If you have any questions regarding the approved lists, please contact the person/section indicated.

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List No. 1

(1) AIR-ENTRAINING ADMIXTURES – (Physical Lab)

The following list of air-entraining admixtures is approved for use in hydraulic cement concrete. They meet the requirements of AASHTO M-154.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements in Section 215.02 of the VDOT Road and Bridge Specifications. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval, the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of AASHTO M-154 and that the product has not changed in formulation since initial approval.

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### (1) AIR-ENTRAINING ADMIXTURES

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List No. 2

(2) CHEMICAL ADMIXTURES FOR CONCRETE – (Physical Lab)

The following list of admixtures is approved for use in hydraulic cement concrete. They meet the requirements of ASTM C-494 for the respective types. The listed types are:
“G” - High Range Water Reducing and Retarding.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements in Section 215.02 of the VDOT Road and Bridge Specifications. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 and that the product has not changed in formulation since initial approval.

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(2) CHEMICAL ADMIXTURES FOR CONCRETE

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List No. 3

(3) CHEMICAL ADMIXTURES FOR CONCRETE TYPE S – (Physical Lab)

The following list of admixtures is approved for use in hydraulic cement concrete. They meet the requirements of ASTM C-494 for type “S” – Specific Performance.

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 Type “S”. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Upon approval, the Manufacturer will be required to submit a letter each year with a notarized signature stating that the chemical admixture meets the requirements of ASTM C-494 and that the product has not changed in formulation since initial approval.

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### (3) CHEMICAL ADMIXTURES FOR CONCRETE TYPE S – (Cont.)

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[January 2020]

List No. 3(cont.)

II-A-12
(4) CORROSION INHIBITING ADMIXTURES – (Physical Lab)

The following list of corrosion inhibiting admixtures is approved for use in hydraulic cement concrete. They meet the requirements in Section 215.02(j) of the VDOT Road and Bridge Specifications.

Upon approval the Manufacturer will be required to submit each year a letter with a notarized signature stating that the chemical admixture meets the requirements of Section 215.02(j) of the VDOT Road and Bridge Specifications and that the product has not changed in formulation since initial approval.

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## RESULTS OF QUALITY TESTS ON

(5) COARSE AGGREGATE DATA – (Physical Lab)

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List No. 5 (cont.)

(5) FINE AGGREGATE DATA (Grading A) – (Physical Lab)

The data listed herein represents the latest determinations as of publication date. All figures are subject to change, particularly the fineness modulus. They are, therefore, intended only as a guide.

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(Grading A)

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List No. 5 (cont.)

(5) ASPHALT CONCRETE FINE AGGREGATE DATA – (Physical Lab)

The data listed herein represents the latest determinations as of this publication date. All figures are subject to change. They are, therefore, intended only as a guide. NOTE: Tests performed with No. 10 screening are indicated. Some materials on this list may be used in concrete under options two and three of section 217.07 of the R&B spec book.

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## ASPHALT CONCRETE FINE AGGREGATE DATA (Cont.)

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| Walker Sand & Stone          |                     |                            |                           |            |                |                 |
| 6044 King George, VA         | 10/17               |                            | 2.557                     | 1.1        | 2.9            | 41              |

| W-L Construction             |                     |                            |                           |            |                |                 |
| 3035 Turbeville, VA          | 2019                | N.S.                       | 2.618                     | 1.2        | 24.4           | 98              |

| Wythe Stone Co               |                     |                            |                           |            |                |                 |
| 1082 Wytheville, VA          | 2019                | Ls.                        | 2.722                     | 1.5        | 8.2            | 89              |

(5) LIGHTWEIGHT AGGREGATE DATA – (Physical Lab)

Note: Lightweight aggregates must conform to section 206 of VDOT’s 2002 Road and Bridge Specifications before used for VDOT work.

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<th>Producer and Location</th>
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<th>Absorption</th>
<th>LA Abrasion Loss</th>
<th>Dry Bulk Specific Gravity</th>
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LEGEND: Refer to following list for geological classification abbreviations used in the table above.

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(FT) Freeze-Thaw Method of Soundness determination
A) Agricultural Liming Materials (Pulverized or Ground Limestone):

Pulverized and Ground Limestone are paid by Ton or Metric Ton

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<tr>
<th>Firm Name</th>
<th>Product Name</th>
<th>Cal Carb Eqty % (CCE)</th>
<th>Percent Passing 20 Mesh Screen</th>
<th>Percent Passing 60 Mesh Screen</th>
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B) Hydrated Lime

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<th>Percent Passing 20 Screen</th>
<th>Percent Passing 60 Screen</th>
<th>Percent Passing 100 Screen</th>
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<td>Greer Hydrated Lime</td>
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<td>Morgantown, WV</td>
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<td>Lhoist North America of Virginia, Inc.</td>
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<td>Oldcastle Lawn &amp; Garden</td>
<td>Lee Double Strength Hydrate</td>
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<td>Atlanta, GA</td>
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C) Industrial Co-Product (Substandard Liming Materials)

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<th>Product Name</th>
<th>Cal Carb Equiv % (CCE)</th>
<th>Percent Passing 20 Screen</th>
<th>Percent Passing 60 Screen</th>
<th>Percent Passing 100 Screen</th>
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<tbody>
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<td>Dominion</td>
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<td>95.00</td>
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<td>Wood Ash (Altavista Location)</td>
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<td>Georgia Pacific LLC</td>
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<td>Gladys, VA</td>
<td>GPB Bottom Ash</td>
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<td>GPB Mixed Ash</td>
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<td>Greifwood Ash Substandard Liming Material</td>
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<td>New Enterprise #18 Calcium Limestone</td>
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<td>Dregs</td>
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<td>West Point, VA</td>
<td>Dry Lime After Kiln</td>
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<td>Grits</td>
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<td>Mixed Dry Lime and Grits</td>
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<td>Post-belt Press Lime Mud</td>
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<td>South Boston Energy LLC</td>
<td>Cycleright</td>
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<td>South Boston, VA</td>
<td>UOSA Lime Solids</td>
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<td>UOSA Lime Solids</td>
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D) Fast Acting Lime – 2016 Road and Bridge Specification 244.02 (e) 2

Fast acting lime is a highly processed grade of agricultural lime that has a higher percentage by weight of material passing the U.S. Standard 100 Sieve. Fast acting lime can be supplied in liquid or dry form. The minimum calcium carbonate equivalent (CCE) for fast acting lime shall be as follows:

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<th>Minimum CCE %</th>
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<tr>
<td>Liquid</td>
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<td>Dry</td>
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<table>
<thead>
<tr>
<th>Firm Name</th>
<th>Product Name</th>
<th>Cal Carb Equiv % (CCE)</th>
<th>Percent Passing 20 Screen</th>
<th>Percent Passing 60 Screen</th>
<th>Percent Passing 100 Screen</th>
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<td>Aqua-Aid, Inc.</td>
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<td>Verde-Lawn</td>
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<td>Verda Lawn Hydro</td>
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E) Fast Acting Lime

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F) Soil Amendments

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<th>Cal Carb Equiv % (CCE)</th>
<th>Percent Passing 20 Screen</th>
<th>Percent Passing 60 Screen</th>
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### (7) ANTISTRIPPING ADDITIVES – (Asphalt Lab)

Following is a list of approved Anti-stripping Additives:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Brand Names</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouryon</td>
<td>Kling Beta2550-(HM)</td>
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</tr>
<tr>
<td></td>
<td>Kling Beta 2914</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>Rediset LQ 1102C</td>
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<tr>
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<tr>
<td></td>
<td>Wetfix 312</td>
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<tr>
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<td>Wetfix G400</td>
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<tr>
<td>ARR-MAZ Products</td>
<td>Ad-here HP Plus</td>
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<tr>
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<td>Ad-here 65-00</td>
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<tr>
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<td>Ad-here LOF 6500 LS</td>
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<td>Ad-here 66-01</td>
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<tr>
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<tr>
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<td>Cargill Industrial Specialties</td>
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<tr>
<td>13400 15th Ave N</td>
<td></td>
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<tr>
<td>Suite B MS 103</td>
<td></td>
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<tr>
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<td>Galway, Ireland</td>
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<td>Tomah Products</td>
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<td>ACRA-5092</td>
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<td></td>
<td>No Strip Super Concentrate</td>
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<tr>
<td></td>
<td>101-25B</td>
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<td>101-25D</td>
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<td></td>
<td>101-25E</td>
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<td>Manufacturer</td>
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<td>Notes</td>
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<tr>
<td>--------------</td>
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<tr>
<td>Innophos</td>
<td>Innovalt W</td>
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<tr>
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<td>Koher AS-500</td>
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</tr>
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<td>Koher AS-700</td>
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<td>Koher AT-1000</td>
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<td>Evotherm J1</td>
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<td>Ingevity</td>
<td>Evotherm M1</td>
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<td>Ingevity</td>
<td>Evotherm U3</td>
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<td>Morlife 5000</td>
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<td>Ingevity</td>
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<td>Pavegrip 250 G</td>
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<td>Pavegrip 350</td>
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<td>Pre Tech Industries</td>
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<td>Pavegrip AA-2</td>
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<td>Pre Tech Industries</td>
<td>Pavegrip 550</td>
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<td>SouthEastern Chemical Corp.</td>
<td>Aggrebond 275</td>
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<td>TAPCO, Inc.</td>
<td>TAPCO 206</td>
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<td>Unichem International</td>
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<td>100% Active</td>
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<td>Unique Paving Materials</td>
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<td>Westvaco Corp.</td>
<td>Indulin AS-1</td>
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<td>Westvaco Corp.</td>
<td>Indulin AS-Special</td>
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<td>Zycotherm EZ</td>
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<tr>
<td>Zycoherm SP</td>
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</tbody>
</table>

The quantity of Anti-stripping Additive used will be checked in accordance with VTM-13.
## (8) ASPHALT RELEASE AGENTS – (Asphalt Lab)

The following list of asphalt release agents are approved; however, they shall be diluted as recommended by the Manufacturer, and approved by the Department. The dilution recommendation shall be shown on a label attached to the Release Agent container. The dilution rates listed below are the maximums currently approved by the VDOT.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Brand Names</th>
<th>Dilution Rate Agent:Water</th>
<th>Foaming (F) /Non-Foaming (NF)</th>
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<td>Algonquin Products</td>
<td>ALG-1</td>
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<tr>
<td>Alzo, Inc.</td>
<td>RELEEZ</td>
<td>1:30</td>
<td>NF</td>
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<td>ARR-MAZ Products</td>
<td>ARR-MAZ TBRA #7191</td>
<td>1:40</td>
<td>F</td>
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<td>Arrow Magnolia Int'l.</td>
<td>Slick II</td>
<td>1:20</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Super Slick</td>
<td>1:20</td>
<td>NF</td>
</tr>
<tr>
<td>Bowser-Morner Inc.</td>
<td>Econopave 1000</td>
<td>8:1</td>
<td>NF</td>
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<tr>
<td>Breakaway Advanced</td>
<td>Maintenance Mates</td>
<td>1:20</td>
<td>F</td>
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<tr>
<td>Bio-Clean Ind.</td>
<td>Bio-Clean</td>
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<td>Capital Janitorial Supply</td>
<td>Colonial Blue Blaze</td>
<td>1:20</td>
<td>F</td>
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<td>Capitol Supply Co.</td>
<td>Rapid Release</td>
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<td>Certified Laboratories</td>
<td>Citrus Claw</td>
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<td>Chem-Tech Solutions, Inc.</td>
<td>Westech CT-1440</td>
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<td>The ChemMark Corp.</td>
<td>Thermal-Slide</td>
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<td>Chemsolve L-40</td>
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<td>3917</td>
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<td>2159</td>
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<td></td>
<td>2620</td>
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<td>2791</td>
<td>5:1</td>
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<td>Aqua Slip</td>
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<td>CleanEdge, formerly ChemStation</td>
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<td>HD-5565</td>
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<td>SP-Slip</td>
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<td>SMA-Slip</td>
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<tr>
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<td>SB-Slip</td>
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<td>F</td>
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<td>V-Slip</td>
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<td>F</td>
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<td>F</td>
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<td>Diver-Slip</td>
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<td>PolySlip</td>
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<td>Slide-Eze</td>
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<td>F</td>
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<td>Slide-All</td>
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<td>Slipcoat-IRC</td>
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<td>Handi-Clean Prod. Inc.</td>
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<td>L &amp; F Products</td>
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<td>1:32</td>
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<td>Phalt Free</td>
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<td>Quick Slick</td>
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<td>Foaming (F) /Non-Foaming (NF)</td>
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Any electrode or flux-electrode combination which appears on the approved list may be accepted without evidence of test or certification. The electrodes are to be used in the welding of the following ASTM steel base metals: A709, Gr.36, Gr. 50, Gr. 100, Gr. 50W, 70W, and 100W.

If the Fabricator or Contractor desires to use any electrode or flux-electrode combination which is not on the approved list, he may do so, providing he submits certified copies of test reports of all pertinent required tests of the American Welding Society made on electrodes and flux-electrode combinations of the same class, size and brand, and which were manufactured by the same process and with the same materials as the brands being furnished.

*E6010 and E6011 rods may only be used for miscellaneous welding (piling, forms, railing, etc.).

**F6A2, F6A4, or F6A6 may only be used to weld A36 steel.

**FILLER METAL FOR M270M (M270) A709M (A709) GR. 36, 50, 100 AND PAINTED GR. 50W AND 100W STEEL**

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### FILLER METAL FOR EXPOSED BARE APPLICATION OF M270M (M270) A709M (A709) GR 345W (50W) STEEL

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### FILLER METAL FOR HIGH PERFORMANCE STEEL HPS 70 W (HPS 485 W) STEEL ONLY

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<td>Valspar</td>
<td>720-A-009 Greenbar</td>
</tr>
<tr>
<td>North Kansas City, MO</td>
<td></td>
</tr>
<tr>
<td>Dupont Powder Coating Houston, TX</td>
<td>Nap-Gard 7-2719</td>
</tr>
<tr>
<td></td>
<td>Nap-Gard 7-2709</td>
</tr>
<tr>
<td>3-M Co., St. Paul, MN</td>
<td>ScotchKote 413</td>
</tr>
<tr>
<td>IFS Coatings</td>
<td>ERSS33252 PureFlex Green Powder</td>
</tr>
</tbody>
</table>

*When applied to blasted and chromate pretreated steel.

**Limited approval for use only on wire mesh and post fabricated reinforcing steel.
The following fiber mulches are currently approved and may be accepted on visual inspection:

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulch&amp;Grow 70/30 Wood Blend</td>
<td>Carolina Precision Fibers, Inc.</td>
<td>(866) 476-3278</td>
</tr>
<tr>
<td>Mulch&amp;Grow Premium Cellulose</td>
<td>P.O. Box 624</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elkin, NC 28621</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFM Wood Fiber Blend</td>
<td>Profile Products LLC</td>
<td>(800) 508-8681</td>
</tr>
<tr>
<td></td>
<td>Sandra House</td>
<td></td>
</tr>
<tr>
<td></td>
<td>750 Lake Cook Road, Suite 440</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buffalo Grove, IL 60089</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="mailto:shouse@profileproducts.com">shouse@profileproducts.com</a></td>
<td></td>
</tr>
<tr>
<td>HY-C1</td>
<td>East Coast Erosion Blankts, LLC</td>
<td>(610) 488-8496</td>
</tr>
<tr>
<td></td>
<td>443 Bricker Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bernville, PA 19506</td>
<td></td>
</tr>
<tr>
<td>Mat Blend Mat Fiber</td>
<td>Matt Norwood LLC</td>
<td>(828) 758-4463</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 578</td>
<td></td>
</tr>
<tr>
<td></td>
<td>747 Harrisburg Drive SW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lenoir, NC 28645</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attn: Mr. Jim Sandherr</td>
<td></td>
</tr>
<tr>
<td>GeoSkin Hydraulic Mulch</td>
<td>Mulch and Seed Innovations, LLC</td>
<td>(256) 927 - 8823</td>
</tr>
<tr>
<td></td>
<td>7265 Alabama Hwy 9 South Centre, AL 35960</td>
<td></td>
</tr>
<tr>
<td>1000 2000 Enviro-Blend</td>
<td>Profile Products</td>
<td>(828) 327-4165</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 652</td>
<td></td>
</tr>
<tr>
<td></td>
<td>219 Simpson Street</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conover, NC 28613</td>
<td></td>
</tr>
<tr>
<td>Country Boy Hydro Spray</td>
<td>Profile Products</td>
<td>(423) 257-2051</td>
</tr>
<tr>
<td>Conwed Cellulose Terra Mulch</td>
<td>60 Dave Crockett Road</td>
<td></td>
</tr>
<tr>
<td>Soil Cover</td>
<td>Limestone, TN 37681</td>
<td></td>
</tr>
<tr>
<td>Soil Cover wTack Terra Wood</td>
<td>Attn: Mr. Gary Bower</td>
<td></td>
</tr>
<tr>
<td>TerraWood TerraWood wTack</td>
<td>Profile Products</td>
<td>(800) 508-8681</td>
</tr>
<tr>
<td>TerraBlend with UltraGro</td>
<td>750 Lake Cook Road – Suite 440</td>
<td></td>
</tr>
<tr>
<td>Seed Aide-CoverGrow</td>
<td>Buffalo Grove, IL 60089</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attn: Sandra Portrait-House</td>
<td></td>
</tr>
</tbody>
</table>

Fiber mulches will be accepted only if bagged and shipped from the locations listed above.
List No. 12

(12) CERTIFICATE OF COMPLIANCE AND GUARANTEE - GUARDRAIL MATERIALS

(Structures)

In accordance with the Virginia Road and Bridge Specifications and Manual of Instruction Sec. 204.18 herein, the following guardrail Erectors and Suppliers have submitted annual Certificates of Compliance and Guarantee verifying conformance with the Buy America Act provision requirements and installation of approved guardrail components:

- A&P Services, LLC
- Curtis Contracting
- Guardrail of Roanoke Inc.
- Interstate Specialties Services
- L.S. Lee, Inc.
- Long Fence
- Makco, Inc.
- McPeak Supply, LLC
- Nickelston Industries, Inc.
- Penn Line Services, Inc.
- Roadway Construction Products, Inc.
- Webster and Webster

In accordance with the Virginia Road and Bridge Specifications and Manual of Instruction Sec. 204.18 herein, the following guardrail Manufacturers have submitted annual Certificates of Compliance and Guarantee, Brand Registration, and verification of conformance with the Buy America Act provision requirements:

- Brifen USA
- Elderlee, Inc.
- Gregory Highway Products
- Highway Safety Products
- R.G. Steel Corporation
- SPIG Industry, Inc.
- Trinity Highway Products
- Trinity Highway Products
- Trinity Highway Products

Oklahoma City, OK
Oaks Corner, NY
Canton, OH
Glastonbury, CT
Pulaski, PA
Bristol, VA
Fort Worth, TX
Orangeburg, SC
Lima, OH

(*P)=Probationary

These certificates have been reviewed and are on file at the office of the State Materials Engineer. For the period January 1, 2019 through December 31, 2019, steel material supplied by the above companies will be accepted by visual inspection.

Guardrail end treatments must be crash tested in accordance with MASH 2016 criteria and approved by the Department. The Special Design Group in Central office Location & Design Division maintains a VDOT approved MASH 2016 product list at the following website:


Approved offset blocks meeting Virginia Road & Bridge Specifications Section 221 requirements can be located on the Location & Design Division’s Provisionally Approved MASH Products List at the following website.


List No. 13
QUALIFIED LOW VOLATILE ORGANIC COMPOUND

(13) ZINC RICH PAINT SYSTEMS LIST—(Chemistry Lab)

(SYSTEM B)

Note: All approved paint systems must not exceed the 2.8 lb/gal VOC as applied requirements, except zinc-rich primers, which must not exceed the 3.5 lb/gal requirement as applied.

The below listed systems have been prequalified for use, as listed and must be certified for each lot. Although these products are approved for use, no statement is made about relative ease of application. The contractor needs to determine the particular application techniques, spray equipment, etc., including inspection equipment that is needed for acceptance. In all cases, Manufacturers' recommendations shall be followed as to application requirements and temperature limitations. If there is a conflict between Manufacturer's recommendation and specification requirement, then, with the approval of the Engineer the Manufacturer's recommendation will rule. The Manufacturer is required to have a technical service representative on hand to assist the Contractor the first time that these products are used by the Contractor. Material exceeding stated range is to be removed and reapplied unless otherwise allowed by the Engineer. No two or more component material is to be mixed in less than packaged quantities and shall be mixed with power agitators.

All top coats shall be of sufficient dry film thickness to completely cover and hide the intermediate coat and produce a uniform color and appearance.

GROUP I

Primers in this group shall be used to paint new steel, including contact, bolted and faying surfaces and may be used to paint existing steel. Prime coats in this group meet Class B slip coefficient requirements.

System Type: Inorganic Zinc primer, cycloaliphatic epoxy intermediate and aliphatic acrylic-polyester urethane topcoat, organic zinc epoxy repair primer

| MANUFACTURER - Carboline Paint Co. – St. Louis, MO (888) 227-2654 |
|----------------------|----------------|------------|----------------|-------------|
| COAT | PAINT | COLOR | DRY FILM THICKNESS (mils) | VOC lb/gal |
| Primer(s) | Carbozinc 11 HS | Green | 2.0-3.0 | 2.4 |
| Intermediate(s) | Carboguard 893 | White | 4.0-6.0 | 1.6 |
| Topcoat(s) | Carbothane 133 L/V | As Specified | 3.0-5.0 | 1.76 |
| Primer Repair(s) | Carbozinc 859 | | 2.0-3.0 | 2.4 |
| NTPEP Test No.: SSC(12)-03 | Approval date 4/2014 | Review date 5/2021 |

System Type: Inorganic zinc primer, polyamide epoxy intermediate and aliphatic acrylic polyurethane topcoat, organic zinc repair primer

| MANUFACTURER – International Paint, Houston, TX (800) 589-1267 |
|----------------------|----------------|------------|----------------|-------------|
| COAT | PAINT | COLOR | DRY FILM THICKNESS (mils) | VOC lb/gal |
| Primer(s) | Interzinc 22 HS | Reddish gray | 2.5-3.0 | 2.8 |
| Intermediate(s) | Intergard 475 HS | White | 2.0-4.0 | 1.76 |
| Topcoat(s) | Interthane 870 UHS | As specified | 3.0-5.0 | 1.91 |
| Primer Repair (s) | Interzinc 52 | | 3.0 | 2.8 |
| NTPEP Test No.: SSC(17)-03 | Approval date 4/2019 | Review date 5/2023 |
System Type: Inorganic zinc primer, epoxy intermediate and aliphatic acrylic polyurethane topcoat, inorganic zinc repair primer.

<table>
<thead>
<tr>
<th>MANUFACTURER – ICI Devoe, Buffalo, NY (716) 824-6455</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAT</td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(04)-04</td>
</tr>
</tbody>
</table>

System Type: Inorganic zinc primer, polyamide epoxy intermediate and polyester modified aliphatic acrylic polyurethane topcoat, organic zinc repair primer.

<table>
<thead>
<tr>
<th>MANUFACTURER – Sherwin Williams – Richmond, Va. (804) 387-4050</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAT</td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair (s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(03)-07</td>
</tr>
</tbody>
</table>

System Type: Inorganic zinc primer, polyamide epoxy intermediate and Aliphatic Acrylic-polester urethane topcoat, organic zinc repair primer.

<table>
<thead>
<tr>
<th>MANUFACTURER – Sherwin Williams – Richmond, Va. (804) 387-4050</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAT</td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair (s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(09)-01</td>
</tr>
</tbody>
</table>
GROUP IA

Primers in this group shall only be used to paint existing steel and may be used on contact, bolted and faying surfaces. Prime coats in this group meet Class B slip coefficient requirements.

System Type: Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic urethane topcoat, organic zinc repair primer

**MANUFACTURER – PPG Industries, Inc. – Roswell, GA**

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC lb/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer(s)</td>
<td>Amercoat 68 HS</td>
<td>Redish-Gray</td>
<td>3.0-5.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Intermediate(s)</td>
<td>Amercoat 399</td>
<td>White</td>
<td>4.0-8.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Topcoat(s)</td>
<td>Amercoat 450 H</td>
<td>As Specified</td>
<td>2.0-5.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
<td>Amercoat 68 HS</td>
<td></td>
<td>3.0-5.0</td>
<td>2.4</td>
</tr>
</tbody>
</table>

NTPEP Test No.: SSC(10)-03  Approval Date 11/2008  Review date 12/2019

System Type: Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic polyester polyurethane topcoat, organic zinc repair primer

**MANUFACTURER – Sherwin Williams – Richmond, VA (804) 387-4050**

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC lb/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer(s)</td>
<td>Zinc Clad III HS</td>
<td>Gray-Green</td>
<td>3.0-5.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Intermediate(s)</td>
<td>Macropoxy 646</td>
<td>White</td>
<td>5.0-10.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Topcoat(s)</td>
<td>Acrolon 218 HS</td>
<td>As Specified</td>
<td>3.0-6.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
<td>Zinc Clad III HS</td>
<td></td>
<td>3.0-5.0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

NTPEP Test No.: SSC(11)-03  Approval Date 10/2012  Review date 12/2019

System Type: Organic zinc primer, epoxy intermediate, aliphatic acrylic urethane topcoat, organic zinc epoxy repair primer

**MANUFACTURER – Akzo Nobel / International Paint – Jeffersonville, IN**

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC lb/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer(s)</td>
<td>Interzinc 315 B</td>
<td>Green</td>
<td>2.0-6.0</td>
<td>2.42</td>
</tr>
<tr>
<td>Intermediate(s)</td>
<td>Intergard 475HS EVA 009 BUFF/056</td>
<td>Buff</td>
<td>4.0-8.0</td>
<td>1.72</td>
</tr>
<tr>
<td>Topcoat(s)</td>
<td>Interthane 870UHS</td>
<td>As Specified</td>
<td>3.0-5.0</td>
<td>1.91</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
<td>Interzinc 315B</td>
<td></td>
<td></td>
<td>2.42</td>
</tr>
</tbody>
</table>

NTPEP Test No.: SSC(11)-01  Approval Date 4/2012  Review date 12/2019
System Type: Organic zinc primer, cycloaliphatic amine epoxy intermediate, aliphatic acrylic polyester polyurethane topcoat, organic zinc repair primer

<table>
<thead>
<tr>
<th>MANUFACTURER – Carboline Paint Co. – St. Louis, MO (888) 227-2654</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAT</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(12)-04</td>
</tr>
</tbody>
</table>

System Type: Organic zinc primer, polysiloxane (epoxy siloxane hybrid) topcoat, organic zinc repair primer

<table>
<thead>
<tr>
<th>MANUFACTURER – Sherwin Williams – Richmond, VA (804) 387-4050</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAT</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(18)-01-003</td>
</tr>
</tbody>
</table>

II-A-50
List No. 13 (cont.)

**GROUP II**

Primers in this group shall only be used for existing structures that require no painting of contact, bolted or faying surfaces. Prime coats in this group do not meet Class B slip coefficient requirements.

**System Type:** Organic zinc primer, epoxy intermediate, acrylic polysiloxane topcoat, organic zinc repair primer

<table>
<thead>
<tr>
<th>MANUFACTURER – International Paint, LLC – Houston, TX (800) 589-1267</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COAT</strong></td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate (s)</td>
</tr>
<tr>
<td>Topcoat (s)</td>
</tr>
<tr>
<td>Primer Repair (s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(03)-12</td>
</tr>
</tbody>
</table>

**System Type:** Organic zinc primer, polyamide epoxy intermediate, aliphatic acrylic-polyester polyurethane topcoat, organic zinc repair primer

<table>
<thead>
<tr>
<th>MANUFACTURER – Carboline Paint Co. – St. Louis, MO (888) 227-2654</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COAT</strong></td>
</tr>
<tr>
<td>Primer(s)</td>
</tr>
<tr>
<td>Intermediate(s)</td>
</tr>
<tr>
<td>Topcoat(s)</td>
</tr>
<tr>
<td>Primer Repair(s)</td>
</tr>
<tr>
<td>NTPEP Test No.: SSC(04)-02</td>
</tr>
</tbody>
</table>
List No. 14

(14) PIPE JOINTS AND CONNECTIONS AND COATINGS – (Soils Lab)

January 6, 2020

The following joint and connection materials and joint and connection types and configurations are listed categorically by pipe type for which they are used and classified according to their tightness per AASHTO R82 (soil-tight, silt-tight, and leak-resistant). Sections 212, 232, and 302 of the VDOT Road and Bridge Specifications reference this approved list. Special design joints require a project Special Provision. This list will be refreshed every 5 years.

Note: Any leak-resistant joint is also silt-tight and soil-tight, and any silt-tight joint is also soil-tight. Higher classification joints are not listed again separately for the lower classifications for a given pipe type. Only silt-tight and leak-resistant joints require plant testing as described below.

Nitrile gaskets shall be considered oil-resistant.

**CONCRETE PIPE, PIPE ARCH, BOX CULVERTS, AND MANHOLES**

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material meeting ASTM C990:</td>
<td>Any pipe or arch with tongue and groove or bell and spigot joints</td>
<td>None</td>
<td>MultiSeal, Inc. Evansville, IN</td>
</tr>
<tr>
<td>Butyl-Tite</td>
<td></td>
<td></td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>E-Z Stik Pro-Stik</td>
<td></td>
<td></td>
<td>Ru Van, Inc. Evansville, IL</td>
</tr>
<tr>
<td>RV 30</td>
<td></td>
<td></td>
<td>Delta Pipe Products Gainesville, GA</td>
</tr>
<tr>
<td>M-30-B Butyl Sealant</td>
<td>Any concrete pipe or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints</td>
<td>None</td>
<td>Concrete Sealants Inc. Tipp City, OH</td>
</tr>
<tr>
<td>Ram-Nek RN103 Flexible Plastic Sealant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ram-Nek RN101 preformed flexible plastic sealant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rub’R Nek LTMRN106 butyl rubber sealant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ConSeal CS-102 butyl rubber sealant</td>
<td>Any concrete pipe or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints</td>
<td>None</td>
<td>Concrete Sealants Inc. Tipp City, OH</td>
</tr>
<tr>
<td>Joint Materials</td>
<td>For Use With Joint Type/Configuration</td>
<td>Expiration Date</td>
<td>Man’t/Vendor &amp; Facility Location</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>ConSeal CS-102B</td>
<td>groove or bell and spigot joints</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clippership Bituminous Joint Compound MP-52 (asbestos-free trowel mastic)</td>
<td>Any pipe or arch with tongue and groove, bell and spigot, single offset, or O-ring joints</td>
<td>None</td>
<td>Seaboard Asphalt Baltimore, MD</td>
</tr>
<tr>
<td>Material meeting ASTM D1056, Type 2A: R-427-N</td>
<td>Any box culvert with tongue and groove or bell and spigot joints</td>
<td>None</td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>ConSeal CS101, 208</td>
<td>Any pipe or arch with tongue and groove or bell and spigot joints</td>
<td>None</td>
<td>Concrete Sealants, Inc. Tipp City, OH</td>
</tr>
<tr>
<td>Closed cell joint filler</td>
<td>Any concrete pipe or box culvert with tongue and groove, single offset, or O-ring joints</td>
<td>None</td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>Sika Greenstreak Swellstop Primer Adhesive and Waterstop</td>
<td>Any concrete box culvert</td>
<td>Sika</td>
<td>St. Louis, MO</td>
</tr>
<tr>
<td>Infi-Shield Gator Wrap</td>
<td>Any pipe, arch, or box; 9” width up to 78” diameter, 12” width up to 108” diameter</td>
<td>None</td>
<td>Sealing Systems, Inc. Loretto, MN</td>
</tr>
<tr>
<td>Bidco C-56</td>
<td>Any pipe, arch, or box culvert</td>
<td>None</td>
<td>Trelleborg Milford, NH</td>
</tr>
<tr>
<td>Bidco Wrap</td>
<td>Any pipe, arch, or box culvert; 9” wrap to 78” diameter, 12” wrap to 108” diameter</td>
<td>None</td>
<td>Trelleborg Milford, NH</td>
</tr>
</tbody>
</table>

Silt-Tight Joints – Requires independent PE-sealed report of plant verification test on 24” and 48” diameter pipe (ASTM C443 at 2 psi for straight and deflected position). Plant testing is not required for joints using external wraps that meet ASTM C877; external wraps not meeting C877 must meet these test requirements and be of the same material properties as those listed in C877.

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material meeting ASTM C990: ConSeal CS102, 202, 302</td>
<td>Any pipe or arch with tongue and groove joints (3/4” for 12”-30” dia pipe; 1” for 36”-48” dia pipe; 1-1/2” for 54”-.72” dia pipe)</td>
<td>None</td>
<td>Concrete Sealants, Inc. Tipp City, OH</td>
</tr>
<tr>
<td>Butyl-Nek BN109</td>
<td>Any concrete pipe or box culvert with tongue and groove, bell and spigot,</td>
<td></td>
<td>Henry Company El Segundo, CA</td>
</tr>
</tbody>
</table>
Joint Materials | For Use With Joint Type/Configuration | Expiration Date | Man’t/Vendor & Facility Location
---|---|---|---
External wraps meeting ASTM C877: single offset, or O-ring joints
CS-212 external joint wrap Any pipe or arch or box culvert with tongue and groove, bell and spigot, single offset, or O-ring joints; 9” width to 78” diameter, min. 11” width to 108” diameter, min. 13” width to 144” diameter
Infi-Shield Gator Wrap 12”wide minimum external joint wrap Any concrete box culvert with tongue and groove joints; 9” width to 78” diameter, min. 11” width to 108” diameter, min. 13” width to 144” diameter
Mar Mac DP Coupler, from 12” to 36” wide with 4 steel compression bands Any concrete pipe or arch to any metal pipe or arch or concrete pipe to plastic pipe, in comparable diameters; min 13” width for diameters over 108”
12” wide double wrap of VDOT drainage fabric Any pipe, arch, or box culvert.

Leak-Resistant Joints – Requires independent PE-sealed report of plant verification test on 24” and 48” diameter pipe (ASTM C443 at 10.8 psi for straight and 10 psi in the deflected position). No testing required for external wraps meeting ASTM C877 Type I or II. For wraps not meeting ASTM C877, the same plant verification test may be used to qualify wraps of same applicable material requirements listed in C877. Geotextile wraps not permitted to qualify joint.

Joint Materials | For Use With Joint Type/Configuration | Expiration Date | Man’t/Vendor & Facility Location
---|---|---|---
Material meeting ASTM C443 or C1619: Press-Seal gaskets 158-4G Foltz pipe with profile offset joint, 15”-36” dia. None Press-Seal Corp. Fort Wayne, IN Foltz Concrete Pipe York, SC Press-Seal Corp. Fort Wayne, IN
Press-Seal 4G gaskets CP&P round and elliptical pipe with profile None

January 2020

II-A-54
<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Profile and O-ring rubber gaskets</td>
<td>offset joint; round, 12”-96” diameter; elliptical, 23”x14” through 91”x48”</td>
<td>None</td>
<td>Concrete Pipe and Precast</td>
</tr>
<tr>
<td></td>
<td>Rinker Materials concrete pipe with single offset and confined O-ring joints</td>
<td>None</td>
<td>Hanover &amp; Chesapeake, VA; Jessup, MD; Oakboro, NC</td>
</tr>
<tr>
<td>Press-Seal gaskets 210-4G</td>
<td>Foltz pipe with profile offset joint, 42”-72” dia.</td>
<td>None</td>
<td>Press-Seal Corp.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fort Wayne, IN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Foltz Concrete Pipe York, SC</td>
</tr>
<tr>
<td>Material meeting ASTM C443 or C1619 or C361:</td>
<td>CP&amp;P round pipe with confined O-ring joint, 12”-108” diameter</td>
<td>None</td>
<td>Concrete Pipe and Precast</td>
</tr>
<tr>
<td>Press-Seal O-ring gaskets</td>
<td></td>
<td></td>
<td>Hanover, Chesapeake, Salem, VA; Jessup, MD; Oakboro, NC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Press-Seal Corp.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fort Wayne, IN</td>
</tr>
<tr>
<td>Delta Profile and O-ring rubber gaskets</td>
<td>Rinker Materials concrete pipe with single offset and confined O-ring joints</td>
<td>None</td>
<td>Delta Pipe Products Gainesville, GA</td>
</tr>
<tr>
<td>Universal Polymer and Rubber Profile and O-ring rubber gaskets</td>
<td>PermaTile Concrete Products</td>
<td>None</td>
<td>PermaTile Concrete Products Bristol, VA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Universal Polymer and Rubber, Ltd. Middlefield, OH</td>
</tr>
<tr>
<td>External wraps meeting ASTM C877, Type I or II:</td>
<td>Any concrete pipe, arch, or box culvert</td>
<td>None</td>
<td>MarMac Construction Products Co., Inc. 334 N. 7th St. McBee, SC 29101</td>
</tr>
<tr>
<td>Macwrap and Seal Wrap, from 9” to 14” wide with 2 steel compression bands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Materials</td>
<td>For Use With Joint Type/Configuration</td>
<td>Expiration Date</td>
<td>Man’f/Vendor &amp; Facility Location</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Mar Mac Polyseal Coupler, with 2 steel compression bands</td>
<td>Any concrete pipe, arch, or box culvert</td>
<td>None</td>
<td>MarMac Construction Products Co., Inc. 334 N. 7th St. McBee, SC 29101</td>
</tr>
</tbody>
</table>

Leak-Resistant Horizontal Manhole Joints (no testing required)

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material for horizontal joints meeting ASTM C990:</td>
<td>CP&amp;P round manhole sections with tongue and groove or profile offset joint, 48”-126” diameter; Nansemond tongue and groove sections, 48”-.84”</td>
<td>None</td>
<td>Concrete Pipe and Precast Ashland, Harrisonburg, Salem, VA; Martinsburg, WV; Greencastle, PA</td>
</tr>
<tr>
<td>Butyl-Tite</td>
<td></td>
<td></td>
<td>MultiSeal, Inc. Evansville, IN</td>
</tr>
<tr>
<td>E-Z Stik Pro-Stik</td>
<td></td>
<td></td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>RV 30</td>
<td></td>
<td></td>
<td>Ru Van, Inc. Evansville, IL</td>
</tr>
<tr>
<td>ConSeal CS102, 102B</td>
<td></td>
<td></td>
<td>Concrete Sealants, Inc. Tipp City, OH</td>
</tr>
<tr>
<td>CS-212 external joint wrap</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-56 Bidco Sealant</td>
<td>None</td>
<td></td>
<td>Trelleborg Milford, NH</td>
</tr>
<tr>
<td>Material for horizontal joints meeting ASTM C443:</td>
<td>CP&amp;P round manhole sections with profile offset joint, 48”-120” diameter</td>
<td>None</td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>Press-Seal 4G gaskets</td>
<td></td>
<td></td>
<td>Concrete Pipe and Precast Ashland, Harrisonburg, Salem, VA; Martinsburg, WV; Greencastle, PA</td>
</tr>
<tr>
<td>SP/SL Gaskets</td>
<td>None</td>
<td></td>
<td>Trelleborg Milford, NH</td>
</tr>
<tr>
<td>Material for horizontal joints meeting ASTM C443 or C361:</td>
<td>CP&amp;P round manhole sections with confined O-ring joint, 48”-126” diameter</td>
<td>None</td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
<tr>
<td>Press-Seal O-ring gaskets</td>
<td></td>
<td></td>
<td>Concrete Pipe and Precast</td>
</tr>
<tr>
<td>Joint Materials</td>
<td>For Use With Joint Type/Configuration</td>
<td>Expiration Date</td>
<td>Man’f/Vendor &amp; Facility Location</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Salem, VA; Martinsburg, WV</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Soil-Tight Connectors – Concrete Pipe to Structure**

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection.</td>
<td>Any pipe, arch, or box culvert and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>WS-30 Waterstop</td>
<td>Any pipe, arch, or box culvert and structure</td>
<td>None</td>
<td>Press-Seal Corp. Fort Wayne, IN</td>
</tr>
</tbody>
</table>

**Silt-Tight Connectors – Concrete Pipe to Structure**

Resilient connectors meeting ASTM C1478: 
None at this time

**Leak-Resistant Connectors – Concrete Pipe to Structure**

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”- wide tightened metal bands.</td>
<td>Any pipe, arch, or box culvert and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**CORRUGATED METAL PIPE, ARCH, and PLATE**

**Soil-Tight Joints**

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annular corrugated or helical corrugated pipe with annular rerolled ends with: partially-corrugated end</td>
<td>Any VDOT approved corrugated metal pipe or arch</td>
<td>None</td>
<td>Hardware (band angle, lugs, bolts, bars, straps): Nucor – LMP Steel, Inc. 2000 East First Street Maryville, MO 64468</td>
</tr>
</tbody>
</table>
### Joint Materials

<table>
<thead>
<tr>
<th>For Use With Joint Type/ Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>rerolled to a 2-2/3-by-1/2 in corrugation) or fully-corrugated bands and connectors of banded angle, oval lugs, or bar and straps</td>
<td></td>
<td>Gaskets: Pro Tech Fabricators 801 Macon Street Bedford, VA 24523</td>
</tr>
</tbody>
</table>

### Silt-Tight Joints – No test method currently specified in AASHTO R82; therefore, an independent PE-sealed report is required on a plant verification test consisting of a minimum 10-ft section of pipe on each side of joint assembled similar to field assembly in straight and deflected positions and tested as per Section 7 of ASTM D3212, but at 2 psi in the straight and deflected position, on 24” and 48” diameter pipe. There is no report or testing requirement for joints using external wraps at least 10.5 inches wide.

<table>
<thead>
<tr>
<th>For Use With Joint Type/ Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only annular rerolled ends with: partially-corrugated band, fully-corrugated band, or flat band, with O-ring gasket meeting ASTM D1056 and connectors of banded angle, oval and lugs, or bar and straps; and having a minimum 12-in wide double geotextile fabric wrap</td>
<td>None</td>
<td>Hardware (angle, lugs, bolts, bars, straps): Nucor – LMP Steel, Inc. 2000 East First Street Maryville, MO 64468 O-rings:</td>
</tr>
<tr>
<td>Mar Mac Dissimilar Pipe (DP) Coupler, covering 2 corrugations or 8” minimum each side of joint for rerolled ends with 4 steel compression bands</td>
<td>Any metal pipe or arch to any concrete pipe or arch or metal pipe to plastic pipe, in comparable diameters</td>
<td>None</td>
</tr>
<tr>
<td>Infi-Shield Gator Wrap 12” wide minimum external wrap</td>
<td>Any pipe, arch, or box culvert</td>
<td>None</td>
</tr>
<tr>
<td>12” wide double wrap of VDOT drainage fabric</td>
<td>Any pipe, arch, or box culvert.</td>
<td>None</td>
</tr>
</tbody>
</table>

### Leak-Resistant Joints – No test method currently specified in AASHTO R82; therefore, an independent PE-sealed report is required on a plant verification test consisting of a minimum 10-ft section of pipe on each side of joint assembled in straight and deflected positions and tested as per Section 7 of ASTM D3212, but at 10.8 psi in the straight position and 10 psi in the deflected position, on 24” and 48” diameter pipe. External wraps require same test. Geotextile wraps not permitted to qualify joint.
### Soil-Tight Connectors – Metal Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man‘f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection. For corrugated pipe, 2 corrugations must be covered.</td>
<td>Any pipe or arch and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Silt-Tight Connectors – Metal Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man‘f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection, 2 corrugations covered for corrugated pipe, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.</td>
<td>Any pipe or arch and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Leak-Resistant Connectors – Metal Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man‘f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection, 2 corrugations covered for corrugated pipe, with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.</td>
<td>Any pipe or arch and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### Soil-Tight Joints

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split coupler, single or double wide, covering 2 corrugations each side of joint</td>
<td>12”-24” dia. ADS AASHTO M294 (N-12 plain end) pipe</td>
<td>None</td>
<td>Advanced Drainage Systems, Inc. 4640 Trueman Blvd., Hilliard, OH 43026</td>
</tr>
<tr>
<td></td>
<td>30”-60” dia. ADS AASHTO M294 (N-12 plain end) pipe</td>
<td></td>
<td>McClarin Plastics 15 Industrial Dr., Hanover, PA 17331</td>
</tr>
<tr>
<td>Elastomeric gaskets meeting ASTM F477:</td>
<td>12”-60” dia. in-line bell and spigot joint, ADS AASHTO M294 HDPE pipe.</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Soleno double bell with clips; bell with clips welded to pipe; bell with O-ring gasket</td>
<td>12” dia. Soleno HDPE pipe; 15”-36” dia. pipe; 42”-60” dia. pipe</td>
<td>None</td>
<td>Soleno 64 North Lane McAdam, NB E6J 1K6 Canada</td>
</tr>
<tr>
<td>Split coupler or banded coupler from same as pipe man’f, covering 2 corrugations each side of joint</td>
<td>Any VDOT approved plastic pipe, 12” to 60” dia.</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>External cleated snap coupler, covering 2 corrugations each side of joint</td>
<td>Any VDOT approved plastic pipe, 3” to 12” dia.</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

### Silt-Tight Joints – Requires independent PE-sealed report of plant verification test on 24” and 48” diameter pipe (ASTM D3212 with a maximum test pressure of 2 psi, in straight and deflected positions). This test is also required for external wraps. Geotextile wraps are not permitted to qualify joint.

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’f/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split coupler, single or double wide, covering 2 corrugations each side of joint, with external filter fabric wrap 1 ft each side of joint</td>
<td>12”-24” dia. ADS AASHTO M294 Type S or SP (N-12 plain end) pipe</td>
<td>None</td>
<td>Advanced Drainage Systems, Inc. 4640 Trueman Blvd., Hilliard, OH 43026</td>
</tr>
<tr>
<td></td>
<td>30”-60” dia. ADS AASHTO M294 Type S or SP (N-12 plain end) pipe</td>
<td>None</td>
<td>McClarin Plastics 15 Industrial Dr., Hanover, PA 17331</td>
</tr>
</tbody>
</table>
Leak-Resistant Joints – Requires independent PE-sealed report of plant verification test on 24” and 48” diameter pipe (ASTM D3212 with a maximum test pressure of 10.8 psi). External wraps must meet same testing. Geotextile wraps are not permitted to qualify joint.

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elastomeric gaskets meeting ASTM F477:</td>
<td>In-line bell and spigot joints, ADS 12”-60” dia. AASHTO M294 HDPE or 330 Polypro pipe.</td>
<td>None</td>
<td>Press-Seal Corp. 2424 West State Blvd Fort Wayne, IN 46808</td>
</tr>
<tr>
<td>Press-Seal 10.8 psi gasket</td>
<td></td>
<td>None</td>
<td>Vertex, Inc. 3956 Mogadore Industrial Pkwy Mogadore, OH 44260</td>
</tr>
<tr>
<td>Vertex 10.8 psi gasket</td>
<td></td>
<td>None</td>
<td>Hamilton Kent 740 Baxter Lane Winchester, TN 37398 77 Carlingview Drive Toronto, ON M9W 5E6 Canada</td>
</tr>
<tr>
<td>Hamilton Kent 10.8 psi gasket</td>
<td></td>
<td>None</td>
<td>Trelleborg 250 Elm St. Milford, NH 03055</td>
</tr>
<tr>
<td>Trelleborg 10.8 psi gasket</td>
<td></td>
<td>None</td>
<td>SpringSeal, Inc. 800 Enterprise Pkwy. Ravenna, OH 44266</td>
</tr>
<tr>
<td>SpringSeal gasket</td>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Elastomeric gaskets meeting ASTM F477:</td>
<td>In-line bell and spigot joints, Lane 12”-60” dia. AASHTO M294 pipe.</td>
<td>None</td>
<td>Hamilton Kent 77 Carlingview Drive, Toronto, ON M9W 5E6, Canada</td>
</tr>
<tr>
<td>Hamilton Kent gasket</td>
<td></td>
<td>None</td>
<td>SpringSeal, Inc. 800 Enterprise Pkwy. Ravenna, OH 44266</td>
</tr>
<tr>
<td>Spring Seal gasket</td>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Mar Mac Polyseal Coupler, covering 1 corrugation each side of joint with 2 steel compression bands</td>
<td>Any HDPE corrugated pipe 12”-60” dia. AASHTO M330 Polypropylene Pipe</td>
<td>None</td>
<td>MarMac Construction Products Co., Inc. 334 N. 7th St. McBee, SC 29101</td>
</tr>
</tbody>
</table>
### Soil-Tight Connectors – Plastic Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/ Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection. For corrugated pipe, 2 corrugations must be covered.</td>
<td>Any pipe or arch and structure</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Rubber booted connection or pre-cast into structure, secured to corrugated pipe stub with or without smooth solid HDPE sleeve welded over corrugated portion of pipe stub.</td>
<td>12”-60” dia. AASHTO M294 HDPE or M330 Polypro pipe</td>
<td>None</td>
<td>A-Lok (12” to 60” dia.) 697 Main Street Tullytown, PA 19007 Press-Seal Corporation (12” to 60” dia.) 2424 West State Blvd Fort Wayne, IN 46808 Trelleborg Kor-N-Seal (12” to 60” dia.) 250 Elm St. Milford, NH 03055</td>
</tr>
<tr>
<td>Corrugated Pipe Adaptors (CGA) with Kor-N-Seal Connectors</td>
<td>Pipe 8” – 60” diameter</td>
<td>None</td>
<td>Trelleborg Milford, NH</td>
</tr>
</tbody>
</table>

### Silt-Tight Connectors – Plastic Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/ Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.</td>
<td>Any pipe</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>
## Leak-Resistant Connectors – Plastic Pipe to Structure

<table>
<thead>
<tr>
<th>Joint Materials</th>
<th>For Use With Joint Type/ Configuration</th>
<th>Expiration Date</th>
<th>Man’t/Vendor &amp; Facility Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick and mortar connection with double exterior geotextile wrap. Wrap to extend 2 ft. over pipe and around entire structure – to be held in place with minimum 1”-wide tightened metal bands.</td>
<td>Any pipe</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>
List No. 15

(15) STUD SHEAR CONNECTORS – (Structures)

The Manufacturers listed below have qualified their stud shear connectors in accordance with Sec. 232(h) of the Virginia Department of Transportation Road and Bridge Specifications. Effective immediately, these studs may be used on Virginia construction projects without evidence of test or certification.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Division or Trade Name</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlueArc Stud Welding</td>
<td>BlueArc</td>
<td>1/4, 3/8, 1/2, 5/8, 3/4, 7/8</td>
</tr>
<tr>
<td>Cox Industries</td>
<td>Cox</td>
<td>3/8, 1/2, 5/8, 3/4, 7/8</td>
</tr>
<tr>
<td>Nelson Stud Welding</td>
<td>Nelson</td>
<td>1/4, 3/8, 1/2, 5/8, 3/4, 7/8</td>
</tr>
<tr>
<td>Tru-Fit Screw Products, Corp.</td>
<td>Tru-Weld</td>
<td>3/8, 1/2, 5/8, ¾, 7/8</td>
</tr>
</tbody>
</table>
List No. 16

(16) SURFACE MOUNTED and GROUND MOUNTED FLEXIBLE POST DELINEATORS –
(Chemistry Lab)

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Manufacturer</th>
<th>Local Representative</th>
</tr>
</thead>
</table>
| SH 236 SMA – WS SH 336 SMA – WS SH 536 SST-YO | Safe-Hit Corporation  
Safe Hit Series includes various heights and mounting assemblies  
Dura-Post and Safe-Hit Series includes various heights and mounting assemblies. | Korman Signs, Inc.  
35 East Wacker Drive, Suite 1100  
Chicago, IL  60601  
312.467.6750 |
| Channelizer SDCF303601MB       | Carsonite International  
10 Bob Gifford Blvd.  
Early Branch, SC 29916  
803-943-9115 | Carsonite International  
Paul R. DuBay  
605 Bob Gifford Blvd.  
Early Branch, SC 29916  
804-778-7775 |
| Tra-Flex 36"                    | Arkan Plastics  
136 SE 20th Street  
Great Bend, KS 67530  
620-792-3794 | Protection Services  
3027 Christian Ave  
Roanoke, VA 24012  
540-362-2777 |
| Flex Stake TM 750 series       | Flexstake Inc.  
2150 Andrea Lane  
Fort Myers, FL 33912  
800-348-9839 | RGA Inc.  
454 Southlake Blvd.  
Richmond, VA 23236  
804-794-1592 |
| FG 300 UR FG300 EFX FG300 PE City Post  | Pexco-Davidson Traffic Control Products  
Tacoma, Inc.  
3110 70th Avenue East  
Tacoma, WA 98424  
253-284-8000 | Highway Safety Supply  
P.O. Box 128  
Brandy Station, VA 22714  
540-825-2675 |
| D36F                           | Impact Recovery Systems  
P.O. Box 12637  
246 West Josephine St.  
San Antonio, TX 78212  
210-736-4477 |                |
| TUFFFTP36 TUFFFTP42 TUFFFTP48  | Three D Traffic Works, Inc.  
430 N. Varney St.  
Burbank, CA  91502  
(877)843-9757 |                |
<table>
<thead>
<tr>
<th>Shur-Flex, Surface Mount Del.</th>
<th>Shur-Tite Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shur-Flex, Driveable Del.</td>
<td>P.O Box 2283</td>
</tr>
<tr>
<td></td>
<td>Round rock, TX 78680</td>
</tr>
<tr>
<td></td>
<td>512-218-9500</td>
</tr>
</tbody>
</table>

| TSM 360 Series                | NDM Marking Systems, Inc. |
| FTSM 360 Series               | 26 Gateway Dr.         |
| Includes various heights and  | Jasper, GA 30143       |
| mounting assemblies           | (706) 253-3040         |

Shur-Tite Products
Mike Ostler
P.O Box 2283
Round rock, TX 78680
Cell 980-939-4551
(17) QUALIFIED PREFORMED TAPE LIST – (Chemistry Lab)

The following products have been prequalified, but the manufacturer must supply certification for each lot. Manufacturer's instructions for installation shall be followed both as to method and temperature of application to pavement requirements. Primer/sealers may be required; the manufacturer’s specific recommendations shall be followed, and the cost of the primer/sealer shall be included in the bid price or unit price. Although approved for use, not all products may be equal in all characteristics. Contractor needs to determine the best product for his intended use.

<table>
<thead>
<tr>
<th>Name</th>
<th>Manufacturer</th>
<th>Approval No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type B Class IV</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>These tapes may be used for stop lines, crosswalks, messages and arrows only:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series 1000, White</td>
<td>Brite-Line Technologies</td>
<td>STR-96-137-PA</td>
</tr>
<tr>
<td>ATM 300, White</td>
<td>Advance Traffic Markings</td>
<td>STR-98-TX-510</td>
</tr>
<tr>
<td>ATM 300, Yellow</td>
<td>Advance Traffic Markings</td>
<td>STR-98-TX-511</td>
</tr>
<tr>
<td>3M 390, White</td>
<td>3M</td>
<td>PMM-2010-01-026</td>
</tr>
<tr>
<td>3M 391, Yellow</td>
<td>3M</td>
<td>PMM-2010-01-027</td>
</tr>
<tr>
<td><strong>Type B Class VI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(See Note 2 below for Slurry and Latex Emulsion Surfaces)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>These tapes may be used for edge lines, center and skip lines, messages and arrows only:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A 380I ES, White</td>
<td>3M</td>
<td>MS 13965</td>
</tr>
<tr>
<td>A 381I ES, Yellow</td>
<td>3M</td>
<td>MS 13966</td>
</tr>
<tr>
<td>A 380 WR, White</td>
<td>3M</td>
<td>MS 19276</td>
</tr>
<tr>
<td>A 381 WR, Yellow</td>
<td>3M</td>
<td>MS 19277</td>
</tr>
<tr>
<td>A 380 WR ES, White</td>
<td>3M</td>
<td>MS 19276</td>
</tr>
<tr>
<td>A 381 WR ES, Yellow</td>
<td>3M</td>
<td>MS 19277</td>
</tr>
<tr>
<td>A 380 AW, White</td>
<td>3M</td>
<td>MS 13965</td>
</tr>
<tr>
<td>A 381 AW, Yellow</td>
<td>3M</td>
<td>MS 13966</td>
</tr>
<tr>
<td>3M 390, White</td>
<td>3M</td>
<td>PMM-2010-01-026</td>
</tr>
<tr>
<td>3M 391, Yellow</td>
<td>3M</td>
<td>PMM-2010-01-027</td>
</tr>
<tr>
<td>A 380AW-5, White Contrast Tape</td>
<td>3M</td>
<td>MS13965</td>
</tr>
<tr>
<td>A 381 AW-5, Yellow Contrast Tape</td>
<td>3M</td>
<td>MS13966</td>
</tr>
<tr>
<td>A 380I-5 ES White Contrast Tape</td>
<td>3M</td>
<td>MS11107</td>
</tr>
<tr>
<td>A 381I-5 ES, Yellow Contrast Tape</td>
<td>3M</td>
<td>MS11108</td>
</tr>
<tr>
<td>XRP, White</td>
<td>Brite-Line Technologies, LLC</td>
<td>PMM-2011-01-017(PA), MS 21492</td>
</tr>
<tr>
<td>XRP-E Yellow</td>
<td>Brite-Line Technologies, LLC</td>
<td>PMM-2010-01-017(PA), MS21493</td>
</tr>
<tr>
<td>XRP-HCL, White Contrast Tape</td>
<td>Brite-Line Technologies, LLC</td>
<td>PMM-2011-01-017(PA), MS 21492</td>
</tr>
<tr>
<td>XRP-E-HCL, Yellow Contrast Tape</td>
<td>Brite-Line Technologies, LLC</td>
<td>PMM-2010-01-017(PA), MS21493</td>
</tr>
</tbody>
</table>

Note 1: The Prefix “A” = Adhesive - may not be designated on the product number tested.

Note 2: A low VOC primer adhesive shall be used as part of the manufacturer’s installation instructions when installed on Slurry or Latex Emulsion surfaces.
The following products have been prequalified, but the manufacturer must supply certification for each lot.

<table>
<thead>
<tr>
<th>Name</th>
<th>Manufacturer</th>
<th>Approval No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type D  Class II – Temporary Tape</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATM 200 White</td>
<td>Advance Traffic Markings</td>
<td>STR-98-TX-507</td>
</tr>
<tr>
<td>Series 100 White</td>
<td>Brite-Line Technologies</td>
<td>PMM-04-014-MS</td>
</tr>
<tr>
<td>Series 100 Yellow</td>
<td>Brite-Line Technologies</td>
<td>PMM-05-007-PA</td>
</tr>
<tr>
<td>ATM 2000W White</td>
<td>Advance Traffic Markings</td>
<td>PMM-02-12-MS</td>
</tr>
<tr>
<td>ATM 2000Y Yellow</td>
<td>Advance Traffic Markings</td>
<td>PMM-02-13-MS</td>
</tr>
<tr>
<td>3M 710, White</td>
<td>3M</td>
<td>PMM-09-020-FL,MS 22605</td>
</tr>
<tr>
<td>3M 711, Yellow</td>
<td>3M</td>
<td>PMM-09-021-FL, MS 22606</td>
</tr>
<tr>
<td><strong>Type D  Class III – Temporary Tape (Wet Reflective)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotchlane 780™ White</td>
<td>3M</td>
<td>PMM- 06-010-MS, MS 18477</td>
</tr>
<tr>
<td>Scotchlane 781™ Yellow</td>
<td>3M</td>
<td>PMM- 06-011-MS, MS 18478</td>
</tr>
<tr>
<td>3M 710, White</td>
<td>3M</td>
<td>PMM-09-020-FL,MS 22605</td>
</tr>
<tr>
<td>3M 711, Yellow</td>
<td>3M</td>
<td>PMM-09-021-FL, MS 22606</td>
</tr>
<tr>
<td>3M A710-5, White Contrast</td>
<td>3M</td>
<td>PMM-09-020-FL,MS 22605</td>
</tr>
<tr>
<td>3M A711-5, Yellow Contrast</td>
<td>3M</td>
<td>PMM-09-021-FL, MS 22606</td>
</tr>
<tr>
<td>Delta-Line TWR-White</td>
<td>Brite-Line Technologies, Inc.</td>
<td>PMM-09-005-FL, MS 21321</td>
</tr>
<tr>
<td>Delta-Line TWR- Yellow</td>
<td>Brite-Line Technologies, Inc.</td>
<td>PMM-09-006-FL, MS 21322</td>
</tr>
<tr>
<td>TWR-HCL White Contrast</td>
<td>Brite-Line Technologies, Inc.</td>
<td>PMM-09-005-FL, MS 21321</td>
</tr>
<tr>
<td>TWR-HCL Yellow Contrast</td>
<td>Brite-Line Technologies, Inc.</td>
<td>PMM-09-006-FL, MS 21322</td>
</tr>
<tr>
<td><strong>Type E</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3M, Series A145</td>
<td>3M</td>
<td>STR-93-111</td>
</tr>
<tr>
<td>3M, 715 Black</td>
<td>3M</td>
<td>2009-FL-022, MS 22940</td>
</tr>
<tr>
<td>ATM 280 Black</td>
<td>Advance Traffic Markings</td>
<td>STR-98-TX-509</td>
</tr>
<tr>
<td>Deltaline BTR</td>
<td>Brite-Line Technologies</td>
<td>STR-97-83-MN</td>
</tr>
</tbody>
</table>
EXPENDABLE ABRASIVES

1. Starblast XL – DuPont
   Phone: (800) 441-9487

2. Black Blast -- Virginia Materials and Supplies
   Phone: (757) 855-0155

3. GMA ROM 30 x 60 Garnet – Barton Mines Company
   Phone: (800) 792-5462

4. Crystalgrit -- Virginia Materials and Supplies
   Phone: (757) 855-0155

5. Glass Jet – Virginia Materials and Supplies
   Phone: (757) 855-0155

6. Western’s Bengal Bay Garnet – Virginia Materials and Supplies
   Phone: (757) 855-0155

7. Reed Minerals Black Beauty® 1240 from Moundsville WV plant
   Phone: (717) 763-4200

8. Reed Minerals Black Beauty® 2040 from Moundsville WV plant
   Phone: (717) 763-4200

9. Reed Minerals Black Beauty® 4490 from Moundsville WV plant
   Phone: (717) 763-4200
List No. 19

(19) ABSORPTIVE SOUNDWALL COLOR COATINGS – (Structures)

The following color coating may be used on sound absorptive soundwall panels for the purpose of obtaining the specified color using brand names, provided manufacturing specifications are followed specifically.

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canyon Tone Stain</td>
<td>United Coatings</td>
</tr>
<tr>
<td>Cementrate</td>
<td>Harris Specialty Chemicals, Inc.</td>
</tr>
<tr>
<td>Cold-Flex Stain</td>
<td>Cold-Flex, Inc.</td>
</tr>
<tr>
<td>FX-430</td>
<td>Fox Industries</td>
</tr>
<tr>
<td>Nitocote Cementrate WB (Waterbased)</td>
<td>Harris Specialty Chemicals, Inc.</td>
</tr>
<tr>
<td>H&amp;C Silicone Acrylic Concrete Stain</td>
<td>Sherwin Williams</td>
</tr>
<tr>
<td>Aquastain T-96</td>
<td>The Euclid Chemical Company</td>
</tr>
<tr>
<td>Rainstopper Concrete Stain</td>
<td>Textured Coatings of America, Inc.</td>
</tr>
<tr>
<td>Tex*Cote 300 Bridge-Cote Smooth Coating</td>
<td>Textured Coatings of America, Inc.</td>
</tr>
<tr>
<td>Tex*Cote XL-70 Bridge-Cote Smooth Coating</td>
<td>Textured Coatings of America, Inc.</td>
</tr>
</tbody>
</table>
### (20) WATER BORNE TRAFFIC PAINT (TYPE A) – (Chemistry Lab)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product Number</th>
<th>NTPEP Submittal Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHITE PAINT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>BP14016</td>
<td>STR-97-41-AL</td>
</tr>
<tr>
<td></td>
<td>BP14019</td>
<td>STR-97-44-AL</td>
</tr>
<tr>
<td></td>
<td>BP15622</td>
<td>STR-98-PA-150</td>
</tr>
<tr>
<td></td>
<td>BP17312</td>
<td>PMM(2000PA)-170</td>
</tr>
<tr>
<td></td>
<td>BP17313</td>
<td>PMM(2000PA)-171</td>
</tr>
<tr>
<td></td>
<td>BP17316</td>
<td>PMM(2000PA)-174</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings and Centerline)</td>
<td>CL-6000</td>
<td>STR-96-85-PA</td>
</tr>
<tr>
<td></td>
<td>CL-6004</td>
<td>STR-96-68-PA</td>
</tr>
<tr>
<td></td>
<td>CL-7018</td>
<td>STR-97-69-AL</td>
</tr>
<tr>
<td></td>
<td>CL-8210</td>
<td>STR-98-PA-96</td>
</tr>
<tr>
<td></td>
<td>CL-8214</td>
<td>STR-98-PA-100</td>
</tr>
<tr>
<td></td>
<td>CL-8216</td>
<td>STR-98-PA-102</td>
</tr>
<tr>
<td></td>
<td>CL-8218</td>
<td>STR-98-PA-104</td>
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<td></td>
<td>CL-8220</td>
<td>STR-98-PA-106</td>
</tr>
<tr>
<td></td>
<td>CL-8222</td>
<td>STR-98-PA-108</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)</td>
<td>LD96-1002</td>
<td>STR-96-85-PA</td>
</tr>
<tr>
<td></td>
<td>LD96-1008</td>
<td>STR-96-91-PA</td>
</tr>
<tr>
<td></td>
<td>LD971001C</td>
<td>STR-97-138-AL</td>
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<tr>
<td></td>
<td>LD981001</td>
<td>STR-98-PA-158</td>
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<tr>
<td></td>
<td>LD981002</td>
<td>STR-98-PA-159</td>
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<td></td>
<td>LD981003</td>
<td>STR-98-PA-160</td>
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<td></td>
<td>LD981004</td>
<td>STR-98-PA-161</td>
</tr>
<tr>
<td></td>
<td>LD981005</td>
<td>STR-98-PA-162</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings)</td>
<td>LRMOOWB-19</td>
<td>PMM(2000PA)-110</td>
</tr>
<tr>
<td></td>
<td>LRMOOWB-20</td>
<td>PMM(2000PA)-111</td>
</tr>
<tr>
<td>Ennis Paint</td>
<td>Douglas 303-98</td>
<td>STR-98-PA-214</td>
</tr>
<tr>
<td></td>
<td>Ennis EP200W13</td>
<td>STR-98-PA-17</td>
</tr>
<tr>
<td></td>
<td>Ennis EP200W14</td>
<td>STR-98-PA-18</td>
</tr>
<tr>
<td></td>
<td>Ennis EP200W16</td>
<td>STR-98-PA-20</td>
</tr>
<tr>
<td></td>
<td>EP415W03</td>
<td>PMM(2000PA)-61</td>
</tr>
<tr>
<td>Ozark Materials, LLC</td>
<td>14224 White</td>
<td>PMM-2015-01-110</td>
</tr>
</tbody>
</table>
### List No. 20 (Cont’d.)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product Number</th>
<th>NTPEP Submittal Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YELLOW PAINT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>BP-14021</td>
<td>STR-97-46-AL</td>
</tr>
<tr>
<td></td>
<td>BP15611 / TM 2325</td>
<td>STR-98-PA-139</td>
</tr>
<tr>
<td></td>
<td>BP15623</td>
<td>STR-98-PA-151</td>
</tr>
<tr>
<td></td>
<td>BP17314</td>
<td>PMM(2000PA)-172</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)</td>
<td>LD961009</td>
<td>STR-96-92-PA</td>
</tr>
<tr>
<td></td>
<td>LD981009</td>
<td>STR-98-PA-165</td>
</tr>
<tr>
<td></td>
<td>LD981010</td>
<td>STR-98-PA-166</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings)</td>
<td>LRMOOWB-31</td>
<td>PMM(2000PA)-122</td>
</tr>
<tr>
<td>Aexcel</td>
<td>72Y-AO65</td>
<td>STR-96-148-PA</td>
</tr>
<tr>
<td>Ennis Paint</td>
<td>Douglas 306-98</td>
<td>STR-98-PA-217</td>
</tr>
<tr>
<td></td>
<td>Douglas 307-98</td>
<td>STR-98-PA-218</td>
</tr>
<tr>
<td></td>
<td>Ennis EP200Y-18</td>
<td>STR-98-PA-29</td>
</tr>
<tr>
<td></td>
<td>EP415Y03</td>
<td>PMM(2000PA)-66</td>
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<tr>
<td></td>
<td>EP415Y04</td>
<td>PMM(2000PA)-67</td>
</tr>
<tr>
<td></td>
<td>EP415Y05</td>
<td>PMM(2000PA)-68</td>
</tr>
<tr>
<td></td>
<td>EP415Y06</td>
<td>PMM(2000PA)-69</td>
</tr>
<tr>
<td>Ozark Materials, LLC</td>
<td>24224 Yellow</td>
<td>PMM-2015-01-111</td>
</tr>
</tbody>
</table>
List No. 21

(21) QUALIFIED #14 ALUMINUM EPOXY MASTIC COATINGS – (Chemistry Lab)
(SYSTEM F)

Note: All approved paint systems must not exceed the 2.8 lb/gal/VOC requirement as applied.

The following coatings have been prequalified for use in accordance with Road & Bridge Specifications, Section 231. Each lot must be certified in accordance with the Materials Division Manual of Instructions.

<table>
<thead>
<tr>
<th>Company</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboline</td>
<td>Carbomastic 15</td>
</tr>
<tr>
<td>Carboline</td>
<td>Carbomastic 90 Aluminum</td>
</tr>
<tr>
<td>International Paint</td>
<td>Interplus 670 HS AL</td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>Epoxy Mastic Aluminum II</td>
</tr>
</tbody>
</table>

The following epoxy mastic products are available in colors, and have been prequalified for use where colored topcoats are specified.

<table>
<thead>
<tr>
<th>Company</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboline</td>
<td>Carboguard 890</td>
</tr>
<tr>
<td>Carboline</td>
<td>Carboguard 890 LT</td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>Macropoxy High Solids</td>
</tr>
</tbody>
</table>

The following urethane products may also be used for colored topcoats.

<table>
<thead>
<tr>
<th>Company</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboline</td>
<td>Carbothane 133 LH</td>
</tr>
<tr>
<td>Carboline</td>
<td>Carbothane 134 HS</td>
</tr>
<tr>
<td>International Paint</td>
<td>Interthane 870UHS</td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>Acrolon 218 HS</td>
</tr>
</tbody>
</table>
(22) PAVEMENT MARKERS – (Chemistry Lab)
Pavement Markers are approved per R&B Section 235

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Casting Model No.</th>
<th>Reflector Description</th>
<th>Casting Adhesive</th>
<th>Reflector Adhesive</th>
</tr>
</thead>
</table>

NOTES:
1. The Model 98 has been discontinued. The 940 reflector can be used as a replacement in existing Model 98 castings. The Model 98 has been replaced with the approved castings listed above.
2. All reflectors are approved for use in any casting in which they fit.
4. Any approved casting adhesive may be used with any casting provided they meet AASHTO, M-237, Type IV specifications.

Special Note – Effective January 1, 2020 these Snow Plowable Raised Pavement Markers (with Steel Castings listed above) will not be approved for VDOT use.
### PLASTIC INLAID MARKERS (PIMs)

*per SP704-000110-00*

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Marker Holder</th>
<th>Retroreflector Description</th>
<th>Marker Holder Epoxy Adhesive</th>
<th>Retroreflector Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>Model 201</td>
<td>Ennis-Flint 940, 944, C-40</td>
<td>Epoplex MA-50 or</td>
<td>Liquid Nails</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ray-O-Lite 2004/2004S</td>
<td>Epoplex MA-52 or</td>
<td>- 602</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3M 190</td>
<td>Lord Corp. Thermoset EP-87</td>
<td>- 2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P3 Infrastructure, Inc. Duradhesive</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Olin Epoxy-Poly-Carb, Mark 29 &amp; 29.9</td>
<td></td>
</tr>
<tr>
<td>Marker One</td>
<td>Model R-100</td>
<td>Ennis-Flint 940, 944, C-40</td>
<td>Lumiline SMA</td>
<td>Liquid Nails</td>
</tr>
<tr>
<td></td>
<td>Model R-101</td>
<td>Ray-O-Lite 2004/2004S</td>
<td>Epoplex MA-50 or</td>
<td>- 602</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3M 190</td>
<td>Epoplex MA-52 or</td>
<td>- 2000</td>
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<td></td>
<td>Lord Corp. Thermoset EP-87</td>
<td></td>
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<td>P3 Infrastructure, Inc. Duradhesive</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Olin Epoxy-Poly-Carb, Mark 29 &amp; 29.9</td>
<td></td>
</tr>
</tbody>
</table>

Note 1

Note 2

1. Any approved epoxy may be used with any marker holder provided they meet AASHTO, M-237, Type IV specifications.
2. Retroreflector adhesive shall be per marker holder MFGR recommendation.

### TEMPORARY PAVEMENT MARKERS

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Marker No.</th>
<th>Size</th>
<th>Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>88</td>
<td>4” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>11</td>
<td>4” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>948</td>
<td>2” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>C-80</td>
<td>4” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>C-40</td>
<td>2” x 4”</td>
<td>Bitumen Adhesive or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ray-O-Lite</td>
<td>“Standard”</td>
<td>4” x 4”</td>
<td>Bitumen Adhesive</td>
</tr>
<tr>
<td>Ray-O-Lite</td>
<td>2004, 2004S</td>
<td>4” x 4”</td>
<td>Bitumen Adhesive</td>
</tr>
</tbody>
</table>
### Ray-O-Lite

<table>
<thead>
<tr>
<th>Model AA Types – B, C, D, DR, G, H, K, X, Z</th>
<th>4” x 4”</th>
<th>Bitumen Adhesive</th>
</tr>
</thead>
</table>

### Ray-O-Lite

<table>
<thead>
<tr>
<th>Model AA-ARC II Types – B, C, D, DR, G, H, K, X, Z</th>
<th>4” x 4”</th>
<th>Bitumen Adhesive</th>
</tr>
</thead>
</table>

### 3M

<table>
<thead>
<tr>
<th>290 (White)</th>
<th>3.5” x 4”</th>
<th>Bitumen Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>291 (Yellow)</td>
<td>3.5” x 4”</td>
<td>Bitumen Adhesive</td>
</tr>
</tbody>
</table>

### PEXCO, LLC

<table>
<thead>
<tr>
<th>DAPCO RPM</th>
<th>4” x 4”</th>
<th>Bitumen Adhesive</th>
</tr>
</thead>
</table>

### FLEXIBLE TEMPORARY PAVEMENT MARKER (FTPM) (Chip Seal/Overlay)
For 14 Day Maximum Usage

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Marker No.</th>
<th>Size</th>
<th>Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEXCO, LLC.</td>
<td>TOM W-1</td>
<td>4” Width</td>
<td>Bitumen Adhesive</td>
</tr>
<tr>
<td></td>
<td>TOM W-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOM Y-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOM Y-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APEX</td>
<td>MODEL 932</td>
<td>4” Width</td>
<td>Bitumen Adhesive</td>
</tr>
<tr>
<td></td>
<td>CW/CW2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CY/CY2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CWOL/CW2OL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CYOL/CY2OL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### RECESSED PAVEMENT MARKERS

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Marker No.</th>
<th>Size</th>
<th>Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Types – B, C, D, DR, G, H, K, X, Z</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>948</td>
<td>2” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>944SB</td>
<td>2” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
<tr>
<td>Ennis-Flint Traffic Safety Solutions</td>
<td>C-40</td>
<td>2” x 4”</td>
<td>2202 Bitumen or AASHTO-M237, Type II</td>
</tr>
</tbody>
</table>
### GUARDRAIL DELINEATORS

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model No.</th>
<th>Adhesive Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duraflex</td>
<td>Railrider</td>
<td>H.B. Fuller SCO 252124</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>661 (one-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>662 (two-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>631 (one-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>632 (two-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Artuk, Inc.</td>
<td>FT – 1 (Note 1)</td>
<td>Artuk Cement # SB-12</td>
</tr>
<tr>
<td>Artuk, Inc.</td>
<td>FR - 1</td>
<td>Artuk Cement # SB-12</td>
</tr>
<tr>
<td>Artuk, Inc.</td>
<td>FB - 33</td>
<td>Artuk Cement # SB-12</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>DAPCO I-Flex Guardrail Marker Davidson Straight Guardrail Reflector</td>
<td>DAPCO 795A</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – T9</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – T12</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 9</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 12</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 15</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – Little Dog</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – Big Dog</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM 3 x 4 -1 / EBM 3 x 4 - 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM 3 x 3 -1 / EBM 3 x 3 - 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBMT – 1 / EBMT- 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>GRD-C1 / GRD-C2</td>
<td>Per MFGR Recommendation</td>
</tr>
</tbody>
</table>
### BARRIER DELINEATORS

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model No.</th>
<th>Adhesive Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duraflex</td>
<td>Flexx 2020</td>
<td>H.B.Fuller SCO 252124</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>661 (one-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>662 (two-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>631 (one-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Eastern Metal / USA-Sign</td>
<td>632 (two-sided) (Note 1)</td>
<td>Dow Corning #795 Silicone or Courtlaulds PRC Rapid Seal</td>
</tr>
<tr>
<td>Artuk Inc.</td>
<td>FT - 1</td>
<td>Artuk Cement # SB-12</td>
</tr>
<tr>
<td>Artuk Inc.</td>
<td>FT - 33</td>
<td>Artuk Cement # SB-12</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM - T9</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – T12</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 9</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 12</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – 15</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – Little Dog</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Pexco/Davidson TCP</td>
<td>PCBM – Big Dog</td>
<td>DAPCO 795</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM 3 x 4 -1 / EBM 3 x 4 - 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM 3 x 3 -1 / EBM 3 x 3 - 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM 3 x 3 -1 / EBM 3 x 3 - 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>EBM – 1 / EBM- 2</td>
<td>Per MFGR Recommendation</td>
</tr>
<tr>
<td>Empco-Lite</td>
<td>GRD-C1 / GRD-C2</td>
<td>Per MFGR Recommendation</td>
</tr>
</tbody>
</table>
List No. 23 (cont.)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model No.</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ennis Paint/Stimsonite)</td>
<td>975</td>
<td>3.25&quot; Circular</td>
</tr>
<tr>
<td>AKT</td>
<td>18 (Delineator only)</td>
<td>3.25&quot; Circular</td>
</tr>
<tr>
<td></td>
<td>181 (Delineator with Bracket)</td>
<td></td>
</tr>
<tr>
<td>Ray-O-Lite</td>
<td>RT-90</td>
<td>3.25&quot; Circular</td>
</tr>
</tbody>
</table>

NOTE 1: For use when guardrail has wooden blockout posts.
(24) MINERAL ADMIXTURES FOR HYDRAULIC CEMENT CONCRETE – (Physical Lab)

To have a product included on the Approved List for "Mineral Admixtures for Hydraulic Cement Concrete" the following shall be submitted to Materials Division’s Physical Laboratory Assistant Concrete Program Manager a letter with a notarized signature stating that the mineral admixture meets the appropriate requirements in Section 215.02 (G, H, I or M) of the VDOT Road and Bridge Specifications. Fly Ash meets ASTM C-618, Class F, Slag meets ASTM C-989 grade 100 or 120. Silica Fume meets AASHTO M-307. Metakaolin meets AASHTO M-321.

Upon approval the Mineral Admixtures Manufacturer will be required to submit each year a letter with a notarized signature stating that the chemical admixture meets the requirements of the appropriate method. Also quarterly mill certifications’ showing that the material is staying within the specification range.

**Fly Ash**

<table>
<thead>
<tr>
<th>Fly Ash Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>AshVenture Roxboro, NC</td>
<td>113</td>
<td>Class F</td>
</tr>
<tr>
<td>AshVenture Belews Creek, NC</td>
<td>102</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral Bowen Plant, Stilesboro, GA</td>
<td>111</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral Fort Martin Plant, Maidsville, WV</td>
<td>137</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral Mill Creek Plant, Louisville, KY</td>
<td>149</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral Mitchell Plant, Moundsville, WV</td>
<td>147</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral W.H. Sammis Plant, Stratton, OH</td>
<td>134</td>
<td>Class F</td>
</tr>
<tr>
<td>Boral Washingtonville Plant, Washingtonville, PA</td>
<td>148</td>
<td>Class F</td>
</tr>
<tr>
<td>Charah Miami Fort Planr North Bend, OH</td>
<td>144</td>
<td>Class F</td>
</tr>
<tr>
<td>Fly Ash Direct John Amos Plant, Winfield, WV</td>
<td>127</td>
<td>Class F</td>
</tr>
<tr>
<td>Fly Ash Direct Mountaineer Plant, New Haven, WV</td>
<td>145</td>
<td>Class F</td>
</tr>
<tr>
<td>Riverside Civitavecchia, Italy</td>
<td>143</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Bull Run Fossil Plant Oak Ridge, TN</td>
<td>132</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Cumberland Station Cumberland City, TN</td>
<td>135</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Cross Station Pineville, SC</td>
<td>129</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Eastman Station Kingsport, TN</td>
<td>123</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Kingston Fossil Plant Harriman, TN</td>
<td>136</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA McMeeken Station Columbia, SC</td>
<td>128</td>
<td>Class F Bagged product</td>
</tr>
<tr>
<td>SEFA Morgantown Generation Station, Newburg, MD</td>
<td>120</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Wateree Station Code Eastover, SC</td>
<td>130</td>
<td>Class F</td>
</tr>
<tr>
<td>SEFA Winyah Generation Station Georgetown, SC</td>
<td>131</td>
<td>Class F</td>
</tr>
</tbody>
</table>
## Fly Ash (cont.)

<table>
<thead>
<tr>
<th>Fly Ash Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Separation Technologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brandon Shores Station</td>
<td>119</td>
<td>Class F</td>
</tr>
<tr>
<td>Brunner Island Station</td>
<td>125</td>
<td>Class F</td>
</tr>
<tr>
<td>EDP Sines, Portugal</td>
<td>142</td>
<td>Class F</td>
</tr>
<tr>
<td>Longview Power</td>
<td>146</td>
<td>Class F</td>
</tr>
<tr>
<td><strong>Spartan Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spartan AC34, India</td>
<td>138</td>
<td>Class F</td>
</tr>
</tbody>
</table>

## Slag

<table>
<thead>
<tr>
<th>Slag Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GGBF Slag Source</strong></td>
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</tr>
<tr>
<td>Argos USA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tampa, FL</td>
<td>710</td>
<td>Grade 120</td>
</tr>
<tr>
<td>Adana Turkey</td>
<td>711</td>
<td>Grade 100</td>
</tr>
<tr>
<td><strong>Caycem USA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adana, Turkey</td>
<td>712</td>
<td>Grade 100/120</td>
</tr>
<tr>
<td><strong>Lafarge / Holcim</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparrows Point, MD</td>
<td>700</td>
<td>Grade 120</td>
</tr>
<tr>
<td><strong>Lehigh</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camden, NJ</td>
<td>703</td>
<td>Grade 120</td>
</tr>
<tr>
<td>Evansville plant</td>
<td>704</td>
<td>Grade 120</td>
</tr>
<tr>
<td>Middlebranch OH</td>
<td>708</td>
<td>Grade 100</td>
</tr>
</tbody>
</table>

## Silica Fume

<table>
<thead>
<tr>
<th>Silica Fume Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced Cement Technologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>904</td>
<td></td>
</tr>
<tr>
<td><strong>RED Industrial Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mississippi Silicon</td>
<td>909</td>
<td>R-E-D Fume 102 DM</td>
</tr>
<tr>
<td>Mississippi Silicon</td>
<td>909</td>
<td>R-E-D Fume 104 OG</td>
</tr>
<tr>
<td>Montgomery, AL</td>
<td>915</td>
<td>RED 102DA (Densified Alabama)</td>
</tr>
<tr>
<td>Montgomery, AL</td>
<td>915</td>
<td>RED 104OGA (Semi Densified Alabama)</td>
</tr>
<tr>
<td>Montgomery, AL</td>
<td>915</td>
<td>RED 106UA (Undensified Alabama)</td>
</tr>
<tr>
<td><strong>BASF</strong></td>
<td>905</td>
<td>MasterLife SF 100</td>
</tr>
</tbody>
</table>

List 24 (cont.)
### Silica Fume (cont.)

<table>
<thead>
<tr>
<th>Silica Fume Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elkem</td>
<td>908</td>
<td>EMS 970D</td>
</tr>
<tr>
<td>Sika</td>
<td>906</td>
<td>Sikacrete 950 DP</td>
</tr>
<tr>
<td>W. R. Grace</td>
<td>907</td>
<td>Force 10000 D</td>
</tr>
</tbody>
</table>

### Metakaolin

<table>
<thead>
<tr>
<th>Metakaolin Source</th>
<th>Plant ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Cement Technologies</td>
<td>910</td>
<td>PowerPozz</td>
</tr>
<tr>
<td>BASF Corporation</td>
<td>912</td>
<td>MetaMax</td>
</tr>
<tr>
<td>CARBO Ceramics Inc.</td>
<td>913</td>
<td>Metakao</td>
</tr>
<tr>
<td>GCP Applied Technologies</td>
<td>911</td>
<td>Grace HRMK 100</td>
</tr>
<tr>
<td>Sika Corporation</td>
<td>914</td>
<td>Sikacrete M-100</td>
</tr>
</tbody>
</table>
The following manufacturers of corrugated metal culvert pipe have VDOT approved Quality Assurance programs as outlined in the instructions. For additions and deletions to this list contact the Materials Division Quality Assurance Section.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Address</th>
<th>Plant Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ConTech Engineered Solutions LLC</td>
<td></td>
<td>Greencastle, PA</td>
</tr>
<tr>
<td>ConTech Engineered Solutions LLC</td>
<td></td>
<td>Charlotte, NC</td>
</tr>
<tr>
<td>ConTech Engineered Solutions LLC</td>
<td>6115 Chapel Hill Road</td>
<td>Raleigh, NC 27607</td>
</tr>
<tr>
<td>ConTech Engineered Solutions LLC</td>
<td></td>
<td>Ashland (Summit), KY</td>
</tr>
<tr>
<td>Lane Metal Products</td>
<td></td>
<td>Bedford, PA</td>
</tr>
<tr>
<td>Lane Metal Products</td>
<td></td>
<td>Dublin, VA</td>
</tr>
<tr>
<td>Public Drainage Supply</td>
<td></td>
<td>Blountville, TN</td>
</tr>
<tr>
<td>Smith Setzer &amp; Sons, Inc.</td>
<td></td>
<td>Catawba, NC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Plant Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowie Sales, Inc.</td>
<td>6475 Roanoke Road</td>
</tr>
<tr>
<td>Carl M. Henshaw Drainage Products</td>
<td>13300 Ramblewood Drive</td>
</tr>
<tr>
<td>CMC Supply, Inc.</td>
<td></td>
</tr>
<tr>
<td>ConTech Engineered Solutions LLC</td>
<td></td>
</tr>
<tr>
<td>Eastern Supply, Inc.</td>
<td></td>
</tr>
<tr>
<td>Jennmar Specialty Products</td>
<td></td>
</tr>
<tr>
<td>Lane Metal Products</td>
<td></td>
</tr>
</tbody>
</table>
(26) CONCRETE PIPE PRODUCERS ON QA/QC PROGRAM – (Quality Assurance)

The following manufacturers of concrete culvert pipe have VDOT approved Quality Assurance programs as outlined in the instructions. For additions and deletions to this list contact the Materials Division Quality Assurance Section.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Address</th>
<th>Plant Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>3801 Cook Blvd</td>
<td>Chesapeake, VA 23323</td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>10364 Design Road</td>
<td>Design Rd. Ashland, VA</td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Jessup, MD</td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Roanoke, VA</td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Salem, VA</td>
</tr>
<tr>
<td>Foltz Concrete Pipe Co.</td>
<td></td>
<td>Winston –Salem, NC</td>
</tr>
<tr>
<td>Oldcastle Precast</td>
<td>3960 Cedar Creek Road</td>
<td>Fayetteville, NC 28301</td>
</tr>
<tr>
<td>Oldcastle Precast</td>
<td>920 Withers Road</td>
<td>Raleigh, NC 27603</td>
</tr>
<tr>
<td>Permatile Concrete Pipe Co.</td>
<td></td>
<td>Bristol, VA</td>
</tr>
<tr>
<td>Rinker Materials</td>
<td></td>
<td>Frederick, MD</td>
</tr>
<tr>
<td>Rinker Materials</td>
<td></td>
<td>Middletown, DE</td>
</tr>
<tr>
<td>Rinker Materials</td>
<td></td>
<td>Thomasville, NC</td>
</tr>
<tr>
<td>Rinker Materials</td>
<td>1600 Thorne Ave. S.</td>
<td>Wilson, NC 27893</td>
</tr>
<tr>
<td>Smith Setzer &amp; Sons, Inc.</td>
<td>12556 Setzer Road</td>
<td>Stoney Creek, VA 23882</td>
</tr>
</tbody>
</table>

(*P) = Probationary
List No. 27

(27) QUALIFIED SILICONE RUBBER JOINT SEALER – (Chemistry Lab)

The following products have been prequalified, but the manufacturer must supply certification for each lot.

**Class A**

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadsaver Part #34902</td>
<td>Crafco, Inc.</td>
<td>6165 W. Detroit Street, Chandler, AR 85226</td>
<td>(800) 528-8242</td>
</tr>
<tr>
<td>Dow Corning 888</td>
<td>Dow Corning Corp.</td>
<td>3901 South Saginaw Road, Midland, MI 48686</td>
<td>(989)496-4400</td>
</tr>
<tr>
<td>Tremco Spectrum 800</td>
<td>Tremco Incorporated</td>
<td>3777 Green Road, Beachwood, OH 44122</td>
<td>(216) 292-5000</td>
</tr>
</tbody>
</table>

**Class B** (for use on newly sawn or newly constructed joints only)

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadsaver SL Part #34903</td>
<td>Crafco, Inc.</td>
<td>6165 W. Detroit Street, Chandler, AR 85226</td>
<td>(800) 528-8242</td>
</tr>
<tr>
<td>Pecora 300SL (NTPEP, JS-2010-01-001)</td>
<td>Pecora Corp.</td>
<td>165 Wambold Rd., Harleysville, PA 19438</td>
<td>(215) 799-7557</td>
</tr>
</tbody>
</table>

**Class C** (for use in newly sawn or newly constructed joints, including joints between hydraulic cement concrete pavement and asphaltic shoulders with no spalling of HCC edge)

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow Corning 890 SL</td>
<td>Dow Corning Corp.</td>
<td>3901 South Saginaw Road, Midland, MI 48686</td>
<td>(989) 496-4400</td>
</tr>
<tr>
<td>Tremco Spectrum 900 SL</td>
<td>Tremco Incorporated</td>
<td>3777 Green Road, Beachwood, OH 44122</td>
<td>(216) 292-5000</td>
</tr>
<tr>
<td>SikSil 728 SL (formerly Bondaflex)</td>
<td>Bondaflex Technologies</td>
<td>995 Towbin Avenue, Lakewood, NJ 08701</td>
<td>(201) 458-4146</td>
</tr>
</tbody>
</table>
Class D (to seal expansion joints on bridge decks, where rapid curing is required).

<table>
<thead>
<tr>
<th>Product</th>
<th>Company</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow Corning 902 RCS</td>
<td>Dow Corning Corp.</td>
<td>3901 South Saginaw Road</td>
<td>(989) 496-4400</td>
</tr>
<tr>
<td>Wabo Silicone Seal</td>
<td>Watson Bowman Acme Corp.</td>
<td>95 Pineview Drive</td>
<td>(703) 691-9239</td>
</tr>
</tbody>
</table>
To have a product included on the Approved List for "Polymers for Sealing Cracks in Hydraulic Cement Concrete" the following shall be submitted to Materials Division’s Physical Laboratory Assistant Concrete Program Manager. The Safety Data Sheet (SDS), Technical Data Sheets, and a sample of material that will be tested in accordance with Virginia Road and Bridge Specifications, Section 252.02.

Upon approval the Manufacturer will be required to submit each year a notarized letter stating that the product has not changed in formulation since initial approval.

<table>
<thead>
<tr>
<th>Product</th>
<th>Type Polymer</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crack Sealer ULV – 2 Part</td>
<td>HMWM (Mod.)</td>
<td>Watson Bowman Acme</td>
</tr>
<tr>
<td>Crackbond Healer Sealer</td>
<td>Epoxy</td>
<td>Adhesives Technology Corp.</td>
</tr>
<tr>
<td>Crackbond LR-321</td>
<td>Epoxy</td>
<td>Adhesives Technology Corp.</td>
</tr>
<tr>
<td>Deckseal</td>
<td>Epoxy</td>
<td>SSI Construction &amp; Industrial Materials, Inc.</td>
</tr>
<tr>
<td>Degadeck Crack Sealer Plus</td>
<td>MMA</td>
<td>BASF Construction Chemicals, LLC</td>
</tr>
<tr>
<td>Duraguard 401-3 (High Modulus)</td>
<td>HMWM</td>
<td>ChemMasters</td>
</tr>
<tr>
<td>Duraguard 401-100 (Low Modulus)</td>
<td>HMWM</td>
<td>ChemMasters</td>
</tr>
<tr>
<td>Dural 335</td>
<td>Epoxy</td>
<td>The Euclid Chemical Company</td>
</tr>
<tr>
<td>Dural 50 LM</td>
<td>Epoxy</td>
<td>The Euclid Chemical Company</td>
</tr>
<tr>
<td>E-Bond 523</td>
<td>Epoxy</td>
<td>E-Bond</td>
</tr>
<tr>
<td>E-Bond 550 Hi-Mod Low Viscosity</td>
<td>Epoxy</td>
<td>E-Bond</td>
</tr>
<tr>
<td>KBP-204 P SEAL</td>
<td>HMWM</td>
<td>Kwik Bond Polymers</td>
</tr>
<tr>
<td>Mark-135 Safe-T-Seal</td>
<td>Epoxy</td>
<td>Olin Epoxy-POLY-CARB (Blue Cube Operations LLC)</td>
</tr>
<tr>
<td>Percol Concrete Healer</td>
<td>Urethane</td>
<td>Percol Polymerics, Inc.</td>
</tr>
<tr>
<td>Rhoca Gil HS-2K</td>
<td>HMWM</td>
<td>Rhone Poulenc</td>
</tr>
<tr>
<td>Rhoca Gil HS-LV</td>
<td>HMWM</td>
<td>Rhone Poulenc</td>
</tr>
<tr>
<td>Roadware 10 Minute Concrete Mender</td>
<td>Urethane</td>
<td>Roadware Incorporated</td>
</tr>
<tr>
<td>Sealate T-70-MX-30 Bridge Deck Elongation</td>
<td>HMWM</td>
<td>Transpo Industries</td>
</tr>
</tbody>
</table>
(28) POLYMERS FOR SEALING CRACKS IN HYDRAULIC CEMENT CONCRETE-

<table>
<thead>
<tr>
<th>Product</th>
<th>Type Polymer</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sika Pronto 19</td>
<td>HMWM</td>
<td>Sika Chemical Corp.</td>
</tr>
<tr>
<td>Sika Pronto 19 TF</td>
<td>HMWM</td>
<td>Sika Chemical Corp.</td>
</tr>
<tr>
<td>Sikadur 35 Hi-Mod LV</td>
<td>Epoxy</td>
<td>Sika Chemical Corp.</td>
</tr>
<tr>
<td>Sikadur 55 SLV</td>
<td>Epoxy</td>
<td>Sika Chemical Corp.</td>
</tr>
<tr>
<td>SIL-ACT EP-700D</td>
<td>Epoxy</td>
<td>Advanced Chemical Technologies</td>
</tr>
<tr>
<td>Surepoxy HMLV</td>
<td>Epoxy</td>
<td>Kaufman Inc.</td>
</tr>
<tr>
<td>Transpo T-70 MX</td>
<td>HMWM</td>
<td>Transpo Industries</td>
</tr>
<tr>
<td>Transpo T-70 X Static Loading</td>
<td>HMWM</td>
<td>Transpo Industries</td>
</tr>
<tr>
<td>Versafill 60A/60B</td>
<td>Epoxy</td>
<td>Henkel Corporation</td>
</tr>
</tbody>
</table>

**LEGEND:**
- HMWM (Mod.)  High Molecular Weight Methacrylate Modified
- HMWM        High Molecular Weight Methacrylate
- MMA         Methyl Methacrylate
To have a product included on the Approved List for "Chemical / Mechanical Anchoring Systems" the following shall be submitted to Materials Division’s Physical Laboratory Assistant Concrete Program Manager; A Safety Data Sheet (SDS) and any Technical Data Sheets, for the material being evaluated. Also needed is a sample of material that will be tested at a depth of .5 inches. A minimum of 69,300 PSI needs to be obtained.

Upon approval the Manufacturer will be required to submit each year a notarized letter stating that the product has not changed in formulation since initial approval.

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesives Technology Corporation</td>
<td>ASF-1000</td>
<td>A 2-component styrene free, acrylic system used for anchoring or doweling applications in good sound concrete using threaded rod or rebar.</td>
</tr>
<tr>
<td>Pompano Beach, FL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS-1CC</td>
<td></td>
<td>A two-component, high performance epoxy anchoring system which has an application temperature range between 40 °F to 110 °F.</td>
</tr>
<tr>
<td>Ultrabond 1</td>
<td></td>
<td>Two component, 100% solids, high modulus, structural epoxy gel. Ultrabond 1 is solvent free, no odor, high strength moisture intensive, non-sag epoxy system. Recommended temperature range is 35º - 115ºF.</td>
</tr>
<tr>
<td>Ultrabond 1300</td>
<td></td>
<td>A two-component, fast-setting adhesive system that offers exceptional strength in anchoring and doweling applications. It may be used in temperatures between 40 ºF - 110 ºF.</td>
</tr>
<tr>
<td>Ultrabond 2300</td>
<td></td>
<td>Epoxy adhesive anchors for fastening materials to masonry items. Sets in 8 hrs. at 80ºF.</td>
</tr>
<tr>
<td>Ultrabond 365 CC</td>
<td></td>
<td>Ultra Bond 365 CC is a 2-component high performance cement and silane hybrid anchoring system with an extended installation temperature range.</td>
</tr>
<tr>
<td>Ultrabond HS-200</td>
<td></td>
<td>Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Cures in temperatures of 32ºF - 100°F.</td>
</tr>
<tr>
<td>Aerosmith Fastening Systems</td>
<td>Sure-Set ACR</td>
<td>Designed for most demanding structural applications and rebar connections. Offers high load capacities when used in conjunction with threaded rod or Rebar or Steel Dowels.</td>
</tr>
<tr>
<td></td>
<td>Sure-Set PE</td>
<td>Pure epoxy bonding system designed for most demanding structural applications and rebar connections. Offers high load capacities when used in conjunction with threaded rod or Rebar or Steel Dowels.</td>
</tr>
</tbody>
</table>
Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankrtite Fastening Systems</td>
<td>Slam-Tite Hammer in Glass Chemical Capsule</td>
<td>Polyester resin and hardening agent with aggregate filler. Minimum cure time above 68°F 10 min. 50-68°F 5 hrs., Store in original container at 50 to 100°F.</td>
</tr>
<tr>
<td>BASF Construction Chemicals, LLC</td>
<td>Conressive 1420</td>
<td>Two component 100% solids nonsag epoxy adhesive. Mainly used for anchoring fasteners, rebar, and dowels into concrete.</td>
</tr>
<tr>
<td>Covert Operations</td>
<td>CIA – Gel Epoxy</td>
<td>Cartridge epoxy anchoring system for dowel bars, rebars and anchoring bolts.</td>
</tr>
<tr>
<td>Dayton Superior</td>
<td>Sure Anchor Epoxy J50</td>
<td>Cures above 40°F for use in anchoring bolts, dowels, and reinforcing steel 1:1 by volume, pot life 30-40 min.</td>
</tr>
<tr>
<td>E-Bond</td>
<td>Hi-Mod Gel 580, 590, 592</td>
<td>For use in anchoring bolts dowels, and pins, injection grouting and as a structural adhesive. Can be extended with salt free silica aggregate mixed 1:1 by volume. Cures to 40°F</td>
</tr>
<tr>
<td>Euclid Chemical</td>
<td>Dural Fast Set Epoxy Gel</td>
<td>Epoxy cartridge kit for anchoring dowel bars, rebar and anchoring bolts. Application temperature must be at least 35°F and rising.</td>
</tr>
<tr>
<td>Kirkland</td>
<td>Dural HS Gel</td>
<td>Two component, 100% solids, high modulus, structural epoxy gel. It is solvent free, no odor, high strength, moisture intensive, non-sag epoxy system. Recommended temperature range is 35°F - 115°F.</td>
</tr>
<tr>
<td></td>
<td>Duual ICC Gel</td>
<td>A 2-component high performance cement and silane hybrid anchoring system with an extended installation temperature range.</td>
</tr>
<tr>
<td>Futura Companies</td>
<td>Futura Bond 566R</td>
<td>For grouting anchoring dowels, re-bars, and bolts in concrete. Also for bonding in external steel reinforcing plates to concrete. For bonding concrete. Use above 40°F.</td>
</tr>
<tr>
<td>Scottdale, GA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Henkel Corporation</td>
<td>Fixmaster Anchor Bolt</td>
<td>Two component, 100% solids, high modulus, structural epoxy gel. Is solvent free, no odor, high strength moisture intensive, non-sag epoxy system. Recommended temperature range is 35°F - 115°F.</td>
</tr>
<tr>
<td></td>
<td>Grout HP</td>
<td>A two-component adhesive anchoring system for fastenings in concrete and masonry. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td></td>
<td>Hilti Hit-HY 10 Plus</td>
<td>A two-component fast cure adhesive anchoring system for fastenings in concrete and masonry. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td>Hilti, Inc.</td>
<td>Hilti Hit-HY 100</td>
<td></td>
</tr>
<tr>
<td>Tulsa, OK</td>
<td>Hilti HIT-HY 200A</td>
<td>A two-component adhesive anchoring system for rebar and anchor fastenings in concrete. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
</tbody>
</table>
Chemical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilti, Inc. Tulsa, OK</td>
<td>Hilti HIT-HY 200R</td>
<td>A two-component adhesive anchoring system for rebar and anchor fastenings in concrete. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td></td>
<td>Hilti HIT-RE 10</td>
<td>Adhesive Anchoring System may be used with fully threaded rod or deformed reinforcing bar installed in uncracked concrete.</td>
</tr>
<tr>
<td></td>
<td>Hilti HIT-RE 100</td>
<td>Hilti HIT-RE 100 adhesive is an injectable, two-component epoxy adhesive. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td></td>
<td>Hilti Hit Re 500</td>
<td>Two part epoxy system. Extended temperature range from 23° to 105° F. Has a working time of 30 minutes.</td>
</tr>
<tr>
<td></td>
<td>Hilti HIT-RE 500 V3</td>
<td>Hilti HIT-RE 500 V3 adhesive is an injectable, two-component epoxy adhesive. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td>ITW Ramset/Red Head Wooddale, IL</td>
<td>Epcon Systems</td>
<td>Cartridge epoxy anchor system for threaded rod and rebar applications.</td>
</tr>
<tr>
<td></td>
<td>Epcon System Acrylic 7</td>
<td>Two part, all weather adhesive for anchoring, dowling and pinning applications. Can be used down to -10° F without preheating the cartridge.</td>
</tr>
<tr>
<td></td>
<td>Red Head A7+</td>
<td>A7 can be used with threaded rod or rebar for fastening to hollow base materials.</td>
</tr>
<tr>
<td></td>
<td>Red Head C6+</td>
<td>One product for most environmental conditions and weather conditions. Installs even when concrete is wet. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td></td>
<td>Red Head G5+</td>
<td>The epoxy resin and hardener are completely mixed as they are dispensed from the dual cartridge through a static mixing nozzle, directly into the anchor hole.</td>
</tr>
<tr>
<td>J. Dedoes, Inc. Milford, MI</td>
<td>True Grip 590</td>
<td>Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Cure time is 24 hrs. at 75°F.</td>
</tr>
<tr>
<td>Kaufman Products, Inc.</td>
<td>Surepoxy 117 Epoxy</td>
<td>Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Use above 60°F, pot life of 8-10 min at 75°F.</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>Anchoring System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surepoxy 116 Epoxy</td>
<td>Epoxy anchoring system for grouting, anchoring bolts, and dowel bars. Use 40-60°F, pot life of 8-10 min at 50°F.</td>
</tr>
<tr>
<td></td>
<td>Anchoring System</td>
<td></td>
</tr>
<tr>
<td>Kelken Gold, Inc. Parlin, NJ</td>
<td>Keligrit</td>
<td>High strength, non-shrink polyester resin anchoring. May be used in freezing Conditions down to 10 F by keeping resin at 70° F- 90 F immediately prior to use.</td>
</tr>
<tr>
<td></td>
<td>Keligrou/Keligrou 101</td>
<td>Polyester anchoring system for grouting anchor bolts and dowel bars. Cure time is 48 hours at 70° F.</td>
</tr>
<tr>
<td></td>
<td>Kelipoxy II</td>
<td>Epoxy anchoring system for grouting anchor bolts and dowel bars. Cure time is 48 hours at 77° F.</td>
</tr>
</tbody>
</table>
Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meadow Burke Tampa, FL</td>
<td>Burke E Anchor</td>
<td>Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Cures in temperatures of 32°F - 100°F.</td>
</tr>
<tr>
<td>Mitek</td>
<td>CIA Gel 6000 GP</td>
<td>A two-component, fast-setting adhesive system that offers exceptional strength in anchoring and doweling applications. It may be used in temperatures between 40 °F - 110 °F.</td>
</tr>
<tr>
<td>MKT Fastening, LLC Lonoke, AR</td>
<td>Liquid ROC 300 Capsule</td>
<td>Capsule polyester anchor for dowel bars rebar, anchoring bolts.</td>
</tr>
<tr>
<td>MKT Fastening, LLC Lonoke, AR</td>
<td>Liquid ROC 300 Twin Tube</td>
<td>Twin tube polyester anchor for dowel bars rebar, anchoring bolts.</td>
</tr>
<tr>
<td>Olin Epoxy-POLY-CARB (Blue Cube Operations LLC)</td>
<td>Mark-198.1</td>
<td>Two part cartridge epoxy system used to install reinforcing steel and threaded studs. Substrate temperature should be above 40º F. at time of application.</td>
</tr>
<tr>
<td>PolyGem, Inc. West Chicago, IL</td>
<td>PolyBac/Polyject 1257-58</td>
<td>Polymer anchoring system for use anchoring threaded rods, bolts, reinforcing steel and smooth dowels to solid concrete. Pot life at 75° F is 15 minutes.</td>
</tr>
<tr>
<td>PolyGem, Inc. West Chicago, IL</td>
<td>PolyBac/Polyject 1605</td>
<td>Fast setting polymer anchoring system for use anchoring threaded rods, bolts, reinforcing steel and smooth dowels to solid concrete. Pot life at 75° F is 10 minutes.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>AC100+ Gold</td>
<td>Injectable two component vinyl ester adhesive. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>PE 1000+</td>
<td>Epoxy two component injectable adhesive. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>Power Fast Standard Set</td>
<td>Gel time 60 minutes at 40°F, min. cure time 16 hours, full cure 48 hours. Do not use below 40°F.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>T308+</td>
<td>An injection two component epoxy adhesive. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>Pure 50+</td>
<td>A two-component adhesive anchoring system. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>Pure 110+</td>
<td>A two-component adhesive anchoring system. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td>Powers Fasteners Brewster, NY</td>
<td>Pure GP</td>
<td>Pure GP is a two-component adhesive anchoring system designed for bonding threaded rod or reinforcing bar into drilled holes in solid concrete base. Prior to use see manufacturer’s instructions for uses and precautions.</td>
</tr>
<tr>
<td>Schul International Co. Norcross, GA</td>
<td>Anchor Loc</td>
<td>Cartridge epoxy dowel bar anchoring system.</td>
</tr>
</tbody>
</table>
List No. 29 (cont.)

Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sika Corp.</strong> Lyndhurst, NJ</td>
<td>Anchor Fix-1</td>
<td>High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete.</td>
</tr>
<tr>
<td></td>
<td>Anchor Fix 2</td>
<td>High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete.</td>
</tr>
<tr>
<td></td>
<td>Sikadur Anchor Fix 500</td>
<td>High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in uncracked concrete for transportation applications.</td>
</tr>
<tr>
<td></td>
<td>Sikadur AnchorFix 3001</td>
<td>High performance, two component, adhesive anchoring system for threaded rod and reinforcing steel in both cracked and uncracked concrete.</td>
</tr>
<tr>
<td></td>
<td>Sikadur Injection Gel</td>
<td>A two component, moisture tolerant, high modulus, high strength, structural epoxy which give a smooth, nonabrasive paste adhesive for bolts, dowels, pins and special fasteners.</td>
</tr>
<tr>
<td><strong>Simpson Strong-Tie Co., Inc.</strong></td>
<td>AT Acrylic</td>
<td>A high strength acrelic based anchoring system formulated for use as a high strength anchor-grouting material in a wide range of temperature conditions.</td>
</tr>
<tr>
<td>Colmbus OH</td>
<td>AT-XP</td>
<td>An injectible two component acrylic based adhesive that is mixed at a ten to one volume ratio of resin to initiator.</td>
</tr>
<tr>
<td></td>
<td>ET-HP</td>
<td>A two component, high-solids, epoxy based system for use as a high strength, non-shrink anchor grouting material.</td>
</tr>
<tr>
<td></td>
<td>EDOT</td>
<td>Two component high-solids epoxy based system that is non-shrink anchor grouting material. See manufacturer’s instructions for uses and applications.</td>
</tr>
<tr>
<td></td>
<td>SET</td>
<td>A high-strength, non-shrink, epoxy-based adhesive formulated for anchoring and doweling threaded rod or rebar.</td>
</tr>
<tr>
<td></td>
<td>SET –XP</td>
<td>An injectible two component 100 percent solids, epoxy based adhesive that is mixed at a one to one volume ratio of resin to hardner.</td>
</tr>
<tr>
<td><strong>Superior Epoxies Coatings, Inc.</strong></td>
<td>DBA-5</td>
<td>Epoxy gel anchor system for dowel bars, rebars, anchoring bolts, and bonding hardened concrete to other materials Mix 1:1 by volume. Apply above 33° F.</td>
</tr>
<tr>
<td><strong>W. R. Meadows Austell, GA</strong></td>
<td>Rezi-Weld Rapid Set Epoxy Anchor System</td>
<td>Epoxy anchoring system used for dowels, bars, and anchoring bolts. Pot life at 73° F is 10 min.</td>
</tr>
<tr>
<td><strong>Unisorb, Inc. Jackson, MI</strong></td>
<td>Unisorb Capsule Anchor</td>
<td>Urethane adhesive anchor for grouting bolts, dowels, and pins. Glass encapsulated package may be used in wet or damp conditions. Sets in 30 min. at room temperature.</td>
</tr>
</tbody>
</table>
Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitex Kansas City, MO</td>
<td>Propoxy 300 Fast</td>
<td>Fast epoxy anchoring system used for grouting bolts, dowels, pins, structural bonding of concrete, masonry, metal, and wood. Moisture insensitive use above 30°F sets 5-10 min.</td>
</tr>
<tr>
<td></td>
<td>Propoxy 300</td>
<td>Epoxy anchoring system used for grouting bolts, dowels, pins, structural bonding concrete and masonry. Use between 65-85°F Pot life above 30 min.</td>
</tr>
<tr>
<td>X-Calibur Construction Systems, Inc. Miramar, FL</td>
<td>X-Tite ResiLoc EX22</td>
<td>Two components, 100% solids, high modulus, structural epoxy gel. Solvent free, no odor, high strength moisture intensive, non-sag epoxy system. Recommended Temperature range is 35°F - 115°F.</td>
</tr>
</tbody>
</table>
Chemical and Mechanical Anchors are not to be used in direct tension or overhead applications.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Mechanical Anchors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drillco Devices, Ltd</td>
<td>Drillco Maxi-Bolt</td>
<td>Expansion anchor</td>
</tr>
<tr>
<td>Long Island City, NY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hilti, Inc.</td>
<td>Hilti Kwik Bolt II</td>
<td>Expansion Anchor Bolt</td>
</tr>
<tr>
<td>Tulsa, OK</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hilti Kwik Bolt 3</td>
<td>Expansion Anchor Bolt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hilti HDI Anchor</td>
<td>Flush mount drop in expansion anchor.</td>
</tr>
<tr>
<td>ITS Ramset Redhead</td>
<td>Tru Bolt Wedge Anchors</td>
<td>Anchor bodies are made of plated carbon steel, hot-dipped galvanized carbon steel, type 304 stainless steel or type 316 stainless steel.</td>
</tr>
<tr>
<td>Liebig International, Inc.</td>
<td>Liebig Safety Bolts</td>
<td>Concrete expansion anchor</td>
</tr>
<tr>
<td>Charlottesville, VA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT Fastening, LLC</td>
<td>Sup-R-Stud</td>
<td>Expansion anchor bolt</td>
</tr>
<tr>
<td>Lonoke, AR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powers Fasteners, Inc.</td>
<td>Power-Bolt</td>
<td>Expansion Anchor Bolt</td>
</tr>
<tr>
<td>Brewster, NY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power-Stud</td>
<td>Expansion Anchor Bolt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simpson Strong-Tie Co., Inc.</td>
<td>Drop-In</td>
<td>Expansion shell anchors for use in solid base materials featuring a positive-set marking indicator at the top of the anchor to see clearly when proper installation has taken place.</td>
</tr>
<tr>
<td>Columbus OH</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sleeve-All</td>
<td>Expanding sleeve anchors for use in all types of solid base materials.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Titen HD</td>
<td>A high strength screw anchor for use in cracked or un-cracked concrete or un-cracked masonry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wedge-All</td>
<td>A non-bottom bearing wedge style expansion anchor in solid concrete or grout filled masonry.</td>
</tr>
</tbody>
</table>
List No. 30

(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, AND COATINGS - (Physical Lab)

To have a product included on the Approved List for "Hydraulic Cement Concrete Sealants, Stains and Coatings" the following shall be submitted to Materials Division’s Physical Laboratory Assistant Concrete Program Manager. The Materials Safety Data Sheet (MSDS), Technical Data Sheets, Independent laboratory data demonstrating the material will meet the following, maximum weight loss allowed shall be 7% with a minimum durability factor of 60%. The maximum surface rating allowed shall be 3, when tested to ASTM C-666 for 300 cycles using Method A modified with 2% Sodium Chloride compliance to the specification.

If the material is to be tested by VDOT, then a quart of the material and the application tool (Paint brush, paint roller or etc.) is needed. The test the evaluation period for this material is usually between 6 - 12 months. The material will be tested to ASTM C 666 for 300 cycles using Method A modified with 2% Sodium Chloride. The maximum weight loss allowed shall be 7% with a minimum durability factor of 60%. The maximum surface rating allowed shall be 3.

Upon approval, the Manufacturer will be required to submit each year a notarized letter stating that the product has not changed in formulation since initial approval.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
<th>VOC Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Chemical Technologies Oklahoma City, OK</td>
<td>** Sil-Act ATS 42</td>
<td>Can be applied to the surface by low-pressure spray, brush, roller or squeegee..</td>
<td>** 589 g/l</td>
</tr>
<tr>
<td>BASF Construction Chemicals, LLC</td>
<td>Epoxide GS Structural MasterProtect H 400</td>
<td>A two component ultra-low viscosity epoxy sealer and structural adhesive A water-based, 40% alkylalkoxyxilane penetrating sealer.</td>
<td>0 g/L &lt;350 g/L</td>
</tr>
<tr>
<td>Chem-Crete Corporation Richardson, TX</td>
<td>Chem-Crete Pavix CCC100</td>
<td>A water-based penetrating product that seals concrete from moisture erosion.</td>
<td>0g/L</td>
</tr>
<tr>
<td>ChemMasters Madison, OH</td>
<td>Aquanil Plus 40-A Silencure A</td>
<td>A penetrating sealer that repels moisture and water from concrete. A acrylic copolymer curing and sealing compound for new concrete installations</td>
<td>&lt;250 g/L &lt;350 g/L</td>
</tr>
<tr>
<td>E-Bond Epoxies, Inc Ft. Lauderdale, FL</td>
<td>E-Bond 120</td>
<td>Epoxy penetrating sealer for concrete.</td>
<td></td>
</tr>
<tr>
<td>Evonik Industries</td>
<td>Protectosil AQUA-TRETE 40 Protectosil 300</td>
<td>A clear penetrating, water repellent for use on concrete. A solvent-free silane that protects against corrosion of steel reinforcement.</td>
<td>350 g/L 340 g/L</td>
</tr>
<tr>
<td>Fox Industries Baltimore, MD</td>
<td>FX 432</td>
<td>Polymer modified penetrating sealer for concrete.</td>
<td>0.0 g/L</td>
</tr>
</tbody>
</table>

** Non-Compliant in Arlington, Fairfax, Loudoun, Prince William and Stafford Counties
### Sealants

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
<th>VOC Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaufman Products</td>
<td><strong>Sure-Poxy Penetrating</strong></td>
<td>Epoxy penetrating sealer.</td>
<td>**610 g/l</td>
</tr>
<tr>
<td>Professional Products of Kansas,</td>
<td>Professional Water Sealant</td>
<td>One coat penetrating weather proofing formula using RTV Silicone Rubber.</td>
<td>&lt;250 g/l</td>
</tr>
<tr>
<td>Inc., Wichita, Kansas</td>
<td>Super Strength</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Products of Kansas,</td>
<td>SaltGuard WB</td>
<td>Water based siloxane water repellent and chloride screen</td>
<td>&lt;120 g/L</td>
</tr>
<tr>
<td>Inc., Wichita, Kansas</td>
<td>Professional Water Sealant</td>
<td>A surface applied corrosion inhibitor for use on hardened concrete.</td>
<td>0 g/L</td>
</tr>
<tr>
<td>Prosoco, Inc Lawrence, KS</td>
<td>Surtreat TPS I</td>
<td>A surface applied corrosion inhibitor for use on hardened concrete.</td>
<td></td>
</tr>
<tr>
<td>Surtreat Holding LLC Pittsburg, PA</td>
<td>SaltGuard WB</td>
<td>Water based siloxane water repellent and chloride screen</td>
<td>&lt;120 g/L</td>
</tr>
<tr>
<td>Sika Corporation Lyndhurst, NJ</td>
<td>Sikagard 705L</td>
<td>A low viscosity, solvent free, reactive impregnation for concrete and cementitious substrates.</td>
<td>100 g/L</td>
</tr>
<tr>
<td>Sika Corporation Lyndhurst, NJ</td>
<td>Sikagard 701W</td>
<td>Solvent-free siloxane emulsion concentrate.</td>
<td>193 g/L</td>
</tr>
<tr>
<td>Textured Coatings of America, Inc</td>
<td><strong>Rainstopper 400</strong></td>
<td>Semi-transparent solvent free resin sealer</td>
<td>**600 g/l</td>
</tr>
<tr>
<td>Ft. Lauderdale, FL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vexcon Chemicals, Inc Philadelphia,</td>
<td>Certi-Vex Guard CACS (Gray)</td>
<td>A decorative colored penetrating water repellent sealer.</td>
<td>385 g/L</td>
</tr>
<tr>
<td>PA.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vexcon Chemicals, Inc Philadelphia,</td>
<td>Certi-Vex Guard</td>
<td>A clear penetrating water repellent.</td>
<td>326 g/L</td>
</tr>
<tr>
<td>PA.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vexcon Chemicals, Inc Philadelphia,</td>
<td>Powerseal 40</td>
<td>A high performance industrial and commercial grade penetrating water repellent sealer.</td>
<td>&lt;100 g/L</td>
</tr>
<tr>
<td>PA.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Non-Compliant in Arlington, Fairfax, Loudoun, Prince William and Stafford Counties**
### (30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, COATINGS and ANTI-GRAFFITI SYSTEMS

#### Stains

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
<th>VOC Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF Construction Chemicals, LLC</td>
<td>Thoro Pigmented Sealer</td>
<td>A semi-transparent acrylic stain for sealing concrete.</td>
<td>92 g/L</td>
</tr>
<tr>
<td></td>
<td>White Roc Toner VOC</td>
<td>A 100% acrylic, protective and decorative pigmented penetrating stain for concrete.</td>
<td>138 g/L</td>
</tr>
<tr>
<td>The Euclid Chemical Company Kirkland, IL</td>
<td>Aquastain T-96</td>
<td>A penetrating, decorative, water-based stain</td>
<td>&lt;100 g/L</td>
</tr>
<tr>
<td>Fox Industries Baltimore, MD</td>
<td>** FX 430</td>
<td>Concrete stain and coating.</td>
<td>** 675 g/l</td>
</tr>
<tr>
<td>Sherwin-Williams Richmond, VA</td>
<td>** H &amp; C Silicone Acrylic Concrete Stain</td>
<td>Solvent based concrete stain.</td>
<td>** 575 g/l</td>
</tr>
<tr>
<td></td>
<td>H &amp; C Shield Plus Ultra</td>
<td>A low odor, water based stain</td>
<td>222 g/L</td>
</tr>
<tr>
<td>United Coatings Spokane, WA</td>
<td>Canyon Tone Stain</td>
<td>Pigmented stain for coloring and protecting concrete.</td>
<td>163 g/L</td>
</tr>
</tbody>
</table>

** Non-Compliant in Arlington, Fairfax, Loudoun, Prince William and Stafford Counties

#### Coatings

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Description</th>
<th>VOC Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF Construction Chemicals, LLC</td>
<td>MasterSeal 584</td>
<td>A cement based, waterproof coating for concrete, brick, or block.</td>
<td>0 g/L</td>
</tr>
<tr>
<td></td>
<td>MasterProtect HB 400</td>
<td>A water-based 100% acrylic waterproof coating for above-grade concrete.</td>
<td>107 g/L</td>
</tr>
<tr>
<td></td>
<td>MasterProtect HB 400 DOT</td>
<td>A water-based 100% acrylic waterproof coating for above-grade concrete.</td>
<td>58 g/L</td>
</tr>
<tr>
<td>ChemMasters Madison, OH</td>
<td>Textured DOT</td>
<td>Water based 100% acrylic decorative coating.</td>
<td></td>
</tr>
<tr>
<td>The Euclid Chemical Company Kirkland, IL</td>
<td>Tammscoat</td>
<td>Water based emulsion of 100% acrylic resin polymer.</td>
<td>&lt;100 g/L</td>
</tr>
<tr>
<td>Northern Industries Inc. Coventry, RI</td>
<td>Hydro-Seal 75</td>
<td>A sprayable water-based epoxy coating that protects &amp; preserves</td>
<td>0 g/L</td>
</tr>
</tbody>
</table>
List No. 30(Cont.)
(30) HYDRAULIC CEMENT CONCRETE SEALANTS, STAINS, COATINGS and ANTI-GRAFFITI SYSTEMS

<table>
<thead>
<tr>
<th>Coatings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer</strong></td>
</tr>
<tr>
<td>Prosoco, Inc Lawrence, KS</td>
</tr>
<tr>
<td>Sherwin-Williams Richmond, VA</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Textured</td>
</tr>
<tr>
<td>Coatings of America, Inc</td>
</tr>
<tr>
<td>Ft. Lauderdale, FL</td>
</tr>
<tr>
<td>Vexcon Chemicals, Inc Philadelphia, PA.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concrete Anti-Graffiti Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer</strong></td>
</tr>
<tr>
<td>BASF Construction Chemicals, LLC</td>
</tr>
<tr>
<td>BASF Construction Chemicals, LLC</td>
</tr>
<tr>
<td>Crescent Industries Union, SC</td>
</tr>
<tr>
<td>Fox Industries Baltimore, MD</td>
</tr>
<tr>
<td>Sherwin-Williams Richmond, VA</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
List No. 31

(31) HYDRAULIC CEMENT CONCRETE REPAIR MATERIALS – (Physical Lab)

The following lists of products are approved for use in repair of hydraulic cement concrete. These concrete repair materials meet the requirements of VTM 132 for repair of class A3, A4 or A5 concrete.

Table I repair materials are for repair of A3 Concrete Items
Table II repair materials are for repair of A4 Concrete Items.
Table III repair materials are for repair of A5 Concrete Items.

Products in Table III can be used to repair A5, A4 and A3 concrete items. Products in Table II can be used to repair A4 and A3 concrete items. Product listed in Table I can only be used to repair A3 concrete items.

Products will be assigned to the highest table in which all the specifications are met.

All packaged, dry, rapid hardening repair materials shall meet the requirements of ASTM C 928, Section 4-Chemical Composition.

See end of this section for approval criteria.

Table I - A3

Approved concrete repair materials for A3 Concrete and miscellaneous concrete Items

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Approved concrete repair materials for A4 and A5 concrete items listed in Table II and Table III.</td>
<td>Dayton Superior Corporation</td>
<td>A high strength mortar containing Portland cement, special polymers and accelerators to provide an accelerated strength gain and set time. HD 25 VO is a single component, fiber enhanced trowelable material formulated for vertical and overhead repairs of concrete.</td>
<td>Setting Time – Initial 18 min. Final 20 min. Compressive Strength – 2 hrs. 3,650 4 hrs. 4,620 6 hrs. 5,020 24 hrs. 5,570 28 days 7,730</td>
</tr>
<tr>
<td>HD 25VO</td>
<td>Dayton Superior Corporation</td>
<td>A high strength mortar containing Portland cement, special polymers and accelerators to provide an accelerated strength gain and set time. HD 25 VO is a single component, fiber enhanced trowelable material formulated for vertical and overhead repairs of concrete.</td>
<td>Setting Time – Initial 18 min. Final 20 min. Compressive Strength – 2 hrs. 3,650 4 hrs. 4,620 6 hrs. 5,020 24 hrs. 5,570 28 days 7,730</td>
</tr>
<tr>
<td>Pave Patch 3000</td>
<td>Dayton Superior Corporation</td>
<td>A fast setting, heavy duty, one component concrete repair material requiring only water to mix and apply. A cement based compound having similar characteristics to normal portland cement mixes and is compatible with portland cement concrete.</td>
<td>Setting Time – Initial 20 min. Final 24 min. Compressive Strength – 2 hrs. 5,470 4 hrs. 6,040 6 hrs. 6,270 24 hrs. 7,140 28 days 9,800</td>
</tr>
<tr>
<td>Product</td>
<td>Manufacturer</td>
<td>Description</td>
<td>Test Results</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>All Approved concrete repair materials for A5 concrete items listed in Table III.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Grade FastSet DOT Mix</td>
<td>The Quikrete Companies</td>
<td>A fiber reinforced, rapid-setting repair material specifically designed for a high-performance repair material. 55 lb. bag can be extended.</td>
<td>Setting Time – Initial 1.5 hrs. 5920 Final 28 days 8490</td>
</tr>
<tr>
<td>Commercial Grade FastSet DOT Mix Extended</td>
<td>The Quikrete Companies</td>
<td>A fiber reinforced, rapid-setting repair material specifically designed for a high-performance repair material. 80 lb. bag already extended.</td>
<td>Setting Time – Initial 1.5 hrs. 2780 Final 28 days 6160</td>
</tr>
<tr>
<td>Duracrete II FT</td>
<td>Kaufman Products Inc.</td>
<td>Very rapid setting, non-staining, and non-metallic cementitious repair mortar.</td>
<td>Setting Time – Initial 11 min. Final 14 min. Compressive Strength – 2 hrs. 4480 6 hrs. 5220 24 hrs. 5030 28 days 8980</td>
</tr>
<tr>
<td>EucoRepair SCC</td>
<td>The Euclid Chemical Company</td>
<td>A versatile, one component, self-consolidating repair mortar that is shrinkage-compensated, polymer and microfiber modified, and contains an integral corrosion inhibitor.</td>
<td>Setting Time – Final 5 hrs. 10 min. Compressive Strength – 2 hrs. no strength 4 hrs. no strength 6 hrs. no strength 24 hrs. 3,060 28 days 6,280</td>
</tr>
<tr>
<td>EucoRepair V100</td>
<td>The Euclid Chemical Company</td>
<td>A single-component, quick-setting, low shrinkage repair mortar for trowel applied vertical and overhead repairs requiring.</td>
<td>Setting Time – Initial 11 min. Final 14 min. Compressive Strength – 6 hrs. 3080 28 days 5070</td>
</tr>
<tr>
<td>Planitop 18 ES</td>
<td>MAPEI</td>
<td>A one component, cementitious repair mortar with a corrosion inhibitor. It is suited for horizontal concrete repairs.</td>
<td>Setting Time – Initial 55 min. Final 60 min. Compressive Strength – 6 hrs. 5,870 28 days 9,410</td>
</tr>
<tr>
<td>Product</td>
<td>Manufacturer</td>
<td>Description</td>
<td>Test Results</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>ChemPatch Fast VO</td>
<td>ChemMasters</td>
<td>A one component, polymer modified shrinkage compensated, very fast setting,</td>
<td>Setting Time – Initial 17 min. Final 19 min. Compressive Strength – 1 day 6,500 28 days 9,060</td>
</tr>
<tr>
<td></td>
<td></td>
<td>non-shrink repair mortar with fiber and corrosion inhibitor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>mortar for concrete.</td>
<td></td>
</tr>
<tr>
<td>HD 50</td>
<td>Dayton Superior Corporation</td>
<td>A fast setting, fiber reinforced, latex-modified, shrinkage compensated,</td>
<td>Setting Time – Initial 25 min. Final 28 min. Compressive Strength – 2 hrs. 3,860 4 hrs. 4,910 6 hrs. 4,990 24 hrs. 5,630 28 days 8,640</td>
</tr>
<tr>
<td></td>
<td></td>
<td>heavy duty, one component concrete repair material requiring only water to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>mix and apply. HD 50 is a cement based compound having similar characteristics to normal portland cement mixes and is compatible with portland cement concrete.</td>
<td></td>
</tr>
<tr>
<td>HiCap FT</td>
<td>Kaufman Products Inc.</td>
<td>A patching and finishing compound that can be featheredged or shaved to the</td>
<td>Setting Time – Initial 20 min. Final 34 min. Compressive Strength – 2 hrs. 1,820 4 hrs. 2,370 6 hrs. 2,780 24 hrs. 4,440 28 days 7,400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>desired shape, after achieving an initial set.</td>
<td></td>
</tr>
<tr>
<td>Planitop 11 SCC</td>
<td>MAPEI</td>
<td>A one component cementitious, self-consolidating polymer modified concrete</td>
<td>Setting Time – Initial 7 hrs. 30 min. Final 9 hrs. 50 min. Compressive Strength – 28 days 12,250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mix pre extended with coarse aggregate.</td>
<td></td>
</tr>
</tbody>
</table>
### Approved concrete repair materials for A5 Concrete Items (Cont.)

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planitop 12 SR</td>
<td>MAPEI</td>
<td>A sulfate resistant one component, shrinkage compensated cementitious repair mortar. Fiber reinforced, contains both silica fume and a corrosion inhibitor and is intended for the repair of vertical, overhead and horizontal concrete surfaces.</td>
<td>Setting Time – Initial 225 min. Final 400 min. Compressive Strength – 28 days 9,100</td>
</tr>
<tr>
<td>Planitop 15</td>
<td>MAPEI</td>
<td>A one component, shrinkage compensated cementitious, fiber reinforced fluid mortar. Contains a corrosion inhibitor and silica fume and is well suited where followability is required.</td>
<td>Setting Time – Initial 185 min. Final 370 min. Compressive Strength – 6 hrs. 3,370 28 days 12,290</td>
</tr>
<tr>
<td>Planitop 18TG</td>
<td>MAPEI</td>
<td>A one component, shrinkage compensated, very rapid-hardening, trowel-grade, cementitious repair mortar with a corrosion inhibitor. Gains strength rapidly and is particularly suited for all horizontal concrete repairs from 1/2” to 2” thickness.</td>
<td>Setting Time – Initial 10 min. Final 19 min. Compressive Strength – 2 hrs. - 5,030 4 hrs. - 6,810 6 hrs. - 7,240 24 hrs. - 9,390 28 days - 12,830</td>
</tr>
<tr>
<td>Planitop X</td>
<td>MAPEI</td>
<td>A one component, fiber reinforced, shrinkage compensated, high early strength, fast setting polymer modified high build cementitious repair mortar with corrosion inhibitor.</td>
<td>Setting Time – Initial 13 min. Final 22 min. Compressive Strength – 2 hrs. 2390 28 days 7400</td>
</tr>
<tr>
<td>Planitop XS</td>
<td>MAPEI</td>
<td>An extended working time variation of Planitop X. Shrinkage compensated, fiber reinforced, polymer modified and containing a proprietary corrosion inhibitor.</td>
<td>Setting Time – Initial 34 min. Final 49 min. Compressive Strength – 6 hrs. 2090 28 days 7040</td>
</tr>
<tr>
<td>Concrete Mix</td>
<td>Manufacturing Corp.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
List No. 31 (cont.)

Approved concrete repair materials for A5 Concrete Items (Cont.)

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>RepCon 928</td>
<td>SpecChem, LLC</td>
<td>A single component concrete repair mortar with integral corrosion inhibitor for use on concrete floors, highway pavements, bridge decks.</td>
<td>Setting Time – Initial 23 min. Final 35 min. Compressive Strength – 3 hrs. 5210 28 days 11940</td>
</tr>
<tr>
<td>Sikacrete 211 SCC Plus</td>
<td>Sika Corporation</td>
<td>A one-component, self-consolidating concrete containing factory blended coarse aggregate. This self-consolidating concrete bag is silica fume and polymer modified and also contains a migrating corrosion inhibitor.</td>
<td>Setting Time – Initial 28 min. Final 70 min. Compressive Strength – 2 hrs. no measurable strength 4 hrs. no measurable strength 6 hrs. no measurable strength 24 hrs. 2,500 28 days 9,050</td>
</tr>
<tr>
<td>SikaCrete 421 CI Rapid</td>
<td>Sika Corporation</td>
<td>A early strength-gaining concrete containing coarse aggregate. This concrete is air entrained and also contains a migrating corrosion inhibitor.</td>
<td>Setting Time – Initial 15 min. Final 31 min. Compressive Strength – 2 hrs. 3,563 4 hrs. 4,612 6 hrs. 4,856 24 hrs. 6,006 28 days 7915</td>
</tr>
<tr>
<td>SikaQuick 2500</td>
<td>Sika Corporation</td>
<td>A 1-component, very rapid hardening, early strength gaining, cementitious, patching material for concrete</td>
<td>Setting Time – Initial 32 min. Final 57 min. Compressive Strength – 2 hrs. 4,130 4 hrs. 4,350 6 hrs. 4,410 24 hrs. 4,990 28 days 6,820</td>
</tr>
</tbody>
</table>
List No. 31 (cont.)  

Approved concrete repair materials for A5 Concrete Items (Cont.)

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SikaQuick VOH</td>
<td>Sika Corporation</td>
<td>A fast setting, one component, ready-to-use repair mortar for vertical and overhead applications using specialty cement blends.</td>
<td>Setting Time – Initial 12 min. Final 25 min. Compressive Strength – 2 hrs. 2,120 4 hrs. 4,750 6 hrs. 5,580 24 hrs. 5,100 28 days 9,040</td>
</tr>
<tr>
<td>Tamms Form and Pour</td>
<td>The Euclid Chemical Co.  Cleveland, OH</td>
<td>A flowable, one component, polymermodified cementitious repair mortar containing silica fume and a migratory corrosion inhibitor.</td>
<td>Setting Time – Initial 55 min. Final 60 min. Compressive Strength – 1 day 7364 28 days 11,968</td>
</tr>
</tbody>
</table>

To have a product included on this Approved List, the manufacturer shall submit a signed and notarized letter to Materials Division’s Physical Laboratory Assistant Concrete Program Manager stating that the material meets the requirements listed in VTM 132 for A3, A4 and/or A5 concrete repair material. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification, a Safety Data Sheet (SDS) and Technical Data Sheets. Upon approval the Manufacturer will be required to submit a letter each December for the upcoming year, the notarized letter must state that the concrete repair material meets the requirements of VTM 132 for A3, A4 and/or A5 and that the product has not changed in formulation since initial approval showing it will meet the following requirements. VDOT Material’s Division reserves the right to check any product on this list.

VTM 132 can be found at the following link;  
### (32) STABILIZERS FOR ASPHALT MIXTURES – (Asphalt Lab)

<table>
<thead>
<tr>
<th>Product</th>
<th>Minimum</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilsonite HMA Modifier</td>
<td>Replaces 8% by weight of asphalt</td>
<td>American Gilsonite Co. Ziegler Chemical &amp; Mineral Co.</td>
</tr>
<tr>
<td>Trinidad Lake Asphalt</td>
<td>Replaces 25% by weight of asphalt</td>
<td>Trinidad Asphalt Co. of America</td>
</tr>
<tr>
<td>BoniFibers</td>
<td>6 pounds per ton of total mix</td>
<td>Kapejo, Inc</td>
</tr>
<tr>
<td>Petroflex 402-1N</td>
<td>6 pounds per ton of total mix</td>
<td>GRC Materials Co.</td>
</tr>
<tr>
<td>Fiber Pave 3010</td>
<td>6 pounds per ton of total mix</td>
<td>Fiberized Products</td>
</tr>
<tr>
<td>P440 Natural Fibers</td>
<td>6 pounds per ton of total mix</td>
<td>Advanced Fiber Solutions</td>
</tr>
<tr>
<td>Product</td>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Eucoshot</td>
<td>Euclid Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Silica fume, modified shotcrete</td>
<td>Cleveland, OH</td>
<td></td>
</tr>
<tr>
<td>Eucoshot F</td>
<td>Euclid Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Silica fume, modified with polypropylene</td>
<td>Cleveland, OH</td>
<td></td>
</tr>
<tr>
<td>reinforcing fibers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucoshot FM</td>
<td>Euclid Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Silica fume, modified with polypropylene</td>
<td>Cleveland, OH</td>
<td></td>
</tr>
<tr>
<td>reinforcing fibers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eucoshot Supreme</td>
<td>Euclid Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Latex modified shotcrete</td>
<td>Cleveland, OH</td>
<td></td>
</tr>
<tr>
<td>FX-288 Micro Silica Fiber</td>
<td>Fox Industries</td>
<td></td>
</tr>
<tr>
<td>Reinforced Shotcrete Mortar</td>
<td>Baltimore, MD</td>
<td></td>
</tr>
<tr>
<td>Amerimix Shotcrete 300</td>
<td>Oldcastle</td>
<td></td>
</tr>
<tr>
<td>Portland cement, well graded aggregates,</td>
<td>White Marsh, MD</td>
<td></td>
</tr>
<tr>
<td>microsilica and special additives to improve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>adhesion and reduce rebound.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amerimix Shotcrete 300V</td>
<td>Oldcastle</td>
<td></td>
</tr>
<tr>
<td>Portland cement, well graded aggregates</td>
<td>White Marsh, MD</td>
<td></td>
</tr>
<tr>
<td>microsilica and polypropylene fibers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quikrete Shotcrete MS</td>
<td>The Quikrete Companies</td>
<td></td>
</tr>
<tr>
<td>With polypropylene fibers</td>
<td>Lawrenceville, GA</td>
<td></td>
</tr>
<tr>
<td>ShotPatch 21F</td>
<td>BASF Construction Chemicals, LLC</td>
<td></td>
</tr>
<tr>
<td>Silica fume enhanced, fiber reinforced</td>
<td>Shakopee, MN</td>
<td></td>
</tr>
<tr>
<td>shotcrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SikaCem 103</td>
<td>Sika Corp.</td>
<td></td>
</tr>
<tr>
<td>Portland cement, specially proportioned</td>
<td>Richmond, VA</td>
<td></td>
</tr>
<tr>
<td>aggregates microsilica and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>polypropylene fibers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SureShot Shotcrete</td>
<td>Kaufman Products, Inc.</td>
<td></td>
</tr>
<tr>
<td>Portland cement, specially proportioned</td>
<td>Baltimore, MD</td>
<td></td>
</tr>
<tr>
<td>aggregates microsilica and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>polypropylene fibers.</td>
<td></td>
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</tbody>
</table>
List No. 34

(34) CONCRETE PRECAST PRODUCERS ON QA/QC PROGRAM–(Quality Assurance)

The following manufacturers of concrete precast products have VDOT approved Quality Assurance programs as outlined in the instructions. For additions or deletions to this list contact the Materials Division Quality Assurance Section.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Address</th>
<th>Plant Location</th>
<th>Probation Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Concrete Company (Redi-Rock, Stone Strong)</td>
<td>1321 N Delphine Ave,</td>
<td>Waynesboro, VA 22980</td>
<td></td>
</tr>
<tr>
<td>American Stone Virginia, LLC (*P)</td>
<td>8179 Arba Ave.</td>
<td>Ladysmith, VA 22501</td>
<td>9/17/15</td>
</tr>
<tr>
<td>Boxley (ReCon)</td>
<td>139 Healing Springs Rd,</td>
<td>Blue Ridge, VA 24064</td>
<td></td>
</tr>
<tr>
<td>Carr Precast Concrete (*P)</td>
<td>7519 Plain View Hwy,</td>
<td>Dunn, NC 28334</td>
<td>4/29/19</td>
</tr>
<tr>
<td>Century Concrete, Inc.</td>
<td>1364 Air Rail Ave.</td>
<td>VA. Beach, VA 23455</td>
<td></td>
</tr>
<tr>
<td>Coastal Precast Systems, LLC</td>
<td>1316 Yacht Dr.</td>
<td>Chesapeake, VA 23230</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>11352 Virginia Precast Rd.</td>
<td>Va. Precast Rd., Ashland, VA 23005</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>3801 Cook Blvd.</td>
<td>Chesapeake, VA 23323</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Greencastle, PA</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>10364 Design Rd.</td>
<td>Design Rd., Ashland, VA 23005</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>210 Stone Spring Rd,</td>
<td>Harrisonburg, VA 22801</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Jessup, MD</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td></td>
<td>Martinsburg, WV</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>2000 Salem Industrial Dr,</td>
<td>Salem, VA 24153</td>
<td></td>
</tr>
<tr>
<td>Concrete Pipe &amp; Precast</td>
<td>452 Webb Rd.</td>
<td>Dunn, NC 28334</td>
<td></td>
</tr>
<tr>
<td>Concrete Safety Systems</td>
<td></td>
<td>Bethel, PA</td>
<td></td>
</tr>
<tr>
<td>Contractors Specialties, Inc. (CS1)</td>
<td>1420 16th St SE,</td>
<td>Roanoke, VA 24014</td>
<td></td>
</tr>
<tr>
<td>Contractors Precast Corp.</td>
<td></td>
<td>Davidsonville, MD</td>
<td></td>
</tr>
<tr>
<td>Curtis Contracting, Inc.</td>
<td>7481 Theron Rd.</td>
<td>West Point, VA 23181</td>
<td></td>
</tr>
<tr>
<td>Eastern Vault</td>
<td>460 Courthouse Rd,</td>
<td>Princeton, WV 24740</td>
<td></td>
</tr>
<tr>
<td>Faddis Concrete Products</td>
<td></td>
<td>Downingtown, PA</td>
<td></td>
</tr>
<tr>
<td>Faddis Concrete Products</td>
<td>11023 Dennis W. Kerns Pkwy</td>
<td>King George, VA 22485</td>
<td></td>
</tr>
<tr>
<td>Faddis Concrete Products</td>
<td></td>
<td>New Castle, PA</td>
<td></td>
</tr>
<tr>
<td>Foltz Concrete Pipe</td>
<td>11875 NC-150,</td>
<td>Winston-Salem, NC 27127</td>
<td></td>
</tr>
<tr>
<td>Gillespie Precast – Plant 1</td>
<td></td>
<td>Chestertown, MD</td>
<td>7/19/17</td>
</tr>
<tr>
<td>Gillespie Precast – Plant 2</td>
<td></td>
<td>Chestertown, MD</td>
<td>7/19/17</td>
</tr>
<tr>
<td>K. J. Williams Concrete Co., Inc.</td>
<td></td>
<td>Cressaptown, MD</td>
<td></td>
</tr>
<tr>
<td>Lindsay Precast</td>
<td>2675 US Hwy 1</td>
<td>Franklinton, NC 27525</td>
<td></td>
</tr>
<tr>
<td>Mack Industries, Inc.</td>
<td>4879 Hwy 301 (S. Church St.)</td>
<td>Sharpsburg, NC 27878</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Concrete Products</td>
<td>1910 Chapman Ave SW,</td>
<td>Roanoke, VA 24016</td>
<td></td>
</tr>
<tr>
<td>Mitchell Precast Inc. O/A Durisol</td>
<td>51 Arthur St S</td>
<td>Mitchell, ON N0K1H0</td>
<td>10/24/2019</td>
</tr>
<tr>
<td>Nansemond Precast Concrete Co.</td>
<td>3737 Nansemond Pkwy.</td>
<td>Suffolk, VA 23435</td>
<td></td>
</tr>
<tr>
<td>Oldcastle Precast (*P)</td>
<td>1401 Trimble Road</td>
<td>Edgewood, MD 21040</td>
<td>2/14/2020</td>
</tr>
<tr>
<td>Oldcastle Precast (**P)</td>
<td>5115 Massaponax Church Rd</td>
<td>Fredericksburg, VA 22407</td>
<td>10/4/2019</td>
</tr>
<tr>
<td>Oldcastle Precast</td>
<td>1431 Products Rd,</td>
<td>Fuquay-Varina, NC 27526</td>
<td></td>
</tr>
<tr>
<td>Precast Solutions</td>
<td>7121 Choctaw Ct,</td>
<td>Browns Summit, NC 27214</td>
<td></td>
</tr>
<tr>
<td>Permatile Concrete Products Co.</td>
<td>100 Beacon Rd.</td>
<td>Bristol, VA 24201</td>
<td></td>
</tr>
<tr>
<td>Rinker Materials</td>
<td></td>
<td>Frederick, MD</td>
<td></td>
</tr>
<tr>
<td>Rinker Materials</td>
<td></td>
<td>Middletown, DE</td>
<td></td>
</tr>
<tr>
<td>Rockingham Precast</td>
<td>3330 Kratzer Rd,</td>
<td>Harrisonburg, VA 22802</td>
<td></td>
</tr>
<tr>
<td>Ross Prestress (*P)</td>
<td></td>
<td>Bristol, TN</td>
<td>01/19/2018</td>
</tr>
</tbody>
</table>

(*P) = Probationary  (**P) = Probation with Cause
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Address</th>
<th>Plant Location</th>
<th>Probation Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith Carolina Corporation</td>
<td>654 Freeway Dr.</td>
<td>Reidsville, NC 27320</td>
<td></td>
</tr>
<tr>
<td>Smith Midland Corporation</td>
<td></td>
<td>Midland, VA</td>
<td></td>
</tr>
<tr>
<td>Stonewall Precast, Inc.</td>
<td></td>
<td>Woodstock, VA</td>
<td></td>
</tr>
<tr>
<td>Terre Hill Concrete Products</td>
<td></td>
<td>Lebanon, PA</td>
<td></td>
</tr>
<tr>
<td>Tindall Corporation</td>
<td>3076 N Blackstock Rd.</td>
<td>Spartanburg, SC 29304</td>
<td></td>
</tr>
<tr>
<td>Winchester Building Supply Co.</td>
<td></td>
<td>Winchester, VA</td>
<td></td>
</tr>
</tbody>
</table>

(*P) = Probationary  (**P) = Probation with Cause
To have a product included on the Approved List for "FIBERS FOR USE IN HYDRAULIC CEMENT CONCRETE" the following shall be submitted to Materials Division’s Physical Lab: A certification letter on the company letterhead stating that the fiber meets the requirements in ASTM C-1116 for the type of fiber. The Safety Data Sheet (SDS) and the Technical Data Sheets showing that the material will meet ASTM C 1116 for the specific type fiber. Class I, Class II, Class III or Class IV.

**List 35 Fibers C 1116**

Types of fibers:
- Steel fibers – ASTM A-820 Type I
- Glass fibers ASTM C-1116 Type II
- Synthetic – ASTM D-7508 Type III
- Natural fibers – ASTM D-7357 Type IV

### Steel Fibers Type I

<table>
<thead>
<tr>
<th>Company</th>
<th>Type</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bekaert Wire Co</td>
<td>3D 45/35 BG</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>3D 45/35 BL</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>3D 45/50 BL</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 55/30 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 55/60 BL</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 65/35 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 65/35 GG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 65/60 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 80/30 SL</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>3D 80/60 BG</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>3D 80/60 GG</td>
<td>Import / Special order USA</td>
</tr>
<tr>
<td></td>
<td>4D 65/35 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>4D 65/50 BL</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>4D 65/60 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>4D 80/60 BG</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>5D 65/60 BG</td>
<td>Import</td>
</tr>
<tr>
<td></td>
<td>RC 80/30 BP</td>
<td>Import</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>Type</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helix Steel</td>
<td>Helix 5-25</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>Helix 8-50</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>Helix 8-52</td>
<td>USA</td>
</tr>
</tbody>
</table>

*Approval does not grant permission to reduce steel requirements.*
Glass fibers Type II – None listed

Synthetic fibers Type III (ASTM D 7508)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Polymer / Advanced Fiber Solutions</td>
<td>FiberForce 750</td>
<td>Macro Synthetic fiber</td>
</tr>
<tr>
<td></td>
<td>FiberForce 500</td>
<td>Fibrillated fiber</td>
</tr>
<tr>
<td></td>
<td>FiberForce 300</td>
<td>Fibrillated Polypropylene fiber</td>
</tr>
<tr>
<td></td>
<td>FiberForce 150</td>
<td>Monofilament Polypropylene fiber</td>
</tr>
<tr>
<td></td>
<td>FiberForce 100</td>
<td>Monofilament Polypropylene fiber</td>
</tr>
<tr>
<td>Barchip</td>
<td>Barchip 48</td>
<td>Structural Synthetic Fiber</td>
</tr>
<tr>
<td>BASF</td>
<td>MasterFiber F100</td>
<td>Enhanced Fibrillated Micro Synthetic Fiber</td>
</tr>
<tr>
<td></td>
<td>MasterFiber M 100</td>
<td>Monofilament Micro Synthetic Fiber</td>
</tr>
<tr>
<td></td>
<td>MasterFiber M 70</td>
<td>Monofilament Micro Synthetic Fiber</td>
</tr>
<tr>
<td></td>
<td>MasterFiber MAC 360</td>
<td>Synthetic Hybrid Fiber</td>
</tr>
<tr>
<td></td>
<td>MasterFiber MAC</td>
<td>Macro Synthetic Fiber</td>
</tr>
<tr>
<td></td>
<td>Matrix</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MasterFiber MAC 100</td>
<td>Macro Synthetic Fiber</td>
</tr>
<tr>
<td>Bekaert Wire Co</td>
<td>U-MIX 4700</td>
<td>Macro Synthetic fiber</td>
</tr>
<tr>
<td>The Euclid Chemical Company</td>
<td>Tuf Strand MaxTen</td>
<td>Polypropylene / Polyethylene blend</td>
</tr>
<tr>
<td></td>
<td>Tuf StrandSF</td>
<td>Polypropylene / Polyethylene macro synthetic</td>
</tr>
<tr>
<td></td>
<td>PSI Fiberstrand 100</td>
<td>Monofilament Polypropylene micro fiber</td>
</tr>
<tr>
<td></td>
<td>PSI Fiberstrand F</td>
<td>Fibrillated Polypropylene micro fiber</td>
</tr>
<tr>
<td>Forta Concrete Fiber</td>
<td>Forta-Ferro</td>
<td>Monofilament Fibrillated Polypropylene fiber</td>
</tr>
<tr>
<td></td>
<td>Econo-Net</td>
<td>Fibrillated Polypropylene fiber</td>
</tr>
<tr>
<td></td>
<td>Econo-Mono</td>
<td>Monofilament Polypropylene fiber</td>
</tr>
<tr>
<td>GCP Applied Technologies Inc.</td>
<td>Sinta F19</td>
<td>Fibrillated Polypropylene fiber</td>
</tr>
</tbody>
</table>

*Approval does not grant permission to reduce steel requirements.
List No. 35 (Cont.)

**Synthetic fibers Type III (ASTM D 7508) (cont.)**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sika</td>
<td>Fibermesh 150 e3</td>
<td>Monofilament Polypropylene micro fiber</td>
</tr>
<tr>
<td></td>
<td>Fibermesh 150 F</td>
<td>Monofilament Polypropylene</td>
</tr>
<tr>
<td></td>
<td>Fibermesh 300 e3</td>
<td>Fibrillated Polypropylene fiber</td>
</tr>
<tr>
<td></td>
<td>Enduro Prime</td>
<td>Macro Synthetic Polyolefin</td>
</tr>
</tbody>
</table>

*Approval does not grant permission to reduce steel requirements.

**Natural fibers Type IV** – None listed
List No. 36

(36) MULCHES (HECP TYPES 1 THRU 4) – (Maintenance Div.)

List # 36 on Mulches has been updated and moved to List (79) MULCHES (Hydraulic Erosion Control Products TYPES 1-4) as of August 2016
(37) WALL DRAIN SYSTEMS – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.
VDOT’s Drainage Manual Chapter 8 and VDOT’s Special Provision for Pipe Rehabilitation list three methods for pipe rehabilitation as shown below:

- Method A - Corrugated steel pipe liner
- Method B - Flexible pipe liner
- Method C - Smooth-wall steel pipe liner.

This Approved List 38 is for Method B (Flexible pipe liner) systems only. Method B is divided into 4 categories of products as shown below:

- Category A – Cured in Place Pipe (CIPP)
- Category B – Fold and form flexible liners
- Category C – HDPE, PVC, or Polypropylene (PE) slip liners
- Category D – Spray-on liners

Flexible pipe liner products falling in any of these 4 categories shall be on this Approved List in order to be used on VDOT projects. (Other types of pipe liners, Methods A and C, are allowed also, such as corrugated metal or solid-walled metal pipe, but are approved by other means.) Products covered by the VDOT Road & Bridge Specifications or the VDOT Special Provision for Pipe Rehabilitation are included on this Approved List, products not so covered shall be placed on the Special Products Evaluation List (SPEL). Approved products by category are listed below.

Product requirements for all Method B pipe rehabilitation systems are listed below:

- Shall list host pipe diameter ranges for which the product is applicable.
- Shall list any moisture limitations (e.g. installation in the dry, humidity restrictions, etc.).
- Shall list environmental controls to prevent discharge/impact to soils and water.
- Shall indicate corrosion potential/acid reaction potential.
- Shall require manufacturer’s/supplier’s representative on-site during installation or use certified contractor if certification exists.
- Shall show VDOT interest, and at 5-year resubmittal periods, must show use by VDOT in last 5 years. Otherwise, product will be removed from list. Product may also be removed from list for documented failure to perform properly in the field; or as a result of changes in materials or manufacture or installation processes unless a revised submittal to the VDOT Materials Division Soils Lab is made. (VDOT interest is typically indicated by providing, on the product submittal, the name of the VDOT person or office or project who is expressing a desire to try the product.)
- Shall describe training/certification for installers.
- Shall provide hydraulic data (initial surface roughness) of liners in place.

Further required evaluation criteria specific to each Category can be obtained from the VDOT Materials Division Soils Lab.

All entries below are required to resubmit every five (5) years starting from January 2013.
## Category A – Cured in Place Pipe (CIPP)

<table>
<thead>
<tr>
<th>Product</th>
<th>Vendor/Installer</th>
</tr>
</thead>
</table>
| Blue-Tek CIPP Liner  
(6” – 48”)* | Reline America, Inc.  
Mike Hoffmaster, Sales and Marketing Manager  
mhoffmaster@relineamerica.com  
240.818.8639  
24024 Frederick Road, Clarksburg, MD  20871  
www.relineamerica.com |
| Alphaliner  
(6” – 54”)* | Layne Inliner LLC  
Greg Laszczynski, District Manager  
Greg.laszczynski@layne.com  
301.486.7570  
6303 Macaw Court  
Elkridge, MD 21075  
www.layneinliner.com |
| InLiner  
(6” – 90”)* | Instituform Technologies, LLC  
Andrew Costa  
acosta@aegion.com  
813.309.0385  
3016 North US Highway 301  
Suite #900  
Tampa, FL 33619  
www.aegion.com |
|  | Stephen’s Technologies, Inc.  
Ken Barton, President  
stephenstechnologies@yahoo.com  
888.783.7436  
31004 Highway 27, PO Box 478  
Lake Hamilton, FL 33851  
www.stephenstech.com |
|  | AM-Liner East, Inc.  
Mel Willett, Vice President  
mwillett@amlinereast.com  
540.955.9671  
601 Jack Enders Blvd.  
Berryville, VA  20117  
www.amlinereast.com |
|  | Prism Contractors & Engineers, Inc.  
David A. Reaves, President  
dreaves@prismce.com  
757.874.5670  
1568 Manufacture Drive  
Williamsburg, VA  23185  
www.primcme.com |
|  | RS Technik  
David Kozman, PE, Product Manager  
dkozman@rstechnik.us  
919.481.1977  
P.O. Box 3745  
Cary, NC 27519  
www.rstechnik.us |
| New Life Liner System  
(3” – 48”)* | Capital City Services Company  
Wayne Norman-President  
capitalcityservices@yahoo.com |
## Category B – Fold and form flexible liner

<table>
<thead>
<tr>
<th>Product</th>
<th>Vendor/Installer</th>
</tr>
</thead>
</table>
| Dyna-Liner Warrior Thermoform (4”-36”) | Capital City Services  
Tom Arezzi, Director of Business Development  
t.arezzi@capitalcityservices.com  
804.746.9665  
5404 Sandy Valley Road  
Mechanicsville, VA  23111  
www.capitalcityservices.com |

## Category C – HDPE, PVC, Polypropylene (PP), or Fiberglass slip liners

<table>
<thead>
<tr>
<th>Product</th>
<th>Vendor/Installer</th>
</tr>
</thead>
</table>
| Centrifugally Cast Fiberglass Reinforced Polymer Mortar Pipe (18” – 126”) | Hobas Pipe USA, Inc.  
Bryant Welch, Area Manager Mid-Atlantic  
bwelch@hobaspipe.com  
832.622.8883  
1413 Richey Road  
Houston, TX  77073  
www.hobaspipe.com |
| CONTECH A-2 PVC Corrugated Pipe (12” – 36”) | Contech Engineered Solutions LLC  
Greg Nester, Virginia Representative  
gnester@conteches.com  
540.797.6499  
9025 Centre Pointe Drive, Suite 400  
West Chester, OH  45069  
www.conteches.com |
| HDPE Corrugated Pipe (4” – 60”) | Advanced Drainage Systems, Inc.  
Shawn Coombs, PE, National Railroads/Field R&D/MS Zone Engineer |

---

**July 2019**
<table>
<thead>
<tr>
<th>Product</th>
<th>Vendor/Installer</th>
</tr>
</thead>
<tbody>
<tr>
<td>InnerFlow HDPE Solid Wall pipe (8” – 63”) (Note that pipe outside diameters of 12”-63” are not covered by AASHTO M326.)</td>
<td>Contech Engineered Solutions LLC Greg Nester, Virginia Representative <a href="mailto:gnester@conteches.com">gnester@conteches.com</a> 540.797.6499 9025 Centre Pointe Drive, Suite 400 West Chester, OH 45069 <a href="http://www.conteches.com">www.conteches.com</a></td>
</tr>
<tr>
<td>Link-Pipe SST-316 sleeves (4” – 48”, joint and point repair) (May only be used on non-federally funded projects due to steel being foreign.)</td>
<td>Capital City Services Tom Arezzi, Director of Business Development <a href="mailto:t.arezzi@capitalcityservices.com">t.arezzi@capitalcityservices.com</a> 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111 <a href="http://www.capitalcityservices.com">www.capitalcityservices.com</a></td>
</tr>
<tr>
<td>Quick Lock (6” – 32”, joint and point repair) (May only be used on non-federally funded projects due to steel being foreign.)</td>
<td>Uhrig-Rausch USA Adam Baker, Vice President Sales <a href="mailto:reusa@rauschusa.com">reusa@rauschusa.com</a> 717.552.6460 4757 Innovation Way Chambersburg, PA 17201 <a href="http://www.rauschusa.com">www.rauschusa.com</a> Capital City Services Tom Arezzi, Director of Business Development <a href="mailto:t.arezzi@capitalcityservices.com">t.arezzi@capitalcityservices.com</a> 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111 <a href="http://www.capitalcityservices.com">www.capitalcityservices.com</a> 5 Star Septic J. R. Swerda, Vice President <a href="mailto:5starpipeservices@gmail.com">5starpipeservices@gmail.com</a> 703.618.8632 45910 Transamerica Plaza #103 Sterling, VA 20166 <a href="http://www.fivestarseptic.com">www.fivestarseptic.com</a></td>
</tr>
<tr>
<td>Snap-Tite HDPE Solid Wall Pipe (8.75” – 84”) (Note that pipe outside diameters of 12”-63” are not covered by AASHTO M326.)</td>
<td>PE Sales, Inc. Andy Cary, PE <a href="mailto:amcary@pesales.com">amcary@pesales.com</a> 410.733.0748 PO Box 461 Perry Hall, MD 21128</td>
</tr>
<tr>
<td>Product</td>
<td>Vendor/Installer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| Spirally Wound PVC Pipe                      | Midwest Mole, Inc.  
(19” – 72” outside diameter for SL products)  
(8” – 36” inside diameter for DF products) | David Howell, Project Manager  
David@midwestmole.com  
317.545.1355  
6814 W 350 N  
Greenfield, IN 46140  
www.midwestmole.com |
| (18” – 144”)                                 | Sekisui SPR  
Chris Lind, Regional Sales Manager  
Chris.lind@sekisui-spr.com  
301.752.3363  
4125 Welcome All Rd., Suite 100, Atlanta, GA 30349  
www.sekisui-spr.com |
| Weholite HDPE Profile Wall Pipe              | Uponor Infra, Ltd.  
Tripp Waymack, Engineered Sales Consultant  
tripp.waymack@uponor.com  
540.682.9110  
6507 Mississauga Road  
Mississauga, ON L5N 1A6  
www.uponor.ca |
| (22” – 132”)                                 |                |
| Category D – Spray-on liners                 |                 |
| Centri-Cast Pipe Repair Mortar               | Five Star Products, Inc.  
Claudio Petrucelli, Eastern Regional Manager  
petrucelliec@fivestarproducts.com  
203.336.7900  
60 Parrott Drive  
Shelton, CT 06484  
www.fivestarproducts.com |
| (30” and greater)                            |                 |
| CentriPipe                                   | AP/M Permaform  
Keith Walker, General Manager  
keith@permaform.net  
800.662.6465  
PO Box 555  
Johnston, IA 50131  
www.permaform.net |
| (30” and greater)                            |                 |
| Geospray                                     | Milliken Infrastructure Solutions, LLC  
Scott Naiva, PE, Northeast Region Manager  
Scott.naiva@milliken.com  
610.971.0362  
707 Old Eagle School Road  
Wayne, PA 19087  
geopolymers.milliken.com |
| (30” and greater)                            |                 |
| Polyspray FS-250                             | HydraTech Engineered Products LLC  
Tim Meyer, Sales Manager  
Tim.meyer@hydratechllc.com  
513.827.9169  
10448 Chester Road  
Cincinnati, OH 45215  
www.hydratechllc.com |
| (36” and greater)                            |                 |
| Spraywall                                    | SprayROQ        |

II-A-119
<table>
<thead>
<tr>
<th>Product</th>
<th>Vendor/Installer</th>
</tr>
</thead>
<tbody>
<tr>
<td>(30” and greater)</td>
<td>Jerry Gordon, President <a href="mailto:jgordon@sprayroq.com">jgordon@sprayroq.com</a> 800.634.0504 248 Cahava Valley Parkway Pelham, AL 35124 <a href="http://www.sprayroq.com">www.sprayroq.com</a></td>
</tr>
<tr>
<td>Nukote Aegis Structural Elastomeric Liners (18” and greater)</td>
<td>Nukote Coating Systems International, LLC Michael Osborne, CEO <a href="mailto:mosborne@nukoteglobal.com">mosborne@nukoteglobal.com</a> Sanaz Ghalambor, Business Development Engineer <a href="mailto:sanazg@nukoteusa.com">sanazg@nukoteusa.com</a> 832.770.7100 4730 Consulate Plaza Drive, Suite 100 Houston, Texas 77032 USA <a href="http://www.nukoteglobal.com">www.nukoteglobal.com</a></td>
</tr>
<tr>
<td>Mountain Grout MGP 25</td>
<td>Capital City Services Tom Arezzi <a href="mailto:t.arezzi@capitalcityservices.com">t.arezzi@capitalcityservices.com</a> 804.746.9665 5404 Sandy Valley Road Mechanicsville, VA 23111 <a href="http://www.capitalcityservices.com">www.capitalcityservices.com</a></td>
</tr>
</tbody>
</table>

**CIPP Products**

- Effluent from the curing process (i.e. process water/condensate and rinse water) shall only be discharged directly to a Publicly Owned Treatment Works (POTW) or pumped to above-ground containers for subsequent direct discharge to a POTW; no effluent shall be released exterior to the rehabilitated pipe or containers. For any discharge to a POTW, the Contractor shall ensure the discharge conforms with the Industrial Pretreatment Program requirements of that POTW. In the absence of an Industrial Pretreatment Program, the Contractor shall notify, and obtain approval from, the POTW prior to any discharges and comply with all the requirements of the POTW receiving the discharge. If the POTW does not allow the discharge or the Contractor cannot meet the pretreatment requirements, the Contractor shall collect the process water/condensate and rinse water at the construction site and dispose of it at a private industrial wastewater treatment facility. Irrespective of disposal method, the Contractor shall provide documentation of the POTW discharge approval or waste disposal documentation to the VDOT Engineer.

- The Contractor is responsible for reporting and taking the appropriate corrective actions for any accidental releases of CIPP waste or CIPP effluent into the environment.

- Refer to VDOT’s Special Provision for Pipe Rehabilitation for additional specifications for CIPP.

**Spray-on Liner Products**

- Refer to VDOT’s Special Provision for Pipe Rehabilitation for specifications for spray-on liner products.
(39) WICK DRAINS – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.
The following paint systems have been prequalified for use, but the manufacturer must provide certification for each lot.

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC (lbs./Gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#101 Primer</td>
<td>3356 - 2 Acrylic</td>
<td>Brown</td>
<td>2.0 – 3.0</td>
<td>1.17</td>
</tr>
<tr>
<td>#102 Intermediate</td>
<td>3356 - 1 Acrylic</td>
<td>White</td>
<td>2.0 – 3.0</td>
<td>1.02</td>
</tr>
<tr>
<td>#103 Finish</td>
<td>3356 - 3 Acrylic</td>
<td>As specified</td>
<td>2.0 – 3.0</td>
<td>1.17</td>
</tr>
</tbody>
</table>

MANUFACTURER – Carboline Company, (Contact) Mechanicsville, VA (804) 304-3113  
Approved 7/10

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC (lbs./Gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#101 Primer</td>
<td>W-103 Water-Guard</td>
<td>#595-30045</td>
<td>2.0 – 4.0</td>
<td>1.46</td>
</tr>
<tr>
<td>#102 Intermediate</td>
<td>W-112 Water-Guard</td>
<td>White</td>
<td>2.0 – 4.0</td>
<td>1.29</td>
</tr>
<tr>
<td>#103 Finish</td>
<td>W-XXX Water-Guard</td>
<td>As specified</td>
<td>2.0 – 4.0</td>
<td>2.01</td>
</tr>
</tbody>
</table>

MANUFACTURER – Elite Coatings, Gordon, GA (478) 628-2111  
Approved 1/97

<table>
<thead>
<tr>
<th>COAT</th>
<th>PAINT</th>
<th>COLOR</th>
<th>DRY FILM THICKNESS (mils)</th>
<th>VOC (lbs./Gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#101 Primer</td>
<td>B66NW1 Acrylic</td>
<td>Brown</td>
<td>3.0 – 6.0</td>
<td>1.79</td>
</tr>
<tr>
<td>#102 Intermediate</td>
<td>B66WW8 Acrylic</td>
<td>White</td>
<td>3.0 – 6.0</td>
<td>1.46</td>
</tr>
<tr>
<td>#103 Finish</td>
<td>B66XXXXX Acrylic</td>
<td>As specified</td>
<td>3.0 – 5.0</td>
<td>1.87</td>
</tr>
</tbody>
</table>

MANUFACTURER – Sherwin Williams, Richmond, VA (804) 387-4050  
Approved 4/09
### List No. 41

**SUPERPAVE GYRATORY COMPACTORS FOR ASPHALT CONCRETE MIXTURES**  
 *(Asphalt Lab)*

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model Number</th>
</tr>
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<tbody>
<tr>
<td>INTERLAKEN TECHNOLOGY CORPORATION</td>
<td>Gyratory Compactor, Model GYR-001</td>
</tr>
<tr>
<td>PINE INSTRUMENT COMPANY</td>
<td>Gyratory Compactor, Model AFGC125X</td>
</tr>
<tr>
<td>PINE INSTRUMENT COMPANY</td>
<td>Gyratory Compactor, Model AFG1 SGC</td>
</tr>
<tr>
<td>TEST QUIP INC. (Gilson)</td>
<td>Brovold Gyratory Compactor, No Model Number</td>
</tr>
<tr>
<td>TROXLER ELECTRONIC LABORATORIES, INC.</td>
<td>Gyratory Compactor, Model 4140</td>
</tr>
<tr>
<td>TROXLER ELECTRONIC LABORATORIES, INC.</td>
<td>Gyratory Compactor, Model 5850</td>
</tr>
</tbody>
</table>
## (42) HIGH DENSITY POLYETHYLENE (HDPE) and POLYPROPYLENE (PP)

### PIPE PRODUCERS – (Quality Assurance)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Location</th>
<th>Type of Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>902 East Main Avenue Bessemer City, NC 28016</td>
<td>M252, M294R, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>501 Factory Street Buena Vista, VA 24416</td>
<td>M252, M294V, M294R, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>121 Buck Creek Church RD Calhoun, KY 42327</td>
<td>M252, M294V, M294R</td>
</tr>
<tr>
<td>(ADS / Hancore) Livermore Plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>12370 Jackson TR172 Findley, OH 45389</td>
<td>M252, M294R, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>300 Progress CT Logan Township, NJ</td>
<td>M294V</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>400 E High Street London, OH 43140</td>
<td>M252, M294V, M294R</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>58 Wyoming Street Ludlow, MA 01056</td>
<td>M252, M294V</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>1600 Industrial Drive Mendota, IL 61342</td>
<td>M252, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
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</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>Muncy Ind. Park Muncy, PA 17756</td>
<td>M252, M294R, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>1005 Valley Drive Perry, GA 31069</td>
<td>M252, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>1 William Donnelly Pky Waverly, NV 14892</td>
<td>M252, M294V, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advace Drainage Systems / Hancor</td>
<td>Old Rt 30 West Wooster, OH 44691</td>
<td>M252, M294R, M330</td>
</tr>
<tr>
<td>(ADS / Hancore)</td>
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<td></td>
</tr>
<tr>
<td>Baughman Tile Co.</td>
<td>8516 Twp. Rd Paulding, OH 45879</td>
<td>M252, M294R, M330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crumpler Plastic Pipe</td>
<td>852 Autry Hwy Roseboro, NC</td>
<td>M252, M294V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haviland Drainage Products</td>
<td>100 W. Main Street Haviland, OH 45851</td>
<td>M252, M294V, (M330 PP-Type S, 12&quot;-30&quot; only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JM Eagle</td>
<td>15661 Delano Road Cochranton PA 16314</td>
<td>M252, M294V, M294R, M330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JM Eagle</td>
<td>10807 US-59 Wharton, TX 77488</td>
<td>M252</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Enterprises</td>
<td>34 Strohm Road Shippenburg, PA</td>
<td>M294 - 6&quot;-60&quot; Type S &amp; SP, 4&quot;-24&quot; Type C, 4&quot;-10&quot; Type CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M294R - 12&quot;-36&quot; Type S &amp; SP, 4&quot;-24&quot; Type C &amp; CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M330 - 12&quot;-60&quot; Type S &amp; SP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Enterprises</td>
<td>510 Kents Lane Wytheville, VA 24382</td>
<td>M252, - 12&quot;-36&quot; Type S &amp; SP, 4&quot;-6&quot; Type C &amp; CPM294,</td>
</tr>
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<td></td>
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<td>M294 - 12&quot;-36&quot; Type S &amp; SP, 4&quot;-24&quot; Type C, 4&quot;-6&quot; Type CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M294R - 12&quot;-36&quot; Type S &amp; SP, 4&quot;-24&quot; Type C &amp; CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M330 – 12&quot;-36&quot; Type S &amp; SP</td>
</tr>
</tbody>
</table>
QA List No. 42 is for HDPE AND PP Pipe approval only.

All HDPE and PP end sections and elbows must be approved prior to installation by the Location and Design Division Standards / Special Design Section Manager.
### List No. 43

(43) APPROVED WHITE AND YELLOW THERMOPLASTIC PRODUCTS - (Chemistry Lab)

<table>
<thead>
<tr>
<th>MANUFACTURER / PRODUCT NO.</th>
<th>NTPEP SUBMITTAL NO.</th>
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<tbody>
<tr>
<td><strong>ENNIS TRAFFIC SOLUTIONS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>White</strong></td>
<td></td>
</tr>
<tr>
<td>884330 (VA-AK-SX-W-1)</td>
<td>2006 MS-027</td>
</tr>
<tr>
<td>885637</td>
<td>2008 PA-069</td>
</tr>
<tr>
<td><strong>Yellow</strong></td>
<td></td>
</tr>
<tr>
<td>884337 (counterpart to 884330)</td>
<td></td>
</tr>
<tr>
<td>884188 (formerly YID-5GX-VA-DCA)</td>
<td></td>
</tr>
<tr>
<td>884189 (formerly YID-5GX-VA-HRB)</td>
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</tr>
<tr>
<td>884186 (Y1D-5GX-VA-DCC)</td>
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</tr>
<tr>
<td>884187 (Y1D-5GX-VA-HRC)</td>
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<tr>
<td>VA-AK-SX-YNL-1</td>
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</tr>
<tr>
<td><strong>ENNIS - Alkyd Extrude Yellow:</strong></td>
<td></td>
</tr>
<tr>
<td>32101462 (Formerly Cataphote)</td>
<td></td>
</tr>
<tr>
<td>32101464 (Formerly Cataphote)</td>
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<tr>
<td>32101466 (Formerly Cataphote)</td>
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<tr>
<td>32101468 (Formerly Cataphote)</td>
<td></td>
</tr>
<tr>
<td>32101463 (Formerly Cataphote)</td>
<td></td>
</tr>
<tr>
<td><strong>ENNIS - Alkyd Spray Yellow:</strong></td>
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<tr>
<td>32102462 (Formerly Cataphote)</td>
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<td>32102464 (Formerly Cataphote)</td>
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<tr>
<td>32102466 (Formerly Cataphote)</td>
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<tr>
<td>32102468 (Formerly Cataphote)</td>
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<tr>
<td>EE VA AL F Y 99 1 (Formerly LaFarge and LDI)</td>
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<tr>
<td>P E VA AL F Y 99 1 (Formerly LaFarge and LDI)</td>
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</tr>
<tr>
<td>EE VA AL F Y 99 2 (Formerly LaFarge and LDI)</td>
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<tr>
<td>P E VA AL F Y 99 2 (Formerly LaFarge and LDI)</td>
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</tr>
<tr>
<td>EE VA AL F Y 99 3 (Formerly LaFarge and LDI)</td>
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</tr>
<tr>
<td>P E VA AL F Y 99 3 (Formerly LaFarge and LDI)</td>
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<td>EE VA AAL F Y998 (Formerly LaFarge and LDI)</td>
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<td>EE VA AAL F Y04 (Formerly LaFarge and LDI)</td>
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<td>EE VA AAL F Y06 (Formerly LaFarge and LDI)</td>
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<tr>
<td>MANUFACTURER / PRODUCT NO.</td>
<td>NTPEP SUBMITTAL NO.</td>
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<td><strong>SWARCO</strong></td>
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<td>White</td>
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<td>Yellow</td>
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<td>98 STR-115</td>
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<td>Swarolux</td>
<td>98 STR-116</td>
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<td>VYALF001</td>
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<td>VYALF002</td>
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<tr>
<td><strong>CROWN TECHNOLOGY</strong></td>
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<tr>
<td>White</td>
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<tr>
<td>Crown-White (06-WAX-A1CF)</td>
<td>2000-PMM-049</td>
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<td>Crown-White (06-WAS-A1CF)</td>
<td>2000-PMM-049</td>
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<tr>
<td>Ecotherm 06-YAX-AACF</td>
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<tr>
<td>Ecotherm 06-YAX-01CF</td>
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<td>Ecotherm 06-YAX-00CF</td>
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<tr>
<td><strong>DOBCO</strong></td>
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<tr>
<td>White</td>
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<tr>
<td>(W1X0645)</td>
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<td>Yellow</td>
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</tr>
<tr>
<td>Y1X0605</td>
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<tr>
<td>Y1S0605</td>
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<td>Y1X0615</td>
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<td>Y1X0625</td>
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<tr>
<td><strong>OZARK</strong></td>
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<td>White</td>
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<td>Ozark White Thermoplastic</td>
<td>PMM-2014-01-047</td>
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<tr>
<td>Yellow</td>
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<tr>
<td>Ozark Yellow Thermoplastic</td>
<td>PMM-2012-01-054</td>
</tr>
</tbody>
</table>
List No. 43 (cont.)

MANUFACTURER / PRODUCT NO. NTPEP SUBMITTAL NO.

3M

White
3M All Weather White Thermoplastic PMM-2008-PA-100

Yellow
3M All Weather Yellow Thermoplastic PMM-2008-PA-101

NOTE:
Both White and Yellow 3M Thermoplastic must be installed using the following reflective glass beads and 3M Elements:

- AASHTO, Type 3 glass Beads (0.11 lbs. /Ft²)
- 3M White or Yellow Elements (0.042 lbs. /Ft²)
**List No. 44**

### (44) APPROVED Q/A SUPPLIERS LIST – (Quality Assurance)

**Note:** Approval does not include water and sewer line items.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Street Address</th>
<th>City, State, Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Construction Fabrics / ACF Environmental</td>
<td>3734 Cook Boulevard</td>
<td>Chesapeake, VA 23232</td>
</tr>
<tr>
<td>Atlantic Construction Fabrics / ACF Environmental</td>
<td>2831 Cardwell Road</td>
<td>Richmond, VA 23234</td>
</tr>
<tr>
<td>Atlantic Construction Fabrics / ACF Environmental</td>
<td>3734 Cook Boulevard</td>
<td>Harrisonburg, VA</td>
</tr>
<tr>
<td>Atlantic Construction Fabrics / ACF Environmental</td>
<td>2831 Cardwell Road</td>
<td>Harrisonburg, VA</td>
</tr>
<tr>
<td>Atlantic Construction Fabrics / ACF Environmental</td>
<td>3734 Cook Boulevard</td>
<td>Manassas, VA</td>
</tr>
<tr>
<td>Advanced Drainage Systems, Inc.</td>
<td>510 Factory Street</td>
<td>Buena Vista, VA</td>
</tr>
<tr>
<td>Capitol Foundry of VA, Inc.</td>
<td>2856 Crusader Circle</td>
<td>Virginia Beach, VA 23454</td>
</tr>
<tr>
<td>Cherokee Manufacturing</td>
<td>80 Ceramic Tile Drive</td>
<td>Morganton, NC 28655</td>
</tr>
<tr>
<td>Chesapeake Foundries, Inc.</td>
<td></td>
<td>Gaithersburg, MD</td>
</tr>
<tr>
<td>Chesterfield Trading Co. Inc.</td>
<td>9521 Jeff. Davis Highway</td>
<td>Richmond, VA 23237</td>
</tr>
<tr>
<td>Colonial Construction Materials, Inc</td>
<td>1071 Merchants Lane</td>
<td>Oilville, VA 23129</td>
</tr>
<tr>
<td>Colonial Construction Materials, Inc</td>
<td>2432 Bowland Parkway</td>
<td>Virginia Beach, VA 23454</td>
</tr>
<tr>
<td>Core &amp; Main</td>
<td>11101 Air Park Drive</td>
<td>Ashland, VA 23005</td>
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<tr>
<td>Core &amp; Main</td>
<td>2212 Smith Avenue</td>
<td>Chesapeake, VA 23320</td>
</tr>
<tr>
<td>Core &amp; Main</td>
<td>2 Chestnut Drive</td>
<td>Evington, VA 24550</td>
</tr>
<tr>
<td>Core &amp; Main</td>
<td>2820 Mary Linda Ave.</td>
<td>Roanoke, VA 24012</td>
</tr>
<tr>
<td>Core &amp; Main</td>
<td>224 Industrial Boulevard</td>
<td>Toano, VA 23168</td>
</tr>
<tr>
<td>Country Boy Seed, Inc.</td>
<td>6685 Gate City Hwy #1721</td>
<td>Bristol, VA</td>
</tr>
<tr>
<td>Curtis Contracting, Inc.</td>
<td>7481 Theron Road</td>
<td>West Point, VA 23168</td>
</tr>
<tr>
<td>Eastern Supply Inc</td>
<td></td>
<td>Winchester, VA</td>
</tr>
<tr>
<td>E&amp;R Minority Supplier LLC</td>
<td></td>
<td>Sterling, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td></td>
<td>Chantilly, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>505 Garrett Street</td>
<td>Charlottesville, VA 22902</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>826 Professional Place</td>
<td>Chesapeake, VA 23320</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>221 Industrial Avenue</td>
<td>Danville, VA</td>
</tr>
</tbody>
</table>
**Note:** Approval does not include water and sewer line items.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Street Address</th>
<th>City, State, Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferguson Waterworks</td>
<td>2799 W. 3rd Street</td>
<td>Farmville, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>311 Central Road</td>
<td>Fredericksburg, VA 22401</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>2010 Graves Mill Road</td>
<td>Forest, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>55 Reedy Circle</td>
<td>Harrisonburg, VA 22801</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>1202 Memorial Blvd S.</td>
<td>Martinsville, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>1895 South Creek One</td>
<td>Powhatan, VA 23139</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>1717 W. Main Street</td>
<td>Radford, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>3825 Blue Ridge Drive</td>
<td>Roanoke, VA</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>6540-A Mooretown Road</td>
<td>Williamsburg, VA 23188</td>
</tr>
<tr>
<td>Ferguson Waterworks</td>
<td>625 McGhee Road</td>
<td>Winchester, VA 22603</td>
</tr>
<tr>
<td>Form Services, Inc.</td>
<td></td>
<td>Baltimore, MD</td>
</tr>
<tr>
<td>Geo Products, LLC</td>
<td>161 Technology Park Drive</td>
<td>Kilmarnock, VA 22482</td>
</tr>
<tr>
<td>GETSCO</td>
<td>860 Horseshoe Road</td>
<td>Elizabeth City, NC 27909</td>
</tr>
<tr>
<td>Guaranteed Supply Company</td>
<td>3941 Holland Boulevard</td>
<td>Chesapeake, VA 23323</td>
</tr>
<tr>
<td>Guaranteed Supply Company</td>
<td>2210 Magnolia Street</td>
<td>Richmond, VA 23223</td>
</tr>
<tr>
<td>Hanes Geo Components</td>
<td>600 W. Northwest Blvd</td>
<td>Winston Salem, NC</td>
</tr>
<tr>
<td>Hanes Geo Components</td>
<td>405 W. B Street</td>
<td>Butner, NC</td>
</tr>
<tr>
<td>Hanes Geo Components</td>
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<td>Eldersburg, MD</td>
</tr>
<tr>
<td>Hanes Geo Components</td>
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<td>Manassas, VA</td>
</tr>
<tr>
<td>Hawkins-Graves, Inc.</td>
<td>13432 Wards Road</td>
<td>Lynchburg, VA 24501 24501</td>
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<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td>1049 Island Road</td>
<td>Bristol, VA</td>
</tr>
<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td>1215 E. Market Street</td>
<td>Charlottesville, VA</td>
</tr>
<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td>550 Woodlake Drive</td>
<td>Chesapeake, VA 23320</td>
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<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td>2500 Glen Center Street</td>
<td>Gainesville, VA</td>
</tr>
</tbody>
</table>
**List No. 44 (Cont.)**

*Note: Approval does not include water and sewer line items.*

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Street Address</th>
<th>City, State, Zip</th>
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<tbody>
<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td>3535 Brandon Ave SW</td>
<td>Roanoke, VA</td>
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<tr>
<td>HD Supply Construction and Industrial White Cap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interstate Construction Product, Inc.</td>
<td>4300 Dorchester Road</td>
<td>Norton, VA</td>
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<tr>
<td>Jett &amp; Company</td>
<td>260 Picketts Lane</td>
<td>Newport News, VA 23603</td>
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<tr>
<td>Jett &amp; Company</td>
<td>1188 Kingswood Avenue</td>
<td>Norfolk, VA 23502</td>
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<tr>
<td>Landscape Supply, Inc.</td>
<td></td>
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</tr>
<tr>
<td>Landscape Supply, Inc.</td>
<td>2424 Richmond Road</td>
<td>Charlottesville, VA</td>
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<tr>
<td>Landscape Supply, Inc.</td>
<td>2501 Oak Lake Boulevard</td>
<td>Richmond, VA (Southside) 23112</td>
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<tr>
<td>Landscape Supply, Inc.</td>
<td>12115 Ridgefield Parkway</td>
<td>Richmond, VA (West End) 23242</td>
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<tr>
<td>Landscape Supply, Inc.</td>
<td>101 Madison Ave NE</td>
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<tr>
<td>Landscape Supply, Inc.</td>
<td>513 Viking Drive</td>
<td>Virginia Beach, VA 23452</td>
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<tr>
<td>McPeak Supply, LLC</td>
<td>2010 Apperson Drive</td>
<td>Roanoke, VA</td>
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<tr>
<td>Piedmont Fabrication, LLC</td>
<td>1320 Yacht Drive</td>
<td>Chesapeake, VA 23323</td>
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<tr>
<td>Ramirez Construction Services (RCS)</td>
<td>17061 Lee Highway</td>
<td>Abingdon, VA 24210</td>
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<tr>
<td>RAMTOOL and Supply Company</td>
<td>700 Boundry Street</td>
<td>Chesapeake, VA 23320</td>
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<tr>
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<td>2800 Ackley Avenue</td>
<td>Richmond, VA 23228</td>
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<tr>
<td>RAMTOOL and Supply Company</td>
<td>812 Pocahontas Ave NE</td>
<td>Roanoke, VA</td>
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<tr>
<td>Rockingham Steel(formerly TransCon Supply)</td>
<td>2565 John Wayland Hwy #101</td>
<td>Harrisonburg, VA</td>
</tr>
<tr>
<td>SiteOne Landscape Supply</td>
<td>11102 Air Park Drive</td>
<td>Ashland, VA 23005</td>
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<td>Virginia Contractors Supply, Inc.</td>
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<tr>
<td>Virginia Road and Bridge Supply, Inc.</td>
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</tr>
<tr>
<td>Wharton Supply, Inc. of VA</td>
<td></td>
<td>Springfield, VA</td>
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<tr>
<td>Whitlock Brothers, Inc.</td>
<td>5588 Raby Road</td>
<td>Norfolk, VA 23502</td>
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<tr>
<td>Whitlock Brothers, Inc.</td>
<td>248 Industrial Boulevard</td>
<td>Toano, VA 23168</td>
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<tr>
<td>Whitlock Brothers, Inc.</td>
<td>4801 Roanoke Avenue</td>
<td>Newport News, VA 23607</td>
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</tbody>
</table>
(45) QUALIFIED WOOD TREATMENT PLANTS – (CHEMISTRY LAB)

The following wood treatment plants are approved to provide treated lumber to the Virginia Department of Transportation. They are required to provide certification documentation with each order.

If a wood treatment plant is not on this list, they must be approved by meeting the requirements listed in the VDOT, Manual of Instructions, Section 204.29. They are required to provide certification documentation with each order. (Allow a minimum of two weeks for sampling and testing.)

<table>
<thead>
<tr>
<th>Wood Treatment Plant Preservatives</th>
<th>Telephone #</th>
<th>Preservative</th>
<th>Date Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acme Wood Preserving, Princeton, WV</td>
<td>(304) 425-0022</td>
<td>CCA, Creosote</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Albemarle Wood Preserving, Albemarle, NC</td>
<td>(704) 982-2516</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Amelia Lumber Co. Inc., Amelia, VA</td>
<td>(804) 561-2155</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Newsoms Facility of Koppers Utility &amp; Industrial Products (formerly Atlantic Wood of Cox Wood), Newsoms, VA</td>
<td>(757) 654-9462</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>B&amp;M Wood Products, Inc., Manor, GA</td>
<td>(912) 283-0353</td>
<td>Creosote</td>
<td>Reinstated 2014</td>
</tr>
<tr>
<td>Bestway South Inc., Stony Point, NC</td>
<td>(704) 585-6373</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Culppeper Wood Preservers, Roanoke Rapids, NC Plant</td>
<td>252-507-6073</td>
<td>CCA</td>
<td>5/22/2019</td>
</tr>
<tr>
<td>Eutawville Facility of Koppers Utility &amp; Industrial Products (formerly Carolina Pole of Cox Wood), Eutawville, SC</td>
<td>(803) 492-7728</td>
<td>CCA</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>(803)747-0044</td>
<td>CCA</td>
<td>2009</td>
</tr>
<tr>
<td>Leland Facility of Koppers Utility &amp; Industrial Products (formerly Carolina Pole of Cox Wood), Leland, NC</td>
<td>(910) 371-3131</td>
<td>PENTA, CCA</td>
<td>2012</td>
</tr>
<tr>
<td>Tri-State Lumber, Fulton, MS</td>
<td>(662) 862-2125</td>
<td>CCA</td>
<td>2010</td>
</tr>
<tr>
<td>Fortress Wood Products, Henderson, NC</td>
<td>(800) 289-3678</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td></td>
<td>(276) 656-3251</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Gladys Timber Products, Gladys, VA</td>
<td>(434) 283-4744</td>
<td>CCA</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Long Life Treated Wood, Inc., Hebron, MD</td>
<td>(800) 451-3137</td>
<td>CCA, CA-C</td>
<td>Before 2006</td>
</tr>
<tr>
<td>Madison Wood Preservers Inc., Madison, VA</td>
<td>(800) 844-8383</td>
<td>CCA</td>
<td>Before 2006</td>
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<tr>
<td>American Timber and Steel Co. (formerly Midwest Wood Treating), Norwalk, OH</td>
<td>(419) 668-1610</td>
<td>CCA, ACQ</td>
<td>Before 2006-name change in 2014</td>
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<tr>
<td>North Facility of Koppers Utility &amp; Industrial Products (formerly North-South Wood Preserving of Cox), North, SC</td>
<td>(803) 682-4812</td>
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<td>2009</td>
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<tr>
<td>Reliance Treated Wood, Federalsburg, MD</td>
<td>(410) 754-5711</td>
<td>CCA</td>
<td>2009</td>
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<tr>
<td>McFarland Cascade (formerly Wood Preservers, Inc.), Warsaw, VA</td>
<td>(804) 333-4022</td>
<td>CCA, CA-C</td>
<td>Before 2006</td>
</tr>
</tbody>
</table>

Notes:

PENTA treatment is pentachlorophenol and is, also, called PCP.

Dispersed or micronized Copper Azole (MCA) is not acceptable per VDOT specifications.

Treatment plants that are approved for Copper Azole-B (CA-B) treatment and that have moved to Copper Azole-C (CA-C) treatment, have maintained their qualified status as CA-C.

Plants formerly approved to treat with ACQ or CA-B that are now using only MCA, are no longer listed as qualified for the ACQ or CA-B treatments.

Durable Wood Preservers of Charlotte, NC requested removal from list 45 in 2017.
Approval Requirements:
Reflective sheeting products are included on the Approved Products List only after the Department determines conformance to the specification requirements per R&B, Section 247 – Reflective Sheeting. Reflective sheeting shall meet the specification limits of ASTM D4956 or other VDOT approved performance-based evaluation programs. Determination of conformance will include, but not be limited to, the evaluation of test data from AASHTO’s National Transportation Product Evaluation Program (NTPEP - for VDOT, LADOT, AZDOT Test Decks), VDOT’s own testing facility, or other Department-approved facilities. Testing includes analysis of new and outdoor weathered sign sheeting. When tested after outdoor weathering, sign sheeting Retroreflectivity and Color (Chromaticity and Luminance Factor,Y%) and must have been maintained within the specifications limits for the duration of the test period noted. The sheeting and any applied coatings such as inks, overlay films, and other coatings shall be weather resistant according to ASTM D4956 after being tested by AASHTO/NTPEP, VDOT, or other Department approved facilities.

The inks, overlay films, and other coatings shall be specified by the sheeting manufacturer. The following products have been prequalified, but the manufacturer must supply certification for each lot.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Sheeting Product No.</th>
<th>ASTM Type</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
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<tbody>
<tr>
<td>Avery Dennison</td>
<td>T-6500</td>
<td>IV</td>
<td>White</td>
<td>SSM-98-15</td>
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<tr>
<td>Avery Dennison</td>
<td>T-6501</td>
<td>IV</td>
<td>Yellow</td>
<td>SSM-96-009</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>T-6507</td>
<td>IV</td>
<td>Green</td>
<td>SSM-98-15</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>T-6508</td>
<td>IV</td>
<td>Red</td>
<td>SSM-98-15</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>T-6509</td>
<td>IV</td>
<td>Brown</td>
<td>SSM-2013-01-030</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>T-6505</td>
<td>IV</td>
<td>Blue</td>
<td>SSM-96-009</td>
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<tr>
<td>Avery Dennison</td>
<td>T-9500</td>
<td>IX</td>
<td>White</td>
<td>SSM-04-1073</td>
</tr>
<tr>
<td>Avery Dennison</td>
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<td>Blue</td>
<td>SSM-04-1076</td>
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<td>Barricade (White/Orange)</td>
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<tr>
<td>Avery Dennison</td>
<td>W-9514</td>
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<td>SSM-2004-01-1078</td>
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<tr>
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<td>XI</td>
<td>Fluor. Orange</td>
<td>SSM-2008-01-1297</td>
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<th>Color</th>
<th>NTPEP Submittal No.</th>
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<td>3930</td>
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<td>SSM-04-1062</td>
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<td>3M</td>
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<td>SSM-06-1148</td>
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<td>SSM-07-1247</td>
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<tr>
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<td>3990</td>
<td>IX</td>
<td>White</td>
<td>SSM-04-1052</td>
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<tr>
<td>3M</td>
<td>3991</td>
<td>IX</td>
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<td>SSM-94-5</td>
</tr>
<tr>
<td>3M</td>
<td>3992</td>
<td>IX</td>
<td>Red</td>
<td>SSM-99-705</td>
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<td>3997</td>
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<td>SSM-04-1057</td>
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<td>3995</td>
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<td>SSM-04-1056</td>
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<td>XI</td>
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<tr>
<td>3M</td>
<td>444/446</td>
<td>XI</td>
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<td>IX</td>
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<td>3924S</td>
<td>IX</td>
<td>Fluor. Orange</td>
<td>SSM-03-1028</td>
</tr>
<tr>
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<td>4084</td>
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<td>SSM-05-1109</td>
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<tr>
<td>Nippon Carbide</td>
<td>CRG-92847</td>
<td>IX</td>
<td>Fluor. Orange</td>
<td>SSM-02-7</td>
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<tr>
<td>Orafol</td>
<td>5930-038</td>
<td>IX</td>
<td>Fluor. Orange</td>
<td>SSM-2013-01-017</td>
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</tbody>
</table>

Inks, Overlay Films, and other coatings shall be specified by the sheeting manufacturer
### Reflective sheeting used on:
**Tubular Markers, Flexible Post Delineators, Permanent Sand Barrels, Cones - per Section 247.02 (d)**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Sheet Product No.</th>
<th>ASTM Type</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
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<td>IV</td>
<td>White</td>
<td>SSM-01-03</td>
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<tr>
<td>3M</td>
<td>3814</td>
<td>IV</td>
<td>Orange</td>
<td>SSM-01-03</td>
</tr>
<tr>
<td>3M</td>
<td>3811</td>
<td>IV</td>
<td>Yellow</td>
<td>SSM-96-7</td>
</tr>
<tr>
<td>3M</td>
<td>3311</td>
<td>IV</td>
<td>Yellow</td>
<td>SSM-2017-01-021</td>
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<td>3910</td>
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<td>White</td>
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<td>3340 – (Cones)</td>
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<td>Orange</td>
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<td>White</td>
<td>VDOT Testing</td>
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<td>Yellow</td>
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<td>White</td>
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<td>Orafol</td>
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<td>IV</td>
<td>Fluor. Orange</td>
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<td>WC-4100 (Cones)</td>
<td>IV</td>
<td>White</td>
<td>NTPEP Testing Not Required</td>
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<tr>
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<td>WR-7100</td>
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<td>SSM-2012-01-068</td>
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</tbody>
</table>

Inks, overlay films, and other coatings shall be specified by the sheeting manufacturer

### Reflective sheeting used on:
**Temporary Sand Barrels and Drum, per Section 247.02 (d) and VDOT Table 1 Specs**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Sheet Product No.</th>
<th>ASTM Type</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
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</thead>
<tbody>
<tr>
<td>3M</td>
<td>3910</td>
<td>IV and VDOT Spec</td>
<td>White</td>
<td>SSM-2011-01-014</td>
</tr>
<tr>
<td>3M</td>
<td>3914</td>
<td>IV and VDOT Spec</td>
<td>Fl. Orange</td>
<td>SSM-98-13</td>
</tr>
<tr>
<td>Orafol</td>
<td>5934-010</td>
<td>IV and VDOT Spec</td>
<td>White</td>
<td>SSM-2018-01-033</td>
</tr>
<tr>
<td>Orafol</td>
<td>5935-01</td>
<td>IV and VDOT Spec</td>
<td>White</td>
<td>SSM-2018-01-039</td>
</tr>
<tr>
<td>Orafol</td>
<td>5935-038</td>
<td>IV and VDOT Spec</td>
<td>Fl. Orange</td>
<td>SSM-2018-01-040</td>
</tr>
</tbody>
</table>

Inks, overlay films, and other coatings shall be specified by the sheeting manufacturer
### Reflective Sheeting for Grade DOT-C2 Conspicuity Tape, per Section 247.02(e)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M</td>
<td>981-32</td>
<td>White/red</td>
<td>Not Required</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>V-5720</td>
<td>White/Red</td>
<td>Not Required</td>
</tr>
<tr>
<td>ORAFOL</td>
<td>V82 Classic</td>
<td>White/Red</td>
<td>Not Required</td>
</tr>
<tr>
<td>ORAFOL</td>
<td>V92 Daytime</td>
<td>White/Red</td>
<td>Not Required</td>
</tr>
<tr>
<td>ORAFOL</td>
<td>V92 Daybright</td>
<td>White/Red</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

### Reflective sheeting used on Reflective Roll-up signs, per Section 247.02(f)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>ASTM Type</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M</td>
<td>RS-20-CW</td>
<td>VI</td>
<td>White</td>
<td>MS 09195</td>
</tr>
<tr>
<td>3M</td>
<td>RS-24-CW</td>
<td>VI</td>
<td>Fluorescent Orange</td>
<td>MS 09177</td>
</tr>
<tr>
<td>3M</td>
<td>RS-60</td>
<td>VI</td>
<td>White</td>
<td>MS 26334</td>
</tr>
<tr>
<td>3M</td>
<td>RS-64</td>
<td>VI</td>
<td>Fluorescent Orange</td>
<td>MS 26335</td>
</tr>
<tr>
<td>ORAFOL</td>
<td>Marathon</td>
<td>VI</td>
<td>White</td>
<td>MS 19666</td>
</tr>
<tr>
<td>ORAFOL</td>
<td>Marathon</td>
<td>VI</td>
<td>Fluorescent Orange</td>
<td>MS 19667</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>WU-7000</td>
<td>VI</td>
<td>White</td>
<td>MS 28704</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>WU-7014</td>
<td>VI</td>
<td>Fluorescent Orange</td>
<td>MS 28720</td>
</tr>
</tbody>
</table>

Inks, overlay films, and other coatings shall be specified by the sheeting manufacturer.

### Reflective Sheeting for Hand Signaling Flags and Gate-Arm Flags, per Section 247.02(g)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>ASTM Type</th>
<th>Color</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M</td>
<td>RS-20-CW</td>
<td>VI</td>
<td>White with Red Ink</td>
<td>MS 09195</td>
</tr>
<tr>
<td>Orafol</td>
<td>Marathon</td>
<td>VI</td>
<td>White with Red Ink</td>
<td>MS 19666</td>
</tr>
<tr>
<td>Avery Dennison</td>
<td>WU-7000</td>
<td>VI</td>
<td>White with Red Ink</td>
<td>MS 28704</td>
</tr>
</tbody>
</table>

Inks, overlay films, and other coatings shall be specified by the sheeting manufacturer.
List No. 47

(47) ACRYLIC PAINT FOR ALUMINUM AND GALVANIZED SURFACES – (Chemistry Lab)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Paint</th>
<th>Dry Film Thickness (DFT)</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboline Paint Co.</td>
<td>Carbocrylic 120, Carbocrylic 3350</td>
<td>1.0 – 2.0 mils, 2.0 – 3.0 mils</td>
<td>White, As Specified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elite Coatings</td>
<td>W – 186 Metal Primer, Water Guard Series</td>
<td>3.0 mils, 3.0 mils</td>
<td>Buff, As Specified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A.B. Paints</td>
<td>HydroPrime (073-189), Seashore Enamel (024 Line)</td>
<td>1.5 – 2.0 mils, 1.5 – 2.0 mils</td>
<td>White, As Specified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porter Coatings</td>
<td>212 DTM Acrylic, 2809 Series</td>
<td>2.0 mils, 2.5 – 3.0 mils</td>
<td>Red, As Specified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>B71Y1 DTM Wash, B66-200 Series Finish</td>
<td>0.7 – 1.3 mils, 2.5 – 4.0 mils</td>
<td>Yellow – Green, As Specified</td>
</tr>
</tbody>
</table>

Surface Preparation

All aluminum and galvanized surfaces shall be cleaned in accordance with SSPC-SP1 to remove oil, dirt, grease and any foreign matter that may be present. Secondly, the surface shall be cleaned using an acid etching solution (agreed upon by the manufacturer of the paint) to remove any aluminum oxide or zinc oxide present on the surface. Once etching is complete, the surface shall be washed with clean potable water to neutralize the acid. All of the above procedures are critical to assure proper adhesion and durability of the coating when painting either of these surfaces.

It may be necessary to sweep blast both aluminum and galvanized surfaces after cleaning the surface according to SSPC SP-1. This may be used as an alternative to acid etching. This type of surface preparation should be evaluated on a case-by-case basis and in conjunction with the manufacturer’s recommendations.
(48) APPROVED TYPE F CONSTRUCTION MARKINGS – (Chemistry Lab)

All waterborne paint markings shall be applied at a wet film thickness of 15±1 mil and a glass bead application rate of 6 pounds per gallon.

WATERBORNE PAINT CLASS I

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherwin Williams</td>
<td>BP-14016</td>
<td>STR-97-41-AL</td>
</tr>
<tr>
<td></td>
<td>BP-14019</td>
<td>STR-97-44-AL</td>
</tr>
<tr>
<td></td>
<td>BP15652</td>
<td>STR-98-PA-135</td>
</tr>
<tr>
<td></td>
<td>BP15622</td>
<td>STR-98-PA-150</td>
</tr>
<tr>
<td></td>
<td>BP17312</td>
<td>PMM(2000PA)-170</td>
</tr>
<tr>
<td></td>
<td>BP17313</td>
<td>PMM(2000PA)-171</td>
</tr>
<tr>
<td></td>
<td>BP17316</td>
<td>PMM(2000PA)-174</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings and Centerline)</td>
<td>CL-6000</td>
<td>STR-96-64-PA</td>
</tr>
<tr>
<td></td>
<td>CL-6004</td>
<td>STR-96-68-PA</td>
</tr>
<tr>
<td></td>
<td>CL-7018</td>
<td>STR-97-69-AL</td>
</tr>
<tr>
<td></td>
<td>CL-8210</td>
<td>STR-98-PA-96</td>
</tr>
<tr>
<td></td>
<td>CL-8214</td>
<td>STR-98-PA-100</td>
</tr>
<tr>
<td></td>
<td>CL-8216</td>
<td>STR-98-PA-102</td>
</tr>
<tr>
<td></td>
<td>CL-8218</td>
<td>STR-98-PA-104</td>
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<td></td>
<td>CL-8220</td>
<td>STR-98-PA-106</td>
</tr>
<tr>
<td></td>
<td>CL-8222</td>
<td>STR-98-PA-108</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings and Linear Dynamics)</td>
<td>LD96-1002</td>
<td>STR-96-85-PA</td>
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<tr>
<td></td>
<td>LD96-1008</td>
<td>STR-96-91-PA</td>
</tr>
<tr>
<td></td>
<td>LD971001C</td>
<td>STR-97-138-AL</td>
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<tr>
<td></td>
<td>LD981001</td>
<td>STR-98-PA-158</td>
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<tr>
<td></td>
<td>LD981002</td>
<td>STR-98-PA-159</td>
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<td>LD981003</td>
<td>STR-98-PA-160</td>
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<td></td>
<td>LD981004</td>
<td>STR-98-PA-161</td>
</tr>
<tr>
<td></td>
<td>LD981005</td>
<td>STR-98-PA-162</td>
</tr>
<tr>
<td>Ennis Paint (formerly LaFarge Road Markings)</td>
<td>LRMOOWB-19</td>
<td>PMM(2000PA)-110</td>
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<td></td>
<td>LRMOOWB-20</td>
<td>PMM(2000PA)-111</td>
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<tr>
<td>Ennis Paint</td>
<td>Douglas 303-98</td>
<td>STR-98-PA-214</td>
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<td></td>
<td>Ennis EP200W13</td>
<td>STR-98-PA-17</td>
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<td></td>
<td>Ennis EP200W14</td>
<td>STR-98-PA-18</td>
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<tr>
<td></td>
<td>Ennis EP200W16</td>
<td>STR-98-PA-20</td>
</tr>
<tr>
<td></td>
<td>EP415W03</td>
<td>PMM(2000PA)-61</td>
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</table>
## WATERBORNE PAINT CLASS I

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yellow</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>BP-14021</td>
<td>STR-97-46-AL</td>
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<tr>
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<td>BP15611</td>
<td>STR-98-PA-139</td>
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<tr>
<td></td>
<td>BP15623</td>
<td>STR-98-PA-151</td>
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<td></td>
<td>BP17314</td>
<td>PMM(2000PA)-172</td>
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<tr>
<td><strong>Ennis Paint</strong> (formerly Linear Dynamics) and LaFarge Road Markings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD96-1009</td>
<td>STR-96-92-PA</td>
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<td>LD981009</td>
<td>STR-98-PA-165</td>
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<td>LD981010</td>
<td>STR-98-PA-166</td>
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<tr>
<td><strong>Ennis Paint</strong> (formerly LaFarge Road Markings)</td>
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<td>LRMOOWB-31</td>
<td>PMM(2000PA)-122</td>
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<td><strong>Aexcel</strong></td>
<td>72Y-AO65</td>
<td>STR-96-148-PA</td>
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<td>Douglas 306-98</td>
<td>STR-98-PA-217</td>
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<tr>
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<td>Douglas 307-98</td>
<td>STR-98-PA-218</td>
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<td>Ennis EP200Y-18</td>
<td>STR-98-PA-29</td>
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### WATERBORNE PAINT CLASS II

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product No.</th>
<th>NTPEP Submittal No.</th>
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<tr>
<td><strong>White</strong></td>
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<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>BP-14016</td>
<td>STR-97-41-AL</td>
</tr>
<tr>
<td></td>
<td>BP15652</td>
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</tr>
<tr>
<td></td>
<td>BP15622</td>
<td>STR-98-PA-150</td>
</tr>
<tr>
<td></td>
<td>BP17312</td>
<td>PMM(2000PA)-170</td>
</tr>
<tr>
<td></td>
<td>BP17313</td>
<td>PMM(2000PA)-171</td>
</tr>
<tr>
<td><strong>Ennis Paint (formerly Centerline</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>and LaFarge Road Markings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ennis Paint</td>
<td>CL-8214</td>
<td>STR-98-PA-100</td>
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<tr>
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<td>CL-8216</td>
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<td>CL-8218</td>
<td>STR-98-PA-104</td>
</tr>
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<td>CL-8220</td>
<td>STR-98-PA-106</td>
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<td>CL-8222</td>
<td>STR-98-PA-108</td>
</tr>
<tr>
<td><strong>Ennis Paint (formerly Linear Dynamics)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>and LaFarge Road Markings</strong></td>
<td></td>
<td></td>
</tr>
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<td>LD981001</td>
<td>STR-98-PA-158</td>
</tr>
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</tr>
<tr>
<td></td>
<td>LD981005</td>
<td>STR-98-PA-162</td>
</tr>
<tr>
<td><strong>Ennis Paint</strong></td>
<td>Douglas 303-98</td>
<td>STR-98-PA-214</td>
</tr>
<tr>
<td><strong>Douglas 303-98</strong></td>
<td>Ennis EP200W13</td>
<td>STR-98-PA-17</td>
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<td><strong>EP415W04</strong></td>
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</tr>
<tr>
<td><strong>Yellow</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherwin Williams</td>
<td>BP-14021</td>
<td>STR-97-46-AL</td>
</tr>
<tr>
<td></td>
<td>BP15623</td>
<td>STR-98-PA-151</td>
</tr>
<tr>
<td></td>
<td>BP17314</td>
<td>PMM(2000PA)-172</td>
</tr>
<tr>
<td><strong>Ennis Paint</strong></td>
<td>Douglas 306-98</td>
<td>STR-98-PA-217</td>
</tr>
<tr>
<td><strong>LaFarge Road Markings</strong></td>
<td>Douglas 307-98</td>
<td>STR-98-PA-218</td>
</tr>
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<td><strong>EP415Y03</strong></td>
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</tr>
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<td><strong>EP415Y04</strong></td>
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<td><strong>EP415Y05</strong></td>
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</tr>
<tr>
<td><strong>EP415Y06</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
List No. 49

(49) QUALIFIED SEALERS AND TOPCOATS FOR METALLIZED SURFACES –

(Chemistry Lab)

Note: Effective with the February 2005 advertisement, all approved paint systems must not exceed the 2.8 lb/gal VOC requirement. Also paints manufactured after January 1, 2005 must meet these requirements if supplied to or applied in the Northern Virginia VOC Emission Control Area. This consists of the counties of Arlington, Fairfax, Loudoun, Prince William and Stafford, and the cities Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park City.

The following sealer/topcoat systems have been prequalified for use, but the manufacturer must provide certification for each lot.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>DFT, mils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboline:</td>
<td></td>
</tr>
<tr>
<td>Rustbond FC</td>
<td>1.0-2.0</td>
</tr>
<tr>
<td>Carbothane 134 HG or 134 HS topcoat</td>
<td>2.0-3.0</td>
</tr>
<tr>
<td>ICI Devoe Coatings:</td>
<td></td>
</tr>
<tr>
<td>Pre-Prime 167</td>
<td>0.5-1.5</td>
</tr>
<tr>
<td>Devthane 378 topcoat</td>
<td>2.0-3.0</td>
</tr>
<tr>
<td>Xymax:</td>
<td></td>
</tr>
<tr>
<td>Monolock PP</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>Bridge Finish topcoat</td>
<td>1.0-2.0</td>
</tr>
</tbody>
</table>
## List No. 50

*(50) PERFORMANCE GRADED (PG) BINDER SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM - (Asphalt Lab)*

<table>
<thead>
<tr>
<th>Code Number</th>
<th>Certifying Supplier</th>
<th>Shipping Location</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Associated Asphalt, Inc.</td>
<td>Bristol, VA</td>
<td>PG 64-22, PG 70-22, PG 76-22 PMA, PG 64S-22, PG 64H-22, PG 64E-22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Associated Asphalt Bristol, LLC 10 Spurgeon Lane Bristol, VA 24203</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Associated Asphalt, Inc.</td>
<td>Roanoke, VA</td>
<td>PG 64-22, PG 70-22, PG 76-22 PMA, PG 64S-22, PG 64H-22, PG 64E-22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Associated Asphalt Roanoke, LLC 2677 Roanoke Ave., SW Roanoke, VA 24015</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Associated Asphalt, Inc.</td>
<td>Martinsburg, WV</td>
<td>PG 64-22, PG 70-22, PG 76-22 PMA, PG 64S-22, PG 64H-22, PG 64E-22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>855 Corning Way Martinsburg, WV 25401</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Associated Asphalt, Inc.</td>
<td>Greensboro, NC</td>
<td>PG 64-22, PG 70-22, PG 76-22 PMA, PG 64S-22, PG 64H-22, PG 64E-22, PG 64V-28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 S. Chimney Rock Road Greensboro, NC 27409</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Associated Asphalt LLC</td>
<td>Associated Asphalt Hopewell LLC 410 Water Street Hopewell, VA 23860</td>
<td>PG 64-22, PG 76-22, PG 64S-22, PG 64E-22</td>
</tr>
<tr>
<td>15</td>
<td>Associated Asphalt LLC</td>
<td>1825 Jake Alexander Blvd. Salisbury, NC 28147</td>
<td>PG 64H-22</td>
</tr>
<tr>
<td>Code Number</td>
<td>Certifying Supplier</td>
<td>Shipping Location</td>
<td>Materials</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>16</td>
<td>Associated Asphalt, Inc.</td>
<td>Pike Baltimore 1955 Chesapeake Ave Baltimore, MD 21226</td>
<td>PG64S-22</td>
</tr>
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<td>20</td>
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<td>APEX Oil Company, Inc-Chesapeake 428 Barnes Road Chesapeake, VA 23434</td>
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<td>King Street &amp; Jersey Avenue</td>
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</tr>
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<td></td>
<td></td>
<td>Gloucester City, NJ 08030-0031 Telephone: (856) 456-6673</td>
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<td>Terminal Manager: Ted Davis</td>
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### List No. 50.1

**EMULSIFIED ASPHALT SOURCES ON VA ASPHALT ACCEPTANCE PROGRAM**

**Asphalt Lab**

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<th>Code Number</th>
<th>Certifying Supplier</th>
<th>Shipping Location</th>
<th>Materials</th>
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<td>Asphalt Emulsion, Inc</td>
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<td>Manassas, VA 8730 Vulcan Lane Manassas, VA 20109</td>
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<td>12</td>
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<td>Dumfries, VA 18000 Cockpit Point Rd Dumfries, VA 22026</td>
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<td>13</td>
<td>Asphalt Emulsion, Inc</td>
<td>Newport News, VA 801 Terminal Ave Newport News, VA 23607</td>
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<td>100</td>
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<td>Charlotte, NC 1131 Atando Ave.</td>
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### List 50.1A

(50.1A) APPROVED NONTRACK TACK COAT MATERIALS (Asphalt Lab)

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<td>Appalachian Materials Group</td>
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<td>Drive on Tack Coat (DOT C-10)</td>
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| BCI Materials | Charlotte, NC  
1131 Atando Ave.  
Charlotte, NC 28206 | NTCRS-1hM | 100 |
The following products are approved for field cuts, sawn ends, drilled holes, or abrasions in treated wood. This product is applied to the disturbed area in order to comply with VDOT Road and Bridge Sec. 507.03 (b). Field treatment requires the areas to be brush coated with three heavy applications of Copper Naphthenate preservative containing a minimum of 2% copper as metal. Each application shall be given sufficient time to penetrate the wood. This preservative is recommended for material originally treated (i.e. primary treatment) with Copper Naphthenate, Pentachlorophenol (PENTA), Creosote, Creosote solutions, or waterborne preservatives.

Suppliers:

Poles, Inc.- Customer Service at 719-685-0333 or www.poles.com
Product name: Tenino Copper Naphthenate 2% as metal (17% by volume)
Wood preservative

Nisus, Corp.- Customer Service at 800-264-0870 or www.nisuscorp.com
Product name: QNAP2- Copper Naphthenate 2% as metal (17% by volume)
Wood preservative

Note: Due to changes in EPA requirements, as of June 2011 Nisus Corporation became the only registered manufacturer for Copper Naphthenate.
**List No. 52**

(52) ARTICULATED BLOCKS FOR SLOPE PROTECTION & DITCHLINING – (Location & Design)

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<th>Product</th>
<th>Manufacturer Name</th>
<th>Address</th>
<th>Contact Information</th>
<th>Notes</th>
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<tr>
<td>Armorflex</td>
<td>Armortec, Inc.</td>
<td>Suite 1990, Peachtree Corners Plaza, Norcross, Georgia 30071</td>
<td>(800)241-6313</td>
<td>Note: Mats come in 320 sq. ft. sections. Requires a crane to lift sections into place.</td>
</tr>
<tr>
<td>Hexagonal Interlocking Panels</td>
<td>Ecological Technology Company, Inc.</td>
<td>Thesauer Weg, D-04460 Kitzen, Germany</td>
<td>+4934296/779-20, +4934296/779-33 Fax</td>
<td></td>
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<tr>
<td>NOR-Bloc</td>
<td>Norwood, Inc.</td>
<td>222 George Street, Beckley, West Virginia 25801</td>
<td>(304)252-6517</td>
<td>Note: Individual interlocking blocks.</td>
</tr>
<tr>
<td>Cable Concrete</td>
<td>Permatile Concrete Products Co.</td>
<td>P. O. Box 2049, 100 Beacon Road, Bristol, Virginia 24203-2049</td>
<td>(540)669-5332</td>
<td>Note: Mats come in 2 ft. x 4 ft. sections or 16 ft. x 4 ft. sections.</td>
</tr>
<tr>
<td>Shoreloc (formerly GeoLink)</td>
<td>ACF Environmental</td>
<td>2831 Cardwell Road, Richmond, VA 23234</td>
<td>(800)223-9021</td>
<td>Note: Mats come in either 4” x 12” x 16” or 6” x 12” x 16” blocks.</td>
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<tr>
<td>Shoreblock SD</td>
<td>ACF Environmental</td>
<td>2831 Cardwell Road, Richmond, VA 23234</td>
<td>(800)223-9021</td>
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II-A-151
List No. 53

(53) EROSION CONTROL MULCHES – (Maintenance Div.)

Straw of Hay Mulch applied at a rate of 3,000 lbs. per acre (3,600 kg/hectare) so as to provide a minimum 95% coverage to the soil. Straw or hay shall be tacked with fiber mulch applied at a of 1,000 lbs. per acre, an approved mulch tackifier applied as recommended by the manufacturer, punching, or disking into the soil, or other method approved by the Engineer.

Manufacturers of Mulch Products acceptable for use as Erosion Control Mulch:

<table>
<thead>
<tr>
<th>Mulch Product</th>
<th>Manufacturer</th>
<th>Address/Contact Information</th>
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</thead>
<tbody>
<tr>
<td>Airtrol</td>
<td>United States Gypsum Co.</td>
<td>125 South Franklin Street, Chicago, IL 60606, (312)214-9192</td>
</tr>
<tr>
<td>Earth Guard Matrix</td>
<td>Terra Novo</td>
<td>2930 Patton Way, Bakersfield, CA 93308</td>
</tr>
<tr>
<td>Excel Fibermulch II</td>
<td>American Excelsior Company</td>
<td>831 Pioneer Ave, Rice Lake, WI 54868, Attn: Kurt Kelsey, (715)236-5643</td>
</tr>
<tr>
<td>Bindex BFM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bindex Blend</td>
<td></td>
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</tr>
<tr>
<td>Bindex Blend WT</td>
<td></td>
<td></td>
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<tr>
<td>Bindex Wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bindex Wood WT</td>
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<td></td>
</tr>
<tr>
<td>Flexterra Flexible Growth Medium (FGM)</td>
<td>Profile Products, LLC</td>
<td>750 Lake Cook Road, Suite 440, Buffalo Grove, IL 60089, (866)325-6262</td>
</tr>
<tr>
<td>ProMatrix-Engineered Fiber Matrix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydra CX2</td>
<td>North American Green</td>
<td>14649 Highway North, Evansville, IN 47725, (800) 772-2040</td>
</tr>
<tr>
<td>HY-C4</td>
<td>East Coast Erosion Blankets, LLC</td>
<td>443 Bricker Road, Bernville, PA 19506, (610) 488-8496</td>
</tr>
<tr>
<td>HydroStraw Mulch</td>
<td>HydroStraw, LLC</td>
<td>3676 W 9000 N Road, Manento, IL 60950, 1-800-545-1755</td>
</tr>
<tr>
<td>HydroStraw Guar Plus Formulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HydroStraw Bonded Fiber Matrix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mulch &amp; Grow Bonded Fiber Matrix</td>
<td>Carolina Precision Fibers</td>
<td>P.O. Box 624, Elkin, NC 28621</td>
</tr>
<tr>
<td>PAM-12</td>
<td>ENCAP, LLC</td>
<td>3921 Algoma Rd, Green Bay, WI 54311-9707</td>
</tr>
<tr>
<td>Posi-Cube Seed and Soil Guard</td>
<td>LSC Environmental Products, LLC</td>
<td>2183 Pennsylvania Ave, Apalachin, NY 13732</td>
</tr>
<tr>
<td>Spraymat</td>
<td>Profile Products LLC</td>
<td>Sandra House, 750 Lake Cook Road, Suite 440, Buffalo Grove, IL 60089, 800-508-8681, <a href="mailto:shouse@profileproducts.com">shouse@profileproducts.com</a></td>
</tr>
</tbody>
</table>
| Soil Guard Mat, Inc. | 12402 Highway 2  
Floodwood, MN 55736 |
|---------------------|---------------------|
| Soil Sement Mid-West Industrial Supply Co., Inc. | 14330 Heathland Terrace  
Midlothian, Virginia 23113  
(804)794-4403  
Hal Martin, representative |
| USG Enviro-Shield Brand Bonded Fiber United States Gypsum Co. | 125 South Franklin Street  
Chicago, IL 60606  
(312)214-9192 |
(54) FIBER MULCH SUPPLIERS – (Please see list No. 11)
**List No. 55 (cont.)**

### (55) MULCH TACKIFIER SUPPLIERS – (Maintenance Div.)

<table>
<thead>
<tr>
<th>Product</th>
<th>Company</th>
<th>Contact Information</th>
</tr>
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<tbody>
<tr>
<td>TacPac GT</td>
<td>Profile Products LLC</td>
<td>Sandra House</td>
</tr>
<tr>
<td>Terra-Mulch Tacking Agent 3</td>
<td></td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td>Tornado Tack ST-1000</td>
<td></td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td>FlocLoc Soil and Fiber Mulch Stabilizer</td>
<td></td>
<td>(800) 215-3427 <a href="mailto:shouse@profileproducts.com">shouse@profileproducts.com</a></td>
</tr>
<tr>
<td>Contack</td>
<td>Conwed Fibers</td>
<td>1850 Tate Blvd., S.E.</td>
</tr>
<tr>
<td>Contack AT</td>
<td></td>
<td>Suite 350</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hickory, NC 28601</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(800)366-1180</td>
</tr>
<tr>
<td>EcoTak OP-5</td>
<td>Eastern Products, Inc.</td>
<td>One Copperfield Way</td>
</tr>
<tr>
<td>EcoTak SAT-11</td>
<td></td>
<td>Mahwah, New Jersey 07430-3200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(201)684-0463, (201)684-0464 FAX <a href="mailto:EPINJ@aol.com">EPINJ@aol.com</a></td>
</tr>
<tr>
<td>EC 1000</td>
<td>Erosion Control Technologies, Inc</td>
<td>3380 Route 22 West, Unit 3A</td>
</tr>
<tr>
<td>EC 3000</td>
<td></td>
<td>Branchburg, NJ 08876</td>
</tr>
<tr>
<td>ECT 3000 (copolyacrylamide)</td>
<td></td>
<td>P. O. Box 5383</td>
</tr>
<tr>
<td></td>
<td></td>
<td>North Branch, NJ 08876</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(800)245-0551, (908)707-1445 FAX</td>
</tr>
<tr>
<td>A500 Hydro Stik</td>
<td>Finn Corp.</td>
<td>9281 LeSaint Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fairfield, Ohio 45014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(800)543-7166</td>
</tr>
<tr>
<td>Jonathan Green Hydrogreen Tackifier</td>
<td>Joanthan Green Turf Products</td>
<td>P. O. Box 326</td>
</tr>
<tr>
<td>Jonathan Green Super Tackifier</td>
<td></td>
<td>Farmingdale, New Jersey 07727</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(800)526-2303, (908)938-5788 FAX</td>
</tr>
<tr>
<td>Progacyl AG-50</td>
<td>Lyndal Chemical Co.</td>
<td>P.O.Box 1740</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coronet Dr.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dalton, GA. 30720</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(404)259-4831</td>
</tr>
<tr>
<td>Mulch Mate Supertac</td>
<td>PRS Materials, Inc.</td>
<td>520 Pusey Avenue</td>
</tr>
<tr>
<td>StrawMate Tackifier</td>
<td></td>
<td>Collingdale, PA 19023</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:prsm@juno.com">prsm@juno.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(610)532-3960, (610)534-1555 Fax</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(800)432-3966</td>
</tr>
<tr>
<td>Dirt Glue</td>
<td>Unocal Corp.</td>
<td>Unocal Chemicals Division</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1445 Alondra Blvd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>La Mirada, CA. 90638</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(714)228-4749</td>
</tr>
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**List No. 55 (cont.)**
<table>
<thead>
<tr>
<th>Fiber Rx</th>
<th>HydroStraw, LLC</th>
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<tbody>
<tr>
<td></td>
<td>3676 W 9000 N Road</td>
</tr>
<tr>
<td></td>
<td>Manento, IL 60950</td>
</tr>
<tr>
<td></td>
<td>1-800-545-1755</td>
</tr>
</tbody>
</table>
### (56) STANDARD EC-2 EROSION CONTROL BLANKETS – (Maintenance Div.)

**NOTE:** Products on this list may be selected for use only on VDOT projects still subject to the 2007 VDOT Road and Bridge Specifications. EC-2 type products to be used on VDOT projects subject to the 2016 (or newer) VDOT Road and Bridge Specifications must be selected from VDOT Approved Product List No. 80, Temporary Rolled Erosion Control Products (EC-2 Types 1 thru 4).

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<th>(VELOCITY 2.5 – 4.0 f.p.s.)</th>
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<tr>
<td><strong>Curlex</strong></td>
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<td>Curlex I</td>
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<tr>
<td>Curlex I CL</td>
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<tr>
<td>Curlex II</td>
<td></td>
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<tr>
<td>Curlex II CL</td>
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</tr>
<tr>
<td>Straw, Premier, Single, Green Net</td>
<td></td>
</tr>
<tr>
<td>Straw, Premier, Double, White Net</td>
<td></td>
</tr>
<tr>
<td><strong>Anti-Wash/Geojute</strong></td>
<td>Belton Industries</td>
</tr>
<tr>
<td></td>
<td>8613 Roswell Road, Suite 200</td>
</tr>
<tr>
<td></td>
<td>Atlanta, Ga. 30350</td>
</tr>
<tr>
<td></td>
<td>(800) 225-4099, (770) 992-6361 Fax</td>
</tr>
<tr>
<td><strong>Jute Mesh</strong></td>
<td>Bemis Brothers Bag Company</td>
</tr>
<tr>
<td></td>
<td>St. Louis, Mo.</td>
</tr>
<tr>
<td><strong>Jute Mesh</strong></td>
<td>Belting Bagging Company</td>
</tr>
<tr>
<td></td>
<td>Belton, South Carolina</td>
</tr>
<tr>
<td><strong>Dekowe 700</strong></td>
<td>Belton Industries</td>
</tr>
<tr>
<td><strong>Dekowe 900</strong></td>
<td>Hambry Road</td>
</tr>
<tr>
<td></td>
<td>Belton, South Carolina 29627</td>
</tr>
<tr>
<td><strong>East Coast ECC-2; ECC-2B</strong></td>
<td>East Coast Erosion Blankets, LLC</td>
</tr>
<tr>
<td><strong>East Coast ECS-1; ECS-1B</strong></td>
<td>443 Bricker Road</td>
</tr>
<tr>
<td><strong>East Coast ECS-2; ECS-2B</strong></td>
<td>Bernville, PA 19506</td>
</tr>
<tr>
<td><strong>East Coast ECSC-2; ECSC-2B</strong></td>
<td>Diane M. Hitt</td>
</tr>
<tr>
<td>ECX-1</td>
<td>(610) 488-8496, Fax (610) 488-8494</td>
</tr>
<tr>
<td><strong>S1000</strong></td>
<td>Enviroscape ECM, Ltd.</td>
</tr>
<tr>
<td></td>
<td>22700 State Route 613</td>
</tr>
<tr>
<td></td>
<td>Oakwood, OH 45873</td>
</tr>
<tr>
<td></td>
<td>(888) 550-1999, Fax (419) 594-3213</td>
</tr>
<tr>
<td><strong>S32 UVD, SC32, S32, S31 UVD, S31, C32</strong></td>
<td>ErosionControlBlanket.com</td>
</tr>
<tr>
<td></td>
<td>Box 69</td>
</tr>
<tr>
<td></td>
<td>Riverton Manitoba, Canada R0C 2R0</td>
</tr>
<tr>
<td></td>
<td>Roy Nelsen</td>
</tr>
<tr>
<td></td>
<td>(970) 875-1158, Fax (970) 871-6779</td>
</tr>
<tr>
<td><strong>Earthlock</strong></td>
<td>Erosion Control Systems, Inc.</td>
</tr>
<tr>
<td><strong>St’d. Straw – Proguard SS</strong></td>
<td>9015 Energy Lane</td>
</tr>
<tr>
<td><strong>High Velocity Straw – Proguard DS</strong></td>
<td>Northport, Alabama 35406</td>
</tr>
<tr>
<td><strong>St’d. Excelsior – Everhold XL1</strong></td>
<td>(205)333-3080, Fax (205) 333-3090</td>
</tr>
<tr>
<td><strong>High Velocity Excelsior – Everhold XL2</strong></td>
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<tr>
<td><strong>ETRS-1</strong></td>
<td>Erosion Tech, LLC</td>
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<tr>
<td><strong>ETRS-2</strong></td>
<td>105 Plant Camellia Road</td>
</tr>
<tr>
<td><strong>ETSC-70/30</strong></td>
<td>Juliet, GA 31046</td>
</tr>
<tr>
<td><strong>ETC-100</strong></td>
<td>Josh Still</td>
</tr>
<tr>
<td>List No. 56 (cont.)</td>
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<tr>
<td>(VELOCITY 2.5 - 4.0 f.p.s.)</td>
<td></td>
</tr>
</tbody>
</table>
| Greenfix WS05 Straw Blanket | Greenfix America  
P. O. Box 23310  
Santa Barbara, California 93121  
(800)929-2184 (888)GREENFX |
| Greenfix WSO5B Straw Blanket |  |
| Greenfix WSO52 Straw Blanket |  |
| Greenfix WSO72 Straw Blanket |  |
| Greenfix WSO72B Straw Blanket |  |
| Greenfix CFS072B Straw -Coir Blanket |  |
| Greenfix CFS072R Straw -Coir Blanket |  |
| Greenfix CFO72RR Coir Blanket |  |
| Greenfix CFO72B Coir Blanket |  |
| Jute Erosion Control Matting | The Griffith Bag Company, Inc.  
510 Waterman Drive  
Harrisonburg, VA 22801  
(800)433-2615, (540)433-2616 |
| Soil Saver Heavy Jute Mesh | Jim Walls Company  
Commerce Plaza, Suite 109  
12820 Hillcrest Road  
Dallas, Texas 75230 |
| JMD Jute Mesh | JMD Manufacturing  
5401 Progress Blvd.  
Bethel Park, PA. 15102 |
| Jute Mesh | L & M Bag and Supply Co., Inc.  
541 Hazel Avenue  
P.O. Box 865  
Nashville, Georgia 31639 |
| Jute Mesh | Ludlow Manufacturing & Sales Co.  
Needham Heights 94, MA |
| MA-S1 | Mid America Erosion Control Products, Inc.  
P. O. Box 488, Charlestown, IN 47111  
Kris Bernens (812) 289-1900 (812) 289-1599 Fax |
| Koir Mat 400 | Nedia Enterprises, Inc.  
22187 Vantage Pointe Place  
Ashburn, VA 20148  
(571) 223-0200 (571) 223-0202 Fax |
| S-75, SC-150,C-125, S150, S75BN, S150BN, SC150BN, C125BN | North American Green  
14649 Highway 41 North  
Evansville, Indiana 47711  
(812)867-6632 |
| RS-1 Straw | American Earth Solutions  
5830 Highway 161  
Springfield, Tennessee 37172  
(615) 382-3300, (877) 56ROBEX |
| RS-2 Straw |  |
| BioD Mat 70 | RoLanka International, Inc.  
155 Andrew Drive  
Stockbridge, GA 30281  
(770)506-8211 |
| BioD Mat 90 |  |
| BioD-SiltCheck |  |
| S-1 | SI Geosolutions  
6025 Lee Highway, Suite 435  
Chattanooga, TN 37421  
(800)621-0444, (423)485-9068 Fax |
| S-2 |  |
| CS-2 |  |
| C-2 |  |
| SEC-S1, SEC-S2, SEC-XL1, SEC-XL2, SEC-SC2, SEC-C2 | Southern Environmental Conservation (SEC)  
902 Main Avenue, Suite A  
Northport, Alabama 35476  
(866) 252-4486 (205) 752-1206 Fax |
List No. 56 (cont.)

<table>
<thead>
<tr>
<th>VELOCITY 2.5 - 4.0 f.p.s.</th>
<th>US Erosion Control Products</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Willacoochee, GA 31650</td>
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</tbody>
</table>

| Verdyol Standard ERO-MAT | Verdyol Alabama, Inc.       |
| Verdyol High Vel. ERO-MAT | P.O.Box 605               |
| Verdyol Excelsior Standard | 407 Miles Pkwy.          |
| Verdyol Excelsior High Vel. | Pell City, AL. 35125-0605 |
|                           | (205) 338-4411, (205) 338-4595 Fax |

| Terraguard SS | WEBTEC, Inc.       |
| Terraguard DS | P. O. Box 19729   |
|               | Charlotte, NC 28219|
|               | Dave Snyder       |
|               | (800)438-0027, (704)394-7946 Fax |

| X-Cel Permamat 100 | Western Excelsior |
| Excel SS2 | 4609 E Boonville-New Harmony Rd |
| Excel SR-1 | Evansville IN, 47725 |
| Excel R-1 | Ph: 866-540-9810 |
| Excel S-2 | FX: 812-867-8928 |

| WintersFiber | Winters Excelsior Company |
| WinterStraw SNG, | 77 Holly Road |
| WinterStraw HVW | P.O. Box 39 |
| Winters Choice | McWilliams, AL 36753 |
| Winters Coir | (800) 248-7237, (251) 746-2173, |
|               | (251) 746-2579 fax |

§244.02 (k)(2). Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body.

Mats shall be of consistent thickness, with fiber evenly distributed over its entire area, and covered on the top and bottom side with netting having a high web strength or covered on the top side with netting having a high web strength and machine sown on maximum 2-inch centers along the longitudinal axis of the material. Netting shall be entwined with the mat for maximum strength and ease of handling.
### (57) STANDARD EC-3 TYPE A, TYPE B, & TYPE C SOILS STABILIZATION MATS – (Maintenance Div.)

**NOTE:** Products on this list may be selected for use only on VDOT projects still subject to the 2007 VDOT Road and Bridge Specifications. EC-3 type products to be used on VDOT projects subject to the 2016 (or newer) VDOT Road and Bridge Specifications must be selected from VDOT Approved Product List No. 81, Permanent Rolled Erosion Control Products (EC-3 Types 1 thru 3).

<table>
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<th>TYPE A MATS</th>
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<thead>
<tr>
<th>Product Code</th>
<th>Company Name</th>
<th>Address</th>
<th>City, State  ZIP Code</th>
<th>Phone/Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC Premier Straw/Coconut</td>
<td>American Excelsior Company</td>
<td>831 Pioneer Ave.</td>
<td>Rice Lake, WI 54868</td>
<td>(715) 234-6861</td>
</tr>
<tr>
<td>Curlex I (.98)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Earthlock       | Colbond Inc.              | 1301 Sand Hill Road              | Enka, NC              | (800) 365-7391, (828) 665-5009 fax |
| Enkamat 7003 (formerly 7005) |                  | P.O. Box 1057                    |                        |           |
| Enkamat 7010    |                          |                                  |                        |           |
| Enkamat II      |                          |                                  |                        |           |

| ECP-2; ECP-2 10 oz | East Coast Erosion Blankets, LLC | 443 Bricker Road                | Bernville, PA 19506   | (610) 488-8496, Fax (610) 488-8494 |
| ECX-2            |                            |                                  |                        |           |
| ECC-2            |                            |                                  |                        |           |
| ECC-3            |                            |                                  |                        |           |
| ECP-3            |                            |                                  |                        |           |
| ECSC-2           |                            |                                  |                        |           |
| ECSC-3           |                            |                                  |                        |           |
| T-RECS           |                            |                                  |                        |           |

| C4000           | Enviroscape ECM, Ltd.     | 22700 State Route 613            | Oakwood, OH 45873     | (888) 550-1999, Fax (419) 594-3213 |
| S2000           |                            |                                  |                        |           |
| SC3000          |                            |                                  |                        |           |

| ETSC-70/30      | Erosion Tech, LLC         | 105 Plant Camellia Road          | Juliette, GA 31046    | Josh Still |
| ETC-100         |                            |                                  |                        |           |
| ETPP-10         |                            |                                  |                        |           |

| Greenfix CF072RP | Greenfix America           | P. O. Box 23310                  | Santa Barbara, California 93121 | (800)929-2184 (888)GREENFX |
|                 |                            |                                  |                        |           |

| MacMat N10      | Maccalfi Environmental Solutions | 10303 Governor Lane Blvd         | Williamsport, MD 21795-3116 | (301) 223-6910 (301)223-6134 Fax |
| MacMat N20      |                            |                                  |                        |           |
| MacMat N6P      |                            |                                  |                        |           |
| MacMat N6G      |                            |                                  |                        |           |
| MacMat N8P      |                            |                                  |                        |           |
| MacMat N8G      |                            |                                  |                        |           |

<p>| C350            | North American Green       | 14649 Highway 41 North           | Evansville, Indiana 47711 | (812)867-6632 |
| SC250           |                            |                                  |                        |           |
| P300            |                            |                                  |                        |           |</p>
<table>
<thead>
<tr>
<th>Product Code</th>
<th>Vendor Information</th>
</tr>
</thead>
</table>
| P42          | ErosionControlBlanket.com  
Box 69  
Riverton Manitoba, Canada R0C 2R0  
Roy Nelsen  
(970) 875-1158, Fax (970) 871-6779 |
| CS-3         | Western Excelsior  
4609 E. Boonville-New Harmony Rd.  
Evansville IN, 47725  
Ph: 866-540-9810  
FX: 812-867-8928 |
| Landlok 435  | Propex Operating Company, LLC  
428 Rollins Industrial Blvd.  
Ringgold, GA 30736  
(706) 965-6300, Fax (423) 553-3758 |
| RSSC-3/RSC-4 | American Earth Solutions  
5830 Hwy 161  
Springfield, TN 37172  
(615) 382-3300, Fax (615) 382-9051 |
| S32, S32 UVD | ErosionControlBlanket.com  
Box 69  
Riverton Manitoba, Canada R0C 2R0  
Roy Nelsen  
(970) 875-1158, Fax (970) 871-6779 |
| SEC-C2, SEC-P2 | Southern Environmental Conservation (SEC)  
902 Main Avenue, Suite A  
Northport, Alabama 35476  
(866) 252-4486 (205) 752-1206 Fax |
1800 Springhead Church Rd.  
Willacoochee, GA 31650 |

*Mats listed in the Type B category may be substituted for the Type A material at no additional cost to VDOT.*
## TYPE B MATS
(Velocity 7.0 - 10.0 f.p.s.)

<table>
<thead>
<tr>
<th>List No. 57 (cont.)</th>
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<td><strong>AEC Curlex II (.98)</strong></td>
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<td><strong>AEC Curlex III</strong></td>
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<td><strong>AEC Curlex High Velocity Recyclex</strong></td>
<td>Attn: Kurt Kelsey</td>
</tr>
<tr>
<td><strong>Recyclex Recyclex TRM – V</strong></td>
<td>(715) 234-6861</td>
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<tr>
<td><strong>AEC Premier Coconut</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AEC Premier Straw/Coconut</strong></td>
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<tr>
<td><strong>Enkamat 7012</strong></td>
<td>Colbond Inc.</td>
</tr>
<tr>
<td><strong>Enkamat 7018</strong></td>
<td>1301 Sand Hill Road</td>
</tr>
<tr>
<td><strong>Enkamat 7020</strong></td>
<td>P.O. Box 1057</td>
</tr>
<tr>
<td><strong>Enkamat 7210</strong></td>
<td>Enka, NC</td>
</tr>
<tr>
<td><strong>Enkamat 7220</strong></td>
<td>Attn: Jason Willis</td>
</tr>
<tr>
<td><strong>Enkamat II</strong></td>
<td>(800) 365-7391, (828) 665-5009 fax</td>
</tr>
<tr>
<td><strong>ECX-2</strong></td>
<td>(Formerly Erosion Control Systems Northport, Al. 35476)</td>
</tr>
<tr>
<td><strong>ECC-2; ECC-3</strong></td>
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</tr>
<tr>
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<td><strong>ECP-3</strong></td>
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<tr>
<td><strong>T-RECS</strong></td>
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</tr>
<tr>
<td><strong>C32, SC32</strong></td>
<td>East Coast Erosion Blankets, LLC</td>
</tr>
<tr>
<td><strong>ErosionControlBlanket.com</strong></td>
<td>443 Bricker Road</td>
</tr>
<tr>
<td><strong>Box 69</strong></td>
<td>Bernville, PA 19506</td>
</tr>
<tr>
<td><strong>Riverton Manitoba, Canada R0C 2R0</strong></td>
<td>Diane M. Hitt</td>
</tr>
<tr>
<td><strong>Enkamat</strong></td>
<td>(610) 488-8496, Fax (610) 488-8494</td>
</tr>
<tr>
<td><strong>ETPP-10</strong></td>
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</tr>
<tr>
<td><strong>Erosion Tech, LLC</strong></td>
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<td><strong>Juliette, GA 31046</strong></td>
<td>Josh Still</td>
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<td><strong>PEC-MAT</strong></td>
<td>Greenstreak, Inc.</td>
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<tr>
<td><strong>3400 Tree Court Ind. Blvd.</strong></td>
<td>3400 Tree Court Ind. Blvd.</td>
</tr>
<tr>
<td><strong>St. Louis, Missouri 63122</strong></td>
<td>St. Louis, Missouri 63122</td>
</tr>
<tr>
<td><strong>(800)325-9504, (314)225-9854 Fax</strong></td>
<td>(800)325-9504, (314)225-9854 Fax</td>
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<tr>
<td><strong>MacMat N10</strong></td>
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<td><strong>MacMat N6P</strong></td>
<td>Williamsport, MD 21795-3116</td>
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<tr>
<td><strong>MacMat N6G</strong></td>
<td>(301) 223-6910 (301)223-6134 Fax</td>
</tr>
<tr>
<td><strong>MacMat N8P</strong></td>
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<td><strong>SC250</strong></td>
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<tr>
<td><strong>North American Green</strong></td>
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</tr>
<tr>
<td><strong>14649 Highway 41 North</strong></td>
<td>14649 Highway 41 North</td>
</tr>
<tr>
<td><strong>Evansville, Indiana 47711</strong></td>
<td>Evansville, Indiana 47711</td>
</tr>
<tr>
<td><strong>(812)867-6632, (812) 867-0247 Fax</strong></td>
<td>(812)867-6632, (812) 867-0247 Fax</td>
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<tr>
<td>YPE B MATS (continued)</td>
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<td>RSP-5</td>
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<td>American Earth Solutions</td>
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<tr>
<td>5830 Hwy 161</td>
<td></td>
</tr>
<tr>
<td>Springfield, TN 37172</td>
<td></td>
</tr>
<tr>
<td>(615)382-3300 Fax (615) 382-9051</td>
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</tr>
<tr>
<td>SEC-P2</td>
<td></td>
</tr>
<tr>
<td>Southern Environmental Conservation (SEC)</td>
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<tr>
<td>902 Main Avenue, Suite A</td>
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</tr>
<tr>
<td>Northport, Alabama 35476</td>
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</tr>
<tr>
<td>(866) 252-4486 (205) 752-1206 Fax</td>
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<tr>
<td>Bon Terra America SFB</td>
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<td>428 Rollins Industrial Blvd.</td>
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<tr>
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<tr>
<td>(706) 965-6300, Fax (423) 553-3758</td>
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<tr>
<td>TB1000</td>
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<tr>
<td>TM3000</td>
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<tr>
<td>5775-B Glenridge Drive</td>
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<td>Lakeside Center, Suite 450</td>
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</tr>
<tr>
<td>Atlanta, Georgia 30328-5363</td>
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</tr>
<tr>
<td>(800)292-4459, (404)705-9650 Fax</td>
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<tr>
<td>TerraGuard 44P</td>
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<td>TerraGuard 45P</td>
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</tr>
<tr>
<td>Charlotte, NC 28224-0302</td>
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<tr>
<td>(800)438-0027, (704)394-7946 Fax</td>
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<td>Excel PP5-10</td>
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<tr>
<td>Western Excelsior</td>
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<tr>
<td>4609 E Boonville-New Harmony Rd</td>
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<tr>
<td>Evansville IN, 47725</td>
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<tr>
<td>Ph: 866-540-9810</td>
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<tr>
<td>FX: 812-867-8928</td>
<td></td>
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<tr>
<td>US Erosion Control Products</td>
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<tr>
<td>1800 Springhead Church Rd.</td>
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<tr>
<td>Willacoochee, GA 31650</td>
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<tr>
<td>TYPE C MATS</td>
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<td><strong>TYPE C MATS</strong></td>
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<td>Recyclex TRM</td>
<td>831 Pioneer Ave.</td>
</tr>
<tr>
<td>Recyclex TRM-V</td>
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<tr>
<td></td>
<td>(715) 234-6861</td>
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<tr>
<td>Enkamat 7003 (formerly 7005)</td>
<td>Colbond Inc.</td>
</tr>
<tr>
<td>Enkamat 7010</td>
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<tr>
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<td>P.O. Box 1057</td>
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<td></td>
<td>Enka, NC</td>
</tr>
<tr>
<td></td>
<td>Attn: Jason Willis</td>
</tr>
<tr>
<td></td>
<td>(800) 365-7391, (828) 665-5009 fax</td>
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<tr>
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<td>Diane M. Hitt</td>
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<tr>
<td>ECSC-3</td>
<td>(610) 488-8496, Fax (610) 488-8494</td>
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<td>T-RECS</td>
<td>Erosion Tech, LLC</td>
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<td>105 Plant Camellia Road</td>
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<td>P. O. Box 23310</td>
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<tr>
<td></td>
<td>Santa Barbara, California 93121</td>
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<tr>
<td></td>
<td>(800)929-2184 (888)GREENFX</td>
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<td>Greenfix CF072RP</td>
<td>Greenstreak</td>
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<td>St. Louis, MO 63122-6614</td>
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<tr>
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<td>(800) 325-9504</td>
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<td>PEC-MAT</td>
<td>Maccalfrier Environmental Solutions</td>
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<td>10303 Governor Lane Blvd.</td>
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<tr>
<td></td>
<td>Williamsport, MD 21795-3116</td>
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<td>(301)223-6910, (301) 223-6134 Fax</td>
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<tr>
<td>MacMat N6P</td>
<td>Mid America Erosion Control Products, Inc.</td>
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<tr>
<td>MacMat N6G</td>
<td>P.O. Box 488, Charlestown, IN 47111</td>
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<tr>
<td>MacMat N8P</td>
<td>Kris Bernens</td>
</tr>
<tr>
<td>MacMat N8G</td>
<td>(812) 289-1900 (812) 289-1599 Fax</td>
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<td>(812)867-6632, (812) 867-0247 Fax</td>
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<td>(615)382-3300 Fax (615) 382-9051</td>
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<td>TYPE C MATS (continued)</td>
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<td>(706) 965-6300, Fax (423) 553-3758</td>
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<tr>
<td>Tenax Multimat</td>
<td>Tenax Corp.</td>
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<td></td>
<td>4800 East monument Street</td>
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<tr>
<td></td>
<td>Baltimore, Maryland 21205</td>
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<tr>
<td></td>
<td>(410)522-7000, (410)522-7015 Fax</td>
</tr>
<tr>
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<td>(800)356-8495</td>
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<td>Western Excelsior</td>
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<tr>
<td>Excel PP5-8</td>
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<td>Ph: 866-540-9810</td>
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</tr>
<tr>
<td>US-2P12</td>
<td>US Erosion Control Products</td>
</tr>
<tr>
<td></td>
<td>1800 Springhead Church Rd.</td>
</tr>
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<td>Willacoochee, GA 31650</td>
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<td>TYPE C MATS</td>
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<td>(Slopes steeper than 3:1)</td>
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<table>
<thead>
<tr>
<th>Description</th>
<th>Address</th>
</tr>
</thead>
</table>
| Enkamat S | Colbond Inc.  
1301 Sand Hill Road  
P.O. Box 1057  
Enka, NC  
Attn: Jason Willis  
(800) 365-7391, (828) 665-5009 fax  
(Formerly Erosion Control Systems  
Northport, Al. 35476) |
| Enkamat 7018 | ECP-2  
East Coast Erosion Blankets, LLC  
443 Bricker Road  
Bernville, PA 19506  
Diane M. Hitt  
(610) 488-8496, Fax (610) 488-8494 |
| Enkamat II | MacMat N6P  
MacMat N6G  
MacMat N8P  
MacMat N8G  
Maccaferri Environmental Solutions  
10303 Governor Lane Blvd.  
Williamsport, MD 21795-3116  
(301) 223-6910, (301) 223-6134 Fax |
| P550 | P550  
North American Green  
14649 Highway 41 North  
Evansville, Indiana 47711  
(812) 867-6632, (812) 867-0247 Fax |
| Pyramat 4700 | Pyramat 4700  
Propex Operating Company, LLC  
428 Rollins Industrial Blvd.  
Ringgold, GA 30736  
(706) 965-6300, Fax (423) 553-3758 |
| P42 | P42  
ErosionControlBlanket.com  
Box 69  
Riverton Manitoba, Canada R0C 2R0  
Roy Nelsen  
(970) 875-1158, Fax (970) 871-6779 |
### List No. 58

**(58) STANDARD EC-16 TEMPORARY CHECK DAM – (Location & Design MS4/SWM Program)**

December 3, 2019

<table>
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<th>Product Type</th>
<th>Company Details</th>
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<tbody>
<tr>
<td>Erosion Eel</td>
<td>Friendly Environment&lt;br&gt;100 Prince Street&lt;br&gt;Shelbyville, TN 37160&lt;br&gt;(615) 607-5953, (615) 333-7751 Fax</td>
</tr>
<tr>
<td>AEC Premier Straw Wattles 9”</td>
<td>American Excelsior Company&lt;br&gt;850 Avenue H East&lt;br&gt;Arlington, TX 76011&lt;br&gt;Phone: (817) 385-3500 Fax: (817) 649-7816&lt;br&gt;Toll Free: 800-777-7645</td>
</tr>
<tr>
<td>AEC Premier Straw Wattles 12”</td>
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</tr>
<tr>
<td>AEC Premier Straw Wattles 20”</td>
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<tr>
<td>Curlex Sediment Logs</td>
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<tr>
<td>Triangular Silt Dike</td>
<td>Triangular Silt Dike Company, Inc.&lt;br&gt;608 Greenwood&lt;br&gt;Midwest City, OK 73110&lt;br&gt;Attn: Jason Roach&lt;br&gt;(405) 741-7406</td>
</tr>
<tr>
<td>Filtrexx DitchChexx</td>
<td>Filtrexx International&lt;br&gt;35841 Grafton Eastern Road&lt;br&gt;Grafton, OH 44044&lt;br&gt;(440) 926-2607</td>
</tr>
<tr>
<td>Terra-Tubes – Filter Filtration Tubes (FFT)</td>
<td>Profile Products, LLC&lt;br&gt;750 Lake Cook Road&lt;br&gt;Suite 440&lt;br&gt;Buffalo Grove, IL 60089&lt;br&gt;(847) 215-1144, (866) 325-6262</td>
</tr>
<tr>
<td>GeoHay 9”</td>
<td>GeoHay&lt;br&gt;P.O. Box 160040&lt;br&gt;Spartinburg, SC 29316</td>
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<tr>
<td>GeoHay 12”</td>
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<tr>
<td>GeoHay 15”</td>
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<tr>
<td>GeoHay 18”</td>
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<tr>
<td>Diamond Sock 8”</td>
<td>MKB Company&lt;br&gt;3450 East College Ave&lt;br&gt;State College, PA 16801&lt;br&gt;(888) 578-0777</td>
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<tr>
<td>Diamond Sock 12”</td>
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<tr>
<td>Diamond Sock 18”</td>
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<tr>
<td>Diamond Sock 24”</td>
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See Approved Products List No. 83 for a list of Sediment Retention Rolls approved for use as EC-16 Temporary Check Dams.
## List No. 59
### (59) INLET PROTECTION – (Location & Design MS4/SWM Program)
**December 3, 2019**

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<th>Product</th>
<th>Manufacturer</th>
<th>Address</th>
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<tr>
<td>Curlex Sediment Logs</td>
<td>American Excelsior Company</td>
<td>850 Avenue H East, Arlington, TX 76011</td>
<td>(817) 385-3500, (817) 649-7816 Fax, Toll Free: 800-777-7645</td>
</tr>
<tr>
<td>Dandy Curb (formerly Beaver Dam True Dam)</td>
<td>Dandy Products</td>
<td>P.O. Box 1680, Powell, OH 43065</td>
<td>(800) 591-2284, (614) 875-6305 Fax</td>
</tr>
<tr>
<td>Dandy Bag</td>
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<tr>
<td>Dandy Sack</td>
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<td>Dandy Pop</td>
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<td>Dandy Curb Sack</td>
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<tr>
<td>Diamond Sock 8”</td>
<td>MKB Company</td>
<td>3450 East College Ave, State College, PA 16801</td>
<td>(888) 578-0777</td>
</tr>
<tr>
<td>Diamond Sock 12”</td>
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<tr>
<td>Diamond Sock 18”</td>
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<tr>
<td>Diamond Sock 24”</td>
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<tr>
<td>EZ-Flo, EZ-ClipGuard</td>
<td>Flo-Water, LLC</td>
<td>308 33rd St. West, DeMoines, IA 50265</td>
<td>(515) 577-6763</td>
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<tr>
<td>Filtrexx InletSoxx</td>
<td>Filtrexx International</td>
<td>35481 Grafton Eastern Road, Grafton, OH 44044</td>
<td>(440) 926-2607</td>
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<tr>
<td>GeoHay 9”</td>
<td>GeoHay</td>
<td>P.O. Box 160040, Spartanburg, SC 29316</td>
<td>(864) 472-7000</td>
</tr>
<tr>
<td>Gutter Buddy</td>
<td>ACF Environmental</td>
<td>2831 Cardwell Road, Richmond, VA 23234</td>
<td>(800) 223-9021, (804) 743-7779 Fax</td>
</tr>
<tr>
<td>Gutter Eel</td>
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<tr>
<td>Gutter Gator</td>
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<td>Grate Gator</td>
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<tr>
<td>RockInFilter</td>
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<td></td>
</tr>
<tr>
<td>SiltSack</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Rapid Flow Drain Filter</td>
<td>Erosion Control Products, Inc.</td>
<td>4001 Van Dyke Ct, Monroe, NC 28110</td>
<td>(704) 821-3042, (704) 821-5239 Fax</td>
</tr>
<tr>
<td>Silt Saver Dome</td>
<td>Silt Saver, Inc.</td>
<td>1200 Forrester Cemetery Rd, Covington, GA 30014</td>
<td>(770) 388-7818, (770) 388-7640 Fax, Toll Free: (888) 382-7458</td>
</tr>
<tr>
<td>R-300B-DOT, S-400B-DOT, and S-400BF-DOT</td>
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See Approved Products List No. 83 for a list of Sediment Retention Rolls approved for use as EC-6 Inlet Protection.
As of July 1, 2016, this Approved List is now included in Approved List No. 63.
List No. 61

(61) GRAY IRON CASTING MANUF./DISTRIBUTORS ON QA/QC PROGRAM - (Quality Assurance)

**Gray Iron Casting Domestic Manufacturers**

<table>
<thead>
<tr>
<th>Company Name</th>
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<tbody>
<tr>
<td>Bingham &amp; Taylor</td>
<td>601 Nalle Place</td>
</tr>
<tr>
<td></td>
<td>Culpeper, VA 22701</td>
</tr>
<tr>
<td>EJ</td>
<td>301 Spring Street</td>
</tr>
<tr>
<td></td>
<td>East Jordan, Michigan, USA 49727</td>
</tr>
<tr>
<td>EJ</td>
<td>270 Red Wing Road</td>
</tr>
<tr>
<td></td>
<td>Ardmore Industrial Park</td>
</tr>
<tr>
<td></td>
<td>Ardmore, Oklahoma 73401</td>
</tr>
<tr>
<td>Neenah Foundry Co.</td>
<td>2121 Brooks Avenue</td>
</tr>
<tr>
<td></td>
<td>Neenah, Wisconsin 54956</td>
</tr>
<tr>
<td>U.S. Foundry and Manufacturing Corporation</td>
<td>8351 N.W. 93 Street</td>
</tr>
<tr>
<td></td>
<td>Medley (Miami), Florida, USA 33166-2096</td>
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(62) CABLE GROUTS – (Physical Lab)

<table>
<thead>
<tr>
<th>Product</th>
<th>Company</th>
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<tbody>
<tr>
<td>Masterflow 1205</td>
<td>BASF Construction Chemicals, LLC</td>
</tr>
<tr>
<td>Euco Cable Grout PTX</td>
<td>Euclid Chemical Company</td>
</tr>
</tbody>
</table>
List No. 63

(63) GEOSYNTHETICS – (Soils Lab)

March 1, 2020

This list covers the geotextile products in VDOT Road & Bridge Specifications Section 245 Geosynthetics and Low Permeability Liners, and also specialty high-strength geotextiles and geogrids.

Products on this list meet VDOT Road and Bridge Specification 245 or Special Provisions as noted and are evaluated through AASHTO’s National Transportation Product Evaluation Program (NTPEP) where applicable.

For products for which evaluation is available through NTPEP, to be on this list the product must have current cycle test results listed in NTPEP’s DataMine that meet the VDOT Specification or Special Provision requirements, and the source manufacturer and any downstream facility taking responsibility for the quality of the product must be listed as compliant in the NTPEP Geosynthetics or REGEO audit program, and the local supplier must be listed on VDOT Approved List No. 44 of Approved Suppliers. For products for which VDOT requires additional tests over those included in the NTPEP evaluation, or which are not included in the NTPEP evaluation program, the additional required tests are listed in each category and must be done by a 3rd party laboratory that is accredited by The Geosynthetics Research Institute (GRI-LAP) in the specific test and also accredited by an acceptable body for quality processes. Such additional test information shall be submitted to the VDOT Materials Division directly.

Temporary Silt Fence Fabric - 245.03(a)*
Fabric for Type A and Type B Silt Fence

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<td>Anita 140SF</td>
<td>Apr 1, 2020</td>
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<tr>
<td>Hanes TerraTex SF-D</td>
<td>Jan 1, 2021</td>
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<tr>
<td>Lumite SmartFence-36</td>
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<td>Lumite SmartFence-42</td>
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<td>Propex Geotex 2130</td>
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<tr>
<td>Shandong Leihua SF125</td>
<td>Jan 1, 2022</td>
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<td>Jan 1, 2023</td>
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<tr>
<td>Winfab V24</td>
<td>Jan 1, 2022</td>
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</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*Additional test results for silt fence fabric per ASTM D5141-11 required every 3 years along with NTPEP product evaluation, run in triplicate as per NTPEP Erosion Control Products Committee Work Plan, to obtain flow rate and filtering efficiency.
Riprap Bedding Geotextile (Separation Fabric) - 245.03(b)

<table>
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<td>Hanes TerraTex N08</td>
<td>Jan 1, 2023</td>
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<tr>
<td>L&amp;M Supply LM 315NT</td>
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<tr>
<td>L&amp;M Supply LM 800NT</td>
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<td>L&amp;M Supply LM 2199FW</td>
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<td>SKAPS W270</td>
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<td>Tencate Mirafi FW403</td>
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<td>Thrace-LINQ GTF-250</td>
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<td>Winfab 250W</td>
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Suppliers must be on VDOT Approved List No. 44.
**Drainage Fabric - 245.03(c)**

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Suppliers must be on VDOT Approved List No. 44.
### Subgrade Stabilization Fabric – 245.03(d)1

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<tr>
<td>Thrace-LINQ 180EX</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Thrace-LINQ GTF200</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Thrace-LINQ GTF200S</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Thrace-LINQ GTF370</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Thrace-LINQ GTF500</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>US Fabrics 120NW</td>
<td>Apr 1, 2023</td>
</tr>
<tr>
<td>US Fabrics 200</td>
<td>Apr 1, 2023</td>
</tr>
<tr>
<td>Winfab 2x2 HF</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Winfab 200W</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Winfab 250W</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Winfab 315W</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Winfab 600N</td>
<td>Jan 1, 2022</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.
Embankment Stabilization Fabric (for embankments up to 6 feet high) – 245.03(d)2*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACF S300N</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>ADS 0801T</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>ADS 2x2</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>ADS 370HP</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Carthage Mills FX-80HS</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Carthage Mills FX-66</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Hanes TerraTex 4x4HF</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Hanes TerraTex HD</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Hanes TerraTex HPG-16</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Hanes TerraTex HPG-37</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Hanes TerraTex HPG-57</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Hanes TerraTex HPG-500</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Hanes TerraTex N08</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>L&amp;M Supply LM 315NT</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>L&amp;M Supply LM 370HP</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>L&amp;M Supply LM 800NT</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Propex Geotex 315ST</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Shandong Leihua W300</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>SKAPS GT110</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>SKAPS GT180</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>SKAPS M330</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>SKAPS M440</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>SKAPS SW315</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Tencate Mirafi 180N</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Tencate Mirafi 600X</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>TEXEL 080C</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Thrace-LINQ 180EX</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>Thrace-LINQ GTF 370</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Thrace-LINQ GTF 500</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>US Fabrics 205NW</td>
<td>Apr 1, 2023</td>
</tr>
<tr>
<td>US Fabrics 315</td>
<td>Apr 1, 2023</td>
</tr>
<tr>
<td>Winfab 2x2 HF</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Winfab 315W</td>
<td>Jan 1, 2021</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*Seam strength tests using ASTM D4632 also required per VDOT Road and Bridge Specification 245, to be provided by manufacturer or supplier or Contractor as required for project.
Prefabricated Geocomposite Pavement Underdrain (Edgedrain) – 245.03(e)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWD SITEDRAIN Strip 9400 with Propex Geotex 401, with AWD fittings</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>J-Drain ESD III with Tencate Mirafi 140N, with J-Drain ESD fittings, connectors, end caps, and tape</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>TerraDrain Strip 640 with Hanes TerraTex N04.5 with J-Drain ESD fittings, connectors, end caps, and tape</td>
<td>Apr 1, 2020</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include edgedrains, except the fabric which must be evaluated by NTPEP and from a NTPEP-compliant manufacturer. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division. When submitting product request to VDOT for listing here, the manufacture must also submit connections for underdrain-to-outlet pipe.

Geocomposite Wall Drains – 245.03(f)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Wick Drain DS116, DS186, with Propex Geotex 601</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>J-Drain ES1162P with Tencate Mirafi 160N</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>TerraDrain 106/2-VDOT with Tencate Mirafi 160N</td>
<td>Jan 1, 2022</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include wall drains, except the fabric which must be evaluated by NTPEP and from a NTPEP-compliant manufacturer. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.

Geomembrane Moisture Barrier – 245.03(g)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPT XTRM PLY PVC HP – 7100 Series 30 mil single ply ASTM 7176/FGI 1115</td>
<td>Jan 1, 2021</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include geomembrane moisture barriers. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.
Dewatering Bag – 245.03(h)

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSB-series (Thrace-LINQ 245EX)</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>ACF Dirtbag 55 (SKAPS GT110 or Propex 1001)</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Frank Roberts &amp; Sons GTF-FB series (Thrace-LINQ 245EX)</td>
<td>Apr 1, 2020</td>
</tr>
<tr>
<td>Hanes TerraTex Filter Bags N10 series (N10)</td>
<td>Apr 1, 2020</td>
</tr>
<tr>
<td>Geo Products Filter Bags (Thrace–LINQ 245EX)</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>L&amp;M Supply Q10 Dewatering Bag (Thrace-LINQ 245EX)</td>
<td>Jan 1, 2021</td>
</tr>
<tr>
<td>SKAPS GT110 Dewatering Bag</td>
<td>Jan 1, 2022</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

Pavement Interlayer – 245.03(i)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>C040 (Type II Fabric)</td>
<td>Apr 1, 2020</td>
</tr>
<tr>
<td>Hanes TerraTex OL-I (Type II Fabric)</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Propex Petromat 4598 (Type II Fabric)</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>SKAPS GC140 (Type II Fabric)</td>
<td>Jan 1, 2022</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program only includes paving fabrics, not other interlayer products. However, all products must meet the material requirements of the VDOT Specification and come from a NTPEP-compliant manufacturer. Test results for tests not required by NTPEP are required every 3 years, to be submitted to VDOT Materials Division.

Low Permeability Liners for Stormwater Management Facilities – 245.03(j)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentomat 200R</td>
<td>Jan 1, 2023</td>
</tr>
<tr>
<td>Bentomat ST</td>
<td>Jan 1, 2023</td>
</tr>
</tbody>
</table>

Suppliers must be on VDOT Approved List No. 44.

*The NTPEP program does not include low permeability liners. These products must meet the material requirements of the VDOT Specification. Test results are required every 3 years, to be submitted to VDOT Materials Division.

Prefabricated Vertical Drains – VDOT Special Provision*

<table>
<thead>
<tr>
<th>Product</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonar Colbonndrain CX1000</td>
<td>Jan 1, 2022</td>
</tr>
<tr>
<td>Hayward Baker Mebra-Drain MD-7407</td>
<td>Apr 1, 2020</td>
</tr>
</tbody>
</table>
Suppliers must be on VDOT Approved List No. 44.
*The NTPEP program does not include prefabricated vertical drains, except the fabric which must be evaluated by NTPEP and from a NTPEP-compliant manufacturer. These products must meet the material requirements of the VDOT Special Provision for Prefabricated Vertical Drains dated April 4, 2016. Test results are required every 3 years, to be submitted to VDOT Materials Division.

**High Strength Geotextiles and Geogrids**

At this time, these products must be designed, specified, and approved on a project basis. The source manufacturer and any downstream facility taking responsibility for the quality of the product must be listed as compliant in the NTPEP Geosynthetics or REGEO audit program, and the local supplier must be listed on VDOT Approved List No. 44 of Approved Suppliers.
(64) HYDRAULIC BARRIERS FOR USE IN STORM WATER RETENTION – (Soils Lab)

As of July 1, 2016, this Approved List is now included in Approved List No. 63.
(65) APPROVED SOUND BARRIER PANELS – (James Ponticello)

<table>
<thead>
<tr>
<th>Precast Concrete</th>
<th>Product Name</th>
<th>Contacts Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durisol Ltd</td>
<td>Durisol ®</td>
<td>Mr. Michael Pruden</td>
</tr>
<tr>
<td>8270 Greensboro Drive, Suite 810 McLean, VA 22101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete Innovations /Coastal Precast System 5125 Highway 421 North Wilmington, NC 28401</td>
<td>Whisper-Wall ®</td>
<td>Mr. Stephen McCowin</td>
</tr>
<tr>
<td>Faddis Concrete Products 2206 Horseshoe Pike Honey Brook, PA 19344</td>
<td>AcoustaCrete ® AngleWall ®</td>
<td>Mr. Gary Figallo</td>
</tr>
<tr>
<td>The Reinforced Earth Company 12001 Sunrise Valley Drive Suite 400 Reston, VA 20191</td>
<td>Fanwall</td>
<td>Mr. Keith Braybant</td>
</tr>
<tr>
<td>Smith-Midland Corporation P.O. Box 300 Midland, VA 22728</td>
<td>Softsound ®</td>
<td>Mr. Guy Schuch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>Product Name</th>
<th>Contacts Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Industries Limited 640 Waydom Drive Ayr, ON NOB 1E0</td>
<td>TUF-Barrier ® Silent Protector ®</td>
<td>Mr. Paul Suneth</td>
</tr>
<tr>
<td>Carsonite Composites 19845 US Highway 76 Newbery, South Carolina 29108</td>
<td>“6” Absorptive AcoustaShield 12” Dec Light Weight Absorptive Sound Barrier Panel</td>
<td>Mr. Heath McCutcheon</td>
</tr>
<tr>
<td>Centria 1005 Beaver Grade Road Moon Township, PA 15108</td>
<td>Eco Sound Barrier</td>
<td>Mr. Cory Matchett</td>
</tr>
<tr>
<td>CYRO Industries 1796 Main Street Sanford, ME 04073</td>
<td>ACRYLITE ® Soundstop</td>
<td>Mr. Nathan Binette</td>
</tr>
<tr>
<td>Faddis Concrete Products 2206 Horseshoe Pike Honey Brook, PA 19344</td>
<td>AcoustAL™</td>
<td>Mr. Gary Figallo</td>
</tr>
<tr>
<td>HOOVER Treated Wood Products, Inc. 154 Wire Road Thomson, Georgia 30824</td>
<td>Plywall ®</td>
<td>Ms. Pam Floyd</td>
</tr>
<tr>
<td>Sound Fighter Systems P.O. Box 7216 Shreveport, LA 71137-7216</td>
<td>Sound Fighter Systems SonaGuard ®</td>
<td>Mr. Murray Stacy</td>
</tr>
<tr>
<td>U.S. Construction Supply Corporation 460 Avenue S Riviera Beach, FL 33404</td>
<td>Next Soundwall</td>
<td>Mr. Pierre Marc Gendron</td>
</tr>
</tbody>
</table>

Date: February 12, 2019
List No. 66

(66) APPROVED WARM-MIX ASPHALT PRODUCTS AND PROCESSES -- (Asphalt Lab)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product/Process</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sasol International</td>
<td>Sasobit</td>
<td>1</td>
</tr>
<tr>
<td>Ingevity</td>
<td>Evotherm ET</td>
<td>2</td>
</tr>
<tr>
<td>Astec, Inc.</td>
<td>Double Barrel Green System</td>
<td>3</td>
</tr>
<tr>
<td>Maxam</td>
<td>AQUA Black</td>
<td>4</td>
</tr>
<tr>
<td>Gencor</td>
<td>Ultrafoam Gx</td>
<td>5</td>
</tr>
<tr>
<td>Ingevity</td>
<td>Evotherm M-1</td>
<td>6</td>
</tr>
<tr>
<td>StanSteel</td>
<td>Accu-Shear</td>
<td>7</td>
</tr>
<tr>
<td>ArrMaz</td>
<td>AD-here ULTRA 1</td>
<td>8</td>
</tr>
<tr>
<td>Arkema Inc.</td>
<td>Cecabase RT 945</td>
<td>9</td>
</tr>
<tr>
<td>Sonneborn</td>
<td>SonneWarmix</td>
<td>10</td>
</tr>
<tr>
<td>Zydex Inc.</td>
<td>ZycoTherm</td>
<td>11</td>
</tr>
<tr>
<td>Cargill Industrial Specialties</td>
<td>Anova 1501</td>
<td>12</td>
</tr>
<tr>
<td>Ingevity</td>
<td>Evotherm U3</td>
<td>13</td>
</tr>
<tr>
<td>Ingevity</td>
<td>Evotherm J1</td>
<td>14</td>
</tr>
</tbody>
</table>

New products/processes will be evaluated by the District Materials Engineer and a central committee. Once approved, the product/process will be added to this approved list. The evaluation procedure involves documentation and independent test data to support the new WMA product or process, mix design submittals and a trial section.
(67) APPROVED PRECAST PAVEMENT SYSTEMS - (Affan Habib)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product/Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Fort Miller Co.</td>
<td>Super Slab</td>
</tr>
<tr>
<td>P.O. Box 98</td>
<td></td>
</tr>
<tr>
<td>Schuylerville, NY 12871-0098</td>
<td></td>
</tr>
<tr>
<td>(518) 695-4970</td>
<td></td>
</tr>
</tbody>
</table>

The approval is subject to further clarification of the submitted specification/details and a successful trial installation.
(68) STORM WATER MANAGEMENT – TRASH RACKS (SWM-DR) - (Location & Design)

Substitutions may be made with the approval of the Engineer at no additional cost to VDOT.

<table>
<thead>
<tr>
<th>Manufacturer Name</th>
<th>Product(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic Solutions, Inc.</td>
<td>StormRax – Round Series 24”, 36”, 48”, 60”</td>
</tr>
<tr>
<td>240 McGhee Road</td>
<td>StormRax -- Pyramid Series 72”, 84”, 96”</td>
</tr>
<tr>
<td>Winchester, VA 22603</td>
<td>StormRax – Peak Roof Series Square/Rectangular</td>
</tr>
<tr>
<td>PH: 540-722-4694</td>
<td></td>
</tr>
</tbody>
</table>
(69) APPROVED FENCE MANUFACTURERS - (Chemistry Lab)

Approved fence material shall be used in accordance with the R&B specifications, R&B Standards, Plans, or as directed by the Engineer.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Products Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allied Tube and Conduit</strong></td>
<td>Pipe, SS-40</td>
</tr>
<tr>
<td></td>
<td>Pipe, SCH-40</td>
</tr>
<tr>
<td><strong>Ameristar</strong></td>
<td>GBR 40 Pipes, 1(\frac{5}{8})”, 1(\frac{7}{8})”, 2(\frac{3}{8})”, 2(\frac{7}{8})”</td>
</tr>
<tr>
<td><strong>Bekaert Corporation</strong></td>
<td>Barbed Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Woven Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Brace/Line Wire, Galvanized</td>
</tr>
<tr>
<td><strong>Chicago Heights Steel</strong></td>
<td>Post – “T”</td>
</tr>
<tr>
<td><strong>CMC</strong></td>
<td>Post – “T”</td>
</tr>
<tr>
<td><strong>Guardian Fence Suppliers</strong></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Vinyl Coated</td>
</tr>
<tr>
<td><strong>Iron World</strong></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Woven Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Woven Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Woven Wire, Vinyl Coated</td>
</tr>
<tr>
<td><strong>Master Halco Inc.</strong></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td><strong>Merchant Metals</strong></td>
<td>Pipe, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Aluminized</td>
</tr>
<tr>
<td><strong>Franklin Industries</strong></td>
<td>Post – “T”</td>
</tr>
<tr>
<td><strong>Stateside Steel &amp; Wire, LLC</strong></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td><strong>Stephens Pipe &amp; Steel, LLC</strong></td>
<td>Pipe, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Pipe, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Woven Wire</td>
</tr>
<tr>
<td><strong>Sonco Worldwide, Inc.</strong></td>
<td>Chain-Link Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain-Link Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Vinyl Coated</td>
</tr>
<tr>
<td><strong>Southwestern Wire, Inc.</strong></td>
<td>Chain Length Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Chain Length Fence, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Chain Length Fence, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Chain Length Fence, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Vinyl Coated</td>
</tr>
<tr>
<td></td>
<td>Tension Wire, Aluminized</td>
</tr>
<tr>
<td></td>
<td>Brace/Line Wire, Galvanized</td>
</tr>
<tr>
<td></td>
<td>Barbed Wire, Vinyl Coated</td>
</tr>
<tr>
<td><strong>Wheatland Tube Company</strong></td>
<td>Pipe, WT-40</td>
</tr>
<tr>
<td></td>
<td>Pipe, SCH-40</td>
</tr>
<tr>
<td></td>
<td>Pipe, SCH-40</td>
</tr>
</tbody>
</table>
To qualify for placement on this list, the fence supplier shall submit a Quality Control (QC) Plan defining their routine business quality control practices. The fence supplier shall use products “Made in the USA” from Approved List No.69 or wood products treated by companies on Approved List No. 45. The QC plan shall be submitted to the Materials Division Central Office Quality Assurance Section. After review for completeness and conformance of the supplier’s QC plan, a facility visit will be made to evaluate the supplier’s conformance to his QC Plan.

If no deficiencies are found, the fence supplier is probationally approved and be added to the Approved List No. 70 with a “p” to denote that the facility is probationally approved.

Shipping tickets for material sent to VDOT Projects shall include the following information: Contractor information, VDOT Project Number, Material Identification, Material Quantities shipped and the following QC statement along with signature:

“We certify that these fencing items meet VDOT specifications and conform to the VDOT Fence Suppliers Quality Assurance Program”

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Address</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>A &amp; A Fence / Construction</td>
<td>9319 Mike Garcia Drive</td>
<td>Manassas VA 20109</td>
</tr>
<tr>
<td>American Highway Fence, Inc.</td>
<td></td>
<td>Mt. Sterling, Ky</td>
</tr>
<tr>
<td>Atlantic Fence Supply</td>
<td>11330 Washington Hwy.</td>
<td>Ashland, VA 23005</td>
</tr>
<tr>
<td>Beitzell Fence *P</td>
<td></td>
<td>Catharpin, VA</td>
</tr>
<tr>
<td>Hercules Fence</td>
<td>11074 Air Park Rd.</td>
<td>Ashland, VA 23005</td>
</tr>
<tr>
<td>Hercules Fence</td>
<td>8194 Euclid Ct.</td>
<td>Manassas, VA</td>
</tr>
<tr>
<td>Hercules Fence</td>
<td>1526 Early St.</td>
<td>Norfolk, VA 23502</td>
</tr>
<tr>
<td>Interstate Fence Supply</td>
<td>1807 George Washington Hwy.</td>
<td>Yorktown, VA 23693</td>
</tr>
<tr>
<td>Long Fence</td>
<td></td>
<td>Chantilly, VA</td>
</tr>
<tr>
<td>Master Halco</td>
<td>10968 Richardson Rd.</td>
<td>Ashland, VA 23005</td>
</tr>
<tr>
<td>McPeak Supply (P)</td>
<td></td>
<td>Salem, VA</td>
</tr>
<tr>
<td>NU-Valley Fence Co., Inc.</td>
<td></td>
<td>Greenville, VA</td>
</tr>
<tr>
<td>Webster &amp; Webster Inc.</td>
<td></td>
<td>Mt. Sterling, Ky</td>
</tr>
</tbody>
</table>

(*P) = Probationary
(71) POLYETHYLENE SHEETING - (Physical Lab)

To have a product included on this Approved List, the manufacturer shall submit a letter with a notarized signature stating that the polyethylene sheeting meets the requirements of ASTM C-171. Accompanying this letter must be independent laboratory data demonstrating compliance to the specification. Strength and elongation requirement shall meet ASTM D-4397. The daylight reflectance of white polyethylene film sheet shall be at least 70 % when measured according to ASTM E-1347. Upon approval, the Manufacturer will be required to submit a letter each year, by February 28 with a notarized signature stating that the product has not changed since initial approval.

Note: PE film (ASTM C 171) used for curing concrete shall be white except that opaque or transparent PE film may be used between November 1 and April 1.

White Polyethylene Sheeting

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akrotex Films</td>
<td>877141001216 (4 mils, 20 feet wide, white)</td>
</tr>
<tr>
<td>Poly America</td>
<td>CF0420W (4 mils, 20 feet wide, white)</td>
</tr>
<tr>
<td></td>
<td>CF0428W (4 mils, 28 feet wide, white)</td>
</tr>
<tr>
<td></td>
<td>CF0620W (6 mils, 20 feet wide, white)</td>
</tr>
</tbody>
</table>

Transparent/Opaque Polyethylene Sheeting

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akrotex Films</td>
<td>877141001193 (4 mils, 20 feet wide, transparent)</td>
</tr>
<tr>
<td>Poly America</td>
<td>CF0420 (4 mils, 20 feet wide, transparent)</td>
</tr>
<tr>
<td></td>
<td>CF0428 (4 mils, 28 feet wide, transparent)</td>
</tr>
<tr>
<td></td>
<td>CF0620 (6 mils, 20 feet wide, transparent)</td>
</tr>
<tr>
<td>Rodeo Plastic Bag</td>
<td>871222000822 (6 mils, 20 feet wide, transparent)</td>
</tr>
</tbody>
</table>
Material on this list must meet the minimum requirements of detectable warning surfaces set forth in Section 504 of the Virginia Road and Bridge Specifications. Manufacturers will be reviewed on an annual basis for compliance.

Tiles must meet Light on Dark or Dark on Light contrast requirements

<table>
<thead>
<tr>
<th>Product</th>
<th>Manufacturer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AccessTile Cast in Place Replaceable</td>
<td>AccessTileAccess® Tile 241 Main Street, Suite 100 Buffalo, NY 14203, USA 1-888-679-4022</td>
<td>Engineer composite polymer cast in place replaceable plate</td>
</tr>
<tr>
<td>ADA Solutions (Cast In Place Composite Tactile)</td>
<td>ADA Solutions, Inc. 323 Andover Street – Suite 3 Wilmington, MA 01887 1-800-372-0519</td>
<td>Homogenous glass and carbon composite cast in place panel</td>
</tr>
<tr>
<td>ADA Solutions (Replaceable composite tactile)</td>
<td>ADA Solutions, Inc. 323 Andover Street – Suite 3 Wilmington, MA 01887 1-800-372-0519</td>
<td>Homogenous glass and carbon composite replaceable (wet set) plate</td>
</tr>
<tr>
<td>ADA Solutions (Surface Mount Tactile)</td>
<td>ADA Solutions, Inc. 323 Andover Street – Suite 3 Wilmington, MA 01887 1-800-372-0519</td>
<td>Acceptable for temporary installations in which the product would be in service 6 months or less</td>
</tr>
<tr>
<td>AlertCast</td>
<td>Detectable Warning Systems, Inc. 9310 Old Kings Rd. South Suite 1702 Jacksonville, FL 32257 866-999-7452</td>
<td>Glass reinforced, thermoset composite replaceable cast in place plate</td>
</tr>
<tr>
<td>Armor-Tile (Cast in Place)</td>
<td>Armor-Tile Tactile Systems ENGINEERED PLASTICS INC. 300 International Drive Suite 100 Williamsville, NY 14221 1-800-682-2525</td>
<td>Cast in Place Vitrified Polymer Composite plate</td>
</tr>
<tr>
<td>Armor-Tile (Modular Pavers)</td>
<td>Armor-Tile Tactile Systems ENGINEERED PLASTICS INC. 300 International Drive Suite 100 Williamsville, NY 14221 1-800-682-2525</td>
<td>Vitrified polymer paving system that can be dry laid on compacted fill or set in grout</td>
</tr>
<tr>
<td>Duralast</td>
<td>East Jordan Iron Works 301 Spring Street PO Box 439 East Jordan, MI 49727</td>
<td>Gray Iron Detectable Warning Plates</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>12” Matte VIP Paver 24” Matte VIP Paver</td>
<td>Nitterhouse Masonry Products LLC 859 Cleveland Avenue, Chambersburg, PA 17201 (717) 268-4137</td>
<td>Masonry Pavers</td>
</tr>
<tr>
<td>DWT Tough-EZ</td>
<td>Three D Traffic Works 430 N Varney St Burbank, CA 91502 (877) 843-9757</td>
<td>Acceptable for temporary installations in which the product would be in service 6 months or less</td>
</tr>
<tr>
<td>Detectable Warning Style Prest Pavers</td>
<td>Hanover Architectural Products 5000 Hanover Road, Hanover, PA 17331 (800) 426-4242</td>
<td>Hydraulically pressed concrete pavers</td>
</tr>
<tr>
<td>TufTile Wet Set</td>
<td>TufTile, Inc. 1200 Flex Ct, Lake Zurich, IL 60047 (888) 960-8897</td>
<td>To be used for permanent installations High Impact Polymer Wet-Set (Replaceable) and the Cast Iron Tiles Wet-Set (Replaceable)</td>
</tr>
<tr>
<td>TufTile Surface Applied</td>
<td>TufTile, Inc. 1200 Flex Ct, Lake Zurich, IL 60047 (888) 960-8897</td>
<td>For use in temporary installations in service for 6 months or less High Impact Polymer Surface Applied Tiles (Replaceable)</td>
</tr>
</tbody>
</table>
List No. 73

(73) APPROVED WHITE AND YELLOW PREFORMED THERMOPLASTIC - (Chemistry Lab

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product Name</th>
<th>VDOT Approval No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHITE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>PreMark</td>
<td>PMM (05)-PA-042</td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>PreMark XF</td>
<td>PMM-2017-01-028</td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>PreMark XF (VG)</td>
<td>PMM-2017-01-030</td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>Hot Tape (Pre-Heat)</td>
<td>PMM (08)-PA-132</td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>Flame Tape (Pre-Heat)</td>
<td>PMM (08)-PA-059</td>
</tr>
<tr>
<td>Swarco</td>
<td>Preformed White</td>
<td>PMM(08)-PA-224</td>
</tr>
<tr>
<td>Ozark</td>
<td>Preformed White</td>
<td>PMM-2014-01-134</td>
</tr>
<tr>
<td>Geveko Markings</td>
<td>Optamark White</td>
<td>PMM-2015-01-075</td>
</tr>
<tr>
<td>Crown Tech, LLC</td>
<td>White Tuff-Mark</td>
<td>PMM-2017-01-168</td>
</tr>
<tr>
<td><strong>YELLOW</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ennis - Flint</td>
<td>PreMark</td>
<td>PMM (02)-PA-065</td>
</tr>
<tr>
<td>Ennis – Flint</td>
<td>PreMark XF</td>
<td>PMM-2017-01-029</td>
</tr>
<tr>
<td>Geveko Markings</td>
<td>Optamark Yellow</td>
<td>PMM-2015-01-078</td>
</tr>
<tr>
<td>Ozark</td>
<td>Preformed Yellow</td>
<td>PMM-2015-01-119</td>
</tr>
</tbody>
</table>

**NOTES:**

(Pre-Heat) = Requires pre-heating the road surface.

Above materials shall be supplied at 125 mils in thickness.

Materials shall be installed in accordance with Manufacturer’s installation instructions.

If material is applied to hydraulic cement concrete, the primer/sealer used shall be listed on the C-85 (Contractors Daily Log).

During application (when molten) the above preformed thermoplastic materials shall be “flooded” with additional glass beads conforming to AASHTO M247 Type1 or additional material per manufacturer’s installation instructions.
## (74) APPROVED POLYUREA PAVMENT MARKINGS -- (Chemistry Lab)

<table>
<thead>
<tr>
<th>Manufacture</th>
<th>Color</th>
<th>Product No.</th>
<th>Retroreflective Optics*</th>
<th>NTPEP Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoplex Corp.</td>
<td>White</td>
<td>LS-90</td>
<td>M247 Type 1 (10 lbs./Gal) Visibead Plus II (10 lbs/Gal)</td>
<td>PMM-2014-01-045</td>
</tr>
<tr>
<td>Epoplex Corp.</td>
<td>Yellow</td>
<td>LS-90</td>
<td>M247 Type 1 (10 lbs./Gal) Visibead Plus II (10 lbs/Gal)</td>
<td>PMM-2014-01-046</td>
</tr>
<tr>
<td>Epoplex Corp.</td>
<td>White</td>
<td>GM-90</td>
<td>M247 Type 1 (6 lbs./Gal) Visibead Plus II (6 lbs/Gal)</td>
<td>PMM-2006-MS-036</td>
</tr>
<tr>
<td>Ennis</td>
<td>White</td>
<td>HPS-5</td>
<td>M247 Type 1 (10 lbs./Gal) M247 Type 4 (10 lbs./Gal)</td>
<td>PMM-2008-PA-124</td>
</tr>
<tr>
<td>Ennis</td>
<td>Yellow</td>
<td>HPS-5</td>
<td>M247 Type 1 (Flood) M247 Type 4 (Flood)</td>
<td>PMM-2005-PA-050</td>
</tr>
</tbody>
</table>

*Note:* The same retroreflective optics materials (Type and quantity (lbs/Gal) used for the NTPEP testing must be used with these products when installed on VDOT roads.
<table>
<thead>
<tr>
<th>Manufacture</th>
<th>Color</th>
<th>Product No.</th>
<th>NTPEP No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ennis Traffic Safety</td>
<td>White</td>
<td>HPS-3</td>
<td>PMM-08-PA-180</td>
</tr>
<tr>
<td>Solutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ennis Traffic Safety</td>
<td>Yellow</td>
<td>HPS-3</td>
<td>PMM-08-PA-121</td>
</tr>
<tr>
<td>Solutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accent Stripe</td>
<td>White</td>
<td>Lumiline III</td>
<td>PMM-08-PA-110</td>
</tr>
<tr>
<td>Accent Stripe</td>
<td>Yellow</td>
<td>Lumiline III</td>
<td>PMM-08-PA-111</td>
</tr>
<tr>
<td>Olin Epoxy-POLY-CARB</td>
<td>White</td>
<td>MARK 55.3</td>
<td>PMM-08-PA-180</td>
</tr>
<tr>
<td>Olin Epoxy-POLY-CARB</td>
<td>Yellow</td>
<td>MARK 55.3</td>
<td>PMM-08-PA-181</td>
</tr>
<tr>
<td>Epoplex</td>
<td>White</td>
<td>LS-50</td>
<td>PMM-08-PA-190</td>
</tr>
<tr>
<td>Epoplex</td>
<td>Yellow</td>
<td>LS-50</td>
<td>PMM-08-PA-191</td>
</tr>
</tbody>
</table>
(76) VIRGINIA GLASS BEAD APPROVED LIST -- (Chemistry Lab)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Plant</th>
<th>Date Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potters Industries</td>
<td>Potters Industries</td>
<td>July 2008</td>
</tr>
<tr>
<td></td>
<td>Potters Industries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72 Reynolds Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant Manager – Jason Bell</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potters Industries</td>
<td>Apex, NC</td>
<td>Prior to 2006</td>
</tr>
<tr>
<td></td>
<td>820 Lufkin Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant Manager – Jerry Franks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swarco Industries</td>
<td>Columbia, TN</td>
<td>October 2015</td>
</tr>
<tr>
<td></td>
<td>901 North James Campbell Blvd.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant Manager – Jeff Johnson</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hillcrest Industries</td>
<td>Attica, NY</td>
<td>March 2017</td>
</tr>
<tr>
<td></td>
<td>40 Favor Street</td>
<td>VDOT batches</td>
</tr>
<tr>
<td></td>
<td>Plant Contact – Lillie Williams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(<a href="mailto:lwilliams@ennisflint.com">lwilliams@ennisflint.com</a>)</td>
<td>Ennis-Flint.</td>
</tr>
</tbody>
</table>

Note: These manufacturing plants meet the Virginia Glass Bead Acceptance Plan (VGBAP) described in Materials Division Memorandum, MD 388-15; Revision to the Manual of Instructions

If a glass bead manufacturing plant is not on this list, each batch must be tested and approved by meeting the requirements in the Materials Division Memorandum, MD 388-15 under Section 1 - Glass Bead Batch Sampling/Testing Plan.
<table>
<thead>
<tr>
<th>System</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix 501</td>
<td>Crafco, Inc.</td>
</tr>
<tr>
<td></td>
<td>6165 W. Detroit Street</td>
</tr>
<tr>
<td></td>
<td>Chandler, AZ 85226</td>
</tr>
<tr>
<td></td>
<td>(800) 528-8242</td>
</tr>
<tr>
<td>Matrix 502</td>
<td>D.S. Brown Company</td>
</tr>
<tr>
<td></td>
<td>300 East Cherry St.</td>
</tr>
<tr>
<td></td>
<td>North Baltimore, OH 45872</td>
</tr>
<tr>
<td></td>
<td>419-257-3561</td>
</tr>
<tr>
<td>FlexAble Bridge Joint System</td>
<td>Deery American Corporation (also Crafco)</td>
</tr>
<tr>
<td></td>
<td>1896 Hwy 6 &amp; 50</td>
</tr>
<tr>
<td></td>
<td>Grand Jct., CO 81502-4099</td>
</tr>
<tr>
<td></td>
<td>800-227-4059</td>
</tr>
<tr>
<td>Thorma-Joint</td>
<td>Dynamic Surface Application, Ltd.</td>
</tr>
<tr>
<td></td>
<td>373 Village Road</td>
</tr>
<tr>
<td></td>
<td>Pennsdale, PA 17756</td>
</tr>
<tr>
<td></td>
<td>800-491-5663</td>
</tr>
<tr>
<td>Fibrejoint</td>
<td>Fibrecrete Preservation Technologies, Inc.</td>
</tr>
<tr>
<td></td>
<td>401 Old US 52 South</td>
</tr>
<tr>
<td></td>
<td>Mount Airy, NC 27030</td>
</tr>
<tr>
<td></td>
<td>95 Pineview Drive</td>
</tr>
<tr>
<td></td>
<td>Amherst, NY 14228</td>
</tr>
<tr>
<td></td>
<td>800-677-4922</td>
</tr>
</tbody>
</table>
The following list of cold mix material is approved for use.

Table 1. Approved Cold Mix List

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quikrete Companies BDA QPR 7322 Bonnyshire Drive</td>
<td>QPR</td>
<td></td>
</tr>
<tr>
<td>Chattanooga, TN 37416</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koch Materials Company 1464 Garner Station Blvd.</td>
<td>Styrelf</td>
<td></td>
</tr>
<tr>
<td>Suite 311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raleigh, NC 27603-3634</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heilman Pavement Specialties, Inc. 290 North Pike Road</td>
<td>Hei-Way</td>
<td></td>
</tr>
<tr>
<td>Sarver, PA 16055-2700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seaboard Asphalt Products 3601 Fairfield Road</td>
<td>Bond-x</td>
<td></td>
</tr>
<tr>
<td>Baltimore, MD 21226</td>
<td>Bond-x Green</td>
<td></td>
</tr>
<tr>
<td>Sylcrete Corporation P.O. Box 413 South Salem, NY 10590</td>
<td>Sylcrete EV</td>
<td></td>
</tr>
<tr>
<td>Logan County Asphalt 2905 Commerce Blvd. Guthrie,</td>
<td>ProLine Cold</td>
<td></td>
</tr>
<tr>
<td>Oklahoma 73044</td>
<td>Asphalt</td>
<td></td>
</tr>
<tr>
<td>The EZ Street Company 1786 NW 82nd Ave Miami, FL 33126</td>
<td>EZ Street Cold Mix Asphalt</td>
<td></td>
</tr>
<tr>
<td>Perma-Patch, LLC. 6123 Oakleaf Ave. Baltimore, MD 21215</td>
<td>Perma Patch</td>
<td></td>
</tr>
</tbody>
</table>
List No. 78 (cont.)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Paving Material</td>
<td>P.O. Box 764, Route 22 Ramseu, NC 27316</td>
<td>UPM Cold Mix Asphalt Repair</td>
</tr>
<tr>
<td>Green Patch Corp</td>
<td>65 Edison Avenue Mount Vernon, NY 10550</td>
<td>Green Patch</td>
</tr>
</tbody>
</table>

Table 2. Approved Water Activated Cold Mix List

<table>
<thead>
<tr>
<th>Product and Manufacturer</th>
<th>Approved Size Classification (NMAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.75 mm</td>
</tr>
<tr>
<td><strong>Aquaphalt</strong>&lt;br&gt;RoadStone Production, LLC&lt;br&gt;1230 River Road&lt;br&gt;Charlottesville, VA</td>
<td>Aquaphalt 4.0 Fine</td>
</tr>
<tr>
<td><strong>Aqua Patch</strong>&lt;br&gt;JALUX AMERICAS, Inc.&lt;br&gt;DBA: Aqua Patch Road Materials&lt;br&gt;390 N. Pacific Coast Highway&lt;br&gt;Suite 2000&lt;br&gt;El Segundo, CA 90245</td>
<td>--</td>
</tr>
</tbody>
</table>
Hydraulic Erosion Control Products shall be dyed green or contain a green dye in the package that will provide a color to facilitate visual inspection of the uniformly spread slurry. Mulch, including dye and tackifiers, shall not contain germination-inhibiting or growth-inhibiting factors. The mulch shall be manufactured and processed so that it will remain in uniform suspension in water under agitation and will blend with seed, fertilizer, and other additives to form a homogenous slurry. The mulch shall form a blotter-like ground cover on application having moisture absorption and percolation properties. It shall cover and hold grass seed in direct contact with the soil, promoting the germination and growth of grass seedlings.

The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements of Section 244(g)(2) of the 2016 VDOT Road and Bridge Specifications. Under no circumstances will field mixing of HECP additives or HECP components be allowed. Mulch shall be delivered in packages of uniform weight bearing the name of the manufacturer, the net weight, and an additional statement of the net dry weight content.

Manufacturers of HECP Products acceptable for use as Erosion Control Mulch:

<table>
<thead>
<tr>
<th>HECP TYPE 1</th>
<th>North American Green</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5401 St. Wendel-Cynthiana Road</td>
</tr>
<tr>
<td></td>
<td>Poseyville, Indiana 47633</td>
</tr>
<tr>
<td></td>
<td>(800) 772-2040</td>
</tr>
<tr>
<td>HydraGS</td>
<td>Profile Products LLC</td>
</tr>
<tr>
<td>Conwed Fibers Cellulose</td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td>Conwed Fibers EnviroBlend</td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td>Conwed Fibers HydroMulch 1000</td>
<td>800-508-8681</td>
</tr>
<tr>
<td>Conwed Fibers Hydro Mulch 2000</td>
<td></td>
</tr>
<tr>
<td>Country Boy Cellulose</td>
<td></td>
</tr>
<tr>
<td>EcoBlend</td>
<td></td>
</tr>
<tr>
<td>HydroCover Blend</td>
<td></td>
</tr>
<tr>
<td>HydroCover Cellulose</td>
<td></td>
</tr>
<tr>
<td>HydroSpray Blend</td>
<td></td>
</tr>
<tr>
<td>HydroSpray Cellulose</td>
<td></td>
</tr>
<tr>
<td>EcoFibre Wood</td>
<td></td>
</tr>
<tr>
<td>EcoFibre Plus Tackifier</td>
<td></td>
</tr>
<tr>
<td>HydroCover Wood</td>
<td></td>
</tr>
<tr>
<td>HydroCover Wood with Tack</td>
<td></td>
</tr>
<tr>
<td>HydroSpray Wood</td>
<td></td>
</tr>
<tr>
<td>HydroSpray Wood with Tack</td>
<td></td>
</tr>
<tr>
<td>MulchPro Blend</td>
<td></td>
</tr>
<tr>
<td>MulchPro Wood</td>
<td></td>
</tr>
<tr>
<td>MulchPro Wood with Tack</td>
<td></td>
</tr>
<tr>
<td>SoilCover Wood</td>
<td></td>
</tr>
<tr>
<td>SoilCover Blend</td>
<td></td>
</tr>
<tr>
<td>SoilCover Cellulose</td>
<td></td>
</tr>
<tr>
<td>SoilCover Wood with Tack</td>
<td></td>
</tr>
<tr>
<td>TerraBlend</td>
<td></td>
</tr>
<tr>
<td>Terra-Mulch Cellulose</td>
<td></td>
</tr>
<tr>
<td>Terra-Wood</td>
<td></td>
</tr>
<tr>
<td>Terra-Wood with Tacking Agent 3</td>
<td></td>
</tr>
</tbody>
</table>
## HECP TYPE 2

<table>
<thead>
<tr>
<th>Product</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulch &amp; Grow Hybrid 70/30 Blend</td>
<td>Carolina Precision Fibers Inc.</td>
</tr>
<tr>
<td></td>
<td>145 Factory Street</td>
</tr>
<tr>
<td></td>
<td>Ronda NC, 28670</td>
</tr>
<tr>
<td></td>
<td>(366)-527-4140 &amp; 585-732-7714</td>
</tr>
<tr>
<td>HydraGT</td>
<td>North American Green</td>
</tr>
<tr>
<td></td>
<td>5401 St. Wendel-Cynthiana Road</td>
</tr>
<tr>
<td></td>
<td>Poseyville, Indiana 47633</td>
</tr>
<tr>
<td></td>
<td>(800) 772-2040</td>
</tr>
<tr>
<td>Terra-Matrix SMM</td>
<td>Profile Products LLC</td>
</tr>
<tr>
<td></td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td></td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td></td>
<td>800-508-8681</td>
</tr>
</tbody>
</table>

## HECP TYPE 3

<table>
<thead>
<tr>
<th>Product</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North American Green</td>
</tr>
<tr>
<td>HydraCM</td>
<td>5401 St. Wendel-Cynthiana Road</td>
</tr>
<tr>
<td></td>
<td>Poseyville, Indiana 47633</td>
</tr>
<tr>
<td></td>
<td>(800) 772-2040</td>
</tr>
<tr>
<td>EcoAegis BFM</td>
<td>Profile Products LLC</td>
</tr>
<tr>
<td>EcoMatrix EFM</td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td>Hydro-Blanket BFM</td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td>ProMatrix EFM</td>
<td>800-508-8681</td>
</tr>
<tr>
<td>SprayMatt BFM</td>
<td></td>
</tr>
</tbody>
</table>

## HECP TYPE 4

<table>
<thead>
<tr>
<th>Product</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North American Green</td>
</tr>
<tr>
<td>HydraCX</td>
<td>5401 St. Wendel-Cynthiana Road</td>
</tr>
<tr>
<td></td>
<td>Poseyville, Indiana 47633</td>
</tr>
<tr>
<td></td>
<td>(800) 772-2040</td>
</tr>
<tr>
<td>CocoFlex ET-FGM</td>
<td>Profile Products LLC</td>
</tr>
<tr>
<td>EcoFlex HP-FGM</td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td>Flexterra HP-FGM</td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td>SprayMatrix Fiber Reinforced Matrix (FRM)</td>
<td>800-508-8681</td>
</tr>
<tr>
<td>Earthguard Fiber Matrix</td>
<td>LSC Environmental Products (formerly Terra Nova)</td>
</tr>
<tr>
<td></td>
<td>2930 Patton Way</td>
</tr>
<tr>
<td></td>
<td>Bakersfield, CA 93308</td>
</tr>
<tr>
<td></td>
<td>(800) 800-7671</td>
</tr>
</tbody>
</table>
(80) TEMPORARY ROLLED EROSION CONTROL PRODUCTS (EC-2 TYPES 1 THRU 4) – (Location & Design)

Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body. The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements for EC-2 materials set forth in Section 244(l) of the 2016 VDOT Road and Bridge Specifications.

A product with a higher EC-2 Type number may be substituted for a product with a lower EC-2 Type number if that is cost-effective to the contractor and results in no additional cost to VDOT. For example, EC-2 Type 2 may be substituted for EC-2 Type 1; EC-2 Type 4 may be substituted for any of the lower-numbered EC-2 Types.

Manufacturers of EC-2 Products acceptable for use as Temporary Rolled Erosion Control Mulch:

<table>
<thead>
<tr>
<th>EC-2, TYPE 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS-1 Single Net Straw</td>
<td>East Coast Erosion Control</td>
<td>443 Bricker Road</td>
</tr>
<tr>
<td>ECS-1B Single Net Straw Biodegradable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECX-1 Single Net Excelsior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECS-2B Double Net Straw Biodegradable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curlex I</td>
<td>American Excelsior Company</td>
<td>831 Pioneer Avenue</td>
</tr>
<tr>
<td>Curlex I CL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEC Premier Straw Single Net</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excel SR-1</td>
<td>Western Excelsior</td>
<td>4609 E. Boonville-New Harmony Rd.</td>
</tr>
<tr>
<td>S75</td>
<td>North American Green</td>
<td>4609 E. Boonville-New Harmony Rd.</td>
</tr>
<tr>
<td>TerraGuard SS</td>
<td>Hanes Geo Components</td>
<td>815 Buxton Street</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EC-2, TYPE 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curlex II CL</td>
<td>American Excelsior Company</td>
<td>831 Pioneer Avenue</td>
</tr>
<tr>
<td>AEC Premier Straw Double Net</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S150</td>
<td>North American Green</td>
<td>4609 E. Boonville-New Harmony Rd.</td>
</tr>
<tr>
<td>ECS-2 Double Net Straw</td>
<td>East Coast Erosion Control</td>
<td>443 Bricker Road</td>
</tr>
<tr>
<td>ECSC-2B Double Net Straw/Coconut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Code</td>
<td>Description</td>
<td>Company Name</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>TerraGuard DS</td>
<td></td>
<td>Hanes Geo Components</td>
</tr>
<tr>
<td>Nedia S400</td>
<td></td>
<td>Nedia Enterprises, Inc.</td>
</tr>
<tr>
<td>Excel SS-2</td>
<td></td>
<td>Western Excelsior</td>
</tr>
<tr>
<td>Curlex II</td>
<td>AEC Premier Straw/Coconut</td>
<td>American Excelsior Company</td>
</tr>
<tr>
<td>ECC-2B</td>
<td>Double Net Coconut Biodegradable</td>
<td>East Coast Erosion Control</td>
</tr>
<tr>
<td>ECSC-2</td>
<td>Double Net Straw/Coconut</td>
<td></td>
</tr>
<tr>
<td>ECX-2</td>
<td>Double Net Excelsior</td>
<td></td>
</tr>
<tr>
<td>Nedia SC-400</td>
<td></td>
<td>Nedia Enterprises, Inc.</td>
</tr>
<tr>
<td>Excel R-2</td>
<td></td>
<td>Western Excelsior</td>
</tr>
<tr>
<td>SC150</td>
<td></td>
<td>North American Green</td>
</tr>
<tr>
<td>TerraGuard DSC</td>
<td></td>
<td>Hanes Geo Components</td>
</tr>
<tr>
<td>Excel CS-3</td>
<td></td>
<td>Western Excelsior</td>
</tr>
<tr>
<td>ECC-2</td>
<td>Double Net Coconut</td>
<td>East Coast Erosion Control</td>
</tr>
<tr>
<td>Curlex III</td>
<td></td>
<td>American Excelsior Company</td>
</tr>
<tr>
<td>Curlex High Velocity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curlex Enforcer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEC Premier Coconut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C32BD</td>
<td>Erosion Control Blanket</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>Company &amp; Address</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Nedia C400 | Nedia Enterprises, Inc.  
             | 44675 Cape Court, Suite 120  
             | Ashburn, VA 20147  
             | (888) 725-6999 |
| Nedia C400B |                                         |
| Excel CC-4 | Western Excelsior  
             | 4609 E. Boonville-New Harmony Rd.  
             | Evansville, IN 47725  
             | 866-540-9810 |
| TerraGuard DC | Hanes Geo Components  
               | 815 Buxton Street  
               | Winston Salem, NC 27101  
               | 888-239-4539 |
| C125 | North American Green  
              | 4609 E. Boonville-New Harmony Rd.  
              | Evansville, IN 47725  
              | 866-540-9810 |
(81) PERMANENT ROLLED EROSION CONTROL PRODUCTS (EC-3 TYPES 1 THRU 3) – (Location & Design)

Soil retention mats shall consist of a machine-produced mat of wood fibers, wood excelsior, or manmade fiber that shall intertwine or interlock. Matting shall be nontoxic to vegetation and germination of seed and shall not be injurious to the unprotected skin of the human body. The manufacturer shall provide test reports or certification that all components are pre-packaged by the manufacturer to assure material performance and compliance with the minimum requirements for EC-3 materials set forth in Section 244(1) of the 2016 VDOT Road and Bridge Specifications.

A product with a higher EC-3 Type number may be substituted for a product with a lower EC-3 Type number if that is cost-effective to the contractor and results in no additional cost to VDOT. For example, EC-3 Type 2 may be substituted for EC-3 Type 1; EC-3 Type 3 may be substituted for any of the lower-numbered EC-3 Types.

Manufacturers of EC-3 Products acceptable for use as Rolled Erosion Control Mulch:

| EC-3, TYPE 1                  |  |
|------------------------------|  |
| Nedia PTRM 340               | Nedia Enterprises, Inc.  |
|                              | 44675 Cape Court, Suite 120 |
|                              | Ashburn, VA 20147           |
|                              | (888) 725-6999              |
|------------------------------|  |
| Nedia PTRM 440               | Nedia Enterprises, Inc.  |
|                              | 44675 Cape Court, Suite 120 |
|                              | Ashburn, VA 20147           |
|                              | (888) 725-6999              |
|------------------------------|  |
| LandLok 435                  | Propex GeoSolutions        |
|                              | 4019 Industry Drive        |
|                              | Chattanooga, TN 37416      |
|                              | (800) 621-1273             |
|------------------------------|  |
| EC-3, TYPE 2                 |  |
|------------------------------|  |
| ECP-2 10-oz. Double Net Poly | East Coast Erosion Control |
| ECP-2 Double Net Poly        | 443 Bricker Road           |
| ECP-3 Triple Net Poly        | Bearnville, Pennsylvania   |
|                              | 19506                      |
|                              | (610) 448-8496             |
|------------------------------|  |
| Nedia PTRM 640               | Nedia Enterprises, Inc.  |
|                              | 44675 Cape Court, Suite 120 |
|                              | Ashburn, VA 20147           |
|                              | (888) 725-6999              |
|------------------------------|  |
| AEC Recyclex TRM-V           | American Excelsior Company |
| AEC Recyclex TRM             | 831 Pioneer Avenue         |
|                              | Rice Lake, Wisconsin 54868 |
|                              | (715) 236-6861             |
|------------------------------|  |
| SC250                        | North American Green       |
| C350                         | 5401 St. Wendel-Cynthiana Road |
|                              | Poseyville, Indiana 47633  |
|                              | (800) 772-2040             |
|------------------------------|  |
| ArmorMax 75                  | Propex GeoSolutions        |
| Pyramat 25                   | 4019 Industry Drive        |
| Pyramat 50                   | Chattanooga, TN 37416      |
| Pyramat 75                   | (800) 621-1273             |
| LandLok 450                  |  |
| Flexamat | Environmental Construction Solutions, via Landscaping Supply  
12115 Ridgefield Parkway  
Henrico, VA  23233  
804-754-3590 |
| --- | --- |
| PC42  
PS42 | ErosionControlBlanket.com  
Blanket Highway 8 & Vidir Line Road Riverton, Manitoba R0C 2R0 Canada  
866-280-7327 & 360-910-4800 |
| Shoreflex | Shoretec, LLC  
38200 Louisiana Highway 16  
Denham Springs, LA 70706  
(225) 304-3985, (804) 240-6624 (ACF Environmental) |
(82) BIOLOGICAL GROWTH STIMULANTS – (Maintenance Division)

Manufacturers of HECP Products acceptable for use as Biological Growth Stimulants:

<table>
<thead>
<tr>
<th>BioPrime</th>
<th>Profile Products LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>JumpStart</td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td></td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td></td>
<td>800-508-8681</td>
</tr>
</tbody>
</table>


**List No. 83**

**(83) SEDIMENT RETENTION ROLLS (COMPOST FILTER SOCKS AND SEDIMENT TUBES – Location & Design MS4/SWM Program)**

December 5, 2019

Material on this list must meet the minimum requirements of Sediment Retention Rolls set forth in Section 244 of the Virginia Road and Bridge Specifications.

Items in this list may be used in accordance with the Virginia Road and Bridge Standards EC-6 Inlet Protection, EC-15 Slope Interrupters, and EC-16 Temporary Check Dam.

<table>
<thead>
<tr>
<th>COMPOST FILTER SOCKS</th>
<th>SEDIMENT TUBES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtrexx 5 mil High Density Polyethylene (HDPE) Photodegradable</td>
<td>AGgrow Wattle</td>
</tr>
<tr>
<td>Filtrexx Multi-Filament Polypropylene (MFPP)</td>
<td>AGgrow Tech, LLC</td>
</tr>
<tr>
<td>Filtrexx Multi-Filament Polypropylene</td>
<td>Premier Straw Wattle</td>
</tr>
<tr>
<td>DuraSoxx (Heavy Duty)</td>
<td>American Excelsior Company</td>
</tr>
<tr>
<td>Filtrexx Multi-Filament Polypropylene DuraSoxx</td>
<td>831 Pioneer Ave.</td>
</tr>
<tr>
<td>SafetySoxx</td>
<td>Rice Lake, WI 54868</td>
</tr>
<tr>
<td>Filtrexx Multi-Filament Polypropylene</td>
<td>(715) 226-5643</td>
</tr>
<tr>
<td>DuraSoxx</td>
<td>Profile Products LLC</td>
</tr>
<tr>
<td>SafetySoxx</td>
<td>750 Lake Cook Road, Suite 440</td>
</tr>
<tr>
<td></td>
<td>Buffalo Grove, IL 60089</td>
</tr>
<tr>
<td></td>
<td>800-508-8681</td>
</tr>
<tr>
<td></td>
<td>Siltworm Inc.</td>
</tr>
<tr>
<td></td>
<td>1110 E. Main St.</td>
</tr>
<tr>
<td></td>
<td>Griffith, IN 26319</td>
</tr>
<tr>
<td>Siltworm 18”</td>
<td>219-488-7240/219-488-7240</td>
</tr>
<tr>
<td>Switch Sock</td>
<td>MKB Company</td>
</tr>
<tr>
<td></td>
<td>83 Central Penn Av.</td>
</tr>
<tr>
<td></td>
<td>Belleville, PA 17004</td>
</tr>
<tr>
<td></td>
<td>724-955-4353</td>
</tr>
</tbody>
</table>

Minimum diameter/height of SRR required is shown in the applicable Virginia Road and Bridge Standard. Stacking of SRR of a smaller diameter/height is not permitted.
List No. 84

(84) CLASS B MANUFACTURED TOPSOIL – (Maintenance Division)

List to be populated starting August 2016
The following list of cement manufacturers is approved for use in hydraulic cement concrete. To have a product included on the Approved List No. 85 for Cement Manufacturers, the following shall be submitted to the Materials Division’s Physical Laboratory Assistant Concrete Program Manager: a letter with a notarized signature documenting that each cement type used on VDOT projects meets the requirements in Section 214 of the VDOT Road and Bridge Specifications. The letter shall include the maximum alkali content that the cement will not exceed for the calendar year. The percent mineral admixture for the types of blended cement that has a mineral admixture added. A one-gallon sample of cement with the corresponding mill certification shall also be submitted for each type of cement.

Upon approval, the Cement Manufacturer will be required to submit a letter with a notarized signature stating that the cement meets the VDOT requirements, annually by December documenting the maximum alkalinity content for the following calendar year for each type of cement. Mill certification shall be submitted monthly and a gallon sample shall be submitted each quarter.

<table>
<thead>
<tr>
<th>Cement Source</th>
<th>Type</th>
<th>Plant ID</th>
<th>Maximum Alkali Content (%)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argos</td>
<td>I / II</td>
<td>111</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>Calera, AL</td>
<td></td>
<td></td>
<td></td>
<td>Roberta Plant</td>
</tr>
<tr>
<td>Cartagena, Colombia</td>
<td>I / II LA</td>
<td>115</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>Devnya, Bulgaria</td>
<td>I / II LA</td>
<td>76</td>
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<td>Mylaki, Greece</td>
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<td>Martinsburg, WV</td>
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<td>Martinsburg, WV</td>
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<td>Goltas, Turkey</td>
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<td>Medcem, Turkey</td>
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<td>Federal White Cement</td>
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<td>Woodstock, Ontario Canada</td>
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<td>Giant Cement Company</td>
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<td>Harleyville, SC</td>
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<td>Bath PA</td>
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<td>Bath PA</td>
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### CEMENT MANUFACTURERS (cont.)

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<tr>
<th>Cement Source</th>
<th>Type</th>
<th>Plant ID</th>
<th>Maximum Alkali Content (%)</th>
<th>Remarks</th>
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<tr>
<td><strong>Lehigh Heidelberg Cement Group</strong></td>
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<td>Kamari plant, Greece</td>
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<tr>
<td>Kamari plant, Greece</td>
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<td>62</td>
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<td>Huaxin plant, China</td>
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<td>Patras Plant, Greece</td>
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<td>Patras Plant, Greece</td>
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<td>Roanoke Plant, Troutville, VA</td>
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<td>Roanoke Plant, Troutville, VA</td>
<td>IL</td>
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</table>

### BLENDED CEMENTS

In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures may need to be added.

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<tr>
<th>Cement Source</th>
<th>Type</th>
<th>Plant ID</th>
<th>Maximum Alkali Content (%)</th>
<th>Remarks</th>
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<td><strong>Lafarge/Holcim</strong></td>
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<tr>
<td>Holly Hill, SC</td>
<td>IS(20)</td>
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<td>0.60</td>
<td><em>In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures will need to be added.</em></td>
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<tr>
<td><strong>Lehigh Heidelberg Cement Group</strong></td>
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<tr>
<td>Evansville, PA</td>
<td>IS(40)</td>
<td>83</td>
<td>0.95</td>
<td><em>In order to comply with the VDOT Road and Bridge Specifications Sec. 217, additional mineral admixtures will need to be added.</em></td>
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<tr>
<td>Device</td>
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<td>Contact Information</td>
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<tr>
<td>BaySeparator™ BaySaver Barracuda</td>
<td>½K, 1K, 3K, 5K, 10K, and XK (custom)</td>
<td>ADS/BaySaver Technologies  1030 Deer Hollow Drive  Mt. Airy, Maryland  21771  <a href="http://www.baysaver.com">www.baysaver.com</a>  Contact: (540) 526-6045  Contact: (800) 229-7283</td>
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<tr>
<td>Continuous Deflective Separator® (CDS)</td>
<td>CDS2015-4, CDS2015-5, CDS2020-5, CDS2025-5, CDS3020-6, CDS3025-6, CDS3030-6, CDS3035-6, CDS3535-7, CDS4030-8, CDS4040-8, CDS4045-8, CDS5640-10, CDS5653-10, CDS7070-DV, CDS10060-DV, CDS10080-DV, and CVS100100-DV</td>
<td>Contech® Engineered Solutions LLC  Stormwater Design Engineering  7037 Ridge Road, Suite 350  Hanover, MD  21076  <a href="http://www.ContechES.com">www.ContechES.com</a>  Contact: (410) 740-8490</td>
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<tr>
<td>CrystalClean Separator – Single Vault</td>
<td>646, 846, 856, 866, 956, 1056, and 1266</td>
<td>CrystalStream Technologies  2090 Sugarloaf Parkway, Suite 245  Lawrenceville, Georgia  30045  <a href="http://www.crystalstream.com">www.crystalstream.com</a>  Contact: (800) 748-6945</td>
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<tr>
<td>Downstream Defender®</td>
<td>DD4, DD6, DD8, DD10, and DD12</td>
<td>Hydro International  94 Hutchins Drive  Portland, Maine  04102  <a href="http://www.hydro-int.com">www.hydro-int.com</a>  Contact: Virginia (804) 614-6638  Contact: Corporate Office (207) 239-8997</td>
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<tr>
<td>First Defense®</td>
<td>3, 4, 6, 8 feet diameter</td>
<td>Hydro International  94 Hutchins Drive  Portland, Maine  04102  <a href="http://www.hydro-int.com">www.hydro-int.com</a>  Contact: Virginia (804) 614-6638  Contact: Corporate Office (207) 239-8997</td>
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<tr>
<td>Hydroguard</td>
<td>HG 4, HG 4i, HG 5, HG 6, HG 7, HG 8, HG 9, HG 10, and HG 12</td>
<td>Hydroworks, LLC  136 Central Avenue, 2nd Floor  Clark, New Jersey  07066  <a href="http://www.hydroworks.com">www.hydroworks.com</a>  Contact: Hydroworks, LLC (888) 290-7900  Contact: Exact Stormwater Management LLC (804) 627-3260</td>
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<tr>
<td>Brand/Model</td>
<td>Description</td>
<td>Contact Information</td>
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<tr>
<td>SciClone™</td>
<td>SC-4, SC-5, SC-6, SC-7, SC-8, SC-9, SC-10, SC-11, SC-12, and custom</td>
<td>Bio Clean Environmental Services, A Forterra Company 398 Via El Centro Oceanside, California 92058 <a href="http://www.bioceleanvironmental.com">www.bioceleanvironmental.com</a> Contact: Virginia (804) 466-2099 Contact: (760) 433-7640</td>
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<tr>
<td>Stormceptor® OSR</td>
<td>OSR 065, OSR 140, OSR 250, OSR 390, OSR 560, OSR 780, and OSR 1125</td>
<td>Rinker Materials - Stormceptor OSR 1751 Monocacy Boulevard Frederick, Maryland 21707 <a href="http://www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx">www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx</a> Contact: (301) 698-7373</td>
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<td>Stormceptor® STC</td>
<td>STC 450i, STC 900, STC 1200, STC 1200, STC 1800, STC 2400, STC 3600, STC 4800, STC 6000, STC 7200, STC 11000, STC 13000 and STC 16000</td>
<td>Rinker Materials - Stormceptor 1751 Monocacy Boulevard Frederick, Maryland 21707 <a href="http://www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx">www.rinkerpipe.com/StormceptorProducts/Stormceptor.aspx</a> Contact: (301) 698-7373</td>
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<td>StormPro</td>
<td>24, 36, 48, 510, 612, 714, 816, 918, 1020, 1224, and 2040</td>
<td>Environment 21, LLC 8713 Read Road East Pembroke, NY 14056-0055 <a href="http://www.env21.com">www.env21.com</a> Contact: Environment 21, LLC (585) 815-4714 Contact: Nansemond Precast (757) 538-2761 Contact: Maryland Concrete (443) 491-3598</td>
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<tr>
<td>Storm Water Quality Unit</td>
<td>3620WQA, 3640WQA, 3620WQB, 3640WQB, 4220WQA, 4240WQA, 4220WQB, 4240WQB, 4820WQA, 4840WQA, 4820WQB, 4840WQB, 6020WQA, 6040WQA, 6020WQB, and 6040WQB</td>
<td>Advanced Drainage Systems, Inc. 70 Inwood Road, Suite 3 Rocky Hill, CT 06067 <a href="http://www.ads-pipe.com">www.ads-pipe.com</a> Contact: (609) 707-1576 Contact: (888) 892-2694</td>
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<tr>
<td>V2B1</td>
<td>2 to 40</td>
<td>Environment 21, LLC 8713 Read Road East Pembroke, NY 14056-0055 <a href="http://www.env21.com">www.env21.com</a> Contact: Environment 21, LLC (585) 815-4714 Contact: Nansemond Precast (757) 538-2761 Contact: Maryland Concrete (443) 491-3598</td>
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<tr>
<td>The Vortechs® System</td>
<td>1000, 2000, 3000, 4000, 5000, 7000, 9000, 11000, and 16000</td>
<td>Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350, Hanover MD 21076 <a href="http://www.ContechES.com">www.ContechES.com</a> Contact: (410) 740-8490</td>
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## FILTER DEVICES

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<th>Device</th>
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<td><strong>Aqua-Filter™ Stormwater Filtration System</strong></td>
<td>AF-2.1, AF-3.2, AF-4.3, AF-5.4, AF-6.6, AF-7.8, AF-8.10, AF-9.12, AF-10.15, AF-11.18, AF-12.11 Twin, AF-13.13 Twin, and AF-X.X (custom)</td>
<td>AquaShield™, Inc. 2733 Kanasita Drive, Suite 111 Chattanooga, Tennessee 37343 <a href="http://www.aquashieldinc.com">www.aquashieldinc.com</a> Contact: Northern Virginia (908) 284-5041 Contact: (704) 814-0603</td>
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<tr>
<td><strong>BayFilter™ Stormwater Cartridge System</strong></td>
<td>522, 530, 545</td>
<td>ADS/BaySaver Technologies 1030 Deer Hollow Drive Mt. Airy, Maryland 21771 <a href="http://www.baysaver.com">www.baysaver.com</a> Contact: (540) 526-6045 Contact: (800) 229-7283</td>
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<tr>
<td><strong>Filterra Bioretention Systems</strong></td>
<td>4x6/6x4, 4x8/8x4, 6x6, 6x8/8x6, 6x10/10x6, 6x12/12x6, 7x13/13x7, and custom</td>
<td>Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 <a href="http://www.ContechES.com">www.ContechES.com</a> Contact: (410) 740-8490</td>
</tr>
<tr>
<td><strong>FocalPoint HighPerformance ModularBiofiltration System (HPMBS)</strong></td>
<td>Modular with custom design as indicated on approved plans</td>
<td>Convergent Water Technologies/ACF Environmental 13810 Holister Road #100 Houston, Texas 77086 <a href="http://www.convergentwater.com/www.acfenvironmental.com">www.convergentwater.com/www.acfenvironmental.com</a> Contact: Convergent Water Tech. (800) 711-5428 Contact: ACF Environmental (800) 448-3636</td>
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<tr>
<td><strong>Jellyfish® Filter</strong></td>
<td>JF4, JF6, JF8M JF10, JF12, and custom</td>
<td>Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 <a href="http://www.ContechES.com">www.ContechES.com</a> Contact: (410) 740-8490</td>
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<tr>
<td><strong>Modular Wetland® System Linear</strong></td>
<td>MWS-L-4-4, MWS-L-4-6, MWS-L-4-8, MWS-L-4-13, MWS-L-4-15, MWS-L-4-17, MWS-L-4-19, MWS-L-4-21, MWS-L-6-8, MWS-L-8-8, MWS-L-8-12, MWS-L-8-16, MWS-L-8-20, MWS-L-8-24, and custom</td>
<td>Bio Clean Environmental Services, A Forterra Company 398 Via El Centro Oceanside, California 92058 <a href="http://www.biocleanenvironmental.com">www.biocleanenvironmental.com</a> Contact: Virginia (804) 466-2099 Contact: (760) 433-7640</td>
</tr>
<tr>
<td><strong>Perk Filter</strong></td>
<td>4' x 8', 6' x 8', 6' x 10', 6' x 12', 6' x 14', 8' x 8', 8' x 14', 8' x 16', and Box Culvert and other custom sizes</td>
<td>Oldcastle Precast, Inc. 5115 Massaponax Church Road Fredericksburg, VA 22407 oldcastleprecast.com Contact: (800) 579-8819</td>
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<tr>
<td><strong>The Stormwater Management StormFilter® with Phosphosorb media</strong></td>
<td>SFCBx, SFMHxx, SFxxxx, SFLGxxxx, SFCIxxxx, SFPDxxxx, and custom design (x, xx, and xxxx vary by size and configuration)</td>
<td>Contech® Engineered Solutions LLC Stormwater Design Engineering 7037 Ridge Road, Suite 350 Hanover, MD 21076 <a href="http://www.ContechES.com">www.ContechES.com</a> Contact: (410) 740-8490</td>
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| The Stormwater Management StormFilter® with ZPG media | SFCBx, SFMHxx, SFxxxx, SFLGxxxx, SFCIxxxx, SFPDxxxx, and custom design (x, xx, and xxxx vary by size and configuration) | Contech® Engineered Solutions LLC  
Stormwater Design Engineering  
7037 Ridge Road, Suite 350  
Hanover, MD 21076  
www.ContechES.com  
Contact: (410) 740-8490 |
| StormTank Module Debris Row                      | Modular Underground Storage with Built-in Treatment                           | Brentwood Industries  
500 Spring Ridge Drive  
Reading, PA 19160  
www.brentwoodindustries.com  
Contact: (610) 374-5109 |
| StormTech® Isolator Row™                        | SC-310, RC310, SC-740, RC-750, DC-780, DC-780, MC-3500, and MC-4500           | ADS/StormTech  
70 Inwood Road, Suite 3  
Rocky Hill, CT 06067  
www.stormtech.com  
Contact: (609) 707-1576  
Contact: (888) 892-2694 |
| Up-Flo Filter® with CPZ media                    | UFF 4-feet Diameter MH (1-6 filter modules), UFF Precast Vault (1-54 filter modules), and custom design | Hydro International  
94 Hutchins Drive  
Portland, Maine 04102  
www.hydro-int.com  
Contact: Virginia (804) 614-6638  
Contact: Corporate Office (207) 239-8997 |
(87) APPROVED POWDER COATING MANUFACTURERS – (Chemistry Lab)

Nortek Powder Coating, LLC
5900 Success Drive
Rome, NY 13440
Ph: (888) 667-8357
www.nortekpowder.com

Polytech Coating Labs
P.O. Box 111
951 Morgantown Road
Reading, PA. 19607
Ph: (610) 375-1417
www.polytechcoatinglabs.com

Protech, Inc.
939 Monocacy Road
York, PA. 17404
Ph: (713) 939-4000
www.protechpowder.com

TCI Powder Coatings
P.O. Box 13
734 Dixon Drive
Ellaville, GA. 31806
Ph: (800) 533-9067
www.tcipowder.com

Tiger Drylac USA Inc.
1100 Commons Boulevard
Reading, PA. 19605
Ph: (610) 926-8148
www.customerserviceeast@tiger-coatings.com
ASAP Powder Coating, Inc.*
9724 Williamsport Pike
Falling Waters, WV 25419-3538
Ph: (304) 274-3200
www.asappowdercoating.com

Fortress Fusion Coatings, Inc
P.O. Box 37
New York Mills, NY 13417
Ph: (315) 736-8311
www.whyrust.com

ASCO – American Stripping Co.*
9025 Vassau Court
Manassas Park, VA. 20111
Ph: (703) 368-6573
www.ascoweb.com

Impreglon Inc.*
2915 Wilmarco Avenue
Baltimore, MD. 21223
Ph: (410) 644-4500

Frederick County Customs
441 Marple Road
Winchester, VA. 22603
(540) 323-7518
frederickcountycustoms@comcast.net

Lane Enterprises
1244 Claremont Road
Carlisle, PA. 17013
Ph: (717) 249-8342
www.lane-enterprises.com

Thomarios Powder Coating
1122 Jacoby Road
Copley, OH. 44321
Ph: (330) 670-6400
www.thomarios.com

*Provisional Approval