

## QUALIFIED PRODUCTS LIST

The materials in this section may be accepted for use on Michigan Department of Transportation projects based on the trade name, model number, etc., as listed.

This Qualified Products List is in accordance with the 2003 Standard Specifications for Construction.

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)	
<b>401-SP</b> Culverts; Smooth Lined Corrugated Plastic Pipe (CPE); Class B	Size: 12 – 24 inch Size: 12 – 24 inch Blue Seal	Advanced Drainage Systems (ADS) Hancor (ADS)	
<b>402-SP</b> Storm Sewers; Smooth Lined Corrugated Plastic Pipe (CPE); Corrugated Polyvinyl Chloride Pipe (CPV); Class B	Size: 12 – 24 inch Size: 12 – 24 inch A-2000 PVC Size: 12 – 24 inch Blue Seal	Advanced Drainage Systems (ADS) Contech Drainage Systems Hancor (ADS)	
<b>502-SP</b> Protective Polymer Coating For HMA Pavement at Snowmobile Trail Crossings  *NOTE: Contractor applied, must have prior approval to apply this material. Contact Tom Miller, MDOT, C&T, at 517-322-1070 for approval.	<u>Liquid Binders</u> CB 700 *Nor-Skilt Grade E-5 Mark-163 Flexogrid Mark-174 Polymer Road System E-Bond 526 Lo-Mod Sikadur 22 Lo-Mod Propoxy DOT Type III  <u>Aggregate Size</u> #612 6x12 4 SB Grade - #7 BT 6x10 EP 5 Modified	Axson North America Inc. Clark Highway Services Poly-Carb, Inc. Poly-Carb, Inc. Ridgemoor Supply Sika Corporation Unitex  Best Sand Dixie Cut Stone and Marble Flat Rock Bagging Inc. Humble Sand & Gravel Manufacturers Minerals Co. Unimin Corporation	800-225-5649 800-225-5649 248-569-5665 616-532-0782 517-663-8191 816-231-7700 231-499-1611  313-782-2073 800-783-4661 206-228-2120 800-257-7034 918-673-1737 800-237-4986

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)
<p><b>603.03B2</b> Adhesive Systems for Grouting Dowel Bars and Tie Bars for Full-Depth Concrete Pavement Repairs</p> <p><b>NOTE:</b> Use these Qualified Products for grouting repairs to existing concrete in the same direction of traffic in the same lane of repair. For grouting lane ties (deformed bars positioned transverse to the direction of traffic located between traffic lanes) use Qualified Products listed in 712.03J, "Adhesive Systems for Structural Anchors and Lane Ties".</p>	<p>Anchor-it 1. Solid Bond HS-200 2. Solid Bond HR-200 Ultrabond 1, 2, 3 Ultrabond RT66 Ultrabond Speed Set 2 Inject-Tite Standard Set Inject-Tite Fast Set Aka Bond Aka Bond 550XP Aka Bond 550XPP Sonneborn Rapid Gel BHS-1250 BHS-1250XP Araldite AW / HW 8561 Spec Bond 201 Highway Fast Set Epoxy TRU Grip HI-Modepoxy 590 Tru-Grip 591 Dural Fast Set Epoxy Gel Futura Bond 566 Hilti RSE DOT HY-150 Epcon A7 Epcon-Ceramic 6 Kelipoxy II Poly-Carb Mark 198.4 Polyject/Polybac 1257 Polyject/Polybac 1295 AC 100+ Gold Power Fast Epoxy Adhesive - Normal Set T308+ Speed Bond #1 Sikadur Injection Gel Sikadur 881 DBA Sikadur DOT SP-13 Arcylic -Tie AT Epoxy Tie Dowel Bar Adhesive #5 Pro Poxxy 300 Pro Poxxy 300 FAST CIA Gel 7000 Rezi-Weld Gel Paste</p>	<p>Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. ANKR-Tite Fastening Systems ANKR-Tite Fastening Systems Axson North America (Formerly Akemi Plastics) Axson North America (Formerly Akemi Plastics) Axson North America (Formerly Akemi Plastics) BASF Construction Chemical Blackhawk Sales Company, Inc. Blackhawk Sales Company, Inc. Ciba Specialty Chemicals Corp. Conspec Marketing &amp; Mfg. Co., Inc. Dayton Superior Corp. J. Dedoes, Inc. J. Dedoes, Inc. Euclid Chemical Company Futura Adhesives &amp; Chemicals Hilti, Inc. Hilti, Inc. ITW Ramset/Red Head ITW Ramset/Red Head Kelken Construction Systems Poly-Carb, Inc. Poly-Carb, Inc. Polygen, Inc. Polygen, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Prime Resins, Inc. Sika Corporation Sika Corporation Sika Corporation Simpson Strong-Tie Company, Inc. Simpson Strong-Tie Company, Inc. Superior Epoxies &amp; Coatings Unitex Unitex USP Structural Connectors W. R. Meadows</p>
<p><b>702.02B</b> Non-Shrinking Mortar and Grout Type H-1(Non-Metallic) Pre Mixed</p> <p>H-2 eliminated.</p>	<p>MBT 928 Grout MBT Construction Grout Set Grout Upcon Super Flow Grout Celtite 10-50 Hi-Flow Conspec 100 Enduro 50 Grout Gifford-Hills Supreme Grout 1107 Advantage Grout Sure Grip Grout Sure Grip Utility Grout Euco NS Grout Five Star Grout Pro-Grout 90 Sure-Grip Crystex Duragrout Quikrete Precision Grout Superb Grout 611 Multi Purpose Grout</p> <p>Sealite 588 Grout</p>	<p>BASF Construction Chemical, Shakopee, MN BASF Construction Chemical, Shakopee, MN BASF Construction Chemical, Shakopee, MN Bostik Const. Prod. Co., Cleveland, OH Celtite Inc., Georgetown, KY Conspec Marketing &amp; Mfg., Kansas City, KS Conspec Marketing &amp; Mfg., Kansas City, KS Cormix, Inc., Cleveland, OH (form. Gifford-Hill) Dayton Superior Corp., Oregon, IL Dayton Superior Corp., Oregon, IL Dayton Superior Corp., Oregon, IL Euclid Chemical Co., Cleveland, OH Five Star Products, Inc. G.C.M., Inc., Bensalem, PA Kaufman Products, Inc., Baltimore, MD L&amp;M Construction Chemicals, Inc., Omaha, NE L&amp;M Construction Chemicals, Inc., Omaha, NE Quikrete Technical Center, Atlanta, GA Specco Industries, Lemont, IL Symons Prod, Inc., Denver, CO &amp; Richmond Screw Anchor W.R. Meadows, Inc., Elgin, IL</p>

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<b>703</b> Prepackaged Hydraulic Fast Set* Mortar  <b>NOTE:</b> *Percentage based upon weight of prepackaged bag containing both cement and sand. Example Calculation: 23kg bag approved at 60% extension = 23 x 0.60 = 14kg coarse aggregate per bag.	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: center;">Max. Aggregate Extension, %</th> </tr> </thead> <tbody> <tr><td>Emaco 10-60 Rapid Mortar</td><td style="text-align: center;">60*</td></tr> <tr><td>Emaco Set 45</td><td style="text-align: center;">60*</td></tr> <tr><td>Burke Fast Patch 928</td><td style="text-align: center;">50*</td></tr> <tr><td>Chem Speed 65</td><td style="text-align: center;">50*</td></tr> <tr><td>HD-50 Heavy Duty Concrete Patch</td><td style="text-align: center;">60*</td></tr> <tr><td>Five Star Highway Patch</td><td style="text-align: center;">60*</td></tr> <tr><td>Durapatch Hiway</td><td style="text-align: center;">50*</td></tr> <tr><td>HD-Dot Patch</td><td style="text-align: center;">60*</td></tr> </tbody> </table>		Max. Aggregate Extension, %	Emaco 10-60 Rapid Mortar	60*	Emaco Set 45	60*	Burke Fast Patch 928	50*	Chem Speed 65	50*	HD-50 Heavy Duty Concrete Patch	60*	Five Star Highway Patch	60*	Durapatch Hiway	50*	HD-Dot Patch	60*	BASF Construction Chemical BASF Construction Chemical The Burke Company Chem Masters Dayton Superior Corp.  Five Star Products, Inc. L&M Construction Chemicals, Inc. Symons Corp.																																							
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<b>706.03S</b> Protective Coating for Concrete (Penetrating Water Repellent Treatment of Structure Concrete Surfaces)	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: center;">Application Rate, sq ft/gal (sq m/L)</th> </tr> </thead> <tbody> <tr><td>Hydrozo Enviroseal 20</td><td style="text-align: center;">125-200 (3.07-4.91)</td></tr> <tr><td>Hydrozo Enviroseal 40</td><td style="text-align: center;">125-200 (3.07-4.91)</td></tr> <tr><td>Barracade Silane</td><td style="text-align: center;">125 (3.07)</td></tr> <tr><td>Aquapel Plus 20% Silane</td><td style="text-align: center;">125 (3.07)</td></tr> <tr><td>Stifel</td><td style="text-align: center;">125 (3.07)</td></tr> </tbody> </table>		Application Rate, sq ft/gal (sq m/L)	Hydrozo Enviroseal 20	125-200 (3.07-4.91)	Hydrozo Enviroseal 40	125-200 (3.07-4.91)	Barracade Silane	125 (3.07)	Aquapel Plus 20% Silane	125 (3.07)	Stifel	125 (3.07)	BASF Construction Chemical BASF Construction Chemical Euclid Chemical Co. L&M Construction Chemicals, Inc. Nox-Crete Chemicals																																													
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<b>707.02</b> Bushings for Pins & Link Plates	Rulon CJ Garmax	Furon/Saint-Gobain Garlock																																																									
<b>712.03J</b> Adhesive Systems for Structural Anchor & Lane Ties*  <b>NOTE:</b> *Lane Ties defined as deformed bars positioned transverse to the direction of traffic located between lanes. For grouting dowel bars and tie bars (bars positioned to existing concrete in the direction of the traffic in the same lane as the repair) use QP list on 603.03B2, "Adhesive Systems for Grouting Dowel Bars for Full-Depth Concrete Pavement Repairs". Note 1. Anchors shall be installed per manufacturer's recommendations with a minimum embedment depth of 12 diameters for reinforcing steel and 9 diameters for threaded bolts. Note 2. Material is limited to the shelf life recommendations by the manufacturer.	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"><u>Name</u></th> <th style="width: 20%;"><u>Adhesive Type</u></th> <th style="width: 10%;"><u>Mixing &amp; Inject.</u></th> </tr> </thead> <tbody> <tr><td>Ultrabond 1</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>HS-200</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Tru-Grip 591</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>HY-150</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>HY-150 MAX</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>RE 500</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>HVU</td><td>Urethane-Methacrylate</td><td>Capsule</td></tr> <tr><td>Ceramic 6</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Epcon Acrylic 7</td><td>Methacrylate</td><td>Yes</td></tr> <tr><td>Super Por-Rok</td><td>Non-Shrink Grout</td><td>Yes</td></tr> <tr><td>Power-Fast (Standard Set)</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>AC100 Plus</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Acrylic-Tie</td><td>Methacrylate</td><td>Yes</td></tr> <tr><td>EDOT</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Epoxy-Tie</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>SET</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Pro-Poxy 300</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>CIA-Gel 7000</td><td>Epoxy</td><td>Yes</td></tr> </tbody> </table>	<u>Name</u>	<u>Adhesive Type</u>	<u>Mixing &amp; Inject.</u>	Ultrabond 1	Epoxy	Yes	HS-200	Epoxy	Yes	Tru-Grip 591	Epoxy	Yes	HY-150	Epoxy	Yes	HY-150 MAX	Epoxy	Yes	RE 500	Epoxy	Yes	HVU	Urethane-Methacrylate	Capsule	Ceramic 6	Epoxy	Yes	Epcon Acrylic 7	Methacrylate	Yes	Super Por-Rok	Non-Shrink Grout	Yes	Power-Fast (Standard Set)	Epoxy	Yes	AC100 Plus	Epoxy	Yes	Acrylic-Tie	Methacrylate	Yes	EDOT	Epoxy	Yes	Epoxy-Tie	Epoxy	Yes	SET	Epoxy	Yes	Pro-Poxy 300	Epoxy	Yes	CIA-Gel 7000	Epoxy	Yes	Adhesives Technology Corp. Adhesives Technology Corp. J. Dedoes, Inc. Hilti, Inc. Hilti, Inc. Hilti, Inc. Hilti, Inc. ITW Ramset/Red Head ITW Ramset/Red Head Novex Systems International, Inc. Powers Fasteners, Inc.  Powers Fasteners, Inc. Simpson Strong-Tie Anchor System Simpson Strong-Tie Anchor System Simpson Strong-Tie Anchor System Simpson Strong-Tie Anchor Systems Unitex USP Structural Connectors
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<b>712.03L</b> Mechanical Reinforcement Splicing  <b>NOTE:</b> Splices used to connect precast structural elements shall be high strength splices.	BPI Bar Splicer System Grip Twist Threaded Position Coupler Zap Screwlok Bar-Lock L-Series Bar-Lock S/CA-Series DB SAE Lenton Lenton Form Saver Lenton Interlok (High Strength) Lenton Position Coupler NMB Splice Sleeve (High Strength)	Bar Splice Products, Inc., Beavercreek, OH Bar Splice Products, Inc., Beavercreek, OH Bar Splice Products, Inc., Beavercreek, OH Dayton Superior Corp., Miamisburg, OH Dayton Superior Corp., Miamisburg, OH Dayton Superior Corp., Miamisburg, OH ERICO Concrete Construction, Solon, OH ERICO Concrete Construction, Solon, OH ERICO Concrete Construction, Solon, OH ERICO Concrete Construction, Solon, OH Splice Sleeve North America, Inc., Irvine, CA																																																									
<b>712.03Y</b> Embedded Galvanic Anodes	MBT Emaco Corr-Stops Sentinel-GL Sika Galvashield XP Sika Galvashield XP+ Galvashield XP Galvashield XP+	BASF Construction Chemicals, Bldg Systems Euclid Chemical Co. Sika Corporation Sika Corporation Vector Corrosion Technologies Vector Corrosion Technologies																																																									

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<p><b>713.02B</b> Sealant for Perimeter of Beam Repairs</p> <p><b>NOTE:</b> No silicone materials - only polyurethane (PU) or PU blended materials that are paintable. Typically 1 week cure prior to painting. All non-sag material.</p>	<p>Sonneborn NP1 Duralink (F1200) Sherwin Williams Stampede 1 Sika Flex 15LM Vulkem 116</p>	<p>BASF Construction Chemicals, Shakopee, MN Chem Link Sherwin Williams Sika Corp., Lyndhurst Tremco, Inc.</p>
<p><b>715.02</b> Coating Systems for New Hanger Assemblies</p>	<p>See Bridge Coating Systems, Spec. 915</p>	
<p><b>715.02</b> Abrasive, Low Dusting</p> <p><b>NOTE:</b> The blasting profile produced by these abrasives will depend on the equipment used. It is the responsibility of the contractor to produce a profile within the 1.0 to 2.8 mils specified range. The abrasive additive, Blastox may be used with any of the listed low-dusting abrasives.</p>	<p>GMA Garnet Blast Black Shot Granulated Slag StarBlast XL Emerald Creek Garnet Blackjack MSM, Waupaca Materials Blast Away Ebony Grit Black Beauty Norblast E-1015 M-1015</p>	<p>Barton Mines Corp., Golden, CO Bell &amp; MacKenzie Co Ltd, Hamilton, Ontario Dupont, Wilmington, DE Emerald Creek Garnet, Fernwood, ID Falk Brothers Constr. Co., Inc., Waupaca, WI Gibbco, Inc. Opta Minerals Inc. Reed Minerals Division, Highland, IN Transtech Inc., Covington, KY Universal Ground Cullets, Inc., Brook Park, OH Universal Ground Cullets, Inc., Brook Park, OH</p>
<p><b>803.02-SP</b> Detectable Warning Surfaces (ADA Compliant Sidewalk Ramps),</p> <p>1. Cast-in-Place</p>	<p>Cast in Place Truncated Dome Warning System Alertcast EJIW Detectable Warning Plate Armor-Tile Cast in Place Stainless Armor-Tile Cast in Place Composite NF Detectable Warning Plate</p>	<p>ADA Solutions, North Billerica, MA Detectable Warning Systems, Wilmington, NC East Jordan Iron Works, East Jordan, MI Engineered Plastics, Inc., Williamsville, NY Engineered Plastics, Inc., Williamsville, NY Neenah Foundry Company, Neenah, WI</p>
<p>2. Surface Applied*</p> <p>*NOTE: Surface applied detectable warning surfaces may only be used to retrofit existing concrete</p>	<p>Surface Applied Panel System with Beveled Edges Alerttile Armor-Tile Surface Applied Composite Warning System TopMark</p>	<p>ADA Solutions, North Billerica, MA Detectable Warning Systems, Wilmington, NC Engineered Plastics, Inc., Williamsville, NY Flint Trading Inc., Thomasville, NC</p>

## QUALIFIED PRODUCTS LIST (QPL)

### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k
<b>903.01</b> Air Entraining Admixtures	<b><u>AXIM CONCRETE TECHNOLOGIES, INC.</u></b>				
<b>903.02</b> Concrete Accelerators	Catexol A E 260	AE	Air-entraining	0.5	33
	Catexol A E 360	AE	Air-entraining (vinsol resin)	0.5 - 3	35 - 195
<b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	Catexol Hydrosense	A MR	Water-reducer Mid-range water-reducer	3 - 5 6 - 8	195 - 325 390 - 520
	Catexol VR	AE	Air-entraining (vinsol resin)	0.75	49
	Catexol 800N	A	Water-reducer	3	195
	Catexol 1000N	A D	Water-reducer Water-reducer retarder	2 4	130 260
	Catexol 1000R	D	Water-reducer retarder	2	130
	Catexol 1000 RHE	C	Accelerator (non chloride)	16	1042
	Catexol 1000 SPMN	F MR	High-range water-reducer Mid-range water-reducer	10 - 40 8 - 12	651 - 2602 521 - 782
	Catexol 2000 Ni	A MR G	Water-reducer Mid-range water-reducer High-range water-reducer retarder	3 - 8 8 - 12 14 - 24	195 - 522 522 - 782 910 - 1565
	Catexol 2000 SPMN	F	High-range water-reducer	10 - 32	651 - 2082
	Catexol 2000 RHE	E	Water-reducer accelerator (non chloride)	10 - 90	651 - 5860
	Catexol 3000 GP	A MR	Water-reducer Mid-range water-reducer	2 - 4 5 - 8	130 - 260 325 - 520
	Catexol 3500 N	MR	Mid-range water-reducer	5 - 12	325 - 780
	Duraflux 33	MR F	Mid-range water-reducer High-range water-reducer	3 - 5 5 - 8	195 - 520 325 - 520
	Duraflux 66	MR F	Mid-range water-reducer High-range water-reducer	6 - 8 9 - 12	390 - 520 585 - 780
	Stop Set L	D	Water-reducer retarder	2 - 8	130 - 520
	Superflux 2000pc	F	High-range water-reducer	3	195
	<b><u>BASF CONSTR. CHEM.</u></b>				
	Delvo Stabilizer	D	Water-reducer retarder	3	195
	Glenium 3000 NS	F	High-range water-reducer	4 - 12	260 - 780
	Glenium 3030 NS	MR F	Mid-range water-reducer High-range water-reducer	3 - 5 5 - 7	195 - 325 325 - 455
<b>(Continued)</b>					

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### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k	
<b>Continued:</b> <b>903.01</b> Air Entraining Admixtures  <b>903.02</b> Concrete Accelerators  <b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	<b><u>BASF Continued:</u></b> Glenium 3400NV	F	High-range water-reducer	3 - 10	195 - 650	
	Glenium 7500	A F	Water-reducer High-range water-reducer	1.5 3 - 15	100 195 - 978	
	Glenium 7700	MR F	Mid-range water-reducer High-range water-reducer	2 - 4 4 - 15	130 - 160 160 - 980	
	Masterpave	A	Water-reducer	5 - 6	326 - 390	
	Masterpave N	A	Water-reducer	2 - 4	130 - 260	
	MB-AE 90	AE	Air-entraining			
	MB-VR and MB-VR Concentrated	AE	Air-entraining (vinsol resin)			
	MICRO-AIR	AE	Air-entraining			
	Polyheed 900		A	Water-reducer	4	260
			MR	Mid-range water-reducer	7	455
	Polyheed 997		A	Water-reducer	3	195
			MR	Mid-range water-reducer	6	390
			F	High-range water-reducer	10	650
	Polyheed 1725		A	Water-reducer	2.5 - 4	165 - 260
			MR	Mid-range water-reducer	5.5 - 7	360 - 455
			F	High-range water-reducer	8 - 12	520 - 780
	Polyheed FC-100		A	Water-reducer	4	260
			MR	Mid-range water-reducer	8	520
	Pozzolith 80		A	Water-reducer	3.75 - 5.75	245 - 375
			D	Water-reducer retarder	5.75 - 10	375 - 650
	Pozzolith 100-XR		D	Water-reducer retarder	3 - 4	195 - 260
	Pozzolith 200-N		A	Water-reducer	2 - 3	130 - 195
			D	Water-reducer retarder	3 - 6	195 - 390
Pozzolith 220-N		A	Water-reducer	2 - 3	130 - 195	
		D	Water-reducer retarder	3 - 5	195 - 326	
Pozzolith NC-534		C	Accelerator (non-chloride)	10 - 45	650 - 2930	
Pozzutec 20		E	Water-reducer accelerator (non-chloride)	10	651	
Rheobuild 1000		MR	Mid-range water-reducer	9	585	
		F	High-range water-reducer	13	850	
	<b><u>D.W. DAVIS &amp; CO., INC.</u></b> Air Entrainer #500	AE	Air-entraining (vinsol resin)	---	---	

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### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k
<b>Continued:</b>	<b><u>EUCLID CHEMICAL CO.</u></b>				
<b>903.01</b> Air Entraining Admixtures	AEA - 92	AE	Air-entraining	0.5	33
<b>903.02</b> Concrete Accelerators	AEA - 92S	AE	Air-entraining	0.5 - 2	35 - 130
	Accelguard 80	C	Accelerator (non-chloride)	18 - 32	1170 - 2080
<b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	AIR MIX 200	AE	Air-entraining	0.5	33
	EUCO Air Mix	AE	Air-entraining (vinsol resin)	0.75	49
	EUCON MR	A MR F	Water-reducer Mid-range water-reducer High-range water-reducer	4 - 6 6 - 9.5 9.5 - 12	260 - 390 390 - 625 625 - 780
	EUCON WR-75	A	Water-reducer	2.5 - 5	163 - 326
	EUCON WR-91	A D	Water-reducer Water-reducer retarder	3 - 5 5 - 6	195 - 325 325 - 390
	EUCON A+	A MR	Water-reducer Mid-range water-reducer	3 - 6 6 - 8	195 - 390 390 - 520
	EUCON Retarder75	D	Water-reducer retarder	4	260
	EUCON 37	F	High-range water-reducer	16	1042
	EUCON 537	G	High-range water-reducer retarder	16	1042
	EUCON 1037	F	High-range water-reducer	10 - 25	650 - 1630
	PLASTOL 5000	F	High-range water-reducer	3 - 15	195 - 978
	<b><u>GENERAL RESOURCE TECHNOLOGY</u></b>				
	Melchem	F	High-range water-reducer	8	522
	Polychem VR	AE	Air-entraining (vinsol resin)	---	---
	Polychem AE	AE	Air-entraining	---	---
	Polychem SPC	F	High-range water-reducer	6	390
	Polychem KB-1000	A MR	Water-reducer Mid-range water-reducer	3 6 - 8	195 390 - 520
	Polychem 1000	A	Water-reducer	3	195
	Polychem 400 NC	A	Water-reducer	3	195
	Polychem Super Set	C	Accelerator (non-chloride)	16	1043
	Polychem R	D	Water-reducer retarder	3	195
	Polychem Superflo 3000	F	High-range water-reducer	8	522

## QUALIFIED PRODUCTS LIST (QPL)

### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k
<b>Continued:</b> <b>903.01</b> Air Entraining Admixtures	<b><u>PROMIX ADMIXTURES</u></b> <b><u>(PREMIERE CONCRETE ADMIXTURES)*</u></b>				
<b>903.02</b> Concrete Accelerators	EcoFlo SCM 728	A	Water-reducer	3 - 4	195 - 260
		MR	Mid-range water-reducer	6 - 8	390 - 520
<b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	EcoFlo SCM 40	A	Water-reducer	3 - 4	195 - 260
		MR	Mid-range water-reducer	6 - 8	390 - 520
	Optiflo 700	MR	Mid-range water-reducer	5 - 8	325 - 520
	OptiFlo 50	A	Water-reducer	3	195
	OptiFlo 500	A	Water-reducer	2 - 3.5	130 - 230
		D	Water-reducer	3.5 - 5	230 - 325
	OptiFlo Renu	D	Water-reducer	3 - 6	195 - 390
	OptiFlo Plus	MR	Mid-range water-reducer	5 - 12	325 - 780
	OptiFlo MR	MR	Mid-range water-reducer	7 - 12	455 - 780
	OptiFlo 100R	D	Water-reducer	3 - 5	195 - 325
	ConAir	AE	Air-entraining	0.5 - 4	35 - 260
	ConAir VR	AE	Air-entraining (vinsol resin)	0.5 - 4	35 - 260
	ConAir TX	AE	Air-entraining	0.5 - 4	35 - 260
	ConAir 260	AE	Air-entraining	0.5 - 4	35 - 260
	UltraFlo 2000	MR	Mid-range water-reducer	4 - 6	260 - 390
F		High-range water-reducer	6 - 12	390 - 780	
UltraFlo 4600	MR	Mid-range water-reducer	5 - 8	325 - 520	
	F	High-range water-reducer	10 - 20	650 - 1300	
UltraFlo DP	F	High-range water-reducer	4 - 10	260 - 650	
NitroCast K	C	Accelerator (non-chloride)	10 - 90	650 - 5870	
* Beginning June 1, 2009, Promix Admixtures will become Premiere Concrete Admixtures					
	<b><u>RUSSTECH</u></b>				
	LC-400R	D	Water-reducer retarder	3	195 - 390
	RCI	C	Accelerator (non-chloride)	8	520
	RSA-10	AE	Air-entraining		
	Superflo 2000RM	A	Water-reducer	1 - 3	65 - 195
		F	High-range water-reducer	7 - 20	455 - 1300

## QUALIFIED PRODUCTS LIST (QPL)

### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k
<b>Continued:</b>	<b><u>SIKA CORP.</u></b>				
<b>903.01</b> Air Entraining Admixtures	AEA-14	AE	Air-entraining	0.5 - 3	35 - 195
<b>903.02</b> Concrete Accelerators	Plastiment	D	Water-reducer retarder	2 - 8	130 - 520
	Plastocrete 161	A	Water-reducer	2	130
<b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	Sika AEA-15	AE	Air-entraining	0.5 - 3.0	35 - 195
	Sikament 20 ESL	MR F	Mid-range water-reducer High-range water-reducer	4 - 6 7 - 10	260 - 390 455 - 650
	Sikament 686	MR F	Mid-range water-reducer High-range water-reducer	4 - 6 8 - 10	260 - 390 520 - 650
	Sikaplast 500	A MR	Water-reducer Mid-range water-reducer	3.0 - 5.0 5.0 - 7.0	195 - 325 325 - 455
	Sikset NC	C	Accelerator (non-chloride)	10 - 45	650 - 2930
	Viscocrete 2100	F	High-range water-reducer	8 - 10	520 - 650
	Viscocrete 4100	F	High-range water-reducer	8 - 10	520 - 650
	Viscocrete 6100	F	High-range water-reducer	3 - 8	195 - 520

## QUALIFIED PRODUCTS LIST (QPL)

### ADMIXTURES FOR CONCRETE Air Entraining - ASTM C 260; Chemical - ASTM C 494 (See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Dosage min. or range fl oz/cwt	Dosage min. or range ml/100k
<b>Continued:</b> <b>903.01</b> Air Entraining Admixtures	<b><u>W. R. GRACE &amp; COMPANY</u></b>				
	ADVA 190	F	High-range water-reducer	3 - 9	195 - 585
<b>903.02</b> Concrete Accelerators	ADVA Cast 575	F	High-range water-reducer	3 - 10	195 - 650
<b>903.03</b> Water Reducing and Water Reducing Retarding Admixtures for Concrete	Daracem 19	F	High-range water-reducer (40% solids)	12.5	807
	Daracem 50	A(CL)	Water-reducer (contains chloride restricted use, see Note #5)	3 - 10	195 - 650
	Daracem 55	A	Water-reducer	3 - 10	195 - 650
	Daracem 65	A MR	Water-reducer Mid-range water-reducer	4 - 6 6 - 12	260 - 390 390 - 780
	Daracem 100	A F G	Water-reducer High-range water-reducer High-range water-reducer retarder	3 - 7 9 - 12 12 - 15	325 - 455 651 - 781 781 - 977
	Daratard HC	D	Water-reducer retarder	3	195
	Daratard 17	D	Water-reducer retarder	4	260
	Daravair 1000	AE	Air-entraining		
	Daravair 1400	AE	Air-entraining		
	Darex II AEA	AE	Air-entraining		
	Darex EH AEA	AE	Air-entraining	0.5 - 5.0	35 - 325
	Lubricon NCA	C	Accelerator (non-chloride)	15 - 25	975 - 1630
	Mira 92	A F	Water-reducer High-range water-reducer	3 - 5 8 - 15	195 - 326 520 - 978
	Polarset	C	Accelerator (non-chloride)	8 - 60	520 - 3910
	WRDA 20	A D	Water-reducer Water-reducer retarder	2 - 3 3 - 5	130 - 195 195 - 326
	WRDA 82	A	Water-reducer	3	195
	WRDA w/HYCOL	A D	Water-reducer Water-reducer retarder	3 - 4.5 4.5	195 - 293 293

## **SPEC. 903 ADMIXTURE NOTES:**

### 1. Dosage Rate

The dosage rate shown is the minimum quantity permitted according to the Qualified Products List. The dosage indicated is that recommended by the producer or that used in qualification tests for approval of the admixture. There is no assurance that the desired water-reduction and/or retardation will be achieved with these dosages with a particular cement being used, as the effect is dependent on the cement chemistry, concrete temperature, and other factors. Increasing the dosage appreciably above that recommended may result in abnormal behavior of the concrete, such as extremely long or very short setting times. Reducing the dosage below that recommended may have the effect of substantially no change from concrete without the admixture. The dosage shown for retarding admixtures will normally produce a 1- to 3-hour retardation in the setting of the concrete, compared to similar concrete without the admixture, when used at normal temperatures (approximately 21 C). Increased dosage, within reasonable limits, will usually increase the retardation. Use of a retarding admixture will not slow the stiffening of concrete due to loss of slump.

### 2. Air-Entraining Admixtures

The contractor is responsible for verifying the compatibility of all chemical admixtures and the air-entraining admixture. If admixtures are from more than one manufacturer, run a trial batch prior to concrete placement. Provide test results for slump, air-entrainment and seven-day compression for two (2) cylinders.

### 3. Lignin Type Admixtures

Lignin (or lignosulfonate) admixtures typically will cause the entrainment of additional air in air-entrained concrete. This type admixture does not generally entrain air by itself, but makes other air-entraining materials much more efficient. Thus, a change in dosage of either the chemical admixture or the air-entraining admixture may have a more significant effect on the air content than normally expected. It is the contractor's responsibility to be sure the specific admixture proposed for use is compatible with his operations so that excessive air content in the concrete is not developed. Most lignosulfonate type water-reducers will provide a moderate retardation if used at higher dosage rates.

### 4. High-Range Water-Reducers

Type F and G high range water-reducing (HRWR) admixtures (frequently called "superplasticizers") are capable of greater water reduction and greater strength gain than regular Type A water-reducers, or can provide substantial increase in slump while maintaining a cohesive concrete without loss of strength. Type G admixtures will also provide retardation of setting similar to Type D admixtures. Problems with this type of admixture include the following: (a) Loss of slump is frequently much more rapid than with plain concrete or when other admixtures are used, especially for older formulations of superplasticizers; (b) Effectiveness depends on the chemistry of the Portland cement, and the cements generally available in Michigan do not have the most favorable chemistry; (c) The air-void system may be adversely affected. Type F and G admixtures are to be used only according to the provisions of the Standard Specifications.

### 5. Admixtures Containing Chlorides

Some Type A and D admixtures may contain chlorides, as noted in the above listing. Section 903.03 of the Standard Specifications permits the use of these admixtures, except they are prohibited in concrete for bridge superstructure, prestressed concrete, and concrete containing galvanized steel or aluminum.

(End of Admixture Notes)

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name		Manufacturer(s) or Supplier(s)
<b>905.03C1</b> Bar Reinforcement (Epoxy Coating)  <b>NOTE:</b> Epoxy Coating Material Only. The Coating Applicator and Bar Manufacturer can be Approved Manufacturers, see Approved Manufacturers List.	<u>Epoxy Coating Product Name</u> Scotchkote 215 Scotchkote 413 Interpon HD-33 Interpon HD-34 Resicoat 500607 Resicoat 500620 Resicoat RB-600 Nap-Gard 7-2709 Nap-Gard 7-2719  Corvel Green 10-6071 Corvel Green 10-6095 Greenbar 720A009	<u>Repair Coating Product Name</u> Scotchkote 413/215 PC Scotchkote 413/215 PC Interpon HD-5020 Interpon HD 5020 Resicoat 506610 Resicoat 506610 Denso Protal 7200 Nap-Gard 7-2727 Nap-Gard 7-1870 or 7-2727 Corvel 10-6071PC2 Corvel 10-6071PC2 Greenbar 920-G-966/920-C-966	3M 3M Akzo Nobel Powder Coatings Akzo Nobel Powder Coatings Akzo Nobel Powder Coatings Akzo Nobel Powder Coatings Akzo Nobel Powder Coatings Dupont Powder Coating (O'Brien Products) Dupont Powder Coating (O'Brien Products)  Morton Powder Coating Morton Powder Coating Valspar
<b>906.08</b> Shear Developers (Studs)	<u>Markings:</u> N X TW C		Nelson Stud Welding Co. (Div. of Gregory Ind.) Stud Welding Associates, Inc. Tru-Weld from True Fit Products Corp. TRW Cox Industries
<b>908.05</b> Alternate Adjustable Gray Iron Castings For Manholes, Drainage Structures, and Covers	Final Cut Municipal Casting		Site Solutions, Inc., Gibraltor, MI
<b>909.01</b> Adjusting Rings for Manholes and Drainage Structures (Alternatives, Recycled Rubber)	Flex-O-Ring Pivoted Turnbuckle Infra-Riser UGT Grade Ring Whirlygig		American Highway Products American Highway Products East Jordan Iron Works Underground Technologies Whirlygig, Inc.

Spec #	Pipe Material	Joint Components (Inches)	Pipe Diameter (Inches)	Approved Manufacturers
<b>909.03</b> Watertight Joint Systems  (Continued)	Corrugated Metal Pipe	H12 Hugger Band with Single Bolt Bar and Strap with Compression Gasket	12 thru 24	Contech Construction Products, Inc.
	Corrugated Metal Pipe	Gasket-Bidco Wrap 12 x 3/8 Band	12 thru 18 Band 7 24 thru 30 Band 12 & larger Band 21	Jensen Bridge & Supply Co.
	Corrugated Metal Pipe	12 Bolted Band Angle with Compression Gasket Bidco Wrap 6 x 1/8 Band	12 thru 72	Premarc Inc. (Cadillac Facility)
	Corrugated Metal Pipe	Bolted Corrugated Steel Band with Compression Gasket Ensolite IV Series	12 thru 24	St. Regis Culvert Inc.

## QUALIFIED PRODUCTS LIST (QPL)

Spec #	Pipe Material	Joint Components (Inches)	Pipe Diameters (Inches)	Approved Manufacturers
<b>909.03 Continued</b> Watertight Joint Systems	Corrugated Polyethylene Pipe	Gasket Self Locking Bell/Spigot Hancor Blue Seal Single Compression Gasket	12 thru 60	ADS - Hancor
	Corrugated Polyethylene Pipe	Gasket Self Locking Bell/Spigot Hancor SURE-LOK Single Compression Gasket	12 thru 60	ADS - Hancor
	Corrugated Polyethylene Pipe	Bell/Spigot N-12WT Pro-Link Ultra WT Rubber Gasket	12 thru 60	Advanced Drainage Systems, Inc. (ADS)
	Corrugated Polyethylene Pipe	Compression Gasket	12 thru 24	Baughman Tile Co.
	Corrugated Polyethylene Pipe	Haviland Smooth-Flow WT Compression Gasket	12 thru 48	Haviland Drainage Products Co.
	Corrugated Polyethylene Pipe	Gold Flow Corrugated SLCP Compression Gasket	12 thru 36	Prinsco, Inc.
	Corrugated Polyethylene Pipe	Storm Seal Gasketed Bell/Spigot Rubber or Polyisoprene Gasket	12 thru 48	Quality Culvert, Inc., Wausau
	Corrugated Polyvinyl Chloride Pipe (PVC)	Integrally Formed Elastomeric Gasket, Bell/Spigot	12 thru 36	Contech Construction Products, Inc.
	Concrete Pipe	Single Offset Self-Lubricating Gasket, Tylox - Hamilton Kent	12 thru 24	Co-Pipe Products Inc.
	Concrete Pipe	Compression Gasket Press Seal Gasket Co.	12 thru 24	Independent Concrete Pipe Co.
	Concrete Pipe	Compression Gasket	12 thru 24	National Concrete Prod.
	Concrete Pipe	Gasket-Press Seal/Gasket Corp -Profile X-Section Gasket; Single Offset Self-Lubricating Gasket, Tylox-Hamilton Kent	12 thru 36 Trylox or Profile 42 thru 144 (O-ring)	Northern Concrete Pipe, Inc.
	Concrete Pipe	Gasket-Pipe Gasket & Supply Corp. O-Ring X-Section Gasket Compression Gasket, Press Seal Gasket Corp.	12 thru 72  12 thru 24	Premarc, Inc.
	Concrete Pipe	Compression Gasket, Profile Cross Section, O-Ring Cross Section, Pipe Gasket & Supply	12 thru 24	Upper Peninsula Concrete Pipe Co.
	Concrete Pipe	Profile X-Section Gasket, Hamilton Kent	12 thru 36	Wausaw Concrete

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)
<b>909.05A1</b> Polymer Coated Corrugated Steel Pipe	Trenchcoat Protective Film	Dow Chemical Company
<b>909.08C</b> Bridge Deck Drain Extensions (Fiberglass)		Ann Arbor Plastic Industrial Plastic Nero Plastic, Inc. Professional Fiberglass
<b>909.10</b> Drainage Marker Post	See Delineator Posts 2. Plastic Material, Spec 919.03D	
<b>910.04</b> Silt Fence Geotextile Fabric	Belton 940 Geoturf S1200 Geoturf S1400 Kintex SF-3 GTF - 180 Propex 2130 SKAPS W100 TerraTex SC Willacoochee, Style 1210	Belton Industries, Inc., Norcross, SC CSI Geoturf, Highland, MI CSI Geoturf Geoproducts, Inc., Birmingham, MI LinQ Industrial Fabrics Propex Fabrics, Inc., Austell, GA Skaps Industries, Athens, GA Hanes Geo Components, Winston-Salem, NC Willacoochee, GA
<b>912.09Q</b> Recycled Plastic Or Rubber Guardrail Offset Blocks	<u>Model</u> <b>Type B/BD</b> Dura-Bull Bloclout SPI #4 Eco-Block P- Block Mondo Block #NREC EDEN Block Polylumber PL6814R King Block <b>Type T/TD</b> Mondo Block Steel Post Model #NREC EDEN Block Polylumber King Size King Block	Creative Building Products Eco-Composites LLC Interstate Timber Products Co. Mondo Polymer Technologies Project Back to EDEN Ramco International Trinity Industries, Inc.  Mondo Polymer Technologies Project Back to EDEN Ramco International Trinity Industries, Inc.
<b>914.06</b> Epoxy Resin Adhesive & Temporary Seal (Crack Injection)	Akabond 817 Akabond 818 Akabond 819 MBT P&R Concesive 1380 MBT P&R Concesive 1360 BHS-1617 BHS-1618 BHS-1619 Armdite 8560 True Grip 150 NIP124LV CI 060 E Bond 550 Sika-Dur 35 Hi- Mod L.V. Sika-Dur 52 Pro Poxxy 50 Super LV	Axson, Eaton Rapids, MI (formerly Akemi Corp) Axson, Eaton Rapids, MI (formerly Akemi Corp) Axson, Eaton Rapids, MI (formerly Akemi Corp) BASF Construction Chemical, Shakopee, MN BASF Construction Chemical, Shakopee, MN Blackhawk Sales Co, Inc, Rock Island, IL Blackhawk Sales Co, Inc, Rock Island, IL Blackhawk Sales Co, Inc, Rock Island, IL Ciba Corporation, East Lansing, MI J. Dedoes, Inc., Milford, MI Epoxy Unlimited, Harrison Twp, MI Hilti Inc., Columbus, OH Ridgemoor Supply, Kentwood, MI Sika Corp., Lindhurst, NJ Sika Corp., Lindhurst, NJ Unitex, Kansas City, MO
<b>914.07A</b> Transverse Pavement Joint 1. Dowel Bar Coating (Epoxy)  2. Bond Release	See Reinforcement Bar Coating, Spec. 905.03C  Bond Release Agent - Tectyl 506	  Tectyl Ashland
<b>914.08</b> Transverse Pavement Joint, <u>Deformed</u> Dowel Bar Coating	See Reinforcement Bar Coating, Spec. 905.03C	
<b>914.09</b> Straight & Bent Tie Bars for Longitudinal Pavement Joints (Lane Ties), Coating	See Reinforcement Bar Coating, Spec. 905.03C	

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)	
<p><b>914.10</b> Structure Expansion Anchors (Mechanical Expansion Anchors)</p> <p>Pull-out Testing is required per Q.A. Manual.</p> <p><b>NOTE:</b> Mechanical Expansion Anchors shall be set by applying the manufacturer's specified torque. The turn of the nut method will not be an acceptable alternative.</p>	<p>1. Self Drilling a) ITW Ramset/Redhead - Self Drilling (3/8" (10mm), 1/2" (13mm), dia. anchors only)</p> <p>2. Pre-Drilled Flush Type a) Hilti HDI (3/8" (10mm), 1/2" (13mm), 3/4" (19mm), dia. anchors only) b) ITW Ramset/Redhead - Multi-Set II (3/8" (10mm), 1/2" (13mm), 5/8" (16mm), dia. anchors only)</p> <p>3. Pre-Drilled Stud Type - Not suitable for lane ties or for guardrail end shoes because of exposed thread. a) Hilti Kwik-Bolt II or Kwik-Bolt III 3/8" (10mm) dia. anchor - min. embedment = 2 1/2" (65mm) 1/2" (13mm) dia. anchor - min. embedment = 3 1/2" (90mm) 5/8" (16mm) dia. anchor - min. embedment = 4" (100mm)</p>		
<p><b>914.11</b> Prefomed Waterproofing Membrane</p> <p><b>NOTE:</b> Not to be used on Treated Wood Materials.</p>	<p>Carlisle CCW 711-Highway and Bridge Membrane Geotac Waterproofing Membrane Geotac Polyester HS Protecto Wrap M400 AR Sealtight Mel-Dek</p>	<p>Carlisle Coatings and Waterproofing Crafco Inc. Crafco Inc. Protecto Wrap Co. W. R. Meadows</p>	
<p><b>915</b> Coating Systems for Steel Structures, Hanger Assemblies and End Diaphragms</p> <p><b>NOTES:</b> *Indicates product can be used on faying surfaces of slip critical bolted connections which require Class "B".</p> <p>+Information from the Slip Coefficient and Creep Resistance Test Certificate is given for use with primed bolted connections to meet Class "B" requirements.</p> <p>#Alternative primer can only be used on faying surfaces of slip critical bolted connections which require Class "B".</p>	<p>*Carbozinc 859 <i>+100 hrs min cure, 6 mils max DFT, 10 oz/gal max thin</i> Carbozinc 561 Carbozinc 134HG #Carbozinc 11 HS Inorganic Zinc Primer <i>+18 hrs min cure, 6 mils max DFT, 15 oz/gal max thin</i></p> <p>*Carbozinc 859 <i>+100 hrs min cure, 6 mils max DFT, 10 oz/gal max thin</i> Carbozinc 888 Carbozinc 133LH #Carbozinc 11 HS Inorganic Zinc Primer <i>+18 hrs min cure, 6 mils max DFT, 15 oz/gal max thin</i></p> <p>E-2800 E-500 M.I.O. E-600 or E-700</p> <p>24-166 Zinc Rich Epoxy Primer 24-125 White Epoxy Midcoat 27-250 Aliphatic Urethane Top Coat</p> <p>Catha-Coat 303H Devran 224 HS Devthane 359 #Catha-Coat® 304V Silicate Inorganic Zinc Coating <i>+24 hrs min cure, 3 mils max DFT, 0 oz/gal max thin</i></p> <p>Interzinc 52 Intergard 475 HS Interthane 990HS #Interzinc® 22HS Inorganic Zinc Silicate Primer <i>+16 hrs min cure, 4 mils max DFT, 8 oz/gal max thin</i></p> <p>Polyzinc 3079 Polylock 2260 Diamondglaze 500 or Diamondglaze M</p> <p>*Aquapon 97-670 Series Zinc-Rich Primer <i>+24 hrs min cure, 4 mils max DFT, 0 oz/gal max thin</i> Pitt-Guard All Weather DTR Epoxy 97-946 Pitthane Ultra Gloss Urethane Enamel 95-8800</p>	<p><u>Coats</u> 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p> <p>1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup></p>	<p>Carboline Company Approved for use on projects let prior to 09/30/08</p> <p>Carboline Company Approved for use on projects let prior to 03/31/10</p> <p>Environmental Protective Coating Approved for use on projects let prior to 09/30/08</p> <p>Hoffer's Inc. Approved for use on projects let prior to 09/30/08</p> <p>ICI Devoe Coatings Approved for use on projects let prior to 09/30/08</p> <p>International Protective Coatings Approved for use on projects let prior to 09/30/08</p> <p>Polycoat Products Approved for use on projects let prior to 09/30/08</p> <p>PPG Industries Approved for use on projects let prior to 03/31/10</p>
<b>(Continued)</b>			

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)			
<p><b>915 Continued</b> Coating Systems for Steel Structures, Hanger Assemblies and End Diaphragms</p> <p><b>NOTES:</b> *Indicates product can be used on faying surfaces of slip critical bolted connections which require Class "B".</p> <p>+Information from the Slip Coefficient and Creep Resistance Test Certificate is given for use with primed bolted connections to meet Class "B" requirements.</p> <p>#Alternative primer can only be used on faying surfaces of slip critical bolted connections which require Class "B".</p>	<p>Urethane Zinc-Rich Primer UC65147/97-674 Pitt-Guard All Weather DTR Epoxy 97-946 Pitthane Ultra Gloss Urethane Enamel 95-8000 #Aquapon 97-670 Series Zinc-Rich Primer <i>+24 hrs min cure, 4 mils max DFT, 0 oz/gal max thin</i></p>	1 <sup>st</sup>	PPG Industries Approved for use on projects let prior to 09/30/08		
	<p>*Amercoat 68HS <i>+72 hrs min cure, 3 mils max DFT, 8 oz/gal max thin</i> Amercoat 399 Amercoat 450H #Dimecote 9VOC Zinc-Rich Primer <i>+24 hrs min cure, 4 mils max DFT, 7 oz/gal max thin</i></p>	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup>	PPG Protective & Marine Coatings Approved for use on projects let prior to 09/30/09		
	<p>*Zinc Clad III HS <i>+168 hrs min cure, 5 mils max DFT, 12 oz/gal max thin</i> Epoxy Mastic D.O.T. Acrolon 218 HS #Corothane I GalvaPac One Pack Zinc Primer <i>+24 hrs min cure, 4 mils max DFT, 0 oz/gal max thin</i></p>	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup>	Sherwin-Williams Approved for use on projects let prior to 09/30/08		
	<p>*Zinc Clad III HS <i>+168 hrs min cure, 5 mils max DFT, 12 oz/gal max thin</i> Macropoxy 646 Acrolon 218 HS #Corothane I GalvaPac One Pack Zinc Primer <i>+24 hrs min cure, 4 mils max DFT, 0 oz/gal max thin</i></p>	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup>	Sherwin-Williams Approved for use on projects let prior to 07/31/10		
	<p>*MC-Zinc <i>+48 hrs min cure, 4 mils max DFT, 6 oz/gal max thin</i> MC-Miomastic or MC-Ferrox B MC-Ferrox A</p>	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup>	Wasser High Tech Coatings Approved for use on projects let prior to 09/30/08		
<p><b>916.02</b> Silt Fence (Fabric Only)  (See also 910.04)</p>	<p>Belton 940 Geoturf S1200 Geoturf S1400 Kintex SF-3 GTF - 180 Propex 2130 SKAPS W100 TerraTex SC Willacoochee, Style 1210</p>	<p>Belton Industries, Inc., Norcross, SC CSI Geoturf, Highland, MI CSI Geoturf Geoproducts, Inc., Birmingham, MI LinQ Industrial Fabrics Propex Fabrics, Inc., Austell, GA Skaps Industries, Athens, GA Hanes Geo Components, Winston-Salem, NC Willacoochee, GA</p>			
<p><b>917.12</b> Seed and Seeding Mixtures (Varieties)  Varieties of Seed on QPL Date of Testing Not to Exceed One Year  Approved MDOT seed mixes. See Table 917-1 in the Spec Book.  For Approved Manufacturers of Seed Mixes, see 917.12 in Approved Manufacturers section.  *Species</p>	<p><u>*Kentucky Blue Grass</u> Baron Bristol Cannon Columbia Eva Nassau Parade Raven Rugby Touchdown Viva</p>	<p><u>*Perennial Ryegrass</u> Advent Boardwalk Buccaneer Charger Elegance Fiesta II Manhattan 3 Nighthawk Palmer II Pennant Pennfire Prelude II Prism Quickstart Saturn Target</p>	<p><u>*Hard Fescue</u> Aurora Frontier (4AG) Reliant Rescue Scaldis Spartan</p>	<p><u>*Creeping Red Fescue</u> Dawson Hector Logro Marker Pennlawn Ruby Shademaster</p>	<p><u>*Fults Puccinellia Distans</u> Fults Salty</p>

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)
<b>917.15B1</b> Turf Mulch Blankets, High Velocity Mulch Blankets (Two Sided Net)	AEC Premier Straw Highway Double Net Contech High Velocity ERO-MAT ECS-1B Mulch Blanket Enviroscape HV Straw Mulch Blanket S2000 S2 Erosion Control Blanket WS072B Erosion Control Blanket DS-150 Erosion King High Velocity Double Net Verdyol High Velocity Excelsior Verdyol High Velocity ERO-MAT Excel SS-2 (Regular) WinterStraw HVW	American Excelsior Co. Contech Construction Products East Coast Erosion Control Blankets Enviroscape ECM S.I. Geosolutions / Land Green Fix America North American Green Rhino Seed & Landscape Supply Verdyol Alabama, Inc. Verdyol Alabama, Inc. Western Excelsior Corp. Winters Excelsior Company
<b>917.15B2</b> Turf Mulch Blankets, Mulch Blankets (Single Sided Net)	AEC Premier Straw Highway Single Net Curlex Blankets Curlex ICL Contech ERO-MAT Futerra Mulch Blanket ECS-2B Mulch Blanket Enviroscape Straw Mulch Blanket S1000 WS05 Erosion Control Blanket DS-75 Xcel Excelsior Erosion Control Blankets Erosion King Mulch Blanket S1 Erosion Control Blanket Verdyol Standard Excelsior Blanket Verdyol Standard ERO-MAT ERO-MAT V75S Excel SR-1 (Regular) WinterStraw SNW	American Excelsior Co. American Excelsior Co. American Excelsior Co. Contech Construction Products ConWed Fibers East Coast Erosion Control Blankets Enviroscape ECM Green Fix America North American Green PPS Packaging Co. Rhino Seed & Landscape Supply Synthetic Ind. / BonTerra America Verdyol Alabama, Inc. Verdyol Alabama, Inc. Verdyol-Canada Western Excelsior Corp. Winters Excelsior Company
<b>917.15C5</b> Mulch Binders (Tackifiers)	<u>A. Excelsior/Guar Gum Base Adhesive</u> Excel Fiber Mulch ConWed 2000 Refiber Mix w/TAC Refiber Wood w/TAC <u>B. Guar Gum Base Adhesive</u> Second Nature Tacpac GTX Geotack EcoTak-OP5 Finn A500 Hydro-Stik Landtack Lawn Tack <u>C. Hydrophilic Polymers</u> Agro Tack MP Exact-Tac (E-T) Con-Tack A/T Eco-Tak-SAT 11 RMB Plus <u>D. Latex Base Adhesive</u> BUTOFAN NS 268 <u>E. Paperfiber Mulch Binders</u> Applegate Mulch Cellin Fiber Mulch Geoturf Hydro Mulch Geoturf Hydro Mulch Plus Hydro Green Hydroseeding Mulch Hydro Green Hydroseeding Mulch Rhino Greenstar Rhino Greenstar Plus	American Excelsior Co. ConWed Fibers Wood Recycling, Inc. Wood Recycling, Inc.  Central Fiber Corp. CSI Geoturf, Inc. Eastern Products, Inc. Finn Corporation Midwest Land Supply, Inc. Rhino Seed & Landscape Supply  Agro Diversified Industries American Excelsior Co. ConWed Eastern Products, Inc. Reinco Mulch Binder Corp.  BASF Corp.  Applegate Insulation System Cellin Manufacturing, Inc. CSI/Geoturf, Inc. CSI/Geoturf, Inc. Nu-Wool, Inc. Nu-Wool, Inc. Rhino Seed & Landscape Supply Rhino Seed & Landscape Supply
<b>918.06E</b> Light Weight Composite Handholes	Quazite Box PG1730BA12 & Cover PG1730HA Synertech Underground Enclosure S1730B12FA & Cover S1730HBB0A	Hubbell Synertech Molded Products

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name			Manufacturer(s) or Supplier(s)																																																							
<b>918.08C</b> Light Standards, Frangible Transformer Bases  <b>New Listing March 2005:</b> Contact MDOT, Construction & Technology Div., Structural Unit (517) 322-5707 or Materials Control (517) 322-5665	<u>11 Inch Bolt Circle</u> TB1-17 Modified TB2-17  <u>13 Inch Bolt Circle</u> TB1-17 TB1-17 Modified			Akron Foundry Co.																																																							
<b>919.02B1</b> Reflective Sheeting	<u>Type III</u> Series 3870 -- -- Nikkalite Ultra-lite Grade II	<u>Type IV</u> Series 3930 -- T-6500 Series --	<u>Type IX</u> Series 3990 Series 4000 T-9500 Series --	3M 3M Avery Dennison Nippon Carbide																																																							
<b>919.03D</b> Delineator Post 2. Plastic, Flexible	Survivor Delineator Post Flexi-Guide 400 Series Flexi-Guide 500 Series  Flexstake HD 600 Series Flexstake SM 700 Series Flexstake TM 650 Series Flexstake TM 750 Series EZ Drive 2 Marker SH248GP3			Carsonite Filtrona Extrusion/ Davidson Traffic Control Products Flexstake Flexstake Flexstake Flexstake Flexstake Safe-Hit	<u>Distributor</u> Carrier & Gable, Inc.																																																						
<b>920.01A</b> Cold Plastic Tape, Permanent (Long Line, Legends & Crosswalks)  * WR Tape is wet-night retro reflective	Cold Plastic Tape (Preformed Long Line): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>White</u></th> <th style="text-align: left;"><u>Yellow</u></th> <th style="text-align: left;"><u>Adhesive</u></th> </tr> </thead> <tbody> <tr> <td>380</td> <td>381</td> <td>SP44</td> </tr> <tr> <td>5730</td> <td>5731</td> <td>SP44</td> </tr> <tr> <td>*380 WR</td> <td>*381 WR</td> <td>SP44</td> </tr> <tr> <td>Director</td> <td>Director</td> <td>DP-E4</td> </tr> </tbody> </table> Cold Plastic Tape (Preformed Legends & Symbols): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>White</u></th> <th style="text-align: left;"><u>Yellow</u></th> <th style="text-align: left;"><u>Adhesive</u></th> </tr> </thead> <tbody> <tr> <td>5730</td> <td></td> <td>E-44 Contact Cement</td> </tr> <tr> <td>6330</td> <td></td> <td>E-44 Contact Cement</td> </tr> <tr> <td>270 ES</td> <td>271 ES</td> <td>P50</td> </tr> <tr> <td>380 ES</td> <td>381 ES</td> <td>P50</td> </tr> <tr> <td>ATM 300</td> <td></td> <td>ATM Black TAC</td> </tr> <tr> <td>Premark 20/20</td> <td></td> <td></td> </tr> <tr> <td>Director</td> <td></td> <td>DP-E4</td> </tr> </tbody> </table> Cold Plastic Tape (Preformed Crosswalks & Stop Bars): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>White</u></th> <th style="text-align: left;"><u>Adhesive</u></th> </tr> </thead> <tbody> <tr> <td>5760</td> <td>E-44 Contact Cement</td> </tr> <tr> <td>380</td> <td>E-44 Contact Cement</td> </tr> <tr> <td>270 ES</td> <td>P50</td> </tr> <tr> <td>380 ES</td> <td>P51</td> </tr> <tr> <td>ATM 300</td> <td>ATM Black TAC</td> </tr> <tr> <td>Premark 20/20</td> <td></td> </tr> <tr> <td>Director</td> <td>DP-E4</td> </tr> </tbody> </table>			<u>White</u>	<u>Yellow</u>	<u>Adhesive</u>	380	381	SP44	5730	5731	SP44	*380 WR	*381 WR	SP44	Director	Director	DP-E4	<u>White</u>	<u>Yellow</u>	<u>Adhesive</u>	5730		E-44 Contact Cement	6330		E-44 Contact Cement	270 ES	271 ES	P50	380 ES	381 ES	P50	ATM 300		ATM Black TAC	Premark 20/20			Director		DP-E4	<u>White</u>	<u>Adhesive</u>	5760	E-44 Contact Cement	380	E-44 Contact Cement	270 ES	P50	380 ES	P51	ATM 300	ATM Black TAC	Premark 20/20		Director	DP-E4	3M 3M 3M Volare/Swarco Ind., Inc.  3M 3M 3M 3M Advanced Traffic Markings Flint Trading Volare/Swarco Ind., Inc.  3M 3M 3M 3M Advanced Traffic Markings Flint Trading Volare/Swarco Ind., Inc.
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<b>920.01A</b> Hot Applied Thermoplastic Permanent (Long Lines, Legends & Crosswalks)	<u>White</u> Premark 20/20 Flex Plus			Flint Trading																																																							

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)																					
<b>920.01B2a</b> Waterborne, Liquid Pavement Marking Material	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>White</u></td> <td style="text-align: center;"><u>Yellow</u></td> <td style="text-align: center;"><u>Lead Free Yellow</u></td> </tr> <tr> <td>BP-5760</td> <td>B-5761</td> <td>P8479</td> </tr> <tr> <td>TM-2204</td> <td></td> <td>TM-2205</td> </tr> <tr> <td>982211</td> <td></td> <td>982212</td> </tr> <tr> <td>982221</td> <td></td> <td>982222</td> </tr> <tr> <td>982201</td> <td></td> <td>982202</td> </tr> </table>	<u>White</u>	<u>Yellow</u>	<u>Lead Free Yellow</u>	BP-5760	B-5761	P8479	TM-2204		TM-2205	982211		982212	982221		982222	982201		982202	Baltimore Paint (Sherwin Williams) Baltimore Paint (Sherwin Williams) Ennis Paint Co. Ennis Paint Co. Ennis Paint Co.			
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<b>920.01B2b</b> Regular (Solvent), Liquid Pavement Marking Materials	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>White</u></td> <td style="text-align: center;"><u>Yellow</u></td> <td style="text-align: center;"><u>Lead Free Yellow</u></td> </tr> <tr> <td>TM-5604</td> <td></td> <td>TM-5607</td> </tr> <tr> <td>982271</td> <td>982272</td> <td>982282</td> </tr> </table>	<u>White</u>	<u>Yellow</u>	<u>Lead Free Yellow</u>	TM-5604		TM-5607	982271	982272	982282	Baltimore Paint (Sherwin Williams) Ennis Paint Co.												
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TM-5604		TM-5607																					
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<b>920.01B2c</b> Epoxy, Liquid Pavement Marking Materials	<table style="width: 100%; border: none;"> <tr> <td>Fast Cure, LS 50</td> <td>White and Yellow</td> </tr> <tr> <td>Slow Cure LS 60</td> <td>White and Yellow</td> </tr> <tr> <td>Slow Cure, Mark 55.2</td> <td>White and Yellow</td> </tr> <tr> <td>Fast Cure, Mark 55.3</td> <td>White and Yellow</td> </tr> <tr> <td>Slow Cure, Mark 55.4</td> <td>White and Yellow</td> </tr> </table>	Fast Cure, LS 50	White and Yellow	Slow Cure LS 60	White and Yellow	Slow Cure, Mark 55.2	White and Yellow	Fast Cure, Mark 55.3	White and Yellow	Slow Cure, Mark 55.4	White and Yellow	Epo-Plex Epo-Plex Poly-Carb, Inc. Poly-Carb, Inc. Poly-Carb, Inc.											
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<b>920.01B2c</b> Polyurea, Liquid Pavement Marking Materials	<table style="width: 100%; border: none;"> <tr> <td>1000 LPM</td> <td>White Long Lines Special Marking</td> <td>3M</td> </tr> <tr> <td>1001 LPM</td> <td>Yellow Long Lines Special Marking</td> <td>3M</td> </tr> <tr> <td>1200 LPM</td> <td>White Long Lines</td> <td>3M</td> </tr> <tr> <td>1201 LPM</td> <td>Yellow Long Lines</td> <td>3M</td> </tr> <tr> <td>LS90</td> <td>White and Yellow Long Lines</td> <td>Epo-Plex</td> </tr> <tr> <td>LS90</td> <td>White Special Markings</td> <td>Epo-Plex</td> </tr> <tr> <td>HPS-5</td> <td>White and Yellow</td> <td>IPS</td> </tr> </table>	1000 LPM	White Long Lines Special Marking	3M	1001 LPM	Yellow Long Lines Special Marking	3M	1200 LPM	White Long Lines	3M	1201 LPM	Yellow Long Lines	3M	LS90	White and Yellow Long Lines	Epo-Plex	LS90	White Special Markings	Epo-Plex	HPS-5	White and Yellow	IPS	
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<b>920.01B2c</b> Modified Urethane, Liquid Pavement Marking Materials	<table style="width: 100%; border: none;"> <tr> <td>HPS-4</td> <td>White</td> <td>IPS</td> </tr> <tr> <td>HPS-4</td> <td>Yellow</td> <td>IPS</td> </tr> </table>	HPS-4	White	IPS	HPS-4	Yellow	IPS																
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<b>920.01B2d</b> Thermoplastic, Liquid Pavement Marking Material	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>White</u></td> <td style="text-align: center;"><u>Yellow</u></td> </tr> <tr> <td>Dobco Smart Spray-Hydro W2SS7056</td> <td>Dobco Solar Smart-Hydro W2SS7006</td> </tr> <tr> <td>Dobco Smart Spray-Alkyd W1SS7056</td> <td>Dobco Solar Smart-Alkyd W1SS7006</td> </tr> <tr> <td>884255</td> <td>884940</td> </tr> <tr> <td>884255B</td> <td>884940B</td> </tr> <tr> <td>885590</td> <td>885593</td> </tr> <tr> <td>885590B</td> <td>885593B</td> </tr> <tr> <td>Swarcotherm EWH 131</td> <td>Swarcotherm EYH 132</td> </tr> </table>	<u>White</u>	<u>Yellow</u>	Dobco Smart Spray-Hydro W2SS7056	Dobco Solar Smart-Hydro W2SS7006	Dobco Smart Spray-Alkyd W1SS7056	Dobco Solar Smart-Alkyd W1SS7006	884255	884940	884255B	884940B	885590	885593	885590B	885593B	Swarcotherm EWH 131	Swarcotherm EYH 132	Dobco-Sherwin Williams  Dobco-Sherwin Williams  Ennis Paint Co. Ennis Paint Co. Ennis Paint Co. Ennis Paint Co. Swarco					
<u>White</u>	<u>Yellow</u>																						
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885590	885593																						
885590B	885593B																						
Swarcotherm EWH 131	Swarcotherm EYH 132																						
<b>920.01B2d</b> Thermoplastic, Blocks Rumble Strips & Snowmobile Crossings	E411W (Block) Rumble Strip E4190 (Block) White Darkened to Gray Snowmobile Crossing	Cleansol Cleansol E-4																					
<b>920.01B2e</b> Thermoplastic, Sprayable, Liquid Pavement Marking Material	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>White</u></td> <td style="text-align: center;"><u>Yellow</u></td> </tr> <tr> <td>01-WHK-BADA</td> <td>01-YHK-AADA</td> </tr> <tr> <td>884824</td> <td>884825</td> </tr> <tr> <td>Swarcoplast</td> <td>Swarcoplast</td> </tr> <tr> <td>EWHMI-001</td> <td>SYHMI-001</td> </tr> </table>	<u>White</u>	<u>Yellow</u>	01-WHK-BADA	01-YHK-AADA	884824	884825	Swarcoplast	Swarcoplast	EWHMI-001	SYHMI-001	Crown Technology Ennis Paint Co. Swarco											
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EWHMI-001	SYHMI-001																						
<b>920.01C</b> Raised Pavement Markers  <b>NOTE:</b> All lenses on a corridor shall be of the same model.	<u>Casting Model and Manufacturer</u> 101LP Stimsonite B-250 Nightline	<u>Available Lenses</u> <u>3M Model 190 series</u> RPM-190-W Monodirectional crystal lens RPM-190-Y Monodirectional amber lens RPM-190-2W Bidirectional crystal lens RPM-190-2Y Bidirectional amber lens  <b>NOTE:</b> The following lenses only available for existing roadway castings. <u>Stimsonite Model 940 series</u> 940AW - Bidirectional crystal lens 940AY - Bidirectional amber lens 940BW - Monodirectional crystal lens 940BY - Monodirectional amber lens																					

## QUALIFIED PRODUCTS LIST (QPL)

Spec # and Material Name	Product Name	Manufacturer(s) or Supplier(s)		
<b>922.02</b> Traffic Maintenance and Control, Temporary Signs	Engineering Grade Sheeting (Type I) (Type VII & All Orange must be Fluorescent) Flexible Roll Up Signs Engineering Grade Sheeting (Type I) Engineering Grade Sheeting (Type I) Flexible Roll Up Signs Prismatic Sheeting	3M, St. Paul, MN 3M, St. Paul, MN 3M, St. Paul Avery Fasson, Painsville, Ohio Nippon Carbide Industries, Whitehouse, OH Reflexite Marathon Stimsonite Corp.		
<b>922.03D</b> Traffic Maintenance and Control, Type III Barricade, Reflective Sheeting		3M, St. Paul, MN Avery Fasson, Painsville, OH Nippon Carbide Industries, Whitehouse, OH		
<b>922.03E1</b> Barriers Reflector Markers, Temporary and Permanent	Astro Optics JD Stimsonite 965 BAM Vega JD	Astro Optics Corporation Stimsonite Corporation Stuckley, L.L.C. Vega Molded Plastics		
<b>922.04A</b> Traffic Maintenance and Control Temporary Pavement Markings  A. Type R and NR Tape  B. Paint - See Specific Paint Type in Section 920.01B2  *WR Tape is wet-night retro reflective	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <u>White (Type)</u> 5160 (NR) 5710 (R) 620 (R) *780 WR (R) ATM 200 (R) Series 100 (R) Flex-O-Line 200 (NR) Prismoline (R) RW-140 (R) Aztec 100-W (NR) Aztec 102 (R) Director-2 (R) Visaline CG (NR) </td> <td style="width: 50%; vertical-align: top;"> <u>Yellow (Type)</u> 5161 (NR) 5711 (R) 621 (R) *781 WR (R) ATM 200 (R) Series 100 (R) Flex-O-Line 200 (NR) Prismoline (R) RY-140 (R) 100-Y (NR) 390 (R) Director-2 (R) Visaline CG (NR) </td> </tr> </table>	<u>White (Type)</u> 5160 (NR) 5710 (R) 620 (R) *780 WR (R) ATM 200 (R) Series 100 (R) Flex-O-Line 200 (NR) Prismoline (R) RW-140 (R) Aztec 100-W (NR) Aztec 102 (R) Director-2 (R) Visaline CG (NR)	<u>Yellow (Type)</u> 5161 (NR) 5711 (R) 621 (R) *781 WR (R) ATM 200 (R) Series 100 (R) Flex-O-Line 200 (NR) Prismoline (R) RY-140 (R) 100-Y (NR) 390 (R) Director-2 (R) Visaline CG (NR)	3M 3M 3M 3M ATM Brite-line Technologies FOL Tape, LLC Linear Dynamics/ Carrier & Gable Market Manager Rd Tape, Trelleborg Ind. AB P.B. Laminations, Inc. P.B. Laminations, Inc. Volare/ Swarco Industries, Inc. Volare/ Swarco Industries, Inc.
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<b>922.04B</b> Temp. Raised Pavement Markers	Type 1: Model 932 Chip Seal Marker TRPM Chip Seal Marker Type 2: Model 932 Overlay Marker Temporary Overlay Marker Type 3: Stimsonite Model 88	Apex Universal, Inc. Bunzl Extrusions/Davidson Traffic Control Prod Apex Universal, Inc. Bunzl Extrusions/Davidson Traffic Control Prod Stimsonite Corporation		
<b>922.05</b> Traffic Maintenance and Control, Lighted Arrows Type B and Type C (Solar Assist)	Eclipse 2220 SE/ALT SEH 15-2-B-P SEH 15-2-B-5 SEH 15-3-B-S SEH 15-3-B-S Retrofit unit with aluminum sign panel DLSE Model 4000 SumUp Solar Arrow Board VM-4815 Silent Sentinel Model AB-0515 Silent Sentinel Model AB-0715 Silent Sentinel Model AB-1015 S6000-LED 15 TC1-15S TCI-15S Retrofit unit with aluminum sign panel TC4- 15S WTSP110-LSA WAAW-15SB-WA-MICH WAAW-15SB-STD	Allmand Brothers, Inc. Allmand Brothers, Inc. Allmand Brothers, Inc. Allmand Brothers, Inc. Allmand Brothers, Inc. Amida Industries, Inc. Amstate, Inc. National Signal, Inc. Signalisation Ver-Mac, Inc. Solar Technology Solar Technology Solar Technology Tracom Dietz Trafcon Industries Trafcon Industries Trafcon Industries Wanco, Inc. Work Area Protection Corp. Work Area Protection Corp.		