CITY OF MESA APPROVED PRODUCTS LIST – WASTEWATER

APPROVED PRODUCTS LIST INDEX

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INDEX - APPROVED PRODUCTS LIST

WW-0
OVERVIEW
The City of Mesa (City) has established procedures for the review and approval of products used in the wastewater system. All products considered for use in the wastewater system must be reviewed and approved by the City prior to being included in the Approved Product List (APL).

Through previous investigation, usage by the City, and industry performance history, certain types, brands and models of products and materials have established a satisfactory in-service reliability record. These products have been tabulated by manufacturer's names and identifying numbers on the APL.

Use by Design Engineers: The APL includes products that meet the needs of most wastewater construction projects within the City. Design engineers must however, confirm that products in the APL meet their project needs. If the project requires products of different size, material, or design than those listed in the APL, the design engineer must seek approval by the City prior to their use.

Use by Contractors: The APL, by itself does not constitute a submittal by the contractor. The contractor must submit manufacturer technical data sheets of sufficient detail to adequately describe the product or materials for each project. Submittals shall address all requirements contained in the APL data sheet as well as applicable project specifications. The corresponding APL data sheet should accompany the submittal for listed projects.

Use by Contractor Submittal Reviewers: The APL is intended to expedite reviews of product submittals made by contractors. Contractor submittal reviewers must confirm the following to ensure that products comply with the APL:

- The product meets the functional needs of the project.
- The product is of the type specified for use on the project.
- The product is in the category covered by the APL.
- The manufacturer of that product is listed on the APL.
- The product is within the size range listed on the APL.
- The model number, serial number or manufacturer designation is listed on the APL.
- The product meets all requirements in the applicable specifications, special provisions, details and construction notes in the project contract documents.

GENERAL NOTES AND REQUIREMENTS
1. Contractors shall confirm that the construction contract documents for City of Mesa allow for use of products on the APL. Project-specific Special Provisions or Technical Specifications in the project contract documents may specify other products, in which case the project specifications shall govern if approved by the City.

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2. Projects under construction shall only utilize products on the current Approved Products List. **No substitutions or “approved equal” products will be allowed.** Product manufacturers or representatives wishing to submit products for consideration shall follow the procedures listed in this document and furnish the requested information.

3. Standards referenced in the Approved Product List shall be the latest version of that standard, regardless of the year or date indicated.

4. After an item is approved, the product manufacturer or representative shall inform the City in writing, of any subsequent modifications in product design or material. Changes in product design or material may require further evaluation to determine continued approval of the product. Failure to inform the City of such changes may result in removal of the item from the Approved Products List.

5. The City may withdraw any approval as a result of design or material change, field observation, testing, product failure, or other factors, which, in the City's opinion, warrant such withdrawal.

6. Projects under construction that include wastewater system components by private developers, or other non-CIP projects shall adhere to the APL requirements and only use listed products where applicable unless otherwise approved in writing by the City.

7. Assembled products, and the materials associated with assembled products, may be subject to testing for conformance to applicable standards and manufacturer's specifications for that product.

8. The City may limit the number of approved products for certain items that require specialized tools, training, excessive storage or reduce the efficiency of maintenance and operations activities.

**NEW PRODUCT SUBMITTAL AND REVIEW PROCESS**

New Product Submittal Checklist

Product and equipment manufacturers wishing to have a product reviewed for inclusion on the APL shall submit a complete written request to the City. This should be submitted as a single package for each product and include the following:

1. Identify the product and City of Mesa APL number to which the product would be added (if applicable).

2. Identify the Maricopa Association of Governments (MAG) Standard Specification and City of Mesa MAG supplemental standard specifications that govern the product, where applicable.

3. Describe the product, providing technical specifications, dimensional drawings, product weights and catalog information.*

4. If the product is proposed as an addition to a current Approved Product sheet, demonstrate compliance with listed requirements in the corresponding sheet.*

5. Indicate compliance with applicable AWWA, ASTM, ANSI, IEC, UL, FM, ISO 9001 or other related standards or specifications that govern the product.*

6. Provide an example submittal for review by the City. The example submittal shall contain the same level of detail as that provided by a contractor during construction.
7. Indicate country of origin for all product components.**
8. Name, address and phone number of local product representative.
9. Product availability, delivery time, pricing and manufacturer's location. If both foreign and domestic options are offered, provide availability, pricing and delivery time for each.
10. Provide test results showing compliance with applicable standards, or other relevant testing information, including independent laboratory test results.
11. Provide manufacturer's installation procedures for the product.
12. List maintenance requirements, special equipment and procedures and recommended maintenance schedules.
13. List a minimum of three (3) project owners (public utilities) who have the product installed and currently in use. Include project name and location, project owner's contact name, address, and telephone number, and product application (including sizes) and number of years in use.
14. Provide a material safety data sheet (MSDS), if applicable.
15. Describe recent product revisions or improvements.
16. Explain how the product would benefit the City of Mesa in terms of prolonged service life, reduced maintenance, and reduced life-cycle cost compared to products now in use.

*This information must be shown as part of the manufacturer's publicly available product literature. Separate letters or statements indicating compliance with these requirements may be rejected.

**If portions of the product are cast, manufactured or assembled outside of the U.S.A, provide specific information as required for each component. If the product is primarily non-domestic and a “Domestic” option is available, manufacturers shall indicate this. If the “Domestic” option is not 100% made-in-the U.S.A., the submittal package shall indicate which components are cast, manufactured or assembled outside of the U.S.A, and the corresponding country for each.

New Product Submittals

Electronic submittals in PDF-format or other common formats (Word, etc) are acceptable. Electronic submittals (10 MB maximum) shall be made to the City at:

William.Fick@mesaaz.gov

Hard-copy submittals, in addition to, or in lieu of electronic copies are also acceptable. Three (3) hard-copy submittals shall be sent to:

Wastewater Product and Design Review Committee
City of Mesa Water Resources Department
Attention William Fick
340 N. Mesa Drive
PO Box 1466
Mesa, AZ 85211

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GENERAL NOTES AND REQUIREMENTS

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<table>
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<th>DESIGN/MATERIALS:</th>
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<tr>
<td>• Combination air valves shall comply with MAG Specification Section 630.6.</td>
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<tr>
<td>1. A.R.I. COMBINATION VALVES DESIGNED FOR WASTEWATER</td>
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<tr>
<td>2. HI-TEC MODEL 986</td>
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<td>3. CITY APPROVED EQUAL</td>
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<td>COMBINATION AIR VALVES</td>
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DESIGN/MATERIALS:

For new wastewater manholes, the applicator of the corrosion protective coating is required to have a minimum of three years of experience coating wastewater manholes. The City Inspector may request written verification of said experience at any time. The applicator shall have written verification from the manufacturer of the corrosion protective coating system that is being applied that said applicator is an approved, certified applicator of the manufacturer’s products. The City Inspector may request said written documentation at any time. Application shall be done in accordance with the City of Mesas specifications on file.

NOTES:

1. This is a draft public release of the Approved Products List for this product type and is subject to change.

- Sauereisen Sewergard Lining No. 210 as manufactured by Sauereisen Cements, Pittsburgh, PA
- Sewer Shield 150 Epoxy Lining as manufactured by Environmental Coatings, Mesa, AZ.
- Raven 405 Epoxy Lining as manufactured by Raven Lining Systems, Tulsa, Oklahoma
- COR+GARD 100% solids, high-build epoxy lining as manufactured by Action Products Marketing (AP/M) of Johnston, IA
- Novocoat Superior Environmental Products SL-100 (trowel on) or Superior Products SP-2000R (spray on) as manufactured by Novocoat, Addison Texas
- Neopoxy NPR 5300 Series Epoxy Lining by Neopoxy International, Hayward, CA.
- Warren Environmental 100% Solids Epoxy Coating as manufactured by Warren Environmental, Inc., Carver, MA
- EVR Shield Utilithane 1600 Polyurethane Coating with Utilithane LTE 900 Primer as manufactured by Prime Coatings, Inc., Tustin, CA

Approved Contractors:
1. KE & G Construction
2. Southwest Environmental Testing
3. Quest Civil Constructors
4. K.R Swerdfeger
5. B & F Contracting
6. Juarez Contracting
7. JCPI Services
8. Oldcastle Precast

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APPROVED WASTEWATER NEW MANHOLE CORROSION PROTECTIVE COATINGS

WW-3
DESIGN/MATERIALS:

For wastewater manholes, the applicator of the corrosion protective coating is required to have a minimum of three years of experience coating wastewater manholes. The City Inspector may request written verification of said experience at any time. The applicator shall have written verification from the manufacturer of the corrosion protective coating system that is being applied that said applicator is an approved, certified applicator of the manufacturer’s products. The City Inspector may request said written documentation at any time. Application shall be done in accordance with the City of Mesas specifications on file.

NOTES:

1. This is a draft public release of the Approved Products List for this product type and is subject to change.

- Sauereisen Sewergard Lining No. 210 with Sauereisen Underlayment No. F-121, as manufactured by Sauereisen Cements, Pittsburgh, PA.
- Sewer Shield 150 Epoxy Lining with C120 calcium aluminate cement underlayment as manufactured by Environmental Coatings, Mesa, AZ.
- Raven 405 Epoxy Lining with calcium aluminate cement underlayment, as manufactured by Raven Lining Systems, Tulsa, Oklahoma.
- COR+GARD 100% solids, high-build epoxy lining with PERMACAST MS-10,000 underlayment. The PERMACAST MS-10,000 underlayment shall have ConShield liquid antimicrobial admixture added to it. The amount of ConShield admixture shall be 11 fluid ounces per 50 pounds (dry weight) of PERMACAST MS-10,000. The ConShield shall be as manufactured by ConShield Technologies, Inc. of Atlanta, Georgia. COR+GARD and PERMACAST MS-10,000 shall be as manufactured by Action Products Marketing (AP/M) of Johnston, IA.
- ErgonArmor Novacoat SL-100 (trowel on) or Novacoat SG2500 (spray on) with Novolite Aggregate as the underlayment, as manufactured by ErgonArmor Kansas City, KS.
- Neopoxy NPR 5300 Series Epoxy Lining, by Neopoxy International, Hayward, CA with calcium aluminate cement underlayment, by A.W. Cook, Atlanta GA.
- Warren Environmental 100% Solids Epoxy Coating as manufactured by Warren Environmental, Inc., Carver, MA.
- EVR Shield Utilithane 1600 Polyurethane Coating with Utilithane LTE 900 Primer as manufactured by Prime Coatings, Inc., Tustin, CA.

Approved Contractors:
1. KE & G Construction
2. Southwest Environmental Testing
3. Quest Civil Constructors
4. K.R Swerdfeiger
5. B & F Contracting
6. Juarez Contracting
7. JCPI Services
8. Oldcastle Precast
**DESIGN/MATERIALS:**

For wastewater manholes, the applicator of the corrosion protective structural coatings and inserts is required to have a minimum of three (3) years of experience installing structural inserts or certification from the approved manufacture that the staff conducting the work is able to comply with all construction restrictions and correctly install the wastewater manholes. The City Inspector may request written verification of said experience and certification at any time. Any certification shall be in written from the correct structural inserts system manufacturer being installed and shows the applicator is an approved, certified applicator of the manufacturer’s products. The City Inspector may request said written documentation at any time. Application shall be done in accordance with the City of Mesa’s specifications on file.

The Work of this section includes providing a structural resin aggregate manhole insert system such that manholes become structurally sound and impervious to ground water, soil, debris, and are resistant to hydrogen sulfide (sulfuric acid) corrosion. Manhole rehabilitation riser sections shall be constructed of supplier-certified isophthalic polyester resin, sand and aggregate or multi-layered epoxy fiberglass composite system.

Manhole rehabilitation riser sections shall conform to the following design criteria:

- **ASTM C – 478** Standard Specification for Precast Reinforced Concrete Manholes Sections (Structural intent only)
- **ASTM D – 6783** Standard Specification for Polymer Concrete Pipe (material mix design)
- **ASTM D – 2584** (most current) Test Method for Ignition Loss of Cured Reinforced Resins
- **ASTM C – 497** (most current) Test Methods for Concrete Pipe, Manhole Sections, or Tile
- **ASTM D – 3753-99** (most current) H-20 loading traffic and applicable earth loads.
- **AASHTO HL 93** - LRFD Bridge Design and Axial Load Specifications

**NOTES:**

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- **Polyester Resin Structural Manhole Insert** - Geneva Polymer Products 9546 W. Frank Ave. Peoria, AZ 85382

- **Epoxy Fiberglass Structural Manhole Insert** - Sewer Shield Composites LLC 4702 E. Virginia Str. Mesa, AZ 85215

**Approved Contractors:**
1. KE & G Construction
2. Southwest Environmental Testing
3. Quest Civil Constructors
4. K.R Swerdfeger
5. B & F Contracting
6. Juarez Contracting