

Purchasing Division

ADDENDUM NO. 3

DATE: May 10, 2019

FROM: City of Grand Junction Purchasing Division

TO: All Offerors

RE: 2019 South Downtown Water & Sanitary Sewer Replacement Project

IFB-4628-19-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

- 1. Q. Can the City please provide limits of construction for the mill and overlay on Item 77, 10th Street and 3rd Ave.?
 - A. The City will allow the Contractor to complete the 2" thick mill on both 3rd Ave. and 10th Street (Sta. 14+50 to 24+10) when the milling machine is on-site.
- 2. Q. Plans say sewer 2-way cleanouts to be in with the CI C/O item, but bid schedule says the 2-way cleanouts to be with the service taps. Which one is correct?
 - A. The Sewer Service Tap pay items #13 through #18 do not include the two-way cleanouts. The two-way cleanout per City Standard Detail SS-07 shall be paid for separately per pay item #19. Attached to this Addendum #3 is an updated Bid Schedule.
- 3. Q. Plans page 5- connect to existing 20" water. Do you know what type of pipe is existing?
 - A. The existing waterline pipe at 9th Street and Kimball Ave. is 20" C-905 PVC where the connection is to be made.
- 4. Q. Bid item #16, 10x6 swr tap. 1 on bid, none on plans. #19 would be correct without the 10x6 tap?
 - A. There's a note on sheet 18 for the Contractor to confirm the sewer service size prior to installation of the wye fitting. From the City's CCTV camera inspection video, the service looks larger than a typical 4-inch sewer service, as a result, the City believes the sewer

service for ALSCO Textile Cleaning at Station 2+07 on sheet 18 is a 6-inch service. Need to confirm in the field as to if this sewer service is 4" or 6".

- 5. Q. Bid item #24, 20" Butterfly vlv. 4 on the bid. 2 on the plans after addendum #2. 1 each page 5 & 8?
 - A. The quantity for 20" Butterfly Valves has been changed to two (2). See updated Bid Schedule.
- 6. Q. Bid item #44, 20x1 sdl. 3 on the bid. 2 on the plans. 1 each page 6 & 8?
 - A. There are three (3) total 20" x 1" Tapping Saddles. One on page #6, one on page #8, and one on page #10.
- 7. Q. Bid item #45, 20x2 sdl. 1 on the bid. 2 on the plans. 1 each page 6 & 10?
- A. The quantity for 20" x 2" Tapping Saddle has been changed to two (2). See updated Bid Schedule.
- 8. Q. Are there any specs on the 30" steel casing pipe, or would standard 0.375" wall thickness be ok?
- A. Per the Union Pacific Railroad (UPRR) requirements, the 30" steel casing pipe shall have a minimum wall thickness of 0.469-inches nominal with a minimum yield strength of 35 ksi.

Attached to this Addendum #3 is an updated Special Provision SP-13 SECTION 619 – 30" STEEL CASING BY BORE/JACK

- 9. Q. On page 5 of the plans, there is a connection to 8" HDPE. Is it known what DR pipe is in the ground to connect to? Is it IPS, DI size?
- A. The existing 8" HDPE pipe in Kimball Ave. should be 8" IPS O.D. I don't know what DR the existing HDPE pipe is. The as-built plans don't provide that information.
- 10. Q. on page 10 there are two 20" MJ 45's inside the bubble, but before the cutoff line at station 27+00 that should be on the bid schedule.
- A. These two 20" MJ 45-degree elbows are included in the updated Bid Schedule that is attached.
- 11. Q. Bid item #45 20" x 2" Tapping Saddle, and Bid item #48 2" Corporation Stop, both show a quantity of only one. On the plans, I found a 2" tap on page 6, and another one on page 10 just before the cutoff at station 27+00, by the 20" x 6" MJ Swivel Tee. I thought the bid schedule should be adjusted. Am I thinking correct, or should the second 2" tap be eliminated?
- A. Attached to this Addendum #3 is an updated Bid Schedule that changes the quantity to two (2) total for the Bid Item #45 and Bid Item #48.

- 12. The Price Bid Schedule for this Project has been modified/updated. Please see attached. Contractor shall utilize this Addendum #3 Price Bid Schedule when submitting their bid response.
- 13. Appendix B, Project Special Provisions, for this Project has been modified/updated. Specifically, Special Provision #13, Section 619 30" Steel Casing by Bore/Jack has been updated. Please see updated Appendix B attached.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Duane Hoff Jr., Senior Buyer City of Grand Junction, Colorado

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Pri	ce	Total Price
1	108.2	4" Sewer Pipe Service (SDR-35 PVC) (Includes cost of connection to the existing sewer service line)	570.	Lin. Ft.	\$	_ \$	
2	108.2	6" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to the existing sewer pipe and/or manhole)	167.	Lin. Ft.	\$	_ \$	
3	108.2	8" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to the existing sewer pipe and/or manhole)	1,329.	Lin. Ft.	\$	_ \$	
4	108.2	10" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to the existing sewer pipe and/or manhole)	326.	Lin. Ft.	\$	_ \$	
5	108.2	15" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to the existing sewer pipe and/or manhole)	2,141.	Lin. Ft.	\$	_ \$	
6	108.2	Water Main (4") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	5.	Lin. Ft.	\$	_ \$	
7	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	145.	Lin. Ft.	\$	_ \$	
8	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	140.	Lin. Ft.	\$	_ \$	
9	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	66.	Lin. Ft.	\$	_ \$	
10	108.2	Water Main (20") (C-905 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	2,597.	Lin. Ft.	\$	_ \$	
11	108.2	Storm Drain Pipe (18") (ADS Corrugated HDPE Pipe)	49.	Lin. Ft.	\$	_ \$	
12	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft³)	5,000.	Ton	\$	_ \$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
13	108.3	8" x 4" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	7.	Each	\$ \$	
14	108.3	8" x 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	1.	Each	\$ \$	
15	108.3	10" x 4" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	4.	Each	\$ \$	
16	108.3	10" x 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	1.	Each	\$ \$	
17	108.3	15" x 4" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	5.	Each	\$ \$	
18	108.3	15" x 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, and all fittings required to align and connect into the existing sewer service pipe at the locations shown on the plans) (See City Std. Detail SS-06)	3.	Each	\$ \$	
19	108.3	Install 2-way Sewer Service Cleanout and Ring and Cover (Castings Inc. CO-8030-CI or Approved Equal) (Includes concrete collar in unpaved areas per City Std. Detail SS-07)	20.	Each	\$ \$	
20	108.3	Gate Valve (4")	1.	Each	\$ \$	
21	108.3	Gate Valve (6")	9.	Each	\$ \$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
22	108.3	Gate Valve (8")	3.	Each	\$ \$	· · · · · · · · · · · · · · · · · · ·
23	108.3	Gate Valve (12")	2.	Each	\$ \$	
24	108.3	Butterfly Valve (20")	2.	Each	\$ \$	
25	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	\$ \$	
26	108.3	Tee (8" x 4") MJ Swivel Tee (Epoxy Coated)	1.	Each	\$ \$	
27	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	3.	Each	\$ \$	
28	108.3	Tee (12" x 12") (Epoxy Coated)	1.	Each	\$ \$	
29	108.3	Tee (20" x 6") MJ Swivel Tee (Epoxy Coated)	5.	Each	\$ \$	
30	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	\$ \$	
31	108.3	Tee (20" x 20") (Epoxy Coated)	1.	Each	\$ \$	
32	108.3	Elbow (6" x 45 deg) (Epoxy Coated)	1.	Each	\$ \$	
33	108.3	Elbow (8" x 45 deg) (Epoxy Coated)	4.	Each	\$ \$	
34	108.3	Elbow (12" x 45 deg) (Epoxy Coated)	4.	Each	\$ \$	
35	108.3	Elbow (20" x 45 deg) (Epoxy Coated)	8.	Each	\$ \$	
36	108.3	Reducer (20" x 12") (Epoxy Coated)	1.	Each	\$ \$	
37	108.3	End Cap/Plug (20") (Includes Concrete Thurstblock per City Std Detail W-07 & W-08)	1.	Each	\$ \$	
38	108.3	Fire Hydrant Assembly	7.	Each	\$ \$	
39	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection to existing HDPE pipe (8" HDPE Pipe)	1.	Each	\$ \$	
40	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	284.	Lin. Ft.	\$ \$	
41	108.4	Water Service Line (1") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	80.	Lin. Ft.	\$ \$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
42	108.4	Water Service Line (2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	20.	Lin. Ft.	\$ \$	
43	108.4	Tapping Saddle (20" x 3/4")	11.	Each	\$ \$	
44	108.4	Tapping Saddle (20" x 1")	3.	Each	\$ \$	
45	108.4	Tapping Saddle (20" x 2")	2.	Each	\$ \$	
46	108.4	Corporation Stop (3/4")	11.	Each	\$ \$	
47	108.4	Corporation Stop (1")	3.	Each	\$ \$	
48	108.4	Corporation Stop (2")	2.	Each	\$ \$	
49	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Includes connection of adjacent sewer line, forming inverts and adjusting to final grade. (See City Std. Detail SS-02) (No steps required in sewer manholes)	13.	Each	\$ \$	
50	108.5	Manhole Barrel Section (D>5') (48" I.D.)	51.	Vert. Ft.	\$ \$	
51	108.5	Connect to Existing Manhole (15" pipe) (Doug Jones Sawmill Property manhole)	1.	Each	\$ \$	
52	108.5	Storm Sewer Basic Manhole (48" I.D.) (Includes connection to adjacent storm sewer lines and adjusting to final grade) (See City Std. Detail D-03)	1.	Each	\$ \$	
53	108.5	Manhole Coating (Castagra Ecodur 201 or Engineer Approved Equal)	72.	Vert. Ft.	\$ \$	
54	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft ³)	1,500.	Ton	\$ \$	
55	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	35.	Each	\$ \$	
56	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	7.	Each	\$ \$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
57	202	Abandon Manhole (Remove cone section, ring & cover, and fill remaining barrel sections with flow-fill material)	5.	Each	\$	\$
58	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	7.	Each	\$	\$
59	202	Removal of Existing Pipe (Size & type as shown on plans)	3,375.	Lin. Ft.	\$	\$
60	202	Removal of Asphalt Mat (Full Depth)	3,802.	Sq. Yd.	\$	\$
61	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	4,274.	Sq. Yd.	\$	\$
62	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	1,097.	Sq. Ft.	\$	\$
63	202	Removal of Sod	120.	Sq. Ft.	\$	\$
64	202	Removal of Manhole (Price to include plugging existing abandoned pipes, if any, and removal and disposal of concrete sections)		Each	\$	\$
65	202	Removal of Tree (2" dia.)	1.	Each	\$	\$
66	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	75.	Cu. Yd.	\$	\$
67	206	Structure Backfill (Flow-Fill) (This flow-fill quantity takes into account the flow-fill quantity necessary for Abandon Existing Water Valve, and Abandon Manhole)		Cu. Yd.	\$	\$
68	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	19.	Each	\$	\$
69	208	Concrete Washout Facility	1.	Lump Sum		\$
70	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	364.	Sq. Ft.	\$	\$

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price)	Total Price
71	210	Reset Sprinkler System (Complete in Place) (Various Locations)	1.	Lump Sum		\$	
72	210	Reset Fence (5' High Chain-Link)	30.	Lin. Ft.	\$ 	\$	
73	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top)	120.	Lin. Ft.	\$ · · · · · · · · · · · · · · · · · · ·	\$	
74	212	Re-Sod Area as Shown (Includes 6" Thick Imported Topsoil placed prior to sod placement)	120.	Sq. Ft.	\$ 	\$	
75	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	160.	Sq. Yd.	\$ 	\$	
76	304	Aggregate Base Course (Class 6) (15" thick)	3,833.	Sq. Yd.	\$ 	\$	
77	401	Hot Bituminous Pavement (2" Thick) (Grading SX, PG 64-22, GYR.=75) (Mill & Fill Overlay) (3rd Ave. & 10th Street)	2,057.	Sq. Yd.	\$ 	\$	
78	401	Hot Bituminous Pavement (Patching) (3 " Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	2,710.	Sq. Yd.	\$ 	\$	
79	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) (T-Top)	2,217.	Sq. Yd.	\$ 	\$	
80	401	Hot Bituminous Pavement (Patching) (5 " Thick) (Grading SX, PG 64-22) (GYR.=75) (3" Bottom Mat, 2" Top Mat) (9th Street & 15th Street only due to City's 2019 Asphalt Overlay Project)	1,092.	Sq. Yd.	\$ 	\$	
81	407	Emulsified Asphalt (Tack Coat)	900.	Gallon	\$ 	\$	
82	420	Geotextile (Separator) (Non-Woven) (Wrap stabilization material with fabric) (Minimum Overlap = 24") (As Needed)	1,500.	Sq. Yd.	\$ 	\$	
83	608	Concrete Drainage Pan (3' Wide) (Match in Kind)	4.	Sq. Yd.	\$ 	\$	
84	608	Concrete Drainage Pan (4' Wide) (Match in Kind)	12.	Sq. Yd.	\$ 	\$	
85	608	Concrete Curb and Gutter (2' Wide) (Match in Kind)	180.	Lin. Ft.	\$ 	\$	

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit F	Price	Total Price
86	608	Concrete Valley Gutter (2' Wide) (Match in Kind)	50.	Lin. Ft.	\$	\$	
87	608	Concrete Curb (6" Wide x 12" High) (Match in Kind)	20.	Lin. Ft.	\$	\$	
88	608	Concrete Sidewalk (4" Thick) (Match in Kind)	31.	Sq. Yd.	\$	\$	
89	608	Concrete Pavement (6" Thick) (CDOT Class D, 4500 psi Mix)	27.	Sq. Yd.	\$	\$	
90	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (20' long) (If necessary)	2.	Each	\$	\$	
91	608	Encase Sewer Pipe in Concrete per City Std. Detail GU-04 (20' long) (If necessary)	1.	Each	\$	\$	
92	619	30" Steel Casing Pipe (Bore/Jack)	30.	Lin. Ft.	\$	\$	
93	619	30" Casing Pipe End Caps	2.	Each	\$	\$	
94	619	Cascade Waterworks Casing Spacers or Engineer Approved Equal (Spacing and Installation shall be per Manufacturer's Recommendation	1.	Lump Sum		\$	
95	620	Portable Sanitary Facility	1.	Each	\$	\$	
96	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum		\$	
97	626	Mobilization	1.	Lump Sum		\$	
98	630	Traffic Control Plan	1.	Lump Sum		\$	
99	630	Traffic Control (Complete in Place)	1.	Lump Sum		\$	
100	630	Flagging	1,400.	Hour	\$	\$	
101	SP	Reconfigure Manhole Bench (C3-271-031)	1.	Lump Sum		\$	
102	SP	Coordination with Doug Jones Sawmill Property (Temporarily relocate lumber for sewer installation and then place back lumber in same location)	1.	Lump Sum		\$	
103	SC 3.3.18	Quality Control Testing	1.	Lump Sum		\$	

Item	CDOT,	Description	Overetite - Unite	Unit Drice	Total Drice
No.	City Rei.	Description	Quantity Units	Unit Price	Total Price
104	Pump	Bypass Sewage Pumping (At Contractors Discretion)	1. Lump Sum		\$
MCR		Minor Contract Revisions			\$ 100,000.00
			Bid Amount:	\$	
	Bid Am	ount:			dollars
	Contra	ctor Name:]
	Contra	ctor Address:			
	Contra	ctor Phone #:			

Appendix B

Project Special Provisions

CITY OF GRAND JUNCTION DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

2019 South Downtown Water & Sanitary Sewer Replacement Project

SPECIAL PROVISIONS

GENERAL:

The descriptions of the pay items listed in the Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Bid Schedule.

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:

The *City of Grand Junction Standard Specifications for Road and Bridge Construction* are hereby modified or supplemented for this Project by the following modifications to *The Standard Specifications for Road and Bridge Construction*, State Department of Highways, Division of Highways, State of Colorado:

SP-1 SECTION 208 - EROSION CONTROL

Section 208 of the Standard Specifications is hereby revised for this project as follows:

Subsection 208.04 shall include the following:

If groundwater within the new water line trenches is encountered and requires dewatering, the dewatering pump shall have a filter sock attached to the end of the discharge hose. This will prevent sediment in the discharge water from entering into the City's storm drainage system. The contractor will be responsible for monitoring the levels of sediment within the filter sock and replacing the filter sock when it reaches 50% of its holding capacity. It will also be the responsibility of the contractor to obtain the Dewatering Permit from the Colorado Department of Public Health and Environment if necessary.

Any of the materials to be installed or used for the installation of the sewer line shall be stored within the construction area where the Contractor is working unless permission is granted to store materials elsewhere. Any glues and/or adhesives necessary shall be contained at all times within a spill proof and waterproof container when not being used.

All vehicle and equipment maintenance and fueling shall be performed in a designated area within the construction area that will not interfere with roadway traffic operations unless traffic control is provided. The fueling area shall exhibit Best Management Practices in order to minimize and/or eliminate the potential of fuel spillage. Any spillage of fuel onto the ground shall be immediately cleaned up and any contaminated soil disposed of properly at the Mesa County Landfill. Documentation of spills, leaks and overflows that result in the discharge of pollutants, including logging and reporting of the spill is required to the Water

Quality Control Division at their toll-free 24-hour environmental emergency spill reporting line – 1-877-518-5608.

The Contractor shall clear the site of all on-site waste daily, including scrap from construction materials.

Concrete trucks will be required to wash out in a portable concrete washout pool supplied by the Contractor or the concrete truck can wait to washout back at the concrete batching facility. The Contractor will be responsible for maintaining the washout pool. The washout pool shall be cleaned out and/or replaced when the washout pool reaches 50% of total capacity. The concrete washout pool needs to be dynamic and durable in its ability to be moved with the progress of construction.

The Contractor shall clear the site of all trash and litter daily. Portable toilets will be maintained (cleaned and emptied) by a local supplier.

SP-2 SECTION 420 - GEOSYNTHETICS

Section 420 of the Standard Specification is hereby revised for this project as follows:

Subsection 420.02 in the City of Grand Junction's Standard Specifications shall include the following:

The materials supplied for the "Geotextile (Non-Woven Separator for use with Type B Granular Stabilization Material)" shall be Contech C-60NW or Nilex NW60, or approved equal. Where specified by the Engineer, Geotextile shall be installed per Std. Detail GU-03.

SP-3 SECTION 601 – STRUCTURAL CONCRETE

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 601.02 from the City of Grand Junction Standard Specifications and replace with the following:

Concrete for construction of curbs, gutters, sidewalks, irrigation structures, curb ramps, driveway approaches, corner fillets, drainage pans, median cover, and trails shall be CDOT Class D concrete per the 2017 CDOT Standard Specifications for Road and Bridge Construction (Red Book).

Minimum field compressive strength: 4,500 psi at 28 days

• Air Content: 6% +/- 1.5%

Maximum water cement ratio: 0.45

 Maximum slump at delivery shall be 4-inches. In the event that the concrete slump from the first truck of the day exceeds 5-inches the load will be rejected. Subsequent batches shall be adjusted so that the slump at delivery does not exceed 4-inches.

STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER LINES, SANITARY SEWERS, STORM DRAINS, UNDERDRAINS AND IRRIGATION SYSTEMS

The City of Grand Junction **Standard Specifications for Construction of Water Lines, Sanitary Sewers, Storm Drains, Underdrains and Irrigation Systems** are hereby modified for this Project as follows:

SP-4 SECTION 102.11 - MANHOLES FOR SANITARY SEWER AND STORM DRAINS

Section 102.11 of the Standard Specifications shall include the following:

Both existing and proposed manholes along 15th Street are to be lined using Castagra Ecodur 201 coating (or Engineer Approved Equal). Application requirements for Ecodur 201 may be found in Appendix C. Prior to manhole lining, proposed manholes shall receive pressure water or abrasive blast cleaning to remove any factory applied coating and achieve surface roughness of NACE 6/SSPC SP 13. The bottom portion of new proposed manholes with the inverts shall be coated prior to delivery to the construction site.

Surface preparation for existing manholes shall also meet NACE 6/SSPC SP 13 requirements, including ensuring no bug holes or voids exist in manhole wall surfaces prior to application of coating. If voids cannot be sufficiently removed by pressure water or abrasive blast cleaning, or if additional cleaning will affect the structural integrity of the concrete, fill voids prior to application using coating manufacturer's recommended process.

NACE 6/SSPC SP 13 requirements can be found in Appendix C.

All interior surfaces of manholes shall be coated on 15th Street only, including but not limited to pipe invert, manhole walls, and base. To ensure coating product and concrete waste is not introduced into sanitary sewer flows of existing manholes, plugs must be placed into pipeline prior to surface preparation or coating application.

Method of Measurement: Manhole coating, as described above for 15th Street, will be measured by the vertical lineal foot from manhole invert at centerline of the manhole to the top of the cast iron ring and cover.

Method of Payment: Vertical lineal foot

SP-5 SECTION 102.11 - MANHOLES FOR SANITARY SEWER AND STORM DRAINS

Addition to Contract – Clarification:

Section 102.11 of the Standard Specifications shall include the following:

New straight through manholes as identified on the plan sheets are to have the pipe laid continuously through the manhole providing a PVC invert through the manhole with no joints located within the manhole. Pipe shall be installed at the proposed grade through the manholes, the invert below the PVC pipe and the manhole bench shall be field poured around the pipe. The top of the pipe shall be removed to spring line for manhole access to the pipe for future maintenance. The pipe shall be cut providing clean neat lines. Coating of the poured concrete bench shall be accomplished prior to removal of the top of pipe to spring line. The poured concrete bench shall have a minimum of 7-days cure time prior to protective coating being applied.

SP-6 SECTION 103 - REMOVALS, EXCAVATION, BACKFILLING AND RESTORATION

Section 103 of the Standard Specifications is hereby revised for this project as follows:

Subsection 103.10, Cutoff Walls, shall include the following:

Payment for this work will not be measured or paid for separately and will be considered incidental to the installation of Water Lines and Gravity Sewer Pipe. Refer to Section 108.13 for list of Incidental Construction items.

Subsection 103.16, Earth Backfill Material, shall include the following:

Native material excavated on site shall be used for backfill on all pipelines and appurtenances above the bedding and haunching material unless the native material is too wet, soft, rocky or otherwise unsuitable for backfill as determined by the Engineer or their representative. In such case, imported trench backfill material, or other approved material, shall be used and paid for per ton of material supplied, placed and compacted. The Contractor will be required to salvage useable materials from the project excavations and mix the useable material with imported trench backfill prior to placing backfill in the trench. The contract price for "Imported Trench Backfill" shall include the disposal of the unsuitable material.

SP-7 CLEARING AND GRUBBING

Addition to Contract - Clarification:

Clearing and grubbing for this project shall be considered incidental to the cost of construction. Clearing and grubbing will not be paid for separately.

SP-8 SECTION 103.3 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Addition to Contract:

Section 103.3 of the Standard Specifications shall include the following:

The contractor shall provide temporary security fencing at locations where fencing has been removed to facilitate construction. Temporary security fencing shall be in place whenever work activities are not ongoing near or through the fenced area and at the end of each working day. The temporary fencing shall be securely fastened to the existing fence with wire and/or zip-ties.

Measurement and Payment: Temporary security fencing shall not be measured or paid for separately but shall be incidental to the Reset Fence pay item.

SP-9 PROTECTION OF PROPERTY ADJACENT TO EASEMENTS

Addition to Contract - Clarification:

The contractor shall be responsible for protecting surface or other features located adjacent to and outside any easement procured for this project. This includes pavement, gravel, fencing, structures, etc. located outside easements. Damage as a result of construction activity to objects as described above shall be repaired and/or replaced at the Contractors expense and shall not be the responsibility of the City.

SP-10 RECONFIGURATION OF MANHOLE BENCH

Addition to Contract:

At existing sanitary sewer manhole C3-271-031 (Sta. 1+00, Doug Jones Sawmill Property), no excavation of this manhole is anticipated. All work to reconfigure the invert shall be completed in place. Bypass pumping and/or flow through plugs may be utilized to control flow while completing invert reconfiguration.

The existing manhole bench is to be cored/jackhammered to allow for the connection of the proposed 15-inch sanitary sewer to the northwest.

Surface preparation shall include removal of all latent material, and bush hammering of the existing concrete surfaces where non-shrink grout materials will be placed. A polymer adhesive shall be applied to all bush hammered surfaces immediately prior to placing non-shrink grout. All concrete and grout materials utilized in the reconfiguration of the invert shall be in accordance with Section 102.11 of the City of Grand Junction Standard Specifications for the Construction of Underground Utilities.

The complete reconfigured interior of the manhole shall be coated with Castagra Ecodur 201 in accordance with this project specification and paid for separately under pay item "Manhole Coatings".

Method of Payment: Lump Sum

SP-11 COORDINATION WITH DOUG JONES SAWMILL PROPERTY

Addition to Contract:

Coordination with Doug Jones Sawmill property managers will be necessary to move and reset their lumber stock in the same location along the 15-inch sanitary sewer alignment to facilitate construction. Additional payment will not be made for moving this stock multiple times.

The Contractor is responsible for all coordination.

Method of Payment: Lump Sum

SP-12 SECTION 105 - PIPELINE TESTING

Delete **Section 105.2**. The City of Grand Junction will not require the new sanitary sewer main to be pressure or leakage tested.

All sanitary sewer mains shall be deflection tested using a Mandrel and will be closed captioned (CCTV) inspected by the City of Grand Junction prior to final acceptance.

SP-13 SECTION 619 - 30" STEEL CASING BY BORE/JACK

Addition to Contract:

Contract for waterline will recognize CDOT's Section 619, Subsection 619.03.a for the Bore/Jack operation crossing railroad spur tracks on 9th Street.

Section 619, Subsection 619.03.a of CDOT Specifications shall include the following:

The Contractor shall ensure that method of bore/jack prevents void formation between casing and native soil. Pre and post-construction survey elevations shall be taken by the Contractor of the railroad spur to confirm settlement does not occur.

Per the Union Pacific Railroad (UPRR) requirements, the 30" steel casing pipe shall have a minimum wall thickness of 0.469-inches nominal with a minimum yield strength of 35 ksi.

Casing pipe end seals manufactured by GPT Industries, Model C or W, or Engineer approved equal shall be installed at each end of the steel casing pipe.

The UPRR spur track at 9th Street and 4th Ave. is in use on Monday's and

Wednesday's each week. Boring and/or jacking operations for the steel casing pipe shall be temporarily suspended on these days while spur track is in use. Contractor to coordinate with UPRR for construction timing.

SP-14 MANHOLE GRADE RINGS:

Addition to Contract:

Section 102.11 of the Standard Specifications shall include the following:

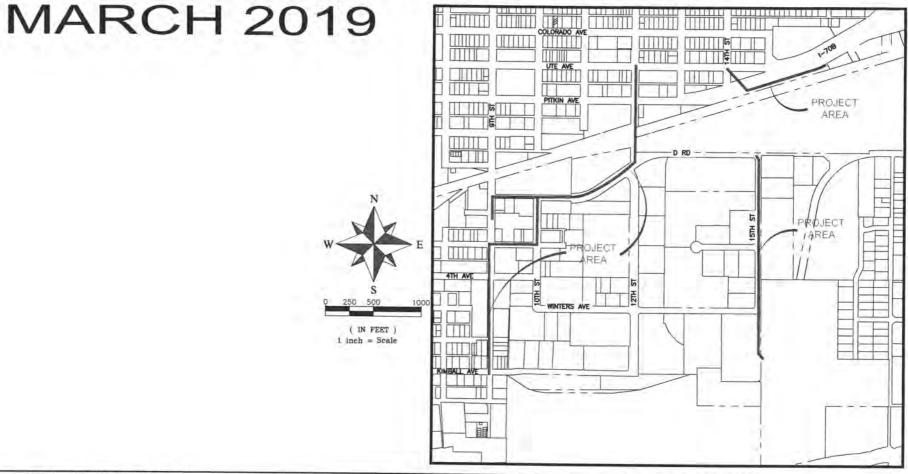
Concrete grade rings, shims and non-shrink grout shall not be used on the sewer manhole sections. Approved grade rings for this project shall be either HDPE Adjusting Rings by LadTech, Inc., or Expanded Polyproplyene grade rings by Cretex Pro-Ring.

Grade rings shall be installed per the manufacturer's recommendations and directions. Caulk and sealants shall be approved by the manufacturer and shall be applied per the manufacturer's recommendation. The top grade ring shall match as close as possible the cross-slope of the existing roadway surface. Both manufacturers of grade rings provide grade rings that can accommodate the existing roadway cross-slope.

CITY OF GRAND JUNCTION 2019 SOUTH DOWNTOWN WATER & SANITARY SEWER REPLACEMENT PROJECT

Sheet List Table

Sheet Number Sheet Title COVER SHEET STANDARD ABBREVIATIONS, LEGEND, SYMBOLS SUMMARY OF APPROXIMATE QUANTITIES PROJECT CONTROL MAP 9TH STREET WATER LINE PLAN & PROFILE (0+00 TO 5+50) 9TH STREET WATER LINE PLAN & PROFILE (5+50 TO 10+00) 9TH STREET WATER LINE PLAN & PROFILE (10+00 TO 14+50) 3RD AVE WATER LINE PLAN & PROFILE (14+50 TO 19+00) 10TH STREET WATER LINE PLAN & PROFILE (19+00 TO 23+50) 9TH STREET SANITARY SEWER PLAN & PROFILE (1+00 TO 5+00) D ROAD SANITARY SWEWER PLAN & PROFILE (5+00 TO 9+50) 20 D ROAD SANITARY SWEWER PLAN & PROFILE (9+50 TO 14+00) D ROAD SANITARY SWEWER PLAN & PROFILE (14+00 TO 17+54.95) 22 15TH STREET SANITARY SEWER PLAN & PROFILE (1+00 TO 5+50) 23 15TH STREET SANITARY SEWER PLAN & PROFILE (5+50 TO 10+00) 15TH STREET SANITARY SEWER PLAN & PROFILE (10+00 TO 14+50) 15TH STREET SANITARY SEWER PLAN & PROFILE (14+50 TO 19+00)



VICINITY MAP

			UTIL	ITIES AND AGENCIES	S			
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501		(970) 256-4022
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242-2762	
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	TILLMON MCSHOOLER	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2695	(970) 244-2664
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656

Grand Junction

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE COVER SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

DESCRIPTION	DATE
REVISION A ADDENDUM #1	- 4/18/2019
REVISION & ADDENDUM #3	_ 5/10/2019
REVISION A	
REVISION A	









RAWING STATUS PROGRESS
FINAL CONSTRUCTION DRAWINGS
ASBUILT DESIGNED BY REVIEWED BY

J-U-B ENGINEERS, INC.

OTHER J-U-B COMPANIES

		LEGEND		SYMBOLS PROJECT NO. 81-18-029
ABBRI	EVIATIONS	<u>LLGLIND</u> BSWMP	PROPOSED CONCRETE	
AASHTO ABC	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS AGGREGATE BASE COURSE	DRAINAGE BASIN BOUNDARY	CURB AND GUTTER	BENCH MARK
AC AP	ASBESTOS CEMENT ANGLE POINT	BSWMP ANCHORED STRAW BALES : AND	PROPOSED CONCRETE	BORE HOLE BASIN
ASB ASP	ANCHORED STRAW BALES ALUMINIZED STEEL PIPE	BSWMP	CURB,GUTTER,& SIDEWALK	CATCH BASIN CLEAN OUT S80
ASTM AWWA BC	AMERICAN SOCIETY FOR TESTING MATERIALS AMERICAN WATER WORKS ASSOCIATION BACK OF CURB	SILT FENCE	PROPOSED CONCRETE SIDEWALK	CURB STOP 4
BF BOW	BUTTERFLY VALVE BACK OF WALK	BUILDING		FIRE HYDRANT
BCR BOT	BEGIN CURB RETURN BOTTOM	2' CURB AND GUTTER	PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND	GUY WIRE ANCHOR
BSWMP CH CAP	BETTER STORM WATER MANAGEMENT PRACTICES CHORD CORRUGATED ALUMINUM PIPE	CONCRETE CURB AND GUTTER	MATERIAL OF NEW MAIN)	HEADGATE ⊞
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION CAST IRON	CONCRETE CURB,GUTTER, & SIDEWALK	ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE	IRRIGATION PUMP
C,G,& SW ©	CURB, GUTTER & SIDEWALK CENTER LINE	CONCRETE DITCH	SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	MAILBOX M
CL CMP CO	CLEAR CORRUGATED METAL PIPE CLEAN OUT	<u></u>		MANHOLE (ELECTRIC) ©
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER) CONCRETE	CONCRETE SIDEWALK 4' SW	RAIL ROAD	MANHOLE (GAS) ©
CSM CSP CU	CITY SURVEY MONUMENT CORRUGATED STEEL PIPE	CULVERT 18" RCP	d actionica vivi	MANHOLE (SANITARY/STORM)
CU DI DWY	COPPER DUCTILE IRON DRIVEWAY		RETAINING WALL	MANHOLE (TELEPHONE)
E ECR	ELECTRIC END CURB RETURN	EARTH DITCH	CTODING (CONTINUOUS MUIT) WHE	MANHOLE (TV) ⊕
EG EL	EDGE OF GUTTER ELEVATION	EDGE OF GRAVEL	STRIPING (CONTINUOUS WHITE)	MANHOLE (WATER) ®
EP EX	EDGE OF PAVEMENT EXISTING FULL BODY	EDGE OF PAVEMENT	STRIPING (DASHED WHITE) — — WHITE — — —	METER (GAS) [™]
FB FC FG	FACE OF CURB FINISHED GRADE	EDGE OF FAVEWEINT	STRIPING (CONTINUOUS YELLOW)	METER (WATER)
FL	FLOW LINE FLANGE	FENCE (BARBED WIRE)	•	PEDESTAL (TELEPHONE) Δ
FM F0 FS FTG	FORCE MAIN FIBER OPTICS FAR SIDE	FENCE (CHAIN LINK)	STRIPING (DASHED YELLOW) — — YELLOW — — —	PEDESTAL (TV) Δ^{TV}
FTG G	FOOTING GAS		TOP OF SLOPE	PROPERTY PIN
GB GM	GRADE BREAK GAS METER	FENCE (IRON) ————————————————————————————————————	CONTOUR LINES	PULL BOX ⊠
GV HBP HDPE	GATE VALVE HOT BITUMINOUS PAVEMENT HIGH DENSITY POLYETHYLENE	FENCE (PLASTIC) ————————————————————————————————————	(SHOWN BETWEEN TOP & TOE)	REDUCER FITTING
INV IRR	INVERT IRRIGATION	FENCE ————	TOE OF SLOPE 4570 — 4570 —	SIGN OR POST (SIGN TYPE NOTED)
L LC	LENGTH OF ARC LONG CHORD	(TEMPORARY CONSTRUCTION)	TRAFFIC DETECTOR LOOP	SPRINKLER HEAD ⊗
LF LL LS	LINEAR FEET LONG ARC SHORT ARC	FENCE (WOOD)		STREET LIGHT
LT MB	LEFT MAILBOX		UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — * (ABANDONED) * ***	SURVEY MONUMENT (CITY)
MCSM MH	MESA COUNTY SURVEY MONUMENT MANHOLE	FENCE (WOVEN WIRE)	LITHITY LINE (OADLE TVA	SURVEY MONUMENT (TYPE NOTED)
MJ MW N/A	MECHANICAL JOINT MILL WRAP NOT APPLICABLE	GUARD RAIL	UTILITY LINE (CABLE TV)	TEST HOLE □ III #1
NIC NOP	NOT IN CONTRACT NO ONE PERSON		UTILITY LINE (ELECTRIC) —	TRAFFIC PAINT MARKING
NRCP NS NTS	NON-REINFORCED CONCRETE PIPE NEAR_SIDE	HATCHING: INDICATES ASPHALT REMOVAL	UTILITY LINE (FIBER OPTIC)	TRAFFIC SIGNAL POLE AND MAST ARM
OHP	NOT TO SCALE OVERHEAD POWER OVERHEAD TELEPHONE	INDICATES ASPHALT REMOVAL		UTILITY POLE -0-
OHT PC PCC	POINT OF CURVATURE POINT OF COMPOUND CURVATURE		UTILITY LINE (GAS)	VALVE (GAS) [№]
PE PERF	POLYETHYLENE PERFORATED	HATCHING: INDICATES CONCRETE REMOVAL	UTILITY LINE (HIGH	VALVE (IRRIGATION) IRR
PI PIP POC	POINT OF INTERSECTION PLASTIC IRRIGATION PIPE POINT ON CURVE		VOLTAGE OVERHEAD POWER) UTILITY LINE	VALVE (WATER) □
POT PR	POINT ON TANGENT PROPOSED	HATCHING:	(OVERHEAD POWER)	VEGETATION (HEDGE OR BUSH)
PRC PT	POINT OF REVERSE CURVATURE POINT OF TANGENCY	INDICATES STAGING AREA	UTILITY LINE (OVERHEAD TELEPHONE)	VEGETATION (TREE STUMP)
PVC R RCP	POLYVINYL CHLORIDE RADIUS REINFORCED CONCRETE PIPE		UTILITY LINE	VEGETATION (TREE) (CALIPER SIZE NOTED) (
REQ'D RG	REQUIRED RESTRAINED GLANDS	LINE (CENTER OF	(SANITARY SEWER)	WATER HYDRANT
RL ROW	LONG RADIUS RIGHT OF WAY	LINE (CITY LIMITS) — CITY LIMITS	UTILITY LINE (SANITARY SEWER FORCE MAIN)	WEIR □
RP RR RS	RADIUS POINT RAIL ROAD SHORT RADIUS	LINE (CONTROL) CONTROL LINE	UTILITY LINE	YARD LIGHT
RT S	RIGHT SLOPE	LINE (CONTROL)	(SANITARY SEWER SERVICE) —====================================	
SAN SC	SANITARY SHORT CHORD	LINE (EASEMENT) — — — — — —	UTILITY LINE (STORM SEWER)	
SC SCD SCH SF	STANDARD CONTRACT DOCUMENTS SCHEDULE SILT FENCE	LINE MONUMENT/SECTION LINE	UTILITY LINE (STORM SEWER, PERFORATED)	
SL SSRB	SECTION LINE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION	(MONUMENT/SECTION)	UTILITY LINE	
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES STATION	LINE (PROPERTY)	(STORM/SANITARY SEWER #500 #500 #500 #500 #500 #500 #500 #50	NORTH ARROW:
STA STL STM T	STEEL STORM TELEPHONE	LINE (RIGHT OF WAY)	UTILITY LINE (TELEPHONE)	BAR SCALE:
TAN TC	LENGTH OF TANGENT TOP OF CURB	MATCH LINE MATCH LINE SEE SHEET NO ?	Sharr Ene (IEEE Hone)	GRAPHIC SCALE
TH TV	TEST HOLE TELEVISION	MICHOLINE SEE SHEET INO :	UTILITY LINE (WATER)	
(TYP) UU VC VCP	TYPICAL UNDERGROUND UTILITIES VERTICAL CURVE	PIPE (IRRIGATION)		(IN FEET) 1 inch = 20 feet
VPC	VITRIFIED CLAY PIPE VERTICAL POINT OF CURVATURE	PIPE (SIPHON)		
VPCC VPRC	VERTICAL POINT OF COMPOUND CURVATURE VERTICAL POINT OF REVERSE CURVATURE			<u> </u>
VPI VPT W	VERTICAL POINT OF INTERSECTION VERTICAL POINT OF TANGENCY WATER			>
•	:			
REVISION ⚠	_	DATE 3/2019 CITY OF	THE THE	GATEWAY CITY OF GRAND JUNCTION
REVISION &		DATE 3/2019	unction (JUB) (5 THE LANGBON GROUP A JUA COMMENT)	MAPPING INC. INC. INC. INC. INC. INC. INC. INC.
REVISION 🕸		DATE 3/2019 DATE 3/2019	J-U-B ENGINEERS, INC. OTHER J-U-B CON	STANDARD ABBREVIATIONS, LEGEND, SYMBOLS

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1	108.2	4" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to the existing sewer service line)	5 7 0	Lín. Ft.
2	108.2	6" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to	1 67	Lin. Ft.
3	108.2	the existing sewer pipe and/or manhole) 8" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to	1329	Lin. Ft.
4	108.2	the existing sewer pipe and/or manhole) 10" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to	326	Lìn. Ft.
5	108.2	the existing sewer pipe and/or manhole) 15" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to	2141	Lin. Ft.
6	108.2	the existing sewer pipe and/or manhole) Water Main (4") (C-900 PVC, DR-18) (Includes cost of restained	5	Lin. Ft.
		connection to existing pipe) Water Main (6") (C-900 PVC, DR-18) (Includes cost of restained		
7	108.2	connection to existing pipe) Water Main (8") (C-900 PVC, DR-18) (Includes cost of restained	145	Lin. Ft.
8	108.2	connection to existing pipe) Water Main (12") (C-900 PVC, DR-18) (Includes cost of restained	140	Lìn. Ft.
9	108.2	connection to existing pipe)	66	Lin. Ft.
10	108.2	Water Main (18") (C 900 PVC, DR 18) (Includes cost of restained connection to existing pipe)	0	Lin. Ft.
11	108.2	Water Main (20") (C-900 PVC, DR-18) (Includes cost of restained connection to existing pipe)	2597	Lin. Ft.
12	108.2	Storm Drain Pipe (18") (ADS Corrugated HDPE Pipe)	49	Lin. Ft.
13	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft3)	11008	Ton
14	108.3	8" X 4" Sewer Service Tap (Full Body Wye w/ Street 45 deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail SS-06)	7	Each
15	108.3	8" X 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail SS-06)	1	Each
16	108.3	10" X 4" Sewer Service Tap (Full Body Wye w/ Street 45 deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail SS-06)	4	Each
17	108.3	10" X 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail SS-06)	1	Each
18	108.3	15" X 4" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail S5-06)	5	Each
19	108.3	15" X 6" Sewer Service Tap (Full Body Wye w/ Street 45-deg.) (Includes full body wye, cleanout, and all fittings required to align and connect into the existing sewer servipce pipe at the locations shown on the plans) (See City Std. Detail SS-06)	3	Each
20	108.3	Sewer Service Clean-out Ring and Cover (Castings Inc. CD-8030-Cl or Approved Equal) (Includes concrete collar in unpaved areas per City Std. Detail SS 07)	20	Each
21	108.3	Gate Valve (4")	1	Each
22	108.3	Gate Valve (6")	9	Each
23	108.3	Gate Valve (3")	3	Each Cach
24	108.3	Gate Valve (12") Rutterfly Valve (18")	2	Each Each
25 26	108.3 108.3	Butterfly Valve (18") Butterfly Valve (20")	0 4	Each Each
27	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	1	Each
28	108.3	Tee (8" x 4") MJ Swivel Tee (Epoxy Coated)	1	Each
29	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	3	Each
30	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	0	Each
31	108.3	Tee (12" x 12") (Epoxy Coated)	1	Each
	108.3	Tee (18" x 18") (Epoxy Coated)	0	Each
32				

34	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3	Each
35	108.3	Tee (20" x 18") (Epoxy Coated)	0	Each
36	108.3	Tee (20" x 20") (Epoxy Coated)	1	Each
37	108.3	Elbow (6" x 45 deg) (Epoxy Coated)	1	Each
38	108.3	Elbow (8" x 45 deg) (Epoxy Coated)	0	Each
39	108.3	Elbow (8" x 22.5 deg) (Epoxy Coated)	0	Each
40	108.3	Elbow (8" x 11.25 deg) (Epoxy Coated)	0	Each
41	108.3	Elbow (12" x 45 deg) (Epoxy Coated)	0	Each
42	108.3	Elbow (18" x 45 deg) (Epoxy Coated)	0	Each
43	108.3	Elbow (18" x 22.5 deg) (Epoxy Coated)	0	Each
44	108.3	Elbow (20" x 45 deg) (Epoxy Coated)	8	Each
45	108.3	Elbow (20" x 11.25 deg) (Epoxy Coated)	0	Each
46	108.3	Reducer (20" x 12") (Epoxy Coated)	1	Each
47	108.3	Cross Fitting (12" x 8") (Epoxy Coated)	0	Each
48	108.3	End Cap/Plug (20") (Includes Concrete Thrustblock per City Std Detail W-07 & W-08)	1	Each
49	108.3	Fire Hydrant Assembly	7	Each
50	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with	1	Each
		Stiffener for connection to HDPE pipe (8" HDPE Pipe) 20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with		
51	108.3		0	Each
		Stiffener for connection to HDPE pipe (20" HDPE Pipe)		
E7	100 4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line	304	Da F
52	108.4	is encountered, water service shall be replaced to meter) (Includes	284	Lin. Ft.
	+	cost of connection to existing pipe)		
		Water Service Line (1") (Type K Copper) (If Lead or Poly service line		
53	108.4	is encountered, water service shall be replaced to meter) (Includes	80	Lin. Ft.
		cost of connection to existing pipe)		
		Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead	_	
54	108.4	service line is encountered, water service shall be replaced to meter)	0	Lin. Ft.
	-	(Includes cost of connection to existing pipe)		
		Water Service Line (2") (Type K Copper or HDPE 3408) (If lead service		
55	108.4	line is encountered, water service shall be replaced to meter)	20	Lin. Ft.
		(Includes cost of connection to existing pipe)		
56	108.4	Tapping Saddle (20" x 3/4")	11	Each
57	108.4	Tapping Saddle (20" x 1")	3	Each
58	108.4	Tapping Saddle (20" x 1-1/2")	0	Each
59	108.4	Tapping Saddle (20" x 2")	1	Each
60	102.8j/108.4	Corporation Stop (3/4")	11	Each
61	102.8j/108.4	Corporation Stop (1")	3	Each
62	102.8j/108.4	Corporation Stop (1-1/2")	0	Each
63	102.8j/108.4	Corporation Stop (2")	1	Each
64	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Includes connection of adjacent sewer line, forming inverts and adjusting to final grade)	13	Each
		(See City Std. Detail SS-02) (No steps required in sewer manholes)		
65	108.5	Manhole Barrel Section (D>5') (48" I.D.)	51	Lin. Ft.
	1	Connect to Existing Manhole (15" pipe) (Doug Jones Sawmill Property		
6 6	108.5	manhole)	1	Each
		Storm Sewer Basic Manhole (48" I.D.) (Includes connection to		
67	108.5	adjacent storm sewer lines and adjusting to final grade) (See City Std.	1	Each
		Detail D-03).		
••				
68	108.5	Manhole Coatings (Castagra Ecodur 201 or Engineer Approved Equal)	72	VLF
	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick		
69		Min.) (Includes haul and disposal of unsuitable excavated material)	2890	Ton
		(Assumed Unit Weight = 138 lbs/ft3)	-	
70	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	35	Each
		Abandon Existing Water Valve (Close valve, remove top half of	30	2001
71	202	existing valve box, fill cavity to finish subgrade with flow-fill	7	Each
, 1		material)	·	Edell
	+	Abandon Manhole (Remove cone section, ring & cover, and fill		
72	202	-	5	Each
70	202	remaining barrel sections with flow-fill material) Pomore Switting Fire Hydront (Poturn Hydront to City Shope)	7	F., -L
73	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)		Each
74	202	Removal of Existing Pipe (Size & type as shown on plans)	3375	Lìn. Ft.
75	202	Removal of Asphalt Mat (Full-Depth)	3656	Sq. Yd.
76	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	4128	Sq. Yd.

				,
77	202	Removal of Concrete (Includes but not limited to curb, gutter, sidewalk, driveway, slabs, V pan, curb ramps, intersection corners,	1097	Sq. Ft.
		aprons, landscape borders, and concrete walls.)		
78	202	Removal of Sod	0	Sq. Ft.
7 9	202	Removal of Manhole (Price to include plugging existing abandoned pipes, if any, and removal and disposal of concrete sections)	9	Each
80	202	Remove Bollard	0	Each
81	202	Removal of Tree (2" dia.)	1	Each
82	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	75	Cu. Yd.
83	206	Structure Backfill (Flow Fill) (Use at CDOT Right of Way road crossing and as required on the Project)	16	Cu. Yd.
84	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes	19	Each
		Maintenance & Removal of Debris, & Removal of Inlet Protection)		
85	208	Concrete Washout Facility	1	Lump Sum
	210	Reset Landscape Ground Cover (Match in Kind) (Contractors shall		
86		remove ground cover and underlying weed barrier as needed and	3 6 4	Sq. Ft.
		stockpile materials. Contractor shall reset these materials and		'
		provide additional materials as needed)		
87	210	Reset Sprinkler System (Complete in place)	1	Lump Surr
88	210	Reset Fence (4' High Barbed Wire Fence)	0	Lin. Ft.
89	210	Reset Fence (5' High Chain-Link)	30	Lìn. Ft.
90	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top)	120	Lin. Ft.
91	210	Reset Sign	0	Each
92	212	Re-Sod Area as Shown (Includes 6" Thick Imported Topsoil Placed Prior to Sod Placement)	0	Sq. Ft.
93	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	160	Sq. Yd.
94	304	Aggregate Base Course (Class 6) (15" thick)	3688	Sq. Yd.
	347	Hot Bituminous Pavement (2" Thick) (Grading SX, PG 64-22) (GYR=75)		24,
95	401	(Mill & Fill Overlay) (3rd Ave. & 10th Street)	2057	Sq. Yd.
96	401	Hot Bituminous Pavement (3" Thick) (Grading SX, PG 64-22) (GYR=75) (One 3" Lift Bottom Mat)	25 6 4	Sq. Yd.
97	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64- 22) (GYR=75) (One 2" Top Mat) (T-Top)	2071	Sq. Yd.
98	401	Hot Bituminous Pavement (Patching) (5" Thick) (Grading SX, PG 64 22) (GYR=75) (3" Bottom Mat, 2" Top Mat) (9th Street & 15th Street)	1092	Sq. Yd.
99	407	Emulsified Asphalt (Tack Coat)	900	Gallon
100	420	Geotextile (Separator) (Non-Woven) (Wrap stabilization material	1900	Sq. Yd.
101	600	with fabric) (Minimum Overlap = 24") (As Needed)	3	Co Vd
101	608	Concrete Drainage Pan (3' Wide) (Match in Kind)		Sq. Yd.
102	608	Concrete Drainage Pan (4' Wide) (Match in Kind)	10	Sq. Yd.
103	608	Concrete Curb and Gutter (2' Wide) (Match in Kind)	179	Lin. Ft.
104	608	Concrete Valley Gutter (2' Wide) (Match in Kind)	48	Lin. Ft.
105	608	Concrete Curb (6" Wide, 12" High) (Match in Kind)	19	Lin. Ft.
106	608	Concrete Sidewalk (4" Thick) (Match in Kind)	31	Sq. Yd.
107	608	Concrete Pavement (6" Thick) (CDOT Class D, 4500 PSI Mix)	27	Sq. Yd.
108	608	Cap Top Half of Sewer Pipe in concrete per City Std. Detail GU-04 (20' long) (If necessary)	2	Each
109	608	Encase Sewer Pipe in Concrete per City Std. Detail GU-04 (20' long) (If necessary)	1	Each
110	620	Portable Sanitary Facility	1	Each
111	625	Construction Surveying (Includes As-Built Drawings)	1	Lump Sum
112	626	Mobilization	1	Lump Surr
113	630	Traffic Control Plan	1	Lump Sum
114	630	Traffic Control (Complete in Place)	1	Lump Sun
115	630	Flagging	1400	Hour
116	SP	UV Cured CIPP Rehabilitation	0	Lin. Ft.
116A	SP	30" Steel Casing by Bore/Jack	30	Lin. Ft.
117	SP	Cathodic Protection System	1	Lump Sum
118	SP	· · · · · · · · · · · · · · · · · · ·	1	
119	SP SP	Reconfigure Manhole Bench (C3-271-031) Coordination with Doug Jones Property (Temporarily relocate lumber	1	Lump Sun
	5C3.3.18	for sewer installation and then place back lumber in same location) Quality Control Testing	1	
130	303.3.10			Lump Sum
120	Dumn			
120 121 MCR	Pump	Bypass Sewage Pumping (At Contractors Discretion) Minor Contract Revisions	1	Lump Sum Lump Sum

