# BULLETIN 15 (Publication 35)
# Qualified Products List for Construction

**Posted:**
**10/22/2020 8:47:19AM**

## Bulletin 15 Description

Bulletin 15 is a listing of prequalified materials that are eligible for use on Department construction projects. The purpose of Bulletin 15 is to provide contractors, consultants, Department personnel, manufacturers, suppliers, and others with easy access to a listing of products whose manufacturers have demonstrated the capability to perform in accordance with Department specifications and to be accepted by certification on PennDOT construction projects. Contractors are ultimately responsible to the Department for the performance of all materials and products supplied to, installed or placed on, and/or incorporated into Department construction projects, notwithstanding the listing of any such materials and products in Bulletin 15

Bulletin 15 is available to the public in two formats: as a searchable database and as a pdf document.

Bulletin 15 listings are organized in the format of Publication 408, Specifications. A Bulletin 15 listing includes an assigned supplier code, the supplier name and address, the product name/type/use, and reference number. The reference number (Ref. No.) is the Product Evaluation control number under which the item was tested and approved (the first four digits are the year of submission). The absence of a reference number indicates that the item was approved prior to the implementation of the current numbering system. For some precast and prestressed items, the date of the approval letter from the Structural Materials Section is provided. For traffic items, the Traffic Division "Certificate of Approval (COA)" number or date is provided.

Bulletin 15 listings will indicate if a Producer is on a reduced Level of Certification (i.e. at a certification level other than Level 1). Producers are assigned a Level of Certification, based on their ability to comply with the specifications. Material provided by Producers listed in Bulletin 15 is approved for use only in its intended application(s).

Bulletin 15 listings will also indicate by notation if a product has received either a ***Provisional Approval*** or a ***Conditional Approval***. These approval categories usually involve products that require further monitoring. The Department has the right to remove any provisionally approved or conditionally approved manufacturer and/or product from Bulletin 15 immediately.

- Provisionally approved products are typically products approved under provisional specifications.
- Conditionally approved products are products approved under manufacturer's specifications. PennDOT may supplement or modify the manufacturer's specifications as needed using special provisions.

## Bulletin 15 Material Approval Process

The web-based Product Evaluation Application within the New Product Evaluation and Tracking System (NPETS) in PennDOT's electronic Construction and Materials Management System (eCAMMS) is the means to submit products for consideration for approval and listing in Bulletin 15. To gain access to eCAMMS (NPETS) for completion and submission of a Product Evaluation Application, the individual Applicant must complete and return the User Request Form: Product Evaluation Applicant User Request Form. Even if you already have an existing eCAMMS user account as a Business Partner, you must request NPETS access by submitting this User Request form. Upon activation of your user account, you may access eCAMMS (NPETS) via the "Product Evaluation" menu in eCAMMS at www.ecamms.pa.gov, to submit a product evaluation application to PennDOT for listing in Bulletin 15, Qualified Products List for Construction.

The following entities are eligible to apply for Bulletin 15 approval:

- Manufacturers
- Steel Epoxy Coaters or Galvanizers
- Wood Treaters
- Steel, Aluminum or Timber Fabricators
- Machine Shops
- Paint Shops
- Precast/Prestressed Concrete Producers
- Cement Plants or Terminals
- Pozzolan Providers
- Bituminous Terminals or Refineries
- Bridge & Structural Products
- Structural Steel Coatings
- Geotextiles
- ITS Devices
- Pavement Markings
- Pipe
- Roadside Safety Hardware
- Sign Sheeting
- Sound Barriers
- Traffic Signals
- Work Zone Devices

The Product Evaluation Application requires company information, product description and technical information, and Quality Control plan information. The Product Evaluation Application also requires specialized testing and certification for some manufacturers/companies, as summarized in the table below:

| Manufacturer / Company | Requirement for Application Submission |
|---|---|
| Structural Steel Coatings (SSC) | NEPCOAT Approved, NTPEP Tested |
| Geotextiles (GTX) | NTPEP Tested |
| High Density Polyethylene Pipe (HDPE) | NTPEP Tested |
| Pavement Marking Materials (PMM) | NTPEP Tested |
| Sign Sheeting Materials (SSM) | NTPEP Tested |
| Precast Concrete Products | NPCA or PCI Plant Certified |
| Prestressed Concrete Products | PCI Plant Certified |
| Reinforced Concrete Pipe | NPCA, ACPA, or Q-Cast Plant Certified |
| Roadside Hardware / Work Zone Devices | Crash Test Report & FHWA Eligibility Letter |
| Sound Barriers | Noise Reduction Analysis |
| Structural Steel Fabrication with Welding | AISC Certified |
| Structural Paint Shops | AISC or SSPC Certified |

During the product evaluation/approval process, index properties (including tolerances or ranges for these index properties) may be established for applicable products or product lines as a means to determine consistent compliance with the PennDOT specification requirements. The established index properties (and tolerances or ranges) will be considered inclusive of all associated sampling, material, and test method variability (i.e., ASTM/AASHTO precision estimates, manufacturing/product variability, shelf life effects, or any other deviations).

When established, these index properties (and tolerances or ranges) are to be used by manufacturers in determining acceptable QC test results for these index properties. PennDOT will also use these established index properties (and tolerances or ranges) for future quality assurance verification or acceptance testing.

Index properties (including tolerances or ranges) submitted by manufacturers are subject to review and acceptance by PennDOT LTS. Once the final index properties (and tolerances or ranges) have been established and approved by PennDOT, the manufacturer must adhere to producing consistent quality materials within these index property limits (tolerances or ranges). Proposed changes to the approved index properties may require the submission of a new Product Evaluation Application to PennDOT by the manufacturer.

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Suppliers, distributors, or companies that outsource the manufacturing of their products, or private label products that are manufactured by other companies are typically not eligible to submit a Product Evaluation Application (for approval and listing in Bulletin 15) unless the outsourcing company performs all required quality control testing and verifications and assumes full responsibility for the performance of the product. Non-eligible companies may obtain products or material from any approved source listed in Bulletin 15, for resale to pre-qualified contractors.

Eligible firms who need assistance completing the application may contact NPETS Support via phone at (717) 425-5816 or e-mail at RA-pdBOPDNPETS@pa.gov

## Bulletin 15 Levels of Certification

Material provided by Producers listed in Bulletin 15 is approved for use only in its intended application(s). Producers will be assigned a Level of Certification, based on their ability to comply with the material specifications. Producers will initially be assigned a LEVEL 1 certification. Poor material performance or material quality issues may dictate a reevaluation of a producer's certification level.

The Levels of Certification are defined as follows:

| **Levels of Certification for Bulletin 15 Producers** | | **Producer Material Shipment Procedure** | **Producer Additional Requirements** |
|---|---|---|---|
| **Level 1** | Standard Certification | Ship on Certification with Form CS-4171* | None |
| **Level 2** | Standard Certification - Reduced | Ship on Certification with Form CS-4171* | See below |
| **Level 3** | Lot Approval Certification | Ship only after Material Lot Approval using Modified Certification, with Form CS-4171* | See below |
| **Suspension or Removal** | In accordance with the State's Contractor Responsibility Program:<br>• Producer may be suspended or removed from Bulletin 15 for any of the reasons stated in the Bulletin 15 Preface, regardless of Producer certification level.<br>• Failure of Producer to advance above Certification Level 3 will result in PennDOT's initiating action for suspension or removal from Bulletin 15. | | |

* Certain Bulletin materials require supplemental or alternate forms of certification, refer to the next section, *Bulletin 15 Material Certification*.

- **LEVEL 1 (Standard Certification)**
  - Initial Level of Certification typically issued to Bulletin 15 listed Producers.
  - Material is produced and tested in accordance with the Producer's approved QC Plan.
  - No known material performance or quality issues exist that warrant a reduced level of certification.
  - Material is shipped on certification using Form CS-4171.

- **LEVEL 2 (Standard Certification - Reduced)**
  - Reduced Level of Certification issued to Bulletin 15 listed Producers who have exhibited minor/moderate material performance or quality issues.
  - Producer is required to work with PennDOT on submission of an improvement plan that may include, but is not limited to, any or all of the following items: a revised QC Plan, a failure analysis/action plan to assess why failures are occurring and how to prevent these failures from occurring in the future, correlation testing between in-house and independent lab testing to assist with validating results.
  - Material is produced and tested in accordance with the improvement plan approved by PennDOT.
  - Material is shipped on certification using Form CS-4171.

- **LEVEL 3 (Lot Approval Certification)**
  - This Level of Certification is issued to Bulletin 15 listed Producers who have exhibited major material performance or quality issues.
  - Producer is required to work with PennDOT on an improvement plan as defined in Level 2.
  - Material **cannot** be shipped to projects using the standard CS-4171 certification process.
  - Producer must arrange for independent, in-plant acceptance testing (IPAT) that will be conducted side-by-side with "in-house" Producer testing at the designated frequencies in the revised QC plan. IPAT will be at the Producer's expense. PennDOT's Laboratory Testing Section (LTS) must approve the Producer's proposed IPAT provider, before it begins.
  - Any material lot to be used on a project must be tested and approved by the IPAT as meeting the required PennDOT specification prior to shipment to the project.
  - Each material lot meeting the specification may be shipped to a project using a modified certification process as follows: submit, to both the Project Representative and LTS, Form CS-4171 along with a signed letter from the IPAT (on their official letterhead) indicating that the material lot meets testing and specification requirements.
  - Correlate results from parallel "in-house" Producer testing and IPAT testing, and submit to the LTS on a monthly basis.

## Bulletin 15 Material Certification

A completed Form CS-4171, "Certificate of Compliance" must be submitted, with each shipment of material to the project. Form CS-4171 must be properly signed by a legally responsible company official. Electronic submission of Form CS-4171 and the use of electronic signature (eSignature) on Form CS-4171 are available options.

Certain Bulletin materials require the submission of supplemental CS-4171 certification in addition to Form CS-4171, to provide traceability of materials in multi-step manufacturing processes.

- Epoxy coated or galvanized reinforcement steel requires the submission of supplemental certification Form CS-4171C (Epoxy Coating or Galvanizing Facility) and/or Form CS-4171F (Fabrication Facility).
- Structural steel, aluminum, or precast/prestressed concrete products, produced in a Bulletin 15 approved facility with an on-site state inspector or a state representative, must be stamped with an approved inspection stamp at the plant and certified with a Form CS-4171.

Certain Bulletin materials require a form of certification other than the Form CS-4171, as identified in the particular material specification.

- Section 701 and 702 materials require a properly completed vendor bill of lading.
- Certification of daily bituminous mixtures requires submission of Form CS-4171B
- Certification of locally approved non-Bulletin materials requires submission of Form CS-4171LA

Form CS-4171 is completed by the manufacturer, fabricator, or producer (**Producer**) of Bulletin material provided to the project. The Producer maintains the original Form CS-4171 and provides a copy of Form CS-4171 with each direct shipment to the project. Producers must maintain all component certifications for purchased Bulletin materials, at their place of business for a period of not less than 3 years from the date of the last shipment to the project. Certification files must be available for inspection by the Department.

When a Producer sells a Bulletin 15 material to a distributor/supplier (**Shipper**), the Producer provides a copy of Form CS-4171 with each delivery to the Shipper. When a Shipper provides Bulletin 15 material directly to the project, the Shipper completes and signs a new Form CS-4171 and provides a copy with each direct shipment to the project. The Shipper will maintain the copy of the Producer's Form CS-4171 that they have received. Shippers must maintain a certification file for purchased Bulletin materials to provide an audit trail to the Producer. Certifications for purchased Bulletin materials must be maintained at their place of business for a period of not less than 3 years from the date of the last shipment to the project. Certification files must be available for inspection by the Department.

The **Contractor** must ensure that Form CS-4171 is received for each project shipment of Bulletin material. The Contractor must submit to the Representative a properly completed and signed copy of Form CS-4171 for each project shipment. The Contractor should not incorporate any Bulletin material in the work until certification arrives on the project, unless otherwise approved by the Representative. Payment for material will be withheld until proper certification documentation is received. The Contractor must retain Form CS-4171 for a period of not less than 3 years from the date of

the last project shipment and make files available for inspection and verification by the Department.

Contractors are responsible to the Department for the conformance to the specifications of all products and materials that the contractors select from Bulletin 15 and incorporate into the work on Department construction projects. Products may be monitored by the Department via inspection, sampling, and/or testing for quality assurance, verification, and acceptance purposes to ensure the quality of the material used is maintained.

Product sample failures will be evaluated at PennDOT's monthly Bulletin 15 failure committee meeting. Supplier test history will be reviewed to determine whether corrective action or root cause analysis by the supplier is warranted. If so, companies will be contacted individually with specifics regarding the requested information or other action(s) required. Failure to make corrections and consistently provide material meeting our specifications can and will result in reduction in certification level and may ultimately lead to Bulletin 15 removal.

## Plant Verification (PV) Samples

Producers and manufacturers of bituminous materials, cement, glass beads, roadway paint, and structural steel paint are required to submit Plant Verification (PV) samples to the Department. Producers are advised to keep a sufficient quantity of material from each production lot or batch to serve as retain sample(s) to perform additional testing as requested or directed by the Department.

In the event of a material PV Sample failure, the Department will require that the supplier's retained sample be split and one split be re-tested by the supplier and the results forwarded to the Department for review and the other split be provided to the Department. The Department will in turn, perform re-testing on the provided retained sample and compare both sets of test results.

Based on the material use and type of test failure, the Department will determine if the failure represented by the Department testing is significant enough to result in unacceptable performance, unanticipated maintenance or reduced service life, or other conditions which may warrant rejection and replacement. Significant material failures such as these may result in the Department notifying the supplier to take any or all of the following actions:

1. Identify and isolate the failed material to ensure that the failed material is not shipped to any PennDOT projects.

2. If the failed PV lot has already been shipped, immediately notify all brokers and distributers to whom the material was sent of the failure with instructions to recall the failed lot of material which was supplied to any PennDOT projects.

3. Supply PennDOT with a project list and the accompanying documentation (Form CS-4171 Certificate of Compliance or bill of lading) for any of the failed material that was delivered to PennDOT projects by the facility.

4. Submit an action plan to the Department within 30 days of notification to demonstrate how material and processes are to be controlled in the future to ensure material consistently meets PennDOT specification requirements.

## Bulletin 15 Removal Actions

A manufacturer and/or product(s) may be removed from Bulletin 15 for any of the following reasons:

- Any action or inaction that may affect the quality of the product, the integrity of the test results, or the implementation of the Quality Control plan.
- Failure of the product to meet appropriate specifications.
- Failure to submit or adhere to a Quality Control Plan.
- Falsification of information provided on the Certificate of Compliance Form CS-4171, CS4171B, CS-4171C, CS-4171F or CS4171LA.
- Failure to supply samples, test results, or other information requested by the Department.
- Failure to notify the Bulletins Administrator at (717) 783-9673 within ten (10) days of any change in company contact information (name, address, o phone number) or change in product information (name, formula, quality control plan, or manufacturing process).
- Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.
- Commission of fraud or a criminal offense or other improper conduct or knowledge or approval of, or acquiescence in these activities by an affiliate, officer, employee or other individual or entity associated with either obtaining, attempting to obtain or performing a public contract or subcontract. Acceptance of the benefits derived from the conduct shall be deemed evidence of knowledge, approval or acquiescence.
- Violation of Federal or State antitrust statutes.
- Violation of a State or Federal law regulating campaign contributions.
- Violation of a State or Federal environmental law.
- Violation of a State or Federal law regulating hours of labor, minimum wage standards or prevailing wage standards; discrimination in wages; or child labor violations.
- Violation of the Workers' Compensation Act (77 P. S. § § 1-2626).
- Violation of a State or Federal law prohibiting discrimination in employment.
- Suspension or debarment by the Commonwealth or an agency thereof or an agency of another state or by an agency or department of the Federal

government.

- Three or more occurrences of being declared ineligible for a contract.
- Unsatisfactory performance including failure to comply with the terms of a Commonwealth contract or subcontract including:
  - Willful failure to perform in accordance with the terms of one or more contracts, or a history of failure to perform, or of unsatisfactory performance of one or more contracts.
  - Failure to complete the work in the time frame specified in the contract.
  - Being declared in default on prior work or project.
  - Failure to submit documents, information or forms as required by contract.
  - Making false statements or failing to provide information or otherwise to cooperate with the contracting agency, the Office of State Inspector General or other Commonwealth authorities.
  - Discrimination in violation of laws or regulations in the conduct of business.
- Providing false or misleading information to the Office of State Inspector General, Office of the Budget, the Department of the Auditor General, the Office of Attorney General, the Treasury Department, the Board of Claims, or other tribunal or court, the Department, or a representative of an agency as part of any investigation, audit, program review, certification, contract bids or proposals, applications or claims for payment. This information includes:
  - Financial statements.
  - Nondiscrimination forms.
  - Affidavits or statements of compliance with prevailing wage statutes.
  - Product descriptive literature and documents submitted in connection with claims for payment made or litigation against Commonwealth agencies.
- Other acts or omissions indicating a lack of skill, ability, capacity, quality control, business integrity or business honesty.

# Section 106.02: Project-Specific Locally Approved Materials

## 106.02 Project-Specific Locally Approved Materials

In accordance with Publication 408, Section 106.02 (a) 2.c, the following Pub 408 Sections contain construction materials that are defined as Project-Specific, Locally Approved Materials.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application (CS-4170) for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to the corresponding Pub 408 Sections for specification and documentation requirements.

* Section 420.2(d): Asphalt Edge Restraints

* Section 659.2(b): Aggregate Surface Topping for HFST

* Section 802: Topsoil Furnished and Placed

* Section 806.2(a, b): Temporary & Permanent Rolled Erosion Control Products (RECPs)

* Section 860.2(a): Inlet Filter Bag

* Section 867: Compost Filter Sock

* Section 868: Compost Blanket and Compost Filter Berm

## Section 218: Foamed Glass Aggregate

### 218.2(a) Foamed Glass Aggregate

Last Revised: 3/15/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AERO1 15** | **Aero Aggregates LLC, 1500 Chester Pike, Eddystone, PA 19022 https://aeroaggregates.com/** | | |
| | Foamed Glass Aggregate (FGA) | AeroAggregates FG-G15 | 2017-048 |

*Provisionally approved based on the following requirements:*

*1. AeroAggregates FG-G15 foamed glass aggregate must be used in accordance with the requirements contained within the Research Work Plan, Design & Construction Guidelines, and Project Specific Specification. To obtain a copy of these documents, contact New Products & Innovations Section (NPI) at 717-787-3137. These documents are considered part of the contract documents.*

*2. The Contractor shall notify NPI (717-787-3137) at least one week in advance of the proposed construction so that NPI may observe and document the placement and performance of the material.*

*3. A representative of the manufacturer shall be present on site during placement to ensure that the material is placed in accordance with the Research Work Plan, Design & Construction Guidelines, and Project Specific Specification.*

*4. NPI will monitor the use, application, and performance of AeroAggregates FG-G15 until at least two projects have been successfully completed for each of the following four usage scenarios:*

**** 1) FGA used to mitigate settlement of embankments constructed over soft ground*
**** 2) FGA used to mitigate new embankment loads over old buried utilities*
**** 3) FGA used to mitigate lateral loads on retaining walls*
**** 4) FGA used as backfill for MSE walls*

*5. Failure to comply with the requirements contained within the Research Work Plan, Design & Construction Guidelines, and Project Specific Specification may result in the AeroAggregate FG-G15 material being removed from Bulletin 15.* ***AeroAggregates FG-G15 Technical Data Sheet***

## Section 219: Geofoam Lightweight Fill

### 219.2(a) Expanded Polystyrene (EPS) Geofoam Blocks

Last Revised: 3/23/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **POLMD 15** | **Poly Molding LLC, 96 Fourth Avenue, Haskell, NJ 07420 http://polymoldingllc.com/** | | |
| | EPS Geofoam Block - Type 1 (EPS22) | EPS22 | 2015-155Q |
| | EPS Geofoam Block - Type 2 (EPS39) | EPS39 | 2015-155Q |

## Section 220: Flowable Backfill

### 220.2(i) Air Entraining Admixtures

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-0 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Facility** | **23700 Chagrin Blvd. Cleveland, OH 44122** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-0 15*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | MasterCell 25 (Rheocell/Rheofill) | As required by testing | CADD-2015-01-120 | 1999-132Q |
| **BAS-5 15** | **BASF, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **7100 Wright Rd. Houston, TX 77041** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-5 15*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | MasterCell 30 (Rheocell 30) | As required by testing | | 2006-024Q |
| **CELLC 15** | **Aerix Industries, 5902 McIntyre Street, Golden, CO 80403 http://www.aerixindustries.com/** | | | | |
| | ***Formerly Cellular Concrete, LLC*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | Forta GoldenAir | | | 2002-139Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | Eucon Easy Fill | | | 2015-056Q |
| **FRITZ 15** | **Fritz-Pak Corporation, 4821 Eastover Circle, Mesquite, TX 75149 http://www.fritzpak.com/** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | Sika Lightcrete Powder | | | 2013-205Q |
| **GRAC0 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Facility** | **62 Whittemore Ave. Cambridge, MA 02140-1692** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | Darafill | | | 1997-148 |

## Section 220: Flowable Backfill

### 220.2(i) Air Entraining Admixtures

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC2 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Plant** | **North Bergen, NJ** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | Darafill | | | 1997-148 |
| **MBS-0 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Facility** | **23700 Chagrin Blvd. Cleveland, OH 44122** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-0 15)*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | MasterCell 25 (Rheocell/Rheofill) | As required by testing | CADD-2015-01-120 | 1999-132Q |
| **MBS-5 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **7100 Wright Rd. Houston, TX 77041** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-5 15)*** | | | | |
| | Air Entraining Admixture For Flowable Fill [AEA] | MasterCell 30 (Rheocell 30) | As required by testing | | 2006-024Q |

## Section 409: Superpave Mixture Design, Standard and RPS Construction of Plant-Mixed HMA Courses

### 409.2(g) Aramid Fibers for HMA

Last Revised: 3/10/2017

The use of this product will be in accordance with SSP #I-c00045 ITEM 9000 - HMA FIBER MODIFIED COURSE.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FORTA 15** | **Forta Corporation, 100 Forta Drive, Grove City, PA 16127 http://www.forta-fi.com/** | | |
| | Aramid Fiber Blend | FORTA-FI | 2016-071Q |
| | Aramid Fiber Blend | FORTA-FI for HMA | 2011-021A |
| **SURF1 15 Plant** | **Surface Tech LLC, 111 SW 5th Ave., Suite 1940, Portland, OR 97204 http://www.surface-tech.com/ Shelton, CT** | | |
| | Aramid Fiber Blend | ACE Fiber | 2016-175Q |

## Section 411/413: Superpave Mixture Design

### 411.2(g)/413.2(f) WMA Technologies (Additive(s), Modifier(s), or Processes)

Last Revised: 10/19/2020

For WMA Technologies that can be blended at a refinery or terminal and supplied by an asphalt (Performance Graded Asphalt Binder Supplier), the asphalt supplier must complete an online Product Evaluation Application for each grade and WMA Technology to be evaluated for potential approval. Approved WMA asphalt material suppliers are listed in Section 702d Asphalt Cement.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **AKZNO 15** | **AkzoNobel Surface Chemistry, 525 West Van Buren Street, Chicago, IL 60607-3835 https://www.akzonobel.com/** | | | |
| | Chemical Additive | Rediset WMX | | ----- |
| **AKZO1 15 Facility** | **AkzoNobel Surface Chemistry, LLC, 525 West Van Buren Street, Chicago, IL 60607 Plant 1390 Morris, IL** | | | |
| | Chemical Additive with Anti-Strip Additives | Rediset LQ-1102C | | 2017-072Q |
| **ASTIN 15** | **Astec Industries, Inc., P.O. Box 72787, Chattanooga, TN 37407 http://www.astecindustries.com/** | | | |
| | Mechanical Foaming Equipment/Process | Double Barrel Green / GreenPac System | | ----- |
| **CECA 15** | **CECA, Subsidiary of Arkema, 89 Boulevard National, La Garenne-Colombes 92257** | | | |
| | Chemical Additive | Cecabase RT 945 | | 2011-153 |
| **CIS01 15** | **Cargill Industrial Specialties, 12201 South Torrence Avenue, Chicago, IL 60617 http://www.cargill.com/bioindustrial** | | | |
| | Chemical Additive with Anti-Strip Additives | Anova 1501 | | 2018-014Q |
| | *Provisionally Approved: Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (11/30/2018 to 11/30/2020). As a result of COVID-19 restrictions, this provisional approval has been extended until 11/30/2021.* | | | |
| **EASIN 15** | **Eastern Industries, Inc., 4401 Camp Meeting Rd., Ste 200, Center Valley, PA 18034 http://www.eastern-ind.com/** | | | |
| | Mechanical Foaming Equipment/Process | SMART-FOAM System | | 2011-207Q |
| **GENID 15** | **Gencor Industries, Inc., 5201 N. Orange Blossom Trail, Orlando, FL 32810 http://www.gencor.com/** | | | |
| | Mechanical Foaming Equipment/Process | Green Machine UltraFoam GX2 Process | | ----- |
| **MAXEQ 15** | **Maxam Equipment, Inc., 1575 Universal Ave., Kansas City, MO 64120 http://maxamequipment.com/Products.htm** | | | |
| | Mechanical Foaming Equipment/Process | AQUABlack Solutions WMA System | | ----- |
| **MCCTE 15** | **McConnaughay Technologies, 1911 Lorings Crossing, Cortland, NY 13045 http://www.mcconnaughay.com/** | | | |
| | Foaming Additive/Process | Low Emission Asphalt (LEA) | | ----- |

## Section 411/413: Superpave Mixture Design

### 411.2(g)/413.2(f) WMA Technologies (Additive(s), Modifier(s), or Processes)

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For WMA Technologies that can be blended at a refinery or terminal and supplied by an asphalt (Performance Graded Asphalt Binder Supplier), the asphalt supplier must complete an online Product Evaluation Application for each grade and WMA Technology to be evaluated for potential approval. Approved WMA asphalt material suppliers are listed in Section 702d Asphalt Cement.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **MEAWE 15** | **Ingevity (formerly WestRock/MeadWestvaco Corporation), 5255 Virginia Avenue, N. Charleston, SC 29406-3615 http://www.ingevity.com** | | | |
| | Chemical Additive | Evotherm DAT | | ----- |
| | Chemical Additive with Anti-Strip Additives | Evotherm J1 | | 2017-059Q |
| | *Provisionally Approved: Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (5/9/2017 to 5/9/2019).* | | | |
| | Chemical Additive with Anti-Strip Additives | Evotherm M1 | | ----- |
| | Chemical Additive with Anti-Strip Additives | Evotherm P25 | | 2017-061Q |
| | *Provisionally Approved: Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (5/9/2017 to 5/9/2019).* | | | |
| | Chemical Additive with Anti-Strip Additives | Evotherm U3 | | 2017-060Q |
| | *Provisionally Approved: Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (5/9/2017 to 5/9/2019).* | | | |
| **MEEEQ 15** | **Meeker Equipment Company, Inc., P.O. Box 925, Louisville, KY 19446-0661 http://www.meekerequipment.com/** | | | |
| | Mechanical Foaming Equipment/Process | Warm Mix System | | ----- |
| **PQCOR 15** | **PQ Corporation, Valley Forge, P.O. Box 840, Valley Forge, PA 19482 http://pqcorp.com/** | | | |
| | Foaming Additive/Process | Advera WMA | | ----- |
| **RAP-1 15** | **Reliable Asphalt Products, Inc., 521 Old Seven Mile Pike, Shelbyville, KY 40065 http://www.reliableasphalt.com/** | | | |
| | Mechanical Foaming Equipment/Process | Reliable Asphalt Warm Mix System | | 2018-198Q |
| | *Provisionally Approved: Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (9/19/2018 to 9/19/2020).* | | | |

## Section 411/413: Superpave Mixture Design

### 411.2(g)/413.2(f) WMA Technologies (Additive(s), Modifier(s), or Processes)

Last Revised: 10/19/2020

For WMA Technologies that can be blended at a refinery or terminal and supplied by an asphalt (Performance Graded Asphalt Binder Supplier), the asphalt supplier must complete an online Product Evaluation Application for each grade and WMA Technology to be evaluated for potential approval. Approved WMA asphalt material suppliers are listed in Section 702d Asphalt Cement.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **ROAD1 15 Facility** | **Road Science, Division of ArrMaz, 6502 South Yale Avenue, Tulsa, OK 74136 Vanceboro, NC** | | | |
| | Chemical Additive with Anti-Strip Additives<br>*This is the same product as formerly named AD-here LOF 65-00 with Cecabase RT 945* | AD-here ULTRA 1 | | 2017-134Q |
| | Chemical Additive with Anti-Strip Additives<br>*This is the same product formerly named as AD-here 62-40 with Cecabase RT 945.* | AD-here ULTRA TS | | 2017-133Q |
| **SASW- 15** | **Sasol Wax North America Corporation, 102 Cutting Blvd., Richmond, CA 94804 http://www.sasolwax.us.com/** | | | |
| | Organic Additive | Sasobit | | ----- |
| **SONNE 15 Facility** | **Sonneborn Refined Products, 600 Parsippany Road, Suite 100, Parsippany, NJ 07054 http://www.sonnewarmix.com 100 Sonneborn Lane Petrolia, PA 16050** | | | |
| | Organic Additive<br>*Provisional Approval: Contact PennDOT Materials Testing Laboratory at (717) 346-1548 before using. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 41 WMA Producer.* | SonneWarmix | | 2012-085M |
| | Organic Additive | SonneWarmix RT | | 2016-015 |
| | Organic Additive with Anti-Strip Additives | Sonnegreen as | | 2016-005Q |
| | Organic Additive with Anti-Strip Additives<br>*Provisional Approval: When this WMA Technology is used, the manufacturer is required to notify the PennDOT Laboratory Testing Section at (717) 346-1548. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 41 WMA Producer. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (2/13/2019 to 2/13/2021).* | Sonnegreen as IV | | 2017-164 |
| | Organic Additive with Anti-Strip Additives<br>*Provisional Approval: When this WMA Technology is used, the manufacturer is required to notify the PennDOT Laboratory Testing Section at (717) 346-1548. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 41 WMA Producer. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (10/1/2018 to 10/1/2020).* | Sonnegreen as II | | 2016-114Q |
| **STAAS 15** | **Stansteel Asphalt Plant Products, 12700 Shelbyville Road, Louisville, KY 40243 http://www.stansteel.com/** | | | |
| | Mechanical Foaming Equipment/Process | Accu-Sheer Warm Mix Asphalt System | | ----- |

## Section 411/413: Superpave Mixture Design

### 411.2(g)/413.2(f) WMA Technologies (Additive(s), Modifier(s), or Processes)

**Last Revised: 10/19/2020**

For WMA Technologies that can be blended at a refinery or terminal and supplied by an asphalt (Performance Graded Asphalt Binder Supplier), the asphalt supplier must complete an online Product Evaluation Application for each grade and WMA Technology to be evaluated for potential approval. Approved WMA asphalt material suppliers are listed in Section 702d Asphalt Cement.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **TERRO 15** | **Terex Roadbuilding, P.O. Box 1985, Oklahoma City, OK 73101-1985 http://www.terex.com/** | | | |
| | Mechanical Foaming Equipment/Process | Warm Mix Asphalt System | | ----- |
| **ZYDEXA15 Facility** | **Zydex Industries, Zydex House, 61 Gotri-Sevasi Road, Sevasi, Vadodara 391101 http://www.zydexindustries.com/ 106 Kitty Hawk Dr. Morrisville, NC 27560** | | | |
| | Chemical Additive<br>*Provisional Approval: Contact PennDOT Materials Testing Laboratory at (717) 346-1548 before using. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 41 WMA Producer.* | ZycoTherm | | 2015-126M |
| | Chemical Additive with Anti-Strip Additives<br>*Provisional Approval: When this WMA Technology is used, the manufacturer is required to notify the PennDOT Laboratory Testing Section at (717) 346-1548. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 41 WMA Producer. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (2/15/2019 to 2/15/2021).* | Zycotherm-SP | | 2018-073Q |

### 411.2(k) Aramid Fibers for WMA

**Last Revised: 3/10/2017**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FORTA 15** | **Forta Corporation, 100 Forta Drive, Grove City, PA 16127 http://www.forta-fi.com/** | | |
| | Aramid Fiber Blend | FORTA-FI | 2016-071Q |
| **SURF1 15 Plant** | **Surface Tech LLC, 111 SW 5th Ave., Suite 1940, Portland, OR 97204 http://www.surface-tech.com/ Shelton, CT** | | |
| | Aramid Fiber Blend | ACE Fiber | 2016-175Q |

# Section 419: Stone Matrix Asphalt Mixture

## 419.2(d)2 Cellulose Fiber Stabilizer

Any brand of cellulose fiber that prevents mixture draindown may be used in SMA mixes.

## 419.2(d)5 Crumb Rubber Stabilizer

**Last Revised: 7/6/2015**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **LIB-1 15** | **Liberty Tire Recycling, LLC, 490 Ohio Street, Lockport, NY 14094 http://libertytire.com/Home.aspx** | | |
| | Crumb Rubber (CR) | TR 20 Minus | 2013-099Q |
| | Crumb Rubber (CR) | WTG 20 | 2013-098Q |
| **LIB-2 15** | **Liberty Tire Recycling, LLC, 100 Talbot Avenue, Braddock, PA 15104 http://libertytire.com/Home.aspx** | | |
| | Crumb Rubber (CR) | 20 WMA | 2013-097Q |
| **MAHAN 15** | **Mahantango Enterprises, Inc., Rr #2, P. O. Box 680, Liverpool, PA 17045 http://www.mahantango.com/** | | |
| | Crumb Rubber (CR) | MAH-1A | 1994-031 |
| **NRIND 15 Plant** | **Edge Rubber, 1711 Opportunity Avenue, Chambersburg, PA 17201 http://www.edgerubber.com**<br>**811 Progress Road Chambersburg, PA 17201**<br>***Formerly NRI Industries*** | | |
| | Crumb Rubber (CR) | | ----- |
| **SPART 15** | **Sparton Enterprises, Inc., 3717 Clark Mill Rd., Barberton, OH 44203 http://spartonenterprises.com/** | | |
| | Crumb Rubber (CR) | 58702 Ground Rubber | 1991-072 |

# Section 420: Pervious Asphalt Pavement System

## 420.2(d) Asphalt Edge Restraints

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 420.2(d) for specification requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

## Section 466: Asphalt Paving Fabric

### 466.2(a) Geotextile Paving Fabric

**Last Revised: 2/25/2020**

Paving Fabrics (AASHTO M 288) are saturated during installation with asphalt cement for use between pavement layers. Paving fabrics and grids act as a stress relieving membrane within the pavement structure and are intended for full width applications.

For placing Heavy Duty Membranes over transverse and longitudinal joints and random cracks in existing concrete pavements, see Section 467.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADFORS15 Plant** | **Saint-Gobain ADFORS, 1795 Baseline Road, Grand Island, NY 14303 http://www.adfors.com/us/road-reinforcement 14770 East Avenue Albion, NY 14411** | | |
| | Fiberglass Reinforced Paving Grid<br>*Conditionally approved per manufacturer's specifications: **GlasGrid 8511 Manufacturer's Specifications*** | GlasGrid 8511 Asphalt Reinforcement System | 2014-122 |
| **PROP2 15 Plant** | **Propex Operating Company, LLC, 4019 Industry Drive, Chattanooga, TN 37416 http://www.propexglobal.com/ 428 Rollins Industrial Blvd. Ringgold, GA 30736** | | |
| | Geotextile Paving Fabric, Type II | Petromat 4597 | 2011-181 |
| **TCGEO 15 Plant** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/ Pendergrass, GA & Cornelia, GA** | | |
| | Fiberglass Reinforced Paving Grid<br>*Conditionally approved per manufacturer's specifications: **TenCate Mirafi PGM-G4 Manufacturer's Specifications*** | Mirafi PGM-G4 | 2015-133 |
| | Geotextile Paving Fabric, Type II<br>*(Pendergrass, GA)* | Mirafi MPV 600 | 2012-183 |

# Section 467: Heavy Duty Membranes

## 467.2(a) Heavy Duty Membranes

**Last Revised: 8/23/2016**

Heavy Duty Membranes are placed over transverse and longitudinal joints and random cracks in existing concrete pavements before placing the pavement overlay. Heavy Duty Membranes are not intended for full width applications and are not evaluated against AASHTO M 288 paving fabric requirements.

For AASHTO M 288 paving fabrics, see section MISC Geotextile Paving Fabric (Asphalt).

| | Product | Name | Letter Date | Membrane Width | Ref. No. |
|---|---|---|---|---|---|
| **CRAF0 15 Plant** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/ 121 Industrial Park Road Halls, TN 38040** | | | | |
| | Heavy Duty Membrane | GeoTac | 7/5/2000 | 12", 18", 24", 36", and 48" | 2000-139Q |
| | Heavy Duty Membrane | Paveprep | 9/15/1986 | 12", 18", 20", 24", 36", and 48" | ----- |
| **PROP1 15 Plant** | **Propex Operating Company, LLC, 4019 Industrial Drive, Chattanooga, TN 37416 http://www.propexglobal.com/ 4019 Industry Drive Chattanooga, TN 37416** | | | | |
| | Heavy Duty Membrane | Petrotac | 9/15/1986 | 12", 18", 24", and 36" | 1980-099 |

## Section 470: Asphalt Seal Coat

### 470.2 Asphalt Seal Coat

Last Revised: 7/6/2017

Refer to Bulletin 15, Section 702 for sources of asphalt material specified in Publication 408, Section 470.2(a).

Refer to Bulletin 14 for sources of coarse aggregate specified in Publication 408, Section 470.2(b).

| Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|
| **TRI-3 15 Facility** | **All States Asphalt, LLC, 325 Amherst Road, P.O. Box 91, Sunderland, MA 01375 http://www.asmg.com**<br>**901 River Road Deerfield, MA 01342**<br>***(Formerly Tri State Materials)*** | | |
| | CRMB for Rubberized Asphalt Seal Coat (RASC)<br>*Conditional approval per: **Rubberized Asphalt Seal Coat, SRL-H Conditional Specification*** | 2/12/2010 | ----- |

# Section 501: Reinforced or Plain Cement Concrete Pavements

## 501.2(r) Preformed Cellular Polystyrene (ASTM C578)

See Section 516.2(m) for listing of approved preformed cellular polystyrene products per ASTM C578.

## 501.2(s) Fiberglass Dowel Sleeve

**Last Revised: 2/24/2015**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BEDRP 15** | **Bedford Reinforced Plastics, 264 Reynoldsdale Road, Bedford, PA 15522 http://bedfordreinforced.com/** | | |
| | Dowel Bar Sleeve, Reinforced Plastic | | 1997-151 |
| **CPULT 15** | **Creative Pultrusions, 214 Industrial Lane, P.O. Box 6, Alum Bank, PA 15521-0006 http://www.creativepultrusions.com/** | | |
| | Dowel Bar Sleeve, Reinforced Plastic | Pultex 1500 (Fiberglass reinforced) | 1992-199 |
| **STRFG 15** | **Structural Fiberglass, Inc., 4766 Business Route 220 North, PO Box 615-T, Bedford, PA 15522 http://www.structuralfiberglass.com/** | | |
| | Dowel Bar Sleeve, Reinforced Plastic | | 1997-150 |

## Section 503: Protective Coating for Cement Concrete Pavement

### 503.2 Boiled Linseed Oil (AASHTO M233)

Last Revised: 5/2/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | |
| | Boiled Linseed Oil (AASHTO M233) | Anti-Spall 55 | 2004-149Q |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | |
| | Boiled Linseed Oil (AASHTO M233) | Anti-Spall (J-33) Formerly: Day Chem Anti-Spall | 1990-147 |
| **DEGEN 15** | **Degen Oil & Chemical Company, 200 Kellogg Street, P.O. Box 5240, Jersey City, NJ 07305** | | |
| | Boiled Linseed Oil (AASHTO M233) | Boiled Linseed Oil | 1998-173 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Boiled Linseed Oil (AASHTO M233) | Euco Linseed Oil Treatment | ----- |
| **MEDW1 15 Plant** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/**<br>**2100 Monroe Street P. O. Box 7550 York, PA 17404-0550** | | |
| | Boiled Linseed Oil (AASHTO M233) | Sealtight Lin-Seal | 1992-265 |
| **PRUET 15** | **Pruett-Schaffer Chemical Company, 3327 Stafford Street, Pittsburgh, PA 15204 http://www.pruett-schaffer.com/** | | |
| | Boiled Linseed Oil (AASHTO M233) | Anti-Spalling Compound | 1997-080 |
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/**<br>***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Boiled Linseed Oil (AASHTO M233) | Anti-Spall 50/50 | 2017-131Q |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/**<br>***Aquired by ChemMasters, Inc.*** | | |
| | Boiled Linseed Oil (AASHTO M233) | Certi-Vex Linseed Anti-Spall | 2000-066Q |
| **WKTEK 15** | **Wicktek, Inc., 103 General Braddock Drive, Braddock, PA 15104 http://wicktek.com/** | | |
| | Boiled Linseed Oil (AASHTO M233) | DensiCrete | 1995-049 |

# Section 516: Concrete Pavement Patching

## 516.2 Concrete Pavement Patching

**Last Revised: 9/27/2017**

Refer to Publication 408, Section 516.2 for the various materials comprising concrete pavement patching.

The product listing below is conditionally approved as an alternate system to Concrete Pavement Patching as specified in Publication 408, Section 516.2.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FTML1 15** | **Fort Miller Company, Inc., P.O. Box 98, Schuylerville, NY 12871-0098 http://www.fortmiller.com/** | | |
| | Precast Concrete Pavement Slab | Super-Slab Precast Concrete Pavement System (PCPS) | 2009-124 |
| | *Full Depth Concrete Pavement Repair, Precast: Item 9516-2034 - 10" Depth and Item 9516-3036 - 12" Depth* | | |
| | *Conditionally approved as an alternate Type A patch per Fort Miller Company's specifications. Fort Miller Company is a licensor, fabricator, and trademark owner of Super-Slab.* | | |
| **NORPR 15** | **Northeast Precast, 92 Reese Road, Millville, NJ 08332 http://www.northeastprecast.com/** | | |
| | Precast Concrete Pavement Slab | Super-Slab Precast Concrete Pavement Panel Fabricator | 2017-221 |
| | *Full Depth Concrete Pavement Repair, Precast: Item 9000-0516 - 13" Depth* | | |
| | *Conditionally approved as an alternate Type A patch per the Super-Slab licensor's (Fort Miller Company) specifications.* | | |

## 516.2(k) Anchor Material

**Last Revised: 8/27/2020**

See **Standard Drawing RC-26M (Publication 72M)**

Note: Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADHTC 15** | **Adhesives Technology Corporation, 450 East Copans, Pompano Beach, FL 33064 http://www.atcepoxy.com/** | | |
| | Dowel Bar Adhesive | ASF-1000 | 2016-242Q |
| | Dowel Bar Adhesive | ULTRABOND 1300 | 1992-013B |
| | Dowel Bar Adhesive | ULTRABOND 365CC | 2016-017Q |
| | Dowel Bar Adhesive | ULTRABOND HS-1CC | 2018-040Q |
| | Dowel Bar Adhesive | ULTRABOND HS-200 | 2002-048Q |

## Section 516: Concrete Pavement Patching

### 516.2(k) Anchor Material

Last Revised: 8/27/2020

See Standard Drawing RC-26M (Publication 72M)

Note: Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CCMAT 15 Facility** | **Cornerstone Construction Material, LLC, 1618 East Elm Street, Harrisonville, MO 64701 http://ccmaterial.com 101 East Walnut Street Archie, MO 64725** | | |
| | Dowel Bar Adhesive | CE308 Epoxy Anchoring Gel | 2017-236Q |
| **DEWA1 15 Facility** | **DEWALT Anchors, 701 E. Joppa Road, Towson, MD 21286 Willich, Germany** | | |
| | Dowel Bar Adhesive | AC100+ Gold | 2017-253Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Dowel Bar Adhesive | Dural 452 Gel | 2003-098Q |
| | Dowel Bar Adhesive | Dural Fast Set Epoxy Gel | 1999-184Q |
| **HILT- 15** | **Hilti, Inc., 5400 South 122nd East Ave., P.O. Box 21148, Tulsa, OK 74121 https://www.hilti.com/** | | |
| | Dowel Bar Adhesive<br>*ICC-ES Evaluation Report: ICC-ES Evaluation Report: ESR-3814 (Subject to renewal 1/2021)* | HIT-RE 500 Anchoring Epoxy | 2001-100Q |
| | Dowel Bar Adhesive | HVU Adhesive Capsule | 2000-123Q |
| **HILT1 15 Plant** | **Hilti, Inc., 7250 Dallas Parkway, Suite 1000, Plano, TX 75024 https://www.hilti.com/ Kaufering, Germany** | | |
| | Dowel Bar Adhesive | HIT-HY 10 PLUS Adhesive Anchor System | 2014-106QA |
| | Dowel Bar Adhesive | HIT-HY 150 Injection Adhesive | 1996-054 |
| | Dowel Bar Adhesive | HIT-RE 100 Adhesive Anchor | 2016-158 |
| | Dowel Bar Adhesive | HIT-RE 500 V3 Adhesive Anchor System | 2016-159 |

## Section 516: Concrete Pavement Patching

### 516.2(k) Anchor Material

Last Revised: 8/27/2020

See Standard Drawing RC-26M (Publication 72M)

Note: Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ITW-R 15** | **ITW Commercial Construction North America, 155 Harlem Avenue, Glenview, IL 60025 http://www.itwredhead.com/** | | |
| | Dowel Bar Adhesive | Red Head C6+ | 2017-289Q |
| | Dowel Bar Adhesive | Red Head G5+ | 2017-209Q |
| **ITWRH 15 Plant** | **ITW Commercial Construction North America, 155 Harlem Avenue, Glenview, IL 60025 http://www.itwredhead.com/ 26501 Bourg Lès Valence Valence, France** | | |
| | Dowel Bar Adhesive | Red Head A7+ | 2016-241 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Dowel Bar Adhesive | Sure-Poxy 116 | 1992-169 |
| | Dowel Bar Adhesive | Sure-Poxy 117 | 1990-371 |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Dowel Bar Adhesive | Rezi-Weld Gel Paste (Construction Epoxy) | 1993-280 |
| **MKTFS 15** | **MKT Fastening, LLC, 1 Gunnebo Drive, Lonoke, AR 72086 http://www.mktfastening.com/** | | |
| | Dowel Bar Adhesive | Liquid Roc 300 Twin Tube Polyester Resin | 1994-199 |
| **PLYGM 15** | **Polygem, Inc., 1105 Carolina Drive, West Chicago, IL 60185 http://www.polygem.com/** | | |
| | Dowel Bar Adhesive | #1257 Epoxy Anchoring Adhesive | 1993-270 |
| **SIKA0 15 Facility** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 201 Polito Avenue Lyndhurst, NJ 07071** | | |
| | Dowel Bar Adhesive | Sikadur DOT SP 3/4 DBA (Epoxy as Injection Gel) | 1989-236 |
| | Dowel Bar Adhesive | Sikadur Injection Gel | 1989-236 |

# Section 516: Concrete Pavement Patching

## 516.2(k) Anchor Material

Last Revised: 8/27/2020

See Standard Drawing RC-26M (Publication 72M)

Note: Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Dowel Bar Adhesive | Sikadur DOT SP 3/4 DBA (Epoxy as Injection Gel) | 1989-236 |
| | Dowel Bar Adhesive | Sikadur Injection Gel | 1989-236 |
| **SIMST 15** | **Simpson Strong-Tie, Inc., 136 Official Road, Addison, IL 60101 http://www.strongtie.com/** | | |
| | Dowel Bar Adhesive *(Formerly known as Acrylic-Tie)* | AT Acrylic Adhesive | 1999-223Q |
| **SOCOM 15** | **Socom, Sogaris 196, 94656 Runngis Cdx, France** | | |
| | Dowel Bar Adhesive | EPO 9030 Acrylic Adhesive | 2004-181Q |
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | |
| | Dowel Bar Adhesive | Pro-Poxy 300 Fast | 1996-004 |
| | Dowel Bar Adhesive | Pro-Poxy 400 | 2001-228Q |

## 516.2(m) Preformed Cellular Polystyrene (ASTM C578)

Last Revised: 9/30/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DOW-3 15** | **The Dow Chemical Company, 200 Lackin Center, 1605 Joseph Drive, Midland, MI 48674 http://www.dow.com/** | | |
| | Preformed Cellular Polystyrene | DOW High Performance Underlayment | 1999-181Q |
| **INSYA 15** | **Insulation Corporation of America, 2571 Mitchell Ave., Allentown, PA 18103 http://insulationcorp.com/** | | |
| | Preformed Cellular Polystyrene | ICA-LITE EPS (ASTM C578 Types I, II, VIII, IX) | 1992-167 |

## Section 516: Concrete Pavement Patching

### 516.2(m) Preformed Cellular Polystyrene (ASTM C578)

Last Revised: 9/30/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **OWENC 15** | **Owens Corning, One Owens Corning Parkway, Toledo, OH 43659 http://www.owenscorning.com/** | | |
| | Preformed Cellular Polystyrene | Foamular 1000 (ASTM C578, Type V) | 2002-005Q |
| | Preformed Cellular Polystyrene | Foamular 150 (ASTM C578, Type X) | 2002-005Q |
| | Preformed Cellular Polystyrene | Foamular 250 (ASTM C578, Type IV) | 2002-005Q |
| | Preformed Cellular Polystyrene | Foamular 400 (ASTM C578, Type VI) | 2002-005Q |
| | Preformed Cellular Polystyrene | Foamular 600 (ASTM C578, Type VII) | 2002-005Q |

## Section 523: Ultra-Thin Portland Cement Concrete Overlay

### 523.2(a) Virgin Polypropylene Fibers

Last Revised: 3/15/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FORTA 15** | **Forta Corporation, 100 Forta Drive, Grove City, PA 16127 http://www.forta-fi.com/** | | |
| | Virgin Polypropylene Fibers<br>*http://www.forta-ferro.com/* | Forta Econo Net | 2010-201Q |

# Section 525: Concrete Pavement Partial-Depth Repair

## 525.2(c) Rapid-Set Concrete Patching Material

Last Revised: 9/23/2019

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Cementitious Repair Mortar | Euco Repair SCC Fast | RSCP-2017-01-014 | 2019-036Q |
| | *Cannot be used with aggregate extenders. Meets the requirements of R1, R2, and R3 material in ASTM C928.* | | | |
| **PHOS1 15 Plant** | **Phoscrete Corporation, 265 S Federal Hwy, Ste 320, Deerfield Beach, FL 33441-4161 https://phoscrete.com/ Whitmore Lake, MI** | | | |
| | Magnesium, Phosphate Cement-Based Material | Phoscrete HC | RSCP-2015-01-002 | 2017-104Q |
| | *Cannot be used with aggregate extenders. Meets the requirements of R1 and R2 material in ASTM C928.* | | | |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | | |
| | Cementitious Repair Mortar | SikaQuick VOH | RSCP-2014-01-004 | 2018-026Q |
| | *Cannot be used with aggregate extenders. Meets the requirements of R1 and R2 material in ASTM C928.* | | | |
| | Rapid-Setting Concrete | Sikacrete 421 CI Rapid | RSCP-2017-01-005 | 2019-084Q |
| | *Cannot be used with aggregate extenders. Meets the requirements of R1, R2, and R3 material in ASTM C928.* | | | |
| **WMD1 15 Plant** | **Western Material and Design, LLC, P.O. Box 268, Lee's Summit, MO 64063 https://wmdus.com/ 101 East Walnut Street Archie, MO 64725** | | | |
| | Rapid-Setting Concrete | FasTrac 246 Concrete | RSCP-2017-01-004 | 2018-197Q |
| | *Cannot be used with aggregate extenders. Meets the requirements of R1 and R2 material in ASTM C928.* | | | |

## 525.2(g) Preformed Cellular Polystyrene (ASTM C578)

See Section 516.2(m) for approved preformed cellular polystyrene products.

# Section 527: Dowel Retrofit

## 527.2(c) Preformed Cellular Polystyrene

## 527.2(d) Rapid Set Concrete Patching Material

See Section 525.2(c) for approved rapid set concrete patching material products.

## Section 529: Full Depth Individual Precast/Prestressed Concrete Pavement Slabs

### 529.2 Precast Concrete Pavement Slab

Last Revised: 2/25/2020

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **FTML1 15** | **Fort Miller Company, Inc., P.O. Box 98, Schuylerville, NY 12871-0098 http://www.fortmiller.com/** | | | |
| | Precast Concrete Pavement Slab | Super-Slab Precast Concrete Pavement System (PCPS) | | 2009-124 |
| | *Full Depth Concrete Pavement Repair, Precast: Item 9516-2034 - 10" Depth and Item 9516-3036 - 12" Depth Conditionally approved as an alternate Type A patch per Fort Miller Company's specifications. Fort Miller Company is a licensor, fabricator, and trademark owner of Super-Slab.* | | | |
| **NORPR 15** | **Northeast Precast, 92 Reese Road, Millville, NJ 08332 http://www.northeastprecast.com/** | | | |
| | Precast Concrete Pavement Slab | Super-Slab Precast Concrete Pavement Panel Fabricator | | 2017-221 |
| | *Full Depth Concrete Pavement Repair, Precast: Item 9000-0516 - 13" Depth Conditionally approved as an alternate Type A patch per the Super-Slab licensor's (Fort Miller Company) specifications.* | | | |

## Section 530: Long-Life Concrete Pavement (LLCP)

### 530.2(e)1.c Long-Life Dowel Bar

Last Revised: 10/8/2020

For contracts let on or after April 10, 2020 (Pub 408, 2020 Initial Edition), see Section 705.3(f) High Performance Dowel Bars.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **JAR-1 15 Plant** | **ARTAZN LLC (formerly Jarden Zinc Products), 2500 Old Stage Road, Greeneville, TN 37744 https://jardenzinc.com/ 2500 Old Stage Road Greeneville, TN 37744** | | |
| | Rolled Zinc Alloy Tubular Dowel Bar | LifeDowel, Type 2 (1.445" OD) | 2016-164Q |
| | *Outside diameter of the approved dowel bar with zinc sleeve is 1.445". Proper galvanized end caps must be supplied to the project (0.06 oz/ft2).* | | |
| | Rolled Zinc Alloy Tubular Dowel Bar | LifeDowel, Type 2 (1.695" OD) | 2016-164Q |
| | *Outside diameter of the approved dowel bar with zinc sleeve is 1.695". Proper galvanized end caps must be supplied to the project (0.06 oz/ft2).* | | |

## Section 548: Unbonded Concrete Overlay of Concrete-Surfaced Pavements

### 548.2(a) Non-Woven Geotextile Interlayer

Last Revised: 6/7/2018

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **PROP2 15** | **Propex Operating Company, LLC, 4019 Industry Drive, Chattanooga, TN 37416 http://www.propexglobal.com/** | | | |
| **Plant** | **428 Rollins Industrial Blvd. Ringgold, GA 30736** | | | |
| | Non-Woven Geotextile Interlayer | GEOTEX 1341NH | | 2018-071Q |

## Section 601: Pipe Culverts

### 601.2(a)3a Round and Elliptical Reinforced Concrete (RC) Pipe

**Last Revised: 8/25/2020**

Companies maintaining an American Concrete Pipe Association Q-Cast certification or NPCA Pipe certification do not require in-plant inspection for standard design concrete pipe (any diameter).

All special design pipe will receive in-plant inspection and an inspection stamp, regardless of the manufacturer's certification status. Special design pipe are identified as those pipe for which the Department has not provided a standard design in BD-636. Special design pipe are identified in BD-636 by a double asterisk (**). Pipe produced by Q-Cast or NPCA certified companies will be stenciled or stamped with the respective logos.

| | Product | Name | Pipe Certification | Ref. No. |
|---|---|---|---|---|
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | | |
| | RC Pipe (End Section) | | NPCA | ----- |
| | RC Pipe (Round) | | NPCA | ----- |
| **HANS2 15** | **Forterra, 7925 Empire Parkway, Macedonia, OH 44056-2144 http://www.forterrabp.com** | | | |
| | ***Formerly Hanson Pipe & Precast*** | | | |
| | RC Pipe (Elliptical) | | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | | ACPA Q-Cast | ----- |
| **HANS3 15** | **Forterra, 1500 Haul Rd., Columbus, OH 43207 http://www.forterrabp.com** | | | |
| | ***Formerly Hanson Pipe & Precast*** | | | |
| | RC Pipe (Elliptical) | | NPCA | - |
| | RC Pipe (Round) | | NPCA | ----- |
| **HYDR1 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 2000 Gregg Station Road, Oakdale, PA 15071 http://www.rinkerpipe.com/** | | | |
| | RC Pipe (Elliptical) | | ACPA Q-Cast | ----- |
| | RC Pipe (End Section) | | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | | ACPA Q-Cast | ----- |
| **HYDR2 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 800 Industrial Drive, Middletown, DE 19709 http://www.rinkerpipe.com/** | | | |
| | RC Pipe (Elliptical) | | ACPA Q-Cast | ----- |
| | RC Pipe (End Section) | | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | | ACPA Q-Cast | ----- |

## Section 601: Pipe Culverts

### 601.2(a)3a Round and Elliptical Reinforced Concrete (RC) Pipe

**Last Revised: 8/25/2020**

Companies maintaining an American Concrete Pipe Association Q-Cast certification or NPCA Pipe certification do not require in-plant inspection for standard design concrete pipe (any diameter).

All special design pipe will receive in-plant inspection and an inspection stamp, regardless of the manufacturer's certification status. Special design pipe are identified as those pipe for which the Department has not provided a standard design in BD-636. Special design pipe are identified in BD-636 by a double asterisk (**). Pipe produced by Q-Cast or NPCA certified companies will be stenciled or stamped with the respective logos.

| Product | Name | Pipe Certification | Ref. No. |
|---|---|---|---|
| **HYDR3 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 4200 Universal Drive, Diamond, OH 44412 http://www.rinkerpipe.com/** | | |
| | RC Pipe (Elliptical) | ACPA Q-Cast | ----- |
| | *Only manufactures elliptical pipe with a major axis of 45" (1150mm) or greater* | | |
| | RC Pipe (Round) | ACPA Q-Cast | ----- |
| | *Only manufactures round pipe with a diameter of 48" (1200mm) or greater* | | |
| **OLDP1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 1900 Pennsylvania Ave., Croydon, PA 19021 http://www.oldcastleprecast.com/Pages/default.aspx** | | |
| | RC Pipe (End Section) | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | ACPA Q-Cast | ----- |
| **OLDP3 15 Plant** | **Oldcastle Infrastructure, Inc., a CRH Company, 1920 12th Street, Williamstown, NJ 08094 https://oldcastleinfrastructure.com/**<br>**1920 12th Street (Rt. 54) Folsom, NJ 08037**<br>***Formerly Oldcastle Precast*** | | |
| | RC Pipe (Elliptical) | ACPA Q-Cast | ----- |
| | RC Pipe (End Section) | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | ACPA Q-Cast | ----- |
| **UPPCP 15** | **Upper Peninsula Concrete Pipe, P. O. Box 313, Escanaba, MI 49829 http://upconcretepipe.net/** | | |
| | RC Pipe (End Section) | NPCA | ----- |
| **VIANN 15** | **Vianini Pipe Inc., P. O. Box 678, Somerville, NJ 08876 http://www.vianinipipe.com/** | | |
| | RC Pipe (Elliptical) | ACPA Q-Cast | ----- |
| | RC Pipe (End Section) | ACPA Q-Cast | ----- |
| | RC Pipe (Round) | ACPA Q-Cast | ----- |

### 601.2(a)3a Reinforced Concrete (RC) Pipe (Related Items)

**Last Revised: 10/19/2020**

Plasticizing admixtures under this section may only be used in the production of reinforced concrete pipes.

## Section 601: Pipe Culverts

### 601.2(a)3a Reinforced Concrete (RC) Pipe (Related Items)

Last Revised: 10/19/2020

Plasticizing admixtures under this section may only be used in the production of reinforced concrete pipes.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BAS-1 15 Plant** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html Allentown, PA** | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | |
| | Plasticizing Admixture for Dry-Cast Manufacturing Only (S-PA)<br>*Recommended Dosage: 2 to 12 oz/cwt* | MasterCast 900 (RheoFIT 900) | 2013-024Q |
| **CONAM 15** | **Concrete Accessory Manufacturing, 211 East Dowland Street, Ludington, MI 49431 http://www.camsales.com/** | | |
| | RC Pipe (Related Item) | Camlock Spacers (Pub. 280) | 1994-250 |
| | RC Pipe (Related Item) | Quik-Fit Stirrup Mat (Pub. 280) | 1994-249 |
| **ENGWP 15** | **Engineered Wire Products, Inc., 1200 N. Warpole Street, P. O. Box 313, Upper Sandusky, OH 43351 http://ewp1.com/** | | |
| | ***(Liberty Steel USA)*** | | |
| | RC Pipe (Related Item) | "S" Stirrup Assemblies | 2003-198Q |
| **GRAC7 15** | **GCP Applied Technologies Inc., 6051 West 65th St., Bedford Park, Chicago, IL 60638 https://gcpat.com/en-us** | | |
| | ***Formerly: W. R. Grace and Company*** | | |
| | Plasticizing Admixture | DQuantec PL-466 (formerly DBM-S) | 1992-285 |
| **HAALA 15** | **Haala Industries, Inc., 1201 Hwy 4 South, Sleepy Eye, MN 56085** | | |
| | Reinforced Concrete Pipe Cages | Fabricator of Welded Steel Cages for Reinforced Flared End Sections | 2016-245Q |
| **KRETE 15** | **Krete Industries, P. O. Box 343, Butler, WI 53007 http://www.krete.com/** | | |
| | Plasticizing Admixture | KreteMix 100 (formerly Krete Econo Plast) | 1992-343 |
| **MBS-1 15 Plant** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us Allentown, PA** | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | |
| | Plasticizing Admixture for Dry-Cast Manufacturing Only (S-PA)<br>*Recommended Dosage: 2 to 12 oz/cwt* | MasterCast 900 (RheoFIT 900) | 2013-024Q |

## Section 601: Pipe Culverts

### 601.2(a)3a Reinforced Concrete (RC) Pipe (Related Items)

Last Revised: 10/19/2020

Plasticizing admixtures under this section may only be used in the production of reinforced concrete pipes.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA3 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ Fairless Hills, PA** | | |
| | Plasticizing Admixture for Dry-Cast Manufacturing Only (S-PA) | SikaMix PL-100 | 2016-282Q |

### 601.2(a)4.a Metal Pipes - Ductile Iron Pipe

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMECI 15** | **American Cast Iron Pipe Company, 1501 31st Avenue North, Birmingham, AL 35207 http://www.american-usa.com/** | | |
| | Ductile Iron Pipe | | 2010-186Q |
| **MCWD1 15** | **McWane Ductile - New Jersey, 183 Sitgraves Street, Philipsburg, NJ 08865 http://mcwaneductile.com/** | | |
| | Ductile Iron Pipe | | ----- |
| **USP&F 15** | **U.S. Pipe and Foundry Company, 1101 E. Pearl St., Burlington, NJ 08016 http://www.uspipe.com/** | | |
| | Ductile Iron Pipe | | 1983-085 |
| **USPF1 15 Plant** | **United States Pipe and Foundry Company, Two Chase Corporate Drive, Suite 200, Birmingham, AL 35244 http://www.uspipe.com 2023 St. Louis Avenue Bessemer, AL 35020** | | |
| | Ductile Iron Pipe | TYTON JOINT Pipe | 2015-087Q |

### 601.2(a)4.b Metal Pipes - Corrugated Steel Pipe, Metallic Coated

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CON03 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Conyers, GA** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |

## Section 601: Pipe Culverts

### 601.2(a)4.b Metal Pipes - Corrugated Steel Pipe, Metallic Coated

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CON05 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Ashland, KY** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **CON07 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Shakopee, MN** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **CON08 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Palmer, MA** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **CON11 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Raleigh, NC** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **CON12 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Greencastle, PA** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **CULVE 15** | **Culverts, Inc., 330 Pittsburgh Ave., P.O. Box 271, Coraopolis, PA 15108 http://www.culvertsinc.com/Pages/default.aspx** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| **J&J-D 15** | **J & J Drainage Products Company, 110 N Pershing, PO Box 0829, Hutchinson, KS 67504-0829 http://jjdrainage.com/** | | |
| | Related Hardware | Band Angle | 1984-073 |
| **LANE0 15** | **Lane Enterprises, Inc., 3905 Hartzdale Dr. (Suite 514), Camp Hill, PA 17011 http://www.lane-enterprises.com/** | | |
| | Related Hardware | Pipe Bands | 1982-024 |

## Section 601: Pipe Culverts

### 601.2(a)4.b Metal Pipes - Corrugated Steel Pipe, Metallic Coated

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| LANE1 15 | **Lane Enterprises, Inc., Box 711, May Street, Bath, NY 14810 http://www.lane-enterprises.com/** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| LANE2 15 | **Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| LANE3 15 | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| LANE4 15 | **Lane Enterprises, Inc, 377 Crooked Lane, King of Prussia, PA 19406 http://www.lane-enterprises.com/** | | |
| | Corrugated Steel Pipe, Metallic Coated | | ----- |
| LMP-S 15 | **LMP Steel & Wire Company, 2000 East First Street, Maryville, MO 64468** | | |
| | Related Hardware | A-307 Grade A, 6" and 8" Electroplated, CMP Band Bolts | 1991-120AB |

### 601.2(a)4.c Metal Pipes - Corrugated Aluminum Alloy Pipe

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| CON03 15 Plant | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Conyers, GA** | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| CON04 15 Plant | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Mitchell, IN** | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |

# Section 601: Pipe Culverts

## 601.2(a)4.c Metal Pipes - Corrugated Aluminum Alloy Pipe

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| CON07 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Shakopee, MN | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| CON08 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Palmer, MA | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| CON11 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Raleigh, NC | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| CULVE 15 | Culverts, Inc., 330 Pittsburgh Ave., P.O. Box 271, Coraopolis, PA 15108 http://www.culvertsinc.com/Pages/default.aspx | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| LANE1 15 | Lane Enterprises, Inc., Box 711, May Street, Bath, NY 14810 http://www.lane-enterprises.com/ | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| LANE2 15 | Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/ | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| LANE3 15 | Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/ | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |
| LANE4 15 | Lane Enterprises, Inc, 377 Crooked Lane, King of Prussia, PA 19406 http://www.lane-enterprises.com/ | | |
| | Corrugated Aluminum Alloy Pipe | | ----- |

## 601.2(a)4.d Metal Pipes - Coated Corrugated Galvanized Steel Pipe

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

## Section 601: Pipe Culverts

### 601.2(a)4.d Metal Pipes - Coated Corrugated Galvanized Steel Pipe

Last Revised: 6/27/2017

Steel Products Procurement Act applies. Note: Approved pipe manufacturers listed in this section also may provide end sections and slope pipe fittings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CON03 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Conyers, GA** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **CON08 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Palmer, MA** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **CON11 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Raleigh, NC** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **CON12 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Greencastle, PA** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **CULVE 15** | **Culverts, Inc., 330 Pittsburgh Ave., P.O. Box 271, Coraopolis, PA 15108 http://www.culvertsinc.com/Pages/default.aspx** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **DOW-2 15** | **The Dow Chemical Company, 4520 Ashman Street, Building 9008, Customer Info., Midland, MI 48642 http://www.dow.com/** | | |
| | Related Hardware<br>*Plastic coating for galvanized steel pipe* | Trenchcoat DAF 625 | 1990-304 |
| **LANE2 15** | **Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/** | | |
| | Coated Corrugated Galvanized Steel Pipe | | ----- |
| **PUREA 15** | **Pure Asphalt Company, 3300 West 31st Street, Chicago, IL 60623 http://www.pureasphalt.com/** | | |
| | Related Hardware<br>*Also listed under Section 702* | Culvert Mastic (Spray Grade) | 1990-270 |

## Section 601: Pipe Culverts

### 601.2(a)6.a Thermoplastic Pipes - Group I

Last Revised: 10/18/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **CON10 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Springfield, IL** | | | | | |
| | Polyvinyl Chloride (PVC) Liner | PS 46, A-2000 Pipe with Inline Bell | Type S | 12", 15", 18", 21", 24", 30", 36" | | 2010-238QB |
| | *A2 liner pipe. Approved for 2' minimum fill height, 36' maximum fill height.* | | | | | |
| | Polyvinyl Chloride (PVC) Pipe | A-2000 Pipe | Type S | 15", 18", 21", 24", 30", 36" | | 2000-326Q |
| | *15" in. size pipe can only be used for maintenance.* | | | | | |
| **ISCFB 15 Facility** | **ISCO Industries, Inc., 100 Witherspoon Street 2 West, Louisville, KY 40202 http://culvert-rehab.com/ 190 Spartan Exchange Rd. Wellford, SC 29385** | | | | | |
| | High Density Polyethylene (HDPE) Liner | Snap-Tite Culvert Liner | Type S | Liner Sizes: 14", 16", 18", 20", 22", 24", 26", 28", 30", 32", 36", 42", 48", 54", 63" | | 2016-249M |
| | *The Snap-Tite Culvert Liner with SDR of 32.5 is for use on rehabilitation projects for lining existing corrugated metal pipes, reinforced concrete pipes, and concrete culverts. For fill heights of greater than 15', a project-by-project design approval is required.* | | | | | |
| **JMMC1 15 Plant** | **J-M Manufacturing Company, 9 Peach Tree Hill Road, Livingston, NJ 07039 Franklin, PA** | | | | | |
| | Polyvinyl Chloride (PVC) Pipe | | Type S | 18", 21", 24", 30", 36", 42", 48" | | 1995-314 |

## Section 601: Pipe Culverts

### 601.2(a)6.a Thermoplastic Pipes - Group I

Last Revised: 10/18/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **PERPI 15** | **Performance Pipe a Division of Chevron Phillips Chemical Company, 5085 W. Park Blvd. Suite 500, Plano, TX 75093** http://www.performancepipe.com/en-us/Pages/default.aspx | | | | | |
| | High Density Polyethylene (HDPE) Pipe *SDR<21* | | Type S | 18”, 21”, 24”, 30”, 36”, 42”, 48” | | 1994-094 |
| | High Density Polyethylene (HDPE) Pipe *SDR=26* | | Type S | 21”, 24”, 30”, 36”, 42”, 48” | | 1994-094 |
| **PRIM1 15 Plant** | **Prime Conduit, Inc., 23240 Chagrin Blvd, Stuite 405, Cleveland, OH 44122** http://www.primeconduit.com/ **Oklahoma City, OK** | | | | | |
| | Polyvinyl Chloride (PVC) Pipe | F 1803 Closed Profile Gravity Pipe | Type S | 21”, 24”, 30”, 36”, 42”, 48” | | 1995-114 |
| **PWEGL 15** | **JM Eagle, 1742 E. Platteville Blvd., Pueblo West, CO 81007** http://www.jmeagle.com/ ***Formerly PW Eagle*** | | | | | |
| | Polyvinyl Chloride (PVC) Pipe *15" size pipe is for maintenance uses only.* | | Type S | 15”, 18”, 21”, 24”, 30” | | 1988-029 |
| | Polyvinyl Chloride (PVC) Pipe | | Type S | 30", 36" (corrugated) | | 1997-007 |
| **ROYAL 15** | **Royal Pipe Systems, 131 Regalcrest Court, Woodbridge, Ontario, Canada** | | | | | |
| | Polyvinyl Chloride (PVC) Pipe *15" size pipe for maintenance only.* | | Type S | 15", 18”, 21”, 24” | | 2002-012Q |

### 601.2(a)6.b Thermoplastic Pipes - Group II

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

## Section 601: Pipe Culverts

### 601.2(a)6.c Thermoplastic Pipes - Group III

Last Revised: 5/17/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | N-12 | Type S | 15", 18", 21", 24", 30" | | 1995-322 |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/**<br>**173 Industrial Park North Muncy, PA 17756** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | | Type S | 15", 18", 24", 30" | | 1995-322 |
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/**<br>**Old Route 30 West Wooster, OH 44691** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | N-12 | Type S | 15", 18", 24", 30" | | 1995-322 |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/**<br>**Ludlow, MA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | N-12 | Type S | 15", 18", 24", 30" | | 1995-322 |

## Section 601: Pipe Culverts

### 601.2(a)6.c Thermoplastic Pipes - Group III

Last Revised: 5/17/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-4 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Buena Vista, VA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | N-12 | Type S | 15”, 18”, 24”, 30” | | 1995-322 |
| **ADS-8 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840**<br>***Formerly Hancor, Inc. (HANC0 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | Type S | 15”, 18”, 21”, 24”, 30” | | - |
| **ADS10 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ 1 William Donnelly Parkway Waverly, NY 14892**<br>***Formerly Hancor, Inc. (HANC1 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | Type S | 15”, 18”, 21”, 24” | | ----- |

## Section 601: Pipe Culverts

### 601.2(a)6.c Thermoplastic Pipes - Group III

Last Revised: 5/17/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | Poly Smooth-Line | | | | 2001-013Q |
| | High Density Polyethylene (HDPE) Pipe | Poly Smooth-Line | | | | 2001-014Q |
| | High Density Polyethylene (HDPE) Pipe | Solid Poly-Drain | | | | 2000-040Q |
| **DRAPR 15** | **Drainage Products, Inc., (Haviland Drainage Products), Main Street, Box 97, Haviland, OH 45851 http://haviland-drainage.com** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30” | | 2000-124Q |
| **JME-1 15** | **JM Eagle, 15661 Delano Road, Cochranton, PA 16314-0000 http://www.jmeagle.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | | Type S | 15" | | 2015-042QA |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18" | | 2015-042QB |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 24" | | 2015-042QC |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 30" | | 2015-042QD |

## Section 601: Pipe Culverts

### 601.2(a)6.c Thermoplastic Pipes - Group III

**Last Revised: 5/17/2018**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | | 15”, 18”, 21”, 24”, 30” | | 1996-190 |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 24" | | 1996-190 |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 18" | | 2016-068Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 24" | | 2016-195Q |
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | | Type S | 15”, 18”, 21”, 24” | | 2009-043Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 30" | | 2010-099Q |

### 601.2(a)6.d Thermoplastic Pipes - Group IV

**Last Revised: 1/11/2018**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

## Section 601: Pipe Culverts

### 601.2(a)6.d Thermoplastic Pipes - Group IV

Last Revised: 1/11/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 1995-322 |
| | High Density Polyethylene (HDPE) Pipe | | Type D | 42", 48" | | 1997-128 |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42" | | 2000-003Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 48" | | 2001-193Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 60" | | 2003-069Q |

## Section 601: Pipe Culverts

### 601.2(a)6.d Thermoplastic Pipes - Group IV

Last Revised: 1/11/2018

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 1995-322 |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42" | | 2000-003Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 48" | | 2001-193Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 60" | | 2003-069Q |
| | High Density Polyethylene (HDPE) Pipe | N-12 | Type D | 42", 48" | | 1997-128 |

## Section 601: Pipe Culverts

### 601.2(a)6.d Thermoplastic Pipes - Group IV

**Last Revised: 1/11/2018**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 1995-322 |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42" | | 2000-003Q |
| | High Density Polyethylene (HDPE) Pipe | N-12 | Type D | 42" | | 1997-128 |
| **ADS-8 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840** ***Formerly Hancor, Inc. (HANC0 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | | 36" | | ----- |
| | High Density Polyethylene (HDPE) Pipe | | | 54", 60" | | 1998-017 |
| | High Density Polyethylene (HDPE) Pipe | Sure-Lok Annular Corrugated, PE | | 42", 48" | | 1997-134 |

## Section 601: Pipe Culverts

### 601.2(a)6.d Thermoplastic Pipes - Group IV

**Last Revised: 1/11/2018**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS10 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/**<br>**1 William Donnelly Parkway Waverly, NY 14892**<br>***Formerly Hancor, Inc. (HANC1 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | | 36" | | ----- |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 54", 60" | | 1998-017 |
| | High Density Polyethylene (HDPE) Pipe | Sure-Lok Annular Corrugated, PE | | 42", 48" | | 1997-134 |
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 2003-050Q |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42", 48" | | 2010-035QAC |
| **DRAPR 15** | **Drainage Products, Inc., (Haviland Drainage Products), Main Street, Box 97, Haviland, OH 45851 http://haviland-drainage.com** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36", 42" | | 2000-124Q |

# Section 601: Pipe Culverts

## 601.2(a)6.d Thermoplastic Pipes - Group IV

**Last Revised: 1/11/2018**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

Type D: This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **JME-1 15** | **JM Eagle, 15661 Delano Road, Cochranton, PA 16314-0000 http://www.jmeagle.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 2015-043QA |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42" | | 2015-043QB |
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 1996-272 |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42", 48" | | 2004-047 |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 60" | | 2016-054Q |
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 36" | | 2010-100Q |

## 601.2(a)6.e Thermoplastic Pipes - Group V

**Last Revised: 6/12/2018**

Type C: This pipe shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

## Section 601: Pipe Culverts

### 601.2(a)6.e Thermoplastic Pipes - Group V

Last Revised: 6/12/2018

Type C: This pipe shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance only.* | | Type C | 15”, 18”, 21”, 24” | | 1995-332 |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | Type C | 15”, 18”, 24” | | 1995-322 |
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Old Route 30 West Wooster, OH 44691** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | Type C | 15”, 18”, 24” | | 1995-322 |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | Type C | 15”, 18”, 24” | | 1995-322 |

## Section 601: Pipe Culverts

### 601.2(a)6.e Thermoplastic Pipes - Group V

Last Revised: 6/12/2018

Type C: This pipe shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-4 15 Plant** | | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Buena Vista, VA** | | | | |
| | High Density Polyethylene (HDPE) Pipe *15" size pipe for maintenance use only.* | | Type C | 15”, 18”, 24” | | 1995-322 |
| **ADS-8 15 Plant** | | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840** ***Formerly Hancor, Inc. (HANC0 15)*** | | | | |
| | High Density Polyethylene (HDPE) Pipe *15" size pipe for maintenance use only.* | | | 15”, 18”, 21”, 24” | | ----- |
| **ADS10 15 Plant** | | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ 1 William Donnelly Parkway Waverly, NY 14892** ***Formerly Hancor, Inc. (HANC1 15)*** | | | | |
| | High Density Polyethylene (HDPE) Pipe *15" size pipe for maintenance use only.* | | | 15”, 18”, 21”, 24” | | ----- |

## Section 601: Pipe Culverts

### 601.2(a)6.e Thermoplastic Pipes - Group V

**Last Revised: 6/12/2018**

Type C: This pipe shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*15" size pipe for maintenance use only.* | | | 15”, 18”, 21”, 24” | | 2010-098Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type C | 24" | | 2016-086Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type C | 18" | | 2018-036Q |

### 601.2(a)6.f Thermoplastic Pipes - Group VI

**Last Revised: 4/17/2020**

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30”, 36”, 42”, 48”, 60” | 432-04-01 | ----- |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 24”, 30”, 36”, 42”, 48”, 60” | 432-04-01 | ----- |
| | High Density Polyethylene (HDPE) Pipe | N-12 Model No. 18850020IB | Type S | 18" | | 2015-039QA |

## Section 601: Pipe Culverts

### 601.2(a)6.f Thermoplastic Pipes - Group VI

Last Revised: 4/17/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | *Revised Profile* | | | | | |
| | High Density Polyethylene (HDPE) Pipe | N-12 Model No. 24850020IB | Type S | 24" | | 2013-064MA |
| | *Revised Profile* | | | | | |
| | Polypropylene (PP) Pipe | 36" HP Storm (3665 0020 IBPL) | Type S | 36" | | 2017-020Q |
| | Polypropylene (PP) Pipe | 42" HP Storm (4265 0020 IBPL) | Type S | 42" | | 2017-012Q |
| | Polypropylene (PP) Pipe | 48" HP Storm (4865 0020 IBPL) | Type S | 48" | | 2017-011Q |
| | Polypropylene (PP) Pipe | 60" HP Storm (6065 0020 IBPL) | Type S | 60" | | 2017-010Q |
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Old Route 30 West Wooster, OH 44691** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 24”, 30” | 432-04-01 | ----- |
| | Polypropylene (PP) Pipe | 18" HP Storm (1865 0020 IBPL) | Type S | 18" | | 2017-021Q |
| | Polypropylene (PP) Pipe | 24" HP Storm (2465 0020 IBPL) | Type S | 24" | | 2017-022Q |
| | Polypropylene (PP) Pipe | 30" HP Storm (3065 0020 IBPL) | Type S | 30" | | 2017-023Q |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 24”, 30”, 36”, 42” | 432-04-01 | ----- |

## Section 601: Pipe Culverts

### 601.2(a)6.f Thermoplastic Pipes - Group VI

Last Revised: 4/17/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-4 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Buena Vista, VA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 24”, 30” | 432-04-01 | ----- |
| **ADS-6 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Logan Township, NJ** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | N-12 Model Numbers 18850020IB & 24850020IB | Type S | 18", 24" | | 2011-143Q |
| **ADS-8 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840** ***Formerly Hancor, Inc. (HANC0 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30” | 432-04-01 | ----- |
| | Polypropylene (PP) Pipe | 18" HP Storm (1865 0020 IBPL) | Type S | 18" | | 2017-013Q |
| | Polypropylene (PP) Pipe | 21" HP Storm (2165 0020 IBPL) | Type S | 21" | | 2017-014Q |
| | Polypropylene (PP) Pipe | 24" HP Storm (2465 0020 IBPL) | Type S | 24" | | 2017-015Q |
| | Polypropylene (PP) Pipe | 36" HP Storm (3665 0020 IBPL) | Type S | 36" | | 2017-016Q |
| | Polypropylene (PP) Pipe | 42" HP Storm (4265 0020 IBPL) | Type S | 42" | | 2017-017Q |
| | Polypropylene (PP) Pipe | 48" HP Storm (4865 0020 IBPL) | Type S | 48" | | 2017-018Q |
| | Polypropylene (PP) Pipe | 60" HP Storm (6065 0020 IBPL) | Type S | 60" | | 2017-019Q |
| **ADS-9 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 39 Precision Drive North Springfield, VT** | | | | | |
| | Polypropylene (PP) Pipe | 18" HP Storm (1865 0020 IBPL) | Type S | 18" | | 2017-024Q |
| | Polypropylene (PP) Pipe | 24" HP Storm (2465 0020 IBPL) | Type S | 24" | | 2017-026Q |

## Section 601: Pipe Culverts

### 601.2(a)6.f Thermoplastic Pipes - Group VI

Last Revised: 4/17/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS10 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/**<br>**1 William Donnelly Parkway Waverly, NY 14892**<br>***Formerly Hancor, Inc. (HANC1 15)*** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30” | 432-04-01 | ----- |
| | Polypropylene (PP) Pipe | HP Storm (1865 0020 IBPL) | Type S | 18" | | 2019-002Q |
| | Polypropylene (PP) Pipe | HP Storm (2165 0020 IBPL) | Type S | 21" | | 2019-005Q |
| | Polypropylene (PP) Pipe | HP Storm (2465 0020 IBPL) | Type S | 24" | | 2019-003Q |
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18", 21", 24" | 432-04-01 | ----- |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 42" | | 2010-035QB |
| **DRAPR 15** | **Drainage Products, Inc., (Haviland Drainage Products), Main Street, Box 97, Haviland, OH 45851 http://haviland-drainage.com** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30”, 36”, 42”, 48” | 432-04-01 | ----- |
| **JME-1 15** | **JM Eagle, 15661 Delano Road, Cochranton, PA 16314-0000 http://www.jmeagle.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18" | | 2015-044QA |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 24" | | 2015-044QB |

# Section 601: Pipe Culverts

## 601.2(a)6.f Thermoplastic Pipes - Group VI

Last Revised: 4/17/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | | Type S | 18”, 21”, 24”, 30”, 36”, 42”, 48” | 432-04-01 | ----- |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 60" | | 2016-055Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 24" | | 2016-069Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 18" | | 2016-197Q |
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 18" | | 2014-057Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 24" | | 2014-058Q |

## 601.2(a)6.g Thermoplastic Pipes - Group VII

Last Revised: 8/20/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |

## Section 601: Pipe Culverts

### 601.2(a)6.g Thermoplastic Pipes - Group VII

Last Revised: 8/20/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | High Density Polyethylene (HDPE) Pipe<br>*Revised Profile - Provisionally Approved.* | N-12 MODEL NO. 18650020IB | Type S | 18" | | 2015-039QB |
| | High Density Polyethylene (HDPE) Pipe<br>*All sizes Provisionally Approved.* | N-12 Model No. XX650020IBC2 (XX = diameter) | Type S | 18”, 21”, 24”, 30”, 36”, 42”, 48”, 54”, 60” | | 2010-266Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 36" | | 2019-065Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 42" | | 2019-066Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 48" | | 2019-067Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 60" | | 2019-068Q |
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Old Route 30 West Wooster, OH 44691** | | | | | |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 18" | | 2019-062Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 24" | | 2019-063Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 30" | | 2019-064Q |
| **ADS-8 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840**<br>***Formerly Hancor, Inc. (HANC0 15)*** | | | | | |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 18" | | 2019-059Q |
| | Polypropylene (PP) Pipe | HP Storm | Type S | 24" | | 2019-061Q |

## Section 601: Pipe Culverts

### 601.2(a)6.g Thermoplastic Pipes - Group VII

Last Revised: 8/20/2020

Type S: This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **LANE6 15** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/** | | | | | |
| **Plant** | **Shippensburg, PA** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 30" | | 2014-251M |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 48" | | 2014-252M |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 42" | | 2014-253M |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 24" | | 2016-286Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 18" | | 2016-291Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 36" | | 2019-154Q |
| | High Density Polyethylene (HDPE) Pipe | HD100Gold | Type S | 60" | | 2016-198 |
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | | |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 18" | | 2014-220Q |
| | High Density Polyethylene (HDPE) Pipe | HD100 | Type S | 24" | | 2014-221Q |

## Section 601: Pipe Culverts

### 601.2(a)7 Steel Reinforced Polyethylene (SRPE) Pipe

Last Revised: 5/26/2020

| | Product | Name | Thermo Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **CON01 15** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/** | | | | | |
| **Plant** | **Montgomery, AL** | | | | | |
| | SRPE Pipe, Group I<br>*Provisionally Approved.* | DuroMaxx | | 30", 36", 42" | | 2017-166 |
| | SRPE Pipe, Group II<br>*Provisionally Approved.* | DuroMaxx | | 48", 54", 60", 66", 72" | | 2017-166 |
| | SRPE Pipe, Group III<br>*Provisionally Approved.* | DuroMaxx | | 84", 96", 108", 120" | | 2017-166 |

## Section 603: Metal Plate Culverts

### 603.2(a) Metal Plate Pipes, Metal Plate Pipe Arches, and Metal Plate Arches

Last Revised: 2/13/2020

Strike Off Letters (SOL) and Drawings for Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **CON06 15** | **Contech Engineered Solutions LLC, a QUIKRETE Company, 9025 Centre Pointe Drive, West Chester, OH 45069 http://www.conteches.com/** | | | |
| **Plant** | **700 Tech Drive Winchester, KY 40391** | | | |
| | Metal Plate Culvert (Fabricator) | Aluminum Plate Pipe | | 1994-246 |
| | *This material has been downgraded to provisional approval status until the manufacturer provides fill height tables to Bridge Design & Technology Division. Provisionally Approved* | | | |
| | Metal Plate Culvert (Fabricator) | Aluminum Structural Plate Box Culverts | 483-19-05 | 2013-224 |
| | Metal Plate Culvert (Fabricator) | Steel Structural Plate for Culverts | | ----- |
| | *Approval date of letter: 10/26/2007* | | | |
| **LANE3 15** | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | | | |
| | Metal Plate Culvert (Fabricator) | Aluminum Structural Plate Box Culverts | 431-12-09 | 2012-110 |
| | Metal Plate Culvert (Fabricator) | Aluminum Structural Plate for Culverts | | 2006-041Q |
| | *Provisionally Approved. This material has provisional approval status until the manufacturer provides fill height tables to Bridge Design & Technology Division.* | | | |
| | Metal Plate Culvert (Fabricator) | Steel Structural Plate for Culverts | | ----- |

## Section 604: Combination Storm Sewer and Underdrain

### 604.2(a)1 Nonmetal Pipes

Last Revised: 10/18/2018

Type CP: This pipe with perforations shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

Type SP: This pipe with perforations shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | AASHTO Pipe Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 36" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 42" | | 2000-002Q |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 48" | | 2001-194Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30", 36", 42", 48", 60" | 432-04-01 | ----- |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | 1995-322 |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 36" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 42" | | 2000-002Q |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 48" | | 2001-194Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 30", 36", 42", 48", 60" | 432-04-01 | ----- |
| | Group VIP Perforated Pipe (Polyethylene) *Revised Profile* | N-12 Model Number 24850020IB | Type SP | 24" | | 2013-064MB |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12" to 24" | | 1995-322 |

## Section 604: Combination Storm Sewer and Underdrain

### 604.2(a)1 Nonmetal Pipes

Last Revised: 10/18/2018

Type CP: This pipe with perforations shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

Type SP: This pipe with perforations shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | AASHTO Pipe Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Old Route 30 West Wooster, OH 44691** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 1995-322 |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30" | 432-04-01 | - |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | 1995-322 |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 36" | | 1995-322 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type S | 42" | | 2000-002Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30", 36", 42" | 432-04-01 | ----- |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | 1995-322 |
| **ADS-4 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Buena Vista, VA** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 1995-322 |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30" | 432-04-01 | ----- |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | 1995-322 |

## Section 604: Combination Storm Sewer and Underdrain

### 604.2(a)1 Nonmetal Pipes

Last Revised: 10/18/2018

Type CP: This pipe with perforations shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

Type SP: This pipe with perforations shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | AASHTO Pipe Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **ADS-8 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840** ***Formerly Hancor, Inc. (HANC0 15)*** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | ----- |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 36", 42", 48" | | 1998-016A, B |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30" | 432-04-01 | ----- |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | ----- |
| **ADS10 15 Plant** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/ 1 William Donnelly Parkway Waverly, NY 14892** ***Formerly Hancor, Inc. (HANC1 15)*** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24" | | ----- |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24" | 432-04-01 | ----- |
| | Group VP Perforated Pipe (Polyethylene) | | Type CP | 12", 15", 18", 24" | | ----- |
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 24", 30" | | 2001-015-016Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24" | 432-04-01 | ----- |
| **CON10 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Springfield, IL** | | | | | |
| | Group IP Perforated Pipe (Polyvinyl Chloride) | | Type SP | 12", 15", 18", 24", 36" | | 2000-327Q |

## Section 604: Combination Storm Sewer and Underdrain

### 604.2(a)1 Nonmetal Pipes

Last Revised: 10/18/2018

Type CP: This pipe with perforations shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

Type SP: This pipe with perforations shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | AASHTO Pipe Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **DRAPR 15** | **Drainage Products, Inc., (Haviland Drainage Products), Main Street, Box 97, Haviland, OH 45851 http://haviland-drainage.com** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 18", 24", 30" | | 2000-125Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 18", 24", 30", 36", 42", 48" | 432-04-01 | ----- |
| **HYDR2 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 800 Industrial Drive, Middletown, DE 19709 http://www.rinkerpipe.com/** | | | | | |
| | Reinforced Concrete (RC) Pipe | Elliptical | | 14"x23" to 58"x91" | | 2013-104Q |
| | Reinforced Concrete (RC) Pipe | Round | | 12" to 84" | | 2013-104Q |
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | | Type SP | 12", 15", 30" | | 1997-182 |
| | Group IIIP Perforated Pipe (Polyethylene) | HD100 | Type SP | 18" | | 2016-194Q |
| | Group IIIP Perforated Pipe (Polyethylene) | HD100 | Type SP | 24" | | 2016-305Q |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 36" | | 1997-182 |
| | Group IVP Perforated Pipe (Polyethylene) | | Type SP | 42", 48" | | 2004-048 |
| | Group IVP Perforated Pipe (Polyethylene) | HD100 | Type SP | 60" | | 2016-307Q |
| | Group VIP Perforated Pipe (Polyethylene) | | Type SP | 30", 36", 42", 48" | 432-04-01 | ----- |
| | Group VIP Perforated Pipe (Polyethylene) | HD100 | Type SP | 18" | | 2016-196Q |
| | Group VIP Perforated Pipe (Polyethylene) | HD100 | Type SP | 24" | | 2016-306 |
| | Group VIP Perforated Pipe (Polyethylene) | HD100 | Type SP | 60" | | 2016-308 |

## Section 604: Combination Storm Sewer and Underdrain

### 604.2(a)1 Nonmetal Pipes

Last Revised: 10/18/2018

Type CP: This pipe with perforations shall have a full circular cross section, with a corrugated surface both inside and outside. Corrugations may be either annular or helical.

Type SP: This pipe with perforations shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.

| | Product | Name | AASHTO Pipe Type | Pipe Size | SOL | Ref. No. |
|---|---|---|---|---|---|---|
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | | |
| | Group IIIP Perforated Pipe (Polyethylene) | HD100 Pipe, Type SP, 15" | Type SP | 15" | | 2014-254Q |
| | Group IIIP Perforated Pipe (Polyethylene) | HD100 Pipe, Type SP, 18" | Type SP | 18" | | 2014-255Q |
| | Group IIIP Perforated Pipe (Polyethylene) | HD100 Pipe, Type SP, 24" | Type SP | 24" | | 2014-256Q |
| | Group VIP Perforated Pipe (Polyethylene) | HD100 Pipe, Type SP, 18" | Type SP | 18" | | 2014-259Q |
| | Group VIP Perforated Pipe (Polyethylene) | HD100 Pipe, Type SP, 24" | Type SP | 24" | | 2014-260Q |
| **OLDP1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 1900 Pennsylvania Ave., Croydon, PA 19021 http://www.oldcastleprecast.com/Pages/default.aspx** | | | | | |
| | Reinforced Concrete (RC) Pipe | | | 12" to 48" | | 2013-086Q |
| **PWEGL 15** | **JM Eagle, 1742 E. Platteville Blvd., Pueblo West, CO 81007 http://www.jmeagle.com/** ***Formerly PW Eagle*** | | | | | |
| | Group IP Perforated Pipe (Polyethylene) | | Type SP | 15", 18", 24", 30", 36" | | 2000-194Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **AMEHP 15** | **American Highway Products, Ltd., 11723 Strasburg Bolivar Road NW, Bolivar, OH 44612 http://www.ahp1.com/index.php** | | | |
| | Grade Adjustment Riser - Structural Steel | Type 1 or 2: RC45M | | 2014-222Q |
| **BERMF 15** | **Bear Ridge Machine & Fabrication, Inc., 10 Eleanor Avenue, Frackville, PA 17931 http://brmf.net/** | | | |
| | Grade Adjustment Riser - Structural Steel | Type 1 or 2: RC45M | | 2002-113Q |
| | Grate - Welded Steel | | | 2002-113Q |
| | Grate - Welded Steel Bicycle Safe | | | 2002-113Q |
| **BREWF 15** | **S. R. Bressler Welding & Fabrication, 558 Lake Drive, Curwensville, PA 16833 http://www.srbressler.com/** | | | |
| | 2'x4' Type S Top | | | 2013-119QI |
| | Frame - Welded Steel Inlet | | | 2013-119QF |
| | Frame - Welded Steel Inlet Angle | | | 2013-119QH |
| | Grade Adjustment Riser - Structural Steel | Type 1 or 2: RC45M | | 2013-119QG |
| | Grate - Type D-H Steel | | | 2013-119QD |
| | Grate - Welded Steel | | | 2013-119QA |
| | Grate - Welded Steel Bicycle Safe | | | 2013-119QB |
| | Vane Grate - Welded Steel | | | 2013-119QE |
| | *May be used outside of the travel lanes, at the edge of outside shoulders, swales, wide median swales, and infield areas. Not approved for HS-25 loading.* | | | |
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | | |
| | Anti-Vortex Device | | | 2019-082Q |
| | Trash Rack | | | 2019-082Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **EJI-0 15** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/** | | | |
| **Facility** | **East Jordan Foundry 2675 North U.S. 131 Elmira, MI 49730** | | | |
| | Frame - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5355Z 3 1/4" Tall Catch Basin Frame (Type M: 535511, Type C: 535513) | | 2008-113Q |
| | Frame - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5356Z 8" Tall Catch Basin Frame, 3 Flanges, Along Curb, Type C (535611) | | 2008-113Q |
| | Frame - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5356Z 8' Tall Catch Basin Frame, 4 Flanges, Type M (535613) | | 2008-113Q |
| | Frame - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5357ZPT 10 1/8" Tall Catch Basin Frame, Bolting with 3 Flanges, Along Curb (535713) | | 2008-113Q |
| | Frame - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5357ZPT 10-1/8" Tall Catch Basin Frame, Bolting with 4 Flanges, Type M (535711) | | 2008-113Q |
| | Grate - Cast Iron, HS25 Loading | 5355M4 Diagonal Two Piece Grate (535541) | | - |
| | Grate - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5355M5 Two Piece Vane Grate (535544, 535545) | | 1986-011 |
| | Grate - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5355M6 ADA Style Two Piece Grate (535548, 535549) | | 1986-011 |
| | Grate - Cast Iron, HS25 Loading<br>* *Approved MM-USA marking as Identifiable Steel* | 5355M8 One Piece Bicycle Safe Grate (535570, 535571) | | 2008-113Q |
| | Grate - Cast Iron, HS25 Loading | 5535M1 Diagonal One Piece Grate (535531) | | - |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **EJI-3 15** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/** | | | |
| **Facility** | **Syracuse Fabrication 132 County Route 59 Phoenix, NY 13135** | | | |
| | Frame - Welded Steel Inlet | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Frame - Welded Steel Inlet Angle | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Grade Adjustment Riser - Structural Steel | Type 1 or 2: RC45M | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Grate - Type D-H Steel | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Grate - Welded Steel | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Grate - Welded Steel Bicycle Safe | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Welded Rebar Cage (Type S Inlet Top) | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Welded Rebar Cage (Type C Inlet Top) | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Welded Rebar Cage (Type C-Alt Inlet Top) | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Welded Rebar Cage (Type DH Inlet Top) | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |
| | Welded Rebar Cage (Type M Inlet Top) | | | ----- |
| | * *Approved MM-USA marking as Identifiable Steel* | | | |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **EJI-4 15** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/** | | | |
| **Facility** | **St Clair Fabrication 300 Wade Road, Suite A St. Clair, PA 17970** | | | |
| | ***Formerly QUIRN*** | | | |
| | Frame - Welded Steel Inlet | | | 2013-177AC |
| | Frame - Welded Steel Inlet Angle | | | ----- |
| | Grate - Type D-H Steel | | | ----- |
| | Grate - Welded Steel | | | ----- |
| | Grate - Welded Steel Bicycle Safe | | | ----- |
| | Welded Rebar Cage (Type S Inlet Top) | | | 2013-176QC |
| | Welded Rebar Cage (Type C Inlet Top) | | | 2013-176QA |
| | Welded Rebar Cage (Type C-Alt Inlet Top) | | | 2013-176QA |
| | Welded Rebar Cage (Type M Inlet Top) | | | 2013-176QB |
| **JERDW 15** | **Jerdon Welding, 409 Wiconisco Street, P.O. Box 322, Wiconisco, PA 17097** | | | |
| | Frame - Welded Steel Inlet | | | 2001-041Q |
| | Grade Adjustment Riser - Structural Steel | Types 1 or 2: RC45M | | 2001-041Q |
| **LANE2 15** | **Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/** | | | |
| | Anti-Vortex Device | | | 2002-050Q |
| | Trash Rack | | | 2002-050Q |
| **LANE3 15** | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | | | |
| | Anti-Vortex Device | | | 2002-049Q |
| | Trash Rack | | | 2002-049Q |
| **LANE4 15** | **Lane Enterprises, Inc, 377 Crooked Lane, King of Prussia, PA 19406 http://www.lane-enterprises.com/** | | | |
| | Anti-Vortex Device | | | 2002-068Q |
| | Trash Rack | | | 2002-068Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LCG-1 15 Plant** | **Laurel Custom Grating, LLC - An MLP Company, 18 Mount Pleasant Road, Scottdale, PA 15683 https://laurelcustomgrating.com/ 800 Brown Street Everson, PA 15631** ***Formerly listed as MLP Steel, LLC (MLP-1 15)*** | | | |
| | Frame - Welded Steel Inlet | | | 1987-416 |
| | Frame - Welded Steel Inlet Angle | | | 1987-416 |
| | Grade Adjustment Riser - Structural Steel | Types 1 or 2: RC-45M | | 1987-416 |
| | Grate - Type D-H Steel | | | 1987-416 |
| | Grate - Welded Steel | | | 1987-416 |
| | Grate - Welded Steel Bicycle Safe | | | 1987-416 |
| | Vane Grate - Welded Steel | | | 1987-416 |
| | *May be used outside of the travel lanes, at the edge of outside shoulders, swales, wide median swales, and infield areas. Not approved for HS-25 loading.* | | | |
| **MANWF_15** | **Mann Welding & Fabrication LLC, 2755 Schukraft Road, Quakertown, PA 18951** | | | |
| | Anti-Vortex Device | | | 2014-061Q |
| | Trash Rack | | | 2014-061Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| Product | Name | Letter Date | Ref. No. |
|---|---|---|---|
| **MCCAR 15** | **McCarroll Precast, Inc., 1129 Old 115, Dallas, PA 18612** | | |
| Frame - Welded Steel Inlet | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Grade Adjustment Riser - Structural Steel | Types 1 or 2: RC45M | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Welded Rebar Cage (Type S Inlet Top) | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Welded Rebar Cage (Type C Inlet Top) | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Welded Rebar Cage (Type C-Alt Inlet Top) | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Welded Rebar Cage (Type DH Inlet Top) | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |
| Welded Rebar Cage (Type M Inlet Top) | | 10/15/1996 | ----- |
| *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | | |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **MILES 15** | **Miles Foundry, 301 Bedford Street, Clarks Summit, PA 18411** | | | |
| | Frame - Welded Steel Inlet | | | ----- |
| | Grade Adjustment Riser - Structural Steel | Types 1 or 2: RC45M | | ----- |
| | Grate - Type D-H Steel | | | ----- |
| | Grate - Welded Steel | | | ----- |
| | Grate - Welded Steel Bicycle Safe | | | ----- |
| | Grate and Frame - Cast Iron, HS20 Loading | | | ----- |
| | *Use outside of travel lanes only.* | | | |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | | | |
| | Anti-Vortex Device | | | 2017-058Q |
| | Frame - Welded Steel Inlet | | 7/11/1983 | ----- |
| | Frame - Welded Steel Inlet Angle | | 7/11/1983 | ----- |
| | Grade Adjustment Riser - Structural Steel | Types 1 or 2: RC45M | 7/11/1983 | ----- |
| | Grate - Type D-H Steel | | 7/11/1983 | ----- |
| | Grate - Welded Steel | | 7/11/1983 | ----- |
| | Grate - Welded Steel Bicycle Safe | | 7/11/1983 | ----- |
| | Trash Rack | | | 2017-058Q |
| | Vane Grate - Welded Steel | | 7/11/1983 | ----- |
| | *May be used outside of the travel lanes, at the edge of outside shoulders, swales, wide median swales, and infield areas. Not approved for HS-25 loading. **Morgan's Welding Structural Steel Vane Grate PennDOT Approved Drawing*** | | | |
| | Welded Rebar Cage (Type S Inlet Top) | | 7/11/1983 | ----- |
| | Welded Rebar Cage (Type C Inlet Top) | | 7/11/1983 | ----- |
| | Welded Rebar Cage (Type C-Alt Inlet Top) | | 7/11/1983 | ----- |
| | Welded Rebar Cage (Type DH Inlet Top) | | 7/11/1983 | ----- |
| | Welded Rebar Cage (Type M Inlet Top) | | 7/11/1983 | ----- |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **NEENA 15** | **Neenah Foundry Company, Box 729, 2121 Brooks Ave., Neenah, WI 54956 http://www.nfco.com/** | | | |
| | Grade Adjustment Riser - Structural Steel | Grate #3573-0007, Type Q, Type 1 or 2: RC45M | | 1996-273 |
| | Grade Adjustment Riser - Structural Steel | Grate #3573-3000, Type L, Type 1 or 2: RC45M | | 1998-010 |
| | Grate - Welded Steel Bicycle Safe | Grate #3573-0007, Type Q | | 1996-273 |
| | Grate - Welded Steel Bicycle Safe | Grate #3573-3000, Type L | | 1998-010 |
| | Grate and Frame - ADA Acceptable | Grate #3573-0007, Type Q | | 1996-273 |
| | Grate and Frame - Cast Iron, HS20 Loading<br>*Use outside of travel lanes only.*<br>*Provides HS25 Grate* | | | ----- |
| | Grate and Frame - Cast Iron, HS25 Loading | Frame #3573-2000, Type C | | 1996-188 |
| | Grate and Frame - Cast Iron, HS25 Loading | Frame #3574-2000, Type M | | 1996-189 |
| | Grate and Frame - Cast Iron, HS25 Loading | Grate #3573-0002 | | 1996-187 |
| | Grate and Frame - Cast Iron, HS25 Loading | Grate #3573-0007, Type Q | | 1996-273 |
| | Grate and Frame - Cast Iron, HS25 Loading | Grate #3573-0008 | | 1996-274 |
| | Grate and Frame - Cast Iron, HS25 Loading | Grate #3573-3000, Type L | | 1998-010 |
| **STAAR 15** | **STAAR Distributing, LLC, 560 Myrtle Street, Reynoldsville, PA 15851 http://www.staardistributing.com/** | | | |
| **Facility** | **130A Satterlee Road DuBois, PA 15801** | | | |
| | Frame - Type C, Welded Structural Steel | | | 2016-012Q |
| | Frame - Type M, Welded Structural Steel | | | 2016-013Q |
| | Grate - Type D-H Steel | | | 2016-011Q |
| | Grate - Welded Steel | | | 2016-009Q |
| | Grate - Welded Steel Bicycle Safe | | | 2016-010Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Inlet Grates and Frames

Last Revised: 9/14/2020

Steel Products Procurement Act Applies Standard Drawing RC-45M (Publication 72M)

Trash Racks and Anti-Vortex Devices per Standard Drawing RC-71M (Publication 72M)

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **TDFSV 15** | **TDF Services, Inc., P.O. Box 111, Oakmont, PA 15139** | | | |
| | Frame - Welded Steel Inlet | | | 2000-005Q |
| | Grade Adjustment Riser - Structural Steel<br>*Types 1 or 2: RC45M* | | | 2000-005Q |
| | Grate - Welded Steel | | | 2000-005Q |
| | Grate - Welded Steel Bicycle Safe | | | 2000-005Q |
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | | | |
| | Frame - Welded Steel Inlet<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type C: RC-45M | | 2018-258Q |
| | Frame - Welded Steel Inlet<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type M: RC-45M | | 2018-259Q |
| | Frame - Welded Steel Inlet Angle<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type C Light Angle: RC-45M | | 2018-250Q |
| | Frame - Welded Steel Inlet Angle<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type DH Level: RC-45M | | 2018-251Q |
| | Frame - Welded Steel Inlet Angle<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type DH Sloped: RC-45 | | 2018-252Q |
| | Frame - Welded Steel Inlet Angle<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type M Light Angle: RC-45M | | 2018-249Q |
| | Frame - Welded Steel Inlet Angle<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type S Light Angle: RC-45M | | 2018-253Q |
| | Grade Adjustment Riser - Structural Steel<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type 1: RC-45M | | 2018-211Q |
| | Grade Adjustment Riser - Structural Steel<br>* ***Approved MM-USA marking as Identifiable Steel*** | Type 2: RC-45M | | 2018-212Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Junction Box Frames

Last Revised: 2/26/2019

Steel Products Procurement Act Applies.

JB-1 & JB-2, Light Duty (For locations with pedestrian type loadings only): Standard Drawing RC-81M (Publication 72M)

JB-11 & JB-12, Heavy Duty: Standard Drawing RC-82M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FADD5 15** | **Faddis Concrete Products, 2206 Horseshoe Pike, Honey Brook, PA 19344 http://www.faddis.com/** | | |
| **Facility** | **210 Hinterleiter Road Kutztown, PA 19530** | | |
| | JB-1 Frame | | 2015-194Q |
| | JB-11 Frame | | 2015-196Q |
| | JB-12 Frame | | 2015-197Q |
| | JB-2 Frame | | 2015-195Q |
| **FISHW 15** | **Fisher Welding & Fabrication, 923 Deturksville Road, P.O. Box 28, Pine Grove, PA 17963 https://fisher-welding-fabricating.hub.biz/** | | |
| | JB-1 Frame | | 1993-213 |
| | JB-11 Frame | | 1993-213 |
| | JB-12 Frame | | 1993-213 |
| | JB-2 Frame | | 1993-213 |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | | |
| | JB-1 Frame | | ----- |
| | JB-11 Frame | | ----- |
| | JB-12 Frame | | ----- |
| | JB-2 Frame | | ----- |
| **PEIWF 15** | **Peirce Welding & Fabricating, 170 Airport Rd., P.O. Box 369, Bethel, PA 19507** | | |
| | JB-1 Frame | | 2001-190Q |
| | JB-11 Frame | | 2001-190Q |
| | JB-12 Frame | | 2001-190Q |
| | JB-2 Frame | | 2001-190Q |

# Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

## 605.2(a) Junction Box Frames

Last Revised: 2/26/2019

Steel Products Procurement Act Applies.

JB-1 & JB-2, Light Duty (For locations with pedestrian type loadings only): Standard Drawing RC-81M (Publication 72M)

JB-11 & JB-12, Heavy Duty: Standard Drawing RC-82M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | | |
| | JB-1 Frame<br>* *Approved MM-USA marking as Identifiable Steel* | | 2018-254Q |
| | JB-11 Frame<br>* *Approved MM-USA marking as Identifiable Steel* | | 2018-256Q |
| | JB-12 Frame<br>* *Approved MM-USA marking as Identifiable Steel* | | 2018-257Q |
| | JB-2 Frame<br>* *Approved MM-USA marking as Identifiable Steel* | | 2018-255Q |

## 605.2(a) Junction Boxes, Steel or Cast Iron

Last Revised: 11/28/2017

Steel Products Procurement Act Applies. JB-25 for underbridge lighting: Standard Drawing BC-721M (Publication 219M)

For JB-26 & JB-27: Standard Drawing TC-8804 - Electrical Distribution (Publication 148)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FISHW 15** | **Fisher Welding & Fabrication, 923 Deturksville Road, P.O. Box 28, Pine Grove, PA 17963 https://fisher-welding-fabricating.hub.biz/** | | |
| | JB-25, Welded Steel Plate Junction Box | | 1993-213 |
| | JB-26, Steel Junction Box | | 1993-213 |
| | JB-27, Steel Junction Box | | 1993-213 |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(a) Junction Boxes, Steel or Cast Iron

Last Revised: 11/28/2017

Steel Products Procurement Act Applies. JB-25 for underbridge lighting: Standard Drawing BC-721M (Publication 219M)

For JB-26 & JB-27: Standard Drawing TC-8804 - Electrical Distribution (Publication 148)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HOPE1 15** | **Hope Electrical Products Co., Inc, 3 Fairfield Crescent, West Caldwell, NJ 07006** | | |
| | JB-25, Cast Iron Junction Box | H62-180808SC, Type H6200 - Internal Recessed Flanged Box | 2016-089Q |
| | JB-26, Cast Iron Junction Box | H70-121212SC, Type H7000 - Flanged Recessed Cover Box | 2016-088Q |
| | JB-27, Cast Iron Junction Box | H70-181224SC, Type H7000 - Flanged Recessed Cover Box | 2016-090Q |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | | |
| | JB-25, Welded Steel Plate Junction Box | | ----- |
| | JB-26, Steel Junction Box | | ----- |
| | JB-27, Steel Junction Box | | ----- |
| **PEIWF 15** | **Peirce Welding & Fabricating, 170 Airport Rd., P.O. Box 369, Bethel, PA 19507** | | |
| | JB-25, Welded Steel Plate Junction Box | | 2001-191Q |
| | JB-26, Steel Junction Box | | 2001-191Q |
| | JB-27, Steel Junction Box | | 2001-191Q |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | JB-25, Welded Steel Plate Junction Box | | 2013-013QA |
| | JB-26, Steel Junction Box | | 2013-013QA |
| | JB-27, Steel Junction Box | | 2013-013QB |
| **UTILT 15** | **Utility Metals, P.O. Box 9054, Louisville, KY 40209-0054 http://utilitymetals.com/** | | |
| | JB-25, Welded Steel Plate Junction Box | | 2001-179Q |
| | JB-26, Steel Junction Box | | 1992-223A |
| | JB-27, Steel Junction Box | | 1992-223B |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(b) Manhole Frames and Covers

Last Revised: 3/11/2020

Steel Products Procurement Act Applies Standard Drawing RC-39M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EJI-0 15 Facility** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**East Jordan Foundry 2675 North U.S. 131 Elmira, MI 49730** | | |
| | Cast Iron Hood<br>*For use with Type C 3 Flange Frames, Dump no Waste!, PennDOT Type C*<br>***Approved MM-USA marking as Identifiable Steel*** | 5357T1 Non-mountable, Non-Adjustable Curb Inlet Hood (535750) | 2008-113Q |
| | Cast Iron Manhole Cover | 1892A Solid Cover PennDOT RC-39 Standard (189221) | 2008-113Q |
| | Cast Iron Manhole Cover<br>* ***Approved MM-USA marking as Identifiable Steel*** | 1892A Solid Cover Storm, PennDOT RC-39 Standard (189224) | 2008-113Q |
| | Cast Iron Manhole Cover<br>* ***Approved MM-USA marking as Identifiable Steel*** | 1892AGS Solid Cover with Gasket (189223) | 2008-113Q |
| | Cast Iron Manhole Frame<br>* ***Approved MM-USA marking as Identifiable Steel*** | 1892Z 4" Tall Frame with 4 Base Flange Holes (189211) | 2008-113Q |
| | Cast Iron Manhole Frame<br>*Approved as an alternate. Shall be installed and used per* ***SELFLEVEL Access Assembly Installation Use and Guidelines for PennDOT*** | SELFLEVEL | 2017-261Q |
| | Manhole Frame and Cover | | 1986-011 |
| **EJI-1 15 Facility** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**Youngstown Fabrication 4150 Simon Road Youngstown, OH 44512**<br>***Formerly E. A. Quirn (QUIRN)*** | | |
| | Manhole Frame and Cover | | ----- |
| **EJI-5 15 Facility** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**Ardmore Foundry 270 Redwing Road Ardmore, OK 73401** | | |
| | Cast Iron Manhole Frame<br>*Approved as an alternate. Shall be installed and used per* ***SELFLEVEL Access Assembly Installation Use and Guidelines for PennDOT*** | SELFLEVEL | 2017-269Q |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(b) Manhole Frames and Covers

Last Revised: 3/11/2020

Steel Products Procurement Act Applies Standard Drawing RC-39M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NEENA 15** | **Neenah Foundry Company, Box 729, 2121 Brooks Ave., Neenah, WI 54956 http://www.nfco.com/** | | |
| | Manhole Frame and Cover | | 1986-100 |
| **USF-1 15** | **US Foundry, 8351 NW 93rd Street, Medley, FL 33166 http://www.usfoundry.com/usfoundry/** | | |
| | Cast Iron Manhole Cover | USF NC Cover | 2018-086Q |
| | Cast Iron Manhole Cover | USF RH Cover | 2018-087Q |
| | Cast Iron Manhole Frame | USF 755 Ring | 2018-085Q |

### 605.2(c) Manhole Steps

Last Revised: 2/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASTEP 15** | **American Step Company, Inc., 830 East Broadway, P. O. Box 137, Griffin, GA 30224-0137 http://www.americanstep.com/** | | |
| | Manhole Step | Model I-11 | 1996-095 |
| | Manhole Step | Model I-11 NCR | 1998-093A |
| | Manhole Step | Model I-13 | 1996-095 |
| | Manhole Step | Model LML-11 | 1996-095 |
| | Manhole Step | Model LML-11 NCR | 1998-093A |
| | Manhole Step | Model LML-13 | 1996-095 |
| | Manhole Step | Model LML-13 NCR | 1998-093A |
| | Manhole Step | Model ML-10 | 1996-095 |
| | Manhole Step | Model ML-10 NCR | 1998-093A |
| | Manhole Step | Model ML-11 | 1996-095 |
| | Manhole Step | Model ML-11 NCR | 1998-093B |
| | Manhole Step | Model ML-13 | 1996-095 |
| | Manhole Step | Model ML-13 NCR | 1998-093A |
| | Manhole Step | Model MSN-10 | 1996-095 |
| | Manhole Step | Model MSN-13 | 1996-095 |
| | Manhole Step | Model SML-13 | 1996-095 |

# Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

## 605.2(c) Manhole Steps

Last Revised: 2/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASTEP 15** | **American Step Company, Inc., 830 East Broadway, P. O. Box 137, Griffin, GA 30224-0137 http://www.americanstep.com/** | | |
| | Manhole Step | Model SML-13 NCR | 1998-093B |
| **BOWCN 15** | **Bowco Industries, Inc., 155 S. Hazel Dell Way, Canby, OR 97013** | | |
| | Manhole Step | Bowco Model 93810 (PP coated, orange) | 1988-242 |
| | Manhole Step | Bowco Model 93813 | 1993-059 |
| | Manhole Step | Bowco Model 93813-TL | 1993-059 |
| **LANEC 15** | **Lane International Corporation, 10758 S.W. Manhasset Drive, P. O. Box 925, Tualatin, OR 97062** | | |
| | Manhole Step | 10" Model P-10938 | 1992-026 |
| | Manhole Step | 14" Model P-14850 | 1992-026 |
| **MAIND 15** | **M A Industries, Inc., Kelley & Dividend Drive, P. O. Box 2322, Peachtree City, GA 30269 http://maind.com/** | | |
| | Manhole Step | Plastic Coated Manhole Step | ----- |
| **PAINS 15** | **Pennsylvania Insert Corporation, P. O. Box 199, Bridge Street, Spring City, PA 19475 http://www.pennsylvaniainsert.com/** | | |
| | Manhole Step | Model 10-R | 1993-246 |
| | Manhole Step | Model 10-S | 1993-246 |
| | Manhole Step | Model 11-R | 1993-246 |
| | Manhole Step | Model 11-S | 1993-246 |
| | Manhole Step | Model 13-R | 1993-246 |
| | Manhole Step | Model 13-S | 1993-246 |

## 605.2(d) Endwall Form (Polyethylene Stay-in-Place Form)

Last Revised: 1/13/2020

Approved product alternative to Section 605.2(d), for cast-in-place endwalls and precast endwalls, as listed in Section 714.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **STEP2 15** | **Hartman Products, P.O. Box 7702, Pittsburgh, PA 15215 https://hartmanendwalls.site/wp-content/uploads/2018/09/PA_State_specs.pdf** | | |
| **Facility** | **Step 2 Company 10010 Aurora-Hudson Road Streetsboro, OH 44241** | | |

## Section 605: Endwalls, Inlets, Manholes, and Spring Boxes

### 605.2(d) Endwall Form (Polyethylene Stay-in-Place Form)

Last Revised: 1/13/2020

Approved product alternative to Section 605.2(d), for cast-in-place endwalls and precast endwalls, as listed in Section 714.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **STEP2 15 Facility** | **Hartman Products, P.O. Box 7702, Pittsburgh, PA 15215 https://hartmanendwalls.site/wp-content/uploads/2018/09/PA_State_specs.pdf Step 2 Company 10010 Aurora-Hudson Road Streetsboro, OH 44241** | | |
| | Endwall Form (Approved Product Alternative for Type D-W Endwall) | Hartman EW System | 2001-160 |
| | *The alternate "Hartman EW System for Endwalls" is Provisionally Approved under ECMS Provisional Special Provision c06052 ITEM 9605-2300 (ITEM 9605-0300) Endwall Stay-In-Place Form Systems.* | | |

## Section 606: Grade Adjustment of Existing Misc. Structures

### 606.2(a) Manhole and Inlet Extensions

Last Revised: 8/15/2019

Steel Products Procurement Act applies.

Inlet Extensions also are listed in Section 605.2(a) as Structural Steel Grade Adjustable Riser (Types 1 or 2: RC 45M)

For Standard Drawings of Precast Concrete and Structural Steel Grade Adjustment Rings/Risers, see RC-39M

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **AMEHP 15** | **American Highway Products, Ltd., 11723 Strasburg Bolivar Road NW, Bolivar, OH 44612 http://www.ahp1.com/index.php** | | | |
| | Utility Hole Adjustable Extension Ring | | | 1979-010 |
| **EJI-1 15 Facility** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**Youngstown Fabrication 4150 Simon Road Youngstown, OH 44512**<br>***Formerly E. A. Quirn (QUIRN)*** | | | |
| | Inlet Extension<br>* ***Approved MM-USA marking as Identifiable Steel*** | | 7/3/1995 | ----- |
| | Utility Hole Adjustable Extension Ring<br>* ***Approved MM-USA marking as Identifiable Steel*** | | | 1988-341 |
| **EJI-2 15 Plant** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**3331 Co Road 160 Millersburg, OH 44654** | | | |
| | Approved Product Alternatives | Recycled Rubber Grade Adjustment Ring | | 1999-154 |
| | *Alternate Manhole Extension Designs are Provisionally Approved under:*<br>*HIGH DENSITY POLYETHYLENE MANHOLE (Utility Hole) EXTENSIONS CMS Special Provision S00(PD06051A) and ECMS Special Provision P-C06051-A.*<br>*RECYCLED RUBBER MANHOLE (Utility Hole) AND INLET EXTENSIONS CMS Special Provision S00(PD06061A) and ECMS Special Provision P-C06061-A.* | | | |
| **JERDW 15** | **Jerdon Welding, 409 Wiconisco Street, P.O. Box 322, Wiconisco, PA 17097** | | | |
| | Inlet Extension | | | 2001-041Q |
| | Utility Hole Adjustable Extension Ring | | | 2001-041Q |

## Section 606: Grade Adjustment of Existing Misc. Structures

### 606.2(a) Manhole and Inlet Extensions

Last Revised: 8/15/2019

Steel Products Procurement Act applies.

Inlet Extensions also are listed in Section 605.2(a) as Structural Steel Grade Adjustable Riser (Types 1 or 2: RC 45M)

For Standard Drawings of Precast Concrete and Structural Steel Grade Adjustment Rings/Risers, see RC-39M

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **JSPIN 15** | **JSP International, LLC, 1285 Drummers Lane, Suite 301, Wayne, PA 19087 http://www.jsp.com/** | | | |
| **Facility** | **1285 Drummers Lane, Suite 301 Wayne, PA 19087** | | | |
| | Approved Product Alternatives<br>*Cross-Linked Expanded Polyethylene*<br>*Conditional Approval* | Pro-Ring 36 Series Manhole Ring | | 2014-031 |
| | Approved Product Alternatives<br>*Cross-Linked Expanded Polyethylene*<br>*Conditional Approval* | Pro-Ring 40 Series Manhole Ring | | 2014-031 |
| **LADTC 15** | **Ladtech, Inc., 6704 Meadowlark Court, Lino Lakes, MN 55038 http://ladtech.com/** | | | |
| | Approved Product Alternatives | HDPE Grade Adjustment Ring | | 1999-008 |
| | *Alternate Utility Hole Extension Designs are Provisionally Approved under:*<br>*HIGH DENSITY POLYETHYLENE MANHOLE (Utility Hole) EXTENSIONS CMS Special Provision S00(PD06051A) and ECMS Special Provision P-C06051-A.*<br>*RECYCLED RUBBER MANHOLE (Utility Hole) AND INLET EXTENSIONS CMS Special Provision S00(PD06061A) and ECMS Special Provision P-C06061-A.* | | | |
| **LCG-1 15** | **Laurel Custom Grating, LLC - An MLP Company, 18 Mount Pleasant Road, Scottdale, PA 15683 https://laurelcustomgrating.com/** | | | |
| **Plant** | **800 Brown Street Everson, PA 15631**<br>***Formerly listed as MLP Steel, LLC (MLP-1 15)*** | | | |
| | Inlet Extension | | | 1987-146 |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | | | |
| | Inlet Extension | | | ----- |
| | Utility Hole Adjustable Extension Ring | | | ----- |
| **ROSST 15** | **Ross Technology Corporation, 104 North Maple Avenue, P.O. Box 646, Leola, PA 17540 http://www.rosstechnology.com/** | | | |
| | Inlet Extension | | | 1982-083 |
| | Utility Hole Adjustable Extension Ring | | | 1982-084 |

## Section 606: Grade Adjustment of Existing Misc. Structures

### 606.2(a) Manhole and Inlet Extensions

Last Revised: 8/15/2019

Steel Products Procurement Act applies.

Inlet Extensions also are listed in Section 605.2(a) as Structural Steel Grade Adjustable Riser (Types 1 or 2: RC 45M)

For Standard Drawings of Precast Concrete and Structural Steel Grade Adjustment Rings/Risers, see RC-39M

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **THOMA 15** | **J. Thomas, Ltd., 300 Richardson Drive, Lancaster, PA 17603 http://www.jthomaslimited.com** | | | |
| | Catch Basin | | | 1982-100 |
| | Utility Hole Adjustable Extension Ring | | | 1982-101 |
| **UNDTE 15** | **Underground Technologies, LLC, 2546 Elliot Drive, Troy, MI 48083** | | | |
| | Approved Product Alternatives<br>*Conditional Approval* | UGT ManHole Elevation System | | 2011-094 |

## Section 610: Pipe Underdrain and Pavement Base Drain

### 610.2(a)3 Corrugated Polyethylene (PE) Pipe (Sizes 4" to 15")

Last Revised: 9/21/2017

| | Product | Name | AASHTO Pipe Type | Pipe Size | Ref. No. |
|---|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6" | 1980-051 |
| | Corrugated PE Pipe, Perforated | | Type CP | 8", 10", 12", 15" | 1981-112 |
| | Corrugated PE Pipe, Perforated | ADS N-12 | Type SP | 12" | 1995-304 |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6" | 1980-051 |
| | Corrugated PE Pipe, Perforated | | Type CP | 8", 10", 12", 15" | 1981-112 |
| | Corrugated PE Pipe, Perforated | | Type SP | 4", 6", 8" | 2007-191QABC |
| | Corrugated PE Pipe, Perforated | N-12 | Type SP | 12" | 1995-304 |
| **ADS-2 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Old Route 30 West Wooster, OH 44691** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6" | 1980-051 |
| | Corrugated PE Pipe, Perforated | | Type CP | 8", 10", 12", 15" | 1981-112 |
| | Corrugated PE Pipe, Perforated | N-12 | Type SP | 12" | 1995-304 |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6 | 1980-051 |
| | Corrugated PE Pipe, Perforated | | Type CP | 8", 10", 12", 15" | 1981-112 |
| | Corrugated PE Pipe, Perforated | ADS N-12 | Type SP | 12" | 1995-304 |
| **ADS-4 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Buena Vista, VA** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6" | 1980-051 |
| | Corrugated PE Pipe, Perforated | | Type CP | 8", 10", 12", 15" | 1981-112 |
| | Corrugated PE Pipe, Perforated | ADS N-12 | Type SP | 12" | 1995-304 |

## Section 610: Pipe Underdrain and Pavement Base Drain

### 610.2(a)3 Corrugated Polyethylene (PE) Pipe (Sizes 4" to 15")

Last Revised: 9/21/2017

| | Product | Name | AASHTO Pipe Type | Pipe Size | Ref. No. |
|---|---|---|---|---|---|
| **ADS-8 15** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | |
| **Plant** | **Findlay South Plant #37 12370 County Road 172 Findlay, OH 45840** | | | | |
| | ***Formerly Hancor, Inc. (HANC0 15)*** | | | | |
| | Corrugated PE Pipe, Perforated | | | 4", 6", 8" | 1985-064 |
| | Corrugated PE Pipe, Perforated | | | 4" | 1987-015 |
| | Corrugated PE Pipe, Perforated | | Type CP | 10", 12", 15" | 1995-284 |
| **ADS10 15** | **Advanced Drainage Systems, Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | | |
| **Plant** | **1 William Donnelly Parkway Waverly, NY 14892** | | | | |
| | ***Formerly Hancor, Inc. (HANC1 15)*** | | | | |
| | Corrugated PE Pipe, Perforated | | | 4", 6", 8" | 1985-064 |
| | Corrugated PE Pipe, Perforated | | | 4" | 1987-015 |
| | Corrugated PE Pipe, Perforated | | Type CP | 10", 12", 15" | 1995-284 |
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6", 8", 10", 12", 15" | 2000-041Q |
| | Corrugated PE Pipe, Perforated | | Type SP | 4", 6", 8", 10", 12", 15" | 2000-042Q |
| **BLUDI 15** | **Blue Diamond Industries, LLC, 3399 Tates Creek Road, Suite 110, Lexington, KY 40502 http://www.bdiky.com/** | | | | |
| | Corrugated PE Pipe, Perforated | | Type SP | 4", 6", 8" | 2007-055Q |
| **DRAPR 15** | **Drainage Products, Inc., (Haviland Drainage Products), Main Street, Box 97, Haviland, OH 45851 http://haviland-drainage.com** | | | | |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 10", 12" | 2000-125Q |
| | Corrugated PE Pipe, Perforated | | Type SP | 8", 10", 12", 15" | 2000-125Q |
| | Corrugated PE Pipe, Perforated | | Type CP | 6" | 2001-167Q |

## Section 610: Pipe Underdrain and Pavement Base Drain

### 610.2(a)3 Corrugated Polyethylene (PE) Pipe (Sizes 4" to 15")

Last Revised: 9/21/2017

| | Product | Name | AASHTO Pipe Type | Pipe Size | Ref. No. |
|---|---|---|---|---|---|
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | | |
| | Corrugated PE Pipe, Perforated | | Type SP | 6", 8", 10", 12", 15" | 1997-182 |
| | Corrugated PE Pipe, Perforated | | Type CP | 4", 6" | 2009-118QAB |
| | Corrugated PE Pipe, Perforated | | Type CP | 8" | 2010-031Q |
| **LANE7 15** | **Lane Enterprises, Inc., 510 Kents Lane, Wytheville, VA 24382 http://www.lane-enterprises.com/** | | | | |
| | Corrugated PE Pipe, Perforated | HD100 | Type CP | 4" | 2017-146Q |
| | Corrugated PE Pipe, Perforated | HD100 | Type CP | 6" | 2017-147Q |

### 610.2(a)4 Polyvinyl Chloride (PVC) Pipe (Sizes 4" to 15")

Last Revised: 2/27/2015

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **CON01 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Montgomery, AL** | | | |
| | PVC Pipe, Perforated | Circular Perforated | 4" | 1987-196 |
| | PVC Pipe, Perforated | Circular Perforated | 6" | 1987-197 |
| | PVC Pipe, Perforated | Perforated | 4" | 1986-181A |
| **NP&P0 15** | **National Pipe & Plastics, Inc., 3421 Old Vestal Road, Vestal, NY 13850 http://nationalpipe.com/** | | | |
| | PVC Pipe, Perforated | SDR 35 Perforated | 4", 6", 8", 10", 12", 15" | 1991-266ABCDEF |

### 610.2(a)5 Acrylonitrile-Butadiene Styrene (ABS) Pipe

Last Revised: 4/20/2015

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **CON01 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Montgomery, AL** | | | |
| | ABS Pipe, Perforated | | 4" | 1986-180A |
| | ABS Pipe, Perforated | | 6" | 1986-180C |

# Section 610: Pipe Underdrain and Pavement Base Drain

## 610.2(a)7 Corrugated Steel Pipe, Metallic Coated

Last Revised: 6/30/2017

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| CON08 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Palmer, MA | | | |
| | Perforated | | 6", 8", 10" | 1991-327 |
| CON12 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Greencastle, PA | | | |
| | Perforated | | 6", 8", 10" | 1991-327 |
| CULVE 15 | Culverts, Inc., 330 Pittsburgh Ave., P.O. Box 271, Coraopolis, PA 15108 http://www.culvertsinc.com/Pages/default.aspx | | | |
| | Perforated | | | ----- |
| LANE2 15 | Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/ | | | |
| | Perforated | | | ----- |

## 610.2(a)8 Corrugated Aluminum Alloy Pipe

Last Revised: 6/30/2017

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| CON08 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Palmer, MA | | | |
| | Perforated | | 6", 8", 10" | 1991-327 |
| CON12 15 Plant | Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Greencastle, PA | | | |
| | Perforated | | 6", 8", 10" | 1991-327 |
| CULVE 15 | Culverts, Inc., 330 Pittsburgh Ave., P.O. Box 271, Coraopolis, PA 15108 http://www.culvertsinc.com/Pages/default.aspx | | | |
| | Perforated | | | ----- |
| LANE2 15 | Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/ | | | |
| | Perforated | | | ----- |

## 610.2(a)9.a Prefabricated Pavement Base Drains

Last Revised: 8/1/2018

## Section 610: Pipe Underdrain and Pavement Base Drain

### 610.2(a)9.a Prefabricated Pavement Base Drains

Last Revised: 8/1/2018

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | |
| | Pavement Base Drain | AdvanEDGE Highway Edge Drain Pipe | 18" only | 1991-267B |
| **AMEWD 15** | **American Wick Drain Corporation, 1209 Airport Road, Monroe, NC 28110 http://www.americanwick.com/** | | | |
| | Pavement Base Drain | Sitedrain 6600 | 12", 18" | 2001-117Q |

## Section 615: Subsurface Drain Outlets

### 615.2 Subsurface Drain Outlets (Solid 4" to 15")

Last Revised: 11/28/2017

70 PSI @ 5% (English) or 483 kPa @ 5% (Metric)

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **ADS-0 15** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd., Hilliard, OH 43026 http://www.ads-pipe.com/en/** | | | |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 4" (102mm) | 1997-039 |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 6" | 1997-040 |
| **ADS-1 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ 173 Industrial Park North Muncy, PA 17756** | | | |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 4" (102mm) | 1997-039 |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 6" | 1997-040 |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 8" | 2011-194Q |
| **ADS-3 15 Plant** | **Advanced Drainage Systems Inc., 4640 Trueman Blvd, Hilliard, OH 43026 http://www.ads-pipe.com/en/ Ludlow, MA** | | | |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 4" (102mm) | 1997-039 |
| | Outlet Pipe | N-12 (Landfield Grade) PE | 6" | 1997-040 |
| **BAUGH 15** | **Baughman Tile Company, 8516 Township Rd. #137, Paulding, OH 45879 http://www.baughmantile.com/** | | | |
| | Outlet Pipe | PE Pipe, Smoothline | 4" to 15" | 2000-043Q |
| **BLUDI 15** | **Blue Diamond Industries, LLC, 3399 Tates Creek Road, Suite 110, Lexington, KY 40502 http://www.bdiky.com/** | | | |
| | Outlet Pipe | | 4" | 2007-185Q |
| **LANE6 15 Plant** | **Lane Enterprises, Inc., 34 Strohm Road, Shippensburg, PA 17257 http://www.lane-enterprises.com/ Shippensburg, PA** | | | |
| | Outlet Pipe | HPDE | 6" | 1996-190 |
| **NP&P0 15** | **National Pipe & Plastics, Inc., 3421 Old Vestal Road, Vestal, NY 13850 http://nationalpipe.com/** | | | |
| | Outlet Pipe | PVC SDR-26 | 4", 6", 8", 10", 12", 15" | 1997-120ABCDEF |

# Section 616: End Sections and Slope Pipe Fittings

## 616.2(a) Concrete End Sections

For approved precast concrete end sections, see 601.2(a)3a.

## 616.2(b) Steel End Sections, Metallic Coated

**Last Revised: 7/6/2015**

Approved steel pipe manufacturers in Section 601.2(a)4b may also provide steel end sections and slope pipe fittings.

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **J&J-D 15** | **J & J Drainage Products Company, 110 N Pershing, PO Box 0829, Hutchinson, KS 67504-0829 http://jjdrainage.com/** | | | |
| | Steel End Section | | | 1990-262 |
| **JENBS 15** | **Jensen Bridge & Supply Company, 400 Stoney Creek Drive, Sandusky, MI 48471 http://jensenbridge.com/** | | | |
| | Steel End Section | | | 2006-011Q |

## 616.2(c) Aluminum Alloy End Sections

**Last Revised: 2/27/2015**

Approved aluminum pipe manufacturers in Section 601.2(a)4c may provide aluminum alloy end sections and slope pipe fittings.

| | Product | Name | Pipe Size | Ref. No. |
|---|---|---|---|---|
| **J&J-D 15** | **J & J Drainage Products Company, 110 N Pershing, PO Box 0829, Hutchinson, KS 67504-0829 http://jjdrainage.com/** | | | |
| | Aluminum Alloy End Section | | | 1990-263 |

## 616.2(d) Steel Slope Pipe Fittings

Approved steel and aluminum pipe manufacturers in Sections 601.2(a)4b and 601.2(a)4c may provide end sections and slope pipe fittings.

## 616.2(f) Thermoplastic End Sections - Outlet Ends Only

Approved thermoplastic pipe manufacturers in Section 601.2(a)6 may provide thermoplastic end sections for the outlet end.

1. For end sections manufactured by the thermoplastic manufacturer, provide a CS-4171 Certificate of Compliance form for the end sections.

2. For end sections manufactured by a third party, the thermoplastic pipe manufacturer must supply letter certifying the end sections meet the pipe manufacturer's requirements and all required specifications with each shipment.

## Section 617: Slotted Drains

### 617.2 Slotted Drains

Last Revised: 7/6/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ABT01 15** | **ABT Inc., 259 Murdock Road, Troutman, NC 28166 http://www.abtdrains.com/** | | |
| | Slotted Drain | Polydrain | 1997-129 |
| **ACOPP 15** | **ACO Polymer Products, Inc., 12080 Ravenna Road, P. O. Box 245, Chardon, OH 44024 http://acousa.com/** | | |
| | Slotted Drain | K100S Trenchdrain | 2003-086Q |
| | Slotted Drain | S100K Powerdrain | 2003-084Q |
| | Slotted Drain | S300K Powerdrain | 2003-085Q |
| **CON12 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/ Greencastle, PA** | | |
| | Slotted Drain | | ----- |
| **HUBI- 15** | **Hubbell Lenoir City, Inc., 3621 Industrial Park Drive, Lenoir City, TN 37771** | | |
| | Slotted Drain | Polycast | 1999-193Q |
| **LANE3 15** | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | | |
| | Slotted Drain | | 1980-017 |

## Section 619: Permanent Impact Attenuating Devices

AASHTO MASH 2016 Implementation Dates for Roadside Safety Hardware:
Type I - Anchored Backslope Terminal (Publication 72M, Drawing RC-54M) - Dec. 31, 2019
Type II - Energy Absorbing Terminals - Tangent: June 30, 2018
Type III - Non-Energy Absorbing Terminals - Dec. 31, 2019
Type IV - Gating Systems Used Where Two-Way Traffic is Present (Crash Cushion) - Dec. 31, 2018
Type V - Non-Gating Terminals Use Where Two-Way Traffic Is Present (Crash Cushion) - Dec. 31, 2018
Type VI - Gating, Non-Redirective Systems (Crash Cushion) - Dec. 31, 2018
Miscellaneous Systems

Important Notice: **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

CS-4171 Certificate of Compliance Forms: Only a single CS-4171 Certificate of Compliance form is required for an end terminal or crash cushion kit. Although parts included with these kits are typically produced by multiple manufacturers, the Bulletin 15 listed manufacturer is responsible for verifying that all parts supplied with the kit meet the required specifications and match the NCHRP 350 or MASH 2016 crash tested system. Only the supplier code of the Bulletin 15 listed manufacturer should appear in Section 2 of CS-4171 form. Steel Mill certs stating melted and manufactured in the United States are required for each part containing steel. If the kit includes an MM-USA approved part, check both the 'Identifiable Steel' and 'Unidentifiable Steel' boxes in Section 6 of the CS-4171.

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

**Last Revised: 6/18/2020**

FHWA Acceptance Letters: **Terminals/Crash Cushions Letters**

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): **Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria**

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **BARRS 15** | **Lindsay Transportation Solutions, LLC (Barrier Systems by Lindsay), 180 River Road, Rio Vista, CA 94571 http://www.barriersystemsinc.com/** | | | | | | | |
| | Gate Barrier System | ArmorGuard Gate | NCHRP 350 | | TL-3 | B-87 | SGM23 | 2004-092Q |
| | Type II, Energy Absorbing Flared Terminal | X-Tension | NCHRP 350 | | TL-3 | CC-102A | SEW20b | 2009-128Q |
| | Type II, Energy Absorbing Tangent Terminal | X-Tension | NCHRP 350 | | TL-3 | CC-102A | SEW19b | 2009-128Q |
| | *Note: NOT approved for contracts let after June 30, 2018.* ***Lindsay Transportation Solutions - Installation Guide*** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | Universal TAU-II | NCHRP 350 | | TL-2, TL-3 | CC-75 | SCT01a | 2004-083Q |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | X-Tension Median Attenuator System (X-MAS) | NCHRP 350 | | TL-3 | CC-102 | | 2009-128Q |
| | *Product also referred to as the X-Tension Median End Terminal. For use in narrow medians or gore areas where guide rail is installed and crossover impacts can occur.* ***Lindsay Transportation Solutions - Installation Guide*** | | | | | | | |

# Section 619: Permanent Impact Attenuating Devices

## 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **BARRS 15** | **Lindsay Transportation Solutions, LLC (Barrier Systems by Lindsay), 180 River Road, Rio Vista, CA 94571 http://www.barriersystemsinc.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | X-TENuator | NCHRP 350 | | TL-3 | CC-109 | SCI23 | 2011-069QA |
| | Type VI, Gating Non-Redirective Crash Cushion System | ABSORB 350 | NCHRP 350 | | TL-2, TL-3 | CC-66 | SCI11b | 2001-066 |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **ENERG 15 Plant** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/ Pell City, AL** | | | | | | | |
| | Gate Barrier System | BarrierGate | NCHRP 350 | | TL-3 | B-25 | SGM20 | 1993-222 |
| | Gate Barrier System | Vulcan Gate | NCHRP 350 | | TL-3 | B-134C | | ----- |
| | Type IV, Gating Two-Way Traffic System | Brakemaster 350 | NCHRP 350 | | TL-3 | CC-41 | SEW06 | 1997-168 |
| | *Effective November 30, 2016, the Brakemaster 350 system and replacement parts will no longer be manufactured. Existing inventory of Brakemaster 350 systems/parts may still be used on projects. Discontinuation Notice of Energy Absorption/Trinity Products* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | QuadGuard Elite | NCHRP 350 | | TL-3 | CC-57 | | 1999-086 |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | QuadGuard LMC | NCHRP 350 | | TL-3 | CC-43 | SCT02f | 1998-060 |
| | *Effective September, 2016, the QuadGuard LMC system will no longer be manufactured. Parts are being manufactured until December, 2016. Existing inventory of QuadGuard LMC systems/parts may still be used on projects. Discontinuation Notice of Energy Absorption/Trinity Products* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | REACT 350 (60 inch) | NCHRP 350 | | TL-3 | CC-73 | SCI16b | 2001-169Q |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | REACT 350 (standard) | NCHRP 350 | | TL-3 | CC-26B | SCI16a | 1995-158 |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QuadGuard | NCHRP 350 | | TL-2, TL-3 | CC-35 | SCT02a | 1996-167 |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QuadGuard (wide) | NCHRP 350 | | TL-3 | CC-42 | | 1998-008 |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QuadGuard Highspeed (HS) | NCHRP 350 | | TL-3 | CC-35E | SCT02d | 2001-223Q |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QuadGuard II (modified) | NCHRP 350 | | TL-2, TL-3 | CC-35I | | 2009-159QA |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QUEST | NCHRP 350 | | TL-3 | CC-87 | | 2005-052Q |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

**Last Revised: 6/18/2020**

FHWA Acceptance Letters: **Terminals/Crash Cushions Letters**

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): **Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria**

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **ENERG 15** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/** | | | | | | | |
| **Plant** | **Pell City, AL** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | Energite III Module | NCHRP 350 | | TL-3 | CC-29 | SCI06c | ----- |
| | Type VI, Gating Non-Redirective Crash Cushion System | Fitch Universal | NCHRP 350 | | TL-3 | CC-28 | SCI06b | ----- |
| | *Effective November, 2016, the Fitch Universal system and replacement parts will no longer be manufactured. Existing inventory of Fitch Universal systems/parts may still be used on projects.* ***Discontinuation Notice of Energy Absorption/Trinity Products*** | | | | | | | |
| **ENTWH 15** | **Entwistle Company, Bigelow Street, Hudson, MA 01749 http://entwistleco.com/** | | | | | | | |
| | Miscellaneous System | The Dragnet | | | | | | 1995-178 |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | | | | | | |
| | TL-5 Steel High Containment Median Barrier | Guardian 5 (G5) | MASH 2016 | | TL-5 | B-267 | SGM42 | 2017-271Q |
| | *Gregory Industries is the sole licensee and manufacturer of the Guardian 5 median barrier designed by ArcelorMittal USA, LLC. Note: The Guardian 5 was TL-5 crash tested in accordance with MASH 2009 and meets the MASH 2016 crash testing criteria.* ***PE Stamped Drawings, Intended Use Guidelines, Components, and FHWA Eligibility Letter for Guardian 5*** | | | | | | | |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **LEISS 15** | **Leiss Tool & Die, 801 North Pleasant Avenue, Somerset, PA 15501 http://leiss.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (30 inch) | MASH 2016 | | TL-3 | CC-128 | | 2014-029QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (36 inch) | MASH 2016 | | TL-3 | CC-128 | | 2014-029QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (41-1/4 to 60 inch maximum) | MASH 2016 | | TL-3 | CC-128 | | 2014-029QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (Standard) | MASH 2016 | | TL-3 | CC-128 | | 2014-029QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system. Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (30 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2014-029QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (36 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2014-029QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (41-1/4 to 60 inch maximum) | NCHRP 350 | | TL-2 | CC-85A | | 2014-029QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (Standard) | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2014-029QA |
| **LIFPR 15** | **Lifetime Products, Freeport Ctr. Blding H-4, P.O. Box 160010, Clearfield, UT 84016 http://www.lifetime.com/** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | Plastic Safety Systems CrashGard | NCHRP 350 | | TL-3 | CC-97, CC-97A | | 2010-305Q |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **LINSY 15 Plant** | **Lindsay Transportation Solutions, LLC, 180 River Road, Rio Vista, CA 94571 http://www.lindsay.com/transportation-solutions 505 Crown Point Ave Omaha, NE 67110** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | MAX-Tension TL-2 | MASH 2016 | | TL-2 | CC-134 | | 2018-023Q |
| | * *Manual w/ Parts List, PE Stamped Drawings, and FHWA Eligibility Letter for MAX-Tension TL-2 & TL-3* | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | MAX-Tension TL-3 | MASH 2016 | | TL-3 (62 mph) | CC-133 | | 2017-234Q |
| | * *Manual w/ Parts List, PE Stamped Drawings, and FHWA Eligibility Letter for MAX-Tension TL-2 & TL-3* | | | | | | | |
| | Type IV, Gating Two-Way Traffic System | MAX-Tension Median | MASH 2016 | | TL-3 | CC-141 | | 2018-022Q |
| | *Installation Instructions with parts identification, inspector checklist, maintenance inspection outline, and drawings: Installation Instructions w/ Parts List, Product Info, Approved Drawings for MAX-Tension Median* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | Universal TAU-M | MASH 2016 | | TL-2, TL-3 | CC-146, CC-147 | | 2018-278Q |
| | *Approved for use on both concrete and asphalt pavements. Manual w/ Parts List, FHWA Eligibility Letters, Concrete & Asphalt Foundation Drawings for TAU-M* | | | | | | | |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **MORVA 15** | **Morgan Valley Manufacturing, 340 North Industrial Road, P. O. Box 746, Morgan, UT 84050** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (30 inch) | MASH 2016 | | TL-3 | CC-128 | | 2011-208QA |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (36 inch) | MASH 2016 | | TL-3 | CC-128 | | 2011-208QB |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (41-1/4 to 60 inch maximum) | MASH 2016 | | TL-3 | CC-128 | | 2011-208QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (Standard) | MASH 2016 | | TL-3 | CC-128 | | 2004-015 |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system. Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (30 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2011-208QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (36 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2011-208QB |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (41-1/4 to 60 inch maximum) | NCHRP 350 | | TL-2 | CC-85A | | 2011-208QC |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (Standard) | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2005-033 |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **RDSYS 15** | **Road Systems, Inc., 3616 Old Howard County Airport Road, Big Spring, TX 79720 http://roadsystems.com/** | | | | | | | |
| | Type II, Energy Absorbing Flared Terminal | FLEAT-350 | NCHRP 350 | | TL-3 | CC-46 | SEW14a | 1998-065 |
| | *RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA) **Identifiable Steel & Parts Supplied by Road Systems, Inc.*** | | | | | | | |
| | Type II, Energy Absorbing Flared Terminal | FLEAT-SP | NCHRP 350 | | TL-3 | CC-88B | | 2009-037Q |
| | *RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA) **Identifiable Steel & Parts Supplied by Road Systems, Inc.*** | | | | | | | |
| | Type II, Energy Absorbing Flared Terminal | MFLEAT | MASH 2016 | | TL-3 | CC-143A, CC-144B | SEW14c | 2019-152Q |
| | *RSI Authorized Distributors: Gregory Industries (Canton, OH), R.G. Steel Corp. (Pulaski, PA), and Universal Industrial Sales (Pleasant Grove/Lindon, UT). Product Information Sheet, Parts Shared and Not Shared with MSKT, PE Stamped Drawing with Parts List and Assembly Notes, Inspection Checklist, FHWA Eligibility Letters, Distributor List, and Identifiable Steel (Impact Head) for **MFLEAT*** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | BEAT-SSCC | NCHRP 350 | | TL-3 | CC-69B | SCI13a,b | 2003-118 |
| | *Note: NOT approved for contracts let after June 30, 2018. RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA) **Identifiable Steel & Parts Supplied by Road Systems, Inc.*** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | MSKT-SP-MGS (MASH Sequentially Kinking Terminal) | MASH 2016 | | TL-3 | CC-126, CC-126E, CC-126G (3-37b) | | 2017-294Q |
| | *RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA). The SKT Impact Head used on the MSKT-SP-MGS system contains an MM-USA plate and is approved as identifiable steel. For MSKT Drawing and Assembly Instructions (See page 5 for Bill of Materials listing for MSKT). **Manual w/ Parts List, PE Stamped Drawings, and FHWA Eligibility Letters for MSKT-SP-MGS*** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | SKT-350 | NCHRP 350 | | TL-3 | CC-40 | | 1998-035 |
| | *Note: NOT approved for contracts let after June 30, 2018. Effective January 1, 2018, Road Systems Inc. will produce only the new SKT impact head that is accepted for use on both NCHRP-350 and MASH guardrail terminals. The 350 SKT head will be discontinued when inventories are depleted and only the new enhanced SKT head version known as the MSKT will be available. The MASH MSKT guardrail terminal uses an impact head that has been crash tested and approved for use on the SKT-350 system per FHWA letter CC-130. Please note this does not convert the SKT-350 guiderail terminal to a MASH MSKT guiderail terminal. For details and images, view the notification letter below: **NCHRP-350 SKT Impact Head Notification Letter (Nov. 15, 2017)*** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | SKT-SP | NCHRP 350 | | TL-3 | CC-61A | | 2009-036Q |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **RDSYS 15** | **Road Systems, Inc., 3616 Old Howard County Airport Road, Big Spring, TX 79720 http://roadsystems.com/** | | | | | | | |
| | *Note: The SKT-SP system is NOT approved for contracts let after June 30, 2018. RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA) **Identifiable Steel & Parts Supplied by Road Systems, Inc.*** | | | | | | | |
| | Type IV, Gating Two-Way Traffic System | FLEAT-MT | NCHRP 350 | | TL-3 | CC-46D | SEW16b | 2003-119 |
| | *RSI Authorized Distributors: Gregory Industries (Canton, OH) and R.G. Steel Corp (Pulaski, PA) **Identifiable Steel & Parts Supplied by Road Systems, Inc.*** | | | | | | | |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | Big Sandy (Sand Barrel System) | MASH | | TL-3 | CC-139 | | 1998-143 |
| | *Note: Big Sandy MASH system tested to MASH 2016 criteria per FHWA Eligibility Letter CC-139 as same system tested to NCHRP 350 criteria. **Installation Instructions and FHWA Eligibility Letter for Big Sandy*** | | | | | | | |
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | SoftStop | MASH 2016 | | TL-3 | CC-115 | | 2017-306Q |
| | * ***Manual w/ Parts List, PE Stamped Drawings, and FHWA Eligibility Letter for Softstop*** | | | | | | | |
| | Type III, Non-Energy Absorbing Terminal | SRT-350 | NCHRP 350 | | TL-3 | CC-51 | | 2010-191A |
| | *For proper assembly, installation, maintenance, repair and replacement of the SRT family of guide rail end treatment systems: **SRT-350 Assembly Instructions*** | | | | | | | |
| | Type IV, Gating Two-Way Traffic System | CAT-350 | NCHRP 350 | | TL-3 | CC-33 | SEW08 | 1989-060 |

## Section 619: Permanent Impact Attenuating Devices

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Last Revised: 6/18/2020

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| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **TRIN3 15** | **Trinity Highway Products, LLC, 2548 NE 28th Street, Ft. Worth, TX 76111 http://www.highwayguardrail.com/** | | | | | | | |
| | Type II, Energy Absorbing Tangent Terminal | SoftStop | MASH 2016 | | TL-3 | CC-115 | | 2017-306Q |
| | * *Manual w/ Parts List, PE Stamped Drawings, and FHWA Eligibility Letter for Softstop* | | | | | | | |
| | Type IV, Gating Two-Way Traffic System | ADIEM | NCHRP 350 | | TL-3 | CC-38 | SCI09 | 1992-246 |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | FASTRACC | NCHRP 350 | | TL-3 | CC-54H | | 2010-251QB |
| | * *Approved MM-USA marking as Identifiable Steel* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | SHORTRACC | NCHRP 350 | | TL-2 | CC-54A | | 2010-251QD |
| | * *Approved MM-USA marking as Identifiable Steel* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | TRACC | NCHRP 350 | | TL-2, TL-3 | CC-54 | | 2010-251QA |
| | * *Approved MM-USA marking as Identifiable Steel* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | WIDETRACC | NCHRP 350 | | TL-3 | CC-54D | | 2010-251QC |
| | * *Approved MM-USA marking as Identifiable Steel* | | | | | | | |
| **TRIN7 15 Plant** | **Trinity Highway Products, LLC, 2525 Stemmons Freeway, Dallas, TX 75207 https://trinityhighway.com/ Pell City, AL 35128** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Standard Maintenance) | QuadGuard M10 (24" Wide) | MASH 2016 | | TL-3 | CC-112, CC-112c | | 2018-219Q |
| | * *Manual, Product Information, FHWA Eligibility Letters, and PE Stamped Drawings for QuadGuard M10* | | | | | | | |

## Section 619: Permanent Impact Attenuating Devices

### 619.2 Permanent Impact Attenuating Devices (DM-2, Chapter 12)

Last Revised: 6/18/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved; Formerly Chapter 12, Appendix C in Pub 13M - Design Manual Part 2): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **WHIPI 15** | **Whip Industries, 3010 South Main Street, Fort Worth, TX 76110 http://www.whipindustries.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (30 inch) | MASH 2016 | | TL-3 | CC-128 | | 2014-017QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (36 inch) | MASH 2016 | | TL-3 | CC-128 | | 2014-017QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (41-1/4 to 60 inch maximum) | MASH 2016 | | TL-3 | CC-128 | | 2014-017QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system.* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 100 GM (Standard) | MASH 2016 | | TL-3 | CC-128 | | 2014-017QC |
| | *Previously approved per NCHRP 350 under approval CC-85 with no changes to system. Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (30 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2014-017QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (36 inch) | NCHRP 350 | | TL-2 | CC-85A | | 2014-017QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (41-1/4 to 60 inch maximum) | NCHRP 350 | | TL-2 | CC-85A | | 2014-017QA |
| | Type V, Non-Gating Two-Way Traffic System (Low-Maintenance, Self-Restoring) | SCI 70 GM (Standard) | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2014-017QA |

## Section 621: Metal Median Barrier

### 621.2(a) Metal Median Barrier

Last Revised: 10/7/2019

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708** http://www.gregorycorp.com/gccorp.htm | | | | | | | |
| | TL-5 Steel High Containment Median Barrier | Guardian 5 (G5) | MASH 2016 | | TL-5 | B-267 | SGM42 | 2017-271Q |

*Gregory Industries is the sole licensee and manufacturer of the Guardian 5 median barrier designed by ArcelorMittal USA, LLC. Note: The Guardian 5 was TL-5 crash tested in accordance with MASH 2009 and meets the MASH 2016 crash testing criteria.* ***PE Stamped Drawings, Intended Use Guidelines, Components, and FHWA Eligibility Letter for Guardian 5***

# Section 622: Concrete Glare Screen

## 622.2 Concrete Glare Screen

For Precast Concrete Glare Screens, see Section 714.2 for approved precasters of standard glare screens (RC-59M). **Standard Drawing RC-59M (Publication 72M)**

## Section 624: Right-of-Way Fence

### 624.2(b) Packaged Dry Concrete

Last Revised: 7/7/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CTS-1 15** | **CTS Cement Manufacturing Company, 12442 Knott Street, Garden Grove, CA 92841 http://www.ctscement.com/** | | |
| | Packaged Dry Concrete | Rapid Set Concrete Mix | 1993-092 |
| **USCPR 15 Plant** | **US Concrete Products, 16 Green Meadow Drive, Suite 202, Timonium, MD 21093 http://www.uscproducts.com/ Baltimore, MD** | | |
| | Packaged Dry Concrete | HP Concrete (41423) | 2010-319Q |

# Section 626: Gabions

## 626.2(c) Gabion Basket

Last Revised: 7/7/2015

Steel Products Procurement Act applies.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CESHC 15** | **C. E. Sheperd Company, 2221 Canada Dry Street, Houston, TX 77023 http://www.ceshepherd.com/** | | |
| | Galvanized Wire Gabion | | 1997-190 |
| | Polyvinyl Chloride Coated Gabion | | 1997-190 |
| **LANE3 15** | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | | |
| | Galvanized Wire Gabion | | 1988-014 |
| | Polyvinyl Chloride Coated Gabion | | 2000-273Q |
| **MACCA 15** | **Maccaferri Gabions, Inc., 10303 Governor Lane Blvd., Williamsport, MD 21795-3116 http://www.maccaferri.com/us/** | | |
| | Galvanized Wire Gabion | | 1968-012 |
| | Polyvinyl Chloride Coated Gabion | | 1968-012 |
| **TERR1 15** | **Terra Aqua Inc., 1415 North 32nd Street, Ft. Smith, AR 72904** | | |
| **Plant** | **Ft. Smith, AR** | | |
| | Galvanized Wire Gabion | | 1987-195B |
| | Polyvinyl Chloride Coated Gabion | | 1987-195A |
| **ULTGB 15** | **Ultimate Gabions, Inc., 500 Wood Street, P.O. Box 1002, Bristol, RI 02809** | | |
| | Galvanized Wire Gabion | | 1998-026 |

# Section 627: Temporary Barrier

Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. Temporary work zone devices, including Category 3, manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers. **Design Manual Part 2 Highway Design - Temporary Barriers (Publication 13M, Chapter 12.10)**

FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Important Notice: **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

## 627.2 Temporary Barriers

For Precast Concrete Barriers, see Section 714.2 for approved precasters of standard PennDOT barriers (RC-57M & RC-58M) or licensed barriers and Glare Screens (RC-59M). Also see Section 901.2 for other approved temporary barriers. Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

Concrete Median Barrier: **Standard Drawing of Concrete Median Barrier RC -57M (Publication 72M)**

Single Face Concrete Barrier: **Standard Drawing of Single Face Concrete Barrier RC-58M (Publication 72M)**

Concrete Glare Screen: **Standard Drawing RC-59M (Publication 72M)**

# Section 633: Plain Concrete Mountable Curb

## 633.2 Preformed Cellular Polystyrene (ASTM C578)

See Section 516.2(m) for approved preformed cellular polystyrene products.

## Section 636: Asphalt Concrete Curb

### 636.2(c) Filler (Drawn Polyester Fibers)

Last Revised: 4/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FIBAD 15** | **Fiber-Ad Corporation, 2619 West Blvd., Charlotte, NC 28224** | | |
| | Asphalt Stockpile Patching Material<br>*Standard Special Provision c04861 Item 9486-001.* | A-1 Polyester | 1991-275 |
| | Asphalt Wearing Course FJ-4 (SU)<br>*Standard Special Provision S-b04231 Section 423-Bituninous Wearing Course FJ-4 (SU). (0.125% by weight mix, 0.2% additional AC.)* | A-1 Polyester | 1991-275 |
| | Filler for Asphalt Concrete Curb Mixes | A-1 Polyester | 1991-275 |
| **GFC-M 15** | **GFC Materials Company, 2183 Pennsylvania Ave., Apalachin, NY 13732** | | |
| | Asphalt Stockpile Patching Material<br>*Standard Special Provision c04861 Item 9486-001.* | Type 402 Polyester | 1990-344B |
| | Asphalt Wearing Course FJ-4 (SU)<br>*Standard Special Provision S-b04231 Section 423-Bituninous Wearing Course FJ-4 (SU). (0.125% by weight mix, 0.2% additional AC.)* | Type 402 Polyester | 1990-344B |
| | Filler for Asphalt Concrete Curb Mixes | Type 402 Polyester | 1990-344B |
| **KAPEJ 15** | **Kapejo, Inc., P. O. Box 649, New Castle, DE 19720-0649** | | |
| | Asphalt Stockpile Patching Material<br>*Standard Special Provision c04861 Item 9486-001.* | Bonifiber B | 1984-014 |
| | Asphalt Wearing Course FJ-4 (SU)<br>*Standard Special Provision S-b04231 Section 423-Bituninous Wearing Course FJ-4 (SU). (0.125% by weight mix, 0.2% additional AC.)* | Bonifiber B | 1984-014 |
| | Filler for Asphalt Concrete Curb Mixes | Bonifiber B | 1984-014 |

# Section 643: Temporary Concrete Barrier, Structure Mounted

## 643.2(a) Temporary Concrete Barrier, Structure Mounted

For Precast Concrete Barriers, Structure Mounted, see Section 714.2 for approved precasters of standard PennDOT barriers (BC-719M). Also see Section 901.2 for other approved temporary structured mounted barriers. Standard Drawing of Temporary Concrete Barrier, Structure Mounted (Pub 219M, BC-719M)

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

## 643.2(c)6 Adhesive Bonding Material (use in accordance with BC-719M)

**Last Revised: 2/7/2019**

Use in accordance with BC-719M. Standard Drawing of Temporary Concrete Barrier, Structure Mounted (Pub 219M, BC-719M)

Provisional Approvals: Publication 408, Section 643.2(c)6.b.3 includes a requirement for independent Shock testing per ASTM E 488 with listed modifications and references to Standard Drawing BC-719M. The provisional approval status will remain until independent shock testing results are received and approved by PennDOT.

| | Product | Name | Installation Type | Spacing | Ref. No. |
|---|---|---|---|---|---|
| **ADHTC 15** | **Adhesives Technology Corporation, 450 East Copans, Pompano Beach, FL 33064 http://www.atcepoxy.com/** | | | | |
| | Adhesive Bonding Material<br>*Provisionally Approved* | ULTRABOND HS-200 | A, B | 1 ft., 2 ft., 4 ft. | 2004-054Q |
| | Adhesive Bonding Material<br>*Provisionally Approved* | ULTRABOND HS-200 | C | 1 ft. | 2004-054Q |
| **ADVAC 15** | **Advance Coatings, 42 Depot Road, Westminster, MA 01473 http://advancecoatings.com/** | | | | |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Keligrout 101-P | A, B | 1 ft., 2 ft. , 4 ft. | 2004-123B |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Keligrout 101-P | C | 1 ft. | 2004-123B |
| **ITWRH 15 Plant** | **ITW Commercial Construction North America, 155 Harlem Avenue, Glenview, IL 60025 http://www.itwredhead.com/ 26501 Bourg Lès Valence Valence, France** | | | | |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Red Head A7+ | A | 1 ft., 2 ft., 4 ft. | 2016-239Q |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Red Head A7+ | B | 1 ft., 2 ft. | 2016-239Q |

## Section 643: Temporary Concrete Barrier, Structure Mounted

### 643.2(c)6 Adhesive Bonding Material (use in accordance with BC-719M)

**Last Revised: 2/7/2019**

Use in accordance with BC-719M. Standard Drawing of Temporary Concrete Barrier, Structure Mounted (Pub 219M, BC-719M)

Provisional Approvals: Publication 408, Section 643.2(c)6.b.3 includes a requirement for independent Shock testing per ASTM E 488 with listed modifications and references to Standard Drawing BC-719M. The provisional approval status will remain until independent shock testing results are received and approved by PennDOT.

| | Product | Name | Installation Type | Spacing | Ref. No. |
|---|---|---|---|---|---|
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | | | |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Propoxy 300 Fast | A, B | 1 ft., 2 ft., 4 ft. | 2004-056B |
| | Adhesive Bonding Material<br>*Provisionally Approved* | Propoxy 300 Fast | C | 1 ft. | 2004-056B |

# Section 659: High Friction Surface Treatment (HFST)

## 659.2(a) Binder Resin System (Binder)

**Last Revised: 2/13/2018**

There are other High Friction Surface Treatment Binder Resin products not listed below that are under evaluation. For a list of other resin systems that can be used on projects, contact the New Products and Innovations (NPI) Section via email at RA-pdBulletin15@pa.gov

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CCMAT 15** | **Cornerstone Construction Material, LLC, 1618 East Elm Street, Harrisonville, MO 64701 http://ccmaterial.com** | | |
| **Facility** | **101 East Walnut Street Archie, MO 64725** | | |
| | Binder Resin System | CE330 Epoxy Binder | 2014-086B |
| **KWIK1 15** | **Kwik Bond Polymers, 923 Teal Drive, Benicia, CA 94510 http://www.kwikbondpolymers.com** | | |
| | Binder Resin System | PPC HFST | 2013-197A |
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | |
| | Binder Resin System | PRO-POXY Type III DOT | 2014-018 |

## 659.2(b) Aggregate Surface Topping (Aggregate)

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 659.2(b) for specification requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

## Section 664: Modular Architectural Block System

### 664.2(a) Modular Architectural Blocks

**Last Revised: 11/5/2019**

Modular architectural block systems may be used for nonstructural landscape architecture applications according to the manufacturer drawings and recommendations. An acceptable landscape architectural site cannot have structures with foundations above the aggregate base within 8 feet of the back of the block system. System construction is restricted to a height of 4 feet above grade.

Approved Licensors:
Allan Block Corporation (Allan Block), 1994-268;
Anchor Wall Systems (Anchor Diamond), 1995-265;
Keystone Retaining Wall Systems (Keystone Compac & Keystone Standard), 2000-186, 2000-187;
Risi Stone Systems (Dura Hold II), 1995-144, 1999-190Q;
Versa-Lok Company (Versa-Lok), 2002-116

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DOREN 15** | **Doren, Inc., R.D. #2, Route 18, P.O. Box 55, Wampum, PA 16157** | | |
| | Modular Architectural Block | Versa-Lok | 2002-116Q |
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | | |
| | Modular Architectural Block | Dura Hold II | 1999-190Q |
| **FIZZ2 15 Plant** | **Fizzano Brothers Concrete Products, Inc., 201 South Phoenixville Pike, Malvern, PA 19355 http://fizzano.com/ 201 S. Phoenixville Pike Malvern, PA 19355** | | |
| | Modular Architectural Block | Allan Block | 1994-268 |
| **LANDS 15** | **Landis Block & Concrete Inc., 711 N. County Line Road, Souderton, PA 18964 http://www.landisbc.com/** | | |
| | Modular Architectural Block | Anchor Diamond | 1995-265 |
| **MIDAP 15** | **Mid Atlantic Precast Inc., 401 Railroad Street, Monongahela, PA 15063** | | |
| | Modular Architectural Block | Dura Hold II | 1995-144 |
| **YORKB 15** | **York Building Products, Inc., 1020 North Hartley Street, York, PA 17404 http://www.yorkbuilding.com/** | | |
| | Modular Architectural Block<br>*Product information for **Keystone Compac*** | Keystone Compac | 2000-187Q |
| | Modular Architectural Block<br>*Product information for **Keystone Standard*** | Keystone Standard | 2000-186Q |

## Section 678: Permanent Barricades

### 678.2(a)1 Wood Posts (Pressure Treated)

Last Revised: 7/7/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| AMETS 15 | American Timber and Steel Corp., 4832 Plank Road, P. O. Box 767, Norwalk, OH 44857-0767 http://www.americantimberandsteel.com/ | | |
| | Wood Post (Pressure Treated) | | 1995-271 |
| GRE-1 15 Plant | Great Southern Wood Preserving, P. O. Box 610, Abberville, AL 36310 http://greatsouthernwood.com/ Hagerstown, MD | | |
| | Wood Post (Pressure Treated) | | 2011-149Q |
| STEJ1 15 | Stella-Jones Corporation, 3424 Parkersburg Road, Reedy, WV 25270-9402 http://stella-jones.com/ *Formerly Burke-Parsons Bowlby (BURPB 15)* | | |
| | Wood Post (Pressure Treated) | | 1997-067 |
| TAYLR 15 | Taylor-Ramsey Corporation, P.O. Box 11888, Lynchburg, VA 24506 | | |
| | Wood Post (Pressure Treated) | | 1985-090 |

## Section 679: Slab Stabilization

(a) Cement Grout Stabilization; (b) Asphalt Grout Stabilization; (c) High Density Polyurethane

### 679.2(a)5 Rapid Set Concrete Patching Materials -Type A

Last Revised: 9/23/2019

Type A: Cementitious, Non-Metallic, Non-Staining (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **5STAR 15** | **Five Star Products, Inc., 750 Commerce Drive, Fairfield, CT 06825 http://www.fivestarproducts.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | 5 Star Highway Patch | | 1979-039 |
| | Cementitious, Non-Metallic, Non-Staining Material | 5 Star Structural Concrete | | 1987-002 |
| | Cementitious, Non-Metallic, Non-Staining Material | 5 Star Structural Concrete V/O | | 1990-214 |
| **AQUAF 15** | **Aquafin, Inc., 505 Blue Ball Road, #160, Elkton, MD 21921 http://www.aquafin.net/** | | | |
| | ***Formerly Ceratech, Inc. (CETEC 15)*** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Pavemend SL | | 2010-276 |
| | *Conditionally approved per manufacturer's specifications and usage guidelines.* ***Pavemend SL Technical Datasheet*** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Pavemend SLQ | | 2010-277 |
| | *Conditionally approved per manufacturer's specifications and usage guidelines.* ***Pavemend SLQ Technical Datasheet*** | | | |
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | MasterEmaco N 424 | | 1977-024 |
| | *Previous Name: Emaco GP* | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | MasterEmaco T 1060 | | 1986-028 |
| | *Previous Name: 10-60 Rapid Mortar* | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | MasterEmaco T 415 | | 1993-148 |
| | *Previous Name: Emaco T415 Repair Mortar* | | | |
| **CGM-N 15** | **CGM Inc., 1463 Ford Road, Bensalem, PA 19020 http://cgmbuildingproducts.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | CGM Highway Patch | | 1987-082 |
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | ChemSpeed 65 | | 1995-046 |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | HD-50 | RSCP-2014-01-007 | 1985-185 |
| | Cementitious, Non-Metallic, Non-Staining Material | Pave Patch 3000 | RSCP-2017-01-007 | 2004-067Q |

## Section 679: Slab Stabilization

### 679.2(a)5 Rapid Set Concrete Patching Materials -Type A

Last Revised: 9/23/2019

Type A: Cementitious, Non-Metallic, Non-Staining (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Euco Repair SCC Fast | RSCP-2017-01-014 | 2019-036Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Euco-Speed | | 1995-148 |
| | Cementitious, Non-Metallic, Non-Staining Material | Express Repair | | 2003-132Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Speed Crete 2028 | | 1996-223 |
| | Cementitious, Non-Metallic, Non-Staining Material | Speed Crete Green Line | | 1991-010 |
| | Cementitious, Non-Metallic, Non-Staining Material | VersaSpeed | | 2006-010Q |
| **GILLI 15** | **Gill Industries, Inc., 3462 Kershaw-Camden Highway, Lancaster, SC 29720 http://www.gill-industries.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Gill 33B | | 1972-050 |
| | Cementitious, Non-Metallic, Non-Staining Material | P Superbond | | 1972-050 |
| **HBFUL 15 Plant** | **H. B. Fuller Construction Products Inc., 1200 Willow Lake Boulevard, St. Paul, MN 55110-5101 http://www.hbfuller.com/ 59 Brunswick Avenue Edison, NJ 08817** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material *(formerly ProSpec F-77)* | ProSpec C-1107 Construction Grout | | 1988-044 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Duracrete II | | 2007-005Q |
| **L&MCC 15** | **L&M Construction Chemicals, Inc., 14851 Calhoun Road, Omaha, NE 68152 http://www.lmcc.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Crystex | | 1976-032 |
| | Cementitious, Non-Metallic, Non-Staining Material | Durapatch Hiway | | 1984-217 |
| **MAPEIA15 Plant** | **MAPEI Corporation, 1144 East Newport Center Drive, Deerfield Beach, FL 33442 http://www.mapei.com/US-EN/ Fredericksburg, VA** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Planitop 18 | | 2017-300Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Planitop 18 TG | RSCP-2018-01-001 | 2018-078Q |

## Section 679: Slab Stabilization

### 679.2(a)5 Rapid Set Concrete Patching Materials -Type A

Last Revised: 9/23/2019

Type A: Cementitious, Non-Metallic, Non-Staining (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **QUIKR 15 Plant** | **The Quikrete Companies, One Securities Centre, 3490 Piedmont Road, N.E. Suite 1300, Atlanta, GA 30305 http://www.quikrete.com/ Latrobe, PA** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Commercial Grade QUIKRETE FastSet™ Concrete Mix | RSCP-2017-01-012 | 2000-288Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Commercial Grade QUIKRETE FastSet™ DOT Mix | RSCP-2017-01-008 | 2003-004Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Commercial Grade QUIKRETE FastSet™ Non-Shrink Grout (Product No. 1585-09) | | 2000-292Q |
| | Cementitious, Non-Metallic, Non-Staining Material | Commercial Grade QUIKRETE Rapid Road Repair | | 1984-086 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | SikaSet Road Patch | | 1978-043 |
| | Cementitious, Non-Metallic, Non-Staining Material | Sikatop III | | 1978-043 |
| **SIKA2 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ Lyndhurst, NJ** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | SikaQuick 1000 | RSCP-2017-01-006 | 2003-036Q |
| | Cementitious, Non-Metallic, Non-Staining Material | SikaQuick 2500 | RSCP-2016-01-011 | 2003-037Q |
| **SPECH 15** | **SpecChem, LLC, 1619 Walnut Street, Kansas City, MO 64108 http://specchemllc.com/** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material *Provisionally Approved* | Repcon 928 | RSCP-2018-01-004 | 2013-018Q |

## Section 679: Slab Stabilization

### 679.2(a)5 Rapid Set Concrete Patching Materials -Type A

Last Revised: 9/23/2019

Type A: Cementitious, Non-Metallic, Non-Staining (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **USGY1 15** | **U. S. Gypsum Company, Industrial Products, 125 South Franklin Street, Chicago, IL 60606-4678** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | Duracal | RSCP-2014-01-005 | 1988-020 |
| | Cementitious, Non-Metallic, Non-Staining Material | Duracal-S | | 1994-009 |
| **WMD1 15 Plant** | **Western Material and Design, LLC, P.O. Box 268, Lee's Summit, MO 64063 https://wmdus.com/ 101 East Walnut Street Archie, MO 64725** | | | |
| | Cementitious, Non-Metallic, Non-Staining Material | FasTrac 246 Concrete | RSCP-2017-01-004 | 2018-197Q |

### 679.2(a)5 Rapid Set Concrete Patching Materials - Type B

Last Revised: 9/9/2019

Type B: Magnesium Phosphate Cement Based Materials (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | |
| | Magnesium, Phosphate Cement-Based Material | MasterEmaco T 545 (previous Set 45 Regular) | | 1974-016 |
| | Magnesium, Phosphate Cement-Based Material | MasterEmaco T 545 HT (previous Set 45 Hot Weather) | | 1974-016 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Magnesium, Phosphate Cement-Based Material | Euco-Speed M.P. | | 1988-354 |
| **IMCTI 15** | **IMCO Technologies, Inc., 350 Wentworth St. North,, Hamilton, Ontario Canada L8L5W3** | | | |
| | Magnesium, Phosphate Cement-Based Material | MG-Krete 1260 | | 2006-235Q |
| **PHOS1 15 Plant** | **Phoscrete Corporation, 265 S Federal Hwy, Ste 320, Deerfield Beach, FL 33441-4161 https://phoscrete.com/ Whitmore Lake, MI** | | | |
| | Magnesium, Phosphate Cement-Based Material | Phoscrete HC | RSCP-2015-01-002 | 2017-104Q |

### 679.2(a)5 Rapid Set Concrete Patching Materials - Type C

Last Revised: 3/2/2015

Type C: Polymer Mortar and Concrete (ASTM C-928)

## Section 679: Slab Stabilization

### 679.2(a)5 Rapid Set Concrete Patching Materials - Type C

Last Revised: 3/2/2015

Type C: Polymer Mortar and Concrete (ASTM C-928)

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **HILT- 15** | **Hilti, Inc., 5400 South 122nd East Ave., P.O. Box 21148, Tulsa, OK 74121 https://www.hilti.com/** | | | |
| | Polymer Mortar and Concrete | RM 698 Epoxy Patch | | 1988-017 |
| **TRASA 15** | **Transpo Industries, Inc., 20 Jones Street, New Rochelle, NY 10801 http://www.transpo.com/** | | | |
| | Polymer Mortar and Concrete | T17 Polymer Concrete | | 1979-060 |

### 679.2(a)6 Alternate Mix Design - Cement Grout Stabilization

Last Revised: 7/6/2017

Concrete Mix Design (void filler beneath slab)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **COVES 15** | **Covestro, LLC, 1 Covestro Circle, Pittsburgh, PA 15205 http://www.covestro.us/en**<br>***Formerly Bayer Material Science*** | | |
| | Alternate to Concrete Mix Design (void filler beneath slab)<br>*Conditionally approved as an alternate per manufacturer's specifications* | 486 Star | 2007-023 |

### 679.2(b)5 Rapid Set Concrete Patching Materials

See Section 679.2(a)5

### 679.2(c)5 Rapid Set Concrete Patching Materials

See Section 679.2(a)5

## Section 680: Waterproofing

### 680.2(b) Adhesive-Backed Preformed Membrane Sheet

Last Revised: 6/20/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF0 15** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/** | | |
| **Plant** | **121 Industrial Park Road Halls, TN 38040** | | |
| | Bridge Deck, Rubberized Asphalt | GeoTac | 2006-035Q |
| | Non-Bridge Deck, Rubberized Asphalt | GeoTac | 2006-035Q |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Bridge Deck, Rubberized Asphalt | SealTight MEL-DEK | 1993-275 |
| | *MEL-PRIME is a surface preparation adhesive as part of the MEL-DEK membrane system.* | | |
| | Non-Bridge Deck, Rubberized Asphalt | SealTight MEL-ROL | 1993-274 |
| | *MEL-PRIME is a surface preparation adhesive as part of the MEL-ROL membrane system.* | | |
| **POLYG 15** | **Polyguard Products, Inc., 3801 S. Business 45, Ennis, TX 75119 http://www.polyguardproducts.com/** | | |
| | Bridge Deck, Rubberized Asphalt | Polyguard NW-75 | 2007-115Q |
| | Non-Bridge Deck, Rubberized Asphalt | Polyguard NW-75 | 2007-115Q |
| **PROP2 15** | **Propex Operating Company, LLC, 4019 Industry Drive, Chattanooga, TN 37416 http://www.propexglobal.com/** | | |
| **Plant** | **428 Rollins Industrial Blvd. Ringgold, GA 30736** | | |
| | Bridge Deck, Rubberized Asphalt | Petrotac 4591 | 2011-167Q |
| | Non-Bridge Deck, Rubberized Asphalt | Petrotac 4591 | 2011-167Q |
| **ROYST 15** | **Chase Corporation, 295 University Avenue, Westwood, MA 02090 http://www.chasecorp.com/** | | |
| **Facility** | **128 First Street Pittsburgh, PA 15238** | | |
| | Bridge Deck, Modified Bitumen | Royston Bridge Membrane 10A-65 | 2000-018Q |
| | *Certification Reduction Level 3 per Publication 408 Section 106.03(b)3 as of 11/27/2012* | | |
| | Bridge Deck, Modified Bitumen | Royston Bridge Membrane 10A-65 Easy Pave | 2000-019Q |
| | *Certification Reduction Level 3 per Publication 408 Section 106.03(b)3 as of 11/27/2012* | | |

## Section 680: Waterproofing

### 680.2(b) Adhesive-Backed Preformed Membrane Sheet

Last Revised: 6/20/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/**<br>***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Bridge Deck, Rubberized Asphalt | Right Deck | 2017-171Q |
| | Non-Bridge Deck, Rubberized Asphalt | Right Roll | 2017-172Q |
| **SOPRE 15** | **Soprema, Inc., 310 Quadral Drive, Wadsworth, OH 44281 http://soprema.us/** | | |
| | Bridge Deck, Modified Bitumen<br>*Conditionally approved as an alternate per manufacturer's specfications.* | Antirock (Alternate) | 2001-043Q |
| **TENC2 15 Plant** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/ Ennis, TX** | | |
| | Non-Bridge Deck, Modified Bitumen | Mirafi MTK | 2018-029Q |

## Section 695: Detectable Warning Surface

### 695.2(a) Detectable Warning Surface (DWS)

Last Revised: 5/4/2018

Dome size and spacing as specified in Standard Drawing RC-67M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADASI 15** | **ADA Solutions, Inc, 323 Andover Street, Suite 3, Wilmington, MA 01887 http://www.adatile.com/** | | |
| | DWS, Cast Iron | Iron Dome | 2018-017Q |
| | DWS, Polymer Composite<br>*Provisionally Approved* | Replaceable Wet Set Composite | 2008-019Q |
| | DWS, Polymer Composite<br>*Provisionally Approved* | Tactile Systems Composite Paver (Cast in Place) | 2007-049Q |
| **ARMOR 15** | **Armorcast Products Company, 13230 Saticoy Street, North Hollywood, CA 91605 http://www.armorcastprod.com/** | | |
| | DWS, Polymer Concrete<br>*Provisionally Approved* | Detectable Warning Wet Set Replaceable (with steel angles) | 2007-116Q |
| **DETTI 15**<br>**Plant** | **Detectile, Inc., 603 Mallard Lane, Oak Brook, IL 60523 http://www.detectile.com/**<br>**Manitowoc, WI** | | |
| | DWS, Polymer Composite<br>*Provisionally Approved* | PFC Composite Replaceable Panel | 2009-057Q |
| **EJI-0 15**<br>**Facility** | **EJ, 301 Spring Street, P.O. Box 439, East Jordan, MI 49727-0439 http://ejco.com/**<br>**East Jordan Foundry 2675 North U.S. 131 Elmira, MI 49730** | | |
| | DWS, Cast Iron<br>*Provisionally Approved* | DURALAST 7005 Detectable Warning Plate | 2007-020Q |
| **ENGPI 15**<br>**Plant** | **Engineered Plastics, Inc., 300 International Dr.,, Suite 100, Williamsville, NY 14221 http://engplastics.com/**<br>**Buffalo, NY** | | |
| | DWS, Polymer Composite<br>*Provisionally Approved* | Access Tile Replaceable Cast in Place ACC-R | 2010-036QB |
| | DWS, Polymer Composite<br>*Provisionally Approved* | Armor-Tile | 2007-052Q |

## Section 695: Detectable Warning Surface

### 695.2(a) Detectable Warning Surface (DWS)

Last Revised: 5/4/2018

Dome size and spacing as specified in Standard Drawing RC-67M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EZSTI 15 Plant** | **EZ Set Tile, Inc., 4495 Gunpowder Circle, Hastings, NE 68901 http://www.ezsettile.com/ Aurora, NE** | | |
| | DWS, Polymer Composite<br>*Provisionally Approved* | EZ Set Tile (Cast in Place) | 2007-019Q |
| **MBI1 15 Plant** | **Mar-Bal Incorporated, 10095 Queens Way, Chagrin Falls, OH 44023 http://www.mar-bal.com/language/en/ Dublin, VA** | | |
| | DWS, Polymer Composite | alertcast Detectable Warning System | 2018-062Q |
| **MFGCS 15** | **Molded Fiber Glass Composite Systems Company, 2925 MFG Place, Ashtabula, OH 44004 http://www.alerttile.com/products-alertcast** | | |
| | DWS, Polymer Composite<br>*Provisionally Approved* | alertcast Detectable Warning System | 2010-196Q |
| **NEENA 15** | **Neenah Foundry Company, Box 729, 2121 Brooks Ave., Neenah, WI 54956 http://www.nfco.com/** | | |
| | DWS, Cast Iron<br>*Provisionally Approved* | 24" x 24" Detectable Warning Plate (4984) | 2007-111Q |
| **STECC 15** | **Steel Craft Corporation, 105 Steel Craft Road, Hartford, WI 53027 http://www.steelcraftwi.com/** | | |
| | DWS, Stainless Steel<br>*Provisionally Approved* | MD Metapanel | 2011-191Q |
| **TRASA 15** | **Transpo Industries, Inc., 20 Jones Street, New Rochelle, NY 10801 http://www.transpo.com/** | | |
| | DWS, Polymer Concrete<br>*Provisionally Approved* | Step-Safe | 2006-229Q |

## Section 696: Temporary Impact Attenuating Devices (DM-2, Chapter 12)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

### 696.2 Temporary Impact Attenuating Devices

Last Revised: 8/17/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

Temporary work zone devices manufactured after December 31, 2019, must meet the AASHTO MASH 2016 criteria. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **BARRS 15** | **Lindsay Transportation Solutions, LLC (Barrier Systems by Lindsay), 180 River Road, Rio Vista, CA 94571 http://www.barriersystemsinc.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | Universal TAU-II | NCHRP 350 | | TL-2, TL-3 | CC-75 | SCT01a | 2004-083Q |
| | Type V, Non-Gating Two-Way Traffic System | X-TENuator | NCHRP 350 | | TL-3 | CC-109 | SCI23 | 2011-069QB |
| | Type VI, Gating Non-Redirective Crash Cushion System | ABSORB 350 | NCHRP 350 | | TL-3 | CC-66 | SCI11b | 2001-066 |
| **ENERG 15** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/** | | | | | | | |
| **Plant** | **Pell City, AL** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | QuadGuard CZ | NCHRP 350 | | TL-3 | CC-35A | SCT02b,c | 1998-027 |
| | Type V, Non-Gating Two-Way Traffic System | QuadGuard High Speed (HS) | NCHRP 350 | | TL-3 | CC-35E | SCT02d | 2001-223Q |
| | Type V, Non-Gating Two-Way Traffic System | QuadGuard II (Modified QuadGuard) | NCHRP 350 | | TL-2, TL-3 | CC-35I | | 2009-159QB |
| | *Spincast Plastics, South Bend, IN* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | QUEST | NCHRP 350 | | TL-3 | CC-87 | SCI20 | 2005-052Q |
| | Type V, Non-Gating Two-Way Traffic System | REACT 350 | NCHRP 350 | | TL-3 | CC-26B | SCI16a | 1995-158 |
| | Type VI, Gating Non-Redirective Crash Cushion System | Energite III Module | NCHRP 350 | | TL-3 | CC-29 | SCI06c | ----- |
| | Type VI, Gating Non-Redirective Crash Cushion System | Fitch Inertial | NCHRP 350 | | TL-3 | CC-28 | | ----- |

## Section 696: Temporary Impact Attenuating Devices (DM-2, Chapter 12)

### 696.2 Temporary Impact Attenuating Devices

Last Revised: 8/17/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

Temporary work zone devices manufactured after December 31, 2019, must meet the AASHTO MASH 2016 criteria. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **LEISS 15** | **Leiss Tool & Die, 801 North Pleasant Avenue, Somerset, PA 15501 http://leiss.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 100 GM | MASH 2016 | | TL-3 | CC-128 | | 2014-029QD |
| | * *Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 70 GM | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2014-029QB |
| **LINSY 15 Plant** | **Lindsay Transportation Solutions, LLC, 180 River Road, Rio Vista, CA 94571 http://www.lindsay.com/transportation-solutions 505 Crown Point Ave Omaha, NE 67110** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | Universal TAU-M | MASH 2016 | | TL-2, TL-3 | CC-146, CC-147 | | 2018-278Q |
| | * *Manual w/ Parts List, FHWA Eligibility Letters, Concrete & Asphalt Foundation Drawings for TAU-M* | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | ABSORB-M | MASH 2016 | 42 | TL-3 | CC-153 | | 2019-183Q |
| | *Manual, FHWA Eligibility Letter CC-153, approved PE stamped drawings, and anti-freeze solutions for water-filled ABSORB-M Type VI Crash Cushion* | | | | | | | |
| **MORVA 15** | **Morgan Valley Manufacturing, 340 North Industrial Road, P. O. Box 746, Morgan, UT 84050** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 100 GM | MASH 2016 | | TL-3 | CC-128 | | 2004-015 |
| | * *Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion* | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 70 GM | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2005-033 |
| **PLASS 15 Facility** | **Plastic Safety Systems, Inc., 2444 Baldwin Road, P.O. Box 20140, Cleveland, OH 44104 http://plasticsafety.com/ Middlefield, OH** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | Plastic Safety Systems | NCHRP 350 | | | | | 2010-306Q |

## Section 696: Temporary Impact Attenuating Devices (DM-2, Chapter 12)

### 696.2 Temporary Impact Attenuating Devices

Last Revised: 8/17/2020

FHWA Acceptance Letters: Terminals/Crash Cushions Letters

Summary of End Treatments Crash Tested to MASH 2016 Criteria (Installation Manuals, Parts List, Maintenance Procedures, and PE Stamped Drawings - PennDOT Approved): Section 619.2 & 696.2 Permanent and Temporary End Treatments Meeting MASH 2016 Criteria

Temporary work zone devices manufactured after December 31, 2019, must meet the AASHTO MASH 2016 criteria. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | Big Sandy (Sand Barrel System) | MASH | | TL-3 | CC-139 | | 1998-143 |
| | *System was crash tested to AASHTO MASH crash tested per FHWA Eligibility Letter CC-139. **Installation Instructions and FHWA Eligibility Letter for Big Sandy*** | | | | | | | |
| | Type VI, Gating Non-Redirective Crash Cushion System | MASH Sentry Longitudinal Energy Dissipater (SLED) | MASH | | TL-3 | CC-131 | | 2011-111 |
| | *System was crash tested to MASH criteria per FHWA Eligibility Letter CC-131. Manual, FHWA Eligibility Letter CC-131, and water freezing prevention documents for MASH Sentry Longitudinal Energy Dissipater (SLED) **Type VI Crash Cushion*** | | | | | | | |
| **TRIN3 15** | **Trinity Highway Products, LLC, 2548 NE 28th Street, Ft. Worth, TX 76111 http://www.highwayguardrail.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | TRACC | NCHRP 350 | | TL-3 | CC-54 | SCI18a,b | 2010-251QA |
| | * ***Approved MM-USA marking as Identifiable Steel*** | | | | | | | |
| **TRIN7 15 Plant** | **Trinity Highway Products, LLC, 2525 Stemmons Freeway, Dallas, TX 75207 https://trinityhighway.com/ Pell City, AL 35128** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | QuadGuard M10 (24" Wide) | MASH 2016 | | TL-3 | CC-112, CC112c | | 2018-219Q |
| | * ***Manual, Product Information, FHWA Eligibility Letters, and PE Stamped Drawings for QuadGuard M10*** | | | | | | | |
| **WHIPI 15** | **Whip Industries, 3010 South Main Street, Fort Worth, TX 76110 http://www.whipindustries.com/** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 100 GM | MASH 2016 | | TL-3 | CC-128 | | 2014-017QB |
| | * ***Manual w/ Parts List, FHWA Eligibility Letter, PE Stamped Drawings for SCI 100 GM Smart Cushion*** | | | | | | | |
| | Type V, Non-Gating Two-Way Traffic System | SCI 70 GM | NCHRP 350 | | TL-2 | CC-85A | SCI17b | 2014-017QD |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **AALPO 15 Plant** | **Aalborg Portland A/S, Roerdalsvej 44, Aalborg 9100 https://www.aalborgportland.dk/**<br>**Roerdalsvej 44 Aalborg 9100** | | | |
| | Type I | | | 2010-084Q |
| **ARGO1 15 Plant** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/**<br>**1826 South Queen Street Martinsburg, WV 25401**<br>***Formerly Essroc Materials, Inc. (ESS-3 15)*** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Portland Cement Type I/II | | 1995-072 |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Portland Cement Type I/II | 8/14/2012 | 1995-072 |
| | Type III | Portland Cement Type III | | 1995-072 |
| | Type III<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Portland Cement Type III | | 2020-077Q |
| | Type IL<br>*Per AASHTO M240, Portland cement with more than 5% but less than or equal to 15% limestone addition.* | Argos Type IL Cement | | 2019-072Q |
| **ARGO2 15 Terminal** | **Argos USA, 3015 Windward Plaza, Winward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/**<br>**4120 Buckeystown Pike Frederick, MD 21703**<br>***Formerly Essroc Materials, Inc. (ESS-5 15)*** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Type I/II, Terminal for ARGO1 15, Ref. No. 1995-072 (Martinsburg, WV) | | ----- |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Type I/II, Terminal for ARGO1 15, Ref. No. 1995-072 (Martinsburg, WV) | | 2010-183QB |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **ARGO3 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ Bessemer, PA** ***Formerly Essroc Materials, Inc. (ESS-6 15)*** | | | |
| | Type I | Type I/II, Terminal for ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2010-149QA |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Type I/II, Terminal for ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2010-149QB |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| **ARGO4 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ 500 West Park Road Leetsdale, PA 15056** ***Formerly Essroc Materials, Inc. (ESS10 15)*** | | | |
| | Type I | Type I/II, Terminal for ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2010-235QA |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Type I/II, Terminal for ARGO6 15, Ref. 2017-230Q (Calera, AL) | | 2010-235QA |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |
| | Type II | Type I/II, Terminal ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2010-235QB |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Type I/II, Terminal for ARGO6 15, Ref. 2017-230Q (Calera, AL) | | 2010-235QB |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |
| **ARGO6 15 Plant** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ Roberta Plant 8039 Highway 25 Calera, AL 35040** | | | |
| | Type I | | | 2017-230Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |
| | Type II | | | 2017-230Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **ARGO7 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ 411 Oberlin Avenue SW Massillon, OH 44647** | | | |
| | Type I | Type I/II, Terminal for ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2019-105Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Type I/II, Terminal for ARGO1 15, Ref. 1995-072 (Martinsburg, WV) | | 2019-105Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| **ARMST 15 Plant** | **Armstrong Cement and Supply, 100 Clearfield Road, Cabot, PA 16023-9521 Cabot, PA** | | | |
| | Type I | | | ----- |
| | Type I | | 7/6/2009 | ----- |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | ----- |
| | Type II | | | 2019-229Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II MH | | | ----- |
| | Type II MH | | | 2019-229Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | | | ----- |
| | Type V | | | 2000-010Q |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **BUZZ1 15 Plant** | **Buzzi Unicem USA Stockertown, 501 Hercules Drive, P. O. Box 69, Stockertown, PA 18083 http://www.buzziunicemusa.com/ Stockertown, PA** | | | |
| | Type I<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | 5/4/2009 | ----- |
| | Type I | | | ----- |
| | Type I<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | Terminal for BUZZ2 15, Ref. 2011-222QA (Chattanooga, TN) | | 2012-023QA |
| | Type II<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | Terminal for BUZZ2 15, Ref. 2011-222QB (Chattanooga, TN) | | 2012-023QB |
| | Type II MH<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | 5/4/2009 | ----- |
| | Type II MH | | | ----- |
| | Type III | | | ----- |
| | Type III<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | 5/4/2009 | ----- |
| **BUZZ2 15 Plant** | **Buzzi Unicem USA, Chattanooga, 1201 Suck Creek Road, P. O. Box 4304, Chattanooga, TN 37405 http://www.buzziunicemusa.com/ Chattanooga, TN** | | | |
| | Type I<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2011-222QA |
| | Type II<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2011-222QB |
| **CEMX1 15 Terminal** | **CEMEX, Inc. (Effective 3/7/20, acquired by Eagle Materials/Kosmos Cement Company LLC - See KCC-2 15), 10100 Katy Freeway, Suite 300, Houston, TX 77043 200-B Neville Island Pittsburgh, PA 15225**<br>***See KCC-2 15 - Kosmos Cement Company LLC*** | | | |
| | Type I | Terminal for CEMX4 15, Ref. No. 2001-056 | | ----- |
| | Type II | Terminal for CEMX4 15, Ref. No. 2001-056 | | ----- |
| | Type II MH | Terminal for CEMX4 15, Ref. No. 2001-056 | | ----- |
| | Type III | Terminal for CEMX4 15, Ref. No. 2001-056 | | ----- |

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### 701 Cement Plants & Terminals

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **CEMX2 15 Terminal** | **CEMEX, Inc., 10100 Katy Freeway, Suite 300, Houston, TX 77043 http://www.cemexusa.com/ 2001 Portland Park Wampum, PA 16157** | | | |
| | Type I | Terminal for CEMX8 15, Ref. 2018-231 (Knoxville, TN) | | 2018-231Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |
| | Type I | Terminal for KCC-1 15, Ref. 2001-056Q (Louisville, KY) | | 2010-042Q |
| | *This cement is supplied from the Kosmos Cement Company LLC plant in Louisville, KY (KCC-1 15).* | | | |
| | Type II | Terminal for CEMX8 15, Ref. 2018-231 (Knoxville, TN) | | 2018-231Q |
| | *Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | |
| | Type II | Terminal for KCC-1 15, Ref. 2001-056Q (Louisville, KY) | | 2010-042Q |
| | *This cement is supplied from the Kosmos Cement Company LLC plant in Louisville, KY (KCC-1 15).* | | | |
| | Type II MH | Terminal for KCC-1 15, Ref. 2001-056Q (Louisville, KY) | 3/9/2020 | 2010-042Q |
| | *This cement is supplied from the Kosmos Cement Company LLC plant in Louisville, KY (KCC-1 15).* | | | |
| | Type III | Terminal for KCC-1 15, Ref. 2001-056Q (Louisville, KY) | | 2010-141QA |
| | *This cement is supplied from the Kosmos Cement Company LLC plant in Louisville, KY (KCC-1 15).* | | | |
| **CEMX4 15 Plant** | **CEMEX, Inc. (Effective 3/7/20, acquired by Eagle Materials/Kosmos Cement Company LLC - See KCC-1 15), 10100 Katy Freeway, Suite 300, Houston, TX 77043 Kosmos Cement Plant 15301 Dixie Highway Louisvillle, KY 40272** | | | |
| | ***See KCC-1 15 - Kosmos Cement Company LLC*** | | | |
| | Type I | | | 2001-056Q |
| | Type I | | | 2017-130Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | 2001-056Q |
| | Type II | | | 2017-130Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II MH | | | 2001-056Q |
| | Type III | | | 2001-056Q |
| | Type IS | | | 1993-040 |

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### 701 Cement Plants & Terminals

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **CEMX6 15 Plant** | **Fairborn Cement Company (Eagle Materials, Inc.), 3811 Turtle Creek Blvd, Suite 1100, Dallas, TX 75219 http://www.eaglematerials.com**<br>**3250 Linebaugh Road Xenia, OH 45385**<br>***(Formerly CEMEX, Inc.)*** | | | |
| | Type I<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2012-172QA |
| | Type II<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2012-172QB |
| | Type II MH<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2012-172QB |
| | Type III | | | 2010-043Q |
| | Type III<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition.* | | | 2017-333Q |
| **CEMX7 15 Terminal** | **CEMEX, Inc. (Effective 3/7/20, acquired by Eagle Materials/Kosmos Cement Company LLC - See KCC-3 15), 10100 Katy Freeway, Suite 300, Houston, TX 77043**<br>**1007 Maccorkle SW Avenue South Charleston, WV 25303**<br>***See KCC-3 15 - Kosmos Cement Company LLC*** | | | |
| | Type I | Terminal for CEMX4 15, Ref. No. 2001-056 | | 2016-084Q |
| | Type II | Terminal for CEMX4 15, Ref. No. 2001-056 | | 2016-084Q |
| | Type II MH | Terminal for CEMX4 15, Ref. No. 2001-056 | | 2016-084Q |
| | Type III | Terminal for CEMX4 15, Ref. No. 2001-056 | | 2016-084Q |
| **CEMX8 15 Plant** | **CEMEX, Inc., 10100 Katy Freeway, Suite 300, Houston, TX 77043 http://www.cemexusa.com/**<br>**6212 Cement Plant Road Knoxville, TN 37924** | | | |
| | Type I<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | 2018-231Q |
| | Type II<br>*Per AASHTO M 85, Portland cement with up to 5% limestone addition and up to 5% inorganic processing addition (bag house dust).* | | | 2018-231Q |

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### 701 Cement Plants & Terminals

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **CRH-1 15 Plant** | **CRH Canada Group Inc. (To be renamed Ash Grove, effective 7/6/20), 2300 Steeles Avenue West, Concord, Ontario L4K 5X6 https://www.ashgrove.com/ Ash Grove Mississauga Cement Plant 2391 Lakeshore Road West Mississauga, Ontario L5J 1K1** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 1/17/2008 | ----- |
| | Type III<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2016-027Q |
| **CRH-2 15 Plant** | **CRH Canada Group Inc. (To be renamed Ash Grove, effective 7/6/20), 2300 Steeles Avenue West, Concord, Ontario L4K 5X6 https://www.ashgrove.com/ Ash Grove Joliette Cement Plant 966 chemin des Prairies Joliette, Quebec J6E 0L4** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2017-079Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2017-079Q |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2017-079Q |
| **ESSEX 15 Terminal** | **Titan America, LLC, 188 Summerfield Court, Suite 201, Roanoke, VA 24019 Essex Cement Company, LLC 182 Calcutta Street Port Newark, NJ 07114** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for TITAN 15, Ref. 2016-132 (Elefsina, Greece) | | 2019-248Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for TITAN 15, Ref. 2016-132 (Elefsina, Greece) | | 2019-248Q |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for TITAN 15, Ref. 2016-132 (Elefsina, Greece) | | 2019-248Q |
| **FEDW0 15 Plant** | **Federal White Cement, Inc., P.O. Box 1609, Woodstock, Ontario N4S 0A8 http://www.federalwhitecement.com/ P.O. Box 1609 Woodstock, Ontario N4S 0A8** | | | |
| | Type I | | | 1997-082 |

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### 701 Cement Plants & Terminals

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **FEDW1 15 Terminal** | **Federal White Cement, Inc., P.O. Box 1609, Woodstock, Ontario N4S 0A8 http://www.federalwhitecement.com/ Northampton, PA** | | | |
| | Type I | Terminal for FEDW0 15, Ref. No. 1997-082 (Woodstock, Ontario) | | 1997-140 |
| **HOLI1 15 Terminal** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Tarentum Terminal 445 Grantham Street Tarentum, PA 15084** | | | |
| | Type I | Terminal for HOLI4 15, Ref. 8/14/2007 (Hagerstown, MD) | | 2008-118Q |
| | Type I | Terminal for HOLI5 15, Ref. 2011-224QA (Holly Hill, SC) | | 2014-191QA |
| | Type II | Terminal for HOLI4 15, Ref. 6/11/2010 (Hagerstown, MD) | | 2008-118Q |
| | Type II | Terminal for HOLI5 15, Ref. 2011-224QB (Holly Hill, SC) | | 2014-191QB |
| | Type II MH | Terminal for HOLI5 15, Ref. 2011-224QB (Holly Hill, SC) | | 2014-191QC |
| **HOLI2 15 Plant** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Buffalo, NY** | | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | Type II MH | | | ----- |
| | Type III | | | ----- |
| **HOLI4 15 Plant** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Holcim Hagerstown Plant 1260 Security Road Hagerstown, MD 21742** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 8/14/2007 | ----- |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 6/11/2010 | 1990-148 |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 6/11/2010 | 1990-148 |
| | Type III | | | 1990-148 |

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| | Product | Name | Letter Date | Ref. No. |
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| **HOLI5 15 Plant** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Holcim Holly Hill Plant 2173 Gardner Boulevard Holly Hill, SC 29059** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-224QA |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-224QB |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-224QB |
| **HOLI6 15 Plant** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Ste. Genevieve Plant 2942 US Highway 61 Bloomsdale, MO 63627** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2012-090QA |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2012-090QB |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2012-090QB |
| **HOLI7 15 Terminal** | **Holcim U.S. Inc, Bloomsdale, MO 63627 https://www.lafargeholcim.us/ Wierton, WV** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for HOLI6 15, Ref. 2012-090QA (Bloomsdale, MO) | | 2012-099Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for HOLI6 15, Ref. 2012-090QB (Bloomsdale, MO) | | 2012-099Q |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for HOLI6 15, Ref. 2012-090QB (Bloomsdale, MO) | | 2012-099Q |

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **HOLI9 15 Terminal** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Baltimore, MD** | | | |
| | Type I | Terminal for HOLI5 15, Ref. No. 2011-224QA (Holly Hill, SC) | | 2014-093Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Terminal for HOLI5 15, Ref. No. 2011-224QB (Holly Hill, SC) | | 2014-093Q |
| | *Per AASHTO M85-07, Portland cement with up to 5% limestone addition.* | | | |
| | Type II MH | Terminal for HOLI5 15, Ref. No. 2011-224QB (Holly Hill, SC) | | 2014-093Q |
| | *Per AASHTO M85-07, Portland cement with up to 5% limestone addition.* | | | |
| **KCC-1 15 Plant** | **Kosmos Cement Company LLC, 15301 Dixie Highway, Louisville, KY 40272 15301 Dixie Highway Louisville, KY 40272** ***Formerly CEMX4 15 - CEMEX, Inc.*** | | | |
| | Type I | | | 2001-056Q |
| | Type I | | | 2017-130Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | 2001-056Q |
| | Type II | | | 2017-130Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II MH | | | 2001-056Q |
| | Type III | | | 2001-056Q |
| | Type IS | | | 1993-040 |

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### 701 Cement Plants & Terminals

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **KCC-2 15 Terminal** | **Kosmos Cement Company LLC, 15301 Dixie Highway, Louisville, KY 40272**<br>**200-B Neville Island Pittsburgh, PA 15225**<br>***Formerly CEMX1 15 - CEMEX, Inc.*** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| | Type I | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| | Type II | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| | Type II MH | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| | Type III | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | ----- |
| **KCC-3 15 Terminal** | **Kosmos Cement Company LLC, 15301 Dixie Highway, Louisville, KY 40272**<br>**1007 Maccorkle SW Avenue South Charleston, WV 25303**<br>***Formerly CEMX7 15 - CEMEX, Inc.*** | | | |
| | Type I | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| | Type II | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| | Type II MH | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| | Type III | Terminal for KCC-1 15, Ref. No. 2001-056 (Louisville, KY) | | 2016-084Q |
| **KEYSP 15 Plant** | **Keystone Cement Company, Route 329, P.O. Box A, Bath, PA 18014 http://www.keystone-cement.com/**<br>**Bath, PA** | | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | Type III | | | ----- |

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **KEYST 15 Terminal** | **Keystone Cement Company, Route 329, P.O. Box A, Bath, PA 18014 Adrian Terminal 719 Tarrtown Road Adrian, PA 16210** | | | |
| | Type I | Terminal for KEYSP 15 (Bath, PA) | | 2017-267Q |
| | Type II | Terminal for KEYSP 15 (Bath, PA) | | 2017-267Q |
| | Type III | Terminal for KEYSP 15 (Bath, PA) | | 2017-267Q |
| **LAFR1 15 Terminal** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Buffalo Cement Terminal 575 Ohio Street Buffalo, NY 14203** | | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | Type III | | | ----- |
| **LAFR1015 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Ravena Cement Plant 1916 Route 9 W Ravena, NY 12143** | | | |
| | Type I | | | ----- |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 3/25/2010 | ----- |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 3/25/2010 | ----- |
| | Type II | | | ----- |
| **LAFR1715 Terminal** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Pittsburg Terminal 1529 Chartiers Avenue Pittsburgh, PA 15204** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for HOLI4 15 (Hagerstown, MD) | | ----- |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for LAFR3 15 (Bath, Ontario) | | 2006-063Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for HOLI4 15 (Hagerstown, MD) | | ----- |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Terminal for LAFR3 15 (Bath, Ontario) | | 2006-063Q |

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| LAFR2 15 Terminal | | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Cleveland Cement Terminal/Slag 2500 Elm Street Cleveland, OH 44113** | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | Type III | | | ----- |
| LAFR3 15 Plant | | **LafargeHolcim Canada Inc., 6509 Airport Road, Mississauga, Ontario https://www.lafarge.ca/en 6501 Hwy 33 West P.O. Box 160 Bath, Ontario K0H 1G0** | | |
| | Type I | | 1/17/2008 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | | | ----- |
| | Type III | | | 2017-275Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| LAFR5 15 Terminal | | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Oswego Cement Terminal 1 West Van Buren Street Oswego, NY 13126** | | |
| | Type I | | | ----- |
| | Type II | | | ----- |
| | Type III | | | ----- |

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| **LAFR7 15 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Whitehall Cement Plant 5160 Main Street Whitehall, PA 18052** | | | |
| | Type I | | 12/16/2009 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | | | 2001-095Q |
| | Type II | | | 2013-146Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | | 12/16/2009 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | | | 2001-095Q |
| | Type IS (25) | MaxCem 25 | | 2019-243Q |
| | Type IS (30) | | | 2005-002Q |
| | Type IS (40) | | | 2008-021Q |
| **LAFR8 15 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Joppa Cement Plant 2500 Portland Road Grand Chain, IL 62941** | | | |
| | Type I | | | 1991-153 |
| | Type II | | | 1991-153 |
| | Type III | | | 1991-153 |
| **LAFR9 15 Terminal** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Belpre Cement Terminal 1684 State Route 618 Belpre, OH 45714** | | | |
| | Type I | | | 1993-402 |
| | Type II | | | 1993-402 |
| | Type III | | | 1993-402 |

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| LEH-1 15 Plant | **Lehigh Cement Company, LLC, 675 Quaker Hill Road, Union Bridge, MD 21791 http://www.lehighhanson.com/ Union Bridge, MD** | | | |
| | Type I | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | 3/11/2008 | ----- |
| | Type II | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | 3/11/2008 | ----- |
| | Type II MH | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | 3/11/2008 | ----- |
| | Type III | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | 3/11/2008 | ----- |
| LEH-2 15 Plant | **Lehigh White Cement Company LLC, 200 Hokes Mill Road, York, PA 17404 https://www.lehighwhitecement.com/ 200 Hokes Mill Road York, PA 17404** | | | |
| | Type I White | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | 4/6/2009 | ----- |
| | Type I White | | | 1989-253 |
| LEH-3 15 Plant | **Lehigh Cement Company, LLC, 537 Evansville Road, Fleetwood, PA 19522 http://www.lehighhanson.com/ Evansville Plant, Fleetwood, PA** | | | |
| | Type I | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | ----- |
| | Type II | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | ----- |
| | Type II MH | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | ----- |
| | Type III | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | ----- |
| | Type IS (40) | | | 1999-152Q |
| | Type IS (50) | | | 2019-035Q |

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LEH-4 15 Terminal** | **Lehigh Cement Company, LLC, 100 Woodlawn Road, Aliquippa, PA 15001-5404 http://www.lehighhanson.com/ Aliquippa, PA** | | | |
| | Type I | Terminal for LEH-1 15, Ref. Ltr. 03/11/2008 (Union Bridge, MD) | | 2003-110Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Terminal for LEH-1 15, Ref. Ltr. 03/11/2008 (Union Bridge, MD) | | 2003-110Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| **LEH-6 15 Terminal** | **Lehigh Cement Company, LLC, 63 Flushing Avenue Unit 295, Brooklyn, NY 11205 http://www.lehighhanson.com/ Brooklyn, NY** | | | |
| | Type I | Terminal for AALPO 15, Ref. No. 2010-084Q (Aalborg, Denmark) | | 2010-208Q |
| **LEH-7 15 Terminal** | **Lehigh Cement Company, LLC, 3100 Mertens Avenue, Baltimore, MD 21224 http://www.lehighhanson.com/ Baltimore, MD** | | | |
| | Type I | Terminal for LEH-1 15, Ref. Ltr. 03/11/2008 (Union Bridge, MD) | | 2012-010QA |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Terminal for LEH-1 15, Ref. Ltr. 03/11/2008 (Union Bridge, MD) | | 2012-010QB |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| **LEH-8 15 Terminal** | **Lehigh Cement Company, LLC, 361 Boxart Street, Rochester, NY 14612 http://www.lehighhanson.com/ 361 Boxart Street Rochester, NY 14612** ***(Formerly Essroc ESS-8 15)*** | | | |
| | Type I | Terminal for LEH11 15, Ref. No. 2005-087Q (Picton, Ontario) | | 2000-004Q |
| | Type II | Terminal for LEH11 15, Ref. No. 2005-087Q (Picton, Ontario) | | 2000-004Q |

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| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LEH-9 15 Plant** | **Lehigh Cement Company, LLC, 3938 Easton Nazareth Highway, Nazareth, PA 18064 http://www.lehighhanson.com/**<br>**3938 Easton Nazareth Highway Nazareth, PA 18064**<br>***(Formerly Essroc ESS-7 15)*** | | | |
| | Type I | Plant 1 - Limestone Source: Pennsy Supply | | 2013-071Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Plant 1 - Saylors Portland Cement - Limestone Source: Medford Fines (Martin Marietta Materials) | | 2019-037Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Plant 1 - Saylors Portland Cement - Limestone Source: Nazareth Limestone | | 2020-157Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Plant 3 | | 1997-187 |
| | Type II | Plant 1 - Limestone Source: Pennsy Supply | | 2013-071Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Plant 1 - Saylors Portland Cement - Limestone Source: Medford Fines (Martin Marietta Materials) | | 2019-037Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Plant 3 | | 1997-187 |
| | Type III | Plant 1 | | 1997-187 |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | Plant 3 | | 1997-187 |
| | Type IL | Plant 1 | | 2018-244Q |
| | *Per AASHTO M240, Portland cement with more than 5% but less than or equal to 15% limestone addition.* | | | |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LEH11 15 Plant** | **Lehigh Cement Company, ULC, Highway 49 South, Picton, Ontario KOK 2TO http://www.lehighhanson.com/ Picton, Ontario, Canada** ***(Formerly Essroc ESS11 15)*** | | | |
| | Type I | | 6/9/2011 | - |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | | | 2005-087Q |
| | Type II | | 6/9/2011 | - |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | 2005-087Q |
| | Type IL | Type IL | | 2019-004Q |
| | *Per AASHTO M240, Portland cement with more than 5% but less than or equal to 15% limestone addition.* | | | |
| **LEH12 15 Terminal** | **Lehigh Cement Company, LLC, 29 West First Street, Oswego, NY 13126 http://www.lehighhanson.com/ Oswego, NY** ***(Formerly Essroc ESS12 15)*** | | | |
| | Type I | Terminal for LEH11 15, Ref. No. 2005-087Q (Picton, Ontario) | | 2005-088Q |
| | Type II | Terminal for LEH11 15, Ref. No. 2005-087Q (Picton, Ontario) | | 2005-088Q |
| **LEH13 15 Plant** | **Lehigh Cement Company, LLC, Highway 31, Speed, IN 47172 http://www.lehighhanson.com/ Speed, IN** ***(Formerly Essroc ESS13 15)*** | | | |
| | Type I | | | 2009-024QA |
| | Type I | | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | 2009-024QB |
| | Type II | | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | | | 2009-162Q |
| | Type III | | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LEH14 15 Terminal** | **Lehigh Cement Company, LLC, 1101 Erieside Extended, Cleveland, OH 44114 http://www.lehighhanson.com/ Cleveland, OH** ***(Formerly Essroc ESS14 15)*** | | | |
| | Type II | Terminal for LEH11 15, Ref. No. 2005087Q (Picton, Ontario) | | 2010-018Q |
| **LEH16 15 Terminal** | **Lehigh Cement Company, LLC, 8282 Middlebranch Road, Middlebranch, OH 44652 http://www.lehighhanson.com/ [Slag Plant, Cement Terminal] Middlebranch, OH 44652** ***(Formerly Essroc ESS-4 15)*** | | | |
| | Type I | Terminal for LEH-1 15, 3/11/2008 (Union Bridge, MD) | | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Terminal for LEH-9 15, Ref. No. 1997-187 (Nazareth, PA) | | 2015-041Q |
| | Type I | Terminal for LEH13 15, Ref No. 2017-354Q (Speed, IN) | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | Terminal for LEH13 15, Ref. No. 2009-024QA (Speed, IN) | | 2009-024QA |
| | Type II | Terminal for LEH-1 15, 3/11/2008 (Union Bridge, MD) | | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Terminal for LEH11 15, Ref. No. 2005-087Q (Picton, Ontario) | | 2010-113QB |
| | Type II | Terminal for LEH13 15, Ref No. 2017-354Q (Speed, IN) | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | Terminal for LEH13 15, Ref. No. 2009-024QB (Speed, IN) | | 2009-024QB |
| | Type III | Terminal for LEH1-15, 3/11/2008 (Union Bridge, MD) | | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | Terminal for LEH13 15, Ref No. 2017-354Q (Speed, IN) | | 2017-354Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type III | Terminal for LEH13 15, Ref. No. 2009-162Q (Speed, IN) | | 2010-113QA |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **LEHN0 15 Plant** | **Lehigh Northeast Cement Company, 313 Warren Street, Glen Falls, NY 12801 Glen Falls, NY** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-180QA |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-180QB |
| | Type III<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2011-180QC |
| **MCINN 15 Plant** | **McInnis Cement Company, 850 Canal Street, 3rd Floor, Stamford, CT 06902 https://mcinniscement.com/the-projects/#the-plant 50, Road 132 Port Daniel-Gascons (Quebec) G0C-2N0** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Type I/II Cement | | 2019-249Q |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Type I/II Cement | | 2019-249Q |
| | Type III<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | Type III Cement | | 2020-186Q |
| **MEDC1 15 Plant** | **Medcem Madencilik, Atasehir Bulvari, Metropol Istanbul, C-2 Blok, 34758, Istanbul, Türkiye http://www.medcem.com.tr/en/home Akdere Köyü Bagalani Mevkii Silifke/MERSIN** | | | |
| | Type I | | | 2019-121Q |
| | Type II | | | 2019-121Q |
| **RIVER 15 Plant** | **Riverside Construction Materials, 355 Newbold Rd., Fairless Hills, PA 19030 Siam Cement Company Thailand** | | | |
| | Type I<br>*Manufactured by the Siam Cement Company.* | | | 1998-195 |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **RIVERT15 Terminal** | **Riverside Construction Materials, 355 Newbold Road, Fairless Hills, PA 19030**<br>**7900 N. Radcliffe Street Bristol, PA 19007** | | | |
| | Type I | Terminal for MEDC1 15, Ref. No. 2019-121 (Mercin, Turkey) | | 2019-097Q |
| | *NOTE: Cement is shipped from the Medcem Madencilik Plant in Mersin, Turkey (MEDC1 15). Plant Verification (PV) samples are submitted by the Riverside Construction Materials terminal in Bristol, PA (RIVERT15).* | | | |
| | Type I | Terminal for TITAN 15, Ref. No. 2016-132 (Elefsina, Greece) | | 2016-098Q |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition. NOTE: Cement is shipped from the Kamari Plant in Elefina, Greece (TITAN 15). Plant Verification (PV) samples are submitted by the Riverside Construction Materials terminal in Bristol, PA (RIVERT15).* | | | |
| **STMC1 15 Plant** | **St. Marys Cement, Votorantim Cimentos, 9333 Dearborn Street, Detroit, MI 48209 http://www.stmaryscement.com/saintmaryscementinc/**<br>**585 Water Street P.O. Box 1000 St. Marys, Ontario N4X 1B6** | | | |
| | Type I | | 10/6/2010 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type I | | | 1988-318 |
| | Type II | | 10/6/2010 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II | | | 1988-318 |
| | Type II MH | | 10/6/2010 | ----- |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | |
| | Type II MH | | | 1988-318 |
| | Type III | | | 1988-318 |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **STMC2 15 Plant** | **St. Marys Cement, 9333 Dearborn Street, Detroit, MI 48209 http://www.stmaryscement.com/saintmaryscementinc/ Bowmanville, Ontario** | | | |
| | Type I<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | 10/6/2010 | ----- |
| | Type I | | | 1997-097 |
| | Type II<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2013-248QA |
| | Type II MH<br>*Per AASHTO M85, Portland cement with up to 5% limestone addition.* | | | 2013-248QB |
| | Type III | | | 1997-097 |
| **STMC3 15 Terminal** | **St. Marys Cement, 9333 Dearborn Street, Detroit, MI 48209 http://www.stmaryscement.com/saintmaryscementinc/ Buffalo, NY** | | | |
| | Type I | Terminal for STMC1 15, Ref. No. 1988-318 (St. Marys, Ontario) | | 1999-1959Q |
| | Type I | Terminal for STMC2 15, Ref. No. 1997-097 (Bowmanville, Ontario) | | 1999-1959Q |
| | Type II | Terminal for STMC1 15, Ref. No. 1988-318 (St. Marys, Ontario) | | 1999-1959Q |
| | Type III | Terminal for STMC1 15, Ref. No. 1988-318 (St. Marys, Ontario) | | 1999-1959Q |
| | Type III | Terminal for STMC2 15, Ref. No. 1997-097 (Bowmanville, Ontario) | | 1999-1959Q |
| **STMC5 15 Terminal** | **St. Marys Cement, 2301 Front Street, Toledo, OH 43605 http://www.stmaryscement.com/saintmaryscementinc/ Toledo, OH** | | | |
| | Type I | Terminal for STMC2 15, Ref. No. 1997-097 (Bowmanville, Ontario) | | 2008-116Q |
| **STMC6 15 Terminal** | **St. Marys Cement, 250 Jefferson Street, Cleveland, OH 44113 http://www.stmaryscement.com/saintmaryscementinc/ Cleveland, OH** | | | |
| | Type I | Terminal for STMC2 15, Ref. No. 1997-097 (Bowmanville, Ontario) | | 2008-117QA |

## Section 701: Cement

### 701 Cement Plants & Terminals

Last Revised: 10/15/2020

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **TITAN 15 Plant** | **Titan Cement Company, Kalkidos 22A, 11143 Athens, Greece http://www.titan-cement.com/en/**<br>**Kamari Plant: Elefsina, Greece** | | | |
| | Type I, II, II MH | Riverside Cement | | 2016-132 |
| | *Per AASHTO M85, Portland cement with up to 5% limestone addition. NOTE: Cement is shipped to a Riverside Construction Materials terminal in Bristol, PA (RIVERT15). Plant Verification samples are submitted by Riverside Construction Materials (RIVERT15).* | | | |

# Section 702: Asphalt Material

## 702a Asphalt Cement

Last Revised: 5/6/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ATLMC 15** | **Atlas Minerals and Chemicals, Inc., 1227 Valley Road, P.O. Box 38, Mertztown, PA 19539-0038 http://www.atlasmin.com/** | | |
| | ASTM D 3141 | | ----- |
| | WA-1 | | ----- |
| | WM-1 | | ----- |
| **PUREA 15** | **Pure Asphalt Company, 3300 West 31st Street, Chicago, IL 60623 http://www.pureasphalt.com/** | | |
| | ASTM D 3141 | | ----- |
| **SOLAR 15** | **Solar Compounds, 1201 West Blancke Street, Linden, NJ 07036 http://www.solarcompounds.com/** | | |
| | J-1 | | ----- |
| **TRUM1 15 Refinery** | **Trumbull Asphalt, Division of Owens Corning, 7800 West 59th Street, Summit, IL 60501 http://www.owenscorning.com/trumbull/ Kearny, NJ** | | |
| | ASTM D 3141 | | 2005-001Q |
| **TRUM3 15 Refinery** | **Trumbull Asphalt, Division of Owens Corning, 7800 West 59th Street, Summit, IL 60501 http://www.owenscorning.com/trumbull/ Medina, OH** | | |
| | ASTM D 3141 | | ----- |
| **ZECH0 15** | **Zeigler Chemical Corporation, 600 Prospect Avenue, Piscataway, NJ 08854 http://zieglerchemical.com/** | | |
| | WA-1 | | ----- |
| | WM-1 | | ----- |

## 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASP-2 15** | **Asphalt Paving Systems, 500 North Egg Harbor Road, P.O. Box 500, Hammonton, NJ 08037-0500 http://www.asphaltpavingsystems.com/** ***Formerly Shore Slurry Seal, Inc. (SHORE 15)*** | | |
| | MC-30 | | ----- |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASP-2 15** | **Asphalt Paving Systems, 500 North Egg Harbor Road, P.O. Box 500, Hammonton, NJ 08037-0500 http://www.asphaltpavingsystems.com/** ***Formerly Shore Slurry Seal, Inc. (SHORE 15)*** | | |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **ATLMC 15** | **Atlas Minerals and Chemicals, Inc., 1227 Valley Road, P.O. Box 38, Mertztown, PA 19539-0038 http://www.atlasmin.com/** | | |
| | MC-30 | | 1999-116Q |
| | MC-400 | | 1999-116Q |
| | MC-70 | | 1999-116Q |
| | MC-800 | | 1999-116Q |
| | RC-250 | | 1999-116Q |
| | RC-70 | | 1999-116Q |
| | RC-800 | | 1999-116Q |
| | WP-1 | | 1999-116Q |
| **COOPC 15** | **Coopers Creek Chemical Corporation, 884 River Road, West Conshohocken, PA 19428-2699 http://cooperscreekchemical.com/** | | |
| | MC-30 | | 2000-119Q |
| | MC-400 | | 2000-119Q |
| | MC-70 | | 2000-119Q |
| | MC-800 | | 2000-119Q |
| | RC-250 | | 2000-119Q |
| | RC-70 | | 2000-119Q |
| | RC-800 | | 2000-119Q |
| | WP-1 | | 2000-119Q |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HENCO 15** | **Henry Company, 336 Cold Stream Road, Kimberton, PA 19442 http://us.henry.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **MARFR 15** | **Frank Martuccio Asphalt and Paving, Inc., 1059 Mercer Avenue, Hermitage, PA 16148** | | |
| | MC-30 | | 2006-067Q |
| | MC-400 | | 2006-067Q |
| | MC-70 | | 2006-067Q |
| | MC-800 | | 2006-067Q |
| | RC-250 | | 2006-067Q |
| | RC-70 | | 2006-067Q |
| | RC-800 | | 2006-067Q |
| | WP-1 | | 2006-067Q |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MDL-3 15 Terminal** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388 http://www.midlandasphalt.com/ Clearfield, PA** | | |
| | ***Formerly Whitaker Road (WHITR 15)*** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **NEVLC 15** | **Neville Chemical Company, 2800 Neville Road, Neville Island, PA 15225 http://www.nevchem.com/** | | |
| | Cut-Back Asphalt | SRTC | ----- |
| **PECKH 15** | **Peckham Materials Corporation, 2 Union Street Extension, Athens, NY 12015** | | |
| | MC-30 | | 1999-133Q |
| | MC-400 | | 1999-133Q |
| | MC-70 | | 1999-133Q |
| | MC-800 | | 1999-133Q |
| | RC-250 | | 1999-133Q |
| | RC-70 | | 1999-133Q |
| | RC-800 | | 1999-133Q |
| | WP-1 | | 1999-133Q |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS0 15** | **Russell Standard Corporation, 1210 Perry Highway, P.O. Box 509, Mercer, PA 16137 http://www.russellstandard.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **RUSS3 15** | **Russell Standard Corporation, Hammaker East, LTD, 118 Siloam Road, Chambersburg, PA 17201 http://www.russellstandard.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS7 15** | **Russell Standard Corporation / Hammaker East LTD, 285 Kappa Drive, Suite 300, Pittsburgh, PA 15238 http://www.russellstandard.com/** | | |
| **Facility** | **3450 Asiatic Avenue Baltimore, MD 21226** | | |
| | MC-30 | | 2018-213Q |
| | MC-400 | | 2018-213Q |
| | MC-70 | | 2018-213Q |
| | MC-800 | | 2018-213Q |
| | RC-250 | | 2018-214Q |
| | RC-70 | | 2018-214Q |
| | RC-800 | | 2018-214Q |
| | WP-1 | | 2018-214Q |
| **SEABD 15** | **Seaboard Asphalt Products Company, 3601 Fairfield Road, Baltimore, MD 21226 http://seaboardasphalt.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

## Section 702: Asphalt Material

### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT1 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 505 Como Park Blvd. Buffalo, NY** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **SUIT3 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Cortland, NY** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT4 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 20 Fairground Lane Watkins Glen, NY** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **SUIT5 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Jamestown, NY** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

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### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT6 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ New York State Route 19 Belmont, NY** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **SUIT8 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 10965 McHenry Street Meadville, PA** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **UAC-1 15 Plant** | **United Asphalt Company, P.O. Box 291, Cedar Brook, NJ 08018 https://unitedasphalt.com/asphalt-cutbacks/ 237 North Grove Street Berlin, NJ 08009** | | |
| | RC-250 | Del-Val RC-250 | 2019-024Q |
| | RC-70 | Del-Val RC-70 | 2019-023Q |
| | RC-800 | Del-Val RC-800 | 2019-025Q |

## Section 702: Asphalt Material

### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **UNRC0 15** | **United Refining Company, P.O. Box 780, Warren, PA 16365 http://www.urc.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |
| **UNRC1 15 Terminal** | **United Refining Company, 15 Bradley Street, P.O. Box 780, Warren, PA 16365-0780 http://www.urc.com/ Springdale Terminal Springdale, PA** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

## Section 702: Asphalt Material

### 702b Cutback Asphalt

Last Revised: 6/24/2020

Cutback Asphalt includes: MC-30, MC-70, MC-400, MC-800, RC-70, RC-250, RC-800 and WP-1 Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ZECH0 15** | **Zeigler Chemical Corporation, 600 Prospect Avenue, Piscataway, NJ 08854 http://zieglerchemical.com/** | | |
| | MC-30 | | ----- |
| | MC-400 | | ----- |
| | MC-70 | | ----- |
| | MC-800 | | ----- |
| | RC-250 | | ----- |
| | RC-70 | | ----- |
| | RC-800 | | ----- |
| | WP-1 | | ----- |

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASP-1 15** | **Asphalt Paving Systems, 8th St. & Reading Ave., P.O. Box 530, Hammonton, NJ 08037 http://www.asphaltpavingsystems.com/** ***Formerly ASPPS 15*** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2017-098Q |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASP-1 15** | **Asphalt Paving Systems, 8th St. & Reading Ave., P.O. Box 530, Hammonton, NJ 08037 http://www.asphaltpavingsystems.com/** ***Formerly ASPPS 15*** | | |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **DOSK0 15** | **Dosch-King Emulsions, Inc., 16 Troy Hills Road, Whippany, NJ 07981 http://doschking.net/index.html** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **ENVES 15** | **Environmental Energy Solutions, LLC, 10027 Route 403 Highway South, Seward, PA 15954 http://www.eesolutionsllc.com/** | | |
| | EM Type 4: AEP | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **KAP-1 15 Terminal** | **Kuhnsville Asphalt Products, 6661 Tilgham Street, Allentown, PA 18106 https://www.kvasphalt.com/ PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2019-080Q |
| **LINP0 15** | **Lindy Paving, Inc., P.O. Box 282, 4551 West State Street, Hillsville, PA 16132 https://www.pjdick.com/lindy-paving/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T<br>*Provisionally Approved* | | 2010-040Q |
| **MARFR 15** | **Frank Martuccio Asphalt and Paving, Inc., 1059 Mercer Avenue, Hermitage, PA 16148** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MDL-1 15** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388** http://www.midlandasphalt.com/ ***Formerly MDLAC 15*** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |
| | EM Type 7: UTFCEM | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MDL-2 15 Terminal** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388 http://www.midlandasphalt.com/ Lyons, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |
| | EM Type 7: UTFCEM | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MDL-3 15 Terminal** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388 http://www.midlandasphalt.com/ Clearfield, PA** | | |
| | ***Formerly Whitaker Road (WHITR 15)*** | | |
| | EM Non-Standard | FastTack | 2010-128 |
| | *Conditionally approved per manufacturer's specifications. FastTack system includes an adhesion agent (MC), an emulsified asphalt and a breaking agent (Rupteur XC).* | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2017-126Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |
| | EM Type 7: UTFCEM | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MDL-4 15 Terminal** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388 http://www.midlandasphalt.com/ Bloomsburg, PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **MOHWK 15** | **Mohawk Asphalt Emulsions, 6 Freemans Bridge Road, Scotia, NY 12302** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 7: UTFCEM | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NEAS1 15** | **New England Asphalt Services, dba Empire Emulsions, 508 Forest Road, Northford, CT 06742** | | |
| **Terminal** | **Empire Emulsions 1297 Craigville Road Chester, NY 10918** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2019-047Q |
| **PECKH 15** | **Peckham Materials Corporation, 2 Union Street Extension, Athens, NY 12015** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS0 15** | **Russell Standard Corporation, 1210 Perry Highway, P.O. Box 509, Mercer, PA 16137 http://www.russellstandard.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T *(Also evaluated per PEQ 2018-033Q)* | | 2018-111Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **RUSS1 15** | **Russell Standard Corporation, 990 Hazel Street, Akron, OH 44305 http://www.russellstandard.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2018-015Q |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS3 15** | **Russell Standard Corporation, Hammaker East, LTD, 118 Siloam Road, Chambersburg, PA 17201 http://www.russellstandard.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2008-172Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **RUSS4 15 Terminal** | **Russell Standard Corporation, 3580 Wheelertown Road, Waterford, PA 16441 http://www.russellstandard.com/ Wheelertown Terminal Waterford, PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS6 15 Terminal** | **Russell Standard Corporation, P.O. Box 802, Mars, PA 16046 http://www.russellstandard.com/ Mars, PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| **RUSS7 15 Facility** | **Russell Standard Corporation / Hammaker East LTD, 285 Kappa Drive, Suite 300, Pittsburgh, PA 15238 http://www.russellstandard.com/ 3450 Asiatic Avenue Baltimore, MD 21226** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2018-112Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS8 15** | **Russell Standard Corporation, 3847 Pottsville Pike, Reading, PA 19605 http://www.russellstandard.com/** ***Formerly Ergon Asphalt & Emulsions, Inc. (ERG01 15)*** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T *(Also evaluated per PEQ 2018-114Q)* | | 2018-113Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | - |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | - |
| | EM Type 4: AEP | | - |
| | EM Type 7: UTFCEM | | ----- |
| **SHSA1 15 Terminal** | **Shelly & Sands Inc., 3570 South River Road, P. O. Box 1585, Zanesville, OH 43702 http://shellyandsands.com/** **S&S Terminal & Emulsions 1731 Old State Route 7 Rayland, OH** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2018-205Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SHSA2 15 Facility** | **Shelly & Sands, Inc., 3570 South River Road, Zanesville, OH 43702 http://shellyandsands.com/ S & S Emulsions 1731 Old SR #7 Rayland, OH 43943** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2018-205Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| **SPEEM 15** | **Specialty Emulsions, Inc., 1194 Zinns Quarry Road, York, PA 17404 http://specialtyemulsionsinc.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T<br>*Product name for NTT: EM-50-TT* | | 2011-084Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT1 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 505 Como Park Blvd. Buffalo, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| **SUIT2 15 Terminal** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 797 Carlton Drive Bentleyville, PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T *(Also evaluated per PEQ 2018-158Q & PEQ 2018-159Q)* | | 2018-163Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | 2018-160Q |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT3 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Cortland, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2017-231Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT4 15** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | |
| **Facility** | **20 Fairground Lane Watkins Glen, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT5 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Jamestown, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | 2018-161Q |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT6 15** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | |
| **Facility** | **New York State Route 19 Belmont, NY** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | ----- |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | 2018-143Q |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT8 15** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | |
| **Facility** | **10965 McHenry Street Meadville, PA** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2017-232Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | ----- |
| | EM Type 7: UTFCEM | | ----- |
| **TERAS 15** | **Terry Asphalt Materials, Inc., 8 Standen Dr., Hamilton, OH 45015 http://terryasphalt.com/index.html** | | |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| **TSA-1 15** | **Tri-State Asphalt, LLC, PO Box 470, 1362 Bungalow Road, Morris, IL 60450 https://www.tsasphalt.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T | | 2018-241Q |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | 2018-242Q |

## Section 702: Asphalt Material

### 702c Emulsified Asphalt

Last Revised: 6/24/2020

EM TYPE 1 = TACK, NTT/CNTT, RS-1/CRS-1, RS-2/CRS-2, MS-2/CMS-2, CMS-2s, SS-1/CSS-1, SS-1h/CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, and AE-T

EM TYPE 2 = RS-2P, CRS-2P, and HFRS-2P

EM TYPE 3 = SS-1hP, CSS-1hP, and CQS-1hP

EM TYPE 4 = AEP ~ EM TYPE 5 = E-1 Prime ~ EM TYPE 6 = EDP ~ EM TYPE 7 = UTFCEM

~ Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

NOTE: NTT and CNTT non-tracking tack coats are listed with EM TYPE 1 emulsions.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **VESTA 15** | **Vestal Asphalt, Inc., 209 Stage Road, Vestal, NY 13850 http://vestalasphalt.com/** | | |
| | EM Type 1: TACK, NTT, CNTT, RS-1, CRS-1, RS-2, CRS-2, MS-2, CMS-2, CMS-2s, SS-1, CSS-1, SS-1h, CSS-1h, HFMS-2h, HFMS-2, HFMS-2s, HFRS-2, E-10, AE-T *(Also evaluated per PEQ 2018-232Q)* | | 2019-075Q |
| | EM Type 2: RS-2P, CRS-2P, HFRS-2P | | ----- |
| | EM Type 3: SS-1hP, CSS-1hP, CQS-1hP | | ----- |
| | EM Type 4: AEP | | ----- |
| | EM Type 5: E-1 Prime | | ----- |
| | EM Type 6: EDP | | 2018-248Q |
| | EM Type 7: UTFCEM | | 2018-246Q |

### 702d Performance Grade Asphalt Binder (PGAB)

Last Revised: 8/28/2020

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **APEX1 15 Terminal** | **Apex Oil Company, Inc., 8235 Forsyth Boulevard, Suite 400, St. Louis, MO 63105 http://www.apexoil.com/ 1622 South Clinton Street Baltimore, MD 21224** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2014-219Q |
| | PG 76-22, PG 64E-22 | | 2017-070Q |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2017-203Q |
| **ASSA1 15 Refinery** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/ Associated Asphalt Paulsboro 4 Paradise Road Paulsboro, NJ 08066-1740** ***(Formerly AXON1 15)*** | | |
| | PG 58-28 | | 2005-110Q |
| | PG 58-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2009-093Q |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2009-046Q |
| | PG 76-22, PG 64E-22 | | ----- |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2009-040Q |

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASSA2 15 Terminal** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/ Associated Asphalt Baltimore 1955 Chesapeake Avenue Baltimore, MD 21226** | | |
| | PG 64-22, PG 64S-22 | | 2019-209Q |
| **ASSA3 15 Terminal** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/ Associated Asphalt Baltimore 1800 Frankfurst Avenue Baltimore, MD 21226** ***(Formerly AXON3 15)*** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 58-28, PG 58S-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives *Terminal for ASSA1 15, Ref. No. 2009-093Q* | | 2012-042Q |
| | PG 64-22, PG 64S-22 | | 2008-104Q |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives *Terminal for ASSA1 15, Ref. No. 2009-046Q* | | 2012-045Q |
| | PG 76-22, PG 64E-22 | | ----- |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives *Terminal for ASSA1 15, Ref. No. 2009-040Q* | | 2012-046Q |

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASSA4 15 Terminal** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/**<br>**Associated Asphalt Perth Amboy 920 High Street Perth Amboy, NJ 08861**<br>***(Formerly AXON4 15)*** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| **ASSA7 15 Terminal** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/**<br>**Associated Asphalt Gloucester [BKEP Materials, LLC] 201 Water Street [King Street & Jersey Avenue] Gloucester City, NJ 08030**<br>***(Formerly AXON7 15)*** | | |
| | PG 58-28, PG 58S-28 | | 2016-284Q |
| | PG 64-22, PG 64S-22 | | 2009-096Q |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2019-221Q |
| | PG 76-22, PG 64E-22 | | 2009-097Q |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2019-220Q |

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: **Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)**

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASSAS 15** | **Associated Asphalt, 5201 Causeway Blvd., Tampa, FL 33675 http://associatedasphalt.com/** | | |
| **Terminal** | **Associated Asphalt Martinsburg, LLC 855 Corning Way Martinsburg, WV 25405** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2019-216Q |
| | PG 76-22, PG 64E-22 | | 2008-075Q |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2019-215Q |

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BIT-0 15** | **Bitumar USA, Inc., 6000 Pennington Avenue, Baltimore, MD 21226 http://www.bitumar.com/home.html** | | |
| | PG 58-28, PG 58S-28 | | 2008-085Q |
| | PG 58-28, PG 58S-28 Modified with Evotherm® J1 Warm Mix Technology with Anti-Strip Additives | | 2019-038Q |
| | PG 58-28, PG 58S-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2018-281Q |
| | PG 64-22, PG 64S-22 | | 2008-084Q |
| | PG 64-22, PG 64S-22 Modified with Evotherm® J1 Warm Mix Technology with Anti-Strip Additives | | 2019-039Q |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2012-181QA |
| | PG 64-22, PG 64S-22 Modified with Sasobit Warm Mix Technology | | 2011-118Q |
| | PG 64-22, PG 64S-22 Modififed with SonneWarmix Warm Mix Technology | | 2013-067Q |
| | PG 76-22, PG 64E-22 | | 2008-048Q |
| | PG 76-22, PG 64E-22 Modified with Evotherm® J1 Warm Mix Technology with Anti-Strip Additives | | 2019-040Q |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2013-066Q |

## Section 702: Asphalt Material

### 702d Performance Grade Asphalt Binder (PGAB)

**Last Revised: 8/28/2020**

PGAB Grades not listed in Bulletin# 25 (Specifications for Asphalt/Bituminous Materials) are Restricted Use Non-Standard Grades. Materials Testing Laboratory must be contacted prior at (717) 787-2707 to use.

PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BIT-3 15 Terminal** | **Bitumar USA, Inc., 6000 Pennington Avenue, Baltimore, MD 21226 http://www.bitumar.com/en 200 Development Drive Inwood, WV 25428** | | |
| | PG 64-22 | | 2017-330Q |
| **ERIEM 15 Terminal** | **Erie Materials, Inc., 4507 Tiffin Ave, P.O. Box 2308, Sandusky, OH 44870 Sandusky, OH** | | |
| | PG 58-28, PG 58S-28 | | 2016-134Q |
| | PG 64-22, PG 64S-22 | | 2016-135Q |
| **GARD3 15 Terminal** | **Gardner Asphalt Supply, LLC, 4161 E 7th Ave, Tampa, FL 33605 Seaford Terminal 25938 Nanticoke Street Seaford, DE 19973** | | |
| | PG 64-22, PG 64S-22 | | 2018-173Q |
| **GORM1 15 Terminal** | **The Gorman Group, LLC, 200 Church Street, Albany, NY 12202 http://www.gormanroads.com/ Gorman Terminals Rensselaer, NY** | | |
| | PG 64-22, PG 64S-22 | | 2016-151Q |
| **HAWG1 15 Terminal** | **Glenn O. Hawbaker, Inc., 1952 Waddle Road, State College, PA 16803 http://www.goh-inc.com/ Pleasant Gap, PA** | | |
| | PG 58-28, PG 58S-28 | | 2015-048Q |
| | PG 64-22, PG 64S-22 | | ----- |

## Section 702: Asphalt Material

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AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MARA1 15 Refinery** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 11631 US Route 23 Catlettsburg, KY** | | |
| | PG 52-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| **MARA1015 Terminal** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 21st Street at Nevada St Wellsville, OH 43968** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| **MARA2 15 Refinery** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 301 S. Fort St Detroit, MI 48217** | | |
| | PG 52-28 | | ----- |
| | PG 58S-28 | | 2020-183Q |
| **MARA3 15 Refinery** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 2408 Gambrinus Avenue, SW Canton, OH 44706** | | |
| | PG 52-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| **MARA6 15 Terminal** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 11001 Brower Road North Bend, OH 45052** | | |
| | PG 76-22, PG 64E-22 | | ----- |

## Section 702: Asphalt Material

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PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MARA7 15 Terminal** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ 2000 Central Furnace Court Cleveland, OH 44115** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | ----- |
| **MARA8 15 Terminal** | **Marathon Petroleum LLC, 28001 Citrin Drive, Romulus, MI 48174 http://www.marathonpetroleum.com/ Floreffe PA Asphalt Terminal 1100 Glasshouse Road Jefferson Hills, PA 15025** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | ----- |
| **MDL-2 15 Terminal** | **Midland Asphalt Materials, Inc, 640 Young Street, Tonawanda, NY 14151-0388 http://www.midlandasphalt.com/ Lyons, NY** | | |
| | PG 58-28 *Provisionally Approved* | | ----- |
| | PG 64-22 *Provisionally Approved* | | ----- |
| | PG 76-22 | | ----- |

## Section 702: Asphalt Material

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AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NJAT1 15 Terminal** | **CL Consulting and Management Corp, 625 Mt. Hope Road, Wharton, NJ 07885**<br>**New Jersey Asphalt Terminals 534 South Front Street Elizabeth, NJ 07202** | | |
| | PG 64-22, PG 64S-22 | | 2015-156Q |
| | PG 76-22, PG 64E-22 | | 2015-157Q |
| **PARCOA15 Terminal** | **Peckham Industries, Inc., 20 Haarlem Ave, White Plains, NY 10603 http://www.peckham.com/**<br>**PARCO - Athens Terminal 2 Union Street Extension Athens, NY 12015** | | |
| | PG 64-22 | | 2017-051Q |
| | PG 76-22 | | ----- |
| **PARCOB15 Terminal** | **Peckham Industries, Inc., 20 Haarlem Ave, White Plains, NY 10603**<br>**PARCO - Bronx 939 East 138th Street Bronx, NY 10454** | | |
| | PG 64-22 | | 2016-240Q |
| **PARCOC15 Terminal** | **Peckham Industries, Inc., 20 Haarlem Ave, White Plains, NY 10603 http://www.peckham.com/**<br>**PARCO - West Athens Terminal 763 Schoharie Turnpike Athens, NY 12015** | | |
| | PG 64-22 | | 2017-052Q |
| **PARCOD15 Terminal** | **Peckham Industries, Inc., 20 Haarlem Ave, White Plains, NY 10603 http://www.peckham.com/**<br>**PARCO - Bridgeport Terminal 1 Seaview Avenue Bridgeport, CT 06607** | | |
| | PG 64-22 | | 2017-050Q |

## Section 702: Asphalt Material

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PGAB Supplier Requirements: Pub 37 (Bulletin 25) Specifications for Bituminous Materials (Nov. 2018 Edition)

AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
AASHTO M 332 PGAB Grades: PG 58S-22, PG 64S-22, PG 64E-22 (Also referred to as Multiple Stress Creep Recovery - MSCR, where S = Standard; E = Extreme)

For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **PAUR- 15 Refinery** | **PBF Holding, LLC, 1 Sylvan Way, Second Floor, Parsippany, NJ 07054** http://www.pbfenergy.com/refineries<br>**Paulsboro Refining Company, LLC 800 Billingsport Road Paulsboro, NJ 08066**<br>***Note: Please use PBFH2 15 as the supplier code*** | | |
| | PG 58-28 | | 2015-135Q |
| | PG 64-22 | | ----- |
| **PBFH0 15 Terminal** | **PBF Holding, LLC, 1 Sylvan Way, Second Floor, Parsippany, NJ 07054**<br>**PBF Logistics Terminal, LLC 3400 S. 67th Street Philadelphia, PA 19153** | | |
| | PG 58-28, PG 58S-28 | | 2014-159Q |
| | PG 58-28, PG 58S-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2016-008Q |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2016-007Q |
| **PBFH2 15 Refinery** | **PBF Holding, LLC, 1 Sylvan Way, Second Floor, Parsippany, NJ 07054** http://www.pbfenergy.com/refineries<br>**Paulsboro Refining Company, LLC 800 Billingsport Road Paulsboro, NJ 08066**<br>***Note: Formerly PAUR- 15*** | | |
| | PG 58-28 | | 2015-135Q |
| | PG 64-22, PG 64S-22 | | ----- |

## Section 702: Asphalt Material

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AASHTO M 320 PGAB Grades: PG 58-28, PG 64-22, PG 76-22
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For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS0 15** | **Russell Standard Corporation, 1210 Perry Highway, P.O. Box 509, Mercer, PA 16137 http://www.russellstandard.com/** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| **RUSS9 15 Terminal** | **Russell Standard Corporation / Hammaker East LTD, 285 Kappa Drive, Suite 300, Pittsburgh, PA 15238 http://www.russellstandard.com/** | **1955 Chesapeake Avenue Baltimore, MD 21226** | |
| | PG 58-28 | | 2019-225Q |
| **SHSA1 15 Terminal** | **Shelly & Sands Inc., 3570 South River Road, P. O. Box 1585, Zanesville, OH 43702 http://shellyandsands.com/** | **S&S Terminal & Emulsions 1731 Old State Route 7 Rayland, OH** | |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | 2019-124Q |
| **SUIT3 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/** | **Cortland, NY** | |
| | PG 52-28 | | ----- |
| | PG 58-28 | | ----- |
| | PG 64-22 | | ----- |
| | PG 76-22 | | ----- |

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For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT5 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Jamestown, NY** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | ----- |
| **SUIT7 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Cortland, NY** | | |
| | PG 52-28 | | ----- |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 58-28, PG 58S-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2013-202Q |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2011-071QB |
| | PG 76-22, PG 64E-22 | | ----- |
| | PG 76-22, PG 64E-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2013-201Q |

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For contracts specifying an AASHTO M 332 MSCR grade (PG 58S-28, PG 64S-22, or PG 64E-22), an AASHTO M 320 grade (PG 58-28, PG 64-22, or PG 76-22) can not be used in its place.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SUIT8 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 10965 McHenry Street Meadville, PA** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | ----- |
| **SUIT9 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 3900 River Road Tonawanda, NY 14150** | | |
| | PG 58-28, PG 58S-28 | | 2016-124Q |
| | PG 64-22, PG 64S-22 | | 2016-122Q |
| | PG 76-22, PG 64E-22 | | 2016-123Q |
| **TRI-1 15 Terminal** | **All States Asphalt, LLC, 325 Amherst Road, P.O. Box 91, Sunderland, MA 01375 http://www.asmg.com 1 West Van Buren Street Oswego, NY 13126** *Formerly Tri State Materials* | | |
| | PG 64-22, PG 64S-22 *Provisionally Approved* | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **TRI-2 15 Terminal** | **All States Asphalt, LLC, 325 Amherst Road, P.O. Box 91, Sunderland, MA 01375 http://www.asmg.com**<br>**301 Normanskill Street Albany, NY 12202**<br>***Formerly Tri State Materials*** | | |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 64-22, PG 64S-22 | | ----- |
| **UNRC0 15** | **United Refining Company, P.O. Box 780, Warren, PA 16365 http://www.urc.com/** | | |
| | PG 52-28 | | ----- |
| | PG 58-28, PG 58S-28 | | ----- |
| | PG 58-28, PG 58S-28 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2012-021QA |
| | PG 58-28, PG 58S-28 Modified with SonneWarmix RT Warm Mix Technology | | 2017-229Q |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 64-22, PG 64S-22 Modified with Evotherm® M1 Warm Mix Technology with Anti-Strip Additives | | 2012-021QB |
| | PG 64-22, PG 64S-22 Modified with SonneWarmix RT Warm Mix Technology | | 2017-228Q |
| **UNRC1 15 Terminal** | **United Refining Company, 15 Bradley Street, P.O. Box 780, Warren, PA 16365-0780 http://www.urc.com/**<br>**Springdale Terminal Springdale, PA** | | |
| | PG 64-22, PG 64S-22 | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **WARMA 15** | **Warden Modified Asphalt L.P., 1210 Perry Highway, P.O. Box 509, Mercer, PA 16137 http://wardenasphalt.com/** | | |
| | PG 64-22, PG 64S-22 | | ----- |
| | PG 76-22, PG 64E-22 | | ----- |

# Section 704: Cement Concrete

## 704 Producers of Ready Mix Concrete

See Bulletin 42, Publication 42

## Section 705: Joint Material

### 705.1 Premolded Expansion Joint Filler

Last Revised: 4/10/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DODGE 15** | **Dodge-Regupol, Inc., 715 Fountain Ave., Lancaster, PA 17601 http://regupol.com/** | | |
| | Cork | CEJ 6510 | 1993-019 |
| **HUNTN 15** | **Hunton Fiber, P.O. Box 578, Grasonville, MD 21638 http://english.hunton.no/index.php** | | |
| | Fiber | Nor-Board | 2000-047Q |
| **JDRSC 15** | **J.D. Russell Company, P.O. Box 36795, 4075 N. Hwy Dr., Tucson, AZ 85740 http://jdrussellco.com/#!/** | | |
| | Preformed Rubber | Reflex | 2000-243Q |
| **KNICE 15** | **Knight - Celotex, One Northfield Plaza, Suite 400, Northfield, AZ 60093 https://knightcelotexfiberboard.wordpress.com/** | | |
| | Fiber | Conflex Bituminous | 1994-217 |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Cork | Sealtight Cork | ----- |
| | Fiber | Sealtight Fibre | ----- |
| | Preformed Rubber | Sealtight Sponge | ----- |
| **MEDW1 15 Plant** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/ 2100 Monroe Street P. O. Box 7550 York, PA 17404-0550** | | |
| | Cork | Sealtight Cork | ----- |
| | Fiber | Sealtight Fibre | ----- |
| | Preformed Rubber | Sealtight Sponge | ----- |
| **MONAR 15** | **Monarch Rubber Company, 3500 Pulaski Highway, Baltimore, MD 21224 http://rubbermasters.in/** | | |
| | Preformed Rubber | Geno 40 #1624 | 1988-026 |
| **NOMAC 15** | **Nomaco, Inc., 501 Innovative Way, Zebulon, NC 27597 http://www.nomaco.com/** | | |
| | Preformed Polypropylene Foam Expansion Joint Filler | Nomaflex | 2016-278 |

# Section 705: Joint Material

## 705.1 Premolded Expansion Joint Filler

Last Revised: 4/10/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| RTPTC 15 | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/** ***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Fiber | Right-Joint | 1997-047 |
| STEIC 15 | **Steico SE, Otto-Lilienthal-Ring 30, Feldkirchen, Germany** | | |
| | Fiber | Form Flex Expansion Joint | 2017-088Q |
| TEMIN 15 | **Temple - Inland, 303 S. Temple Drive, Diboll, TX 75941** | | |
| | Fiber | Fiberflex | ----- |

## 705.2(b) Longitudinal Joint Material

Last Revised: 6/18/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| MIDPA 15 | **Mid-Park, Inc., 1021 Salt River Rd., Leitchfield, KY 42754 http://mid-park.com/** | | |
| | Tie Bolt | Standard Hook | 1986-309 |
| | Tie Bolt | Wiggle Bolt | 1986-308 |
| SIMP1 15 | **Simplex Construction Supplies, Inc., 2150B South Route 45-52, Kankakee, IL 60901 https://www.simplex-usa.com/** ***Formerly Dayton Superior Corporation (DAYT5 15)*** | | |
| | Tie Bolt | Hook Bolt and Coupler | 1994-066A |
| | Tie Bolt | Wiggle Bolt and Coupler | 1994-066B |
| SOEBS 15 | **Southeastern Bolt and Screw, Inc., 1037 16th Avenue West, Birmingham, AL 35204 http://www.sebolt.com/index.html** | | |
| | Tie Bolt | Standard Hook | 1991-118 |
| UNIQU 15 | **Unique Industries, P.O. Box 683, 13488 Highway 25 North, Calera, AL 35040 http://www.uiind.com/** | | |
| | Tie Bolt | | 1999-002Q |
| WADY- 15 | **Wady Industries, Inc., 510 E. Grove St., Maquoketa, IA 52060** | | |
| | Tie Bolt | Wiggle Bolt (Slip Form) | 1990-333B |

## Section 705: Joint Material

### 705.3 Load Transfer Assembies (Force-Transfer Units) for Reinforced and Plain Cement Concrete Pa

Last Revised: 6/18/2019

A Load Transfer Assembly includes contraction/expansion wire baskets and dowel bars. An approved supplier of Load Transfer Assemblies can supply the baskets without the dowels. Standard Drawing of Load Transfer Assemblies RC-20M (Publication 72M)

Steel Products Procurement Act applies. Manufacturers approved for 6:1 skewed and non-skewed joints with Type B coating, unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CMTH1 15** | **CMT Highway, LLC, 2197 Yankee Avenue, Durant, IA 52747 http://cmthighway.com/** | | |
| | Dowel Bars, Fabricator | | 2017-316Q |
| | Load Transfer Assembly | | 2017-316Q |
| **CONTM 15** | **Contractors Materials Company, 10320 South Medallion Drive, Cincinnati, OH 45241 http://cmcmmi.com/** | | |
| | Dowel Bars, Fabricator | | 2015-178Q |
| **DAYT4 15** | **Dayton Superior Corporation, 4201 Montdale Drive, Valparaiso, IN 46383 http://www.daytonsuperior.com/** ***Formerly Block Heavy & Highway Products Company (BH&HP 15)*** | | |
| | Dowel Bars, Epoxy Coater | | 2000-343Q |
| | Dowel Bars, Fabricator | | 2000-344Q |
| | Load Transfer Assembly | | 2000-344Q |
| **MDSP2 15** | **Meadow Burke Products, 6467 S. Falkenburg Road, Riverview, FL 33578 http://meadowburke.com/** | | |
| | Dowel Bars, Epoxy Coater | | ----- |
| | Dowel Bars, Fabricator | | ----- |
| | Load Transfer Assembly | | ----- |
| **SIMP1 15** | **Simplex Construction Supplies, Inc., 2150B South Route 45-52, Kankakee, IL 60901 https://www.simplex-usa.com/** ***Formerly Dayton Superior Corporation (DAYT5 15)*** | | |
| | Dowel Bars, Epoxy Coater | | 1996-160 |
| | Dowel Bars, Fabricator | | ----- |
| | Load Transfer Assembly | | ----- |

## Section 705: Joint Material

### 705.3 Load Transfer Assembies (Force-Transfer Units) for Reinforced and Plain Cement Concrete Pa

**Last Revised: 6/18/2019**

A Load Transfer Assembly includes contraction/expansion wire baskets and dowel bars. An approved supplier of Load Transfer Assemblies can supply the baskets without the dowels. Standard Drawing of Load Transfer Assemblies RC-20M (Publication 72M)

Steel Products Procurement Act applies. Manufacturers approved for 6:1 skewed and non-skewed joints with Type B coating, unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TYEBR 15 Facility** | **TyE Bar, LLC, 1050 Ohio Avenue, Glassport, PA 15045 http://www.tyerebar.com/ 1050 Ohio Avenue Glassport, PA 15045** | | |
| | Dowel Bars, Fabricator | | 2015-084Q |
| | Load Transfer Assembly | | 2016-141Q |
| **VIMC- 15** | **Vimco, Inc., 300 Hansen Access Road, King of Prussia, PA 19406 http://vimcoinc.com/** | | |
| | Dowel Bars, Fabricator | | 2012-242Q |
| | Load Transfer Assembly | | 2012-242Q |
| **WADY- 15** | **Wady Industries, Inc., 510 E. Grove St., Maquoketa, IA 52060** | | |
| | Dowel Bars, Epoxy Coater | | 1996-110 |
| | Dowel Bars, Fabricator | | 1982-059 |
| | Load Transfer Assembly | | 1982-059 |

### 705.3(f) High Performance Dowel Bars

**Last Revised: 10/8/2020**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **JAR-1 15 Plant** | **ARTAZN LLC (formerly Jarden Zinc Products), 2500 Old Stage Road, Greeneville, TN 37744 https://jardenzinc.com/ 2500 Old Stage Road Greeneville, TN 37744** | | |
| | Rolled Zinc Alloy Tubular Dowel Bar | LifeDowel, Type 2 (1.445" OD) | 2016-164Q |
| | *Outside diameter of the approved dowel bar with zinc sleeve is 1.445". Proper galvanized end caps must be supplied to the project (0.06 oz/ft2).* | | |
| | Rolled Zinc Alloy Tubular Dowel Bar | LifeDowel, Type 2 (1.695" OD) | 2016-164Q |
| | *Outside diameter of the approved dowel bar with zinc sleeve is 1.695". Proper galvanized end caps must be supplied to the project (0.06 oz/ft2).* | | |

### 705.4(a) Silicone Joint Sealing Material

**Last Revised: 2/13/2018**

# Section 705: Joint Material

## 705.4(a) Silicone Joint Sealing Material

Last Revised: 2/13/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF0 15 Plant** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/ 121 Industrial Park Road Halls, TN 38040** | | |
| | Silicone | Roadsaver Non-Sag Silicone (34902) | 2000-110Q |
| **DOW-4 15** | **The Dow Chemical Company, 2200 W. Salzburg Road, P. O. Box 994, Midland, MI 48686 http://www.dow.com/** ***Formerly Dow Corning Corporation*** | | |
| | Silicone | DOWSIL 888 Silicone Joint Sealant | 1996-002 |
| **SIKA4 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ Lakewood, NJ** | | |
| | Silicone | Sikasil 728 NS | 2012-210Q |
| **TREM2 15** | **Tremco, Inc., 3755 Green Road, Beachwood, OH 44122 http://tremcoinc.com/** | | |
| | Silicone | Spectrem 800 Low Modulus Silicone | 2001-123Q |

## 705.4(b) Rubberized Joint Sealing Material (ASTM D6690-Type II and IV)

Last Revised: 7/2/2019

Use ASTM D6690-Type II for sealing asphalt pavement joints and ASTM D6690-Type IV for all other joint sealing applications.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF0 15 Plant** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/ 121 Industrial Park Road Halls, TN 38040** | | |
| | Type IV, ASTM D6690 | RoadSaver 231 | 1999-047Q |
| **CRAF2 15** | **Crafco, Inc., 1680 East Race Street, Allentown, PA 18103 http://www.crafco.com/** | | |
| | Type II, ASTM D6690 | Flex-A-Fill 9005 | 2016-256Q |
| | Type II, ASTM D6690 | Roadsaver 221 | 2008-128QB |
| | Type IV, ASTM D6690 | RoadSaver 231 | 1999-047Q |

## Section 705: Joint Material

### 705.4(b) Rubberized Joint Sealing Material (ASTM D6690-Type II and IV)

Last Revised: 7/2/2019

Use ASTM D6690-Type II for sealing asphalt pavement joints and ASTM D6690-Type IV for all other joint sealing applications.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF4 15** | **Crafco, Inc. (Deery Brand), 912 Salt Springs Road, Youngstown, OH 44509 http://www.deeryamerican.com/**<br>***Formerly Deery American Corporation (DEERY 15)*** | | |
| | Type II, ASTM D6690 | Deery 102 | 2008-129A |
| | Type IV, ASTM D6690 | Deery 101 | 1999-113 |
| **MAXPR 15** | **Maxwell Products, Inc., 650 South Delong Street, Salt Lake City, UT 84104 http://maxwellproducts.com** | | |
| | Type II, ASTM D6690 | Elastoflex 61 | 2015-106Q |
| **MCASP 15** | **McAsphalt Industries Limited, 8800 Sheppard Avenue, East, Scarborough, Ontario Canada http://www.mcasphalt.com/** | | |
| | Type II, ASTM D6690 | Beram 195 | 2008-130QA |
| | Type IV, ASTM D6690 | Beram 195 LM | 1998-079Q |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Type II, ASTM D6690 | 3405 (Sealtight) | 2008-131Q |
| | Type IV, ASTM D6690 | 3405-M | 2000-029Q |
| **P&TPR 15** | **P & T Products, Inc., 472 Industrial Parkway, Sandusky, OH 44870 http://www.p-tproductsinc.com/** | | |
| | Type II, ASTM D6690 | Dura-Fill 3405 | 2008-124QA |
| | Type IV, ASTM D6690 | Dura-Fill 3405 LM (K) | 1999-112Q |
| **RTPT2 15**<br>**Facility** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/**<br>**Sharpsville, PA** | | |
| | Type II, ASTM D6690<br>*Formerly #3405 Regular* | RP 3405 | 2016-300Q |
| | Type IV, ASTM D6690<br>*Formerly #3405 Modified* | RP Type 4 ELT | 2004-049Q |

# Section 705: Joint Material

## 705.4(b) Rubberized Joint Sealing Material (ASTM D6690-Type II and IV)

**Last Revised: 7/2/2019**

Use ASTM D6690-Type II for sealing asphalt pavement joints and ASTM D6690-Type IV for all other joint sealing applications.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/**<br>***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Type II, ASTM D6690<br>*Formerly #3405 Regular* | RP 3405 | 2008-161QB |
| | Type IV, ASTM D6690<br>*Formerly #3405 Modified* | RP Type 4 ELT | 2004-049Q |

## 705.4(c) Rubberized Joint Sealing Material (ASTM D6690-Type I)

**Last Revised: 7/2/2019**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF2 15** | **Crafco, Inc., 1680 East Race Street, Allentown, PA 18103 http://www.crafco.com/** | | |
| | Type I, ASTM D 6690 | Roadsaver 211 | 2008-128Q |
| **CRAF4 15** | **Crafco, Inc. (Deery Brand), 912 Salt Springs Road, Youngstown, OH 44509 http://www.deeryamerican.com/**<br>***Formerly Deery American Corporation (DEERY 15)*** | | |
| | Type I, ASTM D 6690 | Deery 103 | 2008-129B |
| | Type I, ASTM D 6690<br>*Conditionally approved for use according to the manufacturer's specifications and usage guidelines.* | Level and Go Repair Mastic | 2002-129 |
| **MAXPR 15** | **Maxwell Products, Inc., 650 South Delong Street, Salt Lake City, UT 84104 http://maxwellproducts.com** | | |
| | Type I, ASTM D 6690 | Elastoflex 410 | 2016-185Q |
| **MCASP 15** | **McAsphalt Industries Limited, 8800 Sheppard Avenue, East, Scarborough, Ontario Canada http://www.mcasphalt.com/** | | |
| | Type I, ASTM D 6690 | Beram 190 | 2008-130QB |
| **P&TPR 15** | **P & T Products, Inc., 472 Industrial Parkway, Sandusky, OH 44870 http://www.p-tproductsinc.com/** | | |
| | Type I, ASTM D 6690 | Dura-Fill 1190 | 2008-124QB |

## Section 705: Joint Material

### 705.4(c) Rubberized Joint Sealing Material (ASTM D6690-Type I)

Last Revised: 7/2/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RTPT2 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/** | | |
| **Facility** | **Sharpsville, PA** | | |
| | Type I, ASTM D 6690<br>*Formerly #1190* | RP 1190 | 2016-301Q |
| | Type I, ASTM D 6690<br>*RP Gray Sealant is gray in color and composed of non-asphaltic resins; therefore, it must not be mixed or combined with other approved crack sealant products.* | RP Gray Sealant | 2017-195Q |
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/**<br>***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Type I, ASTM D 6690<br>*Formerly #1190* | RP 1190 | 2010-209Q |
| **UPMCP 15** | **Unique Paving Materials Corporation, 3993 East 93rd Street, Cleveland, OH 44105-4096 http://www.uniquepavingmaterials.com/** | | |
| | Type I, ASTM D 6690<br>*Conditionally approved for use according to the manufacturer's specifications and usage guidelines.* | Kold-Flo Joint Sealant | 2006-074 |

### 705.4(d)1.a Preformed Neoprene Compression Seals and Strip Seals

Last Revised: 10/16/2020

| | Product | Name | Movement Class | Ref. No. |
|---|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | Bridge Seal | CA-5001 | 2.5 in. | 1993-271 |
| | Bridge Seal | CA-6000 (6") | 3.0 in. | 1994-300 |
| | Bridge Seal | CV-1625 | 0.5 in. | 1989-233 |
| | Bridge Seal | CV-1752 | 0.5 in. | 2013-107Q |
| | Bridge Seal | CV-2000 | 0.5 in. | 1989-161 |
| | Bridge Seal | CV-2250 | 0.5 in. | 2013-108Q |
| | Bridge Seal | CV-2502 | 1.0 in. | 1989-071 |
| | Bridge Seal | CV-3000 | 1.0 in. | 1989-162 |
| | Bridge Seal | CV-3500 | 1.5 in. | 1989-054 |

# Section 705: Joint Material

## 705.4(d)1.a Preformed Neoprene Compression Seals and Strip Seals

Last Revised: 10/16/2020

| | Product | Name | Movement Class | Ref. No. |
|---|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | Bridge Seal | CV-4000 | 1.5 in. | 1989-168 |
| | Bridge Seal | CV-5000 | 2.0 in. | 1991-130 |
| | Bridge Seal | CV-6000 | 2.5 in. | 1989-035 |
| | Bridge Seal | CV-6000-A | 2.5 in. | 1992-002 |
| | Bridge Seal | K-4000 | 2.0 in. | 1993-273 |
| | Bridge Seal | V-1625 | 0.5 in. | 1993-030 |
| | Strip Seal Gland | A2R-400 | 4.0 in. | 2004-162Q |
| | Strip Seal Gland | A2R-EXTRA | 7.0 in. | 2004-165Q |
| | Strip Seal Gland | E2M, WB-400 | 4.0 in. | 2004-163Q |
| | Strip Seal Gland | L2-400 | 4.0 in. | 2004-166Q |
| | Strip Seal Gland | L2-500 | 5.0 in. | 2004-164Q |
| | Strip Seal Gland | SE-300 | 3.0 in. | 2009-195Q |
| | Strip Seal Gland | SE-400 | 4.0 in. | 2009-196Q |
| | Strip Seal Gland | SE-500 | 5.0 in. | 2009-197Q |

## Section 705: Joint Material

### 705.4(d)1.a Preformed Neoprene Compression Seals and Strip Seals

Last Revised: 10/16/2020

| | Product | Name | Movement Class | Ref. No. |
|---|---|---|---|---|
| **TRE-1 15** | **Trelleborg Sealing Profiles US Inc., 285 Lena Drive, Aurora, OH 44202 http://www.trelleborg.com/en/** | | | |
| **Plant** | **Streetsboro, OH** | | | |
| | ***Licensing Company: Watson Bowman Acme (BASF)*** | | | |
| | Bridge Seal | Wabo CompressionSeal WA-175 | 0.5 in. | 2010-222QA |
| | Bridge Seal | Wabo CompressionSeal WA-200 | 1.0 in. | 2010-222QB |
| | Bridge Seal | Wabo CompressionSeal WA-250 | 1.0 in. | 2010-222QC |
| | Bridge Seal | Wabo CompressionSeal WA-300 | 1.5 in. | 2010-222QD |
| | Bridge Seal | Wabo CompressionSeal WA-350 | 1.5 in. | 2010-222QE |
| | Bridge Seal | Wabo CompressionSeal WA-400 | 2.0 in. | 2010-222QF |
| | *Wabo CompressionSeal Technical Data Sheet for WA-175, WA-200, WA-250, WA-300, WA-350, and WA-400* ***Wabo CompressionSeal Technical Data Sheet*** | | | |
| | Strip Seal Gland | Wabo StripSeal SE-300 | 3.0 in. | 2009-087Q |
| | Strip Seal Gland | Wabo StripSeal SE-400 | 4.0 in. | 2009-152Q |
| | Strip Seal Gland | Wabo StripSeal SE-500 | 5.0 in. | 2009-153Q |
| | Strip Seal Gland | Wabo StripSeal SE-800 | 8.0 in. | 2013-169Q |
| | *Wabo StripSeal Technical Data Sheet for SE-300, SE-400, SE-500, and SE-800* ***Wabo StripSeal Technical Data Sheet*** | | | |

### 705.4(d)1.b Lubricant Adhesive

Last Revised: 9/20/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | Lubricant Adhesive | DSB 1520 Lubricant Adhesive | 1992-101 |
| | *Manufactured for D.S. Brown by ChemMasters. Product originally named Delastibond 1520.* | | |

## Section 705: Joint Material

### 705.4(d)1.b Lubricant Adhesive

Last Revised: 9/20/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | |
| | Lubricant Adhesive | Adhesive Lubricant 105 | ----- |
| | Lubricant Adhesive | Lube Plus 4070 | 1995-100 |
| **RASCP 15 Plant** | **Royal Adhesives and Sealants, 2001 W Washington Street, South Bend, IN http://www.royaladhesives.com/ 266 Humberline Drive Toronto, Ontario, Canada M9W 5X1** | | |
| | Lubricant Adhesive<br>*Manufactured for D.S. Brown by Royal Adhesives & Sealants.* | D.S. Brown DSB 1520 | 2016-207Q |

### 705.4(e) Preformed Closed Cell Polyethylene Joint Filler

Last Revised: 3/5/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Preformed Closed Cell Polyethylene Joint Filler | Ceramar 1" | 1986-123B |
| | Preformed Closed Cell Polyethylene Joint Filler | Ceramar 1/2" | 1986-261ABC |
| | Preformed Closed Cell Polyethylene Joint Filler | Ceramar 2" | 1986-261ABC |
| | Preformed Closed Cell Polyethylene Joint Filler | Ceramar 3/4" | 1986-261ABC |

### 705.4(g) Asphalt Rubber Sealing Compound

Last Revised: 7/2/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF2 15** | **Crafco, Inc., 1680 East Race Street, Allentown, PA 18103 http://www.crafco.com/** | | |
| | Asphalt Rubber Sealing Compound | Asphalt Rubber Type 2, Part No. 34232 | 1999-074Q |
| | Asphalt Rubber Sealing Compound | PolyFlex 601 | 2019-006Q |
| | Asphalt Rubber Sealing Compound | PolyFlex Type 2, Part No. 34518 | 2016-033Q |

## Section 705: Joint Material

### 705.4(g) Asphalt Rubber Sealing Compound

Last Revised: 7/2/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF4 15** | **Crafco, Inc. (Deery Brand), 912 Salt Springs Road, Youngstown, OH 44509 http://www.deeryamerican.com/** ***Formerly Deery American Corporation (DEERY 15)*** | | |
| | Asphalt Rubber Sealing Compound | Deery 5078 | 1999-060Q |
| | Asphalt Rubber Sealing Compound | PolyFlex 601 | 2019-021Q |
| **MAXPR 15** | **Maxwell Products, Inc., 650 South Delong Street, Salt Lake City, UT 84104 http://maxwellproducts.com** | | |
| | Asphalt Rubber Sealing Compound | Elastoflex 650 | 2016-186Q |
| **MCASP 15** | **McAsphalt Industries Limited, 8800 Sheppard Avenue, East, Scarborough, Ontario Canada http://www.mcasphalt.com/** | | |
| | Asphalt Rubber Sealing Compound | Beram Asphalt Rubber (AR) | 2000-048Q |
| **P&TPR 15** | **P & T Products, Inc., 472 Industrial Parkway, Sandusky, OH 44870 http://www.p-tproductsinc.com/** | | |
| | Asphalt Rubber Sealing Compound | Dura_Fill 5078 | 2003-044Q |
| **RTPT2 15 Facility** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/ Sharpsville, PA** | | |
| | Asphalt Rubber Sealing Compound *Formerly #5078* | RP 5078 | 2016-302Q |
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/** ***Effective October 19, 2020, acquired by Crafco, Inc.*** | | |
| | Asphalt Rubber Sealing Compound *Formerly #5078* | RP 5078 | 2010-112Q |
| **ULSCP 15** | **Ultra Seal Construction Products, 5309 Maingate Drive, Mississauga, Ontario, Canada L4W 1G6 http://www.ultrasealproducts.com/** | | |
| | Asphalt Rubber Sealing Compound | Ultraseal 1197 | 1998-200 |

### 705.4(alternate) Precompressed, Silicone-and-Foam Hybrid Joint Sealing Material

Last Revised: 7/6/2017

The product listing below is conditionally approved as an alternate system to Joint Sealant Material as specified in Publication 408, Section 705.4.

| | Product | Name | Ref. No. |
|---|---|---|---|

# Section 705: Joint Material

## 705.4(alternate) Precompressed, Silicone-and-Foam Hybrid Joint Sealing Material

**Last Revised: 7/6/2017**

The product listing below is conditionally approved as an alternate system to Joint Sealant Material as specified in Publication 408, Section 705.4.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EMSEAL15** | **EMSEAL, A Sika Company, (EMSEAL Joint Systems, Ltd.), 25 Bridle Lane, Westborough, MA 01581 http://www.emseal.com/** | | |
| | Precompressed, Silicone-and-Foam Hybrid | BEJS (Bridge Expansion Joint System) | 2012-030 |
| | *Conditionally approved per the manufacturer's specifications and usage guidelines. **BEJS Tech Data, Install Data, and Checklist*** | | |

## 705.5(b) Gaskets for Circular Pipe Joints

**Last Revised: 10/16/2020**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONSE 15** | **Concrete Sealants, Inc., 9325 State Route 201, Tipp City, OH 45371 http://www.conseal.com/** | | |
| | Flexible Plastic Gasket (Hydrocarbon Blend) | ConSeal CS-102 | 1984-140 |
| | Flexible Plastic Gasket (Hydrocarbon Blend) | ConSeal CS-202 | 1984-140A |
| **CUSTM 15** | **Custom Rubber Extrusions, 100 Romito Street, P.O. Box 1079, Ravenna, OH 44266** | | |
| | Elastomeric Gasket | Neoprene and Isoprene Gaskets | 1996-019 |
| **FORSH 15** | **Forsheda Pipe Seal Corporation, 2200 South McDuffie St., Anderson, SC 29624** | | |
| | Elastomeric Gasket<br>*Prelubricated Utility Hole Joint Seal* | Forsheda F-114 | 1990-238A |
| | Elastomeric Gasket<br>*Prelubricated Utility Hole Joint Seal* | Forsheda F-138 | 1990-237 |
| **HAMLT 15** | **Hamilton Kent, 77 Carlingview Drive, Etobicoke, Ontario M9W 5E6 Canada** | | |
| | Elastomeric Gasket | Tylox (O-Rings) | ----- |
| | Elastomeric Gasket | Tylox Superseal Gasket | 1997-192 |
| **PSEAL 15** | **Press-Seal Gasket Corporation, 2424 West State Blvd., Fort Wayne, IN 46808 http://www.press-seal.com/** | | |
| | Elastomeric Gasket | O-Ring Concrete Pipe Gasket | 2014-234Q |
| | Elastomeric Gasket | RFS Prelubricated Concrete Pipe Gasket | 2014-233Q |

## Section 705: Joint Material

### 705.5(b) Gaskets for Circular Pipe Joints

Last Revised: 10/16/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RINMA 15** | **Rinker Materials, 1627 Oakbrook Parkway, Gainesville, GA 30507 http://www.rinkerpipe.com/** | | |
| | Elastomeric Gasket | Delta Seal Rubber Profile Gasket | 2009-100QA |
| **RU-VA 15** | **Ru Van, Inc., 1175 Diamond Ave., Evansville, IN 47711** | | |
| | Flexible Plastic Gasket (Hydrocarbon Blend) | RU-30 Butyl Sealant | 1990-042 |
| **TRE-2 15 Plant** | **Trelleborg Pipe Seals, 250 Elm St., P.O. Box 301, Milford, NH 03055 http://www.trelleborg.com/pipe-seals Bonne Terre, MO 63628** | | |
| | ***Formerly Bidco Sealants (BIDC- 15)*** | | |
| | Flexible Plastic Gasket (Hydrocarbon Blend) | Trelleborg C-56 Preformed Joint Sealant | 1990-206 |
| **VERTI 15** | **Vertex, Inc., 3956 Industrial Parkway, Mogadore, OH 44260-1201 http://www.vertexinc.com/** | | |
| | Elastomeric Gasket | Ecoproof Bell Gasket | 2007-008Q |
| | Elastomeric Gasket | Rubberman O-Ring Gasket | 1997-072 |
| | Elastomeric Gasket | Star Seal | 1997-056 |

### 705.5(c)2 Waterstops (Polyvinyl Chloride)

Last Revised: 2/14/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DURAJ 15** | **Durajoint Concrete Accessories, 10421 Industrial Drive, Garrettsville, OH 44231 http://www.durajoint.com/** | | |
| | Polyvinyl Chloride Waterstop | Durajoint Type 12 RT | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 18 RT | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 27 | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 29A RT | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 29RT | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 36 RT | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 3A | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 4 | 1999-219Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 4B | 1999-219Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type 5 | 2017-244Q |

## Section 705: Joint Material

### 705.5(c)2 Waterstops (Polyvinyl Chloride)

Last Revised: 2/14/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DURAJ 15** | **Durajoint Concrete Accessories, 10421 Industrial Drive, Garrettsville, OH 44231 http://www.durajoint.com/** | | |
| | Polyvinyl Chloride Waterstop | Durajoint Type 7 | 2017-244Q |
| | Polyvinyl Chloride Waterstop | Durajoint Type DB-2 | 2017-244Q |
| **GREES 15** | **Sika Greenstreak, 3400 Tree Court, Industrial Boulevard, Box 7139, St. Louis, MO 63177 http://usa.sika.com/** | | |
| | Polyvinyl Chloride Waterstop | Model 698 | ----- |
| | Polyvinyl Chloride Waterstop | Model 701 | ----- |
| | Polyvinyl Chloride Waterstop | Model 703 | ----- |
| | Polyvinyl Chloride Waterstop | Model 705 | ----- |
| | Polyvinyl Chloride Waterstop | Model 709 | ----- |
| | Polyvinyl Chloride Waterstop | Model 748 | ----- |
| **SOUMP 15** | **Southern Metal & Plastic Products, 3400 Tree Court Ind. Blvd., St. Louis, MO 63122 http://sometals.com/** | | |
| | Polyvinyl Chloride Waterstop | 15 RCB | 2006-025Q |
| **WATER 15** | **Waterstop & Accessories, 3400 Tree Court Indus. Blvd., St. Louis, MO 63122** | | |
| | Polyvinyl Chloride Waterstop | RB6-316 (type C1) | 2000-009Q |
| | Polyvinyl Chloride Waterstop | RSB6-316 (type C2) | 2000-009Q |
| | Polyvinyl Chloride Waterstop | TWB6-18 (type E2) | 2000-009Q |

### 705.6 Graphite Lubricant

Last Revised: 5/31/2019

The graphite lubricants are only approved for use on projects with let dates prior to October 4, 2019. Graphite lubricants were removed from Publication 408, 2016 with Change No. 7.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Graphite Lubricant | Sure-Slip Graphite Paste | 1992-340 |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/**<br>***Aquired by ChemMasters, Inc.*** | | |
| | Graphite Lubricant | Certi-Vex Sure Slide | 2011-247Q |

## Section 705: Joint Material

### 705.7(b)/705.6(b) Mortar For Masonry and Horizontal Joints Between Precast Components in Utility I

Last Revised: 11/2/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BUZZ1 15 Plant** | **Buzzi Unicem USA Stockertown, 501 Hercules Drive, P. O. Box 69, Stockertown, PA 18083 http://www.buzziunicemusa.com/ Stockertown, PA** | | |
| | Mortar (Masonry Joints and Horizontal Joints Between Manholes (Utility Holes)/Inlet Components) | Type N | 2017-218Q |
| **CEMX6 15 Plant** | **Fairborn Cement Company (Eagle Materials, Inc.), 3811 Turtle Creek Blvd, Suite 1100, Dallas, TX 75219 http://www.eaglematerials.com 3250 Linebaugh Road Xenia, OH 45385** ***(Formerly CEMEX, Inc.)*** | | |
| | Mortar (Masonry Joints and Horizontal Joints Between Manholes (Utility Holes)/Inlet Components) | Type N | 2010-233QC |
| **LEH-9 15 Plant** | **Lehigh Cement Company, LLC, 3938 Easton Nazareth Highway, Nazareth, PA 18064 http://www.lehighhanson.com/ 3938 Easton Nazareth Highway Nazareth, PA 18064** ***(Formerly Essroc ESS-7 15)*** | | |
| | Mortar (Masonry Joints and Horizontal Joints Between Manholes (Utility Holes)/Inlet Components) | Type N | 2002-109Q |

### 705.8(a)/705.7(a) Caulking Compound (Pipe and Horizontal Joints Between Precast Components in M

Last Revised: 6/29/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SEABD 15** | **Seaboard Asphalt Products Company, 3601 Fairfield Road, Baltimore, MD 21226 http://seaboardasphalt.com/** | | |
| | Caulking (Pipe Joints and Horizontal Joints Between Manholes (Utility Holes)/Inlet Components) | MP-52 | 1994-206 |

### 705.8(b)/705.7(b) Caulking Compound (Other)

Last Revised: 6/7/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | Caulking (Other) | MasterSeal NP 1 | 1990-185 |

## Section 705: Joint Material

### 705.8(b)/705.7(b) Caulking Compound (Other)

Last Revised: 6/7/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | *Previous Name: Sonolastic NP 1* | | |
| **DOW-4 15** | **The Dow Chemical Company, 2200 W. Salzburg Road, P. O. Box 994, Midland, MI 48686 http://www.dow.com/** | | |
| | ***Formerly Dow Corning Corporation*** | | |
| | Caulking (Other) | DOWSIL 790 Silicone Sealant | 1993-235 |
| **PECCR 15** | **Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438 http://pecora.com/** | | |
| | Caulking (Other) | Dynatrol I-XL Polyurethane | 2000-283Q |
| | Caulking (Other) | NR-300 Urexpan Polyurethane | 2000-282Q |
| | Caulking (Other) | Pecora 864 Silicone | 2000-286Q |
| **SCHMH 15** | **Schnee-Morehead, Inc., 111 North Nursery Road, P.O. Box 171305, Irving, TX 75017-1305 http://schneemorehead.com/** | | |
| | Caulking (Other) | SM7108 Permathane | 1999-003Q |
| **SIKA0 15 Facility** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |
| | **201 Polito Avenue Lyndhurst, NJ 07071** | | |
| | Caulking (Other) | Sikaflex 15LM Polyurethane | 2000-126Q |
| | Caulking (Other) | Sikaflex 1a | 1982-035 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |
| | **1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Caulking (Other) | Sikaflex 1a | 1982-035 |
| **SIKA2 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |
| | **Lyndhurst, NJ** | | |
| | Caulking (Other) | Sikaflex 15LM Polyurethane | 2000-126Q |
| | Caulking (Other) | Sikaflex 1a | 1982-035 |

# Section 705: Joint Material

## 705.8(b)/705.7(b) Caulking Compound (Other)

Last Revised: 6/7/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA4 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |
| **Plant** | **Lakewood, NJ** | | |
| | Caulking (Other) | Sikaflex 1a | 1982-035 |
| | Caulking (Other) | Sikasil WS-290 (Type S Grade NS CL 100/50) | 2013-032Q |
| | Caulking (Other) | Sikasil WS-295 (Type S Grade NS CL 50) | 2013-031Q |
| **TREM2 15** | **Tremco, Inc., 3755 Green Road, Beachwood, OH 44122 http://tremcoinc.com/** | | |
| | Caulking (Other) | Tremco Dymonic FC | 2007-033Q |

## 705.9/705.8 Joint Backing Material

Last Revised: 11/22/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ALCOT 15** | **Alcot Plastics Ltd., 31 Malcolm Rd., Guelph, ON Canada N1K 1A7 https://alcotplastics.com/** | | |
| | Joint Backing Material<br>*Cold Application Only* | Alcot Standard Backer Rod | 2018-221Q |
| **INDUS 15** | **Industrial Thermo Polymers Limited, 153 Van Kirk Drive, Brampton, Ontario, Canada** | | |
| | Joint Backing Material | Blue-Grey, Closed Cell PE Foam | 1991-172 |
| | Joint Backing Material | Hot Rod XL (Black Cross Linked) | 1991-173 |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Joint Backing Material | Cera-Rod (Heat Resistant) | 1986-026 |
| | Joint Backing Material | Deck-O-Foam (Cold Application Only) | 1998-050 |
| **NOMAC 15** | **Nomaco, Inc., 501 Innovative Way, Zebulon, NC 27597 http://www.nomaco.com/** | | |
| | Joint Backing Material | HBR Backer Rod (Cold Application Only) | 2001-177Q |
| | Joint Backing Material | HBR XL Backer Rod (Cold or Hot Applied) | 2001-178Q |
| | Joint Backing Material | Sof Rod (Cold Application Only) | 1995-182 |

# Section 706: Concrete Bonding Compound

Type I - Non-load bearing applications, bonding hardened concrete (28 days or older) to hardened concrete surfaces
Type II - Non-load bearing applications, bonding freshly mixed concrete to hardened concrete
Type III - For bonding skid-resistant materials to hardened concrete and as a binder in epoxy mortars or epoxy concretes used on traffic bearing surfaces
Type V - Load bearing applications, bonding fresh concrete to hardened concrete

Grade 1 - Low viscosity;
Grade 2 - Medium viscosity;
Grade 3 - Non-sagging consistency

Class A - For use below 40F, to the lowest allowable temperature defined by manufacturer
Class B - For use between 40F and 60F
Class C - For use above 60F, to the highest allowable temperature defined by manufacturer

## 706.1 Epoxy Bonding Compound (ASTM C881)

**Last Revised: 7/17/2018**

| | Product | Name | Epoxy Class | Ref. No. |
|---|---|---|---|---|
| **ADHTC 15** | **Adhesives Technology Corporation, 450 East Copans, Pompano Beach, FL 33064 http://www.atcepoxy.com/** | | | |
| | Type I, Grade 1 | CRACKBOND LR-321 | C | 2016-101 |
| | Type I, Grade 2<br>*MV = Medium Viscosity; Formerly ULTRABOND 2100* | CRACKBOND 2100 MV | | 2009-095Q |
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | |
| | Type I, Grade 1<br>*Previous Name: Concresive 1380* | MasterInject 1380 | | 1975-040 |
| | Type I, Grade 1<br>*Previous Name: Concresive Std. LVI* | MasterInject 1500 | | 1994-163 |
| | Type I, Grade 3<br>*Previous Name: Concresive Paste LPL* | MasterEmaco ADH 327 | | 1992-146 |
| | Type I, Grade 3<br>*Previous Name: Concresive Paste SPL* | MasterEmaco ADH 327 RS | | 1992-147 |
| | Type II, Grade 2<br>*Previous Name: Concresive Liquid LPL* | MasterEmaco ADH 326 | | 1992-148 |

## Section 706: Concrete Bonding Compound

### 706.1 Epoxy Bonding Compound (ASTM C881)

Last Revised: 7/17/2018

| | Product | Name | Epoxy Class | Ref. No. |
|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Type I & II, Grade 2 | Dural 452 MV | B, C | 2003-100Q |
| | Type I & II, Grade 3 | Dural 452 MV | B, C | 2003-099Q |
| | Type I, Grade 1 | Duralflex Gel (formerly Flexocrete) | | 1980-032 |
| | Type I, Grade 1 | Euco 452 LV | | 1986-310A |
| | Type II, Grade 2 | Euco 452 MV | | 1986-310B |
| | Type III, Grade 1 | Dural 340 NS | C | 2001-192QA |
| | Type III, Grade 1 | Dural 340 SL | B, C | ----- |
| | Type III, Grade 1 | Duralflex Gel (formerly Flexocrete Gel) | C | 1980-031 |
| | Type III, Grade 1 | Flexolith | A, B, C | 1994-231 |
| | Type III, Grade 3 | Dural 452 Gel | C | 2001-192QB |
| | Type III, Grade 3 | Flexocrete | C | ----- |
| | Type V, Grade 2 | Dural 452 MV | B, C | 2003-100QB |
| **HLMTE 15** | **Hallemite, 80 Cypress Street, P. O. Box 840, Warwick, RI 02888** | | | |
| | Type I, Grade 1 | Hallemite 182LV (injection) | | 1997-197 |
| | Type II, Grade 2 | Hallemite 140 | | 1997-195 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | | |
| | Type I, Grade 1 | Sure-Poxy HM, Class B | B | 1992-366 |
| | Type I, Grade 1 | Sure-Poxy HMLV 112 | | 1988-290 |
| | Type I, Grade 3 | Sure-Poxy 116 | | 1992-169 |
| | Type I, Grade 3 | Sure-Poxy HM Gel | | 1990-352 |
| | Type II, Grade 2 | Sure-Poxy HM | | 1981-050 |
| | Type III, Grade 1 | Sure-Poxy LM-LV | | 1981-049 |

## Section 706: Concrete Bonding Compound

### 706.1 Epoxy Bonding Compound (ASTM C881)

Last Revised: 7/17/2018

| | Product | Name | Epoxy Class | Ref. No. |
|---|---|---|---|---|
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | | |
| | Type I, Grade 1 | Rezi-Weld LV | | 1990-230 |
| | Type I, Grade 3 | Rezi-Weld Gel Paste | | 1990-232 |
| | Type II, Grade 2 | Rezi-Weld 1000 | | 1990-231 |
| | Type III, Grade 1 | Rezi-Weld LV | | 1990-230 |
| **PLYGM 15** | **Polygem, Inc., 1105 Carolina Drive, West Chicago, IL 60185 http://www.polygem.com/** | | | |
| | Type I, Grade 1 | Polyject 1001 MV | | 1995-048A |
| **POLYC 15** | **Olin Epoxy-POLY-CARB, 8440 Tower Dr., Twinsburg, OH 44087 http://www.poly-carb.com/** | | | |
| **Plant** | **125 Industrial Park Rd. Roberta, GA 31078** | | | |
| | ***Formerly POLY-CARB, Inc.*** | | | |
| | Type I, Grade 1 | Mark-25.3 | | 2000-172Q |
| | Type II, Grade 1 | Mark-184 | | 2000-174Q |
| | Type II, Grade 1 | Mark-25.3 | | 2000-172Q |
| **SIKA0 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | |
| **Facility** | **201 Polito Avenue Lyndhurst, NJ 07071** | | | |
| | Type I & II, Grade 2 | Sikadur 32 Hi Mod | | ----- |
| | Type I, Grade 1 | Sikadur 35 Hi Mod LV | | ----- |
| | Type I, Grade 1 | Sikadur 52 Injection Resin | | 1986-228 |
| | Type I, Grade 3 | Sikadur Injection Gel | | 1987-165 |
| | Type III, Grade 1 | Sikadur 21 Lo Mod LV | | ----- |
| **SIKA1 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | |
| **Plant** | **1682 Marion Williamsport Road E Marion, OH 43302** | | | |
| | Type I, Grade 1 | Sikadur 35 Hi Mod LV | | ----- |
| | Type I, Grade 1 | Sikadur 52 Injection Resin | | 1986-228 |
| | Type I, Grade 2 | Sikadur 32 Hi Mod | | ----- |
| | Type I, Grade 3 | Sikadur Injection Gel | | 1987-165 |
| | Type II, Grade 2 | Sikadur 32 Hi Mod | | ----- |
| | Type III, Grade 1 | Sikadur 21 Lo Mod LV | | ----- |

## Section 706: Concrete Bonding Compound

### 706.1 Epoxy Bonding Compound (ASTM C881)

Last Revised: 7/17/2018

| | Product | Name | Epoxy Class | Ref. No. |
|---|---|---|---|---|
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | | |
| | Type I, Grade 1 | Pro-Poxy 100 | | 1991-290A |
| | Type I, Grade 3 | Pro-Poxy 300 | | 1991-290C |
| | Type II, Grade 1 | Pro-Poxy 50 | B, C | 2018-012Q |
| | Type II, Grade 2 | Pro-Poxy 200 | | 1991-290B |

### 706.2 Other Bonding Compound (ASTM C882)

Last Revised: 5/11/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADHTC 15** | **Adhesives Technology Corporation, 450 East Copans, Pompano Beach, FL 33064 http://www.atcepoxy.com/** | | |
| | Type II, Grade 3, Class A & B | ASF-1000 | 2016-285Q |
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | |
| | Other Bonding Compound | Cretelox | 1996-096 |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | |
| | Other Bonding Compound | Day-Chem Ad Bond (J-40) | 1995-161 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Other Bonding Compound | Duralprep AC | 1996-222 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Other Bonding Compound | SurePoxy HM EPL | 1996-093 |
| | *For placement of fresh to hardened concrete only in the period 4 to 24 hours after application of bonding agent.* | | |
| **RDWRE 15** | **Roadware, Inc., 381 Bridgepoint Way, South St. Paul, MN 55075 http://www.concretemender.com/** | | |
| | Other Bonding Compound | 10 Minute Concrete Mender | 2000-336Q |

## Section 706: Concrete Bonding Compound

### 706.2 Other Bonding Compound (ASTM C882)

Last Revised: 5/11/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA0 15 Facility** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 201 Polito Avenue Lyndhurst, NJ 07071** | | |
| | Other Bonding Compound | Armatec 110 | 1990-223 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Other Bonding Compound | Armatec 110 | 1990-223 |

# Section 709: Reinforcement Steel

Steel Products Procurement Act applies.

Click to view for companies listed in this section Rebar Mill Symbols

## 709.1 Fabricator of Reinforcement Bars

Last Revised: 7/15/2019

All approved epoxy coated and galvanized rebar fabricators can fabricate black rebar unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| AHLEJ 15 | **J.M. Ahle Company, 190 William Street, Suite 2D, South River, NJ 08882 http://www.jmahle.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2008-139Q |
| AKRRC 15 | **Akron Rebar Company, 809 W. Waterloo Road, Akron, OH 44314 http://www.akronrebar.com/** | | |
| | | Fabricator, Stainless Steel Bar | 2012-019Q |
| BLOMT 15 | **Bloomsburg Metal Company, 610 North Penn Ave., Wilkes-barre, PA 18705-1730 http://www.bloomet.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | ----- |
| BRAYP 15 | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/**<br>***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2014-169Q |
| CMCIL 15 Facility | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/**<br>**CMC Rebar Illinois 780 Eastgate Industrial Parkway Kankakee, IL 60901** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar<br>*(Formerly listed under the TOLTC 15 supplier code)* | 2001-229Q |
| CMCNC 15 Facility | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/**<br>**CMC Rebar North Carolina 2528 North Chester Street Gastonia, NC 28052** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2007-117Q |
| CMCRK 15 Facility | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/**<br>**CMC Rebar Knoxville 1919 Tennessee Avenue Knoxville, TN 37921** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar<br>*(Formerly Gerdau Ameristeel - GERD3 15)* | 2010-190Q |

## Section 709: Reinforcement Steel

### 709.1 Fabricator of Reinforcement Bars

Last Revised: 7/15/2019

All approved epoxy coated and galvanized rebar fabricators can fabricate black rebar unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CMCRM 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Muncie 1610 South Macedonia Avenue Muncie, IN 47302** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 2009-073Q |
| **CMCRPA15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Perth Amboy 333 Riverview Drive Perth Amboy, NJ 08861** | | |
| | Fabricator, Black Bar Only<br>*(Formerly Gerdau Ameristeel - GERD1215)* | | 2017-045Q |
| **CMCRS 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Sayreville 1 Crossman Road North Sayreville, NJ 08872** | | |
| | Fabricator, Black Bar Only<br>*Note: Not approved to bend reinforcement bar.* | Cutting / Shearing of Black Bar to Length | 2019-026 |
| **CMCRY 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar York 1700 7th Avenue York, PA 17403** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar<br>*(Formerly Gerdau Ameristeel - GERD6 15)* | | ----- |
| **CMCTN 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel Tennessee 1919 Tennessee Avenue Knoxville, TN 37921** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar<br>*(Formerly Gerdau Ameristeel - GERD3 15)* | | 2010-190Q |
| **CONTM 15** | **Contractors Materials Company, 10320 South Medallion Drive, Cincinnati, OH 45241 http://cmcmmi.com/** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 1997-049Q |
| | Fabricator, Stainless Steel Bar | | 2012-166Q |
| | Threading of Reinforcement Bar | | 1997-049Q |
| | Threading of Reinforcement Bar | Tru-Splice Precast Insert System | 2017-274Q |

## Section 709: Reinforcement Steel

### 709.1 Fabricator of Reinforcement Bars

Last Revised: 7/15/2019

All approved epoxy coated and galvanized rebar fabricators can fabricate black rebar unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| DIAFB 15 | Diamond Fabrications, Inc., 30 Stewart Court, Washington, PA 15301 http://diamondmetalfab.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 1998-045 |
| DIMFAB15 | Dimension Fabricators, 2000 7th Street, Glenville, NY 12302 https://www.dimensionfabricators.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2016-165Q |
| FISHW 15 | Fisher Welding & Fabrication, 923 Deturksville Road, P.O. Box 28, Pine Grove, PA 17963 https://fisher-welding-fabricating.hub.biz/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2013-154Q |
| HARMA 15 | HarMac, A Division of A.H. Harris Sayreville, 301 Hartle Street, Sayreville, NJ 08872 https://ahharris.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2007-090Q |
| KENGC 15 | Kenglo Construction Supply Company, P. O. Box 54, Route 403 South, Strongstown, PA 15957 | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2001-152Q |
| MENOS 15 | Men of Steel Rebar Fabricators, 2039 Route 130, Burlington, NJ 08016 http://www.menofsteelrebar.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2008-086Q |
| MIDWP 15 | Midwest Pipe Coating, 925 Kennedy Ave., Schererville, IN 46375 http://midwestpiperebar.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2010-054Q |
| MORGA 15 | Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 1989-247 |
| MPI-1 15 | Metal Partners International, 47 E. Chicago Avenue, Suite 314, Naperville, IL 60540 | | |
| Facility | 20 Davidson Lane New Castle, DE 19720-2214 | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2017-190Q |
| REST1 15 | Re-Steel Supply Company, Inc., 2000 Eddystone Industrial Park, Eddystone, PA 19022 http://www.resteel.com/ | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | ----- |

# Section 709: Reinforcement Steel

## 709.1 Fabricator of Reinforcement Bars

Last Revised: 7/15/2019

All approved epoxy coated and galvanized rebar fabricators can fabricate black rebar unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **REST2 15** | **Re-Steel Supply Company, Inc., 798 E. Venango Street, Philadelphia, PA 19134 http://www.resteel.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2007-009Q |
| | | Fabricator, Galvanized Bar | 2007-148Q |
| **REST3 15** | **Re-Steel Supply Company, Inc., 63 Jr. Hawvermale Way, 522 Business Park, Berkeley Springs, WV 25411 http://www.resteel.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2009-067Q |
| | | Fabricator, Stainless Steel Bar<br>*Only approved to cut straight stainless steel reinforcement bars to required length. Not approved to bend stainless steel reinforcement bars at any angle.* | ----- |
| **SALSR 15** | **Salit Specialty Rebar, 3235 Lockport Road, Niagara Falls, NY 14305 http://stainlessrebar.com/** | | |
| | | Fabricator, Stainless Steel Bar | 2008-178Q |
| **SIMCT 15** | **Simcote, Inc., Ohio Division, 250 North Greenwood, Marion, OH 43302 http://simcote.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2010-210Q |
| **SIMP1 15** | **Simplex Construction Supplies, Inc., 2150B South Route 45-52, Kankakee, IL 60901 https://www.simplex-usa.com/**<br>***Formerly Dayton Superior Corporation (DAYT5 15)*** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 1994-117 |
| **SIMRE 15** | **Simpson Reinforcing, Inc, 2001 Dr. Thomas Boulevard, Arnold, PA 15068 http://www.simpsonrebar.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | ----- |
| | | Fabricator, Galvanized Bar | 2008-174Q |
| **SPIFA 15** | **Spiral Fab, Inc., 10034 State Road 156, Vevay, IN 47043 http://spiral-fab.com/** | | |
| | | Spiral Fabricator, Black Bar and Epoxy Coated Bar | 2010-120Q |
| **STEEL 15** | **Steelcorp, Inc., 5938 State Route 128, Miamitown, OH 45041 http://steelcorpinc.com/** | | |
| | | Fabricator, Black Bar and Epoxy Coated Bar | 2000-112Q |

## Section 709: Reinforcement Steel

### 709.1 Fabricator of Reinforcement Bars

Last Revised: 7/15/2019

All approved epoxy coated and galvanized rebar fabricators can fabricate black rebar unless otherwise noted.

| | Product | Name | Ref. No. |
|---|---|---|---|
| TITUS 15 | **Titusville Fabricating, 191 Howard St., Franklin, PA 16323** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 1996-073 |
| | Fabricator, Galvanized Bar | | 2007-011Q |
| TOLTC 15 Facility | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/**<br>**CMC Rebar Illinois 780 Eastgate Industrial Parkway Kankakee, IL 60901**<br>***(formerly: Toltec Steel Services, Inc.)*** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 2001-229Q |
| TRIBO 15 | **Tri-Boro Construction Supplies, Inc, 1490 Ritner Highway, Carlisle, PA 17013 http://www.tri-borosupplies.com/** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 2008-040Q |
| TRISR 15 | **Tri State Rebar Company, 1558 Mt. Pleasant Road, Amcel Center Suite 72, Mount Pleasant, PA 15666 http://tristaterebar.com/contacts.html** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 1990-308 |
| TYEBR 15 Facility | **TyE Bar, LLC, 1050 Ohio Avenue, Glassport, PA 15045 http://www.tyerebar.com/**<br>**1050 Ohio Avenue Glassport, PA 15045** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 2015-084Q |
| WHICO 15 | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/** | | |
| | Fabricator, Black Bar and Epoxy Coated Bar | | 2007-043Q |

### 709.1(a) Billet Steel Bars

Last Revised: 10/14/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| ABSTM 15 | **Byer Steel, 200 West North Bend Road, Cincinnati, OH 45216 http://www.byersteelminded.com/**<br>***Formerly A. B. Steel Mills, Inc.*** | | | |
| | Deformed Straight Rebar | | | 2001-162 |

## Section 709: Reinforcement Steel

### 709.1(a) Billet Steel Bars

Last Revised: 10/14/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **ALTSC 15** | **Alton Steel Inc., # 5 Cut Street, Alton, IL 62002 http://altonsteel.com/** | | | |
| | Plain Straight Rebar | | | 1999-226Q |
| **ARM-1 15** | **Bayou Steel Group (Formerly: Arcelormittal Harriman), 2404 S. Roane St., Harriman, TN 37748 http://bayousteelgroup.com/** | | | |
| | Deformed Straight Rebar | | | 2001-213Q |
| **CMCFL 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel Florida 16770 Rebar Road Jacksonville, FL 32234** | | | |
| | Deformed Straight Rebar *(Formerly Gerdau Ameristeel - GERD4 15)* | | | 1986-166 |
| | Plain Straight Rebar *(Formerly Gerdau Ameristeel - GERD4 15)* | | | 1986-166 |
| **CMCNJ 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel New Jersey 1 North Crossman Road Sayreville, NJ 08872** | | | |
| | Deformed Straight Rebar *(Formerly Gerdau Ameristeel - GERD1115)* | | | 1988-098 |
| | Plain Straight Rebar *(Formerly Gerdau Ameristeel - GERD1115)* | | | 1988-098 |
| **CMCOK 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel Oklahoma 584 Old Highway 70 Durant, OK 74701** | | | |
| | Deformed Straight Rebar | | REBAR-2018-01-028 | 2019-115Q |
| | Derformed Coiled Rebar *Bar sizes 3 to 6 only* | | REBAR-2018-01-028 | 2019-115Q |
| **CMCSC 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel South Carolina 310 New State Road Cayce, SC 29033** | | | |
| | Deformed Straight Rebar | (Prior Ref Nos. 1998-096, 1989-099, 1993-045) | | 1998-084 |
| | Plain Straight Rebar | (Prior Ref Nos. 1998-096, 1989-099, 1993-045) | | 1998-084 |

## Section 709: Reinforcement Steel

### 709.1(a) Billet Steel Bars

Last Revised: 10/14/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **CMCTN 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel Tennessee 1919 Tennessee Avenue Knoxville, TN 37921** | | | |
| | Deformed Straight Rebar *(Formerly Gerdau Ameristeel - GERD3 15)* | | | 1987-204 |
| | Plain Straight Rebar *(Formerly Gerdau Ameristeel - GERD3 15)* | | | 1987-204 |
| **EVRAZ 15** | **Evraz, Inc. NA/Rocky Mountain Steel, 2100 S. Freeway, Pueblo, CO 81004 http://www.evrazna.com/Products/tabid/55/Default.asp** | | | |
| | Derformed Coiled Rebar | | | 2013-130Q |
| **GERD1 15** | **Gerdau Ameristeel, Charlotte Steel Mill Div., P.o. Box 481980, Charlotte, NC 28269 http://www.gerdau.com/northamerica/en** | | | |
| | Deformed Straight Rebar | | | 1986-167 |
| | Plain Straight Rebar | | | 1986-167 |
| **GERD1215** | **Gerdau Ameristeel, Perth Amboy Steel Division, 333 Riverview Drive, Perth Amboy, NJ 08861 http://www.gerdau.com/northamerica/en** | | | |
| | Deformed Straight Rebar | (Prior Ref. Nos.: 1989-198, 1986-354) | | 2000-099Q |
| | Plain Straight Rebar | (Prior Ref No. 1986-354) | | 1989-198 |
| **GERD1315** | **Gerdau Ameristeel, St. Paul Mill, 1678 Red Rock Road, St. Paul, MN 55119 http://www.gerdau.com/northamerica/en** ***Effective July 1, 2020, the St. Paul Mill is an idle status.*** | | | |
| | Deformed Straight Rebar | | | 1986-354 |
| | Plain Straight Rebar | | | 1989-198 |
| **GERD1515** | **Gerdau Ameristeel Sand Springs, Quality Assurance Department, 2300 South Highway 97, Sand Springs, OK 74063 http://www.gerdau.com/northamerica/en** | | | |
| | Deformed Straight Rebar | | | 2003-107Q |
| | Plain Straight Rebar | | | 2003-107Q |
| **GERD1615** | **Gerdau Ameristeel - Midlothian, 300 Ward Road, Midlothian, TX 76065 http://www.gerdau.com/northamerica/en** | | | |
| | Deformed Straight Rebar | | | 1986-120 |
| | Plain Straight Rebar | | | 1986-120 |

## Section 709: Reinforcement Steel

### 709.1(a) Billet Steel Bars

Last Revised: 10/14/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **GERD2 15** | **Gerdau Ameristeel, West Tennessee Steel Mill Division, P.O. Box 3670, Jackson, TN 38303 http://www.gerdau.com/northamerica/en** | | | |
| | Deformed Straight Rebar | | | 1986-160 |
| | Plain Straight Rebar | | | 1986-160 |
| **KEYSW 15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us**<br>***Formerly Keystone Steel & Wire Company*** | | | |
| | Derformed Coiled Rebar<br>*Bar Sizes 3-5 Only. The new supplier code is LIBSWP15.* | | | 2013-061Q |
| **LIBSWP15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us**<br>***Formerly Keystone Steel & Wire Company (KEYSW 15)*** | | | |
| | Derformed Coiled Rebar<br>*Bar Sizes 3-5 Only* | | | 2013-061Q |
| **NUCR1 15** | **Nucor Steel, Darlington Division, 300 Steel Mill Road, Darlington, SC 29540 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | | | 1991-180 |
| | Plain Straight Rebar | | | 1991-180 |
| **NUCR2 15** | **Nucor Steel, Auburn Division, P.O. Box 2008, 25 Quarry Road, Auburn, NY 13021 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | | | 1998-165 |
| | Plain Straight Rebar | | | 1998-165 |
| **NUCR3 15** | **Nucor Steel Kankakee, Inc., 972 East 4500 North Road, Bourbonnais, IL 60914-4127 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | | | 1991-367 |
| | Plain Straight Rebar | | | 1991-367 |
| **NUCR4 15** | **Nucor Steel Jackson, Inc., 3630 Fourth Street, Jackson, MS 39232 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | (Prior Ref. Nos. 1987-151, 1991-314) | | 1991-315 |
| | Plain Straight Rebar | (Prior Ref. Nos. 1987-151, 1991-314) | | 1991-315 |

## Section 709: Reinforcement Steel

### 709.1(a) Billet Steel Bars

Last Revised: 10/14/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **NUCR5 15** | **Nucor Steel Birmingham, Inc., P.O. Box 2764, Birmingham, AL 35202-2764 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | (Prior Ref. Nos. 1990-014, 1990-066, 1991-070, 1991-071, 1995-224, 1995-280) | | 1995-280 |
| **NUCR6 15** | **Nucor Steel Marion, Inc., 912 Cheney Ave., Marion, OH 43302 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | | | 1991-020 |
| | Plain Straight Rebar | | | 1991-020 |
| **NUCR7 15** | **Nucor Steel Connecticut, Inc., 35 Toelles Rd., P. O. Box 928, Wallingford, CT 06492 http://www.nucor.com/** | | | |
| | Deformed Straight Rebar | | | 1992-258 |
| **OPTS1 15 Plant** | **Optimus Steel, P.O. Box 3869, Beaumont, TX 77704 https://optimus-steelusa.com/**<br>**100 Old Highway 90 West, Vidor, TX 77662**<br>***(Formerly Gerdau Ameristeel - GERD1715)*** | | | |
| | Derformed Coiled Rebar<br>*Bar sizes 3 to 5 only* | | | 2014-238QA |
| **STEDC 15 Plant** | **Steel Dynamics, Inc., 7575 West Jefferson Boulevard, Fort Wayne, IN 46804 http://www.stld-cci.com/srd/contact/default.aspx**<br>**Steel Dynamics, Structural and Rail Division 2601 County Road 700 East Columbia City, IN 46725** | | | |
| | Deformed Straight Rebar | | | 2019-107Q |
| **STEDP 15 Plant** | **Steel Dynamics, Inc., 7575 West Jefferson Boulevard, Fort Wayne, IN 46804 https://www.steeldynamics.com/Pittsboro/Home.aspx**<br>**Steel Dynamics, Engineered Bar Products Division 8000 N. County Road 225 East Pittsboro, IN 46167** | | | |
| | Deformed Straight Rebar | | | 2016-152 |
| **STEDR 15 Plant** | **Steel Dynamics, Inc., 7575 West Jefferson Boulevard, Fort Wayne, IN 46804 http://www.roanokesteel.com/**<br>**Steel Dynamics, Roanoke Bar Division 102 Westside Boulevard NW Roanoke, VA 24017** | | | |
| | Deformed Straight Rebar | | | 2007-113Q |

### 709.1(b) Rail Steel Bars

## Section 709: Reinforcement Steel

### 709.1(c) Epoxy Coaters of Steel Bars

Last Revised: 6/18/2019

Approved epoxy coaters: Epoxy coaters may only use approved epoxy powders and patching materials from manufacturers listed in Section 709.1(c). Properly equipped epoxy coaters listed in Section 709.1(c) may also coat mechanical splice couplers and systems in section 1002.2(c).

| Product | Name | Ref. No. |
|---|---|---|
| **ABCCM 15** | **ABC Coating Company of Michigan, 1503 Burlingame S.W., Wyoming, MI 49509** | |
| | Approved Epoxy Coater | 1994-144 |
| **CMCIL 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Illinois 780 Eastgate Industrial Parkway Kankakee, IL 60901** | |
| | Approved Epoxy Coater<br>*(Formerly listed under the TOLTC 15 supplier code)* | 2001-229Q |
| **CMCNC 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar North Carolina 2528 North Chester Street Gastonia, NC 28052** | |
| | Approved Epoxy Coater | 1997-114 |
| **CMCNJ 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel New Jersey 1 North Crossman Road Sayreville, NJ 08872** | |
| | Approved Epoxy Coater<br>*(Formerly Gerdau Ameristeel - GERD1115)* | 1990-381 |
| **CMCRK 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Knoxville 1919 Tennessee Avenue Knoxville, TN 37921** | |
| | Approved Epoxy Coater<br>*(Formerly Gerdau Ameristeel - GERD3 15)* | 1988-337 |
| **CMCRM 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Muncie 1610 South Macedonia Avenue Muncie, IN 47302** | |
| | Approved Epoxy Coater<br>*(Formerly Gerdau Ameristeel - GERD1415)* | 2005-133Q |

## Section 709: Reinforcement Steel

### 709.1(c) Epoxy Coaters of Steel Bars

**Last Revised: 6/18/2019**

Approved epoxy coaters: Epoxy coaters may only use approved epoxy powders and patching materials from manufacturers listed in Section 709.1(c). Properly equipped epoxy coaters listed in Section 709.1(c) may also coat mechanical splice couplers and systems in section 1002.2(c).

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CMCRS 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Rebar Sayreville 1 Crossman Road North Sayreville, NJ 08872** | | |
| | Approved Epoxy Coater *(Formerly Gerdau Ameristeel - GERD1115)* | | 1990-381 |
| **CMCTN 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/ CMC Steel Tennessee 1919 Tennessee Avenue Knoxville, TN 37921** | | |
| | Approved Epoxy Coater *(Formerly Gerdau Ameristeel - GERD3 15)* | | 1988-337 |
| **CORCI 15** | **Corrosion Control, Inc., 10 Quarry Road, Auburn, NY 13021 http://www.corrosioncontrolinc.com/** | | |
| | Approved Epoxy Coater | | 2004-085Q |
| **LANE5 15** | **Lane Enterprises, Inc., 1244 Claremont Road, Carlisle, PA 17013 http://www.lane-enterprises.com/** | | |
| | Approved Epoxy Coater | | 1989-223 |
| **MCOAT 15** | **Miamisburg Coating, 925 N. Main St., Miamisburg, OH 45342** | | |
| | Approved Epoxy Coater of Mechanical Splice Couplers Only | | 2013-242Q |
| **MIDWP 15** | **Midwest Pipe Coating, 925 Kennedy Ave., Schererville, IN 46375 http://midwestpiperebar.com/** | | |
| | Approved Epoxy Coater | | 1984-128 |
| **SIMCT 15** | **Simcote, Inc., Ohio Division, 250 North Greenwood, Marion, OH 43302 http://simcote.com/** | | |
| | Approved Epoxy Coater | | 1985-022 |
| **SIMP1 15** | **Simplex Construction Supplies, Inc., 2150B South Route 45-52, Kankakee, IL 60901 https://www.simplex-usa.com/** ***Formerly Dayton Superior Corporation (DAYT5 15)*** | | |
| | Approved Epoxy Coater | | 1996-160 |

# Section 709: Reinforcement Steel

## 709.1(c) Epoxy Coaters of Steel Bars

**Last Revised: 6/18/2019**

Approved epoxy coaters: Epoxy coaters may only use approved epoxy powders and patching materials from manufacturers listed in Section 709.1(c). Properly equipped epoxy coaters listed in Section 709.1(c) may also coat mechanical splice couplers and systems in section 1002.2(c).

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIMRE 15** | **Simpson Reinforcing, Inc, 2001 Dr. Thomas Boulevard, Arnold, PA 15068 http://www.simpsonrebar.com/** | | |
| | Approved Epoxy Coater<br>*Capability to coat up to and including #11 reinforcement bar.* | | 2017-318Q |
| **TITUS 15** | **Titusville Fabricating, 191 Howard St., Franklin, PA 16323** | | |
| | Approved Epoxy Coater | | 1996-073 |
| **TOLTC 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039 https://www.cmc.com/**<br>**CMC Rebar Illinois 780 Eastgate Industrial Parkway Kankakee, IL 60901**<br>***(formerly: Toltec Steel Services, Inc.)*** | | |
| | Approved Epoxy Coater | | 2001-229Q |
| **UCOAT 15** | **Universal Coatings, 8511 Tower Drive, Twinsburg, OH 44087 http://universal-coatings.net/** | | |
| | Approved Epoxy Coater of Mechanical Splice Couplers Only<br>*Electrostatic and Fluid Dip* | | 2014-240Q |

## 709.1(c)1 Epoxy Powder and Patching Material Manufacturers

**Last Revised: 9/4/2019**

In accordance with Standard Special Provision C-a00022-A, which is effective for projects let after 12/4/15; the patching or repair material must be compatible with the coating, inert in concrete, and feasible for repairs at the applicator, fabricator, or in the field.

Table A: Approved Epoxy Coating Powders and Compatible Patching/Repair Materials

| | Product | Name | Compatible Repair Coating | Ref. No. |
|---|---|---|---|---|
| **3M-07 15 Plant** | **3M Company, 3M Center, Building 0223-02-E-25, St. Paul, MN 55144**<br>**1508 East Cedar Street Angleton, TX 77515** | | | |
| | Epoxy Powder Material (Manufacturer) | Scotchkote 413 | ScotchKote 323 R [SIECO] | 2015-093Q |
| | Epoxy Powder Material (Manufacturer) | Scotchkote 413 | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2017-201Q |

# Section 709: Reinforcement Steel

## 709.1(c)1 Epoxy Powder and Patching Material Manufacturers

**Last Revised: 9/4/2019**

In accordance with Standard Special Provision C-a00022-A, which is effective for projects let after 12/4/15; the patching or repair material must be compatible with the coating, inert in concrete, and feasible for repairs at the applicator, fabricator, or in the field.

Table A: Approved Epoxy Coating Powders and Compatible Patching/Repair Materials

| | Product | Name | Compatible Repair Coating | Ref. No. |
|---|---|---|---|---|
| **3MC-1 15 Plant** | **3M Company, 1840 Oxford Street East, London, Ontario Canada N5v 3r Morden, Manitoba ROG 1JO** | | | |
| | Epoxy Powder Material (Manufacturer) | ScotchKote 413 | ScotchKote 323 R [SIECO] | 2010-014Q |
| **AKZNC 15** | **Akzo Nobel Coatings, Inc., 20 Culvert Street, Nashville, TN 37210 https://www.akzonobel.com/** | | | |
| | Epoxy Powder | Resicoat RB-600 HKF30R | BarPatch 803 [ARMIN], Hi-Build Epoxoline Series 66HS [TNEMEC] | 2013-141QB |
| | Epoxy Powder | Resicoat RB-600 HKF30R | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2019-187Q |
| | Epoxy Powder | Resicoat RB-600 HKF30R-F | BarPatch 803 [ARMIN], Hi-Build Epoxoline Series 66HS [TNEMEC] | 2013-141QB |
| | Epoxy Powder | Resicoat RB-600 HKF30R-F | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2019-187Q |
| | Epoxy Powder | Resicoat RB-600 HKF30R-LG | BarPatch 803 [ARMIN], Hi-Build Epoxoline Series 66HS [TNEMEC] | 2013-141QB |
| | Epoxy Powder | Resicoat RB-600 HKF30R-LG | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2019-187Q |
| **AXACS 15** | **Axalta Coating Systems, LLC, 9800 Genard Road, Houston, TX 77041 http://www.axaltacs.com/corporate/en_US.html** ***Formerly DuPont (DUPT3)*** | | | |
| | Epoxy Powder | Nap-Gard 7-2750, 7-2750FC, 7-2750SG | Nap-Gard 7-1868 [SPEPC] | 2012-176Q |
| | Epoxy Powder | Nap-Gard 7-2750, 7-2750FC, 7-2750SG | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2016-184Q |
| **VALSP215** | **The Sherwin-Williams Company (Formerly Valspar Corporation), 10300 Claude Freeman Drive, Charlotte, NC 28262 https://www.valsparindustrial.com/opencms/en/products/Greenbar/** | | | |
| | Epoxy Powder Material (Manufacturer) | Greenbar 720A009 | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2009-079Q |
| **VALSP415** | **The Sherwin-Williams Company (Formerly Valspar Corporation), 13129 Harland Drive Ne, Covington, GA 30014 https://www.valsparindustrial.com/opencms/en/products/Greenbar/** | | | |
| | Epoxy Powder | Greenbar 720A009 | Valspar Greenbar Touch Up Coating Kit [VALSP3] | 2013-214Q |

## 709.1(c)2.b Coating Repair Material Manufacturers

**Last Revised: 9/4/2019**

## Section 709: Reinforcement Steel

### 709.1(c)2.b Coating Repair Material Manufacturers

Last Revised: 9/4/2019

| | Product | Name | Compatible Epoxy Powder | Ref. No. |
|---|---|---|---|---|
| **ARMIN 15** | **Armitage Industries Inc., DBA Thermal-Chem Corporation, 2550 Edgington Street, Franklin Park, IL 60131 https://www.thermalchem.com/** | | | |
| | Repair/Patching Material | BarPatch 803 | Resicoat RB-600 HKF30R, HKF30R-F, HKF30R-LG [AKZNC] | 2013-141QA |
| | *Application Technical Info: Approval for un-thinned material only; Substrate temp.: 40-80 deg. F; Mix no less than 3 minutes (longer mix time required for lower temperature); VOC = 0.008 lbs/gal.* | | | |
| **SIECO 15** | **Sierra Corporation, 11400 West 47th Street, Minnetonka, MN 55343 http://sierrapaint.com/** | | | |
| | Repair/Patching Material | ScotchKote 323R | ScotchKote 413 [3MC-1 & 3M-07] | 2013-135Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 41-200 deg. F @ 5 deg. F above Dew Point Temp. Mixing accomplished by mixing tip dispenser.* | | | |
| | *VOC = 0.280 lbs/gal. Storage Condition Temperature: 40-100 deg. F* | | | |
| **SPEPC 15** | **Specialty Polymer Coatings Inc, #101 - 20529 62nd Ave., Langley, Bc V3a 8r4 http://www.spc-net.com/** | | | |
| | Repair/Patching Material | Nap-Gard 7-1868 Dark Green Fast Cure Repair | Nap-Gard 7-2750 [AXACS] | 2012-231Q |
| | *Approval for un-thinned material only* | | | |
| | *Application Technical Info - Substrate Temp.: 50-212 degF or a min. of 5.4 deg. F above Dew Point Temp.; VOC = 0.05 lbs/gal.* | | | |
| **TNEMEC15 Facility** | **Tnemec Company Inc., 6800 Corporate Drive, Kansas City, MO 64120 http://www.tnemec.com/** | | | |
| | **123 W. 23rd Avenue North Kansas City, MO 64116** | | | |
| | Repair/Patching Material | Hi-Build Epoxoline Series 66HS | Resicoat RB-600 HKF30R, HKF30R-F, HKF30R-LG [AKZNC] | 2018-034Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 50-135 deg. F @ 5 deg. F above dew point; VOC = 1.44 lbs/gal.* | | | |

## Section 709: Reinforcement Steel

### 709.1(c)2.b Coating Repair Material Manufacturers

Last Revised: 9/4/2019

| | Product | Name | Compatible Epoxy Powder | Ref. No. |
|---|---|---|---|---|
| **VALSP315** | **The Sherwin-Williams Company (Formerly Valspar Corporation), 5400 Avenue Of The Cities, Moline, IL 61265** https://www.valsparindustrial.com/opencms/en/products/Greenbar/ | | | |
| | Repair/Patching Material | Valspar Greenbar Touch Up Coating Kit | Greenbar 720A009 [VALSP1, 2, 4] | 2012-235Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 50-100 deg. F; VOC = 2.27 lbs/gal.* | | | |
| | Repair/Patching Material | Valspar Greenbar Touch Up Coating Kit | Nap-Gard 7-2750, 7-2750FC, 7-2750SG | 2016-184Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 50-100 deg. F; VOC = 2.27 lbs/gal.* | | | |
| | Repair/Patching Material | Valspar Greenbar Touch Up Coating Kit | ScotchKote 413 [3M-07] | 2017-201Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 50-100 deg. F; VOC = 2.27 lbs/gal.* | | | |
| | Repair/Patching Material | Valspar Greenbar Touch Up Coating Kit | Resicoat RB-600 HKF30R, HKF30R-F, HKF30R-LG | 2019-187Q |
| | *Approval for un-thinned material only. Application Technical Info: Substrate Temp.: 50-100 deg. F; VOC = 2.27 lbs/gal.* | | | |

### 709.1(d) Low-Alloy Steel Bars

Last Revised: 5/13/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CMCSC 15 Facility** | **Commercial Metals Company (CMC), 6565 North MacArthur Blvd., Suite 800, Irving, TX 75039** https://www.cmc.com/ **CMC Steel South Carolina 310 New State Road Cayce, SC 29033** | | |
| | Low-Alloy Steel, Deformed | | 2005-015Q |
| **EVRAZ 15** | **Evraz, Inc. NA/Rocky Mountain Steel, 2100 S. Freeway, Pueblo, CO 81004** http://www.evrazna.com/Products/tabid/55/Default.asp | | |
| | Low-Alloy Steel, Coiled Only<br>*Bar Sizes 3-5 Only* | | 2013-130Q |
| **NUCR1 15** | **Nucor Steel, Darlington Division, 300 Steel Mill Road, Darlington, SC 29540** http://www.nucor.com/ | | |
| | Low-Alloy Steel, Deformed | | 2005-092Q |

## Section 709: Reinforcement Steel

### 709.1(d) Low-Alloy Steel Bars

Last Revised: 5/13/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NUCR2 15** | **Nucor Steel, Auburn Division, P.O. Box 2008, 25 Quarry Road, Auburn, NY 13021 http://www.nucor.com/** | | |
| | Low-Alloy Steel, Deformed | | 1998-165 |
| **NUCR3 15** | **Nucor Steel Kankakee, Inc., 972 East 4500 North Road, Bourbonnais, IL 60914-4127 http://www.nucor.com/** | | |
| | Low-Alloy Steel, Deformed | | 1991-367 |
| **OPTS1 15 Plant** | **Optimus Steel, P.O. Box 3869, Beaumont, TX 77704 https://optimus-steelusa.com/**<br>**100 Old Highway 90 West, Vidor, TX 77662**<br>***(Formerly Gerdau Ameristeel - GERD1715)*** | | |
| | Low-Alloy Steel, Coiled Only<br>*Bar sizes 3 to 5 only* | | ----- |

### 709.1(e) Galvanized Bars

Last Revised: 10/2/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONGV 15** | **Connecticut Galvanizing, 239 Commerce Street, Glastonbury, CT 06033-0358 http://ctgalv.com/** | | |
| | Galvanized Bar | | 2006-116Q |
| **HUBBL 15** | **O. W. Hubbell and Sons, P.O. Box 37, New York Mills, NY 13417 http://www.whyrust.com** | | |
| | Galvanized Bar | | 2015-005Q |
| **JAR-1 15 Plant** | **ARTAZN LLC (formerly Jarden Zinc Products), 2500 Old Stage Road, Greeneville, TN 37744 https://jardenzinc.com/**<br>**2500 Old Stage Road Greeneville, TN 37744** | | |
| | Galvanized Bar<br>*American Steel Tubing: bonding zinc to bar*<br>*Southeast Tubular Products: bonding zinc to bar*<br>*Conditionally approved as an alternate per manufacturer's specifications.* | LifeDowel (formerly known as LifeJacket Dowel) | 2009-084 |
| **NJG&T 15** | **New Jersey Galvanizing and Tinning Works, 139 Hayes Avenue, Newark, NJ 07114 http://www.newjerseygalvanizing.com/#!** | | |
| | Galvanized Bar | | 2006-216Q |

## Section 709: Reinforcement Steel

### 709.1(e) Galvanized Bars

Last Revised: 10/2/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| SAGV1 15 | **South Atlantic Galvanizing, 3025 Steel Way Drive, P.O. Box 1380, Graham, NC 27253 http://www.southatlanticllc.com/** | | |
| | Galvanized Bar | | 2014-016Q |
| TENNG 15 | **Tennessee Galvanizing, Inc., 1535 Industrial Boulevard, P.O. Box 609, Jasper, TN 37347 http://tennesseegalvanizing.com/** | | |
| | Galvanized Bar | | 2016-227Q |
| YOUNG 15 | **Young Galvanizing, Inc., P. O. Box 334, Route 551, Pulaski, PA 16143 http://younggalvanizing.com/** | | |
| | Galvanized Bar | | 2006-178Q |

### 709.1(f) Stainless Steel Bars

Last Revised: 9/2/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| CARTC 15 Facility | **Carpenter Technology Corporation, 101 West Bern Street, Reading, PA 19612 http://www.cartech.com/ Hartsville Operations 205 Talley Metal Lane McBee, SC 29101** | | |
| | Stainless Steel Bar | CarTech EnduraMet 32 Stainless (UNS S24100) | 2008-177Q |
| | *TDS: **CarTech EnduraMet 32 Stainless Technical Datasheet*** | | |

### 709.1(g) Uncoated Corrosion-Resistant Bars

Last Revised: 5/1/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| CASST 15 | **Cascade Steel Rolling Mills, Inc. (Subsidiary of Schnitzer Steel Industries, Inc.), 3200 NE Highway 99W, McMinnville, OR 97128 http://www.cascadesteel.com/** | | |
| | Uncoated Corrosion-Resistant Bar | ChromX 9100 (ASTM A1035, CS, Grade 100) | 2011-061 |
| | *Cascade Steel is a licensed partner of MMFX Technologies, a Commercial Metals Company. Product formerly known as MMFX2 Microcomposite Steel.* | | |

### 709.3 Steel Welded Wire Fabric

Last Revised: 10/14/2020

## Section 709: Reinforcement Steel

### 709.3 Steel Welded Wire Fabric

Last Revised: 10/14/2020

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap metal was originally melted to form the hot rolled steel prior to being drawn into wire. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Mill / Non-Mill | Ref. No. |
|---|---|---|---|---|
| **CARSW 15** | **Cargill Steel & Wire, 1915 John Connally Drive, Carrollton, TX 75006 http://www.cargill-etm.com/metals.html** | | | |
| | Cold Drawn Wire Fabricator | | Wire-Mill | 2000-027Q |
| **CONCT 15** | **Concrete Pipe Products Corporation, Ten Thomas St., Chenango Bridge, NY 13901** | | | |
| | Cold Drawn Wire Fabricator | Bright Basic Wire | Wire-Mill | 1990-323 |
| **CONGV 15** | **Connecticut Galvanizing, 239 Commerce Street, Glastonbury, CT 06033-0358 http://ctgalv.com/** | | | |
| | Galvanizer | | | 2006-116Q |
| **DOWNY 15** | **Downey, B. L., Company, Inc., 2125 Gardner Road, Broadview, IL 60153** | | | |
| | Epoxy Coater | | | 1996-248 |
| **ENGWP 15** | **Engineered Wire Products, Inc., 1200 N. Warpole Street, P. O. Box 313, Upper Sandusky, OH 43351 http://ewp1.com/ *(Liberty Steel USA)*** | | | |
| | Cold Drawn Wire Fabricator | Bright Basic Wire | Wire-Mill | 2009-048Q |
| | Welded Wire Fabric Manufacturer | | | 1991-136 |
| **FOXVS 15** | **Fox Valley Steel & Wire Company, 111 North Douglas Street, Hortonville, WI 54944** | | | |
| | Cold Drawn Wire Fabricator | | Wire-Mill | 2000-339Q |
| **INST2 15** | **Insteel Wire Products, 638 Rappahannock Wire Road, Gallatin, TN 37066 http://www.insteel.com/** | | | |
| | Welded Wire Fabric Manufacturer | | | 2000-160Q |
| **INST4 15 Plant** | **Insteel Wire Products, 1373 Boggs Drive, Mount Airy, NC 27030 http://www.insteel.com/ 129 Carter Street Mount Airy, NC 27030** | | | |
| | Cold Drawn Wire Fabricator | Bright Basic Wire | Wire-Mill | 2008-004Q |
| | Welded Wire Fabric Manufacturer | | | ----- |

## Section 709: Reinforcement Steel

### 709.3 Steel Welded Wire Fabric

Last Revised: 10/14/2020

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap metal was originally melted to form the hot rolled steel prior to being drawn into wire. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Mill / Non-Mill | Ref. No. |
|---|---|---|---|---|
| **INST5 15 Plant** | **Insteel Wire Products, 3050 Melson Ave., Jacksonville, FL 32254 http://www.insteel.com/ Jacksonville, FL** *Formerly Ivy Steel and Wire (IS&W6)* | | | |
| | Welded Wire Fabric Manufacturer | | | 2006-043Q |
| **INST6 15 Plant** | **Insteel Wire Products, 810 Atchison Street, St. Joseph, MO 64503 http://www.insteel.com/ MO** *Formerly Ivy Steel and Wire (IS&W5)* | | | |
| | Cold Drawn Wire Fabricator | Bright Basic Wire | Wire-Mill | 1996-191 |
| | Welded Wire Fabric Manufacturer | | | 1996-191 |
| **INST7 15 Plant** | **Insteel Wire Products, 501 Forrest Road, Hazle Township, PA 198202 http://www.insteel.com/ 501 Forrest Rd Humbolt Industrial Park Hazle Township, PA 18202** *Formerly Ivy Steel and Wire (IS&W4)* | | | |
| | Welded Wire Fabric Manufacturer | | | 1993-221 |
| **INST9 15 Plant** | **Insteel Wire Products, 1373 Boggs Drive, Mount Airy, NC 27030 http://www.insteel.com/ 3325 Route 1099 Hickman, KY** | | | |
| | Galvanizer | | | 2013-144Q |
| | Welded Wire Fabric Manufacturer | | | 2013-144Q |
| **IOWSW 15** | **Iowa Steel & Wire, 1500 West Van Buren, Centerville, IA 52544** | | | |
| | Welded Wire Fabric Manufacturer | | | 2000-230Q |

## Section 709: Reinforcement Steel

### 709.3 Steel Welded Wire Fabric

Last Revised: 10/14/2020

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap metal was originally melted to form the hot rolled steel prior to being drawn into wire. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Mill / Non-Mill | Ref. No. |
|---|---|---|---|---|
| **KEYSW 15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us** ***Formerly Keystone Steel & Wire Company*** | | | |
| | Cold Drawn Wire Fabricator | | Steel Mill & Wire-Mill | 2009-069Q |
| | *The new supplier code is LIBSWP15.* | | | |
| **LANE5 15** | **Lane Enterprises, Inc., 1244 Claremont Road, Carlisle, PA 17013 http://www.lane-enterprises.com/** | | | |
| | Epoxy Coater | | | 1989-223 |
| **LEGPT 15** | **Leggett & Platt, Inc., Adcom Wire Division, No. 1 Leggett Road, Carthage, MO 64836 http://leggett.com/** | | | |
| **Plant** | **Nicholasville, KY** | | | |
| | Cold Drawn Wire Fabricator | | Wire-Mill | 2002-022Q |
| **LIBSWP15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us** ***Formerly Keystone Steel & Wire Company (KEYSW 15)*** | | | |
| | Cold Drawn Wire Fabricator | | Steel Mill & Wire-Mill | 2009-069Q |
| **NELWS 15** | **Wire Mesh Corporation (WMC) (Formerly Nelson Wire and Steel), 1015 New Salem Road, New Salem, PA 15468 https://wmc-us.com/** ***Formerly Nucor Wire Products (NUCW-)*** | | | |
| | Welded Wire Fabric Manufacturer | | | 2011-151QAB |
| **NJG&T 15** | **New Jersey Galvanizing and Tinning Works, 139 Hayes Avenue, Newark, NJ 07114 http://www.newjerseygalvanizing.com/#!** | | | |
| | Galvanizer | | | 2006-216Q |
| **NUCR7 15** | **Nucor Steel Connecticut, Inc., 35 Toelles Rd., P. O. Box 928, Wallingford, CT 06492 http://www.nucor.com/** | | | |
| | Cold Drawn Wire Fabricator | | Steel Mill & Wire-Mill | 1992-258B |
| | Welded Wire Fabric Manufacturer | | | 1992-258B |

## Section 709: Reinforcement Steel

### 709.3 Steel Welded Wire Fabric

Last Revised: 10/14/2020

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap metal was originally melted to form the hot rolled steel prior to being drawn into wire. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Mill / Non-Mill | Ref. No. |
|---|---|---|---|---|
| NUMES 15 | Numesh USA, LLC, 211 Warren Street, Glens Falls, NY 12801 http://www.numesh.com/en/ | | | |
| | Welded Wire Fabric Manufacturer | | | 2010-066Q |
| SIMCT 15 | Simcote, Inc., Ohio Division, 250 North Greenwood, Marion, OH 43302 http://simcote.com/ | | | |
| | Epoxy Coater | | | 1985-022 |
| TAUSW 15 | Taubensee Steel & Wire Company, 600 Diens Drive, Wheeling, IL 60090 http://www.taubensee.com/ | | | |
| | Cold Drawn Wire Fabricator | | Wire-Mill | 2003-062Q |
| TWP-1 15 Facility | Tatano Wire Products, LLC (SSW Holding Company, LLC), 3501 Tulsa St, Ft. Smith, AR 79203 http://sswholding.net/ 714 Braddock View Drive Lemont Furnace, PA 15456 | | | |
| | Welded Wire Fabric Manufacturer | | | 2019-250Q |
| VIMC- 15 | Vimco, Inc., 300 Hansen Access Road, King of Prussia, PA 19406 http://vimcoinc.com/ | | | |
| | Welded Wire Fabric Manufacturer | | | 2012-017Q |
| WIRET 15 Plant | Wiretech Inc., 6440 E. Canning St., Commerce, CA 90040 http://www.wiretechincorporated.com/ Elyria, OH 44035 | | | |
| | Cold Drawn Wire Fabricator | | Wire-Mill | 2010-060Q |
| YOUNG 15 | Young Galvanizing, Inc., P. O. Box 334, Route 551, Pulaski, PA 16143 http://younggalvanizing.com/ | | | |
| | Galvanizer | | | 2006-178Q |

### 709.4 Deformed Welded Wire Fabric

Last Revised: 8/28/2020

## Section 709: Reinforcement Steel

### 709.4 Deformed Welded Wire Fabric

**Last Revised: 8/28/2020**

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap steel was originally melted to form the steel rods. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONGV 15** | **Connecticut Galvanizing, 239 Commerce Street, Glastonbury, CT 06033-0358 http://ctgalv.com/** | | |
| | Galvanizer | | 2006-116Q |
| **CRI-1 15** | **Concrete Reinforcements, Inc, 13450 W Peoria Ave, Surprise, AZ 85379 http://cri-steel.com/** | | |
| | Welded Wire Fabric Manufacturer | | 2020-017Q |
| **DOWNY 15** | **Downey, B. L., Company, Inc., 2125 Gardner Road, Broadview, IL 60153** | | |
| | Epoxy Coater | | 1996-248 |
| **ENGWP 15** | **Engineered Wire Products, Inc., 1200 N. Warpole Street, P. O. Box 313, Upper Sandusky, OH 43351 http://ewp1.com/** ***(Liberty Steel USA)*** | | |
| | Welded Wire Fabric Manufacturer | | 1991-136 |
| **INST4 15 Plant** | **Insteel Wire Products, 1373 Boggs Drive, Mount Airy, NC 27030 http://www.insteel.com/ 129 Carter Street Mount Airy, NC 27030** | | |
| | Welded Wire Fabric Manufacturer | | ----- |
| **INST5 15 Plant** | **Insteel Wire Products, 3050 Melson Ave., Jacksonville, FL 32254 http://www.insteel.com/ Jacksonville, FL** ***Formerly Ivy Steel and Wire (IS&W6)*** | | |
| | Welded Wire Fabric Manufacturer | | 2006-043Q |
| **INST6 15 Plant** | **Insteel Wire Products, 810 Atchison Street, St. Joseph, MO 64503 http://www.insteel.com/ MO** ***Formerly Ivy Steel and Wire (IS&W5)*** | | |
| | Welded Wire Fabric Manufacturer | | 1996-191 |

## Section 709: Reinforcement Steel

### 709.4 Deformed Welded Wire Fabric

**Last Revised: 8/28/2020**

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap steel was originally melted to form the steel rods. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **INST7 15 Plant** | **Insteel Wire Products, 501 Forrest Road, Hazle Township, PA 198202 http://www.insteel.com/**<br>**501 Forrest Rd Humbolt Industrial Park Hazle Township, PA 18202**<br>***Formerly Ivy Steel and Wire (IS&W4)*** | | |
| | | Welded Wire Fabric Manufacturer | 1992-071 |
| **INST9 15 Plant** | **Insteel Wire Products, 1373 Boggs Drive, Mount Airy, NC 27030 http://www.insteel.com/**<br>**3325 Route 1099 Hickman, KY** | | |
| | | Galvanizer | 2013-144Q |
| | | Welded Wire Fabric Manufacturer | 2013-144Q |
| **IOWSW 15** | **Iowa Steel & Wire, 1500 West Van Buren, Centerville, IA 52544** | | |
| | | Welded Wire Fabric Manufacturer | 2000-230Q |
| **LANE5 15** | **Lane Enterprises, Inc., 1244 Claremont Road, Carlisle, PA 17013 http://www.lane-enterprises.com/** | | |
| | | Epoxy Coater | 1989-223 |
| **NELWS 15** | **Wire Mesh Corporation (WMC) (Formerly Nelson Wire and Steel), 1015 New Salem Road, New Salem, PA 15468 https://wmc-us.com/**<br>***Formerly Nucor Wire Products (NUCW-)*** | | |
| | | Welded Wire Fabric Manufacturer | 2011-151QAB |
| **NJG&T 15** | **New Jersey Galvanizing and Tinning Works, 139 Hayes Avenue, Newark, NJ 07114 http://www.newjerseygalvanizing.com/#!** | | |
| | | Galvanizer | 2006-216Q |
| **NUCR7 15** | **Nucor Steel Connecticut, Inc., 35 Toelles Rd., P. O. Box 928, Wallingford, CT 06492 http://www.nucor.com/** | | |
| | | Welded Wire Fabric Manufacturer | 2011-124Q |

## Section 709: Reinforcement Steel

### 709.4 Deformed Welded Wire Fabric

**Last Revised: 8/28/2020**

All supplied project material MUST include documentation (Mill Certifications) from the "Steel Mill". A "Steel Mill' is defined as where the iron ore, pig iron, or scrap steel was originally melted to form the steel rods. The documentation must include physical test results and a statement that the material was "melted and manufactured in the USA". Required certification documentation for Department funded projects (Sections 709.3 & 709.4)

A "Wire-Mill" is defined as a facility that cold draws the steel rods into wire.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NUMES 15** | **Numesh USA, LLC, 211 Warren Street, Glens Falls, NY 12801 http://www.numesh.com/en/** | | |
| | Welded Wire Fabric Manufacturer | | 2010-066Q |
| **REISO 15** | **Engineered Wire Products, 3121 West Market Street, Warren, OH 44485 http://ewp1.com/ *(Liberty Steel USA)*** | | |
| | Welded Wire Fabric Manufacturer | | 2011-086Q |
| **SIMCT 15** | **Simcote, Inc., Ohio Division, 250 North Greenwood, Marion, OH 43302 http://simcote.com/** | | |
| | Epoxy Coater | | 1985-022 |
| **YOUNG 15** | **Young Galvanizing, Inc., P. O. Box 334, Route 551, Pulaski, PA 16143 http://younggalvanizing.com/** | | |
| | Galvanizer | | 2006-178Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.1(a) Curing and Protecting Covers: White Polyethylene Sheeting

Last Revised: 3/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| FORTC 15 | **Fortifiber Corporation, 511 Highland Drive, Valdosta, GA 31601 http://www.fortifiber.com/** | | |
| | White Polyethylene Sheeting | | 1999-180 |
| POLYA 15 | **Poly-America, Inc., 2000 West Marshall Drive, Grand Prairie, TX 75051 http://www.poly-america.com/** | | |
| | White Polyethylene Sheeting | | 1986-176 |

## 711.1(b) Curing and Protecting Covers: White Polyethylene Sheeting-Burlap Backed

Last Revised: 7/6/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| MAX-K 15 | **Max Katz Bag Company, Inc., 235 South Lasalle Street, Indianapolis, IN 46201 http://www.maxkatzbag.com/** | | |
| | White Polyethylene Sheeting, Natural Burlap Backed | | ----- |
| | White Polyethylene Sheeting, Synthetic Burlap Backed | | 1995-095 |
| MCTG- 15 | **McTech Group, Inc., 3502 Diversified Drive, Loganville, GA 30052 http://www.mctechgroup.com/** | | |
| | White Polyethylene Sheeting, Natural Burlap Backed<br>*Conditionally approved as an alternate per manufacturer's specifications.* | Ultracure | 2010-062Q |
| MIDWC 15 | **Midwest Canvas Corporation, 4635 West Lake St., Chicago, IL 60644 http://www.midwestcanvas.com/** | | |
| | White Polyethylene Sheeting, Natural Burlap Backed | | 2000-105Q |

## 711.1(c) Curing and Protecting Covers: White Polypropylene Sheeting-Polypropylene Fiber Backed

Last Revised: 3/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| FORTC 15 | **Fortifiber Corporation, 511 Highland Drive, Valdosta, GA 31601 http://www.fortifiber.com/** | | |
| | White Polypropylene Sheeting, Polypropylene Fiber Backed | | 1999-020 |

## 711.1(d) Curing and Protecting Covers: Burlap

Last Revised: 6/5/2020

| Product | Name | Ref. No. |
|---|---|---|

## Section 711: Concrete Curing Material and Admixtures

### 711.1(d) Curing and Protecting Covers: Burlap

Last Revised: 6/5/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ABITC 15** | **Abitec, Inc., 105 Grove Circle, Chalfont, PA 18914** | | |
| | Burlap | | 1999-191Q |
| **ACEBB 15** | **Ace Bag & Burlap Company, 205 Water Street, Brooklyn, NYC, NY 11201 http://www.ace-bag.com/** | | |
| | Burlap | | 1992-046 |
| **AMEES 15** | **Amee Sales, Inc., 55 West 39th Street, New York, NY 10018** | | |
| | Burlap | | 1992-274A |
| **BAG-P 15** | **Bag Processors, Inc., 325 W. Allen Street, Mechanicsburg, PA 17055 http://www.bag-pro.com/** | | |
| | Burlap | | 1983-106 |
| **DAYBAG15** | **The Dayton Bag & Burlap Co, 322 Davis Avenue, Dayton, OH 45403 https://www.daybag.com/** | | |
| | Burlap | | 2020-067Q |
| | *Provisionally Approved. Per the provisional approval, the Department will monitor the burlap use, application, and performance for a period of two years (6/5/2020 to 6/5/2022). Manufacturer agrees to submit samples for Plant Verification (PV) testing of a minimum of six distinct lots delivered to PennDOT projects over the two-year period. The submitted samples shall be two yards long by full width, labeled and rolled for shipping, and delivered to PennDOT's Laboratory Testing Section. Samples of lots not shipped to PennDOT may be used if unavoidable.* | | |
| **G&GF0 15** | **G.& G. Fabricating Co., 930 Henderson Blvd., #12, Folcroft, PA 19032 http://gandgstamping.com/** | | |
| | Burlap | | ----- |
| **INDVA 15** | **Indian Valley Industries, Inc., 5 Pine Camp Dr., Binghamton, NY 13904 http://www.iviindustries.com/index.html** | | |
| | Burlap | | 1994-100 |
| **MAX-K 15** | **Max Katz Bag Company, Inc., 235 South Lasalle Street, Indianapolis, IN 46201 http://www.maxkatzbag.com/** | | |
| | Burlap | | ----- |

### 711.1(e) Curing and Protecting Covers: Insulating Mats

Last Revised: 7/8/2015

| Product | Name | Ref. No. |
|---|---|---|

## Section 711: Concrete Curing Material and Admixtures

### 711.1(e) Curing and Protecting Covers: Insulating Mats

Last Revised: 7/8/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MIDWC 15** | **Midwest Canvas Corporation, 4635 West Lake St., Chicago, IL 60644 http://www.midwestcanvas.com/** | | |
| | Insulating Mat | | 2000-107Q |

### 711.1(f) Curing and Protecting Covers: Foam Insulation

Last Revised: 1/30/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **OWENC 15** | **Owens Corning, One Owens Corning Parkway, Toledo, OH 43659 http://www.owenscorning.com/** | | |
| | Foam Insulation | Foamular 1000 | 2002-005Q |
| | Foam Insulation | Foamular 150 | 2002-005Q |
| | Foam Insulation | Foamular 250 | 2002-005Q |
| | Foam Insulation | Foamular 400 | 2002-005Q |
| | Foam Insulation | Foamular 600 | 2002-005Q |
| **PACTV 15** | **Kingspan Insulation LLC, 2100 RiverEdge Parkway, Suite 175, Atlanta, GA 30328**<br>***Formerly Pactiv Building Products*** | | |
| | Foam Insulation | GreenGuard XPS CM (0.5" thick) | 1990-359A |
| | Foam Insulation | GreenGuard XPS CM (1" thick) | 1990-359B |
| | Foam Insulation | GreenGuard XPS CM (1.5" thick) | 1990-359C |
| | Foam Insulation | GreenGuard XPS CM (2" thick) | 1990-359D |
| | Foam Insulation | GreenGuard XPS CM (2.5" thick) | 1990-359E |
| | Foam Insulation | GreenGuard XPS CM (3" thick) | 1990-359F |

### 711.2(a) Concrete Curing Compound: Clear or White

Last Revised: 4/29/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Safe-Cure and Seal EPX | | 1999-217Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.2(a) Concrete Curing Compound: Clear or White

Last Revised: 4/29/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Safe-Cure Clear DR | | 1989-076 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Safe-Cure 2000 | | 1989-044 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Safe-Cure 800 | | 1989-043 |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Clear Resin Cure J11W | | 1994-070 |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | DSSCC Clear Wax Cure | | 2000-102Q |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D, Translucent/Red Fugitive Dye | Resin Cure with Dye J11W | | 1985-200 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | White Resin Cure J10W | | ----- |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | White Wax Cure J9A | | 2000-101Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D, Translucent/Red Fugitive Dye | Tammscure WB 30D | | 2001-140Q |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Thinfilm-420 | | ----- |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Thinfilm-445 (Wax Based) | | 1989-147 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Thinfilm-450 | | ----- |

## Section 711: Concrete Curing Material and Admixtures

### 711.2(a) Concrete Curing Compound: Clear or White

Last Revised: 4/29/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **L&MCC 15** | **L&M Construction Chemicals, Inc., 14851 Calhoun Road, Omaha, NE 68152 http://www.lmcc.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Cure R | | 1994-187 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Cure R-2 | | 1994-188 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Cure W-2 (Wax Based) | | 1994-162 |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 1200 | | 1988-251 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 1250 | | 1992-076 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 1600 | | 1988-252 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 2255 White | | 2013-115Q |
| **MEDW1 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | | |
| **Plant** | **2100 Monroe Street P. O. Box 7550 York, PA 17404-0550** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D, Translucent/Red Fugitive Dye | Sealtight 1100 | | 2013-128Q |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 1200 | | 1988-251 |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Sealtight 1600 | | 1988-252 |

## Section 711: Concrete Curing Material and Admixtures

### 711.2(a) Concrete Curing Compound: Clear or White

Last Revised: 4/29/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/** ***Effective October 19, 2020, acquired by Crafco, Inc.*** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Acrylic Concrete Cure and Seal 350 | | 2017-199Q |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Clear Water Resin 309 | | 2004-052Q |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Right Sheen 30 350 | | 2017-206Q |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | White Water Resin 309 | | 2004-051Q |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | White Water Wax 309 | | 2003-033Q |
| **SPECH 15** | **SpecChem, LLC, 1619 Walnut Street, Kansas City, MO 64108 http://specchemllc.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Pavecure WW | | 2014-150Q |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** ***Aquired by ChemMasters, Inc.*** | | | |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D | Certi-Vex AC 1315 | | 2000-069Q |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D, Translucent/Red Fugitive Dye | Certi-Vex Envio RC 1000 | | 2002-126Q |
| | Liquid Membrane-Forming Curing Compound, Clear Type 1-D, Translucent/Red Fugitive Dye | Envio Cure Clear 500 | | 2000-067Q |
| | Liquid Membrane-Forming Curing Compound, White Pigmented, Type 2 | Envio Cure White 500 | | 2000-068Q |

### 711.2(b) Concrete Curing Compound: White, Poly-alpha-methylstyrene (PAMS)

Last Revised: 4/29/2020

| Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|

# Section 711: Concrete Curing Material and Admixtures

## 711.2(b) Concrete Curing Compound: White, Poly-alpha-methylstyrene (PAMS)

Last Revised: 4/29/2020

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Liquid Membrane-Forming Curing Compound, White, PAMS | Safe-Cure 4000 | | 2018-051Q |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | | |
| | Liquid Membrane-Forming Curing Compound, White, PAMS | Sealtight 2255 White | | 2013-115Q |
| **RTPTC 15** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/** ***Effective October 19, 2020, acquired by Crafco, Inc.*** | | | |
| | Liquid Membrane-Forming Curing Compound, White, PAMS | White Water Resin 44 (PAMS) | | 2018-013Q |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** ***Aquired by ChemMasters, Inc.*** | | | |
| | Liquid Membrane-Forming Curing Compound, White, PAMS | Certi-Vex Envio Cure White 1315 | | 2018-009Q |
| | *Provisionally approved per manufacturer's requirement to supply internal QC data and representative 1 quart production lot samples for the first 12 shipments to PennDOT projects.* | | | |

## 711.2(c) Concrete Curing Compound: Black

Last Revised: 7/8/2015

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** ***Aquired by ChemMasters, Inc.*** | | | |
| | Liquid Membrane-Forming Curing Compound, Black Emulsified Asphalt | Envio Cure Asphalt | | 2000-070Q |

## 711.2(d) Concrete Curing Compound: Bridge Deck Intermediate

Last Revised: 8/10/2017

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|

## Section 711: Concrete Curing Material and Admixtures

### 711.2(d) Concrete Curing Compound: Bridge Deck Intermediate

Last Revised: 8/10/2017

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | |
| | Bridge Deck Intermediate Curing Compound | MasterKure ER-50 (Formerly: Confilm) | | 1974-038 |
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Bridge Deck Intermediate Curing Compound | Spray Film | | 1990-186 |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | | |
| | Bridge Deck Intermediate Curing Compound<br>*Provisionally Approved* | AquaFilm Concentrate J74 (formerly Sure Film J74) | | 1999-206 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Bridge Deck Intermediate Curing Compound | Euco-Bar | | 1988-088 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | | |
| | Bridge Deck Intermediate Curing Compound | Vapor Aid | | 1993-046 |
| **L&MCC 15** | **L&M Construction Chemicals, Inc., 14851 Calhoun Road, Omaha, NE 68152 http://www.lmcc.com/** | | | |
| | Bridge Deck Intermediate Curing Compound | E-Con | | 1990-176B |
| **MEDW1 15**<br>**Plant** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/**<br>**2100 Monroe Street P. O. Box 7550 York, PA 17404-0550** | | | |
| | Bridge Deck Intermediate Curing Compound<br>*Provisionally Approved* | Evapre | | 1998-182 |
| **SIKA2 15**<br>**Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/**<br>**Lyndhurst, NJ** | | | |
| | Bridge Deck Intermediate Curing Compound<br>*Provisionally Approved* | SikaFilm | | 2000-130 |

## Section 711: Concrete Curing Material and Admixtures

### 711.2(d) Concrete Curing Compound: Bridge Deck Intermediate

Last Revised: 8/10/2017

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** | | | |
| | ***Aquired by ChemMasters, Inc.*** | | | |
| | Bridge Deck Intermediate Curing Compound<br>*Provisionally Approved* | Certi-Vex Envio Assist | | 2010-148Q |

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-0 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Facility** | **23700 Chagrin Blvd. Cleveland, OH 44122** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-0 15*** | | | | |
| | A. Note:<br>*See BAS-1 (Allentown, PA), BAS-3 (Tipp City, OH), BAS-2 (Gurnee, IL), BAS-10 (Lancaster, TX), BAS-12 (Reynolds, GA), BAS-4 (Levittown/Bristol, PA), BAS-5 (Houston, TX), or BAS-8 (Quebec, Canada) for admixtures formerly listed under BAS-0* | | | | ----- |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For use in non-reinforced concrete only.* | MasterSet AC 122 (Pozzolith 122HE) | 16 to 64 oz/cwt | CADD-2015-01-043 | 1978-030 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet AC 534 (Pozzolith NC 534) | 10 to 45 oz/cwt | CADD-2015-01-120 | 1997-153 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-031 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterGlenium 3400 (Glenium 3400 NV) | 2.0 to 12 oz/cwt | CADD-2016-01-099 | 2004-094Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-086 | 2007-118Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7620 | 3.6 oz./cwt and above | CADD-2014-01-053 | 2015-091QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7710 (Glenium 7710) | 2.0 to 15 oz/cwt | CADD-2016-01-100 | 2009-083Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterPolyheed 1025 (PolyHeed 1025) | 3.0 to 12 oz/cwt | CADD-2016-01-141 | 2003-142Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterRheobuild 1000 (Rheobuild 1000) | 1.0 to 25 oz/cwt | CADD-2105-01-070 | 1986-373 |
| | Retarding (Type B) Admixture [RE] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 2000-142Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 100 (Pozzolith 100-XR) | 2.0 to 4.0 oz/cwt | CADD-2016-01-098 | 1969-013 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-085 | 2007-118Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7620 | 2.0 to 3.6 oz/cwt | CADD-2014-01-052 | 2015-091QA |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1025 (PolyHeed 1025) | 3.0 to 12 oz/cwt | CADD-2016-01-140 | 2003-142Q |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 900 (Polyheed 900) | 3.0 to 15 oz/cwt | CADD-2014-01-084 | 2003-187Q |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 997 (Polyheed 997) | 3.0 to 15 oz/cwt | CADD-2015-01-071 | 1990-336 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 1975-066 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 322 (Pozzolith 322-N) | 3.0 to 7.0 oz/cwt | CADD-2014-01-039 | 1991-049 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 700 | 3.0 to 5.0 oz/cwt | CADD-2015-01-044 | 2018-227Q |
| | *Provisionally Approved: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2016-01-028 | 2001-024Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 2000-142Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2017-01-028 | 2001-024Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterSet Delvo (Delvo Stabilizer) | 3.0 to 5.0 oz/cwt | CADD-2014-01-041 | 1995-071 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1015** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Lancaster, TX** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-6 15.*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 1466 (PS 1466) | 2.0 to 10 oz/cwt | CADD-2016-01-143 | 2005-136Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7700 (Glenium 7700) | 2.0 to 15 oz/cwt | CADD-2016-01-097 | 2007-119Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | | CADD-2015-01-069 | 2004-043Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1720 (Polyheed 1720) | 3.0 to 12 oz/cwt | CADD-2015-01-067 | 2010-145QB |
| | Retarding (Type B) Admixture [RE] | MasterSet R 122 (Pozzolith 122-R) | 3.0 to 5.0 oz/cwt | CADD-2010-02-015 | 1975-014 |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-020 | 1974-031 |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterGlenium 1466 (PS 1466) | 2.0 to 10 oz/cwt | CADD-2016-01-142 | 2005-098Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-068 | 2004-138Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1015** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Lancaster, TX** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-6 15.*** | | | | |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1720 (Polyheed 1720) | 3.0 to 12 oz/cwt | CADD-2015-01-066 | 2010-145QA |
| **BAS-1215** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Reynolds, GA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-9 15.*** | | | | |
| | Retarding (Type B) Admixture [RE] | MasterSet R 122 (Pozzolith 122-R) | 3.0 to 5.0 oz/cwt | CADD-2010-02-015 | 1975-014 |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | | CADD-2014-01-020 | 1974-031 |
| | Retarding (Type B) Admixture [RE]<br>*Provisionally Approved* | MasterSet R 961 (Pozzolith 961R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-038 | 2010-302Q |
| | Water Reducing/Retarding (Type D) Admixture [RR]<br>*Provisionally Approved* | MasterSet R 961 (Pozzolith 961R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-038 | 2010-303Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-2 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-2 15*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-031 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | Air Entraining Admixture [AEA] | MasterAir VR 20 (MB-VR Concentrated) | As required | | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7511 (PS 1583) | 3.0 to 15 oz/cwt | CADD-2014-01-030 | 2011-253QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7700 (Glenium 7700) | 2.0 to 15 oz/cwt | CADD-2016-01-097 | 2008-100Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-069 | 2004-043Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-020 | 1974-031 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-2 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-2 15*** | | | | |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterGlenium 7511 (PS 1583) | 3.0 to 15 oz/cwt | CADD-2014-01-030 | 2011-253QA |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-068 | 2004-138Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-3 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-3 15*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For use in non-reinforced concrete only.* | MasterSet AC 122 (Pozzolith 122HE) | 16 to 64 oz/cwt | CADD-2015-01-043 | 1978-030 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet AC 534 (Pozzolith NC 534) | 10 to 45 oz/cwt | CADD-2015-01-087 | 1997-153 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | MasterAir AE 400 (EverAIR Plus) | As required | CADD-2016-01-029 | 2009-143Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-029 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterGlenium 3400 (Glenium 3400 NV) | 2.0 to 12 oz/cwt | CADD-2016-01-099 | 2004-094Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-086 | 2007-118Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-3 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-3 15*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7710 (Glenium 7710) | 2.0 to 15 oz/cwt | CADD-2016-01-100 | 2009-083Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterPolyheed 1725 (Polyheed 1725) | 3.0 to 12 oz/cwt | CADD-2015-01-065 | 2010-212QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterRheobuild 1000 (Rheobuild 1000) | 1.0 to 25 oz/cwt | CADD-2015-01-070 | 1986-373 |
| | Retarding (Type B) Admixture [RE] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-028 | 2000-142Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 100 (Pozzolith 100-XR) | 2.0 to 4.0 oz/cwt | CADD-2016-01-098 | 1969-013 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7500 (Glenium 7500) | 2 to 15 oz/cwt | CADD-2014-01-085 | 2007-118Q |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 100 (PolyHeed FC 100) | 8 to 30 oz/cwt | CADD-2018-01-035 | 2006-068Q |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1725 (Polyheed 1725) | 3.0 to 12 oz/cwt | CADD-2015-01-064 | 2010-212QA |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 900 (Polyheed 900) | 3.0 to 15 oz/cwt | CADD-2014-01-084 | 2003-187Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-3 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-3 15*** | | | | |
| | *Provisionally Approved* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 997 (Polyheed 997) | 3.0 to 15 oz/cwt | CADD-2015-01-071 | 1990-336 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-032 | 1975-066 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 700 | 3 to 5 oz/cwt | CADD-2015-01-044 | 2018-226Q |
| | *Provisionally Approved: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2016-01-028 | 2001-024Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-028 | 2000-142Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2017-01-028 | 2001-024Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterSet Delvo (Delvo Stabilizer) | 3.0 to 5.0 oz/cwt | CADD-2018-01-039 | 1995-071 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-8 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **St. Leonard, Quebec** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-8 15*** | | | | |
| | Water Reducing (Type A) Admixture [WR]<br>*(Plasticizing Admixture for Precast Only) Provisionally Approved* | MasterCast 730S (Rheomix 730 FC-S) | 2 to 15 oz/cwt | | 2000-320Q |
| **CHRYS 15** | **Chryso, Inc., 1611 Hwy. 276, Rockwell, TX 75032 http://us.chryso.com/index.php** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*Provisionally Approved* | Chryso TurboCast NCT | | CADD-2016-01-024 | 2012-227Q |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Chryso Air 260 | | CADD-2016-01-131 | 2012-226Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | Chryso Fluid Optima 256 | | CADD-2010-01-051 | 2012-225Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **DPI-1 15** | **DarCole Products, Inc., P.O. Box 1460, Henderson, KY 42419 http://www.darcole.com/** | | | | |
| **Facility** | **9130 Hwy 60 West Henderson, KY 42420** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | DarNset 166 (DNS 166) | 0 to 54 oz/cwt | CADD-2016-01-050 | 2020-007Q |
| | *Provisionally Approved. It is required that the New Products and Innovations team at PennDOT be contacted by the Bulletin 42 Producer two (2) weeks before placement or use on a PennDOT project each time the product is used. Send email to RA-pdBulletin15@pa.gov. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 42 supplier code. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (6/18/2020 to 6/18/2022).* | | | | |
| | Air Entraining Admixture [AEA] | DarCole Synthetic Air 110 (DSA 110) | 0.25 to 2.0 oz/cwt | CADD-2016-01-049 | 2020-004Q |
| | *Provisionally Approved. It is required that the New Products and Innovations team at PennDOT be contacted by the Bulletin 42 Producer two (2) weeks before placement or use on a PennDOT project each time the product is used. Send email to RA-pdBulletin15@pa.gov. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 42 supplier code. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (6/18/2020 to 6/18/2022).* | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] | DarCole Super Flow 1443SCC (DSF 1443SCC) | 3.0 to 12 oz/cwt | CADD-2016-01-048 | 2020-008Q |
| | *Provisionally Approved. It is required that the New Products and Innovations team at PennDOT be contacted by the Bulletin 42 Producer two (2) weeks before placement or use on a PennDOT project each time the product is used. Send email to RA-pdBulletin15@pa.gov. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 42 supplier code. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (6/18/2020 to 6/18/2022). The maximum allowable dosage for DSF 1443SCC is 12 oz/cwt.* | | | | |
| | Water Reducing (Type A) Admixture [WR] | DarNlok 785 (DNL 785) | 6.0 to 12 oz/cwt | CADD-2016-01-046 | 2020-005Q |
| | *Provisionally Approved. It is required that the New Products and Innovations team at PennDOT be contacted by the Bulletin 42 Producer two (2) weeks before placement or use on a PennDOT project each time the product is used. Send email to RA-pdBulletin15@pa.gov. Notification shall include the following information: ECMS Project No., State Route, County, and Bulletin 42 supplier code. Under provisional approval, the Department will monitor its use, application, and performance for a period of two years (6/18/2020 to 6/18/2022).* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **EUCL3 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| **Plant** | **227 Pearl Street Auburndale, FL 33823** | | | | |
| | Water Reducing (Type A) Admixture [WR] | Eucon SE | 2.0 to 5.0 oz/cwt | CADD 2016-01-027 | 2018-206Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Eucon SE | 2.0 to 5.0 oz/cwt | CADD 2016-01-035 | 2018-207Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | Accelguard 80 | 12 to 90 oz/cwt | CADD-2017-01-080 | 1989-118 |
| | Accelerating (Type C) Admixture [ACCL] | Accelguard G3 | 10 to 90 oz/cwt | CADD-2016-01-005 | 2016-201Q |
| | Accelerating (Type C) Admixture [ACCL] | Accelguard NCA | 12.0 to 75 oz/cwt | CADD-2019-01-001 | 2015-060QB |
| | Accelerating (Type C) Admixture [ACCL] | Eucon CIA | 10 to 90 oz./cwt | CADD-2013-01-025 | 2015-122QA |
| | Air Entraining Admixture [AEA] | Eucon AEA-92 | 0.1 to 4.0 oz/cwt | CADD-2015-01-112 | 1993-024 |
| | Air Entraining Admixture [AEA] | Eucon AEA-92S | 0.5 to 2.0 oz/cwt | CADD-2017-01-055 | 2006-080Q |
| | Air Entraining Admixture [AEA] *Provisionally Approved* | Eucon Air MAC12 | 0.1 to 4.0 oz/cwt | CADD-2018-01-005 | 2012-204Q |
| | Air Entraining Admixture [AEA] | Eucon Air MAC6 | 0.1 to 4.0 oz/cwt | CADD-2016-01-036 | 2016-251Q |
| | Air Entraining Admixture [AEA] | Eucon Air Mix | 0.5 to 1.0 oz/cwt | CADD-2019-01-018 | 1975-080 |
| | Air Entraining Admixture [AEA] | Eucon Air Mix 200 | 0.5 to 1.0 oz/cwt | CADD-2017-01-056 | 1995-005 |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Eucon 1037 | 8.0 to 25 oz/cwt | CADD-2018-01-007 | 2003-067Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Eucon 37 | 6.0 to 18 oz/cwt | CADD-2018-01-006 | 1980-023 |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Eucon MR | 10 to 15 oz/cwt | CADD-2018-01-002 | 2012-220QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Eucon MRX | 7.0 to 12 oz/cwt | CADD-2018-01-047 | 2018-235Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | Plastol 341 | 6.0 to 10 oz/cwt | CADD-2014-01-058 | 2004-081Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Plastol 5000 | 8.0 to 15 oz/cwt | CADD-2018-01-044 | 2002-148Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Plastol 6400 | 7.0 to 12 oz/cwt | CADD-2016-01-002 | 2015-071Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | Plastol 6420 | 6.0 to 10 oz/cwt | CADD-2016-01-004 | 2012-209QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Plastol Ultra 109 | 2.0 to 12 oz/cwt | CADD 2014-01-066 | 2015-094Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Plastol Ultra 209 | 2.0 to 12 oz/cwt | CADD-2018-01-042 | 2016-252Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | High Range Water Reducing/Retarding (Type G) Admixture | Eucon 537 | 6.0 to 32 oz/cwt | CADD-2015-01-119 | 1991-282 |
| | Retarding (Type B) Admixture [RE] | Eucon Retarder 75 | 2.0 to 3.0 oz/cwt | CADD-2017-01-089 | ----- |
| | Retarding (Type B) Admixture [RE] | Eucon Stasis | 1.0 to 6.0 oz/cwt | CADD-2015-01-116 | 2015-061QB |
| | *NOTE: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | *This product is also known as Eucon W.O. (same formulation and manufacturing process).* | | | | |
| | Retarding (Type B) Admixture [RE] | Eucon W.O. | 1.0 to 6.0 oz/cwt | CADD-2017-01-017 | 2015-061QB |
| | *Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | Water Reducing (Type A) Admixture [WR] | Eucon MR | 4.0 to 10 oz/cwt | CADD-2018-01-001 | 2012-220QA |
| | Water Reducing (Type A) Admixture [WR] | Eucon MRX | 3.0 to 5.0 oz/cwt | CADD-2018-01-046 | 2018-234Q |
| | Water Reducing (Type A) Admixture [WR] | Eucon WR | 2.0 to 5.0 oz/cwt | CADD-2019-01-011 | ----- |
| | Water Reducing (Type A) Admixture [WR] | Plastol 341 | 2.0 to 6.0 oz/cwt | CADD-2015-01-117 | 2010-165Q |
| | Water Reducing (Type A) Admixture [WR] | Plastol 6420 | 2.0 to 6.0 oz/cwt | CADD-2016-01-003 | 2012-209QA |
| | *Provisionally Approved* | | | | |
| | Water Reducing and Accelerator (Type E) Admixture | Accelguard NCA | 12 to 75.0 oz/cwt | CADD-2019-01-002 | 2015-060QA |
| | Water Reducing and Accelerator (Type E) Admixture | Eucon CIA | 10 to 90 oz/cwt | CADD-2017-01-081 | 2015-122QB |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Eucon Stasis | 6.0 to 16 oz/cwt | CADD-2015-01-116 | 2015-061QA |
| | *NOTE: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | *This product is also known as Eucon W.O. (same formulation and manufacturing process).* | | | | |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Eucon W.O. | 6.0 to 16 oz/cwt | CADD-2011-01-017 | 2015-061QA |
| | *Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Eucon WR-91 | 6.0 to 10 oz/cwt | CADD-2017-01-084 | 1993-023Q |
| **FABRO 15** | **Great Lakes Polymer Technologies, LLC (dba Fabpro Polymers), 100 South Fabpro Way, Kingman, KS 67068 http://www.fabpropolymers.com/** | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF Master Fiber MAC Matrix | 3.0 lbs/cy | | 2016-174Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber F 70 | 1.5 lbs/cy | | 2013-045Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber M 100 | 0.5 lbs/cy | | 2013-047Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber M 70 | 1.0 lbs/cy | | 2013-046Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber MAC 100 | 3.0 lbs/cy | | 2013-048Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber MAC 360 FF | 3.0 lbs/cy | | 2019-101Q |
| | *Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GENRT 15** | **MAPEI Corporation (Formerly General Resource Technology, Inc.), 2978 Center Court, Eagan, MN 55121-1257 http://www.mapei.com/US-EN/default.asp** | | | | |
| **Plant** | **Eagan, MN** | | | | |
| | ***Effective 1/1/2020, GRT is now MAPEI Corporation*** | | | | |
| | See Supplier Code MAPEID15 | | | | - |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC0 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Facility** | **62 Whittemore Ave. Cambridge, MA 02140-1692** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For non-reinforced concrete only.* | Daraccel | 6.0 to 40 oz/cwt | CADD-2017-01-054 | 1983-257 |
| | Accelerating (Type C) Admixture [ACCL]<br>*Provisionally Approved* | DCI | 8.0 to 100 oz/cwt | CADD-2014-01-050 | 1998-147Q |
| | Accelerating (Type C) Admixture [ACCL] | Polarset | 8.0 to 100 oz/cwt | CADD-2017-01-051 | 1995-040 |
| | Air Entraining Admixture [AEA] | Daravair 1000 | 0.25 to 10 oz/cwt | CADD-2018-01-063 | 1995-041 |
| | Air Entraining Admixture [AEA] | Daravair 1400 | 0.25 to 10 oz/cwt | CADD-2018-01-066 | 1995-220 |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Daravair AT60 | 0.25 to 10 oz/cwt | CADD-2018-01-062 | 1997-048 |
| | Air Entraining Admixture [AEA] | Daravair M | 0.25 to 10 oz/cwt | CADD-2018-01-067 | 1981-040 |
| | Air Entraining Admixture [AEA] | Darex AEA | 0.25 to 10 oz/cwt | CADD-2018-01-065 | 1980-049 |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Darex EH AEA | 0.25 to 10 oz/cwt | CADD-2018-01-068 | 2003-184Q |
| | Air Entraining Admixture [AEA] | Darex II AEA | 0.25 to 10 oz/cwt | CADD-2017-01-040 | 1993-207 |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | ADVA 140 | 5.0 to 20 oz/cwt | | 2002-119Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | ADVA Cast 530 | 3.0 to 10.0 oz/cwt | CADD-2019-01-037 | 2002-045Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Daracem 19 | 5.0 to 20.0 oz/cwt | CADD-2019-01-034 | 1979-028 |
| | Retarding (Type B) Admixture [RE] | Daratard HC | 2.0 to 6.0 oz/cwt | CADD-2015-01-110 | ----- |
| | Water Reducing (Type A) Admixture [WR] | Daraccel | 8.0 to 80 oz/cwt | CADD-2017-01-054 | 1983-257 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC0 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Facility** | **62 Whittemore Ave. Cambridge, MA 02140-1692** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | *For non-reinforced concrete only.* | | | | |
| | Water Reducing (Type A) Admixture [WR] | Daracem 55 | 3.0 to 6.0 oz/cwt | CADD-2018-01-022 | 1995-039Q |
| | Water Reducing (Type A) Admixture [WR] | WRDA 20 | 2.5 oz/cwt | CADD-2017-01-049 | 1988-231 |
| | *Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Water Reducing (Type A) Admixture [WR] | WRDA 35 | 2.0 to 6.0 oz/cwt | CADD-2014-01-048 | 1998-001 |
| | Water Reducing (Type A) Admixture [WR] | WRDA 82 | 2.0 to 6.0 oz/cwt | CADD-2017-01-050 | 1991-167 |
| | Water Reducing (Type A) Admixture [WR] | WRDA/Hycol | 2.0 to 6.0 oz/cwt | CADD-2019-01-031 | 1982-121Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Daratard 17 | 2.0 to 8.0 oz/cwt | CADD-2019-01-029 | 1974-037 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC2 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Plant** | **North Bergen, NJ** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For non-reinforced concrete only.* | Daraccel | 6.0 to 40 oz/cwt | CADD-2017-01-054 | 1983-257 |
| | Accelerating (Type C) Admixture [ACCL]<br>*Provisionally Approved* | DCI | 8.0 to 100 oz/cwt | CADD-2014-01-050 | 1998-147Q |
| | Accelerating (Type C) Admixture [ACCL] | Polarset | 8.0 to 100 oz/cwt | CADD-2017-01-051 | 1995-040 |
| | Air Entraining Admixture [AEA] | Daravair 1000 | 0.25 to 10 oz/cwt | CADD-2018-01-063 | 1995-041 |
| | Air Entraining Admixture [AEA] | Daravair 1400 | 0.25 to 10 oz/cwt | CADD-2018-01-066 | 1995-220 |
| | Air Entraining Admixture [AEA] | DARAVAIR AT30 | 0.25 to 3 oz/cwt | CADD-2018-01-064 | 2015-200Q |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Daravair AT60 | 0.25 to 10 oz/cwt | CADD-2018-01-062 | 1997-048 |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Darex EH AEA | 0.25 to 10 oz/cwt | CADD-2018-01-068 | 2003-184Q |
| | Air Entraining Admixture [AEA] | Darex II AEA | 0.25 to 10 oz/cwt | CADD-2017-01-040 | 1993-207 |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | ADVA 140 | 5.0 to 20 oz/cwt | | 2002-119Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA Flex | 4.0 to 14 oz./cwt | CADD-2019-01-035 | 2015-070Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Daracem 19 | 5.0 to 20.0 oz/cwt | CADD-2019-01-034 | 1979-028 |
| | Retarding (Type B) Admixture [RE] | Daratard HC | 2.0 to 6.0 oz/cwt | CADD-2015-01-110 | ----- |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | ADVA 140M | 2.0 to 6.0 oz/cwt | CADD-2017-01-034 | 2012-101Q |
| | Water Reducing (Type A) Admixture [WR] | Daraccel | 8.0 to 80 oz/cwt | CADD-2017-01-054 | 1983-257 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC2 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Plant** | **North Bergen, NJ** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | *For non-reinforced concrete only.* | | | | |
| | Water Reducing (Type A) Admixture [WR] | Daracem 55 | 3.0 to 6.0 oz/cwt | CADD-2018-01-022 | 1995-039 |
| | Water Reducing (Type A) Admixture [WR] | WRDA 20 | 2.5 oz/cwt | CADD-2017-01-049 | 1988-231 |
| | Water Reducing (Type A) Admixture [WR] | WRDA 35 | 2.0 to 6.0 oz/cwt | CADD-2014-01-048 | 1998-001 |
| | Water Reducing (Type A) Admixture [WR] | WRDA 82 | 2.0 to 6.0 oz/cwt | CADD-2017-01-050 | 1991-167 |
| | Water Reducing (Type A) Admixture [WR] | WRDA/Hycol | 2.0 to 6.0 oz/cwt | CADD-2019-01-031 | 1982-121 |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Recover | 2.0 to 8.0 oz/cwt | CADD-2014-01-045 | 2012-100Q |
| | *Provisionally Approved* | | | | |
| | Water Reducing/Retarding (Type D) Admixture [RR] | WRDA 20 | 3 to 5 oz/cwt | CADD-2017-01-049 | 2009-186Q |
| | *Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Zyla R | 2.0 to 12 oz/cwt | CADD-2017-01-031 | 2012-173QB |
| | *Provisionally Approved* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC3 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **6050 West 51st Street Chicago, IL 60638** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For non-reinforced concrete only.* | Daraccel | 6.0 to 40 oz/cwt | CADD-2017-01-054 | 1983-257 |
| | Accelerating (Type C) Admixture [ACCL]<br>*Provisionally Approved* | DCI | 8.0 to 100 oz/cwt | CADD-2014-01-050 | 1998-147 |
| | Accelerating (Type C) Admixture [ACCL] | Polarset | 8.0 to 100 oz/cwt | CADD-2017-01-051 | 1995-040 |
| | Air Entraining Admixture [AEA] | Daravair 1400 | 0.25 to 10 oz/cwt | CADD-2018-01-066 | 1995-220 |
| | Air Entraining Admixture [AEA] | Daravair M | 0.25 to 10 oz/cwt | CADD-2018-01-067 | 1981-040 |
| | Air Entraining Admixture [AEA] | Darex AEA | 0.25 to 10 oz/cwt | CADD-2018-01-065 | 1980-049 |
| | Air Entraining Admixture [AEA] | Terapave AEA | 0.25 to 1.0 oz/cwt | CADD-2015-01-104 | 2015-111Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA 140M | 5.0 to 20 oz/cwt | CADD-2014-01-044 | 2013-091QA |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Daracem 19 | 5.0 to 20 oz/cwt | CADD-2019-01-034 | 1979-028 |
| | Water Reducing (Type A) Admixture [WR] | ADVA 140M | 2.0 to 6.0 oz/cwt | CADD-2017-01-034 | 2013-091QB |
| | Water Reducing (Type A) Admixture [WR] | Daraccel | 8.0 to 80 oz/cwt | CADD-2017-01-054 | 1983-257 |
| | Water Reducing (Type A) Admixture [WR]<br>*Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | WRDA 20 | 2.5 oz/cwt | CADD-2017-01-049 | 1988-231 |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Daratard 17 | 2.0 to 8.0 oz/cwt | CADD-2019-01-029 | 1974-037Q |
| | Water Reducing/Retarding (Type D) Admixture [RR]<br>*Provisionally Approved* | Recover | 2.0 to 8.0 oz/cwt | CADD-2014-01-045 | 2013-093Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC5 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **Houston, TX** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | Daraset 400 | 8.0 to 100 oz/cwt | CADD-2017-01-053 | 2007-093Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ADVA 140M | 5.0 to 20 oz/cwt | CADD-2014-01-044 | 2009-064Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ADVA 190 Type F | 3.0 to 15 oz/cwt | CADD-2018-01-013 | 2008-202Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA Cast 530 | 3.0 to 10 oz/cwt | CADD-2019-01-037 | 2002-045Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ADVA Cast 555 | 8.0 to 20 oz/cwt | CADD-2018-01-020 | 2007-032Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | ADVA Cast 575 | 2.0 to 10 oz/cwt | CADD-2018-01-014 | 2007-065Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ADVA Cast 600 | 2.0 to 10 oz/cwt | CADD-2017-01-037 | 2010-157Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA ITM750 | 3.0 to 10 oz/cwt | CADD-2017-01-047 | 2018-195Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | CONCERA SA8080 | 8.0 to 20 oz/cwt | CADD-2017-01-018 | 2019-134Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | EXP 950 | 2.0 to 10 oz/cwt | CADD-2018-01-015 | 2009-145Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC6 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **Augusta, GA** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*Provisionally Approved* | DCI | 8.0 to 100 oz/cwt | CADD-2014-01-050 | 2010-102QB |
| | Accelerating (Type C) Admixture [ACCL] | Polarset | 8.0 to 100 oz/cwt | CADD-2017-01-051 | 2010-102QA |
| **GRAC8 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **Lithonia, GA** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Darex AEA | 0.25 to 10 oz/cwt | CADD-2018-01-065 | 2010-103QA |
| | Air Entraining Admixture [AEA]<br>*Provisionally Approved* | Darex II AEA | 0.25 to 10 oz/cwt | CADD-2017-01-040 | 2010-103QE |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA 198 | 2.0 to 15 oz/cwt | CADD-2018-01-017 | 2016-297Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ADVA Cast 585 | 2.0 to 12 oz/cwt | CADD-2018-01-019 | 2016-173Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MIRA 95 | 2 to 15 oz/cwt | CADD-2018-01-016 | 2016-172Q |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | Daraccel | 8.0 to 100 oz/cwt | CADD-2017-01-054 | 2010-103QB |
| | Water Reducing (Type A) Admixture [WR] | Zyla 640 | 2.0 to 6.0 oz/cwt | CADD-2017-01-023 | 2012-174Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GREET 15** | **Great Eastern Technologies, LLC, 4407 Broad Street, Yardville, NJ 08620 http://www.greateasterntechnologies.com/** | | | | |
| | Air Entraining Admixture [AEA] | Setcon 6A | 0.25 to 4 oz/cwt | CADD-2015-01-054 | 2012-091Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | PolyStrong | up to 18 oz/cwt | CADD-2011-02-010 | 2012-070QC |
| | High Range Water Reducing (Type F) Admixture [HRWR] | PolyStrong HP | up to 18 oz/cwt | CADD-2015-01-053 | 2012-070QD |
| | Water Reducing/Retarding (Type D) Admixture [RR] | ChemStrong R | 2.0 to 4.0 oz/cwt | CADD-2015-01-050 | 2006-174Q |
| **GRTLT 15** | **MAPEI Corporation (Formerly General Resource Technology, Inc.), 2978 Center Court, Eagan, MN 55121-1257 http://www.mapei.com/US-EN/default.asp** | | | | |
| **Plant** | **Logan Township, NJ** | | | | |
| | ***Effective 1/1/2020, GRT is now MAPEI Corporation*** | | | | |
| | See Supplier Code MAPEIC15 | | | | - |
| **MAPEIC15** | **MAPEI Corporation, (Effective 1/1/2020, GRT is now MAPEI Corporation), 2978 Center Court, Eagan, MN 55121-1257 http://www.mapei.com/US-EN/default.asp** | | | | |
| **Plant** | **Logan Township, NJ** | | | | |
| | ***Formerly GRTLT 15*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | Polychem Super Set | 8.0 to 32 oz/cwt | | 2018-172Q |
| | Air Entraining Admixture [AEA] | Polychem SA-50 | 0.50 to 3.0 oz/cwt | CADD-2016-01-081 | 2019-090Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Dynamon SX | 3.0 to 15 oz/cwt | CADD-2016-01-080 | 2018-169Q |
| | Water Reducing (Type A) Admixture [WR] | Polychem 400 NC | 3.0 to 5.0 oz/cwt | CADD-2016-01-077 | 2018-170Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Polychem R | 2.0 to 5.0 oz/cwt | CADD-2016-01-093 | 2018-171Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MAPEID15** | **MAPEI Corporation, (Effective 1/1/2020, GRT is now MAPEI Corporation), 2978 Center Court, Eagan, MN 55121-1257 http://www.mapei.com/US-EN/default.asp** | | | | |
| **Plant** | **Eagan, MN** | | | | |
| | ***Formerly GENRT 15*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | Polychem Super Set | 8.0 to 32 oz/cwt | | 1995-218 |
| | Air Entraining Admixture [AEA] | Polychem SA-50 | 0.50 to 3.0 oz/cwt | CADD-2016-01-081 | 2016-156Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Dynamon SX | 3.0 to 15 oz/cwt | CADD-2016-01-080 | 2016-205Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Polychem 3000 | 6.0 to 20 oz/cwt | CADD-2016-01-078 | 2016-157Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Polychem SPC | 5.0 to 12 oz/cwt | CADD-2017-01-075 | 2017-119Q |
| | Retarding (Type B) Admixture [RE] | Polychem Renu | 1.0 to 12 oz/cwt | CADD-2016-01-085 | 2018-074Q |
| | Water Reducing (Type A) Admixture [WR] | Polychem 3000 | 1.0 to 20 oz/cwt | CADD-2016-01-088 | 2016-238Q |
| | Water Reducing (Type A) Admixture [WR] | Polychem 400 NC | 3 to 5 oz/cwt | CADD-2016-01-077 | 2016-155Q |
| | Water Reducing (Type A) Admixture [WR] | Polychem Super Set | 8.0 to 32 oz/cwt | | 1995-218 |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Polychem-R | 2.0 to 5.0 oz/cwt | CADD-2016-01-093 | 2016-206Q |
| **MBS-0 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Facility** | **23700 Chagrin Blvd. Cleveland, OH 44122** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-0 15)*** | | | | |
| | A. Note: | | | | ----- |
| | *See MBS-1 (Allentown, PA), MBS-3 (Tipp City, OH), MBS-2 (Gurnee, IL), MBS-6 (Lancaster, TX), MBS-9 (Reynolds, GA), MBS-4 (Levittown/Bristol, PA), MBS-5 (Houston, TX), or MBS-8 (Quebec, Canada) for admixtures formerly listed under MBS-0* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-1 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | | | |
| | Accelerating (Type C) Admixture [ACCL]<br>*For use in non-reinforced concrete only.* | MasterSet AC 122 (Pozzolith 122HE) | 16 to 64 oz/cwt | CADD-2015-01-043 | 1978-030 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet AC 534 (Pozzolith NC 534) | 10 to 45 oz/cwt | CADD-2015-01-120 | 1997-153 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-031 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterGlenium 3400 (Glenium 3400 NV) | 2.0 to 12 oz/cwt | CADD-2016-01-099 | 2004-094Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-086 | 2007-118Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7620 | 3.6 oz./cwt and above | CADD-2014-01-053 | 2015-091QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7710 (Glenium 7710) | 2.0 to 15 oz/cwt | CADD-2016-01-100 | 2009-083Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-1 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1025 (PolyHeed 1025) | 3.0 to 12 oz/cwt | CADD-2016-01-141 | 2003-142Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterRheobuild 1000 (Rheobuild 1000) | 1.0 to 25 oz/cwt | CADD-2105-01-070 | 1986-373 |
| | Retarding (Type B) Admixture [RE] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 2000-142Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 100 (Pozzolith 100-XR) | 2.0 to 4.0 oz/cwt | CADD-2016-01-098 | 1969-013 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-085 | 2007-118Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7620 | 2.0 to 3.6 oz/cwt | CADD-2014-01-052 | 2015-091QA |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterPolyheed 1025 (PolyHeed 1025) | 3.0 to 12 oz/cwt | CADD-2016-01-140 | 2003-142Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterPolyheed 900 (Polyheed 900) | 3.0 to 15 oz/cwt | CADD-2014-01-084 | 2003-187Q |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 997 (Polyheed 997) | 3.0 to 15 oz/cwt | CADD-2015-01-071 | 1990-336 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-1 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 1975-066 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 322 (Pozzolith 322-N) | 3.0 to 7.0 oz/cwt | CADD-2014-01-039 | 1991-049 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 700 | 3.0 to 5.0 oz/cwt | CADD-2015-01-044 | 2018-227Q |
| | *Provisionally Approved: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2016-01-028 | 2001-024Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2014-01-019 | 2000-142Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2017-01-028 | 2001-024Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterSet Delvo (Delvo Stabilizer) | 3.0 to 5.0 oz/cwt | CADD-2014-01-041 | 1995-071 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-2 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-2 15)*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-031 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | Air Entraining Admixture [AEA] | MasterAir VR 20 (MB-VR Concentrated) | As required | | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7511 (PS 1583) | 3.0 to 15 oz/cwt | CADD-2014-01-030 | 2011-253QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7700 (Glenium 7700) | 2.0 to 15 oz/cwt | CADD-2016-01-097 | 2008-100Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-069 | 2004-043Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-020 | 1974-031 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-2 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-2 15)*** | | | | |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterGlenium 7511 (PS 1583) | 3.0 to 15 oz/cwt | CADD-2014-01-030 | 2011-253QA |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-068 | 2004-138Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-3 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-3 15)*** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet AC 122 (Pozzolith 122HE) | 16 to 64 oz/cwt | CADD-2015-01-043 | 1978-030 |
| | *For use in non-reinforced concrete only.* | | | | |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet AC 534 (Pozzolith NC 534) | 10 to 45 oz/cwt | CADD-2015-01-087 | 1997-153 |
| | Accelerating (Type C) Admixture [ACCL] | MasterSet FP 20 (Pozzutec 20+) | 5.0 to 90 oz/cwt | CADD-2016-01-096 | 2002-018Q |
| | Air Entraining Admixture [AEA] | MasterAir AE 200 (Micro-Air) | As required | CADD-2016-01-030 | 1984-185 |
| | Air Entraining Admixture [AEA] | MasterAir AE 400 (EverAIR Plus) | As required | CADD-2016-01-029 | 2009-143Q |
| | *Provisionally Approved* | | | | |
| | Air Entraining Admixture [AEA] | MasterAir AE 90 (MB AE 90) | As required | CADD-2016-01-029 | 1994-011 |
| | Air Entraining Admixture [AEA] | MasterAir VR 10 (MB-VR Standard) (Pave-Air) | As required | CADD-2016-01-032 | ----- |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-104 | 2001-188Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 3400 (Glenium 3400 NV) | 2.0 to 12 oz/cwt | CADD-2016-01-099 | 2004-094Q |
| | *Provisionally Approved* | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7500 (Glenium 7500) | 2.0 to 15 oz/cwt | CADD-2014-01-086 | 2007-118Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-3 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-3 15)*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterGlenium 7710 (Glenium 7710) | 2.0 to 15 oz/cwt | CADD-2016-01-100 | 2009-083Q |
| | High Range Water Reducing (Type F) Admixture [HRWR]<br>*Provisionally Approved* | MasterPolyheed 1725 (Polyheed 1725) | 3.0 to 12 oz/cwt | CADD-2015-01-065 | 2010-212QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | MasterRheobuild 1000 (Rheobuild 1000) | 1.0 to 25 oz/cwt | CADD-2015-01-070 | 1986-373 |
| | Retarding (Type B) Admixture [RE] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-028 | 2000-142Q |
| | Retarding (Type B) Admixture [RE] | MasterSet R 100 (Pozzolith 100-XR) | 2.0 to 4.0 oz/cwt | CADD-2016-01-098 | 1969-013 |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 3030 (Glenium 3030 NS) | 3.0 to 18 oz/cwt | CADD-2016-01-103 | 2002-034Q |
| | Water Reducing (Type A) Admixture [WR] | MasterGlenium 7500 (Glenium 7500) | 2 to 15 oz/cwt | CADD-2014-01-085 | 2007-118Q |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 100 (PolyHeed FC 100) | 8 to 30 oz/cwt | CADD-2018-01-035 | 2006-068Q |
| | Water Reducing (Type A) Admixture [WR]<br>*Provisionally Approved* | MasterPolyheed 1725 (Polyheed 1725) | 3.0 to 12 oz/cwt | CADD-2015-01-064 | 2010-212QA |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 900 (Polyheed 900) | 3.0 to 15 oz/cwt | CADD-2014-01-084 | 2003-187Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-3 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-3 15)*** | | | | |
| | *Provisionally Approved* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 997 (Polyheed 997) | 3.0 to 15 oz/cwt | CADD-2015-01-071 | 1990-336 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-032 | 1975-066 |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 700 | 3 to 5 oz/cwt | CADD-2015-01-044 | 2018-226Q |
| | *Provisionally Approved: Do not use for prestressed concrete members. Exceeds the limits of chloride ion concentration per AASHTO LRFD Construction Specifications, Section 8 'Concrete Structures' and Publication 408, Section 711.3(a).* | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2016-01-028 | 2001-024Q |
| | Water Reducing (Type A) Admixture [WR] | MasterSet FP 20 (Pozzutec 20+) | | CADD-2016-01-096 | 2002-018Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 200 (Pozzolith 200-N) | 3.0 to 6.0 oz/cwt | CADD-2018-01-028 | 2000-142Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterPozzolith 80 (Pozzolith 80) | 3.0 to 10 oz/cwt | CADD-2017-01-028 | 2001-024Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | MasterSet Delvo (Delvo Stabilizer) | 3.0 to 5.0 oz/cwt | CADD-2018-01-039 | 1995-071 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-6 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Lancaster, TX** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-1015)*** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 1466 (PS 1466) | 2.0 to 10 oz/cwt | CADD-2016-01-143 | 2005-136Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterGlenium 7700 (Glenium 7700) | 2.0 to 15 oz/cwt | CADD-2016-01-097 | 2007-119Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | | CADD-2015-01-069 | 2004-043Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | MasterPolyheed 1720 (Polyheed 1720) | 3.0 to 12 oz/cwt | CADD-2015-01-067 | 2010-145QB |
| | Retarding (Type B) Admixture [RE] | MasterSet R 122 (Pozzolith 122-R) | 3.0 to 5.0 oz/cwt | CADD-2010-02-015 | 1975-014 |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-020 | 1974-031 |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterGlenium 1466 (PS 1466) | 2.0 to 10 oz/cwt | CADD-2016-01-142 | 2005-098Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | MasterPolyheed 1020 (Polyheed 1020) | 3.0 to 12 oz/cwt | CADD-2015-01-068 | 2004-138Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-6 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Lancaster, TX** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-1015)*** | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterPolyheed 1720 (Polyheed 1720) | 3.0 to 12 oz/cwt | CADD-2015-01-066 | 2010-145QA |
| | *Provisionally Approved* | | | | |
| **MBS-8 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **St. Leonard, Quebec** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-8 15)*** | | | | |
| | Water Reducing (Type A) Admixture [WR] | MasterCast 730S (Rheomix 730 FC-S) | 2 to 15 oz/cwt | | 2000-320Q |
| | *(Plasticizing Admixture for Precast Only) Provisionally Approved* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-9 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Reynolds, GA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-1215)*** | | | | |
| | Retarding (Type B) Admixture [RE] | MasterSet R 122 (Pozzolith 122-R) | 3.0 to 5.0 oz/cwt | CADD-2010-02-015 | 1975-014 |
| | Retarding (Type B) Admixture [RE] | MasterSet R 300 (Pozzolith 300-R) | | CADD-2014-01-020 | 1974-031 |
| | Retarding (Type B) Admixture [RE] *Provisionally Approved* | MasterSet R 961 (Pozzolith 961R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-038 | 2010-302Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] *Provisionally Approved* | MasterSet R 961 (Pozzolith 961R) | 3.0 to 5.0 oz/cwt | CADD-2014-01-038 | 2010-303Q |
| **MINRD 15** | **Mineral Research & Development, 5910 Pharr Mill Road, Harrisburg, NC 28075-8625 http://www.mrdc.com/** | | | | |
| | Accelerating (Type C) Admixture [ACCL] *Provisionally Approved* | Sika CNI | | CADD-2015-01-111 | 2010-267Q |

# Section 711: Concrete Curing Material and Admixtures

## 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **PRECA 15** | **Premiere Concrete Admixtures, 508 Cedar Street, Pioneer, OH 43554 http://www.premiereadmix.com/** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | NitroCast K | 6.0 to 90 oz/cwt | | 2011-170Q |
| | Accelerating (Type C) Admixture [ACCL] | NitroCast NC | 8.0 to 90 oz/cwt | CADD-2016-01-122 | 2011-178Q |
| | Air Entraining Admixture [AEA] | ConAir | 0.2 to 3.0 oz/cwt | | 2011-243Q |
| | Air Entraining Admixture [AEA] | ConAir 260 | 0.2 to 3.0 oz/cwt | CADD-2106-01-119 | 2011-244Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | EcoFlo Green | 1.5 to 10 oz/cwt | | 2011-174QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] | UltraFlo 2000 | 6.0 to 16 oz/cwt | CADD-2016-01-127 | 2010-167QA |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | UltraFlo 4600 | 7.0 to 24 oz/cwt | | 2010-174Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | UltraFlo DP | 4.0 to 14 oz/cwt | CADD-2016-01-126 | 2011-175Q |
| | Water Reducing (Type A) Admixture [WR] | EcoFlo Green | 1.5 to 10 oz/cwt | | 2011-174QA |
| | Water Reducing (Type A) Admixture [WR] | OptiFlo 50 | | | 2011-169Q |
| | Water Reducing (Type A) Admixture [WR] | OptiFlo MR | 3.0 to 5.0 oz/cwt | CADD-2016-01-120 | 2011-166Q |
| | Water Reducing (Type A) Admixture [WR] | OptiFlo Plus | 5.0 to 10 oz/cwt | | 2011-165Q |
| | Water Reducing (Type A) Admixture [WR] | UltraFlo 2000 | up to 3.0 oz/cwt | | 2010-167QB |
| | Water Reducing/Retarding (Type D) Admixture [RR] | OptiFlo 100R | 2.0 to 8.0 oz/cwt | | 2011-177Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | OptiFlo Renu | | | 2011-176Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **RTECH 15** | **RussTech, Inc., 11208 Decimal Drive, Louisville, KY 40299** | | | | |
| | Air Entraining Admixture [AEA] | RAE-260 | 0.50 to 2.0 oz/cwt | CADD-2015-01-002 | 2019-054Q |
| | Air Entraining Admixture [AEA] | RSA-10 | 0.5 to 2.0 oz/cwt | CADD-2015-01-001 | 2016-268Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Superflo 2000 SCC | 4.0 to 26 oz/cwt | CADD-2015-01-008 | 2017-123Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Superflo 443 | 10.0 to 26.0 oz/cwt | CADD-2019-01-026 | 2019-052Q |
| | Water Reducing (Type A) Admixture [WR] | FinishEase-NC | 2.0 to 8.0 oz/cwt | CADD-2015-01-010 | 2019-050Q |
| | Water Reducing (Type A) Admixture [WR] | LC-400P | 3.0 to 5.0 oz/cwt | CADD-2015-01-003 | 2016-276Q |
| | Water Reducing (Type A) Admixture [WR] | Superflo 2000 SCC | 1.0 to 3.0 oz/cwt | CADD-2015-01-008 | 2016-275Q |
| | Water Reducing and Accelerator (Type E) Admixture | LCNC-166 | 8.0 to 90 oz/cwt | CADD-2015-01-006 | 2016-269Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | LC-400P | < 65° F (5 to 6 oz/cwt); 65 °F - 85 °F (6 to 7 oz/cwt); >85 °F (7 to 8 oz/cwt) | CADD-2015-01-003 | 2017-124Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | RussTech Renu | 1.0 to 12 oz/cwt | CADD-2015-01-005 | 2018-092Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA0 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Facility** | **201 Polito Avenue Lyndhurst, NJ 07071** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | SikaSet NC | 8.0 to 64.0 oz/cwt | CADD-2014-01-033 | 2000-271Q |
| | Air Entraining Admixture [AEA] | Sika Air | Up to 3.0 oz/cwt | CADD-2016-01-105 | 2000-061Q |
| | Early Strength Accelerator Admixture | Sika Rapid 1 | 8.0 to 64.0 oz/cwt | CADD-2015-01-083 | 1996-138Q |
| | Grout Fluidifier Admixture | IntraPlast-N | 1% by weight of cementitious | | 1974-028Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament 686 | 6.0 to 18.0 oz/cwt | CADD-2016-01-114 | 2005-031Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ViscoCrete 2100 | 2.5 to 12.0 oz/cwt | CADD-2014-01-057 | 2004-142Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ViscoCrete 6100 | 3.0 to 12.0 oz/cwt | CADD-2016-01-109 | 2003-032Q |
| | Water Reducing (Type A) Admixture [WR] | Sikament 686 | 3.0 to 6.0 oz/cwt | CADD-2016-01-110 | 2005-031Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA1 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **1682 Marion Williamsport Road E Marion, OH 43302** | | | | |
| | Air Entraining Admixture [AEA] | Sika AEA 14 | Up to 3.0 oz/cwt | CADD-2016-01-001 | 2004-141Q |
| | Grout Fluidifier Admixture | IntraPlast-N | 1% by weight of cementitious | | 1974-028 |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sika ViscoCrete-1000 | 5.0 to 21.0 oz/cwt | CADD-2015-01-085 | 2012-028B |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sika ViscoCrete-4100 | 3.0 to 12.0 oz/cwt | CADD-2017-01-001 | 2015-075Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament 686 | 6.0 to 18.0 oz/cwt | CADD-2016-01-114 | 2005-031Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament AFM | 8.0 to 18.0 oz/cwt | CADD-2016-01-008 | 2006-193Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ViscoCrete 2100 | 2.5 to 12.0 oz/cwt | CADD-2014-01-057 | 2004-142Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ViscoCrete 6100 | 3.0 to 12.0 oz/cwt | CADD-2016-01-109 | 2003-032Q |
| | Water Reducing (Type A) Admixture [WR] | Sika ViscoCrete-1000 | 2.0 to 5.0 oz/cwt | CADD-2016-01-108 | 2016-287Q |
| | Water Reducing (Type A) Admixture [WR] | Sika ViscoFlow-2020 | 2.0 to 15.0 oz/cwt | CADD-2016-01-117 | 2018-030Q |
| | *Dosage rates of Sika ViscoFlow-2020 will vary according to materials used, ambient conditions, and the requirements of a specific project. Typical dosage rates are 2 to 8 oz/cwt for general concrete applications. If maximum slump retention is required dosage up to 15 oz/cwt may be used.* | | | | |
| | Water Reducing (Type A) Admixture [WR] | Sikament 686 | 3.0 to 6.0 oz/cwt | CADD-2016-01-110 | 2005-031Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | Sikament AFM | 3.0 to 8.0 oz/cwt | CADD-2016-01-007 | 2008-031Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA3 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **Fairless Hills, PA** | | | | |
| | Accelerating (Type C) Admixture [ACCL] | SikaSet NC | 8.0 to 64.0 oz/cwt | CADD-2014-01-033 | 2003-164Q |
| | Air Entraining Admixture [AEA] | Sika AEA 14 | Up to 3.0 oz/cwt | CADD-2016-01-001 | 2004-141Q |
| | Air Entraining Admixture [AEA] *Provisionally Approved* | Sika AER C | Up to 1.5 oz/cwt | CAD-2016-01-095 | 2012-138Q |
| | Air Entraining Admixture [AEA] | Sika Air | Up to 3.0 oz/cwt | CADD-2016-01-105 | 2000-061Q |
| | Air Entraining Admixture [AEA] | Sika Air 260 | Up to 6.0 oz/cwt | CADD-2016-01-106 | 2012-139Q |
| | Air Entraining Admixture [AEA] | Sika Air 360 | Up to 6.0 oz/cwt | CADD-2016-01-107 | 2012-140Q |
| | Air Entraining Admixture [AEA] | SikaControl AIR-160 | 0.1 to 6.0 oz/cwt | CADD-2018-01-012 | 2019-027Q |
| | Early Strength Accelerator Admixture | Sika Rapid-1 | 8.0 to 64.0 oz/cwt | CADD-2015-01-083 | 1996-138Q |
| | Grout Fluidifier Admixture | IntraPlast-N | 1% by weight of cementitious | | 1974-028 |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | Sikament 610 | 5.0 to 18.0 oz/cwt | CADD-2014-01-034 | 2010-274QA |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament 686 | 6.0 to 18.0 oz/cwt | CADD-2016-01-114 | 2005-031Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament AFM | 8.0 to 18.0 oz/cwt | CADD-2016-01-008 | 2006-193Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | Sikament SPMN | Up to 40.0 oz/cwt | CADD-2017-01-014 | 2012-136QB |
| | High Range Water Reducing (Type F) Admixture [HRWR] *If maximum water reduction is required, a dosage of up to 20 oz/cwt or above may be used.* | Sikament-475 | 7.0 to 15.0 oz/cwt | CADD-2015-01-102 | 2017-076Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ViscoCrete 1000 | 5.0 to 21.0 oz/cwt | CADD-2015-01-085 | 2012-028B |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ViscoCrete 2100 | 2.5 to 12.0 oz./cwt | CADD-2014-01-057 | 2004-142Q |
| | High Range Water Reducing (Type F) Admixture [HRWR] *Provisionally Approved* | ViscoCrete 6100 | 3.0 to 12.0 oz/cwt | CADD-2016-01-109 | 2003-032Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA3 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **Fairless Hills, PA** | | | | |
| | High Range Water Reducing (Type F) Admixture [HRWR] | ViscoCrete-4100 | 3.0 to 12.0 oz./cwt | CADD-2017-01-001 | 2015-075Q |
| | Retarding (Type B) Admixture [RE] | Sika Plastiment | 0.5 to 5.0 oz/cwt | CADD-2014-01-032 | 2009-032QA |
| | Retarding (Type B) Admixture [RE] | Sikatard 440 | 1.0 to 10.0 oz/cwt | CADD-2016-01-113 | 2011-195Q |
| | Water Reducing (Type A) Admixture [WR] | Sika Plastocrete-10 N | 1.5 to 3.0 oz/cwt | CADD-2017-01-015 | 2012-137QA |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | Sika Plastocrete-161 | 2.0 to 5.5 oz/cwt | CADD-2015-01-086 | 2012-221Q |
| | Water Reducing (Type A) Admixture [WR] | Sika Plastocrete-250 | 2.0 to 5.0 oz/cwt | CADD-2016-01-075 | 2018-202Q |
| | Water Reducing (Type A) Admixture [WR] | Sika ViscoCrete-1000 | 2.0 to 5.0 oz/cwt | CADD-2016-01-108 | 2016-288Q |
| | Water Reducing (Type A) Admixture [WR] *Dosage rates of Sika ViscoFlow-2020 will vary according to materials used, ambient conditions, and the requirements of a specific project. Typical dosage rates are 2 to 8 oz/cwt for general concrete applications. If maximum slump retention is required dosage up to 15 oz/cwt may be used.* | Sika ViscoFlow-2020 | 2.0 to 15 oz/cwt | CADD-2016-01-117 | 2018-031Q |
| | Water Reducing (Type A) Admixture [WR] | Sikament 686 | 3.0 to 6.0 oz/cwt | CADD-2016-01-110 | 2005-031Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | Sikament AFM | 3.0 to 8.0 oz/cwt | CADD-2016-01-007 | 2008-031Q |
| | Water Reducing (Type A) Admixture [WR] | Sikament-475 | 3.0 to 8.0 oz/cwt | CADD-2015-01-101 | 2017-075Q |
| | Water Reducing (Type A) Admixture [WR] | Sikaplast 200 | Up to 12.0 oz/cwt | CADD-2019-01-022 | 2012-132Q |
| | Water Reducing (Type A) Admixture [WR] *Provisionally Approved* | Sikaplast 300 GP | Up to 12.0 oz/cwt | CADD-2016-01-112 | 2012-134Q |
| | Water Reducing (Type A) Admixture [WR] | ViscoCrete 2100 | 1.0 to 3.5 oz/cwt | CADD-2014-01-056 | 2008-032Q |
| | Water Reducing and Accelerator (Type E) Admixture | SikaSet NC | | | 2003-164Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastiment | 2.0 to 5.0 oz/cwt | CADD-2014-01-032 | 2009-032QB |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastocrete-10 N | 3.0 to 5.0 oz/cwt | CADD-2017-01-016 | 2012-137QC |

## Section 711: Concrete Curing Material and Admixtures

### 711.3 Concrete Admixtures

Last Revised: 10/22/2020

See Section 220.2(i) for Flowable Fill Only Air Entrainment Admixtures

See Section 711.3(e) for Latex Emulsion Admixtures

While the Recommended Dosage ranges provided are typical, dosages outside these ranges may be necessary due to special project considerations, ambient conditions, specific mix designs, or in combination with other admixtures. The manufacturer should be contacted in these situations.

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA3 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **Fairless Hills, PA** | | | | |
| | *Provisionally Approved* | | | | |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastocrete-161 | 5.0 to 10.0 oz/cwt | CADD-2015-01-084 | 2016-183Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastocrete-250 | 5 to 9 oz/cwt | CADD-2017-01-002 | 2018-203Q |
| **SIKA6 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **Ottawa, IL** | | | | |
| | Retarding (Type B) Admixture [RE] | Sika Plastiment XR | 2.0 to 5.0 oz/cwt | CADD-2014-01-095 | 2016-093Q |
| | Water Reducing (Type A) Admixture [WR] | Sika Plastocrete-161 | 2.0 to 5.5 oz/cwt | CADD-2015-01-086 | 2016-235Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastiment XR | 2.0 to 5.0 oz/cwt | CADD-2014-01-095 | 2016-093Q |
| | Water Reducing/Retarding (Type D) Admixture [RR] | Sika Plastocrete-161 | 5.0 to 10.0 oz/cwt | CADD-2015-01-084 | 2016-182Q |
| **SPCRT 15** | **Specrete-IP, Inc., 10703 Quebec Ave., Cleveland, OH 44106 http://specrete.com/** | | | | |
| | Grout Fluidifier Admixture | Intrusion-Aid C | | | 1969-010 |
| | Grout Fluidifier Admixture | Intrusion-Aid DSC | | | 1969-010 |
| | Grout Fluidifier Admixture | Intrusion-Aid LS | | | 1969-010 |
| | Grout Fluidifier Admixture | Intrusion-Aid R | | | 1969-010 |

### 711.3(e) Latex Emulsion Admixture

Last Revised: 5/1/2017

| Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|

## Section 711: Concrete Curing Material and Admixtures

### 711.3(e) Latex Emulsion Admixture

Last Revised: 5/1/2017

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BASFC 15** | **BASF Corporation, 370 Frankfort Road, Monaca, PA 15061 https://www.basf.com/us/en.html** | | | | |
| | Latex Emulsion Admixture [LATEX] | Styrofan 1186 | | | 2009-129Q |
| **DOWRE 15** | **Dow Reichhold Specialty Latex, P. O. Box 13906, Research Triangle Park, NC 27709 http://www.reichhold.com/** | | | | |
| **Plant** | **P. O. Box 13906 Research Triangle Park, NC 27709** | | | | |
| | Latex Emulsion Admixture [LATEX] | Tylac 97314-00 | | | 1990-287 |
| **TRINO 15** | **Trinseo, LLC, 1000 Chesterbrook Blvd, Suite 300, Berwyn, PA 19312 http://www.trinseo.com/** | | | | |
| **Plant** | **Midland, MI** | | | | |
| | Latex Emulsion Admixture [LATEX] | Trinseo Modifier A/NA Latex | | | 2013-022Q |

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **ASH-0 15** | **Ashland Aqualon Functional Ingredients, 1313 North Market Street, Wilmington, DE 19801 http://www.ashland.com/** | | | | |
| | Anti-Washout Admixture - Army Corps Std. CRD-C 661-06<br>*Manufactured by Aqualon Company for BASF.* | MasterMatrix UW 450<br>(Rheomac UW 450) | | | 2011-196 |
| | Viscosity Modifying Admixture [S-VM]<br>*Manufactured by Aqualon Company for BASF.* | MasterMatrix VMA 450<br>(Rheomac VMA 450) | | | 2011-251 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | | | |
| | Shrinkage Reducing Admixture [S-SRA] | MasterLife SRA 035 | See Note | CADD-2016-01-102 | 2018-148Q |
| | *Provisionally Approved: Concrete plants are required to submit a cylinder for hardened air testing to PennDOT's Material Testing Laboratory, 82 Dogwood Avenue, Harrisburg, PA 17110 during the JMF mix design approval process. For field projects, two cylinders must be submitted for hardened air testing to the Materials Testing Laboratory. These are in addition to any cylinders submitted for compressive strength testing. The provisional approval requirements will remain in place for a period of three years until February 1st, 2023 .* | | | | |
| | *Dosage: Knowledge of the shrinkage characteristics of the concrete mixture proposed for use is required prior to the addition of MasterLife SRA 035 admixture. The dosage of MasterLife SRA 035 admixture will be dependent on the desired drying shrinkage and the reduction in drying shrinkage required. Therefore, it is strongly recommended that drying shrinkage testing be performed to determine the optimum dosage for each application and each set of materials. The typical dosage range of MasterLife SRA 035 admixture is 0.5 to 1.5 gal/yd3. However, dosages outside of this range may be required depending on the level of shrinkage reduction needed for a given application and because of variations in concrete materials, jobsite conditions and other factors.* | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2010-184Q |
| | *Provisionally Approved* | | | | |
| | Strength-Enhancing Admixture [S-SEA] | Master X-Seed 55 | 4.0 to 15 oz/cwt | CADD-2017-01-058 | 2018-228Q |
| **BAS-1115** | **BASF Construction Chemicals, LLC, Admixtures Div., 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Newark, CA** | | | | |
| | ***Effective Ocober 1, 2020 new supplier is MBS-7 15.*** | | | | |
| | Waterproofing Admixture [S-WP] | MasterLife 300D (Rheomac 300D) | 2% of cement weight | CADD-2015-01-121 | 2010-053Q |
| | *Provisionally Approved* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-2 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-2 15*** | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2009-116Q |
| | *Provisionally Approved* | | | | |
| **BAS-3 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-3 15*** | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2009-116Q |
| | *Provisionally Approved* | | | | |
| | Strength-Enhancing Admixture [S-SEA] | Master X-Seed 55 | 4.0 to 15 oz/cwt | CADD-2017-01-058 | 2018-053Q |
| **BAS-4 15** | **BASF, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **6450 Bristol Pike Levittown, PA 19057** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-4 15*** | | | | |
| | Waterproofing Admixture [S-WP] | MasterPel 240 (Rheomix Rheopel) | 1.0 to 5.0 oz/cwt | CADD-2016-01-101 | 1999-050Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | Anti-Washout Admixture - Army Corps Std. CRD-C 661-06 | Eucon AWA | 10 to 32 oz/cwt | CADD-2018-01-009 | 2015-183Q |
| | Viscosity Modifying Admixture [S-VM] | Visctrol | | CADD-2017-01-091 | 2012-062Q |
| **FMCLD 15** | **FMC Corporation, Lithium Division, 2801 Yorkmont Road, Suite 300, Charlotte, NC 28208 http://www.fmclithium.com/** | | | | |
| | Lithium Admixture for Alkali Silica Reactivity Remediation [S-Li] | Lifetime (TM) N | | | 1999-058Q |
| | Lithium Admixture for Alkali Silica Reactivity Remediation [S-Li] | Lifetime (TM) SL | | | 1999-059Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC0 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Facility** | **62 Whittemore Ave. Cambridge, MA 02140-1692** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Viscosity Modifying Admixture [S-VM]<br>*Cannot be used as an anti-washout admixture.* | V-MAR 3 | | CADD-2015-01-080 | 2003-061Q |
| | Waterproofing Admixture [S-WP] | Darapel | | CADD-2016-01-015 | 1996-164 |
| **GRAC5 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **Houston, TX** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Viscosity Modifying Admixture [S-VM] | V-MAR F100 | 3.0 to 12 oz/cwt | CADD-2015-01-081 | 2017-268Q |
| **IPA-S 15** | **IPA Systems, Inc., 2745 North Amber St., Philadelphia, PA 19134 http://ipasystems.com/** | | | | |
| | Waterproofing Admixture [S-WP] | Ipanex | | | 1991-112 |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-1 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | | | |
| | Shrinkage Reducing Admixture [S-SRA] | MasterLife SRA 035 | See Note | CADD-2016-01-102 | 2018-148Q |
| | *Provisionally Approved: Concrete plants are required to submit a cylinder for hardened air testing to PennDOT's Material Testing Laboratory, 82 Dogwood Avenue, Harrisburg, PA 17110 during the JMF mix design approval process. For field projects, two cylinders must be submitted for hardened air testing to the Materials Testing Laboratory. These are in addition to any cylinders submitted for compressive strength testing. The provisional approval requirements will remain in place for a period of three years until February 1st, 2023 .* | | | | |
| | *Dosage: Knowledge of the shrinkage characteristics of the concrete mixture proposed for use is required prior to the addition of MasterLife SRA 035 admixture. The dosage of MasterLife SRA 035 admixture will be dependent on the desired drying shrinkage and the reduction in drying shrinkage required. Therefore, it is strongly recommended that drying shrinkage testing be performed to determine the optimum dosage for each application and each set of materials. The typical dosage range of MasterLife SRA 035 admixture is 0.5 to 1.5 gal/yd3. However, dosages outside of this range may be required depending on the level of shrinkage reduction needed for a given application and because of variations in concrete materials, jobsite conditions and other factors.* | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2010-184Q |
| | *Provisionally Approved* | | | | |
| | Strength-Enhancing Admixture [S-SEA] | Master X-Seed 55 | 4.0 to 15 oz/cwt | CADD-2017-01-058 | 2018-228Q |
| **MBS-2 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-2 15)*** | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2009-116Q |
| | *Provisionally Approved* | | | | |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-3 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-3 15)*** | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | MasterSure Z 60 (RheoTEC Z-60) | 2.0 to 12 oz/cwt | CADD-2017-01-029 | 2009-116Q |
| | *Provisionally Approved* | | | | |
| | Strength-Enhancing Admixture [S-SEA] | Master X-Seed 55 | 4.0 to 15 oz/cwt | CADD-2017-01-058 | 2018-053Q |
| **MBS-4 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **6450 Bristol Pike Levittown, PA 19057** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-4 15)*** | | | | |
| | Waterproofing Admixture [S-WP] | MasterPel 240 (Rheomix Rheopel) | 1.0 to 5.0 oz/cwt | CADD-2016-01-101 | 1999-050Q |
| **MBS-7 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Newark, CA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-1115)*** | | | | |
| | Waterproofing Admixture [S-WP] | MasterLife 300D (Rheomac 300D) | 2% of cement weight | CADD-2015-01-121 | 2010-053Q |
| | *Provisionally Approved* | | | | |
| **SIKA1 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **1682 Marion Williamsport Road E Marion, OH 43302** | | | | |
| | Specific Performance Workability Retention Admixture [S-WKR] | Sika ViscoFlow-2020 | 2.0 to 8.0 oz/cwt | | 2016-092Q |
| | Viscosity Modifying Admixture [S-VM] | Sika Stabilizer 300 SCC | 0.3 to 4.0 oz/cwt | CADD-2013-01-035 | 2016-254Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(f) Other Admixtures: Specific Performance [Type S - AASHTO M 194/ASTM C 494]

Last Revised: 10/22/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **SIKA3 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **Fairless Hills, PA** | | | | |
| | Anti-Washout Admixture - Army Corps Std. CRD-C 661-06<br>*Provisionally Approved* | Sikament 100SC | | | 2010-274QB |
| | Specific Performance Workability Retention Admixture [S-WKR] | Sika ViscoFlow-2020 | 2.0 to 8.0 oz/cwt | CADD-2016-01-117 | 2016-095Q |
| | Viscosity Modifying Admixture [S-VM] | Sika Stabilizer-4 R | | CADD-2019-01-025 | 2010-278Q |
| **TROCH 15** | **Troy Chemical Industries, Inc., 17040 Rapids Road, P. O. Box 430, Burton, OH 44021 http://www.troychemical.com/** | | | | |
| | Specialty Workability/Rheology Controlling Admixture<br>*For use in precast concrete only. Manufactured by Troy Chemical Industries, Inc. for BASF.* | BASF MasterMatrix 33 (Navitas 33) | 2.0 to 12 oz/cwt | CADD-2015-01-089 | 2013-134Q |
| | Viscosity Modifying Admixture [S-VM]<br>*Manufactured by Troy Chemical Industries, Inc. for BASF.* | BASF MasterMatrix VMA 358 (Rheomac VMA 358) | 2.0 to 10 oz/cwt | CADD-2015-01-090 | 2004-087Q |
| | Viscosity Modifying Admixture [S-VM]<br>*Manufactured by Troy Chemical Industries, Inc. for BASF.* | BASF MasterMatrix VMA 362 (Rheomac VMA 362) | | CADD-2015-01-091 | 2004-088Q |
| **XYPEX 15** | **Xypex Chemical Corporation, 13731 Mayfield Place, Richmond, British Columbia, Canada V6V 2G9 http://www.xypex.com/** | | | | |
| | Waterproofing Admixture [S-WP] | C1000 | | | 2002-020Q |

### 711.3(g) Fibers for Plastic Shrinkage Cracking

Last Revised: 1/31/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **FABRO 15** | **Great Lakes Polymer Technologies, LLC (dba Fabpro Polymers), 100 South Fabpro Way, Kingman, KS 67068 http://www.fabpropolymers.com/** | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture<br>*Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | BASF MasterFiber F 70 | 1.5 lbs/cy | | 2013-045Q |

## Section 711: Concrete Curing Material and Admixtures

### 711.3(g) Fibers for Plastic Shrinkage Cracking

Last Revised: 1/31/2020

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **FABRO 15** | **Great Lakes Polymer Technologies, LLC (dba Fabpro Polymers), 100 South Fabpro Way, Kingman, KS 67068 http://www.fabpropolymers.com/** | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber M 100 | 0.5 lbs/cy | | 2013-047Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber M 70 | 1.0 lbs/cy | | 2013-046Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber MAC 100 | 3.0 lbs/cy | | 2013-048Q |
| | *Provisionally Approved. Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber MAC 360 FF | 3.0 lbs/cy | | 2019-101Q |
| | *Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |
| | Monofilament or Collated Fibrillated Synthetic Fiber Admixture | BASF MasterFiber MAC Matrix | 3.0 lbs/cy | | 2016-174Q |
| | *Dosages outside the "recommended dosage" may be necessary to meet specific mix design requirements. The manufacturer should be contacted in these situations.* | | | | |

## Section 713: Masonry Units

### 713.1 Brick

Last Revised: 5/15/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| GLNG1 15 Plant | Glen-Gery Corporation, 1166 Spring Street, P.O. Box 7001, Wyomissing, PA 19610-6001 https://www.glengery.com/ Bigler Brick Manufacturing Plant 24 Pinetop Rd Bigler, PA 16825 | | |
| | Brick | | 2010-159QA |
| GLNG2 15 Plant | Glen-Gery Corporation, 1166 Spring Street, P.O. Box 7001, Wyomissing, PA 19610-6001 https://www.glengery.com/ York Brick Manufacturing Plant 1090 East Boundary Avenue York, PA 17403 | | |
| | Brick | | 2010-159QB |
| GLNG3 15 Plant | Glen-Gery Corporation, 1166 Spring Street, P.O. Box 7001, Wyomissing, PA 19610-6001 https://www.glengery.com/ Hanley Brick Manufacturing Plant 12637 Harrison Street Summerville, PA | | |
| | Brick | | 2010-159QC |
| GLNG4 15 Plant | Glen-Gery Corporation, 1166 Spring Street, P.O. Box 7001, Wyomissing, PA 19610-6001 https://www.glengery.com/ Mid-Atlantic Brick Manufacturing Plant 423 South Pottsville Pike Shoemakersville, PA 19555 | | |
| | Brick | | 2010-159QD |
| GLNG5 15 Plant | Glen-Gery Corporation, 1166 Spring Street, P.O. Box 7001, Wyomissing, PA 19610-6001 https://www.glengery.com/ Harmar Brick Manufacturing Plant 26 Rich Hill Road Cheswick, PA *Formerly Redland Brick, Inc. (REDLA 15)* | | |
| | Brick | | 1983-172 |
| WATBC 15 | Watsontown Brick Company, Route 404, P.O. Box 68, Watsontown, PA 17777 http://watsontownbrick.com/ | | |
| | Brick | | 2003-005Q |

### 713.2 Precast Concrete Blocks

Last Revised: 3/13/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| BEAVE 15 | Beavertown Block Company, Inc., P.O. Box 337, Middleburg, PA 17842-0337 http://www.beavertownblock.com/ | | |
| | Precast Concrete Block | | ----- |

## Section 713: Masonry Units

### 713.2 Precast Concrete Blocks

Last Revised: 3/13/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| CASTL 15 | Castle Builders Supply & Trucking LLC, 1409 Moravia Street, New Castle, PA 16101 http://castlebuilderssupply.com/ | | |
| | Precast Concrete Block | | ----- |
| FIZZ0 15 | Fizzano Brothers Concrete Products, Inc., 1776 Chester Pike, Crum Lynne, PA 19022 http://fizzano.com/ | | |
| | Precast Concrete Block | | ----- |
| FIZZ1 15 Plant | Fizzano Brothers Concrete Products, Inc., Trevose and Sterner Mill, Trevose, PA 19053 http://fizzano.com/ Trevose, PA | | |
| | Precast Concrete Block | | ----- |
| FIZZ2 15 Plant | Fizzano Brothers Concrete Products, Inc., 201 South Phoenixville Pike, Malvern, PA 19355 http://fizzano.com/ 201 S. Phoenixville Pike Malvern, PA 19355 | | |
| | Precast Concrete Block | | ----- |
| NEW-0 15 | New Enterprise Stone & Lime Co., Inc., Newcrete Products Division, P.O. Box 34, Roaring Spring, PA 16673 http://www.nesl.com/ | | |
| | Precast Concrete Block | | ----- |
| SIDLY 15 | R. W. Sidley, 715 New Castle Road, Slippery Rock, PA 16057 http://www.rwsidley.com/ | | |
| | Precast Concrete Block | | ----- |
| TERH0 15 Plant | Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/ PLANT #2: P.O. Box 10 Terre Hill, PA 17581 | | |
| | Precast Concrete Block | | ----- |
| YORKB 15 | York Building Products, Inc., 1020 North Hartley Street, York, PA 17404 http://www.yorkbuilding.com/ | | |
| | Precast Concrete Block | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Endwalls

Last Revised: 9/14/2020

See Standard Drawing RC-31M (Publication 72M)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **ALTFJ 15** | **Altomare Precast, Inc., 4300 Wissahickon Avenue, Philadelphia, PA 19129 http://www.altomareprecast.com/** | | | |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | ----- |
| **ATLCP 15** | **Atlantic Concrete Products, Inc., 8900 Old Route 13, Tullytown, PA 19007-1375 http://www.atlanticconcrete.com/** | | | |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | ----- |
| **BINGH 15** | **Binghamton Precast and Supply, 18 Phelps Street, Binghamton, NY 13901 http://www.binghamtonprecast.com/** | | | |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | ----- |
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | ----- |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | 2003-189Q |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | 2013-042Q |

## Section 714: Precast Concrete Products

### 714.2 Endwalls

Last Revised: 9/14/2020

See Standard Drawing RC-31M (Publication 72M)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **CONTN 15** | **Continental Concrete Products, Inc., 1 South Grosstown Road, Pottstown, PA 19464 http://www.continentalconcrete.com/** | | | |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | ----- |
| **CPPLL 15** | **Concrete Pipe and Precast, LLC, 401 South Carlisle Street, Greencastle, PA 17225 http://www.concretepandp.com/** | | | |
| | ***Formerly Advanced Drainage Structures (ADSTR 15)*** | | | |
| | Type D Endwall | | | 2012-067QA |
| | Type D-E Endwall | | | 2012-067QB |
| | Type D-W Endwall | | | 2012-067QC |
| | Type E-S Endwall | | | 2012-067QD |
| **DIXPS 15** | **Dixon Precast and Supply, 740 Laurel Run Road, West Decatur, PA 16878** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | 2009-177QC |
| | Subsurface Drain Outlet Endwall | | | 2009-177QB |
| | Type D Endwall | | | 2009-177QA |
| | Type D-E Endwall | | | 2010-315QA |
| | Type D-W Endwall | | | 2010-315QB |
| | Type E-S Endwall | | | 2010-315QC |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | ----- |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | 2009-089Q |
| | Type D-W Endwall | | | 2006-148Q |
| | Type E-S Endwall | | | 2018-139Q |

## Section 714: Precast Concrete Products

### 714.2 Endwalls

Last Revised: 9/14/2020

See Standard Drawing RC-31M (Publication 72M)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **FIHFC 15** | **Fi-Hoff Concrete Products, Inc., 240 Bentwood Avenue, Johnstown, PA 15904 http://fi-hoff.com/** | | | |
| | Type D Endwall | | | ----- |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | 2009-147QB |
| | Subsurface Drain Outlet Endwall | | | 2009-147QA |
| | Type D Endwall | | | 2015-265QA |
| | Type D-E Endwall | | | 2014-265QB |
| | Type D-W Endwall | | | 2016-083Q |
| | Type E-S Endwall | | | 2016-311Q |
| **MCCAR 15** | **McCarroll Precast, Inc., 1129 Old 115, Dallas, PA 18612** | | | |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply remaining stock from inventory.* | | | |
| | Type D Endwall | | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply remaining stock from inventory.* | | | |
| **MILL0 15** | **A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/** | | | |
| | Type D-W Endwall | | | 2015-199Q |
| **MONAP 15** | **Monarch Products Company, Inc., 385 Sipe Road, York Haven, PA 17370 http://www.monarchproducts.net/** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | 2014-108Q |
| | Subsurface Drain Outlet Endwall | | | 2014-107Q |
| | Type D Endwall | | 9/23/1994 | ----- |
| | Type D-E Endwall | | 8/26/1992 | ----- |
| | Type D-W Endwall | | 4/12/2004 | ----- |

## Section 714: Precast Concrete Products

### 714.2 Endwalls

Last Revised: 9/14/2020

See Standard Drawing RC-31M (Publication 72M)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **MONPC 15** | **Monarch Concrete LLC, 425 North Dauphin Street, Allentown, PA 18109-2199 http://www.monarchprecast.com/** | | | |
| | ***Formerly Monarch Precast Concrete Corporation*** | | | |
| | Type D-W Endwall | | | 2011-048Q |
| **OLP-1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx** | | | |
| | Subsurface Drain Outlet Endwall | | | 2016-303Q |
| | Type D Endwall | | | 2016-303Q |
| | Type D-E Endwall | | | 2016-303Q |
| | Type D-W Endwall | | | 2016-303Q |
| | Type E-S Endwall | | | 2016-303Q |
| **POLCP 15** | **Poland Concrete Products, Inc., 210 Overlook Avenue, Hillsville, PA 16132** | | | |
| | Subsurface Drain Outlet Endwall | | | 2011-038QD |
| | Type D Endwall | | | 2011-038QA |
| | Type D-E Endwall | | | 2011-038QB |
| | Type D-W Endwall | | | 2010-327QF |
| | Type E-S Endwall | | | 2011-038QC |
| **SCRCR 15** | **Scranton Craftsmen, Inc., 930 Dunmore Street, Troop, PA 18512 http://www.scrantoncraftsmen.com/** | | | |
| | Type D Endwall | | | 2010-106Q |
| | Type D-E Endwall | | | 2015-036QC |
| **TERH0 15** | **Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/** | | | |
| **Plant** | **PLANT #2: P.O. Box 10 Terre Hill, PA 17581** | | | |
| | Subsurface Drain Outlet Endwall | | | 2010-203Q |
| | Type D Endwall | | | 2010-203Q |
| | Type D-E Endwall | | | 2010-203Q |
| | Type D-W Endwall | | | 2010-203Q |
| | Type E-S Endwall | | | 2010-203Q |

## Section 714: Precast Concrete Products

### 714.2 Endwalls

Last Revised: 9/14/2020

See Standard Drawing RC-31M (Publication 72M)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **TERH1 15 Plant** | **Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/ PLANT #4: 42 South Butler Road Lebanon, PA 17042** | | | |
| | Subsurface Drain Outlet Endwall | | | ----- |
| | Type D Endwall | | | ----- |
| | Type D-E Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |
| | Type E-S Endwall | | | ----- |
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | | | |
| | Sloped Subsurface Drain Outlet Endwall | | | ----- |
| | Subsurface Drain Outlet Endwall | | | 2009-167QC |
| | Type D Endwall | | | ----- |
| | Type D-W Endwall | | | ----- |

### 714.2 Glare Screen

Last Revised: 5/19/2015

See Standard Drawing RC-59M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONSS 15** | **Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/** | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | | |
| | 52"/50" Glare Screen (RC 59M) | | 2000-275Q |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |

# Section 714: Precast Concrete Products

## 714.2 Glare Screen

Last Revised: 5/19/2015

See Standard Drawing RC-59M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| FADD3 15 | Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/ | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |
| GCLI- 15 | GCL, Inc., 2559 Brandt School Road, Heritage Center, Suite 200, Wexford, PA 15090 http://cambergroup.com/gclinc.htm | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |
| INTSS 15 | Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411 | | |
| | 52"/50" Glare Screen (RC 59M) | | ----- |
| MACK0 15 | Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/ | | |
| | 52"/50" Glare Screen (RC 59M) | | 2011-043Q |

## 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| ALTFJ 15 | Altomare Precast, Inc., 4300 Wissahickon Avenue, Philadelphia, PA 19129 http://www.altomareprecast.com/ | | |
| | Inlet, Standard | | 2011-263QD |
| | Inlet, Type 10 | | 2011-263QK |
| | Inlet, Type 4 | | 2011-263QE |
| | Inlet, Type 5 | | 2011-263QF |
| | Inlet, Type 6 | | 2011-263QG |
| | Inlet, Type 7 | | 2011-263QH |
| | Inlet, Type 8 | | 2011-263QI |
| | Inlet, Type 9 | | 2011-263QJ |

# Section 714: Precast Concrete Products

## 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **ATLCP 15** | **Atlantic Concrete Products, Inc., 8900 Old Route 13, Tullytown, PA 19007-1375 http://www.atlanticconcrete.com/** | |
| | Inlet, Standard | ----- |
| | Inlet, Type 10 | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | ----- |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| | Inlet, Type 9 | ----- |
| **BINGH 15** | **Binghamton Precast and Supply, 18 Phelps Street, Binghamton, NY 13901 http://www.binghamtonprecast.com/** | |
| | Inlet, Standard | ----- |
| | Inlet, Type 10 | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | ----- |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| | Inlet, Type 9 | ----- |
| | Inlet, Type D-H | ----- |

# Section 714: Precast Concrete Products

## 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | 2016-061Q |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | 2016-057Q |
| | Inlet, Type 7 | | 2016-058Q |
| | Inlet, Type 8 | | 2016-059Q |
| | Inlet, Type 9 | | 2016-060Q |
| | Inlet, Type D-H | | 2013-043Q |
| **CONTN 15** | **Continental Concrete Products, Inc., 1 South Grosstown Road, Pottstown, PA 19464 http://www.continentalconcrete.com/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |
| | Inlet, Type D-H | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CPPLL 15** | **Concrete Pipe and Precast, LLC, 401 South Carlisle Street, Greencastle, PA 17225 http://www.concretepandp.com/** ***Formerly Advanced Drainage Structures (ADSTR 15)*** | | |
| | | Inlet, Standard | 2012-069QA |
| | | Inlet, Type 10 | 2012-069QH |
| | | Inlet, Type 4 | 2012-069QB |
| | | Inlet, Type 5 | 2012-069QC |
| | | Inlet, Type 6 | 2012-069QD |
| | | Inlet, Type 7 | 2012-069QE |
| | | Inlet, Type 8 | 2012-069QF |
| | | Inlet, Type 9 | 2012-069QG |
| **DIXPS 15** | **Dixon Precast and Supply, 740 Laurel Run Road, West Decatur, PA 16878** | | |
| | | Inlet, Standard | 2009-176QA |
| | | Inlet, Type 10 | 2014-152QC |
| | | Inlet, Type 4 | 2009-176QB |
| | | Inlet, Type 5 | 2009-176QC |
| | | Inlet, Type 6 | 2014-152QA |
| | | Inlet, Type 7 | 2009-176QD |
| | | Inlet, Type 8 | 2009-176QE |
| | | Inlet, Type 9 | 2014-152QB |
| | | Inlet, Type D-H | 2009-176QF |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | |
| | Inlet, Standard | ----- |
| | Inlet, Type 10 | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | ----- |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| | Inlet, Type 9 | ----- |
| | Inlet, Type D-H | ----- |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| **FIHFC 15** | **Fi-Hoff Concrete Products, Inc., 240 Bentwood Avenue, Johnstown, PA 15904 http://fi-hoff.com/** | |
| | Inlet, Standard | ----- |
| | Inlet, Type 10 | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | ----- |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| | Inlet, Type 9 | ----- |

# Section 714: Precast Concrete Products

## 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | 2010-178QA |
| | Inlet, Type 5 | | 2010-178QB |
| | Inlet, Type 6 | | 2010-178QC |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |
| | Inlet, Type D-H | | 2010-061QA |
| **MACK1 15** | **Mack Industries of PA, Inc., P.O. Box 335, Valley City, OH 44280 http://www.mackconcrete.com/** | | |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MCCAR 15** | **McCarroll Precast, Inc., 1129 Old 115, Dallas, PA 18612** | | |
| | Inlet, Standard | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products. For DGS PA State Contract No. 4600015773, the precast concrete products will be fabricated at Scranton Craftsmen (SCRCR 15) through August 2021.* | | |
| | Inlet, Type 4 | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | |
| | Inlet, Type 5 | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | |
| | Inlet, Type 6 | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | |
| | Inlet, Type D-H | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | |
| **MILL0 15** | **A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MILL1 15** | **A. C. Miller Concrete Products, Inc., 31 E. Bridge Street, Spring City, PA 19475 http://www.acmiller.com/** | | |
| | Inlet, Type 10 | | 2010-068Q |
| | Inlet, Type 4 | | 2010-068Q |
| | Inlet, Type 5 | | 2010-068Q |
| | Inlet, Type 6 | | 2010-068Q |
| | Inlet, Type 7 | | 2010-068Q |
| | Inlet, Type 8 | | 2010-068Q |
| | Inlet, Type 9 | | 2010-068Q |
| **MONAP 15** | **Monarch Products Company, Inc., 385 Sipe Road, York Haven, PA 17370 http://www.monarchproducts.net/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |
| | Inlet, Type D-H | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **MONPC 15** | **Monarch Concrete LLC, 425 North Dauphin Street, Allentown, PA 18109-2199 http://www.monarchprecast.com/** ***Formerly Monarch Precast Concrete Corporation*** | |
| | Inlet, Standard | 2002-083Q |
| | Inlet, Type 10 | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | ----- |
| | Inlet, Type 7 | ----- |
| | Inlet, Type 8 | ----- |
| | Inlet, Type 9 | ----- |
| | Inlet, Type D-H | ----- |
| **OLP-1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx** | |
| | Inlet, Standard | 2014-231QA |
| | Inlet, Type 10 | 2014-231QH |
| | Inlet, Type 4 | 2014-231QB |
| | Inlet, Type 5 | 2014-231QC |
| | Inlet, Type 6 | 2014-231QD |
| | Inlet, Type 7 | 2014-231QE |
| | Inlet, Type 8 | 2014-231QF |
| | Inlet, Type 9 | 2014-231QG |
| | Inlet, Type D-H | 2014-231QI |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **POLCP 15** | **Poland Concrete Products, Inc., 210 Overlook Avenue, Hillsville, PA 16132** | | |
| | Inlet, Standard | | 2010-327QC |
| | Inlet, Type 4 | | 2011-038QE |
| | Inlet, Type 5 | | 2011-038QF |
| | Inlet, Type 6 | | 2011-038QG |
| | Inlet, Type 8 | | 2011-038QH |
| **PREMC 15** | **Precast Manufacturing Company, 187 Strykers Road, Phillipsburg, NJ 08865 http://www.precastmfgco.com/** | | |
| | Inlet, Standard | | 2013-050QC |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | 2013-050QD |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |
| **RAHN- 15** | **Rahns Construction Materials Company, 430 Bridge Road, Rahns, PA 19426 https://www.hkgroup.com/companies/rahns-rahns** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Assemblies

Last Revised: 9/15/2020

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SCRCR 15** | **Scranton Craftsmen, Inc., 930 Dunmore Street, Troop, PA 18512 http://www.scrantoncraftsmen.com/** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | PA (RC-46M) | 2015-036QD |
| | Inlet, Type 6 | | ----- |
| **STOCO 15** | **Stone and Company, 1718 Roseytown Road, Greensburg, PA 15601 http://stoneconcrete.com/** | | |
| | Inlet, Standard | | 2013-213QB |
| **TERH0 15 Plant** | **Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/**<br>**PLANT #2: P.O. Box 10 Terre Hill, PA 17581** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| **TERH1 15 Plant** | **Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/**<br>**PLANT #4: 42 South Butler Road Lebanon, PA 17042** | | |
| | Inlet, Standard | | ----- |
| | Inlet, Type 10 | | ----- |
| | Inlet, Type 4 | | ----- |
| | Inlet, Type 5 | | ----- |
| | Inlet, Type 6 | | ----- |
| | Inlet, Type 7 | | ----- |
| | Inlet, Type 8 | | ----- |
| | Inlet, Type 9 | | ----- |
| | Inlet, Type D-H | | ----- |

# Section 714: Precast Concrete Products

## 714.2 Inlet Assemblies

**Last Revised: 9/15/2020**

Companies listed to fabricate Inlet Assemblies are approved to provide the corresponding riser and top slab sections.

Actual inlet structures may be square or rectangular. The inlet structure type (size) is based on the largest pipe diameter. Standard Drawing RC-46M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **WATRF 15** | **Waterford Precast and Sales, Inc., 511 Bagdad Road, Waterford, PA 16441** | |
| | Inlet, Standard | ----- |
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | |
| | Inlet, Standard | ----- |
| | Inlet, Type 4 | ----- |
| | Inlet, Type 5 | ----- |
| | Inlet, Type 6 | 2012-252Q |

## 714.2 Inlet Tops

**Last Revised: 9/15/2020**

See Standard Drawing RC-45M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **ALTFJ 15** | **Altomare Precast, Inc., 4300 Wissahickon Avenue, Philadelphia, PA 19129 http://www.altomareprecast.com/** | |
| | Inlet Top, Type C | 2011-263QA |
| | Inlet Top, Type M | 2011-263QB |
| | Inlet Top, Type S | 2011-263QC |
| **ATLCP 15** | **Atlantic Concrete Products, Inc., 8900 Old Route 13, Tullytown, PA 19007-1375 http://www.atlanticconcrete.com/** | |
| | Inlet Top, Type C | ----- |
| | Inlet Top, Type C Alternate | ----- |
| | Inlet Top, Type M | ----- |
| | Inlet Top, Type S | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Tops

Last Revised: 9/15/2020

See Standard Drawing RC-45M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BINGH 15** | **Binghamton Precast and Supply, 18 Phelps Street, Binghamton, NY 13901 http://www.binghamtonprecast.com/** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type D-H Level | | 2013-041Q |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| **CONTN 15** | **Continental Concrete Products, Inc., 1 South Grosstown Road, Pottstown, PA 19464 http://www.continentalconcrete.com/** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type C Alternate | | ----- |
| | Inlet Top, Type D-H | | 2012-012QA |
| | Inlet Top, Type D-H Level | | 2012-012QB |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| **CPPLL 15** | **Concrete Pipe and Precast, LLC, 401 South Carlisle Street, Greencastle, PA 17225 http://www.concretepandp.com/** ***Formerly Advanced Drainage Structures (ADSTR 15)*** | | |
| | Inlet Top, Type C | | 2012-068QC |
| | Inlet Top, Type C Alternate | | 2012-068QD |
| | Inlet Top, Type M | | 2012-068QA |
| | Inlet Top, Type S | | 2012-068QB |

# Section 714: Precast Concrete Products

## 714.2 Inlet Tops

Last Revised: 9/15/2020

See Standard Drawing RC-45M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| DIXPS 15 | Dixon Precast and Supply, 740 Laurel Run Road, West Decatur, PA 16878 | | |
| | Inlet Top, Type C | | 2009-174QC |
| | Inlet Top, Type D-H | | 2009-174QD |
| | Inlet Top, Type D-H Level | | 2009-174QE |
| | Inlet Top, Type M | | 2009-174QA |
| | Inlet Top, Type S | | 2009-174QB |
| EAGLE 15 | Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501 | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type D-H | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| FIHFC 15 | Fi-Hoff Concrete Products, Inc., 240 Bentwood Avenue, Johnstown, PA 15904 http://fi-hoff.com/ | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| MACK0 15 | Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/ | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type D-H | | 2010-061QB |
| | Inlet Top, Type D-H Level | | 2010-061QC |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Inlet Tops

Last Revised: 9/15/2020

See Standard Drawing RC-45M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MCCAR 15** | **McCarroll Precast, Inc., 1129 Old 115, Dallas, PA 18612** | | |
| | Inlet Top, Type C | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products. For DGS PA State Contract No. 4600015773, the precast concrete products will be fabricated at Scranton Craftsmen (SCRCR 15) through August 2021.* | | |
| | Inlet Top, Type C Alternate | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | | |
| | Inlet Top, Type M | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products. For DGS PA State Contract No. 4600015773, the precast concrete products will be fabricated at Scranton Craftsmen (SCRCR 15) through August 2021.* | | |
| | Inlet Top, Type S | | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products. For DGS PA State Contract No. 4600015773, the precast concrete products will be fabricated at Scranton Craftsmen (SCRCR 15) through August 2021.* | | |
| **MONAP 15** | **Monarch Products Company, Inc., 385 Sipe Road, York Haven, PA 17370 http://www.monarchproducts.net/** | | |
| | Inlet Top, Type C | | 1992-193Q |
| | Inlet Top, Type D-H | | ----- |
| | Inlet Top, Type D-H Level | | ----- |
| | Inlet Top, Type M | | 1992-193Q |
| | Inlet Top, Type S | | 1992-193Q |
| **MONPC 15** | **Monarch Concrete LLC, 425 North Dauphin Street, Allentown, PA 18109-2199 http://www.monarchprecast.com/** | | |
| | ***Formerly Monarch Precast Concrete Corporation*** | | |
| | Inlet Top, Type C | | 2002-083Q |
| | Inlet Top, Type M | | 2002-083Q |

## Section 714: Precast Concrete Products

### 714.2 Inlet Tops

Last Revised: 9/15/2020

See Standard Drawing RC-45M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| OLP-1 15 | Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx | | |
| | | Inlet Top, Type C | 2014-232QC |
| | | Inlet Top, Type D-H | 2014-232QD |
| | | Inlet Top, Type D-H Level | 2014-232QE |
| | | Inlet Top, Type M | 2014-232QA |
| | | Inlet Top, Type S | 2014-232QB |
| POLCP 15 | Poland Concrete Products, Inc., 210 Overlook Avenue, Hillsville, PA 16132 | | |
| | | Inlet Top, Type C | 2010-327QD |
| | | Inlet Top, Type M | 2010-327QE |
| PREMC 15 | Precast Manufacturing Company, 187 Strykers Road, Phillipsburg, NJ 08865 http://www.precastmfgco.com/ | | |
| | | Inlet Top, Type C | 2013-050QG |
| | | Inlet Top, Type M | 2013-050QE |
| RAHN- 15 | Rahns Construction Materials Company, 430 Bridge Road, Rahns, PA 19426 https://www.hkgroup.com/companies/rahns-rahns | | |
| | | Inlet Top, Type C | ----- |
| | | Inlet Top, Type M | ----- |
| SCRCR 15 | Scranton Craftsmen, Inc., 930 Dunmore Street, Troop, PA 18512 http://www.scrantoncraftsmen.com/ | | |
| | | Inlet Top, Type C | 2015-036QB |
| | | Inlet Top, Type M | 2015-036QA |

# Section 714: Precast Concrete Products

## 714.2 Inlet Tops

Last Revised: 9/15/2020

See Standard Drawing RC-45M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TERH0 15 Plant** | **Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/ PLANT #2: P.O. Box 10 Terre Hill, PA 17581** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type D-H | | ----- |
| | Inlet Top, Type D-H Level | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| **TERH1 15 Plant** | **Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/ PLANT #4: 42 South Butler Road Lebanon, PA 17042** | | |
| | Inlet Top, Type D-H | | ----- |
| | Inlet Top, Type D-H Level | | ----- |
| **WATRF 15** | **Waterford Precast and Sales, Inc., 511 Bagdad Road, Waterford, PA 16441** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | | |
| | Inlet Top, Type C | | ----- |
| | Inlet Top, Type C Alternate | | 2009-167QD |
| | Inlet Top, Type D-H | | 2009-167QA |
| | Inlet Top, Type D-H Level | | ----- |
| | Inlet Top, Type M | | ----- |
| | Inlet Top, Type S | | ----- |

## 714.2 Junction Boxes, Precast Concrete

Last Revised: 5/19/2015

## Section 714: Precast Concrete Products

### 714.2 Junction Boxes, Precast Concrete

Last Revised: 5/19/2015

JB-1 & JB-2, Light Duty (For locations with pedestrian type loadings only): Standard Drawing RC-81M (Publication 72M)

JB-11 & JB-12, Heavy Duty: Standard Drawing RC-82M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| CONCR 15 | Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/ | | |
| | JB-1 | | ----- |
| | JB-11 | | ----- |
| | JB-12 | | ----- |
| | JB-2 | | ----- |
| CONSS 15 | Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/ | | |
| | JB-1 | | ----- |
| | JB-11 | | ----- |
| | JB-12 | | ----- |
| | JB-2 | | ----- |
| DIXPS 15 | Dixon Precast and Supply, 740 Laurel Run Road, West Decatur, PA 16878 | | |
| | JB-1 | | 2014-188QA |
| | JB-11 | | 2014-189QA |
| | JB-12 | | 2014-189QB |
| | JB-2 | | 2014-188QB |
| EAGLE 15 | Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501 | | |
| | JB-1 | | ----- |
| | JB-11 | | ----- |
| | JB-12 | | ----- |
| | JB-2 | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Junction Boxes, Precast Concrete

Last Revised: 5/19/2015

JB-1 & JB-2, Light Duty (For locations with pedestrian type loadings only): Standard Drawing RC-81M (Publication 72M)

JB-11 & JB-12, Heavy Duty: Standard Drawing RC-82M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | |
| | JB-1 | ----- |
| | JB-11 | ----- |
| | JB-12 | ----- |
| | JB-2 | ----- |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | |
| | JB-1 | ----- |
| | JB-11 | ----- |
| | JB-12 | ----- |
| | JB-2 | ----- |
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | |
| | JB-1 | ----- |
| | JB-11 | ----- |
| | JB-12 | ----- |
| | JB-2 | ----- |
| **WINEC 15** | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | |
| | JB-1 | ----- |
| | JB-11 | ----- |
| | JB-12 | ----- |
| | JB-2 | ----- |

### 714.2 Manhole Sections (Reinforced Concrete)

Last Revised: 9/14/2020

## Section 714: Precast Concrete Products

### 714.2 Manhole Sections (Reinforced Concrete)

Last Revised: 9/14/2020

For Sanitary Sewer Manholes, see Standard Drawing RC-38M (Publication 72M)

For Storm Water Manholes, see Standard Drawing RC-39M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **ALTFJ 15** | **Altomare Precast, Inc., 4300 Wissahickon Avenue, Philadelphia, PA 19129 http://www.altomareprecast.com/** | |
| | Manhole Section (RC) | ----- |
| **ATLCP 15** | **Atlantic Concrete Products, Inc., 8900 Old Route 13, Tullytown, PA 19007-1375 http://www.atlanticconcrete.com/** | |
| | Manhole Section (RC) | ----- |
| **BINGH 15** | **Binghamton Precast and Supply, 18 Phelps Street, Binghamton, NY 13901 http://www.binghamtonprecast.com/** | |
| | Manhole Section (RC) | ----- |
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | |
| | Manhole Section (RC) | ----- |
| **CONTN 15** | **Continental Concrete Products, Inc., 1 South Grosstown Road, Pottstown, PA 19464 http://www.continentalconcrete.com/** | |
| | Manhole Section (RC) | ----- |
| **CPPLL 15** | **Concrete Pipe and Precast, LLC, 401 South Carlisle Street, Greencastle, PA 17225 http://www.concretepandp.com/**<br>***Formerly Advanced Drainage Structures (ADSTR 15)*** | |
| | Manhole Section (RC) | 2012-065Q |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | |
| | Manhole Section (RC) | ----- |
| **FIHFC 15** | **Fi-Hoff Concrete Products, Inc., 240 Bentwood Avenue, Johnstown, PA 15904 http://fi-hoff.com/** | |
| | Manhole Section (RC) | ----- |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | |
| | Manhole Section (RC) | ----- |

## Section 714: Precast Concrete Products

### 714.2 Manhole Sections (Reinforced Concrete)

Last Revised: 9/14/2020

For Sanitary Sewer Manholes, see Standard Drawing RC-38M (Publication 72M)

For Storm Water Manholes, see Standard Drawing RC-39M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **MCCAR 15** | **McCarroll Precast, Inc., 1129 Old 115, Dallas, PA 18612** | |
| | Manhole Section (RC) | ----- |
| | *Effective December 18, 2019, McCarroll Precast, Inc. is no longer producing precast items for PennDOT projects. McCarroll Precast, Inc. may continue to supply the remaining stock of precast concrete products.* | |
| **MONAP 15** | **Monarch Products Company, Inc., 385 Sipe Road, York Haven, PA 17370 http://www.monarchproducts.net/** | |
| | Manhole Section (RC) | 1992-193Q |
| **MONPC 15** | **Monarch Concrete LLC, 425 North Dauphin Street, Allentown, PA 18109-2199 http://www.monarchprecast.com/** ***Formerly Monarch Precast Concrete Corporation*** | |
| | Manhole Section (RC) | 2002-084Q |
| **OLP-1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx** | |
| | Manhole Section (RC) | 2020-106Q |
| **POLCP 15** | **Poland Concrete Products, Inc., 210 Overlook Avenue, Hillsville, PA 16132** | |
| | Manhole Section (RC) | 2010-327QA |
| **PREMC 15** | **Precast Manufacturing Company, 187 Strykers Road, Phillipsburg, NJ 08865 http://www.precastmfgco.com/** | |
| | Manhole Section (RC) | 2013-050QA |
| **RAHN- 15** | **Rahns Construction Materials Company, 430 Bridge Road, Rahns, PA 19426 https://www.hkgroup.com/companies/rahns-rahns** | |
| | Manhole Section (RC) | ----- |
| **SCRCR 15** | **Scranton Craftsmen, Inc., 930 Dunmore Street, Troop, PA 18512 http://www.scrantoncraftsmen.com/** | |
| | Manhole Section (RC) | ----- |
| **STOCO 15** | **Stone and Company, 1718 Roseytown Road, Greensburg, PA 15601 http://stoneconcrete.com/** | |
| | Manhole Section (RC) | 2013-213QA |

# Section 714: Precast Concrete Products

## 714.2 Manhole Sections (Reinforced Concrete)

Last Revised: 9/14/2020

For Sanitary Sewer Manholes, see Standard Drawing RC-38M (Publication 72M)

For Storm Water Manholes, see Standard Drawing RC-39M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| TERH0 15 Plant | **Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/**<br>**PLANT #2: P.O. Box 10 Terre Hill, PA 17581** | | |
| | Manhole Section (RC) | | ----- |
| TERH1 15 Plant | **Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/**<br>**PLANT #4: 42 South Butler Road Lebanon, PA 17042** | | |
| | Manhole Section (RC) | | ----- |
| WINEC 15 | **Wine Concrete Products, Inc., 1000 Big Sewickley Creek Road, Sewickley, PA 15143** | | |
| | Manhole Section (RC) | | ----- |

## 714.2 Median Barrier (Temporary and Permanent)

Last Revised: 8/25/2017

Concrete Median Barrier: Standard Drawing of Concrete Median Barrier RC -57M (Publication 72M)

Single Face Concrete Barrier: Standard Drawing of Single Face Concrete Barrier RC-58M (Publication 72M)

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| BRAYP 15 | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/**<br>***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | |
| | 41" Single Face (RC 58M) | | 2015-004QB |
| CONCR 15 | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Median Barrier (Temporary and Permanent)

Last Revised: 8/25/2017

Concrete Median Barrier: Standard Drawing of Concrete Median Barrier RC -57M (Publication 72M)

Single Face Concrete Barrier: Standard Drawing of Single Face Concrete Barrier RC-58M (Publication 72M)

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONSS 15** | **Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | |
| | 32" Double Face with JJ Hook | | ----- |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | |
| | 32" Double Face with JJ Hook | | ----- |
| | 32" Double Face with JJ Hook (MASH) | | 2013-194QC |
| | 32" Double Face-I Beam (NJ/NY) non-structure mounted | 20' NYS I-Beam, NJ Shape Only | 2017-095 |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Median Barrier (Temporary and Permanent)

Last Revised: 8/25/2017

Concrete Median Barrier: Standard Drawing of Concrete Median Barrier RC -57M (Publication 72M)

Single Face Concrete Barrier: Standard Drawing of Single Face Concrete Barrier RC-58M (Publication 72M)

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | | |
| | 32" Double Face with JJ Hook | | ----- |
| | 32" Double Face with JJ Hook (MASH) | | 2013-194QB |
| | 32" Double Face-I Beam (NJ/NY) non-structure mounted | 20' NYS I-Beam, NJ Shape Only | 2017-028 |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **GCLI- 15** | **GCL, Inc., 2559 Brandt School Road, Heritage Center, Suite 200, Wexford, PA 15090 http://cambergroup.com/gclinc.htm** | | |
| | 34"/32" Double Face (RC 57M) | | 2010-069Q |
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | | |
| | 32" Double Face-I Beam (NJ/NY) non-structure mounted | 20' NYS I-Beam, NJ Shape Only | 2014-266QB |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **J&RS1 15** | **Slaw Precast, J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/**<br>***Note: Previously assigned J&RS2 15 for same facility*** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |
| | 41" Single Face (RC 58M) | | ----- |
| **JERPC 15** | **Jersey Precast Corporation, 853 Nottingham Way, Hamilton Township, NJ 08638 http://jerseyprecast.com/** | | |
| | 34"/32" Double Face (RC 57M) | | 2006-230Q |

# Section 714: Precast Concrete Products

## 714.2 Median Barrier (Temporary and Permanent)

Last Revised: 8/25/2017

Concrete Median Barrier: Standard Drawing of Concrete Median Barrier RC -57M (Publication 72M)

Single Face Concrete Barrier: Standard Drawing of Single Face Concrete Barrier RC-58M (Publication 72M)

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | |
| | 34"/32" Double Face (RC 57M) | | 2008-132Q |
| | 41" Single Face (RC 58M) | | 2013-083Q |
| **NITT1 15** | **Nitterhouse Concrete Products Inc., P. O. Box N, Chambersburg, PA 17201 http://nitterhouseconcrete.com/** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |
| **NORPR 15** | **Northeast Precast, 92 Reese Road, Millville, NJ 08332 http://www.northeastprecast.com/** | | |
| | 32" Double Face-I Beam (NJ/NY) non-structure mounted | 20' NYS I-Beam, NJ Shape Only | 2012-118A |
| **OLP-1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx** | | |
| | 34"/32" Double Face (RC 57M) | | ----- |
| **WHICO 15** | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/** | | |
| | 32" Double Face with JJ Hook | | 2011-187Q |

## 714.2 Sound Barrier

Last Revised: 12/27/2018

Standard Drawing BC-776M/BD-676M - Standard Ground Mounted Sound Barriers Precast Concrete Panels

Standard Drawing BC-777M/BD-677M - Standard Ground Mounted Sound Barriers Precast Concrete Posts

Standard Drawing BC-779/BD-679 - Standard Structured Mounted Sound Barrier Walls

Standard Drawing BC-780M/BD-680M - Standard Offset Sound Barrier Walls; Precast Concrete Standard Panel Details

| Product | Name | Ref. No. |
|---|---|---|

## Section 714: Precast Concrete Products

### 714.2 Sound Barrier

Last Revised: 12/27/2018

Standard Drawing BC-776M/BD-676M - Standard Ground Mounted Sound Barriers Precast Concrete Panels

Standard Drawing BC-777M/BD-677M - Standard Ground Mounted Sound Barriers Precast Concrete Posts

Standard Drawing BC-779/BD-679 - Standard Structured Mounted Sound Barrier Walls

Standard Drawing BC-780M/BD-680M - Standard Offset Sound Barrier Walls; Precast Concrete Standard Panel Details

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ARMTC 15** | **Armtec, 51 Arthur Sreet South, Mitchell N0K 1NO https://www.armtec.com/**<br>***Effective 12/1/18, name change back to Durisol (DURIS 15)*** | | |
| | Sound Barrier Panel | | 2009-133Q |
| | Sound Barrier Post (Precast) | | 2009-133Q |
| **BRAYP 15** | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/**<br>***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | |
| | Sound Barrier Panel | | 2012-170Q |
| | Sound Barrier Post (Precast) | | 2014-074Q |
| **CONAW 15** | **Conewago Precast Building Systems, 576 Edgegrove Road, P.O. Box 461, Hanover, PA 17331 http://www.conewago.com/capabilities/precast-concrete/** | | |
| | Sound Barrier Panel | | 2010-241Q |
| | Sound Barrier Post (Precast) | | ----- |
| **CONPG 15** | **Eastern Concrete Products DBA U.S. Concrete Precast Group, 3369 Paxtonville Road, Middleburg, PA 17842 http://eastern-concrete.com/**<br>***Formerly Architectural Precast US Concrete Div. (ARCPR 15)*** | | |
| | Sound Barrier Panel | | 2009-166Q |
| **CONSS 15** | **Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/** | | |
| | Sound Barrier Panel | | ----- |
| | Sound Barrier Post (Precast) | | ----- |

## Section 714: Precast Concrete Products

### 714.2 Sound Barrier

Last Revised: 12/27/2018

Standard Drawing BC-776M/BD-676M - Standard Ground Mounted Sound Barriers Precast Concrete Panels

Standard Drawing BC-777M/BD-677M - Standard Ground Mounted Sound Barriers Precast Concrete Posts

Standard Drawing BC-779/BD-679 - Standard Structured Mounted Sound Barrier Walls

Standard Drawing BC-780M/BD-680M - Standard Offset Sound Barrier Walls; Precast Concrete Standard Panel Details

| Product | Name | Ref. No. |
|---|---|---|
| **DURIS 15 Plant** | **Durisol, 8270 Greensboro Drive, Suite 810, McLean, VA 22102 http://www.durisol.com**<br>**51 Arthur Street South Mitchell, ON Canada NOK 1NO**<br>***(Formerly Armtec - ARMTC 15)*** | |
| | Sound Barrier Panel | 2009-133Q |
| | Sound Barrier Post (Precast) | 2009-133Q |
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | |
| | Sound Barrier Panel | ----- |
| | Sound Barrier Post (Precast) | ----- |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | |
| | Sound Barrier Panel | ----- |
| | Sound Barrier Post (Precast) | ----- |
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | |
| | Sound Barrier Panel | 2010-105Q |
| | Sound Barrier Post (Precast) | 2010-105Q |
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | |
| | Sound Barrier Panel | 2012-178Q |

## Section 714: Precast Concrete Products

### 714.2 Sound Barrier

Last Revised: 12/27/2018

Standard Drawing BC-776M/BD-676M - Standard Ground Mounted Sound Barriers Precast Concrete Panels

Standard Drawing BC-777M/BD-677M - Standard Ground Mounted Sound Barriers Precast Concrete Posts

Standard Drawing BC-779/BD-679 - Standard Structured Mounted Sound Barrier Walls

Standard Drawing BC-780M/BD-680M - Standard Offset Sound Barrier Walls; Precast Concrete Standard Panel Details

| | Product | Name | Ref. No. |
|---|---|---|---|
| **J&RS1 15** | **Slaw Precast, J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/**<br>***Note: Previously assigned J&RS2 15 for same facility*** | | |
| | | Sound Barrier Panel | ----- |
| | | Sound Barrier Post (Precast) | ----- |
| | | Sound Barrier Post (Prestressed) | ----- |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | |
| | | Sound Barrier Panel | 2008-180Q |
| | | Sound Barrier Post (Precast) | 2008-180Q |
| **MILL0 15** | **A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/** | | |
| | | Sound Barrier Panel | ----- |
| | | Sound Barrier Post (Precast) | ----- |
| **NITT1 15** | **Nitterhouse Concrete Products Inc., P. O. Box N, Chambersburg, PA 17201 http://nitterhouseconcrete.com/** | | |
| | | Sound Barrier Panel | ----- |
| | | Sound Barrier Post (Precast) | ----- |
| **NORPP 15** | **Northeast Prestressed Products LLC, 121 River Street, Cressona, PA 17929-1133 http://www.npp-llc.com/** | | |
| | | Sound Barrier Panel | ----- |
| | | Sound Barrier Post (Precast) | ----- |

## Section 714: Precast Concrete Products

### 714.2 Sound Barrier

Last Revised: 12/27/2018

Standard Drawing BC-776M/BD-676M - Standard Ground Mounted Sound Barriers Precast Concrete Panels

Standard Drawing BC-777M/BD-677M - Standard Ground Mounted Sound Barriers Precast Concrete Posts

Standard Drawing BC-779/BD-679 - Standard Structured Mounted Sound Barrier Walls

Standard Drawing BC-780M/BD-680M - Standard Offset Sound Barrier Walls; Precast Concrete Standard Panel Details

| | Product | Name | Ref. No. |
|---|---|---|---|
| **WILLA 15** | **K. J. Williams Concrete Company, Inc., P.O. Box 5137, Cresaptown, MD 21505-5137** | | |
| **Plant** | **15213 McMullen Highway S.W. Cumberland, MD 21502** | | |
| | Sound Barrier Panel | | ----- |
| | Sound Barrier Post (Precast) | | ----- |

### 714.2 Temporary Concrete Barrier, Structure Mounted (BC 719)

Last Revised: 5/19/2015

Note: Approved Bridge and Structure Products

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CONSS 15** | **Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/** | | |
| | 32" Double Face | | ----- |
| | 42" Single Face | | ----- |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | |
| | 32" Double Face | | ----- |
| | 42" Single Face | | ----- |
| | 50" Double Face | | ----- |

# Section 714: Precast Concrete Products

## 714.2 Temporary Concrete Barrier, Structure Mounted (BC 719)

**Last Revised: 5/19/2015**

Note: Approved Bridge and Structure Products

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | |
| | 32" Double Face | | ----- |
| | 42" Single Face | | ----- |
| | 50" Double Face | | ----- |
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | | |
| | 32" Double Face | | ----- |
| | 42" Single Face | | ----- |
| | 50" Double Face | | ----- |
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | | |
| | 32" Double Face | | ----- |
| | 42" Single Face | | ----- |
| | 50" Double Face | | ----- |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | |
| | 32" Double Face | | 2012-014Q |

## 714.6 Fabrication

**Last Revised: 12/14/2016**

Standard Drawing of Vertical Adjustment Device on Steel Beam/Girder BC-775M - Sheet 3 of 3 (Publication 219M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **THOMC 15** | **Thompson Machine Company, 1128 N. Fourth Ave., Altoona, PA 16601** | | |
| | Vertical Adjustment Device | | 2015-171Q |

## Section 721: Calcium Chloride

### 721 Calcium Chloride, AASHTO M144

Last Revised: 7/8/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **GENER 15** | **General Chemical Group, 90 East Halsey Road, Parsippany, NJ 07054 http://www.genchem.com/** | | |
| | Calcium Chloride, Type S, Grade 1, Class A or B | CaCl Flake 77-80% | 2000-141Q |
| **OCCCC 15 Plant** | **Occidental Chemical Corporation, P.O. Box 809050, Dallas, TX 75380 http://www.oxy.com/OurBusinesses/Chemicals/Pages/default.aspx 1600 South Madison Street Ludington, MI 49431** | | |
| | Calcium Chloride, Type S, Grade 1, Class A or B | DOWFLAKE 83-87% | ------ |
| | Calcium Chloride, Type S, Grade 1, Class A or B | LIQUIDOW 30-42% | 1992-345 |
| **TETRA 15** | **TETRA Technologies, Inc., 25025 Interstate 45N, P. O. Box 73087, The Woodlands, TX 77380 http://www.tetratec.com/** | | |
| | Calcium Chloride, Type S, Grade 1, Class A or B | | 1997-076 |

## Section 722: Sodium Chloride

### 722 Sodium Chloride, AASHTO M143 or ASTM D632

Last Revised: 9/14/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMERS 15** | **American Rock Salt Company, LLC, P.O. Box 190, Mount Morris, NY 14510 https://www.americanrocksalt.com/** | | |
| | Sodium Chloride, Type 1, Grade 1 | Hampton Corners, NY | 2000-109Q |
| **CARG0 15 Facility** | **Cargill, Inc., 24950 Country Club Blvd., Suite 450, North Olmsted, OH 44070 http://www.cargill.com/**<br>**Salt Mines: Avery Island, LA; Cleveland, OH; Lansing, NY** | | |
| | Sodium Chloride, Type 1, Grade 1 | Avery Island, LA | 1995-119 |
| | Sodium Chloride, Type 1, Grade 1 | Cleveland, OH | ----- |
| | Sodium Chloride, Type 1, Grade 1 | Lansing, NY | ----- |
| **COMMC 15** | **Compania Minera Cordillera SCM, Providencia 2653, Office 702, 7510015 Santiago, Chile** | | |
| | Sodium Chloride, Type 1, Grade 1 | Salar Grande, Iquique, Chile | 2009-157Q |
| **DETSC 15** | **Detroit Salt Co., 12841 Sanders Street, Detroit, MI 48217 http://detroitsalt.com/** | | |
| | Sodium Chloride, Type 1, Grade 1 | Detroit, MI | 2013-079Q |
| **DETST 15 Terminal** | **Detroit Salt Co., 12841 Sanders St, Detroit, MI 48217 http://detroitsalt.com/**<br>**Kinder Morgan Bulk Terminal 1000 South Port Road Fairless Hills, PA 19030** | | |
| | Sodium Chloride, Type 1, Grade 1 | Siwa and Quattara, Egypt | 2018-050Q |
| **HAVN1 15 Terminal** | **Haven Salt Company LLC, 409 North State Street, Clarks Summit, PA 18411**<br>**Kinder Morgan Bulk Terminals 1 Sinter Road Fairless Hills, PA 19030** | | |
| | Sodium Chloride, Type 1, Grade 1 | Rio de Janeiro, Brazil | 2017-189Q |
| **HOOPS 15** | **Hoopes Fertilizer Works, Inc., 9866 Freshley Ave., NE, Alliance, OH 44601** | | |
| | Sodium Chloride, Type 1, Grade 1 | Ice Bite 55 | 2008-190 |
| | *Anti-foaming agent, AE-30-FGK, can be added per manufacturer recommendations, Univar USA Mfg.*<br>*Conditionally approved as an alternate per the manufacturer's specifications.* | | |

## Section 722: Sodium Chloride

### 722 Sodium Chloride, AASHTO M143 or ASTM D632

Last Revised: 9/14/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MORTS 15** | **Morton Salt Company, 123 North Wacker Drive, Chicago, IL 60606 http://www.mortonsalt.com/** | | |
| | Sodium Chloride, Type 1, Grade 1 | Fairport, OH | ----- |
| | Sodium Chloride, Type 1, Grade 1 | Weeks Island, LA | ----- |
| | Sodium Chloride, Type 1, Grade 1 | Windsor, Ontario | 2001-011Q |
| **NAMSC 15** | **Compass Minerals America Inc., 9900 W 109th St, Suite 600, Overland Park, KS 66210 http://www.nasalt.com/**<br>***Formerly North American Salt Company*** | | |
| | Sodium Chloride, Type 1, Grade 1 | Cote Blanche, LA | 1995-122B |
| | Sodium Chloride, Type 1, Grade 1 | Goderich, Ontario | 1995-122A |
| **POTAH 15** | **Potash Corporation, 1101 Skokie Boulevard, Northbrook, IL 60062 http://www.potashcorp.com/** | | |
| | Sodium Chloride, Type 1, Grade 1 | Sussex, New Brunswick, Canada E4E 5L2 | 2013-116Q |
| **RIVERT15 Terminal** | **Riverside Construction Materials, 355 Newbold Road, Fairless Hills, PA 19030**<br>**7900 N. Radcliffe Street Bristol, PA 19007** | | |
| | Sodium Chloride, Type 1, Grade 1<br>*Provisionally approved.* | Siwa, Egypt | 2018-089Q |
| **SOCPD 15** | **K + S Chile S. A., Av. Tajamar 183, Piso 6, Las Condes, Santiago, Chile**<br>***Formerly Sociedad Punta de Lobos S.A. (SOCPD 15)*** | | |
| | Sodium Chloride, Type 1, Grade 1 | Las Condes, Santiago, Chile | 2005-060Q |

## Section 723: Hydrated Lime

### 723 Hydrated Lime, ASTM C207

Last Revised: 7/8/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CARML 15** | **Carmeuse Lime Company, Inc., Route 422 & Clear Springs Road, Annville, PA 17003 https://www.carmeuse.com/na-en** | | |
| **Plant** | **Route 422 & Clear Springs Road Annville, PA 17003** | | |
| | Hydrated Lime, Type N | | 2002-036Q |
| **GRAYM 15** | **Graymont (PA), Inc., 965 East College Ave., Pleasant Gap, PA 16823 https://www.graymont.com/en/locations/lime-plants/eastern-us/lime-plant/pleasant-gap** | | |
| | Hydrated Lime, Type N | | 1988-128 |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **ASHVE 15 Plant** | **Ash Venture, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.ashventurellc.com/ Belews Creek Power Station 3193 Pine Hall Road Belews Creek, NC 27009** | | | | |
| | Fly Ash, Class F | ProAsh, Belews Creek Power Station | Belews Creek | NC | 2014-187Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **ASHVR 15 Plant** | **Ash Venture, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.ashventurellc.com/ Roxboro Plant 1514 Dunnaway Road Semora, NC 27343** | | | | |
| | Fly Ash, Class F | ProAsh, Roxboro Plant | Semora | NC | 2016-026Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **BASFK 15 Plant** | **BASF, Kaolin, 11501 Steel Creek Rd., Charlotte, NC 28273 http://www.kaolin.basf.com/ McIntyre, GA** | | | | |
| | Fly Ash, Class N | MetaMax | McIntyre | GA | 2014-218M |
| **CEMEXA15 Terminal** | **CEMEX, Inc., 10100 Katy Freeway, Suite 300, Houston, TX 77043 http://www.cemexusa.com/ 200-B Neville Island Pittsburgh, PA 15225** | | | | |
| | Fly Ash, Class C | Labadie Power Plant (MINR1 2005-083) | Labadie | MO | 2014-261Q |
| **CEMEXB15 Terminal** | **CEMEX, Inc., 10100 Katy Freeway, Suite 300, Houston, TX 77043 http://www.cemexusa.com/ 200-B Neville Island Pittsburgh, PA 15225** | | | | |
| | Fly Ash, Class C | Rush Island Power Plant (MINR1 2001-138) | Festus | MO | 2011-098Q |
| **CEMEXC15 Terminal** | **CEMEX, Inc., 10100 Katy Freeway, Suite 300, Houston, TX 77043 http://www.cemexusa.com/ 200-B Neville Island Pittsburgh, PA 15225** | | | | |
| | Fly Ash, Class F | IPL Petersburg Generation Station (MINR1) | Petersburg | IN | 2005-050Q |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **CHAR1 15 Plant** | **Charah, Inc., 12601 Plantside Drive, Louisville, KY 40299 http://charah.com North Bend, OH** | | | | |
| | Fly Ash, Class F | Miami Fort Station (Dynegy, Inc.) | North Bend | OH | 2002-175Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate. Plant is operated by Dynegy, Inc. Quality control testing of the fly ash is performed by Charah, Inc. (Formerly operated by Cinergy Corporation - CINER 15)* | | | | |
| **CHAR2 15 Plant** | **Charah, Inc., 12601 Plantside Drive, Louisville, KY 40299 http://charah.com Moscow, OH** | | | | |
| | Fly Ash, Class F | Zimmer Power Station (Dynegy, Inc.) | Moscow | OH | 2003-052Q |
| | *Plant is operated by Dynegy, Inc. Quality control testing of the fly ash is performed by Charah, Inc.* | | | | |
| **CRH-3 15 Terminal** | **CRH Canada Group Inc. (To be renamed Ash Grove, effective 7/6/20), 2300 Steeles Avenue West, 4th Floor, Concord Ontario Canada L4K 5X6 https://www.ashgrove.com/ Ash Grove Cement Terminal Dundee, CRH US 15225 Day Road Dundee, MI 48131** | | | | |
| | Fly Ash, Class C | DTE Belle River Power Plant (Detroit Edison) | Dundee | MI | 2015-003Q |
| **ENELP 15 Plant** | **Enel Produzione SpA, Viale Regina Margherita, 125, Roma 00198 Via Aurelia Nord 32 Civitavecchia** | | | | |
| | Fly Ash, Class F | Civitavecchia, Italy | Civitavecchia | Italy | 2016-108Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **FAD2 15 Plant** | **WM FlyAshDirect, 4228 Airport Road, Cincinnati, OH 45226 http://www.flyashdirect.com/ Letart, WV** | | | | |
| | Fly Ash, Class F | Mountaineer Power Plant (American Electric Power) | Letart | WV | 2018-002Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **FLYAD 15 Plant** | **WM FlyAshDirect, 4228 Airport Road, Cincinnati, OH 45226 http://www.flyashdirect.com/ Winfield, WV** | | | | |
| | Fly Ash, Class F | John E. Amos Plant (Operated by Appalachian Power, subsidiary of American Electric Power) | Winfield | WV | ----- |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **HEADWA15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Quinton, AL** | | | | |
| | Fly Ash, Class C | Miller Power Station (Alabama Power) | Quinton | AL | 2008-143Q |
| **HEADWB15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Baldwin, IL** | | | | |
| | Fly Ash, Class C | Dynegy-Baldwin Power Station | Baldwin | IL | 2005-072Q |
| **HEADWG15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Maidsville, WV** | | | | |
| | Fly Ash, Class F | Fort Martin Power Station | Maidsville | WV | 1986-312 |
| | *(Allegheny Power) Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **HEADWH15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Stratton, OH** | | | | |
| | Fly Ash, Class F | W. H. Sammis Power Plant | Stratton | OH | 1997-146Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **HEADWJ15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Washingtonville, PA** | | | | |
| | Fly Ash, Class F | Washingtonville, PA (Harvested Fly Ash) | Washingtonville | PA | 2018-165Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **HEADWL15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Labadie, MO** | | | | |
| | Fly Ash, Class C | Labadie Power Plant | Labadie | MO | 2005-083Q |
| **HEADWM15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Fetus, MO** | | | | |
| | Fly Ash, Class C | Rush Island Power Plant | Festus | MO | 2001-138Q |
| **HEADWP15 Plant** | **Boral Resources (formerly Headwaters Resources, Inc.), 10701 S. River Front Parkway, Suite 300, South Jordan, UT 84095 https://www.boral.com/ Moundsville, WV** | | | | |
| | Fly Ash, Class F | AEP Mitchell Power Plant | Moundsville | WV | 2019-058Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **HOLI0 15** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/** | | | | |
| | Fly Ash, Class C | Detroit Edison Belle River Power Plant | China Township | MI | 2014-046Q |
| | *Available Alkalis = 5.00%* | | | | |
| **LAFRA 15 Plant** | **Lafarge North America, 20408 West Renwick Road, Lockport, IL 60441-0089 https://www.lafargeholcim.us/ Rockport, IN** | | | | |
| | Fly Ash, Class C | American Electric Power | Rockport | IN | 1992-052 |
| **LAFRB 15 Plant** | **Lafarge North America, 20408 West Renwick Road, Lockport, IL 60441-0089 https://www.lafargeholcim.us/ Northampton, PA** | | | | |
| | Fly Ash, Class C | Federal White's Skyline, Lafarge Terminal | Northampton | PA | ----- |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **LAFRC 15 Terminal** | **Lafarge North America, 20408 West Renwick Road, Lockport, IL 60441-0089 https://www.lafargeholcim.us/ Harrisburg, PA** | | | | |
| | Fly Ash, Class C | Pennsy Supply, Paxton Street Lafarge Terminal | Harrisburg | PA | ----- |
| **RIVERT15 Terminal** | **Riverside Construction Materials, 355 Newbold Road, Fairless Hills, PA 19030 7900 N. Radcliffe Street Bristol, PA 19007** | | | | |
| | Fly Ash, Class F | Enel Produzione SpA | Civitavecchia | Italy | 2016-087Q |
| | *Terminal for ENELP 2016-108Q. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **SEFA1 15** | **The Sefa Group, 217 Cedar Road, Lexington, SC 29073 http://sefagroup.com/** | | | | |
| | Fly Ash, Class F | Keystone Generating Station | Shelocta | PA | 2016-028Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **SEFA2 15** | **The Sefa Group, 217 Cedar Road, Lexington, SC 29073 http://sefagroup.com/** | | | | |
| | Fly Ash, Class F | Star GenOn Morgantown Generating Station | Newburg | MD | 2011-268Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **STECHA15** | **Separation Technologies, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.proash.com/** | | | | |
| | Fly Ash, Class F | Brunner Island Steam Electric Station (PP&L) | York Haven | PA | ----- |
| | *Flowable Fill* | | | | |
| **STECHB15** | **Separation Technologies, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.proash.com/** | | | | |
| | Fly Ash, Class F | ProAsh (Brandon Shores Wagner Station) | Baltimore | MD | 2006-028Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.2(b) Fly Ash (For Use with Cement Concrete - AASHTO M295)

**Last Revised: 8/4/2020**

Fly ash manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7012 form for fly ash material should be recorded on this spreadsheet: **Fly Ash Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **STECHC15** | **Separation Technologies, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.proash.com/** | | | | |
| | Fly Ash, Class F | ProAsh (Longview Power Plant) | Maidsville | WV | 2016-144Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **STECHD15** | **Separation Technologies, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.proash.com/** | | | | |
| | Fly Ash, Class F | ProAsh (PP&L Generation, Brunner Island Station) | York Haven | PA | 2006-031Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **STECHT15 Terminal** | **Separation Technologies, LLC, 188 Summerfield Court, Suite 101, Roanoke, VA 24019 http://www.proash.com/ Bruner Island 1400 Wago Road York Haven, PA 17370** | | | | |
| | Fly Ash, Class F | ProAsh (Longview Power Plant) | Maidsville | WV | 2016-146Q |
| | *Terminal for STECH 2016-144Q. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **ARGO3 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ Bessemer, PA** | | | | |
| | ***Formerly Essroc Materials, Inc. (ESS-6 15)*** | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **ARGO3 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ Bessemer, PA** | | | | |
| | ***Formerly Essroc Materials, Inc. (ESS-6 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | Lehigh Slag Cement, GGBFS (ALLCEM) (Plant Ref. No. 2006-008) | Middlebranch | OH | 2010-022QC |
| | *Former product names: i.tech Slag & Essroc Slag. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **ARGO4 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ 500 West Park Road Leetsdale, PA 15056** | | | | |
| | ***Formerly Essroc Materials, Inc. (ESS10 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | SuperCem Adana, Grade 100 (Source: Iskenderun, Turkey) | Chesapeake | VA | 2018-028Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **ARGO5 15 Terminal** | **Argos USA, 3015 Windward Plaza, Windward Fairways II, Suite 300, Alpharetta, GA 30005 https://www.argos.co/usa/ Curtis Bay Terminal 5700 Chemical Road Baltimore, MD 21226-5700** | | | | |
| | ***Formerly Essroc Materials, Inc. (ESS16 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | Lehigh Slag Cement (Plant Ref. No. 2000-300Q) | Camden | NJ | 2016-034Q |
| | *Former product name: i.tech Slag. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| | Blast Furnace Slag, Grade 120 | Lehigh Slag Cement (Plant Ref. No. 2008-007Q) | Camden | NJ | 2016-034Q |
| | *Former product name: i.tech Slag. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **CRH-4 15 Plant** | **CRH Canada Group Inc. (To be renamed Ash Grove, effective 7/6/20), 2300 Steeles Avenue West, Concord, Ontario L4K 5X6 https://www.ashgrove.com/ 2391 Lakeshore Road West Mississauga, Ontario L5J 1K1** | | | | |
| | Blast Furnace Slag, Grade 100 | Ash Grove Slag Cement | Mississauga | Ontario | 2000-087Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate. (Formerly CRH Slag Cement)* | | | | |
| **HOLI1 15 Terminal** | **Holcim (US) Inc. d/b/a LafargeHolcim US, 8700 West Bryn Mawr Avenue, Chicago, IL 60631 https://www.lafargeholcim.us/ Tarentum Terminal 445 Grantham Street Tarentum, PA 15084** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Cement (Plant Ref. No. 2009-094) | Chicago | IL | 2009-194Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| | *Purchased by Skyway Cement Company with effective date of July 11th, 2015 and supplier code of SKYC1 15.* | | | | |
| **LAFR1115 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Sparrows Point Cement Plant 2001 Wharf Road Baltimore, MD 21219** | | | | |
| | Blast Furnace Slag, Grade 100 | NewCem 100 | Baltimore | MD | 1993-213 |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| | Blast Furnace Slag, Grade 120 | NewCem 120 | Baltimore | MD | 1993-230 |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **LAFR1515 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ South Chicago Cement Terminal/Slag 2150 East 130th Street Chicago, IL 60633** | | | | |
| | Blast Furnace Slag, Grade 120 | NewCem 120 | Chicago | IL | 2003-002Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **LAFR1715 Terminal** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Pittsburg Terminal 1529 Chartiers Avenue Pittsburgh, PA 15204** | | | | |
| | Blast Furnace Slag, Grade 120 | NewCem 120, (Plant Ref. No. 1993-230) | Baltimore (Sparrows Point) | MD | 1993-230 |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **LAFR1815 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Woodstock, Ontario** | | | | |
| | Blast Furnace Slag, Grade 100 | NewCem 100 | Woodstock | Ontario | 2018-100Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **LAFR2 15 Terminal** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Cleveland Cement Terminal/Slag 2500 Elm Street Cleveland, OH 44113** | | | | |
| | Blast Furnace Slag, Grade 120 | NewCem 120 | Chicago | IL | 2006-234Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **LEH-3 15 Plant** | **Lehigh Cement Company, LLC, 537 Evansville Road, Fleetwood, PA 19522 http://www.lehighhanson.com/ Evansville Plant, Fleetwood, PA** | | | | |
| | Blast Furnace Slag, Grade 120 | Lehigh Slag Cement GGBFS (ALLCEM) | Evansville | PA | 2001-058Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **LEH-4 15 Terminal** | **Lehigh Cement Company, LLC, 100 Woodlawn Road, Aliquippa, PA 15001-5404 http://www.lehighhanson.com/ Aliquippa, PA** | | | | |
| | Blast Furnace Slag, Grade 120 | Lehigh Slag Cement, GGBFS (ALLCEM) | Evansville | PA | 2011-035Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate. [Terminal for LEH-3 15, Ref. No. 2001-058Q]* | | | | |
| **LEH15 15 Plant** | **Lehigh Cement Company, LLC, 595 Morgan Blvd, Camden, NJ 08104 http://www.lehighhanson.com/ 595 Morgan Blvd Camden, NJ 08104** ***(Formerly Essroc ESS15 15)*** | | | | |
| | Blast Furnace Slag, Grade 120 | Lehigh Slag Cement, GGBFS (ALLCEM) | Camden | NJ | 2008-007Q |
| | *Former product names: i.tech Slag & GranCem Cement. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **LEH16 15 Terminal** | **Lehigh Cement Company, LLC, 8282 Middlebranch Road, Middlebranch, OH 44652 http://www.lehighhanson.com/ [Slag Plant, Cement Terminal] Middlebranch, OH 44652** ***(Formerly Essroc ESS-4 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | Lehigh Slag Cement GGBFS (ALLCEM) | Middlebranch | OH | 2006-008Q |
| | *Former product names: i.tech Slag & Essroc Slag. Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate. NOTE: The Middlebranch, OH plant (LEH16 15) supplies Grade 100 Blast Furnace Slag to the ARGO3 15 (Bessemer, PA) and ARGO4 15 (Leetsdale, PA) terminals.* | | | | |
| **SKYC1 15 Plant** | **Skyway Cement Company, 1717 North Naper Blvd., Suite 111, Naperville, IL 60563 http://skywaycement.com/ 3020 East 103rd Street Chicago, IL 60617** ***Formerly Holcim (HOLI0 15, HOLI1 15, and HOLI9 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Cement | Chicago | IL | 2009-094Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **SKYC2 15 Terminal** | **Skyway Cement Company LLC, 1717 North Naper Blvd., Suite 111, Naperville, IL 60563 http://skywaycement.com/ 445 Grantham Street Tarentum, PA 15084** ***Leased cement terminal from Holcim (HOLI1 15)*** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Cement | Chicago | IL | 2009-194Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **SKYC3 15 Terminal** | **Skyway Cement Company LLC, 1717 North Naper Blvd., Suite 111, Naperville, IL 60563 http://skywaycement.com/ Crafton Yard Terminal Pittsburgh, PA** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Slag Cement (Plant Ref. No. 2009-094) | Chicago | IL | 2017-136Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate. Material is stored in a leased silo from LafargeHolcim (LAFR1715). Note: Skyway Cement Company's Bill of Ladings for SKYC3 15 are signed by LafargeHolcim terminal employees.* | | | | |

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.3 Ground Granulated Blast Furnace Slag (GGBFS) for Cement Partial Replacement

**Last Revised: 3/9/2020**

AASHTO M302 (ASTM C989), Grade 100 or 120

Ground Granulated Blast Furnace Slag (GGBFS) manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7013 form for GGBFS material should be recorded on this spreadsheet: **GGBFS Statistical Data Spreadsheet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **SKYC4 15 Terminal** | **Skyway Cement Company LLC, 1717 North Naper Blvd., Suite 111, Naperville, IL 60563 http://skywaycement.com/ Columbus Terminal 220 Walnut Street Blacklick, OH 43004** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Cement (Plant Ref. No. 2009-094) | Chicago | IL | 2017-227Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **SKYC5 15 Terminal** | **Skyway Cement Company LLC, 1717 North Naper Blvd., Suite 111, Naperville, IL 60563 http://skywaycement.com/ 315 Poplar Street Etna, PA 15223** | | | | |
| | Blast Furnace Slag, Grade 100 | Skyway Cement (Plant Ref. No. 2009-094) | Chicago | IL | 2018-145Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **STMC4 15 Plant** | **St. Marys Cement, 9333 Dearbourn Street, Detroit, MI 48209 http://www.stmaryscement.com/saintmaryscementinc/ Detroit, MI** | | | | |
| | Blast Furnace Slag, Grade 100 | Cemplus | Detroit | MI | 2006-007Q |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |
| **STMC6 15 Terminal** | **St. Marys Cement, 250 Jefferson Street, Cleveland, OH 44113 http://www.stmaryscement.com/saintmaryscementinc/ Cleveland, OH** | | | | |
| | Blast Furnace Slag, Grade 100 | Cemplus | Detroit | MI | 2008-117QB |
| | *Acceptable for use in concrete mixes to reduce alkali silica reactivity of aggregate.* | | | | |

### 724.4 Silica Fume (AASHTO M307)

**Last Revised: 10/20/2020**

Silica fume manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7014 form for silica fume material should be recorded on this spreadsheet. **Silica Fume Statistical Data Spreadsheeet**

On a monthly basis, completed spreadsheet(s) should be sent to: **RA-pdCementLab@pa.gov**

## Section 724: Pozzolans - Supplementary Cementitious Materials

### 724.4 Silica Fume (AASHTO M307)

Last Revised: 10/20/2020

Silica fume manufacturers listed in Bulletin 15 are required to submit monthly production test data in an Excel spreadsheet format. All the tests required on the PennDOT TR-7014 form for silica fume material should be recorded on this spreadsheet. Silica Fume Statistical Data Spreadsheeet

On a monthly basis, completed spreadsheet(s) should be sent to: RA-pdCementLab@pa.gov

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **GCPRED15 Plant** | **GCP Applied Technologies, 62 Whittemore Avenue, Cambridge, MA 02140 80 County Road 210 Burnsville, MS 38833** | | | | |
| | Silica Fume | Force 10,000 D (densified) | Burnsville | MS | 2017-143Q |
| **NORC1 15 Plant** | **Norchem, Inc., 985 Seaway Drive, Suite A, Fort Pierce, FL 34949-2744 https://www.norchem.com/ West Virginia Manufacturing Route 60 East Alloy, WV 25002** | | | | |
| | Silica Fume | Chryso DSF | Alloy | WV | 2019-204Q |
| | Silica Fume | Eucon MSA | Alloy | WV | 2019-204Q |
| | Silica Fume | Force 10,000 D | Alloy | WV | 2019-204Q |
| | Silica Fume | MasterLife SF 100 | Alloy | WV | 2019-204Q |
| | Silica Fume | Sikacrete 950 DP | Alloy | WV | 2019-204Q |
| | Silica Fume | Silica Fume | Alloy | WV | 2019-204Q |
| | *Silica fume from the Alloy, West Virginia source is also shipped from Norchem's packaging facility in Marietta, OH. Distributors of Norchem's silica fume include BASF Corporation, Euclid Chemical Company, GCP Applied Technologies, Sika Corporation, Acme, Advanced Cement Technology, Chryso, Fritz Pak, General Resource Technology - Mapei, Hydration Kontrol, Peregrine Chemical, Premiere Concrete Admixture, and RussTech.* | | | | |
| **REDMS 15 Plant** | **RED Industrial Products & Mississippi Silicon Partnership, 4 Village Park Drive, #110, Grove City, PA 16127 http://www.redindustrialproducts.com/ 80 County Road 210 Burnsville, MS 38833** | | | | |
| | Silica Fume | MasterLife SF 100 (densified) | Burnsville | MS | 2016-192Q |
| | Silica Fume | R-E-D Fume Concrete - 102 DM (densified) | Burnsville | MS | 2016-192Q |
| | Silica Fume | SikaCrete 950 DP (densified) | Burnsville | MS | 2016-192Q |

## Section 725: Lime Pozzolan

### 725 Lime Pozzolan

Last Revised: 5/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CARML 15 Plant** | **Carmeuse Lime Company, Inc., Route 422 & Clear Springs Road, Annville, PA 17003 https://www.carmeuse.com/na-en Route 422 & Clear Springs Road Annville, PA 17003** | | |
| | Lime Pozzolan | Envirolime | 2006-037QA |
| **MINTR 15 Facility** | **Mintek Resources, Inc., 3045 Rodenbeck Drive, Beavercreek, OH 45432 https://www.mintekresources.com/ Pleasant Gap, PA** | | |
| | Lime Pozzolan | Calciment | 2005-114Q |

## Section 735: Geotextiles

### 735.1(b) Class 1 Geotextile - Subsurface Drainage

Last Revised: 1/27/2020

Unless noted, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| HANG0 15 | **Hanes Geo Components, 815 Buxton Street, Winston-Salem, NC 27101 http://hanesgeo.com/** | | | |
| | Class 1 Geotextile (Woven Monofilament) | TerraTex EP-12 | GTX-2017-01-128 | 2016-274PL1 |
| PROP1 15 Plant | **Propex Operating Company, LLC, 4019 Industrial Drive, Chattanooga, TN 37416 http://www.propexglobal.com/ 4019 Industry Drive Chattanooga, TN 37416** | | | |
| | Class 1 Geotextile (Woven Monofilament) | GEOTEX 111F | GTX-2017-01-096 | 2017-063PL1 |
| SKA-3 15 Facility | **SKAPS Industries, 335 Athena Drive, Athens, GA 30601 http://www.skaps.com/ Mundra - 370421 Gujarat, India** | | | |
| | Class 1 Geotextile (Woven Monofilament) | M404 | GTX-2017-01-206 | 2017-311Q |
| TCGEO 15 Plant | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/ Pendergrass, GA & Cornelia, GA** | | | |
| | Class 1 Geotextile (Woven Monofilament) | Mirafi FW402 | GTX-2018-01-140 | 2016-264Q |
| THRL3 15 Facility | **Thrace Group, Marinou Antypa 20, Alimos, Greece https://www.thracegroup.com/us/en/companies/lumite/ Lumite 1515 North County Line Road Alto, Georgia 30510** | | | |
| | Class 1 Geotextile (Woven Monofilament) | GTF-400EO | GTX-2019-01-123 | 2016-199PL2 |
| WINFB 15 | **Willacoochee Ind. Fabrics, Inc, 769 West Main Street, P.O. Box 599, Willacoochee, GA 31650 http://winfabusa.com/** | | | |
| | Class 1 Geotextile (Woven Monofilament) | WINFAB 2197 | GTX-2017-01-139 | 2017-186Q |

### 735.1(b) Class 3, Type A & B Geotextiles - Sediment Control

Last Revised: 8/11/2020

Unless note, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| BELTN 15 | **Belton Industries, P.O. Box 127, Belton, SC 29627 http://www.beltonindustries.com/** | | | |
| | Class 3, Type B Geotextile (Woven Slit Film) | Beltech 940 | GTX-2013-01-059 | 2003-199Q |
| LANDM 15 | **L & M Supply Company, 1800 Springhead Church Road, P.O. Box 640, Willacoochee, GA 31650-0640 https://www.landmsupplyco.com/** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | LM 200 NT | GTX-2019-01-161 | 2016-036Q |

## Section 735: Geotextiles

### 735.1(b) Class 3, Type A & B Geotextiles - Sediment Control

Last Revised: 8/11/2020

Unless note, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **PROP3 15 Plant** | **Propex Operating Company, LLC, 4019 Industry Drive, Chattanooga, TN 37416 http://www.propexglobal.com/ 95 East Jefferson Street Hazlehurst, GA 31539** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | GEOTEX 200ST | GTX-2016-01-244 | 2017-055Q |
| | Class 3, Type B Geotextile (Woven Slit Film) | GEOTEX 2130 | GTX-2015-01-071 | 2017-056Q |
| **SKA-1 15** | **SKAPS Industries Nonwoven Division, 316 South Holland Drive, Pendergrass, GA 30567 http://www.skaps.com/** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | SW 200 | GTX-2016-01-266 | 2006-194Q |
| **SKA-2 15** | **SKAPS Industries Nonwoven Division, 335 Athena Drive, Athens, GA 30601 http://www.skaps.com/** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | SW 200 | GTX-2013-01-185 | 2009-085Q |
| **SKA-3 15 Facility** | **SKAPS Industries, 335 Athena Drive, Athens, GA 30601 http://www.skaps.com/ Mundra - 370421 Gujarat, India** | | | |
| | Class 3, Type B Geotextile (Woven Slit Film) | W100 | GTX-2016-01-264 | 2017-043Q |
| **TENC1 15 Facility** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/ Ahmedabad, India** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | Mirafi 500X | GTX-2016-01-175 | 2017-077Q |
| **THRL1 15** | **Thrace-LINQ, Inc., 2550 West 5th North Street, Summerville, SC 29483-9699 http://thracelinq.com/** | | | |
| | Class 3, Type B Geotextile (Woven Slit Film) | GTF-200S | GTX-2018-01-232 | 2016-203Q |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of GTF-200S.* | | | |
| **THRL2 15 Plant** | **Thrace Group, Marinou Antypa 20, Alimos, Greece https://www.thracegroup.com/us/en/ 20 Marinou Antypa str, 17455 Alimos, Athens, Greece** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | GTF-200 | GTX-2017-01-162 | 2017-149Q |
| | Class 3, Type B Geotextile (Woven Slit Film) | GTF-200 | GTX-2017-01-162 | 2017-149Q |
| **WINFB 15** | **Willacoochee Ind. Fabrics, Inc, 769 West Main Street, P.O. Box 599, Willacoochee, GA 31650 http://winfabusa.com/** | | | |
| | Class 3, Type A Geotextile (Woven Slit Film) | WINFAB 200W | GTX-2017-01-217 | 2011-102QA,B |
| | Class 3, Type B Geotextile (Woven Slit Film) | WINFAB 105SF | GTX-2018-01-127 | 2016-188Q |

## Section 735: Geotextiles

### 735.1(b) Class 4, Type A Geotextile - Separation & Erosion Control

Last Revised: 8/11/2020

Unless noted, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **HANG0 15** | **Hanes Geo Components, 815 Buxton Street, Winston-Salem, NC 27101 http://hanesgeo.com/** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | TerraTex N12E | GTX-2017-01-127 | 2016-272PL3 |
| **LANDM 15** | **L & M Supply Company, 1800 Springhead Church Road, P.O. Box 640, Willacoochee, GA 31650-0640 https://www.landmsupplyco.com/** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched)<br>*Provisionally Approved* | LM 1200E NT | GTX-2019-01-171 | 2017-283PL6 |
| **PROP1 15 Plant** | **Propex Operating Company, LLC, 4019 Industrial Drive, Chattanooga, TN 37416 http://www.propexglobal.com/**<br>**4019 Industry Drive Chattanooga, TN 37416** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | GEOTEX 1291 | GTX-2018-01-043 | 1987-107Q |
| **PROP2 15 Plant** | **Propex Operating Company, LLC, 4019 Industry Drive, Chattanooga, TN 37416 http://www.propexglobal.com/**<br>**428 Rollins Industrial Blvd. Ringgold, GA 30736** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | GEOTEX 1291 | GTX-2018-01-043 | 2017-053Q |
| **SKA-2 15** | **SKAPS Industries Nonwoven Division, 335 Athena Drive, Athens, GA 30601 http://www.skaps.com/** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | GE-112 | GTX-2019-01-094 | 2016-265Q |
| **TCGEO 15 Plant** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/**<br>**Pendergrass, GA & Cornelia, GA** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched)<br>*Formerly known as Mirafi S1200.* | Mirafi E1200 | GTX-2019-01-104 | 2017-047Q |

## Section 735: Geotextiles

### 735.1(b) Class 4, Type A Geotextile - Separation & Erosion Control

Last Revised: 8/11/2020

Unless noted, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **TEXEL 15 Plant** | **Texel Technical Materials, Inc., 485 des Erables, Saint-Elzear (Quebec), G0S 2J0 Canada http://texel.ca/en/market-segments/geosynthetics/products/geotextiles/ 1300, 2e Rue, Parc Industriel Sainte-Marie (Quebec), G6E 1G8 Canada** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | TEXEL120E | GTX-2017-01-221 | 2017-073Q |
| **THRL1 15** | **Thrace-LINQ, Inc., 2550 West 5th North Street, Summerville, SC 29483-9699 http://thracelinq.com/** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | 1200EX | GTX-2018-01-170 | 2017-105Q |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of 1200EX.* | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | 275EXPA | GTX-2017-01-164 | 2016-200Q |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of 275EXPA.* | | | |
| **WINFB 15** | **Willacoochee Ind. Fabrics, Inc, 769 West Main Street, P.O. Box 599, Willacoochee, GA 31650 http://winfabusa.com/** | | | |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | WINFAB 1200NE | | 2017-226PL |
| | Class 4, Type A Geotextile (Non-woven Needle Punched) | WINFAB 1200NE-PA | GTX-2020-01-098 | 2020-081PL |

### 735.1(b) Class 4, Type C Geotextile - Stabilization & GRS Abutment Reinforcement

Last Revised: 7/9/2020

Unless noted, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **LANDM 15** | **L & M Supply Company, 1800 Springhead Church Road, P.O. Box 640, Willacoochee, GA 31650-0640 https://www.landmsupplyco.com/** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | LM 570 HP | GTX-2019-01-174 | 2016-046Q |
| **PROP1 15 Plant** | **Propex Operating Company, LLC, 4019 Industrial Drive, Chattanooga, TN 37416 http://www.propexglobal.com/ 4019 Industry Drive Chattanooga, TN 37416** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | GEOTEX 4x4HF | GTX-2019-01-150 | 2017-057PL1 |

## Section 735: Geotextiles

### 735.1(b) Class 4, Type C Geotextile - Stabilization & GRS Abutment Reinforcement

Last Revised: 7/9/2020

Unless noted, approved for projects let on or after October 7, 2016 (Pub 408, 2016, Change No. 1 or later). For prior contracts: Approved Geotextiles for Projects Let BEFORE October 7, 2016

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **SKA-3 15 Facility** | **SKAPS Industries, 335 Athena Drive, Athens, GA 30601 http://www.skaps.com/ Mundra - 370421 Gujarat, India** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | M440 | GTX-2019-01-033 | 2020-076Q |
| **TCGEO 15 Plant** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/ Pendergrass, GA & Cornelia, GA** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | Mirafi HP570 | GTX-2018-01-074 | 2001-111Q |
| **THRL2 15 Plant** | **Thrace Group, Marinou Antypa 20, Alimos, Greece https://www.thracegroup.com/us/en/ 20 Marinou Antypa str, 17455 Alimos, Athens, Greece** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | GTF-550 | GTX-2016-02-005 | 2016-267Q |
| | *This product is only approved for projects let per Publication 408, 2016 Change No. 7 and earlier. It is not approved for contracts let per Standard Special Provision a00089 Changes to Specifications: Section 735 or Pub 408, 2020 Initial Edition.* | | | |
| **THRL3 15 Facility** | **Thrace Group, Marinou Antypa 20, Alimos, Greece https://www.thracegroup.com/us/en/companies/lumite/ Lumite 1515 North County Line Road Alto, Georgia 30510** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | GTF-570 | GTX-2018-01-238 | 2016-202PL2 |
| **WINFB 15** | **Willacoochee Ind. Fabrics, Inc, 769 West Main Street, P.O. Box 599, Willacoochee, GA 31650 http://winfabusa.com/** | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | WINFAB 4x4 | GTX-2017-01-137 | 2017-262Q |
| | *This product is only approved for projects let per Publication 408, 2016 Change No. 7 and earlier. It is not approved for contracts let per Standard Special Provision a00089 Changes to Specifications: Section 735 or Pub 408, 2020 Initial Edition.* | | | |
| | Class 4, Type C Geotextile (Woven Polypropylene) | WINFAB 570HP | GTX-2017-01-131 | 2016-096Q |

## Section 736: Geomembrane

### 736 Geomembrane, High Density Polyethylene (HDPE)

Last Revised: 5/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AGRUA 15** | **Agru America, Inc., 700 Rockmead, Suite 150, Kingwood, TX 77339 http://agruamerica.com/** | | |
| | Geomembrane (HDPE) | AA Microspike | 1999-196 |
| | Geomembrane (HDPE) | AA Smooth | 1999-196 |
| **GSELT 15** | **GSE Environmental, 19103 Gundle Road, Houston, TX 77073 http://www.gseworld.com/** | | |
| | Geomembrane (HDPE) | GSE HD Smooth | 1999-189 |
| | Geomembrane (HDPE) | GSE HD Textured | 1999-189 |
| **RAVEN 15** | **Raven Industries, Inc., 1813 "E" Avenue, Sioux Falls, SD 57104 http://ravenind.com/** | | |
| | Geomembrane (HDPE) | Rufco 3300B | 2001-125Q |
| **SOLMX 15** | **Solmax International, Inc., 2801 Marie-Victorin Boulevard, Varennes, Quebec J3X 1P7 http://www.solmax.com/** | | |
| | Geomembrane (HDPE) | 400 Series | 2000-148 |

## Section 737: Geocell

### 737 Geocell

Last Revised: 5/5/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **GEOPR 15** | **Geo Products, 8615 Golden Spike Lane, Houston, TX 77086 http://www.geoproducts.org/** | | |
| | GeoCell, Perforated or Non-Perforated *(EnviroGrid EGA20)* | TerraCell 140 (Type A - 4", 6", or 8" cell depth) | 2001-122Q |
| | GeoCell, Perforated or Non-Perforated *(EnviroGrid EGA30)* | TerraCell 175 (Type B - 4", 6", or 8" cell depth) | 2001-122Q |
| | GeoCell, Perforated or Non-Perforated *(EnviroGrid EGA40)* | TerraCell 280 (Type C - 4", 6", or 8" cell depth) | 2001-122Q |
| **PREST 15** | **Presto Products Company, P.O. Box 2399, Appleton, WI 54912-2399 http://prestoproducts.com/** | | |
| | Geocell, Perforated | GeoWeb GW20V (Type A - 4", 6", or 8" cell depth) | 2001-063Q |

# Section 738: Geogrids

## 738.2 Class 1 Uniaxial Geogrid Reinforcement

Last Revised: 6/13/2019

| | Product | Name | Ultimate Tensile Strength | Ref. No. |
|---|---|---|---|---|
| **ACEGE 15** | **Ace Geosynthetics Enterprise Company, Ltd., No. 33 Jing 3 Road, C.E.P.Z. Wuchi District, Taichung City 43541 http://www.geoace.com/** | | | |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Maccaferri MacGrid WG8 | 2190 (lbs/ft) | 2012-027ME |
| **STF-1 15** | **Synteen Technical Fabrics, 1950 W. Meeting Street, Lancaster, SC 29720 http://www.synteen.com/** | | | |
| **Plant** | **1950 W. Meeting Street Lancaster, SC 29720** | | | |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF110 | 10,100 (lbs/ft) | 2017-343Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF20 | 2025 (lbs/ft) | 2017-337Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF35 | 3600 (lbs/ft) | 2017-338Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF55 | 5000 (lbs/ft) | 2017-339Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF65 | 6200 (lbs/ft) | 2017-340Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | SF90 | 9000 (lbs/ft) | 2017-342Q |
| **STRATA15** | **Strata Systems, Inc., subsidiary of Glen Raven Technical Fabrics, LLC, 1831 North Park Avenue, Burlington, NC 27217 https://www.geogrid.com/** | | | |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG150 | 1875 (lbs/ft) | 2018-183Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG200 | 3600 (lbs/ft) | 2018-095Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG350 | 5000 (lbs/ft) | 2018-189Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG500 | 6400 (lbs/ft) | 2018-267Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG550 | 8150 (lbs/ft) | 2018-190Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG650 | 10500 (lbs/ft) | 2018-266Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | StrataGrid SG700 | 11800 (lbs/ft) | 2018-265Q |
| **TCGEO 15** | **TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, GA 30567 http://www.tencate.com/** | | | |
| **Plant** | **Pendergrass, GA & Cornelia, GA** | | | |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 10XT | 9500 (lbs/ft) | 2017-084Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 20XT | 13705 (lbs/ft) | 2017-085Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 22XT | 20559 (lbs/ft) | 2017-086Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 2XT | 2000 (lbs/ft) | 2016-166Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 3XT | 3500 (lbs/ft) | 2016-260Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 5XT | 4700 (lbs/ft) | 2017-081Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 7XT | 5900 (lbs/ft) | 2017-082Q |
| | Geogrid: Type A, (PET) PVC Coated Polyester | Miragrid 8XT | 7400 (lbs/ft) | 2017-083Q |

## 738.3 Class 2 and 3 Biaxial Geogrids

# Section 802: Topsoil Furnished and Placed

## 802 Topsoil

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 802 for specification requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

## Section 805: Mulching

### 805.2(a)1 Mulches: Seeded Areas

Last Revised: 4/24/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMEE1 15 Plant** | **American Excelsior Company, 850 Avenue H East, P.O. Box 5067, Arlington, TX 76011 http://americanexcelsior.com/ 831 Pioneer Avenue Rice Lake, WI** | | |
| | Wood Fiber | Excel Wood Fiber Mulch II | 1992-313 |
| **ENCAP 15** | **Encap, LLC, 3921 Algoma Road, Green Bay, WI 54311-9707 http://encap.net/** | | |
| | Wood Fiber<br>*Conditionally Approved as an alternate.* | Pam-12 Recycled Paper Mulch | 2007-128 |
| **HSTRAW15** | **HydroStraw, LLC, 22110 South State Route 27, Rockford, WA 99030 https://www.hydrostraw.com/** | | |
| | Straw<br>*Conditionally Approved as an alternate.* | HydroStraw® Original | 2012-153 |
| **MATTT 15** | **Mat, Inc., 12402 Highway 2, Floodwood, MN 55736 https://www.matinc.biz/** | | |
| | Wood Fiber | Bindex Wood WT | 2011-074QA |
| | Wood Fiber | Mat Fiber Plus | 1992-150D |
| **PROFP 15 Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/ 219 Simpson Street SW Conover, NC 28613** | | |
| | Wood Fiber | Conwed Fibers 2000 | 1990-279 |
| | Wood Fiber | Conwed Fibers Hydro Mulch 1000 | 2014-162MB |
| | Wood Fiber | EcoSolutions EcoFibre™ | 2016-113 |
| | Wood Fiber | Lesco HydroCover Wood | 2016-113 |
| | Wood Fiber | SoilCover Wood | 2016-113 |
| | Wood Fiber | Terra-Mulch Terra-Wood™ | 2016-113 |

## Section 805: Mulching

### 805.2(a)1 Mulches: Seeded Areas

Last Revised: 4/24/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TENSR 15** | **Tensar International Corporation, 7265 AL Highway 9S, Centre, AL 35960 http://www.tensarcorp.com/**<br>***Formerly Mulch and Seed Innov. (MULSI)*** | | |
| | Wood Fiber<br>*Conditionally Approved as an alternate.* | GeoSkin Hydraulic (Wood Fiber Alternate) | 2010-125 |
| | Wood Fiber<br>*Conditionally Approved as an alternate.* | GeoSkin XT Hydraulic (Wood Fiber Alternate) | 2010-135 |

### 805.2(a)1.e Mulches: Seeded Areas, Bonded Fiber Matrix

Last Revised: 5/16/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CARPF 15** | **Carolina Precision Fibers, Inc., 145 Factory Street, Rhonda, NC 28670 http://www.carolinafibers.com/** | | |
| | Polymer or Hydrocolloid Binder Matrix | Mulch and Grow BFM | 2014-008Q |
| **CENTF 15**<br>**Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/**<br>**1525 Waynesburg Drive SE Canton, OH 44707**<br>***(Formerly Central Fiber LLC)*** | | |
| | Polymer or Hydrocolloid Binder Matrix | EnviroMatt | 2013-156Q |
| | Polymer or Hydrocolloid Binder Matrix | SprayMatt | 2013-157Q |
| **EMSAL 15** | **E M Sales, LLC, 212 East High Street, Suite 102, Pottstown, PA 19464 http://emsalesllc.com/** | | |
| | Polymer or Hydrocolloid Binder Matrix | Fibre Mat | 1997-133 |
| **HSTRAW15** | **HydroStraw, LLC, 22110 South State Route 27, Rockford, WA 99030 https://www.hydrostraw.com/** | | |
| | Polymer or Hydrocolloid Binder Matrix<br>*Conditionally Approved as an alternate.* | HydroStraw® Bonded Fiber Matrix (BFM) | 2012-155 |
| | Polymer or Hydrocolloid Binder Matrix<br>*Conditionally Approved as an alternate.* | HydroStraw® Guar Plus | 2012-154 |

## Section 805: Mulching

### 805.2(a)1.e Mulches: Seeded Areas, Bonded Fiber Matrix

Last Revised: 5/16/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MATNU 15 Facility** | **Mat, Inc., 12402 Highway 2, Floodwood, MN 55736 https://www.matinc.biz/ Mat-NuWood, LLC 811 Price Place Lenoir, NC 28645** | | |
| | Polymer or Hydrocolloid Binder Matrix | Spray Guard | 2018-269Q |
| **MATTT 15** | **Mat, Inc., 12402 Highway 2, Floodwood, MN 55736 https://www.matinc.biz/** | | |
| | Polymer or Hydrocolloid Binder Matrix | Bindex BFM | 2011-074QB |
| | Polymer or Hydrocolloid Binder Matrix *Provisionally Approved* | Flex Guard | 2010-004Q |
| | Polymer or Hydrocolloid Binder Matrix | Soil Guard | 1996-046 |
| **PROFP 15 Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/ 219 Simpson Street SW Conover, NC 28613** | | |
| | Polymer or Hydrocolloid Binder Matrix *Provisionally Approved* | EcoSolutions EcoAegis® BFM | 2016-100Q |
| | Polymer or Hydrocolloid Binder Matrix | EcoSolutions EcoFlex™ HP-FGM™ | 2016-111Q |
| | Polymer or Hydrocolloid Binder Matrix *Conditionally approved as an alternate.* | EcoSolutions EcoMatrix™ (EFM) | 2016-110 |
| | Polymer or Hydrocolloid Binder Matrix | Flexterra HP-FGM | 1998-153 |
| | Polymer or Hydrocolloid Binder Matrix *Provisionally Approved* | Hydro-Blanket | 2006-003Q |
| | Polymer or Hydrocolloid Binder Matrix *Conditionally Approved as an alternate.* | ProMatrix EFM | 2014-262M |
| **TENSR 15** | **Tensar International Corporation, 7265 AL Highway 9S, Centre, AL 35960 http://www.tensarcorp.com/** ***Formerly Mulch and Seed Innov. (MULSI)*** | | |
| | Polymer or Hydrocolloid Binder Matrix *Conditionally Approved as an alternate.* | HydraCX2 Extreme Slope Matrix | 2009-066 |
| | Polymer or Hydrocolloid Binder Matrix *Also: Ground Control HY-C3 High Performance Conditionally Approved as an alternate.* | Hydro CM Hydraulically-Applied Mulch | 2011-133 |

# Section 805: Mulching

## 805.2(a)1.e Mulches: Seeded Areas, Bonded Fiber Matrix

Last Revised: 5/16/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TERRN 15** | **LSC Environmental Products, LLC, 2930 Patton Way, Bakersfield, CA 93308 http://www.lscenv.com/** ***(Formerly Terra Novo, Inc.)*** | | |
| | Polymer or Hydrocolloid Binder Matrix | EarthGuard Fiber Matrix | 2013-053Q |
| **USGY1 15** | **U. S. Gypsum Company, Industrial Products, 125 South Franklin Street, Chicago, IL 60606-4678** | | |
| | Gypsum Binder Matrix | Airtrol | 1994-114 |
| | Gypsum Binder Matrix | Enviro-Shield | 2006-189Q |

## 805.2(a)2 Mulches: Planting and Other Areas

Last Revised: 8/14/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **L&W-D 15** | **L & W Demolition Company, 2224 Paxton Street, Rear, Harrisburg, PA 17111 http://lwdemolition.com/** | | |
| | Shredded Bark | | 1991-029 |
| **LAUVS 15** | **Laurel Valley Soils, P.O. Box 640, Avondale, PA 19311 http://laurelvalleysoils.com/** | | |
| | Spent Mushroom Compost | LVS Horticultural Compost | 2003-013Q |
| | Spent Mushroom Compost | LVS Premium Compost | 2003-013Q |

## 805.2(b) Mulch Binders

Last Revised: 6/3/2016

Wood Fiber [See 805.2(a)1.c]

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMEE0 15** | **American Excelsior Company, 850 Avenue H East, Arlington, TX 76011 http://americanexcelsior.com/** | | |
| | Nonasphaltic Emulsion | AM-TAC | 1990-278 |
| **CARPF 15** | **Carolina Precision Fibers, Inc., 145 Factory Street, Rhonda, NC 28670 http://www.carolinafibers.com/** | | |
| | Recycled Cellulose Fiber | Mulch and Grow Hybrid 70/30 Blend | 2010-007Q |
| | Recycled Cellulose Fiber | Mulch and Grow Premium Cellulose | 2010-006Q |
| | Recycled Cellulose Fiber/Wood Fiber Mixture | PF Wood Blend 70/30 Mulch | 2004-077Q |

## Section 805: Mulching

### 805.2(b) Mulch Binders

Last Revised: 6/3/2016

Wood Fiber [See 805.2(a)1.c]

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CENTF 15 Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/ 1525 Waynesburg Drive SE Canton, OH 44707** ***(Formerly Central Fiber LLC)*** | | |
| | Recycled Cellulose Fiber | Second Nature Wood Fiber | 1991-182 |
| **EMSAL 15** | **E M Sales, LLC, 212 East High Street, Suite 102, Pottstown, PA 19464 http://emsalesllc.com/** | | |
| | Nonasphaltic Emulsion | Mulchmate Hydro Tac | 1987-187 |
| | Recycled Cellulose Fiber | Quickseed | 1987-187 |
| **MATTT 15** | **Mat, Inc., 12402 Highway 2, Floodwood, MN 55736 https://www.matinc.biz/** | | |
| | Recycled Cellulose Fiber | Mat Blend | 1992-150A |
| | Recycled Cellulose Fiber | Mat Blend Plus | 1992-150B |
| | Recycled Cellulose Fiber/Wood Fiber Mixture | Bindex Blend WT | 2011-074QC |
| **PINNA 15** | **Pinnacle Industries, 160 Wilber Placw, Bohemmia, NY 11716 http://pinnacleindustriesltd.com/en/home** | | |
| | Recycled Cellulose Fiber | Evergreen Fiber Mulch | 1994-013 |
| **PLWBC 15** | **Plant Wise Biostimulant Company, 1402 West Main Street, Louisville, KY 40203-1328 http://www.plant-wise.com/** | | |
| | Nonasphaltic Emulsion | TAC-L | 2001-082Q |
| **PROFP 15 Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/ 219 Simpson Street SW Conover, NC 28613** | | |
| | Nonasphaltic Emulsion | Contack | 1990-280 |
| **PROFT 15 Plant** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/ Limestone, TN** | | |
| | Recycled Cellulose Fiber | SoilCover Cellulose | 2014-163Q |
| | Recycled Cellulose Fiber | Terra-Mulch Cellulose | 2014-064Q |
| | Recycled Cellulose Fiber | Tornado Tack ST-1000 | 2015-032Q |

# Section 805: Mulching

## 805.2(b) Mulch Binders

Last Revised: 6/3/2016

Wood Fiber [See 805.2(a)1.c]

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RANTC 15** | **Rantec Corporation, 17 Kukuchka Lane, P.O. Box 729, Ranchester, WY 82839 http://www.ranteccorp.com/** | | |
| | Nonasphaltic Emulsion | HF5000 Tack | 2012-211 |
| **TURGD 15 Plant** | **Turf Guard Manufacturing, Inc., 489 Sweet Valley Road, Hunlock Creek, PA 18621 West Nanticoke, PA 18634** | | |
| | Nonasphaltic Emulsion | Earth Bond | 2002-017Q |

## 805.2(c) Mulch Control Netting

Last Revised: 5/27/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BELTN 15** | **Belton Industries, P.O. Box 127, Belton, SC 29627 http://www.beltonindustries.com/** | | |
| | Coconut Coir Netting | Dekowe Geonet | ----- |
| **TENX0 15** | **Tenax Corporation, 4800 East Monument Street, Baltimore, MD 21205 http://www.tenaxus.com/** | | |
| | Plastic Netting | Ornex LM | 1999-036Q |

## 805.2(d) Weed Barrier and Weed Control Mats

Last Revised: 8/11/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HANG0 15** | **Hanes Geo Components, 815 Buxton Street, Winston-Salem, NC 27101 http://hanesgeo.com/** | | |
| | Weed Barrier Mat | Terra Tex NO3 | 1996-125 |
| | Weed Barrier Mat | Terra Tex NO4 | 1986-295 |
| | Weed Barrier Mat | Terra Top WC | ----- |
| **REEMA 15** | **Berry Global, Inc., 70 Old Hickory Boulevard, Old Hickory, TN 37138-3651 http://www.typargeosynthetics.com** ***(Formerly known as Fiberweb, Inc. and Reemay, Inc.)*** | | |
| | Weed Control Mat | Biobarrier II | 1994-304 |

## Section 805: Mulching

### 805.2(d) Weed Barrier and Weed Control Mats

Last Revised: 8/11/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **THRL1 15** | **Thrace-LINQ, Inc., 2550 West 5th North Street, Summerville, SC 29483-9699 http://thracelinq.com/** | | |
| | Weed Barrier Mat | 125EX | 1999-120Q |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of 125EX.* | | |
| | Weed Barrier Mat | GTF 200 WBM | 1991-329 |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of GTF 200 WBM.* | | |
| | Weed Barrier Mat | GTF 200S | 1994-197 |
| | *Effective April 24, 2020, Thrace-LINQ, Inc. ceased manufacturing operations in the United States. Distributors may continue to supply remaining supply of GTF 200S.* | | |

## Section 806: Rolled Erosion Control Products (RECPs)

For contracts let on or after April 7th, 2017 (Pub 408, 2016 Change No. 2), temporary and permanent Rolled Erosion Control Products (RECPs) are project-specific, locally approved materials.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 806 for specification requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

Use of any product listed in this Section is ultimately subject to County Conservation District (DEP's representatives) oversight and acceptance for project field conditions.

## Section 808: Plants, Planting and Transplanting

### 808.2(a)6 Bare Root (BR) Plants

Last Revised: 3/18/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HORTA 15** | **Horticultural Alliance, Inc., P.O. Box 5744, Sarasota, FL 34239 http://www.horticulturalalliance.com/** | | |
| | Superconcentrated Water Absorbent Gel | Horta-Sorb SM | 1998-161 |

### 808.2(c) Fertilizer

Last Revised: 3/18/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **UNIQF 15** | **U.F.I., 205 Caulfield Avenue, Deptford, NJ 08096 http://www.ufi.org/** | | |
| | Fertilizer | The Unique Feeder, 16-8-16 Packet 4 oz. | ----- |

### 808.2(f) Soil Amendments

Last Revised: 5/10/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HORTA 15** | **Horticultural Alliance, Inc., P.O. Box 5744, Sarasota, FL 34239 http://www.horticulturalalliance.com/** | | |
| | Mycorrhizal Inoculation (Trees) | Diehard Transplant | 1998-179 |
| | Water Absorbent Polymer | Horta-Sorb LG | 1998-160 |
| **LAUVS 15** | **Laurel Valley Soils, P.O. Box 640, Avondale, PA 19311 http://laurelvalleysoils.com/** | | |
| | Spent Mushroom Soil Compost | LVS Horticultural Compost | 2003-014Q |
| | Spent Mushroom Soil Compost | LVS Premium Compost | 2003-014Q |
| **PLTHC 15** | **Plant Health Care, Inc., 440 William Pitt Way, Pittsburgh, PA 15238 http://www.planthealthcare.com/** | | |
| | Mycorrhizal Inoculation (Bare Root Seedlings and Transplants) | Mycor Tree Root Dip | 1998-167 |
| | Mycorrhizal Inoculation (Trees) | Mycor Tree Saver | 1998-166 |
| **PROFP 15** | **Profile Products, LLC, 750 W. Lake Cook Road, Suite 440, Buffalo Grove, IL 60089 http://www.profileproducts.com/** | | |
| **Plant** | **219 Simpson Street SW Conover, NC 28613** | | |
| | Paper Mill Compost | ProGanics™ Biotic Soil Media™ (BSM™) | 2016-128 |
| | *Conditionally approved as an alternate. The required soil testing and interpretation will be performed by Profile Products. Contractor must adhere to the manufacturer's usage and application guidelines.* | | |

## Section 808: Plants, Planting and Transplanting

### 808.2(f) Soil Amendments

Last Revised: 5/10/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **UAJA- 15** | **University Area Joint Authority, 1576 Spring Valley Road, State College, PA 16801 http://uaja.com/** | | |
| | Sewage Sludge Compost | UAJA Compost | 1993-141 |

### 808.2(g)3 Collar Strap Attachments

Last Revised: 3/18/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **KESLK 15** | **Keslick and Son, 214 North Penn Street, West Chester, PA 19380** | | |
| | Collar Strap Attachment | CambGuards | 1996-033 |
| **NEPTC 15** | **Neptco, Inc., 30 Hamlet Street, Pawtucket, RI 02861 http://www.neptco.com/** | | |
| | Collar Strap Attachment | ArborTie | 1995-277 |

### 808.2(i) Time-Release Water

Last Revised: 3/18/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DRIWA 15** | **Driwater, Inc., 50 Old Court House Square, Suite 606, Santa Rosa, CA 95404 http://driwater.com/** | | |
| | Time-Release Water | Driwater | 1995-186 |

# Section 855: Pumped Water Filter Bag

## 855.2(a) Pumped Water Filter Bag

Last Revised: 6/7/2018

Pumped Water Filter Bag: Standard Drawing of Dewatering Devices RC-75M (Pub 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ENVGE 15** | **Environmental Geosynthetics, 1314 State Road, Coopersburg, PA 18036 http://www.environmentalgeosynthetics.com/** | | |
| | Filter Bag | The Protector 1515 10 oz Sediment Filter Bag | 2005-036Q |
| **HANG1 15 Plant** | **Hanes Geo Components, 815 Buxton Street, Winston-Salem, NC 27101 http://hanesgeo.com/ Gastonia, NC** | | |
| | Filter Bag | FilterBag 1515P | 2016-191 |
| **INDVA 15** | **Indian Valley Industries, Inc., 5 Pine Camp Dr., Binghamton, NY 13904 http://www.iviindustries.com/index.html** | | |
| | Filter Bag | IVI 1515 Sediment Filter Bag | 2001-020Q |
| **JOHNS 15** | **Johnston-Morehouse Dickey Company, 5401 Progress Boulevard, P.O. Box 173, Bethel Park, PA 15102 http://www.jmdcompany.com/** | | |
| | Filter Bag | Enviro-Protection Filter Bag (15' x 15') | 1997-122 |
| **ROBER 15** | **Frank Roberts and Sons, Inc., 1130 Robertsville Road, Punxsutawney, PA 15767 http://www.frankrobertsandsons.com/** | | |
| | Filter Bag | FB-3 Filter Bag | 1995-019Q |
| **WINFB 15** | **Willacoochee Ind. Fabrics, Inc, 769 West Main Street, P.O. Box 599, Willacoochee, GA 31650 http://winfabusa.com/** | | |
| | Filter Bag | DWB10 | 2016-187Q |

## Section 857: Concrete Block Revetment Systems

### 857.2 Concrete Block Revetment Systems

Last Revised: 10/19/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BETPR 15** | **Bethlehem Precast, Inc., 835 East North Street, Bethlehem, PA 18017 http://www.bethlehemprecast.com/** | | |
| | Precaster, Concrete Block Revetment System<br>*Licensor: International Erosion Control Systems* | Cable Concrete | 1999-142Q |
| **YORKB 15** | **York Building Products, Inc., 1020 North Hartley Street, York, PA 17404 http://www.yorkbuilding.com/** | | |
| | Precaster, Concrete Block Revetment System<br>*Licensor: ARMORTEC Erosion Control Solutions (Contech Engineered Solutions)* | A-Jacks | 2000-190Q |
| | Precaster, Concrete Block Revetment System<br>*Licensor: ARMORTEC Erosion Control Solutions (Contech Engineered Solutions)* | ArmorFlex | 2000-188Q |
| | Precaster, Concrete Block Revetment System<br>*Licensor: ARMORTEC Erosion Control Solutions (Contech Engineered Solutions)* | ArmorLoc | 2000-189Q |

# Section 860: Storm Inlet Protection

## 860.2(a) Inlet Filter Bag

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 860 for specification and documentation requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

## 860.2(b) Concrete Block/Gravel Inlet Protection for Type M, S, or C Inlets

**Last Revised: 11/7/2018**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MKB-1 15** | **MKB Company, 3450 East College Ave, State College, PA 16801 https://www.mkbcompany.com/** | | |
| | Frame & Filter Assembly | Black Hawk Inlet Filter Mat 2'X4' Type-C | 2018-131 |
| | *Conditionally Approved as an alternate to stone filter inlet protection. * Shall be installed and used per manufacturer's specifications and guidelines. * Shall only be used for inlets at grade level. * Shall not be placed where ponding water or inlet protection may be hazardous to vehicular traffic. If a PennDOT Representative determines the use of this product poses a safety hazard on location of inlet, its project use will not be allowed.* ***Blackhawk Inlet Filter Mat Product Specifications and Installation/Maintenance Procedure*** | | |
| | Frame & Filter Assembly | Black Hawk Inlet Filter Mat 2'X4' Type-M | 2018-131 |
| | *Conditionally Approved as an alternate to stone filter inlet protection. * Shall be installed and used per manufacturer's specifications and guidelines. * Shall only be used for inlets at grade level. * Shall not be placed where ponding water or inlet protection may be hazardous to vehicular traffic. If a PennDOT Representative determines the use of this product poses a safety hazard on location of inlet, its project use will not be allowed.* ***Blackhawk Inlet Filter Mat Product Specifications and Installation/Maintenance Procedure*** | | |

## Section 860: Storm Inlet Protection

### 860.2(b) Concrete Block/Gravel Inlet Protection for Type M, S, or C Inlets

Last Revised: 11/7/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SILTS 15** | **SILT-SAVER, INC, 1094 CULPEPPER DRIVE, CONYERS, GA 30094-0000** | | |
| | Frame & Filter Assembly | R-100A-DOT (Round) | 2013-057 |
| | *Conditionally Approved as an alternate to stone filter inlet protection. * Shall be installed and used per manufacturer's specifications and guidelines. * Shall only be used for inlets at grade level which are not adjacent to a curb or gutter. * Shall not be placed where ponding water or inlet protection may be hazardous to vehicular traffic. If a PennDOT Representative determines the use of this product poses a safety hazard on location of inlet, its project use will not be allowed.* | | |
| | Frame & Filter Assembly | S-200A-DOT (Square) | 2013-057 |
| | *Conditionally Approved as an alternate to stone filter inlet protection. * Shall be installed and used per manufacturer's specifications and guidelines. * Shall only be used for inlets at grade level which are not adjacent to a curb or gutter. * Shall not be placed where ponding water or inlet protection may be hazardous to vehicular traffic. If a PennDOT Representative determines the use of this product poses a safety hazard on location of inlet, its project use will not be allowed.* | | |

## Section 865: Silt Barrier Fence

### 865.2 Geotextile Silt Fence Fabricators

Last Revised: 1/31/2020

Fabricate according to Standard Drawing RC-70M (Publication 72M)

30" Fence Requires Mesh Support. Maximum Post Spacing is 8 feet for Fence using Class 3, Type A Geotextile. Maximum Post Spacing is 4 feet for Fence using Class 3, Type B Geotextile.

| | Product | Name | Geotextile Type | Max Post Spacing (ft) | Ref. No. |
|---|---|---|---|---|---|
| **ACF-1 15** | **ACF Environmental, Inc., 2831 Cardwell Road, Richmond, VA 23234 http://www.acfenvironmental.com/view.aspx?page=home** | | | | |
| | Silt Barrier Fence, 18" Height | PD3A18100 | Class 3, Type A | 8 | 2004-099Q |
| | Silt Barrier Fence, 18" Height | PD3B18052 | Class 3, Type B | 4 | 2004-100Q |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | PD3A30100 | Class 3, Type A | 8 | 2004-101Q |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | PD3B30052 | Class 3, Type B | 4 | 2004-102Q |
| **AMEE0 15** | **American Excelsior Company, 850 Avenue H East, Arlington, TX 76011 http://americanexcelsior.com/** | | | | |
| | Silt Barrier Fence, 18" Height | Silt Fence | Class 3, Type B | 4 | 1989-155A |
| **HANG0 15** | **Hanes Geo Components, 815 Buxton Street, Winston-Salem, NC 27101 http://hanesgeo.com/** | | | | |
| | Silt Barrier Fence, 18" Height | IKEX 244B36 3B | Class 3, Type B | 4 | 2004-172QA |
| | Silt Barrier Fence, 18" Height | IKEX 248B36 3A | Class 3, Type A | 8 | 2004-172QB |
| | Silt Barrier Fence, 18" Height | P-Fence 303A | Class 3, Type A | 8 | 1991-390 |
| | Silt Barrier Fence, 18" Height | P-Fence 303B | Class 3, Type B | 4 | 1991-391 |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | IKEX 368B48 3A | Class 3, Type A | 8 | 2004-171QA |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | IKEX 368B48 3B | Class 3, Type B | 4 | 2004-171QB |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | P-Fence 423AM | Class 3, Type A | 8 | 1991-392 |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | P-Fence 423BM | Class 3, Type B | 4 | 1991-393 |
| **INDVA 15** | **Indian Valley Industries, Inc., 5 Pine Camp Dr., Binghamton, NY 13904 http://www.iviindustries.com/index.html** | | | | |
| | Silt Barrier Fence, 18" Height | 1813-PA | Class 3, Type B | 4 | 2001-019QA |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | 3013-PA | Class 3, Type B | 8 | 2001-019QB |

## Section 865: Silt Barrier Fence

### 865.2 Geotextile Silt Fence Fabricators

Last Revised: 1/31/2020

Fabricate according to Standard Drawing RC-70M (Publication 72M)

30" Fence Requires Mesh Support. Maximum Post Spacing is 8 feet for Fence using Class 3, Type A Geotextile. Maximum Post Spacing is 4 feet for Fence using Class 3, Type B Geotextile.

| | Product | Name | Geotextile Type | Max Post Spacing (ft) | Ref. No. |
|---|---|---|---|---|---|
| **JOHNS 15** | **Johnston-Morehouse Dickey Company, 5401 Progress Boulevard, P.O. Box 173, Bethel Park, PA 15102 http://www.jmdcompany.com/** | | | | |
| | Silt Barrier Fence, 18" Height | JMD 3A | Class 3, Type A | 8 | 1990-135 |
| | Silt Barrier Fence, 18" Height | JMD 3B | Class 3, Type B | 4 | 1988-159 |
| | Silt Barrier Fence, 18" Height<br>*With Approved Mesh* | JMD 3B | Class 3, Type B | 8 | 1990-082 |
| | Silt Barrier Fence, 30" Height<br>*With Approved Mesh* | JMD 3A | Class 3, Type A | 8 | 2001-089Q |
| | Silt Barrier Fence, 30" Height<br>*With Approved Mesh* | JMD 3B | Class 3, Type B | 4 | 1988-282 |
| **MKB-1 15** | **MKB Company, 3450 East College Ave, State College, PA 16801 https://www.mkbcompany.com/** | | | | |
| | Multi-layer Geotextile Filter Fence<br>*Conditionally approved per manufacturer's specifications as an alternate to Class 3, Type A.* | SILTRON | | | 2018-229Q |
| **MUTAL 15** | **Mutual Industries, 707 West Grange Street, Philadelphia, PA 19120 http://www.mutualindustries.com/** | | | | |
| | Silt Barrier Fence, 18" Height | PA DOT 3B18 | Class 3, Type B | 4 | 1994-156A |
| | Silt Barrier Fence, 18" Height<br>*With Approved Mesh* | PA DOT 3B18 | Class 3, Type B | 4 | 1994-156B |
| | Silt Barrier Fence, 30" Height | PA DOT 3B30 | Class 3, Type B | 4 | 1994-156C |
| | Silt Barrier Fence, 30" Height<br>*With Approved Mesh* | PA DOT 3B30 | Class 3, Type B | 4 | 1994-156D |

## Section 865: Silt Barrier Fence

### 865.2 Geotextile Silt Fence Fabricators

Last Revised: 1/31/2020

Fabricate according to Standard Drawing RC-70M (Publication 72M)

30" Fence Requires Mesh Support. Maximum Post Spacing is 8 feet for Fence using Class 3, Type A Geotextile. Maximum Post Spacing is 4 feet for Fence using Class 3, Type B Geotextile.

| | Product | Name | Geotextile Type | Max Post Spacing (ft) | Ref. No. |
|---|---|---|---|---|---|
| **ROBER 15** | **Frank Roberts and Sons, Inc., 1130 Robertsville Road, Punxsutawney, PA 15767 http://www.frankrobertsandsons.com/** | | | | |
| | Silt Barrier Fence, 18" Height *With Approved Mesh* | FR 110-278M | Class 3, Type B | 8 | 1988-125 |
| | Silt Barrier Fence, 18" Height | FR 180-304 Blue | Class 3, Type B | 4 | 1991-372 |
| | Silt Barrier Fence, 18" Height | FR 400-308 White | Class 3, Type A | 8 | 1991-370 |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | FR 180-424M Black | Class 3, Type B | 4 | 1991-373 |
| | Silt Barrier Fence, 30" Height *With Approved Mesh* | FR 400-428M Red | Class 3, Type A | 8 | 1991-371 |

## Section 867: Compost Filter Sock

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 867 for specification and documentation requirements. Submit for local approval by the Representative all required information for the material, as indicated in the specification.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

## Section 868: Compost Blanket and Compost Filter Berm

Project-Specific, Locally Approved Material.

In accordance with Publication 408, Section 106.02(a)2.c, a material specified for use in this Section is defined as a Project-Specific, Locally Approved Material.

PennDOT does not require manufacturers of Project-Specific, Locally Approved Materials to submit a Product Evaluation Application) for approval and listing of their material(s) in Bulletin 15. Project-Specific, Locally Approved Materials are not listed in Bulletin 15.

Contractors proposing to use materials that meet the specification requirements must list them on Form CS-200 (Source of Supply-Materials) and submit them for local approval by the Representative (i.e. at the District or project level). Refer to Publication 408, Section 868 for specification and documentation requirements.

Also refer to the Project Specific, Locally Approved Materials section (Section 106) of Bulletin 15 for a complete listing of Publication 408 Sections that fall within this category.

# Section 874: Temporary Riser Pipe Assembly

## 874.2(d) Trash Rack and Anti-Vortex Device

Last Revised: 9/19/2017

See Standard Drawing RC-71M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| LANE2 15 | **Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/** | |
| | Trash Rack and Anti-Vortex Device | 2002-050Q |
| LANE3 15 | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | |
| | Trash Rack and Anti-Vortex Device | 2002-049Q |
| LANE4 15 | **Lane Enterprises, Inc, 377 Crooked Lane, King of Prussia, PA 19406 http://www.lane-enterprises.com/** | |
| | Trash Rack and Anti-Vortex Device | 2002-068Q |
| MANWF_15 | **Mann Welding & Fabrication LLC, 2755 Schukraft Road, Quakertown, PA 18951** | |
| | Trash Rack and Anti-Vortex Device | 2014-061Q |
| MORGA 15 | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | |
| | Trash Rack and Anti-Vortex Device | 2017-058Q |

# Section 875: Concrete Outlet Structure

## 875.2(c) Trash Rack

Last Revised: 9/20/2017

See Standard Drawing RC-71M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|
| **LANE2 15** | **Lane Enterprises, Inc., 682 Quaker Valley Road, Bedford, PA 15522 http://www.lane-enterprises.com/** | |
| | Trash Rack | 2002-050Q |
| **LANE3 15** | **Lane Enterprises, Inc., 8271 Mercer St., P.O. Box 345, Pulaski, PA 16143 http://www.lane-enterprises.com/** | |
| | Trash Rack | 2002-049Q |
| **LANE4 15** | **Lane Enterprises, Inc, 377 Crooked Lane, King of Prussia, PA 19406 http://www.lane-enterprises.com/** | |
| | Trash Rack | 2002-068Q |
| **MANWF_15** | **Mann Welding & Fabrication LLC, 2755 Schukraft Road, Quakertown, PA 18951** | |
| | Trash Rack | 2014-061Q |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | |
| | Trash Rack | 2017-058Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **AMIDA 15** | **Amida Industries, Inc., P. O. Box 3147, Rock Hill, SC 29731** | | | | | | |
| | Arrow Panel | DL25-FACH-DLO/4 | | Trailer | Diesel | 48x96 | 1983-134 |
| | Arrow Panel | DLB-15-FACH-E900 | | Trailer | Battery | 48x96 | 1989-079 |
| | Arrow Panel | DLB-25-FACH-E900 | | Trailer | Battery | 48x96 | 1989-091 |
| | Arrow Panel | DLSB-15-ODLX4650 | | Trailer | Battery | 48x96 | 1993-164 |
| **BEMIS 15** | **Bemis Division, Allmand Brothers, Inc., P.O. Box 888, Holdrege, NE 68949 https://www.bemis.com/** | | | | | | |
| | Arrow Panel | 2200/SE | AB-7 | Trailer | Solar Battery | 48x96 | 1992-094 |
| | *May be used only on stationary operations.* *Must be aimed every time it is set up or moved.* | | | | | | |
| | Arrow Panel | 96-SER-3-F-S "Ellipse" | AB-7 | | | | 1996-178 |
| | *Retrofit kit for 2200/SE.* | | | | | | |
| | Arrow Panel | KO25CTA | AB-7 | Trailer | Gas | 48x96 | ----- |
| | Arrow Panel | LI25CTA | AB-7 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | LO25CTA | AB-7 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PE25CTA | AB-7 | Trailer | Diesel | 48x96 | ----- |
| **COLEM 15** | **Coleman Engineering, 1020 South Bellevue, Memphis, TN 38106 http://www.coleman-engineering.com/** | | | | | | |
| | Arrow Panel | AB-15 | | Trailer | Diesel | 48x96 | 1989-092 |
| **CROCE 15** | **Crown Construction Equipment, 330 Saulteaux Cres., Winnipeg, Manitoba Canada http://www.crownequip.com/** | | | | | | |
| | Arrow Panel | AB15 | AB-27 | Trailer | Solar Battery | 48x96 | ----- |
| | Arrow Panel | AB25 | AB-27 | Trailer | Solar Battery | 48x96 | ----- |
| **DISPL 15** | **Display Solutions, Inc., 6301 Best Friend Road, Norcross, GA 30071 https://www.displaysolutionsgroup.com/** | | | | | | |
| | Arrow Panel | Sunray Solar 15 Lamp | | Trailer | Solar Battery | 48x96 | 2001-203Q |
| | Arrow Panel | Sunray Solar 25 Lamp | | Trailer | Solar Battery | 48x96 | 2001-204Q |
| **FEDER 15** | **Federal Construction Products, 2645 Federal Sign Dr., University Park, IL 60466** | | | | | | |
| | Arrow Panel | RW-1FA | | Trailer | Diesel | 48x96 | 1988-169 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **HI-TE 15** | **Hi-Tech Enterprises, Inc., Pinellas Park, FL 33782 http://hitechenterprises.com/** | | | | | | |
| | Arrow Panel | Arrow Plus | | Trailer | Solar Battery | 48x96 | 1992-068 |
| | *May be used only on stationary operations.* | | | | | | |
| | *Must be aimed every time it is set up or moved.* | | | | | | |
| | Arrow Panel | S-15/184 | | Trailer | Solar Battery | 48x96 | 1992-068 |
| **HI-VU 15** | **Hi-Vu, Inc., 1000 E. 9th Street, Indianapolis, IN 46202** | | | | | | |
| | Arrow Panel | AO2413 | | Vehicle | Vehicle (12V) | 24x48 | 1985-100 |
| | Arrow Panel | AO3060-15 | | Vehicle | Vehicle (12V) | 30x60 | 1985-101 |
| | Arrow Panel | AO3615 | | Vehicle | Vehicle (12V) | 36x72 | 1985-103 |
| | Arrow Panel | AO4815 | | Vehicle | Vehicle (12V) | 48x96 | 1985-104 |
| | Arrow Panel | AO4815DTM-E | | Vehicle | Battery | 48x96 | 1985-105 |
| | Arrow Panel | TM4815CD | | Trailer | Diesel | 48x96 | 1985-108 |
| | Arrow Panel | TM4815CE | | Trailer | Battery | 48x96 | 1985-109 |
| | Arrow Panel | TM4815CG | | Trailer | Gas | 48x96 | 1985-110 |
| | Arrow Panel | TM4815SD | | Trailer | Diesel | 48x96 | 1985-111 |
| | Arrow Panel | TM4815SE | | Trailer | Battery | 48x96 | 1985-112 |
| | Arrow Panel | TM4815SG | | Trailer | Gas | 48x96 | 1985-113 |
| | Arrow Panel | TM4825SD | | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | TM4825SE | | Trailer | Battery | 48x96 | ----- |
| | Arrow Panel | TM4825SG | | Trailer | Gas | 48x96 | ----- |
| **INTTC 15** | **International Traffic Control Products, Inc., FM 2169, P.O. Box 24, Junction, TX 76849** | | | | | | |
| | Arrow Panel | ITCP 15L | | Trailer | Solar Battery | 48x96 | 1999-001Q |
| **KKSYS 15** | **K & K Systems, 687 Palmetto Road, Tupelo, MS 38801 http://k-ksystems.com/** | | | | | | |
| | Arrow Panel | KKAB5025 | AB-28 | Trailer | Solar Battery | 48x96 | ----- |

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### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **NATSG 15** | **National Signal, Inc., 2440 Artesia Avenue, Fullerton, CA 92833 http://www.nationalsignalinc.net/** | | | | | | |
| | Arrow Panel | Aro-Lite 15L100W TM | AB-26 | Trailer | Solar Battery | 48x96 | ----- |
| | Arrow Panel | DDP 244813L | AB-26 | Vehicle | Vehicle (12V) | 24x48 | ------ |
| | Arrow Panel | DDP 306013L VM | AB-26 | Vehicle | Vehicle (12V) | 30x60 | ------ |
| | Arrow Panel | DDP 306015L VM | AB-26 | Vehicle | Vehicle (12V) | 30x60 | ------ |
| | Arrow Panel | DDP 367215L VM | AB-26 | Vehicle | Vehicle (12V) | 36x72 | ------ |
| | Arrow Panel | DDP 489615L VM | AB-26 | Vehicle | Vehicle (12V) | 48x96 | ------ |
| | Arrow Panel | Sun-Up 15L100W TM | AB-26 | Trailer | Solar Battery | 48x96 | ----- |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | | |
| | Arrow Panel | M-90 Series | AB-2 | Trailer | Solar Battery | 48x96 | ----- |
| | Arrow Panel | PEVM-6030-15 | | Vehicle | Vehicle (12V) | 30x60 | 1992-349 |
| | Arrow Panel | PFAW-M-72 | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M-78 | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M-78-25 | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M-85-25 | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M-85-FA | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M-FA-SA | AB-2 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | PFAW-M90-SKMT | AB-2 | Vehicle with Skid | Battery | 48x96 | ----- |
| | Arrow Panel | PFAW-M93-SA | | Trailer with Skid | Solar Battery | 48x96 | 1995-101 |
| | Arrow Panel | PFAW-M93-SA (M90-D) | | Trailer | Solar Battery | 48x96 | 1995-170 |
| | Arrow Panel | PFEL-M-78 | AB-2 | Trailer | Battery | 48x96 | ----- |
| | Arrow Panel | PFEL-VM-87 | | Vehicle | Vehicle (12V) | 36x72 | 1987-110 |
| | Arrow Panel | PFVM-80-13 | | Vehicle | Vehicle (12V) | 24x48 | 1981-063 |
| | Arrow Panel | PFVM-80-15 | | Vehicle | Vehicle (12V) | 24x48 | 1982-069 |
| | Arrow Panel | PFVM-SB-15 | AB-2 | Vehicle | Vehicle (12V) | 24x48 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **SERVM 15** | **Service & Materials Company, Inc., 4835 East County Road 600, Sunman, IN 47041** | | | | | | |
| | Arrow Panel | 1950-A | AB-18 | Trailer | Gas | 48x96 | ----- |
| | Arrow Panel | 1950-A-D | AB-18 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | 1950-ACHAS | AB-18 | Trailer | Gas | 48x96 | ----- |
| | Arrow Panel | 1950-ACHAS-D | AB-18 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | 1953-A-D | AB-18 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | 1955-Trailer Train | AB-18 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | 3000-AH | AB-18 | Vehicle | Vehicle (12V) | 24x48 | ----- |
| | Arrow Panel | 3001-A | AB-18 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| | Arrow Panel | 3001-ACHAS | AB-18 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| **SOLAT 15** | **Solar Technology, Inc., 7620 Cetronia Road, Allentown, PA 18106 http://solartechnology.com/** | | | | | | |
| | Arrow Panel | AB-0515-D (LED) | | Trailer | Solar Battery | 48x96 | 1996-251 |
| | Arrow Panel | AB-0525 | | Trailer | Solar Battery | 48x96 | 2015-095Q |
| | Arrow Panel | AB-0715-D (LED) | | Trailer | Solar Battery | 48x96 | 1996-251 |
| | Arrow Panel | AB-1015-D (LED) | | Trailer | Solar Battery | 48x96 | 1996-251 |
| | Arrow Panel | AB-1515-D (LED) | | Trailer | Solar Battery | 48x96 | 1996-251 |
| | Arrow Panel | AB-2015 | | Trailer | Solar Battery | 48x96 | 1992-041 |
| | *May be used only on stationary operations.* *Must be aimed every time it is set up or moved.* | | | | | | |
| | Arrow Panel | AB-2015 (WB) | | Trailer | Solar Battery | 48x96 | 1992-269 |
| | Arrow Panel | AB-2025 | | Trailer | Solar Battery | 48x96 | 1992-041 |
| | *May be used only on stationary operations.* *Must be aimed every time it is set up or moved.* | | | | | | |
| | Arrow Panel | AB-2025 (WB) | | Trailer | Solar Battery | 48x96 | 1992-268 |
| | Arrow Panel | AT-0515 | AB-20 | Vehicle | Solar Battery | 48x96 | ----- |
| | Arrow Panel | AT-0715 | AB-20 | Vehicle | Solar Battery | 48x96 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **SUNEL 15** | **Sunshine Electronic Display Company, 501 Sylvania Street, St. Joseph, MO 64501 http://sunshine.us.com/** | | | | | | |
| **Plant** | **St. Joseph, MO 64501** | | | | | | |
| | Arrow Panel | AWD | | Trailer | Diesel | 48x96 | 1984-166 |
| | *Includes a 66"x112" message sign on the back of the arrow panel. Approved as a combination portable changeable message sign and 48"x96" arrow panel.* | | | | | | |
| **SUPSG 15** | **Superior Signals Inc., 16355 South Lone Elm Road, Olathe, KS 66062 http://www.superiorsignals.com/** | | | | | | |
| | Arrow Panel | SY382 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 30x60 | ----- |
| | Arrow Panel | SY382 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 48x96 | ----- |
| | Arrow Panel | SY382 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| | Arrow Panel | SY3900 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 48x96 | ----- |
| | Arrow Panel | SY3900 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| | Arrow Panel | SY3900 (15 or 25 lamps only) | AB-29 | Vehicle | Vehicle (12V) | 30x60 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| TRFCN 15 | Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/ | | | | | | |
| | Arrow Panel | MB1-13 | | Vehicle | Vehicle (12V) | 24x48 | 1984-214 |
| | Arrow Panel | MB1-15 | | Vehicle | Vehicle (12V) | 24x48 | 1984-214 |
| | Arrow Panel | MB3-15 | | Vehicle | Vehicle (12V) | 30x60 | 1988-142 |
| | Arrow Panel | MB3-15 Pulsar | AB-1 | Vehicle | Vehicle (12V) | 30x60 | ----- |
| | Arrow Panel | MB4-15 | | Vehicle | Vehicle (12V) | 36x72 | 1991-272 |
| | Arrow Panel | MB4-15 Pulsar | AB-1 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| | Arrow Panel | MB4-25 | | Vehicle | Vehicle (12V) | 36x72 | 1991-251 |
| | Arrow Panel | MB4-25 Pulsar | AB-1 | Vehicle | Vehicle (12V) | 36x72 | ----- |
| | Arrow Panel | MB5-15 | | Vehicle | Diesel | 48x96 | 1995-163 |
| | Arrow Panel | MB5-15 Pulsar | AB-1 | Vehicle | Vehicle (12V) | 48x96 | ----- |
| | Arrow Panel | MB5-25 | | Vehicle | Diesel | 48x96 | 1995-164 |
| | Arrow Panel | MB5-25 Pulsar | AB-1 | Vehicle | Vehicle (12V) | 48x96 | ----- |
| | Arrow Panel | TC1-15B | | Trailer | Battery | 48x96 | ----- |
| | Arrow Panel | TC1-15D | | Trailer with Skid | Diesel | 48x96 | 1984-040 |
| | Arrow Panel | TC1-15S | | Trailer with Skid | Solar Battery | 48x96 | 1995-047 |
| | Arrow Panel | TC1-25D | | Trailer with Skid | Diesel | 48x96 | 1985-186A |
| | Arrow Panel | TC2-15D | | Trailer | Diesel | 48x96 | 1984-041 |
| | Arrow Panel | TC2-15S | | Trailer | Solar Battery | 48x96 | 1998-215 |
| | Arrow Panel | TC2-25D | | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | TC3-15D | | Trailer with Skid | Diesel | 48x96 | 1987-354 |
| | Arrow Panel | TCI-15D Pulsar | AB-1 | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | TCI-15S Pulsar | AB-1 | Trailer | Solar Battery | 48x96 | ----- |
| | Arrow Panel | TCI-25S Pulsar | AB-1 | Trailer | Solar Battery | 48x96 | ----- |
| | Arrow Panel | TM1-15B | | Vehicle with Skid | Vehicle (12V) | 48x96 | ----- |
| | Arrow Panel | TM1-15RS | | Trailer | Solar Battery | 48x96 | 1998-214 |
| | Arrow Panel | TM1-15S | | Vehicle with Skid | Solar Battery | 48x96 | 1995-074B |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **TRLCM 15** | **Trailer Component Manufacturing, Inc., 7795 Division Drive, Mentor, OH 44060** | | | | | | |
| | Arrow Panel | 3060 | | Vehicle | Vehicle (12V) | 30x60 | ----- |
| | Arrow Panel | 7636EC/PD | | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | 7636EF/PD | | Trailer | Diesel | 48x96 | ----- |
| | Arrow Panel | D2000 | | Trailer | Diesel | 48x96 | 1995-171 |
| | Arrow Panel | S6000 | | Trailer | Solar Battery | 48x96 | 1995-187 |
| **USSEA 15** | **U. S. Seal, Inc., 281 West Sixth Street, West Wyoming, PA 18644** | | | | | | |
| | Arrow Panel | 2500 | | Trailer | Solar Battery | 48x96 | 1990-156 |
| | *May be used only on stationary operations.* | | | | | | |
| | *Must be aimed every time it is set up or moved.* | | | | | | |
| **VERMI 15** | **Signalisation VER-MAC, Inc., 1781 Bresse Street, Quebec, Canada G3N 1X3 http://www.ver-mac.com/** | | | | | | |
| | Arrow Panel | ST-4825 | AB-23 | Trailer | Solar Battery | 48x96 | 2011-223Q |
| | Arrow Panel | VM-95S | AB-23 | Trailer | Solar Battery | 48x96 | 1997-155 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Arrow Panel

Last Revised: 5/3/2019

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Arrow Panel Mount | Allow Panel Power | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|---|
| **WANCN 15** | **Wanco, Inc., 5870 Tennyson Street, Arvada, CO 80003-6903 http://www.wanco.com/** | | | | | | |
| | Arrow Panel | WRB4-A | | Vehicle | Vehicle (12V) | 24x48 | 1989-093E |
| | Arrow Panel | WRB5-A | | Vehicle | Vehicle (12V) | 30x60 | 1989-093F |
| | Arrow Panel | WRB5-SA | | Vehicle | Vehicle (12V) | 30x60 | 1989-093G |
| | Arrow Panel | WRB5-SAC | | Vehicle | Vehicle (12V) | 30x60 | 1989-093H |
| | Arrow Panel | WRB6-SA | | Vehicle | Vehicle (12V) | 36x72 | 1989-093J |
| | Arrow Panel | WTB8-SA | | Vehicle | Vehicle (12V) | 48x96 | 1989-093K |
| | Arrow Panel | WTB8-SAC | | Trailer | Diesel | 48x96 | 1989-093C |
| | Arrow Panel | WTB8-SAC | | Vehicle | Vehicle (12V) | 48x96 | 1989-093L |
| | Arrow Panel | WTDB8-SA | | Trailer with Skid | Diesel | 48x96 | 1989-093A |
| | Arrow Panel | WTDB8-SAC | | Trailer | Diesel | 48x96 | 1989-093D |
| | Arrow Panel | WTGB8-SA | | Trailer | Diesel | 48x96 | 1989-093B |
| | Arrow Panel | WTSP110-LSA | | Trailer | Solar Battery | 48x96 | 2001-091Q |
| | Arrow Panel | WTSP55-LSA | | Trailer | Solar Battery | 48x96 | 2001-091Q |
| | Arrow Panel | WTSP75-LSA | | Trailer | Solar Battery | 48x96 | 2001-091Q |
| | Arrow Panel | WTSV-LSA (W\|ECO 15 Light Display Panel, Vertical Mast) | | Trailer | Solar Battery | 48x96 | 2018-268Q |
| | Arrow Panel | WTSV-LSAC (W\|ECO 25 Light Display Panel, Vertical Mast) | | Trailer | Solar Battery | 48x96 | 2018-277Q |
| **WORKA 15** | **Work Area Protection Corporation, 2500 Production Drive, PO Box 4087, St. Charles, IL 60174 http://workareaprotection.com/** | | | | | | |
| | Arrow Panel | VMAW 2415 | AB-17 | Vehicle | Vehicle (12V) | 24x48 | 1992-022 |
| | Arrow Panel | VMAW-24-15LV | AB-17 | Vehicle | Vehicle (12V) | 24x48 | 1992-330 |
| | Arrow Panel | VMAW-30-15LV | AB-17 | Vehicle | Vehicle (12V) | 30x60 | 1992-350 |
| | Arrow Panel | WAAW-100-15D | AB-17 | Trailer | Diesel | 48x96 | 1991-283 |
| | Arrow Panel | WAP-WAAW-15SB | AB-17 | Trailer | Solar Battery | 48x96 | 1990-165 |
| | *May be used only on stationary operations. Must be aimed every time it is set up or moved.* | | | | | | |
| | Arrow Panel | WAP-WAAW-15SB-III | AB-17 | Trailer | Solar Battery | 48x96 | 1993-049 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Automated Flagger Assistance Device

Last Revised: 7/10/2020

Category 4 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Flagger Mount | Flagger Power | Ref. No. |
|---|---|---|---|---|---|---|
| **INTES 15** | **IntelliStrobe Safety Systems, LLC, 4136 S. McCann Ct., Springfield, MO 65804** | | | | | |
| | Automated Flagger Assistance Device | W1-AG | AFAD-3 | Stand Alone | Battery | 2010-324Q |
| | Automated Flagger Assistance Device | W1-AG/TM | AFAD-3 | Trailer | Solar Battery | ----- |
| | Automated Flagger Assistance Device | WS1-AG/TM | AFAD-3 | Trailer | Solar Battery | ----- |
| **RCFLG 15** | **North America Traffic Inc. (R. C. Flagman), 7 Petersburg Circle, Port Colborne, Ontario, Canada L3K 5V5 https://northamericatraffic.com/** | | | | | |
| | Automated Flagger Assistance Device | RCF 2.4 | AFAD-1 | Trailer | Solar Battery | ----- |
| **SAFTI 15** | **Safety Technologies, Inc., 28932 Highway 58 Blvd., Red Wing, MN 55066** | | | | | |
| | Automated Flagger Assistance Device | AF 76 | AFAD-2 | Trailer | Solar Battery | ----- |
| | Automated Flagger Assistance Device | AutoFlagger AF-54 | | Trailer | Solar Battery | 2015-168Q |
| **SITE2 15** | **Site 2020, 1505 Barrington Street, Suite 711, Halifax, Canada B2T1A4 https://site2020.com/** | | | | | |
| | Automated Flagger Assistance Device | Guardian SmartFlagger | | Stand Alone | Battery | 2018-133Q |
| **THOJO 15** | **John Thomas, Inc. (JTI), 1560 Lovett Drive, Dixon, IL 61021 http://www.jtitraffic.com/** | | | | | |
| | Automated Flagger Assistance Device | JTI Sentinel AFAD | | Trailer | Battery | 2018-196Q |

*Provisional Approval: The Bureau of Maintenance and Operations, Work Zones and Regulations Department will monitor the Sentinel AFAD's performance for a period of one year after its first project use.*

### 901.2 Drums, Nonmetallic

Last Revised: 9/11/2018

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Nonmetallic drums manufactured after December 31, 2019 must be certified as MASH 2016 compliant. Clarifications on Implementing the AASHTO MASH 2016 Edition (May 9, 2018)

Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **CORTI 15** | **Cortina Safety Products, 10706 West Grand Ave., Franklin Park, IL 60131 http://www.cortinaco.com/safety-products/cortina-safety-products/** | | | |
| | Drums, Nonmetallic | 360 Channelizer, Model 03-755-6HI | 360C-1 | 2009-141Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Drums, Nonmetallic

**Last Revised: 9/11/2018**

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Nonmetallic drums manufactured after December 31, 2019 must be certified as MASH 2016 compliant. Clarifications on Implementing the AASHTO MASH 2016 Edition (May 9, 2018)

Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **EASMI 15** | **Eastern Molding International, 1 Elizabeth Street, Batavia, NY 14020** | | | |
| | Drums, Nonmetallic | HTHD with High Density 25lb/40lb Rubber Base | | 2003-148Q |
| | Drums, Nonmetallic | HTLD with Low Density 25lb/40lb Rubber Base | | 2003-149Q |
| **LAKSD 15** | **Lakeside Plastics, Inc., 450 West 33rd Avenue, P.O. Box 2384, Oshkosh, WI 54903 http://www.lakesideplastics.net/index.html** | | | |
| | Drums, Nonmetallic<br>*Provisionally Approved* | The Director, Model FTS 5 | | 2002-032Q |
| **PLAPC 15** | **Plasticade Products Corporation, 7700 North Austin Ave., Skokie, IL 60077 http://www.plasticade.com/** | | | |
| | Drums, Nonmetallic | Commander Traffic Drum, Series 456 - HD (High Density) | | 2018-118Q |
| | *Manufacturer certified as MASH compliant with no attachments to device. Lightweight plastic drums crash tested to NCHRP 350, Test Level 3 criteria with warning lights attached per FHWA Eligibility Letters WZ-54 & WZ-54A. NTPEP tested: TTCD-2016-01-004* | | | |
| | Drums, Nonmetallic | Commander Traffic Drum, Series 456 - LD (Low Density) | | 2018-181Q |
| | *Manufacturer certified as MASH compliant with no attachments to device. Lightweight plastic drums crash tested to NCHRP 350, Test Level 3 criteria with warning lights attached per FHWA Eligibility Letters WZ-54 & WZ-54A. NTPEP tested: TTCD-2016-01-005* | | | |
| | Drums, Nonmetallic | Econocade II Drum, Series 452 High Density | | 2013-162QB |
| | Drums, Nonmetallic | Econocade II Drum, Series 452 Low Density | | 2013-162QA |
| | Drums, Nonmetallic | Rhino Channelizer Barrel 454 High Density | ND-13 | 2012-043Q |
| | Drums, Nonmetallic | Rhino Channelizer Barrel 454 Low Density | ND-13 | 2012-043Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Drums, Nonmetallic

Last Revised: 9/11/2018

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Nonmetallic drums manufactured after December 31, 2019 must be certified as MASH 2016 compliant. Clarifications on Implementing the AASHTO MASH 2016 Edition (May 9, 2018)

Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **PLASS 15** | **Plastic Safety Systems, Inc., 2444 Baldwin Road, P.O. Box 20140, Cleveland, OH 44104 http://plasticsafety.com/** | | | |
| **Facility** | **Middlefield, OH** | | | |
| | Drums, Nonmetallic | LifeGard HDPE with Rubber Collar | | 1992-100A |
| | Drums, Nonmetallic | LifeGard LDPE with Rubber Collar and Light | | 1992-100B |
| **SERVM 15** | **Service & Materials Company, Inc., 4835 East County Road 600, Sunman, IN 47041** | | | |
| | Drums, Nonmetallic | 1500 HD Channelizer Standard with Rubber Base and Light | | 1991-098 |
| | Drums, Nonmetallic | 1500 LD Channelizer Standard with Rubber Base and Light | | 1991-098 |
| | Drums, Nonmetallic | Bouncer PB-90 | | 1991-098 |
| | Drums, Nonmetallic | PB-85 Commander, 2-piece, O | | 1991-098 |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | |
| | Drums, Nonmetallic | Model 18000HDPE LW Standard with Sand Base and Light | | 1991-103 |
| | Drums, Nonmetallic | Model 18000HDPE Standard with Sand Base and Light | | 1991-102 |
| | Drums, Nonmetallic | Model 18000HDPE with Rubber Ring Ballast and Light | | 1995-008 |
| | Drums, Nonmetallic | Model 18000LDPE Standard with Sand Base and Light | | 1991-101 |
| | Drums, Nonmetallic | Model 18000LDPE with Rubber Ring Ballast and Light | | 1995-008 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Drums, Nonmetallic

**Last Revised: 9/11/2018**

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Nonmetallic drums manufactured after December 31, 2019 must be certified as MASH 2016 compliant. Clarifications on Implementing the AASHTO MASH 2016 Edition (May 9, 2018)

Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **WORKA 15** | **Work Area Protection Corporation, 2500 Production Drive, PO Box 4087, St. Charles, IL 60174 http://workareaprotection.com/** | | | |
| | Drums, Nonmetallic | B- 500LC with Rubber Tire Base, Plastic Base w/wo Light | ND-04 | ----- |
| | Drums, Nonmetallic | B-200HDPE with Sand Base | | 1993-143 |
| | Drums, Nonmetallic | B-300HDPE with Rubber Tire Base | | 1993-144 |
| | Drums, Nonmetallic | B-400HDPE with Rubber Base and Light | | 1996-236B |
| | Drums, Nonmetallic | B-400HDPE with Sand Base and Light | | 1996-236A |

### 901.2 Intrusion Alarm

**Last Revised: 8/10/2017**

Category 2 Temporary Traffic Control Device

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | |
| | Intrusion Alarm<br>*Provisionally Approved* | Model HWZIA-300 | PCIA-2 | 1997-015A |
| | Intrusion Alarm<br>*Provisionally Approved* | Model HWZIA-500 | PCIA-2 | 1997-015B |
| **SAFLS 15** | **Safe-Lite Systems, 1050 Eagle Road, Newton, PA 18940** | | | |
| | Intrusion Alarm<br>*Must use 70 durometer pneumatic tube.* | Model 10A-M | | 1997-032 |

### 901.2 Lane Separator Curb

**Last Revised: 2/7/2019**

| Product | Name | COA | Ref. No. |
|---|---|---|---|

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Lane Separator Curb

Last Revised: 2/7/2019

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | |
| | Lane Separator Curb | IRS Tuff Curb XLP | LSC-02 | 2011-112Q |
| | Lane Separator Curb | Tuff Curb | LSC-02 | ----- |
| **PEXCO 15 Facility** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic 3110 70th Avenue East Tacoma, WA 98424** | | | |
| | Lane Separator Curb | FG 300 Curb | | 2007-078Q |
| **QWICK 15** | **Qwick Kurb, Inc., 1916 US 41 South, Ruskin, FL 33570 http://qwickkurb.com/** | | | |
| | Lane Separator Curb | Qwick Kurb | | 2002-117Q |

### 901.2 Longitudinal Channelizing Devices

Last Revised: 1/25/2019

Category 3 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **REMCON15 Plant** | **REMCON Plastics Inc., 208 Chestnut Street, Reading, PA 16902 https://www.remcon.com/ 208 Chestnut Street Reading, PA 16902** | | | |
| | Longitudinal Channelizing Device, Plastic Barrier ~ *Guardsafe 36 Technical Drawing* | Guardsafe 36 | | 2019-001Q |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | |
| | Longitudinal Channelizing Device, Plastic Barrier | Sentry (Water Filled Temporary) | LCD-03 | 2010-039Q |
| **TRISD 15** | **Trident Security Devices, Inc., 1017 Prospect Avenue, Elkins Park, PA 19027** | | | |
| | Longitudinal Channelizing Device, Plastic Barrier | Roadguard 2 | | 2011-067Q |
| **YODOK 15** | **Yodock Wall Company, Inc., 900 Patterson Drive, Bloomsburg, PA 17815 https://trinityhighway.com/** | | | |
| | Longitudinal Channelizing Device, Plastic Barrier | Model 2001 | LCD-02 | ----- |
| | Longitudinal Channelizing Device, Plastic Barrier | Model 2001M | LCD-02 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Changeable Message Signs

Last Revised: 9/10/2019

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | PCMS Type | PCMS Power | Size (in) | PCMS Mount | PCMS Message | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **ADDC- 15** | **ADDCO Manufacturing, 240 Arlington Ave. E., St. Paul, MN 55117 http://www.addco.com/en/** | | | | | | | | |
| | Portable Changeable Message Sign | 9050100 | | Flip Disk | Diesel | 91x115 | Trailer | 3-Line | 1986-152 |
| | Portable Changeable Message Sign | 9050100-7 | | Flip Disk | Diesel | 91x102 | Trailer | 3-Line | 1986-152 |
| | Portable Changeable Message Sign | BRICK | | LED | Battery/Vehicle/ Generator | 42x84 | Vehicle | Full Matrix | 1999-024 |
| | Portable Changeable Message Sign | BRICK | | LED | Solar Battery | 69x145 | Trailer | Full Matrix | 1999-024 |
| | Portable Changeable Message Sign | DE3000 | | LED | Battery | 50x90 | Skid | 2-Line | 1990-080 |
| | Portable Changeable Message Sign | DH1000 | | Flip Disk | Diesel | 76x113 | Trailer | 3-Line | 1990-067 |
| | Portable Changeable Message Sign | DH1000 ALS | | LED | Solar Battery | 76x134 | Trailer | 3-Line | 1995-135 |
| | Portable Changeable Message Sign | DH1000 SLD | | LED | Solar Battery | 76x113 | Trailer | 3-Line | 1993-195 |
| | Portable Changeable Message Sign | DM2000 | | Flip Disk | Diesel | 50x90 | Trailer | 2-Line | 1990-079 |
| **ADVSP 15** | **Advanced Safety Products, P.O. Box 2663, Fallbrook, CA 92088** | | | | | | | | |
| | Portable Changeable Message Sign | VMS Message Master | S-12 | LED | Battery | 35x71 | Trailer/Vehicle | 2-Line | ----- |
| **AMELS 15** | **American Electronic Sign Company, Spokane Ind. Park, Bldg. 10, North 3808 Sullivan Road, Spokane, WA 99216-1670** | | | | | | | | |
| | Portable Changeable Message Sign | AESCO | | Flip Disk | Battery/Diesel | 76x115 | Trailer | 3-Line | 1993-254 |
| | Portable Changeable Message Sign | AESCOVCMS | | Flip Disk | Generator | 46x81 | Vehicle | 2-Line | 1993-255 |
| **AMESC 15** | **American Signal Company, 2755 Bankers Industrial Drive, Atlanta, GA 30360 http://www.amsig.com/frame_home.htm** | | | | | | | | |
| | Portable Changeable Message Sign | CMS-GP-232 | | LED | Battery/Vehicle | 32x72 | Vehicle | Full Matrix | 1999-166 |
| | Portable Changeable Message Sign | CMS-GP-432 | | LED | Battery | 48x96 | Vehicle | Full Matrix | 1996-161 |
| | Portable Changeable Message Sign | CMS-GP-432T | PS-6 | LED | Solar Battery | 48x96 | Trailer | Full Matrix | ----- |
| | Portable Changeable Message Sign | CMS-T300 | | Flip Disk | Diesel | 78x113 | Trailer | 3-Line | 1990-182 |
| | Portable Changeable Message Sign | CMS-T320 | PS-6 | LED | Solar Battery | 78x126 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | CMS-T331 | PS-6 | LED | Solar Battery | 78x126 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | CMS-T333 | | LED | Solar Battery | 78x126 | Trailer | Full Matrix | 1995-283 |
| | Portable Changeable Message Sign | CMS-T333.1B | | LED | Solar Battery | 79x136 | Trailer | Full Matrix | 2001-148Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Changeable Message Signs

Last Revised: 9/10/2019

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | PCMS Type | PCMS Power | Size (in) | PCMS Mount | PCMS Message | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **DAKI- 15** | **Daktronics, Inc., 331 32nd Ave. P O Box 5128, Brookings, SD 57006-5128 http://www.daktronics.com/en-us** | | | | | | | | |
| | Portable Changeable Message Sign | VP-4000 | PS-20 | LED | Solar Battery | 77x133 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | VP-4000 FM | PS-20 | LED | Solar Battery | 77x133 | Trailer | Full Matrix | ----- |
| **DISPL 15** | **Display Solutions, Inc., 6301 Best Friend Road, Norcross, GA 30071 https://www.displaysolutionsgroup.com/** | | | | | | | | |
| | Portable Changeable Message Sign | Gen III | PS-2 | Lamp | Diesel | 75x94 | Trailer | 3-Line | 1981-132 |
| | Portable Changeable Message Sign | Gen V | PS-2 | Lamp | Diesel | 30x89 | Trailer | 1-Line | 1981-005 |
| | Portable Changeable Message Sign | Gen VI | PS-2 | Flip Disk | Diesel | 78x124 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | Gen VI-C | PS-2 | Flip Disk | Diesel | 78x125 | Trailer | 3-Line | 1990-301 |
| | Portable Changeable Message Sign | NightHawk 340 | PS-2 | Flip Disk | Diesel | 78x111 | Trailer | 3-Line | 1993-166 |
| | Portable Changeable Message Sign | PCMS-2 | PS-2 | Lamp | Diesel | 66x112 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | Sunray 340 | PS-2 | LED | Solar Battery | 78x111 | Trailer | 3-Line | 1995-096 |
| | Portable Changeable Message Sign | Sunray 380 | PS-2 | LED | Solar Battery | 78x128 | Trailer | 3-Line | 2001-097Q |
| | Portable Changeable Message Sign | Sunray FM | PS-2 | LED | Solar Battery | 85x129 | Trailer | Full Matrix | 2000-228Q |
| | Portable Changeable Message Sign | Sunray Mini FM | PS-2 | LED | Solar Battery | 48x96 | Trailer | Full Matrix | 2001-098Q |
| **INTTC 15** | **International Traffic Control Products, Inc., FM 2169, P.O. Box 24, Junction, TX 76849** | | | | | | | | |
| | Portable Changeable Message Sign | CMS-100 | | LED | Solar Battery | 76x113 | Trailer | 3-Line | 1996-113 |
| | Portable Changeable Message Sign | CMS-100 FM | | LED | Solar Battery | 84x113 | Trailer | Full Matrix | 1998-005 |
| **KKSYS 15** | **K & K Systems, 687 Palmetto Road, Tupelo, MS 38801 http://k-ksystems.com/** | | | | | | | | |
| | Portable Changeable Message Sign | DDMB3I-240 | PS-18 | LED | Solar Battery | 72x120 | Trailer | 3-Line | ----- |
| **LAKET 15** | **Lake Technologies, Inc., 28248 Country Road 561, Tavares, FL 32778** | | | | | | | | |
| | Portable Changeable Message Sign | PDM-S18502131 | | Flip Disk | Diesel | 79x142 | Trailer | 3-Line | 1987-216 |
| **LITSI 15** | **LiteSys Inc., 150 Pollywog Lane, Belgrade, MT 59714 http://www.litesys.com/** | | | | | | | | |
| | Portable Changeable Message Sign | 1020A-4W | PS-19 | LED | Battery/Vehicle | 31x75 | Vehicle | 2-Line | ----- |
| | Portable Changeable Message Sign | 1030F-4W | PS-19 | LED | Battery/Vehicle | 41x75 | Vehicle | Full Matrix | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Changeable Message Signs

Last Revised: 9/10/2019

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | PCMS Type | PCMS Power | Size (in) | PCMS Mount | PCMS Message | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **NATSG 15** | **National Signal, Inc., 2440 Artesia Avenue, Fullerton, CA 92833 http://www.nationalsignalinc.net/** | | | | | | | | |
| | Portable Changeable Message Sign | ER200 | PS-17 | LED | Solar Battery | 48x96 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | ER200 CAB | PS-17 | LED | Solar Battery | 48x96 | Vehicle | 3-Line | ----- |
| | Portable Changeable Message Sign | ER200 Jr | PS-17 | LED | Solar Battery | 48x96 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | Vu-Pointe | PS-17 | LED | Solar Battery | 76x116 | Trailer | 3-Line | ----- |
| **PRSLR 15** | **Precision Solar Controls, Inc., 2985 Market Street, Garland, TX 75041 http://www.precisionsolarcontrols.com/** | | | | | | | | |
| | Portable Changeable Message Sign | SMC-1000 | PS-8 | LED | Solar Battery | 77x127 | Trailer | 3-Line | 1992-035 |
| | Portable Changeable Message Sign | SMC-1000 ST | PS-8 | LED | Solar Battery | 77x127 | Trailer | 3-Line | 2009-132Q |
| | Portable Changeable Message Sign | SMC-1000-HE | PS-8 | LED | Solar Battery | 76x127 | Trailer | 3-Line | 1995-237 |
| | Portable Changeable Message Sign | SMC-2000 | PS-8 | LED | Solar Battery | 77x127 | Trailer | Full Matrix | 1995-183 |
| | Portable Changeable Message Sign | SMC-2000 FM ST | PS-8 | LED | Solar Battery | 77x127 | Trailer | Full Matrix | 2011-056Q |
| | Portable Changeable Message Sign | SMC-3000 | PS-8 | LED | Solar Battery | 48x96 | Trailer | Full Matrix | 2009-038Q |
| | Portable Changeable Message Sign | SMC-4000 | PS-8 | LED | Solar Battery | 48x96 | Trailer | Full Matrix | ----- |
| **REVAP 15** | **Reva Plastics Corporation, P. O. Box 440, Route 31, Weedsport, NY 13166 http://www.revaplastics.com/** | | | | | | | | |
| | Portable Changeable Message Sign | 2002 | PS-9 | Lamp | Diesel | 30x96 | Trailer | 1-Line | ----- |
| **SOLAT 15** | **Solar Technology, Inc., 7620 Cetronia Road, Allentown, PA 18106 http://solartechnology.com/** | | | | | | | | |
| | Portable Changeable Message Sign | MB-1548 | PS-11 | LED | Solar Battery | 76x126 | Trailer | Full Matrix | ----- |
| | Portable Changeable Message Sign | MB-3048 | PS-11 | LED | Solar Battery | 76x126 | Trailer | Full Matrix | ----- |
| | Portable Changeable Message Sign | MB-3748 | PS-11 | LED | Solar Battery | 76x126 | Trailer | Full Matrix | ----- |
| | Portable Changeable Message Sign | MB-4024 | PS-11 | LED | Solar Battery | 72x120 | Trailer | 3-Line | ----- |
| | *Must be equipped with LED lamps, model HLMT-CL00.* | | | | | | | | |
| | Portable Changeable Message Sign | MB-4048 | | LED | Solar Battery | 76x126 | Trailer | Full Matrix | 1999-038Q |
| **SUNEL 15** | **Sunshine Electronic Display Company, 501 Sylvania Street, St. Joseph, MO 64501 http://sunshine.us.com/** | | | | | | | | |
| **Plant** | **St. Joseph, MO 64501** | | | | | | | | |
| | Portable Changeable Message Sign | AWD | | LED | Diesel | 66x112 | Trailer | 3-Line | 1984-166 |
| | *Includes a 48"x96" arrow board on the back of the message panel. Approved as a combination portable changeable message sign and 48"x96" arrow board.* | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Changeable Message Signs

Last Revised: 9/10/2019

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | PCMS Type | PCMS Power | Size (in) | PCMS Mount | PCMS Message | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **TELE- 15** | **Tele-Spot Systems, 76 Progress Drive, Stamford, CT 06902-3600** | | | | | | | | |
| | Portable Changeable Message Sign | 317913-001 (trailer) | | | Generator | | | | 1987-351 |
| | Portable Changeable Message Sign | 317943-001 (sign) | | | Diesel | 80x120 | Trailer | 3-Line | 1987-351 |
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | | | | | | |
| | Portable Changeable Message Sign | MB-ADS | PS-15 | LED | Solar/Vehicle | | Vehicle | Full Matrix | 2001-202Q |
| | Portable Changeable Message Sign | TC1-ADS | PS-15 | LED | Solar/Vehicle | | Trailer | Full Matrix | 2001-202Q |
| **VERMI 15** | **Signalisation VER-MAC, Inc., 1781 Bresse Street, Quebec, Canada G3N 1X3 http://www.ver-mac.com/** | | | | | | | | |
| | Portable Changeable Message Sign | Northern Lights | PS-14 | LED | Solar Battery | 78x84 | Trailer | 3-Line | ----- |
| | Portable Changeable Message Sign | PCMS-1500 | PS-14 | LED | Solar Battery | 82x132 | Trailer | Full Matrix | 2000-164Q |
| | Portable Changeable Message Sign | PCMS-320 | PS-14 | LED | Solar Battery | 66x96 | Trailer | Full Matrix | 2009-185Q |
| | Portable Changeable Message Sign | PCMS-320RT | | LED | Solar Battery | 66x104 | Trailer | Full Color | 2018-011Q |
| | Portable Changeable Message Sign | PCMS-548 | PS-14 | LED | Solar Battery | 45x80 | Trailer | Full Matrix | 2009-184Q |
| | Portable Changeable Message Sign | TH-548 | PS-14 | LED | Vehicle (12V) | 45x80 | Vehicle | Full Matrix | 2009-184Q |
| **WANCN 15** | **Wanco, Inc., 5870 Tennyson Street, Arvada, CO 80003-6903 http://www.wanco.com/** | | | | | | | | |
| | Portable Changeable Message Sign | WTLMB(A) | | LED | Solar Battery | 72x130 | Trailer | 3-Line | 1997-167 |
| | Portable Changeable Message Sign | WTLMB-S-LL(A) | | LED | Solar Battery | 72x130 | Trailer | 3-Line | 1997-167 |
| | Portable Changeable Message Sign | WTMMB (A) | | LED | Solar Battery | 72x130 | Trailer | Full Matrix | 2000-264Q |
| | Portable Changeable Message Sign | WTMMB-S-LL(A) | | LED | Solar Battery | 72x130 | Trailer | Full Matrix | 2000-264Q |
| | Portable Changeable Message Sign | WVTMM-L | | LED | Solar Battery | 48x96 | Trailer | Full Matrix | 2019-108Q |
| | Portable Changeable Message Sign | WVTMM-M | | LED | Solar Battery | 48x71 | Trailer | Full Matrix | 2019-153Q |
| **WORKA 15** | **Work Area Protection Corporation, 2500 Production Drive, PO Box 4087, St. Charles, IL 60174 http://workareaprotection.com/** | | | | | | | | |
| | Portable Changeable Message Sign | VMBS-1000 | | | Solar Battery | 77x127 | Trailer | 3-Line | 1992-028 |

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

Temporary work zone devices manufactured after December 31, 2019, must meet the AASHTO MASH 2016 criteria. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 2 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **BONE- 15** | **Bone Safety Signs, Inc., 2151 Northwest Parkway, S.E., Suite 100, Marietta, GA 30067 http://www.bonesafety.com/** | | | | |
| | X-Base Support | Big Dog SZ-412-2S | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-412 | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-412FX | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-412S | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-460 | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-460-2S | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-484 | PSS-13 | TL-3 (62 mph) | ----- |
| | X-Base Support | SZ-484-2S | PSS-13 | TL-3 (62 mph) | ----- |
| **DICKE 15** | **Dicke Tool Company, 1201 Warren Avenue, Downers Grove, IL 60515 http://dicketool.com/** | | | | |
| | Rubber Base Support | DSB100 | PSS-4 | TL-3 (62 mph) | ----- |
| | Rubber Base Support | DSB100HD | PSS-4 | TL-3 (62 mph) | ----- |
| | Tripod Support | T155 | PSS-4 | TL-3 (62 mph) | 2011-186Q |
| | Tripod Support | T50 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF-3003 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF-4000 | PSS-4 | TL-3 (62 mph) | 2001-085Q |
| | X-Base Support | DF3000S | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF3000W | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF3000WQ | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF3003S | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF3003W | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF3330 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF4000 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF4503 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DF4700 | PSS-4 | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| DICKE 15 | Dicke Tool Company, 1201 Warren Avenue, Downers Grove, IL 60515 http://dicketool.com/ | | | | |
| | X-Base Support | DF4700TX | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DL1003 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DL1003 Latch | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | DL1008 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | MS-Flex-30 | PSS-4 | TL-3 (62 mph) | 2001-085Q |
| | X-Base Support | MS-Rigid-30 | PSS-4 | TL-3 (62 mph) | 2001-085Q |
| | X-Base Support | QFV-60 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | QFV-84 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | QFV48 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | QFVW | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | QLVW | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SDF4000 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SDL1000 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SDL1000 Latch | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SDL1008 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SMS-Flex-30 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | STF-12C | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | STF-12W | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | STF-18 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | STF1214 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | STF1230 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SUF2000 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | SUF2000S | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF-12 | PSS-4 | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **DICKE 15** | **Dicke Tool Company, 1201 Warren Avenue, Downers Grove, IL 60515 http://dicketool.com/** | | | | |
| | X-Base Support | TF-12C | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF-12W | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF-18 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF-60 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF-84 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF1214 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | TF1230 | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | UF-2000 | PSS-4 | TL-3 (62 mph) | 2001-085Q |
| | X-Base Support | UF2000S | PSS-4 | TL-3 (62 mph) | ----- |
| | X-Base Support | UF2000T | PSS-4 | TL-3 (62 mph) | 2010-317Q |
| **DICSP 15** | **Dicke Safety Products, 1201 Warren Ave., Downers Grove, IL 60515 http://dicketool.com/** | | | | |
| | X-Base Support | QFV48 | PSS-7 | TL-3 (62 mph) | ----- |
| | X-Base Support | QFVW | PSS-7 | TL-3 (62 mph) | ----- |
| | X-Base Support | QLVW | PSS-7 | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | |
| | Tripod Support | E-350 | | TL-3 (62 mph) | 2001-156Q |
| | X-Base Support | C-102 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-132 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-142 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-200 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-202 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-232 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-242 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-802 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-832 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-842 | | TL-3 (62 mph) | 2001-105Q |
| | X-Base Support | C-902 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | C-932 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | C-942 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | X-501 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | X-550 | | TL-3 (62 mph) | 2001-156Q |
| | X-Base Support | X-551 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | X-552 | PSS-5 | TL-3 (62 mph) | ----- |
| | X-Base Support | X-553 | PSS-5 | TL-3 (62 mph) | ----- |
| | X-Base Support | X-600 | | TL-3 (62 mph) | 2001-157Q |
| | X-Base Support | X-601 | | TL-3 (62 mph) | 2001-106Q |
| | X-Base Support | X-840 | | TL-3 (62 mph) | 2001-158Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | | |
| | Rubber Base Support | 350 | PSS-6 | TL-3 (62 mph) | ----- |
| | Rubber Base Support | 351 | PSS-6 | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **KORMN 15** | **Korman Signs, Inc., 3029 Lincoln Ave., Henrico, VA 23228 http://www.kormansigns.com/** | | | | |
| | Tripod Support | SS1 | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548 | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548A | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548AE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548AEE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548AETL | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548C | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548CA | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548CAE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548CE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548E | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548EE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548ETL | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548UC | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548UCA | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548UCR | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS548UCRA | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560 | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560A | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560AE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560AEE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560E | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560EE | PSS-12 | TL-3 (62 mph) | ----- |
| | X-Base Support | SS560UCA | PSS-12 | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **MDITC 15** | **Marketing Displays, Inc. (MDI WorldWide), 38271 W. Twelve Mile Road, Farmington Hills, MI 48331 http://www.mditrafficcontrol.com/** | | | | |
| | X-Base Support | 30CAM | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 3612DLK | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 40CAM | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4812 | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814CS | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814DLK | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814HDK | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814K | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814NSCK | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4814SL | | TL-3 (62 mph) | 2015-160QA |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-333* | | | | |
| | X-Base Support | 4814SSCK | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4815 | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4818 | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4850 | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4860 | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4884CS | | TL-3 (62 mph) | 2000-341Q |
| | X-Base Support | 4884KET | | TL-3 (62 mph) | 2018-077Q |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-138* | | | | |
| | X-Base Support | 5012NS | | TL-3 (62 mph) | 2015-160QC |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-114* | | | | |
| | X-Base Support | 5012NSAL | | TL-3 (62 mph) | 2015-160QE |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-114* | | | | |
| | X-Base Support | 5012SS | | TL-3 (62 mph) | 2015-160QD |

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### 901.2 Portable Sign Support

Last Revised: 2/19/2020

FHWA Hardware Eligibility Letters - Work Zone Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **MDITC 15** | **Marketing Displays, Inc. (MDI WorldWide), 38271 W. Twelve Mile Road, Farmington Hills, MI 48331 http://www.mditrafficcontrol.com/** | | | | |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-114* | | | | |
| | X-Base Support | 5012SSAL | | TL-3 (62 mph) | 2015-160QF |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letter: WZ-114* | | | | |
| | X-Base Support | 5018K | | TL-3 (62 mph) | 2015-160QB |
| | *Testing Criteria: NCHRP 350, FHWA Approval Letters: WZ-69, WZ-164* | | | | |
| | X-Base Support | 50SM | | TL-3 (62 mph) | 2000-341Q |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | |
| | Tripod Support | Tri-Buster 93012 | PSS-3 | TL-3 (62 mph) | ----- |
| | X-Base Support | Big Buster | | TL-3 (62 mph) | 2002-044Q |
| | X-Base Support | Econo-Buster 80018 | PSS-3 | TL-3 (62 mph) | ----- |
| | X-Base Support | Lil-Buster 24018 | | TL-3 (62 mph) | 2001-030Q |
| | X-Base Support | Traffic Stand 22000 | | TL-3 (62 mph) | 2001-031Q |
| | X-Base Support | Zephyr 26000 | | TL-3 (62 mph) | 2001-032Q |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** | | | | |
| | ***Formerly PIBH- 15*** | | | | |
| | X-Base Support | 9905-0075-010 | | TL-3 (62 mph) | 2001-033Q |
| | *FHWA Eligibility Letter: WZ-18, NCHRP-350. Stand supports a roll up sign 12" above the ground and three warning flags on top. Assembled by MCAR, Inc. in Hermitage, PA. The portable sign part no. 9905-0075-010 is referenced as Model 30SM-PAKD in WZ-18. **Model 30SM-PAKD Schematic Drawing from WZ-18*** | | | | |
| | X-Base Support | 9905-0075-015 | | TL-3 (62 mph) | 2001-034Q |

### 901.2 Safety Markers

Last Revised: 3/27/2015

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **VAG&S 15** | **Vara, A. G. & Sons, 4881 Newton Road, Hamburg, NY 14075** | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Safety Markers

Last Revised: 3/27/2015

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **VAG&S 15** | **Vara, A. G. & Sons, 4881 Newton Road, Hamburg, NY 14075** | | | |
| | Safety Marker | OC-5-30-64 Octopus | | ----- |

### 901.2 Sign Trailer with Solar Powered Flashing Beacons

Last Revised: 4/13/2015

May be used with regulatory or warning series signs within a construction zone.

The sign trailer shall not be used in place of a Type B warning light as required by Department Regulations.

The red beacons shall be used only in conjunction with a stop sign.

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | Beacon Colors | Ref. No. |
|---|---|---|---|---|---|
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | |
| | Sign Trailer with Solar Powered Flashing Beacons | PFAW-M91-SST | | Yellow and Red | ----- |
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | | |
| | Sign Trailer with Solar Powered Flashing Beacons | SST-1 | | Yellow and Red | ----- |

### 901.2 Speed Display Signs

Last Revised: 5/7/2020

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | Speed Display Mount | Speed Display Power | Ref. No. |
|---|---|---|---|---|---|---|
| **ALLTS 15** | **All Traffic Solutions, 3100 Research Drive, State College, PA 16801 http://www.alltrafficsolutions.com/** | | | | | |
| | Speed Display Sign | SpeedSentry 18 | SDS-3 | Trailer | Solar Battery | ----- |
| **AMESC 15** | **American Signal Company, 2755 Bankers Industrial Drive, Atlanta, GA 30360 http://www.amsig.com/frame_home.htm** | | | | | |
| | Speed Display Sign | Digibrite Advantage | SDS-5 | Trailer | Solar Battery | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Speed Display Signs

Last Revised: 5/7/2020

Category 4 Temporary Traffic Control Device

| | Product | Name | COA | Speed Display Mount | Speed Display Power | Ref. No. |
|---|---|---|---|---|---|---|
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | |
| | Speed Display Sign | ConSAM | SDS-1 | Trailer | Solar Battery | ----- |
| **SOLAT 15** | **Solar Technology, Inc., 7620 Cetronia Road, Allentown, PA 18106 http://solartechnology.com/** | | | | | |
| | Speed Display Sign | RST-2000 | SDS-6 | Trailer | Solar Battery | ----- |
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | | | |
| | Speed Display Sign | SST-2 | SDS-2 | Trailer | Solar Battery | ----- |
| **VERMI 15** | **Signalisation VER-MAC, Inc., 1781 Bresse Street, Quebec, Canada G3N 1X3 http://www.ver-mac.com/** | | | | | |
| | Speed Display Sign | SP-3248V | SVM-001P | Trailer | Solar Battery | 2018-137Q |
| | Speed Display Sign | SP-710 | SDS-7 | Trailer | Solar Battery | ----- |
| **WANCN 15** | **Wanco, Inc., 5870 Tennyson Street, Arvada, CO 80003-6903 http://www.wanco.com/** | | | | | |
| | Speed Display Sign | WSDT-S | SDS-4 | Trailer | Solar Battery | ----- |
| | Speed Display Sign | WSDT3 | SDS-9 | Trailer | Solar Battery | 2013-173 |

### 901.2 Stop/Slow Paddle, Flashing

Last Revised: 5/19/2015

| | Product | Name | COA | Paddle Size (in) | Ref. No. |
|---|---|---|---|---|---|
| **DETRL 15** | **Detronics Limited, 4003 Bloomington Rd, RR #4, Stoufville, Ontario, Canada** | | | | |
| | Stop/Slow Paddle, Flashing | Model TES-336T | | 18x18 | 1996-251 |
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | |
| | Stop/Slow Paddle, Flashing | VA-WZ-1872-HI/DGF | FSSP-2 | 18x18 | ----- |
| | Stop/Slow Paddle, Flashing | VA-WZ-2472-HI/DGF | FSSP-2 | 24x24 | ----- |
| **TRFPC 15** | **TAPCO - Traffic & Parking Control Company, Inc., 5100 W. Brown Deer Road, Brown Deer, WI 53223 http://www.tapconet.com/** | | | | |
| | Stop/Slow Paddle, Flashing | Blinkerpaddle 2180 | FSSP-3 | 18x18 | ----- |
| | Stop/Slow Paddle, Flashing | Blinkerpaddle 2180 | FSSP-3 | 24x24 | ----- |

### 901.2 Temporary Barricades

Last Revised: 5/23/2019

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barricades

Last Revised: 5/23/2019

FHWA Hardware Eligibility Letters - Work Zone Devices

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 2 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Barricade Light | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|---|
| **ALLPI 15** | **Allied Plastics, Inc., 150 Holy Hill Road, Twin Lakes, WI 53181** | | | | | |
| | Three Sided Barricade | Multicade | BAR-11 | Lighted | TL-3 (62 mph) | ----- |
| **CAMSC 15** | **Camsco Services, Inc., 255 Pennbriar Drive, Erie, PA 16509 https://camsco.com/public/home.html** | | | | | |
| | Barricade, Type 2 | T2HSA | | Lighted | TL-3 (62 mph) | 2002-076Q |
| **CORTI 15** | **Cortina Safety Products, 10706 West Grand Ave., Franklin Park, IL 60131 http://www.cortinaco.com/safety-products/cortina-safety-products/** | | | | | |
| | Barricade, Type 1 | Plastx 97-01-001 | BAR-8 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 1 | Steelcade 97-03-001 | BAR-8 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | 97-11-003-45 SF Series | BAR-8 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | 97-11-45 F Series | BAR-8 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | Plastx 97-01-002 | BAR-8 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | Steelcade 97-03-002 | BAR-8 | | TL-3 (62 mph) | ----- |
| **HTGCP 15** | **HTG Custom Plastech, 15002 Cross Creek Parkway, Newbury, OH 44065** | | | | | |
| | Barricade, Type 3 | Sentinel B-30 | | | TL-3 (62 mph) | 2002-081Q |
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | | | |
| | Barricade, Type 3 | Barricade Series 600 | BAR-9 | | TL-3 (62 mph) | ----- |
| **KORMN 15** | **Korman Signs, Inc., 3029 Lincoln Ave., Henrico, VA 23228 http://www.kormansigns.com/** | | | | | |
| | Barricade, Type 1, 2 | WBT2 Jammer Plastic | BAR-12 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 1, 2 | WBT2 Jammer Steel | BAR-12 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 3 | WBT3BR Splice Plate Bracket | BAR-12 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 3 | WBT3HP EZ-Kade | BAR-12 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 3 | WBT3SW Welded Stub | BAR-12 | Lighted | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barricades

Last Revised: 5/23/2019

FHWA Hardware Eligibility Letters - Work Zone Devices

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 2 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Barricade Light | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|---|
| **PLAPC 15** | **Plasticade Products Corporation, 7700 North Austin Ave., Skokie, IL 60077 http://www.plasticade.com/** | | | | | |
| | Barricade, Type 1 | 100-WT12EG | BAR-10 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 1 | Fibercade 101 | BAR-10 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 1, 2, Direction Indicator (DI) | SafetyCade | | Lighted | TL-3 (62 mph) | 2000-303Q |
| | Barricade, Type 2 | 100-T12B8 | BAR-10 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | Fibercade 111 | BAR-10 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 3 | 300 Series | BAR-10 | | TL-3 (62 mph) | ----- |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | |
| | Barricade, Type 3 | Type Metallic Barricade | BAR-14 | | TL-3 (62 mph) | 2012-040Q |
| **THDTW 15** | **Three D Traffic Works, Inc., 430 North Varney Street, Burbank, CA 91502 http://www.trafficwks.com/** | | | | | |
| | Barricade, Type 1 | TD 2000 Works | | Lighted | TL-3 (62 mph) | 2000-272Q |
| | Barricade, Type 1 | TD 2150 Works | BAR-1 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | TD 2000 Works | | Lighted | TL-3 (62 mph) | 2000-272Q |
| | Barricade, Type 2 | TD 2150 Works | BAR-1 | Lighted | TL-3 (62 mph) | ----- |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | |
| | Barricade, Type 1 | TD 36000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 1 | TD 37000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 1 | TD 39000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | TD 36000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | TD 37000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |
| | Barricade, Type 2 | TD 39000 Series | BAR-4 | Lighted | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barricades

Last Revised: 5/23/2019

FHWA Hardware Eligibility Letters - Work Zone Devices

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 2 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | COA | Barricade Light | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|---|
| **YODOK 15** | **Yodock Wall Company, Inc., 900 Patterson Drive, Bloomsburg, PA 17815 https://trinityhighway.com/** | | | | | |
| | Barricade, Type 3<br>*Maximum water per cell unit: 1060 pounds (482 kg).* | Model 2001 | BAR-7 | | TL-3 (62 mph) | ----- |
| | Barricade, Type 3<br>*May not contain water.* | Model 2001M | BAR-7 | | TL-3 (62 mph) | ----- |

### 901.2 Temporary Barrier, Concrete (DM-2, Chapter 12)

Last Revised: 3/24/2020

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. Design Manual Part 2 Highway Design - Temporary Barriers (Publication 13M, Chapter 12.10)

FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): Longitudinal Barrier Letters

See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers.

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Tested Criteria | Barrier Shape | Connection Type | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **BARCO 15** | **Barrier Connection, LLC, 976 Narcissus Avenue, Clearwater, FL 33767-0564** | | | | | | | | | |
| | Temporary Concrete Barrier | 10' or 20' Modified VDOT Barrier | NCHRP 350 | F | Pin and Loop | 32 | 6.0 ft. | TL-3 (62 mph) | B-54 | ----- |
| | *Approved FHWA Barrier System Design only, not manufacturers! Requires approval by District and Central Office BOPD, Highway Delivery Division before use.* | | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete (DM-2, Chapter 12)

**Last Revised: 3/24/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Design Manual Part 2 Highway Design - Temporary Barriers (Publication 13M, Chapter 12.10)**

FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers.

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Barrier Shape | Connection Type | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **EASSI 15** | **Easi-Set Industries, 5119 Catlett Road, P.O. Box 400, Midland, VA 22728 http://www.easiset.com/** | | | | | | | | | |
| | Temporary Concrete Barrier | 12' and 20' J-J Hook Barrier | NCHRP 350 | F and NJ | J-J Hook | 32 | 4.2 ft. | TL-3 (62 mph) | B-52, SWC02 | ----- |
| | *See Section 714 for Precasters.* *Drawings for J-J Hooks with NJ or F-Shape Concrete Barrier: **B-52 FHWA Approval Letter (3/26/1999)*** | | | | | | | | | |
| | Temporary Concrete Barrier | 12' and 20' J-J Hook Barrier, Bolt Down (concrete pavement) | MASH 2016 | F | J-J Hook (MASH) | 32 | 5.9" (0.49 ft.) | TL-3 (62 mph) | B-52B, SWC02b | 2013-194A |
| | *Roadway Use only - Bolted to concrete surface. Test Article Deflections (MASH Test 3-11) - Dynamic: 5.9 inches; Permanent: 4.0 inches; Working width: 27.5 inches. 2 anchors bolts required per 12' segment and 3 anchor bolts per 20' segment. See Section 714 for Precasters. **J-J Hook F-Shape 12' and 20' Barrier Bolted & Pinned Drawings Signed by PennDOT 3/30/15*** | | | | | | | | | |
| | Temporary Concrete Barrier | 12' and 20' J-J Hook Barrier, Pin Down (asphalt pavement) | MASH 2016 | F | J-J Hook (MASH) | 32 | 8.8" (0.73 ft.) | TL-3 (62 mph) | B-52C, SWC02c | 2013-194A |
| | *Roadway Use only - Pinned down to asphalt surface. Test Article Deflections (MASH Test 3-11) - Dynamic: 8.76 inches; Permanent: 5.50 inches; Working width: 32.03 inches. 3 pins required per 12' segment. See Section 714 for Precasters. **J-J Hook F-Shape 12' and 20' Barrier Bolted & Pinned Drawings Signed by PennDOT 3/30/15*** | | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete (DM-2, Chapter 12)

**Last Revised: 3/24/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Design Manual Part 2 Highway Design - Temporary Barriers (Publication 13M, Chapter 12.10)**

FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers.

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Barrier Shape | Connection Type | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **EASSI 15** | **Easi-Set Industries, 5119 Catlett Road, P.O. Box 400, Midland, VA 22728 http://www.easiset.com/** | | | | | | | | | |
| | Temporary Concrete Barrier | 12' J-J Hook Barrier, Free Standing | MASH 2016 | F | J-J Hook (MASH) | 32 | 64.2" (5.4 ft.) | TL-3 | B-300 | 2019-100Q |
| | *PennDOT approved Drawing: **J-J Hook F-Shape MASH Free Standing Drawing Signed by PennDOT 02/10/20*** | | | | | | | | | |
| **KENPR 15** | **Kentucky Precast, Easi-Set Industries, 5119 Catlett Road, P.O. Box 400, Midland, VA 22728** | | | | | | | | | |
| | Temporary Concrete Barrier | 20' J-J Hook Kentucky Barrier | NCHRP 350 | NJ | J-J Hook | 32 | 5.5 ft. | TL-3 (62 mph) | B-169 | ----- |
| | *Approved FHWA Barrier System Design only, not manufacturers. Requires approval by District and Central Office BOPD, Highway Delivery Division, before use.* | | | | | | | | | |
| **LINSY 15 Plant** | **Lindsay Transportation Solutions, LLC, 180 River Road, Rio Vista, CA 94571 http://www.lindsay.com/transportation-solutions 505 Crown Point Ave Omaha, NE 67110** | | | | | | | | | |
| | Temporary Concrete Barrier | 3.28' QuickChange Series 200 Moveable Concrete Barrier (MCB) | NCHRP 350 | Tee-Head | Pin and Hinge | 32 | 4.4 ft. | TL-3 (62 mph) | B-63, SWC01 | 2013-052 |
| | *PennDOT Approved Drawings: **QuickChange Series 200 Moveable Concrete Barrier (MCB) Drawings Signed by PennDOT 1/27/14*** | | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete (DM-2, Chapter 12)

**Last Revised: 3/24/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact.
**Design Manual Part 2 Highway Design - Temporary Barriers (Publication 13M, Chapter 12.10)**

FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers.

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Barrier Shape | Connection Type | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **NYSDO 15** | **NYSDOT, State Office Campus-Building 5, Room 410, 1220 Washington Avenue, Albany, NY 12232-0751 https://www.dot.ny.gov/index?nd=nysdot** | | | | | | | | | |
| | Temporary Concrete Barrier | 20' NYDOT I-Beam Barrier | NCHRP 350 | F and NJ | I-Beam | 32 | 3.4 ft. unanchored | TL-3 (62 mph) | B-94 | ----- |
| | *See Section 714.2 for approved precasters.* | | | | | | | | | |
| | *MwRSF Report TRP-03-202-08, 03/14/2008 - Evaluation of Box Beam Stiffening of Unanchored Temporary Concrete Barriers* | | | | | | | | | |
| | *MwRSF Report TRP-03-224-10, 01/27/2010 - Dynamic Evaluation of a Pinned Anchoring System for New York State's Temporary Concrete Barriers - Phase II* ***Midwest Roadside Safety Facility (MwRSF) Test Reports*** | | | | | | | | | |
| **OHIDO 15** | **Ohio DOT, Ohio Department of Transportation, P. O. Box 899, Columbus, OH 43216-0899 http://www.dot.state.oh.us/pages/home.aspx** | | | | | | | | | |
| | Temporary Concrete Barrier | 10' Ohio DOT Barrier | NCHRP 350 | NJ | Pin and Loop | 32 | 5.5 ft. | TL-3 (62 mph) | B-93 | ----- |
| | *Approved FHWA Barrier System Design only, not manufacturers. Requires approval by District and Central Office BOPD, Highway Delivery Division, before use.* | | | | | | | | | |
| | *Drawings of Ohio DOT Pin and Loop NJ Shape Concrete Barrier:* ***B-93 FHWA Approval Letter May 8th, 2002 with Drawings*** | | | | | | | | | |
| **ROCPR 15** | **Rockingham Precast, P.O. Box 1347, Harrisonburg, VA 22801 http://rockinghamprecast.com/** | | | | | | | | | |
| | Temporary Concrete Barrier | 12' T-LOK Barrier | NCHRP 350 | F | T-Shape Plate | 32 | 3.8 ft. | TL-3 (62 mph) | B-42, SWC22 | ----- |
| | *Approved FHWA Barrier System Design only, not manufacturers. Requires approval by District and Central Office BOPD, Highway Delivery Division, before use.* | | | | | | | | | |
| | *Drawings for T-LOK F Shape Barrier:* ***B-42 FHWA Approval Letter with Drawings*** | | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete (DM-2, Chapter 12)

**Last Revised: 3/24/2020**

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FHWA Acceptance Letters (Refer to this FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

See Section 714.2 Median Barrier (Temporary and Permanent) for approved precasters of standard PennDOT barrier (RC-57M & RC-58M) and licensed barriers.

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| | Product | Name | Tested Criteria | Barrier Shape | Connection Type | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **VIRDO 15** | **Virginia DOT, The Dale Building, Suite 205, 1504 Santa Rosa Road, Richmond, VA 23229 http://www.virginiadot.org/** | | | | | | | | | |
| | Temporary Concrete Barrier | 10' or 20' VDOT Barrier, Modified MB-7D | NCHRP 350 | F | Pin and Loop | 32 | 6.0 ft. | TL-3 (62 mph) | B-54 | ----- |
| | *Approved FHWA Barrier System Design only, not manufacturers. Requires approval by District and Central Office BOPD, Highway Delivery Division, before use.* | | | | | | | | | |

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 20' NYS I-Beam, Pinned Sections (Concrete Pavement) | MASH 2016 | NJ Shape Only | I-Beam | 1.7 ft. (20.5") | | 2017-095 |
| | *Test Article Deflections (MASH Test 3-11, NYTCB-5) - Dynamic: 20.5 inches; Permanent: 9 inches; Working width: 32.5 inches. Installed on concrete with 4 anchor pins on back side of each barrier. MwRSF Report #TRP-03-224-10 - Dynamic Evaluation of a Pinned Anchoring System for New York State's Temporary Concrete Barriers - Phase II, 01/27/2010. Per* ***Faddis Concrete Products Drawings Dated and Signed by PennDOT 3/15/17*** | | | | | | | |
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 20' NYS I-Beam, Pinned Sections (Concrete Pavement) | MASH 2016 | NJ Shape Only | I-Beam | 1.7 ft. (20.5") | | 2017-028 |
| | *Test Article Deflections (MASH Test 3-11, NYTCB-5) - Dynamic: 20.5 inches; Permanent: 9 inches; Working width: 32.5 inches. Installed on concrete with 4 anchor pins on back side of each barrier. MwRSF Report #TRP-03-224-10 - Dynamic Evaluation of a Pinned Anchoring System for New York State's Temporary Concrete Barriers - Phase II, 01/27/2010. Per* ***Faddis Concrete Products Drawings Dated and Signed by PennDOT 3/15/17*** | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 20' NYS I-Beam Modified, Pinned Sections (Concrete Pavement | MASH 2016 | NJ Shape Only | I-Beam | 1.7 ft. (20.5") | | 2019-133Q |
| | *Test Article Deflections (MASH Test 3-11, NYTCB-5) - Dynamic: 20.5 inches; Permanent: 9 inches; Working width: 32.5 inches. Installed on concrete with 4 anchor pins on back side of each barrier. MwRSF Report #TRP-03-224-10, 01/27/2010. Per* ***Interstate Safety Service Drawing Signed by PennDOT 4/8/2020*** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 20' NYS I-Beam, Pinned Sections (Concrete Pavement) | MASH 2016 | NJ Shape Only | I-Beam | 1.7 ft. (20.5") | | 2014-266QA |
| | *Test Article Deflections (MASH Test 3-11, NYTCB-5) - Dynamic: 20.5 inches; Permanent: 9 inches; Working width: 32.5 inches. Installed on concrete with 4 anchor pins on back side of each barrier. MwRSF Report #TRP-03-224-10, 01/27/2010. Per* ***Interstate Safety Service Drawing 1218 - Signed by PennDOT 07/08/2015*** | | | | | | | |
| **NORPR 15** | **Northeast Precast, 92 Reese Road, Millville, NJ 08332 http://www.northeastprecast.com/** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 20' NYS I-Beam, Pinned Sections (Concrete Pavement) | MASH 2016 | NJ Shape Only | I-Beam | 1.7 ft. (20.5") | | 2012-118A |
| | *Test Article Deflections (MASH Test 3-11, NYTCB-5) - Dynamic: 20.5 inches; Permanent: 9 inches; Working width: 32.5 inches. Installed on concrete with 4 anchor pins on back side of each barrier. MwRSF Report #TRP-03-224-10, 01/27/2010. Per* ***Northeast Precast Drawings Dated 07/30/2012*** | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **STRBK 15** | **Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 12' Double Slot F-Shape J-J Hook Deflection Reducing Retrofit (asphalt pavement) | MASH 2016 | F Shape only | J-J Hook | 0.94 ft (11.3") at TOP, < 5" at BASE | | 2018-091Q |
| | *This version installed on asphalt pavement utilizes (2) bent anchor plates per barrier. Each bent anchor plate is secured to asphalt with (2) 1" dia. x 12 3/4" long threaded anchors. Test Article Deflections (MASH Test 3-11 690900-SBK7) - Dynamic at top: 11.3 inches; Dynamic at base: < 5 inches; Permanent: 3.25 inches; Working width: 29.7 inches. Provisionally approved based on successful crash testing by TTI and related FHWA Eligibility Letter to Indiana DOT (B-258). TTI MASH test report #690900-SBK7 (April 2018)* | | | | | | | |
| | *Per **Strongstown's B&K Enterprise's Double Slot Asphalt Pavement Drawings Signed by PennDOT 7/24/18*** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 12' Double Slot F-Shape J-J Hook Deflection Reducing Retrofit (concrete pavement) | MASH 2016 | F Shape only | J-J Hook | 1.04 ft (12.5") at TOP, < 5" at BASE | | 2018-094Q |
| | *This version installed on concrete pavement utilizes 2 bent anchor plates per barrier. Each bent anchor plate is secured to concrete with (2) 1" dia. x 7 3/4" long threaded anchors. Test Article Deflections (MASH Test 3-11 690900-SBK6) - Dynamic at top: 12.5 inches; Dynamic at base: < 5 inches; Permanent: 3.0 inches; Working width: 29.0 inches. Provisionally approved based on successful crash testing by TTI and related FHWA Eligibility Letter to Indiana DOT (B-258). TTI MASH test report #690900-SBK6 (April 2018)* | | | | | | | |
| | *Per **Strongstown's B&K Enterprise's Double Slot Concrete Pavement Drawings Signed by PennDOT 7/24/18*** | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **STRBK 15** | **Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 12' F-Shape J-J Hook Deflection Reducing Retrofit (asphalt pavement) | MASH 2016 | F Shape only | J-J Hook | 1.02 ft (12.2") | | 2017-252 |
| | *This version installed on asphalt pavement utilizes (3) bent anchor plates per barrier with (2) 1" dia. x 16" long threaded anchor rods per plate. Test Article Deflections (MASH Test 3-11, 690900-SBK5) - Dynamic: 12.2 inches; Permanent: 2.5 inches; Working width: 31.2 inches. Provisionally approved based on successful crash testing by TTI and related FHWA Eligibility Letter to Indiana DOT (B-258). TTI MASH test report #690900-SBK4 (April 2017, revised 6/19/17)* *Per **Strongstown's B&K Enterprises' Asphalt Pavement Retrofit Drawings Signed by PennDOT 9/12/17*** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 12' F-Shape J-J Hook Retro Fit v3 (concrete pavement) | MASH 2016 | F Shape only | J-J Hook | At Toe: < 1" toward field, 4.0" toward traffic; At Top: 11.9" toward field | | 2019-078Q |
| | *This version installed on concrete pavement utilizes 1 bent anchor plate per barrier with (1) 1" x 7 3/4" zinc coated threaded rod with a zinc coated hex nut per each plate. Nut welded to rod for removal. Test Article Deflections (MASH Test 3-11, 690900-SBK-9) - Dynamic at top: 11.9 inches; Dynamic at toe: < 1 inch toward field, 4 inches toward traffic; Permanent: 4.0 inches toward traffic; Working width: 29.3 inches.* ***Strongstown's B&K Enterprise's Retro Fit v3 Concrete Pavement Drawings Signed by PennDOT 12/05/19*** | | | | | | | |
| | Barrier Retrofit System (Limit Deflection) | 12' F-Shape J-J Hook Retro Fit v4 (asphalt pavement) | MASH 2016 | F Shape only | J-J Hook | At Toe: 2.2" toward field; At Top: 8.5" toward field | B-344 | 2019-086Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Concrete - Retrofit Systems to Limit Deflection (DM-2, Chapter 12)

**Last Revised: 6/16/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, Section 6.1.3.13, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| Product | Name | Tested Criteria | Comp. Barrier Shape | Comp. Barrier Conn. Type | Dynamic Deflection (ft) | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|
| **STRBK 15** | **Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957** | | | | | | |
| | *This version installed on asphalt pavement utilizes 1 bent anchor plate per barrier with (1) 1" x 7 3/4" zinc coated threaded rod with a zinc coated hex nut per each plate. Nut welded to rod for removal. Test Article Deflections (MASH Test 3-11, 690900-SBK10) - Dynamic at top: 8.5 inches toward field; Dynamic at toe: 2.2 inches toward field; Permanent at toe: 2.5 inches toward traffic; Working width: 29.4 inches.* ***Retro Fit v4 Asphalt Pavement Drawings Signed by PennDOT 12/05/19 & FHWA Eligibility Letter B-344*** | | | | | | |
| Barrier Retrofit System (Limit Deflection) | 12' F-Shape, J-J Hook Deflection Reducing Retrofit (concrete pavement) | MASH 2016 | F Shape only | J-J Hook | 0.99 ft (11.9") | | 2017-141 |
| | *This version installed on concrete utilizes (3) bent anchor plates per barrier with (2) 1" dia. x 7 3/4" threaded anchor rods per plate. Test Article Deflections (MASH Test 3-11) - Dynamic: 11.9 inches; Permanent: 4.0 inches; Working width: 28.4 inches. Provisionally approval based on successful crash testing by TTI and related FHWA Eligibility Letter to Indiana DOT (B-258). TTI MASH test report #690900-SBK4 (April 2017, revised 6/19/17)*<br>*Per*<br>***Strongstown's B&K Enterprises' Concrete Pavement Retrofit Drawings Signed by PennDOT 9/12/17*** | | | | | | |

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Approved Bridge and Structure Products**

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **BARRS 15** | **Lindsay Transportation Solutions, LLC (Barrier Systems by Lindsay), 180 River Road, Rio Vista, CA 94571 http://www.barriersystemsinc.com/** | | | | | | | | |
| | Temporary Steel Barrier | 28' ArmorGuard Barrier (AGB) | NCHRP 350 | 33.3 | 2.4 to 8.75 ft. | TL-3 (62 mph) | No (Ground Only) | B-173 (SWM07) | 2004-057Q |
| | *Tested deflection varies by configuration from 2.4 to 8.75 ft.*<br>*A. 2.4 ft: Based on three 28' AGB sections between six portable concrete barriers on each end (See Figure 1)*<br>*B. 4.0 ft.: Based on four 28' AGB sections used between permanent barriers (See Figure 6)*<br>*C. 8.75 ft.: Based on one 28' AGB section between permanent barriers (See Figure 11)*<br>*See B-173 FHWA Eligibility Letter for details.*<br>*Drawings of Armorguard Barrier: **B-173 FHWA Approval Letter With Drawings*** | | | | | | | | |
| **ENERG 15 Plant** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/ Pell City, AL** | | | | | | | | |
| | Temporary Steel Barrier | 12M Vulcan Barrier and Anchor System | NCHRP 350 | 32 | 1 ft. | TL-3 (62 mph) | No (Ground Only) | B-134C, SWM04b | 2009-099Q |
| | Temporary Steel Barrier | 4M and 12M Vulcan Barrier System | NCHRP 350 | 32 | 7.9 ft. | TL-4 (small truck) | No (Ground Only) | B-134D, SWM04a | 2009-099Q |
| | Temporary Steel Barrier | Vulcan Barrier System, anchored ends | NCHRP 350 | 32 | 6.9 ft. Anchored Ends | TL-3 (62 mph) | No (Ground Only) | B-134, SWM04b | 2009-099Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. Approved Bridge and Structure Products

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): Longitudinal Barrier Letters

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **ENERG 15** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/** | | | | | | | | |
| **Plant** | **Pell City, AL** | | | | | | | | |
| | Temporary Steel Barrier | Vulcan Barrier System, unanchored ends | NCHRP 350 | 32 | 13.2 ft. Unanchored Ends | TL-3 (62 mph) | No (Ground Only) | B-134, SWM04b | 2009-099Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Approved Bridge and Structure Products**

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **HIGCA 15** | **Highway Care International, The Highlands, Detling Hill,, Dertling, Maidstone, Kent, United Kingdom ME14 3HT http://www.highwaycareint.com/** | | | | | | | | |
| | Temporary Steel Barrier | BarrierGuard 800 | NCHRP 350 | 31.5 | 4.92 ft. | TL-4 (small truck) | Structure, Ground | B-131, SWM06 | ----- |
| | *PennDOT Drawing: **BarrierGuard 800 - System Drawings (14-602 BDTD)*** | | | | | | | | |
| | Temporary Steel Barrier | BarrierGuard 800 MASH TL-3 Standard (Asphalt Pavement) | MASH 2016 | 31.5 | 5.54 ft. (66.5") | TL-3 (62 mph) | Structure, Ground | B-303 | ----- |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic: 66.5 inches; Permanent: 63 inches; Dynamic working width: 87.4 inches; Permanent Working Width: 84.3 inches. Installed on asphalt with 8 anchor pins used in first and last barrier. Anchor pins used in crash test 1.18 in. dia. x 17.7 in. long. BarrierGuard 800 Standard originally tested per NCHRP 350 criteria (FHWA Eligibility Letter B-131). PennDOT Drawing: **BarrierGuard 800 - System Drawings (14-602 BDTD)*** | | | | | | | | |
| | Temporary Steel Barrier, Minimum Deflection System | BarrierGuard 800 MDS, 20 ft. Anchoring | MASH 2016 | 31.5 | 1.54 ft. (18.5") at TOP, 5.2" at BASE | TL-3 (62 mph) | Structure, Ground | B-286 REVISED | ----- |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic at top: 18.5 inches; Dynamic at base: 5.2 inches; Permanent: 8.64 inches; Working width: 39.7 inches. Installed on concrete slab and asphalt with impact area on 8 inch thick concrete. Anchored on 20 feet (6 m) intervals. BarrierGuard 800 MDS originally crash tested to NCHRP 350 (FHWA Eligibility Letter B-158). The dynamic deflection of 12 in. at TOP and 3" at BASE only applies to the original NCHRP 350 crash testing criteria. PennDOT Drawing: **BarrierGuard 800 - System Drawings (14-602 BDTD)*** | | | | | | | | |
| | Temporary Steel Barrier, Minimum Deflection System | BarrierGuard 800 MDS, 40 ft. Anchoring | NCHRP 350 | 31.5 | 2.92 ft for 40 ft anchor spacing | TL-3 (62 mph) | Structure Mounted | B-158, SWM06 | ----- |
| | *PennDOT Drawing: **BarrierGuard 800 - System Drawings (14-602 BDTD)*** | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. Approved Bridge and Structure Products

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): Longitudinal Barrier Letters

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Approved Bridge and Structure Products**

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **HILSM 15** | **Hill & Smith, 1000 Buckeye Park Road, Columbus, OH 43207 http://www.hillandsmith.com/** | | | | | | | | |
| | Temporary Steel Barrier | Zoneguard - Asphalt (Asphalt Pavement) | MASH 2016 | 32 | 1.95 ft. (23.4") beyond toe | TL-3 | No (Ground Only) | B-320 | 2010-154Q |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic beyond toe: 23.4 inches; Permanent at toe: 10.0 inches; Working width: 50.9 inches. Barrier pinned every 33 ft - 4" on center with exception at each end of installation. Pins used during crash test: 1 1/4" x 20" long.* | | | | | | | | |
| | Temporary Steel Barrier | Zoneguard - Concrete (Concrete Pavement) | MASH 2016 | 32 | 6.8 ft. (81") | TL-3 | No (Ground Only) | B-176C | 2010-154Q |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic at top: 81.4 inches; Permanent at base: 80.0 inches; Working width: 108.5 inches. Barrier installed on concrete without rubber pads. 50 ft. galvanized steel barrier segments tested with drop-in pin anchors at ends only.* | | | | | | | | |
| | Temporary Steel Barrier | Zoneguard - Standard | NCHRP 350 | 32 | 4.75 ft. | TL-4 (small truck) | Structure, Ground | B-176, SWM10a | 2010-154Q |
| | *PennDOT Drawings: **ZoneGuard Portable Steel Barrier System Drawings (12-602-BDTD)*** | | | | | | | | |
| | Temporary Steel Barrier | Zoneguard -Standard (Concrete Pavement) | MASH 2016 | 32 | 6.3 ft. (76") at TOP, 6.2 ft. (74") at BASE | TL-3 (62 mph) | Structure, Ground | B-176A, SWM10b | 2010-154Q |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic at top: 76 inches; Dynamic at base: 74 inches; Permanent at base: 67 inches. Installed on concrete with anchoring at end of the barrier. PennDOT Drawings: **ZoneGuard Portable Steel Barrier System Drawings (12-602-BDTD)*** | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Approved Bridge and Structure Products**

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **HILSM 15** | **Hill & Smith, 1000 Buckeye Park Road, Columbus, OH 43207 http://www.hillandsmith.com/** | | | | | | | | |
| | Temporary Steel Barrier, Minimum Deflection System | Zoneguard Barrier - Min. Deflection (Concrete Pavement) | MASH 2016 | 32 | 1.35 ft. (16") at TOP, 5" at BASE | TL-3 (62 mph) | Structure, Ground | B-176A, SWM10b | 2010-154Q |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic at top: 16 inches; Dynamic at base: 5 inches; Permanent at top: 5 inches; Permanent at base: 0 inches. Installed on concrete and pinned every 33.3 ft. along barrier. PennDOT Drawings: **ZoneGuard Portable Steel Barrier System Drawings (12-602-BDTD)*** | | | | | | | | |
| **MOBBA 15** | **Mobile Barriers, LLC, 24918 Genesee Trail Road, Golden, CO 80401 http://mobilebarriers.com/** | | | | | | | | |
| | Temporary Steel Barrier | Mobile Barrier Trailer (MBT-1) | MASH 2016 | 48 | 2.0 ft. | TL-3 (62 mph) | No | B-178 | ----- |
| | *Test Article Deflections (MASH Test 3-11) - Dynamic: 24 inches; Static: 3.8 inches. The 100 foot long mobile barrier trailer was crash tested on concrete.* | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Steel (DM-2, Chapter 12)

**Last Revised: 3/17/2020**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 Test 3-11 at a 25 degree impact angle as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact. **Approved Bridge and Structure Products**

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Tested Height (in) | Dynamic Deflection (ft) | Barrier Approved Crash Test Level | Structure Mounted | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **SBNA1 15 Plant** | **Safe Barriers North America LLC, 755 Grand Boulevard, Suite B105-227, Miramar Beach, FL 32550 https://www.safebarriers.com/ Unit 2205, No. 170 East Tapu Road, Siming District Xiamen, China** | | | | | | | | |
| | Temporary Steel Barrier | Defender Barrier 100 HC (Asphalt Pavement) | MASH 2016 | 31.5 | 8.1 ft. (97") | TL-4 | No (Ground Only) | B-297 | 2018-210Q |
| | *HC = High Containment. Test Article Deflections (MASH Test 4-11, 2270P vehicle) - Dynamic: 7.5 feet; Permanent: 6.4 feet; Working width: 7.5 feet. Test Article Deflections (MASH Test 4-12, 10000S vehicle) - Dynamic 8.1 feet; Permanent: 6.0 feet, Working width: 8.6 feet. Installed on asphalt with a 1.18" dia. x 19.68" long ground anchor pin on each side of barrier every 157 feet.* ***Safe Barriers Defender Barrier - PennDOT Signed Drawing 071819*** | | | | | | | | |
| | Temporary Steel Barrier, Minimum Deflection System | Defender Barrier 100 LDS (Asphalt Pavement) | MASH 2016 | 31.5 | 2.9 ft. | TL-3 | No (Ground Only) | B-298 | 2018-209Q |
| | *Test Article Deflection (MASH Test 3-11) - Dynamic: 2.9 feet; Permanent 1.9 feet; Working width: 2.9 feet. Installed on asphalt with a 1.18" dia. x 19.68" long anchor pin on each side of barrier every 30 feet.* ***Safe Barriers Defender Barrier - PennDOT Signed Drawing 071819*** | | | | | | | | |

### 901.2 Temporary Barrier, Water-Filled (DM-2, Chapter 12)

**Last Revised: 11/1/2017**

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Water-Filled (DM-2, Chapter 12)

**Last Revised: 11/1/2017**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact.

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Barrier Material | Tested Height (in) | Dynamic Deflection (ft) | Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **ARMOR 15** | **Armorcast Products Company, 13230 Saticoy Street, North Hollywood, CA 91605 http://www.armorcastprod.com/** | | | | | | | | |
| | Temporary Water-Filled Barrier | Guardian Safety Barrier | NCHRP 350 | Plastic with Steel Tubing | 42 | 6.5 ft. | TL-3 (62 mph) | B-34E | ----- |
| **ENERG 15 Plant** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/ Pell City, AL** | | | | | | | | |
| | Temporary Water-Filled Barrier | Triton | NCHRP 350 | Plastic with Steel Straps | 32 | 12.8 ft. | TL-2 (44 mph) | B-21, SWM03b | ----- |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |
| | Temporary Water-Filled Barrier | Triton | NCHRP 350 | Plastic with Steel Straps | 32 | 19 to 22.64 ft. | TL-3 (62 mph) | B-48, SWM03a | ----- |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | | | | |
| | Temporary Water-Filled Barrier | Sentry | NCHRP 350 | Plastic with Steel Cable | 46 | 5.9 ft. | TL-2 (44 mph) | B-196 | 2010-039Q |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |
| | Temporary Water-Filled Barrier | Sentry | NCHRP 350 | Plastic with Steel Cable | 46 | 9 ft. | TL-3 (62 mph) | B-196 | 2010-039Q |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Barrier, Water-Filled (DM-2, Chapter 12)

**Last Revised: 11/1/2017**

The Tested Deflection distances listed in Bulletin 15 are documented in crash test reports per NCHRP 350, MASH 2009, or MASH 2016 criteria as the Dynamic Test Article Deflection. Per the AASHTO Manual for Assessing Safety Hardware 2016, Second Edition, the dynamic deflection is the maximum lateral displacement of the test article on the traffic side that occurs during the impact.

FHWA Acceptance Letters (refer to the FHWA website for any subsequent or follow-up letters for each approved system): **Longitudinal Barrier Letters**

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 3 Temporary Traffic Control Device **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| | Product | Name | Tested Criteria | Barrier Material | Tested Height (in) | Dynamic Deflection (ft) | Approved Crash Test Level | FHWA Acc. Letter | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **YODOK 15** | **Yodock Wall Company, Inc., 900 Patterson Drive, Bloomsburg, PA 17815 https://trinityhighway.com/** | | | | | | | | |
| | Temporary Water-Filled Barrier | Model 2001 | NCHRP 350 | Plastic with Steel Tubing | 46 | 14 ft. | TL-3 (62 mph) | B-97 | ----- |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |
| | Temporary Water-Filled Barrier | Model 2001M | NCHRP 350 | Plastic with Steel Tubing | 32 | 12.1 ft. | TL-2 (44 mph) | B-97 | ----- |
| | *FHWA Acceptance Letter: refer to the FHWA website for any subsequent or follow-up letters for each approved system.* | | | | | | | | |

### 901.2 Temporary Pavement Marking Tape, Nonremovable

**Last Revised: 6/17/2015**

| | Product | Name | COA | Tape Color | Tape Surface | Ref. No. |
|---|---|---|---|---|---|---|
| **FOLT- 15** | **FOL Tape, LLC, 2025 Hitzert Court, Fenton, MO 63026 http://www.foltape.com/** | | | | | |
| | Temporary Pavement Marking Tape, Nonremovable | FOL200 | TPT-01 | White | Asphalt and Concrete | 1991-235 |
| | Temporary Pavement Marking Tape, Nonremovable | FOL200 | TPT-01 | Yellow | Asphalt and Concrete | 1991-236 |
| | Temporary Pavement Marking Tape, Nonremovable | FOL300 | TPT-01 | White | Asphalt and Concrete | 1991-237 |
| | Temporary Pavement Marking Tape, Nonremovable | FOL300 | TPT-01 | Yellow | Asphalt and Concrete | 1991-238 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Pavement Marking Tape, Nonremovable

Last Revised: 6/17/2015

| | Product | Name | COA | Tape Color | Tape Surface | Ref. No. |
|---|---|---|---|---|---|---|
| **SWAR0 15** | **Swarco Reflex LLC, 900 N. Denton, Mexia, TX 76667 https://www.swarco.com/northamerica** | | | | | |
| | Temporary Pavement Marking Tape, Nonremovable | Visa-Line C.G | TPT-02 | White | Asphalt and Concrete | 1991-229 |
| | Temporary Pavement Marking Tape, Nonremovable | Visa-Line C.G | TPT-02 | Yellow | Asphalt and Concrete | 1991-230 |
| | Temporary Pavement Marking Tape, Nonremovable | Visa-Line E.G | TPT-02 | White | Asphalt and Concrete | 1991-231 |
| | Temporary Pavement Marking Tape, Nonremovable | Visa-Line E.G | TPT-02 | Yellow | Asphalt and Concrete | 1991-232 |

### 901.2 Temporary Pavement Marking Tape, Removable

Last Revised: 1/26/2018

| | Product | Name | COA | Tape Color | Tape Surface | Ref. No. |
|---|---|---|---|---|---|---|
| **3M-03 15** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/** | | | | | |
| **Plant** | **Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | |
| | Temporary Pavement Marking Tape, Removable | Stamark 145 | TT-01 | Black Line Mask | Asphalt and Concrete | 1992-190 |
| | Temporary Pavement Marking Tape, Removable | Stamark 715 | TT-01 | Black Line Mask | Asphalt and Concrete | 2011-215QC |
| | Temporary Pavement Marking Tape, Removable | Stamark Wet Reflective Tape Series 710 | TT-01 | White | Asphalt and Concrete | 2011-215QA |
| | Temporary Pavement Marking Tape, Removable | Stamark Wet Reflective Tape Series 711 | TT-01 | Yellow | Asphalt and Concrete | 2011-215QB |
| | Temporary Pavement Marking Tape, Removable | Stamark Wet Reflective Tape Series 780 | TT-01 | White | Asphalt and Concrete | 2010-126QA |
| | Temporary Pavement Marking Tape, Removable | Stamark Wet Reflective Tape Series 781 | TT-01 | Yellow | Asphalt and Concrete | 2010-126QB |
| **ADTMK 15** | **Advance Traffic Markings, P.O. Box H, Roanoke Rapids, NC 27870-8082 http://www.trafficmarkings.com/** | | | | | |
| | Temporary Pavement Marking Tape, Removable | 280B 19-286 Black | TT-02 | Black Line Mask | Asphalt and Concrete | ----- |
| | Temporary Pavement Marking Tape, Removable | ATM200W 19-200/216 | TT-02 | White | Asphalt and Concrete | ----- |
| | Temporary Pavement Marking Tape, Removable | ATM200Y 19-201/217 | TT-02 | Yellow | Asphalt and Concrete | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Pavement Marking Tape, Removable

Last Revised: 1/26/2018

| | Product | Name | COA | Tape Color | Tape Surface | Ref. No. |
|---|---|---|---|---|---|---|
| **BRITE 15** | **Brite-Line Technologies LLC, 10660 E. 51st Ave., Denver, CO 80239 http://brite-line.com/** | | | | | |
| | Temporary Pavement Marking Tape, Removable | Series 100 | TT-03 | White | Asphalt and Concrete | 1992-188 |
| | Temporary Pavement Marking Tape, Removable | Series 100 | TT-03 | Yellow | Asphalt and Concrete | 1993-159A |
| | Temporary Pavement Marking Tape, Removable | TWR | TT-03 | White | Asphalt and Concrete | ----- |
| | Temporary Pavement Marking Tape, Removable | TWR | TT-03 | Yellow | Asphalt and Concrete | ----- |
| **SWAR0 15** | **Swarco Reflex LLC, 900 N. Denton, Mexia, TX 76667 https://www.swarco.com/northamerica** | | | | | |
| | Temporary Pavement Marking Tape, Removable | Director 2 | TT-05 | White | Asphalt and Concrete | 1991-227 |
| | Temporary Pavement Marking Tape, Removable | Director 2 | TT-05 | Yellow | Asphalt and Concrete | 1991-228 |
| | Temporary Pavement Marking Tape, Removable | Director 2 WR | TT-07 | White | Asphalt and Concrete | 2010-008QA |
| | Temporary Pavement Marking Tape, Removable | Director 2 WR | TT-07 | Yellow | Asphalt and Concrete | 2010-008QB |
| **TAPE4 15** | **Tape 4, LLC, 2940 Mary Avenue, St. Louis, MO 63144 http://tape4.com/Tape4/Tape_4.html** | | | | | |
| | ***Formerly Laminations PB (LAMPB 15)*** | | | | | |
| | Temporary Pavement Marking Tape, Removable | Aztec 102 Engr. Gr. | | White | Asphalt and Concrete | 1993-168A |
| | Temporary Pavement Marking Tape, Removable | Aztec 390 | | Yellow | Asphalt and Concrete | 1994-140 |

### 901.2 Temporary Portable Rumble Strips

Last Revised: 5/14/2020

| | Product | Name | COA | Pipe Certification | Ref. No. |
|---|---|---|---|---|---|
| **PLASS 15** | **Plastic Safety Systems, Inc., 2444 Baldwin Road, P.O. Box 20140, Cleveland, OH 44104 http://plasticsafety.com/** | | | | |
| **Facility** | **Middlefield, OH** | | | | |
| | Temporary Portable Rumble Strips | RoadQuake 2 (RQ2) | TPRS-01 | Black | ----- |
| | Temporary Portable Rumble Strips | RoadQuake 2 (RQ2) | TPRS-01 | White | ----- |
| | Temporary Portable Rumble Strips | RoadQuake 2 (RQ2) | TPRS-01 | Orange | ----- |
| | Temporary Portable Rumble Strips | RoadQuake 2F (RQ2F) | | | 2015-120Q |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | |
| | Temporary Portable Rumble Strips | TrafFix Alert High Speed Rumble Strip | | | 2019-222Q |

### 901.2 Temporary Traffic Control Signals

Last Revised: 4/3/2019

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Temporary Traffic Control Signals

Last Revised: 4/3/2019

Publication 408, Section 1124 - Temporary Traffic Control Signals

Publication 213 - Temporary Traffic Control Guidelines

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. Category 4 Temporary Traffic Control Device

| | Product | Name | COA | COA Date | Signal Mount | Ref. No. |
|---|---|---|---|---|---|---|
| **HORST 15** | **Horizon Signal Technologies, 5 Corporate Blvd., Reading, PA 19608 http://horizonsignal.com/** | | | | | |
| | Temporary Traffic Control Signal | SQ2 | HOR-01 | 12/16/2008 | Pedestal Mount | ----- |
| | Temporary Traffic Control Signal | SQ3TS | HOR-00 | 12/16/2008 | Trailer Mount | ----- |
| **NORAT 15** | **North America Traffic, 7 Petersburg Circle, Port Colborne, Ontario, Canada L3K 5V5 http://www.northamericatraffic.com/** | | | | | |
| | Temporary Traffic Control Signal | PTL 2.4x | NAT-00 | 12/16/2008 | Trailer Mount | ----- |
| **OMJC1 15** | **OMJC Signal, INC, 403 Chestnut St, Waterloo, IA 50703 http://omjcsignal.com/** | | | | | |
| | Temporary Traffic Control Signal | Pop-Up LD | OSI-001P | 8/21/2017 | Trailer Mount | 2016-143 |
| **THOJO 15** | **John Thomas, Inc. (JTI), 1560 Lovett Drive, Dixon, IL 61021 http://www.jtitraffic.com/** | | | | | |
| | Temporary Traffic Control Signal | ADDCO PTS-2000 | JTI-001P | 3/12/2012 | Trailer Mount | ----- |
| | Temporary Traffic Control Signal | Sentinel Pedestal-mounted Portable Traffic Signal (PTS) | JTS-002P | 3/26/2019 | Pedestal Mount | 2017-310Q |

### 901.2 Traffic Alert Radio

Last Revised: 4/13/2015

| | Product | Name | COA | Power | Ref. No. |
|---|---|---|---|---|---|
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | | |
| | CB Radio | Wizard | | Battery/Vehicle, AC with adapter | 1998-007 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Traffic Cones

Last Revised: 11/22/2019

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Cone Type | Height (in) | Cone Color | Ref. No. |
|---|---|---|---|---|---|---|---|
| **HIGSP 15** | **Highway Safety Products, 1060 Kaiser Road, P. O. Box 4169, Napa, CA 94558 http://hsptrafficcones.com/** | | | | | | |
| | Traffic Cone | BHSP 4328 | TC-2 | One piece | 28 | Fluorescent Orange | ----- |
| | Traffic Cone | HSP 4328 | | | 28 | Red Orange | 1994-056 |
| | Traffic Cone | HSP 4328E-10 | | Slimline | 28 | Red Orange | 1994-055 |
| | Traffic Cone | HSP 4336 | | | 36 | Red Orange | 1994-058 |
| **JBCSP 15** | **JBC Safety Plastic Inc., 16750 Chestnut Street, City of Industry, CA 91748 http://www.jbcsafetyplastic.com/** | | | | | | |
| | Traffic Cone | RC70045S | | 10 lb Slimline | 28 | Fluorescent Orange | 2004-035Q |
| | Traffic Cone | RS70045CT | | 10 lb Wide Body | 28 | Fluorescent Orange | 2005-104Q |
| | Traffic Cone | RS90045CT | | 10 lb Wide Body | 36 | Fluorescent Orange | 2018-204Q |
| **LAKSD 15** | **Lakeside Plastics, Inc., 450 West 33rd Avenue, P.O. Box 2384, Oshkosh, WI 54903 http://www.lakesideplastics.net/index.html** | | | | | | |
| | Traffic Cone | 2850-10 | TC-4 | Trimline | 28 | Red Orange | 1994-075 |
| | Traffic Cone | 2850-10 | TC-4 | | 28 | Red Orange | 1994-078 |
| **PLAPC 15** | **Plasticade Products Corporation, 7700 North Austin Ave., Skokie, IL 60077 http://www.plasticade.com/** | | | | | | |
| | Traffic Cone | Navigator Traffic Channelizer 650 | TC-15 | | 48 | Orange | 2012-157Q |
| **PLASS 15 Facility** | **Plastic Safety Systems, Inc., 2444 Baldwin Road, P.O. Box 20140, Cleveland, OH 44104 http://plasticsafety.com/ Middlefield, OH** | | | | | | |
| | Traffic Cone | Navigator Channelizer | | | 42 | Fluorescent Orange | 2010-275Q |

*Provisionally Approved*

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Traffic Cones

Last Revised: 11/22/2019

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Cone Type | Height (in) | Cone Color | Ref. No. |
|---|---|---|---|---|---|---|---|
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | | |
| | Traffic Cone | Channelizer | | | 42 | Fluorescent Orange | 2006-048Q |
| **SERVM 15** | **Service & Materials Company, Inc., 4835 East County Road 600, Sunman, IN 47041** | | | | | | |
| | Traffic Cone | 2058647 | | | 28 | Red Orange / Black Base | 1994-038 |
| | Traffic Cone | TC-28FH-PA | | Slimline | 28 | Red Orange | 2001-184Q |
| | Traffic Cone | TC-28WH-PA | | Wide Body | 28 | Red Orange | 2001-183Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Traffic Cones

Last Revised: 11/22/2019

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Cone Type | Height (in) | Cone Color | Ref. No. |
|---|---|---|---|---|---|---|---|
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | | |
| | Traffic Cone | Enviro-Cone | TDI-TC-14 | 7 lb | 28 | Orange / Fluorescent Orange | 2014-236QA |
| | Traffic Cone | Enviro-Cone | TDI-TC-14 | 10 lb | 28 | Orange / Fluorescent Orange | 2014-236QB |
| | Traffic Cone | Enviro-Cone | TDI-TC-14 | 12 lb | 28 | Orange / Fluorescent Orange | 2014-236QC |
| | Traffic Cone | Enviro-Cone | TDI-TC-14 | 10 lb | 36 | Orange / Fluorescent Orange | 2014-237QA |
| | Traffic Cone | Enviro-Cone | TDI-TC-14 | 12 lb | 36 | Orange / Fluorescent Orange | 2014-237QB |
| | Traffic Cone | Grabber 42000 Series | TC-13 | | 42 | Orange / Fluorescent Orange | ----- |
| | Traffic Cone | Looper 46000 Series | TC-13 | | 42 | Orange / Fluorescent Orange | ----- |
| | Traffic Cone | Spring Cone | TC-13 | | | Orange | ----- |
| **UATLLC15** | **UAT LLC, 4010 Earls Court, Alpharetta, GA 30004 https://uatsupply.com/** | | | | | | |
| | Traffic Cone | CW3M28-10 | | 10 lb Wide Body | 28 | Orange | 2017-224Q |
| | Traffic Cone | NG3M28-10 | | 10 lb | 28 | Orange | 2019-079Q |
| | Traffic Cone | NGSL3M28-10 | | 10 lb Slimline | 28 | Orange | 2019-205Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Traffic Cones

Last Revised: 11/22/2019

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Cone Type | Height (in) | Cone Color | Ref. No. |
|---|---|---|---|---|---|---|---|
| **WORKA 15** | **Work Area Protection Corporation, 2500 Production Drive, PO Box 4087, St. Charles, IL 60174 http://workareaprotection.com/** | | | | | | |
| | Traffic Cone | 18 PVCS | TC-6 | 3 lb | 18 | Orange | 1993-107 |
| | Traffic Cone | 18 PVCS | TC-6 | 3 lb | 18 | Orange | 1994-071 |
| | Traffic Cone | 28 PVCH | TC-6 | 10 lb Wide Body | 28 | Orange | 1993-109 |
| | Traffic Cone | 28 PVCH | TC-6 | 10 lb Wide Body | 28 | Orange | 1994-073 |
| | Traffic Cone | 28 PVCTLH | TC-6 | 10 lb | 28 | Orange | 1993-108 |
| | Traffic Cone | 28 PVCTLH | TC-6 | 10 lb Trimline | 28 | Orange | 1994-074 |
| | Traffic Cone | 36 PVCS | TC-6 | 10 lb | 36 | Orange | 1993-238 |
| | Traffic Cone | 36 PVCS | TC-6 | 10 lb | 36 | Orange | 1994-072 |
| | Traffic Cone | Channelizer | | | 42 | Fluorescent Orange | 2006-048Q |

### 901.2 Traffic Warning Signal Spinning Delineator

Last Revised: 2/26/2020

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **SHEWN 15** | **Sherwin Industries, Inc., 2410 Copper Hill Place, Midlothian, VA 23112 http://sherwinindustriesinc.com/sherwin/** | | | |
| | Spinning Delineator | Safe T Spin | | 1995-107 |
| | *This device shall not be used in place of a warning light required by Publication 213.* | | | |

### 901.2 Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA)

Last Revised: 8/20/2019

FHWA Eligibility Letters for TMA's: Terminals/Crash Cushions Letters

Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA): Installed on or connected to the shadow vehicle, as required in Pub 212, Pub 213, and the MUTCD. Category 3 Temporary Traffic Control Devices

Temporary work zone devices manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. AASHTO/FHWA Joint Implementation Agreement for MASH 2016

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA)

**Last Revised: 8/20/2019**

FHWA Eligibility Letters for TMA's: Terminals/Crash Cushions Letters

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **ENERG 15** | **Energy Absorption Systems, Inc. (Trinity Industries, Inc. Company), 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://energyabsorption.com/** | | | | |
| **Plant** | **Pell City, AL** | | | | |
| | Trailer Impact Attenuator (TA) | Safe-Stop Trailer TMA, Model 9000 | TMA-2 | TL-3 (62 mph), NCHRP 350 | ----- |
| | Trailer Impact Attenuator (TA) | Vorteq Trailer TMA | TMA-2 | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | ALPHA 70K TMA | | TL-2 (44 mph), NCHRP 350 | 1997-055 |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 8290 | TMA-2(14) | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 8291 | TMA-2(14) | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 8291CLC | | TL-3 (62 mph), NCHRP 350 | 1999-177 |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 9180 | TMA-2(14) | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 9181 | TMA-2(14) | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 9182 | TMA-2(14) | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Safe-Stop TMA, Model 9182LC | TMA-2 | TL-3 (62 mph), NCHRP 350 | ----- |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | | | |
| | Trailer Impact Attenuator (TA) | Model TTMA-100 Trailer Attenuator | TA-01 | TL-3 (62 mph), NCHRP 350 | 2013-147 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA)

**Last Revised: 8/20/2019**

FHWA Eligibility Letters for TMA's: Terminals/Crash Cushions Letters

Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA): Installed on or connected to the shadow vehicle, as required in Pub 212, Pub 213, and the MUTCD. Category 3 Temporary Traffic Control Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **LINSY 15** | **Lindsay Transportation Solutions, LLC, 180 River Road, Rio Vista, CA 94571 http://www.lindsay.com/transportation-solutions** | | | | |
| **Plant** | **505 Crown Point Ave Omaha, NE 67110** | | | | |
| | Trailer Impact Attenuator (TA) | U-MAD 100K Trailer Attenuator | TA-02 | TL-3 (62 mph), NCHRP 350 | 2014-030Q |
| | Truck-Mounted Impact Attenuator (TMA) | U-MAD 100K | TMA-6 | TL-3 (62 mph), NCHRP 350 | 2000-229Q |
| | Truck-Mounted Impact Attenuator (TMA) | U-MAD 70K | TMA-6 | TL-2 (44 mph), NCHRP 350 | 2000-229Q |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | React-350 TMA | | TL-3 (62 mph), NCHRP 350 | 1998-158 |
| **RENCO 15** | **Renco Supply Inc., P.O. Box 730, Pflugerville, TX 78691 http://rencosupply.com/** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | RAM 100k | TMA-3 | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Ren-Gard 815 | TMA-3 | TL-2 (44 mph), NCHRP 350 | ----- |
| **SYRS2 15** | **Syro, Inc., 2525 Stemmons Freeway, Dallas, TX 75207 http://www.syrologistics.com/** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | MPS-350III | | TL-3 (62 mph), NCHRP 350 | 1997-035 |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | |
| | Trailer Impact Attenuator (TA) | Scorpion Model 10002 TL3-12TA Trailer | TMA-7 | TL-3 (62 mph), NCHRP 350 | ----- |
| | Truck-Mounted Impact Attenuator (TMA) | Scorpion II Series 10000 TMA | | TL-3 (62 mph), MASH 2016 | 2019-008Q |
| | *FHWA Eligibility Letter: CC-132* ***Scorpion II TMA - PennDOT Approved Drawing 081919*** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | Scorpion Model A 10,000 | | TL-2 (44 mph), NCHRP 350 | 2000-301Q |
| | Truck-Mounted Impact Attenuator (TMA) | Scorpion Model C 10,000 | | TL-3 (62 mph), NCHRP 350 | 2000-301Q |
| **TRIN5 15** | **Trinity Highway Products, LLC, 2525 Stemmons Freeway, Dallas, TX 75207 http://www.highwayguardrail.com/** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | MPS-350 | TMA-1(03) | TL-3 (62 mph), NCHRP 350 | - |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA)

**Last Revised: 8/20/2019**

FHWA Eligibility Letters for TMA's: Terminals/Crash Cushions Letters

Truck-Mounted Impact Attenuators (TMA) & Trailer Impact Attenuators (TA): Installed on or connected to the shadow vehicle, as required in Pub 212, Pub 213, and the MUTCD. Category 3 Temporary Traffic Control Devices

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| | Product | Name | COA | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|
| **VERDE 15** | **Verdegro USA LLC, Biscayne Blvd., Suite 505, Miami, FL 33132 https://www.blade-tma.com/** | | | | |
| **Facility** | **Munnikenheiweg 59 4879 NE Etten Leur, The Netherlands** | | | | |
| | Truck-Mounted Impact Attenuator (TMA) | BLADE TMA | | TL-3 (62 mph), MASH 2016 | 2017-242Q |
| | *FHWA Eligibility Letter: CC-136* | | | | |

### 901.2 Tubular Markers (Traffic Guide Posts)

**Last Revised: 6/17/2015**

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Height (in) | Tubular Marker Color | Tubular Marker Bond | Ref. No. |
|---|---|---|---|---|---|---|---|
| **CARST 15** | **Carsonite International Corporation, Carsonite Composites, 19845 US Highway 76, Newberry, SC 29108 http://www.carsonite.com/** | | | | | | |
| | Tubular Marker | SDC-2036 | TM-09 | 36 | White | Butyl Pad | ----- |
| | Tubular Marker | SDC-2036 | TM-09 | 36 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | SDC-2036 | TM-09 | 36 | White | Epoxy | ----- |
| | Tubular Marker | SDC-2036 | TM-09 | 36 | Yellow | Epoxy | ----- |
| | Tubular Marker | SDC-2048 | TM-09 | 48 | White | Butyl Pad | ----- |
| | Tubular Marker | SDC-2048 | TM-09 | 48 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | SDC-2048 | TM-09 | 48 | White | Epoxy | ----- |
| | Tubular Marker | SDC-2048 | TM-09 | 48 | Yellow | Epoxy | ----- |
| | Tubular Marker | SDR-3028 | TM-09 | 28 | White | Butyl Pad | ----- |
| | Tubular Marker | SDR-3028 | TM-09 | 28 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | SDR-3028 | TM-09 | 28 | Orange | Butyl Pad | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Tubular Markers (Traffic Guide Posts)

Last Revised: 6/17/2015

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| | Product | Name | COA | Height (in) | Tubular Marker Color | Tubular Marker Bond | Ref. No. |
|---|---|---|---|---|---|---|---|
| **CARST 15** | **Carsonite International Corporation, Carsonite Composites, 19845 US Highway 76, Newberry, SC 29108 http://www.carsonite.com/** | | | | | | |
| | Tubular Marker | SDR-3036 | TM-09 | 36 | White | Butyl Pad | ----- |
| | Tubular Marker | SDR-3036 | TM-09 | 36 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | SDR-3036 | TM-09 | 36 | Orange | Butyl Pad | ----- |
| **FLEXS 15** | **FlexStake, Inc., 2150 Andrea Lane, Fort Myers, FL 33912 http://www.flexstake.com/** | | | | | | |
| | Tubular Marker | TM 753 | TM-10 | 36 | White | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Orange | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Red | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Blue | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Green | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Gray | Butyl Pad | ----- |
| | Tubular Marker | TM 753 | TM-10 | 36 | Brown | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Orange | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Red | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Blue | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Green | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Gray | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | Brown | Butyl Pad | ----- |
| | Tubular Marker | TM 754 | TM-10 | 48 | White | Butyl Pad | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Tubular Markers (Traffic Guide Posts)

**Last Revised: 6/17/2015**

The listed devices have been self-certified for crashworthiness by the vendor and are deemed compliant with NCHRP-350. The devices may be sold for use in Pennsylvania. Category 1 Temporary Traffic Control Device

| | Product | Name | COA | Height (in) | Tubular Marker Color | Tubular Marker Bond | Ref. No. |
|---|---|---|---|---|---|---|---|
| **PEXCO 15** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic** | | | | | | |
| **Facility** | **3110 70th Avenue East Tacoma, WA 98424** | | | | | | |
| | Tubular Marker | FG 300-UR/18" | TM-13 | 18 | White | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/18" | TM-13 | 18 | Yellow | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/18" | TM-13 | 18 | Orange | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/24" | TM-13 | 24 | White | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/24" | TM-13 | 24 | Yellow | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/24" | TM-13 | 24 | Orange | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/36" | TM-13 | 36 | White | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/36" | TM-13 | 36 | Yellow | Epoxy | ----- |
| | Tubular Marker | FG 300-UR/36" | TM-13 | 36 | Orange | Epoxy | ----- |
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | | | | | |
| | Tubular Marker | SH518SMTEAOS | TM-07 | 18 | Orange | Epoxy | ----- |
| | *Use Master Builders Concressive 1011 Epoxy 1 to 1 Mix* | | | | | | |
| | Tubular Marker | SH518SMTEAWS | TM-07 | 18 | White | Epoxy | ----- |
| | *Use Master Builders Concressive 1011 Epoxy 1 to 1 Mix* | | | | | | |
| | Tubular Marker | SH518SMTEAYS | TM-07 | 18 | Yellow | Epoxy | ----- |
| | *Use Master Builders Concressive 1011 Epoxy 1 to 1 Mix* | | | | | | |
| | Tubular Marker | SH524SMAEAOS | TM-07 | 24 | Orange | Butyl Pad | ----- |
| | Tubular Marker | SH524SMAEAWS | TM-07 | 24 | White | Butyl Pad | ----- |
| | Tubular Marker | SH524SMAEAYS | TM-07 | 24 | Yellow | Butyl Pad | ----- |
| | Tubular Marker | SH536SMTEOOS | TM-07 | 36 | Orange | Butyl Pad | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Tubular Markers (Traffic Guide Posts)

**Last Revised: 6/17/2015**

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| | Product | Name | COA | Height (in) | Tubular Marker Color | Tubular Marker Bond | Ref. No. |
|---|---|---|---|---|---|---|---|
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** *Formerly PIBH- 15* | | | | | | |
| | Tubular Marker | PIBH-18TM | TM-11 | 18 | White | Epoxy | ----- |
| | Tubular Marker | PIBH-18TM | TM-11 | 18 | Yellow | Epoxy | ----- |
| | Tubular Marker | PIBH-18TM | TM-11 | 18 | Orange | Epoxy | ----- |
| | Tubular Marker | PIBH-24TM | TM-11 | 24 | White | Epoxy | ----- |
| | Tubular Marker | PIBH-24TM | TM-11 | 24 | Yellow | Epoxy | ----- |
| | Tubular Marker | PIBH-24TM | TM-11 | 24 | Orange | Epoxy | ----- |
| | Tubular Marker | PIBH-28TM | TM-11 | 28 | White | Epoxy | ----- |
| | Tubular Marker | PIBH-28TM | TM-11 | 28 | Yellow | Epoxy | ----- |
| | Tubular Marker | PIBH-28TM | TM-11 | 28 | Orange | Epoxy | ----- |
| | Tubular Marker | PIBH-36TM | TM-11 | 36 | White | Epoxy | ----- |
| | Tubular Marker | PIBH-36TM | TM-11 | 36 | Yellow | Epoxy | ----- |
| | Tubular Marker | PIBH-36TM | TM-11 | 36 | Blue | Epoxy | ----- |
| | Tubular Marker | PIBH-36TM | TM-11 | 36 | Orange | Epoxy | ----- |
| | Tubular Marker | PIBH-48TM | TM-11 | 48 | White | Epoxy | ----- |
| | Tubular Marker | PIBH-48TM | TM-11 | 48 | Yellow | Epoxy | ----- |
| | Tubular Marker | PIBH-48TM | TM-11 | 48 | Blue | Epoxy | ----- |
| | Tubular Marker | PIBH-48TM | TM-11 | 48 | Orange | Epoxy | ----- |
| | Tubular Marker | PIBH-TMB | TM-11 | | | | ----- |
| | *Surface Mount Base, Pin Lock, Epoxy* | | | | | | |

### 901.2 Variable Speed Limit Signs

**Last Revised: 3/20/2015**

| | Product | Name | COA | Speed Display Mount | Speed Display Power | Ref. No. |
|---|---|---|---|---|---|---|
| **ASTIT 15** | **ASTI Transportation Systems, 18 Blevins Drive, New Castle, DE 19720 http://www.asti-trans.com/** | | | | | |
| | Variable Speed Limit Sign | CST-1 | VSL-1 | Trailer | Solar Battery | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Variable Speed Limit Signs

Last Revised: 3/20/2015

| | Product | Name | COA | Speed Display Mount | Speed Display Power | Ref. No. |
|---|---|---|---|---|---|---|
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | | | |
| | Variable Speed Limit Sign | SST-2W | VSL-2 | Trailer | Solar Battery | ----- |

### 901.2 Vertical Panels

Last Revised: 3/26/2015

| | Product | Name | COA | Panel Type | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|---|
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | | | |
| | Vertical Panel | 320 F Fixed Base | VP-4 | Single Panel | TL-2 (44 mph) | ----- |
| | Vertical Panel | 320 F Portable Base | VP-4 | Single Panel | TL-3 (62 mph) | ----- |
| **PLAPC 15** | **Plasticade Products Corporation, 7700 North Austin Ave., Skokie, IL 60077 http://www.plasticade.com/** | | | | | |
| | Vertical Panel<br>*May be used with light.* | Extended SafetyCade | VP-1 | Single Panel | TL-3 (62 mph) | ----- |
| **PLASS 15 Facility** | **Plastic Safety Systems, Inc., 2444 Baldwin Road, P.O. Box 20140, Cleveland, OH 44104 http://plasticsafety.com/ Middlefield, OH** | | | | | |
| | Vertical Panel<br>*May be used with light* | MVP | VP-5 | Single Panel | TL-3 (62 mph) | ----- |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | |
| | Vertical Panel<br>*May be used with light* | Big Foot | VP-2 | Single Panel | TL-3 (62 mph) | ----- |
| | Vertical Panel<br>*May be used with light* | Big Foot II | VP-2 | Single Panel | TL-3 (62 mph) | ----- |
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | | | | |
| | Vertical Panel<br>*May be used with light* | RT 360 VP | VP-7 | Single Panel | TL-3 (62 mph) | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Vertical Panels

Last Revised: 3/26/2015

| | Product | Name | COA | Panel Type | Approved Crash Test Level | Ref. No. |
|---|---|---|---|---|---|---|
| **THDTW 15** | **Three D Traffic Works, Inc., 430 North Varney Street, Burbank, CA 91502 http://www.trafficwks.com/** | | | | | |
| | Vertical Panel<br>*May be used with light* | TD6000 | VP-6 | Single Panel | TL-3 (62 mph) | ----- |
| | Vertical Panel | TD6500 | VP-6 | Single Panel | | ----- |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | |
| | Vertical Panel<br>*May be used with light* | 33000 Series | VP-3 | Single Panel | TL-3 (62 mph) | ----- |
| | Vertical Panel<br>*May be used with light* | 40000 Series | VP-3 | Double Panel | TL-3 (62 mph) | ----- |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/**<br>***Formerly PIBH- 15*** | | | | | |
| | Vertical Panel | 320 Series | VP-8 | Single Panel | TL-2 (44 mph) | ----- |
| | Vertical Panel | 320 Series | VP-8 | Single Panel | TL-3 (62 mph) | ----- |

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **C&CSG 15** | **C&C Signal, LLC, 216 South Alma School Road, Mesa, AZ 85210** | | | |
| | Warning Light: Type A, Yellow | BL1V.3W00 | WL-13 | ----- |
| | Warning Light: Type A, Yellow | BL3V.3WXX | WL-13 | ----- |
| | Warning Light: Type A, Yellow | BLU36.3W | WL-13 | ----- |
| | Warning Light: Type A, Yellow | BLU36.3W00 | WL-13 | ----- |
| | Warning Light: Type A, Yellow | SB.ACX | WL-13 | ----- |
| | Warning Light: Type B, White<br>*Provisionally Approved* | BL3V.BL100 | PWL-5 | ----- |
| | Warning Light: Type B, White<br>*Provisionally Approved* | BLU6.BL100 | PWL-5 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **C&CSG 15** | **C&C Signal, LLC, 216 South Alma School Road, Mesa, AZ 85210** | | | |
| | Warning Light: Type B, Yellow | BL3V.BL100 | WL-13 | ----- |
| | Warning Light: Type B, Yellow | BLU6.BL1-DH | WL-13 | ----- |
| | Warning Light: Type B, Yellow | BLU6.BL100 | WL-13 | ----- |
| | Warning Light: Type C, Yellow | BL1V.3W00 | WL-13 | ----- |
| | Warning Light: Type C, Yellow | BL3V.3WXX | WL-13 | ----- |
| | Warning Light: Type C, Yellow | BLU36.3W | WL-13 | ----- |
| | Warning Light: Type C, Yellow | BLU36.3W00 | WL-13 | ----- |
| | Warning Light: Type C, Yellow | SB.ACX | WL-13 | ----- |
| **COLLT 15** | **Collt Manufacturing, Inc., 249 Hollis St., Holliston, MA 01746 http://www.collt.com/** | | | |
| | Warning Light: Type A, Yellow | PS-120 | | ----- |
| | Warning Light: Type A, Yellow | PS-600 | | ----- |
| | Warning Light: Type A, Yellow | RS-120 | | 1984-126 |
| | Warning Light: Type B, Yellow | 12-B | | 1984-125 |
| | Warning Light: Type C, Yellow | PSB-600 | | 1984-127 |
| **DORMA 15** | **Dorman Smith Traffic Products, Rufford Road, Southport, England** | | | |
| | Warning Light: Type A, Yellow | TW1S-12V | | 1986-219 |
| | Warning Light: Type C, Yellow | TW2S | | 1985-206 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **EMPCL 15** | **Elgin Molded Plastics, Inc. DBA Empco-Lite, 909 Grace St., Elgin, IL 60120 http://www.elginmolded.com/** | | | |
| | Warning Light: Type A, Yellow | 100 | WL-2 | ----- |
| | Warning Light: Type A, Yellow | 100 LED | WL-2 | 1995-195 |
| | Warning Light: Type A, Yellow | 2006 | WL-2 | ----- |
| | Warning Light: Type A, Yellow | 400 | WL-2 | ----- |
| | Warning Light: Type A, Yellow | 400 LED | WL-2 | 1995-196 |
| | Warning Light: Type A, Yellow | 444 LED | WL-2 | 1999-040Q |
| | Warning Light: Type A, Yellow | 499L3 | WL-2 | ----- |
| | Warning Light: Type A, Yellow | Y2K | WL-2 | 2000-162Q |
| | Warning Light: Type B, White | 212-6LW | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 1002 | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 1002S | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 1102 | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 1102L | WL-2 | 1996-085 |
| | Warning Light: Type B, Yellow | 212 LED | WL-2 | 1997-179 |
| | Warning Light: Type B, Yellow | 212-3 | WL-2 | ----- |
| | Warning Light: Type B, Yellow<br>*Provisionally Approved* | 212-3DSL LED | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 212-3LW | WL-2 | ----- |
| | Warning Light: Type B, Yellow<br>*Provisionally Approved* | 212-3S | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 212-6 | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 212-6DH | WL-2 | ----- |
| | Warning Light: Type B, Yellow | 213-3DH | WL-2 | ----- |
| | Warning Light: Type C, Yellow | 100 | WL-2 | ----- |
| | Warning Light: Type C, Yellow | 100 LED | WL-2 | 1995-133 |
| | Warning Light: Type C, Yellow | 2006 | WL-2 | ----- |
| | Warning Light: Type C, Yellow | 400 | WL-2 | ----- |
| | Warning Light: Type C, Yellow | 400 LED | WL-2 | 1994-270 |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **EMPCL 15** | **Elgin Molded Plastics, Inc. DBA Empco-Lite, 909 Grace St., Elgin, IL 60120 http://www.elginmolded.com/** | | | |
| | Warning Light: Type C, Yellow | 400 LED-DH | WL-2 | 1994-134 |
| | Warning Light: Type C, Yellow | 499L3 | WL-2 | ----- |
| | Warning Light: Type C, Yellow | Y2K | WL-2 | 2000-162Q |
| | Warning Light: Type D, Yellow | 499L3D | WL-2 | ----- |
| **PENTC 15** | **Pennsylvania Turnpike Commission, P.O. Box 67676, Harrisburg, PA 17106 https://www.paturnpike.com/** | | | |
| | Warning Light: Type B, Yellow<br>*May be used only with W21-19 sign.*<br>*Provisionally Approved* | T-1 | PWL-3 | ----- |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | |
| | Warning Light: Type A, Yellow | PF-4 | WL-1 | ----- |
| | Warning Light: Type A, Yellow | PF3-P-12V-A | WL-1 | ----- |
| | Warning Light: Type A, Yellow | PF3P-12V-PC-S | WL-1 | ----- |
| | Warning Light: Type A, Yellow | PF4P-12V-PC-S | | 1983-069 |
| | Warning Light: Type A, Yellow | PF4P-LED-6V-FL | | 1996-103A |
| | Warning Light: Type B, Yellow | 200 LED | | 1995-075 |
| | Warning Light: Type B, Yellow<br>*May be used only with W21-19 sign.*<br>*Provisionally Approved* | Active WZ Light (Act 229) | PWL-4 | ----- |
| | Warning Light: Type B, Yellow | HI-3 | | 1987-313 |
| | Warning Light: Type B, Yellow | HI-3-120 | WL-1 | ----- |
| | Warning Light: Type B, Yellow | HI-3-12V | WL-1 | ----- |
| | Warning Light: Type B, Yellow | HI-4 | | 1983-143 |
| | Warning Light: Type C, Yellow | 200-1-LED | | 1995-004 |
| | Warning Light: Type C, Yellow | PF-3-PC-SB2 | WL-1 | ----- |
| | Warning Light: Type C, Yellow | PF-3P-6V-SBP-CS | | 1983-071 |
| | Warning Light: Type C, Yellow | PF-3P-6VC | WL-1 | ----- |
| | Warning Light: Type C, Yellow | PF-4-PC-SB | WL-1 | ----- |
| | Warning Light: Type C, Yellow | PF4P-LED-6V-FL | | 1996-103B |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights

Last Revised: 8/10/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **SERVM 15** | **Service & Materials Company, Inc., 4835 East County Road 600, Sunman, IN 47041** | | | |
| | Warning Light: Type A, Yellow | 301 | | 1981-103 |
| | Warning Light: Type A, Yellow | 501 | | 1981-103 |
| | Warning Light: Type A, Yellow | NF5003 | | 1983-139 |
| | Warning Light: Type A, Yellow | PAR7003 | | 1983-140 |
| | Warning Light: Type B, Yellow | NF1714 | WL-9 | ----- |
| | Warning Light: Type B, Yellow | NF1724 | WL-9 | ----- |
| | Warning Light: Type B, Yellow | PAR1764 | WL-9 | ----- |
| | Warning Light: Type B, Yellow | PAR1774 | WL-9 | ----- |
| | Warning Light: Type C, Yellow | 301 | | 1981-103 |
| | Warning Light: Type C, Yellow | 501 | | 1981-103 |
| | Warning Light: Type C, Yellow | NF5001 | WL-9 | ----- |
| | Warning Light: Type C, Yellow | PAR7001 | WL-9 | ----- |
| **TRFCN 15** | **Trafcon Industries, Inc., 81 Texaco Road, Mechanicsburg, PA 17050 https://www.trafcon.com/** | | | |
| | Warning Light: Type B, Yellow | M90 | | 1990-021 |
| **WLITL 15** | **WLI Industries, Inc., 880 North Addison Road, Villa Park, IL 60181** | | | |
| | Warning Light: Type A, Yellow | Toughlite 2000 | WL-11 | ----- |
| | Warning Light: Type C, Yellow | Toughlite 2000 | WL-11 | ----- |
| | Warning Light: Type C, Yellow | Toughlite II | WL-11 | ----- |
| **WORKA 15** | **Work Area Protection Corporation, 2500 Production Drive, PO Box 4087, St. Charles, IL 60174 http://workareaprotection.com/** | | | |
| | Warning Light: Type B, Yellow | 2524 | WL-12 | ----- |
| | Warning Light: Type B, Yellow | 2540 | WL-12 | ----- |

### 901.2 Warning Lights, Sequential

Last Revised: 3/11/2020

| Product | Name | COA | Ref. No. |
|---|---|---|---|

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.2 Warning Lights, Sequential

Last Revised: 3/11/2020

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **EMPCL 15** | **Elgin Molded Plastics, Inc. DBA Empco-Lite, 909 Grace St., Elgin, IL 60120 http://www.elginmolded.com/** | | | |
| | Sequential Warning Lights | Empco-Lite Model 2006 | | 2014-217Q |
| **PIVAR 15** | **Pi Variables, Inc., 14831 Myford Road, Tustin, CA 92780 http://pivariables.com/** | | | |
| | Sequential Warning Lights | Pi-Lit Barricade Style | | 2014-011 |
| | Sequential Warning Lights | Pi-Lit Sunflower Sequential Cone-Top Warning Lamp | | 2016-293Q |
| | *Provisional Approval for Sunflower Cone-Top Lamps - Contact Ryan Palman (rpalman@pa.gov) before using on a Department highway.* | | | |
| | *FHWA Crashworthiness Eligibility: Self-Certification* | | | |
| **UNID2 15** | **Unipart Dorman, Wennington Road, Southport, England PR97TN** | | | |
| | Sequential Warning Lights | ConeLITE Synchro | | 2016-137 |
| | *This light cannot be used on 28" cones due to the MUTCD requirement of a 30" minimum mounting height (Section 6F.83 paragraph 11). FHWA MASH Crashworthiness Eligibility Letter: WZ-339* | | | |
| **UNIDO 15** | **Unipart Dorman, 173 Main Street, Bath, Ontario, Canada K0H 1G0 http://www.unipartdorman.com/** | | | |
| | Sequential Warning Lights | SynchroGUIDE model BAB6N/AW/P/H | | 2012-164Q |

### 901.3(b) Dust Control Palliatives

Last Revised: 6/23/2016

Publication 447, Section MS-0440-0020 Dust Palliatives Publication 447, Approved Products for Lower Volume Local Roads

Dust palliatives referenced in Pub 447, MS-0440-0020 are approved through the PennState Center for Dirt and Gravel Road Studies. To view the approved list and application rates: The Dirt & Gravel Maintenance Program, Approved Products List

| | Product | Name | Ref. No. |
|---|---|---|---|
| **D&DEM 15** | **D & D Emulsions Inc., 270 Park Avenue East, P.O. Box 1706, Mansfield, OH 44901 http://ddemulsionsinc.com/** | | |
| | Emulsified Petroleum Resins | Coherex | 2000-133Q |

## Section 901: Maintenance and Protection of Traffic During Construction

### 901.3(b) Dust Control Palliatives

Last Revised: 6/23/2016

Publication 447, Section MS-0440-0020 Dust Palliatives Publication 447, Approved Products for Lower Volume Local Roads

Dust palliatives referenced in Pub 447, MS-0440-0020 are approved through the PennState Center for Dirt and Gravel Road Studies. To view the approved list and application rates: The Dirt & Gravel Maintenance Program, Approved Products List

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ENVES 15** | **Environmental Energy Solutions, LLC, 10027 Route 403 Highway South, Seward, PA 15954 http://www.eesolutionsllc.com/** | | |
| | Emulsified Petroleum Resins | Ultra Bond 2000 | 2000-235Q |
| **GAPAC 15** | **Georgia-Pacific Corporation, 777 N. Eldridge Parkway, Houston, TX 77079 http://www.gp.com/** | | |
| | Calcium Lignosulfonate | Lignosite | 1992-110 |
| **PENSU 15 Plant** | **PennzSuppress Corporation, P.O. Box 4993, Lago, TX 78701 http://pennzsuppress.com/ 77 North Kendall Avenue Bradford, PA 16701** | | |
| | Emulsified Petroleum Resins | PennzSuppress-D | 1991-177 |
| **SUIT0 15** | **Suit-Kote Corporation, 1911 Lorings Crossing Rd, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | |
| | Calcium Lignosulfonate | CLS | 1996-168 |
| **SUIT3 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ Cortland, NY** | | |
| | Emulsified Petroleum Resins | | 1997-188 |

## Section 910: Highway Lighting

### 910.3(d) Pole Foundations (Alternates): Drilled Concrete Caissons

Last Revised: 7/13/2017

Approved product alternative for Section 910.3(d).

Strike Off Letters (SOL) and Drawings for **Approved Bridge and Structure Products**

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **SHAIN 15** | **Shaner Industries, LLC, 260 Pullman Square #169, Butler, PA 16001 http://www.shanerindustries.com/** | | | |
| | Pole Foundation (Alternate): Drilled Concrete Caisson | Metal Finned Pipe Foundations for Conventional Lighting Pole | 483-16-06 | 2016-162 |
| | *Drawing Number: 99-034 PE , Approval Date on Drawing: 10/6/2016. The alternate foundation design for conventional lighting has been approved under ECMS Special Provision c09101 ITEM 9910-0150.* ***Approved Bridge and Structure Products*** | | | |
| | Pole Foundation (Alternate): Drilled Concrete Caisson | Metal Foundations for High Mast Lighting Pole | 483-16-01 | 1995-291 |
| | *Drawing Number: 95-291, PE, Rev. 2, Approval Date on Drawing: 3/7/2016. The alternate foundation design for high mast lighting has been approved under ECMS Special Provision c09102 ITEM 9910-0170.* ***Approved Bridge and Structure Products*** | | | |

## Section 930: Post Mounted Signs, Type A

### 930.2(c)2 Post Mounted Signs, Type A: Foundations (Alternatives)

Last Revised: 3/27/2015

Approved product alternatives for Section 930.2(c)1, Cast in Place.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **SHAIN 15** | **Shaner Industries, LLC, 260 Pullman Square #169, Butler, PA 16001 http://www.shanerindustries.com/** | | | |
| | Steel Finned Pipe Foundation | Safe (Sign Foundation) | | 1995-290 |

## Section 937: Delineation Devices

### 937.2(a) Delineation Devices, Barrier Mount

Last Revised: 10/27/2017

For barrier delineator type drawings (Side-Mount types R and O; Top-Mount types P, S, R, and WZ), see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-06 15 Plant** | **3M Company, 4501 Highway 377 South, Brownwood, TX 76804 http://www.3m.com/3M/en_US/company-us/ 4501 Highway 377 South Brownwood, TX 76804** | | | | | | |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-341.5 (1.5 inch) | LDS-01 | | | | 2013-150 |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-344 (4 inch) | LDS-01 | | | | 2013-150 |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-346 (6 inch) | LDS-01 | | | | 2013-150 |
| **AMEMP 15** | **American Molded Plastic, Inc., P.O. Box 434, Newton Falls, OH 44444 http://americanmoldedplastic.com/** | | | | | | |
| | Barrier Mounted Delineator | Flex-D | BMD-12 | White and Yellow | Single/Bidirectional | Type R | ----- |
| **ARTUK 15** | **Artuk Corporation, 1200 Abbott Dr., Elgin, IL 60123 http://artukinc.com/** | | | | | | |
| | Barrier Mounted Delineator | FB-38 | BMD-06 | White and Yellow | Impact Resistant, Single Direction, Single/Double Sided | Type P | ----- |
| | Barrier Mounted Delineator *(Formerly listed under Supplier Code ASTR-15)* | FB33-1 | BMD-08 | White and Yellow | Impact Resistant, Single Direction | Type O | ----- |
| | Barrier Mounted Delineator *(Formerly listed under Supplier Code ASTR-15)* | FB33-2 | BMD-08 | White and Yellow | Impact Resistant, Bidirectional | Type O | ----- |
| | Barrier Mounted Delineator *(Formerly listed under Supplier Code ASTR-15)* | FB34-1 | BMD-08 | White and Yellow | Impact Resistant, Single Direction | Type O | ----- |
| | Barrier Mounted Delineator *(Formerly listed under Supplier Code ASTR-15)* | FB34-2 | BMD-08 | White and Yellow | Impact Resistant, Bidirectional | Type O | ----- |

## Section 937: Delineation Devices

### 937.2(a) Delineation Devices, Barrier Mount

Last Revised: 10/27/2017

For barrier delineator type drawings (Side-Mount types R and O; Top-Mount types P, S, R, and WZ), see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **ARTUK 15** | **Artuk Corporation, 1200 Abbott Dr., Elgin, IL 60123 http://artukinc.com/** | | | | | | |
| | Barrier Mounted Delineator | FT-1 | BMD-06 | White and Yellow | Impact Resistant, Single Direction, Single Sided | Type R | ----- |
| | Barrier Mounted Delineator | FT-2 | BMD-06 | White and Yellow | Impact Resistant, Bidirectional, Double Sided | Type R | ----- |
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | | | |
| | Barrier Mounted Delineator | 660-IR-BMD | BMD-01 | | | Type O | ----- |
| | Barrier Mounted Delineator | 661-IR-BMD | BMD-01 | White and Yellow | Impact Resistant, Single Direction | Type O | ----- |
| | Barrier Mounted Delineator | 662-IR-BMD | BMD-01 | White and Yellow | Impact Resistant, Bidirectional | Type O | ----- |
| **EXTRU 15** | **Extrudex, LLP, 310 Figgie Road, Painesville, OH 44077 https://extrudex.net/** ***Formerly Hall Manufacturing & Intek Plastics (HALMC 15)*** | | | | | | |
| | Barrier Mounted Delineator | Flexx 2020 | BMD-09 | White and Yellow | Impact Resistant, Single/Bidirectional | Type R | ----- |
| **PEXCO 15 Facility** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic 3110 70th Avenue East Tacoma, WA 98424** | | | | | | |
| | Barrier Mounted Delineator | PCBM T12 | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type R | ----- |
| | Barrier Mounted Delineator | PCBM-12 | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type O | ----- |
| | Barrier Mounted Delineator | PCBM-15 | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type P | ----- |

## Section 937: Delineation Devices

### 937.2(a) Delineation Devices, Barrier Mount

Last Revised: 10/27/2017

For barrier delineator type drawings (Side-Mount types R and O; Top-Mount types P, S, R, and WZ), see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602** http://www.safehitlx.com/html/safehit/index.html | | | | | | |
| | Barrier Mounted Delineator | SH216RBM-AS, 16" Post | BMD-05 | Gray | Impact Resistant, Single Direction | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBM-RS, 16" Post | BMD-05 | Red | Impact Resistant, Single Direction | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBM-YA, 16" Post | BMD-05 | Yellow | Impact Resistant, Single Direction | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBMD-AA, 16" Post | BMD-05 | Gray | Impact Resistant, Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBMD-RA, 16" Post | BMD-05 | Red | Impact Resistant, Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBMD-WS, 16" Post | BMD-05 | White | Impact Resistant, Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | SH216RBMD-YA, 16" Post | BMD-05 | Yellow | Impact Resistant, Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | SH216RMB-WS, 16" Post | BMD-05 | White | Impact Resistant, Single Direction | Type S | ----- |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876** https://www.uniquesource.com/ ***Formerly PIBH- 15*** | | | | | | |
| | Barrier Mounted Delineator | PIBH-16BMW, 16" Post | BMD-07 | White | Impact Resistant, Single/Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | PIBH-16BMY, 16" Post | BMD-07 | Yellow | Impact Resistant, Single/Bidirectional | Type S | ----- |
| | Barrier Mounted Delineator | PIBH-BMB BM Base | BMD-07 | | Pin Lock, Epoxy | | ----- |

### 937.2(b) Delineation Devices, Guiderail Mount

Last Revised: 8/12/2020

For guide-rail delineator type drawings [A, B, CS - Strong Post, CW - Weak Post, and D] see Publication 111, TC-8604 TC-8600 and TC-8700

## Section 937: Delineation Devices

### 937.2(b) Delineation Devices, Guiderail Mount

Last Revised: 8/12/2020

For guide-rail delineator type drawings [A, B, CS - Strong Post, CW - Weak Post, and D] see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-06 15 Plant** | **3M Company, 4501 Highway 377 South, Brownwood, TX 76804 http://www.3m.com/3M/en_US/company-us/ 4501 Highway 377 South Brownwood, TX 76804** | | | | | | |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-341.5 (1.5 inch) | LDS-01 | | | | 2013-150 |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-344 (4 inch) | LDS-01 | | | | 2013-150 |
| | Linear Delineation System Series 340 *Installation with manual fasteners only.* | LDS-346 (6 inch) | LDS-01 | | | | 2013-150 |
| **AMEMP 15** | **American Molded Plastic, Inc., P.O. Box 434, Newton Falls, OH 44444 http://americanmoldedplastic.com/** | | | | | | |
| | Strong Post Guiderail Mounted Delineator | Flex-DS | BMD-12 | White and Yellow | Single/Bidirectional | Type CS | ----- |
| | Weak Post Guiderail Mounted Delineator | Flex-DS | BMD-12 | White and Yellow | Single/Bidirectional | Type CW | ----- |
| **ARTUK 15** | **Artuk Corporation, 1200 Abbott Dr., Elgin, IL 60123 http://artukinc.com/** | | | | | | |
| | Guiderail Mounted Delineator | 313 Straight | BMD-06 | White and Yellow | Impact Resistant, Single Direction, Single/Double Sided | Type A | 2012-192Q |
| | Guiderail Mounted Delineator | 717 | BMD-06 | White and Yellow | Impact Resistant, Single/Bidirectional | Type D | ----- |
| | Strong Post Guiderail Mounted Delineator | FR-1 | BMD-06 | White and Yellow | Impact Resistant, Single Direction | Type CS | ----- |
| | Strong Post Guiderail Mounted Delineator | FR-2 | BMD-06 | White and Yellow | Impact Resistant, Single Direction | Type CS | ----- |
| **ASDC1 15** | **Arrow Safety Device Company, 123 Dixon Street, Selbyville, DE 19975 http://www.arrowsafetydevice.com** | | | | | | |
| | Guiderail Mounted Delineator *Provisionally Approved* | ARRDelB | | White and Yellow | Impact Resistant, Single/Bidirectional | Type D | 2016-109 |

## Section 937: Delineation Devices

### 937.2(b) Delineation Devices, Guiderail Mount

Last Revised: 8/12/2020

For guide-rail delineator type drawings [A, B, CS - Strong Post, CW - Weak Post, and D] see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **CARST 15** | **Carsonite International Corporation, Carsonite Composites, 19845 US Highway 76, Newberry, SC 29108 http://www.carsonite.com/** | | | | | | |
| | Guiderail Mounted Delineator | CFGBK300 Bracket for Guiderail | BMD-10 | | | | ----- |
| | Guiderail Mounted Delineator | CFGR-02701BP (27" Flexguard Guiderail or Sentry Marker) | DPOST-02 | White | Impact Resistant, Single/Bidirectional | Type B | 2010-226Q |
| | Guiderail Mounted Delineator | CFGR-02702BP (27" Flexguard Guiderail or Sentry Marker) | DPOST-02 | Yellow | Impact Resistant, Single/Bidirectional | Type B | 2010-226Q |
| | Guiderail Mounted Delineator | CGR-302701 | BMD-10 | White | Impact Resistant, Single/Bidirectional | Type A | ----- |
| | Guiderail Mounted Delineator | CGR-302702 | BMD-10 | Yellow | Impact Resistant, Single/Bidirectional | Type A | ----- |
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | | | |
| | Guiderail Mounted Delineator | 650-IR-GMD | BMD-01 | | | Type D | ----- |
| | Guiderail Mounted Delineator | 651-IR-GMD | BMD-01 | White and Yellow | Impact Resistant, Single Direction | Type D | ----- |
| | Guiderail Mounted Delineator | 652-IR-GMD | BMD-01 | White and Yellow | Impact Resistant, Bidirectional | Type D | ----- |
| **EMPCL 15** | **Elgin Molded Plastics, Inc. DBA Empco-Lite, 909 Grace St., Elgin, IL 60120 http://www.elginmolded.com/** | | | | | | |
| | Guiderail Mounted Delineator | GRD-S | BMD-13 | | Impact Resistant, Single/Bidirectional | Type D | 2014-247Q |
| | Guiderail Mounted Delineator | GRD-ST | BMD-13 | | Impact Resistant, Single/Bidirectional | Type A | 2014-246Q |

## Section 937: Delineation Devices

### 937.2(b) Delineation Devices, Guiderail Mount

Last Revised: 8/12/2020

For guide-rail delineator type drawings [A, B, CS - Strong Post, CW - Weak Post, and D] see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **EXTRU 15** | **Extrudex, LLP, 310 Figgie Road, Painesville, OH 44077 https://extrudex.net/** ***Formerly Hall Manufacturing & Intek Plastics (HALMC 15)*** | | | | | | |
| | Strong Post Guiderail Mounted Delineator | Railrider | BMD-09 | White and Yellow | Impact Resistant, Single/Bidirectional | Type CS | ----- |
| | Weak Post Guiderail Mounted Delineator | Weak Post Railrider | BMD-09 | White and Yellow | Impact Resistant, Single/Bidirectional | Type CW | ----- |
| **PEXCO 15 Facility** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic 3110 70th Avenue East Tacoma, WA 98424** | | | | | | |
| | Guiderail Mounted Delineator | Butterfly Guiderail | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type D | ----- |
| | Guiderail Mounted Delineator | Straight Post Ref. -GMD | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type A | ----- |
| | Strong Post Guiderail Mounted Delineator | I-Flex 12 | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type CS | ----- |
| | Weak Post Guiderail Mounted Delineator | I-Flex 12 WP | BMD-02 | White and Yellow | Impact Resistant, Single/Bidirectional | Type CW | ----- |
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | | | | | |
| | Guiderail Mounted Delineator | SH2276GRSD-YS12, 27" Post | BMD-05 | Yellow | Impact Resistant, Bidirectional | Type B | ----- |
| | Guiderail Mounted Delineator | SH227GRS-WS12, 27" Post | BMD-05 | White | Impact Resistant, Single Direction | Type B | ----- |
| | Guiderail Mounted Delineator | SH227GRS-YS12, 27" Post | BMD-05 | Yellow | Impact Resistant, Single Direction | Type B | ----- |
| | Guiderail Mounted Delineator | SH227GRSD-WS12, 27" Post | BMD-05 | White | Impact Resistant, Bidirectional | Type B | ----- |
| | Guiderail Mounted Delineator | SH227GRSE-UL-LA, 27" Post | BMD-05 | Blue | Impact Resistant, Single Direction | Type B | ----- |

## Section 937: Delineation Devices

### 937.2(b) Delineation Devices, Guiderail Mount

Last Revised: 8/12/2020

For guide-rail delineator type drawings [A, B, CS - Strong Post, CW - Weak Post, and D] see Publication 111, TC-8604 TC-8600 and TC-8700

| | Product | Name | COA | Device Color | Mount Description | Mount Type | Ref. No. |
|---|---|---|---|---|---|---|---|
| **SHUR1 15 Plant** | **SHUR-TITE Products, 105 Tradesmens Park Drive, Hutto, TX 78634 https://shur-tite.com/traffic_products Gainesville, TX** | | | | | | |
| | Guiderail Mounted Delineator | Shur-Tite Guiderail Post "Flat Mount" Delineator | | White | Impact Resistant, Single/Bidirectional | Type B | 2020-121Q |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** ***Formerly PIBH- 15*** | | | | | | |
| | Guiderail Mounted Delineator | PIBH-27GRW, 27" Post | BMD-07 | White | Impact Resistant, Single/Bidirectional | Type B | ----- |
| | Guiderail Mounted Delineator | PIBH-27GRY, 27" Post | BMD-07 | Yellow | Impact Resistant, Single/Bidirectional | Type B | ----- |
| | Guiderail Mounted Delineator | SHUR-FLEX Guiderail Post "Flat Mount" Delineator (#SF2752) | | White | Impact Resistant, Single/Bidirectional | Type B | 2015-148 |

### 937.2(c) Delineation Devices, Posts

Last Revised: 5/13/2020

The Devices listed in this section have been self-certified by the vendor as to their crashworthiness and are deemed compliant with NCHRP-350. These Devices are approved for use in PA.

| | Product | Name | COA | Post Type | Ref. No. |
|---|---|---|---|---|---|
| **CARST 15** | **Carsonite International Corporation, Carsonite Composites, 19845 US Highway 76, Newberry, SC 29108 http://www.carsonite.com/** | | | | |
| | Delineator Post | 27” Sentry Marker | DPOST-02 | Guide Rail Post | 2010-226Q |
| | Delineator Post | CDS-30 | DPOST-02 | Ground Mounted | 1993-188 |
| | Delineator Post | CFR-406601 | DPOST-02 | Ground Mounted | ------ |
| | Delineator Post | CFR-406602 | DPOST-02 | Ground Mounted | ------ |
| | Delineator Post | FlexGuard Post | DPOST-02 | Ground Mounted | 2010-051Q |
| | Delineator Post | SDC-2036 / 36” | DPOST-02 | Surface Mounted | ------ |
| | Delineator Post | SDC-2048 / 48” | DPOST-02 | Surface Mounted | ------ |

## Section 937: Delineation Devices

### 937.2(c) Delineation Devices, Posts

**Last Revised: 5/13/2020**

The Devices listed in this section have been self-certified by the vendor as to their crashworthiness and are deemed compliant with NCHRP-350. These Devices are approved for use in PA.

| | Product | Name | COA | Post Type | Ref. No. |
|---|---|---|---|---|---|
| **FLEXS 15** | **FlexStake, Inc., 2150 Andrea Lane, Fort Myers, FL 33912 http://www.flexstake.com/** | | | | |
| | Delineator Post | HD-600 Series | DPOST-03 | Ground Mounted | 1992-072A-F |
| | Delineator Post | SM-700 Series | DPOST-03 | Surface Mounted | 1992-072A-F |
| **FRANK 15** | **Franklin Industries, 645 Atlantic Ave., Franklin, PA 16323 http://store.franklinindustriesco.com/** | | | | |
| | Delineator Post | PC-220 | DPOST-06 | Ground Mounted | 2000-046Q |
| | *Approved to manufacture ground mounted delineator posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171.* ***Franklin Industries' Certificate of Conformance*** | | | | |
| **PEXCO 15 Facility** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic 3110 70th Avenue East Tacoma, WA 98424** | | | | |
| | Delineator Post | City Post EAC (Embedded Anchor Cup) | | Spin-in (Embedded Anchor Cup) | 2018-150Q |
| | Delineator Post | FG 300-UR | DPOST-05 | Surface Mounted (Epoxy) | ----- |
| | Delineator Post | FG-500 Series FG-95 | DPOST-05 | Ground Mounted | ----- |
| | Delineator Post | FG-500 Series FG-96 | DPOST-05 | Ground Mounted | ----- |
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | | | |
| | Delineator Post | SH-SMA-1-BL | DPOST-01 | Surface Mounted Base (Pin Lock, Epoxy) | ----- |
| | Delineator Post | SH236SMA-SP12 | DPOST-01 | Surface Mounted | ----- |
| | Delineator Post | SH248GP3-SP-12 | DPOST-01 | Ground Mounted | ----- |
| | Delineator Post | SH336SMA-SP12 | DPOST-01 | Surface Mounted | ----- |
| | Delineator Post | SH348GP3-SP-12 | DPOST-01 | Ground Mounted | ----- |
| | Delineator Post | SHA1-08OE-GL (8" Steel Anchor) | DPOST-01 | Ground Mounted | ----- |
| | Delineator Post | SHA3-18C-GL (18" Steel Anchor) | DPOST-01 | Ground Mounted | ----- |

## Section 937: Delineation Devices

### 937.2(c) Delineation Devices, Posts

**Last Revised: 5/13/2020**

The Devices listed in this section have been self-certified by the vendor as to their crashworthiness and are deemed compliant with NCHRP-350. These Devices are approved for use in PA.

| | Product | Name | COA | Post Type | Ref. No. |
|---|---|---|---|---|---|
| **SHUR1 15** | **SHUR-TITE Products, 105 Tradesmens Park Drive, Hutto, TX 78634 https://shur-tite.com/traffic_products** | | | | |
| **Plant** | **Gainesville, TX** | | | | |
| | Delineator Post | Shur-Flex Driveable Delineator | | Ground Mounted | 2020-119Q |
| | Delineator Post | Shur-Flex Surface Mount Delineator | | Surface Mounted | 2020-120Q |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** | | | | |
| | ***Formerly PIBH- 15*** | | | | |
| | Delineator Post | PIBH-36G | DPOST-04 | Surface Mounted | ----- |
| | Delineator Post | PIBH-48G | DPOST-04 | Ground Mounted | ----- |
| | Delineator Post | PIBH-52G | DPOST-04 | Ground Mounted | ----- |
| | Delineator Post | PIBH-A18 (18" Steel Anchor) | DPOST-04 | Ground Mounted | ----- |
| | Delineator Post | PIBH-A8 (8" Steel Anchor) | DPOST-04 | Surface Mounted | ----- |
| | Delineator Post | PIBH-TMB | DPOST-04 | Surface Mounted (Epoxy) | ----- |
| | Delineator Post | SHUR-FLEX Driveable Delineator Item #SD0031 | | Ground Mounted | 2015-147Q |
| | Delineator Post | SHUR-FLEX Surface Mount Delineator (#SF0140) | | Surface Mounted | 2015-149 |

## Section 948: Steel Sign Structure

### 948 Steel Sign Structure

Last Revised: 11/26/2019

Preapproved Plants

These plants have been preapproved to fabricate overhead steel sign structures for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **ACKBAY15** | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | | | |
| | Steel Sign Structure Fabricator | | Baltimore | MD | 2018-282Q |
| **APEX- 15** | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | | | |
| | Steel Sign Structure Fabricator | | Boyertown | PA | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| **BRFAB 15** | **Brookfield Fabricating Corporation, P. O. Box 406, Brookfield, MO 64628 http://www.brookfieldfabricating.com/** | | | | |
| | Steel Sign Structure Fabricator | | Brookfield | MO | ----- |
| **DURAB 15** | **Dura-Bond Steel Corporation, 2658 Puckety Drive, Export, PA 15632 http://www.dura-bond.com/** | | | | |
| | Steel Sign Structure Fabricator | | Export | PA | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| **GRENR 15** | **Greiner Industries, Inc., 1650 Steel Way, Mount Joy, PA 17552 http://greinerindustries.com/** | | | | |
| | Steel Sign Structure Fabricator | | Mount Joy | PA | ----- |
| | *Also approved for induction bending of monopipe.* | | | | |
| **HALL1 15** | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | Steel Sign Structure Fabricator | | Ellwood City | PA | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| **HALL3 15** | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | Steel Sign Structure Fabricator | | Ellwood City | PA | 2017-029Q |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| **HASSC 15** | **Harris Structural Steel Company, Inc., 1640 New Market Ave., South Plainfield, NJ 07080 http://www.harrissteelco.com/** | | | | |
| | Steel Sign Structure Fabricator | | South Plainfield | NJ | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| **HEART 15** | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** | | | | |
| | ***Formerly Brownsville Marine Products*** | | | | |
| | Steel Sign Structure Fabricator | | Brownsville | PA | 2018-220Q |

## Section 948: Steel Sign Structure

### 948 Steel Sign Structure

Last Revised: 11/26/2019

Preapproved Plants

These plants have been preapproved to fabricate overhead steel sign structures for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

| Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|
| **HURFC 15** | **Hurtt Fabricatintg Corporation, 26707 E. Scott Road, Mareline, MO 64658 http://www.hurttfab.com/** | | | |
| | Steel Sign Structure Fabricator | Mareline | MO | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | |
| **L&MFM 15 Facility** | **L&M Fabrication & Machine, Inc., 6814 Chrisphalt Drive, P. O. Box 124, Bath, PA 18014 http://www.lmfab.com/ 6814 Chrisphalt Dr. Bath, PA 18014** | | | |
| | Steel Sign Structure Fabricator | Bath | PA | ----- |
| **LEHUA 15** | **Lehigh Utility Associates, Inc., 1300 New Market Ave., South Plainfield, NJ 07080** | | | |
| | Steel Sign Structure Fabricator | South Plainfield | NJ | ----- |
| **MAICO 15** | **Maico Industries, Inc, 936 Highway 14, Ellsworth, KS 67439 http://www.maicoind.com/** | | | |
| | Steel Sign Structure Fabricator | Ellsworth | KS | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | |
| **MCS-1 15 Facility** | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/ 271 Industrial Lane Alum Bank, PA 15221** | | | |
| | Steel Sign Structure Fabricator | Alum Bank | PA | 2019-131Q |
| **PELET 15** | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | | |
| | Steel Sign Structure Fabricator | Coatesville | PA | 2014-068Q |
| **PENNF 15** | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/** | | | |
| | ***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | | |
| | Steel Sign Structure Fabricator | Bensalem | PA | 2014-212Q |
| **PMWI1 15** | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | | |
| | Steel Sign Structure Fabricator | Carbondale | PA | 2018-218Q |
| **PSFAB 15** | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | | |
| | Steel Sign Structure Fabricator | Bristol | PA | 2016-281 |
| **RCCFI 15** | **RCC Fabricators, Inc., 2035 Route 206 South, Southampton, NJ 18434** | | | |
| | Steel Sign Structure Fabricator | Southampton | NJ | 2015-079Q |

## Section 948: Steel Sign Structure

### 948 Steel Sign Structure

Last Revised: 11/26/2019

Preapproved Plants

These plants have been preapproved to fabricate overhead steel sign structures for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| SAFGD 15 Plant | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/ 220 Lincoln Avenue Pittsburgh, PA 15209** | | | | |
| | Steel Sign Structure Fabricator | | Millvale | PA | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| SOVGN 15 | **Sovereign Steel Manufacturing LLC, 225 Kiwanis Blvd, West Hazleton, PA 18202 http://www.sovereignsteelmfg.com/** | | | | |
| | ***Formerly at 2027 South 12th Street, Bldg. 507, Allentown, PA*** | | | | |
| | Steel Sign Structure Fabricator | | West Hazleton | PA | 2018-184Q |
| | *Formerly located at 2027 South 12th Street, Bldg. 507, Allentown, PA 18103* | | | | |
| SPECF 15 | **Specialty Fab, Inc., 11950 South Avenue, North Lima, OH 44452 http://www.specialtyfab.com/** | | | | |
| | Steel Sign Structure Fabricator | | North Lima | OH | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| STRUS 15 | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | | | |
| | Steel Sign Structure Fabricator | | Elizabethtown | KY | ----- |
| | *Not approved to fabricate structures with T, Y or K pipe-to-pipe connections.* | | | | |
| UMIC1 15 | **Union Metal Industries Corporation, 1432 Maple Avenue NE Canton, Ohio 44705, Canton, OH 44705** | | | | |
| | Steel Sign Structure Fabricator | | Canton | OH | 2018-177Q |
| UNIIS 15 | **Universal Industrial Sales, P.O. Box 699, Plesant Grove, UT 84062 http://www.uisutah.com/uis2011/** | | | | |
| | Steel Sign Structure Fabricator | | Lindon | UT | ------ |
| | *Also approved for induction bending of monopipe.* | | | | |
| VAL-2 15 | **Valmont Specialty Structures/Plymouth, 1545 Pidco Drive, Plymouth, IN 46563 http://www.valmont.com/** | | | | |
| | Steel Sign Structure Fabricator | | Plymouth | IN | ----- |
| WALPR 15 | **Walpar, Inc., 4200 Jefferson Ave., S.W., Birmingham, AL 35228 http://walpar.com/** | | | | |
| | Steel Sign Structure Fabricator | | Birmingham | AL | ----- |

### 948.3(b) Steel Sign Structures, Foundations

Last Revised: 3/29/2015

Approved product alternatives for Section 948.3(b)

## Section 948: Steel Sign Structure

### 948.3(b) Steel Sign Structures, Foundations

Last Revised: 3/29/2015

Approved product alternatives for Section 948.3(b)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SHAIN 15** | **Shaner Industries, LLC, 260 Pullman Square #169, Butler, PA 16001 http://www.shanerindustries.com/** | | |
| | Steel Sign Structure Foundation | | 1995-290 |
| | *The alternate foundation design for cantilever and center mount sign structure poles has been approved under CMS Special Provision S00(ID09103B) and ECMS Special Provision I-C09103-B.* | | |

## Section 960: Hot Thermoplastic Pavement Markings

### 960.2 Hot Thermoplastic Pavement Markings

Last Revised: 7/6/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885625 | HTPM-06 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | 2010-286 |
| | *(Tested on 2005 Pennsylvania NTPEP Test Desk: PMM-2005-PA-023). Lot numbers start with T or G.* | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885626 | HTPM-06 | Yellow | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | 2010-021 |
| | *(Tested on 2005 Pennsylvania NTPEP Test Desk: PMM-2005-PA-024). Lot numbers start with T or G.* | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885636 | HTPM-06 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 Type 1 | Lines and Other Uses | 2012-131 QB |
| | *(Tested on 2008 Pennsylvania NTPEP Test Desk: PMM-2008-PA-068). Lot numbers start with T or G.* | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885637 | HTPM-06 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 Type 1 | Lines and Other Uses | 2012-131 QC |
| | *(Tested on 2008 Pennsylvania NTPEP Test Desk: PMM-2008-PA-069). Lot numbers start with T or G.* | | | | | | | | | |

## Section 960: Hot Thermoplastic Pavement Markings

### 960.2 Hot Thermoplastic Pavement Markings

Last Revised: 7/6/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-2 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 505 County Line Road Thomasville, NC 27630** | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885625 | | White | Lighted and Unlighted Roadways | Asphalt | No | M247 Type 1 | Lines and Other Uses | 2017-312 Q |
| | *Lot numbers start with N. (Tested on 2005 Pennsylvania NTPEP Test Desk: PMM-2005-PA-023)* | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885626 | | Yellow | Lighted and Unlighted Roadways | Asphalt | No | M247 Type 1 | Lines and Other Uses | 2017-313 Q |
| | *Lot numbers start with N. (Tested on 2005 Pennsylvania NTPEP Test Desk: PMM-2005-PA-024)* | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | 885637 | | White | Lighted and Unlighted Roadways | Asphalt | No | M247 Type 1 | Lines and Other Uses | 2017-314 Q |
| | *Lot numbers start with N. (Tested on 2008 Pennsylvania NTPEP Test Desk: PMM-2008-PA-069)* | | | | | | | | | |

## Section 960: Hot Thermoplastic Pavement Markings

### 960.2 Hot Thermoplastic Pavement Markings

Last Revised: 7/6/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-4 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1001 Nebula Road Manchester, GA 31816** ***Formerly Dobco, Business Unit of Sherwin-Williams*** | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | W1X0156 | HTPM-05 | White | Lighted and Unlighted Roadways | Concrete | Yes | | Lines and Other Uses | 2007-204 Q |
| | Hot Thermoplastic Pavement Marking | W1X0156 | HTPM-05 | White | Lighted and Unlighted Roadways | Asphalt | No | | Lines and Other Uses | 2007-204 Q |
| | Hot Thermoplastic Pavement Marking | Y1X0106 | HTPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | | Lines and Other Uses | 2007-205 Q |
| | Hot Thermoplastic Pavement Marking | Y1X0126 | HTPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | | Lines and Other Uses | 2007-203 Q |

## Section 960: Hot Thermoplastic Pavement Markings

### 960.2 Hot Thermoplastic Pavement Markings

Last Revised: 7/6/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **SWAR1 15** | **Swarco Industries LLC, 270 Rutherford Lane, P.O. Box 89, Columbia, TN 38402 https://www.swarco.com/northamerica** | | | | | | | | | |
| | Hot Thermoplastic Pavement Marking | WHAASHTO | HTPM-03 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | ----- |
| | Hot Thermoplastic Pavement Marking | WHAASHTO | HTPM-03 | White | Lighted and Unlighted Roadways | Concrete | No | M247 | Lines Only | ----- |
| | Hot Thermoplastic Pavement Marking | YHAASHTO | HTPM-03 | Yellow | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | ----- |
| | Hot Thermoplastic Pavement Marking | YHAASHTO | HTPM-03 | Yellow | Lighted and Unlighted Roadways | Concrete | No | M247 | Lines Only | ----- |

### 960.2 Hot Thermoplastic Decorative Crosswalks (Conditionally Approved)

Last Revised: 7/2/2019

See Standard Drawing TC-8600 Pavement Markings (Publication 111)

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **TRACA 15** | **Traffic Calming, 110 Thompson Road, Suite 102A, Hiram, GA 30141 http://www.trafficcalmingusa.com/services.html** | | | |
| | Alternate System - Hot Applied Synthetic Asphalt | Brinkprint 45 Decorative Crosswalks | | 2010-179 |
| | *For decorative crosswalks only. Marking Surface: Asphalt only. Conditionally Approved as an alternate.* | | | |

## Section 961: Cold Plastic Pavement Markings or Legends

### 961.2 Cold Plastic Pavement Markings or Legends

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **3M-01 15** | **3M Company, 3M Traffic Control Materials Lab, 3M Center Building 235-3B-55, St. Paul, MN 55144 http://www.3m.com/3M/en_US/company-us/** | | | | | | | | | |
| | Cold Plastic Pavement Marking or Legend | 380-1 | CPPM-11 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | Ceramic | Lines and Other Uses | ----- |
| | Cold Plastic Pavement Marking or Legend | 381-1 | CPPM-11 | Yellow | Lighted and Unlighted Roadways | Asphalt | Yes | Ceramic | Lines and Other Uses | ----- |
| | Cold Plastic Pavement Marking or Legend | 381-1 | CPPM-11 | Yellow | Lighted and Unlighted Roadways | Concrete | Yes | Ceramic | Lines Only | ----- |
| | Cold Plastic Pavement Marking or Legend | A380 | CPPM-11 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Lines and Other Uses | ----- |
| | Cold Plastic Pavement Marking or Legend | A381 | CPPM-11 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Lines and Other Uses | ----- |
| **BRITE 15** | **Brite-Line Technologies LLC, 10660 E. 51st Ave., Denver, CO 80239 http://brite-line.com/** | | | | | | | | | |
| | Cold Plastic Pavement Marking or Legend | Series 1000 | CPPM-10 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | Yes | Lines and Other Uses | 2009-077 Q |

## Section 961: Cold Plastic Pavement Markings or Legends

### 961.2 Cold Plastic Pavement Markings or Legends

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **SWAR1 15** | **Swarco Industries LLC, 270 Rutherford Lane, P.O. Box 89, Columbia, TN 38402 https://www.swarco.com/northamerica** | | | | | | | | | |
| | Cold Plastic Pavement Marking or Legend<br>*Restricted Use: surface applied on existing pavements only.* | Director 60 | CPPM-06 | White | Lighted Roadways Only | Asphalt | Yes | SP | Lines and Other Uses | ----- |
| | Cold Plastic Pavement Marking or Legend<br>*Restricted Use: surface applied on existing pavements only.* | Director 60 | CPPM-06 | White | Lighted and Unlighted Roadways | Concrete | Yes | SP | Lines and Other Uses | ----- |
| | Cold Plastic Pavement Marking or Legend<br>*Restricted Use: surface applied on existing pavements only.* | Director 60 | CPPM-06 | White | Lighted Roadways Only | Asphalt and Concrete | Yes | SP | Lines and Other Uses | ----- |

## Section 962: Waterborne Pavement Markings

### 962.2 Waterborne Pavement Markings

Last Revised: 10/7/2020

| | Product | Name | COA | Marking Color | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | |
| | Waterborne Pavement Marking | 991022 | WP-01 | White | | 2007-074Q |
| | Waterborne Pavement Marking | 991028 | WP-01 | Yellow | | 2007-070Q |
| | Waterborne Pavement Marking | 991152 | WP-01 | White | | 2011-237Q |
| | Waterborne Pavement Marking | 991158 | WP-01 | Yellow | | 2011-231Q |
| **ENN-3 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 4400 Vawter Avenue Richmond, VA 23222** | | | | | |
| | Waterborne Pavement Marking | 983801 (EF Series WB18NTPWBW6) | | White | PMM-2018-01-110 | 2020-090Q |
| | Waterborne Pavement Marking | 983802 (EF Series WB18NTPWBY6) | | Yellow | PMM-2018-01-111 | 2020-091Q |
| | Waterborne Pavement Marking | 991022 | WP-01 | White | | 2007-074Q |
| | Waterborne Pavement Marking | 991028 | WP-01 | Yellow | | 2007-070Q |
| | Waterborne Pavement Marking | 991152 | WP-01 | White | | 2011-237Q |
| | Waterborne Pavement Marking | 991158 | WP-01 | Yellow | | 2011-231Q |
| **ENN-5 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 129 Cleveland Drive Paris, KY 40361** | | | | | |
| | Waterborne Pavement Marking | 991022 | | White | | 2018-119Q |
| | Waterborne Pavement Marking | 991028 | | Yellow | | 2018-120Q |
| **FRAPC 15** | **Franklin Paint Company, 259 Cottage Street, Franklin, MA 02038** | | | | | |
| | Waterborne Pavement Marking<br>*Use on concrete pavement only.* | 2014 | WP-03 | White | | 2012-197QA |
| | Waterborne Pavement Marking<br>*Use on concrete pavement only.* | 2015 | WP-03 | Yellow | | 2012-197QB |

## Section 962: Waterborne Pavement Markings

### 962.2 Waterborne Pavement Markings

Last Revised: 10/7/2020

| | Product | Name | COA | Marking Color | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|---|
| **OZARK 15** | **Ozark Materials, LLC, 591 Glendale Avenue, Greenville, AL 36037 http://ozarkmaterials.net** | | | | | |
| | Waterborne Pavement Marking | Yellow PA Type I | | Yellow | | 2020-089Q |
| | *Provisionally Approved. Upon successful completion of chemistry verification testing, the provisional status will be removed.* | | | | | |
| **SHER2 15 Plant** | **The Sherwin-Williams Company, Protective & Marine Coatings, 101 West Prospect Avenue, Cleveland, OH 44115 https://protective.sherwin-williams.com/ 2325 Hollins Ferry Road Baltimore, MD 21230** | | | | | |
| | Waterborne Pavement Marking | 058-004 (TM2382) | WP-02 | White | | 2007-014Q |
| | Waterborne Pavement Marking | 058-006 (TM2383) | WP-02 | Yellow | | 2007-016Q |
| | Waterborne Pavement Marking | 2008138105 | WP-02 | White | | 2011-245Q |

## Section 964: Epoxy Pavement Markings

### 964.2 Epoxy Pavement Markings

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ACCST 15** | **Accent Stripe, 3275 Benzing Road, Orchard Park, NY 14127 http://www.accentstripe.com/** | | | | | | | | | |
| | Epoxy Pavement Marking | ACNT-W-A | EPM-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Lines Only | ----- |
| | Epoxy Pavement Marking | ACNT-W-S | EPM-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Lines Only | ----- |
| | Epoxy Pavement Marking | ACNT-W-T | EPM-01 | White | Lighted and Unlighted Roadways | Asphalt | | | Lines Only | ----- |
| | Epoxy Pavement Marking | ACNT-Y-S | EPM-01 | Yellow | Lighted and Unlighted Roadways | Concrete | | | Lines Only | ----- |
| **BALTP 15** | **Baltimore Paint & Chemical, Division of Sherwin Williams, 2325 Hollins Ferry Road, Baltimore, MD 21230** | | | | | | | | | |
| | Epoxy Pavement Marking | TM8206 (TM8212) | PM-5-5 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | ----- |
| | Epoxy Pavement Marking | TM8209 (TM8215) | PM-5-5 | Yellow | Lighted and Unlighted Roadways | Asphalt | No | M247 | Lines and Other Uses | ----- |
| | Epoxy Pavement Marking | TM8209 (TM8215) | PM-5-5 | Yellow | Lighted and Unlighted Roadways | Concrete | No | M247 | Lines Only | ----- |

## Section 964: Epoxy Pavement Markings

### 964.2 Epoxy Pavement Markings

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-3 | EPM-05 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2008-154QA |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-3 | EPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2008-154QB |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-4 | EPM-05 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2010-019QA |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-4 | EPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2010-019QB |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |

## Section 964: Epoxy Pavement Markings

### 964.2 Epoxy Pavement Markings

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-3 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 4400 Vawter Avenue Richmond, VA 23222** | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-3 | EPM-05 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | ----- |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-3 | EPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | ----- |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-4 | EPM-05 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | ----- |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | HPS-4 | EPM-05 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | ----- |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |

## Section 964: Epoxy Pavement Markings

### 964.2 Epoxy Pavement Markings

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **EPOPX 15** | **Epoplex, 1000 East Park Avenue, Maple Shade, NJ 08052 http://www.epoplex.com/** | | | | | | | | | |
| | Epoxy Pavement Marking | LS50 | EPM-03 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2007-003QA |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | LS50 | EPM-03 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2007-003QB |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* | | | | | | | | | |
| | Epoxy Pavement Marking | LS50 | EPM-03 | Black Line Mask | Lighted and Unlighted Roadways | Concrete | No | No | Lines Only | 2011-017Q |
| | *Provisionally Approved* | | | | | | | | | |
| | Epoxy Pavement Marking | LS65 | EPM-03 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2010-330Q |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* *Provisionally Approved* | | | | | | | | | |
| | Epoxy Pavement Marking | LS65 | EPM-03 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Vary | Lines and Other Uses | 2010-331Q |
| | *Beads vary by type and rate of application. Refer to Certificate of Approval.* *Provisionally Approved* | | | | | | | | | |

## Section 964: Epoxy Pavement Markings

### 964.2 Epoxy Pavement Markings

Last Revised: 1/29/2018

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **POLYC 15 Plant** | **Olin Epoxy-POLY-CARB, 8440 Tower Dr., Twinsburg, OH 44087 http://www.poly-carb.com/ 125 Industrial Park Rd. Roberta, GA 31078** ***Formerly POLY-CARB, Inc.*** | | | | | | | | | |
| | Epoxy Pavement Marking | Mark-55.3 | EPM-04 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | M237 Type 1 | Lines and Other Uses | ----- |
| | Epoxy Pavement Marking | Mark-55.3 | EPM-04 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | M237 Type 4 | Lines and Other Uses | ----- |
| | Epoxy Pavement Marking | Mark-55.3 | EPM-04 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | M237 Type 1 | Lines Only | ----- |
| | Epoxy Pavement Marking | Mark-55.3 | EPM-04 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | M237 Type 4 | Lines Only | ----- |
| **SWAR3 15** | **Colorado Paint Company, the SWARCO Group, 4747 Holly Street, Denver, CO 80216 https://www.swarco.com/cpc** | | | | | | | | | |
| | Epoxy Pavement Marking | 1180 | | White | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Type E (Megalux Utah Blend) at 24lbs/gal. | Lines and Other Uses | 2017-035Q |
| | Epoxy Pavement Marking | 1186 | | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | No | Type E (Megalux Utah Blend) at 24 lbs/gal. | Lines and Other Uses | 2017-036Q |

## Section 965: Preformed Thermoplastic Pavement Markings

### 965.2 Preformed Thermoplastic Pavement Markings

Last Revised: 7/9/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color (Thermoplastic) | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **FLINT 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 115 Todd Court Thomasville, NC 27360** | | | | | | | | | |
| | Preformed Thermoplastic Pavement Marking *Formerly listed as 9WPASTR96.* | HotTape (HT) | PTPM-02 | White | Lighted Roadways Only | Asphalt | No | PT260 | Lines and Other Uses | ----- |
| | Preformed Thermoplastic Pavement Marking *Formerly listed as 9WPASTR96.* | HotTape (HT) | PTPM-02 | White | Lighted and Unlighted Roadways | Concrete | No | PT260 | Lines and Other Uses | ----- |
| | Preformed Thermoplastic Pavement Marking *Formerly listed as 9WPASTR96.* | HotTape (HT) | PTPM-02 | Yellow | Lighted Roadways Only | Asphalt | No | PT260 | Lines and Other Uses | ----- |
| | Preformed Thermoplastic Pavement Marking *Formerly listed as 9WPASTR96.* | HotTape (HT) | PTPM-02 | Yellow | Lighted and Unlighted Roadways | Concrete | No | PT260 | Lines Only | ----- |
| | Preformed Thermoplastic Pavement Marking | PreMark (PM) | PTPM-02 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Lines and Other Uses | ----- |

## Section 965: Preformed Thermoplastic Pavement Markings

### 965.2 Preformed Thermoplastic Pavement Markings

Last Revised: 7/9/2020

Lines are defined as Center, Lane, and Edge Lines.

Other Uses are defined as Crosswalks, Stop Lines, Legends, and Crosshatching.

| | Product | Name | COA | Marking Color (Thermoplastic) | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **OZARK 15** | **Ozark Materials, LLC, 591 Glendale Avenue, Greenville, AL 36037 http://ozarkmaterials.net** | | | | | | | | | |
| | Preformed Thermoplastic Pavement Marking | Preformed Thermoplastic | | White | Lighted and Unlighted Roadways | Asphalt and *Concrete | No | | *Lines and **Other Uses | 2018-075Q |

** For use as a Line on concrete surfaces, the preformed thermoplastic must be preheated before placing on concrete surface.*
*** The preformed thermoplastic is NOT approved for Other Uses on concrete surfaces.*
*The product is approved for both Lines and Other Uses on asphalt surfaces.*

### 965.2 Preformed Thermoplastic Decorative Crosswalks (Conditionally Approved)

Last Revised: 9/18/2019

Per MUTCD, no glass beads are allowed for decorative crosswalks.

| | Product | Name | COA | Marking Color (Thermoplastic) | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **FLINT 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 115 Todd Court Thomasville, NC 27360** | | | | | | | | | |
| | Imprinted Aggregate Reinforced Decorative Crosswalk | TrafficPatternsXD | | Non-Reflective White, Black, Brown, Silver-Gray, Maroon, or Tan | N/A | Asphalt | Yes, two-part epoxy sealer | N/A | Crosswalk Only, Offset Brick & Diagonal Herringbone Patterns | 2016-248Q |
| | *Conditionally approved per manufacturer's specifications (150 mil thickness, brick-looking stamped material). The stamping templates and StreetPrint/StreetHeat reciprocating infrared heating equipment is supplied by Ennis-Flint. **TrafficPatterns XD Manufacturer's Specification*** | | | | | | | | | |
| | Interconnected Surface Applied Decorative Crosswalk | TrafficPatterns | PTPM-02 | Non-Reflective White, Black, Brown, Silver-Gray, Maroon, or Tan | N/A | Asphalt and Concrete | | N/A | Decorative Crosswalk | ----- |

## Section 965: Preformed Thermoplastic Pavement Markings

### 965.2 Preformed Thermoplastic Decorative Crosswalks (Conditionally Approved)

Last Revised: 9/18/2019

Per MUTCD, no glass beads are allowed for decorative crosswalks.

| | Product | Name | COA | Marking Color (Thermoplastic) | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **FLINT 15** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/** | | | | | | | | | |
| **Plant** | **115 Todd Court Thomasville, NC 27360** | | | | | | | | | |
| | *Conditionally approved per manufacturer's specifications (125 mil thickness).* | | | | | | | | | |

## Section 966: Snowplowable Raised Pavement Markers

### 966.2 Snowplowable Raised Pavement Marker (RPM) Castings

Last Revised: 3/6/2017

| | Product | Name | COA | Direction | Ref. No. |
|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | |
| | RPM Casting | 101 LP | | One Way / Two Way | ----- |
| | RPM Casting | 101 LPS, Bridge Deck Only | | One Way / Two Way | ----- |
| **ENN-2 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 505 County Line Road Thomasville, NC 27630** | | | | |
| | RPM Casting | 101 LP | | One Way / Two Way | ----- |
| | RPM Casting | 101 LPS, Bridge Deck Only | | One Way / Two Way | ----- |
| **RAYOL 15 Plant** | **Rayolite, 4500 N. Sam Houston Parkway West, Suite 120, Houston, TX 77086 http://www.rayolite.com/ 4500 N. Sam Houston Parkway West Suite 120 Houston, TX 77086** | | | | |
| | RPM Casting | H-1010 Low Profile (Narrow) | RPM-C2 | One Way / Two Way | ----- |
| | RPM Casting | H-960 Low Profile | RPM-C2 | One Way / Two Way | ----- |

### 966.2 Snowplowable Raised Pavement Marker (RPM) Reflector Units

Last Revised: 1/25/2018

| | Product | Name | COA | Reflector Unit Color | Direction | Recessed? | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-03 15 Plant** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | | |
| | RPM Reflector Unit | 190 | RPM-04 | White / Blank | One Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | Yellow / Blank | One Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | White / Blank | Two Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | Yellow / Blank | Two Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | Red / White | Two Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | Red / Yellow | Two Way | No | ----- |
| | RPM Reflector Unit | 190 | RPM-04 | Yellow / Yellow | Two Way | No | ----- |
| | RPM Reflector Unit | 194 | RPM-04 | White / Blank | One Way | No | ----- |

## Section 966: Snowplowable Raised Pavement Markers

### 966.2 Snowplowable Raised Pavement Marker (RPM) Reflector Units

Last Revised: 1/25/2018

| | Product | Name | COA | Reflector Unit Color | Direction | Recessed? | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-03 15 Plant** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | | |
| | RPM Reflector Unit | 194 | RPM-04 | Yellow / Blank | One Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | White / Blank | One Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | Yellow / Blank | One Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | White / Blank | Two Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | Yellow / Blank | Two Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | Red / White | Two Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | Red / Yellow | Two Way | No | ----- |
| | RPM Reflector Unit | 198 | RPM-04 | Yellow / Yellow | Two Way | No | ----- |
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | |
| | RPM Reflector Unit | C40 | RPM-01 | Yellow / Yellow | Two Way | No | 2006-049Q |
| | RPM Reflector Unit | C40 | RPM-01 | Yellow / Blank | One Way | No | 2006-050Q |
| | RPM Reflector Unit | C40 | RPM-01 | White / Blank | One Way | No | 2006-051Q |
| | RPM Reflector Unit | C40 | RPM-01 | Red / White | Two Way | No | 2010-164QA |
| | RPM Reflector Unit | C40 | RPM-01 | Red / Yellow | Two Way | No | 2010-164QB |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | White / Blank | One Way | No | 2013-019A |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Yellow / Yellow | Two Way | No | 2013-019B |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Yellow / Blank | One Way | No | 2013-019C |

## Section 966: Snowplowable Raised Pavement Markers

### 966.2 Snowplowable Raised Pavement Marker (RPM) Reflector Units

Last Revised: 1/25/2018

| | Product | Name | COA | Reflector Unit Color | Direction | Recessed? | Ref. No. |
|---|---|---|---|---|---|---|---|
| **ENN-2 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 505 County Line Road Thomasville, NC 27630** | | | | | | |
| | RPM Reflector Unit | C40 | RPM-01 | Yellow / Blank | One Way | No | ----- |
| | RPM Reflector Unit | C40 | RPM-01 | White / Blank | One Way | No | ----- |
| | RPM Reflector Unit | C40 | RPM-01 | Yellow / Yellow | Two Way | No | ----- |
| | RPM Reflector Unit | C40 | RPM-01 | Red / Yellow | Two Way | No | ----- |
| | RPM Reflector Unit | C40 | RPM-01 | Red / White | Two Way | No | ----- |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | White / Blank | One Way | No | 2013-019A |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Yellow / Yellow | Two Way | No | 2013-019B |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Yellow / Blank | One Way | No | 2013-019C |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Red / White | Two Way | No | 2014-249QA |
| | RPM Reflector Unit | C80 Nonsnowplowable | RPM-01 | Red / Yellow | Two Way | No | 2014-249QB |

## Section 966: Snowplowable Raised Pavement Markers

### 966.2 Snowplowable Raised Pavement Marker (RPM) Reflector Units

Last Revised: 1/25/2018

| | Product | Name | COA | Reflector Unit Color | Direction | Recessed? | Ref. No. |
|---|---|---|---|---|---|---|---|
| **PEXCO 15** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic** | | | | | | |
| **Facility** | **3110 70th Avenue East Tacoma, WA 98424** | | | | | | |
| | RPM Reflector Unit | Halftrack Nonsnowplowable | RPM-02 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | Halftrack Nonsnowplowable | RPM-02 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | Halftrack Nonsnowplowable | RPM-02 | Yellow / Yellow | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | RPM Nonsnowplowable | RPM-02 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | RPM Nonsnowplowable | RPM-02 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | RPM Nonsnowplowable | RPM-02 | Yellow / Yellow | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TOM Nonsnowplowable | RPM-02 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TOM Nonsnowplowable | RPM-02 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TOM Nonsnowplowable | RPM-02 | Yellow / Yellow | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TRPM Nonsnowplowable | RPM-02 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TRPM Nonsnowplowable | RPM-02 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TRPM Nonsnowplowable | RPM-02 | Yellow / Yellow | One Way / Two Way | No | ----- |

## Section 966: Snowplowable Raised Pavement Markers

### 966.2 Snowplowable Raised Pavement Marker (RPM) Reflector Units

Last Revised: 1/25/2018

| | Product | Name | COA | Reflector Unit Color | Direction | Recessed? | Ref. No. |
|---|---|---|---|---|---|---|---|
| **RAYOL 15** | **Rayolite, 4500 N. Sam Houston Parkway West, Suite 120, Houston, TX 77086 http://www.rayolite.com/** | | | | | | |
| **Plant** | **4500 N. Sam Houston Parkway West Suite 120 Houston, TX 77086** | | | | | | |
| | RPM Reflector Unit | 2002 B | RPM-05 | White / White | One Way | Yes | ----- |
| | RPM Reflector Unit | 2002 C | RPM-05 | Red / White | Two Way | Yes | ----- |
| | RPM Reflector Unit | 2002 D | RPM-05 | Yellow / Yellow | One Way | Yes | ----- |
| | RPM Reflector Unit | 2002 G | RPM-05 | White / Blank | One Way | Yes | ----- |
| | RPM Reflector Unit | 2002 H | RPM-05 | Yellow / Blank | One Way | Yes | ----- |
| | RPM Reflector Unit<br>*Provisionally Approved* | 2004 | RPM-05 | White / Blank | One Way | Yes | 2011-078QA |
| | RPM Reflector Unit<br>*Provisionally Approved* | 2004 | RPM-05 | Red / White | Two Way | Yes | 2011-078QB |
| | RPM Reflector Unit<br>*Provisionally Approved* | 2004 | RPM-05 | Yellow / Blank | One Way | Yes | 2011-078QC |
| | RPM Reflector Unit<br>*Provisionally Approved* | 2004 | RPM-05 | Red / Yellow | Two Way | Yes | 2011-078QD |
| | RPM Reflector Unit<br>*Provisionally Approved* | 2004 | RPM-05 | Yellow / Yellow | Two Way | Yes | 2011-078QE |
| **VEGA- 15** | **Vega Molded Products, Inc., 122 Industrial Drive, Gilberts, IL 60136 http://vegamoldedproducts.com/** | | | | | | |
| | RPM Reflector Unit | CM Nonsnowplowable | RPM-03 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | CM Nonsnowplowable | RPM-03 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | CM Nonsnowplowable | RPM-03 | Yellow / Yellow | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TPM Nonsnowplowable | RPM-03 | White / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TPM Nonsnowplowable | RPM-03 | Yellow / Blank | One Way / Two Way | No | ----- |
| | RPM Reflector Unit | TPM Nonsnowplowable | RPM-03 | Yellow / Yellow | One Way / Two Way | No | ----- |

## Section 1001: Cement Concrete Structures

### 1001.2(h)2 Metal Bridge Deck Forms

Last Revised: 7/9/2015

Steel Products Procurement Act applies.

ASTM A924/A924M and ASTM A653/A653M. Standard Drawing BC-732M (Publication 219M)

| | Product | Name | Grade | Ref. No. |
|---|---|---|---|---|
| **BRIDS 15** | **Bridge Deck Solutions, LLC, 298 Cherry Hill Drive, Latrobe, PA 15650 http://bridgedecksolutions.com/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 2 | 2010-207Q |
| **D-MAC 15** | **D-Mac Industries Inc., 1880 D-mac Drive, Alpharetta, GA 30004 http://www.d-macindustries.com/index.html** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 1989-265 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 1 | 2013-035QAB |
| | Metal Bridge Deck Form | | Structural Steel (SS) 80 | 2013-035QAB |
| **EPIC- 15** | **Epic Metals Corporation, 11 Talbot Ave., Rankin, PA 15104 http://www.epicmetals.com/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 1992-243 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 1 | 1992-243 |
| **FOST0 15** | **L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | ----- |
| | Metal Bridge Deck Form | Classes 1 and 3 only | Structural Steel (SS) 80 | 2014-204QB |
| **FOST2 15** | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 2014-204QA |
| | Metal Bridge Deck Form | Classes 1 and 3 only | Structural Steel (SS) 80 | 2014-204QB |
| **HALFE 15** | **Halferty Metals Company, 294 Bergman Road, Derry, PA 15627** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 2012-212QAB |
| | Metal Bridge Deck Form | | Structural Steel (SS) 80 | 2012-212QAB |

## Section 1001: Cement Concrete Structures

### 1001.2(h)2 Metal Bridge Deck Forms

Last Revised: 7/9/2015

Steel Products Procurement Act applies.

ASTM A924/A924M and ASTM A653/A653M. Standard Drawing BC-732M (Publication 219M)

| | Product | Name | Grade | Ref. No. |
|---|---|---|---|---|
| **NMBS1 15** | **New Millennium Building Systems, 4900 Hungerford Rd., Memphis, TN 38118 https://www.newmill.com/** | | | |
| | ***(Formerly Consolidated Systems, Inc. - CONS2 15)*** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 33 | 1989-125 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 37 | 1989-125 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 1989-125 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 1 | 1989-125 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 80 | 1989-125 |
| **SIPDE 15** | **SIP Inc. of Delaware, 2204 Chestnut Street, P.O. Box 4347, Gadsden, AL 35904 http://wmsi.com/subsidiaries/sip/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 33 | 2012-152Q |
| | Metal Bridge Deck Form | | Structural Steel (SS) 37 | 2012-152Q |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 2012-152Q |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 1 | 2012-152Q |
| | Metal Bridge Deck Form | | Structural Steel (SS) 80 | 2012-152Q |
| **UNSDK 15** | **United Steel Deck, 14 Harmish Road, South Plainfield, NJ 07080 http://www.unitedsteel.com/** | | | |
| | Metal Bridge Deck Form | | Structural Steel (SS) 40 | 1985-024 |
| | Metal Bridge Deck Form | | Structural Steel (SS) 50, Class 1 | 1995-076 |

## Section 1002: Reinforcement Bars

### 1002.2(c) Mechanical Splice System

Last Revised: 8/27/2020

NOTE: Assemble mechanical splices per manufacturer's recommended procedure.

Assemble three splices for each size reinforcing bar plus an unassembled set of each size used. Submit to the LTS for testing to verify the procedure.

| | Product | Name | Bar Sizes | Ref. No. |
|---|---|---|---|---|
| **BARSP 15** | **Barsplice Products, Inc., 4900 Webster Street, Dayton, OH 45430 http://www.barsplice.com/** | | | |
| | Mechanical Splice System | BPI Barsplicer System | # 4, 5, 6, 7, 8, 9, 10, 11 | 2000-204Q |
| | Mechanical Splice System | BPI-Grip "BarGrip" System | 4 - 18 | 1996-198 |
| | Mechanical Splice System | Taper Threaded Grip-Twist | # 4, 5, 6, 7, 8, 9, 10, 11, 14, 18 | 2006-042Q |
| | Mechanical Splice System | ZAP Screwlok Type 2 Series | # 4, 5, 6, 7, 8, 9, 10, 11 | 1996-255 |
| | Mechanical Splice System | ZAP Screwlok Type 2 Series | # 18 | 2014-269Q |
| | Mechanical Splice System | ZAP Screwlok Type 2 Series | # 14 | 2016-116Q |
| **DAYT0 15** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342-5765 http://www.daytonsuperior.com/** | | | |
| | Mechanical Splice System | D250L Bar Lock L-Series Coupler | #3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 18 | 1992-351 |
| | *UES Evaluation Report:* ***Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | DB/DI Splice Connector (D101A, D101) | 4 - 18 | 1989-288 |
| | *UES Evaluation Report:* ***Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | US/MC-SAE Rebar Splice (D110, D111, D112) | 4 - 18 | 1994-219 |
| **DAYT2 15 Plant** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342 http://www.daytonsuperior.com/ Bellingham, WA** | | | |
| | Mechanical Splice System | D250L Bar Lock L-Series Coupler | # 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 | 1992-351 |
| | *UES Evaluation Report:* ***Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | DB/DI Splice Connector (D101A, D101) | 4 - 18 | 1989-288 |
| | *UES Evaluation Report:* ***Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | US/MC-SAE Rebar Splice (D110, D111, D112) | 4 - 18 | 1994-219 |

## Section 1002: Reinforcement Bars

### 1002.2(c) Mechanical Splice System

Last Revised: 8/27/2020

NOTE: Assemble mechanical splices per manufacturer's recommended procedure.

Assemble three splices for each size reinforcing bar plus an unassembled set of each size used. Submit to the LTS for testing to verify the procedure.

| | Product | Name | Bar Sizes | Ref. No. |
|---|---|---|---|---|
| **DAYT3 15 Plant** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342 http://www.daytonsuperior.com/ Tremont, PA 17981** | | | |
| | Mechanical Splice System | D250L Bar Lock L-Series Coupler | # 3, 4, 5, 6, 7, 8, 9, 10, 11, 14 | 1992-351 |
| | *UES Evaluation Report: **Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | DB/DI Splice Connector (D101A, D101) | 4 - 18 | 1989-288 |
| | *UES Evaluation Report: **Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| | Mechanical Splice System | US/MC-SAE Rebar Splice (D110, D111, D112) | 4 - 18 | 1994-219 |
| **DAYT6 15 Plant** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342-5765 http://www.daytonsuperior.com/ Allentown, PA** | | | |
| | Mechanical Splice System | D310 Taper-Lock Standard Coupler | # 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 18 | 2018-018Q |
| | *UES Evaluation Report: **Bar-Lock & DB/DI IAPMO-UES Evaluation Report Number: 319 (Valid through 04/30/2021)*** | | | |
| **ERIC- 15** | **nVent, 34600 Solon Road, Solon, OH 44139 https://www.erico.com/lenton.asp** ***Formerly Erico, Inc*** | | | |
| | Mechanical Splice System | nVent Lenton Form Saver (SA) Coupler | 4 - 11 | 2013-078Q |
| | *IAPMO-UES Evaluation Report: **nVent Lenton IAPMO-UES Evaluation Report Number: 0129 (Valid through 02/28/2021)*** | | | |
| | Mechanical Splice System | nVent Lenton Standard (A2) Coupler | # 4, 5, 6, 7, 8, 9, 10, 11, 14, 18 | 1996-118 |
| | *IAPMO-UES Evaluation Report: **nVent Lenton IAPMO-UES Evaluation Report Number: 0129 (Valid through 02/28/2021)*** | | | |
| **MDSP2 15** | **Meadow Burke Products, 6467 S. Falkenburg Road, Riverview, FL 33578 http://meadowburke.com/** | | | |
| | Mechanical Splice System | Standard-Lok Coupler Mech. Splice System | 4 - 18 | 2006-009Q |
| | *RC-53 Smooth and RC-54 Smooth Flanged* | | | |
| | *Per letter dated September 19, 2014: Meadow Burke has elected to suspend shipments to PennDOT temporarily.* | | | |

## Section 1002: Reinforcement Bars

### 1002.2(c) Mechanical Splice System

**Last Revised: 8/27/2020**

NOTE: Assemble mechanical splices per manufacturer's recommended procedure.

Assemble three splices for each size reinforcing bar plus an unassembled set of each size used. Submit to the LTS for testing to verify the procedure.

| | Product | Name | Bar Sizes | Ref. No. |
|---|---|---|---|---|
| **SSNA- 15 Plant** | **Splice Sleeve North America, 38777 West Six Mile Rd, Suite 205, Livonia, MI 48152 http://www.splicesleeve.com/ Easton, PA** | | | |
| | Mechanical Splice System | NMB Splice Sleeve with SS Mortar (Grout) | 5 - 18 | 1995-102 |

### 1002.2(c) Epoxy Coaters of Mechanical Splice Couplers

**Last Revised: 7/5/2016**

Epoxy coaters may only use approved epoxy powders and patching materials from manufacturers listed in Section 709.1(c). Properly equipped epoxy coaters listed in Section 709.1(c) may also coat mechanical splice couplers and systems in section 1002.2(c).

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MCOAT 15** | **Miamisburg Coating, 925 N. Main St., Miamisburg, OH 45342** | | |
| | Approved Epoxy Coater of Mechanical Splice Couplers | | 2013-242Q |
| **SIMCT 15** | **Simcote, Inc., Ohio Division, 250 North Greenwood, Marion, OH 43302 http://simcote.com/** | | |
| | Approved Epoxy Coater of Mechanical Splice Couplers | | 1985-022 |
| **UCOAT 15** | **Universal Coatings, 8511 Tower Drive, Twinsburg, OH 44087 http://universal-coatings.net/** | | |
| | Approved Epoxy Coater of Mechanical Splice Couplers<br>*Electrostatic and Fluid Dip* | | 2014-240Q |

### 1002.3(d)2 Reinforcement Bar Support Systems

**Last Revised: 7/12/2019**

CRSI, Concrete Reinforcing Steel Institute, Manual of Standard Practice, Chapter 3 - Bar Supports

BC - Individual Bar Chair; BB - Beam Bolster; BBU - Beam Bolster Upper; CHC - Continuous High Chair; CHCU - Continuous High Chair Upper; HC - Individual High Chair; HCM - High Chairs for Metal Decking; JC - Joist Chair; SB - Slab Bolster; SBU - Slab Bolster Upper

| Product | Name | Size | Ref. No. |
|---|---|---|---|

## Section 1002: Reinforcement Bars

### 1002.3(d)2 Reinforcement Bar Support Systems

Last Revised: 7/12/2019

CRSI, Concrete Reinforcing Steel Institute, Manual of Standard Practice, Chapter 3 - Bar Supports

BC - Individual Bar Chair; BB - Beam Bolster; BBU - Beam Bolster Upper; CHC - Continuous High Chair; CHCU - Continuous High Chair Upper; HC - Individual High Chair; HCM - High Chairs for Metal Decking; JC - Joist Chair; SB - Slab Bolster; SBU - Slab Bolster Upper

| | Product | Name | Size | Ref. No. |
|---|---|---|---|---|
| **AZTEC 15** | **Aztec Concrete Accessories, Inc., 14760 Santa Ana Ave., Fontana, CA 92337** | | | |
| | Rebar Support Bolster | Aztec E Z Lok Slab Bolster | 2"and 2-1/2", Molded Plastic | 1997-063 |
| | Rebar Support Chair | Aztec E Z Chair | 2", 2-1/2", 3", 4" and 5" Molded Plastic | 1997-064 |
| **BIPCO 15** | **Bip Company, LLC, 901 Ne Gilsan Street, Portland, OR 97232 http://bipclipcompany.com/** | | | |
| | Rebar Support Chair | BIP Chair (Black Resin) with Sandplate Base | #4 and #5 Rebar with 2" Cover | 2013-007QA |
| | Rebar Support Chair | BIP Chair (Black Resin) with Sandplate Base | #6 Rebar with 2.5" Cover | 2013-007QA |
| | Rebar Support Chair | BIP Chair (Black Resin) with Sandplate Base | #4 and #5 Rebar with 1.5", 2.5" and 3" Cover | 2013-160Q |
| | Rebar Support Chair | BIP Chair (Black Resin) with Sandplate Base | #6 Rebar with 1.5", 3" and 4" Cover | 2013-160Q |
| **DAYT0 15** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342-5765 http://www.daytonsuperior.com/** | | | |
| | Metal Reinforcing Bar Supports | Epoxy Coated Chairs, Bolsters | Epoxy Coated | 1985-013 |
| | Metal Reinforcing Bar Supports | Galvanized Chairs, Bolsters, including SBU | Galvanized | 1987-374B |
| | Rebar Support Chair | Galvanized HCM with Plastic Tips | | 1987-374A |

## Section 1002: Reinforcement Bars

### 1002.3(d)2 Reinforcement Bar Support Systems

Last Revised: 7/12/2019

CRSI, Concrete Reinforcing Steel Institute, Manual of Standard Practice, Chapter 3 - Bar Supports

BC - Individual Bar Chair; BB - Beam Bolster; BBU - Beam Bolster Upper; CHC - Continuous High Chair; CHCU - Continuous High Chair Upper; HC - Individual High Chair; HCM - High Chairs for Metal Decking; JC - Joist Chair; SB - Slab Bolster; SBU - Slab Bolster Upper

| | Product | Name | Size | Ref. No. |
|---|---|---|---|---|
| **GENTC 15** | **General Technologies, Inc., 13022 Trinity Drive, P.O. Box 1503, Stafford, TX 77477 http://www.gti-usa.net/** | | | |
| | Rebar Support Bolster | GTI Composite Slab and Beam Bolster - Black, Series 209 | 1", 2", 3", 4" | 2009-039QB |
| | Rebar Support Bolster | GTI Composite Slab and Beam Bolster - Grey, Series 215 | 1", 2", 3", 4" | 2009-039QB |
| | Rebar Support Bolster<br>*Top layer double mat support.* | GTI Composite Slab Bolster Upper, Series 260 | | 2009-140 |
| | Rebar Support Chair | GTI Composite Bar Chair, Series 210 | 1”, 2”, 3”, 4”, 5”, 6” | 2009-039QE |
| | Rebar Support Chair | GTI Composite High Chair, Series 208 | 7”, 8”, 9”, 10” | 2009-039QD |
| | Rebar Support Chair | GTI Composite PC Chair, Series 216 | 1”, 2”, 3”, 4” 5”, 6”, 7” | 2009-039QF |
| | Rebar Support Chair | GTI Extended High Chair, Series 211 | 11”, 12”, 13”, 14”, 15”, 16”, 17” | 2009-039QC |
| **HHHUL 15** | **H & H Hulls, Inc., 35 Industrial Tract, Hudson, NY 12534** | | | |
| | Rebar Support Chair<br>*For use in box beam tops only.* | Q3 Void Chair | 1" | 2003-186Q |

## Section 1002: Reinforcement Bars

### 1002.3(d)2 Reinforcement Bar Support Systems

Last Revised: 7/12/2019

CRSI, Concrete Reinforcing Steel Institute, Manual of Standard Practice, Chapter 3 - Bar Supports

BC - Individual Bar Chair; BB - Beam Bolster; BBU - Beam Bolster Upper; CHC - Continuous High Chair; CHCU - Continuous High Chair Upper; HC - Individual High Chair; HCM - High Chairs for Metal Decking; JC - Joist Chair; SB - Slab Bolster; SBU - Slab Bolster Upper

| | Product | Name | Size | Ref. No. |
|---|---|---|---|---|
| **MDSP1 15 Plant** | **Meadow Burke Products, 6467 S. Falkenburg Road, Riverview, FL 33578 http://meadowburke.com/ Humboldt Industrial Park 565 Oak Ridge Road Hazle Township, PA 18202** | | | |
| | Metal Reinforcing Bar Supports | Epoxy Coated Chairs, Bolsters | Epoxy Coated | 2000-056Q |
| | Metal Reinforcing Bar Supports | Galvanized Chairs, Bolsters, including BB | Galvanized | 2000-058Q |
| | *Galvanized (BB) Beam Bolster originally approved per 1992-355.* | | | |
| **VIMC- 15** | **Vimco, Inc., 300 Hansen Access Road, King of Prussia, PA 19406 http://vimcoinc.com/** | | | |
| | Metal Reinforcing Bar Supports | Epoxy Coated Chairs, Bolsters; including BB, BBU, CHC, CHCU, HC, SB, SBU | Epoxy Coated | 2008-135Q |
| | Metal Reinforcing Bar Supports | Galvanized Chairs, Bolsters | Galvanized | 1984-006 |
| | Metal Reinforcing Bar Supports | Stainless Steel Chairs, Bolsters with Plastic Tips | Stainless | 1984-006 |

# Section 1005: Piles

## 1005.2(b) Cast-In-Place Concrete Piles (Steel Shells)

Manufacturers of cast-in-place piles (steel shells) must conform to Department Specifications, Publication 408, Section 1005.2(b).

## 1005.2(c) Steel H-Piles

**Last Revised: 7/9/2015**

The Companies listed in this Section are the owners of the designs/patterns only.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASSPF 15** | **Associated Pile & Fitting Corporation, 8 WoodHollow Rd., Suite 102, Parsippany, NJ 07054-2829 http://www.associatedpile.com/** | | |
| | Steel H-Pile Tip | Hard Bite H-Pile Tip HP-77600-B | 1994-286 |
| | Steel H-Pile Tip | Hard Bite H-Pile Tip HP-77750-B | 1994-286 |
| | Steel H-Pile Tip | PAR-T Series H-Pile Points | 1994-042 |
| **CONSC 15** | **Construction Supply Company, P. O. Box 1682, Tualatin, OR 97062** | | |
| | Steel H-Pile Tip | HT 3300 Series H-Pile Points | 2004-053Q |
| **VERST 15** | **Versa-Steel, Inc., 1618 NE 1st Avenue, Portland, OR 97219 http://www.versasteel.com/** | | |
| | Steel H-Pile Tip | VS-300 N Series H-Pile Points | 2002-063Q |

## Section 1012: Pedestrian Railing

### 1012.2 Aluminum Pedestrian Railing

Last Revised: 3/8/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2014-195QB |
| AUCEL 15 | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 1991-009B |
| FOST0 15 | **L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | ----- |
| FOST2 15 | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | ----- |
| FUTFAB15 | **Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2017-046Q |
| HALL1 15 | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2002-178Q |
| HALL2 15 | **Hall Industries, Inc., 514 Mecklem Lane, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | Assembly Only | 2002-178Q |
| HALL3 15 | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2017-029Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2011-101QA |
| PENNF 15 | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/**<br>***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | |
| | Aluminum Pedestrian Railing Fabricator | | 2015-154QA |

## Section 1013: Aluminum Bridge Railing

### 1013.2 Aluminum Bridge Railing

Last Revised: 3/9/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| ALUMS 15 | Aluminum Shapes, Inc., 9000 River Rd., Delair, NJ 46218 http://www.shapesllc.com/ | | |
| | Aluminum Bridge Railing Fabricator | | ----- |
| APEX- 15 | Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2014-195QB |
| FOST0 15 | L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/ | | |
| | Aluminum Bridge Railing Fabricator | | ----- |
| FOST2 15 | L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/ | | |
| | Aluminum Bridge Railing Fabricator | | ----- |
| FUTFAB15 | Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2017-096Q |
| HALL1 15 | Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2002-178Q |
| HALL3 15 | Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2017-029Q |
| MAGND 15 | Magnode Products, Inc., 400 East State St., Trenton, OH 45067 http://magnode.com/ | | |
| | Aluminum Bridge Railing Fabricator | | ----- |
| PELET 15 | Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2011-101QB |
| PENNF 15 | PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/<br>*2nd Facility: 20 Steel Rd., Morrisville, PA 19067* | | |
| | Aluminum Bridge Railing Fabricator | | 2015-154QB |

## Section 1013: Aluminum Bridge Railing

### 1013.2 Aluminum Bridge Railing

Last Revised: 3/9/2018

| | Product | Name | Ref. No. |
|---|---|---|---|
| RELCC 15 | Reliable Casting Corporation, 3530 Spring Grove Avenue, Cincinnati, OH 45223 http://reliablecastings.com/ | | |
| | Aluminum Bridge Railing Fabricator | | ----- |
| RP-MA 15 | RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/ | | |
| | Aluminum Bridge Railing Fabricator | | 2004-096Q |

## Section 1014: Steel Bridge Railing

### 1014.2 Steel Bridge Railing

Last Revised: 11/26/2019

Steel Products Procurement Act applies.

| | Product | Name | Ref. No. |
|---|---|---|---|
| ACKBAY15 | Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/ | | |
| | | Steel Bridge Railing Fabricator | 2018-282Q |
| ADVSC 15 | Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/ | | |
| | | Steel Bridge Railing Fabricator | 2015-023Q |
| APEX- 15 | Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/ | | |
| | | Steel Bridge Railing Fabricator | 2014-195QC |
| AUCEL 15 | Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/ | | |
| | | Steel Bridge Railing Fabricator | 2011-160Q |
| CAPST 15 | Capital Steel Service, LLC, 82 Stokes Avenue, Trenton, NJ 08638 http://www.capitalsteel.org/ | | |
| | | Steel Bridge Railing Fabricator | 2013-102Q |
| CIANB 15 | Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx *Formerly Foster Precise Structural Products (FOSPR).* | | |
| | | Steel Bridge Railing Fabricator | 2010-249Q |
| FOST0 15 | L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/ | | |
| | | Steel Bridge Railing Fabricator | ----- |
| FOST2 15 | L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/ | | |
| | | Steel Bridge Railing Fabricator | ----- |
| FUTFAB15 | Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/ | | |
| | | Steel Bridge Railing Fabricator | 2017-097Q |
| HALL1 15 | Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | | Steel Bridge Railing Fabricator | 2002-178Q |

## Section 1014: Steel Bridge Railing

### 1014.2 Steel Bridge Railing

Last Revised: 11/26/2019

Steel Products Procurement Act applies.

| | Product | Name | Ref. No. |
|---|---|---|---|
| HALL3 15 | Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | | Steel Bridge Railing Fabricator | 2017-029Q |
| HEART 15 | Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/<br>*Formerly Brownsville Marine Products* | | |
| | | Steel Bridge Railing Fabricator | 2018-220Q |
| MCS-1 15 Facility | Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/<br>271 Industrial Lane Alum Bank, PA 15221 | | |
| | | Steel Bridge Railing Fabricator | 2019-131Q |
| PELET 15 | Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/ | | |
| | | Steel Bridge Railing Fabricator | 2010-015Q |
| PENNF 15 | PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/<br>*2nd Facility: 20 Steel Rd., Morrisville, PA 19067* | | |
| | | Steel Bridge Railing Fabricator | 2015-154QC |
| PMWI1 15 | Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/ | | |
| | | Steel Bridge Railing Fabricator | 2018-218Q |
| PREC1 15 | Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/ | | |
| | | Steel Bridge Railing Fabricator | 2016-204 |
| PSFAB 15 | Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007 | | |
| | | Steel Bridge Railing Fabricator | 2016-281 |
| RP-MA 15 | RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/ | | |
| | | Steel Bridge Railing Fabricator | 2004-016Q |

## Section 1014: Steel Bridge Railing

### 1014.2 Steel Bridge Railing

Last Revised: 11/26/2019

Steel Products Procurement Act applies.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SSW-1 15** | **Shawnee Steel & Welding, 6124 Merriam Drive, Merriam, KS 66203** | | |
| | Steel Bridge Railing Fabricator | | 2017-187Q |
| **STRUS 15** | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | |
| | Steel Bridge Railing Fabricator | | 2015-142QA |

## Section 1015: Protective Barrier

### 1015.2 Aluminum Protective Barrier

Last Revised: 9/29/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| APEX- 15 | Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/ | | |
| | | Aluminum Protective Barrier Fabricator | 2014-195QD |
| AUCEL 15 | Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/ | | |
| | | Aluminum Protective Barrier Fabricator | 1996-055 |
| FOST0 15 | L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/ | | |
| | | Aluminum Protective Barrier Fabricator | ----- |
| FOST2 15 | L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/ | | |
| | | Aluminum Protective Barrier Fabricator | ----- |
| HALL1 15 | Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | | Aluminum Protective Barrier Fabricator | 2011-267Q |
| HALL3 15 | Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | | Aluminum Protective Barrier Fabricator | 2017-029Q |
| PENNF 15 | PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/<br>*2nd Facility: 20 Steel Rd., Morrisville, PA 19067* | | |
| | | Aluminum Protective Barrier Fabricator | 2015-154QD |
| WATSB 15 | Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228 https://wbacorp.com/ | | |
| | | Aluminum Protective Barrier Fabricator | 2006-073Q |

## Section 1016: Protective Fence

### 1016.2(a)3 Protective Fence (Steel) Posts, Rails and Fittings (BC-701M)

Last Revised: 5/17/2017

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | |
| | Protective Fence Fabricator | | 2010-017Q |
| **SHAFC 15** | **Sharon Fence Company, 1 Miller Court, Sharon, PA 16146 http://www.sharonfence.com/** | | |
| | Protective Fence Fabricator | | 2011-044Q |
| **SPSKY 15** | **Stephens Pipe & Steel, LLC, 2224 E. Highway 619, P.O. Box 618, Russell Springs, KY 42642 http://www.spsfence.com/** | | |
| **Facility** | **5975 South Highway 76 Russell Springs, KY 42642** | | |
| | Protective Fence Fabricator | | 2016-212Q |

# Section 1019: Protective Coatings for Reinforced Concrete Surfaces

## 1019.2(a) Boiled Linseed Oil (AASHTO M233)

Last Revised: 10/23/2019

See Section 503.2 for approved product listing.

| | Product | Name | Ref. No. |
|---|---|---|---|

## 1019.2(b) Epoxy Resins (For Abutments, Pier Caps and Endwalls)

Last Revised: 6/18/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **GROSC 15** | **Groco Specialty Coatings, 10818 Hawn Freeway, Dallas, TX 75217 http://www.grocosc.com/** | | |
| | Epoxy Resins (For Abutments, Pier Caps and Endwalls) | Si-Rex03 Silicone | 2009-074 |
| | *Required Primers: Si-Prime* | | |
| | *Conditionally approved as an alternate per manufacturer's specifications and usage guidelines. Effective 6/15/2020, Groco Specialty Coatings is no longer manufacturing Si-Rex03 Silicone or the required primer. This product has a shelf life of 1 year. A new manufacturer for the Si-Rex03 Silicone coating and primer is under evaluation.* | | |
| **UNICO 15** | **United Coatings, 2810 S. 18th Place, Phoenix, AZ 85034** | | |
| | Epoxy Resins (For Abutments, Pier Caps and Endwalls) | Canyon Tone Stain | 2011-156 |
| | *Approved as an aesthetic coating, not a protective coating.* | | |
| | *Conditionally approved as an alternate per manufacturer's specifications and usage guidelines.* | | |

## 1019.2(c) Penetrating Sealers (For Reinforced Concrete Substructure Surfaces)

Last Revised: 6/10/2019

AASHTO T259 and T260, FHWA RD 78-35, Section 4.B.77

The use of some penetrating sealers may affect the frictional properties of concrete surfaces. Consult the manufacturer before using sealer on surfaces subject to vehicular or pedestrian traffic.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADVCT 15** | **Advanced Chemical Technologies, Inc., 9608 N Robinson Avenue, Oklahoma City, OK 73114 http://www.advchemtech.com/** | | |
| | Penetrating Sealer, Organo-Silicon Compounds in Solvents | SIL-ACT ATS-100LV | 2012-114Q |
| **AQURN 15** | **Aquron Corporation, P.O. Box 758, Rockwall, TX 75087 http://www.aquron.com/** | | |
| | Penetrating Sealer, Silicates in Water | Aquron CPT-2000 | 2000-298Q |

## Section 1019: Protective Coatings for Reinforced Concrete Surfaces

### 1019.2(c) Penetrating Sealers (For Reinforced Concrete Substructure Surfaces)

Last Revised: 6/10/2019

AASHTO T259 and T260, FHWA RD 78-35, Section 4.B.77

The use of some penetrating sealers may affect the frictional properties of concrete surfaces. Consult the manufacturer before using sealer on surfaces subject to vehicular or pedestrian traffic.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | Penetrating Sealer, Organo-Silicon Compounds in Water | MasterProtect H 400 (previously Enviroseal 40) | 1987-129 |
| **BASBS115** | **BASF Corporation Building Systems, 23930 Concord Ave., Mattawan, MI 49071 https://www.basf.com/us/en.html** | | |
| | Penetrating Sealer, Organo-Silicon Compounds in Solvents | MasterProtect H 1000 (previously Hydrozo 100) | 2011-227Q |
| **CONSE 15** | **Concrete Sealants, Inc., 9325 State Route 201, Tipp City, OH 45371 http://www.conseal.com/** | | |
| | Penetrating Sealer, Silicates in Water | ConBlock SH | 2012-129Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Penetrating Sealer, Silicates in Water | Baracade WB 244 | 1999-185Q |
| **EVONK 15** | **Evonik Corporation, 299 Jefferson Road, Parsippany, NJ 07054 http://corporate.evonik.com/en/Pages/default.aspx** | | |
| **Plant** | **4201 Degussa Road Theodore, AL 36590** | | |
| | Penetrating Sealer, Organo-Silicon Compounds in Solvents | Protectosil BHN | 2014-005Q |
| **PROS1 15** | **Prosoco, Inc., 3741 Greenway Circle, Lawrence, KS 66046 http://www.prosoco.com/** | | |
| | Penetrating Sealer, Silicates in Water | Consolideck Saltguard WB | 1999-140Q |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** | | |
| | ***Aquired by ChemMasters, Inc.*** | | |
| | Penetrating Sealer, Organo-Silicon Compounds in Solvents | Vexcon Certi-Penseal 244 100% | 2012-202Q |
| | Penetrating Sealer, Organo-Silicon Compounds in Solvents | Vexcon Powerseal 40 | 2010-146QB |
| **WKTEK 15** | **Wicktek, Inc., 103 General Braddock Drive, Braddock, PA 15104 http://wicktek.com/** | | |
| | Penetrating Sealer, Silicates in Water | DensiCrete | 1995-049 |

# Section 1019: Protective Coatings for Reinforced Concrete Surfaces

## 1019.2(c) Penetrating Sealers (For Reinforced Concrete Substructure Surfaces)

**Last Revised: 6/10/2019**

AASHTO T259 and T260, FHWA RD 78-35, Section 4.B.77

The use of some penetrating sealers may affect the frictional properties of concrete surfaces. Consult the manufacturer before using sealer on surfaces subject to vehicular or pedestrian traffic.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **XYPEX 15** | **Xypex Chemical Corporation, 13731 Mayfield Place, Richmond, British Columbia, Canada V6V 2G9 http://www.xypex.com/** | | |
| | Penetrating Sealer, Silicates in Water<br>*Alternate (solid concentrate mixed on job, not liquid form)* | Xypex Concentrate (C500) | 2002-019Q |

## 1019.2(d) Penetrating Sealers (For Bridge Superstructure)

**Last Revised: 10/4/2016**

NCHRP 244 Test as described in Publication 408.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | Penetrating Sealer (For Bridge Superstructure), Organo-Silicon in Water | MasterProtect H 400 (previously Enviroseal 40) | 1987-129 |
| **BASBS115** | **BASF Corporation Building Systems, 23930 Concord Ave., Mattawan, MI 49071 https://www.basf.com/us/en.html** | | |
| | Penetrating Sealer (For Bridge Superstructure), Organo-Silicon Compounds in Solvents | MasterProtect H 1000 (previously Hydrozo 100) | 2011-227Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Penetrating Sealer (For Bridge Superstructure), Silicates in Water | Baracade WB 244 | 1999-185Q |

# Section 1020: Tooth Expansion Dam with Drain Trough

## 1020.2 Tooth Expansion Dam Fabricators

Last Revised: 11/26/2019

| Product | Name | Ref. No. |
|---|---|---|
| ACKBAY15 | Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/ | |
| | Tooth Expansion Dam Fabricator | 2018-282Q |
| BROWD 15 | D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/ | |
| | Tooth Expansion Dam Fabricator | 2010-080Q |
| FOST2 15 | L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/ | |
| | Tooth Expansion Dam Fabricator | ----- |
| KARDW 15 | Kard Welding, Inc., 480 Osterloh Road, P. O. Box 124, Minster, OH 45865 | |
| | Tooth Expansion Dam Fabricator | 2007-001Q |
| MCS-1 15 Facility | Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/<br>271 Industrial Lane Alum Bank, PA 15221 | |
| | Tooth Expansion Dam Fabricator | 2019-131Q |
| OHSTR 15 Plant | Ohio Structures, Inc., 4030 Boardman Canfield Road, Suite 200 D, Canfield, OH 44406 https://www.ohiostructures.com/<br>6120 Pricetown Road Berlin Center, OH 44401 | |
| | Tooth Expansion Dam Fabricator | 2013-230Q |
| PELET 15 | Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/ | |
| | Tooth Expansion Dam Fabricator | 2009-042Q |
| RP-MA 15 | RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/ | |
| | Tooth Expansion Dam Fabricator | ----- |
| SAFGD 15 Plant | Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/<br>220 Lincoln Avenue Pittsburgh, PA 15209 | |
| | Tooth Expansion Dam Fabricator | ----- |

## Section 1020: Tooth Expansion Dam with Drain Trough

### 1020.2 Tooth Expansion Dam Fabricators

Last Revised: 11/26/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **WATSB 15** | **Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228 https://wbacorp.com/** | | |
| | Tooth Expansion Dam Fabricator | | ----- |

### 1020.2(h) Drain Trough Material for Tooth Expansion Dams

Last Revised: 10/8/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BRPMF 15** | **BRP Manufacturing Company, 637 North Jackson St., P.O. Box 389, Lima, OH 45802-0389 http://www.brpmfg.com/** | | |
| | Fabric Reinforced Rubberized Trough Material | Nitrile Draintrough Material | 2006-227Q |
| **FABRK 15** | **Fabreeka International, Inc., 1023 Turnpike Street, P. O. Box 210, Stroughton, MA 02072 http://www.fabreeka.com/** | | |
| | Fabric Reinforced Rubberized Trough Material | Fabric-Elastomer Trough Material | 1985-015 |
| **HBD-1 15** | **HBD/Thermoid, Inc., 240 Industrial Lane, P.O. Box 4310, Oneida, TN 37841 http://www.hbdthermoid.com/** | | |
| | Fabric Reinforced Rubberized Trough Material | 2 Ply PNT 45 Black Nitrile 3/64 - Draintrough | 2010-134Q |

## Section 1022: Steel Bridge Hand Railing

### 1022.2 Steel Bridge Hand Railing (BC-720M or Alternate BC-718M)

Last Revised: 11/26/2019

| Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|
| ACKBAY15 | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2018-282Q |
| ADVSC 15 | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2015-022Q |
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2014-195QE |
| AUCEL 15 | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2011-158Q |
| | Steel Bridge Hand Railing Fabricator | | 2011-159Q |
| BROWD 15 | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2006-196Q |
| CAPST 15 | **Capital Steel Service, LLC, 82 Stokes Avenue, Trenton, NJ 08638 http://www.capitalsteel.org/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2011-193Q |
| CIANB 15 | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** ***Formerly Foster Precise Structural Products (FOSPR).*** | | |
| | Steel Bridge Hand Railing Fabricator | | 2010-250Q |
| ELDER 15 | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2009-021Q |
| FOST0 15 | **L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/** | | |
| | Steel Bridge Hand Railing Fabricator | 07/19/1996 | ----- |
| FOST2 15 | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | |
| | Steel Bridge Hand Railing Fabricator | 07/19/1996 | ----- |
| FUTFAB15 | **Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2017-100Q |

## Section 1022: Steel Bridge Hand Railing

### 1022.2 Steel Bridge Hand Railing (BC-720M or Alternate BC-718M)

Last Revised: 11/26/2019

| Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|
| HALL1 15 | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2002-178Q |
| HALL3 15 | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2017-029Q |
| HEART 15 | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** | | |
| | ***Formerly Brownsville Marine Products*** | | |
| | Steel Bridge Hand Railing Fabricator | | 2018-220Q |
| MCS-1 15 | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/** | | |
| Facility | **271 Industrial Lane Alum Bank, PA 15221** | | |
| | Steel Bridge Hand Railing Fabricator | | 2019-131Q |
| | Steel Bridge Hand Railing Fabricator | | 2019-131Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2010-015Q |
| PENNF 15 | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/** | | |
| | ***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | |
| | Steel Bridge Hand Railing Fabricator | | 2015-154QE |
| PMWI1 15 | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2018-218Q |
| PREC1 15 | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2016-204 |
| PSFAB 15 | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | |
| | Steel Bridge Hand Railing Fabricator | | 2016-281 |
| QUABF 15 | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2012-248 |

## Section 1022: Steel Bridge Hand Railing

### 1022.2 Steel Bridge Hand Railing (BC-720M or Alternate BC-718M)

Last Revised: 11/26/2019

| Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2004-016Q |
| **STRUS 15** | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | |
| | Steel Bridge Hand Railing Fabricator | | 2015-142QB |
| **VAL-2 15** | **Valmont Specialty Structures/Plymouth, 1545 Pidco Drive, Plymouth, IN 46563 http://www.valmont.com/** | | |
| | Steel Bridge Hand Railing Fabricator | | 2007-181Q |

## Section 1023: Aluminum Bridge Hand Railing

### 1023.2 Aluminum Bridge Hand Railing (BC-720M)

Last Revised: 5/9/2019

| Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|
| ACKBAY15 | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2018-282Q |
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2014-195QF |
| AUCEL 15 | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 1991-009C |
| FOST0 15 | **L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | 07/19/1996 | ----- |
| FOST2 15 | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | 07/19/1996 | ----- |
| FUTFAB15 | **Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2017-101Q |
| HALL1 15 | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2002-178Q |
| HALL3 15 | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2017-029Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2011-101QC |
| PENNF 15 | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/**<br>***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2015-154QF |
| RP-MA 15 | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | |
| | Aluminum Bridge Hand Railing Fabricator | | 2004-096Q |

## Section 1023: Aluminum Bridge Hand Railing

### 1023.2 Aluminum Bridge Hand Railing (BC-720M)

Last Revised: 5/9/2019

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| **VAL-2 15** | **Valmont Specialty Structures/Plymouth, 1545 Pidco Drive, Plymouth, IN 46563 http://www.valmont.com/** | | | |
| | Aluminum Bridge Hand Railing Fabricator | | | 2007-180Q |

## Section 1026: Neoprene Strip Seal Dam

Strip Seal Expansion Joint Retainer Drawings: Approved Bridge and Structure Products

### 1026.2 Neoprene Strip Seal Dam (Strip Seal Retainers)

Last Revised: 7/17/2017

BC-767 Sheet 2 of 5

| | Product | Name | Retainer ID/Shop Drawing # | Ref. No. |
|---|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | SSPA02SC | ----- |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | 1.5" depth per SOL 431-97-23 | SSE2M | 1996-196 |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | 2" depth per SOL 431-97-23 | SSA2 | 1996-195 |
| **WATRJ 15** | **R. J. Watson, Inc., 11035 Walden Avenue, Alden, NY 14007 http://www.rjwatson.com/** | | | |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | SV-400 | 1992-039 |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | PADOT 92-280-PEQ | 1992-280 |
| **WATSB 15** | **Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228 https://wbacorp.com/** | | | |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | C-11382 | ----- |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | C-12164 | 1992-027 |
| | Neoprene Strip Seal Dam (Strip Seal Retainer) | | C-14398 | 1992-327 |

### 1026.2(a) Neoprene Strip Seal Dam (Fabricators)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate Neoprene Strip Seal Dam as defined by BC 767M

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **ACKBAY15** | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Baltimore | MD | 2018-282Q |
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | North Baltimore | OH | 2006-198Q |
| **FOST2 15** | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Bedford | PA | ----- |
| **HALL1 15** | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Elwood | PA | 2012-175Q |
| **HALL3 15** | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Ellwood City | PA | 2017-029Q |

## Section 1026: Neoprene Strip Seal Dam

### 1026.2(a) Neoprene Strip Seal Dam (Fabricators)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate Neoprene Strip Seal Dam as defined by BC 767M

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **MAGE1 15 Facility** | **mageba USA LLC, 575 Lexington Ave, 4th Floor, New York 10022 http://www.magebausa.com/ Pottstown, PA** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Pottstown | PA | 2018-021Q |
| **MCS-1 15 Facility** | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/ 271 Industrial Lane Alum Bank, PA 15221** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Alum Bank | PA | 2019-131Q |
| **NIABR 15** | **Niagara Bridge & Rail, 2212 Cory Drive, Sanborn, NY 14132 http://nbrfab.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Sanborn | NY | 2018-048Q |
| **PELET 15** | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Coatesville | PA | 2017-315Q |
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Jersey Shore | PA | ----- |
| **SAFGD 15 Plant** | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/ 220 Lincoln Avenue Pittsburgh, PA 15209** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Millvale | PA | ----- |
| **WATSB 15** | **Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228 https://wbacorp.com/** | | | | |
| | Neoprene Strip Seal Dam Fabricator | | Amherst | NY | ----- |

## Section 1031: Timber Structures

### 1031.2(a) Structural Timber

Last Revised: 9/29/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| ALAWP 15 | **Alamco Wood Products, Inc., 1410 West Ninth Street, Albert Lea, MN 56007 http://www.alamcowood.com/** | | |
| | | Softwood (Glue Laminated) | 2000-236Q |
| AMETS 15 | **American Timber and Steel Corp., 4832 Plank Road, P. O. Box 767, Norwalk, OH 44857-0767 http://www.americantimberandsteel.com/** | | |
| | | Softwood (Non-Laminated) | 1995-268 |
| | | Timber Treater Facility | ----- |
| BELLP 15 | **Bell Lumber & Pole Company, P.O. Box 120786, New Brighton, MN 55112-0024 http://www.blpole.com/** | | |
| | | Timber Treater Facility | 1999-110Q |
| KOPRS 15 | **Koppers Industries, Inc., 50 Koppers Lane, Montgomery, PA 17752 http://www.koppers.com/locations/susquehanna-plant** | | |
| | | Timber Treater Facility | 1999-194Q |
| NORSO 15 | **North-South Wood Preserving Company, 160 Preserver Road, North, SC 29112** | | |
| | | Timber Treater Facility | 2012-116Q |
| RIGID 15 | **Rigidply Rafters, Inc., 701 East Linden Street, Richland, PA 17087 http://www.rigidply.com/** | | |
| | | Softwood (Glue Laminated) | 1999-176Q |
| | | Softwood (Mechanically Laminated) | 1999-176Q |
| STEJ2 15 | **Stella-Jones Corporation, R.R. 3, P. O. Box 275, Dubois, PA 15801 http://stella-jones.com/** ***Formerly Burke-Parsons-Bowby Corp. (BURPB 15)*** | | |
| | | Timber Treater Facility | 2002-079Q |

## Section 1043: Shotcrete

### 1043.2(a) Shotcrete

Last Revised: 11/15/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | Shotcrete (Pre-Packaged)<br>*Conditionally Approved* | MasterEmaco S211 SP | 2012-018Q |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Shotcrete (Pre-Packaged) | Eucoshot | 2007-079Q |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Shotcrete (Pre-Packaged) | SureShot | 2010-065 |
| **QUIKR 15**<br>**Plant** | **The Quikrete Companies, One Securities Centre, 3490 Piedmont Road, N.E. Suite 1300, Atlanta, GA 30305 http://www.quikrete.com/**<br>**Latrobe, PA** | | |
| | Shotcrete (Pre-Packaged) | Commercial Grade QUIKRETE Shotcrete MS | 2002-014Q |
| **SIKA1 15**<br>**Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/**<br>**1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Shotcrete (Pre-Packaged) | Sikacem 103 | 2018-097Q |
| **USCPR 15**<br>**Plant** | **US Concrete Products, 16 Green Meadow Drive, Suite 202, Timonium, MD 21093 http://www.uscproducts.com/**<br>**Baltimore, MD** | | |
| | Shotcrete (Pre-Packaged) | GUNITE 7001d (dry-mix) | 2010-296 |

## Section 1045/1047: Polyester Polymer Concrete (PPC) Overlay

### 1045.2/1047.2 Polyester Polymer Concrete (PPC)

**Last Revised: 9/27/2019**

Per Standard Special Provision b10451 SECTION 1045 - POLYESTER POLYMER CONCRETE (PPC) OVERLAY (For use on projects let on or before March 12, 2020)

Per Standard Special Provision a00091 Changes to Specifications: Section 1047 (For use on projects let on or after March 13, 2020)

* Concrete Deck Overlays - Usage Guidelines (Update to DM-4, Chapter 5, Section 5.6.4)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **KWIK1 15** | **Kwik Bond Polymers, 923 Teal Drive, Benicia, CA 94510 http://www.kwikbondpolymers.com** | | |
| | Polyester Polymer Concrete | PPC 1121 EC | 2015-900 |
| | *Provisionally approved per Standard Special Provision b10451 SECTION 1045 - POLYESTER POLYMER CONCRETE (PPC) OVERLAY and usage guidelines per Pub 15M - Design Manual, Part 4 (DM-4), Chapter 5, Section 5.6.4. Concrete Deck Overlays - Usage Guidelines (Update to DM-4, Chapter 5, Section 5.6.4)* | | |

## Section 1051: Downspouting

### 1051.2 Downspouting

Last Revised: 7/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BELCO 15** | **Belco Manufacturing, Inc., P.O. Box 210, Belton, TX 76513 http://www.belco-mfg.com/** | | |
| | Downspouting | Bridgeline Fiberglass Downspouting | 2013-033Q |
| **GRACO 15** | **Grace Composites, 351 Ruth Road, Lonoke, AR 72086** | | |
| | Downspouting | Fiberglass Downspouting | 2005-117Q |
| **HARVL 15** | **Georg Fischer Harvel LLC, 300 Kuebler Road, Forks Twp., Easton, PA 18040 http://www.harvel.com/**<br>***Formerly Harvel Plastics Inc.*** | | |
| | Downspouting | PVC Downspouting | 2001-107Q |
| **UNIFG 15** | **United Fiberglass of America, 2145 Airpark Drive, Springfield, OH 45502 http://www.unitedfiberglass.com/** | | |
| | Downspouting | Fiberglass Downspouting | 2012-127Q |

## Section 1060: Shop Painting Structural Steel

### 1060.2 Coating System for Structural Steel

Last Revised: 6/28/2018

NEPCOAT Approved and Maintained paint systems. (NEPCOAT - Northeast Protective Coating Committee)

Mixing portions of paint systems by hand without powered mechanical homogenization available to contractors is not recommended.

| | Product | Name | Primer Coat | VOC (g/L) | Intermediate Coat | VOC (g/L) | Finish Coat | VOC (g/L) | NEPCOAT Number | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **CARBL 15** | **Carboline Company, 2150 Schuetz Road, St. Louis, MO 63146 http://www.carboline.com/** | | | | | | | | | |
| | Three Coat Paint System (using Inorganic, Zinc-Rich Primer) *Plants in Lake Charles, LA and Green Bay, WI* | | Carbonzinc 11 HS | 267 | Carboguard 893 | 207 | Carbothane 133 LV | 255 | SCC(12) -03 | 2014-208QA BC |

## Section 1070: Painting Existing Structural Steel

### 1070.2 Coating System for Existing Structural Steel

Last Revised: 7/17/2019

NEPCOAT Approved and Maintained paint systems. (NEPCOAT - Northeast Protective Coating Committee)

Mixing portions of paint systems by hand without powered mechanical homogenization available to contractors is not recommended.

| | Product | Name | Primer Coat | VOC (g/L) | Intermediate Coat | VOC (g/L) | Finish Coat | VOC (g/L) | NEPCOAT Number | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **CARBL 15** | **Carboline Company, 2150 Schuetz Road, St. Louis, MO 63146 http://www.carboline.com/** | | | | | | | | | |
| | Three Coat Paint System (using Organic, Zinc-Rich Primer) | | Carbonzinc 859 | 322 | Carboguard 893 | 207 | Carbothane 133 VOC | 316 | SSC(12)-04 | 2015-037QABC |
| | *Plants in Lake Charles, LA, Green Bay, WI, and Dayton, NV* | | | | | | | | | |
| **SHER0 15** | **The Sherwin-Williams Company, Protective & Marine Coatings, 101 West Prospect Avenue, Cleveland, OH 44115 https://protective.sherwin-williams.com/** | | | | | | | | | |
| | Three Coat Paint System (using Organic, Zinc-Rich Primer) | | Zinc Clad 4100 | 319 | Macropoxy 646 FC | 265 | Hi-Solids Polyurethane 250 | 289 | SSC(15)-07 | 2018-054Q |
| | *Primer Plants: Andover, KS, Greensboro, NC - Stagecoach*<br>*Intermediate Plants: Andover, KA, Victorville, CA, and Greensboro, NC - Howard*<br>*Finish Plants: Andover, KS, Cincinnati, OH, and Richmond, KY* | | | | | | | | | |

## Section 1071: Spot/Zone Maintenance Painting of Existing Structural Steel

### 1071.2 Field Maintenance Structural Paint Systems (Aluminum-Filled Mastic)

Last Revised: 8/6/2018

Mixing portions of paint systems by hand without powered mechanical homogenization available to contractors is not recommended.

| | Product | Name | Primer Coat | Primer VOC (g/L) | Intermediate Coat (g/L) | Intermediate VOC (g/L) | Finish Coat | Finish VOC | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|
| **CARBL 15** | **Carboline Company, 2150 Schuetz Road, St. Louis, MO 63146 http://www.carboline.com/** | | | | | | | | |
| | Three Coat Paint System (Aluminum-Filled Mastic) | | Carbomastic 15 | 242 | Carbomastic 15 | 242 | Carbothane 134HS | 336 | ----- |
| | Three Coat Paint System (Aluminum-Filled Mastic) | | Carbomastic 90 | 245 | Carbomastic 90 | 245 | Carbothane 134HS | 336 | ----- |
| **PPG-1 15** | **PPG - Protective & Marine Coatings, 11605 Vimy Ridge Road, Little Rock, AR 72219 http://www.ppgpmc.com/Home.aspx** | | | | | | | | |
| | Three Coat Paint System (Aluminum-Filled Mastic) | | Amerlock 400 AL | 240 | Amerlock 400 AL | 240 | Amercoat 450 HS | 340 | ----- |

### 1071.2 Field Maintenance Structural Paint Systems (Non-Zinc Primer)

Mixing portions of paint systems by hand without powered mechanical homogenization available to contractors is not recommended.

### 1071.2 Field Maintenance Structural Paint Systems (Organic Zinc Primer)

Mixing portions of paint systems by hand without powered mechanical homogenization available to contractors is not recommended.

## Section 1080: Prestressed Concrete Bridge Superstructure

### 1080.2(c) Nonshrink Grout (Cement-Based)

Last Revised: 3/9/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **5STAR 15** | **Five Star Products, Inc., 750 Commerce Drive, Fairfield, CT 06825 http://www.fivestarproducts.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | 5 Star Grout | 1970-012 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | 5 Star Instant Grout | 1976-060 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **ADMXT 15** | **Admixtures, Inc., 200 Furnace Road, P. O. Box 225, Wernersville, PA 19565-0225** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | BC Grout | 1976-053 |
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | MasterFlow 100 (previously Construction Grout) | 2007-097Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | MasterFlow 713 | 1976-006 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | MasterFlow 816 | 1975-005 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Set Grout | 1987-058 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **CGM-N 15** | **CGM Inc., 1463 Ford Road, Bensalem, PA 19020 http://cgmbuildingproducts.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Pro-Grout 90 | 1987-083 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Conset Grout | 1992-241 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **CONSM 15** | **Concrete Service Materials Company, Elm & Walnut St., P. O. Box 447, Conshohocken, PA 19428-0447 http://www.concreteservicematerials.com/** | | |
| | Premixed, Nonshrink Grout (Metallic Grout Admixture) | CSMC Shrink Proof Grout | ----- |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Diamondcrete | 1972-067 |

## Section 1080: Prestressed Concrete Bridge Superstructure

### 1080.2(c) Nonshrink Grout (Cement-Based)

Last Revised: 3/9/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining)<br>*One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | 1107 Advantage Grout | 2019-212Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining)<br>*One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | Sure-Grip High Performance Grout | 1982-094 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Sure-Grip Precision Grout (formerly Multi-Purpose Grout) | 1986-040 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining)<br>*One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | Suregrip Util. | 1991-055 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Euco Cable Grout PTX | 2004-008Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Euco NS Grout | 1976-019 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Hi-Flow Grout | 2002-152Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | NC Grout | 2000-281Q |
| **GILLI 15** | **Gill Industries, Inc., 3462 Kershaw-Camden Highway, Lancaster, SC 29720 http://www.gill-industries.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Gill 33B&P | 1972-050 |
| **HBFUL 15**<br>**Plant** | **H. B. Fuller Construction Products Inc., 1200 Willow Lake Boulevard, St. Paul, MN 55110-5101 http://www.hbfuller.com/**<br>**59 Brunswick Avenue Edison, NJ 08817** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | ProSpec High Strength Precision Grout | 1972-054 |
| **IPA-S 15** | **IPA Systems, Inc., 2745 North Amber St., Philadelphia, PA 19134 http://ipasystems.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining)<br>*One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | Penn Grout | 1975-079 |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Premixed, Nonshrink Grout (Metallic, Non-Staining) | Sure Grout-Met | 1981-052 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining)<br>*One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | Sure Grout | 1976-048 |

## Section 1080: Prestressed Concrete Bridge Superstructure

### 1080.2(c) Nonshrink Grout (Cement-Based)

Last Revised: 3/9/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **KELKN 15** | **Kelken Construction Systems, 550 Hartle Street Suite C, Sayreville, NJ 08872 http://www.kelken.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Keligrout | 1986-125 |
| **L&MCC 15** | **L&M Construction Chemicals, Inc., 14851 Calhoun Road, Omaha, NE 68152 http://www.lmcc.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Crystex | 1976-032 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Duragrout | 1990-175 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **MAPEIA15 Plant** | **MAPEI Corporation, 1144 East Newport Center Drive, Deerfield Beach, FL 33442 http://www.mapei.com/US-EN/ Fredericksburg, VA** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Planigrout 712 | 2016-292Q |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | CG-86 Construction-Grade Grout | 1993-292 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Sealtight 588 | 1984-165 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **MEDW1 15 Plant** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/ 2100 Monroe Street P. O. Box 7550 York, PA 17404-0550** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | CG-86 Construction-Grade Grout | 1993-292 |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | CG-86 N.E. Construction-Grade Grout | 2017-219Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Sealtight 588 | 1984-165 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **NATPC 15** | **National Permacrete Company, 590 N. Valley Forge Rd., P. O. Box 886, Devon, PA 19333** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Permagrout | 1976-088 |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |

## Section 1080: Prestressed Concrete Bridge Superstructure

### 1080.2(c) Nonshrink Grout (Cement-Based)

Last Revised: 3/9/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **QUIKR 15 Plant** | **The Quikrete Companies, One Securities Centre, 3490 Piedmont Road, N.E. Suite 1300, Atlanta, GA 30305 http://www.quikrete.com/ Latrobe, PA** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Commercial Grade QUIKRETE Non-Shrink General Purpose Grout (No. 1585-01) | 2000-290Q |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Commercial Grade QUIKRETE Non-Shrink Precision Grout (No. 1585-00) | 2000-289Q |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |
| **SIKA0 15 Facility** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 201 Polito Avenue Lyndhurst, NJ 07071** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Sikagrout 212 | 1983-219 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Sikagrout 300 PT | 2007-147Q |
| **SPECH 15** | **SpecChem, LLC, 1619 Walnut Street, Kansas City, MO 64108 http://specchemllc.com/** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | SC Multipurpose Grout | 2012-159Q |
| **VEXCN 15** | **Vexcon Chemicals, Inc., 7240 State Road, Philadelphia, PA 19135 http://www.vexcon.com/** ***Aquired by ChemMasters, Inc.*** | | |
| | Premixed, Nonshrink Grout (Non-Metallic, Non-Staining) | Certi-Grout 1000 | 2000-071Q |
| | *One-day Compressive Strength is equal to or greater than 26 Mpa (3750 psi).* | | |

### 1080.2(e) Modified Mortar for Beam Seat Leveling

Last Revised: 4/3/2015

Mortars listed in the Miscellaneous Section - MISC Polymer Modified and Special Cements, Mortars, and Concrete conforming to the Pub 408, Section 1080.2(e) specifications are also approved for PennDOT projects.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA0 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |

## Section 1080: Prestressed Concrete Bridge Superstructure

### 1080.2(e) Modified Mortar for Beam Seat Leveling

**Last Revised: 4/3/2015**

Mortars listed in the Miscellaneous Section - MISC Polymer Modified and Special Cements, Mortars, and Concrete conforming to the Pub 408, Section 1080.2(e) specifications are also approved for PennDOT projects.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA0 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | |
| **Facility** | **201 Polito Avenue Lyndhurst, NJ 07071** | | |
| | Mortar for Beam Seat Leveling | Sikatop Plus 122 | 1979-036 |
| | Mortar for Beam Seat Leveling | Sikatop Plus 123 | 1982-007 |

### 1080.2(g) Nonshrink Epoxy Grout for Shear Keys in Adj. Prestressed Concrete Box Beam Bridges

Required minimum compressive strength per ASTM C579:
*4,000 pounds per square inch at 24 hours
*5,000 pounds per square inch at 28 days

## Section 1085: Precast Reinforced Concrete Box Culvert

### 1085.2 Precast Box Culverts

Last Revised: 7/30/2019

For Protective Coatings, see MISC Coal Tar Epoxy (RCC Pipe Coating)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| ATLCP 15 | **Atlantic Concrete Products, Inc., 8900 Old Route 13, Tullytown, PA 19007-1375 http://www.atlanticconcrete.com/** | | | |
| | Precast Box Culvert | | | 2009-088Q |
| BRAYP 15 | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/**<br>***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | | |
| | Precast Box Culvert | | | 2015-004QA |
| CONCR 15 | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | | |
| | Precast Box Culvert | | | 2016-053Q |
| | Total Precast Bridge Structures | | | 2017-069Q |
| CONTN 15 | **Continental Concrete Products, Inc., 1 South Grosstown Road, Pottstown, PA 19464 http://www.continentalconcrete.com/** | | | |
| | Precast Box Culvert | | | 2005-034Q |
| DUTCH 15 | **Dutchland, Inc., 160 Route 41, Gap, PA 17527-0549 http://www.dutchlandinc.com/** | | | |
| | Precast Box Culvert | | | 2003-185Q |
| HYDR3 15 | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 4200 Universal Drive, Diamond, OH 44412 http://www.rinkerpipe.com/** | | | |
| | Precast Box Culvert | | 05/27/1992 | ----- |
| HYDR4 15<br>Plant | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 2000 Gregg Station Road, Oakdale, PA 15071 http://www.rinkerpipe.com/**<br>**1751 Monocacy Blvd. Frederick, MD** | | | |
| | Precast Box Culvert | | | 2001-171Q |
| LIND1 15<br>Plant | **Lindsay Precast, 6845 Erie Avenue NW, P.O. Box 578, Canal Fulton, OH 44614 http://www.lindsayprecast.com/**<br>**6845 Erie Avenue NW P.O. Box 578 Canal Fulton, OH 44614** | | | |
| | Precast Box Culvert | | | 2016-081 |
| MACK0 15 | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | | |
| | Precast Box Culvert | | | - |
| MACK1 15 | **Mack Industries of PA, Inc., P.O. Box 335, Valley City, OH 44280 http://www.mackconcrete.com/** | | | |
| | Precast Box Culvert | | 09/21/1990 | ----- |

## Section 1085: Precast Reinforced Concrete Box Culvert

### 1085.2 Precast Box Culverts

Last Revised: 7/30/2019

For Protective Coatings, see MISC Coal Tar Epoxy (RCC Pipe Coating)

| | Product | Name | Reference Letter | Ref. No. |
|---|---|---|---|---|
| MILL0 15 | A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/ | | | |
| | Precast Box Culvert | | 11/20/1987 | ----- |
| | Total Precast Bridge Structures | | | - |
| MILL1 15 | A. C. Miller Concrete Products, Inc., 31 E. Bridge Street, Spring City, PA 19475 http://www.acmiller.com/ | | | |
| | Precast Box Culvert | | | 2000-241Q |
| MONAP 15 | Monarch Products Company, Inc., 385 Sipe Road, York Haven, PA 17370 http://www.monarchproducts.net/ | | | |
| | Precast Box Culvert | | | 2005-009Q |
| NITT0 15 | Nitterhouse Concrete Products Inc., P. O. Box N, Chambersburg, PA 17201 http://nitterhouseconcrete.com/ | | | |
| | Precast Box Culvert | | 01/02/1992 | ----- |
| OLP-1 15 | Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx | | | |
| | Precast Box Culvert | | | ----- |
| PREMC 15 | Precast Manufacturing Company, 187 Strykers Road, Phillipsburg, NJ 08865 http://www.precastmfgco.com/ | | | |
| | Precast Box Culvert | | | 2016-080 |
| TERH0 15 Plant | Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/<br>PLANT #2: P.O. Box 10 Terre Hill, PA 17581 | | | |
| | Precast Box Culvert | | | - |
| TERH1 15 Plant | Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/<br>PLANT #4: 42 South Butler Road Lebanon, PA 17042 | | | |
| | Precast Box Culvert | | 05/17/1989 | ----- |
| WHICO 15 | L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/ | | | |
| | Precast Box Culvert | | | 2016-138 |

### 1085.2(m) Neoprene Joint Material

Last Revised: 11/15/2019

## Section 1085: Precast Reinforced Concrete Box Culvert

### 1085.2(m) Neoprene Joint Material

Last Revised: 11/15/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ARMCL 15** | **Armacell, LLC, 7600 Oakwood Street Extension, P. O. Box 1038, Mebane, NC 27302 http://www.armacell.us/index.php?id=6** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | F-2062 | 2005-107Q |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 5 | F-2045 | 2005-109Q |
| **MONRP 15** | **Monmouth Rubber and Plastics, 75 Longbranch Avenue, Long Branch, NJ 07740 http://www.monmouthrubber.com/** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | DK 2121 PADOT | 2005-094Q |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 5 | DK5151 PADOT | 2014-158Q |
| **RUBAT 15** | **Rubatex International, LLC, 906 Adams Street, Bedford, VA 24523-2168 http://www.rubatexusa.com/** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | G-207-N | 2006-006Q |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | R-470 | 2005-116Q |

### 1085.3(m) Protective Coating (SSPC-PS 16-82)

Last Revised: 7/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **COOPC 15** | **Coopers Creek Chemical Corporation, 884 River Road, West Conshohocken, PA 19428-2699 http://cooperscreekchemical.com/** | | |
| | Protective Coating (SSPC-PS 16-82) | Black No. 775 Epoxy Tar Coating | 2010-325Q |

## Section 1086: Sound Barriers

### 1086.2(b) Sound Barrier Wall Panels (Alternates)

Last Revised: 6/28/2018

Note: Approved Bridge and Structure Products

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CENTR 15** | **Centria, 1005 Beaver Grade Road, Moon Township, PA 15108 http://www.centria.com/Pages/default.aspx** | | |
| | Sound Barrier Wall Panel (Alternate) | Vesapanel Sound Barrier (Reflective Barrier Only) | 2006-206 |
| **DIAMC 15** | **Diamond Manufacturing Company, 243 West Eighth Street, P.o. Box 4174, Wyoming, PA 18644 http://www.diamondman.com/** | | |
| | Sound Barrier Wall Panel (Alternate)<br>*Per SOL 431-08-15* | Acoustax Sound Barrier (Structure Mount Only) | 2002-130 |
| **EVCYR 15** | **Evonik Cyro, LLC, 1796 Main Street, Sanford, ME 04073 http://www.acrylitesoundstop.com** | | |
| | Sound Barrier Wall Panel (Alternate) | Acrylite Soundstop Structure Mounted Sound Barrier System | 2012-050 |

*Clear Structure Mounted Sound Barrier, per SOL 483-14-02. Acrylite Soundstop Structure Mounted Sound Barrier System has the following restrictions:*

*• Maximum panel height: 6ft.-6in.*
*• Maximum wall height and post spacing (see below)*

*A. Bridge Barrier Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 9 ft.*
*8 ft. Post Spacing: Wall Height of > 9 ft. thru 10 ft.*

*B. Retaining Wall Barrier or Moment Slab Barrier Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 12 ft.*
*8 ft. Post Spacing: Wall Height of > 12 ft. thru 13 ft.*

*C. Retaining Wall Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 13 ft.*

## Section 1086: Sound Barriers

### 1086.2(b) Sound Barrier Wall Panels (Alternates)

Last Revised: 6/28/2018

Note: Approved Bridge and Structure Products

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FABCO 15** | **Fabcon Precast Concrete Products, 1200 Morea Road, Mahanoy City, PA 17948 http://www.fabcon-usa.com/** | | |
| | Sound Barrier Wall Panel (Alternate) | Sentry-Cast Wall Sound Panel (Reflective Barrier Only) | 2011-275 |
| **FACADE15 Facility** | **Facade Technology, 680 Ben Franklin Highway, Birdsboro, PA 19508 www.soundzero.com 1441 Stoneridge Drive Middletown, PA 17057** | | |
| | Sound Barrier Wall Panel (Alternate) | Sound Zero | 2015-153 |
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | | |
| | Sound Barrier Wall Panel (Alternate)<br>*Precast Absorptive Sound Panel Wall System, per SOL 431-08-16* | AcoustaCrete | 2000-335 |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | |
| | Sound Barrier Wall Panel (Alternate)<br>*Precast Absorptive Sound Panel Wall System, per SOL 431-08-16* | AcoustaCrete | 2016-190 |
| **HOOTW 15** | **Hoover Treated Wood Products, Inc., 154 Wire Road, Thomson, GA 30824 http://www.frtw.com/** | | |
| | Sound Barrier Wall Panel (Alternate) | Plywall | 2009-050Q |
| **J&RS1 15** | **Slaw Precast, J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/**<br>***Note: Previously assigned J&RS2 15 for same facility*** | | |
| | Sound Barrier Wall Panel (Alternate)<br>*Absorptive Sound Barrier System, per SOL 431-08-01* | Concrete Innovation Series / Whisper Wall | 2007-040Q |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | |
| | Sound Barrier Wall Panel (Alternate)<br>*Absorptive Sound Barrier System, per SOL 431-08-01* | Concrete Innovation Series / Whisper Wall | 2008-092Q |

## Section 1086: Sound Barriers

### 1086.2(b) Sound Barrier Wall Panels (Alternates)

Last Revised: 6/28/2018

Note: Approved Bridge and Structure Products

| | Product | Name | Ref. No. |
|---|---|---|---|
| **STNB1 15** | **Superior Transparent Noise Barriers, LLC, 220 E Golfview Road, Ardmore, PA 19003 https://www.transparentnb.com/** | | |
| | Sound Barrier Wall Panel (Alternate) | Superior Transparent Sound Barrier System | 2017-332 |

*Clear Structure Mounted Sound Barrier, per SOL 483-18-01. Superior Transparent Sound Barrier System has the following restrictions:*

*• Maximum panel height: 13 ft.- 3 1/2 in.*
*• Maximum wall height and post spacing (see below)*

*A. Bridge Barrier Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 9 ft.*
*8 ft. Post Spacing: Wall Height of > 9 ft. thru 10 ft.*

*B. Retaining Wall Barrier or Moment Slab Barrier Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 12 ft.*
*8 ft. Post Spacing: Wall Height of > 12 ft. thru 13 ft.*

*C. Retaining Wall Mounted:*
*----------*
*10 ft. Post Spacing: Wall Height of 2 ft. thru 13 ft.*
*8 ft. Post Spacing: Wall Height of > 13 ft. thru 14 ft.*

## Section 1087: PA HT Bridge Barrier

### 1087.2 PA HT Bridge Barrier Railing (BC-707M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 707M (PA, HT Bridge Barrier).

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| ACKBAY15 | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Baltimore | MD | 2018-282Q |
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Boyerstown | PA | 2014-195QG |
| AUCEL 15 | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Hudson | MA | 2007-157Q |
| BROWD 15 | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | | |
| | PA HT Bridge Barrier Railing | | North Baltimore | OH | 2010-081Q |
| CIANB 15 | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** | | | | |
| | ***Formerly Foster Precise Structural Products (FOSPR).*** | | | | |
| | PA HT Bridge Barrier Railing | | Georgetown | MA | ----- |
| FOST2 15 | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Bedford | PA | 2010-246Q |
| GSIHP 15 | **GSI Highway Products, 720 W. Wintergreen Road, Hutchins, TX 75141 https://www.gsihighway.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Hutchins | TX | 2017-353Q |
| HALL1 15 | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Ellwood City | PA | 2005-044Q |
| HALL3 15 | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Ellwood City | PA | 2017-029Q |
| HEART 15 | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** | | | | |
| | ***Formerly Brownsville Marine Products*** | | | | |
| | PA HT Bridge Barrier Railing | | Brownsville | PA | 2018-220Q |
| MCS-1 15 | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/** | | | | |
| Facility | **271 Industrial Lane Alum Bank, PA 15221** | | | | |
| | PA HT Bridge Barrier Railing | | Alum Bank | PA | 2019-131Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Coatesville | PA | 2010-015Q |

## Section 1087: PA HT Bridge Barrier

### 1087.2 PA HT Bridge Barrier Railing (BC-707M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 707M (PA, HT Bridge Barrier).

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| **PENNF 15** | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/** | | | | |
| | ***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | | | |
| | PA HT Bridge Barrier Railing | | | | 2015-154QG |
| **PMWI1 15** | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | | | |
| | PA HT Bridge Barrier Railing | | Carbondale | PA | 2018-218Q |
| **PREC1 15** | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | | | | |
| | PA HT Bridge Barrier Railing | | | | 2016-204Q |
| **PSFAB 15** | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | | | |
| | PA HT Bridge Barrier Railing | | Bristol | PA | 2016-281 |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | | | |
| | PA HT Bridge Barrier Railing | | West Middlesex | PA | 2015-187Q |
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | | | |
| | PA HT Bridge Barrier Railing | | Jersey Shore | PA | 2004-016Q |
| **SAFGD 15** | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/** | | | | |
| **Plant** | **220 Lincoln Avenue Pittsburgh, PA 15209** | | | | |
| | PA HT Bridge Barrier Railing | | Pittsburgh | PA | 2016-016Q |
| **STRUS 15** | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | | | |
| | PA HT Bridge Barrier Railing | | | | 2015-142QC |

## Section 1088: PA Type 10M Bridge Barrier

### 1088.2 PA Type 10M Bridge Barrier Railing (BC-709M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 709M (PA Type, 10M Bridge Barrier).

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| ACKBAY15 | | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Baltimore | MD | 2018-282Q |
| ADVSC 15 | | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Saxonburg | PA | 2015-025Q |
| APEX- 15 | | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Boyerstown | PA | 2014-195QH |
| AUCEL 15 | | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Hudson | MA | 2007-120Q |
| BROWD 15 | | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | North Baltimore | OH | 2008-039Q |
| CAPST 15 | | **Capital Steel Service, LLC, 82 Stokes Avenue, Trenton, NJ 08638 http://www.capitalsteel.org/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Trenton | NJ | 2013-077Q |
| CIANB 15 | | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** | | | |
| | | ***Formerly Foster Precise Structural Products (FOSPR).*** | | | |
| | PA Type 10M Bridge Barrier Railing | | Georgetown | MA | 2010-246Q |
| ELDER 15 | | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Oaks Corner | NY | 2009-025Q |
| FOST2 15 | | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Bedford | MA | 2008-056Q |
| HALL1 15 | | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Ellwood City | PA | ----- |
| HALL3 15 | | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | | |
| | PA Type 10M Bridge Barrier Railing | | Ellwood City | PA | 2017-029Q |
| HEART 15 | | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** | | | |
| | | ***Formerly Brownsville Marine Products*** | | | |
| | PA Type 10M Bridge Barrier Railing | | Brownsville | PA | 2018-220Q |

## Section 1088: PA Type 10M Bridge Barrier

### 1088.2 PA Type 10M Bridge Barrier Railing (BC-709M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 709M (PA Type, 10M Bridge Barrier).

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| MCS-1 15 Facility | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/ 271 Industrial Lane Alum Bank, PA 15221** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Alum Bank | PA | 2019-131Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Coatesville | PA | 2010-015Q |
| PMWI1 15 | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Carbondale | PA | 2018-218Q |
| PREC1 15 | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Sistersville | WV | 2016-204Q |
| PSFAB 15 | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Bristol | PA | 2016-281 |
| QUABF 15 | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | West Middlesex | PA | 2012-246Q |
| RG-ST 15 | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Pulaski | PA | 2006-191Q |
| RP-MA 15 | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Jersey Shore | PA | 2004-016Q |
| SAFGD 15 Plant | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/ 220 Lincoln Avenue Pittsburgh, PA 15209** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Pittsburgh | PA | 2010-223Q |
| STRUS 15 | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | | | |
| | PA Type 10M Bridge Barrier Railing | | | | 2015-142QD |
| USBRG 15 | **U.S. Bridge, 201 Wheeling Avenue, P.O. Box 757, Cambridge, OH 43725 http://www.usbridge.com/** | | | | |
| | PA Type 10M Bridge Barrier Railing | | Cambridge | OH | 2007-108Q |

## Section 1089: PA Bridge Barrier

### 1089.2 PA Bridge Barrier Railing (BC-713M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 713M (PA Bridge Barrier).

| Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|
| ACKBAY15 | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | | |
| | PA Bridge Barrier Railing | Baltimore | MD | 2018-282Q |
| ADVSC 15 | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | | |
| | PA Bridge Barrier Railing | Saxonburg | PA | 2015-027Q |
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | | |
| | PA Bridge Barrier Railing | Boyertown | PA | 2014-195QI |
| AUCEL 15 | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | | |
| | PA Bridge Barrier Railing | Hudson | MA | 2007-156Q |
| BROWD 15 | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | PA Bridge Barrier Railing | North Baltimore | OH | 2008-039Q |
| CAPST 15 | **Capital Steel Service, LLC, 82 Stokes Avenue, Trenton, NJ 08638 http://www.capitalsteel.org/** | | | |
| | PA Bridge Barrier Railing | Trenton | NJ | 2013-102Q |
| CIANB 15 | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** | | | |
| | ***Formerly Foster Precise Structural Products (FOSPR).*** | | | |
| | PA Bridge Barrier Railing | Georgetown | MA | 2010-250Q |
| FOST2 15 | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | | |
| | PA Bridge Barrier Railing | Bedford | PA | 2008-055Q |
| HALL1 15 | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | | |
| | PA Bridge Barrier Railing | Ellwood City | PA | 2007-088Q |
| HALL3 15 | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | | |
| | PA Bridge Barrier Railing | Ellwood City | PA | 2017-029Q |
| HEART 15 | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** | | | |
| | ***Formerly Brownsville Marine Products*** | | | |
| | PA Bridge Barrier Railing | Brownsville | PA | 2018-220Q |
| MCS-1 15 | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/** | | | |
| Facility | **271 Industrial Lane Alum Bank, PA 15221** | | | |
| | PA Bridge Barrier Railing | Alum Bank | PA | 2019-131Q |

## Section 1089: PA Bridge Barrier

### 1089.2 PA Bridge Barrier Railing (BC-713M)

Last Revised: 11/26/2019

These plants have been pre-approved to fabricate steel barrier railings as defined by BC 713M (PA Bridge Barrier).

| | Product | Name | Plant City | Plant State | Ref. No. |
|---|---|---|---|---|---|
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | | | |
| | PA Bridge Barrier Railing | | Coatesville | PA | 2010-015Q |
| PENNF 15 | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/** | | | | |
| | ***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | | | |
| | PA Bridge Barrier Railing | | | | 2015-154QH |
| PMWI1 15 | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | | | |
| | PA Bridge Barrier Railing | | Carbondale | PA | 2018-218Q |
| PREC1 15 | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | | | | |
| | PA Bridge Barrier Railing | | Sistersville | WV | 2016-204Q |
| PSFAB 15 | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | | | |
| | PA Bridge Barrier Railing | | Bristol | PA | 2016-281 |
| QUABF 15 | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | | | |
| | PA Bridge Barrier Railing | | West Middlesex | PA | 2013-012Q |
| RG-ST 15 | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | | | |
| | PA Bridge Barrier Railing | | Pulaski | PA | 2010-111Q |
| RP-MA 15 | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | | | |
| | PA Bridge Barrier Railing | | Jersey Shore | PA | 2006-219Q |
| SAFGD 15 | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/** | | | | |
| Plant | **220 Lincoln Avenue Pittsburgh, PA 15209** | | | | |
| | PA Bridge Barrier Railing | | Millvale | PA | 2013-133QB |
| STRUS 15 | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | | | |
| | PA Bridge Barrier Railing | | | | 2015-142QE |

## Section 1101: Highway Lighting

### 1101.02 Highway Lighting Poles (Aluminum)

Last Revised: 9/4/2019

| Product | Name | Ref. No. |
|---|---|---|
| **APEX- 15** | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **HAPCO 15** | **Hapco/American Flagpole, 26252 Hillman Highway, Abington, VA 24210 http://hapco.com/** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **METPL 15** | **MPL (Metal Pole-Lite, Inc.), 375 & 375B St. Louis, Saint-Jean-Sur-Richelieu, Quebec Canada J3B 1Y4** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **P&KTP 15** | **P&K Tubular Products/Flagpoles, Inc., 95 Gnarled Hollow Road, East Setauket, NY 11733 http://pktubularproducts.com/** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **PHIHA 15** | **Philips Hadco, 100 Craftway, Littlestown, PA 17340 http://www.hadco.com/Hadco/home.html** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **SCEMC 15** | **Spring City Electrical Manufacturing Company, Inc., One South Main Street, Spring City, PA 19475 http://www.springcity.com/** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **STEVL 15** | **Sternberg Vintage Lighting, 555 Lawrence Avenue, Roselle, IL 60172 http://www.sternberglighting.com/www-sternberglighting-com/** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **UMIC1 15** | **Union Metal Industries Corporation, 1432 Maple Avenue NE Canton, Ohio 44705, Canton, OH 44705** | |
| | Highway Lighting Pole Fabricator (Aluminum) | 2018-177Q |
| **VALM1 15 Plant** | **Valmont Industries, Inc., 7002 N 288th Street, Valley, NE 68064 http://www.valmont.com/ Valley, NE 68064** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |
| **VALM2 15 Plant** | **Valmont Industries, Inc., 58027 Charlotte Ave., Elkhart, IN 46517 http://www.valmont.com/ Elkhart, IN 46517** | |
| | Highway Lighting Pole Fabricator (Aluminum) | ----- |

## Section 1101: Highway Lighting

### 1101.02 Highway Lighting Poles (Cast Iron)

Last Revised: 4/3/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| APEX- 15 | Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/ | | |
| | Highway Lighting Pole Fabricator (Cast iron) | | ----- |

### 1101.02 Highway Lighting Poles (Steel)

Last Revised: 11/26/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| APEX- 15 | Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/ | | |
| | Highway Lighting Pole Fabricator (Steel) | | ----- |
| HEART 15 | Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/<br>*Formerly Brownsville Marine Products* | | |
| | Highway Lighting Pole Fabricator (Steel) | | 2018-220Q |
| MCS-1 15<br>Facility | Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/<br>271 Industrial Lane Alum Bank, PA 15221 | | |
| | Highway Lighting Pole Fabricator (Steel) | | 2019-131Q |
| STRUS 15 | Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701 | | |
| | Highway Lighting Pole Fabricator (Steel) | | ----- |
| UMIC1 15 | Union Metal Industries Corporation, 1432 Maple Avenue NE Canton, Ohio 44705, Canton, OH 44705 | | |
| | Highway Lighting Pole Fabricator (Steel) | | 2018-177Q |
| VALM1 15<br>Plant | Valmont Industries, Inc., 7002 N 288th Street, Valley, NE 68064 http://www.valmont.com/<br>Valley, NE 68064 | | |
| | Highway Lighting Pole Fabricator (Steel) | | ----- |
| VALM5 15<br>Plant | Valmont Industries, Inc., 2551 Valmont Drive, Brenham, TX 77833 http://www.valmont.com/<br>Brenham, TX | | |
| | Highway Lighting Pole Fabricator (Steel) | | ----- |

## Section 1101: Highway Lighting

### 1101.06(c) Arm Mount Luminaires - LED - (Cobra Head)

Last Revised: 10/21/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ACUITY15 Plant** | **Acuity Brands Lighting, Inc., 1170 Peachtree Street, NE, Suite 2300, Atlanta, GA 30309-7676 Guadalupe, Mexico** | | |
| | Conventional LED Luminaire | Autobahn ATB0 | 2017-348Q |
| | Conventional LED Luminaire | Autobahn ATB2 | 2017-349Q |
| **EATON 15 Plant** | **Eaton (formerly Cooper Lighting), 1121 Highway 74 South, Peachtree City, GA 30269 http://www.cooperindustries.com/content/public/en/lighting.html Juarez, Mexico** | | |
| | Conventional LED Luminaire | Streetworks ARCH Archeon Small | 2018-098Q |
| | Conventional LED Luminaire | Streetworks ARCH-L Archeon Large | 2018-093Q |
| | Conventional LED Luminaire | Streetworks ARCH-M Archeon Medium | 2018-068Q |
| **GELED 15 Plant** | **General Electric Company, 1975 Noble Road, East Cleveland, OH 44112 https://products.currentbyge.com/ GE Lighting East Flat Rock, NC** | | |
| | Conventional LED Luminaire | GE Evolve ERL1 | 2018-101Q |
| | Conventional LED Luminaire | GE Evolve ERL2 | 2018-045Q |
| | Conventional LED Luminaire | GE Evolve ERLH | 2018-044Q |
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | |
| | Conventional LED Luminaire | ComfortView Neighborhood LED Streetlight, CV1-H | 2019-119Q |
| | Conventional LED Luminaire | GC2-96G GreenCobra LED Street Light - GC2 G-Series | 2017-291Q |
| | Conventional LED Luminaire | GCJ0-15H GreenCobra LED Street Light - GCJ Series | 2018-099Q |
| | Conventional LED Luminaire | GCJ1-20H GreenCobra LED Street Light - GCJ Series | 2018-099Q |
| | Conventional LED Luminaire | GCJ2-20H GreenCobra LED Street Light - GCJ Series | 2018-099Q |
| | Conventional LED Luminaire | GCM2-30H GreenCobra Midsize LED Street Light - GCM H-Series | 2017-351Q |
| | Conventional LED Luminaire | GCM2-40H GreenCobra Midsize LED Street Light - GCM H-Series | 2017-351Q |

## Section 1101: Highway Lighting

### 1101.06(c) Arm Mount Luminaires - LED - (Cobra Head)

Last Revised: 10/21/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIGN1 15 Plant** | **Signify (formerly Philips Lighting), 200 Franklin Square Drive, Somerset, NJ 08873 https://www.signify.com/en-us Camargo Chichuahua, Mexico** | | |
| | Conventional LED Luminaire | RoadFocus LED Cobra Head - Large (RFL) | 2018-152Q |
| | Conventional LED Luminaire | RoadFocus LED Cobra Head - Medium (RFM) | 2018-152Q |
| | Conventional LED Luminaire | RoadFocus LED Cobra Head - Small (RFS) | 2018-152Q |

### 1101.09 Highway Lighting Conduit

In lieu of certification, submit catalog cuts or shop drawings to the Engineer for approval, as specified in Publication 408, Section 1101.01.

Refer to the Project Office Manual for material information requirements.

### 1101.10 Highway Lighting Junction Boxes

Steel or Cast Iron Junction Boxes and Frames: See Section 605.2(a).

Precast Concrete Junction Boxes: See Section 714.

## Section 1103: Traffic Signing and Marking

### 1103.02 Extruded Aluminum Channel Signs (Post Mounted Types A and E; and Structure Mounted)

Last Revised: 2/4/2020

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| 3M-03 15 Plant | 3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ | Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000 | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| DONLN 15 | Donlyn Company/Osburn Associates, Inc., P.O. Box 912, Logan, OH 43138 http://www.osburns.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| ELDER 15 | Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| GARDS 15 | Garden State Highway Products, Inc., 1740 East Oak Road, Vineland, NJ 08361 http://www.gardenstatehwy.com/default.aspx | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| INSHS 15 | Interstate Highway Sign Company, 7415 Lindsey Road, Little Rock, AR 72206 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| LIGH1 15 | Lightle Enterprises of Ohio, LLC, P.O. Box 329, 22 East Springfield Street, Frankfort, OH 45628 http://www.lightleenterprisesohio.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | February 3, 2020 | ----- |
| LYLE- 15 | Lyle Signs, Inc., 6294 Bury Drive, Eden Prairie, MN 55346 http://lylesigns.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| PROTE 15 | Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| ROCAL 15 | Rocal, Inc., 3186 CR 550, Frankfort, OH 45628 http://www.rocal.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| STRBK 15 | Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ------ |

## Section 1103: Traffic Signing and Marking

### 1103.02 Extruded Aluminum Channel Signs (Post Mounted Types A and E; and Structure Mounted)

Last Revised: 2/4/2020

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **TRFSC 15** | **Trafco Supply Company, 1420 Ford Avenue, Harrisburg, PA 17109** | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ------ |
| **USMUS 15** | **U. S. Municipal Supply, Inc., 10583 Raystown Road, Huntingdon, PA 16652 http://store.usmuni.com/** | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-03 15 Plant** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | | |
| | Reflective Sheeting | 3314 | RS-1 | Type III / Type IV | Orange | Tubular Markers / Drums / Channelizers / Flexible Delineators | ----- |
| | Reflective Sheeting<br>*Provisionally Approved* | 334/336 | RS-1 | Type III / Type IV | White/Orange | Barricades / Panels Only | ----- |
| | Reflective Sheeting | 3340 | RS-1 | Type VIII | White | Cones Only | ----- |
| | Reflective Sheeting | 3811-I | RS-1 | Type III / Type IV | Yellow | Tubular Markers / Drums / Channelizers / Flexible Delineators | ----- |
| | Reflective Sheeting | 3872 | RS-1 | Type III | Red | No Restrictions | ----- |
| | Reflective Sheeting | 3910 | RS-1 | Type III / Type IV (reboundable) | White | Tubular Markers / Drums / Channelizers / Flexible Delineators | ----- |
| | Reflective Sheeting | 3914 | RS-1 | Type III / Type IV (reboundable) | Fluorescent Orange | Tubular Markers / Drums / Channelizers / Flexible Delineators | ----- |
| | Reflective Sheeting | 3924 | RS-1 | Type VII | Fluorescent Orange | Work Zones and Incidents Only | 1991-311 |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| 3M-03 15 Plant | 3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000 | | | | | | |
| | Reflective Sheeting | 3930 | RS-1 | Type III / Type IV | White | No Restrictions | ----- |
| | Reflective Sheeting | 3931 | RS-1 | Type III / Type IV | Yellow | No Restrictions | ----- |
| | Reflective Sheeting | 3934 | RS-1 | Type III / Type IV | Orange | Work Zones Only | 2014-144Q |
| | Reflective Sheeting | 3935 | RS-1 | Type III / Type IV | Blue | No Restrictions | ----- |
| | Reflective Sheeting | 3937 | RS-1 | Type III / Type IV | Green | No Restrictions | ----- |
| | Reflective Sheeting | 3981 | RS-1 | Type IX | Fluorescent Yellow | No Restrictions | 1999-165Q |
| | Reflective Sheeting | 3990 | RS-1 | Type IX | White | No Restrictions | ----- |
| | Reflective Sheeting | 3990T | RS-1 | Type VIII | Translucent White | Internally Illuminated Signs Only | ----- |
| | Reflective Sheeting | 3991 | RS-1 | Type IX | Yellow | No Restrictions | ----- |
| | Reflective Sheeting | 3992 | RS-1 | Type IX | Red | No Restrictions | ----- |
| | Reflective Sheeting | 3995 | RS-1 | Type IX | Blue | No Restrictions | ----- |
| | Reflective Sheeting | 3997 | RS-1 | Type IX | Green | No Restrictions | ----- |
| | Reflective Sheeting | 4081 | RS-1 | Type XI | Fluorescent Yellow | No Restrictions | 2010-078QG |
| | Reflective Sheeting | 4083 | RS-1 | Type XI | Fluorescent Yellow Green | No Restrictions | 2010-078QH |
| | Reflective Sheeting | 4084 | RS-1 | Type XI | Fluorescent Orange | Work Zones and Incidents Only | 2010-078QJ |
| | Reflective Sheeting | 4090 | RS-1 | Type XI | White | No Restrictions | 2010-078QA |
| | Reflective Sheeting | 4091 | RS-1 | Type XI | Yellow | No Restrictions | 2010-078QB |
| | Reflective Sheeting | 4092 | RS-1 | Type XI | Red | No Restrictions | 2010-078QC |
| | Reflective Sheeting | 4095 | RS-1 | Type XI | Blue | No Restrictions | 2010-078QD |
| | Reflective Sheeting | 4097 | RS-1 | Type XI | Green | No Restrictions | 2010-078QE |
| | Reflective Sheeting | 444/446 | RS-1 | Type XI | White/Orange | No Restrictions | 2010-078QK |
| | Reflective Sheeting | RS24 | RS-1 | Type VI (reboundable) | Fluorescent Orange | Work Zones and Incidents Only | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **3M-06 15 Plant** | **3M Company, 4501 Highway 377 South, Brownwood, TX 76804 http://www.3m.com/3M/en_US/company-us/ 4501 Highway 377 South Brownwood, TX 76804** | | | | | | |
| | Reflective Sheeting | 3334 Flexible Prismatic Reflective Barricade Sheeting (4-inch) | | Type IV | Orange and White | Barricades / Panels Only | 2016-076Q |
| | Reflective Sheeting | 3336 Flexible Prismatic Reflective Barricade Sheeting (6-inch) | | Type IV | Orange and White | Barricades / Panels Only | 2016-076Q |
| | Reflective Sheeting | 4081 | RS-1 | Type XI | Fluorescent Yellow | No Restrictions | 2010-078QG |
| | Reflective Sheeting | 4083 | RS-1 | Type XI | Fluorescent Yellow Green | No Restrictions | 2010-078QH |
| | Reflective Sheeting | 4084 | RS-1 | Type XI | Fluorescent Orange | Work Zones and Incidents Only | 2010-078QJ |
| | Reflective Sheeting | 4090 | RS-1 | Type XI | White | No Restrictions | 2010-078QA |
| | Reflective Sheeting | 4091 | RS-1 | Type XI | Yellow | No Restrictions | 2010-078QB |
| | Reflective Sheeting | 4092 | RS-1 | Type XI | Red | No Restrictions | 2010-078QC |
| | Reflective Sheeting | 4095 | RS-1 | Type XI | Blue | No Restrictions | 2010-078QD |
| | Reflective Sheeting | 4097 | RS-1 | Type XI | Green | No Restrictions | 2010-078QE |
| | Reflective Sheeting | 444/446 | RS-1 | Type XI | White/Orange | No Restrictions | 2010-078QK |
| | Reflective Sheeting | RS60 | | Type VI | White | No Restrictions | 2016-228Q |
| | Reflective Sheeting | RS64I | | Type VI | Fluorescent Orange | No Restrictions | 2016-243Q |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **AVERY 15 Plant** | **Avery Dennison Reflective Solutions, 7542 North Natchez Avenue, Niles, IL 60714 http://reflectives.averydennison.com/en/home.html 902 Feehanville Drive Mount Prospect, IL 60056** | | | | | | |
| | Reflective Sheeting | T-11500 | RS-6 | Type XI | White | No Restrictions | 2012-081QD |
| | Reflective Sheeting | T-11501 | RS-6 | Type XI | Yellow | No Restrictions | 2012-081QC |
| | Reflective Sheeting | T-11505 | RS-6 | Type XI | Blue | No Restrictions | 2012-081QB |
| | Reflective Sheeting | T-11507 | RS-6 | Type XI | Green | No Restrictions | 2012-081QA |
| | Reflective Sheeting | T-11508 | RS-6 | Type XI | Red | No Restrictions | 2012-081QE |
| | Reflective Sheeting | T-11511 | | Type XI | Flourescent Yellow | No Restrictions | 2017-008Q |
| | Reflective Sheeting | T-11513 | RS-6 | Type XI | Fluorescent Yellow Green | No Restrictions | 2012-081QG |
| | Reflective Sheeting | T-6500 | RS-6 | Type III / Type IV | White | No Restrictions | 1996-158A |
| | Reflective Sheeting | T-6501 | RS-6 | Type III / Type IV | Yellow | No Restrictions | 1996-158B |
| | Reflective Sheeting | T-6505 | RS-6 | Type III / Type IV | Blue | No Restrictions | 1996-158D |
| | Reflective Sheeting | T-6507 | RS-6 | Type III / Type IV | Green | No Restrictions | 1996-158C |
| | Reflective Sheeting | T-6508 | RS-6 | Type III / Type IV | Red | No Restrictions | 1996-158E |
| | Reflective Sheeting | T-7500 | RS-6 | Type VIII | White | No Restrictions | 2006-214Q |
| | Reflective Sheeting | T-7511 | RS-6 | Type VIII | Fluorescent Yellow | No Restrictions | 2001-115Q |
| | Reflective Sheeting | T-7513 | | Type VIII | Flourescent Yellow Green | No Restrictions | 2017-007Q |
| | Reflective Sheeting | T-9500 | RS-6 | Type IX | White | No Restrictions | 2009-109Q |
| | Reflective Sheeting | T-9501 | RS-6 | Type IX | Yellow | No Restrictions | 2009-112Q |
| | Reflective Sheeting | T-9505 | RS-6 | Type IX | Blue | No Restrictions | 2009-114Q |
| | Reflective Sheeting | T-9507 | RS-6 | Type IX | Green | No Restrictions | 2009-110Q |
| | Reflective Sheeting | T-9508 | RS-6 | Type IX | Red | No Restrictions | 2009-111Q |
| | Reflective Sheeting | T-9511 | RS-6 | Type IX | Fluorescent Yellow | No Restrictions | 2009-113Q |
| | Reflective Sheeting | T-9513 | RS-6 | Type IX | Fluorescent Green | No Restrictions | 2009-108Q |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **AVERY 15 Plant** | **Avery Dennison Reflective Solutions, 7542 North Natchez Avenue, Niles, IL 60714 http://reflectives.averydennison.com/en/home.html 902 Feehanville Drive Mount Prospect, IL 60056** | | | | | | |
| | Reflective Sheeting | W-11000 | RS-6 | Type XI | White/Orange | No Restrictions | 2015-175Q |
| | *Provisional approval is granted through calendar year 2016 or until such time as NTPEP testing data is available from the Arizona testing site.* | | | | | | |
| | Reflective Sheeting | W-11514 | RS-6 | Type XI | Fluorescent Orange | No Restrictions | 2012-081QH |
| | Reflective Sheeting | W-6100 | RS-6 | Type III | White/Orange | Barricades / Panels Only | 2012-108Q |
| | Reflective Sheeting | W-6200 | RS-6 | Type III | White/Orange | Barricades / Panels Only | 1996-158I |
| | Reflective Sheeting | W-6504 | RS-6 | Type III / Type IV | Orange | No Restrictions | 1998-043 |
| | Reflective Sheeting | W-7514 | RS-6 | Type VIII | Fluorescent Orange | No Restrictions | ----- |
| | Reflective Sheeting | W-9514 | RS-6 | Type IX | Fluorescent Orange | No Restrictions | 2009-115Q |
| | Reflective Sheeting | WR-6100 | RS-6 | Type III (reboundable) | White | Cones Only | 2014-146Q |
| | Reflective Sheeting | WR-6100 | RS-6 | Type III (reboundable) | White | Drums Only | 2014-146Q |
| | Reflective Sheeting | WR-6100 | RS-6 | Type III (reboundable) | White | Tubular Markers Only | 2014-146Q |
| | Reflective Sheeting | WR-6104 | RS-6 | Type III (reboundable) | Orange | Cones Only | 2014-147Q |
| | Reflective Sheeting | WR-6104 | RS-6 | Type III (reboundable) | Orange | Drums Only | 2014-147Q |
| | Reflective Sheeting | WR-6104 | RS-6 | Type III (reboundable) | Orange | Tubular Markers Only | 2014-147Q |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| NIPCA 15 | Nippon Carbide Industries USA Inc., 12981 East Florence Avenue, Santa Fe Springs, CA 90670 http://nikkalite.com/ | | | | | | |
| | Reflective Sheeting | 92805 | RS-3 | Type VIII | Red | No Restrictions | ----- |
| | Reflective Sheeting | 92806 | RS-3 | Type VIII | Blue | No Restrictions | ----- |
| | Reflective Sheeting | 92808 | RS-3 | Type VIII | Green | No Restrictions | ----- |
| | Reflective Sheeting | 92847 | RS-3 | Type VIII | Fluorescent Orange | No Restrictions | ----- |
| | Reflective Sheeting | 94802 | | Type IV | White | No Restrictions | 2016-310Q |
| | Reflective Sheeting | 94804 | RS-3 | Type IV | Yellow | No Restrictions | 2014-041QA |
| | Reflective Sheeting | 94804 | | Type IV | Yellow | No Restrictions | 2016-310Q |
| | Reflective Sheeting | 94805 | | Type IV | Red | No Restrictions | 2016-310Q |
| | Reflective Sheeting | 94806 | RS-3 | Type IV | Blue | No Restrictions | 2014-041QC |
| | Reflective Sheeting | 94806 | | Type IV | Blue | No Restrictions | 2016-310Q |
| | Reflective Sheeting | 94808 | | Type IV | Green | No Restrictions | 2016-310Q |
| | Reflective Sheeting | N504 | RS-3 | Type III | Yellow | No Restrictions | ----- |
| | Reflective Sheeting | N506 | RS-3 | Type III | Blue | No Restrictions | ----- |
| | Reflective Sheeting | N507 | RS-3 | Type III | Orange | No Restrictions | ----- |
| | Reflective Sheeting | N508 | RS-3 | Type III | Green | No Restrictions | ----- |
| | Reflective Sheeting | N512 | RS-3 | Type III | White | No Restrictions | ----- |
| | Reflective Sheeting | N517 | RS-3 | Type III | White/Orange | Barricades / Panels Only | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **ORAAI 15** | **Orafol Americas Inc., 120 Darling Drive, Avon, CT 06001 https://www.orafol.com/corp/americas/en/frontpage** | | | | | | |
| | ***Formerly Reflexite North America (REFLE 15)*** | | | | | | |
| | Reflective Sheeting | C85-1572 | RSF-2 | Type III (reboundable) | White | No Restrictions | 1998-003 |
| | *Provisionally Approved* | | | | | | |
| | Reflective Sheeting | C85-1772 | RSF-2 | Type III (reboundable) | Orange | No Restrictions | 1998-003 |
| | *Provisionally Approved* | | | | | | |
| | Reflective Sheeting | D89-1541 AR1000 | RSF-2 | Type V (reboundable) | White | No Restrictions | 1996-111 |
| | Reflective Sheeting | D89-1841 AR1000 | RSF-2 | Type V (reboundable) | Yellow | No Restrictions | 1996-111 |
| | Reflective Sheeting | Marathon | RSF-2 | Type VI | White | No Restrictions | 2000-184Q |
| | Reflective Sheeting | Marathon | RSF-2 | Type VI | Fluorescent Orange | No Restrictions | 2000-185Q |
| | Reflective Sheeting | ORALITE 5900-010 | RSF-2 | Type IV | White | No Restrictions | 2014-155QA |
| | Reflective Sheeting | ORALITE 5900-020 | RSF-2 | Type IV | Yellow | No Restrictions | 2014-155QB |
| | Reflective Sheeting | ORALITE 5900-030 | RSF-2 | Type IV | Red | No Restrictions | 2014-155QC |
| | Reflective Sheeting | ORALITE 5900-050 | RSF-2 | Type IV | Blue | No Restrictions | 2014-155QD |
| | Reflective Sheeting | ORALITE 5900-060 | RSF-2 | Type IV | Green | No Restrictions | 2014-155QE |
| | Reflective Sheeting | ORALITE 5930-038 | RSF-2 | Type IV | Fluorescent Orange | No Restrictions | 2012-143Q |
| | Reflective Sheeting | ORALITE 5930-038 | | Type IX | Fluorescent Orange | No Restrictions | 2016-177Q |
| | Reflective Sheeting | ORALITE 5934-010 | | Type III / Type IV (reboundable) | White | Tubular Markers / Drums / Channelizers / Flexible Delineators | 2019-227Q |
| | Reflective Sheeting | ORALITE 5935-010 Marathon | | Type VIII (reboundable) | White | Tubular Markers / Drums / Channelizers / Flexible Delineators | 2020-070Q |

## Section 1103: Traffic Signing and Marking

### 1103.02(c) Reflective Sheeting

Last Revised: 8/20/2020

| | Product | Name | COA | Sheeting Type | Colors | Restricted Use | Ref. No. |
|---|---|---|---|---|---|---|---|
| **ORAAI 15** | **Orafol Americas Inc., 120 Darling Drive, Avon, CT 06001 https://www.orafol.com/corp/americas/en/frontpage** *Formerly Reflexite North America (REFLE 15)* | | | | | | |
| | Reflective Sheeting | ORALITE 5935-029 Marathon | | Type VIII (reboundable) | Fluorescent Yellow Green | Tubular Markers / Drums / Channelizers / Flexible Delineators | 2020-072Q |
| | Reflective Sheeting | ORALITE 5935-038 Marathon | | Type VIII (reboundable) | Fluorescent Orange | Tubular Markers / Drums / Channelizers / Flexible Delineators | 2020-071Q |
| | Reflective Sheeting | ORALITE 7900-010 | | Type IX | White | No Restrictions | 2018-243Q |
| | Reflective Sheeting | ORALITE 7900-020 | | Type IX | Yellow | No Restrictions | 2017-319Q |
| | Reflective Sheeting | ORALITE 7900-029 | | Type IX | Fluorescent Yellow-Green | No Restrictions | 2017-322Q |
| | Reflective Sheeting | ORALITE 7900-037 | | Type IX | Fluorescent Yellow | No Restrictions | 2017-323Q |
| | Reflective Sheeting | ORALITE 7900-050 | | Type IX | Blue | No Restrictions | 2017-321Q |
| | Reflective Sheeting | ORALITE 7900-060 | | Type IX | Green | No Restrictions | 2017-320Q |
| | Reflective Sheeting | Super Brite | RSF-2 | Type VI | Fluorescent Orange | No Restrictions | 1997-038 |
| | *Provisionally Approved* | | | | | | |

### 1103.03 Electrically Powered Traffic Signs

Last Revised: 4/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ALLTS 15** | **All Traffic Solutions, 3100 Research Drive, State College, PA 16801 http://www.alltrafficsolutions.com/** | | | | |
| | Speed Display Sign | SA18 | ATS-004P | 12/1/2011 | ----- |
| | Speed Display Sign | SH12 | ATS-001P | 12/1/2011 | ----- |
| | Speed Display Sign | SH15 | ATS-002P | 12/1/2011 | ----- |
| | Speed Display Sign | SS12 | ATS-003P | 12/1/2011 | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.03 Electrically Powered Traffic Signs

Last Revised: 4/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **APXEN 15** | **APX Enclosures, Inc., 200 Oregon Street, Mercersburg, PA 17236 http://apx-enclosures.com/main/index.html** | | | | |
| | Internally Illuminated Sign | 1-850-000621 | APX-001P | 10/26/2010 | ----- |
| **CARMH 15** | **Carmanah Technologies Corporation, 250 Bay Street, Victoria, BC V9A 3K5** | | | | |
| | ***Formerly Spot Devices, Inc. (SPODE 15)*** | | | | |
| | School Warning Sign System | R829C | CTC-003P | 12/9/2009 | ----- |
| | School Warning Sign System | SB410 | CTC-004P | 7/25/2013 | ----- |
| | School Warning Sign System | SC-15.FL | CTC-007P | 2/28/2020 | ----- |
| | Warning Sign System | R247RC | CTC-001P | 12/9/2009 | ----- |
| | Warning Sign System | R820C | CTC-002P | 12/9/2009 | ----- |
| **CROAS 15** | **Cross Alert Systems, Inc., 20 Altieri Way, #3, Warwick, RI 02886 http://www.crossalert.com/** | | | | |
| | Warning Sign System | BP-IN | CAS-002P | 5/29/2012 | ----- |
| | Warning Sign System | BP-IN12 | CAS-001P | 4/5/2012 | ----- |
| **ELAN1 15** | **Elan City Inc., 10-34 44th Drive, Long Island City, NY 11101 https://www.elancity.net/** | | | | |
| **Plant** | **Elan Cité Orvault, France** | | | | |
| | Speed Display Sign | Evolis | ELA-001P | 12/21/2018 | 2017-158Q |
| **ELECT 15** | **Electrotechnics Corporation, 1310 Commerce Street, Marshall, TX 75672 http://www.elteccorp.com/** | | | | |
| | School Warning Sign System | S891161 | ECH-020P | 12/7/2011 | ----- |
| | School Warning Sign System | S891162 | ECH-021P | 12/7/2011 | ----- |
| | Warning Sign System | CautionGuard | EHC-018P | 2/18/2003 | ----- |
| | Warning Sign System | S891163 | ECH-022P | 12/7/2011 | ----- |
| | Warning Sign System | S891164 | ECH-023P | 12/7/2011 | ----- |
| | Warning Sign System | S891165 | ECH-024P | 12/7/2011 | ----- |
| | Warning Sign System | S891166 | ECH-025P | 12/7/2011 | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.03 Electrically Powered Traffic Signs

Last Revised: 4/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **GENHP 15** | **General Highway Products, Inc., 878 Sussex Blvd., P. O. Box 596, Broomall, PA 19008 http://generalhighwayproducts.com/** | | | | |
| | School Warning Sign System | MSRS-101-I | GHP-001P | 4/13/1995 | ----- |
| **KUSTOM15** | **Kustom Signals, Inc., 9652 Loiret Boulevard, Lenexa, KS 66219-2406 https://www.kustomsignals.com/** | | | | |
| | Speed Display Sign | PMD 12 | KUS-001P | 4/6/2020 | 2020-006Q |
| **NATSG 15** | **National Signal, Inc., 2440 Artesia Avenue, Fullerton, CA 92833 http://www.nationalsignalinc.net/** | | | | |
| | Blankout Sign | DLED | NSI-002P | 10/22/2010 | ----- |
| | Blankout Sign | NuArt IIRS Series | NSI-001P | 9/29/2009 | ----- |
| **NATSS 15** | **National Sign & Signal Company, 301 S. Armstrong Road, Battle Creek, MI 49037 http://www.nationalssc.com/** | | | | |
| | Blankout Sign | 48LEDRSA-PA | NSS-007P | 3/9/2012 | ----- |
| | Blankout Sign | E-101-WW Series | NSS-003S | 2/26/1976 | ----- |
| | Blankout Sign | E-101-WW-1 | NSS-001S | 12/6/1974 | ----- |
| | Blankout Sign | FO-BO | NSS-006S | 10/6/1987 | ----- |
| | Blankout Sign | SF-107-2 Series | NSS-002S | 12/18/1974 | ----- |
| | Fire Warning Sign | FIRE SIGN | NSS-004S | 9/26/1977 | ----- |
| | Internally Illuminated Sign | FSF Series | NSS-008P | 6/5/2012 | ----- |
| | Internally Illuminated Sign | XXLEDBLB-R | NSS-010P | 4/27/2016 | ----- |
| | Internally Illuminated Sign | XXLEDBLB-W | NSS-009P | 4/27/2016 | ----- |
| **ORANG 15** | **Orange Traffic, 18195 Rue J A Bombardier, Mirabel, Quebec J7J 0E7 https://www.orangetraffic.com/** | | | | |
| | Blankout Sign | LED Blank Out Sign | OTR-001P | 7/13/2018 | 2016-147Q |
| **PATH- 15** | **Path Master, Inc., 1960 Midway Drive, P.O. Box 451, Twinsburg, OH 44087 https://www.pathmasterinc.com/** | | | | |
| | School Warning Sign System | QFA Series | PHM-003P | 11/15/2010 | ----- |
| **RADAR 15** | **Radarsign, LLC, 1220 Kennestone Circle, Ste 130, Marietta, GA 30066 https://www.radarsign.com/** | | | | |
| | Speed Display Sign | TC-600S Full Matrix | RAA-001P | 5/9/2019 | 2018-176Q |

## Section 1103: Traffic Signing and Marking

### 1103.03 Electrically Powered Traffic Signs

Last Revised: 4/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **RTC-M 15** | **RTC Manufacturing Inc., P. O. Box 150189, Arlington, TX 76015 http://www.rtc-traffic.com/** | | | | |
| | Fire Warning Sign | FIRE | RTC-003P | 8/27/1996 | ----- |
| **SIGNS 15** | **Signal Service Inc., 1020 Andrew Drive, West Chester, PA 19380 http://www.signalservice.com/** | | | | |
| | School Warning Sign System | SWD-1 | SSI-005S | 1/9/1989 | ----- |
| | School Warning Sign System | SWD-1 LED | SSI-007P | 10/4/2011 | ----- |
| **SIGP2 15** | **Signal Control Products, Inc., 737 Hagey Center Drive, Unit B1, Souderton, PA 18964 http://www.signalcontrol.com/** | | | | |
| | School Warning Sign System | School Speed Limit Sign | SCP-004P | 2/17/2010 | ----- |
| **SOUMC 15** | **Southern Manufacturing Company, 501 Herndon Ave., Orlando, FL 32803 http://southernmfg.com/** | | | | |
| | Internally Illuminated Sign | FF-1.1 | SMC-001P | 2/14/1994 | ----- |
| | Internally Illuminated Sign | FF-1.1S680022120 | SMC-002P | 2/14/1994 | ----- |
| **TLX-1 15** | **Traffic Logix, 3 Harriet Lane, Spring Valley, NY 10977 https://trafficlogix.com/** | | | | |
| | Speed Display Sign | SafePace Evolution 12 | TLX-001P | 4/18/2019 | 2019-011 |
| **TRACP 15** | **Traffic Control Products, Inc., 4565 Glenbrook Road, Willoughby, OH 44094 http://www.traffcon.com/** | | | | |
| | School Warning Sign System | 3654PASOP | TCP-001P | 1/18/2002 | ----- |
| | School Warning Sign System | SSA-PA-II | TCP-003P | 7/8/2011 | ----- |
| **TRAFF 15** | **TraffiCalm Systems, 5676 East Seltice Way, Post Falls, ID 83854 http://trafficalm.com/** | | | | |
| | Speed Display Sign | iQ1200 Driver Feedback Sign | TAC-001P | 9/14/2018 | 2017-259Q |

## Section 1103: Traffic Signing and Marking

### 1103.03 Electrically Powered Traffic Signs

Last Revised: 4/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **TRASI 15** | **Traffic Signs, Inc., 1499 East Michigan Avenue, Battle Creek, MI 49014 http://www.trafficsignsinc.com/Site/Home.html** | | | | |
| | Blankout Sign | 6000-FOBO | TSI-001P | 5/22/2002 | ----- |
| | Blankout Sign | 6000-LED BO | TSI-004P | 10/5/2010 | ----- |
| | Internally Illuminated Sign | 6000-CASE | TSI-002P | 12/20/2002 | ----- |
| | Internally Illuminated Sign | 6000-LED II | TSI-005P | 10/5/2010 | ----- |
| | Internally Illuminated Sign | 6000-SNS | TSI-003P | 12/20/2002 | ----- |
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | |
| | Internally Illuminated Sign | JXM-STN | TRA-030P | 11/23/2010 | ----- |
| **TRFPC 15** | **TAPCO - Traffic & Parking Control Company, Inc., 5100 W. Brown Deer Road, Brown Deer, WI 53223 http://www.tapconet.com/** | | | | |
| | School Warning Sign System | Dual BlinkerBeacon School Zone System LED | TCO-003P | 8/14/2018 | 2017-196Q |
| | Warning Sign System | BlinkerBeacon LED Beacons | TCO-002P | 4/10/2018 | 2017-237Q |
| **WELSM 15** | **Wells Sign Manufacturing, Inc., 109 Brothers Road, Woodland, WA 98674** | | | | |
| | Blankout Sign | BO | WEL-001P | 10/10/1992 | ----- |
| | Internally Illuminated Sign | II | WEL-003P | 10/10/1992 | ----- |

### 1103.03 Flat Sheet Aluminum Signs with Stiffeners (Post Mounted Types A, D, and E; and Structure

Last Revised: 10/23/2019

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **3M-03 15** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/** | | | |
| **Plant** | **Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | |
| | Fabricated Aluminum Sign Manufacturer | | | - |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.03 Flat Sheet Aluminum Signs with Stiffeners (Post Mounted Types A, D, and E; and Structure

Last Revised: 10/23/2019

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| DONLN 15 | Donlyn Company/Osburn Associates, Inc., P.O. Box 912, Logan, OH 43138 http://www.osburns.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| ELDER 15 | Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| ESTTC 15 | Established Traffic Control, Inc., 3162 Unionville Pike, Hatfield, PA 19440 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | 2019-200Q |
| GARDS 15 | Garden State Highway Products, Inc., 1740 East Oak Road, Vineland, NJ 08361 http://www.gardenstatehwy.com/default.aspx | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| INSHS 15 | Interstate Highway Sign Company, 7415 Lindsey Road, Little Rock, AR 72206 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| LYLE- 15 | Lyle Signs, Inc., 6294 Bury Drive, Eden Prairie, MN 55346 http://lylesigns.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| MAISI 15 | Main Stream Industries, Inc., 7340 Bernville Road, Bernville, PA 19506 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| MILLS 15 | Miller Municipal Supply LLC, 1117 Snyder Road, West Lawn, PA 19609 http://www.mmssigns.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| PROTE 15 | Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| ROCAL 15 | Rocal, Inc., 3186 CR 550, Frankfort, OH 45628 http://www.rocal.com/ | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| STRBK 15 | Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957 | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.03 Flat Sheet Aluminum Signs with Stiffeners (Post Mounted Types A, D, and E; and Structure

Last Revised: 10/23/2019

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| TRFSC 15 | **Trafco Supply Company, 1420 Ford Avenue, Harrisburg, PA 17109** | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |
| USMUS 15 | **U. S. Municipal Supply, Inc., 10583 Raystown Road, Huntingdon, PA 16652 http://store.usmuni.com/** | | | |
| | Fabricated Aluminum Sign Manufacturer | | | ----- |

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| 3DS1 15 | **3D Specialties, Inc., 1110 25th Avenue N, Fargo, ND 58102** | | | | | |
| | Sign Manufacturer | | PDT 2150-19 | Cut Out Characters and Silk Screen | | - |
| 3M-03 15 Plant | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | |
| | Sign Manufacturer | | PDT 110-68 | Cut Out Characters and Silk Screen | | ----- |
| ACESI 15 | **Ace of Signs, 500 Airport Road, Selinsgrove, PA 17870 http://www.aceofsigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 1870-04 | | | ----- |
| AMEFT 15 | **American Fiber Technologies, 500 Bostwick Avenue, Bridgeport, CT 06605 https://www.frpsigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 2040-11 | | Only faces manufactured by 3M, PDT 110-68 | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **ASSPR 15** | **Associated Products Company, 2 East Road, Mechanicsburg, PA 17050 http://www.associated-products.com/** | | | | | |
| | Sign Manufacturer | | PDT 820-78 | Cut Out Characters | Black on Orange Construction Series Only | ----- |
| **ATLAS 15** | **Atlas Flasher & Supply Company, 2949 Felton Road, Norristown, PA 19401 http://www.atlasflasher.com/** | | | | | |
| | Sign Manufacturer | | PDT 1100-84 | | | ----- |
| **BASSEC15** | **Bassler Equipment Co., Inc., 1300 Wyoming Avenue, Forty Fort, PA 18704 http://www.basslerequipment.com/** | | | | | |
| | Sign Manufacturer | | PDT 2120-18 | Cut Out Characters | | ----- |
| **BLAIR 15** | **Blair Excavating Company Inc., R. R. #5, Box 308A, Tyrone, PA 16686** | | | | | |
| | Sign Manufacturer | | PDT 1400-91 | | | ----- |
| **BONE- 15** | **Bone Safety Signs, Inc., 2151 Northwest Parkway, S.E., Suite 100, Marietta, GA 30067 http://www.bonesafety.com/** | | | | | |
| | Sign Manufacturer | | PDT 1320-89 | Silk Screen | | ----- |
| **BRADC 15** | **Bradco Supply Company, 80 Old Mills Rd., Towanda, PA 18848 http://www.bradcosupplycompany.com/default.htm** | | | | | |
| | Sign Manufacturer | | PDT 270-68 | Cut Out Characters and Silk Screen | | ----- |
| **CAMSC 15** | **Camsco Services, Inc., 255 Pennbriar Drive, Erie, PA 16509 https://camsco.com/public/home.html** | | | | | |
| | Sign Manufacturer | | PDT 1750-01 | Cut Out Characters | | ----- |
| **CASSI 15** | **Cassidy Signs, 7 Cassidy Drive, Burgettstown, PA 15021** | | | | | |
| | Sign Manufacturer | | PDT 2050-11 | Cut Out Characters | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **CENTS 15** | **Keystone Sign Systems DBA Central Sign Systems, 5215 Simpson Ferry Road, Mechanicsburg, PA 17050** | | | | | |
| | Sign Manufacturer | | PDT 1560-95 | Cut Out Characters and Silk Screen | | ----- |
| **CLARS 15** | **Clarion Signs, 255 Whisner Road, Shippenville, PA 16254 http://www.clarionsafety.com/** | | | | | |
| | Sign Manufacturer | | PDT 1690-99 | | | ----- |
| **COMSG 15** | **Compusign & Graphic, 1295 Baltimore Pike, Toughkenamon, PA 19374-0271 http://compusign.com/** | | | | | |
| | Sign Manufacturer | | PDT 1820-03 | Cut Out Characters and Silk Screen | | ----- |
| **CORCG 15** | **Corson Custom Graphics, 53 Corson Lane, Canonsburg, PA 15317** | | | | | |
| | Sign Manufacturer | | PDT 1850-04 | Cut Out Characters and Silk Screen | | ----- |
| **CORRE 15** | **Correctional Industries Sign Shop, State Correctional Institute - Fayette, 50 Overlook Drive, Labelle, PA 15450** | | | | | |
| | Sign Manufacturer | | PDT 1730-01 | Cut Out Characters and Silk Screen | | ----- |
| **COSDS 15** | **C.O. Signs & Designs, Inc., 10125 Route 56, Box B, Homer City, PA 15748** | | | | | |
| | Sign Manufacturer | | PDT 1770-02 | Cut Out Characters and Silk Screen | | ----- |
| **CSIGNS15** | **Commonwealth Signs LLC, 135 Antler Drive, Canadensis, PA 18325 http://commonwealthsignsllc.com/** | | | | | |
| | Sign Manufacturer | | PDT 2170-20 | Cut Out Characters | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **CUSTP 15** | **Custom Products Corporation, P.O. Box 54091, Jackson, MS 39288-4091 http://www.customproducts.net/** | | | | | |
| | Sign Manufacturer | | PDT 1790-02 | Silk Screen | | ----- |
| **D&DLE 15** | **D & D Leasing, LLC, 1621 Middle Road, Gibsonia, PA 15044** | | | | | |
| | Sign Manufacturer | | PDT 1550-95 | Cut Out Characters and Silk Screen | | ----- |
| **DAYCS 15** | **Dayton Computer & Sign, Inc., 107 N. School Street, Apt. 3, P. O. Box 616, Dayton, PA 16222** | | | | | |
| | Sign Manufacturer | | PDT 1890-05 | Cut Out Characters | | ----- |
| **DECAL 15** | **Decal Driven.com, Box 108, Walston, PA 15781** | | | | | |
| | Sign Manufacturer | | PDT 1880-04 | Cut Out Characters | | ----- |
| **DECKR 15** | **Decker Supply Company, Inc., 1115 O'Neill Avenue, Madison, WI 53704 http://deckersupply.com/** | | | | | |
| | Sign Manufacturer | | PDT 1010-81 | Cut Out Characters and Silk Screen | | ----- |
| **DICKE 15** | **Dicke Tool Company, 1201 Warren Avenue, Downers Grove, IL 60515 http://dicketool.com/** | | | | | |
| | Sign Manufacturer | | PDT 750-76 | Silk Screen | | ----- |
| **DONLN 15** | **Donlyn Company/Osburn Associates, Inc., P.O. Box 912, Logan, OH 43138 http://www.osburns.com/** | | | | | |
| | Sign Manufacturer | | PDT 1760-01 | Cut Out Characters and Silk Screen | | ----- |
| **DTRAF 15** | **Directional Traffic LLC, 1580 Gabler Road, Suite 103, Chambersburg, PA 17201 http://www.directionaltraffic.com/** | | | | | |
| **Facility** | **1580 Gabler Road Suite 103 Chambersburg, PA 17201** | | | | | |
| | Sign Manufacturer | | PDT 2130-18 | Cut Out Characters | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | | |
| | Sign Manufacturer | | PDT 020-68 | Cut Out Characters and Silk Screen | | ----- |
| | Sign Manufacturer | | PDT 021-75 | Cut Out Characters and Silk Screen | | ----- |
| **ELDER 15** | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | | | | |
| | Sign Manufacturer | | PDT 610-74 | Silk Screen | | ----- |
| **ESTTC 15** | **Established Traffic Control, Inc., 3162 Unionville Pike, Hatfield, PA 19440** | | | | | |
| | Sign Manufacturer | | PDT 1910-06 | Cut Out Characters | | ----- |
| **FISTC 15** | **C. R. Fisher Traffic Control, LLC, 10176 Chapel Church Road, Red Lion, PA 17356** | | | | | |
| | Sign Manufacturer | | PDT 1830-04 | | | ----- |
| **GARDS 15** | **Garden State Highway Products, Inc., 1740 East Oak Road, Vineland, NJ 08361 http://www.gardenstatehwy.com/default.aspx** | | | | | |
| | Sign Manufacturer | | PDT 1300-88 | Cut Out Characters and Silk Screen | | ----- |
| **GEMML 15** | **D.E. Gemmill, Inc., 10174 Chapel Church Road, Red Lion, PA 17356 http://degemmill.com/** | | | | | |
| | Sign Manufacturer | | PDT 1720-01 | Cut Out Characters | | ----- |
| **GRIFN 15** | **Griffin Sign Company, 464 North Randolph Ave., Cinnaminson, NJ 08077 http://www.griffinhighway.com/index.php** | | | | | |
| | Sign Manufacturer | | PDT 680-75 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **GRIMC 15** | **Grimco, Inc., 1585 Fencorp Drive, Fenton, MO 63026 http://www.grimco.com/** | | | | | |
| | Sign Manufacturer | | PDT 290-69 | Silk Screen | | ----- |
| **HALLS 15** | **Hall Signs, Inc., 4495 West Vernel Pike, P.O. Box 515, Bloomington, IN 47402 http://store.hallsigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 560-73 | | | ----- |
| **HIWSS 15** | **Hi-Way Safety Systems, Inc., 9 Rockview Way, Rockland, MA 02370 http://www.hiwayss.com/concrete5.4.2.2/index.php** | | | | | |
| | Sign Manufacturer | | PDT 1860-04 | Cut Out Characters | | ----- |
| **IBITK 15** | **ibisSIGNS, LLC (Formerly Ibis Tek, LLC), 496 Pittsburgh Road, Butler, PA 16002 http://www.ibissigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 2010-08 | Silk Screen | Street Name Signs D 3-1 | ----- |
| **IMAGE 15** | **Image Signs Inc., 1720 B. Margaret Ave., Altoona, PA 16601 http://imagesignsinc.com/** | | | | | |
| | Sign Manufacturer | | PDT 1460-93 | | | ----- |
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | | | |
| | Sign Manufacturer | | PDT 1810-03 | Silk Screen | | ----- |
| **INSHS 15** | **Interstate Highway Sign Company, 7415 Lindsey Road, Little Rock, AR 72206** | | | | | |
| | Sign Manufacturer | | PDT 670-75 | Cut Out Characters and Silk Screen | | ----- |
| **INTER 15** | **Interstate Logos, L.L.C., 6696 Exchequer Drive, Baton Rouge, LA 70809 http://www.interstatelogos.com/main/** | | | | | |
| | Sign Manufacturer | | PDT 2110-17 | Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

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Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| JLSCR 15 | J. L. Screen Printing, Rt.#31, P.O. Box 324, Ruffs Dale, PA 15697 http://www.jlscreen.com/ | | | | | |
| | Sign Manufacturer | | PDT 1140-84 | Cut Out Characters and Silk Screen | | ----- |
| KAGSW 15 | KAG Signworks, 444 Saint Clair Ave., Clairton, PA 15025 | | | | | |
| | Sign Manufacturer | | PDT 030-68 | Cut Out Characters and Silk Screen | | ----- |
| KEMGR 15 | Kemmerer Graphics, 6169 Sullivan Trail, Nazareth, PA 18064 | | | | | |
| | Sign Manufacturer | | PDT 2000-08 | Cut Out Characters | | ----- |
| KORMN 15 | Korman Signs, Inc., 3029 Lincoln Ave., Henrico, VA 23228 http://www.kormansigns.com/ | | | | | |
| | Sign Manufacturer | | PDT 1050-82 | Silk Screen | | ----- |
| KRIEG 15 | Daniel B. Krieg, Inc., 4200 Paxton Street, Harrisburg, PA 17111 http://www.dbkrieginc.com/ | | | | | |
| | Sign Manufacturer | | PDT 1470-93 | Cut Out Characters | | ----- |
| LETIN 15 | Letterco, Inc., 1069 County Line Road, Souderton, PA 18964 http://www.letterco.com/ | | | | | |
| | Sign Manufacturer | | PDT 1220-86 | Cut Out Characters | | ----- |
| LIGH1 15 | Lightle Enterprises of Ohio, LLC, P.O. Box 329, 22 East Springfield Street, Frankfort, OH 45628 http://www.lightleenterprisesohio.com/ | | | | | |
| | Sign Manufacturer | | PDT 2100-17 | Cut Out Characters, Silk Screen, Borders | | ----- |
| LYLE- 15 | Lyle Signs, Inc., 6294 Bury Drive, Eden Prairie, MN 55346 http://lylesigns.com/ | | | | | |
| | Sign Manufacturer | | PDT 260-68 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **MAISI 15** | **Main Stream Industries, Inc., 7340 Bernville Road, Bernville, PA 19506** | | | | | |
| | Sign Manufacturer | | PDT 1840-04 | Cut Out Characters | | ----- |
| **MARKE 15** | **Marketing Displays, Inc., 38271 West 12 Mile Road, Farmington, MI 48331 https://www.mdiworldwide.com/** | | | | | |
| | Sign Manufacturer | | PDT 1160-85 | Silk Screen | Flexible Retroflective Signs Only | ----- |
| **MCREEK15** | **Middle Creek Signs, 158 Rigel Lane, Beaver Springs, PA 17812 https://middlecreeksigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 2180-20 | | Prepared Sign Faces (Grimco PDT 290-69) | 2020-156Q |
| | *Only approved to manufacturer signs made using prepared faces from Grimco (PDT 290-69).* | | | | | |
| **MILLS 15** | **Miller Municipal Supply LLC, 1117 Snyder Road, West Lawn, PA 19609 http://www.mmssigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 1180-85 | Cut Out Characters and Silk Screen | | ----- |
| **MUNSS 15** | **Municipal Signs & Sales, 1219 Mccloskey Road, Columbiana, OH 44408** | | | | | |
| | Sign Manufacturer | | PDT 1130-84 | Cut Out Characters and Silk Screen | | ----- |
| **NATSC 15** | **National Sign Company, Inc., P. O. Box 25, Ottawa, KS 66067** | | | | | |
| | Sign Manufacturer | | PDT 940-80 | Cut Out Characters and Silk Screen | | ----- |
| **NEWMA 15** | **Newman Signs, Inc., Business Loop West, P. O. Box 1728, Jamestown, ND 58401 http://www.newmansigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 930-80 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **NISSL 15** | **Andrew W. Nissly, Inc., 544 W. Mill Avenue, P.O. Box 633, Lancaster, PA 17608** | | | | | |
| | Sign Manufacturer | | PDT 230-68 | Cut Out Characters and Silk Screen | | ----- |
| **OSBAI 15** | **Osburn Associates Inc., 11931 St Rt 93 N, P.O. Box 912, Logan, OH 43138 http://www.osburns.com/** | | | | | |
| | Sign Manufacturer | | PDT 1760-01 | Cut Out Characters and Silk Screen | | ----- |
| **PADER 15** | **Penn Nursery @ Wood Shop, DCNR Bureau Of Forestry, 137 Penn Nursery Road, Spring Mills, PA 16875 http://dcnr.state.pa.us/forestry/stateforests/pennnursery/index.htm** | | | | | |
| | Sign Manufacturer | | PDT 1150-85 | Cut Out Characters and Silk Screen | | ----- |
| **PALMR 15** | **Palmer Products Imaging, 2808 Broadway Blvd., Monroeville, PA 15146 https://palmerproductsimaging.com/** | | | | | |
| | Sign Manufacturer | | PDT 500-72 | Silk Screen | | ----- |
| **PEXCO 15 Facility** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic 3110 70th Avenue East Tacoma, WA 98424** | | | | | |
| | Sign Manufacturer | | PDT 1780-02 | | Yield to Pedestrian Signs and Barricade Rails Only | ----- |
| **POCDW 15** | **Pocono Digital Woodshop, 105 Marion Ct., Shohola, PA 18458 http://poconodigitalwoodshop.com/** | | | | | |
| | Sign Manufacturer | | PDT 1990-08 | | | ----- |
| | *May manufacture and sell only signs made using prepared faces from Grimco Inc., PDT 290-69.* | | | | | |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **POWCC 15** | **Power Contracting Company, 61 Arch Street Ext., Suite 201, Carnegie, PA 15106 http://powercontractingllc.com/** | | | | | |
| | Sign Manufacturer | | PDT 2020-09 | Cut Out Characters | | ----- |
| **POWEL 15** | **Powell Engineering Contractors Inc., P. O. Box 4100, Reading, PA 19606** | | | | | |
| | Sign Manufacturer | | PDT 1420-92 | | | ----- |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | |
| | Sign Manufacturer | | PDT 060-68 | Cut Out Characters and Silk Screen | | ----- |
| **PSU-1 15** | **Penn State University, 101M Physical Plant, University Park, PA 16802** | | | | | |
| | Sign Manufacturer | | PDT 2160-19 | | Penn State Football Signs Only | ----- |
| **RAELY 15** | **Rae-Lyn Enterprises, Inc., P.O. Box 50, Spring Church, PA 15686 http://www.raelynenterprises.com/** | | | | | |
| | Sign Manufacturer | | PDT 1900-05 | Cut Out Characters and Silk Screen | | ----- |
| **RAPGM 15** | **Greggory M. Rapp, 326 E. Broad St. Apt. 1R, Bethlehem, PA 18018** | | | | | |
| | Sign Manufacturer | | PDT 1970-08 | Cut Out Characters | | ----- |
| **RAPSI 15** | **Rapp Signs, Inc, 3979 Ny Route 206, Greene, NY 13778 http://rappsigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 2030-09 | | | ----- |
| | *May manufacture and sell only signs made using prepared faces from Eastern Metal of Elmira Inc., PDT 021-75.* | | | | | |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

All listed manufacturers are approved to make signs using prepared faces.

Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **REIDL 15** | **Reidler Decal Corporation, 264 Industrial Park Road, St. Clair, PA 17970 http://www.reidlerdecal.com/** | | | | | |
| | Sign Manufacturer | | PDT 340-69 | Silk Screen | | ----- |
| | Sign Manufacturer | | PDT 349-75 | Silk Screen | | ----- |
| **RELSS 15** | **Reliable Sign & Striping Inc., 354 W. Moorestown Road, Nazareth, PA 18064 http://www.reliable-sign.com/** | | | | | |
| | Sign Manufacturer | | PDT 1650-97 | Cut Out Characters and Silk Screen | | ----- |
| **ROCAL 15** | **Rocal, Inc., 3186 CR 550, Frankfort, OH 45628 http://www.rocal.com/** | | | | | |
| | Sign Manufacturer | | PDT 1030-82 | Cut Out Characters and Silk Screen | | ----- |
| **RPMSL 15** | **RPM Signs and Lighting, 631 South 17th Street, Harrisburg, PA 17104 http://rpmsignsandlighting.com/** | | | | | |
| | Sign Manufacturer | | PDT 2080-17 | Cut Out Characters | | ----- |
| **RSTS1 15** | **RoadSafe Traffic Systems, 55 Bodwell Street, Avon, MA 02322** | | | | | |
| | Sign Manufacturer | | PDT 2090-17 | Cut Out Characters, Silk Screen, Borders | | ----- |
| **S&SSS 15** | **S & S Signs And Safety Equipment, Inc., P. O. Box 102, Big Flats, NY 14814 http://signssafety.com/** | | | | | |
| | Sign Manufacturer | | PDT 1530-95 | Cut Out Characters and Silk Screen | Flexible Material, C-II and Non-Reflective | ----- |
| **SAFSG 15** | **Safety Sign Company, P. O. Box 360500, Cleveland, OH 44136 http://safetysignco.com/** | | | | | |
| | Sign Manufacturer | | PDT 1060-82 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

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Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **SAFTS 15** | **Signs Plus of Kanona, Inc., 7964 N.Y.S. Rt. 53, Bath, NY 14810 http://signsplusofkanona.com/** | | | | | |
| | Sign Manufacturer | | PDT 1380-91 | Cut Out Characters, Silk Screen, Borders | | ----- |
| **SHANN 15** | **Shannon-Baum Signs, Inc., 105 Competitive Goals Drive, Eldersburg, MD 21784 http://www.shannonbaum.com/** | | | | | |
| | Sign Manufacturer | | PDT 950-80 | Cut Out Characters and Silk Screen | | ----- |
| **SHASG 15** | **Sharp Signs & Graphics, 202 S. 6th Street, Emmaus, PA 18049 http://sharpsng.com/** | | | | | |
| | Sign Manufacturer | | PDT 2060-12 | Cut Out Characters | | ----- |
| **SI&BL 15** | **Signs & Blanks, Inc., P.O. Box 2234, Cleveland, OH 44309-2234** | | | | | |
| | Sign Manufacturer | | PDT 1520-95 | Cut Out Characters and Silk Screen | | ----- |
| **SIGUC 15** | **Sign-Up Corporation, P. O. Box 14624, Portland, OR 97293 http://signupcorp.com/moved.asp** | | | | | |
| | Sign Manufacturer | | PDT 1370-91 | Silk Screen | Flexible Roll-up Type | ----- |
| **STRBK 15** | **Strongstown's B&K Enterprises, Inc., 260 Route 403 South, P. O. Box 124, Strongstown, PA 15957** | | | | | |
| | Sign Manufacturer | | PDT 1040-82 | Cut Out Characters and Silk Screen | | ----- |
| **SULCO 15** | **Sullivan County COG, P.O. Box 239, Dushore, PA 18614 http://sullivancountycog.com/** | | | | | |
| | Sign Manufacturer | | PDT 1980-08 | Cut Out Characters | Street Name Signs D 3-1 | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

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Signs shall be manufactured from aluminum sign blanks in accordance with Publication 236 and appropriate specs., unless otherwise indicated. Other Department approved substrates include, but are not limited to: plywood, fiberglass, steel, and plastic. Plywood substrate shall be indicated with a (P). Fiberglass substrate shall be indicated with a (F). Publication 236 "Handbook of Approved Signs"

| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **T&W-T 15** | **T & W Traffic Control, 1505 Rohrerstown Road, Lancaster, PA 17601 http://www.twtrafficcontrol.com/** | | | | | |
| | Sign Manufacturer | | PDT 1280-88 | Cut Out Characters and Silk Screen | | ----- |
| **TAPCO 15** | **TAPCO - Traffic & Parking Control Company, Inc., 5100 West Brown Deer Road, Brown Deer, WI 53223 http://www.tapconet.com/** | | | | | |
| | Sign Manufacturer | | PDT 1940-07 | Silk Screen | | ----- |
| **TCI-1 15** | **Traffic Control Industries, LLC, 805 W 5th Street, Unit 15, Lansdale, PA 19446** | | | | | |
| | Sign Manufacturer | | PDT 2140-18 | Cut Out Characters | | ----- |
| **TRFSS 15** | **Traffic & Safety Signs, Inc., 703 Terminal Way, Kennett Square, PA 19348** | | | | | |
| | Sign Manufacturer | | PDT 1230-86 | Cut Out Characters and Silk Screen | | ----- |
| **TRFXD 15** | **TrafFix Devices, Inc., 160 Avenida La Pata, San Clemente, CA 92673 http://www.traffixdevices.com/** | | | | | |
| | Sign Manufacturer | | PDT 1390-91 | Silk Screen | | ----- |
| **TRREG 15** | **Traffic Regulators, LLC, 7 Regulators Lane, Suite 1, Avoca, PA 18641-1749** | | | | | |
| | Sign Manufacturer | | PDT 2070-16 | Cut Out Characters | | ----- |
| **TRSSR 15** | **Traffic Services Sales & Rentals, Inc., 1128 North Graham Street, Allentown, PA 18109 http://trafficservicessalesandrental.com/** | | | | | |
| | Sign Manufacturer | | PDT 850-79 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

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| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** *Formerly PIBH- 15* | | | | | |
| | Sign Manufacturer | | PDT 1300-89 | Cut Out Characters and Silk Screen | | ----- |
| **USMUS 15** | **U. S. Municipal Supply, Inc., 10583 Raystown Road, Huntingdon, PA 16652 http://store.usmuni.com/** | | | | | |
| | Sign Manufacturer | | PDT 210-68 | Cut Out Characters and Silk Screen | | ----- |
| **USSSC 15** | **U. S. Standard Sign Company, 11400 West Addison St., Franklin Park, IL 60131 http://www.usstandardsign.com/index.html** | | | | | |
| | Sign Manufacturer | | PDT 770-76 | Cut Out Characters and Silk Screen | | ----- |
| **VICSI 15** | **Victory Signs, 119 Fire Academy Road, Homer City, PA 15748** | | | | | |
| | Sign Manufacturer | | PDT 1950-07 | Cut Out Characters and Silk Screen | | ----- |
| **VINGU 15** | **Vinyl Graphics Unlimited, 9912 Route 322, Shippenville, PA 16254** | | | | | |
| | Sign Manufacturer | | PDT 1700-00 | Cut Out Characters | | ----- |
| **VITSI 15** | **Vital Signs, 1915 Park Manor Blvd., Pittsburgh, PA 15205 http://www.vitalsigns.us.com/** | | | | | |
| | Sign Manufacturer | | PDT 1960-07 | Cut Out Characters and Silk Screen | | ----- |
| **VULSS 15** | **Vulcan Signs, 408 E. Berry Avenue, P. O. Box 1850, Foley, AL 36536-1850 http://www.vulcaninc.com/?p=vulcan_signs** | | | | | |
| | Sign Manufacturer | | PDT 570-73 | Cut Out Characters and Silk Screen | | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.04 Flat Sheet Signs (Post Mounted Types B, C and F; and Distance Markers)

Last Revised: 7/6/2020

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| | Product | Name | COA | Sign Special Approvals | Sign Manufacturer Restrictions | Ref. No. |
|---|---|---|---|---|---|---|
| **WALSH 15** | **Stephenson Equipment, Inc., 796 Unionville Rd., Prospect, PA 16052** ***Formerly Walsh Equipment, Inc.*** | | | | | |
| | Sign Manufacturer | | PDT 460-70 | Cut Out Characters | | ----- |
| **WEIGL 15** | **H. A. Weigand, Inc., 1409 State Road, Phoenixville, PA 19460 http://weigandsigns.com/** | | | | | |
| | Sign Manufacturer | | PDT 740-76 | Cut Out Characters and Silk Screen | | ----- |
| **WHELA 15** | **J.S. Whelan Co., Inc., 13810 Route 30, North Huntingdon, PA 15642** | | | | | |
| | Sign Manufacturer | | PDT 400-70 | Cut Out Characters and Silk Screen | | ----- |
| **WKZSS 15** | **Work Zone Safety Specialists Inc., 1764 Columbia Turnpike, Castleton, NY 12033** | | | | | |
| | Sign Manufacturer | | PDT 1740-01 | Cut Out Characters | | ----- |

### 1103.07(a) Steel S or W Beam Posts (For Post Mounted Signs, Type A)

Mill Certification meeting the standard or contract specifications is required. No listings are required in Bulletin 15.

Steel Products Procurement Act Applies.

### 1103.07(b) Breakaway Systems (For Post Mounted Signs, Type A)

Last Revised: 4/6/2015

Steel Products Procurement Act Applies.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **TRASA 15** | **Transpo Industries, Inc., 20 Jones Street, New Rochelle, NY 10801 http://www.transpo.com/** | | | |

## Section 1103: Traffic Signing and Marking

### 1103.07(b) Breakaway Systems (For Post Mounted Signs, Type A)

Last Revised: 4/6/2015

Steel Products Procurement Act Applies.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **TRASA 15** | **Transpo Industries, Inc., 20 Jones Street, New Rochelle, NY 10801 http://www.transpo.com/** | | | |
| | Breakaway System (For Post Mount Sign, Type A) | Type I | | ----- |

### 1103.08(a) Steel Channel Bar Posts (For Post Mounted Signs, Type B; and Distance Markers)

Last Revised: 6/13/2016

Steel Products Procurement Act Applies.

| | Product | Name | COA | Post Size | Posts Per 7' Path | Breakaway System | Ref. No. |
|---|---|---|---|---|---|---|---|
| **CHIHS 15** | **Chicago Heights Steel, 211 E. Main Street, Chicago Heights, IL 60411 http://chs.com/** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-4 | 4 lb/ft (5.94kg/m) or less | 3 | Bracer Bar System | ----- |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-4 | 4 lb/ft (5.94kg/m) or less | 2 | Erect Ease System | ----- |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-4 | 4 lb/ft (5.94kg/m) or less | 3 | Universal Spacer | ----- |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-4 | 1.12 lb/ft (1.66kg/m) | | Multiple Sign Mounting Stringers | ----- |

## Section 1103: Traffic Signing and Marking

### 1103.08(a) Steel Channel Bar Posts (For Post Mounted Signs, Type B; and Distance Markers)

Last Revised: 6/13/2016

Steel Products Procurement Act Applies.

| | Product | Name | COA | Post Size | Posts Per 7' Path | Breakaway System | Ref. No. |
|---|---|---|---|---|---|---|---|
| **FRANK 15** | **Franklin Industries, 645 Atlantic Ave., Franklin, PA 16323 http://store.franklinindustriesco.com/** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-3 | 4 lb/ft (5.94kg/m) or less | 2 | EZE-Erect System | ----- |
| | *Must match the same configuration as tested and approved by FHWA, as shown in Publication 111. Approved to manufacture steel channel bar posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-3 | 4 lb/ft (5.94kg/m) or less | 3 | Base Bolted System | ----- |
| | *Approved to manufacture steel channel bar posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-3 | 4 lb/ft (5.94kg/m) or less | 3 | Universal Spacer | ----- |
| | *Approved to manufacture steel channel bar posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-3 | 1.12 lb/ft (1.66kg/m) | | Multiple Sign Mounting Stringers | ----- |
| | *Approved to manufacture steel channel bar posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | | | | | |
| **NUCR6 15** | **Nucor Steel Marion, Inc., 912 Cheney Ave., Marion, OH 43302 http://www.nucor.com/** | | | | | | |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-1 | 1.12 lb/ft (1.66kg/m) or less | | Multiple Sign Mounting Stringers | ----- |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-1 | 3 lb/ft (4.46kg/m) or less | 1 | Minute Man System | 1992-153 |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-1 | 4 lb/ft (5.94kg/m) or less | 3 | Lap Splice System | 1992-153 |
| | Steel Channel Bar Post (For Post Mount Sign, Type B) | | SP-1 | 4 lb/ft (5.94kg/m) or less | 3 | Universal Spacer | 1992-153 |

## Section 1103: Traffic Signing and Marking

### 1103.08(b) Steel Square Posts (For Post Mounted Signs, Type B; and Distance Markers)

Last Revised: 7/9/2015

Steel Products Procurement Act Applies. Standard Drawing TC-8702B (Publication 111)

| | Product | Name | COA | Gauge | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|
| **ALLTC 15** | **Allied Tube & Conduit Corporation, 16100 South Lathrop Ave., Harvey, IL 60426 http://www.alliedeg.us/** | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | 18" Sleeve | | 12 ga (33 ksi) | 2", 2.25", 2.5" | 1994-136B |
| | Steel Square Posts (For Post Mount Sign, Type B) | 18" Sleeve | | 3/16" (33 ksi) | 3" | 1994-136B |
| | *Use 18" anchor stiffener sleeves with each Department-installed post system. No dual post approval.* | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | 18" Sleeve | | 12 ga (60 ksi) | 2", 2.25", 2.5" | 1994-136B |
| | Steel Square Posts (For Post Mount Sign, Type B) | 36" Anchor Post | | 12 ga (33 ksi) | 1.75", 2", 2.25", 2.5" | 1994-136B |
| | *Use 18" anchor stiffener sleeves with each Department-installed post system. No dual post approval.* | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | 36" Anchor Post | | 3/16" (33 ksi) | 3" | 1994-136B |
| | *Use 18" anchor stiffener sleeves with each Department-installed post system. No dual post approval.* | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | 36" Anchor Post | | 12 ga (60 ksi) | 1.75", 2", 2.25" | 1994-136B |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | | 12 ga (33 ksi) | 1.5", 1.75", 2", 2.25" | 1994-136A |
| | *Use 18" anchor stiffener sleeves with each Department-installed post system. No dual post approval.* | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | | 10 ga (33 ksi) | 2.5" | 1994-136A |
| | *Use 18" anchor stiffener sleeves with each Department-installed post system. No dual post approval.* | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | | 14 ga (60 ksi) | 1.5", 1.75", 2" | 1994-136A |

## Section 1103: Traffic Signing and Marking

### 1103.08(b) Steel Square Posts (For Post Mounted Signs, Type B; and Distance Markers)

Last Revised: 7/9/2015

Steel Products Procurement Act Applies. Standard Drawing TC-8702B (Publication 111)

| | Product | Name | COA | Gauge | Size (in) | Ref. No. |
|---|---|---|---|---|---|---|
| **STLSP 15** | **St. Louis Steel Products, Inc., 191 Rock Industrial Park Drive, St. Louis, MO 63044-1210** | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | | 12 ga | 1.75", 2", 2.25" | 1999-153Q |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | | 14 ga | 1.75" | 1999-153Q |
| **WESTH 15** | **Ultimate Highway Solutions, 11095 West Olive Road, Grand Haven, MI 49417 http://www.uhsolutions.net/** | | | | | |
| | Steel Square Posts (For Post Mount Sign, Type B) | Anchor Post | SP-5 | 12 ga (50 ksi) | 2", 2.25", 2.5" | 1997-054 |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sign Posts | SP-5 | 14 ga (60 ksi) | 1.75", 2", 2.25" | 1997-054 |
| | Steel Square Posts (For Post Mount Sign, Type B) | Sleeve | SP-5 | 12 ga (50 ksi) | 2.25", 2.5" | 1997-054 |
| | *Anchor sleeve is required only for concrete installation.* | | | | | |

### 1103.09(a) Treated Wood Posts (For Post Mount Signs, Types C and E)

Last Revised: 9/29/2015

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **AMETS 15** | **American Timber and Steel Corp., 4832 Plank Road, P. O. Box 767, Norwalk, OH 44857-0767 http://www.americantimberandsteel.com/** | | | |
| | Treated Wood Post (For Post Mount Sign, Type C and E) | | | 1999-136Q |
| **GRE-1 15 Plant** | **Great Southern Wood Preserving, P. O. Box 610, Abberville, AL 36310 http://greatsouthernwood.com/ Hagerstown, MD** | | | |
| | Treated Wood Post (For Post Mount Sign, Type C and E) | | | 2011-162Q |
| **WOOPI 15** | **Stella-Jones Corporation, 15939 Historyland Highway, P.O. Box 158, Warsaw, VA 22572 http://www.woodpreservers.com/** ***Formerly McFarland Cascade Holdings, Inc.*** | | | |
| | Treated Wood Post (For Post Mount Sign, Type C and E) | | | 2009-127Q |

## Section 1103: Traffic Signing and Marking

### 1103.12 Sign and Distance Marker Supports

Last Revised: 1/5/2017

| Product | Name | Ref. No. |
|---|---|---|

### 1103.14 Reflective Glass Beads (For Pavement Markings)

Last Revised: 2/11/2016

| | Product | Name | COA | Bead Type | Ref. No. |
|---|---|---|---|---|---|
| **POTT1 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Cleveland, OH** | | | | |
| | Type A, Reflective Glass Bead | | | | ----- |
| | Type C, Reflective Glass Bead | Visibeads | | | 1994-084 |
| **POTT2 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Potsdam, NY** | | | | |
| | Type A, Reflective Glass Bead | | | | ----- |
| | Type C, Reflective Glass Bead | Visibeads | | | 1994-084 |
| **POTT3 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Apex, NC** | | | | |
| | Type A, Reflective Glass Bead | | | | 1990-079 |
| **POTT4 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Malvern, PA** | | | | |
| | Type C, Reflective Glass Bead | Visibeads | | | 1994-084 |
| **POTT5 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Muscatine, IA** | | | | |
| | ***Formerly Flex-O-Lite (FLEX1 15)*** | | | | |
| | Type A, Reflective Glass Bead | | | | 1995-146 |
| **POTT6 15 Plant** | **Potters Industries, LLC, Customer Service Division, P.O. Box 841, Valley Forge, PA 19482-0840 https://www.pqcorp.com/our-markets/highway-safety-and-construction Paris, TX** | | | | |
| | ***Formerly Flex-O-Lite (FLEX2 15)*** | | | | |
| | Type A, Reflective Glass Bead | | | | 1995-146 |
| **SWAR0 15** | **Swarco Reflex LLC, 900 N. Denton, Mexia, TX 76667 https://www.swarco.com/northamerica** | | | | |
| | Type B, Reflective Glass Bead | Megalux | GB-01 | | 2005-016Q |

## Section 1103: Traffic Signing and Marking

### 1103.14 Reflective Glass Beads (For Pavement Markings)

Last Revised: 2/11/2016

| | Product | Name | COA | Bead Type | Ref. No. |
|---|---|---|---|---|---|
| **SWAR1 15** | **Swarco Industries LLC, 270 Rutherford Lane, P.O. Box 89, Columbia, TN 38402 https://www.swarco.com/northamerica** | | | | |
| | Type A, Reflective Glass Bead | | | | 2004-110Q |
| | Type B, Reflective Glass Bead | Megalux | GB-01 | Type B | 2005-016Q |
| | Type E, Reflective Glass Bead | Utah Blend | GB-01 | | 2012-185Q |

## Section 1104: Traffic Signals

### 1104.02 Traffic Signal Supports (Steel)

Last Revised: 8/29/2018

Steel Products Procurement Act applies. Publication 148 Traffic Standards - Signals (TC-8800 Series)

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| STRUS 15 | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | | |
| | Traffic Signal Support Fabricator | | | 2016-244 |
| UMIC1 15 | **Union Metal Industries Corporation, 1432 Maple Avenue NE Canton, Ohio 44705, Canton, OH 44705** | | | |
| | Traffic Signal Support Fabricator | | | 2018-177Q |
| VALM1 15 Plant | **Valmont Industries, Inc., 7002 N 288th Street, Valley, NE 68064 http://www.valmont.com/ Valley, NE 68064** | | | |
| | Traffic Signal Support Fabricator | | | ----- |
| VALM5 15 Plant | **Valmont Industries, Inc., 2551 Valmont Drive, Brenham, TX 77833 http://www.valmont.com/ Brenham, TX** | | | |
| | Traffic Signal Support Fabricator | | | ----- |

### 1104.02(e) Traffic Signal Anchor Bolts, Hex Nuts, and Washers

Last Revised: 7/16/2015

Refer to Hardware Manufacturing Symbols

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| AMBBO 15 | **Ameribolt, Inc., 18060 AL Highway 21, Sycamore, AL 35149 http://www.ameribolt.com/** | | | |
| | Anchor Bolts | A-449 | | 2012-150QA |
| ATLRC 15 | **Atlanta Rod and Manufacturing Company, Inc., 144 Schokbeton Street, Lavonia, GA 30553 http://www.atlrod.com/** | | | |
| | Anchor Bolts | A-449 | | 2011-088Q |
| BBC-F 15 | **BBC Fastners, Inc., 4210 Shirley Lane, Alsip, IL 60803 http://www.bbcfasteners.com/** | | | |
| | Anchor Bolts, Hex Nuts and Washers | A-449 | | 1989-238 |
| BIRFM 15 | **Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234** | | | |
| | Galvanized Anchor Bolts | A-449 Bolts | | 2015-033Q |

# Section 1104: Traffic Signals

## 1104.02(e) Traffic Signal Anchor Bolts, Hex Nuts, and Washers

Last Revised: 7/16/2015

Refer to Hardware Manufacturing Symbols

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| DECKM 15 | **Decker Manufacturing Corporation, 703 North Clark Street, Albion, MI 49224 http://www.deckernut.com/** | | | |
| | Anchor Bolts, Hex Nuts and Washers | A-563, Grade C Hex Nut | | 1989-094 |
| FOUND 15 | **Foundation Systems and Anchors, Inc., 2300 Allen Avenue, SE, Canton, OH 44707 http://fsabolt.com/** | | | |
| | Galvanized Anchor Bolts | A-449 | | 1990-385C |
| GAFBC 15 | **Gaffney Bolt Company, Inc., 6100 Material Avenue, Rockford, IL 61111 http://gaffneybolt.com/** | | | |
| | Anchor Bolts | A-449 | | 2003-008Q |
| HAYDN 15 | **Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/** | | | |
| | Galvanized Anchor Bolts | A-449 | | 1990-039 |
| HERBC 15 | **Hercules Bolt Company, 1010 River Bluff Drive, Madison, TN 37115 http://herculesbolt.com/** | | | |
| | Galvanized Anchor Bolts | A-449 | | 1998-198 |
| JHBTS 15 | **J. H. Botts, Inc., 253 East Bruce St., Joliet, IL 60432 http://www.jhbotts.com/products.htm** | | | |
| | Galvanized Anchor Bolts | A-449 | | 2001-059Q |
| PORBM 15 | **Portland Bolt and Manufacturing, Inc., 3441 NW Guam Street, P.O. Box 2866, Portland, OR 97210 http://www.portlandbolt.com/** | | | |
| | Galvanized Anchor Bolts | A-449 | | 2008-112Q |
| SOEBS 15 | **Southeastern Bolt and Screw, Inc., 1037 16th Avenue West, Birmingham, AL 35204 http://www.sebolt.com/index.html** | | | |
| | Galvanized Anchor Bolts | A-449 | | 1991-058 |
| STCBS 15 | **Steel City Bolt and Screw, LLC, 230 West Valley Road, Birmingham, AL 35201 http://www.steelcitybolt.com/** | | | |
| | Galvanized Anchor Bolts | A-449 | | 1990-037 |
| UNIQU 15 | **Unique Industries, P.O. Box 683, 13488 Highway 25 North, Calera, AL 35040 http://www.uiind.com/** | | | |
| | Anchor Bolts | A-449 | | 1990-145 |

## 1104.03(a)4 Traffic Signal Flashers

Last Revised: 6/10/2015

## Section 1104: Traffic Signals

### 1104.03(a)4 Traffic Signal Flashers

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **EBERL 15** | **Eberle Design Inc., 3819 East Lasalle, Phoenix, AZ 85040 http://www.editraffic.com/** | | | | |
| | Traffic Signal Flasher | 810 Series | EBD-001S | 10/6/1987 | ----- |
| **ELECT 15** | **Electrotechnics Corporation, 1310 Commerce Street, Marshall, TX 75672 http://www.elteccorp.com/** | | | | |
| | Traffic Signal Flasher | FS-2 | ECH-026P | 2/17/2012 | ----- |
| **GENTR 15** | **General Traffic Equipment Corporation, 259 Broadway, Newburgh, NY 12550 http://www.generaltrafficequip.com/** | | | | |
| | Traffic Signal Flasher | SSRF Series | GTE-003P | 4/9/1991 | ----- |
| **PDC- 15** | **PDC, 210 Estates Drive, Suite 110, Roseville, CA 95678** | | | | |
| | Traffic Signal Flasher | PDC SSF-86 | PDC-005S | 1/9/1989 | ----- |
| **RENOA 15** | **Reno A & E, Inc., 4655 Aircenter Circle, Reno, NV 89502 http://www.renoae.com/** | | | | |
| | Traffic Signal Flasher | FL-200 | RAE-020P | 5/5/2004 | ----- |
| **TRAPA 15** | **Traffic Parts, Inc., P. O. Box 837, Spring, TX 77383 http://www.trafficparts.com/** | | | | |
| **Facility** | **Chapel Hill Manufacturing 27895 Robinson Road Conroe, TX 77385** | | | | |
| | Traffic Signal Flasher | Model 150 | TPI-005P | 11/23/2010 | ----- |
| | Traffic Signal Flasher | Model 158 | TPI-005P | 11/23/2010 | ----- |
| | Traffic Signal Flasher | Model 159 | TPI-005P | 11/23/2010 | ----- |
| | Traffic Signal Flasher | Model 572 | TPI-005P | 11/23/2010 | ----- |

### 1104.03(b)1 Traffic Signal Controller Assembly: NEMA TS-1

Last Revised: 9/4/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | |
| | NEMA TS-1 Signal Controller | ASC/3 Rack Mounted | ECO-117P | 10/21/2009 | ----- |
| | NEMA TS-1 Signal Controller | ASC/3-2100 | ECO-116P | 5/19/2006 | ----- |

## Section 1104: Traffic Signals

### 1104.03(b)1 Traffic Signal Controller Assembly: NEMA TS-1

Last Revised: 9/4/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **INTLI 15** | **Intelight, Inc., 3450 S. Broadmont Drive, Suite 126, Tucson, AZ 85713 http://www.intelight-its.com/** | | | | |
| | NEMA TS-1 Signal Controller | X-1 | INT-004P | 9/24/2013 | ----- |
| | NEMA TS-1 Signal Controller | X-1L | INT-003P | 9/24/2013 | ----- |
| | NEMA TS-1 Signal Controller | X-2 | INT-005P | 9/24/2013 | ----- |
| **MCCAN 15** | **McCain Inc., 2365 Oak Ridge Way, Vista, CA 92081 http://www.mccain-inc.com/** | | | | |
| | NEMA TS-1 Signal Controller | ATC eX | MCC-018P | 8/26/2014 | - |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | NEMA TS-1 Signal Controller | 980 | TFW-003P (NAZ-011P) | 4/13/2016 | ----- |
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | |
| | NEMA TS-1 Signal Controller | 3000 E Series | PTS-022P | 3/21/1994 | ----- |
| | NEMA TS-1 Signal Controller | LMD-9200 Series | PTS-040P | 5/15/1995 | ----- |
| **SIEME 15** | **Siemens ITS, 8004 Cameron Road, Austin, TX 78754-3899 http://www.usa.siemens.com/entry/en/** | | | | |
| | NEMA TS-1 Signal Controller | Eagle EPA C300 Series | SMS-211S | 1/9/1989 | ----- |
| | NEMA TS-1 Signal Controller | Eagle EPAC 3108 M40 | SMS-001P | 9/27/2004 | ----- |
| | NEMA TS-1 Signal Controller | Eagle EPAC 3608 M40 | SMS-002P | 9/27/2004 | ----- |
| | NEMA TS-1 Signal Controller | Eagle EPAC M50 | SMS-205P | 1/3/2003 | ----- |
| | NEMA TS-1 Signal Controller | Eagle MARC 360 | SMS-210P | 8/1/1985 | ----- |
| | NEMA TS-1 Signal Controller | Eagle MARC 390 M34 | SMS-208P | 6/4/2003 | ----- |
| **USTRA 15** | **U. S. Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221** | | | | |
| | NEMA TS-1 Signal Controller | 820A | UST-137S | 10/6/1987 | ----- |

### 1104.03(b)1 Traffic Signal Controller Assembly: NEMA TS-2

Last Revised: 6/4/2020

## Section 1104: Traffic Signals

### 1104.03(b)1 Traffic Signal Controller Assembly: NEMA TS-2

Last Revised: 6/4/2020

| | Product | Name | Controller Type | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | | |
| | NEMA TS-2 Signal Controller | ASC/2S-1000 | Type 1 | ECO-118P | 10/21/2009 | ----- |
| | NEMA TS-2 Signal Controller | ASC/3 Rack Mounted | Types 1 and 2 | ECO-117P | 10/21/2009 | ----- |
| | NEMA TS-2 Signal Controller | ASC/3-1000 | Type 1 | ECO-115P | 5/19/2006 | ----- |
| | NEMA TS-2 Signal Controller | ASC/3-2100 | Types 1 and 2 | ECO-116P | 5/19/2006 | ----- |
| | NEMA TS-2 Signal Controller | Cobalt | Types 1 and 2 | ECO-127P | 4/15/2015 | ----- |
| | NEMA TS-2 Signal Controller | Cobalt C | Types 1 and 2 | ECO-128P | 10/3/2017 | 2016-229Q |
| | NEMA TS-2 Signal Controller | Rackmount C | Types 1 and 2 | ECO-129P | 10/3/2017 | 2016-230 |
| **INTLI 15** | **Intelight, Inc., 3450 S. Broadmont Drive, Suite 126, Tucson, AZ 85713 http://www.intelight-its.com/** | | | | | |
| | NEMA TS-2 Signal Controller | 2070 LDX | Types 1 and 2 | INT-013P | 7/7/2017 | 2016-263 |
| | NEMA TS-2 Signal Controller | 2070LC | Types 1 and 2 | INT-012P | 7/7/2017 | 2016-259 |
| | NEMA TS-2 Signal Controller | ATC TS2 | Types 1 and 2 | INT-001P | 11/1/2011 | ----- |
| | NEMA TS-2 Signal Controller | ATC TS2 | Types 1 and 2 | INT-002P | 6/6/2011 | ----- |
| | NEMA TS-2 Signal Controller | X-1 | Types 1 and 2 | INT-004P | 9/24/2013 | ----- |
| | NEMA TS-2 Signal Controller | X-1L | Types 1 and 2 | INT-003P | 9/24/2013 | ----- |
| | NEMA TS-2 Signal Controller | X-2 | Types 1 and 2 | INT-005P | 9/24/2013 | ----- |
| | NEMA TS-2 Signal Controller | X3C | Types 1 and 2 | INT-009P | 7/7/2017 | 2016-262 |
| | NEMA TS-2 Signal Controller | X3L | Types 1 and 2 | INT-010P | 7/7/2017 | 2016-261 |
| | NEMA TS-2 Signal Controller | X3LT | Types 1 and 2 | INT-011P | 7/7/2017 | 2016-222 |
| **MCCAN 15** | **McCain Inc., 2365 Oak Ridge Way, Vista, CA 92081 http://www.mccain-inc.com/** | | | | | |
| | NEMA TS-2 Signal Controller | ATC eX | Types 1 and 2 | MCC-018P | 8/26/2014 | - |
| | NEMA TS-2 Signal Controller | FLeX ATC | Types 1 and 2 | MCC-019P | 5/22/2020 | 2019-171Q |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | | |
| | NEMA TS-2 Signal Controller | 980 | Types 1 and 2 | TFW-003P (NAZ-01 | 4/29/1997 | ----- |
| | NEMA TS-2 Signal Controller | 980 ATC | Types 1 and 2 | TFW-011P | 5/6/2016 | - |
| | NEMA TS-2 Signal Controller | 981 | Types 1 and 2 | TFW-004P (NAZ-01 | 4/13/2016 | ----- |
| | NEMA TS-2 Signal Controller | ATC Controller | Types 1 and 2 | TFW-013P | 8/14/2018 | ----- |
| | NEMA TS-2 Signal Controller | Commander | Types 1 and 2 | TFW-015P | 4/21/2020 | 2019-224Q |

## Section 1104: Traffic Signals

### 1104.03(b)1 Traffic Signal Controller Assembly: NEMA TS-2

Last Revised: 6/4/2020

| | Product | Name | Controller Type | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | | |
| | NEMA TS-2 Signal Controller | 3000 E Series | Types 1 and 2 | PTS-022P | 3/21/1994 | ----- |
| | NEMA TS-2 Signal Controller | ATC-1000 | Type 2 | PTS-042P | 7/11/2011 | ----- |
| | NEMA TS-2 Signal Controller | LMD-9200 Series | Type 2 | PTS-040P | 5/15/1995 | ----- |
| **SIEME 15** | **Siemens ITS, 8004 Cameron Road, Austin, TX 78754-3899 http://www.usa.siemens.com/entry/en/** | | | | | |
| | NEMA TS-2 Signal Controller | Eagle EPA C300 Series | Types 1 and 2 | SMS-211S | 1/9/1989 | ----- |
| | NEMA TS-2 Signal Controller | Eagle EPAC 3108 M42 | Type 2 | SMS-003P | 9/27/2004 | ----- |
| | NEMA TS-2 Signal Controller | Eagle EPAC 3608 M42 | Type 2 | SMS-004P | 9/27/2004 | ----- |
| | NEMA TS-2 Signal Controller | Eagle EPAC M51 | Type 1 | SMS-206P | 1/3/2003 | ----- |
| | NEMA TS-2 Signal Controller | Eagle EPAC M52 | Type 2 | SMS-207P | 1/3/2003 | ----- |
| | NEMA TS-2 Signal Controller | Eagle MARC 360 | Types 1 and 2 | SMS-210P | 8/1/1985 | ----- |
| | NEMA TS-2 Signal Controller | Eagle MARC 390 M34 | Types 1 and 2 | SMS-208P | 6/4/2003 | ----- |
| | NEMA TS-2 Signal Controller | m60 Series ATC | Types 1 and 2 | SMS-231P | 6/25/2016 | ----- |

### 1104.03(b)2 Traffic Signal Controller Assembly: Type 170E

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **DYNTS 15** | **Dynamic Traffic Systems, Inc., 5050 Cohasset Road, Bldg. #4, Chico, CA 95973 http://dts-i.net/** | | | | |
| | Type 170E Signal Controller | 170E | DTS-001P | 4/26/2013 | ----- |
| **MCCAN 15** | **McCain Inc., 2365 Oak Ridge Way, Vista, CA 92081 http://www.mccain-inc.com/** | | | | |
| | Type 170E Signal Controller | 170E | MCC-013S | 5/16/1995 | ----- |
| **SAFET 15** | **Safetran Traffic Systems, 1485 Garden Of The God's Road, Colorado Springs, CO 80904 http://safetran-traffic.com/** | | | | |
| | Type 170E Signal Controller | 170E | STS-059P | 10/14/2010 | ----- |

### 1104.03(c)5 Traffic Signal Time Clock

Last Revised: 7/2/2019

## Section 1104: Traffic Signals

### 1104.03(c)5 Traffic Signal Time Clock

Last Revised: 7/2/2019

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **AINFO 15** | **Applied Information, Inc., 4411 Suwanee Dam Road, Suite 510, Suwanee, GA 30024** | | | | |
| | Time Signal Time Clock | AI-500-070 | AEA-001P | 6/17/2019 | 2018-225Q |
| **ELECT 15** | **Electrotechnics Corporation, 1310 Commerce Street, Marshall, TX 75672 http://www.elteccorp.com/** | | | | |
| | Time Signal Time Clock | ELTEC NTC-17E | EHC-016P | 1/27/1999 | ----- |
| | Time Signal Time Clock | TC-18 | EHC-027P | 6/25/2013 | ----- |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | Time Signal Time Clock | CHRONOMAX 100 | TFW-001P (NAZ-008P) | 2/27/1997 | ----- |
| **RTC-M 15** | **RTC Manufacturing Inc., P. O. Box 150189, Arlington, TX 76015 http://www.rtc-traffic.com/** | | | | |
| | Time Signal Time Clock | AP21 | RTC-005S | 12/28/1988 | ----- |
| | Time Signal Time Clock | AP22 | RTC-006P | 9/20/2006 | ----- |
| | Time Signal Time Clock | AP41 | RTC-004P | 12/28/1988 | ----- |
| **SIGNS 15** | **Signal Service Inc., 1020 Andrew Drive, West Chester, PA 19380 http://www.signalservice.com/** | | | | |
| | Time Signal Time Clock | SSI 21 | SSI-006S | 5/1/1979 | ----- |
| **TORK- 15** | **Tork, Inc., 1 Grove Street, Mount Vernon, NY 10550** | | | | |
| | Time Signal Time Clock | DIN100B | TKI-007P | 9/29/1989 | ----- |
| | Time Signal Time Clock | DTS100B | TKI-003S | 10/6/1987 | ----- |
| | Time Signal Time Clock | DTS400B | TKI-001P | 3/13/1984 | ----- |
| | Time Signal Time Clock | DZS100B | TKI-004P | 6/14/1988 | ----- |
| | Time Signal Time Clock | DZS400BP | TKI-002P | 3/13/1984 | ----- |

### 1104.04 Traffic Signal Systems and Communications

Last Revised: 10/15/2015

| Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|

## Section 1104: Traffic Signals

### 1104.04 Traffic Signal Systems and Communications

Last Revised: 10/15/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | |
| | NEMA Master Controller Assembly | ASC/2-M | ECO-103S | 10/31/1997 | ----- |
| **INTLI 15** | **Intelight, Inc., 3450 S. Broadmont Drive, Suite 126, Tucson, AZ 85713 http://www.intelight-its.com/** | | | | |
| | NEMA Master Controller Assembly | X-1 | INT-007P | 9/24/2013 | ----- |
| | NEMA Master Controller Assembly | X-1L | INT-006P | 9/24/2013 | ----- |
| | NEMA Master Controller Assembly | X-2 | INT-008P | 9/24/2013 | ----- |
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | |
| | NEMA Master Controller Assembly | E Series | PTS-026P | 4/29/1996 | ----- |
| **SIEME 15** | **Siemens ITS, 8004 Cameron Road, Austin, TX 78754-3899 http://www.usa.siemens.com/entry/en/** | | | | |
| | NEMA Master Controller Assembly | Eagle MARC 360 | SMS-210P | 8/1/1985 | ----- |
| | NEMA Master Controller Assembly | Eagle MARC 390 M34 | SMS-208P | 6/4/2003 | ----- |
| | NEMA Master Controller Assembly | EPAC M51 | SMS-229P | 10/25/2011 | ----- |
| | NEMA Master Controller Assembly | EPAC M51 | SMS-230P | 10/25/2011 | ----- |

### 1104.05(c) Junction Boxes, Traffic Signal

Last Revised: 8/10/2017

See Standard Drawing TC-8804 - Electrical Distribution (Publication 148)

Also, see Section 605.2(a) for Steel or Cast Iron Junction Boxes and Section 714.2 for Precast Concrete Junction Boxes that may be used for this Section.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **ARMOR 15** | **Armorcast Products Company, 13230 Saticoy Street, North Hollywood, CA 91605 http://www.armorcastprod.com/** | | | |
| | JB-26, Reinforced Plastic Mortar | A6001423A | | 2000-279Q |
| | JB-27, Reinforced Plastic Mortar | A6001946APC-PA | | 2002-067Q |
| | JB-27, Reinforced Plastic Mortar | A6001946APCX24 | | 2000-280Q |

## Section 1104: Traffic Signals

### 1104.05(c) Junction Boxes, Traffic Signal

Last Revised: 8/10/2017

See Standard Drawing TC-8804 - Electrical Distribution (Publication 148)

Also, see Section 605.2(a) for Steel or Cast Iron Junction Boxes and Section 714.2 for Precast Concrete Junction Boxes that may be used for this Section.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **CDRSC 15** | **CDR Systems Corporation, 146 South Atlantic Ave., Ormond Beach, FL 32176** | | | |
| | JB-26, Reinforced Plastic Mortar | SA13-1212-12 | | 2002-086Q |
| | JB-27, Reinforced Plastic Mortar | SA10-1324-24 | | 2002-086Q |
| **HIL-0 15 Plant** | **Highline Products, 131 Hartwell Ave., Lexington, MA 02421 http://highlineproducts.com/ Sweetwater, TN** | | | |
| | JB-26, Reinforced Plastic Mortar | PHA121212 | | 2011-212QA |
| | JB-27, Reinforced Plastic Mortar | PHA132412 | | 2011-212QB |
| | JB-27, Reinforced Plastic Mortar | PHA132418H | | 2013-092Q |
| | JB-27, Reinforced Plastic Mortar | PHA132424H | | 2012-049Q |
| **MAREN 15** | **Martin Enterprises, 19940 Hansen Ave., Romoland, CA 92508 http://martinfrp.com/** | | | |
| | JB-26, Reinforced Plastic Mortar | 121212PC T15 | | 2011-229Q |
| | JB-27, Reinforced Plastic Mortar | 132418 T15 | | 2011-230Q |
| | JB-27, Reinforced Plastic Mortar | 132418PC T8 | | 2011-228Q |
| **NEWBA 15** | **Newbasis, 2626 Kansas Avenue, Riverside, CA 92507 http://www.newbasis.com/** | | | |
| | JB-26, Reinforced Plastic Mortar | PCA 121212-10006 | | 1991-321 |
| | JB-27, Reinforced Plastic Mortar | PCA 132412-00006 | | 1993-017 |
| | JB-27, Reinforced Plastic Mortar | PCA 132418-00006 | | 1993-017 |
| | JB-27, Reinforced Plastic Mortar | PCE 132408-00000 | | 1993-017 |
| **OLES1 15** | **Oldcastle Enclosure Solutions, 801 South Pine Street, Madera, CA 96367 http://www.oldcastleprecast.com/Pages/default.aspx** | | | |
| | JB-27, Reinforced Plastic Mortar | PC1324-24 | | 2013-106Q |

## Section 1104: Traffic Signals

### 1104.05(c) Junction Boxes, Traffic Signal

Last Revised: 8/10/2017

See Standard Drawing TC-8804 - Electrical Distribution (Publication 148)

Also, see Section 605.2(a) for Steel or Cast Iron Junction Boxes and Section 714.2 for Precast Concrete Junction Boxes that may be used for this Section.

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **OLES2 15** | **Oldcastle Enclosure Solutions, 2 Inverness Street, Candiac, QC Canada J5R 4W5 http://www.oldcastleprecast.com/Pages/default.aspx** *Formerly Old Castle Moulded Products (OLDMP)* | | | |
| | JB-26, Reinforced Plastic Mortar | SYN1212 | | 2011-080A |
| | JB-27, Reinforced Plastic Mortar | SYN1324 | | 2011-080B |
| **QUAZT 15** | **Hubbell Power Systems, Inc., 3621 Industrial Park Drive, Lenoir City, TN 37771 https://www.hubbell.com/hubbellpowersystems/en/hps-brands/quazite** | | | |
| | JB-26, Reinforced Plastic Mortar | Quazite PC1212BA12 | | 1993-096 |
| | JB-26, Reinforced Plastic Mortar | Quazite PC1212CA46 | | 1993-096 |
| | JB-27, Reinforced Plastic Mortar | Quazite PG1324BA18 | | 1993-096 |
| | JB-27, Reinforced Plastic Mortar | Quazite PG1324CA46 | | 1993-096 |
| | JB-27, Reinforced Plastic Mortar | Quazite PG1324EA08 | | 1993-096 |

### 1104.06(a) Vehicular Signal Head Housings

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **BRTPI 15** | **Brown Traffic Products, Inc., 736 Federal Street, Suite 2312, Davenport, IA 52803 http://browntraffic.com/** | | | | |
| | 12-inch Aluminum Housing | SIG 10X A | BTP-005P | 6/20/2014 | ----- |
| | 12-inch Polycarbonate Housing | SA 10X A | BTP-003P | 6/20/2014 | ----- |
| | 8-inch Aluminum Housing | SIG 1X0 A | BTP-006P | 6/20/2014 | ----- |
| | 8-inch Polycarbonate Housing | SA 1X0 A | BTP-004P | 6/20/2014 | ----- |
| **CHMAI 15** | **C H Manufacturing Inc., 200 Elder Road, Conroe, TX 77385** | | | | |
| | 12-inch Aluminum Housing | SIG-TAY-305-TTP-EVN-00 | CHM-005P | 7/26/1993 | ----- |
| | 12-inch Polycarbonate Housing | SIG-TPY-305-TTP-EVN-00 | CHM-006P | 7/26/1993 | ----- |
| | 8-inch Aluminum Housing | SIGEAY305TTPEV | CHM-001P | 6/15/1994 | ----- |
| | 8-inch Polycarbonate Housing | SIGEPY305TTPEV | CHM-002P | 6/15/1994 | ----- |

## Section 1104: Traffic Signals

### 1104.06(a) Vehicular Signal Head Housings

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | |
| | 12-inch Aluminum Housing | | ECO-114S | 4/12/1988 | ----- |
| | 12-inch Polycarbonate Housing | CP | ECO-105S | 4/1/1983 | ----- |
| | 12-inch Polycarbonate Housing | TP | ECO-104S | 4/1/1983 | ----- |
| | 8-inch Aluminum Housing | | ECO-114S | 4/12/1988 | ----- |
| | 8-inch Polycarbonate Housing | EP | ECO-106S | 4/1/1983 | ----- |
| | 8-inch Polycarbonate Housing | TP | ECO-104S | 4/1/1983 | ----- |
| **GENTR 15** | **General Traffic Equipment Corporation, 259 Broadway, Newburgh, NY 12550 http://www.generaltrafficequip.com/** | | | | |
| | 12-inch Aluminum Housing | T30-ALUM-A-N-N-P-T-Y-Y-Y | GTE-006P | 4/23/2004 | ----- |
| | 12-inch Polycarbonate Housing | T30-POLY | GTE-004P | 12/19/2002 | ----- |
| | 8-inch Aluminum Housing | E30-ALUM-A-N-P-T-Y-Y-Y | GTE-005P | 4/23/2004 | ----- |
| **MCCAN 15** | **McCain Inc., 2365 Oak Ridge Way, Vista, CA 92081 http://www.mccain-inc.com/** | | | | |
| | 12-inch Aluminum Housing | MTSTA | MCC-016P | 7/21/1997 | ----- |
| | 12-inch Aluminum Housing | Signal Head | MCC-012P | 7/26/1993 | ----- |
| | 12-inch Polycarbonate Housing | MTSVP | MCC-011S | 7/14/1993 | ----- |
| | 8-inch Aluminum Housing | MTSEA | MCC-015P | 7/21/1997 | ----- |
| | 8-inch Polycarbonate Housing | MTSEP | MCC-010S | 7/14/1993 | ----- |
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | |
| | 12-inch Aluminum Housing | H Series | PTS-028S | 2/20/1970 | ----- |
| | 12-inch Polycarbonate Housing | P Series | PTS-035S | 11/9/1979 | ----- |
| | 8-inch Aluminum Housing | T Series | PTS-029S | 2/20/1970 | ----- |
| | 8-inch Polycarbonate Housing | E Series | PTS-036S | 11/9/1979 | ----- |

## Section 1104: Traffic Signals

### 1104.06(a) Vehicular Signal Head Housings

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **USTRA 15** | **U. S. Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221** | | | | |
| | 12-inch Aluminum Housing | ST30 22X C221 | UST-191S | 3/6/1997 | ----- |
| | 12-inch Polycarbonate Housing | LT30 22X C221 | UST-193S | 12/18/2008 | ----- |
| | 8-inch Aluminum Housing | SE30 22X C221 | UST-192S | 12/18/2008 | ----- |
| | 8-inch Polycarbonate Housing | LE30 22X C221 | UST-190S | 3/6/1997 | ----- |

### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | | |
| | 12-inch Green, LED Module | 433-2220-001XL | | DIA-049P | 6/3/2008 | ----- |
| | 12-inch Green, LED Module | 433-2220-001XL15 (tinted) | | DIA-077P | 11/23/2015 | ----- |
| | 12-inch Green, LED Module | 433-2220-005XL | Direct Current (DC) | DIA-065P | 5/9/2012 | ----- |
| | 12-inch Green, LED Module | 433-2270-001XL | | DIA-050P | 6/3/2008 | ----- |
| | 12-inch Green, LED Module | 433-2270-001XL15 (clear) | | DIA-078P | 11/23/2015 | ----- |
| | 12-inch Green, LED Module | 433-2270-005XL | Direct Current (DC) | DIA-066P | 5/9/2012 | ----- |
| | 12-inch Red, LED Module | 433-1210-003XL | | DIA-047P | 6/3/2008 | ----- |
| | 12-inch Red, LED Module | 433-1210-003XL15 (tinted) | | DIA-073P | 11/23/2015 | ----- |
| | 12-inch Red, LED Module | 433-1210-005XL | Direct Current (DC) | DIA-063P | 5/9/2012 | ----- |
| | 12-inch Red, LED Module | 433-1270-003XL15 (clear) | | DIA-074P | 11/23/2015 | ----- |
| | 12-inch Yellow, LED Module | 433-3230-001XL | | DIA-048P | 6/3/2008 | ----- |
| | 12-inch Yellow, LED Module | 433-3230-901XL | | DIA-055P | 9/16/2008 | ----- |
| | 12-inch Yellow, LED Module | 433-3230-901XL15 (tinted) | | DIA-075P | 11/23/2015 | ----- |
| | 12-inch Yellow, LED Module | 433-3230-905XL | Direct Current (DC) | DIA-064P | 5/9/2012 | ----- |
| | 12-inch Yellow, LED Module | 433-3270-901XL15 (clear) | | DIA-076P | 11/23/2015 | ----- |
| | 8-inch Green, LED Module | 433-2120-001XL | | DIA-045P | 6/3/2008 | ----- |
| | 8-inch Green, LED Module | 433-2170-001XL | | DIA-046P | 6/3/2008 | ----- |
| | 8-inch Red, LED Module | 433-1110-003XL | | DIA-043P | 6/3/2008 | ----- |
| | 8-inch Yellow, LED Module | 433-3130-001XL | | DIA-044P | 6/3/2008 | ----- |

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### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | | |
| | 8-inch Yellow, LED Module | 433-3130-901XL | | DIA-054P | 9/18/2008 | ----- |
| **EXCOP 15** | **Excellence Opto, Inc., 1400 West Lambert Road, Suite B, Brea, CA 92821 http://www.eoi.com.tw/** | | | | | |
| | 12-inch Green, LED Module | TRV-G12SG-D2T | | EOI-002P | 11/2/2009 | ----- |
| | 12-inch Green, LED Module | TRV-G12SG-D2T-C | | EOI-018P | 7/13/2011 | ----- |
| | 12-inch Red, LED Module | TRV-R12SG-D2T | | EOI-001P | 11/2/2009 | ----- |
| | 12-inch Yellow, LED Module | TRV-Y12SG-D1T | | EOI-003P | 11/2/2009 | ----- |
| | 8-inch Green, LED Module | TRV-G08SG-D1T | | EOI-014P | 11/2/2009 | ----- |
| | 8-inch Green, LED Module | TRV-G08SG-D1T-C | | EOI-015P | 11/2/2009 | ----- |
| | 8-inch Red, LED Module | TRV-R08SG-D1T | | EOI-010P | 11/2/2009 | ----- |
| | 8-inch Red, LED Module | TRV-R08SG-D1T-C | | EOI-011P | 11/2/2009 | ----- |
| | 8-inch Yellow, LED Module | TRV-Y08SG-D1T | | EOI-012P | 11/2/2009 | ----- |
| | 8-inch Yellow, LED Module | TRV-Y08SG-D1T-C | | EOI-013P | 11/2/2009 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | | |
| | 12-inch Green, LED Module | DR6-GCFB-17A | | GEL-046P | 4/22/2009 | ----- |
| | 12-inch Green, LED Module | DR6-GCFB-77A | | GEL-057P | 10/21/2011 | ----- |
| | 12-inch Green, LED Module | DR6-GCFB-VLA | Clear | GEL-069P | 6/10/2013 | ----- |
| | 12-inch Green, LED Module | DR6-GTFB-17A | | GEL-045P | 4/22/2009 | ----- |
| | 12-inch Green, LED Module | DR6-GTFB-77A | | GEL-054P | 10/21/2011 | ----- |
| | 12-inch Green, LED Module | DR6-GTFB-VLA | Tinted | GEL-068P | 6/10/2013 | ----- |
| | 12-inch Red, LED Module | DR6-RCFB-17A | | GEL-042P | 4/22/2009 | ----- |
| | 12-inch Red, LED Module | DR6-RCFB-77A | | GEL-055P | 10/21/2011 | ----- |
| | 12-inch Red, LED Module | DR6-RCFB-VLA | Clear | GEL-065P | 6/10/2013 | ----- |
| | 12-inch Red, LED Module | DR6-RTFB-17A | | GEL-041P | 4/22/2009 | ----- |
| | 12-inch Red, LED Module | DR6-RTFB-77A | | GEL-052P | 10/21/2011 | ----- |
| | 12-inch Red, LED Module | DR6-RTFB-VLA | Tinted | GEL-064P | 6/10/2013 | ----- |
| | 12-inch Yellow, LED Module | DR6-YCFB-17A-YX | | GEL-044P | 4/22/2009 | ----- |
| | 12-inch Yellow, LED Module | DR6-YCFB-77A | | GEL-056P | 10/21/2011 | ----- |
| | 12-inch Yellow, LED Module | DR6-YCFB-VLA | Clear | GEL-067P | 6/10/2013 | ----- |
| | 12-inch Yellow, LED Module | DR6-YTFB-17A-YX | | GEL-043P | 4/22/2009 | ----- |
| | 12-inch Yellow, LED Module | DR6-YTFB-17A-YX1 | | GEL-047P | 4/22/2009 | ----- |
| | 12-inch Yellow, LED Module | DR6-YTFB-77A | | GEL-053P | 10/21/2011 | ----- |
| | 12-inch Yellow, LED Module | DR6-YTFB-VLA | Tinted | GEL-066P | 6/10/2013 | ----- |
| | 8-inch Green, LED Module | DR4-GCFB-17A | | GEL-040P | 4/22/2009 | ----- |
| | 8-inch Green, LED Module | DR4-GCFB-77A | Clear | GEL-063P | 5/21/2012 | ----- |
| | 8-inch Green, LED Module | DR4-GCFB-VLA | Clear | GEL-075P | 6/10/2013 | ----- |
| | 8-inch Green, LED Module | DR4-GTFB-17A | | GEL-039P | 4/22/2009 | ----- |
| | 8-inch Green, LED Module | DR4-GTFB-77A | Tinted | GEL-062P | 5/21/2012 | ----- |
| | 8-inch Green, LED Module | DR4-GTFB-VLA | Tinted | GEL-074P | 6/10/2013 | ----- |
| | 8-inch Red, LED Module | DR4-RCFB-17A | | GEL-036P | 4/22/2009 | ----- |
| | 8-inch Red, LED Module | DR4-RCFB-77A | Clear | GEL-059P | 5/21/2012 | ----- |
| | 8-inch Red, LED Module | DR4-RCFB-VLA | Clear | GEL-071P | 6/10/2013 | ----- |
| | 8-inch Red, LED Module | DR4-RTFB-17A | | GEL-035P | 4/22/2009 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | | |
| | 8-inch Red, LED Module | DR4-RTFB-77A | Tinted | GEL-058P | 5/21/2012 | ----- |
| | 8-inch Red, LED Module | DR4-RTFB-VLA | Tinted | GEL-070P | 6/10/2013 | ----- |
| | 8-inch Yellow, LED Module | DR4-YCFB-17A-YX | | GEL-038P | 4/22/2009 | ----- |
| | 8-inch Yellow, LED Module | DR4-YCFB-77A | Clear | GEL-061P | 5/21/2012 | ----- |
| | 8-inch Yellow, LED Module | DR4-YCFB-VLA | Clear | GEL-073P | 6/10/2013 | ----- |
| | 8-inch Yellow, LED Module | DR4-YTFB-17A-YX | | GEL-037P | 4/22/2009 | ----- |
| | 8-inch Yellow, LED Module | DR4-YTFB-77A | Tinted | GEL-060P | 5/21/2012 | ----- |
| | 8-inch Yellow, LED Module | DR4-YTFB-VLA | Tinted | GEL-072P | 6/10/2013 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | | |
| | 12-inch Green, LED Module | TSL-12G-LX-IL3-A1 | | LEO-067P | 4/22/2009 | ----- |
| | 12-inch Green, LED Module | TSL-12G-LX-IL3-B1 | Direct Current (DC) | LEO-085P | 10/18/2010 | ----- |
| | 12-inch Green, LED Module | TSL-12G-LX-IL6-A1-P2 | | LEO-094P | 1/5/2011 | ----- |
| | 12-inch Green, LED Module | TSL-12G-LX-IL6-A1-P2-CLR | Clear | LEO-097P | 1/5/2011 | ----- |
| | 12-inch Green, LED Module | TSL-12G-LX-IL6-A1-P3 | | LEO-112P | 5/28/2015 | - |
| | 12-inch Green, LED Module | TSL-12G-LX-IL6-B1 | | LEO-124P | 8/2/2017 | ----- |
| | 12-inch Green, LED Module | TSL-12G-LX-IL6-B1-P3 | | LEO-119P | 8/2/2017 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL3-A1 | | LEO-065P | 4/22/2009 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL3-B1 | Direct Current (DC) | LEO-083P | 10/18/2010 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL6-A1-P2 | | LEO-092P | 1/5/2011 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL6-A1-P2-CLR | Clear | LEO-095P | 1/5/2011 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL6-A1-P3 | | LEO-110P | 5/28/2015 | - |
| | 12-inch Red, LED Module | TSL-12R-LX-IL6-B1 | | LEO-122P | 8/2/2017 | ----- |
| | 12-inch Red, LED Module | TSL-12R-LX-IL6-B1-P3 | | LEO-117P | 8/2/2017 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL3-A1-C | | LEO-066P | 4/22/2009 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL3-B1 | Direct Current (DC) | LEO-084P | 10/18/2010 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-A1-P2 | | LEO-093P | 1/5/2011 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-A1-P2-CLR | Clear | LEO-096P | 1/5/2011 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-A1-P2-CLR | Clear | LEO-090P | 1/5/2011 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-A1-P3 | | LEO-111P | 5/28/2015 | - |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-B1 | | LEO-123P | 8/2/2017 | ----- |
| | 12-inch Yellow, LED Module | TSL-12Y-LX-IL6-B1-P3 | | LEO-118P | 8/2/2017 | ----- |
| | 8-inch Green, LED Module | TSL-08G-LX-IL3-A1 | Tinted | LEO-076P | 4/29/2010 | ----- |
| | 8-inch Green, LED Module | TSL-08G-LX-IL3-A1-CL | Clear | LEO-077P | 4/29/2010 | ----- |
| | 8-inch Green, LED Module | TSL-08G-LX-IL6-A1-P2 | | LEO-088P | 1/5/2011 | ----- |
| | 8-inch Green, LED Module | TSL-08G-LX-IL6-A1-P2-CLR | Clear | LEO-091P | 1/5/2011 | ----- |
| | 8-inch Green, LED Module | TSL-08G-LX-IL6-A1-P3 | | LEO-109P | 5/28/2015 | - |
| | 8-inch Red, LED Module | TSL-08R-LX-IL3-A1 | Tinted | LEO-072P | 4/29/2010 | ----- |
| | 8-inch Red, LED Module | TSL-08R-LX-IL3-A1-CL | Clear | LEO-073P | 4/29/2010 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Circular Vehicle Traffic Signal Modules

Last Revised: 8/4/2017

| | Product | Name | Description | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | | |
| | 8-inch Red, LED Module | TSL-08R-LX-IL3-B1 | Direct Current (DC) | LEO-081P | 10/18/2010 | ----- |
| | 8-inch Red, LED Module | TSL-08R-LX-IL6-A1-P2 | | LEO-086P | 1/5/2011 | ----- |
| | 8-inch Red, LED Module | TSL-08R-LX-IL6-A1-P2-CLR | Clear | LEO-089P | 1/5/2011 | ----- |
| | 8-inch Red, LED Module | TSL-08R-LX-IL6-A1-P3 | | LEO-107P | 5/28/2015 | - |
| | 8-inch Red, LED Module | TSL-08R-LX-IL6-B1 | | LEO-120P | 8/2/2017 | ----- |
| | 8-inch Red, LED Module | TSL-08R-LX-IL6-B1-P3 | | LEO-115P | 8/2/2017 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL3-A1 | Tinted | LEO-074P | 4/29/2010 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL3-A1-CL | Clear | LEO-075P | 4/29/2010 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL3-B1 | Direct Current (DC) | LEO-082P | 10/18/2010 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL6-A1-P2 | | LEO-087P | 1/5/2011 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL6-A1-P3 | | LEO-108P | 5/28/2015 | - |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL6-B1 | | LEO-121P | 8/2/2017 | ----- |
| | 8-inch Yellow, LED Module | TSL-08Y-LX-IL6-B1-P3 | | LEO-116P | 8/2/2017 | ----- |
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | | |
| | 12-inch Green, LED Module | D-L, JXC300-HFG | | TRA-019P | 1/7/2009 | ----- |
| | 12-inch Green, LED Module | D-L, JXC300-HFTG | | TRA-025P | 2/22/2010 | ----- |
| | 12-inch Red, LED Module | D-L, JXC300-HFR | | TRA-017P | 1/7/2009 | ----- |
| | 12-inch Red, LED Module | D-L, JXC300-HFTR | | TRA-023P | 2/22/2010 | ----- |
| | 12-inch Yellow, LED Module | D-L, JXC300-HFDCY-P | Direct Current (DC) | TRA-032P | 2/14/2012 | ----- |
| | 12-inch Yellow, LED Module | D-L, JXC300-HFTY02 | | TRA-024P | 2/22/2010 | ----- |
| | 12-inch Yellow, LED Module | D-L, JXC300-HFY02 | | TRA-018P | 1/7/2009 | ----- |
| | 8-inch Green, LED Module | D-L, JXC200-HFG | | TRA-022P | 4/27/2009 | ----- |
| | 8-inch Red, LED Module | D-L, JXC200-HFR | | TRA-020P | 4/27/2009 | ----- |
| | 8-inch Yellow, LED Module | D-L, JXC200 HFY02 | | TRA-021P | 4/27/2009 | ----- |

### 1104.06(b) LED Vehicle Arrow Traffic Signal Modules

Last Revised: 8/11/2017

| Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|

## Section 1104: Traffic Signals

### 1104.06(b) LED Vehicle Arrow Traffic Signal Modules

Last Revised: 8/11/2017

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | |
| | 12-inch Green Arrow, LED Module | 432-2324-001XOD | DIA-052P | 6/3/2008 | ----- |
| | 12-inch Green Arrow, LED Module | 432-2324-001XOD15 (tinted) | DIA-071P | 11/23/2015 | ----- |
| | 12-inch Green Arrow, LED Module | 432-2374-001XOD | DIA-053P | 6/3/2008 | ----- |
| | 12-inch Green Arrow, LED Module | 432-2374-001XOD15 (tinted) | DIA-072P | 11/23/2015 | ----- |
| | 12-inch Red Arrow, LED Module | 432-1314-001XOD15 (tinted) | DIA-067P | 11/23/2015 | ----- |
| | 12-inch Red Arrow, LED Module | 432-1314-00IXOD | DIA-061P | 2/17/2010 | ----- |
| | 12-inch Red Arrow, LED Module | 432-1374-001XOD15 (clear) | DIA-068P | 11/23/2015 | ----- |
| | 12-inch Yellow Arrow, LED Module | 431-3334-001XOD | DIA-051P | 6/3/2008 | ----- |
| | 12-inch Yellow Arrow, LED Module | 431-3334-901XOD | DIA-056P | 9/16/2008 | ----- |
| | 12-inch Yellow Arrow, LED Module | 431-3334-901XOD15 (tinted) | DIA-069P | 11/23/2015 | ----- |
| | 12-inch Yellow Arrow, LED Module | 431-3374-001XOD15 (clear) | DIA-070P | 11/23/2015 | ----- |
| **EXCOP 15** | **Excellence Opto, Inc., 1400 West Lambert Road, Suite B, Brea, CA 92821 http://www.eoi.com.tw/** | | | | |
| | 12-inch Green Arrow, LED Module | TRA-G12DG-IN | EOI-004P | 8/6/2009 | ----- |
| | 12-inch Green Arrow, LED Module | TRA-G12DG-IN-C | EOI-017P | 7/13/2011 | ----- |
| | 12-inch Red Arrow, LED Module | TRA-R12DG-IN | EOI-016P | 2/17/2010 | ----- |
| | 12-inch Yellow Arrow, LED Module | TRA-Y12DG-IN | EOI-005P | 8/6/2009 | ----- |
| | 12-inch Yellow Arrow, LED Module | TRA-Y12DG-IN2 | EOI-008P | 11/2/2009 | ----- |
| | 12-inch Yellow Arrow, LED Module | TRA-Y12DG-IN2-C | EOI-009P | 11/2/2009 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Vehicle Arrow Traffic Signal Modules

Last Revised: 8/11/2017

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | |
| | 12-inch Green Arrow, LED Module | DR6-GCAAN-VLA | GEL-083P | 8/10/2017 | ----- |
| | 12-inch Green Arrow, LED Module | DR6-GTAAN-VLA | GEL-082P | 8/10/2017 | ----- |
| | 12-inch Green Arrow, LED Module | DRG-GCAAN-17A | GEL-033P | 9/24/2008 | ----- |
| | 12-inch Green Arrow, LED Module | DRG-GTAAN-17A | GEL-032P | 9/24/2008 | ----- |
| | 12-inch Red Arrow, LED Module | DR6-RCAAN-17A | GEL-049P | 2/17/2010 | ----- |
| | 12-inch Red Arrow, LED Module | DR6-RCAAN-VLA | GEL-079P | 8/10/2017 | ----- |
| | 12-inch Red Arrow, LED Module | DR6-RTAAN-17A | GEL-048P | 2/17/2010 | ----- |
| | 12-inch Red Arrow, LED Module | DR6-RTAAN-VLA | GEL-078P | 8/10/2017 | ----- |
| | 12-inch Yellow Arrow, LED Module | DR6-YCAAN-VLA | GEL-081P | 8/10/2017 | ----- |
| | 12-inch Yellow Arrow, LED Module | DR6-YTAAN-VLA | GEL-080P | 8/10/2017 | ----- |
| | 12-inch Yellow Arrow, LED Module | DRG-YTAAN-17A-YX | GEL-034P | 9/24/2008 | ----- |
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | |
| | 12-inch Green Arrow, LED Module | TSL-12GA- IL6-A1 | LEO-102P | 1/4/2012 | ----- |
| | 12-inch Green Arrow, LED Module | TSL-12GA- IL6-A1-CLR | LEO-103P | 1/4/2012 | ----- |
| | 12-inch Green Arrow, LED Module | TSL-12GA-LD-A1 | LEO-064P | 4/22/2009 | ----- |
| | 12-inch Green Arrow, LED Module | TSL-12GA-LD-A1-CLR | LEO-070P | 2/17/2010 | ----- |
| | 12-inch Red Arrow, LED Module | TSL-12RA- IL6-A1 | LEO-098P | 1/4/2012 | ----- |
| | 12-inch Red Arrow, LED Module | TSL-12RA-IL6-A1-CLR | LEO-099P | 1/4/2012 | ----- |
| | 12-inch Red Arrow, LED Module | TSL-12RA-LD-A1 | LEO-068P | 2/17/2010 | ----- |
| | 12-inch Red Arrow, LED Module | TSL-12RA-LD-A1-CLR | LEO-069P | 2/17/2010 | ----- |
| | 12-inch Yellow Arrow, LED Module | TSL-12YA-IL6-A1 | LEO-100P | 1/4/2012 | ----- |
| | 12-inch Yellow Arrow, LED Module | TSL-12YA-IL6-A1-CLR | LEO-101P | 1/4/2012 | ----- |
| | 12-inch Yellow Arrow, LED Module | TSL-12YA-LD-A1 | LEO-063P | 4/22/2009 | ----- |
| | 12-inch Yellow Arrow, LED Module | TSL-12YA-LD-A1-CLR | LEO-071P | 2/17/2010 | ----- |

## Section 1104: Traffic Signals

### 1104.06(b) LED Vehicle Arrow Traffic Signal Modules

Last Revised: 8/11/2017

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | |
| | 12-inch Green Arrow, LED Module | Duralight JXJ300-07G03 | TRA-028P | 2/22/2010 | ----- |
| | 12-inch Red Arrow, LED Module | Duralight JXJ300-07R03 | TRA-026P | 2/22/2010 | ----- |
| | 12-inch Yellow Arrow, LED Module | Duralight JXJ300-07Y03 | TRA-027P | 2/22/2010 | ----- |

### 1104.06(c) LED Optically Programmed Signal Heads

Last Revised: 6/10/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | |
| | Green, LED Module | P46-3G33-003 | DIA-036P | 1/28/2005 | ----- |
| | Red, LED Module | P46-3R33-003 | DIA-038P | 1/28/2005 | ----- |
| | Yellow, LED Module | P46-3Y33-003 | DIA-037P | 1/28/2005 | ----- |
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | |
| | Green, LED Module | DR3-GCFB-01A | GEL-020P | 9/24/2008 | ----- |
| | Red, LED Module | DR3-RCFB-01A | GEL-018P | 9/24/2008 | ----- |
| | Yellow, LED Module | DR3-YCFB-01A | GEL-019P | 9/24/2008 | ----- |
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | |
| | Green, LED Module | T05G-A-CA01 | LEO-080P | 7/23/2010 | ----- |
| | Red, LED Module | T05R-A-6100 | LEO-078P | 7/23/2010 | ----- |
| | Yellow, LED Module | T05Y-A-6100 | LEO-079P | 7/23/2010 | ----- |

### 1104.06(d) Pedestrian Signal Housings

Last Revised: 5/9/2019

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **BRTPI 15** | **Brown Traffic Products, Inc., 736 Federal Street, Suite 2312, Davenport, IA 52803 http://browntraffic.com/** | | | | | |
| | Pedestrian Signal Housing | SA 302 A | 12 x 12 | BTP-001P | 6/20/2014 | ----- |

## Section 1104: Traffic Signals

### 1104.06(d) Pedestrian Signal Housings

Last Revised: 5/9/2019

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **BRTPI 15** | **Brown Traffic Products, Inc., 736 Federal Street, Suite 2312, Davenport, IA 52803 http://browntraffic.com/** | | | | | |
| | Pedestrian Signal Housing | SA 320 A | 9 x 9 | BTP-002P | 6/20/2014 | ----- |
| | Pedestrian Signal Housing | SG7SZ10C1YYF | 16 x 18 | BTP-007P | 6/20/2014 | ----- |
| | Pedestrian Signal Housing | SG7SZ20C1YYF | 16 x 18 | BTP-008P | 6/20/2014 | ----- |
| **CHMAI 15** | **C H Manufacturing Inc., 200 Elder Road, Conroe, TX 77385** | | | | | |
| | Pedestrian Signal Housing | SIG-PAY-315-TCG-EVN-00 | 12 x 12 | CHM-003P | 3/28/1994 | ----- |
| | Pedestrian Signal Housing | SIG-PPY-315-TCG-EVN-00 | 12 x 12 | CHM-004P | 3/28/1994 | ----- |
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | | |
| | Pedestrian Signal Housing | 12-inch Aluminum | 12 x 12 | ECO-119P | 1/13/2010 | ----- |
| | Pedestrian Signal Housing | 12-inch Polycarbonate | 12 x 12 | ECO-120P | 1/13/2010 | ----- |
| | Pedestrian Signal Housing | 16-inch Aluminum | 16 x 18 | ECO-121P | 1/13/2010 | ----- |
| **MCCAN 15** | **McCain Inc., 2365 Oak Ridge Way, Vista, CA 92081 http://www.mccain-inc.com/** | | | | | |
| | Pedestrian Signal Housing | 1000 Series | 16 x 18 | MCC-003P | 8/20/1991 | ----- |
| | Pedestrian Signal Housing | M31941 | 16 x 18 | MCC-017P | 2/2/2012 | ----- |
| | Pedestrian Signal Housing | MPSTA | 12 x 12 | MCC-009S | 7/14/1993 | ----- |
| | Pedestrian Signal Housing | MPSTP | 12 x 12 | MCC-008S | 7/14/1993 | ----- |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | | |
| | Pedestrian Signal Housing | PHXAXXXX | 16 x 18 | TFW-014P | 5/9/2019 | ----- |
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | | |
| | Pedestrian Signal Housing | 4302 | 16 x 18 | PTS-41P | 9/21/2009 | ----- |
| | Pedestrian Signal Housing | MP Series | 12 x 12 | PTS-030S | 8/18/1972 | ----- |
| | Pedestrian Signal Housing | MPA Series | 12 x 12 | PTS-034S | 4/12/1978 | ----- |
| | Pedestrian Signal Housing | MPP Series | 12 x 12 | PTS-037S | 10/6/1987 | ----- |
| | Pedestrian Signal Housing | PED-100 | 12 x 12 | PTS-027P | 5/4/2001 | ----- |

## Section 1104: Traffic Signals

### 1104.06(d) Pedestrian Signal Housings

Last Revised: 5/9/2019

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **TRAPA 15** | **Traffic Parts, Inc., P. O. Box 837, Spring, TX 77383 http://www.trafficparts.com/** | | | | | |
| **Facility** | **Chapel Hill Manufacturing 27895 Robinson Road Conroe, TX 77385** | | | | | |
| | Pedestrian Signal Housing | SSPED-CNN-P22-N | 16 x 18 | TPI-009P | 1/22/2016 | - |
| | Pedestrian Signal Housing | SSPED-CNN-Y22-N | 16 x 18 | TPI-011P | 1/22/2016 | - |
| | Pedestrian Signal Housing | SSPED-PNN-P2N-N | 16 x 18 | TPI-010P | 1/22/2016 | - |
| | Pedestrian Signal Housing | SSPED-PNN-Y2N-N | 16 x 18 | TPI-012P | 1/22/2016 | - |
| **USTRA 15** | **U. S. Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221** | | | | | |
| | Pedestrian Signal Housing | 7037 | 12 x 12 | UST-185S | 5/26/1982 | ----- |
| | Pedestrian Signal Housing | 7057 | 12 x 12 | UST-186S | 5/26/1982 | ----- |
| | Pedestrian Signal Housing | 7090 | 12 x 12 | UST-187S | 5/26/1982 | ----- |

### 1104.06(e) LED Pedestrian Signal Modules

Last Revised: 6/10/2015

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | | |
| | Pedestrian Signal, LED Module, Dual Unit | 430-6450-001X | 16 x 18 | DIA-040P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Dual Unit | 430-6772-001X | 12 x 12 | DIA-039P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Upraised Hand | 430-5570-001X | | DIA-059P | 2/2/2009 | ----- |
| | Pedestrian Signal, LED Module, Upraised Hand | 430-5770-001X | 12 x 12 | DIA-057P | 2/2/2009 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | 430-7570-001X | | DIA-060P | 2/2/2009 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | 430-7771-001X | 12 x 12 | DIA-058P | 2/2/2009 | ----- |
| **EXCOP 15** | **Excellence Opto, Inc., 1400 West Lambert Road, Suite B, Brea, CA 92821 http://www.eoi.com.tw/** | | | | | |
| | Pedestrian Signal, LED Module, Dual Unit | TRP-C45DG-W2 | 16 x 18 | EOI-007P | 8/6/2009 | ----- |
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | | |
| | Pedestrian Signal, LED Module, Dual Unit | PS6-CFL1-26A | 12 x 12 | GEL-050P | 2/4/2011 | ----- |
| | Pedestrian Signal, LED Module, Dual Unit | PS7-CFC1-26A | 16 x 18 | GEL-031P | 8/20/2008 | ----- |
| | Pedestrian Signal, LED Module, Upraised Hand | PS6-PFH1-26A | | GEL-028P | 1/4/2008 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | PS6-WFM3-26A | | GEL-029P | 1/4/2008 | ----- |

## Section 1104: Traffic Signals

### 1104.06(e) LED Pedestrian Signal Modules

Last Revised: 6/10/2015

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | | |
| | Pedestrian Signal, LED Module, Dual Unit | TP12H-HM | 12 x 12 | LEO-062P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Dual Unit | TSL-PED-16-DIL | 16 x 18 | LEO-057P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Upraised Hand | TP09B-EH | 9 x 9 | LEO-058P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Upraised Hand | TP12B-EH | 12 x 12 | LEO-060P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | TP09B-WM | 9 x 9 | LEO-059P | 6/3/2008 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | TP12H-WM | 12 x 12 | LEO-061P | 6/3/2008 | ----- |
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | | |
| | Pedestrian Signal, LED Module, Upraised Hand | Duralight JXM-09VIH | 9 x 9 | TRA-015P | 1/7/2008 | ----- |
| | Pedestrian Signal, LED Module, Walking Person | Duralight JXM-09VIM | 9 x 9 | TRA-016P | 1/7/2008 | ----- |

### 1104.06(f) LED Countdown Pedestrian Signal Modules

Last Revised: 12/15/2017

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | | |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | 4430-6479-001X | 16 x 18 | DIA-041P | 6/3/2008 | ----- |
| | Countdown Pedestrian Signal, LED Module, Time Only | 430-7773-001X | 12 x 12 | DIA-042P | 6/3/2008 | ----- |
| **EXCOP 15** | **Excellence Opto, Inc., 1400 West Lambert Road, Suite B, Brea, CA 92821 http://www.eoi.com.tw/** | | | | | |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | TRP-C45D3154C10 | 16 x 18 | EOI-006P | 8/6/2009 | ----- |

## Section 1104: Traffic Signals

### 1104.06(f) LED Countdown Pedestrian Signal Modules

Last Revised: 12/15/2017

| | Product | Name | Size (in.) | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|---|
| **GELUM 15** | **GE Lighting Solutions, 2713 N.E. 14th Street, Fort Lauderdale, FL 33304 http://www.gelighting.com/** | | | | | |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | PS7-CFF1-26A | 16 x 18 | GEL-030P | 6/15/2008 | ----- |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | PS7-CFF1-27A | 16 x 18 | GEL-076P | 3/14/2014 | ----- |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | PS7-CFF1-VLA | 16 x 18 | GEL-077P | 3/30/2016 | - |
| | Countdown Pedestrian Signal, LED Module, Time Only | PS6-PFD1-26A | 12 x 12 | GEL-051P | 2/1/2011 | ----- |
| | Countdown Pedestrian Signal, LED Module, Time Only | PS6-PFD1-26A | 12 x 12 | GEL-051P | 2/1/2011 | ----- |
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | | |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | TSL-PED-16-CIL-9 | 16 x 18 | LEO-056P | 6/3/2008 | ----- |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | TSL-PED-16-SPC-V1 | 16 x 18 | LEO-125P | 12/12/2017 | ----- |
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | | |
| | Countdown Pedestrian Signal, LED Module, Dual Unit | JXM-400VIEIL | 16 x 18 | TRA-029P | 11/3/2010 | ----- |
| | Countdown Pedestrian Signal, LED Module, Time Only | Duralight JXM-200VIE | 12 x 12 | TRA-014P | 8/23/2006 | ----- |

### 1104.06(g) LED Lane Use Traffic Control Signal Heads

Last Revised: 11/30/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ORANG 15** | **Orange Traffic, 18195 Rue J A Bombardier, Mirabel, Quebec J7J 0E7 https://www.orangetraffic.com/** | | | | |
| | Lane Use Signal Head, LED Module | LCS2828-18AB, Green Arrow / Yellow X / Red X Indicator | OTR-002P | 11/9/2018 | 2017-027Q |

## Section 1104: Traffic Signals

### 1104.06(g) LED Lane Use Traffic Control Signal Heads

Last Revised: 11/30/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | |
| | Lane Use Signal Head, LED Module | MP, Green Arrow Indicator | PTS-033P | 3/20/2007 | ----- |
| | Lane Use Signal Head, LED Module | MP, Red X Indicator | PTS-031S | 3/20/2007 | ----- |
| | Lane Use Signal Head, LED Module | MP, Yellow X Indicator | PTS-032S | 3/20/2007 | ----- |
| **TRAST 15** | **TraStar, Inc., 860 N. Dorothy Dr. Suite 600, Richardson, TX 75081 http://www.trastarusa.com/** | | | | |
| | Lane Use Signal Head, LED Module | JXM-LC1818, Green Arrow / Yellow X / Red X Indicator | TRA-031P | 10/25/2011 | ----- |

### 1104.07(a)1 Loop Detector Sealants

Last Revised: 6/8/2015

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **3M-03 15** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/** | | | | |
| **Plant** | **Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | |
| | Loop Detector Sealant | 3M Detector Loop Sealant | | | 1985-136 |
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | | |
| | Loop Detector Sealant | Gold Label Loop Sealant | | | 1977-004 |
| **CHEMQ 15** | **Chemque, Inc., 6107 Guion Road, Indianapolis, IN 46254 http://chemque.com/** | | | | |
| | Loop Detector Sealant | Q-Seal 296-06 | | | 1996-237 |
| **DURPT 15** | **Durant Paints, Inc., 112 Railroad Street, Revere, MA 02151 http://www.durantcorp.com/** | | | | |
| | Loop Detector Sealant | Stat-A-Flex | | | 1995-275 |
| **DYNAT 15** | **Dynatron/Bondo Corporation, 3700 Atlanta Ind. Parkway, Atlanta, GA 30331 http://bondo.com/** | | | | |
| | Loop Detector Sealant | P-606 | | | ----- |
| **MAGNL 15** | **Magnolia Plastics, Inc., 5547 Peachtree Ind. Blvd., Chamblee, GA 30341** | | | | |
| | Loop Detector Sealant | Magnoloop I | | | 1977-055 |
| **RAIPR 15** | **RAI Products, P.O. Box 240772, Charlotte, NC 28224 http://raiproducts.com/** | | | | |
| | Loop Detector Sealant | Pro-Seal 6006 | | | 1994-261 |
| **RUSCE 15** | **Ruscoe Highway Products, Ruscoe, W. J. , Co., P. O. Box 3858, Akron, OH 44314 http://www.ruscoe.com/highway-products/** | | | | |
| | Loop Detector Sealant | Loop Sealant 974 | | 8/10/1992 | ----- |

## Section 1104: Traffic Signals

### 1104.07(b)1 Vehicular Detection: Loop Amplifier Systems

Last Revised: 9/4/2018

| Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|
| **EBERL 15** | **Eberle Design Inc., 3819 East Lasalle, Phoenix, AZ 85040 http://www.editraffic.com/** | | | |
| Loop Amplifier Detection System | LM 222 Series | EBD-021P | 6/7/2000 | ----- |
| Loop Amplifier Detection System | LM 602 | EBD-014S | 10/31/1997 | ----- |
| Loop Amplifier Detection System | LM 622 | EBD-018S | 10/31/1997 | ----- |
| Loop Amplifier Detection System | LMD 222 Series | EBD-025P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 224 Series | EBD-026P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 301 Series | EBD-027P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 302 Series | EBD-028P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 304 Series | EBD-029P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 602 Series | EBD-030P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 602T Series | EBD-031P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 604 Series | EBD-032P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 604T Series | EBD-033P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 622 Series | EBD-034P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 622T Series | EBD-035P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 624 Series | EBD-036P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 624T Series | EBD-037P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 632T Series | EBD-038P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | LMD 642T Series | EBD-039P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle 2E Enhanced | EBD-040P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle 2EC Enhanced | EBD-041P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle 4E Enhanced | EBD-042P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle 4EC Enhanced | EBD-044P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle 4H Enhanced | EBD-043P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle S1E Enhanced | EBD-045P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle S1EC Enhanced | EBD-046P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle S2E Enhanced | EBD-047P | 11/18/2008 | ----- |
| Loop Amplifier Detection System | Oracle S2EC Enhanced | EBD-048P | 11/18/2008 | ----- |

## Section 1104: Traffic Signals

### 1104.07(b)1 Vehicular Detection: Loop Amplifier Systems

Last Revised: 9/4/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **GLOTT 15** | **Global Traffic Technologies, LLC, 800 North 3rd St. Suite 100, St. Paul, MN 55128-5441 http://www.gtt.com/** | | | | |
| | Loop Amplifier Detection System | Canoga 9004 Loop Amplifier System | GTT-006P | 2/17/2016 | 2015-167Q |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | Loop Amplifier Detection System | 710 TX/I | TFW-002P (NAZ-009P) | 4/13/2016 | ----- |
| | Loop Amplifier Detection System | 722L | TFW-009P (NAZ-017P) | 4/13/2016 | ----- |
| | Loop Amplifier Detection System | 722TXC | TFW-007P (NAZ-015P) | 4/13/2016 | ----- |
| | Loop Amplifier Detection System | 724 | TFW-008P (NAZ-016P) | 4/13/2016 | ----- |
| | Loop Amplifier Detection System | 724L | TFW-010P (NAZ-018P) | 4/13/2016 | ----- |
| **NORCO 15** | **Northstar Controls, LLC, 6147 Clark Center Avenue, Sarasota, FL 34238 http://www.northstarcontrols.com/** | | | | |
| | Loop Amplifier Detection System | N222 | NSC-005P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | N222-2 | NSC-007P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | N222-2E | NSC-008P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | N222-E | NSC-006P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | N224-2 | NSC-009P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | N224-2E | NSC-010P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | NT11 | NSC-001P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | NT11-E | NSC-002P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | NT22 | NSC-003P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | NT22-E | NSC-004P | 12/15/2008 | ----- |
| | Loop Amplifier Detection System | NT44 | NSC-011P | 12/15/2008 | ----- |

## Section 1104: Traffic Signals

### 1104.07(b)1 Vehicular Detection: Loop Amplifier Systems

Last Revised: 9/4/2018

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **RENOA 15** | **Reno A & E, Inc., 4655 Aircenter Circle, Reno, NV 89502 http://www.renoae.com/** | | | | |
| | Loop Amplifier Detection System | 222 | RAE-001P | 1/6/2000 | ----- |
| | Loop Amplifier Detection System | 222 (R) | RAE-002P | 1/6/2000 | ----- |
| | Loop Amplifier Detection System | C (R) | RAE-004P | 8/11/1998 | ----- |
| | Loop Amplifier Detection System | C-1200-SS | RAE-003P | 8/11/1998 | ----- |
| | Loop Amplifier Detection System | E-1200-SS | RAE-005P | 2/11/2000 | ----- |
| | Loop Amplifier Detection System | G-200-SS | RAE-019P | 11/5/2003 | ----- |
| | Loop Amplifier Detection System | GT-200-R | RAE-010P | 6/12/2003 | ----- |
| | Loop Amplifier Detection System | GT-200-SS | RAE-011P | 6/12/2003 | ----- |
| | Loop Amplifier Detection System | L-1200-R | RAE-006P | 8/11/1998 | ----- |
| | Loop Amplifier Detection System | L-1200-SS | RAE-007P | 8/11/1998 | ----- |
| | Loop Amplifier Detection System | S-1200-R | RAE-012P | 2/11/2000 | ----- |
| | Loop Amplifier Detection System | S-1200-SS | RAE-013P | 2/11/2000 | ----- |
| | Loop Amplifier Detection System | T-100-R | RAE-014P | 4/25/2002 | ----- |
| | Loop Amplifier Detection System | T-100-SS | RAE-015P | 11/5/2003 | ----- |
| | Loop Amplifier Detection System | T-110-R | RAE-016P | 11/5/2003 | ----- |
| | Loop Amplifier Detection System | T-210-R | RAE-017P | 11/5/2003 | ----- |
| | Loop Amplifier Detection System | T-400-R | RAE-018P | 11/5/2003 | ----- |
| | Loop Amplifier Detection System | Y-200-SS | RAE-008P | 6/12/2003 | ----- |
| | Loop Amplifier Detection System | Y-204-SS | RAE-009P | 6/12/2003 | ----- |
| **USTRA 15** | **U. S. Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221** | | | | |
| | Loop Amplifier Detection System | 222 | UST-139S | 1/9/1989 | ----- |
| | Loop Amplifier Detection System | 242 | UST-144S | 3/5/1986 | ----- |

### 1104.07(b)2 Vehicular Detection: Video Detection Systems

Last Revised: 9/10/2020

| Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|

## Section 1104: Traffic Signals

### 1104.07(b)2 Vehicular Detection: Video Detection Systems

Last Revised: 9/10/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ALDIS 15** | **Aldis Corporation, 10545 Hardin Valley Road, Knoxville, TN 37932 http://www.aldiscorp.com/** | | | | |
| | Video Detection System | GridSmart | ALD-001P | 9/17/2013 | ----- |
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | |
| | Video Detection System | AIS-V | ECO-125P | 10/21/2013 | ----- |
| | Video Detection System | Autoscope Image Sensor-AIS IV | ECO-124P | 2/19/2013 | ----- |
| | Video Detection System | Autoscope Solo Terra | ECO-123P | 2/19/2013 | ----- |
| | Video Detection System | Autoscope Vision Camera | ECO-130P | 12/7/2018 | 2018-129Q |
| | Video Detection System | Encore | ECO-122P | 1/7/2011 | ----- |
| **FLIRS 15** | **FLIR Systems, Inc., 70 Castillian Drive, Goleta, CA 93117 https://www.flir.com/** | | | | |
| | Video Detection System | FC-Series T Thermal | FLI-001P | 5/5/2014 | ----- |
| | Video Detection System | TrafiSense | FLI-002P | 12/21/2018 | ----- |
| **ITERS 15** | **Iteris, Inc, 1700 Carnegie Ave., Suite 100, Santa Ana, CA 92705-5551 http://www.iteris.com/** | | | | |
| | Video Detection System | RZ-4A WDR | ITE-001P | 8/31/2012 | ----- |
| | Video Detection System | SmartSpan | ITE-006P | 4/10/2018 | 2017-118Q |
| | Video Detection System | Vantage Vector | ITE-003P | 2/21/2013 | ----- |
| | Video Detection System | VantageNext | ITE-004P | 12/20/2016 | 2016-211 |
| | Video Detection System | Versicam | ITE-002P | 8/31/2012 | ----- |
| **ITSP1 15** | **ITS Plus, Inc., 6220 Trailwood Drive, Suite 200, Plano, TX 75024 https://itsplus3.com/** | | | | |
| **Facility** | **Broach Bilt Manufacturing 2140 Redbud Boulevard McKinney, TX 75069** | | | | |
| | Video Detection System | ITSP-PM120C/24C | ITS-001P | 3/21/2019 | 2018-215Q |
| **LEDTI 15** | **LeddarTech, Inc., 2740 Einstein Street, Quebec City, Canada G1P 4S4** | | | | |
| | Video Detection System | D-Tec Sensor | LTI-001P | 11/2/2012 | ----- |

## Section 1104: Traffic Signals

### 1104.07(b)2 Vehicular Detection: Video Detection Systems

Last Revised: 9/10/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **MIGMA 15** | **Migma Systems, Inc., 1600 Providence Highway, Walpole, MA 02081 http://www.migmapd.com** | | | | |
| | Video Detection System | MigmaIntersection | MIG-001P | 6/17/2016 | 2014-225 |
| | Video Detection System | MigmaMidblock | MIG-002P | 6/17/2016 | 2014-224 |
| **MIOV1 15** | **Miovision Technologies Inc., 137 Glasgow Street, Suite 110, Kitchener, Ontario, Canada N2G 4X8 https://miovision.com/** | | | | |
| | Video Detection System | TrafficLink Camera Detection | MIO-001P | 3/24/2020 | 2019-053Q |
| **PEKTS 15** | **Peek Traffic Corporation, 2906 Corporate Way, Palmetto, FL 34221 http://peektraffic.com/index.php** | | | | |
| | Video Detection System | VideoTrak IQ | PTS-043P | 10/11/2013 | ----- |
| **TRAFI 15** | **Traficon USA LLC, 10161 Park Run Drive Suite 150, Las Vegas, NV 89145** | | | | |
| | Video Detection System | C-Walk (Pedestrian) | TUL-004P | 10/4/2012 | ----- |
| | Video Detection System | SafeWalk (Pedestrian) | TUL-003P | 10/4/2012 | ----- |
| | Video Detection System | TrafiCam | TUL-001P | 10/4/2012 | ----- |
| | Video Detection System | VIP | TUL-002P | 10/4/2012 | ----- |

### 1104.07(b)3 Vehicular Detection: Microwave Radar Detection Systems

Last Revised: 10/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ECON0 15** | **Econolite Control Products, 1250 N. Tustin Avenue, Anaheim, CA 92807 http://www.econolite.com/** | | | | |
| | Microwave Radar Detection System | RTMS G4 | ECO-126P | 3/14/2014 | ----- |
| **ISSINC15** | **Image Sensing Systems, 500 Spruce Tree Center, St. Paul, MN 55104 http://www.imagesensing.com/** | | | | |
| | Microwave Radar Detection System | SX-300 | IMA-001P | 3/27/2017 | ----- |

## Section 1104: Traffic Signals

### 1104.07(b)3 Vehicular Detection: Microwave Radar Detection Systems

Last Revised: 10/13/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ITERS 15** | **Iteris, Inc, 1700 Carnegie Ave., Suite 100, Santa Ana, CA 92705-5551 http://www.iteris.com/** | | | | |
| | Microwave Radar Detection System | Vantage Vector | ITE-003P | 2/21/2013 | ----- |
| | Microwave Radar Detection System | VantageRadius | ITE-005P | 10/4/2018 | 2016-283Q |
| | Microwave Radar Detection System | VantageRadius | ITE-005P | 10/4/2018 | 2018-179Q |
| **MSSED 15** | **Ms Sedco, 8701 Castle Park Drive, Indianapolis, IN 46256 http://mssedco.com/** | | | | |
| | Microwave Radar Detection System | TC-26-B | MSD-004P | 3/27/1991 | ----- |
| | Microwave Radar Detection System | TC-30 | MSD-005P | 11/13/1989 | ----- |
| | Microwave Radar Detection System | TC-CK1-SBE/TCIB-4 | MSD-006P | 6/7/2011 | ----- |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | Microwave Radar Detection System | 150 LX | TFW-006P (NAZ-014P) | 4/13/2016 | - |
| **TRACP 15** | **Traffic Control Products, Inc., 4565 Glenbrook Road, Willoughby, OH 44094 http://www.traffcon.com/** | | | | |
| | Microwave Radar Detection System | Pulsar II | TCP-002P | 8/20/2008 | ----- |
| **WAVTX 15** | **Wavetronix, LLC, 78 E. 1700 S., Provo, UT 84606 http://www.wavetronix.com/en** | | | | |
| | Microwave Radar Detection System | Smart Sensor Advance Model 200 | WAV-001S | 9/14/2009 | ----- |
| | Microwave Radar Detection System | Smart Sensor Matrix Radar Detection System | WAV-002S | 6/13/2012 | ----- |
| **XTRAL 15** | **Xtralis, 700 Longwater Drive, Norwell, MA 02061 http://xtralis.com/index.cfm** | | | | |
| | Microwave Radar Detection System | MW 232-819/M2 | XTR-001P | 10/5/2009 | ----- |

### 1104.07(b)6 Vehicular Detection: Magnetic Detection Systems

Last Revised: 5/16/2016

| Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|

## Section 1104: Traffic Signals

### 1104.07(b)6 Vehicular Detection: Magnetic Detection Systems

Last Revised: 5/16/2016

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **GLOTT 15** | **Global Traffic Technologies, LLC, 800 North 3rd St. Suite 100, St. Paul, MN 55128-5441 http://www.gtt.com/** | | | | |
| | Magnetic Detection System | 701 | MMM-038P | 3/29/2002 | ----- |
| | Magnetic Detection System | 702 | MMM-033P | 3/29/2002 | ----- |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | Magnetic Detection System | Valence Pod System | TFW--012P | 5/6/2016 | - |
| **SENNE 15** | **Sensys Networks, Inc., 12 Middle Woods Court, Parkton http://www.sensysnetworks.com/** | | | | |
| | Magnetic Detection System | Wireless Detection System | SNI-001P | 1/7/2008 | ----- |

### 1104.07(c)1 Pedestrian Detection: Pedestrian Pushbuttons

Last Revised: 3/19/2019

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **CAMCO 15** | **Campbell Company, 450 West McGregor Drive, Boise, ID 83705 http://www.pedsafety.com/** | | | | |
| | Pedestrian Pushbutton System | 4 EVR C | DCC-008P | 5/20/2011 | ----- |
| | Pedestrian Pushbutton System | 4EVR 120 | DCC-002P | 9/10/2003 | ----- |
| | Pedestrian Pushbutton System | 4EVR 700 Rnd | DCC-003P | 9/10/2003 | ----- |
| | Pedestrian Pushbutton System | 4EVR 800 Rec | DCC-004P | 9/10/2003 | ----- |
| | Pedestrian Pushbutton System | DCC 200 Series | 1562-P001 | 8/31/2001 | ----- |
| | Pedestrian Pushbutton System | DCC Enlightened PPB | DCC-007P | 11/18/2008 | ----- |
| **PELC- 15** | **Pelco Products, Inc., 320 S.W. 18th Street, Edmond, OK 73013 http://www.pelcoinc.com/** | | | | |
| | Pedestrian Pushbutton System | SE-2005-08 | PEL-002P | 6/2/2010 | ----- |
| | Pedestrian Pushbutton System | SE-2119-P29 | PEL-003P | 11/28/2011 | ----- |
| | Pedestrian Pushbutton System | SE-2120-P29 | PEL-004P | 11/28/2011 | ----- |
| | Pedestrian Pushbutton System | SE-2154-P29 | PEL-005P | 11/28/2011 | ----- |

## Section 1104: Traffic Signals

### 1104.07(c)1 Pedestrian Detection: Pedestrian Pushbuttons

Last Revised: 3/19/2019

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **POLEI 15** | **Polara Engineering, Inc., 9153 Stellar Court, Corona, CA 92833 http://www.polara.com/** | | | | |
| | Pedestrian Pushbutton System | BDL3-X | POL-014P | 8/2/2013 | ----- |

### 1104.07(c)2 Pedestrian Detection: Accessible Pedestrian Signals (APS)

Last Revised: 4/30/2019

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **CAMCO 15** | **Campbell Company, 450 West McGregor Drive, Boise, ID 83705 http://www.pedsafety.com/** | | | | |
| | Accessible Pedestrian Signal System | A 915 | DCC-010P | 5/20/2011 | ----- |
| | Accessible Pedestrian Signal System | AAPS | DCC-012P | 5/18/2015 | ----- |
| | Accessible Pedestrian Signal System | Advisor APS A912 | DCC-006P | 11/18/2008 | ----- |
| | Accessible Pedestrian Signal System | AGPS | DCC-013P | 5/18/2015 | ----- |
| | Accessible Pedestrian Signal System | APB 915 | DCC-009P | 5/20/2011 | ----- |
| | Accessible Pedestrian Signal System | Guardian APS | DCC-015P | 4/25/2019 | ----- |
| | Accessible Pedestrian Signal System | WiAAPS | DCC-014P | 8/14/2018 | ----- |
| **NOVIC 15** | **Novac Industries Corporation, #202 - 1525 Cliveden Ave., Delta BC Canada, V3M 6L2 http://www.novax.com/** | | | | |
| | Accessible Pedestrian Signal System | DS3000 | NOV-001P | 2/3/2012 | ----- |
| **PELC- 15** | **Pelco Products, Inc., 320 S.W. 18th Street, Edmond, OK 73013 http://www.pelcoinc.com/** | | | | |
| | Accessible Pedestrian Signal System | Intellicross | PEL-006P | 10/4/2016 | - |
| **POLEI 15** | **Polara Engineering, Inc., 9153 Stellar Court, Corona, CA 92833 http://www.polara.com/** | | | | |
| | Accessible Pedestrian Signal System | BDLM2-X | POL-013P | 9/23/2010 | ----- |
| | Accessible Pedestrian Signal System | iNavigator 2-Wire APS | POL-015P | 3/16/2018 | 2017-156Q |
| | Accessible Pedestrian Signal System | iNavigator 3-Wire APS | POL-016P | 3/16/2018 | 2017-155Q |
| | Accessible Pedestrian Signal System | Navigator 2-Wire APS | POL-010P | 5/11/2004 | ----- |
| | Accessible Pedestrian Signal System | Navigator 4-Wire APS | POL-011P | 5/11/2004 | ----- |

## Section 1104: Traffic Signals

### 1104.07(d) LED Preemption Confirmation Lights

Last Revised: 3/16/2016

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **DIACO 15** | **Dialight Corporation, 1501 Route 34 South, Farmingdale, NJ 07727 http://www.dialight.com/** | | | | |
| | 8-inch White, LED Module | 433-7170-001 | DIA-062P | 5/2/2012 | ----- |
| **LEOEC 15** | **Leotek Electronics USA, LLC, 1955 Lundy Avenue, San Jose, CA 95131 http://www.leotek.com/** | | | | |
| | 8-inch White, LED Module | TP08B-WS | LEO-114P | 3/4/2016 | - |

### 1104.07(d) Traffic Signal Preemption Systems

Last Revised: 8/21/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **AINFO 15** | **Applied Information, Inc., 4411 Suwanee Dam Road, Suite 510, Suwanee, GA 30024** | | | | |
| | GPS (Radio Based) Preemption System | AI-500-085 Glance Preempt | AEA-002P | 7/14/2020 | 2019-198Q |
| **EMTRAC15** | **EMTRAC (STC, Inc.), 1201 West Randolph Street, McLeansboro, IL 62859 https://www.emtracsystems.com/** | | | | |
| | Optical Preemption System | ST-9320 2-Channel Optical Priority Detector | ESI-001P | 4/25/2019 | ----- |
| | Optical Preemption System | ST-9340 4-Channel Optical Priority Detector | ESI-001P | 4/25/2019 | ----- |
| | Optical Preemption System | ST-9730 Optical Sensor | ESI-001P | 4/25/2019 | ----- |
| | Optical Preemption System | ST-9731 Optical Sensor | ESI-001P | 4/25/2019 | ----- |
| | Optical Preemption System | ST-9732 Optical Sensor | ESI-001P | 4/25/2019 | ----- |
| **ETS-1 15** | **Emergency Traffic Systems, Inc., 540 West 18th Street, Erie, PA 16502-3716** | | | | |
| | Radio Preemption System | PR1 Program and Phase | EME-001P | 12/3/2018 | 2018-135Q |

## Section 1104: Traffic Signals

### 1104.07(d) Traffic Signal Preemption Systems

Last Revised: 8/21/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **GLOTT 15** | **Global Traffic Technologies, LLC, 800 North 3rd St. Suite 100, St. Paul, MN 55128-5441 http://www.gtt.com/** | | | | |
| | GPS (Radio Based) Preemption System | OPTICOM GPS System | GTT-001S | 11/26/2008 | ----- |
| | Optical Preemption System | 452 | MMM-029P | 3/10/1999 | ----- |
| | Optical Preemption System | 454 | MMM-028P | 3/10/1999 | ----- |
| | Optical Preemption System | 462 | GTT-004P | 11/11/2012 | ----- |
| | Optical Preemption System | 464 | GTT-005P | 11/11/2012 | ----- |
| | Optical Preemption System | 752 | MMM-030P | 3/11/1999 | ----- |
| | Optical Preemption System | 754 | MMM-031P | 3/11/1999 | ----- |
| | Optical Preemption System | 762 | GTT-002P | 2/20/2012 | ----- |
| | Optical Preemption System | 764 | GTT-003P | 2/20/2012 | ----- |
| | Optical Preemption System | OPTICOM | MMM-006S | 5/1/1979 | ----- |
| **TOMEI 15** | **Tomar Electronics, Inc., 2100 West Obispo Ave., Gilbert, AZ 85233 http://tomar.com/** | | | | |
| | Optical Preemption System | Strobecom I | TEL-002S | 4/2/1998 | ----- |
| | Optical Preemption System | Strobecom II | TEL-003P | 4/27/1998 | ----- |
| **TRASY 15** | **Traffic Systems LLC, 15207 North 75th Street, Scottsdale, AZ 85259-2638 http://www.trafficsystemsllc.com/** | | | | |
| | Acoustic Preemption System | SONEM 2000 | TSL-001S | 6/1/2001 | ----- |
| **WAPEN 15** | **Wapiti Engineering, LLC, 4565 Glenbrook Road, Willoughby, OH 44094 http://www.wapitienergy.com/** | | | | |
| | Acoustic Preemption System | Right O' Way (ROW-2) | WAP-001S | 4/30/2008 | ----- |

# Section 1105: Fabricated Structural Steel and Aluminum

Steel Products Procurement Act applies.

## 1105 Fabricated Structural Steel: Fabricators and Machine Shops

Any manufacturer approved by the American Institute of Steel Construction (AISC) and PennDOT will be qualified for steel fabrication as specified in this Section. For listing of approved fabricators, see Bulletin 15 Section, "AISC - Department Register of Certified Structural Steel Fabricators (AISC)".

For a listing of approved Machine Shops that provide services and materials to structural steel fabricators, see Bulletin 15 Section, "MACH - PennDOT Register of Certified Machine Shops".

## 1105.02(a) Structural Steel

For Producers of Fabricated Structural Steel, PennDOT accepts material supplied from any Steel Mill as long as the material complies with the requirements of Publication 408, Section 106, "Control of Material".

## 1105.02(c)1 Bolts, Nuts and Washers for General Application

**Last Revised: 8/26/2020**

Several ASTM A307 Bolt and Nut manufacturers also are listed in Section 1109 "Guide Rail and Metal Median Barrier".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMBBO 15** | **Ameribolt, Inc., 18060 AL Highway 21, Sycamore, AL 35149 http://www.ameribolt.com/** | | |
| | | Nut (ASTM A563) | 2014-176QA |
| **ATLRC 15** | **Atlanta Rod and Manufacturing Company, Inc., 144 Schokbeton Street, Lavonia, GA 30553 http://www.atlrod.com/** | | |
| | | Nut (ASTM A563) | 2011-091Q |
| **AUTBN 15** | **Auto Bolt Company, 4740 Manufacturing Avenue, Cleveland, OH 44135 http://autobolt.net** | | |
| | | Bolt (ASTM A307, Grade A) | 2005-099Q |
| **BIRFM 15** | **Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234** | | |
| | | Bolt (ASTM A307, Grade A) | 2003-146Q |
| **DYSNC 15** | **Dyson Corporation, 53 Freedom Road, Painesville, OH 44077 http://www.dysoncorp.com/index.html** | | |
| | | Nut (ASTM A563) | 2000-211Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(c)1 Bolts, Nuts and Washers for General Application

Last Revised: 8/26/2020

Several ASTM A307 Bolt and Nut manufacturers also are listed in Section 1109 "Guide Rail and Metal Median Barrier".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| FAST1 15 Facility | Fastenal Company, P.O. Box 978, 2001 Theurer Blvd, Winona, MN 55987 https://www.fastenal.com/ Holo-Krome 5800 Industrial Avenue Loves Park, IL 61111 | | |
| | | Bolt (ASTM A307, Grade A) | 2019-211Q |
| FAST2 15 Facility | Fastenal Company, P.O. Box 978, 2001 Theurer Blvd, Winona, MN 55987 https://www.fastenal.com/ Holo-Krome 61 Barnes Industrial Park North Wallingford, CT | | |
| | | Bolt (ASTM A307, Grade A) | 2019-213Q |
| GAFBC 15 | Gaffney Bolt Company, Inc., 6100 Material Avenue, Rockford, IL 61111 http://gaffneybolt.com/ | | |
| | | Bolt (ASTM A307, Grade A) | 1999-025Q |
| HAYDN 15 | Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/ | | |
| | | Bolt (ASTM A307, Grade A) | 1990-047A |
| MNP-C 15 | MNP Corporation, 44225 Utica Road, Utica, MI 48318 http://www.mnp.com/ | | |
| | | Bolt (ASTM A307, Grade A) | 1991-022B |
| NUCR0 15 | Nucor Fastner, 6730 County Rd. 60, St. Joe, IN 46785 http://nucor-fastener.com/ | | |
| | | Bolt (ASTM A307, Grade A) | 1990-197A |
| | | Nut (ASTM A563) | 1990-197B |
| PORBM 15 | Portland Bolt and Manufacturing, Inc., 3441 NW Guam Street, P.O. Box 2866, Portland, OR 97210 http://www.portlandbolt.com/ | | |
| | | Bolt (ASTM A307, Grade A) | 2008-049QB |
| PRSTA 15 | Prestige Stamping, Inc., 23513 Grosbeck Highway, Warren, MI 48089 http://www.prestigestamping.com/ | | |
| | | Washer (ANSI B18.22M) | 2010-151Q |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(c)1 Bolts, Nuts and Washers for General Application

**Last Revised: 8/26/2020**

Several ASTM A307 Bolt and Nut manufacturers also are listed in Section 1109 "Guide Rail and Metal Median Barrier".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ROCBC 15** | **Rockford Bolt and Steel Company, 126 Mill Street, Rockford, IL 61101** | | |
| | Bolt (ASTM A307, Grade A) | | 2003-056Q |
| **SOEBS 15** | **Southeastern Bolt and Screw, Inc., 1037 16th Avenue West, Birmingham, AL 35204 http://www.sebolt.com/index.html** | | |
| | Bolt (ASTM A307, Grade A) | | 1991-059 |
| | Nut (ASTM A563) | | 1991-059 |
| **STLSB 15** | **St. Louis Screw & Bolt, P.O. Box 260, 2000 Access Blvd., Madison, IL 62060 http://www.stlouisscrewbolt.com/** | | |
| | Bolt (ASTM A307, Grade A) | | 1998-191 |
| **TELFI 15** | **Telefast Industries, Inc., 777 West Bagley Road, Berea, OH 44017** | | |
| | Nut (ASTM A563) | | 2004-107Q |

## 1105.02(c)2 Anchor Bolts (AASHTO M270), Nuts, and Washers

**Last Revised: 6/8/2015**

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMBBO 15** | **Ameribolt, Inc., 18060 AL Highway 21, Sycamore, AL 35149 http://www.ameribolt.com/** | | |
| | Nut (ASTM A563) | | 2014-176QB |
| **BENNE 15** | **Bennett Bolt Works, Inc., 12 Elbridge Street, P. O. Box 922, Jordan, NY 13080 http://www.bennettboltworks.com/** | | |
| | Anchor Bolt (AASHTO M270, Grade 36) | | 1985-135B |
| **BIRFM 15** | **Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234** | | |
| | Anchor Bolt (AASHTO M270, Grade 36) | | 2006-040Q |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(c)2 Anchor Bolts (AASHTO M270), Nuts, and Washers

**Last Revised: 6/8/2015**

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| FOST0 15 | L.B. Foster Company, 415 Holiday Drive, Pittsburgh, PA 15220 http://www.lbfoster.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | ----- |
| FOUND 15 | Foundation Systems and Anchors, Inc., 2300 Allen Avenue, SE, Canton, OH 44707 http://fsabolt.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1990-385B |
| HAYDN 15 | Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1990-047B |
| HERBC 15 | Hercules Bolt Company, 1010 River Bluff Drive, Madison, TN 37115 http://herculesbolt.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1998-196 |
| PABOL 15 | Pennsylvania Bolt Corporation, P.O. Box 256, Manatawny Road, Pine Forge, PA 19548-0256 | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1987-299 |
| | | Washer (ASTM F436) | 1991-115 |
| S&SFA 15 | S & S Fastners, 2501A Duss Avenue, Ambridge, PA 15003 http://www.ss-fastener.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1993-295 |
| TECSI 15 | Technical Stamping Inc., 50600 E. Russell Schmidt Blvd., Chesterfield, MI 48051 http://technicalstamping.net/ | | |
| | | Washer (ASTM F436) | 2006-078Q |
| UNIQU 15 | Unique Industries, P.O. Box 683, 13488 Highway 25 North, Calera, AL 35040 http://www.uiind.com/ | | |
| | | Anchor Bolt (AASHTO M270, Grade 36) | 1990-260 |

## 1105.02(c)3 Anchor Bolts (ASTM F1554), Nuts, and Washers

**Last Revised: 10/31/2017**

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(c)3 Anchor Bolts (ASTM F1554), Nuts, and Washers

Last Revised: 10/31/2017

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| ALPTP 15 | All-Pro Threaded Products, Inc, 1915 Peyco Drive North, Arlington, TX 76001 http://www.all-profasteners.com/ | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2012-026QB |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2012-026QA |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2011-141Q |
| AMBBO 15 | Ameribolt, Inc., 18060 AL Highway 21, Sycamore, AL 35149 http://www.ameribolt.com/ | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2012-150QD |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2012-150QB |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2012-150QC |
| | Nut (ASTM A563) | | 2014-176QC |
| ATLRC 15 | Atlanta Rod and Manufacturing Company, Inc., 144 Schokbeton Street, Lavonia, GA 30553 http://www.atlrod.com/ | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2011-090Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2011-090Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2011-090Q |
| BENNE 15 | Bennett Bolt Works, Inc., 12 Elbridge Street, P. O. Box 922, Jordan, NY 13080 http://www.bennettboltworks.com/ | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2015-146Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2015-146Q |
| | *A weldable grade 55 anchor bolt may not be supplied as a substitute when Grade 36 is specified.* | | |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2015-146Q |
| BIRFM 15 | Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234 | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2014-004Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2006-039Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2006-038Q |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(c)3 Anchor Bolts (ASTM F1554), Nuts, and Washers

Last Revised: 10/31/2017

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CFAST 15** | **CFAST, LLC, 801 43rd Street North, Birmingham, AL 35212** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2005-123Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2005-122Q |
| **DECKM 15** | **Decker Manufacturing Corporation, 703 North Clark Street, Albion, MI 49224 http://www.deckernut.com/** | | |
| | Nut (ASTM A563) | | 1989-094 |
| **DYSNC 15** | **Dyson Corporation, 53 Freedom Road, Painesville, OH 44077 http://www.dysoncorp.com/index.html** | | |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2017-030Q |
| | Nut (ASTM A563) | | 2000-210Q |
| **EASCT 15** | **East Coast Threading Company, 1520 Manatawny Road, P.O. Box 347, Pine Forge, PA 19548 http://eastcoastthreading.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2008-089QC |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2008-089QA |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2008-089QB |
| **FOUND 15** | **Foundation Systems and Anchors, Inc., 2300 Allen Avenue, SE, Canton, OH 44707 http://fsabolt.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-128Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2003-128Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2003-128Q |
| | Nut (ASTM A563) | | 2011-020QA |
| **HALL2 15** | **Hall Industries, Inc., 514 Mecklem Lane, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-109Q |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(c)3 Anchor Bolts (ASTM F1554), Nuts, and Washers

Last Revised: 10/31/2017

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HAYDN 15** | **Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-117Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2003-117Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2003-117Q |
| **HERBC 15** | **Hercules Bolt Company, 1010 River Bluff Drive, Madison, TN 37115 http://herculesbolt.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-114Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2003-112Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2003-113Q |
| **JHBTS 15** | **J. H. Botts, Inc., 253 East Bruce St., Joliet, IL 60432 http://www.jhbotts.com/products.htm** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2001-001Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2001-001Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2001-001Q |
| **PORBM 15** | **Portland Bolt and Manufacturing, Inc., 3441 NW Guam Street, P.O. Box 2866, Portland, OR 97210 http://www.portlandbolt.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2008-049QF |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2008-049QD |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2008-049QE |
| **PRSTA 15** | **Prestige Stamping, Inc., 23513 Grosbeck Highway, Warren, MI 48089 http://www.prestigestamping.com/** | | |
| | Washer (ASTM F436) | | 1999-157Q |
| **STCBS 15** | **Steel City Bolt and Screw, LLC, 230 West Valley Road, Birmingham, AL 35201 http://www.steelcitybolt.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-129Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2003-129Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2003-129Q |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(c)3 Anchor Bolts (ASTM F1554), Nuts, and Washers

Last Revised: 10/31/2017

For Anchoring Adhesives and Mechanical Anchors, see Miscellaneous Section, "Anchoring Devices for Use in Vertical Positions Only".

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TECSI 15** | **Technical Stamping Inc., 50600 E. Russell Schmidt Blvd., Chesterfield, MI 48051 http://technicalstamping.net/** | | |
| | Washer (ASTM F436) | | 2006-078Q |
| **TFI-1 15 Facility** | **Threaded Fasteners, Inc., 3200 Crichton Street, Mobile, AL 36607 2650-B North Schillingers Road Semmes, AL 36575** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2017-001Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2017-001Q |
| **TRISB 15** | **Tristate Bolt Company, 1110 Fuller Drive, Garrett, IN 46738 http://www.tristateboltinc.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2008-101Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2008-101Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2008-101Q |
| **UNIIS 15** | **Universal Industrial Sales, P.O. Box 699, Plesant Grove, UT 84062 http://www.uisutah.com/uis2011/** | | |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2011-064Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2011-064Q |
| **UNIQU 15** | **Unique Industries, P.O. Box 683, 13488 Highway 25 North, Calera, AL 35040 http://www.uiind.com/** | | |
| | Anchor Bolt (ASTM F1554, Grade 105) | | 2003-150Q |
| | Anchor Bolt (ASTM F1554, Grade 36) | | 2003-150Q |
| | Anchor Bolt (ASTM F1554, Grade 55) | | 2003-150Q |

## 1105.02(d) High Strength Bolt Assemblies

Last Revised: 10/26/2017

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ALPHA 15** | **Alpha Stamping Company, 33375 Glendale, Livonia, MI 48150 http://www.alphausa.com/** | | |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(d) High Strength Bolt Assemblies

Last Revised: 10/26/2017

See Hardware Manufacturing Symbols

| Product | Name | Ref. No. |
|---|---|---|
| **ALPHA 15** | **Alpha Stamping Company, 33375 Glendale, Livonia, MI 48150 http://www.alphausa.com/** | |
| | Washer (ASTM F436) | 1992-293 |
| **AMBBO 15** | **Ameribolt, Inc., 18060 AL Highway 21, Sycamore, AL 35149 http://www.ameribolt.com/** | |
| | Nut, Galvanized (ASTM A563) | 2014-177Q |
| **ATLRC 15** | **Atlanta Rod and Manufacturing Company, Inc., 144 Schokbeton Street, Lavonia, GA 30553 http://www.atlrod.com/** | |
| | Nut, Non-Galvanized (plain), (ASTM A194) | 2011-093QC |
| **BBC-F 15** | **BBC Fastners, Inc., 4210 Shirley Lane, Alsip, IL 60803 http://www.bbcfasteners.com/** | |
| | High Strength Bolt (ASTM A490, Type 3) | 1996-171 |
| **BIRFM 15** | **Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234** | |
| | High Strength Bolt (ASTM A325) | 2011-114Q |
| **CHIFM 15** | **Chicago Fasteners Manufacturing, 10902 Walnut Lane, Mokena, IL 60448 http://www.chicagofastener.com/** | |
| | High Strength Bolt (ASTM A325) | 1997-193 |
| **DYSNC 15** | **Dyson Corporation, 53 Freedom Road, Painesville, OH 44077 http://www.dysoncorp.com/index.html** | |
| | High Strength Bolt (ASTM A325) | 2000-208Q |
| | Nut, Galvanized (ASTM A563) | 2000-209Q |
| **FONT1 15** | **Fontana Fasteners Inc., 3595 W. Sr 28, Frankfort, IN 46041 http://www.gruppofontana.it/en/production/lep-inc.html** | |
| | High Strength Bolt (ASTM A325) | 2007-146QA |
| | High Strength Bolt (ASTM A490, Types 1 & 3) | 2007-146QB |
| **FOUND 15** | **Foundation Systems and Anchors, Inc., 2300 Allen Avenue, SE, Canton, OH 44707 http://fsabolt.com/** | |
| | Nut, Non-Galvanized (plain), (ASTM A194) | 2011-020QB |
| **GAFBC 15** | **Gaffney Bolt Company, Inc., 6100 Material Avenue, Rockford, IL 61111 http://gaffneybolt.com/** | |
| | High Strength Bolt (ASTM A325) | 1999-026Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(d) High Strength Bolt Assemblies

Last Revised: 10/26/2017

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| GRAHM 15 | Graham Stamping Company, 1700 Broadway Ave., Wheatland, PA 16161 http://grahamstampingco.com/ | | |
| | | Washer (ASTM F436) | 1991-166 |
| HAYDN 15 | Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/ | | |
| | | High Strength Bolt (ASTM A325) | 1990-047C |
| MNP-C 15 | MNP Corporation, 44225 Utica Road, Utica, MI 48318 http://www.mnp.com/ | | |
| | | High Strength Bolt (ASTM A325) | 1991-022A |
| NUCR0 15 | Nucor Fastner, 6730 County Rd. 60, St. Joe, IN 46785 http://nucor-fastener.com/ | | |
| | | High Strength Bolt (ASTM A325) | 1989-021 |
| | | Nut, Galvanized (ASTM A563) | 1990-198 |
| PRSTA 15 | Prestige Stamping, Inc., 23513 Grosbeck Highway, Warren, MI 48089 http://www.prestigestamping.com/ | | |
| | | Washer (ASTM F436) | 1999-157Q |
| ROCBC 15 | Rockford Bolt and Steel Company, 126 Mill Street, Rockford, IL 61101 | | |
| | | High Strength Bolt (ASTM A325) | 2003-054Q |
| | | High Strength Bolt (ASTM A490, Types 1 & 3) | 2003-055Q |
| STCBS 15 | Steel City Bolt and Screw, LLC, 230 West Valley Road, Birmingham, AL 35201 http://www.steelcitybolt.com/ | | |
| | | Heavy Hex Structural Bolt (ASTM A325, Type 1) | 2016-070Q |
| STLSB 15 | St. Louis Screw & Bolt, P.O. Box 260, 2000 Access Blvd., Madison, IL 62060 http://www.stlouisscrewbolt.com/ | | |
| | | Heavy Hex Structural Bolt (ASTM A490, Types 1 & 3) | 2015-112Q |
| | | Heavy Hex Structural Bolt (ASTM A490, Types 1 & 3) | 2015-112Q |
| | | High Strength Bolt (ASTM A325) | 1984-194 |
| | | Nut, Galvanized (ASTM A563) | 1984-194 |
| | | Washer (ASTM F436) | 1984-194 |

# Section 1105: Fabricated Structural Steel and Aluminum

## 1105.02(d) High Strength Bolt Assemblies

Last Revised: 10/26/2017

See Hardware Manufacturing Symbols

| | Product | Name | Ref. No. |
|---|---|---|---|
| TECSI 15 | Technical Stamping Inc., 50600 E. Russell Schmidt Blvd., Chesterfield, MI 48051 http://technicalstamping.net/ | | |
| | Washer (ASTM F436) | | 2006-078Q |
| TURNA 15 | TurnaSure, LLC, 340 East Maple Avenue, Suite 206, Langhorne, PA 19047 http://www.turnasure.com/ | | |
| | Direct Tension Indicator Device (DTI) | | 2010-256Q |
| TXBLT 15 | Texas Bolt Company, 3233 West 11th Street, Houston, TX 77008 | | |
| | High Strength Bolt (ASTM A325) | | 1989-029 |
| | Nut, Non-Galvanized (plain), (ASTM A194) | | 1989-031 |
| UNITT 15 | Unytite, Inc., 1 Unytite Drive, Peru, IL 61354 http://www.unytiteusa.com/ | | |
| | High Strength Bolt (ASTM A325) | | 1991-117 |
| | Nut, Galvanized (ASTM A563) | | 1991-117 |
| WWASH 15 | Wrought Washer Manufacturing, Inc., 2100 South Bay Street, Milwaukee, WI 53207 | | |
| | Washer (ASTM F436) | | 1993-279 |

## 1105.02(e) Welded Stud Shear Connectors

Last Revised: 6/8/2015

AASHTO 10.3.1.9

| | Product | Name | Size (in.) | Ref. No. |
|---|---|---|---|---|
| BLUAC 15 | Bluearc Stud Welding (Image Industries), 11220 East Main Street, Huntley, IL 60142 http://www.imageindustries.com/ | | | |
| | Welded Stud Shear Connector | | 1/2 | 2011-076Q |
| | Welded Stud Shear Connector | | 3/8 | 2011-076Q |
| | Welded Stud Shear Connector | | 5/8 | 2011-076Q |
| | Welded Stud Shear Connector | | 3/4 | 2011-076Q |
| | Welded Stud Shear Connector | | 7/8 | 2011-076Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(e) Welded Stud Shear Connectors

Last Revised: 6/8/2015

AASHTO 10.3.1.9

| | Product | Name | Size (in.) | Ref. No. |
|---|---|---|---|---|
| **COXND 15** | **Cox Industries, P. O. Box 366, New Haven, MI 48048 http://cox-industries.com/** | | | |
| | Welded Stud Shear Connector | | 3/8 | 1991-104 |
| | Welded Stud Shear Connector | | 1/2 | 1991-104 |
| | Welded Stud Shear Connector | | 3/4 | 1991-104 |
| | Welded Stud Shear Connector | | 5/8 | 1994-006 |
| | Welded Stud Shear Connector | | 7/8 | 1994-006 |
| **NELSW 15** | **Nelson Stud Welding, Inc., 7900 West Ridge Road, Elyria, OH 44035 http://www.nelsonstud.com/** ***Formerly TRW Nelson Stud Welding Div. (TRWNS)*** | | | |
| | Welded Stud Shear Connector | | 1/2 | 1992-290C |
| | Welded Stud Shear Connector | | 5/8 | 1992-290D |
| | Welded Stud Shear Connector | | 3/4 | 1992-290E |
| | Welded Stud Shear Connector | | 7/8 | 1992-290F |
| | Welded Stud Shear Connector | | 3/8 | 2011-274QA |
| | Welded Stud Shear Connector | | 1 | 2011-274QB |
| **STUDW 15** | **Stud Welding Associates, 41515 Schaden Road, Elyria, OH 44035 http://studwelding.com/** | | | |
| | Welded Stud Shear Connector | | 1/4 | 1992-221 |
| | Welded Stud Shear Connector | | 3/8 | 1992-221 |
| | Welded Stud Shear Connector | | 1/2 | 1992-221 |
| | Welded Stud Shear Connector | | 5/8 | 1992-221 |
| | Welded Stud Shear Connector | | 3/4 | 1992-221 |
| | Welded Stud Shear Connector | | 7/8 | 1992-221 |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(e) Welded Stud Shear Connectors

Last Revised: 6/8/2015

AASHTO 10.3.1.9

| Product | Name | Size (in.) | Ref. No. |
|---|---|---|---|
| **TRUFT 15** | **Tru-Fit Products, Tru-Weld Division, 460 Lake Road, Medina, OH 44256 http://tfpcorp.com/** | | |
| | Welded Stud Shear Connector | 1/4 | 1993-224 |
| | Welded Stud Shear Connector | 3/8 | 1993-224 |
| | Welded Stud Shear Connector | 1/2 | 1993-224 |
| | Welded Stud Shear Connector | 5/8 | 1993-224 |
| | Welded Stud Shear Connector | 3/4 | 1993-224 |
| | Welded Stud Shear Connector | 7/8 | 1993-224 |
| | Welded Stud Shear Connector | 1 | 1993-224 |

### 1105.02(j) Steel Pipe, Couplings, and Fittings

For Producers of Fabricated Structural Steel, PennDOT accepts material supplied from any Steel Mill as long as the material complies with the requirements of Publication 408, Section 106, "Control of Material".

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|
| **AMEGV 15** | **Valmont Coatings, American Galvanizing Facility, 1919 12th Street, Williamstown, NJ 08094 https://www.valmontcoatings.com/locations/united-states/galvanizing-services/american-galvanizing-(nj)** | | |
| | Hot Dip Galvanizer | 55 ft. x 6 ft.-6 in. x 10 ft. | 1987-211 |
| **AMETG 15** | **American Tinning and Galvanizing Company, 552 West 12th Street, Erie, PA 16501 http://www.galvanizeit.com/** | | |
| | Hot Dip Galvanizer | 11 ft. x 3 ft. x 4 ft. | 1995-104 |
| **ARTGV 15** | **Art Galvanizing Works, Inc., 3935 Valley Road, Cleveland, OH 44109 http://www.artgalvanizing.com/** | | |
| | Hot Dip Galvanizer | 12 ft. x 2 ft.-4 in. x 4 ft. | 2002-136Q |
| **AZZ-1 15** | **AZZ Galvanizing Services, Dixon, 310 East Progress Drive, Dixon, IL 61021 http://www.azz.com/** ***Formerly AAA Galvanizing of Dixon, IL (AAAIL 15)*** | | |
| | Hot Dip Galvanizer | 51 ft. x 7 ft. x 10 ft. | 2003-059Q |
| **AZZ-1015** | **AZZ Galvanizing, Inc., 800 6th Street South, Winsted, NM 55395 http://www.azz.com/** | | |
| | Hot Dip Galvanizer | 53' x 10' x 7' | 2012-230Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|
| AZZ-1115 | **AZZ Galvanizing Services, Muncie, 2415 South Walnut Street, Muncie, IN 47302 http://www.azz.com/** | | |
| | ***Formerly Witt Industries, Inc. (WITT1 15)*** | | |
| | Hot Dip Galvanizer | 42' x 5'-6" x 7' | 2006-033Q |
| AZZ-1215 | **AZZ Galvanizing Services, Plymouth, 2631 Jim Neu Drive, Plymouth, IN 46563 http://www.azz.com/** | | |
| | ***Formerly Witt Industries (WITT2 15)*** | | |
| | Hot Dip Galvanizer | 45' x 6' x 8' | 2007-035Q |
| AZZ-1315 | **AZZ Galvanizing, Inc., 1461 Kin Ark Court, St. Louis, MO 63132 http://www.azz.com/** | | |
| | Hot Dip Galvanizer | 51' x 7'-3" x 10' | 2013-060Q |
| AZZ-1415 | **AZZ Galvanizing Services, Tulsa, 1800 West 21st Street, Tulsa, OK 74107 http://www.azz.com/** | | |
| | Hot Dip Galvanizer | 56' x 5'-3" x 7' | 2014-084Q |
| AZZ-2 15 | **AZZ Galvanizing Services, Hamilton, 7825 South Homestead Drive, Hamilton, IN 46724 http://www.azz.com/** | | |
| | ***Formerly AAA Galvanizing of Hamilton, IN. (AAAIN 15)*** | | |
| | Hot Dip Galvanizer | 35' x 6' x 12'-6" | 2003-060Q |
| AZZ-3 15 | **AZZ Galvanizing Services, Joliet, 625 Mills Road, Joliet, IL 60433 http://www.azz.com/** | | |
| | ***Formerly AAA Galvanizing of Joliet, IL (AAAJO 15)*** | | |
| | Hot Dip Galvanizer | 51' x 6'-6" x 9'-3" | 2007-069Q |
| AZZ-4 15 | **AZZ Galvanizing Services, Peoria, 6718 West Plank Road, Peoria, IL 61604 http://www.azz.com/** | | |
| | ***Formerly AAA Galvanizing of Peoria, IL (AAAPE 15)*** | | |
| | Hot Dip Galvanizer | 51' x 8'-6" x 8'-8" | 2006-105Q |
| AZZ-5 15 | **AZZ Galvanizing Services, Nashville, 200 32nd Avenue, North, Nashville, TN 37209-3901 http://www.azz.com/** | | |
| | ***Formerly North American Galvanizing Co. (NAMG1 15)*** | | |
| | Hot Dip Galvanizer | 51' x 6'-6" x 8'-6" | 2010-108QA |
| AZZ-6 15 | **AZZ Galvanizing Services, Kansas City, 770 East 12th Street, Kansas City, MO 64126 http://www.azz.com/** | | |
| | ***Formerly: North American Galvanizing Co. (NAMG2 15)*** | | |
| | Hot Dip Galvanizer | 30' x 4'-6" x 5'-6" | 2002-091Q |
| AZZ-7 15 | **AZZ Galvanizing Services, Canton, 1723 Cleveland Avenue SW, Canton, OH 44707 http://www.azz.com/** | | |
| | ***Formerly: North American Galvanizing Co. (NAMG3)*** | | |
| | Hot Dip Galvanizer | 51' x 6'-6" x 8'-6" | 2005-046Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| | Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|---|
| AZZ-9 15 | AZZ Galvanizing Services, Louisville, 6310 Kenloy Drive, Louisville, KY 40214 http://www.azz.com/ *Formerly North American Galvanizing Co. (NAMG5 15)* | Hot Dip Galvanizer | 42' x 5' x 6' | 2010-108QB |
| BALGV 15 | Baltimore Galvanizing, 7110 Quad Avenue, Baltimore, MD 21237 http://www.baltimoregalv.com/ | Hot Dip Galvanizer | 13' x 4'-6" x 4'-6" | 1995-078 |
| BBGAL 15 | Big Bend Galvanizing LLC, 1000 Industrial Park Drive, Trenton, TN 38382 | Hot Dip Galvanizer | 33' x 5'-6" x 8' | 2017-210Q |
| CANTG 15 | Canton Galvanizing, 1821 Moore Avenue Southeast, Canton, OH 44707 | Hot Dip Galvanizer | 20 ft. x 6 ft. x 10 ft. | 2019-156Q |
| COLUB 15 | V&S Columbus Galvanizing, LLC, 987 Buckeye Park Road, Columbus, OH 43207 http://www.hotdipgalvanizing.com/ | Hot Dip Galvanizer | 48' x 6' x 11' | ----- |
| CONGV 15 | Connecticut Galvanizing, 239 Commerce Street, Glastonbury, CT 06033-0358 http://ctgalv.com/ | Hot Dip Galvanizer | 30'-6" x 5' x 7'-6" | 2004-006Q |
| DUNGV 15 | Duncan Galvanizing, 69 Norman Street, Everatt, MA 02149 http://www.duncangalvanizing.com/ | Hot Dip Galvanizer | 70' x 5'-2" x 7' | 1997-012 |
| ELDER 15 | Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/ | Hot Dip Galvanizer | 38'-6" x 5' x 6' | ----- |
| FRONT 15 | Frontier Hot-Dip Galvanizing, Inc., 1740 Elmwood Avenue, Buffalo, NY 14207-0199 http://www.frontiergalvanizing.com/ | Hot Dip Galvanizer | 27' x 4' x 6' | 1988-312 |
| GALVA 15 | Galvan Industries, Inc., 7320 Millbrook Road, P.O. Box 369, Harrisburg, NC 28075 http://www.galvanelectrical.com/ | Hot Dip Galvanizer | 42' x 4'-6" x 7' | 1995-177 |
| GLVZR 15 | Galvanizers, Incorporated, 714 12th Avenue Northeast, West Fargo, ND 58078 http://www.galvanizersinc.com/ | Hot Dip Galvanizer | 41' x 4'-6" x 5' | 1998-187 |
| GREGV 15 | Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm | Hot Dip Galvanizer | 16' x 5' x 9' | 2011-137Q |
| HUBBL 15 | O. W. Hubbell and Sons, P.O. Box 37, New York Mills, NY 13417 http://www.whyrust.com | Hot Dip Galvanizer | 46' x 5' x 10' | 1995-034 |
| INDGA 15 | Indiana Galvanizing, LLC, 51702 Lovejoy Drive, Middlebury, IN 46540 | Hot Dip Galvanizer | 33' x 5'-4" x 8' | 2013-175Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| | Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|---|
| INGAL 15 | Valmont Birmingham Galvanizing, 475 Dietrich Road, Steele, AL 35987 http://www.valmontcoatings.com/ | | | |
| | Hot Dip Galvanizer | | 58' x 7'-2" x 9' | 2010-160Q |
| KORNS 15 | Korns Galvanizing Company, 75 Bridge Street, Johnstown, PA 15902 http://www.kornsgalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 12' x 3'-6" x 5' | 1994-101 |
| | Hot Dip Galvanizer | | 8' x 3'-6" x 4' | 1994-101 |
| KTGAL 15 | K-T Galvanizing Company, Inc., 2500 Chambers Road, Venus, TX 76084 http://www.ktgalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 24' x 3'-6" x 6' | 2011-218Q |
| KTGAL115 | K-T Galvanizing Company, Inc., 5105 East 3rd Street, P.O. Box 560, Katy, TX 77493 http://www.ktgalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 16' x 4' x 6' | 2011-217Q |
| MANDR 15 | M&R Plating, Inc., 303 Westlink Industrial Dr., Washington, MO 63090 http://www.mrplating.com/ | | | |
| Plant | 303 Westlink Industrial Dr. Washington, MO 63090 | | | |
| | Mechanical Galvanizer (Not Hot Dip) | | N/A | 2015-121Q |
| MECGV 15 | Mechanical Galv-Plating Corporation, 933 Oak Avenue, P.O. Box 56, Sidney, OH 45365 http://www.mechanicalgalv-plating.com/ | | | |
| | Mechanical Galvanizer (Not Hot Dip) | | | 1994-015 |
| MONNG 15 | Monnig Industries, Inc., P.O. Box 98, Glasgow, MO 65254-0098 http://monnigindustries.com/ | | | |
| | Hot Dip Galvanizer | | 24' x 4' x 5'-6" | 1991-027 |
| | Hot Dip Galvanizer | | 24' x 5' x 4'-6" | 1991-027 |
| | Hot Dip Galvanizer | | 2 barrels, 10 cu. ft. each | 1991-027 |
| MPGV1 15 | Metalplate Galvanizing, Inc., 757 44th Street North, Birmingham, AL 35201 http://www.metalplate.com/ | | | |
| | Hot Dip Galvanizer | | 22' x 4'-4" x 5'-6"' | 1984-203 |
| MPGV2 15 | Metalplate Galvanizing, Inc., 1120 39th Street North, Birmingham, AL 35201 http://www.metalplate.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 5' x 6' | 1984-203 |
| MPGV3 15 | Metalplate Galvanizing, Inc., 500 Selig Drive, Atlanta, GA 30336 http://www.metalplate.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 5' x 6' | 1984-203 |
| MPGV4 15 | Metalplate Galvanizing, Inc., 7123 Moncrief Road West, Jacksonville, FL 32219 http://www.metalplate.com/ | | | |
| | Hot Dip Galvanizer | | 28' x 5' x 6' | 1984-203 |
| MPGV5 15 | Metalplate Galvanizing, Inc., 10625 Needham Street, Houston, TX 77013 http://www.metalplate.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 5' x 6' | 1984-203 |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| | Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|---|
| NEVGV 15 | Neville Galvanizing, 3005 Grand Avenue, Neville Island, Pittsburgh, PA 15225 | | | |
| | Hot Dip Galvanizer | | 21' x 4'-6" x 3'-2" | ----- |
| NICGV 15 | Nicholas Galvanizing Company, 120 Duffield Avenue, Jersey City, NJ 07306 | | | |
| | Hot Dip Galvanizer | | 21' x 3' x 3'-4" | 1989-005 |
| NJG&T 15 | New Jersey Galvanizing and Tinning Works, 139 Hayes Avenue, Newark, NJ 07114 http://www.newjerseygalvanizing.com/#! | | | |
| | Hot Dip Galvanizer | | 40'-6" x 4'-4" x 4'-6" | ----- |
| OH-GV 15 | Ohio Galvanizing Corporation, 467 West Fairground Street, Marion, OH 43302 http://www.ohgalv.com/ | | | |
| | Hot Dip Galvanizer | | 30'-6" x 5' x 7'-6" | 1996-254 |
| PLTCO 15 | Plateco, Inc., 1375 Industrial St., Reedsburg, WI 53959 http://www.platecoinc.com/ | | | |
| | Mechanical Galvanizer (Not Hot Dip) | | | 2012-078Q |
| QUAG- 15 | Quality Galvanizing, 1110 Fuller Drive, Garrett, IN 46738 | | | |
| | Hot Dip Galvanizer | | 6'-7" x 2'-4" x 3"-6" | 2014-032Q |
| RGBGV 15 | AZZ Galvanizing - Rockford (Formerly Rogers Brothers Inc.), 1925 Kishwaukee Street, Rockford, IL 61104 https://www.azz.com/ | | | |
| | Hot Dip Galvanizer | | 12' x 3' x 4' | 1995-214 |
| | Hot Dip Galvanizer | | 22' x 4' x 5' (2 tanks) | 1995-214 |
| SAGV0 15 | South Atlantic Galvanizing, P.O. Box 1042, US Highway 276 West, Travelers Rest, SC 29690 http://www.southatlanticllc.com/ | | | |
| | Hot Dip Galvanizer | | 28' x 4' x 6'-6" | ----- |
| SAGV1 15 | South Atlantic Galvanizing, 3025 Steel Way Drive, P.O. Box 1380, Graham, NC 27253 http://www.southatlanticllc.com/ | | | |
| | Hot Dip Galvanizer | | 51' x 5' x 10' | 1983-142 |
| SAGV2 15 | South Atlantic Galvanizing, P.O. Box 876, Highway 280 West, Claxton, GA 30417 http://www.southatlanticllc.com/ | | | |
| | Hot Dip Galvanizer | | 28' x 4' x 6'-6" | 1983-142 |
| SAGV3 15 | South Atlantic Galvanizing, 4186 South Creek Road East, Chattanooga, TN 37406 http://www.southatlanticllc.com/ | | | |
| | Hot Dip Galvanizer | | 45' x 5'-6" x 9' | ----- |
| SAGV4 15 | South Atlantic Galvanizing, 11022 Lewistown Road, Ashland, VA 23005 http://www.southatlanticllc.com/ | | | |
| | *Formerly Virginia Galvanizing (VAGAL)* | | | |
| | Hot Dip Galvanizer | | 42' x 6'-6" x 8'-6" | 1997-053 |
| SOUGV 15 | Southern Galvanizing, Inc., 1620 Bush Street, Baltimore, MD 21230 http://southerngalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 35' x 6'-6" x 8' | ----- |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| | Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|---|
| SWGLV 15 | Southwest Galvanizing, Inc., 737 Aleen Street, P.O. Box 24188, Houston, TX 77229-4188 http://www.swgalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 5' x 5'-6" | 1998-210 |
| | Hot Dip Galvanizer | | 32'-6" x 4'-2" x 5' | 1998-210 |
| | Hot Dip Galvanizer | | 30'-6" x 4' x 5' | 1998-210 |
| | Hot Dip Galvanizer | | 14' x 3' x 4'-2" | 1998-210 |
| TENNG 15 | Tennessee Galvanizing, Inc., 1535 Industrial Boulevard, P.O. Box 609, Jasper, TN 37347 http://tennesseegalvanizing.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 5' x 7' | 2001-083Q |
| | Hot Dip Galvanizer | | 18' x 2'-2" x 6'-6" | 2001-083Q |
| | Hot Dip Galvanizer | | 14' x 4' x 5' | 2001-083Q |
| TRIN2 15 | Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/ | | | |
| | Hot Dip Galvanizer | | 55' x 6' x 8'-3" | 2010-131Q |
| TRIN3 15 | Trinity Highway Products, LLC, 2548 NE 28th Street, Ft. Worth, TX 76111 http://www.highwayguardrail.com/ | | | |
| | Hot Dip Galvanizer | | 42' x 13' x 9' | 2010-271Q |
| TRIN6 15 | Trinity Highway Products, LLC, 2525 Stemmons Freeway, Dallas, TX 75207 | | | |
| Plant | 600 Prosperity Drive Orangeburg, SC 29115 | | | |
| | Hot Dip Galvanizer | | 42 ft. x 12 ft. x 8 ft. - 6 in. | 2017-260Q |
| UNIGI 15 | Universal Galvanizing, Inc., 501 SE 1st Street, Wright City, MO 63390 http://ug.monnigindustries.com/ | | | |
| | Hot Dip Galvanizer | | 25' x 5' x 7' | 2012-254Q |
| UNIIS 15 | Universal Industrial Sales, P.O. Box 699, Plesant Grove, UT 84062 http://www.uisutah.com/uis2011/ | | | |
| | Hot Dip Galvanizer | | 45' x 5' x 7' | 2011-063QC |
| VALM0 15 | Valmont Industries, Inc., P. O. Box 358, Highway #275, Valley, NE 68064 http://www.valmont.com/ | | | |
| | Hot Dip Galvanizer | | 58' x 6' x 8'-6" | 1991-142 |
| VALM3 15 | Valmont Industries, Inc., 10909 Franklin Ave., Franklin Park, IL 60131 http://www.valmont.com/ | | | |
| | Hot Dip Galvanizer | | 52' x 4'-8" x 6' | 2000-152Q |
| | Hot Dip Galvanizer | | 26' x 5' x 7' | 2000-152Q |
| VALM6 15 | Valmont Salina Galvanizing, 1100 North Ohio Street, Salina, KS 67401 http://www.valmont.com/ | | | |
| | Hot Dip Galvanizer | | 55' x 12' x 10'-6" | 2013-203Q |
| VALM7 15 | Valmont Coatings Gateway Galvanizing, 1117 Brown Forman Road, Jeffersonville, IN 47130 http://www.valmont.com/ | | | |
| | Hot Dip Galvanizer | | 44' x 6'-5" x 7'-5" | 2000-310Q |

## Section 1105: Fabricated Structural Steel and Aluminum

### 1105.02(s) Galvanizers

Last Revised: 8/17/2020

| | Product | Name | Tank Size (L x W x D) | Ref. No. |
|---|---|---|---|---|
| VALM8 15 | Valmont Virginia Galvanizers, 3535 Halifax Road, Petersburg, VA 23805 http://www.valmont.com/ | | | |
| | | Hot Dip Galvanizer | 49' x 5'-8" x 8'-8" | 1998-092 |
| VICTA 15 | Victaulic Company Of America, Apex Facility, 119 Edison Road, Stewartsville, NJ 08886 http://www.victaulic.com/ | | | |
| | | Hot Dip Galvanizer | 21' x 3' x 4'-6" | 2000-277Q |
| VOISG 15 | V&S Detroit Galvanizing, LLC, 12600 Arnold Street, Redford, MI 48239 http://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 42' x 6' x 8'-6" | 2000-311Q |
| VSAGV 15 | V&S Amboy Galvanizing, LLC, 1190 Amboy Avenue, Perth Amboy, NJ 08861 http://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 25' x 6' x 10' | 2000-278Q |
| VSDGV 15 | V&S Delaware Galvanizing, LLC, 511 Carroll Drive, New Castle, DE 19720 http://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 29' x 6' x 10' | 2010-239Q |
| VSLGV 15 | V&S Lebanon Galvanizing, LLC, 153 Micro Drive, Jonestown, PA 17038 http://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 56' x 7'-2 " x 10'-2" | 2002-033Q |
| VSMGV 15 | V&S Memphis Galvanizing, LLC, 3348 Fite Road, Millington, TN 38053 | | | |
| | | Hot Dip Galvanizer | 48' x 6'-4" x 11' | 2017-279Q |
| VSNYGV15 | V&S New York Galvanizing, LLC, 272 Corporate Drive, Owego, NY 13827 https://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 29' x 6' x 10' | 2020-043Q |
| VSTGV 15 | V&S Taunton Galvanizing, LLC, 585 John Hancock Road, Taunton, MA 02780 http://www.hotdipgalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 29' x 6' x 10' | 2007-045Q |
| YOUNG 15 | Young Galvanizing, Inc., P. O. Box 334, Route 551, Pulaski, PA 16143 http://younggalvanizing.com/ | | | |
| | | Hot Dip Galvanizer | 48' x 5' x 8'-6" | ----- |
| | | Hot Dip Galvanizer | 24' x 5' x 6' | ----- |

## Section 1107: Prestressed Concrete Bridge Beams

### 1107.02 Prestressed Concrete Bridge Beams

Last Revised: 1/5/2018

Note: Applicable Prestressed Concrete Institute (PCI) Plant Certification codes listed after product name. Approved Bridge and Structure Products

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **BRAYP 15** | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/**<br>***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | | |
| | Precast Plank Beam - Post Tensioned | | | 2017-336Q |
| | Prestressed Straight-Strand Bridge Member Only<br>(PCI Code: B3)<br>*Allowable Bed Moment = 48,114 in-kips*<br>*Working Load = 3937 kips* | | | 2017-162Q |
| **CARRC 15** | **CARR Concrete, a Division of CXT, Inc., 362 Waverly Rd., Williamstown, WV 26187 http://www.carrconcrete.com/** | | | |
| | Prestressed Straight-Strand Bridge Member Only<br>(PCI Code: B3)<br>*Allowable Bed Moment = 15,146 in-kips*<br>*Working Load = 946 kips* | | | 2015-045Q |
| **HIGCG 15** | **High Concrete Group, LLC, 125 Denver Road, Denver, PA 17517 http://www.high.net/** | | | |
| | Next Beam Producer (SOL 483-13-07)<br>*Allowable Bed Moment = 12,900,000 pound-inches.*<br>*Working Load = 2,150,000 pounds.* | | | 2011-113Q |
| **J&RS1 15** | **Slaw Precast, J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/**<br>***Note: Previously assigned J&RS2 15 for same facility*** | | | |
| | Next Beam Producer (SOL 483-13-07)<br>*Allowable Bed Moment = 34,250,000 pound inches.*<br>*Working Load = 1,352,000 pounds* | | | 2012-016Q |
| | Prestressed Straight-Strand Bridge Member Only<br>(PCI Code: B3) | | 8/13/1997 | 1995-044 |
| | Total Precast Bridge Structures | | | - |

## Section 1107: Prestressed Concrete Bridge Beams

### 1107.02 Prestressed Concrete Bridge Beams

Last Revised: 1/5/2018

Note: Applicable Prestressed Concrete Institute (PCI) Plant Certification codes listed after product name. Approved Bridge and Structure Products

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **J&RS2 15** | **J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/** | | | |
| | Next Beam Producer (SOL 483-13-07)<br>*Allowable Bed Moment = 34,250,000 pound inches.*<br>*Working Load = 1,352,000 pounds.* | | | 2012-016Q |
| **JERPC 15** | **Jersey Precast Corporation, 853 Nottingham Way, Hamilton Township, NJ 08638 http://jerseyprecast.com/** | | | |
| | Prestressed Straight-Strand Bridge Member Only (PCI Code: B3)<br>*Allowable Bed Moment = 232 ft-k.*<br>*Working Load = 1,548,000 lbs.* | | | 2011-200Q |
| **MACIN 15** | **PennStress, Division of MacInnis Group, LLC, 8180 Woodbury Pike, Roaring Spring, PA 16673 http://www.pennstress.com/**<br>***Formerly NEW-0 15.*** | | | |
| | Next Beam Producer (SOL 483-13-07) | | | 2011-077Q |
| | Precast Plank Beam - Post Tensioned | | | 2015-125Q |
| | Prestressed Deflected and Straight-Strand Bridge Member (PCI Code: B4) | | | 2011-077Q |
| | Total Precast Bridge Structures | | | - |
| **MILL0 15** | **A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/** | | | |
| | Precast Plank Beam - Post Tensioned | | | 2017-198Q |
| **NORPP 15** | **Northeast Prestressed Products LLC, 121 River Street, Cressona, PA 17929-1133 http://www.npp-llc.com/** | | | |
| | Next Beam Producer (SOL 483-13-07)<br>*Allowable Bed Moment = 37,200,000 pound inches.*<br>*Working Load = 2,480,000 pounds.* | | | 2012-015Q |
| | Prestressed Deflected and Straight-Strand Bridge Member (PCI Code: B4) | | | 2012-015Q |
| | Total Precast Bridge Structures | | | - |

## Section 1107: Prestressed Concrete Bridge Beams

### 1107.02 Prestressed Concrete Bridge Beams

Last Revised: 1/5/2018

Note: Applicable Prestressed Concrete Institute (PCI) Plant Certification codes listed after product name. Approved Bridge and Structure Products

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **WHICO 15** | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/** | | | |
| | Prestressed Deflected and Straight-Strand Bridge Member (PCI Code: B4) | | | ----- |
| | Total Precast Bridge Structures | | | - |

### 1107.02(m) Box Beam Void Forms

Last Revised: 9/30/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CLFNA 15** | **Cellofoam North America, Inc., 33 Baron Park Road, Falmouth, VA 22405 http://cellofoam.com/** | | |
| | Box Beam Void Form | Cellofoam EPS | 1999-080Q |
| **DOW-3 15** | **The Dow Chemical Company, 200 Lackin Center, 1605 Joseph Drive, Midland, MI 48674 http://www.dow.com/** | | |
| | Box Beam Void Form | Styrofoam (EPS) | 1999-182Q |
| **INSUC 15** | **Insulation Corporation of America, 2571 Mitchell Avenue, Allentown, PA 18103 http://insulationcorp.com/** | | |
| | Box Beam Void Form | ICA-LITE (EPS) | 1993-032 |
| **INSUL 15** | **Insul-Board, Inc., 2120 Colonial Ave., P. O. Box 8103, Erie, PA 16505 http://insulboard.com/** | | |
| | Box Beam Void Form | Insul-Board (EPS) | 1988-107 |
| **OPC-N 15** | **Opco, Inc., Harrison Ave. West, P. O. Box 101, Latrobe, PA 15650 http://opcodirect.com/** | | |
| | Box Beam Void Form | Op-Foam (EPS) | 1991-276 |
| **PACEM 15** | **Pacemaker Plastics Co., 126 New Pace Rd., Newcomertown, OH 43832** | | |
| | Box Beam Void Form | Chemform Polyvoid (EPS) | 1992-149 |
| **POLMD 15** | **Poly Molding LLC, 96 Fourth Avenue, Haskell, NJ 07420 http://polymoldingllc.com/** | | |
| | Box Beam Void Form | Poly Foam | 1995-311 |

## Section 1107: Prestressed Concrete Bridge Beams

### 1107.02(m) Box Beam Void Forms

Last Revised: 9/30/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SHELE 15** | **Shelter Enterprises, Inc., 8 Saratoga Street, Cohoes, NY 12047 http://www.shelter-ent.com/** | | |
| | Box Beam Void Form | Shelterfoam | 2003-068Q |
| **SPRCC 15** | **Spring Cove Container, 301 Cove Lane, Roaring Spings, PA 16673 http://www.springcove.com/** | | |
| | Box Beam Void Form | Cardboard | ----- |

### 1107.02(n)3.d Tendons: 7-Wire, Uncoated, Low-Relaxation Strand

Last Revised: 5/30/2018

AASHTO M 203 (ASTM A 416), Grade 270. Steel Products Procurement Act applies.

| | Product | Name | Strength | Ref. No. |
|---|---|---|---|---|
| **BKERT 15 Facility** | **Bekaert Corporation, 1395 South Marietta Parkway, Building 500, Suite 100, Marietta, GA 30067 http://www.bekaert.com/en/ Van Buren, AR** | | | |
| | 7-Wire, Uncoated, Low-Relaxation Strand | 0.500", 0.520", 0.600" | | 2016-181Q |
| **INST2 15** | **Insteel Wire Products, 638 Rappahannock Wire Road, Gallatin, TN 37066 http://www.insteel.com/** | | | |
| | 7-Wire, Uncoated, Low-Relaxation Strand | 0.500", 0.520", 0.600" LoLax | 270K | 1994-081 |
| **INST8 15** | **Insteel Wire Products, 1 Wiremil Road, Sanderson, FL 32087 http://www.insteel.com/** | | | |
| | 7-Wire, Uncoated, Low-Relaxation Strand | 0.500", 0.520", 0.600" LoLax | 270K | 2012-237Q |
| **SUMWP 15** | **Sumiden Wire Products Corporation, 710 Marshall Stuart Drive, Dickson, TN 37055 http://www.sumidenwire.com/** | | | |
| | 7-Wire, Uncoated, Low-Relaxation Strand | 0.500", 0.520", 0.600" LoLax | 270K | 1998-151 |
| **WMCSC 15 Facility** | **Wire Mesh Corporation, 25219 Kuykendahl Rd Ste 290, The Woodlands, TX 77375 State Road S-9-205 St. Matthews, SC 29135** | | | |
| | 7-Wire, Uncoated, Low-Relaxation Strand | 0.500", 0.520", 0.600" WMC Strand | 270K | 2016-176Q |

### 1107.02(p) Neoprene Joint Material

Last Revised: 7/9/2015

## Section 1107: Prestressed Concrete Bridge Beams

### 1107.02(p) Neoprene Joint Material

Last Revised: 7/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ARMCL 15** | **Armacell, LLC, 7600 Oakwood Street Extension, P. O. Box 1038, Mebane, NC 27302 http://www.armacell.us/index.php?id=6** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | F-2062 | 2005-107Q |
| **MONRP 15** | **Monmouth Rubber and Plastics, 75 Longbranch Avenue, Long Branch, NJ 07740 http://www.monmouthrubber.com/** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | DK 2121 PADOT | 2005-094Q |
| **RUBAT 15** | **Rubatex International, LLC, 906 Adams Street, Bedford, VA 24523-2168 http://www.rubatexusa.com/** | | |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | G-207-N | 2006-006Q |
| | Closed-Cell Neoprene Sponge, Type 2, Class C, Grade 2 | R-470 | 2005-116Q |

# Section 1108: Post-Tensioning Operations

## 1108.03(f) Bonding and Grouting (Admixtures)

Concrete admixtures previously referenced in this section were moved to Section 711.3, Concrete Admixtures, and are listed as Grout Fluidifiers (GF).

# Section 1109: Guide Rail and Metal Median Barrier

Steel Products Procurement Act applies

For Attenuation Devices, see Section 619

## 1109.01 Guide Rail: Rail Elements and Rubbing Rails

Last Revised: 11/15/2019

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DI-HS 15** | **Di Highway Sign & Structure Corporation, P. O. Box 123, New York Mills, NY 13417-0123 http://dihighway.com/** | | |
| | Rail Element | | 1991-345 |
| | Rubbing Rail | | 1991-345 |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | |
| | Rail Element | | 1994-014 |
| | Rubbing Rail | | 1994-014 |
| **HIGSC 15** | **Highway Safety Corporation, 239 Commerce Street, P. O. Box 358, Glastonbury, CT 06033-0358 http://www.highwaysafety.net/** | | |
| | Rail Element | | 1989-180 |
| | Rubbing Rail | | 1989-180 |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | Rubbing Rail | | 2012-194Q |
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | |
| | Rail Element | RG-400 | 1996-230 |
| | Rubbing Rail | | 1999-077Q |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.01 Guide Rail: Rail Elements and Rubbing Rails

Last Revised: 11/15/2019

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | | |
| | Rail Element | 21G Anchor Post Rail Element (RC-54M) | 2010-132QA |
| | Rail Element<br>* *Approved MM-USA marking as Identifiable Steel* | 9G (12' 6" p/6' 3" Guide Rail), 11G (12' 6" p/3' 1 1/2" Guide Rail) | 2010-132QA |
| | Rail Element | Bridge Barrier Transition Rail Element (RC-50M) | 2010-132QA |
| | Rubbing Rail | | ----- |
| **TRIN6 15 Plant** | **Trinity Highway Products, LLC, 2525 Stemmons Freeway, Dallas, TX 75207<br>600 Prosperity Drive Orangeburg, SC 29115** | | |
| | Rail Element | 11G (12' 6" p/3' x 1 1/2" Guide Rail) | 2018-104Q |
| **V&SSE 15** | **V & S Schuler Engineering, 2240 Allen Ave. S.E., Canton, OH 44707 http://www.vsschuler.com/** | | |
| | Rubbing Rail | | 1994-046 |

### 1109.02 Guide Rail: Terminal Sections

Last Revised: 11/15/2019

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary).

Terminal Section Bridge Connection: Standard Drawing RC-51M (Sheet 2 of 14) & RC-739M [Type 31 Strong Post Guide Rail to Standard Bridge Barrier]

Flared Terminal Section: Standard Drawing RC-53M (Sheet 2 of 3)

Guide Rail Terminal Section, Single: Standard Drawing RC-51M (Sheet 3 of 14)

Publication 13M, Design Manual, Part 2 Highway Design, Chapter 12, Guide Rail End Treatments and Terminals

| Product | Name | Ref. No. |
|---|---|---|

# Section 1109: Guide Rail and Metal Median Barrier

## 1109.02 Guide Rail: Terminal Sections

Last Revised: 11/15/2019

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary).

Terminal Section Bridge Connection: Standard Drawing RC-51M (Sheet 2 of 14) & RC-739M [Type 31 Strong Post Guide Rail to Standard Bridge Barrier]

Flared Terminal Section: Standard Drawing RC-53M (Sheet 2 of 3)

Guide Rail Terminal Section, Single: Standard Drawing RC-51M (Sheet 3 of 14)

Publication 13M, Design Manual, Part 2 Highway Design, Chapter 12, Guide Rail End Treatments and Terminals

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DI-HS 15** | **Di Highway Sign & Structure Corporation, P. O. Box 123, New York Mills, NY 13417-0123 http://dihighway.com/** | | |
| | Guide Rail Terminal Section | | 1991-345 |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | |
| | Alternate Terminal Section | W Beam End Section (Buffer) | 1994-281B |
| | Alternate Terminal Section | W Beam End Section (Rounded) | 1994-281B |
| | Flared Terminal Section | W Beam End Section (Flared) | 1994-281A |
| | Guide Rail Terminal Section | | 1994-281 |
| | Terminal Section Bridge Connection | W Beam Terminal Connector | 1994-281C |
| **HIGSC 15** | **Highway Safety Corporation, 239 Commerce Street, P. O. Box 358, Glastonbury, CT 06033-0358 http://www.highwaysafety.net/** | | |
| | Alternate Terminal Section | | 1989-180 |
| | Flared Terminal Section | | 1989-180 |
| | Guide Rail Terminal Section | | 1989-180 |
| | Terminal Section Bridge Connection | | 1989-180 |
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | |
| | Alternate Terminal Section | RG-475 Terminal Half Wrap | 1996-230 |
| | Flared Terminal Section | | 1996-230 |
| | Guide Rail Terminal Section | | 1996-230 |
| | Terminal Section Bridge Connection | | 1996-230 |

# Section 1109: Guide Rail and Metal Median Barrier

## 1109.02 Guide Rail: Terminal Sections

Last Revised: 11/15/2019

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary).

Terminal Section Bridge Connection: Standard Drawing RC-51M (Sheet 2 of 14) & RC-739M [Type 31 Strong Post Guide Rail to Standard Bridge Barrier]

Flared Terminal Section: Standard Drawing RC-53M (Sheet 2 of 3)

Guide Rail Terminal Section, Single: Standard Drawing RC-51M (Sheet 3 of 14)

Publication 13M, Design Manual, Part 2 Highway Design, Chapter 12, Guide Rail End Treatments and Terminals

| | Product | Name | Ref. No. |
|---|---|---|---|
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | | |
| | Alternate Terminal Section | 907G Circular Terminal (RC-51M) | 2010-132QA |
| | Alternate Terminal Section | 974G Guide Rail to Bridge Barrier Transition Section (RC-50M) | 2010-132QA |
| | Flared Terminal Section | 901G Flared Terminal (RC-53M, Sheet 2, Detail F) | 2010-132QA |
| | Guide Rail Terminal Section | | 2010-132QA |
| | Terminal Section Bridge Connection | 926G Terminal Section Bridge Connection - Straight (RC-51M, Sheet 2) | 2010-132QA |
| | Terminal Section Bridge Connection | 928G Terminal Section Bridge Connection (RC-51M, Sheet 2, Detail A) | 2010-132QA |

## 1109.03 Guide Rail: Posts

Last Revised: 9/10/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

See **Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)**

Or **Standard Drawing of Type 2 Weak Post Guide Rail RC-53M (Publication 72M)**

Important Notice: **AASHTO/FHWA Joint Implementation Agreement for MASH 2016**

| Product | Name | Ref. No. |
|---|---|---|

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.03 Guide Rail: Posts

Last Revised: 9/10/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

See Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Or Standard Drawing of Type 2 Weak Post Guide Rail RC-53M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMETS 15** | **American Timber and Steel Corp., 4832 Plank Road, P. O. Box 767, Norwalk, OH 44857-0767 http://www.americantimberandsteel.com/** | | |
| | | Breakaway Terminal Foundation Wood Post | 1995-252 |
| | | Breakaway Terminal Wood Post | 1995-252 |
| | | Timber Guide Rail Post | 1995-252 |
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | | Welded Steel Post | 2008-114Q |
| **CNWPI 15 Facility** | **Central Nebraska Wood Preservers, Inc., P.O. Box 630, Sutton, NE 68979 http://www.nebraskawood.com/ 105 North Owen Street Sutton, NE 68979** | | |
| | | Long Breakaway Timber Post | 2014-241QD |
| | | Short Breakaway Timber Post | 2014-241QC |
| | | Timber Guide Rail Post | 2014-241QA |
| **DI-HS 15** | **Di Highway Sign & Structure Corporation, P. O. Box 123, New York Mills, NY 13417-0123 http://dihighway.com/** | | |
| | | Steel I-Beam Post | 1991-344 |
| **ELDER 15** | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | |
| | | Steel I-Beam Post | 1987-158 |
| | | Welded Steel Post | 2006-020Q |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.03 Guide Rail: Posts

Last Revised: 9/10/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

See Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Or Standard Drawing of Type 2 Weak Post Guide Rail RC-53M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **GRE-2 15 Plant** | **Great Southern Wood Preserving, P. O. Box 610, Abberville, AL 36310 http://greatsouthernwood.com/ Rocky Mount, VA** | | |
| | Breakaway Terminal Foundation Wood Post | | 2011-163QABC |
| | Breakaway Terminal Wood Post | | 2011-163QABC |
| | Timber Guide Rail Post | | 2011-163QABC |
| **GREG2 15 Facility** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm 7320 Galvan Way Harrisburg, NC 28075** | | |
| | Steel I-Beam Post | | ----- |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | |
| | Steel I-Beam Post | | 1995-321 |
| **HIGSC 15** | **Highway Safety Corporation, 239 Commerce Street, P. O. Box 358, Glastonbury, CT 06033-0358 http://www.highwaysafety.net/** | | |
| | Steel C-Post and Channel Post | | 1989-180 |
| | Steel I-Beam Post | | 1989-180 |
| | Welded Steel Post | | 2005-105Q |
| **IAWP1 15** | **Iowa Wood Preservers, Inc., 2102 South 17th Street, Oskaloosa, IA 52577** | | |
| | Long Breakaway Timber Post | | 2014-047QD |
| | Short Breakaway Timber Post | | 2014-047QC |
| | Timber Guide Rail Post | | 2014-047QA |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.03 Guide Rail: Posts

Last Revised: 9/10/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

See Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Or Standard Drawing of Type 2 Weak Post Guide Rail RC-53M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| Product | Name | Ref. No. |
|---|---|---|
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | |
| | Steel I-Beam Post | 2012-156Q |
| | Welded Steel Post | 2012-245Q |
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | |
| | Steel I-Beam Post | 1999-022Q |
| | Welded Steel Post | 2005-134Q |
| **STEJ1 15** | **Stella-Jones Corporation, 3424 Parkersburg Road, Reedy, WV 25270-9402 http://stella-jones.com/** ***Formerly Burke-Parsons Bowlby (BURPB 15)*** | |
| | Timber Guide Rail Post | 1998-101 |
| **STOREY15** | **S.I. Storey Lumber Company, 285 Sike Storey Road, Armuchee, GA 30105 http://www.sistoreylumber.com/** | |
| | Long Breakaway Timber Post | 2016-041QA |
| | Short Breakaway Timber Post | 2016-041QB |
| | Timber Guide Rail Post | 2016-041QC |
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | |
| | Steel I-Beam Post<br>* *Approved MM-USA marking as Identifiable Steel* | 2010-132QB |
| | Welded Steel Post | 2007-186Q |
| **TRIN4 15** | **Trinity Highway Products, LLC, 200 Dynatex Road, Sunbright, TN 37872 http://www.highwayguardrail.com/** | |
| | Breakaway Terminal Wood Post | 2010-224QA |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.03 Guide Rail: Posts

Last Revised: 9/10/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

See Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Or Standard Drawing of Type 2 Weak Post Guide Rail RC-53M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **V&SSE 15** | **V & S Schuler Engineering, 2240 Allen Ave. S.E., Canton, OH 44707 http://www.vsschuler.com/** | | |
| | Steel I-Beam Post | | 1994-046 |

### 1109.04 Guide Rail: Offset Brackets (Blocks)

Last Revised: 11/2/2018

See Standard Drawings RC-50M and RC-51M Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMETS 15** | **American Timber and Steel Corp., 4832 Plank Road, P. O. Box 767, Norwalk, OH 44857-0767 http://www.americantimberandsteel.com/** | | |
| | Wood Offset Bracket (4" x 8" x 14") | | 2003-116 |
| | Wood Offset Bracket (6" x 8" x 14") | | 1995-185 |
| **CNWPI 15 Facility** | **Central Nebraska Wood Preservers, Inc., P.O. Box 630, Sutton, NE 68979 http://www.nebraskawood.com/ 105 North Owen Street Sutton, NE 68979** | | |
| | Wood Offset Bracket - Routed for Steel Posts (6" x 8" x 14") | | 2014-241QB |
| **CREAT 15** | **Creative Building Products, 4307 Arden Drive, Fort Wayne, IN 46804-4446 http://creativebuildingproducts.com/** | | |
| | Plastic Offset Block | | 1996-199 |
| **DEKLB 15** | **DeKALB Molded Plastics, 550 West Main Street, Butler, IN 46721 http://www.dekalbplastics.com/** | | |
| | Composite Offset Block | Lightweight | 2002-071 |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.04 Guide Rail: Offset Brackets (Blocks)

Last Revised: 11/2/2018

See Standard Drawings RC-50M and RC-51M Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Ref. No. |
|---|---|---|---|
| **IAWP1 15** | **Iowa Wood Preservers, Inc., 2102 South 17th Street, Oskaloosa, IA 52577** | | |
| | Wood Offset Bracket - Routed for Steel Posts (6" x 8" x 14") | | 2014-047B |
| **MONDP 15** | **Mondo Polymer Technologies, State Route 7, P.O. Box 250, Reno, OH 45773 http://www.mondopolymer.com/** | | |
| | Composite Offset Block | GB14SH | 2002-062Q |
| | Plastic Offset Block | | 2002-062Q |
| **MONM1 15** | **Monroeville Industrial Molding, 75 Ontario St., Norwalk, OH 44857 http://www.monroevillemoldings.com/** | | |
| | Plastic Offset Block | | 2003-017Q |
| **RAMC1 15** | **Ramco International, 3102 Estate Drive, Bldg. 1, Oakdale, PA 15071** | | |
| | Plastic Offset Block | | 1999-200Q |
| **STEJ1 15** | **Stella-Jones Corporation, 3424 Parkersburg Road, Reedy, WV 25270-9402 http://stella-jones.com/** ***Formerly Burke-Parsons Bowlby (BURPB 15)*** | | |
| | Wood Offset Bracket (6" x 8" x 14") | | 1998-101 |
| **STOREY15** | **S.I. Storey Lumber Company, 285 Sike Storey Road, Armuchee, GA 30105 http://www.sistoreylumber.com/** | | |
| | Wood Offset Bracket - Non-Routed for Wood Posts (6" x 8" x 14") | | 2016-232Q |
| **TRIN4 15** | **Trinity Highway Products, LLC, 200 Dynatex Road, Sunbright, TN 37872 http://www.highwayguardrail.com/** | | |
| | Wood Offset Bracket - Routed for Steel Posts (6" x 8" x 14") | | 2010-224QB |

### 1109.05 Guide Rail: Miscellaneous Material

Last Revised: 8/26/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

For miscellaneous material, including nuts, bolts, and washers, see Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

| Product | Name | Ref. No. |
|---|---|---|

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.05 Guide Rail: Miscellaneous Material

Last Revised: 8/26/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

For miscellaneous material, including nuts, bolts, and washers, see Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASPEC 15** | **Assembly Specialty Products, 14700 Brookpark Road, Cleveland, OH 44135 https://www.assemblyspecialty.com/** | | |
| | 3/4" (6x19) Swaged Galvanized Cable (RC-51M)<br>*Actual Dimensions of Threaded Section of Swaged Fitting: 1" diameter x 8 TPI x 7" long, where Standard Drawing RC-51 shows 15/16" diameter x 9 TPI.* | BCT Cable Assembly Fabricator | 2019-106Q |
| **AUTBN 15** | **Auto Bolt Company, 4740 Manufacturing Avenue, Cleveland, OH 44135 http://autobolt.net** | | |
| | Post Bolt (RC-51M) | Post Bolt (ASTM A307, Grade A) | 2017-132Q |
| | Splice Bolt (RC-51M) | Splice Bolt (ASTM A307, Grade A) | 2017-132Q |
| **BENNE 15** | **Bennett Bolt Works, Inc., 12 Elbridge Street, P. O. Box 922, Jordan, NY 13080 http://www.bennettboltworks.com/** | | |
| | 2" x 3/8" x 6" Galvanized Anchor Bar (BC-709M) | PLA 37x200x600H Plate Washer | 2015-145Q |
| | Bolt | ASTM A307, Grade A Bolt | 1985-135A |
| **BIRFM 15** | **Birmingham Fastener Manufacturing, 931 Avenue W, P.O. Box 10323, Birmingham, AL 35234** | | |
| | Nut, Bolt, and Washer | ASTM A307, Grade A Guiderail Bolt, ASTM F436 Washer, and ASTM A-563 Heavy Hex Nut | 2011-127Q |
| **CENMC 15** | **CenMac Metalworks, 1339 E. Fairground Road, Marion, OH 43302 http://cenmacmetalworks.com/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 2014-048Q |
| **CGLP1 15**<br>**Plant** | **Commercial Group Lifting Products, 12801 Universal Drive, Taylor, MI 48180 http://www.cglift.com/**<br>**2427 East Judd Road Burton, MI 48529** | | |
| | 3/4" (6x19) Swaged Galvanized Cable (RC-51M)<br>*Actual Dimensions of Threaded Section of Swaged Fitting: 1" diameter x 8 TPI x 7" long, where Standard Drawing RC-51 shows 15/16" diameter x 9 TPI. (Original approval from 1990-078A, former supplier code: CWR&S 15)* | BCT Cable Assembly Fabricator | 2016-142Q |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.05 Guide Rail: Miscellaneous Material

Last Revised: 8/26/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

For miscellaneous material, including nuts, bolts, and washers, see Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **DAYT3 15 Plant** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342 http://www.daytonsuperior.com/ Tremont, PA 17981** | | |
| | Anchor Insert Assemblies (A, B, C, and D per BC-734) | | 2008-070QABCD |
| **DI-HS 15** | **Di Highway Sign & Structure Corporation, P. O. Box 123, New York Mills, NY 13417-0123 http://dihighway.com/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 1991-344 |
| | Nut, Bolt, and Washer | | 1991-344 |
| **ELDER 15** | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 1987-158 |
| | Rotating Bracket | | 1987-158 |
| **FAST1 15 Facility** | **Fastenal Company, P.O. Box 978, 2001 Theurer Blvd, Winona, MN 55987 https://www.fastenal.com/ Holo-Krome 5800 Industrial Avenue Loves Park, IL 61111** | | |
| | Bolt | ASTM A307, Grade A Bolts | 2019-211Q |
| | Splice Bolt (RC-51M) | Type “H” Splice Bolt (Button Head, ASTM A307) | 2019-211Q |
| **FAST2 15 Facility** | **Fastenal Company, P.O. Box 978, 2001 Theurer Blvd, Winona, MN 55987 https://www.fastenal.com/ Holo-Krome 61 Barnes Industrial Park North Wallingford, CT** | | |
| | Bolt | ASTM A307, Grade A Bolts | 2019-213Q |
| | Splice Bolt (RC-51M) | Type “G” Splice Bolt (Button Head, ASTM A307) | 2019-213Q |
| **HAYDN 15** | **Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/** | | |
| | Bolt | ASTM A307, Grade A Bolts | 1990-048 |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.05 Guide Rail: Miscellaneous Material

Last Revised: 8/26/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

For miscellaneous material, including nuts, bolts, and washers, see Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HIGSC 15** | **Highway Safety Corporation, 239 Commerce Street, P. O. Box 358, Glastonbury, CT 06033-0358 http://www.highwaysafety.net/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 1989-180 |
| | Nut, Bolt, and Washer | | 1989-180 |
| | Rotating Bracket | | 1989-180 |
| | Steel Spacer Tube | | 1989-180 |
| **MIDW1 15** | **Mid West Fabricating Company, 313 North Johns Street, Amanda, OH 43102 http://midwestfab.com/** | | |
| | Bolt | ASTM A307, Grade A Bolts | 1999-168Q |
| **MIDW2 15** | **Mid West Fabricating Company, 3115 West Fair Avenue, Rockmill Division, Lancaster, OH 43130 http://midwestfab.com/** | | |
| | Nut | ASTM A-563 Heavy Hex Nut | 2012-105Q |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 2012-160Q |
| | Rotating Bracket | | 2013-096Q |
| | Steel Spacer Tube | | 2012-171Q |
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | |
| | Anchor Plate (RC-51M) | | 1994-295Q |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | | 1994-293Q |
| | Rotating Bracket | | 1994-294Q |
| | Steel Spacer Tube | | 1999-078 |
| **SILOF 15** | **Silo Fasteners - Ohio Rod Products, Elgin Fastener Group, 1415 South Benham Road, Versailles, IN 47042 http://elginfasteners.com/** | | |
| | Bolt | ASTM A307 Bolt | 1999-135Q |
| | * *Approved MM-USA marking as Identifiable Steel* | | |

## Section 1109: Guide Rail and Metal Median Barrier

### 1109.05 Guide Rail: Miscellaneous Material

Last Revised: 8/26/2020

Impact Attenuating Devices: See Section 619.2 (Permanent) and Section 696.2 (Temporary)

For miscellaneous material, including nuts, bolts, and washers, see Standard Drawing of Type 31 Strong Post Guide Rail RC-51M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SOEBS 15** | **Southeastern Bolt and Screw, Inc., 1037 16th Avenue West, Birmingham, AL 35204 http://www.sebolt.com/index.html** | | |
| | Nut, Bolt, and Washer | | 1991-059 |
| **STCBS 15** | **Steel City Bolt and Screw, LLC, 230 West Valley Road, Birmingham, AL 35201 http://www.steelcitybolt.com/** | | |
| | Nut, Bolt, and Washer | ASTM A307, Grade A Bolts | 1990-036 |
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | | |
| | Base Plate, Post Plate, End Post Support Angle, and Hardware | Excluding Steel Tube | 2010-262Q |
| | Bolt and Nut | ASTM A307A Bolt and ASTM A-563 Heavy Hex Nut | 2010-137QAB |
| | Rotating Bracket | | ----- |
| | Steel Spacer Tube | | ----- |
| **VAMP- 15** | **Vamp Company, 28055 Fort Street, Trenton, MI 48133 http://vampcompany.com/** | | |
| | Nut | ASTM A-563 Heavy Hex Nut | 2011-073Q |

### 1109.08 Guide Rail: Welded Material

For Welded Steel Posts, see Section 1109.03.

## Section 1110: Right-of-Way Fence

### 1110.01(a) Wire Fabric and Components, Type 1 Right-of-Way Fence

Last Revised: 10/14/2020

AASHTO M 181 Type I, Class D: Zinc-coated, Type II: Aluminum-coated, Type IV, Class A or B: Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric. Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ANCHR 15** | **Master Halco, Inc., Anchor Fence Division, 1000 N. South Rd., Scranton, PA 18504 http://www.masterhalco.com/** ***Formerly Anchor Fence Company.*** | | |
| | Aluminum-coated Steel Fabric | | 1995-243 |
| | Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric | | ----- |
| | Zinc-coated (Galvanized) Steel Fabric | | ----- |
| **MERME 15** | **Merchant Metals, 900 Ashwood Parkway, Suite 200, Atlanta, GA 30338 https://www.merchantsmetals.com/** | | |
| | Aluminum-coated Steel Fabric | | 2003-191Q |
| | Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric | | 2003-192Q |
| | Zinc-coated (Galvanized) Steel Fabric | | 2003-190Q |
| **SHAFC 15** | **Sharon Fence Company, 1 Miller Court, Sharon, PA 16146 http://www.sharonfence.com/** | | |
| | Aluminum-coated Steel Fabric | | 2017-280Q |
| | Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric | | 2017-281Q |
| | Zinc-coated (Galvanized) Steel Fabric | | 2017-207Q |
| **SPSKJ 15 Facility** | **Stephens Pipe & Steel, LLC, 2224 E. Highway 619, P.O. Box 618, Russell Springs, KY 42642 http://www.spsfence.com/** **SPS Jamestown 2151 N. Main Highway 127 Jamestown, KY 42649** | | |
| | Aluminum-coated Steel Fabric | OnGuard Aluminum Coated Steel Chain Link Fence Fabric | 2016-118Q |
| | Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric | OnGuard SPSV Fused and Bonded Poly (Vinyl Chloride) - PVC Coated Steel Chain Link Fence Fabric | 2016-103Q |
| **SPSMD 15 Facility** | **Stephens Pipe & Steel, LLC, 2224 E. Highway 619, P.O. Box 618, Russell Springs, KY 42642 http://www.spsfence.com/** **SPS Bladensburg 4301 46th Street Bladensburg, MD 20710** | | |
| | Aluminum-coated Steel Fabric | OnGuard Aluminum Coated Steel Chain Link Fence Fabric | 2016-221Q |
| | Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric | OnGuard SPSV Fused and Bonded Poly (Vinyl Chloride) - PVC Coated Steel Chain Link Fence Fabric | 2016-220Q |

## Section 1110: Right-of-Way Fence

### 1110.01(a) Wire Fabric and Components, Type 1 Right-of-Way Fence

Last Revised: 10/14/2020

AASHTO M 181 Type I, Class D: Zinc-coated, Type II: Aluminum-coated, Type IV, Class A or B: Polyvinyl Chloride (PVC) and Other Organic Polymer-coated Steel Fabric. Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **STASW 15** | **Stateside Steel and Wire, 304 Wyanoke Road, West Memphis, AR 72301 http://statesidesteel.com/** | | |
| | Aluminum-coated Steel Fabric | | 2007-149QB |
| | Zinc-coated (Galvanized) Steel Fabric | | 2007-149QA |
| | *Stateside Steel and Wire is approved to galvanize the wire used to manufacture the fence fabric.* | | |
| **STEPN 15 Facility** | **Stephens Pipe & Steel, LLC, 2224 E. Highway 619, P.O. Box 618, Russell Springs, KY 42642 http://www.spsfence.com/ 10732 Schadel Road SE Mount Sterling, OH 43143-0237** | | |
| | Zinc-coated (Galvanized) Steel Fabric | | 2000-090Q |
| | *Stephens Pipe & Steel is approved to galvanize the wire used to manufacture the fence fabric.* | | |

### 1110.01(b) Wire Fabric and Components, Type 2 and Type 5 Right-of-Way Fence

Last Revised: 10/15/2020

Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BKERT 15 Facility** | **Bekaert Corporation, 1395 South Marietta Parkway, Building 500, Suite 100, Marietta, GA 30067 http://www.bekaert.com/en/ Van Buren, AR** | | |
| | Galvanized Steel Fabric | | 1999-027Q |
| | *Bekaert Corporation is approved to galvanize (zinc-coat) the top, bottom, intermediate line, and stay wires used to manufacture the fence fabric.* | | |
| **KEYSW 15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us** ***Formerly Keystone Steel & Wire Company*** | | |
| | Galvanized Steel Fabric | 1047-6-11 Hinge Joint Fabric | 2007-038Q |
| | *Keystone Steel & Wire Company is approved to galvanize (zinc-coat) the top, bottom, intermediate line, and stay wires to manufacturer the fence fabric. The new supplier code is LIBSWP15.* | | |

## Section 1110: Right-of-Way Fence

### 1110.01(b) Wire Fabric and Components, Type 2 and Type 5 Right-of-Way Fence

Last Revised: 10/15/2020

Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **LIBSWP15** | **Liberty Steel & Wire Peoria, 7000 S. W. Adams Street, Peoria, IL 61641 http://www.libertysteel.us**<br>***Formerly Keystone Steel & Wire Company (KEYSW 15)*** | | |
| | Galvanized Steel Fabric | 1047-6-11 Hinge Joint Fabric | 2007-038Q |
| | *Liberty Steel & Wire Peoria is approved to galvanize (zinc-coat) the top, bottom, intermediate line, and stay wires to manufacturer the fence fabric.* | | |
| **OKSW1 15 Facility** | **Oklahoma Steel & Wire, P.O. Box 220, Madill, OK 73446 http://www.okbrandwire.com/**<br>**Highway 70 South Madil, OK 73446** | | |
| | Galvanized Steel Fabric | 1047-6-11 Class III Galvanized Field Fence Fabric | 2018-081Q |
| | *Oklahoma Steel & Wire is approved to galvanize (zinc-coat) the top, bottom, intermediate line, and stay wires used to manufacture the fence fabric.* | | |

### 1110.02 End Posts, Corner and Pull Posts, Line Posts, Braces, Stretcher Bars, Truss Rods, Fittings,

Last Revised: 8/10/2017

Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ALLTC 15** | **Allied Tube & Conduit Corporation, 16100 South Lathrop Ave., Harvey, IL 60426 http://www.alliedeg.us/** | | |
| | Fence Posts | | 2000-028Q |
| **ANCHR 15** | **Master Halco, Inc., Anchor Fence Division, 1000 N. South Rd., Scranton, PA 18504 http://www.masterhalco.com/**<br>***Formerly Anchor Fence Company.*** | | |
| | Fence Fittings and Hardware | | ----- |
| | Fence Posts | | ----- |
| **BENNE 15** | **Bennett Bolt Works, Inc., 12 Elbridge Street, P. O. Box 922, Jordan, NY 13080 http://www.bennettboltworks.com/** | | |
| | Fence Fittings and Hardware | | ----- |
| | Fence Posts | | ----- |

## Section 1110: Right-of-Way Fence

### 1110.02 End Posts, Corner and Pull Posts, Line Posts, Braces, Stretcher Bars, Truss Rods, Fittings,

Last Revised: 8/10/2017

Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FRANK 15** | **Franklin Industries, 645 Atlantic Ave., Franklin, PA 16323 http://store.franklinindustriesco.com/** | | |
| | Fence Fittings and Hardware<br>*Approved to manufacture fence parts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | ----- |
| | Fence Posts<br>*Approved to manufacture fence posts from recycled train rail per Franklin Industries' Rail Identification & Traceability Procedure, Q113.003. In lieu of mill certifications, a Certificate of Conformance must be included with the 'Unidentified Steel' box checked on the CS-4171. **Franklin Industries' Certificate of Conformance*** | | ----- |
| **GREGV 15** | **Gregory Industries, Inc., 4100 13th Street SW, P.O. Box 80508, Canton, OH 44708 http://www.gregorycorp.com/gccorp.htm** | | |
| | Fence Fittings and Hardware | | 1990-291 |
| | Fence Posts | | 1990-291 |
| | Fence Posts<br>*C Fabric up to 5'* | | 1990-291A |
| | Fence Posts<br>*H Fabric up to 8'* | | 1990-291B |
| | Fence Posts<br>*Roll-formed C Section fence framework coated with Galfan 1", 2", and 2-3/8".* | | 1993-251 |
| **LANCC 15** | **Lancaster Composite, Inc., P.O. Box 27, Millersville, PA 17551-0027 http://lancastercomposite.com/** | | |
| | Fence Posts<br>*Provisional Approval: ECMS Special Provision P-C06241-A.* | Composite Post 40 | 1995-239 |

## Section 1110: Right-of-Way Fence

### 1110.02 End Posts, Corner and Pull Posts, Line Posts, Braces, Stretcher Bars, Truss Rods, Fittings,

Last Revised: 8/10/2017

Steel Products Procurement Act applies. See Standard Drawing RC-60M (Publication 72M)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MTMINC15** | **Midwest Tube Mills, Inc., 2855 Michigan Road, Madison, IN 47250 http://www.midwesttubemills.com** | | |
| | Braces | MT-40 Fence Tubing | 2015-119Q |
| | End Posts (2 3/8")<br>*Approved for fabric heights of 4, 5, and 6 feet* | MT-40 Fence Tubing | 2015-119Q |
| | Line Posts (1 7/8")<br>*Approved for fabric heights of 4 feet* | MT-40 Fence Tubing | 2015-119Q |
| **SPSKY 15 Facility** | **Stephens Pipe & Steel, LLC, 2224 E. Highway 619, P.O. Box 618, Russell Springs, KY 42642 http://www.spsfence.com/**<br>**5975 South Highway 76 Russell Springs, KY 42642** | | |
| | Braces | OnGuard SPS40E | 2016-051Q |
| | End Posts (2 3/8")<br>*Approved for fabric heights of 4, 5, and 6 feet* | OnGuard SPS40E | 2016-051Q |
| | Fence Fittings and Hardware | OnGuard SPS40E Tension Band, Dome Cap, Rail End, Brace Band | 2016-051Q |
| | Fence Fittings and Hardware | OnGuard SPS40E Top Rail Sleeve, Line Post Eye Cap, Truss Rod Bracket, Line Clamp | 2016-051Q |
| | Line Posts (1 7/8")<br>*Approved for fabric heights of 4 feet* | OnGuard SPS40E | 2016-051Q |
| **WHETC 15** | **Wheatland Tube Company, 1 Council Avenue, Wheatland, PA 16161 http://www.wheatland.com/** | | |
| | Fence Posts | | 1998-110 |
| | Fence Posts | | 1998-136 |

# Section 1111: High Load Multi-Rotational Bearings

## 1111.03 High Load Multi-Rotational Bearings

Last Revised: 5/8/2018

Companies not listed must be preapproved by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA before commencing fabrication. Approved Bridge and Structure Products

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | Disc Bearing | | 2005-082Q |
| | Pot Bearing | | 2005-082Q |
| | Spherical Bearing | | 2005-082Q |
| **CONSV 15** | **Con-Serv, Inc., 2963 Interstate Parkway, Brunswick, OH 44212 http://www.con-servinc.com/** | | |
| | Disc Bearing | | 2003-012Q |
| | Pot Bearing | | 2003-012Q |
| | Spherical Bearing | | 2003-012Q |
| **COSME 15** | **Cosmec Inc., 1501 Rocky Ridge Road, Athens, TX 75751 http://www.cosmecinc.com/** | | |
| | Pot Bearing | | 1990-146 |
| | Spherical Bearing | | 1990-146 |
| **HALL1 15** | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Disc Bearing | | 2016-031Q |
| | Pot Bearing | | 2001-022Q |
| **HALL3 15** | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Disc Bearing | | 2017-029Q |
| | Pot Bearing | | 2017-029Q |
| **LUBTC 15** | **Lubrite Technologies, 18649 Brake Shoe Road, Meadville, PA 16335-0458 http://www.usbfmi.com/lube1.htm** | | |
| | Pot Bearing<br>*Approved to fabricate non-welded bearings only.* | | 1990-309AB |
| | Spherical Bearing<br>*Approved to fabricate non-welded bearings only.* | | 1990-309AB |

## Section 1111: High Load Multi-Rotational Bearings

### 1111.03 High Load Multi-Rotational Bearings

Last Revised: 5/8/2018

Companies not listed must be preapproved by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA before commencing fabrication. Approved Bridge and Structure Products

| | Product | Name | Ref. No. |
|---|---|---|---|
| **MAGE1 15 Facility** | **mageba USA LLC, 575 Lexington Ave, 4th Floor, New York 10022 http://www.magebausa.com/ Pottstown, PA** | | |
| | Disc Bearing | Reston Disc | 2018-016Q |
| **NATBR 15** | **R. J. Watson / National Bridge Company Inc., 11035 Walden Avenue, Alden, NY 14004 http://www.rjwatson.com/** | | |
| | Disc Bearing | | 2013-239Q |

# Section 1112: Glued Laminated Hardwood Timber Members

## 1112 Glued Laminated Hardwood Timber Members

Last Revised: 7/9/2015

| Product | Name | Ref. No. |
|---|---|---|
| **ALAWP 15** | **Alamco Wood Products, Inc., 1410 West Ninth Street, Albert Lea, MN 56007 http://www.alamcowood.com/** | |
| | Timber Fabricator | 2000-236Q |
| **KOPRS 15** | **Koppers Industries, Inc., 50 Koppers Lane, Montgomery, PA 17752 http://www.koppers.com/locations/susquehanna-plant** | |
| | Timber Treater | 1999-194Q |
| **NORSO 15** | **North-South Wood Preserving Company, 160 Preserver Road, North, SC 29112** | |
| | Timber Treater | 2012-117Q |
| **RIGID 15** | **Rigidply Rafters, Inc., 701 East Linden Street, Richland, PA 17087 http://www.rigidply.com/** | |
| | Timber Fabricator | 1999-176Q |
| **STEJ2 15** | **Stella-Jones Corporation, R.R. 3, P. O. Box 275, Dubois, PA 15801 http://stella-jones.com/**<br>***Formerly Burke-Parsons-Bowby Corp. (BURPB 15)*** | |
| | Timber Treater | 2002-079Q |

## Section 1113: Plain and Laminated Neoprene Bearing Pads

### 1113 Plain and Laminated Neoprene Bearing Pads

Last Revised: 7/18/2017

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 1986-117 |
| | Plain 60D Neoprene Bearing Pad | | | 1986-118 |
| | Steel Laminated 50D Neoprene Bearing Pad | | | 1986-119A |
| | Steel Laminated 60D Neoprene Bearing Pad | | | 1986-119B |
| **BRPMF 15** | **BRP Manufacturing Company, 637 North Jackson St., P.O. Box 389, Lima, OH 45802-0389 http://www.brpmfg.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 2016-231Q |
| | Plain 60D Neoprene Bearing Pad | | | 2001-174Q |
| **MURR1 15** | **MurRubber Technologies, Inc. (Formerly Bedell-Kraus), 1350 Commerce Drive, Stow, OH 44224 http://murrubber.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 2012-251Q |
| **SCOUG 15** | **Scougal Rubber Corporation, 885 Denmark Dr. Ste. 103b, McCarran, NV 89434 http://www.scougalrubber.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 1998-178 |
| | Plain 60D Neoprene Bearing Pad | | | 1998-178 |
| | Steel Laminated 50D Neoprene Bearing Pad | | | 1998-178 |
| | Steel Laminated 60D Neoprene Bearing Pad | | | 1998-178 |
| **SEISM 15 Plant** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/**<br>**518 Progress Way Athens, TX 75751**<br>***(Formerly Seismic Energy Products, Inc.)*** | | | |
| | Plain 50D Neoprene Bearing Pad | | | ----- |
| | Plain 60D Neoprene Bearing Pad | | | ----- |
| | Steel Laminated 50D Neoprene Bearing Pad | | | ----- |
| | Steel Laminated 60D Neoprene Bearing Pad | | | ----- |
| **VOSSE 15** | **Voss Engineering, Inc., 6965 North Hamlin Ave., Lincolnwood, IL 60712 http://www.vossengineering.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 2000-198Q |
| | Plain 60D Neoprene Bearing Pad | | | 2000-198Q |

# Section 1113: Plain and Laminated Neoprene Bearing Pads

## 1113 Plain and Laminated Neoprene Bearing Pads

Last Revised: 7/18/2017

| | Product | Name | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|
| **WSTAR 15** | **West American Rubber Company, Inc., 750 North Main Street, Orange, CA 92668 http://warco.com/** | | | |
| | Plain 50D Neoprene Bearing Pad | | | 1999-051Q |
| | Plain 60D Neoprene Bearing Pad | | | 1999-051Q |

## 1113.03(h) Bedding Material for Bridge Shoes

Last Revised: 7/9/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FABRK 15** | **Fabreeka International, Inc., 1023 Turnpike Street, P. O. Box 210, Stroughton, MA 02072 http://www.fabreeka.com/** | | |
| | Bedding Material for Bridge Shoes | FABCO SA47, Type I | 1981-022 |
| | Bedding Material for Bridge Shoes | Fabreeka, Type II | ----- |
| **HBD-1 15** | **HBD/Thermoid, Inc., 240 Industrial Lane, P.O. Box 4310, Oneida, TN 37841 http://www.hbdthermoid.com/** | | |
| | Bedding Material for Bridge Shoes | No. 24-34-5111-72 Type II | 2008-096 |
| **VOSSE 15** | **Voss Engineering, Inc., 6965 North Hamlin Ave., Lincolnwood, IL 60712 http://www.vossengineering.com/** | | |
| | Bedding Material for Bridge Shoes | SORBTEX, Type II | 2000-200Q |

# Section 1124: Temporary Traffic Control Signals

## 1124.03 Temporary Traffic Control Signals on Pedestal-Mounted Portable Traffic Control Signal Syst

Last Revised: 2/14/2018

See Section 901.2 Temporary Traffic Control Signals for product listings.

| Product | Name | COA | Ref. No. |
|---|---|---|---|

## Section MISC: Miscellaneous

### MISC Anchoring Devices for Use in Vertical Positions Only

**Last Revised: 8/27/2020**

Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear, or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load. See Section 516.2(k) for horizontal anchoring applications. Steel Products Procurement Act applies for mechanical anchors and threaded rods. ICC-ES Evaluation Reports

& IAPMO- Uniform Evaluation Service (UES)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADHTC 15** | **Adhesives Technology Corporation, 450 East Copans, Pompano Beach, FL 33064 http://www.atcepoxy.com/** | | |
| | Anchoring Adhesive | ULTRABOND HS-200 | 2002-048Q |
| **ADVAC 15** | **Advance Coatings, 42 Depot Road, Westminster, MA 01473 http://advancecoatings.com/** | | |
| | Anchoring Adhesive | Keligrout 101-P | 2004-123QA |
| | Anchoring Adhesive | Keligrout Polyester Adhesive | 2004-132Q |
| **DAYT0 15** | **Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342-5765 http://www.daytonsuperior.com/** | | |
| | Mechanical Anchor | Type A and B Anchors, per BC-734 | 1997-169 |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Anchoring Adhesive | Dural 452 Gel | 2003-098Q |
| | Anchoring Adhesive | Dural Fast Set Epoxy LV | 1999-183Q |
| **FOGLA 15** | **Foglia, A & P, Inc., 14 Hickory Drive, East Brunswick, NJ 08816** | | |
| | Anchoring Adhesive | Magnabond | 1991-349 |
| **HILT- 15** | **Hilti, Inc., 5400 South 122nd East Ave., P.O. Box 21148, Tulsa, OK 74121 https://www.hilti.com/** | | |
| | Anchoring Adhesive | HIT-RE 500 Anchoring Epoxy | 2001-101Q |
| | *ICC-ES Evaluation Report: ICC-ES Evaluation Report: ESR-3814 (Subject to renewal 1/2021)* | | |
| | Anchoring Device (Adhesive & Threaded Rod) | HVU Capsule Adhesive Anchoring System | 2000-123Q |
| | *Approved two-component system consists of a self-contained adhesive capsule (HVU Adhesive Capsule) and a threaded rod with nut and washer (HAS Anchor Rod Assembly). Only approved for threaded rods manufactured in the United States.* | | |

## Section MISC: Miscellaneous

### MISC Anchoring Devices for Use in Vertical Positions Only

**Last Revised: 8/27/2020**

Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear, or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load. See Section 516.2(k) for horizontal anchoring applications. Steel Products Procurement Act applies for mechanical anchors and threaded rods. ICC-ES Evaluation Reports

& IAPMO- Uniform Evaluation Service (UES)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HILT1 15 Plant** | **Hilti, Inc., 7250 Dallas Parkway, Suite 1000, Plano, TX 75024 https://www.hilti.com/ Kaufering, Germany** | | |
| | Anchoring Adhesive | HIT-HY 10 PLUS Adhesive Anchor System | 2014-106QB |
| | Anchoring Adhesive | HIT-HY 150 Injection Adhesive | 1996-054 |
| **ITW-R 15** | **ITW Commercial Construction North America, 155 Harlem Avenue, Glenview, IL 60025 http://www.itwredhead.com/** | | |
| | Anchoring Adhesive | EPCON C6+ High Strength Epoxy | 1988-131 |
| | Anchoring Adhesive<br>*ICC-ES Evaluation Report: ESR-1137* | EPCON G5 High Strength Epoxy | 1993-276 |
| | Mechanical Anchor | Trubolt Wedge Anchor, Galvanized | 1992-363A |
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | |
| | Anchoring Adhesive | Sure-Poxy 116 | 1992-169 |
| | Anchoring Adhesive | Sure-Poxy 117 | 1990-371 |
| **MEDW0 15** | **W. R. Meadows, Inc., 300 Industrial Drive, P.O. Box 338, Hampshire, IL 60140-0338 http://www.wrmeadows.com/** | | |
| | Anchoring Adhesive | Rezi-Weld Gel Paste (Construction Epoxy) | 1993-280 |
| **MKTFS 15** | **MKT Fastening, LLC, 1 Gunnebo Drive, Lonoke, AR 72086 http://www.mktfastening.com/** | | |
| | Anchoring Adhesive | Liquid Roc 300 Twin Tube | 1996-092E |
| | Anchoring Adhesive | Liquid Roc 500 Low Odor Twin Tube | 1996-092F |
| | Mechanical Anchor | Sup-R-Stud Wedge Anchor | 1996-092B |
| | Mechanical Anchor | Taper Bolt | 1996-092A |
| **PLYGM 15** | **Polygem, Inc., 1105 Carolina Drive, West Chicago, IL 60185 http://www.polygem.com/** | | |
| | Anchoring Adhesive | 1257 Epoxy Anchoring Adhesive | 1993-270 |

## Section MISC: Miscellaneous

### MISC Anchoring Devices for Use in Vertical Positions Only

Last Revised: 8/27/2020

Adhesive anchors are not to be used for permanent installations which have the anchor in tension due to external loading regardless of whether the anchor is in a horizontal or vertical position. External loading can be from moment, moment and shear, or direct tension to cause tension in the anchor. Tension due to a torqued bolt is not an external load. See Section 516.2(k) for horizontal anchoring applications. Steel Products Procurement Act applies for mechanical anchors and threaded rods. ICC-ES Evaluation Reports

& IAPMO- Uniform Evaluation Service (UES)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **POWFS 15** | **Powers Fasteners, Inc., 2 Powers Square, New Rochelle, NY 10801 http://www.powers.com/** | | |
| | Mechanical Anchor | Power-Bolt | 1991-206 |
| | Mechanical Anchor | Power-Stud | 1991-205 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Anchoring Adhesive | Sikadur DOT SP 3/4 DBA (Epoxy as Injection Gel) | 1989-236 |
| | Anchoring Adhesive | Sikadur Injection Gel | 1989-236 |
| **SIKA5 15 Plant** | **Sika Corporation / 2K Polymer Systems Limited, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 2K Polymer Systems Limited 1682 Marion Williamsport Road Venture Crescent, DE55 7RA U.K.** | | |
| | Anchoring Adhesive | Sikadur Anchor Fix 500 | 2014-125QB |
| **SIMST 15** | **Simpson Strong-Tie, Inc., 136 Official Road, Addison, IL 60101 http://www.strongtie.com/** | | |
| | Anchoring Adhesive *(Formerly known as Acrylic-Tie)* | AT Acrylic Adhesive | 1999-223Q |
| | Anchoring Adhesive | ET-HP Epoxy Adhesive | 1985-008 |
| | *ICC-ES Evaluation Reports: ESR-3372 & ESR-3372-SP. (Formerly known as ET Epoxy-Tie) **ET-HP Epoxy Adhesive IAPMO-UES Evaluation Report Number: 0241 - Masonry (Valid through 07/31/2021)*** | | |
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | |
| | Anchoring Adhesive | Pro-Poxy 300 | 1996-016 |
| | Anchoring Adhesive | Pro-Poxy 300 Fast | 1994-093B |
| | Anchoring Adhesive | Pro-Poxy 400 | 2001-228Q |

### MISC Asphalt Paving Course, FB Modified

Last Revised: 9/14/2017

## Section MISC: Miscellaneous

### MISC Asphalt Paving Course, FB Modified

Last Revised: 9/14/2017

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| GORBR 15 | **Gorman Brother's, Church Street, Port Of Albany, Albany, NY 12202 http://www.gormanroads.com/** | | | |
| | FB Modified | | | 2003-196Q |
| | FB-3 Modified Wearing Course | | | 2003-196Q |
| HEILM 15 | **Heilman Pavement Specialties, 290 North Pike Road, Sarver, PA 16055-9735 http://www.hei-way.com/** | | | |
| | FB Modified | HEI-WAY (HGP) | 1/7/1992 | ----- |
| | FB-3 Modified Wearing Course | HEI-WAY | | 1998-134 |
| RUSS6 15 Terminal | **Russell Standard Corporation, P.O. Box 802, Mars, PA 16046 http://www.russellstandard.com/ Mars, PA** | | | |
| | FB Modified | | | 1994-054 |
| | FB-3 Modified Wearing Course | | | 1996-104 |
| SUIT0 15 | **Suit-Kote Corporation, 1911 Lorings Crossing Rd, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | | |
| | FB Modified | | | 2003-088Q |
| | FB-3 Modified Wearing Course | | | 2003-089Q |
| | *Provisional Approval - Contact PennDOT Materials Testing Laboratory at 717-787-2707 before using on a Department project.* | | | |

### MISC Coal Tar Epoxy (RCC Pipe Coating)

Last Revised: 4/7/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| CARBL 15 | **Carboline Company, 2150 Schuetz Road, St. Louis, MO 63146 http://www.carboline.com/** | | |
| | Coal Tar Epoxy | Bitumastic No. 300-M | ----- |
| ROYST 15 Facility | **Chase Corporation, 295 University Avenue, Westwood, MA 02090 http://www.chasecorp.com/ 128 First Street Pittsburgh, PA 15238** | | |
| | Coal Tar Epoxy | Roskote-201 | 1970-005 |

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

## Section MISC: Miscellaneous

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

Admixtures for inhibiting the corrosion of steel reinforcement in concrete.

ASTM C1582 - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-1 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-1 15*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **BAS-1215** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Reynolds, GA** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-9 15.*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 222 (Rheocrete 222+) | 1 gallon per cubic yard | | 1995-105 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **BAS-2 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-2 15*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |

## Section MISC: Miscellaneous

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

Admixtures for inhibiting the corrosion of steel reinforcement in concrete.

ASTM C1582 - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **BAS-3 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-3 15*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **BAS-8 15** | **BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.basf.com/us/en.html** | | | | |
| **Plant** | **St. Leonard, Quebec** | | | | |
| | ***Effective October 1, 2020, new supplier code is MBS-8 15*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 222 (Rheocrete 222+) | 1 gallon per cubic yard | | 1995-105 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | | |
| | Corrosion Inhibitor [CI] | Eucon CIA | 2 to 6 gal/yd3 | CADD-2013-01-025 | 2015-122QC |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |

## Section MISC: Miscellaneous

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

Admixtures for inhibiting the corrosion of steel reinforcement in concrete.

ASTM C1582 - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **GRAC0 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140-1692 https://gcpat.com/en-us** | | | | |
| **Facility** | **62 Whittemore Ave. Cambridge, MA 02140-1692** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Corrosion Inhibitor [CI] | DCI | | | 2010-102QB |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | DCI Calcium Nitrite | | | 1980-040 |
| | Corrosion Inhibitor [CI] | DCIS | | | 1997-149 |
| **GRAC6 15** | **GCP Applied Technologies Inc., 62 Whittemore Ave., Cambridge, MA 02140 https://gcpat.com/en-us** | | | | |
| **Plant** | **Augusta, GA** | | | | |
| | ***Formerly: W. R. Grace and Company*** | | | | |
| | Corrosion Inhibitor [CI] | DCI | | | 2010-102QB |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | DCI Calcium Nitrite | | | 1980-040 |
| | Corrosion Inhibitor [CI] | DCIS | | | 1997-149 |
| **MBS-1 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Allentown, PA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-115)*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |

## Section MISC: Miscellaneous

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

Admixtures for inhibiting the corrosion of steel reinforcement in concrete.

ASTM C1582 - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-2 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Gurnee, IL** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-2 15)*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **MBS-3 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Tipp City, OH** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-3 15)*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **MBS-8 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **St. Leonard, Quebec** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-8 15)*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 222 (Rheocrete 222+) | 1 gallon per cubic yard | | 1995-105 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |

## Section MISC: Miscellaneous

### MISC Corrosion Inhibitor

Last Revised: 10/19/2020

Admixtures for inhibiting the corrosion of steel reinforcement in concrete.

ASTM C1582 - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete

ASTM G109 - Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

| | Product | Name | Recommended Dosage | NTPEP Test Number | Ref. No. |
|---|---|---|---|---|---|
| **MBS-9 15** | **Master Builders Solutions US LLC, 23700 Chagrin Blvd., Cleveland, OH 44122 https://www.master-builders-solutions.com/en-us** | | | | |
| **Plant** | **Reynolds, GA** | | | | |
| | ***Formerly BASF Construction Chemicals (BAS-1215)*** | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 222 (Rheocrete 222+) | 1 gallon per cubic yard | | 1995-105 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| | Corrosion Inhibitor [CI] | MasterLife CI 30 (Rheocrete CNI) | 1 to 6 gallons per cubic yard | CADD-2016-01-115 | 1998-113 |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **MINRD 15** | **Mineral Research & Development, 5910 Pharr Mill Road, Harrisburg, NC 28075-8625 http://www.mrdc.com/** | | | | |
| | Corrosion Inhibitor [CI] | Sika CNI | | CADD-2015-01-111 | 2010-267Q |
| | *Provisional Approval: Contact PennDOT Materials Testing Laboratory at 717-787-2489 before using.* | | | | |
| **SIKA1 15** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/** | | | | |
| **Plant** | **1682 Marion Williamsport Road E Marion, OH 43302** | | | | |
| | Corrosion Inhibitor [CI] | FerroGard-901 (formerly Armatec 2000) | | | 1996-264 |

### MISC Crumb Rubber Modifier (CRM) Additive

Last Revised: 4/5/2016

Use in accordance with project specification (CRM requirements for gradation, contaminants, moisture, and specific gravity).

| | Product | Name | Ref. No. |
|---|---|---|---|
| **LIB-1 15** | **Liberty Tire Recycling, LLC, 490 Ohio Street, Lockport, NY 14094 http://libertytire.com/Home.aspx** | | |

## Section MISC: Miscellaneous

### MISC Crumb Rubber Modifier (CRM) Additive

Last Revised: 4/5/2016

Use in accordance with project specification (CRM requirements for gradation, contaminants, moisture, and specific gravity).

| | Product | Name | Ref. No. |
|---|---|---|---|
| LIB-1 15 | **Liberty Tire Recycling, LLC, 490 Ohio Street, Lockport, NY 14094 http://libertytire.com/Home.aspx** | | |
| | Crumb Rubber Modifier (CRM) Additive | | 2013-098A |
| LIB-2 15 | **Liberty Tire Recycling, LLC, 100 Talbot Avenue, Braddock, PA 15104 http://libertytire.com/Home.aspx** | | |
| | Crumb Rubber Modifier (CRM) Additive | | 2013-097A |
| LTINC 15 | **Lehigh Technologies, Inc., 120 Royal Woods Court SW, Tucker, GA 30084 http://www.lehightechnologies.com** | | |
| | Crumb Rubber Modifier (CRM) Additive | MicroDyne 400-TR (40 Mesh GTR) | 2015-179M |
| MAHAN 15 | **Mahantango Enterprises, Inc., Rr #2, P. O. Box 680, Liverpool, PA 17045 http://www.mahantango.com/** | | |
| | Crumb Rubber Modifier (CRM) Additive | | 1994-031 |
| NRIND 15 Plant | **Edge Rubber, 1711 Opportunity Avenue, Chambersburg, PA 17201 http://www.edgerubber.com**<br>**811 Progress Road Chambersburg, PA 17201**<br>***Formerly NRI Industries*** | | |
| | Crumb Rubber Modifier (CRM) Additive | | ----- |
| SPART 15 | **Sparton Enterprises, Inc., 3717 Clark Mill Rd., Barberton, OH 44203 http://spartonenterprises.com/** | | |
| | Crumb Rubber Modifier (CRM) Additive | | 1991-072 |

### MISC Crumb Rubber Modifier (CRM), Treated

Last Revised: 2/8/2017

No approved products for treated Crumb Rubber Modifier (CRM)

| Product | Name | Ref. No. |
|---|---|---|

### MISC Dust Palliatives

Last Revised: 6/23/2016

Moved to Section 901.3(b)

## Section MISC: Miscellaneous

### MISC Dust Palliatives

Last Revised: 6/23/2016

Moved to Section 901.3(b)

| | Product | Name | Ref. No. |
|---|---|---|---|

### MISC Embedded Galvanic Anodes

Last Revised: 2/15/2019

Cathodic Protection (CP) systems are intended to prevent or retard corrosion in concrete structures. There are several key factors that need to be considered and evaluated before CP is deemed a technically acceptable and cost effective solution on an individual project.

Establishing the required electrical continuity in new construction comes only with significant effort and, in rehabilitation work, it is exceedingly difficult. Therefore, the design and use of CP systems for any structure, or part thereof, needs to be approved by the C.O. Bridge Quality Assurance Division (BQAD).
Project designers should consider the CP System Guidelines (link below) prior to submitting their project designs to BQAD for review and approval.

Use & Approval Guidelines: **Cathodic Protection (CP) Systems**

All listings in this section are conditionally approved.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Sentinel GL | 2010-013Q |
| **JAR-1 15 Plant** | **ARTAZN LLC (formerly Jarden Zinc Products), 2500 Old Stage Road, Greeneville, TN 37744 https://jardenzinc.com/**<br>**2500 Old Stage Road Greeneville, TN 37744** | | |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | MasterProtect 8065 CP Anodes | 2014-117 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | MasterProtect 8105 CP Anodes | 2014-118 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | MasterProtect 8150 CP Anodes | 2014-119 |

## Section MISC: Miscellaneous

### MISC Embedded Galvanic Anodes

**Last Revised: 2/15/2019**

Cathodic Protection (CP) systems are intended to prevent or retard corrosion in concrete structures. There are several key factors that need to be considered and evaluated before CP is deemed a technically acceptable and cost effective solution on an individual project.

Establishing the required electrical continuity in new construction comes only with significant effort and, in rehabilitation work, it is exceedingly difficult. Therefore, the design and use of CP systems for any structure, or part thereof, needs to be approved by the C.O. Bridge Quality Assurance Division (BQAD).
Project designers should consider the CP System Guidelines (link below) prior to submitting their project designs to BQAD for review and approval.

Use & Approval Guidelines: **Cathodic Protection (CP) Systems**

All listings in this section are conditionally approved.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Sika FerroGard 650 | 2018-185 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Sika FerroGard 670 | 2018-186 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Sika FerroGard 675 | 2018-187 |
| **VECTR 15** | **Vector Corrosion Technologies, 13312 North 56th Street, #102, Tampa, FL 33617 http://www.vector-corrosion.com/** | | |
| | Embedded Galvanic Anodes - Distributed<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Galvanode DAS | 2008-166 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Galvashield XP | 2001-145 |
| | Embedded Galvanic Anodes - Point<br>*Use & Approval Guidelines: **Cathodic Protection (CP) Systems*** | Galvashield XP4 | 2011-075 |

### MISC Epoxy Based Surface Treatment for Bridge Decks

**Last Revised: 9/26/2019**

## Section MISC: Miscellaneous

### MISC Epoxy Based Surface Treatment for Bridge Decks

Last Revised: 9/26/2019

ECMS Provisional Specification: c10431 ITEM 9043-2101 (ITEM 9043-0101) Epoxy-based Surface Treatment for Bridge Decks

This Provisional Specification may be withdrawn immediately.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CARG1 15** | **Cargill, Inc., 15407 Mcginty Road West, Wayzata, MN 55391 http://www.cargill.com/** | | |
| | Epoxy Based Surface Treatment System for Bridge Decks<br>*Cargill aggregate must be used (SRL M).*<br>*System can be used only on roads with Average Daily Traffic (ADT) of 3,000 vehicles or less.*<br>*Conditionally Approved as an alternate per manufacturer's specifications.* | Safelane Surface Overlay System | 2007-034 |
| **CCMAT 15 Facility** | **Cornerstone Construction Material, LLC, 1618 East Elm Street, Harrisonville, MO 64701 http://ccmaterial.com**<br>**101 East Walnut Street Archie, MO 64725** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | CE330 Epoxy Binder | 2014-086A |
| **EBOND 15** | **E-Bond Epoxies, Inc, 501 N.E. 33rd Street, Ft. Lauderdale, FL 33334 http://ebondepoxies.com/** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | E-Bond 526 | 2013-011 |
| **ECHEM 15** | **E-Chem, LLC, 4102 El Rey Road SE, Albuquerque, NM 87105 http://www.e-chem.net** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | EPX50-Overlay | 2014-127MA |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | EPX50-Overlay Fast | 2018-199 |
| **EUCL2 15 Plant** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/**<br>**3835 State Route 72 Kirkland, IL 60146** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Flexolith UR | 2013-005 |

## Section MISC: Miscellaneous

### MISC Epoxy Based Surface Treatment for Bridge Decks

Last Revised: 9/26/2019

ECMS Provisional Specification: c10431 ITEM 9043-2101 (ITEM 9043-0101) Epoxy-based Surface Treatment for Bridge Decks

This Provisional Specification may be withdrawn immediately.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Flexolith | 1994-231 |
| **KWIK1 15** | **Kwik Bond Polymers, 923 Teal Drive, Benicia, CA 94510 http://www.kwikbondpolymers.com** | | |
| | Polyester Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | PPC-HFST | 2013-197B |
| **MAPEIB15 Plant** | **MAPEI Corporation, 1144 East Newport Center Drive, Deerfield Beach, FL 33442 http://www.mapei.com/US-EN/**<br>**Garland, TX** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Planiseal Traffic Coat | 2017-276 |
| **P3INF 15** | **P3 Infrastructure, Inc., 2146 Enterprise Parkway, Suite C, Twinsburg, OH 44087 http://www.p3-i.com/** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Impervious ME | 2015-090M |
| **POLYC 15 Plant** | **Olin Epoxy-POLY-CARB, 8440 Tower Dr., Twinsburg, OH 44087 http://www.poly-carb.com/**<br>**125 Industrial Park Rd. Roberta, GA 31078**<br>***Formerly POLY-CARB, Inc.*** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Flexogrid (Mark-163) | 2000-168Q |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Mark-154 PA | 2008-140Q |

## Section MISC: Miscellaneous

### MISC Epoxy Based Surface Treatment for Bridge Decks

**Last Revised: 9/26/2019**

ECMS Provisional Specification: c10431 ITEM 9043-2101 (ITEM 9043-0101) Epoxy-based Surface Treatment for Bridge Decks

This Provisional Specification may be withdrawn immediately.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | |
| | Epoxy Resin Binder<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Sikadur 22, Lo-Mod FS | 2015-007MB |
| **TRASA 15** | **Transpo Industries, Inc., 20 Jones Street, New Rochelle, NY 10801 http://www.transpo.com/** | | |
| | Epoxy Based Surface Treatment System for Bridge Decks<br>*Conditionally Approved as an alternate per manufacturer's specifications.* | T-48 Polysulfide Epoxy Overlay System | 2006-046Q |
| **UNITX 15** | **Dayton Superior Corporation - UNITEX, 3101 Gardner Ave., Kansas City, MO 64120 http://www.daytonsuperior.com/brands/chemicals/unitex** | | |
| | Epoxy Based Surface Treatment System for Bridge Decks<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Pro-Poxy Type III DOT | 2007-002Q |
| | Epoxy Based Surface Treatment System for Bridge Decks<br>*Provisionally approved per ECMS Provisional Specification c10431.* | Pro-Poxy Type III DOT LT | 2017-157 |

### MISC Expanded Foam Backfill For Post Mounted Signs Types B, C and E

**Last Revised: 6/25/2019**

Provisional Specification: ECMS Special Provision P-c09311-A, Type B (Only for use on projects let on or before July 1, 2019)

Provisional Specification: ECMS Special Provision P-c09321-A, Type C (Only for use on projects let on or before July 1, 2019)

Provisional Specification: ECMS Special Provision P-c09341-A, Type E (Only for use on projects let on or before July 1, 2019)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FOREI 15** | **Forward Enterprises, Inc., 9430 Telephone Road, Houston, TX 77075** | | |
| | Expanded Foam Backfill For Post Mounted Signs Types B, C and E<br>*Provisionally approved for use on projects let on or before July 1, 2019.* | Poly-Set HD-2 | 2000-089 |
| | Expanded Foam Backfill For Post Mounted Signs Types B, C and E | Poly-Set HD-5 | 2000-089 |

## Section MISC: Miscellaneous

### MISC Expanded Foam Backfill For Post Mounted Signs Types B, C and E

**Last Revised: 6/25/2019**

Provisional Specification: ECMS Special Provision P-c09311-A, Type B (Only for use on projects let on or before July 1, 2019)

Provisional Specification: ECMS Special Provision P-c09321-A, Type C (Only for use on projects let on or before July 1, 2019)

Provisional Specification: ECMS Special Provision P-c09341-A, Type E (Only for use on projects let on or before July 1, 2019)

| | Product | Name | Ref. No. |
|---|---|---|---|
| **FOREI 15** | **Forward Enterprises, Inc., 9430 Telephone Road, Houston, TX 77075** | | |
| | *Provisionally approved for use on projects let on or before July 1, 2019.* | | |

### MISC Flexible Weatherproofing Coating for Concrete

**Last Revised: 4/8/2015**

| | Product | Name | Ref. No. |
|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | |
| | Flexible Weatherproofing Coating for Concrete | Dural 355 | 1988-351 |
| **PDI-N 15** | **PDI, Inc., P. O. Box 130, Circle Pines, MN 55014 http://www.pdi-inc.com/** | | |
| | Flexible Weatherproofing Coating for Concrete | Plastic Dip UV 1800 | 1985-179 |
| **WATSB 15** | **Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228 https://wbacorp.com/** | | |
| | Flexible Weatherproofing Coating for Concrete | EP Elastic Waterproofing | 1987-125 |

### MISC Geosynthetic Clay Liner (GCL)

**Last Revised: 12/6/2019**

ECMS Special Provision C02121 ITEM 9212-2101 (ITEM 9212-0101) - Geosynthetic Clay Liner

This Provisional Specification or any manufacturer or product may be withdrawn immediately, if experience demonstrates a problem with the use of Geosynthetic Clay Liner.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BNTFX 15** | **TAG Environmental, Inc., Division of Terrafix, 23 Truman Road, Barrie, Ontario L4M 6E7 http://terrafixgeo.com/products/geosynthetic-clay-liner-gcl/** ***Formerly Bentofix Technologies, Inc.*** | | |
| | Geosynthetic Clay Liner (GCL) | Bentofix NSL | 1999-109Q |
| | *Provisionally Approved. This approval is only for Bentofix NSL geosynthetic clay liners manufactured at the Barrie, Ontario facility.* | | |

## Section MISC: Miscellaneous

### MISC Geosynthetic Clay Liner (GCL)

**Last Revised: 12/6/2019**

ECMS Special Provision C02121 ITEM 9212-2101 (ITEM 9212-0101) - Geosynthetic Clay Liner

This Provisional Specification or any manufacturer or product may be withdrawn immediately, if experience demonstrates a problem with the use of Geosynthetic Clay Liner.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CETCO 15** | **CETCO, Mineral Technologies Inc., 2870 Forbs Avenue, Hoffman Estates, IL 60192 http://www.cetco.com/en-us/** ***(Formerly Colloid Environmental Technologies Company)*** | | |
| | Geosynthetic Clay Liner (GCL) *Provisionally Approved* | Bentomat CL | 2011-206Q |
| | Geosynthetic Clay Liner (GCL) *Provisionally Approved* | Bentomat ST | 1999-075Q |

### MISC Geotextile and Fiberglass Reinforced Paving Fabrics and Grids (Asphalt)

**Last Revised: 3/2/2020**

See Section 466.2(a) Geotextile Paving Fabric

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|

### MISC High-Tension Cable Median Barrier Systems

**Last Revised: 7/20/2020**

Publication 13M, Design Manual Part 2 (DM2), Chapter 12.6.D - High-Tension Cable Median Barrier & Table 12.10 (Design/Location Guidelines for High-Tension Cable Barrier Systems Installed in Medians)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **BRIF0 15** | **Brifen USA, Inc., 12501 North Santa Fe Avenue, Oklahoma City, OK 73114 http://www.brifenusa.com/** | | | | | | | |
| | High-Tension Barrier System | Brifen TL-4 Wire Rope Safety Fence (WRSF) (4 Cable) | NCHRP 350 | | TL-4 | B-82B | SGR07d | 2013-165M |

## Section MISC: Miscellaneous

### MISC High-Tension Cable Median Barrier Systems

**Last Revised: 7/20/2020**

Publication 13M, Design Manual Part 2 (DM2), Chapter 12.6.D - High-Tension Cable Median Barrier & Table 12.10 (Design/Location Guidelines for High-Tension Cable Barrier Systems Installed in Medians)

Important Notice: AASHTO/FHWA Joint Implementation Agreement for MASH 2016

| | Product | Name | Tested Criteria | Tested Height (in) | Tested Level | FHWA Acc. Letter | Designator | Ref. No. |
|---|---|---|---|---|---|---|---|---|
| **GIBRA 15 Facility** | **Gibraltar Global LLC, 4303 Innovation Loop, Marble Falls, TX 78654 https://gibraltarglobal.com/ 1208 Houston Clinton Dr. Burnet, TX 78611** | | | | | | | |
| | High-Tension Barrier System | Gibraltar TL-4 Cable Barrier System (4 Cable) | NCHRP 350 | Multiple | TL-4 | B-137A, B-137A1, B-137B, B-137D | SGM07b | 2015-129M |
| **NUCR6 15** | **Nucor Steel Marion, Inc., 912 Cheney Ave., Marion, OH 43302 http://www.nucor.com/** | | | | | | | |
| | High-Tension Barrier System | NU-CABLE TL-4 High Tension Barrier System (4 Cable) | NCHRP 350 | Multiple | TL-4 | B-167 | SGM07f | 2010-166MB |
| **TRIN2 15** | **Trinity Highway Products, LLC, 550 East Robb Ave., Lima, OH 45801 http://www.highwayguardrail.com/** | | | | | | | |
| | High-Tension Barrier System | CASS S3 TL4 Cable Barrier System (4 Cable) | MASH 2009 | | TL-4 | B-232B, B-232C, B-141F | SGM36b | 2013-168M |
| | *FHWA Eligibility Letters for CASS S3:*<br>*B-232C: MASH TL-4 on Level Terrain*<br>*B-232B: MASH TL-3 on 4H:1V slopes: The as tested condition - 30 foot-wide median on backslope 11 feet from bottom of median and 26 feet from slope break point.*<br>*B-141F: NCHRP-350 TL-3 on 1:4 slopes or flatter; TL-4 on 1:6 slopes or flatter* | | | | | | | |
| **TRIN3 15** | **Trinity Highway Products, LLC, 2548 NE 28th Street, Ft. Worth, TX 76111 http://www.highwayguardrail.com/** | | | | | | | |
| | High-Tension Barrier System | CASS S3 TL4 Cable Barrier System (4 Cable) | MASH 2009 | | TL-4 | B-232B, B-232C, B-141F | SGM36b | 2013-168M |
| | *FHWA Eligibility Letters for CASS S3:*<br>*B-232C: MASH TL-4 on Level Terrain*<br>*B-232B: MASH TL-3 on 4H:1V slopes: The as tested condition - 30 foot-wide median on backslope 11 feet from bottom of median and 26 feet from slope break point.*<br>*B-141F: NCHRP-350 TL-3 on 1:4 slopes or flatter; TL-4 on 1:6 slopes or flatter* | | | | | | | |

## Section MISC: Miscellaneous

### MISC Hot Pour Mastics

Last Revised: 2/28/2020

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CRAF0 15 Plant** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/ 121 Industrial Park Road Halls, TN 38040** | | |
| | Hot Pour Mastic | Mastic One Part No. 33339 | 2014-270 |
| | *Conditionally approved to be used per manufacturer's specifications: **Mastic One 33339 Product Data Sheet (manufacturer's specfications)*** | | |
| **FTECH 15 Plant** | **Fibrecrete Preservation Technologies, Inc., 401 Old 52 South, Mount Airy, NC 27030 https://www.fibrecretept.com/ 401 Old 52 South Mount Airy, NC 27030** | | |
| | Hot Pour Mastic | SAMIscreed | 2019-186 |
| | *Conditionally approved to be used per manufacturer's specifications: **SAMIscreed Technical Data Sheet (manufacturer's specifications)*** | | |
| **MAXPR 15** | **Maxwell Products, Inc., 650 South Delong Street, Salt Lake City, UT 84104 http://maxwellproducts.com** | | |
| | Hot Pour Mastic | Gap Mastic B | 2018-239 |
| | *Conditionally approved to be used per manufacturer's specifications: **GAP Mastic B Product Data Sheet (manufacturer's specifications)*** | | |
| **RTPT2 15 Facility** | **RIGHT/POINTE, LLC, 234 Harvestore Drive, Dekalb, IL 60115 http://www.rightpointe.com/ Sharpsville, PA** | | |
| | Hot Pour Mastic | Pave Patch Black | 2018-157 |
| | *Conditionally approved to be used per manufacturer's specifications: **Pave Patch Black Product Data Sheet (manufacturer's specifications)*** | | |

### MISC Metal Cribbing

Last Revised: 1/27/2016

Steel Products Procurement Act applies.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CON00 15** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/** | | |
| | Metal Cribbing | | ----- |
| **CON06 15 Plant** | **Contech Engineered Solutions LLC, a QUIKRETE Company, 9025 Centre Pointe Drive, West Chester, OH 45069 http://www.conteches.com/ 700 Tech Drive Winchester, KY 40391** | | |
| | Metal Cribbing | | ----- |

## Section MISC: Miscellaneous

### MISC Modular Glare Screen

Last Revised: 4/8/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| CARST 15 | **Carsonite International Corporation, Carsonite Composites, 19845 US Highway 76, Newberry, SC 29108 http://www.carsonite.com/** | | |
| | Modular Glare Screen | | 1984-159 |
| SAFHC 15 | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | |
| | Modular Glare Screen | Anti-Glare Shield System | 1991-053 |

### MISC PA Structure Mounted Guide Rail Bridge Barrier (BD-609M)

Last Revised: 7/23/2019

| | Product | Name | Ref. No. |
|---|---|---|---|
| ACKBAY15 | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2018-282Q |
| APEX- 15 | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2014-195QN |
| BROWD 15 | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2008-114Q |
| CIANB 15 | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** ***Formerly Foster Precise Structural Products (FOSPR).*** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2010-246Q |
| ELDER 15 | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2009-025Q |
| PELET 15 | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2010-015Q |
| PMWI1 15 | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | |
| | PA Structure Mounted Guide Rail Bridge Barrier | | 2018-218Q |

## Section MISC: Miscellaneous

### MISC PA Structure Mounted Guide Rail Bridge Barrier (BD-609M)

Last Revised: 7/23/2019

| Product | Name | Ref. No. |
|---|---|---|
| PREC1 15 | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2016-204Q |
| PSFAB 15 | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2016-281 |
| QUABF 15 | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2012-247Q |
| RG-ST 15 | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2007-189Q |
| SAFGD 15 | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/** | |
| Plant | **220 Lincoln Avenue Pittsburgh, PA 15209** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2013-133QC |
| STRUS 15 | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | |
| | PA Structure Mounted Guide Rail Bridge Barrier | 2015-142QF |

### MISC Photovoltaic Modules

Last Revised: 4/13/2015

Must satisfy requirements of Section 910.3(u)3 and 910.3(v).

Approval for use granted only on a project-by-project basis by Special Provision in the contract.

Use in rural areas where cost-effectiveness can be demonstrated.

| Product | Name | Letter Date | Ref. No. |
|---|---|---|---|
| KYOCE 15 | **Kyocera International, Inc., 8611 Balboa Ave., San Diego, CA 92123 http://americas.kyocera.com/** | | |
| | Photovoltaic Modules | 1/4/1991 | ----- |

## Section MISC: Miscellaneous

### MISC Pipe Penetrating Sealers to Reduce Chlorine Penetration of Concrete

The products previously listed in this Section have been moved to Section 1019.2(c) Penetrating Sealers (For Reinforced Concrete Substructure Surfaces) and/or Section 1019.2(d) Penetrating Sealers (For Bridge Superstructure).

AASHTO T259, AASHTO T260, FHWA RD 78-35, Section 4.B.77

### MISC Polymer Modified and Special Cements, Mortars, and Concrete

**Last Revised: 8/19/2019**

| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **AQUAF 15** | **Aquafin, Inc., 505 Blue Ball Road, #160, Elkton, MD 21921 http://www.aquafin.net/** | | | |
| | ***Formerly Ceratech, Inc. (CETEC 15)*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Pavemend SL | | 2010-276 |
| | *Conditionally approved per manufacturer's specifications and usage guidelines. **Pavemend SL Technical Datasheet*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Pavemend SLQ | | 2010-277 |
| | *Conditionally approved per manufacturer's specifications and usage guidelines. **Pavemend SLQ Technical Datasheet*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Pavemend VR | Vertical and Overhead | 2007-064Q |
| **BASBS 15** | **BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379 https://www.basf.com/us/en.html** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MasterEmaco N 400 (formerly HB2 Repair Mortar) | Vertical and Overhead | 1983-080 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MasterEmaco S 466 CI (formerly Emaco S66 CI) | Vertical and Overhead | 1994-284 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MasterEmaco S 488 CI (formerly Emaco S88 CI) | | 1992-034 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MasterEmaco T 310 CI (formerly Emaco R310 CI) | | 1994-024 |
| | *Not Rapid Hardening* | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MasterEmaco T 415 (formerly Emaco T415 Mortar Metallic) | | 1971-043 |

## Section MISC: Miscellaneous

### MISC Polymer Modified and Special Cements, Mortars, and Concrete

Last Revised: 8/19/2019

| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **CEMX6 15 Plant** | **Fairborn Cement Company (Eagle Materials, Inc.), 3811 Turtle Creek Blvd, Suite 1100, Dallas, TX 75219 http://www.eaglematerials.com**<br>**3250 Linebaugh Road Xenia, OH 45385**<br>***(Formerly CEMEX, Inc.)*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type M Masonry Cement | | 2010-233QA |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type S Masonry Cement | | 2010-233QB |
| **CHEMM 15** | **ChemMasters, Inc., 300 Edward Street, Madison, OH 44057 http://www.chemmasters.net/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | SpeedPatch | | 1996-135 |
| **CRAF0 15 Plant** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/**<br>**121 Industrial Park Road Halls, TN 38040** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete<br>*Conditionally Approved* | TechCrete | | 2013-114 |
| **CTS-1 15** | **CTS Cement Manufacturing Company, 12442 Knott Street, Garden Grove, CA 92841 http://www.ctscement.com/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Chem Comp III / Komponent (for Type K) | | 1989-085 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | CTS Type K | | 2001-161Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Rapid Set Cement | | 1986-358 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Rapid Set Concrete Mix, Section 624.2(c) | | 1993-092 |
| **DAYT1 15** | **Dayton Superior Corporation, 4226 Kansas Avenue, Kansas City, KS 66106 http://www.daytonsuperior.com/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Acrylic Bonding Agent J40, formerly Day Chem, AD Bond (J-40) | | 1995-161 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | HD-25VO, formerly HD-25 | Vertical and Overhead | 1999-207Q |

## Section MISC: Miscellaneous

### MISC Polymer Modified and Special Cements, Mortars, and Concrete

Last Revised: 8/19/2019

| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **EUCLD 15** | **Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110-2799 http://www.euclidchemical.com/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Concrete Top Supreme | | 2002-159Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Dural Top Gel | Vertical and Overhead | 1996-224 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Eucocrete | | 2002-154Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Speedcrete Red Line | Vertical and Overhead | 2001-143Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Thin Top Supreme | | 2002-158Q |
| **FLETE 15** | **Flexkrete Technologies, 1181 Terrace Manor, Prosper, TX 75078 http://flexkrete.com/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Flexkrete Technologies 102 | | 2003-077Q |
| **FTECH 15** | **Fibrecrete Preservation Technologies, Inc., 401 Old 52 South, Mount Airy, NC 27030 https://www.fibrecretept.com/** | | | |
| **Plant** | **401 Old 52 South Mount Airy, NC 27030** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Fibrecrete G | | 2014-244 |
| **HBFUL 15** | **H. B. Fuller Construction Products Inc., 1200 Willow Lake Boulevard, St. Paul, MN 55110-5101 http://www.hbfuller.com/** | | | |
| **Plant** | **59 Brunswick Avenue Edison, NJ 08817** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | ProSpec BlendCrete | Pre-cast, Prestressed and Dry-Cast Cosmetic Repairs Only | 1987-072 |
| | ~ ***ProSpec BlendCrete Features & Benefits, Datasheets, and Specs*** | | | |
| **IMCTI 15** | **IMCO Technologies, Inc., 350 Wentworth St. North,, Hamilton, Ontario Canada L8L5W3** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | MG-Krete 1260 | | 2008-122Q |

## Section MISC: Miscellaneous

### MISC Polymer Modified and Special Cements, Mortars, and Concrete

Last Revised: 8/19/2019

| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **KAUFM 15** | **Kaufman Products, Inc., 3811 Curtis Ave., Baltimore, MD 21226-1131 http://www.kaufmanproducts.net/** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Duracrete II VOFT | | 2016-179Q |
| | *Approved per manufacturer's specifications: **Duracrete II VOFT Product Datasheet*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | HiCap (Light) Patching Compound | | 1994-269 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | HiCap (Medium) Patching Compound | | 1992-295 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | HiCap FT | | 2018-164Q |
| | *Approved per manufacturer's specifications: **HiCap FT Product Datasheet*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | PipeWipe | Pre-cast, Prestressed and Dry-Cast Cosmetic Repairs Only | 2004-033Q |
| **LAFR7 15 Plant** | **Lafarge North America, Northeast Region, 5160 Main Street, Whitehall, PA 18052 https://www.lafargeholcim.us/ Whitehall Cement Plant 5160 Main Street Whitehall, PA 18052** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | T-SF Blended | Not Approved for ASR Mitigation | 1998-013 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type I-E (Enhanced) | | 2008-037Q |
| **LEH-9 15 Plant** | **Lehigh Cement Company, LLC, 3938 Easton Nazareth Highway, Nazareth, PA 18064 http://www.lehighhanson.com/ 3938 Easton Nazareth Highway Nazareth, PA 18064** ***(Formerly Essroc ESS-7 15)*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type M Cement | | 2002-108Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type N Cement | | 2002-109Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Type S Cement | | 2002-107Q |

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### MISC Polymer Modified and Special Cements, Mortars, and Concrete

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| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **LEH13 15 Plant** | **Lehigh Cement Company, LLC, Highway 31, Speed, IN 47172 http://www.lehighhanson.com/ Speed, IN** ***(Formerly Essroc ESS13 15)*** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Brixment Type M Cement | | 2012-163QA |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Brixment Type N Cement | | 2012-163QB |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Brixment Type S Cement | | 2012-163QC |
| **MAPEIA15 Plant** | **MAPEI Corporation, 1144 East Newport Center Drive, Deerfield Beach, FL 33442 http://www.mapei.com/US-EN/ Fredericksburg, VA** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete *ASTM C928, R2 Repair Mortar - **Planitop X Technical Data Sheet*** | Planitop X | | 2017-295Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete *ASTM C928, R1 Repair Mortar - **Planitop XS Technical Data Sheet*** | Planitop XS | | 2017-302Q |
| **NATPC 15** | **National Permacrete Company, 590 N. Valley Forge Rd., P. O. Box 886, Devon, PA 19333** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Permacrete | Pre-cast, Prestressed and Dry-Cast Cosmetic Repairs Only | 1998-168 |

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### MISC Polymer Modified and Special Cements, Mortars, and Concrete

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| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **QUIKR 15 Plant** | **The Quikrete Companies, One Securities Centre, 3490 Piedmont Road, N.E. Suite 1300, Atlanta, GA 30305 http://www.quikrete.com/ Latrobe, PA** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Commercial Grade QUIKRETE FastSet™ Concrete Mix | Vertical and Overhead | 2000-288Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Commercial Grade QUIKRETE FastSet™ DOT Mix | Vertical and Overhead | 2003-004Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Commercial Grade QUIKRETE FastSet™ Non-Shrink Grout | Vertical and Overhead | 2000-292Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Commercial Grade QUIKRETE FastSet™ Repair Mortar | Vertical and Overhead | 2000-291Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | FastSet™ Cement | Vertical and Overhead | 2000-287Q |
| **ROKLIN15 Facility** | **Roklin Systems Incorporated, 300 East Shell Road, Ventura, CA 93001 300 East Shell Road Ventura, CA 93001** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Roklin Concrete Welder Gray System For Concrete Repair with Pea Gravel Aggregates | | 2016-217 |

*Conditionally approved as a system per manufacturer's specifications. System includes Concrete Welder Gray two component liquid and bags of FairmountSantrol's 3/8 inch silica pea gravel & 1/8 inch silica sand (topping). Manufacturer's Specifications: **Roklin Concrete Welder System Technical Data Sheet***

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### MISC Polymer Modified and Special Cements, Mortars, and Concrete

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| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **SIKA0 15 Facility** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 201 Polito Avenue Lyndhurst, NJ 07071** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sika Cem 133 | Vertical and Overhead | 1992-006 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikadur 42 Grout Pak (for seating base plates) | | 1992-005 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 111 | | 1978-043 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 121 | | 1980-016 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 122 | | 1979-036 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 123 | Vertical and Overhead | 1982-007 |
| **SIKA1 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ 1682 Marion Williamsport Road E Marion, OH 43302** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sika Cem 133 | Vertical and Overhead | 1992-006 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikadur 42 Grout Pak (for seating base plates) | | 1992-005 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 111 | | 1978-043 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 121 | | 1980-016 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 122 | | 1979-036 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 123 | Vertical and Overhead | 1982-007 |

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### MISC Polymer Modified and Special Cements, Mortars, and Concrete

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| | Product | Name | Cement Usage | Ref. No. |
|---|---|---|---|---|
| **SIKA2 15 Plant** | **Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 http://usa.sika.com/ Lyndhurst, NJ** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sika Cem 133 | Vertical and Overhead | 1992-006 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikadur 42 Grout Pak (for seating base plates) | | 1992-005 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 111 | | 1978-043 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 121 | | 1980-016 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 122 | | 1979-036 |
| | Polymer Modified and Special Cements, Mortars, and Concrete | Sikatop Plus 123 | Vertical and Overhead | 1982-007 |
| **USCPR 15 Plant** | **US Concrete Products, 16 Green Meadow Drive, Suite 202, Timonium, MD 21093 http://www.uscproducts.com/ Baltimore, MD** | | | |
| | Polymer Modified and Special Cements, Mortars, and Concrete | High Power Cement | | 2002-141Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | High Power DOT Grade Repair Mortar | | 2002-140Q |
| | Polymer Modified and Special Cements, Mortars, and Concrete | High Power Fast Setting Concrete | | 2003-147Q |

### MISC Precast Concrete Products

Last Revised: 4/7/2020

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **ADVIT 15** | **Advanced Infrastructure Technologies, LLC, 55 Baker Boulevard, Suite 205, Brewer, ME 04412 http://www.aitbridges.com/** | | | |

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### MISC Precast Concrete Products

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **ADVIT 15** | **Advanced Infrastructure Technologies, LLC, 55 Baker Boulevard, Suite 205, Brewer, ME 04412 http://www.aitbridges.com/** | | | |
| | Alternate Concrete Arch System (Non-Precast) | Composite Arch Bridge System | 483-20-01 (Previously 483-14-05) | 2019-170Q |
| | *Item Number 9000-7022: Clear Span Length: 20 feet to 65 feet; Skew Angle: 50 degrees to 90 degrees; Structure configuration: Simple Span (Original Product Evaluation Application 2013-236Q) **Approved Bridge and Structure Products*** | | | |
| **BRAYP 15** | **Brayman Precast Solutions, LLC, 2900 South Noah Drive, Saxonburg, PA 16056 http://www.braymanprecast.com/** | | | |
| | ***Previous Supplier Codes: SRST0 15 & ADVPS 15*** | | | |
| | Earth Retainment System | Lagging Walls | | 2012-169Q |
| **CONAW 15** | **Conewago Precast Building Systems, 576 Edgegrove Road, P.O. Box 461, Hanover, PA 17331 http://www.conewago.com/capabilities/precast-concrete/** | | | |
| | Earth Retainment System | Lagging Walls | | 2018-222Q |
| **CONCR 15** | **Concrete Concepts, Inc., 1095 Thompson Avenue, P.O. Box 272, McKees Rocks, PA 15136 https://bryanmaterialsgroup.com/** | | | |
| | Earth Retainment System | Foster Geotechnical (MSE wall) | 431-01-06 (00-602-BQAD) | ----- |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | ----- |
| | Earth Retainment System | Wall Lagging | | ----- |
| **CONSS 15** | **Concrete Safety Systems, LLC, 9190 Old Route 22, Bethel, PA 19507 http://concretesafety.com/** | | | |
| | Earth Retainment System | Foster Geotechnical (MSE wall) | 431-01-06 (00-602-BQAD) | ----- |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | ----- |
| **DAILY 15** | **Dailey, W. E., Inc., RR1A Box 51, Airport Road, Shaftsbury, VT 05262 http://wedailey.com/** | | | |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | 1995-070 |
| **EAGLE 15** | **Eagle Concrete Products, 1019 East Bakersville Edie Road, Somerset, PA 15501** | | | |
| | Earth Retainment System | Lagging Walls | | 2002-135Q |

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### MISC Precast Concrete Products

Last Revised: 4/7/2020

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **FADD1 15** | **Faddis Concrete Products, 3515 Kings Highway, Downingtown, PA 19335 http://www.faddis.com/** | | | |
| | Earth Retainment System | Dura-Hold | 431-11-10 (95-144R PE) | 1999-190Q |
| | Earth Retainment System | Lagging Walls | | 2007-127Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | 2011-214Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Rectangular Panel) | 431-04-10 (04-601-BQAD) | 2011-214Q |
| | Earth Retainment System | SINE WALL (MSE wall) | 483-17-4 | 2017-049Q |
| **FADD2 15** | **Faddis Concrete Products, 205 West Washington Street, New Castle, PA 16101 http://www.faddis.com/** | | | |
| | Earth Retainment System | Lagging Walls | | 2001-121Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | 2011-070Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Rectangular Panel) | 431-04-10 (04-601-BQAD) | 2011-070Q |
| | Earth Retainment System | SINE WALL (MSE Wall) | 483-17-4 | 2018-264Q |
| | Earth Retainment System | T-Wall Units (Reinforced Earth Company, formerly Neel) | 483-17-01 rev. IV (2016-129) | 2003-045Q |

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### MISC Precast Concrete Products

Last Revised: 4/7/2020

Approval Guidelines: Design Manual, Part 4 (Publication 15M), Part A, Chapter 1, Section 1.14

Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **FADD3 15** | **Faddis Concrete Products (Precast), 210 Hinterleiter Road, Kutztown, PA 19530 http://www.faddis.com/** | | | |
| | Earth Retainment System | Foster Geotechnical (MSE wall) | 431-01-06 (00-602-BQAD) | 2003-075Q |
| | Earth Retainment System | Lagging Walls | | 2014-267Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | 2012-047Q |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Rectangular Panel) | 431-04-10 (04-601-BQAD) | 2012-047Q |
| | Earth Retainment System | SINE WALL (MSE wall) | 483-17-4 | 2015-110B |
| | Earth Retainment System | T-Wall Units (Reinforced Earth Company, formerly Neel) | 483-17-01 rev. IV (2016-129) | 2005-019Q |
| | Precast Concrete Arch System | ECO-SPAN Precast Arch-Box System | 483-18-04 (2014-115A, PreTek Group) | 2014-115B |
| **FTML1 15** | **Fort Miller Company, Inc., P.O. Box 98, Schuylerville, NY 12871-0098 http://www.fortmiller.com/** | | | |
| | Earth Retainment System | T-Wall Units (Reinforced Earth Company, formerly Neel) | 483-17-01 rev. IV (2016-129) | 2005-042Q |
| | Precast Bridge Superstructure | Inverset | 431-96-49 | 1990-117 |
| **GADSP 15** | **Garden State Precast, Inc., P. O. Box 702, Farmingdale, NJ 07727 http://gardenstateprecast.com/** | | | |
| | Earth Retainment System | Stone Strong Systems | 483-13-04 | 2009-187 |
| **GCLI- 15** | **GCL, Inc., 2559 Brandt School Road, Heritage Center, Suite 200, Wexford, PA 15090 http://cambergroup.com/gclinc.htm** | | | |
| | Earth Retainment System | Lagging Walls | | 2011-240Q |
| **HYDR1 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 2000 Gregg Station Road, Oakdale, PA 15071 http://www.rinkerpipe.com/** | | | |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | ----- |
| | *Provisional Approval: ECMS Special Provision I-c1084-A* | | | |

## Section MISC: Miscellaneous

### MISC Precast Concrete Products

Last Revised: 4/7/2020

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **HYDR3 15** | **Hydro Conduit Corporation dba Rinker Materials/Concrete Pipe Division, 4200 Universal Drive, Diamond, OH 44412 http://www.rinkerpipe.com/** | | | |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | ----- |
| | *Provisional Approval: ECMS Special Provision I-c1084-A.* | | | |
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | | | |
| | Earth Retainment System | Lagging Walls | | 2013-054Q |
| **J&RS1 15** | **Slaw Precast, J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/** | | | |
| | ***Note: Previously assigned J&RS2 15 for same facility*** | | | |
| | Alternate Precast Concrete Parapet | Barlock | | ----- |
| | Earth Retainment System | Foster Geotechnical (MSE wall) | 431-01-06 (00-602-BQAD) | ----- |
| | Earth Retainment System | Lagging Walls | | ----- |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | ----- |
| | Precast Bridge Superstructure | Inverset | 431-96-49 | 2006-202Q |
| **J&RS2 15** | **J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/** | | | |
| | Earth Retainment System | Rett Wall | 483-13-10 | 2011-203 |
| **LIND1 15** | **Lindsay Precast, 6845 Erie Avenue NW, P.O. Box 578, Canal Fulton, OH 44614 http://www.lindsayprecast.com/** | | | |
| **Plant** | **6845 Erie Avenue NW P.O. Box 578 Canal Fulton, OH 44614** | | | |
| | Precast Concrete Arch System | ECO-SPAN Precast Arch-Box System | 483-18-04 (2014-115A, PreTek Group) | 2017-305Q |
| **MACK0 15** | **Mack Industries of PA, Inc., 2207 Sodom-Hutchings Road, Vienna, OH 44473 http://www.mackconcrete.com/** | | | |
| | Earth Retainment System | Lagging Walls | | 2008-093Q |
| | Earth Retainment System | Stone Strong Systems | 483-13-04 | 2018-041Q |

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### MISC Precast Concrete Products

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| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **MIDAP 15** | **Mid Atlantic Precast Inc., 401 Railroad Street, Monongahela, PA 15063** | | | |
| | Earth Retainment System | Dura-Hold | 431-11-10 | 1995-144 |
| **MILL0 15** | **A. C. Miller Concrete Products, P.O. Box 93, 9588 Route 22, Blairsville, PA 15717 http://www.acmiller.com/** | | | |
| | Earth Retainment System | Lagging Walls | | 2018-194Q |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | 2000-072Q |
| | *Provisional Approval: ECMS Special Provision I-c1084-A.* | | | |
| **MILL2 15 Plant** | **A. C. Miller Concrete Products, Inc., 31 E. Bridge Street, Spring City, PA 19475 http://www.acmiller.com/ Royersford Plant Royersford, PA** | | | |
| | Earth Retainment System | Lagging Walls | | 2019-073Q |
| **NORPP 15** | **Northeast Prestressed Products LLC, 121 River Street, Cressona, PA 17929-1133 http://www.npp-llc.com/** | | | |
| | Earth Retainment System | Evergeen Wall | 431-03-09 (92-047PE) | ----- |
| | Earth Retainment System | Universal Wall System (U-Wall) | 483-13-11 (2011-221PE) | 2011-221 |
| **NORPR 15** | **Northeast Precast, 92 Reese Road, Millville, NJ 08332 http://www.northeastprecast.com/** | | | |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Rectangular Panel) | 431-04-10 (04-601-BQAD) | 2017-220 |
| | Earth Retainment System | SINE WALL (MSE Wall) | 483-17-04 (Drawing #2015-110 dated 9/21/17) | 2017-122Q |

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### MISC Precast Concrete Products

Last Revised: 4/7/2020

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **OLP-1 15** | **Oldcastle Infrastructure, Inc., a CRH Company, 200 Keystone Drive, Telford, PA 18969 http://www.oldcastleprecast.com/Pages/default.aspx** | | | |
| | Earth Retainment System | T-Wall Units (Reinforced Earth Company, formerly Neel) | 483-17-01 rev. IV (2016-129) | 2015-185Q |
| | Precast Concrete Arch System | Bebo Precast Concrete Arch Bridge System | 431-00-06 (1998-211) | 1998-211Q |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | 2006-072Q |
| | *Provisional Approval: ECMS Special Provision I-c1084-A* | | | |
| **REDRK 15** | **Redi Rock of Southeastern Pennsylvania, 451 East Reliance Road, Telford, PA 18969-0000 http://jdm-inc.com/** | | | |
| | Earth Retainment System | Redi-Rock Gravity Wall | 483-18-02 (2016-030) | 2016-030M |
| | Earth Retainment System | Redi-Rock Positive Connection Retaining Wall System | 483-18-02 (2015-067) | 2015-067A |
| **SIDP1 15** | **Sidley Precast Division of R.W. Sidley, Inc., 88 East Hillis Street, Youngwood, PA 15697 http://www.sidleyprecast.com/** | | | |
| | Earth Retainment System | Lagging Walls | | 2010-204Q |
| **STOCO 15** | **Stone and Company, 1718 Roseytown Road, Greensburg, PA 15601 http://stoneconcrete.com/** | | | |
| | Earth Retainment System | Redi-Rock Positive Connection Retaining Wall System | 483-18-02 (2015-067) | 2017-356 |
| **TERH0 15 Plant** | **Terre Hill Concrete Products, PLANT #2:, P.O. Box 10, Terre Hill, PA 17581 http://www.terrehill.com/ PLANT #2: P.O. Box 10 Terre Hill, PA 17581** | | | |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | 2009-013Q |
| | *Provisional Approval: ECMS Special Provision I-c1084-A* | | | |

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### MISC Precast Concrete Products

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Strike Off Letters (SOL) and Drawings of approved Earth Retainment Systems, Precast and Alternate Concrete Arch Systems, and Precast Bridge Superstructures: Approved Bridge and Structure Products

| | Product | Name | SOL Number | Ref. No. |
|---|---|---|---|---|
| **TERH1 15 Plant** | **Terre Hill Concrete Products, PLANT #4:, 42 South Butler Road, Lebanon, PA 17042 http://www.terrehill.com/ PLANT #4: 42 South Butler Road Lebanon, PA 17042** | | | |
| | Precast Concrete Arch System | Con-Span Precast Structure Standard | 483-17-4 (86-353PE Change #2) | 2001-141Q |
| | *Provisional Approval: ECMS Special Provision I-c1084-A* | | | |
| **WHICO 15** | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/** | | | |
| | Earth Retainment System | Lagging Walls | | 2007-042Q |
| **WILLA 15 Plant** | **K. J. Williams Concrete Company, Inc., P.O. Box 5137, Cresaptown, MD 21505-5137 15213 McMullen Highway S.W. Cumberland, MD 21502** | | | |
| | Earth Retainment System | Foster Geotechnical (MSE wall) | 431-01-06 (00-602-BQAD) | ----- |
| | Earth Retainment System | Reinforced Earth Company (MSE Wall - Cross Panel) | 431-94-53 (94-603-BQAD) | ----- |
| | Earth Retainment System | SINE WALL (MSE Wall) | 483-17-4 | 2018-027Q |

### MISC Sediment Filter Bag

Last Revised: 6/7/2018

For 15' x 15' pumped water filter bags, see Section 855.

ECMS Special Provision I-C08581-A

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ACF-2 15** | **ACF Envionmental, Inc., 2831 Cardwell Road, Richmond, VA 23234 http://www.acfenvironmental.com/view.aspx?page=home** | | |
| | Sediment Filter Bag | Dirt Bag | 1995-156 |
| **ENVGE 15** | **Environmental Geosynthetics, 1314 State Road, Coopersburg, PA 18036 http://www.environmentalgeosynthetics.com/** | | |
| | Sediment Filter Bag | The Protector 1515 10 oz Sediment Filter Bag | 2005-036Q |

## Section MISC: Miscellaneous

### MISC Sediment Filter Bag

Last Revised: 6/7/2018

For 15' x 15' pumped water filter bags, see Section 855.

ECMS Special Provision I-C08581-A

| | Product | Name | Ref. No. |
|---|---|---|---|
| **INDVA 15** | **Indian Valley Industries, Inc., 5 Pine Camp Dr., Binghamton, NY 13904 http://www.iviindustries.com/index.html** | | |
| | Sediment Filter Bag | IVI 1515 Sediment Filter Bag | 2001-020Q |
| **JOHNS 15** | **Johnston-Morehouse Dickey Company, 5401 Progress Boulevard, P.O. Box 173, Bethel Park, PA 15102 http://www.jmdcompany.com/** | | |
| | Sediment Filter Bag | Enviro-Protection Filter Bag | 1997-122 |
| **ROBER 15** | **Frank Roberts and Sons, Inc., 1130 Robertsville Road, Punxsutawney, PA 15767 http://www.frankrobertsandsons.com/** | | |
| | Sediment Filter Bag | FB-3 Filter Bag | 1995-019 |

### MISC Special Asphalt Patching Material

Last Revised: 10/2/2020

Note: Volatile Organic Compound (VOC) Content is not considered in the approval process for products in this section.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **COLMM 15** | **Cold Mix Manufacturing Corporation, 65 Edison Avenue, Mount Vernon, NY 10550 https://www.greenpatch.com** | | |
| | Special Asphalt Patching Material | GreenPatch High Performance Cold Mix | 2013-034M |
| **CRAF0 15** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/** | | |
| **Plant** | **121 Industrial Park Road Halls, TN 38040** | | |
| | Special Asphalt Patching Material<br>*Provisionally Approved* | Crafco HP Cold Patch | 2011-136 |
| | Special Asphalt Patching Material | Polypatch Type 1, Hot Applied | 2000-064 |
| | Special Asphalt Patching Material | Polypatch Type 2, Hot Applied | 2000-064 |
| | Special Asphalt Patching Material | Polypatch Type 3, Hot Applied | 2000-064 |
| **EZSCO 15** | **EZ Street Company, 1786 NW 82nd Avenue, Miami, FL 33126 http://www.asphaltrepair.net/** | | |
| | Special Asphalt Patching Material<br>*Provisionally approved per manufacturer's specifications. **EZ Street Cold Asphalt Patching Material - Manufacturer's Specifications*** | EZ Street Cold Asphalt Patching Material | 2007-007Q |

## Section MISC: Miscellaneous

### MISC Special Asphalt Patching Material

Last Revised: 10/2/2020

Note: Volatile Organic Compound (VOC) Content is not considered in the approval process for products in this section.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HEILM 15** | **Heilman Pavement Specialties, 290 North Pike Road, Sarver, PA 16055-9735 http://www.hei-way.com/** | | |
| | Special Asphalt Patching Material | HEI-Way General Purpose Permanent Patching Material | 1983-128 |
| | Special Asphalt Patching Material | HEI-Way Latex Modified Permanent Patching Material | 1983-127 |
| | Special Asphalt Patching Material | HEI-Way Premium Stockpile Permanent Patching Material | 1980-077 |
| **INNMU 15** | **Innovative Municipal U.S., Inc., P.O. Box 712, Niagara Falls, NY 14302** | | |
| | Special Asphalt Patching Material<br>*Provisionally Approved* | Propatch High Performance | 2008-146Q |
| **PERMA 15** | **Perma-Patch, Inc., 6123 Oakleaf Avenue, Baltimore, MD 21215 http://permapatch.com/** | | |
| | Special Asphalt Patching Material | Perma-Patch | 86-037 |
| **QPR-1 15** | **QPR, Division of the Quikrete Company, 12735 Morris Road, Alpharetta, GA 30004 http://www.quikrete.com/** | | |
| | Special Asphalt Patching Material<br>*Provisionally Approved* | QPR High Performance Cold Patch | 2004-153Q |
| **ROAPR 15** | **Roadstone Production, LLC, 1230 River Road, Charlottesville, VA 22901 http://aquaphalt.com/** | | |
| | Special Asphalt Patching Material<br>*Provisionally approved per manufacturer's specifications. **Aquaphalt Technical Data Sheet - Specfications*** | Aquaphalt 4.0 Fine | 2012-198 |
| | Special Asphalt Patching Material<br>*Provisionally approved per manufacturer's specifications. **Aquaphalt Technical Data Sheet - Specfications*** | Aquaphalt 6.0 Medium | 2012-198 |
| | Special Asphalt Patching Material<br>*Provisionally approved per manufacturer's specifications. **Aquaphalt Technical Data Sheet - Specfications*** | Aquaphalt 9.0 Coarse | 2012-198 |
| **RUSS1 15** | **Russell Standard Corporation, 990 Hazel Street, Akron, OH 44305 http://www.russellstandard.com/** | | |
| | Special Asphalt Patching Material | Jasa HP Cold Patch | 2011-123 |
| **RUSS2 15** | **Russell Standard Corporation, #2 Prestley Road, Bridgeville, PA 15017 http://www.russellstandard.com/** | | |
| | Special Asphalt Patching Material | Polypave Stockpile Patch | 1982-025 |

## Section MISC: Miscellaneous

### MISC Special Asphalt Patching Material

Last Revised: 10/2/2020

Note: Volatile Organic Compound (VOC) Content is not considered in the approval process for products in this section.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **RUSS7 15 Facility** | **Russell Standard Corporation / Hammaker East LTD, 285 Kappa Drive, Suite 300, Pittsburgh, PA 15238 http://www.russellstandard.com/ 3450 Asiatic Avenue Baltimore, MD 21226** | | |
| | Special Asphalt Patching Cutback Asphalt | JASA HP-5 Cutback Asphalt | 2015-136Q |
| | *This approval is for the liquid only. The cutback asphalt must be blended with aggregate that meets the quality requirements in Sections 703.1 and 703.2 of Pub 408 to be used as cold patching material. See Bulletin 27, Specifications for Special Bituminous (Asphalt) Mixtures, for composition of mixture requirements: **Bulletin 27, Chapter 3, Bituminous Patching Materials*** | | |
| **SEABD 15** | **Seaboard Asphalt Products Company, 3601 Fairfield Road, Baltimore, MD 21226 http://seaboardasphalt.com/** | | |
| | Special Asphalt Patching Material | BOND-X Green Patching Material | 2011-125 |
| | *Product Application Guide: **Seaboard BOND-X Green Product Application Guide*** | | |
| | Special Asphalt Patching Material | BOND-X High Performance Cold Patch | 1994-280 |
| | *Product description and specifications: **BOND-X High Performance Cold Patch Product Data Sheet*** | | |
| | Special Asphalt Patching Material | SpecChem MAX-A-PATCH ACP | 2020-187Q |
| | *Technical Data Sheet: **SpecChem MAX-A-PATCH ACP Technical Data Sheet*** | | |
| **SUIT0 15** | **Suit-Kote Corporation, 1911 Lorings Crossing Rd, Cortland, NY 13045-5160 http://www.suit-kote.com/** | | |
| | Special Asphalt Patching Material | SK-MOD | 1994-086 |
| | *Modified stockpile patching material. Product description, recommended uses, and specifications: **SK-MOD Product Data Sheet*** | | |
| **SUIT2 15 Terminal** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 797 Carlton Drive Bentleyville, PA** | | |
| | Special Asphalt Patching Material | SK-CAMP | 2020-063Q |
| | *Coarse aggregate modified patch. Product description, recommended uses, and specifications: **SK-CAMP Product Data Sheet*** | | |
| **SUIT8 15 Facility** | **Suit-Kote Corporation, 1911 Lorings Crossing Road, Cortland, NY 13045-5160 http://www.suit-kote.com/ 10965 McHenry Street Meadville, PA** | | |
| | Special Asphalt Patching Material | SK-CAMP | 2007-037Q |
| | *Coarse aggregate modified patch. Product description, recommended uses, and specifications: **SK-CAMP Product Data Sheet*** | | |

## Section MISC: Miscellaneous

### MISC Special Asphalt Patching Material

Last Revised: 10/2/2020

Note: Volatile Organic Compound (VOC) Content is not considered in the approval process for products in this section.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **UPMCP 15** | **Unique Paving Materials Corporation, 3993 East 93rd Street, Cleveland, OH 44105-4096 http://www.uniquepavingmaterials.com/** | | |
| | Special Asphalt Patching Material<br>*(product name formerly listed as UPM High Performance Cold Patch)* ***UPM Permanent Pavement Repair Material Usage Guidelines*** | UPM Permanent Pavement Repair Material | 1992-058 |

### MISC Steel Fibers For Fiber-Reinforced Concrete (ASTM A820)

Last Revised: 11/17/2016

ECMS Special Provision c10901 ITEM 3090 Steel Fiber Reinforced Concrete Wearing Surface

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BKERT 15 Facility** | **Bekaert Corporation, 1395 South Marietta Parkway, Building 500, Suite 100, Marietta, GA 30067 http://www.bekaert.com/en/ Van Buren, AR** | | |
| | Steel Fibers for Reinforced Concrete, Type 1 Deformed<br>*Not for use with Ultra High Performance Concrete.* | Dramix 3D | 1999-018Q |
| **MFIBR 15** | **Fibercon, International, 100 South Third Street, Evans City, PA 16033 http://www.fiberconfiber.com/** | | |
| | Steel Fibers for Reinforced Concrete, Type 2<br>*Not for use with Ultra High Performance Concrete.* | Fibercon Steel Fibers | 1991-133 |

### MISC Subgrade Stabilization Treatment

Last Revised: 6/22/2015

Provisional Specification: ECMS Special Provision I-c02101B

| | Product | Name | Ref. No. |
|---|---|---|---|
| **CARML 15 Plant** | **Carmeuse Lime Company, Inc., Route 422 & Clear Springs Road, Annville, PA 17003 https://www.carmeuse.com/na-en Route 422 & Clear Springs Road Annville, PA 17003** | | |
| | Subgrade Stabilization Treatment | Envirolime, Lime Pozzolan | 2006-037QB |
| | Subgrade Stabilization Treatment | Quicklime | 2006-036Q |

### MISC Temporary Expansion Dam Systems

Last Revised: 3/1/2019

## Section MISC: Miscellaneous

### MISC Temporary Expansion Dam Systems

Last Revised: 3/1/2019

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| | Alternate System (Conditionally Approved)<br>*Conditionally approved as an alternate.* | V-300 Temporary Expansion Dam | | 2011-040A |
| | Alternate System (Conditionally Approved)<br>*Conditionally approved as an alternate.* | V-400 Temporary Expansion Dam | | 2011-040B |
| **CRAF0 15** | **Crafco, Inc., 6165 W. Detroit Street, Chandler, AZ 85226 http://www.crafco.com/** | | | |
| **Plant** | **121 Industrial Park Road Halls, TN 38040** | | | |
| | Asphaltic Plug<br>*Conditionally approved per manufacturer's specifications: **Crafco Matrix 501 Product Data Sheet*** | Matrix 501 Asphaltic Plug Bridge Joint System | | 2013-017Q |
| | Asphaltic Plug<br>*Conditionally approved per manufacturer's specifications: **Crafco Matrix 502 Product Data Sheet*** | Matrix 502 Asphaltic Plug Bridge Joint System | | 1995-189Q |
| **DSBLT 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | | |
| **Plant** | **LymTal International, Inc. 4150 South Lapeer Road Lake Orion, MI 48359** | | | |
| | Two-component Urethane Sealant<br>*Conditionally approved.* | Delastic-LS Pourable Bridge Seal | | 2011-030 |
| **DYSAP 15** | **Dynamic Surface Applications, Ltd., 373 Village Road, Pennsdale, PA 17756 http://dsa-ltd.com/** | | | |
| | Asphaltic Plug | BJS | 9/3/1997 | ----- |
| | Asphaltic Plug | Thormo Joint | 9/3/1997 | ----- |
| **SILSP 15** | **Silicone Specialties, Inc., P.O. Box 50009, Tulsa, OK 74150 http://ssicm.com/** | | | |
| | Two Part Silicone<br>*Recommended for maintenance projects with service life up to five (5) years.*<br>*Provisionally Approved* | XJS | | 1993-157 |

## Section MISC: Miscellaneous

### MISC Temporary Expansion Dam Systems

Last Revised: 3/1/2019

| | Product | Name | Letter Date | Ref. No. |
|---|---|---|---|---|
| **WATRJ 15** | **R. J. Watson, Inc., 11035 Walden Avenue, Alden, NY 14007 http://www.rjwatson.com/** | | | |
| | Preformed Silicone<br>*Provisionally Approved* | Silicoflex SF 150 | | 1996-015 |
| | Preformed Silicone<br>*Provisionally Approved* | Silicoflex SF 225 | | 1996-015 |
| | Preformed Silicone<br>*Provisionally Approved* | Silicoflex SF 400 | | 1996-015 |

### MISC Warm Mix Asphalt (WMA) Technologies

Last Revised: 10/2/2018

The approved WMA Technologies are now located in Section 411.2(g).

| Product | Name | Ref. No. |
|---|---|---|

### MISC Warm Mix Modified Performance Graded Asphalt Binders

Last Revised: 11/30/2017

See Section 702d PG Asphalt Cement for approved warm mix technology modified Performance Grade asphalt binders.

| Product | Name | Ref. No. |
|---|---|---|

### MISC Waterproofing Fabric (Asphalt)

Last Revised: 4/14/2015

| | Product | Name | Ref. No. |
|---|---|---|---|
| **BREWR 15** | **Brewer Company, 30060 Lakeland Boulevard, Wickliffe, OH 44092 http://www.thebrewerco.com/** | | |
| | Waterproofing Fabric (Asphalt) | 9400 Cotton Fabric (Asphalt Saturated) | ----- |

## Section MISC: Miscellaneous Traffic

### MISC Automated Red Light Enforcement Systems (ARLE)

Last Revised: 3/17/2017

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **AMERT 15** | **American Traffic Solutions, 1330 West Southern Avenue, Tempe, AZ 85282 http://www.atsol.com/** | | | |
| | Automated Red Light Enforcement System (ARLE)<br>*Provisionally Approved* | RLSC-3D (ARLE) | AMT-001P | ----- |
| **GATSO 15** | **Gatso USA, Inc., 900 Cummings Center, Suitte 321U, Beverly, MA 01915 http://www.gatso-usa.com/** | | | |
| | Automated Red Light Enforcement System (ARLE)<br>*Provisionally Approved* | T-Series (ARLE) | GAT-001P | ----- |
| **REDTS 15** | **Redflex Traffic Systems, Inc., 23751 North 23rd Avenue, Phoenix, AZ 85085 http://www.redflex.com/index.php/en/** | | | |
| | Automated Red Light Enforcement System (ARLE)<br>*Provisionally Approved* | RFR2012 (ARLE) | RTS-001P | ----- |
| **XERSL 15** | **Xerox State and Local Solutions, Inc., 12410 Milestone Center Drive, 4th Floor, Germantown, MD 20876 http://www.xerox.com/** | | | |
| | Automated Red Light Enforcement System (ARLE)<br>*Provisionally Approved* | DriveSafe (ARLE) | XSL-001P | ----- |

### MISC In Road Warning Lights

Last Revised: 6/10/2015

Department approval is required before purchase of in-roadway warning lights. Contact the Bureau of Maintenance and Operations for approval requirements at (717) 787-9787.

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ASTUL 15** | **Astucia (UK), Ltd., 42 Eldon Way, Tonbridge, Kent http://www.clearviewtraffic.com/astucia/** | | | | |
| | In Road Warning Light | IRS-XW-2001 | AST-001E | 8/29/2002 | ----- |
| **LIGSY 15** | **LightGuard Systems, Inc., 2292 Airport Boulevard, Santa Rosa, CA 95403-1003 http://www.lightguardsystems.com/** | | | | |
| | In Road Warning Light | Type 6B (SP) - LED (Endurolight) | 1544-X001 | 4/11/2001 | ----- |
| **SMASS 15** | **SmartStud Systems, Inc., 479 John Street, Victoria, BC V8T 5H1** | | | | |
| | In Road Warning Light | SmartStud | SST-001E | 6/16/2005 | ----- |

## Section MISC: Miscellaneous Traffic

### MISC In Road Warning Lights

Last Revised: 6/10/2015

Department approval is required before purchase of in-roadway warning lights. Contact the Bureau of Maintenance and Operations for approval requirements at (717) 787-9787.

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **SWAR2 15** | **Swarco Futurit America, 900 North Denton, Mexia, TX 76667 https://www.swarco.com/northamerica** | | | | |
| | In Road Warning Light | MLK 150 | SFA-001E | 10/15/2003 | ----- |
| **TRASC 15** | **Traffic Safety Corporation, 2708 47th Avenue, Sacramento, CA 95822 http://www.xwalk.com/** | | | | |
| | In Road Warning Light | TS500 | TSC-002E | 5/1/2003 | ----- |
| | In Road Warning Light | TS600YYL4 | TSC-003E | 9/26/2012 | ----- |
| | In Road Warning Light | ZA 230 | 1534-X001 | 4/11/2001 | ----- |

### MISC MISC Pavement Marking Systems, Integrated Multi-Polymer

Last Revised: 5/21/2019

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | | | | |
| | Integrated Multi-Polymer Pavement Marking | HPS-8 White | | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | AASHTO M247, Type 4 beads flooded and AASHTO M247, Type 1 beads flooded | Long lines and other uses on aphalt and concrete | 2017-240 Q |

## Section MISC: Miscellaneous Traffic

### MISC MISC Pavement Marking Systems, Integrated Multi-Polymer

Last Revised: 5/21/2019

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Marking Color | Illumination | Marking Surface | Primer? | Beads | Application Uses | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-6 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Greensboro, NC 27410 Atlanta, GA** | | | | | | | | | |
| | Integrated Multi-Polymer Pavement Marking | HPS-8 Yellow | | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | | AASHTO M247, Type 4 beads at 10 lbs/gallon and Type 1 beads at 6 lbs/gallon | Other uses on asphalt and concrete, but not for long lines | 2017-217 Q |

### MISC Pavement Marking Systems, Methyl Methacrylate

Last Revised: 12/26/2019

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer? | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **AEXCE 15** | **Aexcel Coatings, 7373 Production Drive, Mentor, OH 44061-0780 http://www.aexcelcoatings.com/index.html** | | | | | | | | | |
| | Methyl Methacrylate Pavement Marking | SP01W-40 | MMA-02 | White | Lighted and Unlighted Roadways | Asphalt | | | Yes | ----- |
| | Methyl Methacrylate Pavement Marking | SP01W-90 | MMA-02 | White | Lighted and Unlighted Roadways | Asphalt | | | Yes | ----- |
| | Methyl Methacrylate Pavement Marking | SP01W-90 | MMA-02 | White | Lighted and Unlighted Roadways | Concrete | | | No | ----- |

## Section MISC: Miscellaneous Traffic

### MISC Pavement Marking Systems, Methyl Methacrylate

Last Revised: 12/26/2019

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer? | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **AEXCE 15** | **Aexcel Coatings, 7373 Production Drive, Mentor, OH 44061-0780 http://www.aexcelcoatings.com/index.html** | | | | | | | | | |
| | Methyl Methacrylate Pavement Marking | SP01Y-40 | MMA-02 | Yellow | Lighted and Unlighted Roadways | Asphalt | | | No | ----- |
| | Methyl Methacrylate Pavement Marking | SP01Y-90 | MMA-02 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | | | No | ----- |
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | | | | |
| | Methyl Methacrylate Pavement Marking | Duraset 05MXW | MMA-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Yes | 2008-073QB |
| | Methyl Methacrylate Pavement Marking | Duraset 05MXY | MMA-01 | Yellow | Lighted Roadways Only | Asphalt and Concrete | | | No | 2008-073QA |
| | Methyl Methacrylate Pavement Marking | HPS-7 | MMA-01 | White | Lighted and Unlighted Roadways | Asphalt | | | Yes | 2011-139Q |
| | *(Also known as 999105 or Pathfinder-05MPW)* | | | | | | | | | |
| **ENN-7 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ Salem, OR** | | | | | | | | | |
| | Methyl Methacrylate Pavement Marking | MMAX EF Bike Lane Green with Corundum (999660G-KIT) | | Green | Lighted and Unlighted Roadways | Asphalt and Concrete | | | Bike Lanes Only | 2019-219Q |
| | *Approval is for bike lanes only.* | | | | | | | | | |

## Section MISC: Miscellaneous Traffic

### MISC Pavement Marking Systems, Modified Polyacrylate

Last Revised: 7/14/2016

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer? | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **SWAR3 15** | **Colorado Paint Company, the SWARCO Group, 4747 Holly Street, Denver, CO 80216 https://www.swarco.com/cpc** | | | | | | | | | |
| | Modified Polyacrylate Pavement Marking | MFUA-10 | MPPM-01 | White | | Asphalt and Concrete | No | 12/12 (See note) | No | 2014-065M |
| | *This material can only be installed with the glass bead type and quantity indicated on the Certificate of Approval (12 lbs/gal each of AASHTO M247, type 1 and 12 lbs/gal each of AASHTO M247, type 4, for a total of 24 lbs/gal of Modified Polyacrylate. NTPEP Test # PMM-2011-01-083* | | | | | | | | | |
| | Modified Polyacrylate Pavement Marking | MFUA-10 | MPPM-01 | Yellow | | Asphalt and Concrete | No | 12/12 (See note) | No | 2014-066M |
| | *This material can only be installed with the glass bead type and quantity indicated on the Certificate of Approval (12 lbs/gal each of AASHTO M247, type 1 and 12 lbs/gal each of AASHTO M247, type 4, for a total of 24 lbs/gal of Modified Polyacrylate. NTPEP Test # PMM-2011-01-084* | | | | | | | | | |

### MISC Pavement Marking Systems, Polyester

Last Revised: 6/23/2015

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer? | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **AEXCE 15** | **Aexcel Coatings, 7373 Production Drive, Mentor, OH 44061-0780 http://www.aexcelcoatings.com/index.html** | | | | | | | | | |
| | Polyester Pavement Marking | 75W-DO12 | PPM-01 | White | Lighted and Unlighted Roadways | Asphalt | No | M247 | No | ----- |
| | Polyester Pavement Marking | SP01W-90 | PPM-01 | Yellow | Lighted and Unlighted Roadways | Asphalt | No | M247 | No | ----- |

### MISC Pavement Marking Systems, Polyurea

Last Revised: 6/23/2015

## Section MISC: Miscellaneous Traffic

### MISC Pavement Marking Systems, Polyurea

Last Revised: 6/23/2015

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer? | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **ENN-1 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 1509 South Kaufman Street Ennis, TX 75120** | | | | | | | | | |
| | Polyurea Pavement Marking | HPS-5 | PUPM-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | M247 | Yes | ----- |
| | Polyurea Pavement Marking | HPS-5 | PUPM-01 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | | M247 | Yes | ----- |
| **ENN-3 15 Plant** | **Ennis-Flint, Inc., 4161 Piedmont Parkway, Suite 370, Greensboro, NC 27410 http://www.ennisflintamericas.com/ 4400 Vawter Avenue Richmond, VA 23222** | | | | | | | | | |
| | Polyurea Pavement Marking | HPS-5 | PUPM-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | | M247 | Yes | ----- |
| | Polyurea Pavement Marking | HPS-5 | PUPM-01 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | | M247 | Yes | ----- |
| **EPOPX 15** | **Epoplex, 1000 East Park Avenue, Maple Shade, NJ 08052 http://www.epoplex.com/** | | | | | | | | | |
| | Polyurea Pavement Marking | LS90 | PM-05-05 | White | | Asphalt and Concrete | | See COA | No | ----- |
| | Polyurea Pavement Marking | LS90 | PM-05-05 | Yellow | | Asphalt and Concrete | | See COA | No | ----- |

### MISC Pavement Marking Systems, Preformed Wet Reflective Striping Tape

Last Revised: 3/17/2017

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

## Section MISC: Miscellaneous Traffic

### MISC Pavement Marking Systems, Preformed Wet Reflective Striping Tape

Last Revised: 3/17/2017

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **3M-03 15** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/** | | | | | | | | | |
| **Plant** | **Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | | | | | |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 380AW | WRST-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | | Yes | ----- |
| | *Apply primer per manufacturer recommendation.*<br>*Refer to Certificate of Approval.*<br>*Provisionally Approved* | | | | | | | | | |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 380IES | WRST-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | | Yes | ----- |
| | *Apply primer per manufacturer recommendation.*<br>*Refer to Certificate of Approval.* | | | | | | | | | |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 380WR | WRST-01 | White | Lighted and Unlighted Roadways | Asphalt and Concrete | P-50 | | Yes | ----- |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 381AW | WRST-01 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | | Yes | ----- |
| | *Apply primer per manufacturer recommendation.*<br>*Refer to Certificate of Approval.*<br>*Provisionally Approved* | | | | | | | | | |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 381IES | WRST-01 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | Yes | | No | ----- |
| | *Apply primer per manufacturer recommendation.*<br>*Refer to Certificate of Approval.* | | | | | | | | | |

## Section MISC: Miscellaneous Traffic

### MISC Pavement Marking Systems, Preformed Wet Reflective Striping Tape

Last Revised: 3/17/2017

Lines: Center, Lane and Edge Lines

Other Uses: Crosshatching, Crosswalks, Legends and Stop Lines

| | Product | Name | COA | Pavement Marking Color | Illumination Conditions | Marking Surface | Primer | Beads | Other Uses? | Ref. No. |
|---|---|---|---|---|---|---|---|---|---|---|
| **3M-03 15 Plant** | **3M Company, Traffic Control Devices Department, 3M Center, Building 582-1-15, St. Paul, MN 55144-1000 http://www.3m.com/3M/en_US/company-us/ Traffic Control Devices Department 3M Center, Building 582-1-15 St. Paul, MN 55144-1000** | | | | | | | | | |
| | Preformed Wet Reflective Striping Tape Pavement Marking | Stamark™ Series 381WR | WRST-01 | Yellow | Lighted and Unlighted Roadways | Asphalt and Concrete | P-50 | | No | ----- |

### MISC Rectangular Rapid Flashing Beacon (RRFB) Systems 2

Last Revised: 8/17/2020

Department approval is required before purchasing Rectangular Rapid Flashing Beacons. Contact the Bureau of Maintenance and Operations for approval requirements at (717) 787-9787.

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **CARMH 15** | **Carmanah Technologies Corporation, 250 Bay Street, Victoria, BC V9A 3K5** ***Formerly Spot Devices, Inc. (SPODE 15)*** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | R920 Series | CTC-004X | 8/2/2013 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | R920-E | CTC-008P | 7/10/2020 | 2019-177Q |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | RRFB | CTC-005X | 7/25/2013 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | SB435HP | CTC-006X | 7/25/2013 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | SC315-G | CTC-009P | 7/10/2020 | 2019-178Q |

## Section MISC: Miscellaneous Traffic

### MISC Rectangular Rapid Flashing Beacon (RRFB) Systems 2

Last Revised: 8/17/2020

Department approval is required before purchasing Rectangular Rapid Flashing Beacons. Contact the Bureau of Maintenance and Operations for approval requirements at (717) 787-9787.

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **ELECT 15** | **Electrotechnics Corporation, 1310 Commerce Street, Marshall, TX 75672 http://www.elteccorp.com/** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | AC890371-X | ETC-001X | 5/14/2010 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | AC890372 | ETC-002X | 5/14/2010 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | S891070-X | ETC-003X | 5/14/2010 | ----- |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | S891071 | ETC-004X | 5/14/2010 | ----- |
| **RDJSE 15** | **R.D. Jones, Stop Experts, Inc., 723 Commerce Drive, Venice, FL 34962 http://stopexperts.com/** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | Enhancer | RDO-001X | 11/19/2015 | - |
| **RTC-M 15** | **RTC Manufacturing Inc., P. O. Box 150189, Arlington, TX 76015 http://www.rtc-traffic.com/** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | RFB-2 | RTC-007X | 9/30/2013 | ----- |
| **TAPCO 15** | **TAPCO - Traffic & Parking Control Company, Inc., 5100 West Brown Deer Road, Brown Deer, WI 53223 http://www.tapconet.com/** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | RRFB-XL | TCO-001X | 4/29/2014 | 2014-010 |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | TOP RRFB-XL2 | TCO-004X | 1/27/2020 | 2018-272Q |
| **TRAFF 15** | **TraffiCalm Systems, 5676 East Seltice Way, Post Falls, ID 83854 http://trafficalm.com/** | | | | |
| | Rectangular Rapid Flashing Beacon (RRFB) Systems | PUSH-2-CROSS | TAC-002P | 7/7/2020 | 2019-251Q |

### MISC Traffic Operations, Auxiliary

Last Revised: 7/21/2020

## Section MISC: Miscellaneous Traffic

### MISC Traffic Operations, Auxiliary

Last Revised: 7/21/2020

| | Product | Name | COA | COA Date | Ref. No. |
|---|---|---|---|---|---|
| **CCABH 15** | **Cambria Company Association for the Blind and Handicapped, 175 Industrial Park Road, RD 3 Box 164, Ebensburg, PA 15931-1813 http://www.cabproducts.com/** | | | | |
| | Auxilliary Traffic Operations Item | CAB Cable Rings and Saddles | 1520-0000 | 10/22/1999 | ----- |
| **IBITK 15** | **ibisSIGNS, LLC (Formerly Ibis Tek, LLC), 496 Pittsburgh Road, Butler, PA 16002 http://www.ibissigns.com/** | | | | |
| | Auxilliary Traffic Operations Item | Traffic Signal Police Control, Wireless | IBS-001P | 1/11/2013 | ----- |
| **LINCO 15** | **Nortek Security & Control, LLC (Linear), 5919 Sea Otter Place, Carlsbad, CA 92010 https://www.linearproaccess.com/radio-controls/xtended-range-wireless-radio-controls/** ***Formerly Linear Corporation*** | | | | |
| | Auxilliary Traffic Operations Item | Mid Range Receiver XR-1 | LIN-001P | 7/10/1997 | ----- |
| | Auxilliary Traffic Operations Item | Mid Range Transmitter XT-1 | LIN-002P | 7/10/1997 | ----- |
| **NAZTC 15** | **Trafficware, Inc., 522 Gillingham Drive, Sugar Land, TX 77478 http://www.trafficware.com/** ***(Merger with Naztec, Inc.)*** | | | | |
| | Auxilliary Traffic Operations Item | Cabinet Interface Panel, 150 LX Interface | TFW-005P (NAZ-013P) | 4/13/2016 | ----- |

### MISC Yield to Pedestrian (YTP) Channelizing Devices

Last Revised: 2/19/2020

| | Product | Name | COA | Yield Type | Size (in.) | Yield Mount | Ref. No. |
|---|---|---|---|---|---|---|---|
| **CONSF 15** | **Continental Safety Supply Company, Inc., 790 Bloomfield Avenue, Clifton, NJ 07012** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | Soft Sandwich | | Cone with Sign | 18" x 36" | Surface (unfastened) | 1998-011 |
| **DICKE 15** | **Dicke Tool Company, 1201 Warren Avenue, Downers Grove, IL 60515 http://dicketool.com/** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | SBL1236-Y | PED-07 | Vertical Panel | 12" x 36" (one-sided) | Surface (unfastened) | ----- |
| | Yield To Pedestrian (YTP) Channelizing Device | SBL1236D-Y | PED-07 | Vertical Panel | 12" x 36" (two-sided) | Surface (unfastened) | ----- |

## Section MISC: Miscellaneous Traffic

### MISC Yield to Pedestrian (YTP) Channelizing Devices

Last Revised: 2/19/2020

| | Product | Name | COA | Yield Type | Size (in.) | Yield Mount | Ref. No. |
|---|---|---|---|---|---|---|---|
| **EASTM 15** | **Eastern Metal of Elmira, 1430 Sullivan Street, Elmira, NY 14901 http://www.usa-sign.com/** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | Big Foot | | Vertical Panel | 12" x 36" | Surface (unfastened) | 2000-161Q |
| **GARDS 15** | **Garden State Highway Products, Inc., 1740 East Oak Road, Vineland, NJ 08361 http://www.gardenstatehwy.com/default.aspx** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | Ped Barricade | | Vertical Panel | 12" x 36" | Surface (unfastened) | 2002-042Q |
| **IMPRS 15** | **Impact Recovery Systems, Inc., 4955 Stout Drive, San Antonio, TX 78219 http://www.impactrecovery.com/** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | 254-R-1-6 Crossing Sign | PED-3 | Vertical Panel | 12" x 42" | Surface (unfastened) | 2000-323Q |
| **PEXCO 15** | **Pexco Davidson Traffic Control Products, 2500 Northwinds Parkway, Suite 472, Alpharetta, GA 30009 http://www.pexco.com/markets/industrial/traffic** | | | | | | |
| **Facility** | **3110 70th Avenue East Tacoma, WA 98424** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | 8FG342FLGEFX613 | PED-08 | Vertical Panel | 12" x 42" | Surface (unfastened) | ----- |
| **PROTE 15** | **Protection Services, Inc., 1000 E Ashland Avenue, Folcroft, PA 19032** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | Big Foot | | Vertical Panel | 12" x 36" | Surface (unfastened) | 2000-161Q |
| **SAFHC 15** | **Safe-Hit Corporation, a Division of Energy Absorption Systems, Inc., A Trinity Industries, Inc. Company, 70 West Madison Street, Suite 2350, Chicago, IL 60602 http://www.safehitlx.com/html/safehit/index.html** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | RT 360 VP | PED-4 | Vertical Panel | 12" x 43" | Surface (unfastened) | ----- |
| **THDTW 15** | **Three D Traffic Works, Inc., 430 North Varney Street, Burbank, CA 91502 http://www.trafficwks.com/** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | TD5275 | PED-9 | Vertical Panel | 12" x 36" | Surface (unfastened) | ----- |
| **UNISO 15** | **UniqueSource, 500 Bent Creek Boulevard, Mechanicsburg, PA 17050-1876 https://www.uniquesource.com/** | | | | | | |
| | ***Formerly PIBH- 15*** | | | | | | |
| | Yield To Pedestrian (YTP) Channelizing Device | R1-6 Pedestrian Sign | PED-10 | Vertical Panel | 12" x 42" | Surface (unfastened) | ----- |
| | *NCHRP-350 Test Level: TL-2* | | | | | | |

## Section MISC: Winter Road Maintenance

### MISC Snow and Ice Control Chemical Products

**Last Revised: 3/26/2019**

The exact product names listed have been accepted for listing in PA Bulletin 15 based upon the specific approval and listing on the Pacific Northwest SnowFighters (PNS) Qualified Product List. All specific compositional, usage approvals & restrictions, and other noted criteria listed on the PNS Qualified Product List will also apply to this product's use in Pennsylvania. If this product is removed from the PNS QPL, or fails to meet the minimum standards required for listing on the PNS QPL, it may be removed from the PA Bulletin 15. Refer to the manufacturer's website for product data sheet. Refer to the PNS website for approval information and resources including the PNS QPL: **Pacific Northwest Snowfighters**

PNS Experimental Category: Approved Liquid Corrosion Inhibited Products

PNS Inhibitor Category A3: Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)

PNS Category 4C: Corrosion Inhibited Solid Sodium Chloride - Standard Gradation (Corrosion Percent Effectiveness 31% to 85%)

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **CARG0 15 Facility** | **Cargill, Inc., 24950 Country Club Blvd., Suite 450, North Olmsted, OH 44070 http://www.cargill.com/ Salt Mines: Avery Island, LA; Cleveland, OH; Lansing, NY** | | | |
| | PNS Category 4C - Corrosion Inhibited Solid Sodium Chloride - Standard Gradation (Corrosion Percent Effectiveness 31% to 85%) | ClearLane enhanced deicer | | 2018-107 |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. Liquid pre-wetting facility located in Newark, CA.* ***Manufacturer's specifications for ClearLane enhanced deicer*** | | | |
| **ETECH 15** | **EnviroTech Services, Inc., 4676 284th Street East, Randolph, MN 55065-0000** | | | |
| | PNS Inhibitor Category A3 - Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl) | AMP | | 2016-075 |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved for addition to concentrated sodium chloride (salt) brine.* | | | |

## Section MISC: Winter Road Maintenance

### MISC Snow and Ice Control Chemical Products

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PNS Experimental Category: Approved Liquid Corrosion Inhibited Products

PNS Inhibitor Category A3: Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)

PNS Category 4C: Corrosion Inhibited Solid Sodium Chloride - Standard Gradation (Corrosion Percent Effectiveness 31% to 85%)

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **ISS-1 15** | **Innovative Municipal Products US Inc. (dba Innovative Surface Solutions), 454 River Road, Glenmont, NY 12077 http://www.innovativecompany.com** | | | |
| | PNS Category 1 - Corrosion Inhibited Liquid Magnesium Chloride | ProMelt Ultra 1000 INH | | 2018-109Q |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. **Manufacturer's specifications for ProMelt Ultra 1000*** | | | |
| | PNS Experimental Category - Liquid Corrosion Inhibited Products | Magic Minus Zero (MAGIC-0) Concentrate | | 2014-007 |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved as a pre-wet material to solid salt. Not for direct application.* | | | |
| | PNS Experimental Category - Liquid Corrosion Inhibited Products | ProMelt Ultra 2000 INH | | 2018-108Q |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved as a pre-wet material to solid salt. Not for direct application. **Manufacturer's specifications for ProMelt Ultra 2000*** | | | |
| **KTECH 15** | **K-Tech Specialty Coatings, Inc., P.O. Box 428, Ashley, IN 46705-0000** | | | |
| | PNS Experimental Category - Liquid Corrosion Inhibited Products | BEET HEET Concentrate | | 2013-117 |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved as a pre-wet material to solid salt. Not for direct applications as a liquid deicer.* | | | |
| **NATOS 15** | **NATURES OWN SOURCE LLC, 7033 Mill Road, Becksville, OH 44141-0000** | | | |
| | PNS Experimental Category - Liquid Corrosion Inhibited Products | AquaSalina+ | | 2014-043 |
| | *Conditionally approved per manufacturer's specifications for winter road maintenance.* | | | |

## Section MISC: Winter Road Maintenance

### MISC Snow and Ice Control Chemical Products

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PNS Experimental Category: Approved Liquid Corrosion Inhibited Products

PNS Inhibitor Category A3: Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)

PNS Category 4C: Corrosion Inhibited Solid Sodium Chloride - Standard Gradation (Corrosion Percent Effectiveness 31% to 85%)

| | Product | Name | COA | Ref. No. |
|---|---|---|---|---|
| **SNIS1 15** | **SNI SOLUTIONS, 205 North Stewart Street, Geneseo, IL 61254-0000** | | | |
| | PNS Inhibitor Category A3 - Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)<br>*Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved for addition to concentrated sodium chloride (salt) brine.* | Biomelt AG | | 2016-024 |
| | PNS Inhibitor Category A3 - Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)<br>*Conditionally approved per manufacturer's specifications for winter road maintenance. Material approved for addition to concentrated sodium chloride (salt) brine.* | Geomelt 55 | | 2011-042 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **ACKBAY15** | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2018-282Q |
| **ACROW 15** | **Acrow Corporation of America, 6 Canal Street, Milton, PA 17847 http://acrow.com/** | | |
| | Certified Structural Steel Fabricator<br>*Not approved to perform submerged arc welding.* | Major Steel Bridges (CBR) | 2014-168 |
| **ADVSC 15** | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | |
| | Certified Structural Steel Fabricator<br>*Approved to perform heat-cambering and heat curving of rolled beams.* | SBR | 2015-021Q |
| **AMTHR 15** | **Amthor Steel, 1717 Gaskell Ave., Erie, PA 16503** | | |
| | Certified Structural Steel Fabricator | SBR | 2013-121 |
| **ANDBR 15** | **Anderson Bridges, LLC, 111 Willow Street, Colfax, WI 54730 http://www.andersonbridges.com/** | | |
| | Certified Structural Steel Fabricator<br>*Approved to fabricate pedestrian bridge only.* | Simple Steel Bridges (SBR) | 2013-192 |
| **APEX- 15** | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **ATFAB 15** | **American Tank & Fabricating Co. (AT&F), 12314 Elmwood Avenue, Cleveland, OH 44111 http://www.atfco.com** | | |
| | Certified Structural Steel Fabricator | SBR | 2015-152Q |
| **AUCEL 15** | **Auciello Iron Works, Inc., 560 Main St., Hudson, MA 01749 http://aucielloironworks.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **BBI-1 15** | **Bridge Brothers Inc, 255 Pumpkintown Highway, Pickens, SC 29671 https://bridgebrothers.com/** | | |
| | Certified Structural Steel Fabricator | IBR | 2020-064Q |
| **BIGRB 15 Plant** | **Big R Bridge, P.O. Box 1290, Greeley, CO 80632 http://www.bigrbridge.com/en/home/default.aspx 25581 Hillman Highway Abingdon, VA 24210** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Not approved to perform submerged arc welding.* | | |
| **BRFAB 15** | **Brookfield Fabricating Corporation, P. O. Box 406, Brookfield, MO 64628 http://www.brookfieldfabricating.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | ----- |
| | *Approved to fabricate modular bridge expansion dams.* | | |
| **CANAM 15** | **Canam Steel Corporation, 4010 Clay Street, P.O. Box 285, Point of Rocks, MD 21777 http://www.canam-construction.com/en/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2013-223 |
| | *Approved to fabricate high performance steel.* | | |
| **CAPST 15** | **Capital Steel Service, LLC, 82 Stokes Avenue, Trenton, NJ 08638 http://www.capitalsteel.org/** | | |
| | Certified Structural Steel Fabricator | SBR | 2010-087 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **CBSSI 15** | **Casco Bay Steel Structures, Inc., One Wallace Avenue, South Portland, ME 04106** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2016-131Q |
| | *Casco Bay Steel Structures, Inc. has Fracture Critical Endorsement (CBR/F) for the following three facilities:*<br>*1st Facility: One Wallace Avenue, South Portland, ME 04106*<br>*2nd Facility: 1156 Broadway, South Portland, ME 04106*<br>*3rd Facility: 75 Spring Hill Road, Saco, ME 04072* | | |
| **CIAFC 15** | **Cianbro Fabrication & Coating Corporation, 605 Pittman Road, Baltimore, MD 21226 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2010-214 |
| **CIANB 15** | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx**<br>***Formerly Foster Precise Structural Products (FOSPR).*** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2007-202 |
| **CON13 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/**<br>**Fort Payne, AL** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2017-113 |
| **CORNL 15** | **Cornell & Company, Inc., P. O. Box 807, Woodbury, NJ 08096 http://www.cornellcraneandsteel.com/** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

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ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **DECKI 15** | **Cameron Bridge Works LLC, 1051 South Main Street, Elmira, NY 14904 http://www.cameronbridgeworks.com/** | | |
| | ***Formerly Echo Bridge, Inc. / Decker Inc.*** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2009-052 |
| | *Approved to fabricate pedestrian bridge only.* | | |
| **DURAB 15** | **Dura-Bond Steel Corporation, 2658 Puckety Drive, Export, PA 15632 http://www.dura-bond.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| | *Approved to perform heat-cambering and heat curving of rolled beams.* | | |
| **DURBD 15** | **Dura-Bond Pipe, LLC, 2716 South Front Street, Steelton, PA 17113 http://www.dura-bond.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2014-178 |
| **EAGMC 15** | **Eagle Manufacturing Company, Inc., 13 Homonick Road, Colchester, CT 06415 http://eagle-mfg.com/Default.aspx** | | |
| | Certified Structural Steel Fabricator | SBR | 2014-120 |
| **ELDER 15** | **Elderlee, Inc., 729 Cross Road, Oaks Corners, NY 14518 http://www.elderlee.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2009-027 |
| **FABCR 15** | **Fabcor, Inc., 1205 Mid Valley Drive, Jessup, PA 18434 http://www.fabcorinc.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **FOST2 15** | **L.B. Foster Company, 202 Weber Lane, Bedford, PA 15522 http://www.lbfoster.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **GOODS 15** | **Goodhart Sons, Inc., 2515 Horeshoe Road, P. O. Box 10308, Lancaster, PA 17605-0308 http://www.goodhartsons.com/** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2004-118 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **GRENR 15** | **Greiner Industries, Inc., 1650 Steel Way, Mount Joy, PA 17552 http://greinerindustries.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2008-047 |
| **HABSI 15** | **Haberle Steel, Inc., 1946 East Cherry Lane, Souderton, PA 18964 http://haberlesteel.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2011-097 |
| **HALL1 15** | **Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **HALL2 15** | **Hall Industries, Inc., 514 Mecklem Lane, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Certified Structural Steel Fabricator<br>*Not approved to perform welding.* | SBR | ----- |
| **HALL3 15** | **Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2017-029Q |
| **HASSC 15** | **Harris Structural Steel Company, Inc., 1640 New Market Ave., South Plainfield, NJ 07080 http://www.harrissteelco.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| **HEART 15** | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/**<br>***Formerly Brownsville Marine Products*** | | |
| | Certified Structural Steel Fabricator<br>*(Original product evaluation - 2015-137Q)* | IBR, FCE | 2018-220Q |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| | Product | Name | AISC Category | Ref. No. |
|---|---|---|---|---|
| **HIGH1 15** | **High Steel Structures, Inc., 1915 Old Philadelphia Pike,, P.O. Box 10008, Lancaster, PA 17605-0008 http://www.highsteel.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Approved to fabricate high performance steel.* | | | |
| **HIGH2 15** | **High Steel Structures, Inc., 3501 W 4th Street, Williamsport, PA 17701 http://www.highsteel.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Approved to fabricate high performance steel.* | | | |
| **HIR01 15** | **W&W \| AFCO STEEL Hirschfeld Division, 9035 West Market Street, Colfax, NC 27235 http://hirschfeld.wwafcosteel.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Approved to fabricate high performance steel.* | | | |
| **HIR02 15** | **W&W \| AFCO STEEL Hirschfeld Division, Nash County Plant,, 241 Corbett Road, Nashville, NC 27856 http://hirschfeld.wwafcosteel.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| **HIR03 15** | **W&W \| AFCO STEEL Hirschfeld Division, Abingdon Plant, 15083 Industrial Park Road, Bristol, VA 24201 http://hirschfeld.wwafcosteel.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Approved to fabricate high performance steel.* | | | |
| **INDS1 15** | **Industrial Steel Construction, Inc., 86 North Bridge Street, Gary, IN 46404 http://www.iscbridge.com/** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **INDS2 15** | **Industrial Steel Construction, Inc., 6120 River Road, Hodgkins, IL 60525 http://www.iscbridge.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2008-094 |
| **JGM-1 15** | **JGM, 1201 Valley Road, Coatesville, PA 19320** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2017-128 |
| **KARDW 15** | **Kard Welding, Inc., 480 Osterloh Road, P. O. Box 124, Minster, OH 45865** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges (CBR) | 2010-227 |
| **KIN-1 15** | **Kinsley Manufacturing, 1100 East Princess Street, York, PA 17403 http://www.kinsleymanufacturing.com/** | | |
| | Certified Structural Steel Fabricator<br>*Not approved to perform submerged arc welding.* | Major Steel Bridges (CBR) | ----- |
| **KIN-2 15** | **Kinsley Manufacturing, 3900 E. Market Street, York, PA 17402 http://www.kinsleymanufacturing.com/** | | |
| | Certified Structural Steel Fabricator<br>*Not approved to perform submerged arc welding.* | Major Steel Bridges (CBR) | ----- |
| **L&MF2 15 Facility** | **L&M Fabrication and Machine, Inc., 6814 Chrisphalt Drive, Bath, PA 18014 http://www.lmfab.com/**<br>**7230 Beth-Bath Pike Bath, PA 18014** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2017-347Q |
| **L&MFM 15 Facility** | **L&M Fabrication & Machine, Inc., 6814 Chrisphalt Drive, P. O. Box 124, Bath, PA 18014 http://www.lmfab.com/**<br>**6814 Chrisphalt Dr. Bath, PA 18014** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2006-001 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **LEHUA 15** | **Lehigh Utility Associates, Inc., 1300 New Market Ave., South Plainfield, NJ 07080** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | ----- |
| **LEVAN 15** | **Levan Associates, Inc., 4870 Raymond Court, Emmaus, PA 18049 http://levanfab.com/** | | |
| | Certified Structural Steel Fabricator<br>*Not approved to perform submerged arc welding.* | SBR | 2010-310 |
| **LITEL 15** | **Littell Steel Company, 100 Fallston Street, New Brighton, PA 15066 https://www.littellsteel.com/** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | ----- |
| **LMCIC 15** | **LMC Industrial Contractors, Inc., 9431 Foster Wheeler Road, Dansville, NY 14437 https://www.lmcic.com** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2018-192Q |
| **MACIND15** | **Maccabee Industrial, Inc., 113 Water Street, Belle Vernon, PA 15012 http://www.maccabeeindustrial.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2015-180Q |
| **MCIWK 15** | **MC Ironworks, Inc., P.O. Box 20431, Lehigh Valley, PA 18002-0431 http://www.mcironworks.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2006-023 |
| **MCMAN 15** | **J. A. McMahon, Inc., 649 Grant Street, Niles, OH 44446 http://www.jamcmahon.com/home.htm** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **MCS-1 15** | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/** | | |
| **Facility** | **271 Industrial Lane Alum Bank, PA 15221** | | |
| | Certified Structural Steel Fabricator | SBR | 2019-131Q |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **MICSE 15** | **Michelman Steel Enterprises, 3135 Schonersville Road, Bethlehem, PA 18017** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2012-239 |
| **MISUF 15** | **Missouri Fabricators, 3226 County Road 257, Fulton, MO 65251-3101 http://www.occimofab.com/** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2000-191 |
| **OAKIW 15** | **Oakdale Iron Works, Inc., 1 Oakdale Industrial Park Dr., P.O. Box 240, Oakdale, PA 15071** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2002-082 |
| **OHSTR 15** | **Ohio Structures, Inc., 4030 Boardman Canfield Road, Suite 200 D, Canfield, OH 44406 https://www.ohiostructures.com/** | | |
| **Plant** | **6120 Pricetown Road Berlin Center, OH 44401** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2018-043Q |
| **PELET 15** | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2001-094 |
| **PENNF 15** | **PennFab, Inc., 1431 Ford Rd., Bensalem, PA 19020 http://www.pennfab.com/** | | |
| | ***2nd Facility: 20 Steel Rd., Morrisville, PA 19067*** | | |
| | Certified Structural Steel Fabricator | SBR | 2015-154Q |
| **PIOBR 15** | **Pioneer Bridges, Division of Bailey Bridges, Inc., 119 40th. Street N.E., Fort Payne, AL 35967 http://pioneerbridges.com/** | | |
| | Certified Structural Steel Fabricator | IBR | 2010-215 |
| | *Not approved to perform submerged arc welding.* | | |
| **PMWI1 15** | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | |
| | Certified Structural Steel Fabricator | IBR, FCE | 2018-218Q |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

In accordance with Section 1105, the listed companies have been preapproved to fabricate items for PennDOT. Company approval to fabricate Penn DOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

ABR: Certified Bridge Fabricator - Advanced (Major) | CPT: Certified Component Manufacturer - Bridge | FCE: Fracture Critical Endorsement

IBR: Certified Bridge Fabricator - Intermediate (Major) | SBR: Certified Bridge Fabricator - Simple | AISC Certification

| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **PSFAB 15** | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2016-281 |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2012-248 |
| | *Approved to perform heat cambering and heat curving of rolled beams.* | | |
| **RCCFI 15** | **RCC Fabricators, Inc., 2035 Route 206 South, Southampton, NJ 18434** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2015-078Q |
| **RG-ST 15** | **R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2015-130Q |
| | *Approved to Perform Heat-Cambering and Heat Curving of Rolled Beams.* | | |
| | *Not approved to perform submerged arc welding. (Initial Approval Ref. No. 2011-045Q)* | | |
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | |
| | Certified Structural Steel Fabricator | IBR | 2015-031Q |
| | *Approved to perform heat cambering and heat curving of rolled beams.* | | |
| **SAFGD 15** | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/** | | |
| **Plant** | **220 Lincoln Avenue Pittsburgh, PA 15209** | | |
| | Certified Structural Steel Fabricator | SBR | 2013-074 |
| | *Approved to perform heat cambering and heat curving of rolled beams.* | | |
| **SCOUG 15** | **Scougal Rubber Corporation, 885 Denmark Dr. Ste. 103b, McCarran, NV 89434 http://www.scougalrubber.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2016-125 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **SEISM 15 Plant** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/**<br>**518 Progress Way Athens, TX 75751**<br>***(Formerly Seismic Energy Products, Inc.)*** | | |
| | Certified Structural Steel Fabricator | SBR | 2010-197 |
| **SELMC 15 Facility** | **Selco Manufacturing Corp., 3 Fairfield Crescent, West Caldwell, NJ 07006**<br>**3 Fairfield Crescent West Caldwell, NJ 07006** | | |
| | Certified Structural Steel Fabricator | SBR | 2017-139 |
| **SEMMW 15** | **Seibel Modern Manufacturing & Welding Corporation, 38 Palmer Place, Lancaster, NY 14086 http://www.seibelmodern.com/** | | |
| | Certified Structural Steel Fabricator | SBR | 2000-155 |
| **SHANE 15** | **Shane Felter Industries, P. O. Box 2022, Rt. 51, Uniontown, PA 15401 http://www.shanefelterindustries.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| **SPECF 15** | **Specialty Fab, Inc., 11950 South Avenue, North Lima, OH 44452 http://www.specialtyfab.com/** | | |
| | Certified Structural Steel Fabricator | Simple Steel Bridges (SBR) | 2005-003 |
| **STRBR 15** | **Canam Bridges US, Inc., a Canam Group Business, 386 River Road, Claremont, NH 03743 https://www.canambridges.com/**<br>***Formerly Structal Bridges, Div. of Canam Steel Corporation*** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2014-202 |
| | *Approved to fabricate high performance steel.* | | |
| **STRUS 15** | **Structures, USA, 333 Peterson Drive, P. O. Box 2281, Elizabethtown, KY 42701** | | |
| | Certified Structural Steel Fabricator | SBR | 2014-110 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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| Product | Name | AISC Category | Ref. No. |
|---|---|---|---|
| **STSSI 15** | **STS Steel, Inc., 301 Nott Street, Building 304, Schenectady, NY 12305 http://stssteel.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2010-161QB |
| **STUPP 15** | **Stupp Bridge Company, 445 Century Street, Bowling Green, KY 42101 http://www.stuppbridge.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | 2000-050 |
| | *Approved to fabricate high performance steel.* | | |
| **UMIC1 15** | **Union Metal Industries Corporation, 1432 Maple Avenue NE Canton, Ohio 44705, Canton, OH 44705** | | |
| | Certified Structural Steel Fabricator | SBR | 2018-177Q |
| **USBRG 15** | **U.S. Bridge, 201 Wheeling Avenue, P.O. Box 757, Cambridge, OH 43725 http://www.usbridge.com/** | | |
| | Certified Structural Steel Fabricator | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Not approved to perform submerged arc welding.* | | |
| **VALM1 15 Plant** | **Valmont Industries, Inc., 7002 N 288th Street, Valley, NE 68064 http://www.valmont.com/ Valley, NE 68064** | | |
| | Certified Structural Steel Fabricator | SBR | ----- |
| **VALM2 15 Plant** | **Valmont Industries, Inc., 58027 Charlotte Ave., Elkhart, IN 46517 http://www.valmont.com/ Elkhart, IN 46517** | | |
| | Certified Structural Steel Fabricator | CPT | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Structural Steel Fabricators (AISC)

**Last Revised: 8/18/2020**

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| | Product | Name | AISC Category | Ref. No. |
|---|---|---|---|---|
| **VETS1 15** | **Veritas Steel, 2800 Melby Street, Eau Claire, WI 54703** http://www.veritassteel.com/ | | | |
| **Plant** | **2800 Melby Street Eau Claire, WI 54703** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| | *Approved to fabricate high performance steel.* | | | |
| **VETS2 15** | **Veritas Steel, 3526 W. Sherman Street, Wausau, WI 54401** http://www.veritassteel.com/ | | | |
| **Plant** | **3526 W. Sherman Street Wausau, WI 54401** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| **WABST 15** | **Wabash Steel Company, LLC, 2007 Oliphant Drive, P.O. Box 117, Vincennes, IN 47591** http://www.wabashsteel.biz/ | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges with Fracture Critical Endorsement (CBR/F) | ----- |
| **WALPR 15** | **Walpar, Inc., 4200 Jefferson Ave., S.W., Birmingham, AL 35228** http://walpar.com/ | | | |
| | Certified Structural Steel Fabricator | | SBR | ----- |
| **WATSB 15** | **Watson Bowman Acme Corporation, 95 Pineview Drive, Amherst, NY 14228** https://wbacorp.com/ | | | |
| | Certified Structural Steel Fabricator | | SBR | ----- |
| **WHELU 15** | **Wheeler Lumber, LLC, 1151 Chaparral Ave., Shakopee, MN 55379** | | | |
| | Certified Structural Steel Fabricator | | Major Steel Bridges (CBR) | 2006-217 |
| | *Approved to fabricate pedestrian bridge only.* | | | |
| **WHICO 15** | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895** http://www.lcwhitford.com/ | | | |
| | Certified Structural Steel Fabricator | | SBR | 2017-121 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

The listed companies have been preapproved to paint items for PennDOT. Company approval to paint PennDOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ADVSC 15** | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | |
| | Certified Paint Shop | | 2014-132Q |
| **BCIND 15** | **B-C Industries, 12 Hawksley Rd., Oxford, MA 01540** | | |
| **Plant** | **12 Hawksley Rd. Oxford, MA 01540** | | |
| | Certified Paint Shop | | 2009-172Q |
| **BIGRB 15** | **Big R Bridge, P.O. Box 1290, Greeley, CO 80632 http://www.bigrbridge.com/en/home/default.aspx** | | |
| **Plant** | **25581 Hillman Highway Abingdon, VA 24210** | | |
| | Certified Paint Shop | | ----- |
| **BRIDS 15** | **Bridge Deck Solutions, LLC, 298 Cherry Hill Drive, Latrobe, PA 15650 http://bridgedecksolutions.com/** | | |
| | Certified Paint Shop | | ----- |
| | *Shop has SSPC-QP3 required for removal and disposal of hazardous coatings.* | | |
| **BROWD 15** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/** | | |
| | Certified Paint Shop | | ----- |
| **CANAM 15** | **Canam Steel Corporation, 4010 Clay Street, P.O. Box 285, Point of Rocks, MD 21777 http://www.canam-construction.com/en/** | | |
| | Certified Paint Shop | | 2013-228 |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| Product | Name | Ref. No. |
|---|---|---|
| **CBSSI 15** | **Casco Bay Steel Structures, Inc., One Wallace Avenue, South Portland, ME 04106** | |
| | Certified Paint Shop<br>*Casco Bay Steel Structures, Inc. is approved for the following two paint shop facilities:*<br>*1st Facility: One Wallace Avenue, South Portland, ME 04106*<br>*2nd Facility: 1156 Broadway, South Portland, ME 04106* | 2016-209Q |
| **CIAFC 15** | **Cianbro Fabrication & Coating Corporation, 605 Pittman Road, Baltimore, MD 21226 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx** | |
| | Certified Paint Shop | 2010-213 |
| **CIANB 15** | **Cianbro Fabrication & Coating Corporation, 3 Farm Lane, Georgetown, MA 01833 http://www.cianbro.com/ProjectsMarkets/FabricationCoating.aspx**<br>***Formerly Foster Precise Structural Products (FOSPR).*** | |
| | Certified Paint Shop | ----- |
| **COLOR 15** | **Color Works Painting, Inc., 251 Edward Avenue, New Castle, DE 19720 http://www.colorworkspainting.com/** | |
| | Certified Paint Shop | 2007-176Q |
| **CON13 15 Plant** | **Contech Engineered Solutions, a QUIKRETE Company, 5 Concourse Parkway, Suite 1900, Atlanta, GA 30328 http://www.conteches.com/**<br>**Fort Payne, AL** | |
| | Certified Paint Shop | 2001-154 |
| **CONSV 15** | **Con-Serv, Inc., 2963 Interstate Parkway, Brunswick, OH 44212 http://www.con-servinc.com/** | |
| | Certified Paint Shop | ----- |
| **CORNL 15** | **Cornell & Company, Inc., P. O. Box 807, Woodbury, NJ 08096 http://www.cornellcraneandsteel.com/** | |
| | Certified Paint Shop | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

The listed companies have been preapproved to paint items for PennDOT. Company approval to paint PennDOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **COSME 15** | **Cosmec Inc., 1501 Rocky Ridge Road, Athens, TX 75751 http://www.cosmecinc.com/** | | |
| | | Certified Paint Shop | ----- |
| **CPMP1 15** | **Carney's Point Metal Processing, Inc., 351 North Virginia Avenue, Carneys Point, NJ 08069** | | |
| | | Certified Paint Shop | 2016-102Q |
| **DECKI 15** | **Cameron Bridge Works LLC, 1051 South Main Street, Elmira, NY 14904 http://www.cameronbridgeworks.com/**<br>***Formerly Echo Bridge, Inc. / Decker Inc.*** | | |
| | | Certified Paint Shop | 2016-094Q |
| **DUNGV 15** | **Duncan Galvanizing, 69 Norman Street, Everatt, MA 02149 http://www.duncangalvanizing.com/** | | |
| | | Certified Paint Shop | 2017-243Q |
| **DURAB 15** | **Dura-Bond Steel Corporation, 2658 Puckety Drive, Export, PA 15632 http://www.dura-bond.com/** | | |
| | | Certified Paint Shop | ----- |
| **DURBD 15** | **Dura-Bond Pipe, LLC, 2716 South Front Street, Steelton, PA 17113 http://www.dura-bond.com/** | | |
| | | Certified Paint Shop<br>*Shop has SSPC-QP3 required for removal and disposal of hazardous coatings.* | 2014-179 |
| **EAGMC 15** | **Eagle Manufacturing Company, Inc., 13 Homonick Road, Colchester, CT 06415 http://eagle-mfg.com/Default.aspx** | | |
| | | Certified Paint Shop | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **EPACI 15 Plant** | **EPAcoat, Inc, 4500 Oakleys Lane, Richmond, VA 23231**<br>**4500 Oakleys Lane Richmond, VA 23231** | | |
| | Certified Paint Shop | | 2012-004Q |
| **ESAFE 15 Plant** | **Envirosafe Stripping, Inc., 785 Arch Street, Carnegie, PA 15106 https://envirosafeindustrial.com/**<br>**785 Arch Street Carnegie, PA 15106** | | |
| | Certified Paint Shop | | 2009-130Q |
| **FUTFAB15** | **Future Fabricating, 23450 Regency Park Drive, Warren, MI 48089 http://futurefabricating.com/** | | |
| | Certified Paint Shop | | 2018-273Q |
| **GATEW 15 Plant** | **Gateway Industrial Services, 805 Harrison Street, Allentown, PA 18103 http://www.gatewayis.com/index1.htm**<br>**805 Harrison Street Allentown, PA 18103** | | |
| | Certified Paint Shop | | 2013-139Q |
| **GRENR 15** | **Greiner Industries, Inc., 1650 Steel Way, Mount Joy, PA 17552 http://greinerindustries.com/** | | |
| | Certified Paint Shop | | ----- |
| **HABSI 15** | **Haberle Steel, Inc., 1946 East Cherry Lane, Souderton, PA 18964 http://haberlesteel.com/** | | |
| | Certified Paint Shop | | 2011-096 |
| **HASSC 15** | **Harris Structural Steel Company, Inc., 1640 New Market Ave., South Plainfield, NJ 07080 http://www.harrissteelco.com/** | | |
| | Certified Paint Shop | | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

The listed companies have been preapproved to paint items for PennDOT. Company approval to paint PennDOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **HEART 15** | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/**<br>***Formerly Brownsville Marine Products*** | | |
| | Certified Paint Shop | | 2018-220Q |
| **HIGH1 15** | **High Steel Structures, Inc., 1915 Old Philadelphia Pike,, P.O. Box 10008, Lancaster, PA 17605-0008 http://www.highsteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **HIGH2 15** | **High Steel Structures, Inc., 3501 W 4th Street, Williamsport, PA 17701 http://www.highsteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **HIR01 15** | **W&W \| AFCO STEEL Hirschfeld Division, 9035 West Market Street, Colfax, NC 27235 http://hirschfeld.wwafcosteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **HIR02 15** | **W&W \| AFCO STEEL Hirschfeld Division, Nash County Plant,, 241 Corbett Road, Nashville, NC 27856 http://hirschfeld.wwafcosteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **HIR03 15** | **W&W \| AFCO STEEL Hirschfeld Division, Abingdon Plant, 15083 Industrial Park Road, Bristol, VA 24201 http://hirschfeld.wwafcosteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **INDPS 15**<br>**Plant** | **Industrial Painting Specialists, 5858 152nd Street North, Hugo, MN 55038**<br>**5858 152nd Street North Hugo, MN 55038** | | |
| | Certified Paint Shop | | 2012-007Q |
| **INDS1 15** | **Industrial Steel Construction, Inc., 86 North Bridge Street, Gary, IN 46404 http://www.iscbridge.com/** | | |
| | Certified Paint Shop | | ----- |

# Section AISC: Certified Facilities

## AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **INDS2 15** | **Industrial Steel Construction, Inc., 6120 River Road, Hodgkins, IL 60525 http://www.iscbridge.com/** | | |
| | Certified Paint Shop | | 2008-094 |
| **KARDW 15** | **Kard Welding, Inc., 480 Osterloh Road, P. O. Box 124, Minster, OH 45865** | | |
| | Certified Paint Shop | | 2010-228Q |
| **KIN-1 15** | **Kinsley Manufacturing, 1100 East Princess Street, York, PA 17403 http://www.kinsleymanufacturing.com/** | | |
| | Certified Paint Shop | | ----- |
| **KIN-2 15** | **Kinsley Manufacturing, 3900 E. Market Street, York, PA 17402 http://www.kinsleymanufacturing.com/** | | |
| | Certified Paint Shop | | ----- |
| **L&MF2 15 Facility** | **L&M Fabrication and Machine, Inc., 6814 Chrisphalt Drive, Bath, PA 18014 http://www.lmfab.com/ 7230 Beth-Bath Pike Bath, PA 18014** | | |
| | Certified Paint Shop | | 2017-347Q |
| **LITEL 15** | **Littell Steel Company, 100 Fallston Street, New Brighton, PA 15066 https://www.littellsteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **MCIWK 15** | **MC Ironworks, Inc., P.O. Box 20431, Lehigh Valley, PA 18002-0431 http://www.mcironworks.com/** | | |
| | Certified Paint Shop | | 2006-022 |
| **MISUF 15** | **Missouri Fabricators, 3226 County Road 257, Fulton, MO 65251-3101 http://www.occimofab.com/** | | |
| | Certified Paint Shop | | ----- |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **NIAGC 15** | **Niagara Coatings Services, Inc., 8025 Quarry Road, Niagara Falls, NY 14304 http://niagaracoatings.com/** | | |
| | Certified Paint Shop<br>*Shop has SSPC-QP3 required for removal and disposal of hazardous coatings.* | | ----- |
| **OESTE 15 Plant** | **Oesterling's Sandblasting & Painting, 686 Glenwood Way, Butler, PA 16001 http://www.oesterlingssandblasting.com/**<br>**686 Glenwood Way Butler, PA 16001** | | |
| | Certified Paint Shop | | - |
| **OHSTR 15 Plant** | **Ohio Structures, Inc., 4030 Boardman Canfield Road, Suite 200 D, Canfield, OH 44406 https://www.ohiostructures.com/**<br>**6120 Pricetown Road Berlin Center, OH 44401** | | |
| | Certified Paint Shop<br>*Approved for Shop Application Metalizing.* | | 2001-168Q |
| **PDMB1 15** | **Veritas Steel, 2800 Melby Street, Eau Claire, WI 54703 http://www.veritassteel.com/** | | |
| | Certified Paint Shop | | ----- |
| **PELET 15** | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Certified Paint Shop | | 2012-029Q |
| **PIOBR 15** | **Pioneer Bridges, Division of Bailey Bridges, Inc., 119 40th. Street N.E., Fort Payne, AL 35967 http://pioneerbridges.com/** | | |
| | Certified Paint Shop | | 2010-215 |
| **PMWI1 15** | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | |
| | Certified Paint Shop | | 2018-218Q |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **POWSC 15** | **Powell Steel Corporation, 625 Baumgardner Road, Lancaster, PA 17603** | | |
| | Certified Paint Shop | | ----- |
| **REGIC 15** | **Regal Industrial Corporation, 1st Street, Donora, PA 15033 http://regalindustrial.com/** | | |
| | Certified Paint Shop<br>*Shop has SSPC-QP3 required for removal and disposal of hazardous coatings.*<br>*Approved for shop application of metalizing.* | | ----- |
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | |
| | Certified Paint Shop | | ----- |
| **SAFGD 15** | **Safety Guard Steel Fabricating Company, 113 Lincoln Avenue, Pittsburgh, PA 15209 http://www.safetyguardsteel.com/** | | |
| **Plant** | **220 Lincoln Avenue Pittsburgh, PA 15209** | | |
| | Certified Paint Shop | | ----- |
| **SCOUG 15** | **Scougal Rubber Corporation, 885 Denmark Dr. Ste. 103b, McCarran, NV 89434 http://www.scougalrubber.com/** | | |
| | Certified Paint Shop | | 2016-104 |
| **SECON 15** | **Secondary Service, 757 East Ferry, Buffalo, NY 14211** | | |
| **Plant** | **757 East Ferry Buffalo, NY 14211** | | |
| | Certified Paint Shop<br>*Shop has SSPC-QP3 required for removal and disposal of hazardous coatings.*<br>*Approved for shop application of metalizing.* | | - |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

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These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **SEISM 15 Plant** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/**<br>**518 Progress Way Athens, TX 75751**<br>***(Formerly Seismic Energy Products, Inc.)*** | | |
| | Certified Paint Shop | | 2010-199 |
| **SHANE 15** | **Shane Felter Industries, P. O. Box 2022, Rt. 51, Uniontown, PA 15401 http://www.shanefelterindustries.com/** | | |
| | Certified Paint Shop | | ----- |
| **SRTSS 15** | **SRT Sales and Services, LLC, 4936 Southway Street SW, Canton, OH 44706 http://www.srtsands.com/** | | |
| | Certified Paint Shop | | ----- |
| **STRBR 15** | **Canam Bridges US, Inc., a Canam Group Business, 386 River Road, Claremont, NH 03743 https://www.canambridges.com/**<br>***Formerly Structal Bridges, Div. of Canam Steel Corporation*** | | |
| | Certified Paint Shop | | 2014-015 |
| **STSSI 15** | **STS Steel, Inc., 301 Nott Street, Building 304, Schenectady, NY 12305 http://stssteel.com/** | | |
| | Certified Paint Shop | | 2010-161QB |
| **STUPP 15** | **Stupp Bridge Company, 445 Century Street, Bowling Green, KY 42101 http://www.stuppbridge.com/** | | |
| | Certified Paint Shop | | ----- |
| **TSFAB 15 Plant** | **Tuckerman Steel Fabricators, Inc., 256 Marginal St., East Boston, MA 02128**<br>**256 Marginal St. East Boston, MA 02128** | | |
| | Certified Paint Shop | | - |

## Section AISC: Certified Facilities

### AISC Department Register of Certified Paint Shops (AISC or SSPC)

**Last Revised: 8/27/2020**

The listed companies have been preapproved to paint items for PennDOT. Company approval to paint PennDOT projects must be received before commencement of any work, from the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA.

These plants have been pre-approved to paint items for PennDOT by the Structural Materials Engineer, Materials Testing Laboratory, Harrisburg, PA. The Paint Shops listed below are approved by either the AISC Sophisticated Paint Endorsement (SPE), Category P1 (enclosed shop category) Program or the Society For Protective Coatings (SSPC) QP3 Certification Program enclosed shop category.

| Product | Name | Ref. No. |
|---|---|---|
| **UNIIS 15** | **Universal Industrial Sales, P.O. Box 699, Plesant Grove, UT 84062 http://www.uisutah.com/uis2011/** | |
| | Certified Paint Shop | 2011-063QB |
| **USBRG 15** | **U.S. Bridge, 201 Wheeling Avenue, P.O. Box 757, Cambridge, OH 43725 http://www.usbridge.com/** | |
| | Certified Paint Shop | ----- |
| **VALM1 15 Plant** | **Valmont Industries, Inc., 7002 N 288th Street, Valley, NE 68064 http://www.valmont.com/ Valley, NE 68064** | |
| | Certified Paint Shop | ----- |
| **VETS1 15 Plant** | **Veritas Steel, 2800 Melby Street, Eau Claire, WI 54703 http://www.veritassteel.com/ 2800 Melby Street Eau Claire, WI 54703** | |
| | Certified Paint Shop | ----- |
| **VETS2 15 Plant** | **Veritas Steel, 3526 W. Sherman Street, Wausau, WI 54401 http://www.veritassteel.com/ 3526 W. Sherman Street Wausau, WI 54401** | |
| | Certified Paint Shop | ----- |
| **WABST 15** | **Wabash Steel Company, LLC, 2007 Oliphant Drive, P.O. Box 117, Vincennes, IN 47591 http://www.wabashsteel.biz/** | |
| | Certified Paint Shop | 2008-079Q |
| **WALPR 15** | **Walpar, Inc., 4200 Jefferson Ave., S.W., Birmingham, AL 35228 http://walpar.com/** | |
| | Certified Paint Shop | ----- |

## Section MACH: PennDOT Register of Certified Machine Shops

### MACH Certified Machine Shops

Last Revised: 9/14/2020

In accordance with Section 1105, listed shops are eligible to manufacturer and furnish indicated machining operations on products for the Department. All products must conform to PennDOT Specifications in Publication 408 and approved shop drawings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AASCO 15** | **A588 & A572 Steel Company, 785 Arch Street, Carnegie, PA 15106 http://www.a588a572steel.com/** | | |
| | Cutting Operation | | 2010-192Q |
| **ACCPR 15** | **AccuTrex Products, Inc., 112 Southpointe Blvd., Canonsburg, PA 15317 http://www.accutrex.com/** | | |
| | Bending Operation | | 2012-241Q |
| | Cutting Operation | | 2003-178Q |
| | Drilling or Punching Operation | | 2003-178Q |
| | Grinding Operation | | 2012-241Q |
| | Laser Cutting Operation | | 2012-241Q |
| | *Project by project approval by Chief Structural Materials Engineer. The Water Jet Cutting Operation approval is listed under the Washington, PA facility with a Supplier Code of ACCPS 15.* | | |
| **ACCPS 15 Facility** | **AccuTrex Products, Inc., 112 Southpointe Blvd., Canonsburg, PA 15317 http://www.accutrex.com/ 75 Museum Road Washington, PA 15301** | | |
| | Water Jet Cutting Operation | | 2012-240Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **ACKBAY15** | **Ackerman & Baynes, LLC, 4211 Erdman Ave., Baltimore, MD 21213 http://www.ackbay.com/** | | |
| | Bending Operation | | 2018-282Q |
| | Cutting Operation | | 2018-282Q |
| | Drilling or Punching Operation | | 2018-282Q |
| | Grinding Operation | | 2018-282Q |
| **ACMGS 15** | **Acme Grinding Services, Inc., 126 East Niagara St., Tonawanda, NY 14150** | | |
| | Cutting Operation | | 2015-198Q |
| | Drilling or Punching Operation | | 2015-198Q |
| | Grinding Operation | | 2001-049Q |

## Section MACH: PennDOT Register of Certified Machine Shops

### MACH Certified Machine Shops

Last Revised: 9/14/2020

In accordance with Section 1105, listed shops are eligible to manufacturer and furnish indicated machining operations on products for the Department. All products must conform to PennDOT Specifications in Publication 408 and approved shop drawings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ACMMW 15** | **Acme Machine & Welding Company, 46 Anchor Inn Road, P.O. Box 1099, Punxsutawney, PA 15767 http://www.acmemw.com/** | | |
| | Cutting Operation | | 2009-168Q |
| | Drilling or Punching Operation | | 2009-168Q |
| | Grinding Operation | | 2009-168Q |
| **ACRMI 15** | **ACR Machine, Inc., 21 N. 10th Ave., Coatesville, PA 19320-3382 http://www.acrmachine.com/** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **ADGFAB15** | **ADG Fabrication, 540 Sampson Street, New Castle, PA 16101** | | |
| | Bending Operation | | 2019-091Q |
| | Cutting Operation | | 2019-091Q |
| | Drilling or Punching Operation | | 2019-091Q |
| | Grinding Operation | | 2019-091Q |
| | Laser Cutting Operation | | 2019-091Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **ADVSC 15** | **Advantage Steel & Construction, LLC, 2300 South Noah Drive, Saxonburg, PA 16056 http://www.advsteel.com/** | | |
| | Bending Operation | | 2015-024Q |
| | Cutting Operation | | 2015-024Q |
| | Drilling or Punching Operation | | 2015-024Q |
| | Grinding Operation | | 2015-024Q |
| **ALTPS 15** | **Pechter, Inc. DBA Altoona Pipe and Steel, 1128 Ninth Ave., P.O. Box 112, Altoona, PA 16603 http://www.altoonapipeandsteel.com/** | | |
| | Bending Operation | | 2012-051Q |
| | Cutting Operation | | 2012-051Q |
| | Drilling or Punching Operation | | 2012-051Q |
| | Grinding Operation | | 2012-051Q |

## Section MACH: PennDOT Register of Certified Machine Shops

### MACH Certified Machine Shops

Last Revised: 9/14/2020

In accordance with Section 1105, listed shops are eligible to manufacturer and furnish indicated machining operations on products for the Department. All products must conform to PennDOT Specifications in Publication 408 and approved shop drawings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **AMCTC 15** | **A.M. Castle & Company, 26800 Miles Road, Bedford Heights, OH 44146 http://www.amcastle.com/** | | |
| | Bending Operation | | 2002-089Q |
| | Cutting Operation | | 2002-089Q |
| | Drilling or Punching Operation | | 2002-089Q |
| | Grinding Operation | | 2002-089Q |
| **AMEPB 15** | **American Pipe Bending, Inc., Dawson Road, Tulsa, OK 74110 http://americanpipebending.co/** | | |
| | Cutting Operation | | 2011-157Q |
| | Induction Bending Operation | | 2011-157Q |
| **APEX- 15** | **Apex Fabrication & Design, Inc., 7938 Boyertown Pike, Boyertown, PA 19512-8144 http://www.apexfab.com/** | | |
| | Bending Operation | | 2014-195QM |
| | Cutting Operation | | 2014-195QM |
| | Drilling or Punching Operation | | 2014-195QM |
| | Grinding Operation | | 2014-195QM |
| **ASC-1 15** | **Alro Steel Corporation, 1800 W. Willow Road, Lansing, MI 48915 http://www.alro.com/** | | |
| | Bending Operation | | 2007-123Q |
| | Cutting Operation | | 2007-123Q |
| | Drilling or Punching Operation | | 2007-123Q |
| | Grinding Operation | | 2007-123Q |
| **ASC-2 15** | **Alro Steel Corporation, 50 Ensminger Road, Tonawanda, NY 14150-6718 http://www.alro.com/** | | |
| | Cutting Operation | | 2007-197Q |
| | Grinding Operation | | 2007-197Q |

## Section MACH: PennDOT Register of Certified Machine Shops

### MACH Certified Machine Shops

Last Revised: 9/14/2020

In accordance with Section 1105, listed shops are eligible to manufacturer and furnish indicated machining operations on products for the Department. All products must conform to PennDOT Specifications in Publication 408 and approved shop drawings.

| | Product | Name | Ref. No. |
|---|---|---|---|
| **ASC-3 15** | **Alro Steel Corporation, 4787 State Road, Cuyahoga Falls, OH 44223-3555 http://www.alro.com/** | | |
| | Cutting Operation | | 2007-199Q |
| | Drilling or Punching Operation | | 2007-199Q |
| | Grinding Operation | | 2007-199Q |
| **ASC-4 15** | **Alro Steel Corporation, 3003 Airport Highway, Toledo, OH 43609 http://www.alro.com/** | | |
| | Bending Operation | | 2007-124Q |
| | Cutting Operation | | 2007-124Q |
| | Drilling or Punching Operation | | 2007-124Q |
| | Grinding Operation | | 2007-124Q |
| **ASC-5 15** | **Alro Steel Corporation, 140 Solar Drive, Imperial, PA 15126 http://www.alro.com/** | | |
| | Cutting Operation | | 2007-198Q |
| **ASC-6 15** | **Alro Steel Corporation, 5859 Alro Park Dr, Potterville, MI 48876-8795 http://www.alro.com/** | | |
| | Cutting Operation | | 2011-115Q |
| | Laser Cutting Operation | | 2015-076Q |
| **ASC-7 15** | **Alro Steel Corporation, 130 Keeney Lane, York, PA 17406 http://www.alro.com/** | | |
| | Cutting Operation | | 2013-196Q |
| **ASC-8 15** | **Alro Steel Corporation, 18881 Sherwood Avenue, Detroit, MI 48234 http://www.alro.com/** | | |
| | Water Jet Cutting Operation | | 2013-240Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |

## Section MACH: PennDOT Register of Certified Machine Shops

### MACH Certified Machine Shops

Last Revised: 9/14/2020

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **ATFAB 15** | **American Tank & Fabricating Co. (AT&F), 12314 Elmwood Avenue, Cleveland, OH 44111 http://www.atfco.com** | | |
| | Bending Operation | | 2015-152Q |
| | Cutting Operation | | 2015-152Q |
| | Drilling or Punching Operation | | 2015-152Q |
| | Grinding Operation | | 2015-152Q |
| | Laser Cutting Operation | | 2015-152Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| | Press Brake (Tubular) | | 2015-152Q |
| | Water Jet Cutting Operation | | 2015-152Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **ATLMW 15** | **Atlas Machining & Welding, Inc, 777 Smith Lane, Northampton, PA 18067 http://www.atlasmw.com/** | | |
| | Bending Operation | | 2010-292Q |
| | Cutting Operation | | 2010-292Q |
| | Drilling or Punching Operation | | 2010-292Q |
| | Grinding Operation | | 2010-292Q |
| **ATLRC 15** | **Atlanta Rod and Manufacturing Company, Inc., 144 Schokbeton Street, Lavonia, GA 30553 http://www.atlrod.com/** | | |
| | Cutting Operation | | 2015-002Q |
| **AXSAC 15** | **A & X Steel and Aluminum Company, 2825 Annapolis Road, Baltimore, MD 21230** | | |
| | Bending Operation | | 2013-155Q |
| **BACWM 15** | **Bachle Welding & Machine, Inc., 1685 Turkey Bottom Road, Muncy, PA 17756 http://www.bachlewelding.com/** | | |
| | Cutting Operation | | 2007-145Q |
| | Drilling or Punching Operation | | 2007-145Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **BARMM 15** | **Bartley Machine & Manufacturing Company, Inc., 35 Water Street, Amesbury, MA 01913 http://www.bartleymachine.com/** | | |
| | Bending Operation | | 2014-172Q |
| | Cutting Operation | | 2014-172Q |
| | Drilling or Punching Operation | | 2014-172Q |
| | Grinding Operation | | 2014-172Q |
| | Press Brake (Tubular) | | 2014-172Q |
| | Water Jet Cutting Operation | | 2014-172Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **BEAES 15** | **Bearing Engineered Solutions, 430 Morgan Ave., Akron, OH 44311 http://bearingengineeredsolutions.com/** | | |
| | Drilling or Punching Operation | | 2011-131Q |
| **BENNE 15** | **Bennett Bolt Works, Inc., 12 Elbridge Street, P. O. Box 922, Jordan, NY 13080 http://www.bennettboltworks.com/** | | |
| | Bending Operation | | 2015-144Q |
| | Cutting Operation | | 2015-144Q |
| | Drilling or Punching Operation | | 2015-144Q |
| | Grinding Operation | | 2015-144Q |
| | Laser Cutting Operation | | 2015-144Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **BENS1 15** | **Benjamin Steel Company, Inc., 777 Benjamin Dr., Springfield, OH 45502 http://www.benjaminsteel.com/** | | |
| | Cutting Operation | | 2010-189Q |
| | Drilling or Punching Operation | | 2010-189Q |
| **BENS2 15** | **Benjamin Steel Company, Inc., 15 Mansfield Ind. Pkwy., Mansfield, OH 44903 http://www.benjaminsteel.com/** | | |
| | Cutting Operation | | 2010-279Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **BENS3 15** | **Benjamin Steel Company, Inc., 1825 Kuntz Road, Dayton, OH 45404 http://www.benjaminsteel.com/** | | |
| | Bending Operation | | 2010-298Q |
| | Cutting Operation | | 2010-298Q |
| | Grinding Operation | | 2010-298Q |
| **BENS4 15** | **Benjamin Steel Company, Inc., 3111 St. Johns Road, Lima, OH 45804 http://www.benjaminsteel.com/** | | |
| | Bending Operation | | 2010-280Q |
| | Cutting Operation | | 2010-280Q |
| | Drilling or Punching Operation | | 2010-280Q |
| | Grinding Operation | | 2010-280Q |
| **BENTC 15** | **BendTec, Inc., 366 Garfield Avenue, Duluth, MN 55802 http://www.bendtec.com/** | | |
| | Bending Operation | | 2013-087QA |
| | Cutting Operation | | 2013-087QA |
| | Drilling or Punching Operation | | 2013-087QA |
| | Grinding Operation | | 2013-087QA |
| | Induction Bending Operation | | 2013-087QA |
| **BERMF 15** | **Bear Ridge Machine & Fabrication, Inc., 10 Eleanor Avenue, Frackville, PA 17931 http://brmf.net/** | | |
| | Bending Operation | | 2002-113Q |
| | Cutting Operation | | 2002-113Q |
| | Drilling or Punching Operation | | 2002-113Q |
| | Grinding Operation | | 2002-113Q |
| | Stud Welding of Embed Plates Only | | 2015-181Q |
| | Water Jet Cutting Operation | | 2015-177Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **BLALP 15** | **Black Lion Products, LLC, 3710 Henricks Road, Youngstown, OH 44515** | | |
| | Bending Operation | | 2014-213Q |
| | Cutting Operation | | 2014-213Q |
| | Drilling or Punching Operation | | 2014-213Q |
| | Grinding Operation | | 2014-213Q |
| **BREWF 15** | **S. R. Bressler Welding & Fabrication, 558 Lake Drive, Curwensville, PA 16833 http://www.srbressler.com/** | | |
| | Bending Operation | | 2013-119Q |
| | Cutting Operation | | 2013-119Q |
| | Drilling or Punching Operation | | 2013-119Q |
| | Grinding Operation | | 2013-119Q |
| **BRIDS 15** | **Bridge Deck Solutions, LLC, 298 Cherry Hill Drive, Latrobe, PA 15650 http://bridgedecksolutions.com/** | | |
| | Bending Operation | | 2011-190Q |
| | Cutting Operation | | 2011-190Q |
| | Drilling or Punching Operation | | 2011-190Q |
| | Grinding Operation | | 2011-190Q |
| **CBSSI 15** | **Casco Bay Steel Structures, Inc., One Wallace Avenue, South Portland, ME 04106** | | |
| | Bending Operation | | 2016-210 |
| | Cutting Operation | | 2016-210 |
| | Drilling or Punching Operation | | 2016-210 |
| | Grinding Operation | | 2016-210 |

*The following Casco Bay Steel Structures, Inc. facilities are approved for bending, cutting, drilling/punching, and grinding operations:*
*1st Facility: One Wallace Avenue, South Portland, ME 04106*
*2nd Facility: 1156 Broadway, South Portland, ME 04106*
*3rd Facility: 75 Spring Hill Road, Saco, ME 04072*

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **CEDLLC15** | **Cutting Edge Design, LLC, 46861 McDonald Street, East Liverpool, OH 43920 http://cuttingedgedesignllc.com/** | | |
| | Cutting Operation | | 2019-176Q |
| | Drilling or Punching Operation | | 2019-176Q |
| | Grinding Operation | | 2019-176Q |
| **CHASC 15** | **Chapel Steel Company, 191 South Keim Street, Pottstown, PA 19464 http://chapelsteel.com/** | | |
| | Cutting Operation | | 2001-196Q |
| | Drilling or Punching Operation | | 2001-196Q |
| **CONS0 15** | **Consolidated Steel Services, Inc., 632 Glendale Valley Blvd., Fallentimber, PA 16639 http://csteel.com/** | | |
| | Cutting Operation | | 2003-093Q |
| | Drilling or Punching Operation | | 2003-093Q |
| **CONSV 15** | **Con-Serv, Inc., 2963 Interstate Parkway, Brunswick, OH 44212 http://www.con-servinc.com/** | | |
| | Bending Operation | | 2006-060Q |
| | Cutting Operation | | 2006-060Q |
| | Drilling or Punching Operation | | 2006-060Q |
| | Grinding Operation | | 2006-060Q |
| **CUMPS 15** | **Pechter Inc. DBA Cumberland Pipe & Steel Supply, 11901 Upper Potomac Ind. Park, P.O. Box 1320, Cumberland, MD 21501** | | |
| | Bending Operation | | 2012-052Q |
| | Cutting Operation | | 2012-052Q |
| | Drilling or Punching Operation | | 2012-052Q |
| | Grinding Operation | | 2012-052Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **CUSMC 15** | **Custom Manufacturing Company, 5501 S. Lamar Street, Dallas, TX 75215 http://custommfgco.com/** | | |
| | Bending Operation | | 2010-328Q |
| | Cutting Operation | | 2010-328Q |
| | Drilling or Punching Operation | | 2010-328Q |
| | Grinding Operation | | 2010-328Q |
| **DAVMC 15** | **Davis Machine Company, 180 Front Street, Leetonia, OH 44431 http://www.davismachineco.com/** | | |
| | Bending Operation | | 2001-118Q |
| | Cutting Operation | | 2001-118Q |
| | Drilling or Punching Operation | | 2001-118Q |
| | Grinding Operation | | 2001-118Q |
| **DELT1 15 Facility** | **Delta Steel, Inc., 1585 Edgefield Way, Cedar Hill, TX 75104 https://www.deltasteel.com/ 1585 Edgefield Way Cedar Hill, TX 75104** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **DIVMA 15** | **Diversified Manufacturing, Inc, 410 Ohio St., Lockport, NY 14094 http://www.dmimfg.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **DMSMF 15** | **DMS Machining and Fabrication, P.O. Box 477, 10 Transport Drive, Barre, VT 05641 http://www.dmsmachine.com/** | | |
| | | Bending Operation | 2015-047Q |
| | | Cutting Operation | 2015-047Q |
| | | Drilling or Punching Operation | 2015-047Q |
| | | Grinding Operation | 2015-047Q |
| **DOLAN 15** | **Dolan's Welding & Steel Fabricating, 118 Venture Street, Johnstown, PA 15909-4224** | | |
| | | Bending Operation | 2017-167Q |
| | | Cutting Operation | 2017-167Q |
| | | Drilling or Punching Operation | 2017-167Q |
| | | Grinding Operation | 2017-167Q |
| | | Laser Cutting Operation | 2017-167Q |
| | | *Project by project approval by Chief Structural Materials Engineer.* | |
| **DSPSS 15** | **DS Pipe & Steel Supply LLC, P.O. Box 6367, 1301 Wicomico Street, Baltimore, MD 21230 http://www.dspipeandsteel.com** | | |
| **Facility** | **P.O. Box 6367 1301 Wicomico Street Baltimore, MD 21230** | | |
| | | Cutting Operation | 2016-067Q |
| | | Drilling or Punching Operation | 2016-067Q |
| | | Grinding Operation | 2016-067Q |
| | | Laser Cutting Operation | 2016-067Q |
| | | *Project by project approval by Chief Structural Materials Engineer.* | |
| **DVS-1 15** | **Delaware Valley Steel, 2249 Manor Ave, Upper Darby, PA 19082 http://www.delawarevalleysteel.com/** | | |
| | | Cutting Operation | 2017-355Q |
| | | Drilling or Punching Operation | 2017-355Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| DYNFC 15 | Dyna-Fab Corporation, 3893 South S.R. 263, West Lebanon, IN 47991 http://dyna-fab.org/ | | |
| | | Bending Operation | 2008-105Q |
| | | Cutting Operation | 2008-105Q |
| | | Drilling or Punching Operation | 2008-105Q |
| | | Grinding Operation | 2008-105Q |
| DYSNC 15 | Dyson Corporation, 53 Freedom Road, Painesville, OH 44077 http://www.dysoncorp.com/index.html | | |
| | | Bending Operation | ----- |
| | | Cutting Operation | ----- |
| | | Drilling or Punching Operation | ----- |
| | | Grinding Operation | ----- |
| EASCT 15 | East Coast Threading Company, 1520 Manatawny Road, P.O. Box 347, Pine Forge, PA 19548 http://eastcoastthreading.com/ | | |
| | | Cutting Operation | 2016-271Q |
| | | Drilling or Punching Operation | 2016-271Q |
| | | Grinding Operation | 2016-271Q |
| EASSM 15 | Eastern Shaft & Manufacturing, 160 Court St., Lancaster, NY 14086 | | |
| | | Bending Operation | 2000-330Q |
| | | Cutting Operation | 2000-330Q |
| | | Drilling or Punching Operation | 2000-330Q |
| | | Grinding Operation | 2000-330Q |
| EXC-0 15 | Excalibur Machine, LLC, 9723 Hwy 322, P.O. Box 605, Conneaut Lake, PA 16316 http://www.excaliburmachine.com/ | | |
| | | Bending Operation | 2013-122Q |
| | | Cutting Operation | 2013-122Q |
| | | Drilling or Punching Operation | 2013-122Q |
| | | Grinding Operation | 2013-122Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **EXC-1 15 Plant** | **Excalibur Machine, LLC, 9723 Hwy 322, P.O. Box 605, Conneaut Lake, PA 16316 http://www.excaliburmachine.com/ 9723 Hwy 322 P.O. Box 605 Conneaut Lake, PA 16316** | | |
| | Bending Operation | | 2013-170Q |
| | Cutting Operation | | 2013-170Q |
| | Drilling or Punching Operation | | 2013-170Q |
| | Grinding Operation | | 2013-170Q |
| **EXC-2 15 Plant** | **Excalibur Machine, LLC, 9723 Hwy 322, P.O. Box 605, Conneaut Lake, PA 16316 http://www.excaliburmachine.com/ 9723 Hwy 322 P.O. Box 605 Conneaut Lake, PA 16316** | | |
| | Bending Operation | | 2013-171Q |
| | Cutting Operation | | 2013-171Q |
| | Drilling or Punching Operation | | 2013-171Q |
| | Grinding Operation | | 2013-171Q |
| **EXTMF 15 Plant** | **Extreme Machine & Fabricating, Inc., 2340 Quality Lane, West Middlesex, PA 16159 http://extrememachine.net/ Hermitage, PA 16148** | | |
| | Bending Operation | | 2000-265Q |
| | Cutting Operation | | 2000-265Q |
| | Drilling or Punching Operation | | 2000-265Q |
| | Grinding Operation | | 2000-265Q |
| **FASCM 15** | **Fastenal Company Manufacturing Division, 1801 Theurer Blvd., Winona, MN 55987 https://www.fastenal.com/home.ex** | | |
| | Bending Operation | | 2000-342Q |
| | Cutting Operation | | 2000-342Q |
| | Drilling or Punching Operation | | 2000-342Q |
| | Grinding Operation | | 2000-342Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **FEMCO 15 Facility** | **FEMCO - Corporate Headquarters, 1000 Gamma Drive, Suite 600, Pittsburgh, PA 15238 http://femcomachine.com/**<br>**FEMCO - Pennsylvania 754 South Main Street Ext. Punxsutawney, PA 15767** | | |
| | Bending Operation | | 2019-141Q |
| | Cutting Operation | | 2019-141Q |
| | Drilling or Punching Operation | | 2019-141Q |
| | Grinding Operation | | 2019-141Q |
| **FILCD 15** | **Dennis Filges Company, Inc., 238 Center Drive, Chicora, PA 16025 http://www.filgesco.com/** | | |
| | Bending Operation | | 2012-060Q |
| | Cutting Operation | | 2012-060Q |
| | Drilling or Punching Operation | | 2012-060Q |
| **FLEMI 15** | **Fletcher Machine, Inc., 19537 U.S. Route 6, Weston, OH 43569 http://www.fletchermachine.com/** | | |
| | Bending Operation | | 2000-267Q |
| | Cutting Operation | | 2000-267Q |
| | Drilling or Punching Operation | | 2000-267Q |
| | Grinding Operation | | 2000-267Q |
| **FLORJ 15** | **R/J Florig Industrial Company, Inc., 910 Brook Road, Conshohocken, PA 19428 http://www.rjflorig.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **FROST 15** | **Frontier Steel Company, 4990 Grand Avenue, Newville Island, PA 15225 http://www.frontiersteel.com/** | | |
| | Bending Operation | | 2009-183Q |
| | Cutting Operation | | 2006-085Q |
| | Drilling or Punching Operation | | 2009-183Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **GILCR 15** | **Gilcher Machine LLC, 65671 Rabbit Road, Cambridge, OH 43725** | | |
| | Cutting Operation | | 2013-208Q |
| | Drilling or Punching Operation | | 2013-208Q |
| | Grinding Operation | | 2013-208Q |
| **GLOFA 15** | **Gortech Global Fabrication, 215 Beaver Drive, Dubois, PA 15801** | | |
| | Bending Operation | | 2009-015Q |
| | Cutting Operation | | 2009-015Q |
| | Drilling or Punching Operation | | 2009-015Q |
| | Grinding Operation | | 2009-015Q |
| **GRENR 15** | **Greiner Industries, Inc., 1650 Steel Way, Mount Joy, PA 17552 http://greinerindustries.com/** | | |
| | Bending Operation | | 2009-060Q |
| | Cutting Operation | | 2009-060Q |
| | Drilling or Punching Operation | | 2009-060Q |
| | Grinding Operation | | 2009-060Q |
| | Induction Bending Operation | | 2017-278Q |
| **HABSI 15** | **Haberle Steel, Inc., 1946 East Cherry Lane, Souderton, PA 18964 http://haberlesteel.com/** | | |
| | Bending Operation | | 2010-211Q |
| | Cutting Operation | | 2010-211Q |
| | Drilling or Punching Operation | | 2010-211Q |
| | Grinding Operation | | 2010-211Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| HALL1 15 | Hall Industries, Inc., Hall Equipment Division, 1 USS Industrial Park, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| HALL2 15 | Hall Industries, Inc., 514 Mecklem Lane, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | Bending Operation | | 2002-011Q |
| | Cutting Operation | | 2002-011Q |
| | Drilling or Punching Operation | | 2002-011Q |
| | Grinding Operation | | 2002-011Q |
| HALL3 15 | Hall Industries, Inc., HGH Facility, 606 2nd Street, Ellwood City, PA 16117 http://hallindustries.com/ | | |
| | Bending Operation | | 2017-029Q |
| | Cutting Operation | | 2017-029Q |
| | Drilling or Punching Operation | | 2017-029Q |
| | Grinding Operation | | 2017-029Q |
| HAYDN 15 | Haydon Bolts, Inc., 1181 Unity Street, Philadelphia, PA 19124 http://www.haydonbolts.com/ | | |
| | Bending Operation | | 2011-262Q |
| | Cutting Operation | | 2011-262Q |
| | Drilling or Punching Operation | | 2011-262Q |
| | Grinding Operation | | 2011-262Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| HEART 15 | **Heartland Fabrication, LLC, 1800 Paul Thomas Boulevard, Brownsville, PA 15417 https://www.hl-fabrication.com/** ***Formerly Brownsville Marine Products*** | | |
| | Bending Operation | | 2013-095Q |
| | Cutting Operation | | 2013-095Q |
| | Drilling or Punching Operation | | 2013-095Q |
| | Grinding Operation | | 2013-095Q |
| | Press Brake (Tubular) | | 2013-095Q |
| HERSA 15 | **Herr and Sacco, Incorporated, 1831 Auction Road, Manheim, PA 17545 http://www.herrandsacco.com/index.html** | | |
| | Bending Operation | | 2014-192Q |
| | Cutting Operation | | 2014-192Q |
| | Drilling or Punching Operation | | 2014-192Q |
| | Grinding Operation | | 2014-192Q |
| | Laser Cutting Operation *Project by project approval by Chief Structural Materials Engineer.* | | 2014-192Q |
| | Water Jet Cutting Operation *Project by project approval by Chief Structural Materials Engineer.* | | 2014-192Q |
| HIGH1 15 | **High Steel Structures, Inc., 1915 Old Philadelphia Pike,, P.O. Box 10008, Lancaster, PA 17605-0008 http://www.highsteel.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **HMSI1 15** | **HMS Industries, Inc., 1256 Route 22 Highway West, Blairsville, PA 15717 http://hmsindustries.com/** | | |
| | Bending Operation | | 2018-141Q |
| | Cutting Operation | | 2018-141Q |
| | Drilling or Punching Operation | | 2018-141Q |
| | Grinding Operation | | 2018-141Q |
| **HREVA 15** | **HR Evans Steel Company, 193 N. James Street, East Palestine, OH 44413 http://www.hrevans.com/** | | |
| | Cutting Operation | | 2014-003Q |
| | Drilling or Punching Operation | | 2014-003Q |
| | Grinding Operation | | 2014-003Q |
| **HWN-1 15** | **H. W. Nicholson Welding and Manufacturing Inc., 3899 Route 66, Apollo, PA 15613** | | |
| | Bending Operation | | 2016-270Q |
| | Cutting Operation | | 2016-270Q |
| | Drilling or Punching Operation | | 2016-270Q |
| | Grinding Operation | | 2016-270Q |
| **IMHPI 15** | **IMH Products, Inc, 1121 East 46th Street, Indianapolis, IN 46205 http://www.imh.com/** | | |
| | Bending Operation | | 2013-113Q |
| | Cutting Operation | | 2013-113Q |
| | Drilling or Punching Operation | | 2013-113Q |
| | Grinding Operation | | 2013-113Q |
| **INDGS 15** | **Industrial Gasket & Shim Company, Inc., 200 Country Club Rd., P.O. Box 368, Meadow Lands, PA 15347 http://www.igsind.com/** | | |
| | Bending Operation | | 2011-148Q |
| | Drilling or Punching Operation | | 2011-148Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **INFR2 15** | **Infra-Metals Company, 1 Sturgills Way, New Boston, OH 45662** | | |
| | Cutting Operation | | 2016-150Q |
| | Drilling or Punching Operation | | 2016-150Q |
| **INFRA 15** | **Infra-Metals Company, 1900 Bessemer Road, Petersburg, VA 23805 http://www.infra-metals.com/** | | |
| | Bending Operation | | 2012-190Q |
| | Cutting Operation | | 2012-190Q |
| | Drilling or Punching Operation | | 2012-190Q |
| | Grinding Operation | | 2012-190Q |
| | Press Brake (Tubular) | | 2012-190Q |
| **INTSF 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411 https://interstatesafetyservice.com/** | | |
| | Bending Operation | | 2015-006Q |
| | Cutting Operation | | 2015-006Q |
| **INTSS 15** | **Interstate Safety Service, Inc., 1301 Winola Road, Clarks Summit, PA 18411** | | |
| | Bending Operation | | 2015-006Q |
| | Cutting Operation | | 2015-006Q |
| **J&RS2 15** | **J & R Slaw, Inc., 438 Riverview Road, Lehighton, PA 18235 http://www.slawprecast.com/** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **JERMA 15** | **Jerl Machine, Inc., 11140 Avenue Road, Perrysburg, OH 43551 http://jerl.com/** | | |
| | Bending Operation | | 2000-266Q |
| | Cutting Operation | | 2000-266Q |
| | Drilling or Punching Operation | | 2000-266Q |
| | Grinding Operation | | 2000-266Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **JHBTS 15** | **J. H. Botts, Inc., 253 East Bruce St., Joliet, IL 60432 http://www.jhbotts.com/products.htm** | | |
| | | Bending Operation | 2010-109Q |
| | | Cutting Operation | 2010-109Q |
| | | Drilling or Punching Operation | 2010-109Q |
| | | Grinding Operation | 2010-109Q |
| **KARDW 15** | **Kard Welding, Inc., 480 Osterloh Road, P. O. Box 124, Minster, OH 45865** | | |
| | | Bending Operation | 2010-228Q |
| | | Cutting Operation | 2010-228Q |
| | | Drilling or Punching Operation | 2010-228Q |
| | | Grinding Operation | 2010-228Q |
| **KDM-1 15** | **K.D.M. Die Company, Inc., 620 Elk Street, Buffalo, NY 14210-2237 http://www.kdmdie.com/** | | |
| | | Cutting Operation | 2019-020Q |
| | | Drilling or Punching Operation | 2019-020Q |
| | | Grinding Operation | 2019-020Q |
| **KELBR 15** | **Kellner Brothers, Inc., 222 Chicago St., Buffalo, NY 14204-2249 http://kellnerbrosinc.com/** | | |
| | | Cutting Operation | 2003-115Q |
| | | Drilling or Punching Operation | 2003-115Q |
| **KERMA 15** | **Kercher Machine Works, 920 Mechanic St., Lebanon, PA 17042 http://www.kercherindustries.com/** | | |
| | | Bending Operation | ----- |
| | | Cutting Operation | ----- |
| | | Drilling or Punching Operation | ----- |
| | | Grinding Operation | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **KEYSN 15** | **Keystone North, Inc., 310 South Main Street, Mansfield, PA 16933 http://keystonewelding.com/** | | |
| | Bending Operation | | 2015-190Q |
| | Cutting Operation | | 2015-190Q |
| | Drilling or Punching Operation | | 2015-190Q |
| | Grinding Operation | | 2015-190Q |
| **KLENY 15** | **Klein Steel of Western New York, 1050 Military Road, Buffalo, NY 14217** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **KLESS 15** | **Klein Steel Service, Inc., 105 Vanguard Parkway, Rochester, NY 14606 http://www.kleinsteel.com/** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **KLOMC 15** | **Kloeckner Metals Corporation, 2005 Grassland Parkway, Alpharetta, GA 30004 http://www.kloecknermetals.com/Home.aspx** | | |
| | Cutting Operation | | 2001-126Q |
| | Drilling or Punching Operation | | 2001-126Q |
| **KLOMT 15** | **Kloeckner Metals - Temtco Steel Division, 500 Manchester Court, York, PA 17408 http://www.kloecknermetals.com/** | | |
| | Bending Operation | | 2014-226Q |
| | Cutting Operation | | 2014-226Q |
| | Drilling or Punching Operation | | 2014-226Q |
| | Grinding Operation | | 2014-226Q |
| | Laser Cutting Operation | | 2014-226Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |

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|---|---|---|---|
| **KOTMP 15** | **Kottler Metal Products, 1595 Lost Nation Road, Willoughby, OH 44094-4633 http://www.kottlermetal.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| **LAMTC 15** | **Lawruk Machine & Tool Company, 302 East 6th Ave., Altoona, PA 16602 http://lawrukmachine.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **LOGII 15** | **Logue Industries, Inc., 120 South Arch St., Montoursville, PA 17754 http://logueind.com/** | | |
| | Bending Operation | | 2000-334Q |
| | Cutting Operation | | 2000-334Q |
| | Drilling or Punching Operation | | 2000-334Q |
| | Grinding Operation | | 2000-334Q |
| **LPRPR 15** | **LPR Precision, 108 Rome Street, Farmingdale, NY 11735 http://lprprecision.com/** | | |
| | Bending Operation | | 2014-034Q |
| | Drilling or Punching Operation | | 2014-034Q |
| | Grinding Operation | | 2014-034Q |
| | Laser Cutting Operation<br>*Project by project approval by Chief Structural Materials Engineer.* | | 2014-034Q |
| | Water Jet Cutting Operation<br>*Project by project approval by Chief Structural Materials Engineer.* | | 2014-034Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| LUBTC 15 | Lubrite Technologies, 18649 Brake Shoe Road, Meadville, PA 16335-0458 http://www.usbfmi.com/lube1.htm | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| MADDEN15 | Madden Bolt Corporation, 13420 Hempstead Road, Houston, TX 77040 https://maddenbolt.com/ | | |
| | Bending Operation | | 2019-104Q |
| | Cutting Operation | | 2019-104Q |
| | Drilling or Punching Operation | | 2019-104Q |
| | Grinding Operation | | 2019-104Q |
| MAFES 15 | The Machine Fabricating and Weight Equipment Shop, 267 Coolspring Street, Uniontown, PA 15401 http://machfabshop.com/ | | |
| | Bending Operation | | 2000-231Q |
| | Cutting Operation | | 2000-231Q |
| | Drilling or Punching Operation | | 2000-231Q |
| | Grinding Operation | | 2000-231Q |
| MARII 15 | Marstrand Industries, Inc., 12 Rutgers Road, P.O. Box 44089, Pittsburgh, PA 15205 http://www.marstrand.us/ | | |
| | Bending Operation | | 2001-214Q |
| | Cutting Operation | | 2001-214Q |
| | Drilling or Punching Operation | | 2001-214Q |
| | Grinding Operation | | 2001-214Q |
| MARKL 15 | Marmon/Keystone, LLC, 4521 Willow Parkway, Cleveland, OH 44125 https://www.marmonkeystone.com/ecomm/servlet/HomepageServlet | | |
| | Bending Operation | | 2010-195Q |
| | Cutting Operation | | 2010-195Q |
| | Grinding Operation | | 2010-195Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **MARMF 15** | **Martelli's Metal Fabrication, 4 Louise Drive, Ivyland, PA 18974 http://martellismetalfab.com/** | | |
| | Bending Operation | | 2015-001Q |
| | Cutting Operation | | 2015-001Q |
| | Drilling or Punching Operation | | 2015-001Q |
| | Grinding Operation | | 2015-001Q |
| **MCS-1 15 Facility** | **Mission Critical Solutions, LLC, 271 Industrial Lane, Alum Bank, PA 15221 https://www.missioncriticalsolutions.com/ 271 Industrial Lane Alum Bank, PA 15221** | | |
| | Bending Operation | | 2019-132Q |
| | Cutting Operation | | 2019-132Q |
| | Drilling or Punching Operation | | 2019-132Q |
| | Grinding Operation | | 2019-132Q |
| **MDLM- 15** | **MDL Manufacturing Industries, Inc., 15 Commerce Court, Bedford, PA 15522 http://www.mdlmanufacturing.com/** | | |
| | Bending Operation | | 2014-059Q |
| | Cutting Operation | | 2014-059Q |
| | Drilling or Punching Operation | | 2014-059Q |
| | Grinding Operation | | 2014-059Q |
| | Laser Cutting Operation<br>*Project by project approval by Chief Structural Materials Engineer.* | | 2014-059Q |
| | Press Brake (Tubular) | | 2014-059Q |
| **MET-1 15** | **Metals USA, 50 Cabot Blvd., Langhorne, PA 19047 http://www.metalsusa.com/** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **MET-2 15** | **Metals USA, 81 Century Drive, Ambridge, PA 15003 http://www.metalsusa.com/** | | |
| | Cutting Operation | | 2002-077Q |
| | Drilling or Punching Operation | | 2002-077Q |
| **MET-3 15** | **Metals USA, 6991 Freedom Avenue, N.W., North Canton, OH 44720 http://www.metalsusa.com/** | | |
| | Cutting Operation | | 2003-103Q |
| | Drilling or Punching Operation | | 2003-103Q |
| **MET-4 15** | **Metals USA, 10 Tower Road, Seekonk, MA 02771 http://www.metalsusa.com/** | | |
| | Cutting Operation | | ----- |
| **MET-5 15** | **Metals USA, 1900 Kittyhawk Avenue, Building 57, Philadelphia, PA 19112 http://www.metalsusa.com/** | | |
| | Bending Operation | | 2001-026Q |
| | Cutting Operation | | 2001-026Q |
| | Press Brake (Tubular) | | 2001-026Q |
| **MET-6 15** | **Metals USA, 75 Stonewood Road, York, PA 17402 http://www.metalsusa.com/** | | |
| | Cutting Operation | | 2010-247Q |
| **MET-7 15** | **Metals USA, 201 South Washington Street, Pottstown, PA 19047 http://www.metalsusa.com/** | | |
| | Cutting Operation | | 2015-040Q |
| | Drilling or Punching Operation | | 2015-040Q |
| **MGLOS 15 Facility** | **M. Glosser & Sons, Inc., 72 Messenger Street, Johnstown, PA 15902 https://www.glossersteel.com/ Glosser Steel 347 Pomroys Drive Windber, PA 15963** | | |
| | Cutting Operation | | 2012-219Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **MGLOSB15 Facility** | **M. Glosser & Sons, Inc., 72 Messenger Street, Johnstown, PA 15902 https://www.glossersteel.com/ Glosser Steel 3802 Industrial Park Road Camp Hill, PA 17011** | | |
| | Cutting Operation | | 2020-030Q |
| **MIDATL15** | **Mid-Atlantic Steel, LLC, 1144 River Road, New Castle, DE 19720** | | |
| | Bending Operation | | 2017-327Q |
| | Cutting Operation | | 2017-327Q |
| | Drilling or Punching Operation | | 2017-327Q |
| | Grinding Operation | | 2017-327Q |
| **MILMF 15** | **Miller Metal Fabrication, Inc., 16356 Sussex Hwy, P.O. Box 249, Bridgeville, DE 19933 http://www.millermetal.com/** | | |
| | Bending Operation | | 2007-096Q |
| | Cutting Operation | | 2007-096Q |
| | Drilling or Punching Operation | | 2007-096Q |
| | Grinding Operation | | 2007-096Q |
| **MINERD15** | **Minerd & Sons, Inc., 101 Red Nine Lane, Lawrence, PA 15055 http://www.minerdandsons.com/** | | |
| | Bending Operation | | 2019-139Q |
| | Cutting Operation | | 2019-139Q |
| | Drilling or Punching Operation | | 2019-139Q |
| | Grinding Operation | | 2019-139Q |
| **MORGA 15** | **Morgan's Welding Inc. (Neenah Enterprises, Inc.), 1941 Camp Swatara Road, Myerstown, PA 17067 http://www.nfco.com/** | | |
| | Bending Operation | | 2018-005Q |
| | Cutting Operation | | 2018-005Q |
| | Drilling or Punching Operation | | 2018-005Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **MTGFAB15** | **Manufacturing Technology Group, Inc., 85 Servistar Industrial Way, Westfield, MA 01085 http://www.mtgfab.com** | | |
| | Bending Operation | | 2016-001Q |
| | Cutting Operation | | 2015-170Q |
| | Drilling or Punching Operation | | 2016-001Q |
| | Grinding Operation | | 2015-170Q |
| | Laser Cutting Operation | | 2015-170Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| | Water Jet Cutting Operation | | 2016-001Q |
| | *Project by project approval by Chief Structural Materials Engineer* | | |
| **MUNMT 15** | **Muncy Machine & Tool Company, Inc., P. O. Box 205, Muncy, PA 17756 http://www.muncyindustries.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **NAMCO 15** | **Namasco Corporation, 3835 Singleton Blvd., Dallas, TX 75212** | | |
| | Cutting Operation | | 2011-140Q |
| | Drilling or Punching Operation | | 2011-140Q |
| | Grinding Operation | | 2011-140Q |
| **NIABR 15** | **Niagara Bridge & Rail, 2212 Cory Drive, Sanborn, NY 14132 http://nbrfab.com/** | | |
| | Bending Operation | | 2009-076Q |
| | Cutting Operation | | 2009-076Q |
| | Drilling or Punching Operation | | 2009-076Q |
| | Grinding Operation | | 2009-076Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **NIAMC 15** | **Niagara Manufacturing Company, 2725 West 17th St., Erie, PA 16505 http://niagaramfg.com/** | | |
| | Bending Operation | | 1999-169Q |
| | Cutting Operation | | 1999-169Q |
| | Drilling or Punching Operation | | 1999-169Q |
| | Grinding Operation | | 1999-169Q |
| **NIVERT15** | **Nivert Metal Supply, Inc., 1100 Marshwood Road, Throop, PA 18512 https://www.nivertmetal.com/** | | |
| | Cutting Operation | | 2017-273Q |
| **OLYCD 15** | **Olympic Steel, Cleveland Division, 5080 Richmond Road, Bedford Heights, OH 44146 http://www.olysteel.com/** | | |
| | Cutting Operation | | 2003-057Q |
| | Drilling or Punching Operation | | 2003-057Q |
| **ONL-1 15** | **O'Neal Steel LLC, 2975 Duss Ave., Ambridge, PA 15003 https://www.onealsteel.com/locations/pittsburgh-pa/** | | |
| | Bending Operation | | 2000-309Q |
| | Cutting Operation | | 2000-309Q |
| | Drilling or Punching Operation | | 2000-309Q |
| | Grinding Operation | | 2000-309Q |
| **ONL-2 15** | **O'Neal Steel LLC, 11228 Hwy 14 East, New Haven, IN 46774 https://www.onealsteel.com/locations/fort-wayne-in/** | | |
| | Cutting Operation | | 2011-109Q |
| | Grinding Operation | | 2011-109Q |
| **ONL-5 15** | **O'Neal Steel LLC, 4005 East I-30, Grand Prairie, TX 75050 https://www.onealsteel.com/locations/dallas-tx/** | | |
| | Cutting Operation | | 2011-199 |
| | Grinding Operation | | 2011-199 |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **ONL-6 15** | **O'Neal Steel LLC, 841 N Michigan Road, Shelbyville, IN 46176 https://www.onealsteel.com/locations/shelbyville-in/** | | |
| | Bending Operation | | 2019-201Q |
| | Cutting Operation | | 2019-201Q |
| | Laser Cutting Operation | | 2019-201Q |
| | *Project by project approval by Chief Structural Materials Engineer.* | | |
| **PARTD 15** | **Paragon Tool & Die, 15439 Akron-Canfield Road, P.O. Box 102, Berlin Ctr., OH 44401 https://www.paragontd.com/** | | |
| | Drilling or Punching Operation | | 2009-005Q |
| | Grinding Operation | | 2009-005Q |
| **PEIWF 15** | **Peirce Welding & Fabricating, 170 Airport Rd., P.O. Box 369, Bethel, PA 19507** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **PELET 15** | **Pelet Welding, Inc., 19 North 12th Avenue, Coatesville, PA 19320 http://peletwelding.com/** | | |
| | Bending Operation | | 2012-109Q |
| | Cutting Operation | | 2012-109Q |
| | Drilling or Punching Operation | | 2012-109Q |
| | Grinding Operation | | 2012-109Q |
| | Water Jet Cutting Operation | | 2012-109QB |
| **PERPV 15** | **Performance Processing Venture, LLC, 660 Martin Luther King Jr. Blvd., Farrell, PA 16121** | | |
| | Cutting Operation | | 2009-136Q |
| | Drilling or Punching Operation | | 2009-136Q |

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|---|---|---|---|
| **PKMAC 15** | **P. K. Machine, 9 Brooks Ave., Willow Street, PA 17584 https://www.pkmachine.com/** | | |
| | Bending Operation | | 2001-165Q |
| | Cutting Operation | | 2001-165Q |
| | Drilling or Punching Operation | | 2001-165Q |
| | Grinding Operation | | 2001-165Q |
| **PMWI1 15** | **Pleasant Mount Welding, Inc., 45 Dundaff Street, Carbondale, PA 18407 https://www.pmwi.net/** | | |
| | Bending Operation | | 2018-218Q |
| | Cutting Operation | | 2018-218Q |
| | Drilling or Punching Operation | | 2018-218Q |
| | Grinding Operation | | 2018-218Q |
| **PREC1 15** | **Precision International, 435 Burt Street, Sistersville, WV 26175 http://precisioninc.net/** | | |
| | Bending Operation | | 2016-204Q |
| | Cutting Operation | | 2016-204Q |
| | Drilling or Punching Operation | | 2016-204Q |
| | Grinding Operation | | 2016-204Q |
| **PRESS 15** | **Precision Steel Services Inc., 31 E. Sylvania Ave., Toledo, OH 43616 http://precision-steel.com/** | | |
| | Cutting Operation | | ----- |
| **PRETC 15** | **Premium Tool Company, Inc., 1082 Penn Avenue, Jersey Shore, PA 17740** | | |
| | Cutting Operation | | 2002-043Q |
| | Drilling or Punching Operation | | 2002-043Q |
| **PROMA 15** | **Professional Machine, 518 Maple Street, Holyoke, MA 01040 http://www.promach.biz/** | | |
| | Drilling or Punching Operation | | 2013-015Q |
| | Grinding Operation | | 2013-015Q |

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|---|---|---|---|
| **PRSNY 15** | **Cataract Steel Industries, 3774 Lakeshore Rd., Blasdell, NY 14219 http://www.cataractsteel.com** ***(Formerly: Private Systems of WNY, Inc.)*** | | |
| | Drilling or Punching Operation | | 2010-177Q |
| | Grinding Operation | | 2010-177Q |
| **PSFAB 15** | **Penn Steel Fabrication, Inc., 805 N. Wilson Ave, Unit 206, Bristol, PA 19007** | | |
| | Bending Operation | | 2016-281 |
| | Cutting Operation | | 2016-281 |
| | Drilling or Punching Operation | | 2016-281 |
| | Grinding Operation | | 2016-281 |
| **PTP-1 15** | **Pro Tech Precision LLC, 11 Saint Joseph Street, Lancaster, NY 14086 https://www.protechprecisionllc.com/** | | |
| | Bending Operation | | 2019-196Q |
| | Cutting Operation | | 2019-196Q |
| | Drilling or Punching Operation | | 2019-196Q |
| | Grinding Operation | | 2019-196Q |
| **QUABF 15** | **Quality Bridge and Fab, Inc., 3608 Sharon Road, West Middlesex, PA 16159 http://www.qualitybridgeandfab.com/** | | |
| | Bending Operation | | 2013-049Q |
| | Cutting Operation | | 2013-049Q |
| | Drilling or Punching Operation | | 2013-049Q |
| | Grinding Operation | | 2013-049Q |
| **QUAFC 15** | **Quality Flame Cutting, Inc., 828 Main St., Fremont, NH 03841 http://www.qfcflame.com/** | | |
| | Cutting Operation | | 2008-179Q |
| | Grinding Operation | | 2008-179Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| RANIN 15 | Ranor, Inc., 1 Bella Drive, Westminster, MA 01473 http://www.ranor.com/ | | |
| | Bending Operation | | 2001-151Q |
| | Cutting Operation | | 2001-151Q |
| | Drilling or Punching Operation | | 2001-151Q |
| | Grinding Operation | | 2001-151Q |
| REYMC 15 | Reynolds Manufacturing Company, Inc., 621 Railroad Ave., Avonmore, PA 15618 http://www.reynoldsmfg.com/ | | |
| | Bending Operation | | 2013-084Q |
| | Cutting Operation | | 2013-084Q |
| | Drilling or Punching Operation | | 2013-084Q |
| | Grinding Operation | | 2013-084Q |
| RG-ST 15 | R. G. Steel Corporation, P. O. Box 356, Route 551, Pulaski, PA 16143 http://rgsteel.com/ | | |
| | Bending Operation | | 2008-002Q |
| | Cutting Operation | | 2008-002Q |
| | Drilling or Punching Operation | | 2008-002Q |
| | Grinding Operation | | 2008-002Q |
| RICMT 15 | Richard's Machine Tool Company, Inc., 3753 Walden Ave., Lancaster, NY 14086 http://richardscnc.com/ | | |
| | Bending Operation | | 2000-312Q |
| | Cutting Operation | | 2000-312Q |
| | Drilling or Punching Operation | | 2000-312Q |
| | Grinding Operation | | 2000-312Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **RP-MA 15** | **RPS Machinery Sales, Inc., 175 Old Route 220 Highway, P. O. Box 507, Jersey Shore, PA 17740 http://www.rpsmachinery.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **RYER1 15 Facility** | **Ryerson Inc. (Joseph T Ryerson & Son), 227 West Monroe Street, 27th Floor, Chicago, IL 60606 http://www.ryerson.com/ 43 Century Drive Ambridge, PA 15003** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **RYER2 15 Facility** | **Ryerson Inc. (Joseph T Ryerson & Son), 227 West Monroe Street, 27th Floor, Chicago, IL 60606 http://www.ryerson.com 3915 Walden Avenue Lancaster, NY 14086** | | |
| | Cutting Operation | | 2000-233Q |
| | Drilling or Punching Operation | | 2000-233Q |
| **RYER3 15 Facility** | **Ryerson Inc. (Joseph T Ryerson & Son), 227 West Monroe Street, 27th Floor, Chicago, IL 60606 http://www.ryerson.com/ 555 North Yearling Road Columbus, OH 43213** | | |
| | Cutting Operation | | 2015-052 |
| | Drilling or Punching Operation | | 2015-052 |
| | Grinding Operation | | 2015-052 |
| **RYER4 15 Facility** | **Ryerson Inc. (Joseph T Ryerson & Son), 227 West Monroe Street, 27th Floor, Chicago, IL 60606 http://www.ryerson.com Ryerson Philadelphia, 20 Steel Road South Morrisville, PA 19067** | | |
| | Cutting Operation | | 2016-050Q |
| | Grinding Operation | | 2016-050Q |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **RYER5 15 Facility** | **Ryerson Inc. (Joseph T Ryerson & Son), 227 West Monroe Street, 27th Floor, Chicago, IL 60606 http://www.ryerson.com 920 Old Brunerstown Road Shelbyville, KY 40065-9132** | | |
| | Cutting Operation | | 2016-133Q |
| | Grinding Operation | | 2016-133Q |
| **SABAL 15** | **Sabre Alloys, 6039 Thomas Road, Building B, Houston, TX 77041 http://www.sabrealloys.com/Index.htm** | | |
| | Bending Operation | | 2012-117Q |
| | Cutting Operation | | 2012-117Q |
| | Drilling or Punching Operation | | 2012-117Q |
| | Grinding Operation | | 2012-117Q |
| **SALFL 15** | **Salescorp of Florida, Inc., 3402C N.E. 37th Place, Wildwood, FL 34785 http://salescorpusa.com/** | | |
| | Fabrication of bearing and beveled plates only | | 2011-204Q |
| | Fabrication of JJ-Hook connector plate assembly only | | 2011-204Q |
| **SAMPS 15** | **Samuel Plate Sales, 250 Lake Ave., Blasdell, NY 14219** | | |
| | Cutting Operation | | 2000-318Q |
| | Drilling or Punching Operation | | 2000-318Q |
| **SCHMC 15** | **Scheirer Machine Company, Inc., 3200 Industrial Blvd., Bethel Park, PA 15120-0670 http://scheirer.com/** | | |
| | Bending Operation | | 2000-192Q |
| | Cutting Operation | | 2000-192Q |
| | Drilling or Punching Operation | | 2000-192Q |
| | Grinding Operation | | 2000-192Q |

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|---|---|---|---|
| **SCHMI 15** | **Schaefer Machine, Inc., 727 Robinson Hwy, Route 980, McDonald, PA 15071 http://www.schaeferco.com/** | | |
| | Bending Operation | | 2000-154Q |
| | Cutting Operation | | 2000-154Q |
| | Drilling or Punching Operation | | 2000-154Q |
| | Grinding Operation | | 2000-154Q |
| **SEISM 15 Plant** | **D.S. Brown Company, 300 East Cherry Street, North Baltimore, OH 45872 http://www.dsbrown.com/**<br>**518 Progress Way Athens, TX 75751**<br>***(Formerly Seismic Energy Products, Inc.)*** | | |
| | Bending Operation | | 2010-198Q |
| | Cutting Operation | | 2010-198Q |
| | Drilling or Punching Operation | | 2010-198Q |
| | Grinding Operation | | 2010-198Q |
| **SOMERA15 Facility** | **Somerville Industries, Inc., 336 South Meadow Drive, Mineral Wells, WV 26150 https://www.somervilleindustries.com/contact**<br>**Somerville Fabricators 336 South Meadow Drive Mineral Wells, WV 26150** | | |
| | Bending Operation | | 2020-151Q |
| | Cutting Operation | | 2020-151Q |
| | Drilling or Punching Operation | | 2020-151Q |
| | Grinding Operation | | 2020-151Q |
| **SOMERB15 Facility** | **Somerville Industries, Inc., 336 South Meadow Drive, Mineral Wells, WV 26150 https://www.somervilleindustries.com/contact**<br>**Somerville Manufacturing 15 Townhall Road Marietta, OH 45750** | | |
| | Bending Operation | | 2020-150Q |
| | Cutting Operation | | 2020-150Q |
| | Drilling or Punching Operation | | 2020-150Q |
| | Grinding Operation | | 2020-150Q |

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|---|---|---|---|
| **SPESS 15** | **Specialty Steel Supply Company, Inc., 225 Lincoln Hwy, Fairless Hills, PA 19030 https://225steel.com/** | | |
| | Cutting Operation | | 2009-158Q |
| | Drilling or Punching Operation | | 2009-158Q |
| **STAAR 15 Facility** | **STAAR Distributing, LLC, 560 Myrtle Street, Reynoldsville, PA 15851 http://www.staardistributing.com/ 130A Satterlee Road DuBois, PA 15801** | | |
| | Bending Operation *DuBois, PA and Reynoldsville, PA* | | 2016-119Q |
| | Cutting Operation *DuBois, PA and Reynoldsville, PA* | | 2016-119Q |
| | Drilling or Punching Operation *DuBois, PA and Reynoldsville, PA* | | 2016-119Q |
| | Grinding Operation *DuBois, PA and Reynoldsville, PA* | | 2016-119Q |
| | Press Brake (Tubular) *DuBois, PA and Reynoldsville, PA* | | 2016-119Q |
| **STAMS 15** | **Stark Metal Sales, Inc., 432 E. Keystone St., Alliance, OH 44601 http://www.starkmetal.com/** | | |
| | Bending Operation | | 2011-126Q |
| | Cutting Operation | | 2011-126Q |
| | Drilling or Punching Operation | | 2011-126Q |
| | Grinding Operation | | 2011-126Q |
| **STESE 15** | **Steel Services, Inc., 835 Boundary St., Salisbury, MD 21801 http://www.steelservicesinc.com/** | | |
| | Cutting Operation | | ----- |

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| | Product | Name | Ref. No. |
|---|---|---|---|
| **STESH 15** | **Steel Shearing, Inc., 5300 Lakeside Ave East Suite 2, Cleveland, OH 44114** | | |
| | Cutting Operation | | 2003-104Q |
| | Drilling or Punching Operation | | 2003-104Q |
| **STEWK 15** | **Steelworks, Inc., P.O. Box 390, 2335 Toledo Ave., Trenton, MI 48183** | | |
| | Bending Operation | | 2001-071Q |
| | Cutting Operation | | 2001-071Q |
| | Drilling or Punching Operation | | 2001-071Q |
| | Grinding Operation | | 2001-071Q |
| **STRMS 15** | **Struthers Metal Service, Inc., 2800 Intertech Drive, Youngstown, OH 44509 http://struthersmetalserviceinc.com/** | | |
| | Cutting Operation | | 2014-242Q |
| **SUMSM 15** | **Summit Steel & Manufacturing Company, 1005 Patriot Parkway, Reading, PA 19605 http://summitsteelinc.com/** | | |
| | Fabrication of JJ-Hook connector plate assembly only | | 2011-049Q |
| **SUSTR 15** | **Summit Utility Structures, 2027 South 12th Street, Bldg 504, Allentown, PA 18103 http://summitutilitystructures.com/** | | |
| | Bending Operation | | 2015-123Q |
| | Cutting Operation | | 2015-123Q |
| | Drilling or Punching Operation | | 2015-123Q |
| | Grinding Operation | | 2015-123Q |
| | Press Brake (Tubular) | | 2015-123Q |
| **SVPRO 15** | **Steel Valley Processing, LLC, 3710 Hendricks Road, Youngstown, OH 44515** | | |
| | Bending Operation | | 2016-032Q |
| | Cutting Operation | | 2016-032Q |
| | Drilling or Punching Operation | | 2016-032Q |
| | Grinding Operation | | 2016-032Q |

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|---|---|---|---|
| **TBRSA 15** | **T. Bruce Sales, 9 Carbaugh Street, West Middlesex, PA 16159 http://tbrucesales.com/tbrucesales_3_010.htm** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| **TEKT1 15** | **Tektonics Design Group, LLC, 702 East 4th Street, Richmond, VA 23224** | | |
| **Facility** | **702 East 4th Street Richmond, VA 23224** | | |
| | Cutting Operation | | 2015-114Q |
| | Drilling or Punching Operation | | 2015-114Q |
| | Grinding Operation | | 2015-114Q |
| **THOMC 15** | **Thompson Machine Company, 1128 N. Fourth Ave., Altoona, PA 16601** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **TIMMA 15** | **Time Machine, Inc., 1746 Pittsburgh Road, Polk, PA 16432 http://www.timemachinepa.com/** | | |
| | Bending Operation | | 2000-329Q |
| | Cutting Operation | | 2000-329Q |
| | Drilling or Punching Operation | | 2000-329Q |
| | Grinding Operation | | 2000-329Q |
| **TOLSS 15** | **Toledo Steel Supply, Inc., 222 LaVoy Road, Erie, MI 48133 http://toledosteel.net/** | | |
| | Cutting Operation | | 2014-131Q |
| | Grinding Operation | | 2014-131Q |
| **TRIM1 15** | **Metal Traders, Inc. DBA Triad Metals International, 1951 Bessemer Rd., Petersburg, VA 23805 http://metaltrader.com/** | | |
| | Cutting Operation | | 2009-062Q |

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|---|---|---|---|
| TRIM2 15 | Metal Traders, Inc. DBA Triad Metals International, 3480 Grand Avenue, Pittsburgh, PA 15225-1508 http://triadmetals.com/triad-locations/pittsburgh-pa-campus/ | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | - |
| | Grinding Operation | | - |
| TRISB 15 | Tristate Bolt Company, 1110 Fuller Drive, Garrett, IN 46738 http://www.tristateboltinc.com/ | | |
| | Bending Operation | | 2012-249Q |
| | Cutting Operation | | 2012-249Q |
| | Drilling or Punching Operation | | 2012-249Q |
| | Grinding Operation | | 2012-249Q |
| UMCI1 15 | Unverferth Manufacturing Co., Inc., P.O. Box 357, 601 S. Broad Street, Kalida, OH 45853 https://www.unverferth.com/ | | |
| | Cutting Operation | | 2018-245Q |
| | Drilling or Punching Operation | | 2018-245Q |
| UNIIS 15 | Universal Industrial Sales, P.O. Box 699, Plesant Grove, UT 84062 http://www.uisutah.com/uis2011/ | | |
| | Bending Operation | | 2011-063Q |
| | Cutting Operation | | 2011-063Q |
| | Drilling or Punching Operation | | 2011-063Q |
| | Grinding Operation | | 2011-063Q |
| VAL-2 15 | Valmont Specialty Structures/Plymouth, 1545 Pidco Drive, Plymouth, IN 46563 http://www.valmont.com/ | | |
| | Bending Operation | | 2008-197Q |
| | Cutting Operation | | 2008-197Q |
| | Drilling or Punching Operation | | 2008-197Q |
| | Grinding Operation | | 2008-197Q |

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|---|---|---|---|
| **VERIN 15** | **Vertech International, Inc., 420 Station Road, Quakertown, PA 18951 http://www.vertechinternational.com/** | | |
| | Bending Operation | | 2011-248Q |
| | Cutting Operation | | 2011-248Q |
| | Drilling or Punching Operation | | 2011-248Q |
| | Grinding Operation | | 2011-248Q |
| **VICFC 15** | **Vicon Fabricating Company, 7200 Justin Way, Mentor, OH 44060 http://viconfab.com/** | | |
| | Bending Operation | | 2009-008Q |
| | Cutting Operation | | 2009-008Q |
| | Drilling or Punching Operation | | 2009-008Q |
| | Grinding Operation | | 2009-008Q |
| **VOSMA 15** | **Voss Manufacturing, Inc., 2345 Lockport Road, Sanborn, NY 14132 http://vossmfg.com/** | | |
| | Bending Operation | | ----- |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| | Grinding Operation | | ----- |
| **WALLO 15** | **Walter Long Manufacturing Company, Inc., 86 Walter Long Road, Finleyville, PA 15332 http://www.walterlongmanufacturing.com/index.html** | | |
| | Bending Operation | | 2003-010Q |
| | Cutting Operation | | 2003-010Q |
| | Drilling or Punching Operation | | 2003-010Q |
| | Grinding Operation | | 2003-010Q |
| **WATSP 15** | **Watson Steel Products, Inc., 264 Mystic Ave., Buffalo, NY 14206 http://www.watsonsteelproducts.com/** | | |
| | Cutting Operation | | 2006-004Q |
| | Drilling or Punching Operation | | 2006-004Q |

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|---|---|---|---|
| **WECAL 15** | **Wecall, Inc., 64 Penniman Road, Orwell, OH 44076 http://www.wecallinc.com/** | | |
| | Cutting Operation | | 2011-154Q |
| | Drilling or Punching Operation | | 2011-154Q |
| | Grinding Operation | | 2011-154Q |
| **WHICO 15** | **L. C. Whitford Company, 164 North Main Street, P.O. Box 663, Wellsville, NY 14895 http://www.lcwhitford.com/** | | |
| | Cutting Operation | | 2017-120Q |
| | Drilling or Punching Operation | | 2017-120Q |
| | Grinding Operation | | 2017-120Q |
| **WHIFB 15** | **White Fabrication, Inc., 724 Avenue W, Birmingham, AL 35214 http://whitefab.com/** | | |
| | Cutting Operation | | ----- |
| | Drilling or Punching Operation | | ----- |
| **WILMI 15** | **Willbanks Metals, Inc., 1155 N. E. 28th Street, Fort Worth, TX 76106 http://www.willbanksmetals.com/** | | |
| **Facility** | **2678 Harvard Avenue Tulsa, OK 74115** | | |
| | Bending Operation | | 2014-170Q |
| | Cutting Operation | | 2014-170Q |
| | Press Brake (Tubular) | | 2014-170Q |
| **WINME 15** | **Winchester Metals, Inc., 195 Ebert Road, Winchester, VA 22603 http://winchestermetals.com/** | | |
| | Fabrication of JJ-Hook connector plate assembly only | | 2010-309Q |
| | Fabrication of JJ-Hook connector plate assembly with attached welded reinforcement, including Deflection Limiter and Bolt Down Bar | | 2015-054Q |
| **YOU-1 15** | **Youngstown Pipe & Steel, LLC, 4100 Lake Park Road, Youngstown, OH 44513 http://yopipe.com/** | | |
| | Cutting Operation | | 2002-114Q |
| | Drilling or Punching Operation | | 2002-114Q |

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|---|---|---|---|
| YOU-2 15 | Youngstown Pipe & Steel, LLC, 45 S Mongomery Ave., P.O. Box 3467, Youngstown, OH 44506 http://yopipe.com/ | | |
| | Cutting Operation | | 2012-111Q |
| | Drilling or Punching Operation | | 2012-111Q |
| | Grinding Operation | | 2012-111Q |