



## CITY OF SUGAR LAND

### APPROVED PRODUCTS LIST

(Revised July 2017)

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#### APPROVED WATER PRODUCTS LIST

All Products must conform to NSF/ANSI standards 60 or 61, if available.

**1. Fire Hydrants (Flushing Valves, AWWA C 502) (Pumper Nozzle 4.125", Hose Nozzle 2.5")**

- A. Mueller - Super Centurion 250, Option 110
- B. Kennedy Valve - Guardian K 81-A
- C. Clow - 5 1/4" Medallion (w/ grade 304 stainless steel bolts)
- D. East Jordan Iron Works - WaterMaster - 5CD250
- E. American AVK - Series 2780 Nostalgic
- F. American AVK - Series 65, 45, and 55
- G. American Flow Control - 5 1/4 B-84-B

**2. Gate Valves (3/4" - 2", AWWA Approved, Bronze)**

- A. Hammond Valve
- B. Watts
- C. Red and White
- D. Matco Norca
- E. Eagle America
- F. Cambridge Brass
- G. Mueller
- H. Municipal Valve & Equipment Company

**3. Gate Valves (3" and larger, AWWA C 509, Resilient Wedge Type)**

- A. Mueller
- B. American Cast Iron Pipe Company (Waterous)
- C. American Flow Control (American Darling)
- D. Kennedy Valve

- E. M & H Valve Company
- F. US Pipe-Valve & Hydrant Division
- G. Clow Product Reinstated 11/2011
- H. Municipal Valve & Equipment Company

**4. Butterfly Valves (16-inch and Larger)**

- A. Pratt
- B. Crispin Valve
- C. Municipal Valve & Equipment Company

**5. PVC Pipe (AWWA C 900, C 905, C909)**

- A. All manufacturers compliant with AWWA and/or ASTM standards.

**6. Restraint Joint Pipe**

- A. CertainTeed – Certa-Lok C905/RJ Certa-Lok
- B. APS Casing Spacer and Insulators

**7. Ductile Iron Fittings for C 900, C 905 or C 909 Pipe (AWWA C110, C153 or C151)**

- A. All manufacturers compliant with AWWA and/or ASTM standards.
  - 1. SIP Industries
  - 2. Star Pipe – DI Compact MJ Fittings 2”-64”
  - 3. Sigma Corp - DI Compact MJ Fittings 2”-64”
  - 4. Sigma Corp - DI Compact Flanged Fittings 2”-64”
  - 5. Smith Blair – Camlock 111 4”-24”

**8. Pipe & Fitting Restraints**

- A. EBAA Iron Inc – Megalug Series
- B. Star Pipe – Pipe Restraints Stargrip Series 1100 for PVC
- C. Star Pipe – PVC Stargrip Series 4000 MJ Wedge Restraint
- D. Smith Blair – Camlock 111 – 4”-24”
- E. Sigma – One-Lock Series SLCE for PVC Pipe
- F. Sigma – One-Lock Series SLDE for Ductile Iron Pipe
- G. SIP Industries – EZ Grip Joint Restraint for PVC Pipe
- H. Star Pipe – Ductile Iron Mechanical Wedge Restraint Joint
- I. RTC – Flange Adaptor RCT DI C900
- J. RTC – Flex-Tite Bends (90, 45, 22.5, 11.25)
- K. RTC – Flex-Tite Tees/Reducing Tees
- L. RTC – Flex-Tite Reducers/Wyes

M. RTC – Flex-Tite Caps

N. RTC – Flex-Tite Tees

**9. Steel Pipe (AWWA C 200, TCEQ, NSF 61)**

A. All manufacturers compliant with AWWA, NSF 61 and/or ASTM standards.

**10. Steel Pipe Coatings, Exterior (AWWA C 203, TCEQ, NSF 61)**

A. All manufacturers compliant with AWWA, NSF 61 and/or ASTM standards.

**11. Steel Pipe Coatings, Interior (AWWA C 210, D 102, TCEQ, NSF 61)**

A. All manufacturers compliant with AWWA, NSF 61 and/or ASTM standards.  
Bituminous interior coatings are not allowed.

**12. Curb Stop - (1" - 2", Ball Valve, Full Port, 360 turn, Locking Wing, Pack Joint CTS O.D. tubing x FIP)**

- A. Ford Meter Box Company
- B. Jones Brand (James Jones)
- C. A.Y. McDonald
- D. Cambridge Brass
- E. Mueller

**13. Curb Stop - (3/4", Ball Valve, Full Port, 360 turn, Locking Wing, FIP x FIP)**

- A. Ford Meter Box Company
- B. Cambridge
- C. Mueller

**14. Compression Coupling (1"-2", Pack Joint for CTS O.D. tubing connections)**

- A. Cambridge
- B. Ford Meter Box Company
- C. Mueller

**15. Service Saddles (Single Wide-Band Strap, Stainless Steel Band, Epoxy Coated)**

A. Romac 101 NS or Pre-approved equivalent.

**16. Corporation Stop – Bronze**

- A. Ford Meter Box Company - F1000
- B. Mueller - H-15008 or H-15013
- C. Jones Product (James Jones)
- D. McDonald
- E. Cambridge

**17. Service Saddle - Dual Strap, Stainless Steel, Epoxy Coated Saddle**

- A. Romac
- B. Ford Meter Box Company
- C. Mueller Company
- D. Jones Product (James Jones)
- E. McDonald
- F. JCM Industries Inc
- G. Pipeline Products Incorporate (Power Seal)
- H. Dresser
- I. Smith & Blair

**18. Service Saddle - Single Wide-Band Strap, Stainless Steel, Epoxy Coated Saddle**

- A. Romac or pre-approved equal

**19. Water Meters (AWWA Approved)**

- A. Neptune
- B. Badger
- C. Sensus (old Rockwell)

**20. Service Tubing (3/4" - 2" Type "K" Annealed, Seamless Copper Tubing, AWWA B 88)**

- A. Cerro Flow Products
- B. Great Lakes Copper Inc. (Formerly Wolverine Tube)
- C. Mueller Industries Inc. (Mueller-Streamline)
- D. Holstad

**21. Service Tubing (3/4" - 2" Polyethylene Tubing) (ASTM D3350, ASTM D2239 and NSF-14)**

- A. Endot Industries (Endopure Pure Virgin Polyethylene)

## **22. Air Release Valve, 2”**

- A. APCO - No. 200
- B. GA Industries – Fig. 2-AR
- C. Val-matic, 2”
- D. ARI Model D-040, D-040-C, D-060-C HF, D-062HF
- E. Crispin Valve PL, AR, UL Series (7/20)

## **23. Combination Air Valves (Air Release-Air/Vacuum)**

- A. APCO – 145-C
- B. Crispin Valve C Series
- C. H-TEC Model 986 (Stainless) 2”-6”

## **24. Meter Boxes**

- A. Plastic
  - 1. DFW Plastic Inc.
  - 2. Gross
- B. Concrete
  - 1. Brooks Products
  - 2. Southern Precast & Concrete Products Inc (Southern Precast)

## **25. Pipe Casing Spacers & End Seals for Bored Crossings**

- A. Pipeline Seal and Insulator (PSI)

## **26. Tapping Sleeves & Valves**

- A. Tapping Sleeves – All Stainless Steel w/ Full Circumference Gasket
  - 1. JCM – Stainless Steel Tapping Sleeve 432 & 462
  - 2. Ford Meter Box Company
  - 3. TPS 4” – 16” (7/2015)
- B. Tapping Valve
  - 1. All Approved Gate Valve Manufacturers in Section 3
  - 2. East Jordan Iron Works 2” – 16”

# APPROVED SANITARY SEWER PRODUCTS LIST

## 1. Gravity Flow Pipes -- Fusible C900/C905/PVC (All manufactures meeting the following specifications)

- A. PVC, 12" and smaller to max. depth of 12' – SDR 26, min. 160 PSI rating, ASTM D 2241 pipe, D3212 joint with F477 rubber gasket, F679 fittings
- B. PVC, 12" and smaller exceeding 12' in depth – AWWA C 900, DR 18, Class 150 pipe, joined per ASTM 3139 with F477 rubber gasket
- C. PVC, Larger than 12" and smaller than 24" to max. depth of 12' – DR 25, min. 165 PSI rating, D3212 joint with F477 rubber gasket
- D. PVC, Larger than 12" and smaller than 24" exceeding 12' in depth - AWWA C 905, DR 18, Class 235 pipe, joined per ASTM 3139 with F477 rubber gasket
- E. PVC, 24" and larger at all depths – AWWA C 905, DR 18, Class 235 pipe, joined per ASTM 3139 with F477 rubber gasket
- F. Fiberglass Reinforced Polyester (FRP) sewer pipe (Transmission only – No service leads allowed) – ASTM D 3262, ASTM D 3517, ASTM 3754 or AWWA C 950 – Depths per Manufacturers Recommendations.
- ~~G. ADS SaniTite HP, Single/Double Wall 6"–30" (Suspending Pending TCEQ Approval)~~
- ~~H. ADS SaniTite HP, Triple Wall 30"–60" (Suspending Pending TCEQ Approval)~~

## 2. Force Mains-- Fusible C900/C905/PVC (All manufactures meeting the following specifications)

- A. PVC, 12" and smaller at all depths – AWWA C 900, DR 18, Class 150 pipe, joined per ASTM 3139 with F477 rubber gasket
- B. PVC, Larger than 12" at all depths - AWWA C 905, DR 18, Class 235 pipe, joined per ASTM 3139 with F477 rubber gasket
- C. Fiberglass Reinforced Polyester (FRP) sewer pipe – ASTM D 3517, ASTM 3754 or AWWA C 950 – Depths per Manufacturers Recommendations

## 3. Ductile Iron Fittings for C 900, C 905 Pipe (AWWA C 110, AWWA C 153)

- A. All manufacturers compliant with AWWA and/or ASTM standards.

## 4. PVC Drainage Pattern Fittings for SDR 26 and DR 25 Pipe (ASTM D 3034)

- A. GPK
- B. JM Eagle
- C. Vassallo
- D. Plastic Trends

## 5. Pipe Connectors / Adapters / Flexible Couplings

- A. Fernco Inc.
- B. Indiana Seal
- C. Flow Control
- D. Flow Seal
- E. DFW

## **6. Manhole & Lift Station Coatings (Reformatted to Address Various Applications)**

- A. New Manhole Installations – H2S Corrosion Prevention
  - 1. IPA Systems (Ipagard Epoxy)
  - 2. Thane Coat FE 100
  - 3. Polyurea Coatings and Linings Industry (Polyurea)
  - 4. Aquatapoxy A-6
  - 5. Tnemec Series 66 epoxy coating
  - 6. Aegis Coating Technologies epoxy coating
  - 7. Lotus Chemicals epoxy coating
  - 8. Raven 405
  - 9. Quadex Structure Guard Epoxy
  
- B. Manhole Rehabilitation –Inflow/Infiltration Only
  - 1. Quadex Aluminaliner calcium aluminate sewer rehabilitation mortar (min. 1”/ max. 3” thickness)
  - 2. Strong Seal MS-2
  - 3. Kernos Sewpercoat
  - 4. Standard Cement – Reliner MSP or Maximum CA Cement
  - 5. ECO Cast GeoSpray
  
- C. Manhole Rehabilitation – H2S Corrosion & Inflow/Infiltration
  - 1. Kernos Sewpercoat
  - 2. Standard Cement - Reliner MSP or Maximum CA Cement w/ Standard Shield Epoxy (Acropoxy 4582)
  - 3. Quadex Aluminaliner calcium aluminate sewer rehabilitation mortar (min. 1”/ max. 3” thickness) w/ Quadex Structure Guard Epoxy or Raven 405
  
- D. New Lift Station Wet Well Installation
  - 1. Standard Cement Materials, Inc (Acropoxy 4582 epoxy coating)
  - 2. Poly-Triplex Technologies, Inc. (Poly-Triplex Liner System)
  - 3. Kernos Sewpercoat
  - 4. Raven 405 Epoxy
  - 5. Quadex Structure Guard Epoxy
  
- E. Lift Station Wet Well Rehabilitation
  - 1. Kernos Sewpercoat
  - 2. Standard Cement - Reliner MSP or Maximum CA Cement w/Standard Shield Epoxy (Acropoxy 4582)
  - 3. Quadex Aluminaliner calcium aluminate sewer rehabilitation mortar (min. 1”/ max. 3” thickness) w/ Quadex Structure Guard Epoxy

**7. Lift Station Submersible Pumps**

- A. ~~KSB~~ (Temporarily Removed Pending Redesign) 9/2013
- B. Flyght
- C. ABS
- D. Gorman Rupp
- E. PACO

**8. Lift Station Dry Pit Pumps**

- A. Pacific Pumps
- B. Crown
- C. Gorman-Rupp
- D. PACO

**9. Lift Station Plug Valves**

- A. Pratt
- B. Crispin Valve
- I. Municipal Valve & Equipment Company

**10. Check Valve**

- A. Stockman
- B. Watts
- C. Sepco
- D. Mission
- E. Val-matic
- F. Crispin Valve
- J. Municipal Valve & Equipment Company



## 11. Lift Station Control Panels – Various Manufacturers

### Motor Control Components as Follows:

#### Duplex Controller

QTY	PART NUMBER	DESCRIPTION
1	A48H3612SSLP	Enclosure Nema 4X 48x36x12 Stainless Steel, Hoffman (OR EQUIVALENT)
1	A48P36	Backplane, Hoffman
1	Shof.1Made	Inner Door Painted Medium Blue
1	63133	Power Distribution Block, Gould-Shawmut
1	63131	Power Distribution Block, Gould-Shawmut
1	30323	3-Pole Fuse Block, Gould-Shawmut
3	DFC3M	Safety Fuse Puller, Gould-Shawmut
1	Q08-16L100F	8-Space Lightning Panel, Sq. D
1	PK7-GTA	Ground Bar Kit, Sq. D
1	00230	2-Pole Circuit Breaker, Sq. D
6	00120	Single-Pole Circuit Breaker, Sq. D
1	PBD-230-ALE	Phase Monitor Relay, Diversified
1	ARB-120-AEA	2-Pump Alternator, Diversified
2	HJL36030-71M	Motor Circuit Protector, Sq. D
2	8536SC03V02S	Starters Nema Size 1, Sq. D
2	S04	Overload Module, Sq. D
2	9066 RA1	Starter Reset Pushbutton, Sq. D
11	RR3-PUL-120VAC	Blade Base Relays 120V, Idee
2	RR2-PUL-24VAC	Pin Base Relay 24VAC, Idee
16	SR3B05	Blade Base Relay, Idee
2	SR3P06	Pin Base Relay, Idee
3	SR2P06	Pin Base Relay, Idee
4	RTE-B1AF20	Time Delay Relays with Sockets, Idee
1	EDAW-N1-E1-02-TO	Pressure Switch, Mercoïd
2	HR10WB3	Air Compressor, Ingram
1	MPL-502	Air Switch, Micromatic
2	2963860	Single receptacle, Phoenix Contact
AR		Miscellaneous Fittings and piping for pressure switch
1	010100C1	Heater 50W 120V, Watlow
1	FLZ520	Thermostat, Pfannenberg
2	635G	Elapsed Time Meter, Cramer
2	9001 KS43B	Hand/Off/Auto Switch, Sq. D
2	KN260	Legend Plate, Sq. D
4	9001 KS11B	2-Position Switch, Sq. D
4	9001 KR1U	Pushbutton, Sq. D
3	9001KA1	Contact Blocks for Switches and Pushbuttons, Sq. D
5	9001KA2	Contact Blocks for Switches and Pushbuttons, Sq. D
3	9001KA3	Contact Blocks for Switches and Pushbuttons, Sq. D
7	ALD29911NR120V	Push-To-Test Pilot Light 30MM Full Voltage, Idee
3	ALD29911NA120V	Push-To-Test Pilot Light 30MM Full Voltage, Idee
2	ALD29911NG120V	Push-To-Test Pilot Light 30MM Full Voltage, Idee
1	7599-1	GFCI, Leviton
1	52R-N5-40W	Rotating Alarm Beacon, Edwards
1	504-120	Alarm Bell, Federal Signal Vibratone
1	LA303	Lightning Protector 480V, Delta
1	CA603R	Surge Protector 480V, Delta
2	9421LJ4	Door Operator, Sq. D
2	9421LH3	Door Operator Handle, Sq. D
1	9070T1OOD23	Transformer 120-24V 100VA, Sg. D
1	9070SF25A	Transformer Fuse Kit, Sq. D
1	SDP06-24-100T	Power Supply, Sola
56	UT6	Terminals, Phoenix Contact

**SHIPPED SEPARATELY**

SHOP MADE      Sunshield (shipped loose)

**SUPPLIED BY VENDOR**

2		Mini Cas Relay, Flygt
2		Float Relay Switches
1	SHOP MADE	PVC Air Cell

**TRIPLEX LIFT STATION**

<b>QTY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	SHOP MADE	Inner Door Painted Medium Blue
1	63133	Power Distribution Block, Ferraz Shawmut
1	63131	Power Distribution Block, Ferraz Shawmut
1	30323	3-Pole Circuit Breaker, Sq. D
3	DFC3M	Safety Fuse Puller, Ferraz Shawmut
1	Q08-16L100F	8-Space Lightning Panel, Sq. D
1	PK7-GTA	Ground Bar Kit, Sq. D
1	00230	2-Pole Circuit Breaker, Sq. D
6	00120	Single-Pole Circuit Breaker, Sq. D
1	PBD-230-ALE	Phase Monitor Relay, Diversified
2	ARA-120-AHE	3-Pumps Alternator, Diversified
3	HJL36100M73	Motor Circuit Protector, Sq. D
3	8536SC03V02S	Starters Nema Size 1, Sq. D
2	S04	Overload Module, Sq. D
2	9066 RA1	Starter Reset Pushbutton, Sq. D
14	RR3-PUL-120VAC	Blade Base Relays 120V, Idee
16	SR3B05	Blade Base Relay, Idee
2	SR3P06	Pin Base Relay, Idee
3	SR2P06	Pin Base Relay, Idee
3	RTE-B1AF20	Time Delay Relay with Sockets, Idee
2	EDAW-N1-E1-02-TO	Pressure Switch, Mercoide
2	HR10WB3	Air Compressor, Ingram
1	MPL-502	Air Switch, Micromatic
2	2963860	Single Receptacle, Phoenix Contact
AR		Miscellaneous Fittings and Piping for Pressure Switch
1	010100C1	Heater SOW 10V, Watlow
1	FLZ520	Thermostat, Pfannenberg
3	635G	Elapsed Time Meter, Cramer
3	9001KS43B	Hand/Off/Auto Switch, Sq. D
2	KN260	Legend Plate, Sq. D
4	9001KS11B	2-Position Switch, Sq. D
9	9001KR1U	Pushbutton, Sq. D
3	9001KA1	Contacts Blocks for Switches and Pushbuttons, Sq. D
5	9001KA2	Contacts Blocks for Switches and Pushbuttons, Sq. D
3	9001KA3	Contacts Blocks for Switches and Pushbuttons, Sq. D
10	ALD29911NR10V	Push-To-Test Polor Light 30MM Full Voltage, Idee
4	ALD29911NA120V	Push-To-Test Polor Light 30MM Full Voltage, Idee
3	ALD29911NG120V	Push-To-Test Polor Light 30MM Full Voltage, Idee
1	7599-1	GFCI, Leviton
1	52R-N5-40W	Rotating Alarm Beacon, Edwards
1	504-120	Alarm Bell, Federal Signal Vibratone
1	LA303	Lightning Protector 480V, Delta
1	CA603R	Surge Protector 480V, Delta
3	9421LJ4	Door Operator, Sq. D
3	9421LH3	Door Operator, Sq. D
1	9070T100D23	Transformer 120-24V 100VA, s_q. D
1	9070SF25A	Transformer Fuse Kit, Sq. D
1	SDP06-24-100T	Power Supply, Sola

SHIPPED SEPARATELY

SHOP MADE sunshield (shipped loose)

SUPPLIED BY VENDOR

2		Mini Cas Relay, Flygt
2		Float Relay Switches
1	SHOP MADE	PVC Air Cell

**AR: As Required**

**12. Air Release Valves**

- A. ARI Model D-025, D-020 (Stainless Steel)
- B. Crispin Valve (7/2015) All Sizes
- K. Municipal Valve & Equipment Company

**13. Manhole Covers and Rings, CITY OF SUGAR LAND Specs, (ASTM A 48, AASHTO H-20 Load Rating, Ductile Iron ring and cover – 32” diameter)**

- A. Vulcan Foundry – 32” diameter, Model V-2420
- B. Neenah Foundry – 32” diameter, Model R-1741-F
- C. East Jordan Iron Works, Inc. - 32” diameter, Model V-1420
- D. Star Pipe Products – 32” diameter, COMC Spec.
- E. SIP – 32” diameter Manhole cover – Item 2250

**14. Manhole Inserts (No Flow/In-Flow Protector)**

- A. Various Mfgs.

**15. Manholes (Precast Concrete, CITY OF SUGAR LAND Specifications)**

- A. More-Tex
- B. Southern Precast
- C. Calvert
- D. Gifford Hill
- E. Old Castle Pre-cast (Formerly Brooks Products)
- F. Concrete Products, Inc. (Dalworth)
- G. Old Castle Pre-cast (Precast Systems, Inc.)

- H. Koastal Precast, Inc.
- I. Hanson Pipe & Products
- J. JS Concrete Products – 48” Pre-cast concrete manholes all types
- K. Rinker
- L. 48” Precast Manhole – Liberty Precast (Pending Plant Visit)

**16. Manholes (Corrosion-Resistant Polymer, CITY OF SUGAR LAND Specifications - Requires Specific Approval)**

**17. Geotextile Fabric Wrap**

- A. Trevira S1114

**18. Pipe Casing Spacers & End Seals for Bored Crossings**

- A. Pipeline Seal and Insulator (PSI)

## APPROVED STORM SEWER PRODUCTS LIST

### 1. Manhole Covers and Rings, CITY OF SUGAR LAND Specifications, (ASTM A 48, AASHTO H-20 Load Rating)

- A. Vulcan Foundry – 32” diameter, Model V-2420
- B. Neenah Foundry – 32” diameter, Model R-1741-F
- C. East Jordan Iron Works, Inc. - 32” diameter, Model V-1420
- D. Star Pipe Products – 32” diameter, COMC Spec.
- E. D&L Supply A-4000 Series Manhole Rings and Covers (Commercial Spec.)
- F. Liberty Precast 48” diameter Manhole (Pending Site Visit)

### 2. Storm Inlet Grates and Frames, CITY OF SUGAR LAND Specs, (ASTM A 48, AASHTO H-20 Load Rating)

- A. Vulcan Foundry
- B. Neenah Foundry
- C. East Jordan Iron Works, Inc.
- D. N.C. Pipe and Precast Products
- E. D&L Supply A-4800 Series Frames and Grates
- F. Liberty Precast - Type A and H-2 Inlet

### 3. Pipe Materials

- A. RCP, 24” and larger at all depths – ASTM C 76 with rubber gasketed
- B. joints conforming to ASTM 433 (Various Manufacturers)
- C. HDPE, 24” and larger at all depths - AASHTO M-294 (Various Manufacturers)
- D. ADS HP Storm Pipe Dual Wall 12” – 60” all depth. (Non-Pressure)
- E. Contech Profile Wall PVC Storm Sewer, 24” and larger – ASTM F949-03
- F. DuroMaxx HP Pipe. 24” or larger

### 4. Reinforced Concrete Box Culverts (ASTM C 789, C 850, C1577, C1677, AASHTO M259, M 273 – Various Manufacturers)

- A. RCB, 24” X 24” and larger having min. 2’ to max. 12’ of cover – ASTM C 789/AASHTO M 259 joined with “Ramnek” joint sealing compound by K.T. Snyder Co.
- B. RCB, 24” X 24” and larger having less than 2’ cover or greater than 12’ of cover – ASTM C 850/AASHTO M 276 joined with “Ramnek” joint sealing compound by K.T. Snyder Co.
- C. RCB, 3’ X 2’ and larger – ASTM C1577 & C1677 joined with pre-lubricated rubber gaskets. (Revised 3/2012)
- D. Hanson 10’ x 6’ RCB – RAMNEK Joint Sealing Method.

**5. Corrugated Metal Outfall Pipes to Receiving Channels in Drainage Easements (ASTM A762, A742, – Various Manufacturers)**

- A. CGMP, 24” and larger to max. depths recommended by manufacturer – polymer coated corrugated steel pipe joined with coupling bands as per manufacturer's recommendations. Minimum thickness required is 12 gauge.

**6. Manholes and Storm Inlets (Precast Concrete, CITY OF SUGAR LAND Specifications)**

- A. More-Tex
- B. Southern Pre-cast and Concrete Products Inc (Southern Precast)
- C. Calvert
- D. Gifford Hill
- E. Old Castle (Brooks Products)
- F. Concrete Products Inc (Dalworth)
- G. Precast Systems, Inc. (Old Castle)
- H. Koastal Precast, Inc.
- I. JS Concrete Products – 48” Pre-cast concrete manholes all types
- J. N.C. Precast Pipe and Precast

**7. Manholes (Corrosion-Resistant Polymer, CITY OF SUGAR LAND Specifications – Requires Specific Approval)**

- A. United Polymer Technology - Fabri-Kast Solid Cast Polymer (SCP)

**8. Geotextile Fabric Wrap**

- A. Trevira S1114
- B. Tensar/Contech – Tensar TX140 Geogrid

**9. Pipe Casing Spacers & End Seals for Bored Crossings**

- A. Pipeline Seal and Insulator (PSI)

**10. Storm Sewer Manhole and Line Rehabilitation**

- A. ECO Cast GeoSpray

**11. Culvert Lining**

- A. Flexamat from Hill Country Culverts

## **APPROVED TRAFFIC/STREET PRODUCTS LIST**

### **1. Raised Pavement Markers (Class A, B, C & D)**

A. Apex Universal (or equivalent)

### **2. Type Y and Type W Traffic Buttons (ceramic only)**

A. Apex Universal (or equivalent)

### **3. Raised Pavement Marker Adhesive**

- A. Bundy Raised Pavement Marker Adhesive
- B. TxDOT approved epoxy

### **4. Multipolymer Pavement Markings**

A. Modified-Urethane Pavement Markings - Epoplex – LS-70

### **5. Crack and Joint Sealant (Various Manufacturers)**

A. Elastometric-type, Hot-pour Joint Sealant conforming to TxDOT Item 433 and TxDOT Departmental Material Specification D-9-6310

### **6. Paints (Various Manufacturers)**

A. Only water based conforming to TxDOT specifications are approved for use in the City of CITY OF SUGAR LAND

### **7. Road Marker Posts**

A. Carsonite # CRM-375 (or equivalent)

### **8. Replaceable Delineator Post w/ Base (Epoxy or 8" Bundy Adhesive)**

A. Repo TM Model (or equivalent)

### **9. Concrete Curing Membranes (Various Manufacturers)**

- A. Liquid membrane-forming Curing Compound conforming to TxDOT Item 526 and TxDOT Departmental Material Specification D-9-8120

**10. Chemical Stain for Use On Ramps for Handicapped Access, Cola Color (A.D.A., Texas Accessibility Standards.)**

- A. Kemiko Concrete Products – “Cola” color (or equivalent)

**11. Traffic Control Signalization, Lighting and Appurtenances (Various Manufacturers)**

All materials and manufactured products pertaining to traffic control signals, lighting, and associated appurtenances shall conform to current Texas Department of Transportation specifications and shall be listed in the TxDOT Prequalified Master List of Approved Products at time of installation.

**12. Curb Drains**

- A. ‘ADDA’ Curb Drain – Galvanized Model (or Equivalent)

**13. Traffic Signal Hardware**

- A. Vehicle Signal Heads (TxDOT-approved products list) (polycarbonate) (black)
- B. Vehicle Signal LEDs (GE GTx) (12-inch) (incandescent) (clear)
- C. Vehicle Signal Backplates (TxDOT-approved products list) (0.125-inch vacuum-formed ABS plastic) (black)
- D. Vehicle Signal Visors (TxDOT-approved products list) (geometrically-programmed) (12-inch) (polycarbonate) (black)
- E. Signal Mast Arm clamp kits (Sky Bracket)
- F. Pedestrian Signal Heads (TxDOT-approved products list) (aluminum) (clamshell and zigzag visor) (black)
- G. Pedestrian Signal LEDs (TxDOT-approved products list) (Countdown) (clamshell and zigzag visor) (incandescent)
- H. Pedestrian Push Buttons (Polara Bulldog III with model #APBC-x aluminum cup) (piezo) (black)
- I. Audible Push Button System (Polara Navigator Control Unit with 2-wire push buttons) (black)

**14. Traffic Signal Poles**

- A. Vehicle signal mast poles and arms (KW) (supplied by the City)
- B. Pedestrian signal poles (KW) (supplied by the City)



## **15. Signs and Pavement Markings**

- A. Traffic Signs (TxDOT-approved products list) (grade)
- B. Pavement Markings (Epoplex LS-65 grade) (multipolymer)
- C. ReflectORIZED Raised Pavement Markers (3M)
- D. Raised Pavement Marker adhesive (TxDOT-approved products list) (epoxy or bituminous)
- E. Delineator Posts (Pexco FG-300)
- F. In Pavement Lights (ITEM)

## **16. Traffic Cabinet Equipment**

- A. NEMA TS2 Traffic Cabinet (Trafficware) (2, 16-channel detection racks) (double doors)
- B. 980 ATC Controller (Trafficware) (Ethernet & USB faceplate)
- C. 516L-E MMU (Trafficware)
- D. UPS Module (Alpha FXM 2000)
- E. UPS Batteries (AlphaCell 220 Gold-HP gel cell)
- F. UPS Automatic Bypass Switch (Alpha UATS)
- G. UPS Battery Charge Management System (Alpha Guard) (48V)

## **17. Communications Hardware**

- A. Wireless / Fiber Communications Switch (Cisco IE-2000)
- B. Wireless Subscriber Module (Cambium PMP 400) (4.9 GHz)
- C. Wireless Access Point (Motorola 7161) (5.8 GHz)
- D. Wireless system surge protector (Citel MJ8-POE-B)
- E. Pan-tilt-zoom cameras (Axis Q6042-E) (T8124 midspan)

## **18. Signal Luminaire**

- A. LED luminaire (Sun Valley Lighting LAE-LED-UA or Holophane Acrylic Washington Postlite II) (Type III optics) (500ma) (clear acrylic diffuser) (black finish) (neutral white color)

## **19. Emergency Preemption System**

- A. Preemption Detectors (Global Traffic Technologies) (Opticom Model 721)
- B. Preemption Detection Card (Global Traffic Technologies) (Opticom Model 764)

## **20. School Zone Flasher System**

- A. Solar Flasher Batteries (UB 121000, 12-volt, 100-amp)
- B. Battery Charge Controllers (MorningStar ProStar PS-15M)

C. School Zone Flasher Processor (AI-500-070)

## **21. Vehicle Detection Systems**

- A. Pod Magnetometer Detection System (Trafficware)
- B. Loop Detection wire lead-in (TxDOT-approved products list) (2/C #14 AWG)
- C. Loop Detection cards (TxDOT-approved products list)

## **22. Traffic Signal Cables**

- A. 7/C #12 AWG signal cable (TxDOT-approved products list) (stranded)
- B. 4/C #12 AWG signal cable (TxDOT-approved products list) (stranded)
- C. 2/C #12 AWG signal cable (TxDOT-approved products list) (stranded)
- D. 2/C #12 AWG tray cable for base lights (TxDOT-approved products list)
- E. 1/C #4 XHHW power cable (TxDOT-approved products list)
- F. 1/C #4 AWG bare – power ground (TxDOT-approved products list)
- G. 1/C #6 AWG bare – conduit ground (TxDOT-approved products list)
- H. 4/C #12 AWG tray cable for luminaires (TxDOT-approved products list)
- I. 3/C #20 AWG preemption cable (Opticom Model 138)
- J. 19/C #14 AWG wayside horn cable (Belden 28097A)
- K. Cat 5E cable (Belden 7919A)

## **23. Traffic Signal Conduit**

- A. Rigid metal conduit (TxDOT-approved products list) (galvanized) (underground)
- B. PVC conduit (TxDOT-approved products list) (schedule 80) (underground)

## **24. Signal Pull Boxes**

- A. Detection loops box (TxDOT-approved products list) (Type A) (11.5" x 21.0" x 20.0" ID)
- B. Signal cable / detection box (TxDOT-approved products list) (Type D) (15.25" x 28.25" x 20.0" ID)
- C. Signal / communications box (TxDOT-approved products list) (19.5" x 31.0" x 20.0" ID)

## **25. Electrical Service**

- A. Electrical service (COSL specifications) [Type D 120/240 070 (NS) SS (E) SP (U)] (2195 key)

## **26. Railroad Monitoring System**

- A. Wayside Horn (AHS)
- B. Wayside horn cabinet (AHS) (NEMA 4:24.0" x 20.0" x 8.0")
- C. Wayside horn circuit boards (AHS)
- D. Doppler Unit (Decatur SI-3)
- E. Railroad monitor processor (Wilke Icom 201)
- F. Power supply (MDR-40 series)
- G. Terminal Server (Digi TS1)
- H. Preempt Relay (Magnecraft 120 VAC)
- I. RS 232 surge suppressor (B&B Electronics 232HESP)
- J. ADAM-6060 ethernet I/O unit

**27. Pavement Reinforcement Alternatives**

**A. GatorBar (#3 Bar) (Sidewalk Application Only)**


NOTE:

Materials and manufactured items utilized for construction of public infrastructure in public rights-of-way and easements within the corporate limits and extraterritorial jurisdiction of CITY OF SUGAR LAND, Texas shall comply in all respects with those listed above in this Approved Products List.

Materials and manufactured items not listed herein may be submitted to the Engineering Department for review and consideration on a case-by-case basis. In no instance shall such items be installed without specific approval having been granted by the Engineering Department prior to construction.

APPROVED BY:

\_\_\_\_\_, P.E., Ph.D.  
 Jessie Li, P.E., Ph.D.  
 City Engineer

  
 \_\_\_\_\_, P.E., CFM  
 Robert Valenzuela, P.E. CFM  
 Director of Public Works

# ATTACHMENT A

## CITY OF SUGAR LAND ENGINEERING DEPARTMENT

### PRODUCT APPROVAL APPLICATION

#### Instructions

All information requested below must be submitted in full. Please label each section with the item number conforming to the list below. The Committee will review no application until the submittal is complete. Failure to provide full disclosure may be grounds for disapproval of product.

Revisions to the City of Sugar Land's Approved Product List are issued at the end of each calendar quarter. Applications must be received a minimum of 4-weeks prior to the end of each quarter to be considered for approval for that quarter.

**Eight (8)** copies of the application should be sent to:

City Engineer  
City of Sugar Land  
2700 Town Center Blvd. N.  
Sugar Land, TX 77478

#### Item #

1. Basic general information - Provide all information requested on attached form (Item 1).
2. Existing Installations of Product - The following data is requested on representative installations of your product. A sample form (Item 2) is attached or you may use your own tabular format. Failure to disclose representative installations can be grounds for disapproval of product.
3. Describe materials of construction (including relevant industry standards - e.g., ASTM, ANSI, AWWA, etc.), special manufacturing processes and quality control measures used in the manufacture and installation of your product. Include copies of relevant referenced specifications or standards. Also include Material Safety Data Sheets (MSDS) and National Sanitary Foundation (NSF) testing results in all products in contact with potable water or otherwise providing an exposure to operations or maintenance personnel.
4. Indicate if there are any special conditions (such as pipe size) for optimal performance of the product. Specify conditions or requirements for optimal performance. Where appropriate, include the engineering data required for proper application of the product. Indicate relevant safety factors, and pressure, temperature, or environmental limits.

5. Are current City of Sugar Land technical specifications adequate for inclusion of the product? Are exceptions to the City specifications being requested?
6. Provide Certifications of Compliance to applicable City of Sugar Land standards and codes.
7. Engineering Design Guide - Attach a copy of the Engineering Design Guide or Installation Guide for the proposed product. This document should indicate that it was prepared under the supervision of a Registered Professional Engineer in the state of the manufacturer. Should engineering certification not be a part of the standard printed documents, a letter should be provided from the manufacturer that the Engineering Design Guide was prepared under the supervision of a Registered Professional Engineer. The name, seal, registration number and expiration date of the supervising engineer should be included in either the design guide as the accompanying letter.
8. Client References - Provide names, addresses, phone numbers and job identification of current and past clients. The City will contact selected references concerning product performance.
9. Provide copies of tests conducted by independent testing companies showing conformance with industry standard and City's specification established for the product.
10. Provide information relating to patents, licenses and/or franchises held on the product. Include specific descriptions and relevant data such as patent (license) number and date issued.
11. Provide any other related information. Although not required, our application submittal may include other data to assist the Committee in evaluating the product for use on City of Sugar Land projects. This information could include brochures, videotapes, product samples and/or photographs. The Committee cannot be responsible for return of these materials. One (1) copy of video tapes and product samples is sufficient for committee review.

**CITY OF SUGAR LAND  
ENGINEERING DEPARTMENT**

**PRODUCT APPROVAL APPLICATION**

Application Number \_\_\_\_\_  
Date Received \_\_\_\_\_  
Submittal Complete \_\_\_\_\_

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(Do not write above this line for City use only)

**ITEM 1. General Information**

**Product Name** \_\_\_\_\_

**Representative Company Name** \_\_\_\_\_

**Individual Contact(s)** \_\_\_\_\_

**Street Address** \_\_\_\_\_

**City, State, Zip Code** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Fax** \_\_\_\_\_

**E-Mail Address** \_\_\_\_\_

**Manufacturer Company Name** \_\_\_\_\_

**Individual Contact(s)** \_\_\_\_\_

**Street Address** \_\_\_\_\_

**City, State, Zip Code** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Fax** \_\_\_\_\_

**E-Mail Address** \_\_\_\_\_

**Product Application(s)**

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