November 11, 2014

MEMORANDUM

TO: Vendors of Goods and Services

FROM: Joanna McLaurin, 662.323.2525 ext.106

Deputy City Clerk/Purchasing Agent

SUBJECT: Sources of Supply for the Public Works Department, Public Services Department, Fire Department, Sanitation Department and General City.

The City of Starkville, Mississippi will receive **sealed bids** for **Sources of Supply** for the **Public Works Department, Public Services Department, Fire Department, Sanitation Department and General City**.

All bids should be submitted to the Office of the City Clerk, Attn: Joanna McLaurin, 101 Lampkin Street, Starkville, MS 39759, by 10:00 a.m. on Wednesday, December 3, 2014 at which time they will be opened publicly, and taken under advisement.

The bid container must be marked "**SOURCES OF SUPPLY FOR PUBLIC WORKS, PUBLIC SERVICES, FIRE DEPARTMENT, SANITATION DEPARTMENT, OR GENERAL CITY** (*whichever applicable*)**; DUE 10:00 a.m. December 3, 2014 ."** A Source of Supply bid package may be obtained by writing to: City Clerk's Office, Attn:Joanna McLaurin, 101 Lampkin St. Starkville, MS 39759. You can also retrieve this information from the City's web site, www.cityofstarkville.org, locate the subtitle Quick Links, and select Advertisement for Bid.

Questions concerning any item for which bids are being requested should be addressed to the contact person

listed for said item:

Lesa Hardin, City Clerk, (General City) 662.323.2525 ext 117

Roger Mann, Fire Chief (662) 323-1845

Edward Kemp, City Engineer/Street Department (662)323.2525 ext 111

Doug Devlin, Director of Public Services (662) 323.3133, ext 131

Emma Gibson-Gandy, Sanitation Department, (662) 323-2652

The City will appreciate receiving a bid from you. If we can be of any assistance to you in this regard, please do not hesitate to contact us.

ADVERTISEMENT FOR BIDS

THE CITY OF STARKVILLE, MISSISSIPPI

Notice is hereby given that The City of Starkville, Mississippi will receive sealed bids for **SOURCES OF SUPPLY** to be utilized by the **PUBLIC WORKS DEPARTMENT, STREET DEPARTMENT, SANITATION DEPARTMENT, FIRE DEPARTMENT, ELECTRIC DEPARTMENT AND GENERAL CITY**.

Bids will be received at the City Clerk's Office, 101 Lampkin St., City Hall, Starkville, Mississippi, 39759, until 10:00 a.m. local time on Wednesday, December 3, 2014 at which time they will be opened, and taken under advisement.

A Source of Supply bid package may be obtained by writing to: City Clerk's Office, Attn: Joanna McLaurin, 101 Lampkin St. Starkville, MS 39759; or by calling 662.323.2525 ext. 106. You can also retrieve this information from the City's web site, www.cityofstarkville.org, locate the subtitle Quick Links, and select Advertisement for Bid.

No bid shall be withdrawn after the scheduled date and time of the opening of bids without the written consent of the City. Within the limitations if state law, the City of Starkville reserves the right to reject any or all bids received, to

waive any informalities or irregularities in the bids received, or to accept any bid which is deemed most favorable to the City.

CITY OF STARKVILLE

BY: /s/ *Joanna McLaurin*

Joanna McLaurin, Deputy City Clerk

PUBLISH: November 14, 2014 and November 19, 2015

2015 SOURCES OF SUPPLY

THE CITY OF STARKVILLE, MISSISSIPPI

GENERAL BID REQUIREMENTS

SPECIAL NOTE: Please read the following information carefully. Failure to conform to the General Bid Requirements may result in rejection of a bid.

1. All bids must be submitted on the standardized bid form provided. Further, the firm supplying the quotation should include the name of their firm on:

   a. Each page of the bid form utilized in the quotation (it is not necessary to return the unused portion of this bid packet).

   b. On any literature (i.e., manufacturer specifications, brochures, etc.) that may be included with the bid.

2. The notation, "**Sources of Supply Bid**," must appear on the outside of the envelope or other container in which the bid is submitted.

3. Bids shall be submitted by **10:00 a.m.,** , in order to be considered. No bid shall be withdrawn after the scheduled date and time of the opening of bids without the written consent of the City of Starkville.

4. Prices submitted must be firm and all bid quotations shall be valid for the Period beginning January through December 2013, unless otherwise specified.

5. The City reserves the right to extend this contract, or any portion thereof, into the next year if the prices quoted by that vendor remain the same for the extended period. This provision will only be exercised if circumstances beyond the control of the

City inhibit total contract renewal.

6. The bidder is responsible for verifying receipt by this office of their bids; however, verification is not a requirement for inclusion in the process.

7. All bids shall be net, F.O.B. Starkville, Mississippi, with transportation charges pre-paid by the vendor.

8. Manufacturers' brand names or part numbers are shown only to describe the item and to determine a level of acceptable quality. The City will accept bids for items which are equal or superior to those named.

9. The City reserves the right to total subdivisions of a numbered category to determine the lowest and best bid.

10. The City does not guarantee the purchase of any specific quantities of the items listed. Purchases will be made to cover requirements as they arise during the contract period.

11. Where specifications are not spelled out, the industry standard for that type and size item prevails.

12. The City will tabulate bids, select successful vendors, and mail a bid tabulation to all participating vendors as soon as practicable.

13. The City reserves the right to reject any or all bids when such rejection is deemed in the best interest of the City.

14. The City is unable to furnish copies of bid tabulations from previous years.

15. Minor deviations from exact sizes, dimensions, measurements, etc. may be accepted on items bid, at the discretion of the department head. Any such deviation must be noted on the bid form by the vendor.

16. If a contractor intends to apply a noted exception to a particular project, the City must be notified prior to commencement of the project.

17. All contractors are required to submit proof of liability and workmen's compensation coverage for their employees before contract can be awarded.

18. The City reserves the right, based on its own discretion, to purchase from the next low bidder if the low bidder is unable to deliver goods within a reasonable amount of time as determined by the City based on its immediate needs or customary circumstances.

19. Invoices will be paid by the City within 45 days of receipt of invoice and/or goods, whichever is the latter. Items purchased must have been received **prior** to payment of invoice. Late fees will **not** be paid by the City of Starkville.

20. An authorized signature **must** be included on the bid form.

THIS DOCUMENT MUST BE COMPLETED IN-ADDITION TO ANY OTHER BID FORM

City of Starkville, Mississippi

Bid Form: 2015 SOURCE of SUPPLY

DATE DUE: _____

COMPANY: _____

ADDRESS: _____

_____

E-MAIL ADDRESS: _____

PHONE #(S): _____ FAX #: _____

CONTACT PERSON(S) : _____

DATE: _____

Bid Price for: 2015 SOURCE of SUPPLY

City Department: _____

Enclose specifications for the above items. The City of Starkville reserves the right to reject any and all bids received, to waive any informalities in the bids received, or to accept any bid which is deemed most favorable to the City. **ALL BIDS SHOULD BE F.O.B. STARKVILLE, MS.**

Authorized Signature: _____

CITY OF STARKVILLE
2015 SOURCE OF SUPPLY
SPECIFICATIONS and TALLY SHEETS
PUBLIC WORKS: WATER / SEWER DEPARTMENT

SECTION I: (MATERIALS)

Contact Person: Doug Devlin
Telephone Number: (662) 323-3133, ext. 131

SPECIFICATIONS

Where "APPROVED MANUFACTURERS" are listed, bids will be accepted for those manufacturers and products only. Contact the Water Superintendent to have a product tested and qualified for possible inclusion in a future bid advertisement.

Where "EQUIVALENT TO" is listed, bids will be accepted for other manufacturer's products which meet or exceed the listed products. The low bidder may be asked to submit manufacturer's literature and samples if the City of Starkville has no prior experience with the product.

Where no equivalent is listed, the low bidder may be asked to submit manufacturer's literature and samples if the City of Starkville has no prior experience with the product.

Notice to bidders: By submitting a bid, the bidder is indicating that they have a regularly scheduled weekly delivery route in the area of Starkville, MS and all prices bid shall be F.O.B. Starkville, MS. After the establishment of an item's frequency/history of orders from the City of Starkville, winning bidders are expected to maintain a reasonable level of inventory at their location such that delivery of at least a portion of these items will not exceed one (1) week ARO. When bidding, each bidder shall indicate by writing the letters "NS" next to the bid price if the item is not currently stocked at the bidder's location at the time of submitting the bid.

Section 1.0 Ductile Iron Fittings and Accessories

Mechanical joint fittings shall be class 350 ductile iron compact fittings in accordance with ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11 as applicable.

Fittings for flanged connections shall be Class 125 ductile iron in accordance with ANSI/AWWA C110/A2.10.

Fittings shall be uniformly coated on the inside with cement-mortar lining and on the outside with asphalt conforming to ANSI/AWWA C104/A21.4.

Accessory packs shall be inclusive of all hardware necessary to connect the fitting to the type of pipe indicated on the bid response sheet (gaskets, nuts, bolts).

Accessory packs for MJ connections shall also include torque limiting nut actuated gripping wedge (Equivalent to Ebaa iron series 1100, 2200).

Section 2.0 Water Meters and Accessories

5/8" – 2.0" Positive Displacement Disc Meters **:** Construction and performance shall be in accordance with ANSI/AWWA C700 with cast bronze housing and bronze bottom. Measurement shall be by a thermoplastic nutating disc, positive displacement. Registers shall be for manual reading unless indicated otherwise.

Size	Maximum low flow registration	Minimum accuracy at low flow registration	Minimum continuous duty	Minimum intermittent duty	Maximum pressure drop at minimum continuous duty flow
.625”x .750”	1/4 GPM	95%	15 GPM	25 GPM	2.8 PSI
1.0”	3/4 GPM	95%	50 GPM	70 GPM	6.5 PSI
1.5”	1 1/4 GPM	95%	80 GPM	120 GPM	4.8 PSI
2.0”	1 1/2 GPM	95%	100 GPM	170 GPM	3.3 PSI

3.0” – 6.0” Single Jet Low Flow Meters**:** Construction and performance shall be in accordance with ANSI/AWWA C712. Flanges shall be standard class 125/150. Optional features shall be indicated on bid response sheet. Registers shall be for manual reading unless indicated otherwise.

Size	Maximum low flow registration	Minimum accuracy at maximum low flow registration	Minimum continuous duty	Minimum intermittent duty	Maximum pressure drop at minimum continuous duty flow
3.0”	1/2 GPM	95%	175 GPM	350 GPM	7.25 PSI
4.0”	3/4 GPM	95%	260 GPM	500 GPM	7.25 PSI
6.0”	1 1/4 GPM	95%	440 GPM	750 GPM	7.25 PSI

Note: Test ports are required. If test port is not available as an integral part of the meter housing, then the meter quote shall be inclusive of a stainless steel or bronze spool piece with a test port plus accessories (bolts, nuts, gasket) and shipped in the same container as the meter.

4.0” – 6.0” Turbine or Single Jet High Flow Meters**:** Construction and performance shall be in accordance with the applicable ANSI/AWWA standards. Optional features shall be indicated on bid response sheet. Registers shall be for manual reading unless indicated otherwise.

Size	Maximum low flow registration	Minimum accuracy at maximum low flow registration	Minimum continuous duty	Minimum intermittent duty	Maximum pressure drop at minimum continuous duty flow
2.0”	3 GPM	95%	200 GPM	250 GPM	8.3 PSI
3.0”	4 GPM	95%	450 GPM	550 GPM	1.8 PSI
4.0”	10 GPM	95%	1000 GPM	1250 GPM	7.3 PSI
6.0”	15 GPM	95%	2000 GPM	2000 GPM	4.8 PSI

Note: Test ports are required. If test port is not available as an integral part of the meter housing, then the meter quote shall be inclusive of a stainless steel or bronze spool piece with a test port plus accessories (bolts, nuts, gasket) and shipped in the same container as the meter.

Radio read equipment

Transmitters: Transmitters shall be Itron 60W with leads terminated into Itron water tight “quick connect” coupling.

Pulse Registers: Leads shall be terminated into Itron water tight “quick connect” coupling. When used with an Itron 60W transmitter, the combination shall transmit the meter reading to the receiver in gallon units that require a multiplier of 100.

ADE Registers: Leads shall be terminated into Itron water tight "quick connect" coupling. When used with an Itron 60W transmitter, the combination shall transmit the meter reading to the receiver in gallon units that require a multiplier of 100.

Section 3.0 Valve Boxes

Valve boxes shall be for underground installation and shall be fine gray iron castings, 5 ¼" shaft, screw type, adjustable height, round base in accordance with ASTM A48 Class 30B. Valve boxes shall have the word "WATER" cast into the top of the cover and shall not be painted.

EQUIVALENT TO

1. Vulcan V8460

Section 4.0 Concrete Meter Boxes

All concrete cast meter boxes shall accept Ford Copper-setter for meter sizes listed and incorporate a cast iron meter lid

EQUIVALENT TO

1. Brooks 36H12 (up to 1" meter)
   Brooks 65H12 (up to 2" meter)

Cast Iron

EQUIVALENT TO

1. Sigma or Russell 282, RO-1019 (small)
   Sigma or Russell 283, MI-1019 (large)

Section 5.0 Service Saddles/Tapping Sleeves

Service saddles for 2" pipe

The body and strap of service saddles for 2" pipe shall be constructed of brass alloy in accordance with ASTM B-62 and AWWA C800. The strap shall be permanently connected to the body on one side with a hinge which incorporates a silicone bronze pin. The strap is bolted to the other side of the body with a silicon bronze hex head bolt. The gasket shall be Buna N rubber in accordance with ASTM D-2000.

Outlet sizes shall be corporation cock (CC) threads.

Type of pipe (PVC, Steel, etc.) will be specified on the order.

EQUIVALENT TO

1. Ford S70/S90 Series

Service saddles for 4" and larger pipe with 5/8" to 2" outlets:

Service saddles for 4" and larger pipe shall be double strap type. Saddle bodies shall be constructed of ductile iron in accordance with ASTM A536 and coated with a fusion bonded epoxy to a minimum thickness of 12 mils.

The straps, nuts, washers and studs shall be constructed of Type 304 stainless steel.

The gasket shall be constructed of nitrile (Buna N) rubber compounded to resist oil, acid and alkalies. The gasket system shall be designed for a minimum of 300 psi working pressure.

0.75" – 1.50" outlet sizes shall be corporation cock (CC) threads.

2.00" outlet size shall be IP threads.

Type of pipe (C900 PVC, DI, etc.) will be specified on the order.

EQUIVALENT TO

1. Smith Blair 317 series w/ stainless steel straps, nuts, washers and studs

Tapping Sleeves for 4"and larger pipes with 4" and larger outlets:

Tapping sleeves shall be full circumference bands and necks fabricated out of Type 304 stainless steel with epoxy fusion coated carbon steel flanges.

Type of pipe on which sleeve is to be installed: C900 PVC or ductile iron water pipe

The bands, neck, nuts, washers and studs shall be constructed of Type 304 stainless steel and coated to prevent galling. Epoxy coated carbon steel flange permitted.

The gasket shall be constructed of nitrile (Buna N) rubber compounded to resist oil, acid and alkalies. The gasket system shall be designed for a minimum of 300 psi working pressure.

Note: Tapping sleeve diameter ranges shall not be multipurpose for use on both IPS and C900/DI pipe sizes.

EQUIVALENT TO:

Smith Blair 662 Series (flanged outlet)

Section 6.0 Plain End Pipe Couplings

2.0" – 12.0"

Plain end pipe couplings shall incorporate a sleeve constructed of carbon steel having a minimum yield of 30,000 psi.

The follower section shall be constructed of ductile iron in accordance with ASTM A536.

The sleeve and finisher shall be coated with an infusion bonded, corrosion resistant epoxy (Smith Blair Flexi-Coat™ or equivalent).

The gaskets shall be of nitrile Buna N rubber formulated to resist oil, acids and alkalies

The bolts and nuts shall be stainless steel

14.0" and larger

Couplings for 14" and larger pipe shall be in accordance with the aforesaid specification for 2-12" pipe except that the follower shall be constructed of AISI C1020 coated steel.

EQUIVALENT TO

1. Smith Blair series 411 with optional stainless steel fasteners

Section 7.0 Corporation Stops

Corporation stops shall be all brass ball valve type in accordance with AWWA C800.

Inlet threads shall be AWWA tapered corporation cock (CC) unless indicated otherwise on the bid response sheet.

Outlets shall be pack joint for copper or plastic tubing (CTS) with optional grip joint and stainless steel activation screw for the clamp unless indicated otherwise on the bid response sheet.

The body design shall incorporate two (2) opposing flats for installation with an open end wrench.

Equivalent to: Ford F1000 series

Section 8.0Curb Stops

Curb stops (where used) shall be all brass ball valve type in accordance with AWWA C800 with padlock wings.

Inlet shall be pack joint for copper or plastic tubing (CTS) with optional grip joint and stainless steel activation screw for the clamp unless indicated otherwise on the bid response sheet.

Outlet shall be for meter spud unless indicated otherwise on the bid response sheet.

Equivalent to: Ford B43 series

Section 9.0 Fire Hydrants

Fire hydrants shall comply with ANSI/AWWA C502, UL 246, FM 1510.

Threads shall be to City of Starkville Fire Department standard.

Hydrants shall be dry barrel type with break away base.

Hydrants shall incorporate a type MJ shoe

Hydrants shall be painted yellow.

APPROVED MANUFACTURERS

1. Mueller #A-420 (2 way)
   Mueller #A-423 (3 way)

Section 10.0 Resilient Seated Gate Valves

2.0”

2.0” gate valve shall be constructed of cast iron with NPT threads and shall incorporate a 2” square operating nut.

4” – 12”

4” – 12” gate valves shall be resilient seated in accordance with ANSI/AWWA C509. Valves shall incorporate bronze mounted, non-rising stem with O-rings, opening counterclockwise. All cast-iron parts, inside and out, shall be coated with a fusion bonded thermosetting powder epoxy in accordance with ANSI/AWWA C550 and certified to NSF 61 as applicable. All valves are for buried application shall incorporate a standard AWWA wrench nut.

4" – 12" EQUIVALENT TO

1. Mueller 2360 series

Sections 11.0 – 12.0 (reserved)

Section 13.0 Tapping Saddles for Sewer Pipe

Sewer tapping saddles shall be manufactured from high durometer flexible PVC such that one saddle can be affixed to multiple diameter sewer mains up to 15"

Service line connection size shall be specified on the order and shall accept iron and PVC pipe.

Each saddle shall be supplied with stainless steel clamps and screws for affixing the saddle to the service line.

EQUIVALENT TO

1. Fernco TS series

Section 14 Cross-Linked Poly Tubing

Tubing shall be manufactured of high quality cross-linked polyethylene utilizing a high-pressure peroxide method. Cross-linked polyethylene shall have an approved cell classification of 354400 in accordance with ASTM D 3350, and a minimum degree of cross-linking of 80% when tested in accordance with ASTM D 2765, Method B.

The tubing shall have a minimum continuous pressure rating of 160 psi @ 73.4°F and a minimum bursting pressure rating of 475 psi @ 73.4ºF when tested in accordance with ASTM D 2837.

The tubing surface color shall be UV resistant blue. A co-extruded UV resistant blue shield made from UV-resistant, high-density polyethylene is acceptable. The UV protection shall resist exposure to natural sunlight for up to one year.

The tubing outside diameter and wall thickness shall comply with CTS SDR9 dimensions and be compatible with all commonly used AWWA C800 CTS compression fittings and manufactured in accordance with the following standards:

ASTM F 876 and ASTM F 877
AWWA C904

EQUIVALENT TO

1. Rehau Municipex (PEXa)

Section 15.0 Full Circle Repair Clamps

Full circle repair clamps shall incorporate type 304 stainless steel bands and stainless steel lugs manufactured in accordance with ASTM A536

Gaskets shall be nitrile Buna N rubber formulated to resist oil, acids and alkalies.

The diameter range of the clamp shall be for schedule 40/80 PVC and steel pipe and for 2.0" clamps.

The diameter range of the clamp shall be for AWWA ductile iron and PVC (C900) for 4"-12" clamps.

All repair clamps shall incorporate stainless steel fasteners with a fluoropolymer coating to prevent galling.

Note: Repair sleeve diameter ranges shall not be multipurpose for use on both IPS and C900/DI pipe sizes.

EQUIVALENT TO

1. Smith Blair 226 series with optional stainless steel fasteners

Section 16.0 Flexible Sewer Couplings

Sewer couplings shall be constructed of elastometric compound that meets or exceeds ASTM D5926, C1117 and the applicable portions of ASTM C443, C425, C564, CSA B602 and D1869.

The couplings be inclusive of stainless steel clamps that are corrosion-resistant and rust-proof.

When connecting sewer pipes of the same size, but differing outside diameters, the coupling shall align the inner pipe walls such that there are no steps or obstructions that will cause back ups.

EQUIVALENT TO

1. FERNCO "Stock" couplings

Section 17.0 Manhole Rings and Covers

Manhole rings and covers shall be sound gray iron castings, non- watertight type unless specified otherwise. The castings shall be true to pattern, free from faults, sponginess, cracks, blowholes and other defects affecting their strength. Covers shall be cast with the words "SEWER" or "SANITARY SEWER" and shall be the following brand and models

APPROVED MANUFACTURERS

1. Non-traffic areas
   a) East Jordan Iron Works V-1600-3 (reversible) or approved equivalent

2. Traffic Loads
   a) East Jordan Iron Works V-1407 (stackable ring type) or approved equivalent

Section 18.0 Concrete Manhole Bases and Riser Sections

A. Manholes shall be pre-cast reinforced concrete sections in accordance with ASTM C 478 (C 478M).

B. Aggregates for the concrete shall comply with requirements of the current Concrete Aggregates, ASTM C 33.

C. Manhole bases and risers shall be 58" OD x 48" ID with interlocking steps that match Hanson Pre-Cast std

D. Unless noted otherwise, manhole steps shall be furnished. The steps shall be plastic or rubber coated steel type with maximum spacing of 16 inches OC and shall support a concentrated load of 300 pounds (American Step Company ML-10-NCR or equiv.)

E. A concrete sealant (ConSeal CS102B or equiv.) shall be applied to all joints.

F. Where poured inverts are specified in the base, they shall be with 0.1 ft. drop.

G. Manhole base bottoms shall be "anti-float" with a minimum thickness of 6"

H. “Engineered Lifting Points” shall be 180° apart with cast-in hardware. Plain holes are not acceptable.

Section 19.0 Eccentric Concrete Manhole Cone Section

A. Eccentric concrete manhole cone sections shall be in accordance with ASTM C 478 (C 478M) and 36” in height.

B. “Engineered Lifting Points” shall be180° apart with cast-in hardware. Plain holes are not acceptable.

C. Bottom of cone section shall interlock with 58” OD x 48” ID risers.

D. The inside diameter of the top hole shall allow “drop-in” acceptance of an East Jordan Iron Works V-1600-3 (reversible) manhole ring. There should be sufficient concrete surface area between the cone top and the bottom of the ring flange to not diminish the load ratings of the ring and cover while allowing the installation of standard tar strip sealing material to a water tight state.

E. A concrete sealant (ConSeal CS102B or equiv.) shall be applied to all joints

Section 20.0 Pre-Installed Manhole Boot Connectors

A. Boot connectors shall be resilient type in accordance with ASTM C 923 or ASTM C 443.

B. Connector shall provide an airtight seal which eliminates infiltration and exfiltration.

Equivalent to:

1. A LOK as manufactured by A LOK Products, Inc.

C. Bid shall be the per unit price added to the price of the base.

CITY OF STARKVILLE
2014 SOURCE OF SUPPLY
BID TALLY SHEET

PUBLIC WORKS: WATER / SEWER DEPARTMENT

Contact Person: Doug Devlin
Telephone Number: (662) 323-3133 ext 131

Spec. Section #	Description	Central Pipe	Consolidated Pipe/Supply
1.0 Ductile Iron Fittings & Access Pcks	6” x 6” Tee MJ x Flange less accessories	$	
	6” x 6” Tee MJ x MJ less accessories		
	8” x 6” Tee MJ x Flange less accessories		
	8” x 6” Tee MJ x MJ less accessories		
	10” x 6” Tee MJ x Flange less accessories		
	10” x 6” Tee MJ x MJ less accessories		
	12” x 6” Tee MJ x Flange less accessories		
	12” x 6” Tee MJ x MJ less accessories		
	6 “MJ accessory pack for DI pipe + gland		
	6” MJ accessory pack for PVC pipe+ gland		
	6” flange accessory pack		
	8 “MJ accessory pack for DI pipe+ gland		
	8” MJ access pk for PVC pipe+ gland		
	8” flange accessory pack		
	10” MJ accessory pack for DI pipe+ gland		
	10” MJ accessory pack for PVC pipe+ gland		
	10” flange accessory pack		
	12” MJ accessory pack for DI pipe+ gland		
	12” MJ accessory pack for PVC pipe+ gland		
	12” flange accessory pk		

2.0 Water meters	Mueller **Model 420** PD disc, **bronze bottom** w/Mueller Mi.Node® two way transmitter potted into, and integrally mounted on, Mueller register. Min Order = $750 in multiple of 6.		
	Mueller **Model 420** PD disc, **Iron bottom** w/Mueller Mi.Node® two way transmitter potted into, and integrally mounted on, Mueller register. Min Order = $750 in multiple of 6.		
	Mueller **Model 430** PD disc, **Iron bottom** w/Mueller Mi.Node® two way transmitter potted into, and integrally mounted on, Mueller register. Min Order = $750 (6)		
	Badger Model 25 PD disc, IRON **bottom**, straight read register.		
	Badger Model 25 PD disc, iron **bottom**, no register		
	Badger Model 70 PD disc, **iron bottom**, straight read register.		
	Badger Model 70 PD disc, iron **bottom**, no register		
	Badger Model 120 PD disc, straight read register.		
	Badger Model 120 PD disc, no register		
	Badger Model 170 PD disc, straight read register.		
	Badger Model 170 PD disc, no register		
	Badger Model 25 ADE (ASCII protocol) register with Nicor® connector (indicate connector gender on bid		

	response.) Female		
	Badger Model 70 ADE (ASCII protocol) register with Nicor® connector (indicate connector gender on bid response.)Female		
	Badger Model 120 ADE (ASCII protocol) register with Nicor® connector (indicate connector gender on bid response.)Female		
	Badger Model 170 ADE (ASCII protocol) register with Nicor® connector (indicate connector gender on bid response.)Female		
	Itron 60W transmitter with Nicor® connector. Opposite gender of ADE register connector bid above. Min. order = 3		
	Itron 60W transmitter with Nicor® connector. Opposite gender of ADE register connector bid above. Min. order = 6		
	Mueller Mi.Node® two way transmitter with Nicor® connector (gender specified on order) for use with any ADE register (ASCII protocol). Min. order = 25.		
	2.0” PD disc pulse register only with Itron quick connect coupling.		
	.625” x .750” PD disc ADE register only with Itron quick connect coupling.		
	1.0” PD disc ADE register only with Itron quick connectcoupling.		
	1.5” PD disc ADE register only with Itron quick connect coupling		

	2.0” PD disc ADE register only with Itron quick connect coupling.		
3.0 Valve Box	5 1/4 ” shaft x 24”-36” bury (adjustable)		
	5 1/4” shaft x 36”-48” bury (adjustable)		
4.0 Meter Boxes	Concrete box for .750” and 1” meter with concrete top andcast iron meter read door.		
	Same as above, but box only.		
	Same as above, but top only.		
	Concrete box for .750” and 1” meter with composite top and meter read door for AMR radio transmitter.		
	Concrete for 1.25” – 2.0” mtr-Concrete lid		
	Concrete for 1.25” – 2.0” mtr-Metal lid		
	Cast Iron (small)		
	Cast Iron (large)		
5.0 Service Saddles	2” pipe x ¾” CC outlet		
5.1	2” pipe x 1” CC outlet		
	4” pipe x ¾” CC outlet		
5.2	4” pipe x 1” CC outlet		
	4” pipe x 1.5” CC outlet		
	4” pipe x 2” NPT outlet		
	6” pipe x ¾” CC outlet		
	6” pipe x 1” CC outlet		
	6” pipe x 1.5” CC outlet		
	6” pipe x 2” NPT outlet		
	8” pipe x ¾” CC outlet		
	8” pipe x 1” CC outlet		
	8” pipe x 1.5” CC outlet		
	8” pipe x 2” NPT outlet		
	10” pipe x ¾” CC outlet		
	10” pipe x 1” CC outlet		
	10” pipe x 1.5” CC outlet		
	10” pipe x 2” NPT outlet		
	12” pipe x ¾” CC outlet		
	12” pipe x 1” CC outlet		
	12” pipe x 1.5” CC outlet		
	12” pipe x 2” NPT outlet		
5.3 Tapping Sleeves	4” pipe x 4” flange less		

(Carbon Steel Flange)	accessories		
	6” pipe x 4” flange less accessories		
	6” pipe x 6” flange less accessories		
	8” pipe x 4” flange less accessories		
	8” pipe x 6” flange less accessories		
	8” pipe x 8” flange less accessories		
	10” pipe x 4” flange less accessories		
	10” pipe x 6” flange less accessories		
	10” pipe x 8” flange less accessories		
	10” pipe x 10”flange less accessories		
	12” pipe x 4” flange less accessories		
	12” pipe x 6” flange less accessories		
	12” pipe x 8” flange less accessories		
	12” pipe x 10”flange less accessories		
	12” pipe x 12”flange less accessories		
5.3.1 Tapping Sleeves Alt (Stainless Steel Flange)	4” pipe x 4” flange less accessories		
	6” pipe x 4” flange less accessories		
	6” pipe x 6” flange less accessories		
	8” pipe x 4” flange less accessories		
	8” pipe x 6” flange less accessories		
	8” pipe x 8” flange less accessories		
	10” pipe x 4” flange less accessories		
	10” pipe x 6” flange less accessories		
	10” pipe x 8” flange less accessories		
	10” pipe x 10”flange less accessories		
	12” pipe x 4” flange less accessories		
	12” pipe x 6” flange less accessories		

	12” pipe x 8” flange less accessories		
	12” pipe x 10”flange less accessories		
	12” pipe x 12”flange less accessories		
6.0 Pipe Couplings	For 2”Sch 40/80 PVC and steel pipe diameters		
	For 4” D.I. and/or C900 PVC		
	For 6” D.I. and/or C900 PVC		
	For 8” D.I. and/or C900 PVC		
	For 10” D.I. and/or C900 PVC		
	For 12” D.I. and/or C900 PVC		
7.0 Corporation Stops	0.75”		
	1.0 “		
	1.5”		
	2.0 NPT male inlet by CTS outlet		
8.0 Curb Stops	0.75”		
	1.0”		
	1.0” meter spud x male NPT		
	1.5” CTS x elliptical flange		
	1.5” elliptical flange x male NPT		
	2.0” CTS x elliptical flange		
	2.0” elliptical flange x male NPT		
9.0 Fire Hydrants	2 way x 3.5 ft. bury		
	3 way x 3.5 ft. bury		
10.0 Gate Valves-C509	2” NPT (FemalexFemale) Imported Acceptabe		
	4” MJ x MJ less accessories Domestic Only		
	4” MJ x Flange less accessoriesDomestic Only		
	6” MJ x MJ less accessories Domestic Only		
	6” MJ x Flange less accessories Domestic Only		
	8” MJ x MJ less accessories Domestic Only		

	8” MJ x Flange less accessories Domestic Only		
	10” MJ x MJ less accessories Domestic Only		
	10” MJ x Flange less accessories Domestic Only		
	12” MJ x MJ less accessories Domestic Only		
	12” MJ x Flange less access- Domestic Only		
13.0 SewerTapping Saddles	4” Service		
	6” Service		
14.1 Cross-linked Polyethylene Tubing	.750” 100 ft. coil		
	.750” 300 ft. coil		
	.750” 500 ft. coil		
	1.0” 100 ft. coil		
	1.0” 300 ft. coil		
	1.5” 100 ft. coil		
	1.5” 300 ft. coil		
	2.0” 100 ft. coil		
	2.0” 300 ft. coil		
15.0 Full Circle Repair Clamps	2” x 7.5” wide		
	2” x 12.5” wide		
	4” x 7.5” wide		
	4” x 12.5” wide		
	6” x 7.5” wide		
	6” x 12.5” wide		
	8” x 7.5” wide		
	8” x 12.5” wide		
	10” x 7.5” wide		
	10” x 12.5” wide		
	12” x 7.5” wide		
	12” x 12.5” wide		
16.0Sewer Hub Adaptr	4” clay x plastic		
	4” plastic x plastic		
	6” clay x plastic		
	6” plastic x plastic		
	8” clay x plastic		
	8” plastic x plastic		
	10” clay x plastic		
	10” plastic x plastic		
	12” clay x plastic		
	12” plastic x plastic		
	15” clay x plastic		
	15” plastic x plastic		
17.0 Manhole Rings & Covers	East Jordan Iron Works V-1600-3 (reversible) or approved equiv. Ring and cover set.		

	East Jordan Iron Works V-1600-3 (reversible) or approved equiv. Ring only		
	East Jordan Iron Works V-1600-3 (reversible) or approved equiv.Cover only.		
	East Jordan Iron Works V-1407 (stackable ring type) or approved equiv. Ring and cover set.		
	East Jordan Iron Works V-1407 (stackable ring type) or approved equiv. Ring only.		
	East Jordan Iron Works V-1407 (stackable ring type) or approved equiv. Cover only.		
18.0ConcreteManhole Bases and Riser Sections	32” tall base without holes and without poured invert		
	Poured invert adder (6” max radius). Invert out plus 1 inlet		
	Poured invert adder (6” max radius). Invert out plus 2 inlets		
	Poured invert adder (6” max radius). Invert out plus 3 inlets		
	12” riser section		
	16” riser section		
	32” riser section		
	48” riser section		
19.0 Eccentric Concrete Manhole Cone Section	36” tall cone section per specs without ring & cover		
	36” tall cone section per specifications with pre-installed and sealed ring and cover		
20.0 Pre-Installed Manhole Boot Connectors	Pre-installed hole and boot adder for 4” sewer pipe		
	Pre-installed hole and boot adder for 6” sewer pipe		
	Pre-installed hole and boot adder for 8” sewer pipe		
	Pre-installed hole and boot adder for 10” sewer pipe		
	Pre-installed hole and boot adder for 12” sewer pipe		
END OF SECTION I (MATERIALS)			

		Harcros Chem Inc
Wastewater Chemicals	Chlorine Gas(2,000 lb. Cylinder) Per 2000 lb cylinder	
	Sulfur Dioxide: 150lb. Cylinder	
		Harcros Chem Inc
Water Treatment Chemicals	Carus Chemical Company (Aqua Mag®)	
	Potassium Permanganate (50 lb. drum)	
	Sodium Fluoride (50 lb bag)	
	Soda Ash (50 lb bag)	
	Chlorine Gas (150 lb Cylinder)	
	Chlorine Gas (2,000 lb Cylinder)	
	Corrosion Inhibitor	

Public Works: New Construction / ReHab

	License Number:		
	Performance Bond price per $1000 of contract value:	$	
1.Pipe Demo & Disposal			
Diameter/Cut Depth	**Length**	Price per LF	
0” – 24” 0’-6’ Cut	n/a		
25” – 48” 0’-6’ Cut	n/a		
Larger than 48” 0’-6’ Cut	n/a		
0” – 24” 7’-10’ Cut	n/a		
25” – 48” 7’-10’ Cut	n/a		
Larger than 48” 7’-10’ Cut	n/a		
0” – 24” >10’ Cut	n/a		
25” – 48” >10’ Cut	n/a		
Larger than 48” >10’ Cut	n/a		
4”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6” – 10’ Cut	0’ – 300’		
6” – 10’ Cut	301’ - 700’		
6” – 10’ Cut	701 +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
6”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
8”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
10”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		

6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
12”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
15”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
18”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
21”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		
6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
24”			
0’ – 6’ Cut	0’ – 300’		
0’ – 6’ Cut	301’ - 700’		
0’ – 6’ Cut	701’ +		
6’ – 10’ Cut	0’ – 300’		
6’ – 10’ Cut	301’ - 700’		

6’ – 10’ Cut	701’ +		
10’ – 16’Cut	0’ – 300’		
10’ – 16’Cut	301’ - 700’		
10’ – 16’Cut	701’ +		
Misc Sewer Line Installations			
New Manhole Installation	0’ – 6’ Invert Depth		
	6’ – 10’ Invert Depth		
	10’ – 16” Invert Depth		
Manhole Installation over Existing Line	Per Vertical Ft		
Tying into Existing Manhole			
4” Sewer Tap			
6” Sewer Tap			
WaterPipe & Open Cut Steel Casing installation- 36” Nominal Depth			
Type 1 Bedding (Pipe Diameter)			
2” (inc threaded connections)			
4”			
6”			
8”			
10”			
12”			
14”			
16”			
18”			
20”			
24”			
Nominal Depth of 36 Type II Bedding			
4” (Pipe Diameter)			
6”			
8”			
10”			
12”			
14”			
16”			
18”			
20”			
24”			
Nominal Depth of 36” Type III Bedding			
6” (Pipe Diameter)			
8”			
10”			
12”			
14”			
16”			
18”			
20”			
24”			
Miscellaneous Water Line Installations			
Mech Joint & Flange Connections Pipe or Fitting Dia.			
4”			

6”			
8”			
10”			
12”			
14”			
16”			
18”			
20”			
24”			
Concrete Thrust Blocks			
Square Ft of concrete bearing area upon undisturbed trench walls as required by the specifications			
Setting of Hydrants, Valves & Bases			
Prepare base & set Fire hydrant & 6” valve			
Prepare base& set valves &valve box			
2” (including threaded conn)			
4”--- 6”			
8”---10”			
12”			
14”			
16”			
18”			
20”			
24”			
Concrete Storm Drain Installation			
15” Diameter			
0’ to 6’ Depth	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
18” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
24” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
27” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		

6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
30” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
36” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
42” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
48” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
54” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
60” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
66” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
72” Diameter			
0’ to 6’	0’ – 300’		

0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
Corrugated Metal Pipe Installation			
15” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
18” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
21” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
24” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
30” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
36” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
42” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		

6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
48” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
54” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
60” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
66” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
72” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
78” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
84” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
96” Diameter			
0’ to 6’	0’ – 300’		

0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
108” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
Plastic Drainage Pipe Installation			
15” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
18” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
21” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
24” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
30” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
36” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		

6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
42” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
48” Diameter			
0’ to 6’	0’ – 300’		
0’ to 6’	301’ - 700’		
0’ to 6’	701’ +		
6’ to 10’	0’ – 300’		
6’ to 10’	301’ - 700’		
6’ to 10’	701’ +		
Misc Drainage Installations			
Bldg Catch Basin	Per sq ft surface area		
Install 4”3,000 PSI Concrete linings in drainage ditches Per sq ft surface area	Less than 1000 square feet		
“	More than 1000 square feet		
Install Pre-Cast Storm Inlet / Junction Box (Includes Excavation & Equipment)	(Dimensions)		
0’ to 6’ Depth	0 ’x 0’ to 48”x48”		
0’ to 6’	49”x49” to 96”x96”		
0’ to 6’	Larger than 96”x96”		
7’ to 10’	0 ’x 0’ to 48”x48”		
7’ to 10’	49”x49” to 96”x96”		
7’ to 10’	Larger than 96”x96”		
➢ 10’	0 ’x 0’ to 48”x48”		
➢ 10’	49”x49” to 96”x96”		
➢ 10’	Larger than 96”x96”		
Remove & replace concrete driveway	Removal of existing concrete driveways		
	Labor to install concrete surface area		
	Saw-cutting		
	Expansion material & traffic sealant		
Equipment & Personnel Services	Box blade, tractor & operator		
	Dump truck & operator (6cy)		
	Dump truck & operator (15cy)		
	Dump truck & operator (22 cy)		
	Backhoe & operator		
	Large Track Hoe Excavator & Operator		
	Excavator, Operator & Helper(s) for pipe rehab		
	Mini-excavator (1 ft		

	bucket) Operator & one helper for meter work		
	Welding mch & welder		
	D3 Dozer & operator		
	D4 Dozer & operator		
	D5 Dozer & operator		
	D6 Dozer & operator		
	Tractor,Sheep's Ft and / or wobble wheel & op		
	Motor Grader (12G or equal) & operator		
	Motorized wobble wheel compactor & operator		
	Tractor (425 hp min) 17 cy capacity pull scraper and operator		
	Self contained scraper (20 cy) & operator		
	Tractor (225 hp min) Operator & 15' disk		
	Caterpillar Skidsteer Brushcutter		
	w/brush grapple attachment		
	Haul 22 CY/26 ton loads From Columbus, MS		
Erosion Control Services			
City provides seed & hay bales for seeding & mulching.	Broadcast grass seed and apply straw much		
Contractor provides all materials for silt fencing	Install MDOT approved black plastic film silt fence (wood stakes)		
Installation of Hydromulch & seeding	MDOT Fall Mix – Irrigation Required		
	MDOT Spring Mix – Irrigation Required		
Linear Boring – City provides casing pipe, access to boring site, clearing, grubbing, permits & easements	Mobilization Charge		
	Pit Excavations per bore to include both boring & receiving pits		
For Water Lines	6 "		
	8"		
	10"		
	12"		
	14"		
	16"		
	18"		
	20"		
	24"		
For sewer lines on grade	6 "		
	8"		
	10" thru 16"		
	16" and greater		
14.0 Directional Boring, insertion of flexible pipe or conduit and glue joint	Mobilization Charge		

splicing – City provides flexible pipe or conduit, splicing supplies, access to boring sites, clearing, grubbing, permits & easements			
	Pit Excavations per bore To include boring and receiving pits		
Conduit or Pipe O.D.	0 – 1.99”		
	Per glue joint splice		
	2.0” – 2.99”		
	Per glue joint splice		
	3.0” – 3.99”		
	Per glue joint splice		
	4.0” – 4.99”		
	Per glue joint splice		
	5.0” – 5.99”		
	Per glue joint splice		
	6.0” – 6.99”		
	Per glue joint splice		

SECTION IV :SEWER MAINTENANCE AND REHABILITATION SERVICES

	License Number:	
	Performance Bond price per $1000 of contract value:	
Lining of Manholes	Inspection Mobilization	
	Manhole Inspection	
	Mobilization for Lining	
Type Lining	CCi Spectrum, SpectraShield – New Condition	
	CCi Spectrum, SpectraShield – Condition A	
	CCi Spectrum, SpectraShield – Condition B	
	CCi Spectrum, SpectraShield – Condition C	

CITY OF STARKVILLE
2015 SOURCE OF SUPPLY
SPECIFICATIONS AND BIDS
PUBLIC WORKS: DRINKING WATER AND WASTE WATER TREATMENT DIVISIONS

SECTION II: (WATER TREATMENT CHEMICALS)

A. DRINKING WATER CHEMICAL SPECIFICATIONS AND BIDS

Contact Person: Scott Thomas, Chief Water Operator
Telephone Number: (662)-418-3006

General Requirements for Bids: The unit prices bid shall be sales tax exempt and F.O.B. Starkville, MS.

Where "APPROVED MANUFACTURERS" are listed, bids will be accepted for those manufacturers and products only. Contact the Chief Water Operator to have a product tested and qualified for possible inclusion in a future bid advertisement.

Where "EQUIVALENT TO" is listed, bids will be accepted for other manufacturer's products which meet or exceed the requirements and specifications of the listed products. The low bidder may be asked to submit manufacturer's literature and samples if the City of Starkville has no prior experience with the product.

Note: 2,000 pound chlorine cylinders must be delivered in a truck with a jib crane to set the cylinders into a designated location such that subsequent moving and handling of full cylinders by City personnel is not necessary.

All drinking water treatment chemicals shall comply with the applicable AWWA standard.

Section 1.0 Potassium Permanganate (50 lb. drum) $_____

Section 2.0 Sodium Fluoride (50 lb bag) $_____

Section 3.0 Soda Ash (50 lb bag) $_____

Section 4.0 Chlorine Gas (150 lb Cylinder) $_____

Section 5.0 Chlorine Gas (2,000 lb Cylinder) $_____

Section 6.0 Corrosion Inhibitor

Distributor Requirements:

- The distributor shall provide transfer pumps
- The distributor shall fill slurry cans at all treatment facilities.
- The distributor shall deliver the product within three (3) days of notification by the City.

- The distributor shall analyze raw water from each well to determine the feed rate, dosage (mg/l) and provide formulae for determining feed rates prior to the initial delivery of product and upon request thereafter.
- The distributor shall verify the proper calibration of pumps, feed rates and maintenance doses at each delivery and upon request.
- The distributor shall dispense the product through a calibrated metering device with totals per well provided at the time of delivery.

Packaging:

- The distributor shall deliver the product in a carrier that has been previously approved by the manufacturer.
- Product container(s) shall be food grade quality with a Certificate of Analysis (COA) accompanying each shipment.

APPROVED MANUFACTURERS

1. Carus Chemical Company (Aqua Mag®) $_____/gal.

B. WASTEWATER CHEMICAL SPECIFICATIONS AND BIDS

Contact Person: Thomas Ware, Chief Wastewater Operator
Telephone Number: (662)-323-7211

SPECIFICATIONS

General Requirements for Bids: The unit prices bid shall be sales tax exempt and F.O.B. Starkville, MS.

Where "APPROVED MANUFACTURERS" are listed, bids will be accepted for those products only. Contact the Chief Wastewater Operator to have a product tested and qualified for inclusion in a future bid advertisement.

Where "EQUIVALENT TO" is listed, bids will be evaluated for other manufacturer's products of equivalent dimensions and quality. The low bidder may be asked to submit manufacturer's literature and samples if the City of Starkville has no prior experience with the product.

Note: 2,000 pound chlorine cylinders must be delivered in a truck with a jib crane to set the cylinders into a designated location such that subsequent moving and handling of full cylinders by City personnel is not necessary.

Section 1.0 Chlorine Gas(2,000 lb. Cylinder) $_____/2000 lb. cylinder

Section 2.0 Sulfur Dioxide: 150lb. Cylinder $_____/ 150 lb. cylinder

END OF SECTION II (WATER TREATMENT CHEMICALS)

CITY OF STARKVILLE
2015 SOURCE OF SUPPLY
SPECIFICATIONS AND BIDS
PUBLIC WORKS: NEW CONSTRUCTION/REHAB

SECTION III: (CONSTRUCTION)

CONTACT PERSON

Doug Devlin. 662-323-3133 EXT 131

"City" indicates City of Starkville.

The unit prices bid herein shall cover all labor and equipment to excavate, bed, install and backfill the following infrastructure to City specifications (available upon request) at sizes and depths shown. City shall furnish all materials unless noted otherwise. The contractor is responsible for all equipment required to load and deliver all piping, fittings, bedding material, etc. to the project from the City stockpile and returning any unused materials at the completion of the work to the City stockpile (unit prices shown below shall include these costs).

Compliance with the State of Mississippi 811 statues regarding the locations of underground utilities prior to the commencement of any work shall be the responsibility of the contractor and compensation for any damages to underground utilities as a result of the performance of any work covered by this bid shall be the responsibility of the contractor.

The contractor shall carefully inspect all City provided materials and notify the City of any defects or damages prior to handling the materials. Replacement of damaged materials after being handled by the contractor shall be the responsibility of the contractor.

Un-compacted backfill shall incorporate a sufficient "crown" to compensate for settling that may occur over the subsequent 12 months.

The bid unit prices shall be inclusive of the contractor providing a one (1) year warranty, commencing from the time of project completion, covering:

1. Labor and equipment to correct defects in workmanship.

2. Replacement of materials where the cause of failure is determined to be caused by the handling and installation practices of the contractor.

3. Correcting of grades where fully settled backfill is below or above the grades of the adjacent undisturbed soils.

Apparent winning bidders may be asked to submit qualification documents to the City where the City has no prior experience with the contractor's qualifications

Awards exceeding $50,000 or less than $50,000 when required by funding source.

No bidder shall be issued a notice to proceed for single projects in excess of $50,000 (or under $50,000 when required by funding agency), in the absence of responses to the following requests for information on this bid response and the execution of a construction contract with the City prior to said notice to proceed:

1. Construction license number issued by the Mississippi State Board of Contractors:

License number: _____

No award will be issued to a contractor whose classification does not qualify the firm or entity for the scope of work to be performed.

2. Unit price for providing a **Performance Bond** from a surety licensed to do business in the state of Mississippi for the faithful completion of the contracted work.

Contract Value Range	Unit Price to Provide Performance Bond
$0 - $49,999	$ _____ per $1000 of contract value
$50,000 - $99,999	$ _____ per $1000 of contract value
$100,000 – 149,999	$ _____ per $1000 of contract value
$150,000 – 199,999	$ _____ per $1000 of contract value
$200,000 - $249,999	$ _____ per $1000 of contract value
$250,000 - $499,999	$ _____ per $1000 of contract value
$500,000 - $749,999	$ _____ per $1000 of contract value
$750,000 - $999,999	$ _____ per $1000 of contract value

Section 1.0: Pipe Demolition & Disposal (Includes Excavation, Equipment, and Associated Haul-Off Costs)

Diameter	**Cut Depth**	**Length**	**Bid Price per LF**
0”-24”	0’ – 6’ Cut	N/A	$ _____
25”-48”	0’ – 6’ Cut	N/A	$ _____
Larger than 48”	0’ – 6’ Cut	N/A	$ _____
0”-24”	7’ – 10’ Cut	N/A	$ _____
25”-48”	7’ – 10’ Cut	N/A	$ _____
Larger than 48”	7’ – 10’ Cut	N/A	$ _____
0”-24”	> 10’ Cut	N/A	$ _____
25”-48”	>10’ Cut	N/A	$ _____
Larger than 48”	>10’ Cut	N/A	$ _____

Section 2.0: PVC Sewer Pipe Installation (Per City of Starkville Minimum Specifications for the Installation of Sewer Lines in Non-Paved areas).

Diameter	Cut Depth	Length	Bid Price per LF
4”	0’ – 6’ Cut	0’ – 300’	$ _____
4”	0’ – 6’ Cut	301’ – 700’	$ _____
4”	0’ – 6’ Cut	701’ +	$ _____
4”	6” – 10’ Cut	0’ – 300’	$ _____
4”	6’ – 10’ Cut	301’ – 700’	$ _____
4”	6’ – 10’ Cut	701’ +	$ _____
4”	10’ – 16’Cut	0’ – 300’	$ _____
4”	10’ – 16’Cut	301’ –700’	$ _____
4”	10’ – 16’Cut	701’ +	$ _____
6”	0’ – 6’ Cut	0’ – 300’	$ _____
6”	0’ – 6’ Cut	301’ – 700’	$ _____
6”	0’ – 6’ Cut	701’ +	$ _____
6”	6” – 10’ Cut	0’ – 300’	$ _____
6”	6’ – 10’ Cut	301’ – 700’	$ _____
6”	6’ – 10’ Cut	701’ +	$ _____
6”	10’ – 16’Cut	0’ – 300’	$ _____
6”	10’ – 16’Cut	301’ –700’	$ _____
6”	10’ – 16’Cut	701’ +	$ _____
8”	0’ – 6’ Cut	0’ – 300’	$ _____
8”	0’ – 6’ Cut	301’ – 700’	$ _____
8”	0’ – 6’ Cut	701’ +	$ _____
8”	6” – 10’ Cut	0’ – 300’	$ _____
8”	6’ – 10’ Cut	301’ – 700’	$ _____
8”	6’ – 10’ Cut	701’ +	$ _____
8”	10’ – 16’Cut	0’ – 300’	$ _____
8”	10’ – 16’Cut	301’ –700’	$ _____
8”	10’ – 16’Cut	701’ +	$ _____
10”	0’ – 6’ Cut	0’ – 300’	$ _____
10”	0’ – 6’ Cut	301’ – 700’	$ _____
10”	0’ – 6’ Cut	701’ +	$ _____
10”	6” – 10’ Cut	0’ – 300’	$ _____
10”	6’ – 10’ Cut	301’ – 700’	$ _____
10”	6’ – 10’ Cut	701’ +	$ _____
10”	10’ – 16’Cut	0’ – 300’	$ _____
10”	10’ – 16’Cut	301’ –700’	$ _____
10”	10’ – 16’Cut	701’ +	$ _____
12”	0’ – 6’ Cut	0’ – 300’	$ _____
12”	0’ – 6’ Cut	301’ – 700’	$ _____
12”	0’ – 6’ Cut	701’ +	$ _____
12”	6” – 10’ Cut	0’ – 300’	$ _____
12”	6’ – 10’ Cut	301’ – 700’	$ _____
12”	6’ – 10’ Cut	701’ +	$ _____
12”	10’ – 16’Cut	0’ – 300’	$ _____
12”	10’ – 16’Cut	301’ –700’	$ _____
12”	10’ – 16’Cut	701’ +	$ _____
15”	0’ – 6’ Cut	0’ – 300’	$ _____
15”	0’ – 6’ Cut	301’ – 700’	$ _____
15”	0’ – 6’ Cut	701’ +	$ _____
15”	6” – 10’ Cut	0’ – 300’	$ _____

15”	6’ – 10’ Cut	301’ – 700’	$ _____
15”	6’ – 10’ Cut	701’ +	$ _____
15”	10’ – 16’Cut	0’ – 300’	$ _____
15”	10’ – 16’Cut	301’ –700’	$ _____
15”	10’ – 16’Cut	701’ +	$ _____
18”	0’ – 6’ Cut	0’ – 300’	$ _____
18”	0’ – 6’ Cut	301’ – 700’	$ _____
18”	0’ – 6’ Cut	701’ +	$ _____
18”	6” – 10’ Cut	0’ – 300’	$ _____
18”	6’ – 10’ Cut	301’ – 700’	$ _____
18”	6’ – 10’ Cut	701’ +	$ _____
18”	10’ – 16’Cut	0’ – 300’	$ _____
18”	10’ – 16’Cut	301’ –700’	$ _____
18”	10’ – 16’Cut	701’ +	$ _____
21”	0’ – 6’ Cut	0’ – 300’	$ _____
21”	0’ – 6’ Cut	301’ – 700’	$ _____
21”	0’ – 6’ Cut	701’ +	$ _____
21”	6” – 10’ Cut	0’ – 300’	$ _____
21”	6’ – 10’ Cut	301’ – 700’	$ _____
21”	6’ – 10’ Cut	701’ +	$ _____
21”	10’ – 16’Cut	0’ – 300’	$ _____
21”	10’ – 16’Cut	301’ –700’	$ _____
21”	10’ – 16’Cut	701’ +	$ _____
24”	0’ – 6’ Cut	0’ – 300’	$ _____
24”	0’ – 6’ Cut	301’ – 700’	$
24”	0’ – 6’ Cut	701’ +	$ _____
24”	6” – 10’ Cut	0’ – 300’	$ _____
24”	6’ – 10’ Cut	301’ – 700’	$ _____
24”	6’ – 10’ Cut	701’ +	$ _____
24”	10’ – 16’Cut	0’ – 300’	$ _____
24”	10’ – 16’Cut	301’ –700’	$ _____
24”	10’ – 16’Cut	701’ +	$ _____

Section 3.0: Miscellaneous Sewer Line Installations **Bid Price (Per Each)**

New manhole installation and invert construction during pipeline installation (per the City of Starkville Minimum Specifications for Sewer Line Installation).

0’-6’ Invert Depth	$ _____
6’-10’ Invert Depth	$ _____
10’-16’ Invert Depth	$ _____
Manhole Installation over Existing Line (Per Vertical Ft.)	$ _____
Tying into Existing Manhole	$ _____
4” Sewer Tap	$ _____
6” Sewer Tap	$ _____

Section 4.0: PVC Water or Force Main Pipe Installation (Per City of Starkville Minimum Specifications for the Installation of Water Lines).

Nominal Depth of 36” **TYPE I Bedding (Per City Specifications)**

Pipe Diameter	**Bid (Per LF)**
2” (including threaded connections)	$ _____
4”	$ _____
6”	$ _____
8”	$ _____
10”	$ _____
12”	$ _____
14”	$ _____
16”	$ _____
18”	$ _____
20”	$ _____
24”	$ _____

Nominal Depth of 36” **TYPE II Bedding (Per City Specifications)**

Pipe Diameter	**Bid (Per LF)**
4”	$ _____
6”	$ _____
8”	$ _____
10”	$ _____
12”	$ _____
14”	$ _____
16”	$ _____
18”	$ _____
20”	$ _____
24”	$ _____

Nominal Depth of 36” **TYPE III Bedding (Per City Specifications)**

Pipe Diameter	**Bid (Per LF)**
6”	$ _____
8”	$ _____
10”	$ _____
12”	$ _____
14”	$ _____
16”	$ _____
18”	$ _____
20”	$ _____
24”	$ _____

Section 5.0: Miscellaneous Water Line Installations

Mechanical Joint and Flange Connections (Bid Each)

Pipe or Fitting Dia.	Mechanical Joint Connection(Ea.)	Flange Connection(Ea.)
4”	$_____	$_____
6”	$_____	$_____
8”	$_____	$_____
10”	$_____	$_____
12”	$_____	$_____

14”	$_____	$_____
16”	$_____	$_____
18”	$_____	$_____
20”	$_____	$_____
24”	$_____	$_____

Concrete Thrust Blocks.

Contractor to supply form materials and/or steel rebar where required. City shall supply concrete.

$_____ per specified square foot of concrete bearing area upon undisturbed trench walls as required by the specifications.

Setting of hydrants, valves and boxes (less connections and thrust blocks which are bid separately) including any base preparation per City specifications (Bid Each).

Prepare base and set Fire Hydrant and 6” valve $ _____

Prepare base and set valves and valve box (less connections and thrust blocks which are bid separately) per specifications.

Valve Size	Bid Each
2” (including threaded connections)	$ _____
4” – 6”	$ _____
8”-10”	$ _____
12”	$_____
14”	$_____
16”	$_____
18”	$_____
20”	$_____
24”	$_____

Open cut steel casing installations larger than 16” in trenches and creek crossings. Sizes smaller than 18” shall be at the unit price in section 3.0. Welding shall be at the hourly rate bid in section 9.0

	Bid (Per LF)
12”	$ _____
14”	$_____
16”	$_____
18”	$ _____
20”	$ _____
24”	$ _____

Section 6.0: Concrete Storm Drain Installation.

Diameter	**Est. Depth**	**Length**	**Bid (Per LF)**
15”	0’ to 6’	0’ – 300’	$ _____

		301’ – 700’	$ _____
		701’ +	$ _____
15”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
24”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
24”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
27”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
27”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
48”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Diameter	**Depth**	**Length**	**Bid (Per LF)**
48”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____

		701’ +	$ _____
54”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
54”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
60”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
60”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
66”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
66”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
72”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
72”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Section 7.0: Corrugated Metal Pipe Installation.

Diameter	**Depth**	**Length**	**Bid (Per LF)**
15’	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
15”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Diameter	**Depth**	**Length**	**Bid (Per LF)**
21”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
21”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____

		701’ +	$ _____
24”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
24”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
48”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
48”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
54”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
54”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Diameter	**Depth**	**Length**	**Bid (Per LF)**
60”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
60”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
66”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____

		701’ +	$ _____
66”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
72”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
72”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
78”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
78”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
84”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
84”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
96”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
96”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
108”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
108”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Section8.0: Plastic Drainage Pipe Installation.

Diameter	**Depth**	**Length**	**Bid (Per LF)**
15’	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
18”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
21”	0’ to 6’	0’ – 300’	$ _____

		301’ – 700’	$ _____
		701’ +	$ _____
21”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
24”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
24”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
30”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
36”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
42”	6’ to 10’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____
48”	0’ to 6’	0’ – 300’	$ _____
		301’ – 700’	$ _____
		701’ +	$ _____

Diameter	**Depth**	**Length**	**Bid (Per LF)**
48”	6’ to 10’	0’ – 300’	$_____
		301’ – 700’	$ _____
		701’ +	$ _____

Section 9.0 Miscellaneous Drainage Installations

9.1Building Catch Basin (per square ft. surface area) $ _____

9.2 Installing 4” thick 3,000 PSI concrete linings in drainage ditches (per square ft. surface area)

Less than 1000 square feet $ _____

More than 1000 square feet $ ___ _____

9.3 Install Pre-Cast Storm Inlet/Junction Box (Includes Excavation & Equipment)

Top Dimensions	Depth	Bid (Per EA)
0'x0' to 48"x48"	0' to 6'	$_____
49'x49' to 96"x96"	0' to 6'	$_____
Larger than 96"x96"	0' to 6'	$_____
0'x0' to 48"x48"	7' to 10'	$_____
49'x49' to 96"x96"	7' to 10'	$_____
Larger than 96"x96"	7' to 10'	$_____
0'x0' to 48"x48"	> 10'	$_____
49'x49' to 96"x96"	> 10'	$_____
Larger than 96"x96"	> 10'	$_____

Typical project to be the installation in existing drainage ditches. Bid submitted shall include labor, materials & equipment required to excavate, install forms to required grade, install steel reinforcement, place and broom finish the concrete. **City to provide all concrete and steel reinforcement**. Contractor shall provide all other materials.

Section 10.0 Remove and replace Concrete driveway (City shall provide concrete and reinforcing steel. Contractor shall provide all other materials)

A. General Description: This work shall consist of saw cutting and removing existing sections of concrete driveway, backfilling and tamping as required to re-establish proper grade and construction of new sections of driveway of Portland Cement with reinforcing steel in close conformity with the lines, grades, and dimensions, of adjacent existing sections in conformance with cross sections as shown on plans.

B. Material: Driveway sections shall be constructed of ready mix concrete conforming to ASTM Specification C94 and shall develop 3,000 psi compressive strength in 28 days. Reinforcing steel shall be 6"x6" #8 wire mesh.. Forms may be wood or metal, extend the entire depth of the section , and be given a coat of light oil immediately before placing the concrete against them. Care shall be exercised to avoid contact of oil with the reinforcing steel. Minimum thickness shall be 3 ½".

C. Placement: Forms shall be placed on the compacted sub-base in close conformity with the lines shown on the plans and shall be thoroughly braced to withstand the weight of the concrete without bulging or becoming displaced. A ½" premolded expansion joint filler & gray traffic sealant shall be installed at each saw cut. The maximum deviation from adjacent grades shall be less than ¼".

D. Finishing: The concrete shall be finished smooth and even by means of a float and given a light broom finish. Provide contraction scoring as required.

E. Curing: Concrete shall be cured for at least 72 hours by means of moist sand or clear polyethylene sheeting. The Contractor shall have materials available at all times for protection of unhardened concrete against rain.

F. Removing Forms: Forms shall not be removed from freshly poured concrete until it has set for at least 12 hours. Major honeycombed areas will be considered defective work and shall be removed and replaced.

G. Backfill: All driveway sections shall be backfilled immediately after the 72 hour curing period to the required elevations.

Per square ft. of removal of existing concrete driveway $_____

Per square ft. of in place concrete surface area.
$_____

Per linear ft. for saw-cutting.
$_____

Per linear ft. of expansion material and traffic sealant.
$_____

Section 11.0. Equipment and Personnel Services

Box blade, Tractor, and Operator	**Per Hour**	**$_____**
Dump truck and Operator (6 Cy)	**Per Hour**	**$ _____**
Dump Truck and Operator (15Cy)	**Per Hour**	$ _____
Dump Truck and Operator (22 Cy)	**Per Hour**	$ _____
Backhoe and Operator	**Per Hour**	$ _____
Large Track Hoe Excavator and Operator	**Per Hour**	$ _____
Excavator, Operator and Helper(s) for pipe rehab work.	**Per Hour**	$ _____
Mini-excavator (1 ft. bucket), Operator and one Helper for meter work.	**Per Hour**	$_____
Welding Machine and Welder	**Per Hour**	$ _____
D3 Dozer and operator	**Per Hour**	$ _____
D4 Dozer and operator	**Per Hour**	$ _____
D5 Dozer and operator	**Per Hour**	$ _____
D6 Dozer and operator	**Per Hour**	$ _____
Tractor, Sheep's Foot and/or Wobble Wheel and operator	**Per Hour**	$ _____
Motor Grader (12G or equal) and operator	**Per Hour**	$_____
Motorized Wobble Wheel Compactor and operator	**Per Hour**	$ _____
Tractor (425 HP min.),17 cy capacity pull scraper and operator	**Per Hour**	**$ _____**
Self Contained scraper (20 cy capacity) and operator	**Per Hour**	$ _____
Tractor (225 HP min), Operator and 15' disk.	**Per Hour**	$ _____

Section 12.0 Erosion Control Services.

IMPORTANT: ALL BIDDERS FOR ANY CONSTRUCTION SERVICE IN THIS SECTION MUST BID ON THIS ITEM. FAILURE TO BID ON THIS ITEM SHALL BE CAUSE FOR THE REJECTION OF ALL BIDS IN THIS SECTION

The following services shall be linked to the award of construction work bid in this section and do not constitute a "stand alone" bid for this service

City provides: Seed and hay bales for seeding and mulching
Contractor provides: All materials for silt fencing.

Broadcast grass seed and apply straw mulch
$_____/square yard.
Installation of MDOT approved black plastic film silt fence
$_____/foot
Installation of Hydromulch & Seeding (MDOT Fall Mix)(Irrigation Required)
$_____/SY
Installation of Hydromulch & Seeding (MDOT Spring Mix)(Irrigation Required)

$_____/SY

The City reserves the right to execute a change order subsequent to any notice to proceed or contract execution where the City elects to perform this work in lieu of this work being performed by the contractor.

Section 13.0 MDOT ROW Crossing Bore and Installation of Steel Casing

City Provides: Steel casing, access to boring site, clearing, grubbing, permits and easements.

Boring and Casing Installation Shall be Per One of the Approved MDOT Methods listed in MND-002(latest revision).

All road bore work shall require a contract and a performance bond.

An Insurance certificate for the following coverage shall list the City of Starkville, MS and the Mississippi Department of Transportation as additional insured and shall be provided prior to the start of any work.

Comprehensive, general and contractual liability: $ 1 million per occurrence / $3 million aggregate.

Automobile liability coverage: $1 million combined single limit.

Workman's compensation: All employees

The executed contract shall contain clauses that reimburse the City for the cost of steel casings consumed in abandoned bores that do not comply with contract specifications.

Mobilization Charge (Ea)	**$ _____**
Pit excavations per bore (Ea) to include both boring and receiving pits.	**$ _____**

11.1 For Water Lines

Size	Price per foot
6"	$_____/ft.
8"	$_____/ft.
10"	$_____/ft.
12"	$_____/ft.
14"	$_____/ft.
16"	$_____/ft.
18"	$_____/ft.
20"	$_____/ft.
24"	$_____/ft

11.2 For Sewer Lines on Grade

Size	Price per foot
6”	$_____/ft.
8”	$_____/ft.
10”	$_____/ft.
12”	$_____/ft.
14”	$_____/ft.
16”	$_____/ft.
18”	$_____/ft.
20”	$_____/ft.
24”	$_____/ft.

Section 14.0. Directional or non-directional boring with drilling fluid and insertion of flexible pipe or conduit (Not on grade but must meet minimum depth requirement).

City Provides: Flexible pipe or conduit, access to boring sites, clearing, grubbing, permits and easements

Contractor shall perform all joining and splicing operations for the type of flexible pipe or conduit being inserted per the applicable industry standards.

Mobilization Charge (Ea) **$ _____**

Pit excavations per bore (Ea) to include both boring and receiving pits. **$ _____**

Conduit or Pipe O.D.	Price per foot
0-1.99”	$_____/ft.
2.0” – 2.99”	$_____/ft.
3.0” – 3.99”	$_____/ft.
4.0” – 4.99”	$_____/ft.
5.0” – 5.99”	$_____/ft.
6.0” - 6.99”	$_____/ft.

END OF SECTION III (CONSTRUCTION)

CITY OF STARKVILLE
2015 SOURCE OF SUPPLY
SPECIFICATIONS AND BIDS
PUBLIC WORKS: NEW CONSTRUCTION/REHAB

SECTION IV: (2015 SEWER MAINTENANCE AND REHABILITATION SERVICES)

CONTACT PERSONS:

DOUG DEVLIN (662-323-3133) EXT 131

A. Smoke Testing Per LF $ _____
Min. Footage per Work Order _____

B. Cured In Place Pipe

SPECIFICATIONS FOR CURED-IN-PLACE PIPE (CIPP)

THE CITY OF STARKVILLE IS REFERRED TO AS "OWNER" AND THE BIDDER IS REFERRED TO AS "CONTRACTOR"

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is tightly formed to the original conduit. The resin is cured using either hot water under hydrostatic pressure or steam pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting.

2. REFERENCED DOCUMENTS

2.1 This specification references standards from the American Society for Testing and Materials, such as:

ASTM F1216 (Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube)

ASTM F1743 (Rehabilitation of Existing Pipelines and Conduits by Pulled-in- Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP))

ASTM D5813 (Cured-in-Place Thermosetting Resin Sewer Pipe)

ASTM D790 (Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials)

D2990 (Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof.

In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

3. PRODUCT, MANUFACTURER/INSTALLER QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50-year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long- term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

Products and Installers seeking approval must meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product to be considered Commercially Proven, a minimum of five successful wastewater collection system projects of a similar size and scope of work shall be performed in the U.S. and documented to the satisfaction of the Owner to assure commercial viability

3.1.2 For an Installer to be considered as Commercially Proven, the Installer must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 5 (five) years active experience in the commercial installation. In addition, the Installer must have successfully installed at least 1,000,000 feet of a cured-in-place product in wastewater collection systems. Acceptable documentation of these minimum installations must be submitted to the Owner. Installer's project managers must have a minimum of 2 years of CIPP installation experience and must be on-site during the installation of the CIPP products.

3.1.3 Sewer rehabilitation products submitted for approval must provide third party test results supporting the structural performance (short-term and long-term) of the product and such data shall be satisfactory to the Owner. No product will be approved without independent third party testing verification.

3.1.4 Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9000 or other recognized organization standards. Proof of certification shall be required for approval.

3.1.5 The owner authorizes the use of proven materials that serve to enhance the pipe performance specified herein. Proven materials have passed independent laboratory testing, not excluding long-term (10,000 hour) structural behavior testing, and have been successfully installed to repair failing host pipes in the U. S. for at least 4 years. In addition to the aforementioned, the owner may require that the contractor demonstrate that the enhancements proposed exceed the specifications herein, prior to the installation of the enhanced material systems. This section in no way shall be interpreted as authorization to deviate from the minimum standard practices set forth herein.

Documentation for products and installers seeking pre-approved status must be submitted no less than two weeks prior to proposal due date to allow time for adequate consideration. The Owner will advise of acceptance or rejection a minimum of three days prior to the due date. All required submittals must be satisfactory to the Owner.

4. MATERIALS

4.1 Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5.1 or ASTM F1743, Section 5.2.1 or ASTM D 5813, Sections 5 and 6. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

4.1.1 The wet out Tube shall have a relatively uniform thickness that when compressed at installation pressures will equal or exceed the calculated minimum design CIPP wall thickness.

4.1.2 The Tube shall be manufactured to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during installation..

4.1.3 The outside layer of the Tube shall be coated with an impermeable, flexible membrane that will contain the resin and allow the resin impregnation (wet out) procedure to be monitored.

4.1.4 The Tube shall contain no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

4.1.5 The wall color of the interior pipe surface of CIPP after installation shall be a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

4.1.6 Seams in the Tube shall be stronger than the non-seamed felt material.

4.1.7 The Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

4.2 Resin - The resin system shall be a corrosion resistant polyester or vinyl ester system including all required catalysts, initiators that when cured within the tube create a composite that satisfies the requirements of ASTM F1216, ASTM D5813 and ASTM F1743, the physical properties herein, and those which are to be utilized in the submitted and approved design of the CIPP for this project. The resin shall produce a CIPP that will comply with the structural and chemical resistance requirements of this specification.

5. STRUCTURAL REQUIREMENTS

5.1 The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall.

5.2 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing as defined within the relevant ASTM standard. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Retention values exceeding 50% of the short-term test results shall not be applied unless substantiated by qualified third party test data to the Owner’s satisfaction. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.

5.3 The Enhancement Factor 'K' to be used in 'Partially Deteriorated' Design conditions shall be assigned a value of 7.

5.4 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If the layers separate during field sample testing, new samples will be required to be obtained from the installed pipe. Any reoccurrence may cause rejection of the work.

5.5 The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM CIPP PHYSICAL PROPERTIES

Property	Test Method	**Cured Polyester** min. per ASTM F1216	**Composite** Enhanced Resin
Modulus of Elasticity	ASTM D790	250,000 psi	400,000 psi
Flexural Stress	ASTM D790	4,500 psi	4,500 psi

5.6 The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in Section 5.5 or greater values if substantiated by independent lab testing and in accordance with the design equations in the Appendix X1. Design Considerations of ASTM F1216, and the following design parameters:

Design Safety Factor (typically used value)	= 2.0
Retention Factor for Long-Term Flexural Modulus to be used in Design (As determined by long-term tests described in section 5.2 and approved by the Owner)	= 50% - 75%
Ovality* (calculated from (X1.1of ASTM F1216)	= %
Enhancement Factor, K	= See Section 5.3
Groundwater Depth (above invert of existing pipe)*	= ft.
Soil Depth (above crown of existing pipe)*	= ft.
Soil Modulus**	= psi
Soil Density**	= pcf
Live Load**	= H20 Highway
Design Condition (partially or fully deteriorated)***	= ***

* Denotes information, which can be provided here or in inspection videotapes or project construction plans. Multiple lines segments may require a table of values.

** Denotes information required only for fully deteriorated design conditions.

*** Based on review of video logs, conditions of pipeline can be fully or partially deteriorated. (See ASTM F1216 Appendix) The Owner will be sole judge as to pipe conditions and parameters utilized in design.

5.7 Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

6. TESTING REQUIREMENTS

6.1 Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical-testing requirements.

6.2 Hydraulic Capacity - Overall, the hydraulic cross-section shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

6.3 CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from field installations of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

7. INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

7.1 It shall be the responsibility of the Owner to locate and designate all manhole access points open and accessible for the work, and provide rights-of-access to these locations. If a street must be closed to traffic because of the orientation of the sewer, the Owner shall institute the actions necessary to provide access during this for the mutually agreed time period. The Owner shall also provide free access to water hydrants for cleaning, installation and other process related work items requiring water.

7.2 Cleaning of Sewer Lines - The Contractor, when required, shall remove all internal debris out of the sewer line that will interfere with the installation of CIPP. The Owner shall also provide a dumpsite for all debris removed from the sewers during the cleaning operation. Unless stated otherwise, it is assumed this site will be at or near the sewage treatment facility to which the debris would have arrived in absence of the cleaning operation. Any hazardous waste material encountered during this project will be considered as a changed condition.

7.3 Bypassing Sewage - The Contractor, when required, shall provide for the flow of sewage around the section or sections of pipe designated for repair. Plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system shall make the bypass. The pump(s) and bypass line(s) shall be of adequate capacity to accommodate the sewage flow. The Owner may require a detail of the bypass plan to be submitted.

7.4 Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections using close circuit television (CCTV) inspection techniques. The pipeline interior shall be carefully inspected to determine the location of any conditions that may prevent proper installation of CIPP. These shall be noted and corrected. A videotape and suitable written log for each line section shall be produced for later reference by the Owner.

7.5 Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the installation process and it cannot be removed by conventional sewer cleaning equipment, then the Owner shall make a point repair excavation to uncover and remove or repair the obstruction prior to the insertion of CIPP. Such excavation and repair shall be approved by the Contractor through Owner

supplied video media prior to the mobilization for the CIPP work. Where excavations occur in paved roadways, the Owner shall be responsible for repairs to the paving.

7.6 Public Notification - The Contractor shall make every effort to maintain sewer service usage throughout the duration of the project. In the event that a connection will be out of service, the longest period of no service shall be 8 hours. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:

A. Written notice to be delivered to each home or business the day prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any potential problems.

B. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

7.7 The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing the CIPP.

8. INSTALLATION

8.1 CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6, with the following modifications:

8.1.1 Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the potential loss of resin during installation through cracks and irregularities in the original pipe wall, as applicable.

8.1.2 Tube Insertion – The wet out tube shall be positioned in the pipeline using either inversion or a pull-in method as defined within relevant ASTM standards previously stipulated. If pulled into place, a power winch or its equivalent should be utilized and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.

8.1.3 Temperature gauges shall be placed between the tube and the host pipe's invert position to monitor the temperatures during the cure cycle.

8.1.4 Curing shall be accomplished by utilizing hot water under hydrostatic pressure or steam pressure in accordance with the manufacturer's recommended cure schedule. A cool-down process shall be conducted that complies with the resin manufacturer's specification.

9. REINSTATEMENT OF BRANCH CONNECTIONS

9.1 It is the intent of these specifications that branch connections to buildings be re- opened without excavation, utilizing a remotely controlled cutting device, monitored by a CCTV. The Contractor shall certify a minimum of two complete functional cutters plus key spare components are on the job site before each installation or are in the immediate area of the jobsite and can be quickly obtained. Unless otherwise directed by the Owner or his authorized representative, all laterals will be reinstated. No additional payment will be made for excavations for the purpose of reopening connections and the

Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

10. INSPECTION

10.1 CIPP samples shall be prepared for each installation designated by the owner/engineer or approximately 20% of the project's installations. Pipe physical properties will be tested in accordance with ASTM F1216 or ASTM F1743, Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in the table on page 4 of this specification, Table 1 of ASTM F1216 or the values submitted to the Owner/engineer by the contractor for this project's CIPP wall design, whichever is greater.

10.2 Wall thickness of samples shall be determined as described in paragraph 8.1.6 of ASTM F1743. The minimum wall thickness shall not be less than 87½% of the nominal tube thickness and also greater than the submitted minimum wall thickness as calculated in paragraph 5.6 of this document to be acceptable for payment by the Owner.

10.3 Visual inspection of the CIPP shall be in accordance with ASTM F1743, Section 8.6.

11. CLEAN-UP

11.1 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

12 CIPP BID SECTION

		Bid Unit	
12.1 Pipeline Cleaning and Inspection			
12.1.1 Mobilization (one per bid award)		Each	$_____
or			
Minimum footage per bid award		Ft.	_____
12.1.2 Inspection (Per Section 7.4)			
6" – 12" Pipe	Per LF		$_____
15"-24" Pipe	Per LF		$_____
12.1.3 Cleaning (Per Section 7.2)			
6" – 12" Pipe			
Light Cleaning	Per LF		$ _____
Heavy Cleaning	Per LF		$ _____
15" Pipe			
Light Cleaning	Per LF		$ _____
Heavy Cleaning	Per LF		$ _____
18" Pipe			
Light Cleaning		Per LF	$ _____
Heavy Cleaning		Per LF	$ _____

21” Pipe		
Light Cleaning	Per LF	$ _____
Heavy Cleaning	Per LF	$ _____
24” Pipe		
Light Cleaning	Per LF	$ _____
Heavy Cleaning	Per LF	$ _____

12.2 CIPP Installation

12.2.1 Mobilization (one per bid award)	Each	$_____	or
Minimum footage per bid award	Ft.	_____	

12.2.2 Bypass Pumping (Per Section 7.3)

3” Pump	Per Hour	$ _____
4” Pump	Per Hour	$ _____
6” Pump	Per Hour	$ _____
8” Pump	Per Hour	$ _____

12.2.3 Insertion of CIPP

CIPP Size	Diameter	Bid Per LF
6mm	8”	$_____
6mm	10”	$_____
6mm	12”	$_____
6mm	15”	$_____
7.5mm	12”	$_____
7.5mm	15”	$_____
7.5mm	18”	$_____
9mm	15”	$ _____
9mm	18”	$_____
9mm	21”	$_____
10.5mm	18”	$_____
10.5mm	21”	$_____
10.5mm	24”	$_____
12mm	21”	$_____
12mm	24”	$_____
13.5mm	24”	$_____

12.2.5 Reinstatement of Branch Connections Each $ _____
(Per section 9)

13 BID AWARD BASIS

Bids shall be awarded to the qualified bidder with the lowest bid award calculated cost. For the purposes of the bid award calculation, the following assumptions will be used:

13.1 80% of the total piping requires light cleaning.
20% of the total piping requires heavy cleaning.

13.2 Six (6) hours of 3" bypass pumping
Six (6) hours of 4" bypass pumping
Six (6) hours of 6" bypass pumping
Six (6) hours of 8" bypass pumping

13.3 Twenty (20) Reinstatements of Service Connections per 1000 feet of pipe lined.

14 PAYMENTS AND CHANGE ORDERS

14.1 The Owner shall first be invoiced for the inspection and cleaning (itemized by "light" and "heavy" cleaning) based on actual footages.

14.2 Payment for inspection and cleaning shall be remitted by the Owner upon receipt of the inspection report and the estimated total cost of completing the remainder of the CIPP
project at the unit prices bid.

14.3 Upon discovery that unanticipated events will cause the total project cost to exceed the estimate provided in section 14.2, a change order must be approved by the City prior to exceeding the estimated cost.

14.4 Monthly progress bills shall be paid to the Contractor by the Owner based on actual work completed and accepted by the Owner upon inspection.

C. Lining of Manholes

1. Bid unit prices shall be inclusive of cleaning, surface preparation and manhole repairs based on the manhole condition types.

2. Bid unit pricing shall be per square foot of lining material applied based on a circular manhole square footage calculation of:

3.14 (Pi) x Manhole Diameter (in feet) x Height (in feet) = Square Footage Lined.

3. Conditions of manholes shall be based on the following table.

Condition	Description
New	New structures or structures that have not been exposed to sanitary sewer. No evidence of infiltration.
A	Minimal damage. Minimal evidence of exposure to sanitary sewer gases.
B	Moderate damage such as missing mortar between bricks in brick manholes, some exposed aggregate in concrete structures. Moderate evidence of exposure to sanitary sewer gases. Evidence of minimal infiltration.
C	Severe damage such as missing bricks in brick manholes, severe exposed

	aggregates or exposed reinforcing steel in concrete structures. Severe evidence of exposure to sewer gases. Evidence of moderate infiltration.

Mobilization for Inspection (Void if done during a CIPP cleaning and inspection mobilization):
$_____

Or

Minimum number of manholes per bid award _____

Manhole Inspection $_____ per manbole

Mobilization for Lining (Void if done during a CIPP installation mobilization)

$_____

Or

Minimum number of manholes per bid award _____

Type Lining	Condition	Bid Unit	Bid Price
1. CCI Spectrum, SpectraShield®	New	Sq. Ft.	$_____
	A	Sq. Ft.	$_____
	B	Sq. Ft.	$_____
	C	Sq. Ft.	$_____
2. CIPM/FIPM			
MultiPlexx Model PVCP by Terre Hill Composites	New	Sq. Ft.	$_____
	A	Sq. Ft.	$_____
	B	Sq. Ft.	$_____
	C	Sq. Ft.	$_____
Permaform, by AP/M Permaform	New	Sq. Ft.	$_____
	A	Sq. Ft.	$_____
	B	Sq. Ft.	$_____
	C	Sq. Ft	$_____

3. 100% Solids Poly Monolithic	Condition	Min Coating Thickness	Bid Unit	Bid Price
Pre-cast Manhole	New	60	Sq. Ft.	$_____

Pre-cast Manhole w/force main	New	80	Sq. Ft.	$_____
Pre-cast Manhole	A	125	Sq. Ft.	$_____
Pre-cast manhole	B	175	Sq. Ft.	$_____
Brick manhole	B	200	Sq. Ft.	$_____
Brick or Pre-cast Manhole	C	250	Sq. Ft.	$_____

D. Root Treatment in Sewers

Root treatment shall consist of the application of herbicidal foam into the system with a U.S. Environmental Protection Agency approved chemical (e.g. Razorooter II® or approved equivalent).

The process shall have demonstrated prevention of root re-growth into sewer systems for a period of 3-5 years after application and shall carry a warranty of a minimum of two (2) years.

Roots shall be killed upon contact both inside and outside the pipe walls. The foam shall penetrate through wye connections to kill roots in lateral lines.

The City shall not require a special mobilization. Requests for service shall coincide with the bidder's service schedule for other clients in proximity to the Starkville, MS geographic area and shall be for the minimum footage of treatment indicated.

Minimum linear footage treated per service visit (LF) _____

6"	Per LF	$_____
8"	Per LF	$ _____
10"	Per LF	$ _____
12"	Per LF	$ _____
15"	Per LF	$ _____
18"	Per LF	$ _____
24"	Per LF	$ _____

END OF SECTION IV (SEWER MAINTENANCE AND REHABILITATION SERVICES)

END OF DOCUMENT

CITY OF STARKVILLE
2015 SOURCE OF SUPPLY BID
SUPPLIES AND SPECIFICATIONS
PUBLIC WORKS: STREETS

CONTACT PERSONS: LARRY BLACK
TELEPHONE NUMBER: (662) 323 – 2652

STREET DEPARTMENT

Section 3: Traffic Signs: High Intensity grade Scotchlite, must meet all applicable
State and Federal Highway Specifications.
12” x 6”
$ _____/each
12” x 18”
$ _____/each
12” x 36”
$ _____/each
18” x 18”
$ _____/each
18’ x 24”
$ _____/each
24” x 24”
$ _____/each
24” x 30”
$ _____/each
30” x 30”

$ _____/each
36” x 36”
$ _____/each
48” x 24”
$ _____/each
48” x 48”
$ _____/each
24” x 24” Stop Sign
$ _____/each
30” x 30” Stop Sign
$ _____/each
36” x 36” Stop Sign
$ _____/each
30” Yield
$ _____/each
36” Yield
$ _____/each
Section 4: Street Sign Blanks (Aluminum, No Holes)
6 x 18 x 0.080
$ _____/each
6 x 24 x 0.080

$ _____/each
6 x 30 x 0.080
$ _____/each
6 x 36 x 0.080
$ _____/each
6 x 48 x 0.080
$ _____/each
Section 5: Traffic Sign Decals (3M Systems 5, or Equal, for refacing signs in the field)
24” x 24” Stop Sign
$ _____/each
30” x 30” Stop Sign
$ _____/each
36” x 36” Stop Sign
$ _____/each
30” Yield Sign
$ _____/each
36” Yield Sign
$ _____/each
Section 6: Sheet Vinyl
6” roll x 50 yd. White Eng. Grade
$ _____/roll
6” roll x 50 yd. Black Sheet Vinyl
with Application Tape on Front.

$ _____/roll
Section 7: Assorted U – Channel Posts:
U – Channel Posts: Galvanized Steel (2lbs./ft.), Unpainted,
Ordered in lots of 25 or 50
7 Foot $ _____/each
8 Foot $ _____/each
9 Foot $ _____/each
10 Foot $ _____/each
12 Foot $ _____/each
U – Channel Posts: Galvanized Steel (2lbs./ft.), Painted Green,
Ordered in lots of 25 or 50
7 Foot $ _____/each
8 Foot $ _____/each
9 Foot $ _____/each
10 Foot

$ _____/each
12 Foot $ _____/each
U – channel Posts: Galvanized Steel (2lbs./ft.), Unpainted,
Ordered in lots of 12
10 Foot $ _____/each
12 Foot $ _____/each
U – channel Posts: Galvanized Steel (2lbs./ft.), Painted Green,
Ordered in lots of 12
10 Foot $ _____/each
12 Foot $ _____/each
Section 8: 4 – Way Intersection name Signs:
Black on White baked Enamel on Galvanized Steel
With Embossed Lettering and Border and Mounted
On heavy – duty Interlocking Brackets $ _____/each
Section 9: Street Name Posts: Tubular, Galvanized:
2 – 3/8” x 11”

$ _____/each 2 – 3/8” O.D. Pipe Caps
(Vulcan Signs VSS – 2 or Equivalent) $ _____/each 90 Degree Cross Plates
(Vulcan signs VSS – 2 or Equivalent) $ _____/each
Section 10: Fill Material, Delivered
Clay Gravel $_____/ Ton
$ _____/ Cu. Yd.
Washed Gravel $ _____/ Ton
$ _____/ Cu. Yd.
Pea Gravel $ _____/ Ton
$ _____/ Cu. Yd.
Road Gravel $ _____/ Ton

$ _____/ Cu. Yd.
Fill Soil $ _____/ Ton
$ _____/ Cu. Yd.
Top Soil $ _____/ Ton
$ _____/ Cu. Yd.
Fill Dirt (Select) $ _____/ Ton
$ _____/ Cu. Y
River Sand $ _____/ Ton
$ _____/ Cu. Y
MDOT Class C Bedding Material $ _____/ Ton
Fill Dirt (**Local Pit,** Select, Loaded, & Hauled by City Personnel) $_____/ Ton

$_____/ Cu. Yd.
Crushed Limestone
5 $ _____/ Ton
$_____/ Cu. Yd
6 $ _____/ Ton
$ _____/ Cu. Yd
# 7 $ _____/ Ton
$ _____/ Cu. Yd
# 9 $ _____/ Ton
$ _____/ Cu. Yd
#610

$ _____/ Ton
Rip Rap- size 100 Lb. $ _____/ Ton
$ _____/ Cu. Yd
Rip Rap- size 200 Lb. $ _____/ Ton
$ _____/ Cu. Yd
Section 11: Concrete, Delivered
2500 psi (4 ½ bag) $ _____ __ / Cu. Yd.
3000 psi (5 bag) $ _____/ Cu. Yd.
2500 psi (4 ½ bag with fiber Reinf.) $ _____/ Cu. Yd.
3000 psi (5 bag with fiber Reinf.) $____ ____/ Cu. Yd.
2500 psi (4 ½ bag with Fiber Reinf) $ _____/ Cu. Yd.
3000 psi (5 bag with Fiber Reinf) $ _____/ Cu. Yd.

Section 12: Black base, Hot Mix. F.O.B. Asphalt Plant. Asphalt Bid price to be good for 3 months at which time it will be re-negotiated or re-bid.

Grade 1

$ _____/ Ton

Section 13: Surface Course, Hot Mix. F.O.B. Asphalt Plant. Asphalt Bid price to be good for 3 months at which time it will be re-negotiated or re-bid.
Grade 1

$_____/ Ton

Section 14: Binder Course, Hot Mix. F.O.B. Asphalt Plant. Asphalt Bid price to be good for 3 months at which time it will be re-negotiated or re-bid.

Grade 1

$ _____/ Ton

Section 15: Cold Mix. F.O.B. Asphalt Plant.

Plant Mix

$ _____/ Ton

UPM Mix

$ _____/ Ton

Section 16: Emulsified Asphalt. F.O.B. Asphalt Plant/ Distribution Point. Asphalt Bid price to be good for 3 months at which time it will be re-negotiated or re-bid.

CRS2

$ _____/ Gal

Section 17: Mosquito Control Chemicals (**must be labeled for Mosquito Spray Use**)

<u>APPROVED MANUFACTURERS (Adulticides)</u>

1. Bayer

Permanone® RTU

$_____/Gal

Scourge® 4+12

$_____/Gal

2. Clarke

Anvil® 2+2

$_____/Gal

Mosquitomist® One

$_____/Gal

APPROVED MANUFACTURERS (Larvicides)

1. Wellmark (Altosid®) 30 day briquettes (400 count case)
$_____/case

2. Wellmark (Altosid®) 150 day briquettes (220 count case)
$_____/case

Section 18: Concrete Median Barriers (**Precast**) $ _____/each

Section 19: Standard Curb Inlet:
Grate and frame Equivalent to Mississippi Highway Department Type A

$ _____/each

Grate and frame Equivalent to Mississippi Highway Department Type C

$ _____/each

3 piece Grate and Frame Equivalent to City of Hattiesburg Standard (48" width)
$ _____/each

3 piece Grate and Frame Equivalent to

City of Hattiesburg Standard (60” width)

$ _____/each

Section 20: Standard Catch Basin:
Grate and Frame Equivalent to Mississippi
Highway Department Type D

$ _____/each

Section 21: Various traffic control graphics
3M Stamark Pavement Tape, or Equivalent, with installation Equipment
Provided by the Vendor.

Turn Arrows

$ _____/Sq. Ft.

“ONLY”s

$ _____/Sq. Ft.

4” Yellow Strip

$_____/Sq.Ft.

4” White Strip

$ _____/Sq. Ft.

6” Yellow Strip

$ _____/ Sq. Ft.

6’ White Strip

$ _____/ Sq. Ft.

Section 22: Fuel and other Petroleum products:

Note: Please indicate your interest in supplying the City with petroleum products during the coming fiscal year. If a vendor is unable to give a firm price,
Orders will be placed with the vendor, which offers the lowest quotation
On the products needed **as the need occurs.**

Gasoline (unleaded)

$ _____/gal.

Diesel (Non-Highway use)

$ _____/gal.

Diesel (Highway use)

$ _____/gal.

Diesel Oil (55 Gal. Drum)

$ _____/drum

Oil (10W40, 55 Gal. Drum)

$ _____/drum

Oil (10W40, Case of 24 Quart)

$ _____/case

Anti-Freeze (55 Gal. Drum)

$ _____/drum

Hydraulic Fluid (55 Gal. Drum)

$ _____/drum

Transmission Fluid (55 Gal. Drum)

$ _____/drum

Grease (5 Gal. Can)

$ _____/can

Grease (Cartridges)

$ _____/ cartridge

Section 23: Round Reinforced Culvert Pipe, Concrete, Class III, With Mortar Joints
12” $ _____/LF.
15”

$ _____/LF.
18”
$ _____/LF.
21”
$ _____/LF.
24”
$ _____/LF.
27”
$ _____/LF.
30”
$ _____/LF.
36”
$ _____/LF.
42”
$ _____/LF.
48”
$ _____/LF.
54”
$ _____/LF.
60”
$ _____/LF.
66”
$ _____/LF.

72” $ _____/LF.

Section 24: Bends, Wyes, & Tees
Bends $ _____/LF.
Wyes and Tees, Stub 15 Inches or larger, 6 foot lengths $ _____/LF.
Double Wyes and Tees $ _____/LF.
Section 25: Reinforced, Flared end sections**, Round**
18” $ _____/LF.
24” $ _____/LF.
30” $ _____/LF.
36” $ _____/LF.
42” $ _____/LF.
48” $ _____/LF.
54”

	$ _____/LF.
60”	
	$ _____/LF.
66”	
	$ _____/LF.
72”	
	$ _____/LF.
78”	
$ _____/LF.	
84”	
	$ _____/LF.
90”	
	$ _____/LF.
96”	
	$ _____/LF.
Section 26: Reinforced, Flared End sections**, <u>Arch</u>**	
22” x 13”	
$_____/LF.	
30” x 18”	
$ _____/LF.	
36” x 23”	
$ _____/LF.	
44” x 27”	

$ _____/LF.
51” x 31”
$ _____/LF.
58” x 36”
$ _____/LF.
65” x 40”
$_____/LF.
73” x 45”
$ _____/LF.
Section 27: Reinforced, Concrete Culvert Pipe, Arched, Class III
22” x 13”
$ _____/LF.
30” x 18”
$ _____/LF.
36” x 23”
$ _____/LF.
44” x 27”
$ _____/LF.
51” x 31”
$ _____/LF.
58” x 36”
$ _____/LF.

65” x 40”
$ _____/LF.
73” x 45”
$ _____/LF.
Section 28: Joint Sealant (Ramneck or Equivalent)
(28pcs. – 1 ½ x 3’ per box)
$ _____ BOX
Section 29: Precast Manholes
Concrete 48” diameter with water section, proofing
Treatment on interior and flexible at all tie-ins
With Steps
$ _____/LF.
Without Steps
$ _____/LF.
With Floor
$ _____/LF.

Section 30: Corrugated Polyethylene Pipe Culverts

Ribbed pipe with smooth interior (submit specifications and manufacturer with Bid) For use under H20 Live loading. Corrugated polyethylene pipe shall conform to the requirements of AASHTO Designation: M 294, Type S.

12”
$ _____/LF.
18”
$ _____/LF.
24”

	$ _____/LF.
	30” $ _____/LF.
	36” $ _____/LF.
	42” $ _____/LF.
	48” $ _____/LF.
	54” $ _____/LF.
	60” $ _____/LF.

Section 31: Copper, Steel, Galvanized, Corrugated, Metal Pipe, **Round Pipe**

Diameter	**Gauge**	**Corrugation**	**Type**	
12”	16	2-2/3” x ½”	CMP Plain	$_ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
15”	16	2-2/3” x ½”	CMP Plain	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.

18”	16	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
21”	16	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
21”	14	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
24”	16	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
24”	14	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
24”	12	2-2/3” x ½”	CMP Plain	$ _____/LF.
2-2/3” x ½”		CMP Asphalt coated	$ _____/LF.	
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
30”	16	2-2/3” x ½”	CMP Plain	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
30”	14	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$_____/LF.
30”	12	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	

			with Paved Invert	$ _____/LF.
36”	14	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
36”	12	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
36”	10	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
42”	14	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
42”	12	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
42”	10	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
48”	14	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
48”	12	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
48”	10	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	

			with Paved Invert	$ _____/LF.
54”	12	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
54”	10	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
60”	12	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
60”	10	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
66”	12	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
66”	10	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
66”	8	2-2/3” x ½”	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated with Paved Invert	$ _____/LF.
72”	12	2-2/3” x ½’	CMP Plain	$_____/LF.
		2-2/3” x ½”	CMP Asphalt coated	$ _____/LF.
		2-2/3” x ½”	CMP Asphalt coated	

with Paved Invert $ _____/LF.

72” 10 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

72” 8 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

78” 10 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

78” 8 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

84” 10 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

84” 8 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt coated
$ _____/LF.
2-2/3” x ½” CMP Asphalt coated
with Paved Invert $ _____/LF.

96” 10 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3" x ½" CMP Asphalt coated
$ _____/LF.
2-2/3" x ½" CMP Asphalt coated
with Paved Invert $ _____/LF.

96" 8 2-2/3" x ½" CMP Plain $_____/LF.

2-2/3" x ½" CMP Asphalt coated
$ _____/LF.
2-2/3" x ½" CMP Asphalt coated
with Paved Invert $ _____/LF.

Section 32: Copper, Steel, Galvanized, Metal Pipe**, Round Pipe**

Diameter	**Gauge**	**Corrugation**	**Type**	
36"	16	3" x 1"	CMP Plain	$ _____/LF.
		3" x 1"	CMP Asphalt Coated	$ _____/LF.
		3" x 1"	CMP Asphalt Coated with Paved Invert	$ _____/LF.
36"	14	3" x 1"	CMP Plain	$ _____/LF.
		3" x 1"	CMP Asphalt Coated	$ _____/LF.
		3" x 1"	CMP Asphalt Coated with Paved Invert	$ _____/LF.
36"	12	3" x 1"	CMP Plain	$ _____/LF.
		3" x 1"	CMP Asphalt Coated	$ _____/LF.
		3" x 1"	CMP Asphalt Coated with Paved Invert	$ _____/LF.

42” 16 3” x 1” CMP Plain $ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $ _____/LF.

42” 14 3” x 1” CMP Plain $ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $ _____/LF.

42” 12 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

48” 16 3” x 1” CMP Plain $ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $ _____/LF.

48” 14 3” x 1” CMP Plain $ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

48” 12 3” x 1”

CMP Plain $

_____/LF.

3” x 1”

CMP Asphalt Coated $

_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

54” 16 3” x 1”

CMP Plain $

_____/LF.

3” x 1” CMP Asphalt

Coated $ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

54” 14 3” x 1” CMP

Plain

$_____/LF.

3” x 1”

CMP Asphalt Coated $

_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

54” 12 3” x 1”

CMP Plain

$ _____/LF.

3” x 1”

CMP Asphalt Coated $

_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

60” 16 3” x 1”

CMP Plain $

_____/LF.

3” x 1”

CMP Asphalt Coated $

_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

60” 14

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated

$ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

60” 12

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated $

_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

66” 16

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated $

_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

66” 14

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

66” 12

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

72” 16

3” x 1” CMP Plain

$ _____/LF.

3” x 1” CMP Asphalt Coated $ _____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert

$ _____/LF.

72” 14
3” x 1” CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert
$ _____/LF.

72” 12
3” x 1” CMP Plain
$ _____/LF.

3” x 1” CMP Asphalt Coated $
_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert
$ _____/LF.

72” 10
3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $
_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert
$ _____/LF.

78” 14
3” x 1” CMP Plain
$ _____/LF.

3” x 1” CMP Asphalt Coated $
_____/LF.

3” x 1” CMP Asphalt Coated

with Paved Invert
$ _____/LF.

78” 12 3” x 1” CMP Plain $ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

84” 14 3” x 1”
CMP Plain
$_____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

84” 12 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

84” 10 3” x 1”
CMP Plain
$ _____/LF.

3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated
with Paved Invert
$ _____/LF.

90” 14 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated
with Paved Invert
$ _____/LF.

90” 12 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated
with Paved Invert
$ _____/LF.

90” 10 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated
with Paved Invert
$ _____/LF.

90” 8 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

96” 14 3” x 1” CMP Plain $ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved
Invert $ _____/LF.

96” 12 3” x 1” CMP Plain $
_____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

96” 10 3” x 1”
CMP Plain
$ _____/LF.
3” x 1”
CMP Asphalt Coated $
_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

96” 8 3” x 1”

CMP Plain

$ _____/LF.

3” x 1”

CMP Asphalt Coated $ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

108” 14 3” x 1”

CMP Plain

$ _____/LF.

3” x 1”

CMP Asphalt Coated $ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

108” 12 3” x 1”

CMP Plain

$ _____/LF.

3” x 1”

CMP Asphalt Coated $ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

108” 10 3” x 1”

CMP Plain

$ _____/LF.

3” x 1”

CMP Asphalt Coated $ _____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$ _____/LF.

108” 8 3” x 1”
CMP Plain
$ _____/LF.

3” x 1”
CMP Asphalt Coated $ _____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$ _____/LF.

Section 33: Copper, Steel, Galvanized, Corrugated Metal Pipe, **Arch Pipe**

Dia	**Gauge**	**Span x Rise**	**Corrugation**	**Type**	
15”	16	18” x 11”	2-2/3” x ½”	CMP Plain	$ _____/LF.
			2-2/3” x ½”	CMP Asphalt Coated	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated with Paved Invert	$_____/LF.
18”	16	22” x 13”	2-2/3” x ½”	CMP Plain	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated	$ _____/LF.
			2-2/3” x ½”	CMP Asphalt Coated with Paved Invert.	$_____/LF.
21”	16	25” x 16”	2-2/3” x ½”	CMP Plain	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated with Paved Invert.	$_____/LF.
21”	14	25” x 16”	2-2/3” x ½”	CMP Plain	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated	$_____/LF.
			2-2/3” x ½”	CMP Asphalt Coated with Paved Invert.	$_____/LF.

24” 16 29” x 18” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated

with Paved Invert.
$_____/LF.

24” 14 29” x 18” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated

with Paved Invert.
$_____/LF.

24” 12 29” x 18” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated
$_____/LF.
2-2/3” x ½” CMP
Asphalt Coated

with Paved Invert. $_____/LF.

30” 14 36” x 22” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP
Asphalt Coated $_____/LF.
2-2/3” x ½” CMP Asphalt Coated

with Paved Invert.
$_____/LF.

30” 12 36” x 22” 2-2/3” x ½” CMP Plain $
_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

36” 14 43” x 27” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
with Paved Invert. $_____/LF.

36” 12 43” x 27” 2-2/3” x ½” CMP Plain
$ _____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

42” 14 50” x 31” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated $_____/LF

with Paved Invert. $_____/LF.

42” 12 50” x 31” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated $_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

42” 10 50” x 31” 2-2/3” x ½” CMP Plain
$ _____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

48” 14 58” x 36” 2-2/3” x ½” CMP Plain
$ _____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

48” 12 58” x 36” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

48” 10 58” x 36” 2-2/3” x ½” CMP Plain
$_____/LF.
2-2/3” x ½” CMP Asphalt Coated $_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

54” 12 65” x 40” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

54” 10 65” x 40” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

60” 12 73” x 45” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

60” 10 73” x 45” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

60” 8 73” x 45” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

66” 10 73” x 55” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

66” 8 73” x 55” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

72” 10 88” x 54” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

72” 8 88” x 54” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

78” 10 87” x 63” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

78” 8 87” x 63” 2-2/3” x ½” CMP Plain $_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

84” 10 95” x 67” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

84” 8 95” x 67” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

96” 10 122” x 77” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $_____/LF.

96” 8 122” x 77” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

108” 10 138” x 87” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

108” 8 138” x 87” 2-2/3” x ½” CMP Plain
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated
$_____/LF.

2-2/3” x ½” CMP Asphalt Coated

with Paved Invert. $ _____/LF.

Section 34. Copper, Steel, Galvanized, Corrugated Metal Pipe, **Arch Pipe**

Dia.	**Gauge**	**Span x Rise**	**Corrugation**	**Type**
36”	16	43” x 27”	3” x 1”	CMP Plain $_____/LF.
			3” x 1”	CMP Asphalt Coated $_____/LF.
			3” x 1”	CMP Asphalt Coated with Paved Invert $_____/LF.
36”	14	43” x 27”	3” x 1”	CMP Plain $ _____/LF.
			3” x 1”	CMP Asphalt Coated $ _____/LF.
			3” x 1”	CMP Asphalt Coated with Paved Invert $_____/LF.
36”	12	43” x 27”	3” x 1”	CMP Plain $_____/LF.
			3” x 1”	CMP Asphalt Coated $_____/LF.
			3” x 1”	CMP Asphalt Coated with Paved Invert $_____/LF.
42”	16	50” x31”	3” x 1”	CMP Plain $_____/LF.
			3” x 1”	CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved

Invert $_____/LF.

42” 14 50” x 31” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved

Invert $_____/LF.

42” 12 50” x 31” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved

Invert $_____/LF

48” 16 58” x 36” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved

Invert $_____/LF.

48” 14 58” x 36” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert $_____/LF.

48” 12 58” x 36” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

54” 16 65” x 40” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

54” 14 65” x 40” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

54” 12 65” x 40” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

60” 16 73” x 45” 3” x 1”
CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

60” 14 73” x 45” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

60” 12 73” x 45” 3” x 1”
CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

66” 16 73” x 45” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

66” 14 73” x 45” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

66” 12 73” x 45” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

72” 16 88” x 55” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

72” 14 88” x 55” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

72” 12 88” x 55” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$_____/LF.

72” 10 88” x 55” 3” x 1” CMP Plain

$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$_____/LF.

72” 14 88” x 55” 3” x 1” CMP Plain

$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$_____/LF.

72” 12 88” x 55” 3” x 1” CMP Plain

$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$_____/LF.

78” 14 87” x 63” 3” x 1” CMP Plain

$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1”

CMP Asphalt Coated

with Paved Invert

$_____/LF.

78” 12 87” x 63” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

84” 14 95” x 67” 3” x 1” CMP Plain
$_____/LF.
3” x 1” CMP Asphalt
Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

84” 12 95” x 67” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

84” 10 95” x 67” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.
3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

96” 14 122” x 77” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

96” 12 122” x 77” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

96” 10 122” x 77” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

108” 14 138” x 87” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated $_____/LF.

3” x 1” CMP Asphalt Coated with Paved Invert $_____/LF.

108” 12 138” x 87” 3” x 1” CMP Plain $_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

108” 10 138” x 87” 3” x 1” CMP Plain
$_____/LF.

3” x 1” CMP Asphalt Coated
$_____/LF.

3” x 1”
CMP Asphalt Coated

with Paved Invert
$_____/LF.

Section 35. Concrete Pavement and Sidewalks
To include all equipment, labor, and tools necessary to complete the project including haul-off of material on removal projects. See Sidewalk Detail

1. Remove and replace concrete paving (4” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
2. Remove and replace concrete paving (6” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials

$_____/SF.
3. Remove and replace concrete paving (8” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
4. Remove and replace concrete paving (10” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
5. Install concrete paving (4” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
6. Install concrete paving (6” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
7. Install concrete paving (8” depth) per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials

$_____/SF.
8. Install concrete paving (4” depth) for a drainage ditch per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.
9. Install concrete paving (6” depth) for a drainage ditch per square foot
a. Less than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
b. Less than 1000 Sq. Ft.- City provides materials $_____/SF.
c. More than 1000 Sq. Ft.- Contractor provides materials $_____/SF.
d. More than 1000 Sq. Ft.- City provides materials $_____/SF.

Section 36. Concrete ADA Ramps
To include all equipment, labor, and tools necessary to complete the project including haul-off of material on removal projects. See City of Starkville Standard ADA Details for Type I and Type II Ramps.

1. Remove and replace concrete paving (4” depth) per square foot to construct ADA Ramp-Type I (truncated domes to be provided and installed by the City of Starkville)
    a. Less than 1000 Sq. Ft.- Contractor provides materials
    $_____/SF.
    b. Less than 1000 Sq. Ft.- City provides materials
    $_____/SF.
    c. More than 1000 Sq. Ft.- Contractor provides materials
    $_____/SF.
    d. More than 1000 Sq. Ft.- City provides materials
    $_____/SF.

2. Remove and replace concrete paving (4” depth) per square foot to construct ADA Ramp-Type II (truncated domes to be provided and installed by the City of Starkville)
    a. Less than 1000 Sq. Ft.- Contractor provides materials
    $_____/SF.
    b. Less than 1000 Sq. Ft.- City provides materials
    $_____/SF.

c. More than 1000 Sq. Ft.- Contractor provides materials
$_____/SF.
d. More than 1000 Sq. Ft.- City provides materials
$_____/SF.

3. Install concrete paving (4” depth) per square foot to construct ADA Ramp- Type I (truncated domes to be provided and installed by the City of Starkville)
   a. Less than 1000 Sq. Ft.- Contractor provides materials
   $_____/SF.
   b. Less than 1000 Sq. Ft.- City provides materials
   $_____/SF.
   c. More than 1000 Sq. Ft.- Contractor provides materials
   $_____/SF.
   d. More than 1000 Sq. Ft.- City provides materials
   $_____/SF.

4. Install concrete paving (4” depth) per square foot to construct ADA Ramp- Type II (truncated domes to be provided and installed by the City of Starkville)
   a. Less than 1000 Sq. Ft.- Contractor provides materials
   $_____/SF.
   b. Less than 1000 Sq. Ft.- City provides materials
   $_____/SF.
   c. More than 1000 Sq. Ft.- Contractor provides materials
   $_____/SF.
   d. More than 1000 Sq. Ft.- City provides materials
   $_____/SF.

Section 37. Fencing
To include all equipment, labor, and tools necessary to complete the project.

1. Install Chain link fence (4’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
   b. More than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
2. Install Chain link fence (5’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
   b. More than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
3. Install Chain link fence (6’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.

b. More than 1000 Lin. Ft.- Contractor provides materials
$_____/SF.

4. Install Chain link fence (8’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
   b. More than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
5. Install solid wood slat fence (6’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
   b. More than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
6. Install solid wood slat fence (8’ height) per linear foot
   a. Less than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
   b. More than 1000 Lin. Ft.- Contractor provides materials
   $_____/SF.
7. Remove and Dispose of existing fencing
   a. Less than 1000 Lin. Ft.

   $_____/SF.

   b. More than 1000 Lin. Ft.

   $_____/SF.

Section 38. Temporary Erosion Control Matting
Specifications, Fact sheets, test results or other information to be included with Bid.
Minimum specifications:

- **Biodegradable erosion blanket**
- **Functional for up to one year.**
- **Capable of withstanding velocities up to 5 fps.**

1. Matting Name/ Manufacturer: _____

(fill-in information)

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.

2. Matting Name/ Manufacturer: _____

(fill-in information)

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.

3. Matting Name/ Manufacturer: _____

(fill-in information)

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.

Section 39. Permanent Erosion Control Matting
Specifications, Fact sheets, test results or other information to be included with Bid.
Minimum specifications:

- **Three-dimensional erosion control mat made of polypropelene material or equivalent**
- **Strong UV resistance with a warranty of a minimum of 10 years.**
- **Able to be installed on a 1:1 slope**
- **Able to resist 12 ft./sec. velocity in a vegetated state**
- **Able to resist 8 ft./sec. velocity in an unvegetated state**
- **Able to resist 8 lbs./sq. ft. shear stress in a vegetated state**
- **Able to resist 2 lbs./sq. ft. shear stress in an unvegetated state**
- **A minimum of 10 oz./sq. yd. mass per unit area**

4. Matting Name/ Manufacturer: _____

(fill-in information)

c. Between 1,000SY and 5,000 SY

$_____/SY.

d. Greater than 5000 SY

$_____/SY.

5. Matting Name/ Manufacturer: _____

(fill-in information)

c. Between 1,000SY and 5,000 SY

$_____/SY.

d. Greater than 5000 SY

$_____/SY.

6. Matting Name/ Manufacturer: _____

(fill-in information)

c. Between 1,000SY and 5,000 SY

$_____/SY.

d. Greater than 5000 SY

$_____/SY.

7. Matting Name/ Manufacturer: _____

(fill-in information)

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.

8. Matting Name/ Manufacturer: _____

(fill-in information)

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.

Section 40. Permanent Erosion Control Matting Installation
To install Permanent Erosion Control Matting (provided by City) per City specifications. Anchor matting with staples (provided by City) at a rate of 3.75 staples per square yard of matting.

a. Between 1,000SY and 5,000 SY

$_____/SY.

b. Greater than 5000 SY

$_____/SY.