



FAX TRANSMITTAL

Date: December 22, 2020

To: Plan Holders

Company: Contractors

Number of Pages: 19 (Including Cover)

From: Anika Ture - Contract Administration
Telephone No. 918-596-9637
Fax No. 918-699-3470
Email – ature@cityoftulsa.org

**RE: PROJECT NO. TMUA-W 18-14 CITYWIDE 2" WATERLINE
REPLACEMENT IN THE VICINITY OF W. EDISON ST. AND N. 65TH W.
AVE.**

ADDENDUM NO. 1

Please fax or email a signed cover sheet 918-699-3470 to or jiten@cityoftulsa.org as
acknowledgement of receipt.

Thank you,

Signature

Company

Date



**ADDENDUM NO. 1
TO
PROJECT NO. TMUA-W 18-14 CITYWIDE 2" WATERLINE
REPLACEMENT IN THE VICINITY OF W. EDISON ST. AND N.
65TH W. AVE.**

This Addendum No. 1 consisting of (1) item, submitted by City of Tulsa, and (12) items, submitted by Keithline Engineering Group, is hereby made a part of the Contract Documents to the same extent as though it were originally included therein, and shall supersede anything contained in the Plans and Specifications with which it might conflict. **This entire Addendum shall be attached to the Index Sheet of the Contract Documents, recorded on P-6a of the proposal, and submitted with bid. Failure to do so shall result in the bid being deemed non-responsive.**

This Addendum No. 1 consists of the following:

1. Delete the existing Proposal in its entirety and replace with the revised Proposal found at <https://www.cityoftulsa.org/government/departments/engineering-services/construction-bids/>. It is the Bidder's responsibility to download the revised Proposal onto their existing thumb drive.
2. The attached documents list the detail items that have been modified in Addendum No. 1. These documents shall be inclusive and apply to this project.

All other provisions of the Plans and Specifications shall remain in full force and effect.

CITY OF TULSA

for 
Paul D. Zachary, P.E.
City Engineer


HAS/CEW/AT/ji



2-IN WATERLINE REPLACEMENTS
PROJECT NO. TMUA-W 18-14

ADDENDUM NO. 1, dated December 16, 2020

This Addendum No. 1, consisting of twelve (12) items, is hereby made a part of the Contract documents to the same extent as though it were originally included therein and shall supersede anything contained in the Plans and Specifications with which it might conflict. **This addendum shall be attached to the Index Sheet of the Contract Documents and submitted with the bid. Failure to do so shall result in the bid being deemed non-responsive.**

CHANGES:

- 1) Project duration is changed from 150 CDs to 240 CDs.
- 2) Sht 2 Bid Items 47,66,85: 12" DIP CL51 changed to 12" DIP CL50.

REMOVE AND REPLACE:

- 3) Plan Sheets 2,3,7,8,11,14,17,23,24,27

DELETION:

- 4) Sht 2, Bid Item 32: REMOVE AND REPAIR ASPHALT PAVEMENT (STD 730) S.Y.

ADDITION of SHT 2 PAY ITEMS (ODOT SPECS) PER UNIT TO REPLACE THE DELETED BID ITEM 32:

- 5) BID ITEM 40: 12" DEPTH UNCLASSIFIED EXCAVATION (INCLUDES EXISTING ASPHALT REMOVAL)
- 6) BID ITEM 41: 6" AGGREGATE BASE TYPE A, 95% SPD
- 7) BID ITEM 42: 6" SUBGRADE METHOD B, 95% SPD
- 8) BID ITEM 43: SEPERATOR FABRIC (MIRAFI RS3801 OR EQUAL)
- 9) BID ITEM 44: FULL-DEPTH SAWCUT
- 10) BID ITEM 45: 4.25" SUPERPAVE TYPE S3 (PG64-22)
- 11) BID ITEM 46: 2" SUPERPAVE TYPE S4 (PG64-22)

ADDITION TO SHT 3 PAY NOTES FOR ASPHALT BID ITEMS 45-46 ABOVE:

- 12) PAY NOTE 51: APPLIES TO TACK COAT, EDGE JOINT SEAL MATERIAL, SCREENINGS FOR BLOTTING



Dated: December 16, 2020

END of Addendum No. 1

ELECTRONIC BID PROPOSAL INSTRUCTIONS - EXCEL SPREADSHEET
PROJECT NO: TMUA-W 18-14
ADDENDUM 1

Please read the following instructions carefully.

1. After opening this file re-save it as your company's name.
2. Open the BID FORM Sheet from the tabs below.
3. Input the unit price of the appropriate pay item in the cells highlighted in blue.
4. Review all data input and check calculations to ensure accuracy of Bid.
5. Print 1hardcopy of the "PROPOSAL" tab, BID FORM and the "SIGNATURE PAGE" tab.
6. Complete and sign the "Signature Page" document.
6. Submit hardcopy and electronic disk with Contract Documents and Specifications for Bid opening date.

NOTES:

1. The sheet named "FOR CONTRACTOR USE" shall be used by the contractor to export data to estimating software.

LEGEND

- \$ 1.00 Cells Requiring Data Input.
- \$ 1.00 Internal Data Transfer.
- \$ 2.00 Calculated Results.

AGREEMENT FOR USING ELECTRONIC BID PROPOSAL

By and Between: Keithline Engineering Group (ENGINEER) and RECIPIENT. The enclosed electronic media is provided pursuant to your request and is for your limited use in connection with your submittal of Bid Proposal for Project No. **TMUA - W 18-14, 6-IN WATER LINE EXTENSION**. In no event shall the information be used for any other purpose or be released to third parties without the written consent of the ENGINEER. In the event of a discrepancy between the hard copy and this electronic media at delivery or in the future, the hard copy shall govern. ENGINEER hereby disclaims any and all liability for the consequences from use of the electronic media and makes no warranty or guarantee of accuracy. RECIPIENT shall assume full responsibility for the uses and consequences of the electronic media. It is agreed that ENGINEER has and retains ownership of the electronic media. ENGINEER does not warrant or guarantee that the electronic data is compatible with RECIPIENT'S computer hardware or software, and ENGINEER'S responsibility for the electronic media is limited to replacement of defective media for a period of thirty (30) days after delivery to RECIPIENT. !!! By opening and using this FILE, You AGREE to these TERMS AND CONDITIONS!!!

ADDENDUM 1 - PROPOSAL
PROJECT NO: TMUA-W 18-14
240 CDs

TO: TULSA.
CITY OF TULSA, OKLAHOMA

THE UNDERSIGNED BIDDER, having carefully examined the drawings, specifications, and other Contract Documents of the above project presently on file in the City Clerk, City of Tulsa Oklahoma:

CERTIFIES THAT he has inspected the site of the proposed work and has full knowledge of the extent and character of the work involved, construction difficulties that may be encountered, and materials necessary for construction, class and type of excavation, and all other factors affecting or which may be affected by the specified work; and

CERTIFIES THAT he has not entered into collusion with any other bidder or prospective bidder relative to the project and/or bid: and

HEREBY PROPOSES: to enter into a contract to provide all necessary labor, materials, equipment and tools to completely construct and finish all the work required by the Contract Documents hereto attached and other documents referred to therein: to complete said work within 240 calendar days after the work order is issued; and to accept in full payment therefore the amount set forth below for all work actually performed as computed by the Engineer as set forth in the Contract.

Basis of Award

THE BID PROPOSAL INCLUDES A BASE BID WITH THREE MATERIAL OPTIONS.

IT SHOULD BE NOTED THAT THE LOWEST RESPONSIBLE TOTAL BID SHALL BE DETERMINED BY THE BASE BID WITH THE LOWER OF THE MATERIAL OPTIONS.

ANY PROPOSAL SUBMITTED WITH EITHER MATERIAL OPTION INCOMPLETE SHALL BE CONSIDERED NON-RESPONSIVE. THE CITY OF TULSA RESERVES THE RIGHT TO SELECT EITHER MATERIAL OPTION IN THE EVENT THE BID COSTS OF THE THREE MATERIAL OPTIONS ARE EQUAL.

ADDENDUM 1 - BID FORM
PROJECT NO: TMUA-W 18-14
240 CD's

240 CDS					DATA INPUT	
BID ITEM	SPEC NO.	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL COST
BASE BID						
1	301A	RIGHT-OF-WAY CLEARING AND RESTORING	LF	6208		0.00
2	302A	EXCAVATION AND BACKFILL	CY	2429		0.00
3	303A	MOBILIZATION	EA	1		0.00
4	304B	CONTRACTOR CONSTRUCTION STAKING	EA	1		0.00
5	312C	6-INCH PLUG, RJ	EA	2		0.00
6	312F	REMOVE SERVICE CORP AND INSTALL PLUG	EA	69		0.00
7	312G	12-INCH S-B 413 SLEEVE, OR EQUAL (FOR CONNECTING TO OUT-OF-ROUND CI PIPE)	EA	6		0.00
8	312H	6-INCH S-B 413 SLEEVE, OR EQUAL (FOR CONNECTING TO OUT-OF-ROUND CI PIPE)	EA	14		0.00
9	312I	12-INCH SOLID DI SLEEVE, RJ (FOR CONNECTING TO ROUND DIP)	EA	3		0.00
10	312J	6-INCH SOLID DI SLEEVE, RJ (FOR CONNECTING TO ROUND DIP)	EA	17		0.00
11	315A	3/4-INCH METER METER CAN, RIM AND LID	EA	68		0.00
12	315B	1-INCH WATER METER CAN, RIM AND LID	EA	2		0.00
13	315C	3-WAY FIRE HYDRANT (3 FT BURY DEPTH)	EA	18		0.00
14	315D	3/4" SERVICE LINES, EXTENTION (CONTINGENCY)	LF	100		0.00
15	315E	6-IN HYDRANT EXTENSION	EA	19		0.00
16	317A	2-INCH AIR RELIEF VALVE, STD. 327 (CONTINGENCY)	EA	4		0.00
17	318A	VALVE BOX	EA	19		0.00
18	318B	VALVE BOX EXTENSION	EA	19		0.00
19	322A	STEEL CONDUIT OPEN CUT 12-INCH (3/8" WALL THICKNESS) (CONTINGENCY ONLY)	LF	20		0.00
20	325A	SLAB SOD	SY	1724		0.00
21	326A	STREET WASHDOWN	LF	6208		0.00
22	327A	SAFETY FENCE	LF	300		0.00
23	327B	BARRELS WITH STEADY BURN LIGHTS	SD	3600		0.00
24	327C	TUBE CHANNELIZER W/TYPE 'A' FLASHING LIGHTS, RJ	SD	3600		0.00
25	327D	TYPE III BARRICADES W/TYPE 'A' FLASHING LIGHTS	SD	960		0.00
26	327E	ADVANCED WARNING ARROW PANELS	SD	960		0.00
27	327F	SIGNS, 0 TO 15.99 SF W/TYPE 'A' FLASHING LIGHTS	SD	960		0.00
28	327G	SIGNS, 16 SF AND OVER W/TYPE 'A' FLASHING LIGHTS	SD	960		0.00
29	327H	FLAG PERSON	FD	20		0.00
30	328A	8-INCH (HDPE) OR 6-INCH (DIP OR PVC) BORE	LF	1824		0.00
31	328B	8-INCH HDPE BORE - BORE ONLY UNDER BIG HEART CREEK	LF	421		0.00
32	329F	SAW CUT	LF	286		0.00
33	329I	REMOVE & REPLACE 6-IN CONCRETE DRIVEWAY(H.E.S.) (CONTINGENCY ONLY)	SY	15		0.00
34	330A	SILT FENCE	LF	140		0.00
35	SPECIAL - 1	REPAIR DAMAGED ONG SERVICE (CONTINGENCY ONLY)	ALLOW	1	1,500.00	1,500.00
36	SPECIAL - 2	CONSTRUCTION AS-BUILT	EA	1		0.00
37	SPECIAL - 3	BLOW-OFF HYDRANT (STD 310) (CONTINGENCY ONLY)	EA	2		0.00
38	SPECIAL - 4	OWNERS ALLOWANCE	ALLOW	1	10,000.00	10,000.00
39	SPECIAL - 5	REMOVE AND DISPOSE OF EXISTING 24" DIA TREE AT STA 92+73 SHT 20	EA	2		0.00
40	ODOT 202A	12" DEPTH UNCLASSIFIED EXCAVATION (INCLUDES EXISTING ASPHALT REMOVAL)	CY	407		0.00
41	ODOT 303A	6" AGGREGATE BASE TYPE A, 95% SPD	CY	204		0.00
42	ODOT 310A	6" SUBGRADE METHOD B	SY	1221		0.00
43	ODOT 325	SEPERATOR FABRIC (MIRAFI RS 3801 OR EQUAL)	SY	1221		0.00
44	ODOT 329	FULL-DEPTH SAWCUT	LF	284		0.00
45	ODOT 411B	4.25" SUPERPAVE TYPE S3 (PG 64-22OK)	TONS	291		0.00
46	ODOT 411C	2" SUPERPAVE TYPE S4 (PG 64-22OK)	TONS	137		0.00

Material Option 1 (DIP)

47	307A	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	LF	120		0.00
48	307B	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED	LF	2543		0.00
49	307C	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	LF	5369		0.00
50	309A	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	LF	421		0.00
51	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	EA	2		0.00
52	312B	6-INCHx6-INCHx6-INCH DUCTILE IRON TEE, RJ	EA	19		0.00
53	312C	6-INCH DUCTILE IRON - 90 DEGREE BEND, RJ	EA	3		0.00
54	312D	6-INCH DUCTILE IRON - 45 DEGREE BEND, RJ	EA	14		0.00
55	312E	6-INCH DUCTILE IRON - 22 1/2 DEGREE BEND, RJ	EA	1		0.00
56	312F	6-INCH DUCTILE IRON - 11 1/4 DEGREE BEND, RJ	EA	7		0.00
57	312G	8-INCH x 6-INCH DIP REDUCER, RJ (FOR DIRECTIONAL DRILLED HDPE)	EA	4		0.00
58	312H	8-INCH HDPE MJ ADAPTER (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	EA	4		0.00
59	312I	8-INCH HDPE WALL ANCHOR (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	EA	4		0.00
60	315A	1-INCH WATER CONNECTION (LONG)	EA	1		0.00
61	315B	1-INCH WATER CONNECTION (SHORT)	EA	1		0.00
62	315C	3/4 INCH WATER CONNECTION (LONG)	EA	28		0.00
63	315D	3/4 INCH WATER CONNECTION (SHORT)	EA	40		0.00
64	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	EA	2		0.00
65	317B	6-INCH DUCTILE IRON GATE VALVE, RJ	EA	19		0.00

BASE BID PLUS DIP: \$11,500.00

Material Option 2 (PVC)

66	307B	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	LF	120		0.00
67	309A	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	EA	5369		0.00
68	309B	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	LF	421		0.00
69	309C	6-INCH PVC PIPE, AWWA C900, CLASS 200, DR14	EA	2543		0.00
70	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	EA	2		0.00
71	312B	6-INCHx6-INCHx6-INCH DUCTILE IRON TEE, RJ	EA	19		0.00
72	312C	6-INCH DUCTILE IRON - 90 DEGREE BEND, RJ	EA	3		0.00
73	312D	6-INCH DUCTILE IRON - 45 DEGREE BEND, RJ	EA	14		0.00
74	312E	6-INCH DUCTILE IRON - 22 1/2 DEGREE BEND, RJ	EA	1		0.00
75	312F	6-INCH DUCTILE IRON - 11 1/4 DEGREE BEND, RJ	EA	7		0.00
76	312G	8-INCH x 6-INCH DIP REDUCER, RJ (FOR DIRECTIONAL DRILED HDPE)	EA	4		0.00
77	312H	8-INCH HDPE MJ ADAPTER (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	EA	4		0.00
78	312I	8-INCH HDPE WALL ANCHOR (DIPS) (RJ)(FOR DIRECTIONAL DRILED HDPE)	EA	4		0.00
79	315A	1-INCH WATER CONNECTION (LONG)	EA	1		0.00
80	315B	1-INCH WATER CONNECTION (SHORT)	EA	1		0.00
81	315A	3/4 INCH WATER CONNECTION (LONG)	EA	28		0.00
82	315B	3/4 INCH WATER CONNECTION (SHORT)	EA	40		0.00
83	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	EA	3		0.00
84	317B	6-INCH DUCTILE IRON GATE VALVE, RJ	EA	19		0.00

BASE BID PLUS PVC: \$11,500.00

Material Option 3 (HDPE)

85	307B	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	LF	120		0.00
86	307C	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	LF	20		0.00
87	309A	8-INCH HDPE AWWA C906 PE 4107 DR11 (DIPS)	LF	7892		0.00
88	309B	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	LF	421		0.00
89	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	EA	4		0.00
90	312B	8-INCH HDPE - 90 DEGREE BEND, RJ	EA	3		0.00
91	312B	8-INCH HDPE - 45 DEGREE BEND, RJ	EA	14		0.00
92	312C	8-INCH x 6-INCH DIP REDUCER, RJ	EA	38		0.00
93	312D	8-INCH HDPE MJ ADAPTER (DIPS) (RJ)	EA	38		0.00
94	312E	6-INCHx6-INCHx6-INCH DI TEE, RJ	EA	19		0.00
95	312F	8-INCH HDPE WALL ANCHOR (DIPS) (RJ)	EA	40		0.00
96	315A	1-INCH WATER CONNECTION (LONG)	EA	1		0.00
97	315B	1-INCH WATER CONNECTION (SHORT)	EA	1		0.00
98	315C	3/4 INCH WATER CONNECTION (LONG)	EA	28		0.00
99	315D	3/4 INCH WATER CONNECTION (SHORT)	EA	40		0.00
100	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	EA	3		0.00
101	317B	8-INCH DUCTILE IRON GATE VALVE, RJ	EA	19		0.00
BASE BID PLUS HDPE:						\$11,500.00

Base Bid with DIP Option 1:	\$11,500.00
Base Bid with PVC Option 2:	<u>\$11,500.00</u>
Base Bid with HDPE Option 3:	<u>\$11,500.00</u>

SIGNATURE PAGE
PROJECT NO: TMUA-W 18-14
ADDENDUM 1

TOTAL BID (Base Bid with the lower of the three Material Options)

\$11,500.00

Enclosed is a () Bidder's Surety Bond, () Certified Check, () Cashier's Check for

Dollars (\$ _____)
Figures

which the City of Tulsa may retain or recover as liquidated damages in the event that the undersigned fails to enter into contract for the work covered by this proposal., provided the Contract is awarded to the undersigned within thirty (30) days, or within ninety (90) days if Federal funds are utilized, from the date fixed for opening of bids and the undersigned fails to execute said Contract and furnish the required bonds and other requirements as called for in these Contract Documents within thirty (30) days after award of Contract.

Dated at Tulsa, Oklahoma, this _____ day of _____, 2020.

Respectfully submitted,

(Complete legal name of company)

(State of Organization)

By: _____

Title: _____

ATTEST: _____

Title: Corporate Secretary

(SEAL)

Address: _____

Telephone Number: _____

Fax Number: _____

The undersigned acknowledge receipt of the following Addenda (give number and date of each):

PAY QUANTITIES												
PROJECT NO: TMUA-W 18-14												
240 CDs												
BID ITEM	SPEC NO.	DESCRIPTION	PAY NOTES	UNIT	QTY	WL 'A'	WL 'B'	WL 'C'	WL 'D'	WL 'E'	WL 'F'	WL 'G'
BASE BID												
1	301A	RIGHT-OF-WAY CLEARING AND RESTORING	4,5,6,7,17,22,23,45	LF	6208	720	267	1421	997	982	402	1419
2	302A	EXCAVATION AND BACKFILL	14,22	CY	2429		267	99	526	369	364	149 526
3	303A	MOBILIZATION		EA	1	0.10	0.05	0.20	0.15	0.20	0.10	0.20
4	304B	CONTRACTOR CONSTRUCTION STAKING		EA	1	0.10	0.05	0.20	0.15	0.20	0.10	0.20
5	312C	6-INCH PLUG, RJ	2,8	EA	2	1		1				
6	312F	REMOVE SERVICE CORP AND INSTALL PLUG	2,8,9,30	EA	69	6	1	7	11	14	6	24
7	312G	12-INCH S-B 413 SLEEVE, OR EQUAL (FOR CONNECTING TO OUT-OF-ROUND CI PIPE)	2,12,44,47	EA	6	2	2		2			
8	312H	6-INCH S-B 413 SLEEVE, OR EQUAL (FOR CONNECTING TO OUT-OF-ROUND CI PIPE)	2,12,44,47	EA	14	2	2	2	2	2	2	2
9	312I	12-INCH SOLID DI SLEEVE,RJ (FOR CONNECTING TO ROUND DIP)	2,8,47	EA	3	1	1		1			
10	312J	6-INCH SOLID DI SLEEVE,RJ (FOR CONNECTING TO ROUND DIP)	2,8,47	EA	17	2	2	2	2	3	2	4
11	315A	3/4-INCH METER METER CAN, RIM AND LID		EA	68	6	4	4	8	14	8	24
12	315B	1-INCH WATER METER CAN, RIM AND LID		EA	2			1	1			
13	315C	3-WAY FIRE HYDRANT (3 FT BURY DEPTH)	31	EA	18	3		5	2	3	2	3
14	315D	3/4" SERVICE LINES, EXTENTION (CONTINGENCY)	15,16	LF	100							
15	315E	6-IN HYDRANT EXTENSION		EA	19	3		5	2	4	2	3
16	317A	2-INCH AIR RELIEF VALVE, STD. 327		EA	4			1	1	1		1
17	318A	VALVE BOX	21	EA	19	3	0	5	2	3	2	4
18	318B	VALVE BOX EXTENSION		EA	19	3	0	5	2	3	2	4
19	322A	STEEL CONDUIT OPEN CUT 12-INCH (3/8" WALL THICKNESS) (CONTINGENCY ONLY)	2	LF	20							
20	325A	SLAB SOD	32	SY	1724	200	74	395	277	273	112	394
21	326A	STREET WASHDOWN	22	LF	6208	720	267	1421	997	982	402	1419
22	327A	SAFETY FENCE	22,33	LF	300							
23	327B	BARRELS WITH STEADY BURN LIGHTS	34	SD	3600							
24	327C	TUBE CHANNELIZER W/TYPE 'A' FLASHING LIGHTS,RJ	34	SD	3600							
25	327D	TYPE III BARRICADES W/TYPE 'A' FLASHING LIGHTS	34	SD	960							
26	327E	ADVANCED WARNING ARROW PANELS	34	SD	960							
27	327F	SIGNS, 0 TO 15.99 SF W/TYPE 'A' FLASHING LIGHTS	34	SD	960							
28	327G	SIGNS, 16 SF AND OVER W/TYPE 'A' FLASHING LIGHTS	34	SD	960							
29	327H	FLAG PERSON	34	FD	20							
30	328A	8-INCH (HDPE) OR 6-INCH (DIP) BORE (NO PVC) - BORE ONLY	35,48,49	LF	1824	95	124	448	260	310	406	181
31	328B	8-INCH HDPE BORE - BORE ONLY UNDER BIG HEART CREEK	35,48,49	LF	421	240	181					
32	329F	SAW CUT	22	LF	286	270	0	16	0	0	0	0
33	329I	REMOVE & REPLACE 6-IN CONCRETE DRIVEWAY(H.E.S) (CONTINGENCY ONLY)		SY	15							
34	330A	SILT FENCE	37	LF	140	20	20	20	20	20	20	20
35	SPECIAL - 1	REPAIR DAMAGED ONG SERVICE (CONTINGENCY ONLY)	42	ALLOW	1							
36	SPECIAL - 2	CONSTRUCTION AS-BUILT		EA	1							
37	SPECIAL - 3	BLOW-OFF HYDRANT (STD 310) (CONTINGENCY ONLY)	22	EA	2							
38	SPECIAL - 4	OWNERS ALLOWANCE	18	ALLOW	1							
39	SPECIAL - 5	REMOVE AND DISPOSE OF EXISTING 24" DIA TREE AT STA 92+73 SHT 20	50	EA	2			1		1		

1 ADDENDUM 1 ASPHALT ROAD REPAIRS (SHTS 7, 8, 11, 14, 17, 23, 24 & 27) Per Asphalt Pavement Repair Addendum 1

40	ODOT 202A	12" DEPTH UNCLASSIFIED EXCAVATION (INCLUDES EXISTING ASPHALT REMOVAL)		CY	407	117		67				223
41	ODOT 303A	6" AGGREGATE BASE TYPE A, 95% SPD		CY	204	58		34				112
42	ODOT 310A	6" SUBGRADE METHOD B		SY	1221	350		202				669
43	ODOT 325	SEPERATOR FABRIC (MIRAFI RS 3801 OR EQUAL)		SY	1221	350		202				669
44	ODOT 329	FULL-DEPTH SAWCUT		LF	284	73		73				138
45	ODOT 411B	4.25" SUPERPAVE TYPE S3 (PG 64-22)	51	TONS	291	83		48				159
46	ODOT 411C	2" SUPERPAVE TYPE S4 (PG 64-22)	51	TONS	137	39		23				75

Material Option 1 (DIP)												
47	307A	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	1,2,3,8,9,11,27,46	LF	120	20	10	10	80	0	0	0
48	307B	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED	1,2,3,9,10,27,43,46	LF	2543	64	0	735	457	522	235	530
49	307C	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	1,2,3,8,9,11,27,46	LF	5369	731	381	1124	720	770	573	1070
50	309A	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	1,2,3,9,10,19,20,27,38,39,46	LF	421	240	181					
51	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	2,8	EA	2				2			
52	312B	6-INCHx6-INCHx6-INCH DUCTILE IRON TEE, RJ	2,8	EA	19	4	1	6	1	3	1	3
53	312C	6-INCH DUCTILE IRON - 90 DEGREE BEND, RJ	2,8	EA	3			1				2
54	312D	6-INCH DUCTILE IRON - 45 DEGREE BEND, RJ	2,8	EA	14	1	2	9	2			
55	312E	6-INCH DUCTILE IRON - 22 1/2 DEGREE BEND, RJ	2,8	EA	1	1						
56	312F	6-INCH DUCTILE IRON - 11 1/4 DEGREE BEND, RJ	2,8	EA	7	4	2	1		1		
57	312G	8-INCH x 6-INCH DIP REDUCER, RJ (FOR DIRECTIONAL DRILLED HDPE)	2,8	EA	4	2	2					
58	312H	8-INCH HDPE MJ ADAPTER (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	38	EA	4	2	2					
59	312I	8-INCH HDPE WALL ANCHOR (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	26,40,41	EA	4	2	2					
60	315A	1- INCH WATER CONNECTION (LONG)	15,16	EA	1				1			
61	315B	1-INCH WATER CONNECTION (SHORT)	15,16	EA	1			1				
62	315C	3/4 INCH WATER CONNECTION (LONG)	15,16	EA	28		1		2	7	6	12
63	315D	3/4 INCH WATER CONNECTION (SHORT)	15,16	EA	40	6	3	4	6	7	2	12
64	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	8	EA	2		2					
65	317B	6-INCH DUCTILE IRON GATE VALVE, RJ	8	EA	19	4	1	4	2	3	1	4

Material Option 2 (PVC)												
66	307B	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	1,2,3,8,9,11,27,46	LF	120	20	10	10	80			
67	309A	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	1,2,3,9,10,27,43,46	LF	5369	731	381	1124	720	770	573	1070
68	309B	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	1,2,3,9,10,19,20,27,38,39,46	LF	421	240	181					
69	309C	6-INCH PVC PIPE, AWWA C900, CLASS 200, DR14	1,2,3,9,10,27,43,46	LF	2543	64	0	735	457	522	235	530
70	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	2,8	EA	2				2			
71	312B	6-INCHx6-INCHx6-INCH DUCTILE IRON TEE, RJ	2,8	EA	19	4	1	6	1	3	1	3
72	312C	6-INCH DUCTILE IRON - 90 DEGREE BEND, RJ	2,8	EA	3			1				2
73	312D	6-INCH DUCTILE IRON - 45 DEGREE BEND, RJ	2,8	EA	14	1	2	9	2			
74	312E	6-INCH DUCTILE IRON - 22 1/2 DEGREE BEND, RJ	2,8	EA	1	1						
75	312F	6-INCH DUCTILE IRON - 11 1/4 DEGREE BEND, RJ	2,8	EA	7	4	2	1		1		
76	312G	8-INCH x 6-INCH DIP REDUCER, RJ (FOR DIRECTIONAL DRILED HDPE)	2,8	EA	4	2	2					
77	312H	8-INCH HDPE MJ ADAPTER (DIPS) (RJ) (FOR DIRECTIONAL DRILLED HDPE)	38	EA	4	2	2					
78	312I	8-INCH HDPE WALL ANCHOR (DIPS) (RJ)(FOR DIRECTIONAL DRILED HDPE)	26,40,41	EA	4	2	2					
79	315A	1-INCH WATER CONNECTION (LONG)	15,16	EA	1				1			
80	315B	1-INCH WATER CONNECTION (SHORT)	15,16	EA	1			1				
81	315A	3/4 INCH WATER CONNECTION (LONG)	15,16	EA	28		1		2	7	6	12
82	315B	3/4 INCH WATER CONNECTION (SHORT)	15,16	EA	40	6	3	4	6	7	2	12
83	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	8	EA	3	1	2					
84	317B	6-INCH DUCTILE IRON GATE VALVE, RJ	2,8	EA	19	4	1	4	2	3	1	4

Material Option 3 (HDPE)												
85	307B	12-INCH DIP, AWWA, CL50, POLYETHENE WRAPPED, RJ	1,2,3,8,9,11,27,46	LF	120	20	10	10	80			
86	307C	6-INCH DIP, AWWA, CL51, POLYETHENE WRAPPED, RJ	1,2,3,8,9,11,27,46	LF	20	0	0	0	0	0	0	20
87	309A	8-INCH HDPE AWWA C906 PE 4107 DR11 (DIPS)	1,2,3,9,10,19,20,27,38,39,46	LF	7892	805	381	1869	1177	1292	808	1560
88	309B	8-INCH DIRECT DRILLED HDPE AWWA C906 PE 4107 DR11 (DIPS) AT BIG HEART CREEK	1,2,3,9,10,19,20,27,38,39,46	LF	421	240	181					
89	312A	12-INCHx12-INCHx6-INCH DUCTILE IRON TEE, RJ	2,8	EA	4			2	2			
90	312C	6-INCH HDPE - 90 DEGREE BEND, RJ	2,8	EA	3			1				2
91	312B	8-INCH HDPE - 45 DEGREE BEND, RJ	38	EA	14	1	2	9	2			
92	312C	8-INCH x 6-INCH DIP REDUCER, RJ	2,8	EA	38	6	2	9	6	5	2	8
93	312D	8-INCH HDPE MJ ADAPTER (DIPS) (RJ)	38	EA	38	6	2	9	6	5	2	8
94	312E	6-INCHx6-INCHx6-INCH DI TEE, RJ	2,	EA	19	4	1	6	1	3	1	3
95	312F	8-INCH HDPE WALL ANCHOR (DIPS) (RJ)	26,40,41	EA	40	8	2	9	6	5	2	8
96	315A	1-INCH WATER CONNECTION (LONG)	15,16	EA	1				1			
97	315B	1-INCH WATER CONNECTION (SHORT)	15,16	EA	1			1				
98	315C	3/4 INCH WATER CONNECTION (LONG)	15,16	EA	28		1		2	7	6	12
99	315D	3/4 INCH WATER CONNECTION (SHORT)	15,16	EA	40	6	3	4	6	7	2	12
100	317A	12-INCH DUCTILE IRON GATE VALVE, RJ	8	EA	3	1	2					
101	317B	8-INCH DUCTILE IRON GATE VALVE, RJ	2,8	EA	19	4	1	4	2	3	1	4

STATION SUMMARY				TYPE OF PIPE						PIPE TOTALS				6" / 8" BORE LENGTH	8" BORE UNDER BIG HEART CREEK
6-INCH WATERLINE	BEGIN STA.	END STA.	STATION TO STATION	6" RJ PIPE (HDPE-PVC -DIP)	12" PIPE RJ	DIRECTIONAL DRILLED 8" HDPE	6" PUSH-ON PIPE (HDPE-PVC- DIP)	12" DIP PERPENDICLAR CONNECTIONS RJ	6" DIP PERPENDICLAR CONNECTIONS RJ	6" PUSH-ON PIPE (HDPE,PVC, OR DIP)	6" RJ (HDPE,PVC, OR DIP)	DIRECTIONAL DRILLED 8" HDPE	12" DIP RJ PIPE ONLY		
A	10+00	20+35	1,035	731		240	64	20		64	731	240	20	95	240
B	30+00	35+62	562	381		181		10			381	181	10	124	181
C	40+00	58+59	1,859	1,124			735	10		735	1,124		10	448	
D	60+00	72+52	1,252	720	75		457	5		457	720		80	260	
E	80+00	92+92	1,292	770			522			522	770			310	
F	100+00	108+08	808	573			235			235	573			406	
G	118+98	134+78	1,580	1,050			530		20	530	1,070			181	
TOTAL LENGTHS STA TO STA				5,349	75	421	2,543	45	20	2,543	5,369	421	120		
TOTAL 12-/6-INCH PIPE				8,453						8,453				1,824	421

PAY ITEM NOTES (TYPICAL)

1. **TESTING AND CHLORINATION** OF WATER MAINS SHALL BE PERFORMED BY THE CITY OF TULSA. TESTING, CHLORINATION, AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH SECTION 109.3 OF THE GENERAL SPECIFICATIONS.
- A. CONTRACTOR SHALL FURNISH AND INSTALL **TEMPORARY PLUGS** WITH ADEQUATE BLOCKING OR **RESTRAINTS**, PLUS CORPORATION STOPS, AS DIRECTED BY CITY TESTING PERSONNEL. THEN, ONCE TESTING, CHLORINATION AND FLUSHING BY CITY PERSONNEL IS COMPLETED, REMOVE **TEMPORARY BLOCKING** AND TIE INTO EXISTING SYSTEM, USING FITTINGS **SWABBED INTERNALLY** WITH 2% BLEACH SOLUTION.
- B. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAIN SHALL BE PERFORMED BY CITY PERSONNEL ON MAINS WHICH ARE PHYSICALLY DISCONNECTED FROM THE EXISTING WATER SYSTEM. TESTING, CHLORINATION, AND FLUSHING OF NEW WATER MAINS SHALL **NOT BE PERFORMED** AGAINST VALVES WHICH ARE PHYSICALLY CONNECTED TO EXISTING SYSTEM.
- C. **ALL COSTS** FOR TEMPORARY PLUGS, BLOCKING, RESTRAINING, CORPORATION STOPS, TUBING, THREADED CONNECTIONS, BLEACH AND OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.
2. BURIED BOLTS, HARNESS LUGS, AND COUPLINGS SHALL BE GIVEN **TWO COATS OF KOPPER'S BITUMASTIC 300-M** (DRY MIL THICKNESS OF 16 MILS) OR EQUAL. COST TO BE INCLUDED IN UNIT PRICE BID FOR PIPE AND FITTINGS.
3. CONTRACTOR TO **EXCAVATE ALL UTILITY CROSSINGS AHEAD OF PIPE LAYING** SO THAT THE GRADES CAN BE ADJUSTED ON THE PROPOSED WATER MAIN TO AVOID UTILITY CONFLICTS. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED WATER MAIN. COST FOR EXCAVATING UTILITY CROSSINGS SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE.
4. CONTRACTOR SHALL **INSURE ALL POLES** WHICH ARE AFFECTED BY TRENCHING CONDITIONS ARE BRACED BY OWNERS. PAYMENT SHALL BE INCLUDED IN "RIGHT-OF-WAY CLEARING AND RESTORING". NO ADDITIONAL PAYMENT SHALL BE MADE.
5. ALL HYDRANTS, VALVES AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE **SALVAGED AND DELIVERED TO SOUTH YARD**, 2317 S JACKSON. PAYMENT TO BE MADE UNDER RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.
6. CONTRACTOR SHALL REPAIR ANY **IRRIGATION SYSTEMS, ROOF DRAINS, AND FENCING DAMAGED** IN THE ZONE OF CONSTRUCTION DURING THE COURSE OF CONSTRUCTION TO SATISFACTION OF THE PROPERTY OWNER. PAYMENT SHALL BE INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.
7. **COST OF ANY TEMPORARY LIVESTOCK FENCING** AND POLES SHALL BE INCLUDED IN COST OF RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.
8. ALL COSTS FOR COMPONENTS NECESSARY TO RESTRAIN JOINTS FOR PIPE AND FITTINGS DESIGNATED RESTRAINED JOINT ("RJ") SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS.
- A. **DUCTILE IRON PIPE RESTRAINED JOINT SYSTEMS:** US PIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, AMERICAN FLEXRING, EBAA MEGALUG, STAR STARGRIP, SMITH-BLAIR CAMLOCK, CLOW TUGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. SHOULD RJ PIPE BE SPECIFIED THROUGH UNCASED BORES, ONLY USPIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, OR AMERICAN FLEXRING IS TO BE USED. LOCKING GASKETS NOT PERMITTED.
- B. **POLYVINYL CHLORIDE (PVC) RESTRAINED JOINT SYSTEMS:** EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. LOCKING GASKETS NOT PERMITTED; SHOULD RJ PIPE BE SPECIFIED ON BORE CASING IS REQUIRED.
- C. **HIGH DENSITY POLYETHYLENE (HDPE) RESTRAINED JOINT SYSTEMS;** EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT.
- NO ADDITIONAL PAYMENT SHALL BE MADE.
9. ALL CUT ENDS AND WHERE SALVAGED FITTINGS HAVE BEEN REMOVED FROM ABANDONED WATER LINES LEFT IN PLACE, SHALL BE **PLUGGED WITH 24-IN OF CONCRETE INSIDE THE PIPE**. COST OF CONCRETE PLUGGING TO BE INCLUDED IN UNIT PRICE BID FOR PIPE. NO ADDITIONAL PAYMENT SHALL BE MADE.
10. TRACER WIRE AND DETECTABLE MYLAR MARKING TAPE SHALL BE INSTALLED **ABOVE ALL PVC AND HDPE PIPE**, TERMINATING ONLY ONTO HYDRANTS JUST ABOVE GROUND LEVEL AS PER CONST SPEC 310. COST OF TRACER WIRE AND DETECTABLE MYLAR TAPE SHALL BE INCLUDED IN UNIT PRICE BID FOR PVC AND HDPE PIPE. CONST SPEC 310.1 NOW ALLOWS #12 COPPER-CLAD STEEL (CCS) WIRE, 21% CONDUCTIVITY, IN LIEU OF #8 COPPER WIRE AS TRACER WIRE ATOP PVC AND HDPE PIPE.
11. **DETECTABLE MYLAR MARKING TAPE** SHALL BE INSTALLED OVER DUCTILE IRON PIPE AS PER CONST SPEC 307.3 AND 307.4. COST WILL BE INCLUDED IN COST OF DUCTILE IRON PIPE.
12. ALL LABOR, MATERIALS, AND EQUIPMENT TO CONNECT PROPOSED WATER MAINS TO EXISTING WATER MAINS ARE INCLUDED IN COST OF SLEEVES/ADAPTORS. **CONTRACTOR TO EXCAVATE** ALL EXISTING WATER MAINS AHEAD OF PIPE LAYING SO THAT THE GRADES CAN BE ADJUSTED ACCORDINGLY. FAILURE TO DO SO SHALL NOT ENTITLE THE CONTRACTOR TO CLAIM EXTRA COMPENSATION FOR ADJUSTMENTS TO THE PROPOSED WATER MAIN. COST FOR EXCAVATING EXISTING WATER MAINS SHALL BE INCLUDED IN UNIT PRICE BID FOR SLEEVES. NO ADDITIONAL PAYMENT SHALL BE MADE.
13. FOR CONNECTING TO **OUT-OF-ROUND CIP**, SMITH-BLAIR 413 OR EQUAL.
14. CONTRACTOR IS REMINDED TO BACKFILL ALL TRENCHES EXCAVATED ACROSS ANY EXISTING OR PROPOSED DRIVING OR PARKING SURFACE WITH **1 1/2-IN TYPE A AGGREGATE BASE, PLACED IN 8-INCH MAXIMUM LIFTS AND COMPACTED TO 98% MODIFIED PROCTOR DENSITY**. COST TO BE INCLUDED IN COST OF EXCAVATION AND BACKFILL. NO ADDITIONAL PAYMENT SHALL BE MADE.
15. **WATER SERVICE CONNECTIONS** SHALL INCLUDE COST OF MATERIAL, LABOR AND EQUIPMENT TO REMOVE AND INSTALL SADDLES, SERVICE CLAMPS, CORPORATION STOPS, BENDS, 3-PART UNIONS, COUPLINGS, SETTERS AND ANY OTHER INCIDENTALS REQUIRED FOR A COMPLETE WATER SERVICE CONNECTION WITH EXCEPTION OF METER CANS, RIMS AND LIDS. NO ADDITIONAL PAYMENT SHALL BE MADE. METER CANS, LIDS AND RIMS SHALL BE PAID AS A SEPARATE BID ITEM.

- A. **SHORT SERVICE** SHALL BE ANY SERVICE LINE THAT IS 25- FEET OR LESS IN LENGTH. SHORT SERVICES DO NOT INCLUDE PAVEMENT REPLACEMENT. I.E. 1/2-INCH WATER SERVICE CONNECTIONS (SHORT SERVICE)
- B. **LONG SERVICE** SHALL BE ANY SERVICE LINE THAT IS GREATER THAN 25-FEET UP TO 80- FEET IN LENGTH. LONG SERVICES INCLUDE PAVEMENT REPLACEMENT AND/ OR COST TO BORE. EXAMPLE: 3/4-IN WATER SERVICE CONNECTIONS (LONG SERVICE)
- C. **SHORT AND LONG SERVICE LINES EXCEEDING THE ABOVE PARAMETERS** WILL BE COMPENSATED FOR LINEAR FOOTAGE ABOVE AND BEYOND. COMPENSATION SHALL BE PAID AS "SERVICE LINES, EXTENSION", PER LF

16. **SERVICE LINES ON NON-ARTERIALS** SHALL BE EITHER COPPER TUBING (TYPE K SOFT ANNEALED CONFORMING TO ASTM B 88) OR PEX TUBING (UPONOR AQUA PEX 5206 BLUE CONFORMING TO ASTM F876/F877/F/2023). PEX TUBING IS NOT PERMITTED WITHIN ARTERIAL RIGHT OF WAY. WHEN CONTRACTOR ELECTS TO USE PEX TUBING:

- A. 1/2-INCH WATER SERVICE CONNECTION SHALL USE 1-INCH PEX TUBING MINIMUM
- B. 1-INCH WATER SERVICE CONNECTION SHALL USE 1 1/2-INCH PEX TUBING MINIMUM

17. CONTRACTOR'S PLUMBER SHALL PROVIDE **AN INFORMATIONAL BROCHURE TO THE PROPERTY OWNERS** OUTLINING THE STEPS REQUIRED TO THOROUGHLY FLUSH THEIR WATERLINES AFTER CONNECTION TO THE NEW WATER MAIN. ALL COSTS TO PRODUCE AND DISTRIBUTE THE BROCHURE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM.

18. THE "OWNERS ALLOWANCE" CAN BE USED FOR VARIOUS WORK AND MISCELLANEOUS ITEMS NOT IDENTIFIED IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING PROVISIONS: THE ALLOWANCE SHALL BE USED FOR COST OF MATERIALS, LABOR, INSTALLATION AND OVERHEAD AND PROFIT FOR ADDITIONAL WORK AND MISCELLANEOUS ITEMS THAT ARE NOT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AND PLANS, AND NOT INCLUDED IN THE BID ITEMS OF THE CONTRACT.

- A. THE ALLOWANCE SHALL BE USED ONLY AT THE DISCRETION OF THE CITY. ANY ALLOWANCE BALANCE REMAINING AT THE COMPLETION OF THE PROJECT WILL BE CREDITED BACK TO THE CITY ON THE FINAL APPLICATION FOR PAYMENT SUBMITTED BY THE CONTRACTOR.
- B. THE CONTRACTOR SHALL PROVIDE, TO THE CITY, A **WRITTEN REQUEST FOR THE USE OF ANY ALLOWANCE**, WITH A SCHEDULE OF VALUES, AND ALL ASSOCIATED BACKUP INFORMATION, INCLUDING ANY TIME EXTENSIONS REQUIRED TO PERFORM THE WORK.
- C. THE CONTRACTOR SHALL PROCEED WITH THE WORK INCLUDED IN THE ALLOWANCE ONLY **AFTER RECEIVING A WRITTEN ORDER**, FROM THE ENGINEER AND CITY AUTHORIZING SUCH WORK. PROCEEDING WITH WORK IN THE ALLOWANCE WITHOUT A WRITTEN ORDER FROM THE CITY WILL BE AT THE CONTRACTOR'S EXPENSE.

19. WHERE PLANS IDENTIFY A 22.5-DEG OR 11.25-DEG VERTICAL OR HORIZONTAL BEND, HDPE WILL BE **DEFLECTED PER MANUFACTURER'S MINIMUM ALLOWABLE BEND RADIUS**.

20. WHERE PLANS **IDENTIFY A CROSS**, HDPE WILL USE TWO (2) TEE'S. NO ADDITIONAL PAYMENT SHALL BE MADE.

21. **TOP OF VALVE BOX** SHALL BE FLUSH WITH FINISHED GRADE.

22. THE CONTRACTOR SHALL **RESTORE ALL DISTURBED AREAS** TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING IMPROVEMENTS. LIMITS OF DISTURBANCE SHALL NOT EXCEED 9- FEET CENTERED ON THE WATERLINE. ANY DISTURBANCE OUTSIDE OF THIS AREA SHALL BE RESTORED AT THE CONTRACTORS EXPENSE. STREETS, DRIVEWAYS AND ASSOCIATED ITEMS SHALL BE PAID FOR UNDER OTHER ITEMS OF WORK.

23. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION. **THE CONTRACTOR SHALL REPLACE THE SOD TO MATCH IN-KIND AND QUALITY**. LIMITS OF DISTURBANCE SHALL NOT EXCEED 9- FEET CENTERED ON THE WATERLINE. ANY DISTURBANCE OUTSIDE OF THIS AREA SHALL BE RESTORED AT THE CONTRACTORS EXPENSE.

24. **SPOT ELEVATIONS ON THE MAIN WATER LINE** RELATIVE TO FINISHED GRADE SHALL BE PROVIDED AT EACH 100-FT INTERVAL, COMPLETE WITH STATION AND OFFSET. IN ADDITION, ALL VALVES, FITTINGS, FIRE HYDRANTS (TOP OF NUT) AND OTHER MAJOR APPURTENANT ITEMS SHALL BE SHOWN WITH THE PROPER DESCRIPTION, STATION, **OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM**.

25. **SPOT ELEVATIONS ON WATER METER CANS, VAULTS**, SHALL BE SHOWN WITH THE PROPER DESCRIPTION (METER TYPE, METER SIZE, METER NUMBER, SERVICE MATERIAL, SERVICE SIZE), STATION, OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM.

26. WORK UNDER THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING **HDPE WALL ANCHOR** AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE ENGINEER. THE UNIT PRICE SHALL INCLUDE THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR EXCAVATION, BACKFILLING, OR CONCRETE BLOCKING.

27. PRESSURE TESTING AND CHLORINATION OF WATER MAINS SHALL NOT BE PERFORMED UNTIL THE CITY INSPECTOR HAS RECEIVED REQUIRED **CONSTRUCTION RECORD DRAWINGS**.

28. NOT USED

29. **ROADWAY STRIPING DAMAGE** BY CONTRACTOR SHALL BE REPLACED IN FULL AND IN LIKE KIND COMPLETELY. UNDER THIS BID ITEM.

30. MUELLER SERVICE PLUGS, OR EQUAL. USE SIZE PLUG AS REQUIRED. As DIRECTED BY ENGINEER.

31. COST INCLUDES **VERTICAL FIRE HYDRANT SHOE** ON SHT 18 STA 83+59 TO PLACE FIRE HYDRANT IN VERTICAL POSITION.

32. **MATCH EXISTING SOD**. SUBMIT SCHEDULE FOR APPROVAL.

33. **REUSE SAFETY FENCE AS REQUIRED**.

34. ALL **TRAFFIC CONTROL** SHALL BE IN ACCORDANCE WITH LATEST MUTCD STANDARDS.

35. **BORING TO BE DONE UNDER ASPHALT AND CONCRETE STREETS** AND DRIVEWAYS AND WHERE INDICATED FOR TREE BORES UNDER DRIP LINES. STEEL CONDUIT FOR BORES NOT TO BE USED ON THIS BID ITEM. ADDITIONAL BORE PITS MAY BE PLACED IN TREE BORES FOR CONVENIENCE AS DIRECTED BY ENGINEER; NO ADDITIONAL PAYMENT SHALL BE MADE. ONLY 8" HDPE OR 6" DIP MAY BE BORED.

36. **SIDEWALKS THROUGH DRIVEWAY** SHALL BE 6" THICK AND PAID AS DRIVEWAY.

37. **REUSE SILT FENCE AS REQUIRED** BY SITE CONDITIONS IN ACCORDANCE COT STANDARD 126. MAXIMUM PAY QUANTITY 160LF.

38. ALL HDPE PIPE AND FITTING SHALL BE **PE 4710 DR11 IPS**.

39. **FITTING CONNECTING HDPE TO DIP** SHALL BE INCLUDED IN THE COST OF HDPE PIPE.

40. COST OF HDPE WALL ANCHOR FITTING, REINFORCEMENT STEEL, CONCRETE AND ALL LABOR AND MARIALS TO INSTALL THESE ITEMS ARE TO BE INCLUDED IN THE **PRICE OF THE HDPE ANCHOR** (EACH). NO ADDITIONAL PAYMENT SHALL BE MADE. REFER TO DETAIL ON SHEET 40.

41. INCLUDES CONCRETE COLLAR IN ASPHALT AND GRASS SURFACES PER DETAILS SHEET 18.

42. INCLUDES **COSTS OF LICENSED PLUMBER** TO REPAIR ANY DAMAGED ONG SERVICE LINE.

43. COST INCLUDES EBAA MEGASTOPS , OR EQUAL, INSTALLED ON ALL PVC JOINTS THRU BORES TO **PREVENT OVERBELLING**.

44. FOR CONNECTING TO **OUT-OF-ROUND CIP**, SMITH-BLAIR 413 OR EQUAL, IF CONNECTIONS TO OUT-OF-ROUND CIP PIPE IS ENCOUNTERED.

45. THE CONTRATOR SHALL BE RESPONSIBLE TO **REMOVE ALL TRAFFIC SIGNS AS REQUIRED TO PERFORM WORK**. ALL SIGNS SHALL BE REINSTALLED ASAP AFTER PIPE WORK IS COMPLETE. COST SHALL BE INCLUDED IN RIGHT-OF-WAY CLEARING AND RESTORATION.

46. **MARKER BALLS** SHALL BE INSTALLED ABOVE ALL FITTINGS, BLIND FLANGES, SERVICE TAPS, AND EVERY 100 FEET IF THE DISTANCE BETWEEN FITTINGS IS GREATER THAN 100 FEET AS SHOWN ON THE ATTACHED SPECIAL DRAWING, DATED NOVEMBER 2019. COST OF MARKER BALLS SHALL BE INCLUDED IN UNIT PRICE BID FOR EACH PIPE TYPE. MARKERS SHALL BE VIVAX WATER MARKER BALLS OR EQUAL THAT WORK WITH THE VIVAX VLOC3 PRO RECEIVER AND LOC3-10TX TRANSMITTER. LOCATOR BALL INSTALLATIONS ARE ATTACHED. THE CONTRACTOR SHALL PROVIDE THE CITY INSPECTOR, AT THE BEGINNING OF THE PROJECT, THE LOCATOR EQUIPMENT AS SPECIFIED BELOW. THE LOCATOR EQUIPMENT SHALL BE PAID BY THE CONTRACTOR UNDER BID ITEM 3, PROCURED IN CITY OF TULSA'S NAME, EQUIPMENT RETAINED BY TULSA INSPECTION AND WARRANTY IN TULSA NAME AFTER PROJECT IS COMPLETE. THE EQUIPMENT WILL BECOME THE PROPERTY OF THE CITY AND IS NOT RETURNABLE. THE LOCATOR EQUIPMENT TO LOCATE THE MARKER BALLS (ITEM 1) ARE AS FOLLOWS:

- i. RTK-Pro Receiver with Tx-Link, Order Code: 1.226.01.00001
- ii. Bag, Lcc3 Series Transmitters, Order Code: 2.219.02.00011

47. **CONNECTIONS BETWEEN NEW DIP AND NEW PVC** SHALL UTILIZE NEW DIP / NEW PVC BELLS AND SPIGOTS. UNLESS OTHERWISE DIRECTED, SOLID SLEEVES ARE FOR CONNECTIONS TO EXISTING DIP.

48. CONTRACTOR MAY **DIVIDE LONG BORES INTO SHORTER BORES** TO FACILITATE CONSTRUCTION. NO ADDITIONAL PAYMENT SHALL BE MADE.

49. CONTRACTOR, AS ALLOWED BY ENGINEER, MAY **EXTEND BORES TO FACILITATE CONSTRUCTION**. NO ADDITIONAL PAYMENT SHALL BE MADE. PLAN QUANTITIES TO PERFORM OPEN-CUT PIPE INSTALLATION SHALL BE PAID.

50. COST INCLUDES LABOR, MATERIALS, AND EQUIPMENT TO **REMOVE AND DISPOSE OF EXISTING 24" OAK TREE** AT STA 92+73 ON SHT 20 CONFLICTING WITH PROPOSED WATER MAIN.

51. THE COST OF TACK COAT, EDGE JOINT SEAL MATERIAL AND SCREENINGS FOR BLOTING, AND ALL LABOR ASSOCIATED WITH THESE ITEMS, SHALL BE INCLUDED IN COST OF ASPHALT CONCRETE. TACK COAT SHALL BE APPLIED IN ACCORDANCE WITH ODOT SPECIFICATIONS SECTION 407.

WATER CONSTRUCTION NOTES

1. THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT **SHALL INSPECT ALL** TRENCHING, BEDDING, PIPE INSTALLATION, BACKFILL AND COMPACTION.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH **CURRENT STANDARD SPECIFICATIONS AND STANDARD DETAILS**, CITY OF TULSA ENGINEERING SERVICES DEPARTMENT.
3. EXISTING SERVICE CONNECTIONS ARE TO BE KEPT IN SERVICE UNTIL CONNECTIONS TO NEW MAIN ARE MADE. ALL SERVICE LINE RECONNECTIONS SHALL BE MADE BY THE CONTRACTOR. **SERVICE RECONNECTIONS** SHALL BE INSTALLED AS PER CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS.
4. **MINIMUM COVER OVER WATER LINES** SHALL BE AS NOTED ON PLANS.
5. **CONTRACTOR SHALL REPLACE EXISTING GRASS WITH SEED/SOD OF SAME TYPE AND VARIETY** OR AS NOTED ON PLANS.
6. CONTRACTOR SHALL **BORE EXISTING TREES UNDER DRIP LINE**, UNLESS DIRECTED OTHERWISE BY ENGINEER.
7. CONTRACTOR SHALL **BORE EXISTING DRIVEWAYS**, UNLESS DIRECTED OTHERWISE BY ENGINEER.
8. WATER OPERATIONS **SHALL OPERATE ALL VALVES ON TRANSMISSION MAINS (16" AND LARGER)**. CONTRACTOR SHALL OPERATE ALL VALVES ON DISTRIBUTION MAINS (SMALLER THAN 16") WITH THE COORDINATION OF FIELD ENGINEERING AND WATER OPERATIONS AND IN THE PRESENCE OF A FIELD ENGINEERING INSPECTOR.

- A. ATTEMPTS WILL BE MADE WITH ASSISTANCE FROM THE CONTRACTOR TO **NOTIFY ALL AFFECTED CUSTOMERS 48- HOURS IN ADVANCE**, PARTICULARLY IF COMMERCIAL OR INDUSTRIAL CUSTOMERS ARE INVOLVED. PRIOR TO SHUTDOWN, FIELD ENGINEERING WILL NOTIFY WATER OPERATIONS, AT 918-596-9488, GIVING AN ESTIMATED DOWNTIME. WATER OPERATIONS WILL NOTIFY THE FIRE DEPARTMENT OF ALL FIRE HYDRANTS OUT OF SERVICE AND WHEN THEY ARE BACK IN SERVICE, BY STREET ADDRESS OR INTERSECTION.
- B. WHERE COMMERCIAL, INDUSTRIAL, OR CRITICAL CUSTOMERS ARE AFFECTED, AND FOR ALL LINES 16-INCH AND LARGER IN SIZE, **FIELD ENGINEERING WILL REQUEST WATER OPERATIONS TO SHUT DOWN THE MAIN**. THERE WILL BE A MINIMUM OF 48-HOUR NOTICE TO WATER OPERATIONS.

9. **CONTRACTOR** SHALL PROVIDE AT LEAST 48 HOUR NOTICE TO ALL RESIDENTS OR BUSINESSES AFFECTED BEFORE TURNING OFF ANY WATER. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING DOOR HANGERS ON AFFECTED HOMES AND BUSINESSES.
10. **CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER** OF THE OKLAHOMA ONE-CALL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO SOONER THAN 48 HOURS OR LATER THAN 10 DAYS, EXCLUDING SATURDAYS, SUNDAYS, LEGAL HOLIDAYS PRIOR TO COMMENCEMENT OF WORK, PHONE 1-800-522-6543.
11. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH PROJECT AT ALL TIMES. **OPEN CUT STREET CROSSINGS** REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WITH **TRAFFIC CONTROL DEVICES** IN ACCORDANCE WITH CURRENT MUTCD REQUIREMENTS.1
12. ANY DAMAGE CAUSED BY CONTRACTOR TO ADJACENT TRAFFIC SIGNAL INFRASTRUCTURE SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE TRAFFIC ENGINEER.
13. PRIOR TO PAVEMENT SAWING AND EXCAVATION NEAR SIGNALIZED INTERSECTION, CONTRACTOR SHALL CONTACT ENGINEERING SERVICES, TRAFFIC OPERATIONS, 918-596-9766, FOR SITE SPECIFIC, UNDERGROUND TRAFFIC UTILITY LOCATES.
14. CONSTRUCTION FOR ALL ENGINEERING SERVICES **FACILITIES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF TITLE 252**, DEPARTMENT OF ENVIRONMENTAL QUALITY, CHAPTER 626, PUBLIC WATER SUPPLY CONSTRUCTION STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).
15. **ALL EXCAVATED MATERIAL** NOT REQUIRED IN OTHER AREAS OF THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY EXCESS MATERIAL IS TO BE DISPOSED OF WITHIN THE CITY LIMITS OF TULSA.
16. **ANY CHANGES FROM APPROVED PLANS** SHALL BE SUBMITTED TO THE CITY OF TULSA FOR WRITTEN APPROVAL PRIOR TO INSTALLATION.



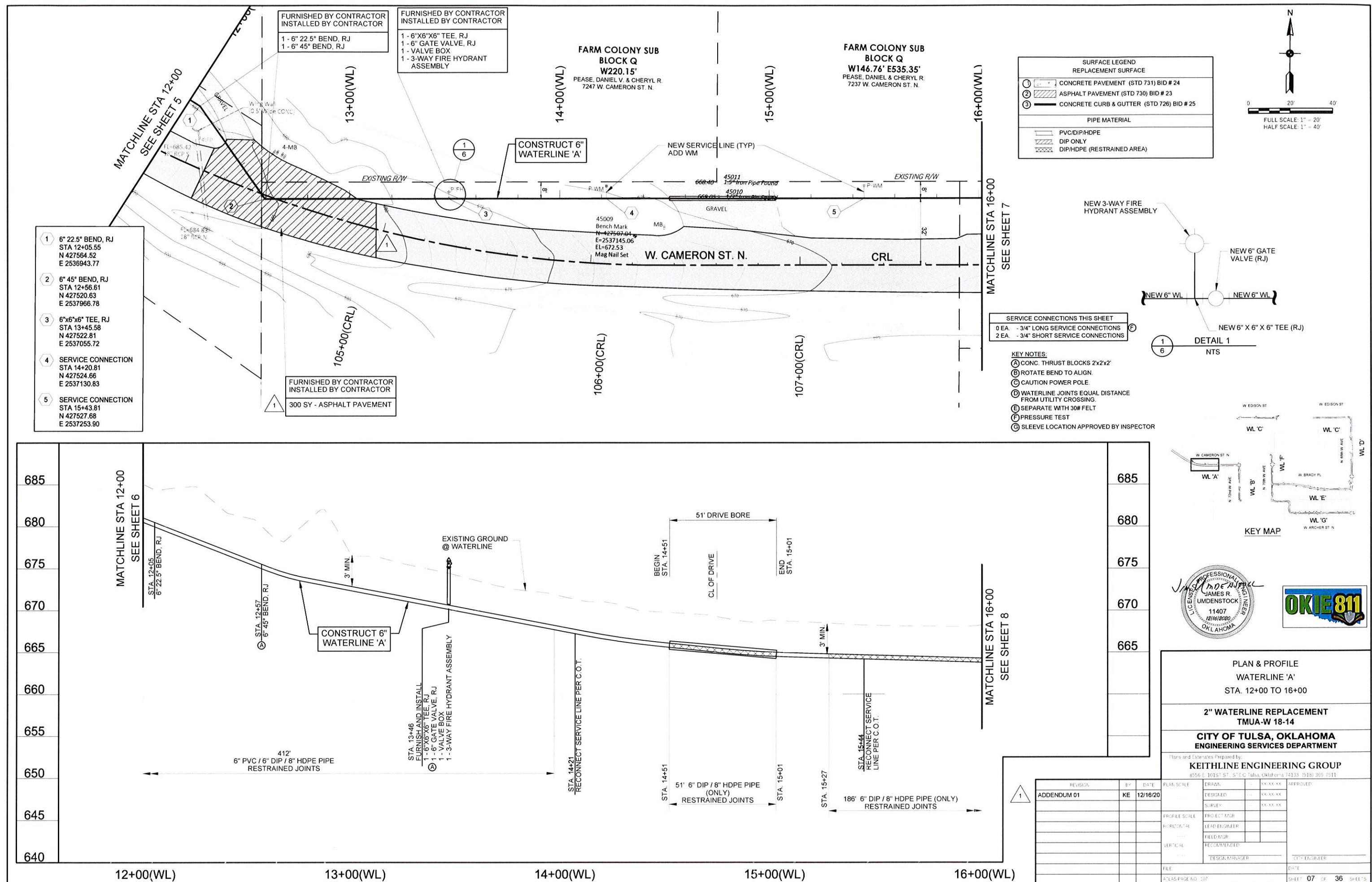
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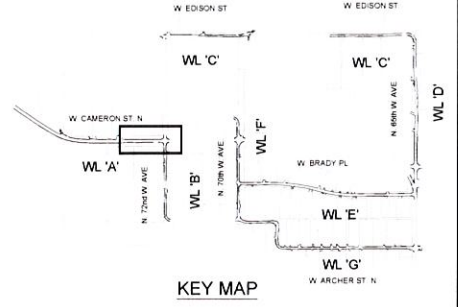
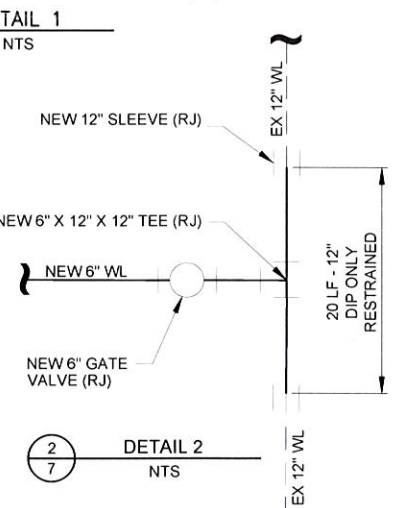
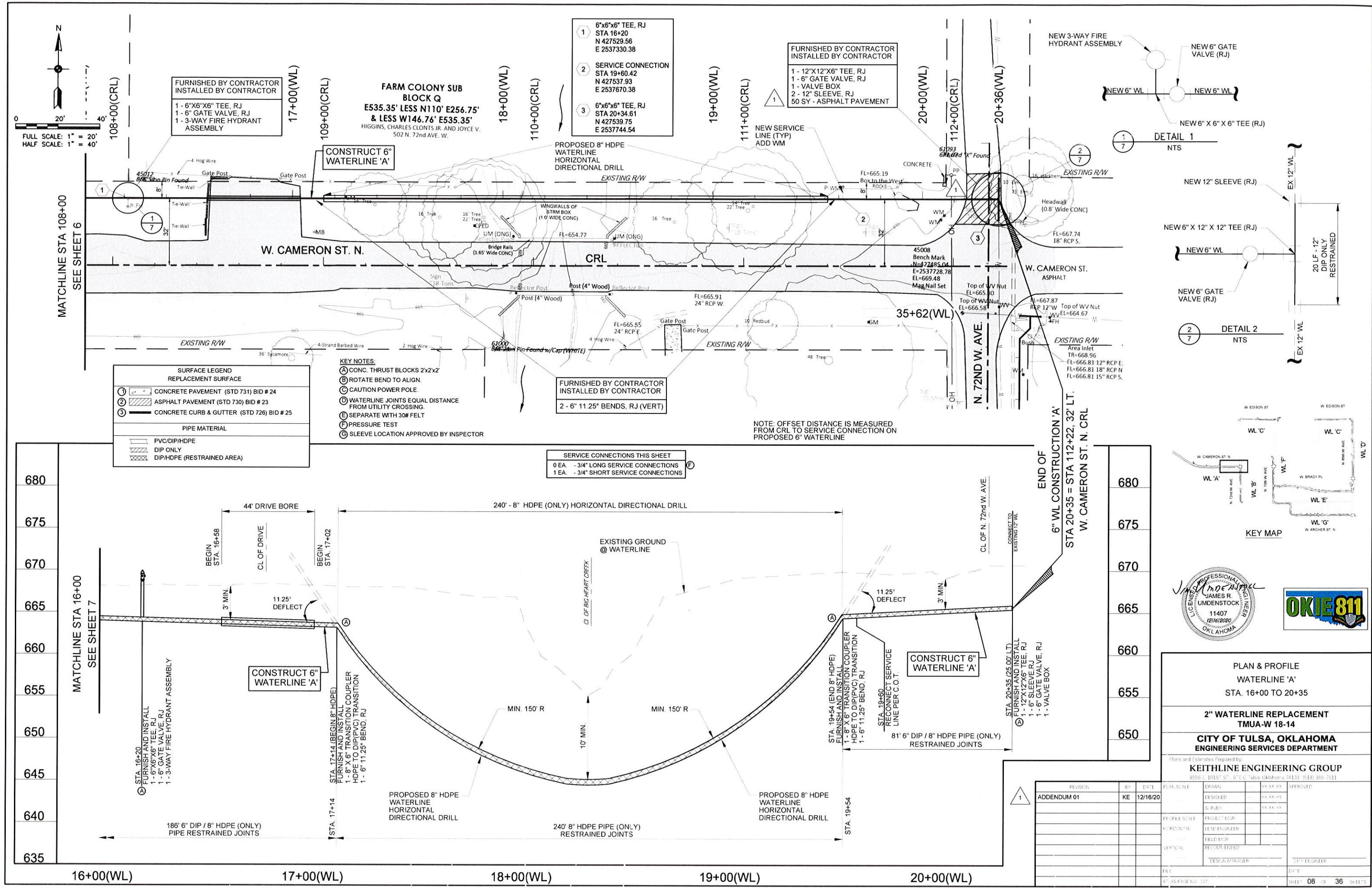
2" WATERLINE REPLACEMENT
TMUA-W 18-14

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Plans and Estimates Prepared by:
KEITHLINE ENGINEERING GROUP
8056 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (918) 369-7911

REVISION	BY	DATE	PLAN SCALE	DRAWN	...	XX-XX-XX	APPROVED
ADDENDUM 01	KE	12/16/20		DESIGNED	...	XX-XX-XX	
				SURVEY	...	XX-XX-XX	
			PROFILE SCALE	PROJECT MGR			
			HORIZONTAL	LEAD ENGINEER			
			VERTICAL	FIELD MGR			
				RECOMMENDED			
				DESIGN MANAGER			CITY ENGINEER
			FILE				DATE
			ATLAS FILE NO. 207				SHEET 03 OF 36 SHEETS





PLAN & PROFILE
WATERLINE 'A'
STA. 16+00 TO 20+35

2" WATERLINE REPLACEMENT
TMUA-W 18-14

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Plans and Estimates Prepared by: KEITHLINE ENGINEERING GROUP 8556 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (918) 369-7911			
REVISION	BY	DATE	FILE
ADDENDUM 01	KE	12/16/20	
DRAWN		DESIGNED	APPROVED
SURVEY		PROJECT MGR	LEAD ENGINEER
FIELD MGR		RECONSTRUCTED	DESIGN MANAGER
FILE		DATE	
AS PAGE NO. 101		SHEET 08 OF 36 SHEETS	

1 - 12"x12"x6" TEE, RJ
1 - 12" SLEEVE, RJ
1 - 6"x6"x6" TEE, RJ
1 - 6" GATE VALVE, RJ
1 - VALVE BOX
1 - 3-WAY FIRE HYDRANT
ASSEMBLY
1 - 6" 45° BEND, RJ
150 SY - ASPHALT PAVEMENT







Retaining Wall (Stone) Retaining Wall (Stone)

N. 72nd W. AVE.

BEGIN OF
WL CONSTRUCTION 'C'
40+00 = STA 300+70, 5' LT.
W. EDISON ST. N. CRL

301+00(CF

CONSTRUCT 6"
WATERLINE 'C'

SURFACE LEGEND	
REPLACEMENT SURFACE	
① 	CONCRETE PAVEMENT (STD 731) BID # 24
② 	ASPHALT PAVEMENT (STD 730) BID # 23
③ 	CONCRETE CURB & GUTTER (STD 726) BID # 25
PIPE MATERIAL	
	PVC/DIP/HDPE
	DIP ONLY
	DIP/HDPE (RESTRAINED AREA)

KEY NOTES:

- (A) CONC. THRUST BLOCKS 2'x2'x2'
- (B) ROTATE BEND TO ALIGN.
- (C) CAUTION POWER POLE.
- (D) WATERLINE JOINTS EQUAL DISTANCE FROM UTILITY CROSSING.
- (E) SEPARATE WITH 30# FELT
- (F) PRESSURE TEST
- (G) SLEEVE LOCATION APPROVED BY INSPECTOR

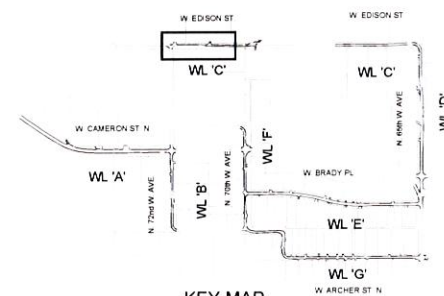
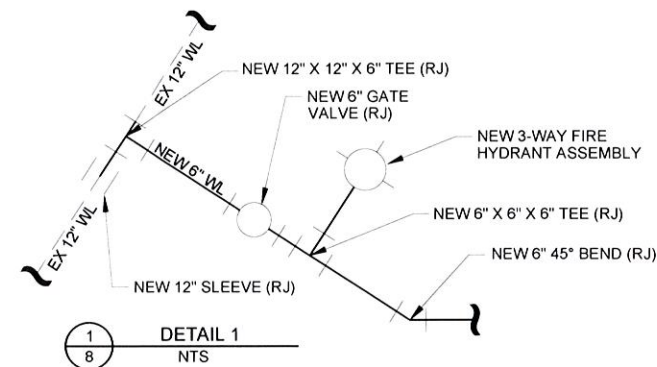
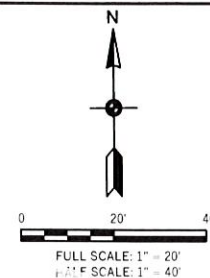
FARM COLONY SUB
BLOCK N

GOLDMAN, ROBERT G. & BARBARA J. TTEES
ROBERT G. & BARBARA J. GOLDMAN TRUST
518 N. 70th AVE. W.

SERVICE CONNECTIONS THIS SHEET

0 EA. - 3/4" LONG SERVICE CONNECTIONS
1 EA. - 3/4" SHORT SERVICE CONNECTIONS

1	12"x12"x6" TEE, RJ STA 40+00 N 428292.16 E 2537737.22
2	6"x6"x6" TEE, RJ STA 40+06.43 N 428287.70 E 2537741.85
3	6" 45° BEND, RJ STA 40+11.03 N 428284.50 E 2537745.16
4	SEVICE CONNECTION STA 42+48.92 N 428289.77 E 2537982.99



KEY MAP



PLAN & PROFILE
WATERLINE 'C'
STA 40+00 TO 44+00

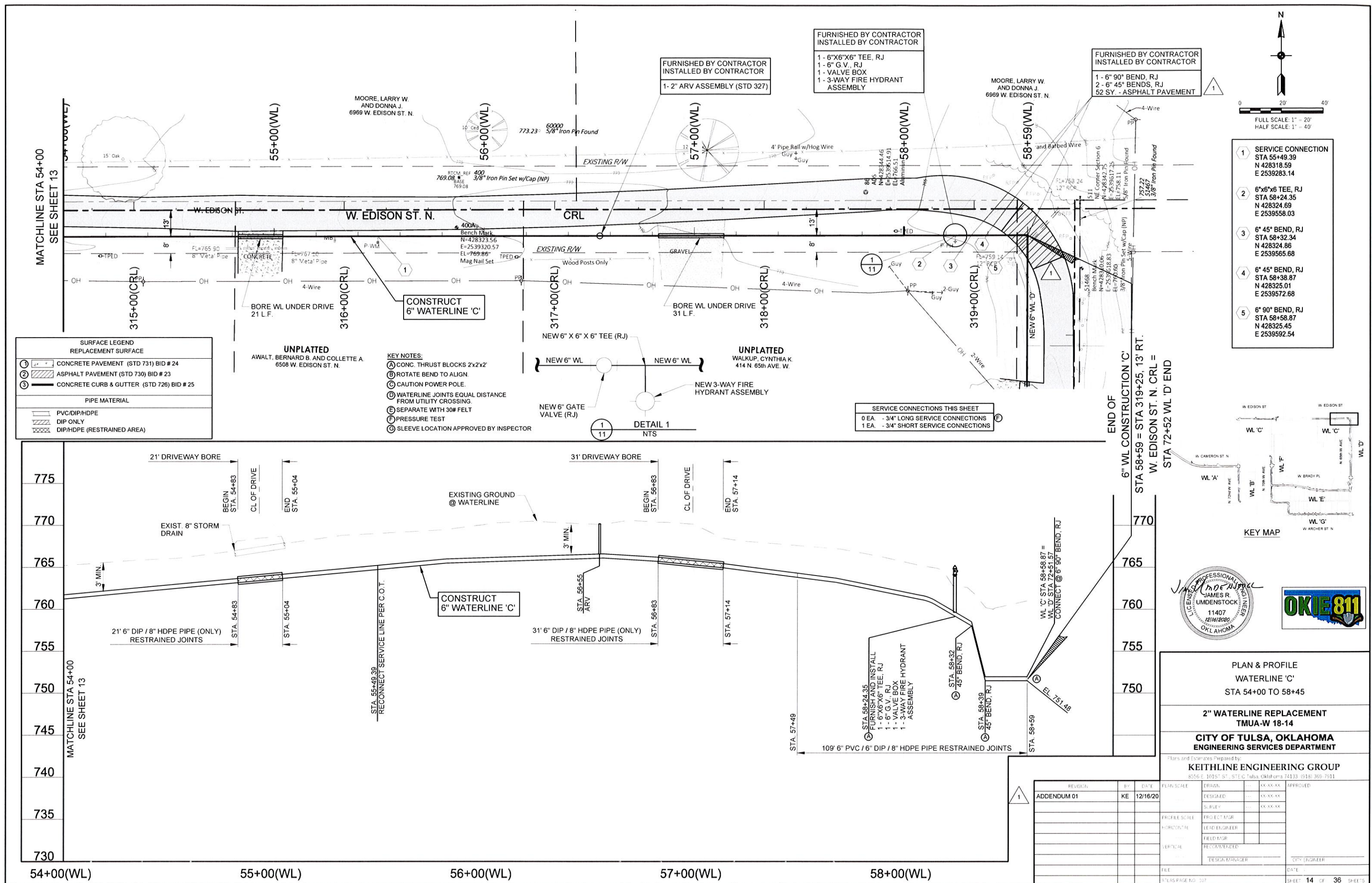
**2" WATERLINE REPLACEMENT
TMUA-W 18-14**

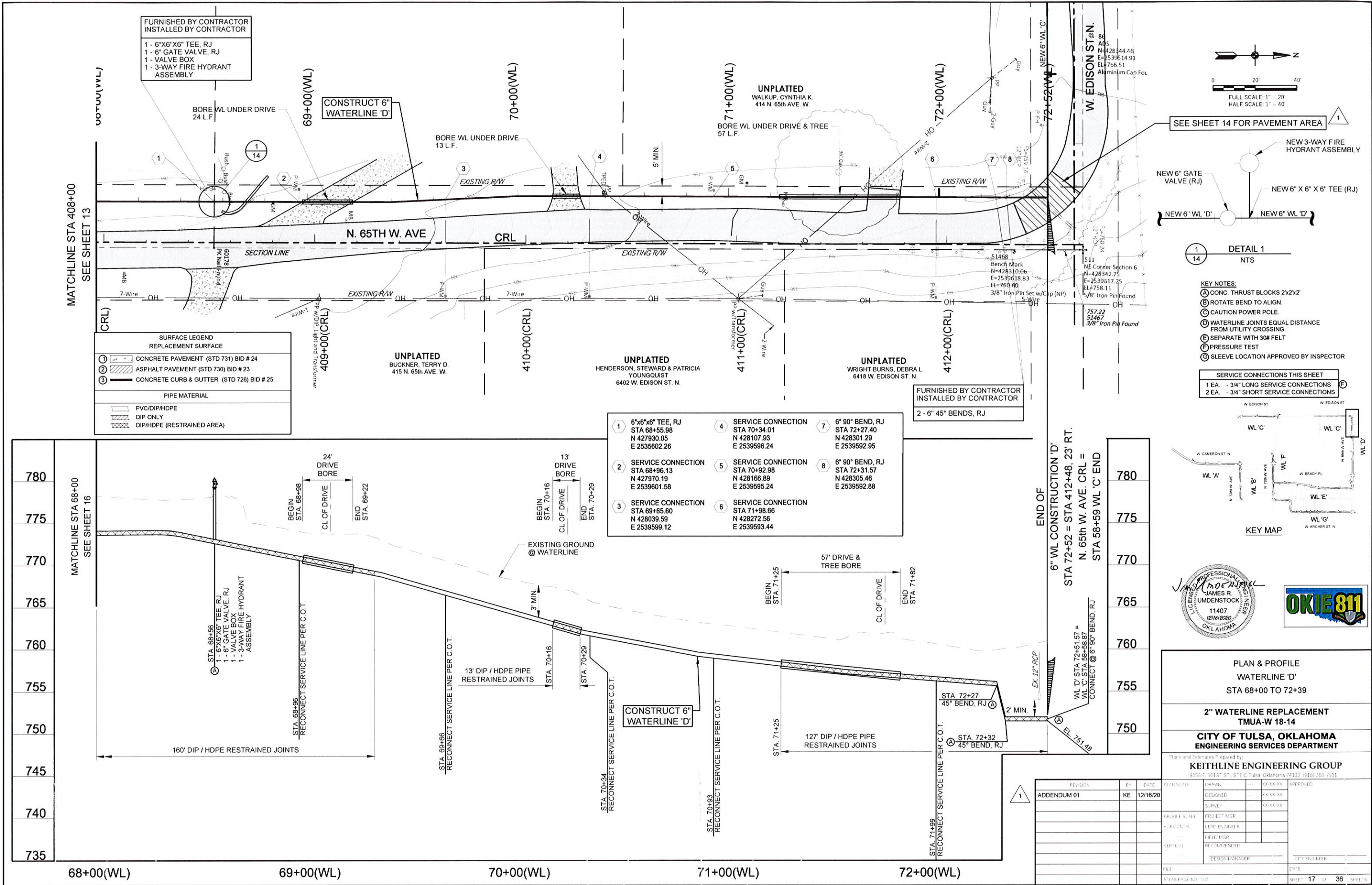
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Plans and Estimates Prepared by:
KEITHLINE ENGINEERING GROUP
8556 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (918) 369-7911

REVISION		BY	DATE	PLAN SCALE	DRAWN	CHKD	XXXX-XX	APPROVED
ADDENDUM 01		KE	12/16/20		DESIGNED	----	XX-XX-XX	
					S. REVIEW	----	XX-XX-XX	
				PROFILE SCALE	PROJECT MGR			
				HORIZONTAL	LEAD ENGINEER			
				VERTICAL	FIELD MGR			
					RECOMMENDED			
					DESIGN MANAGER			CITY ENGINEER
				FILE				DATE
				ATLAS PAGE NO. 107				SHEET 11 OF 36 SHEET

SHEET 11 OF 36 SHEET



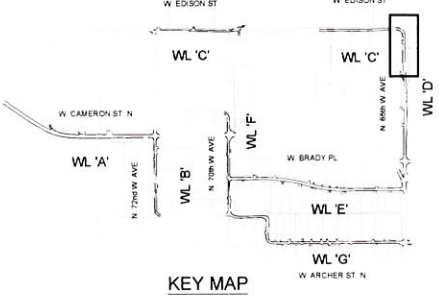


SEE SHEET 14 FOR PAVEMENT AREA

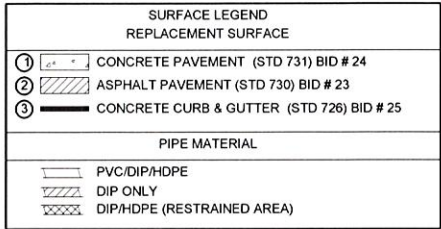
DETAIL 1
NTS

- KEY NOTES:
- 1. CONC. THRUST BLOCKS 2'x2'
 - 2. ROTATE BEND TO ALIGN.
 - 3. CAUTION POWER POLE.
 - 4. WATERLINE JOINTS EQUAL DISTANCE FROM UTILITY CROSSING.
 - 5. SEPARATE WITH 30# FELT
 - 6. PRESSURE TEST
 - 7. SLEEVE LOCATION APPROVED BY INSPECTOR

- SERVICE CONNECTIONS THIS SHEET
- 1 EA. - 3/4" LONG SERVICE CONNECTIONS
 - 2 EA. - 3/4" SHORT SERVICE CONNECTIONS



PLAN & PROFILE WATERLINE 'D' STA 68+00 TO 72+39	
2" WATERLINE REPLACEMENT TMUA-W 18-14	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
Plans and Estimates Prepared by: KEITHLINE ENGINEERING GROUP 8556 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (518) 369-7911	
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ADDENDUM 01	KE 12/16/20
DESIGNED	XX-XX-XX
SURVEY	XX-XX-XX
PROJECT MGR	
LEAD ENGINEER	
FIELD MGR	
RECOMMENDED	
DESIGN MANAGER	
CITY ENGINEER	
DATE	
ATLAS PAGE NO. 107	SHEET 17 OF 36 SHEETS



- | SERVICE CONNECTIONS THIS SHEET | |
|--------------------------------|----------------------------------|
| 0 EA. | - 3/4" LONG SERVICE CONNECTIONS |
| 1 EA. | - 3/4" SHORT SERVICE CONNECTIONS |



PLAN & PROFILE
WATERLINE 'G'
STA 120+00 TO 122+20

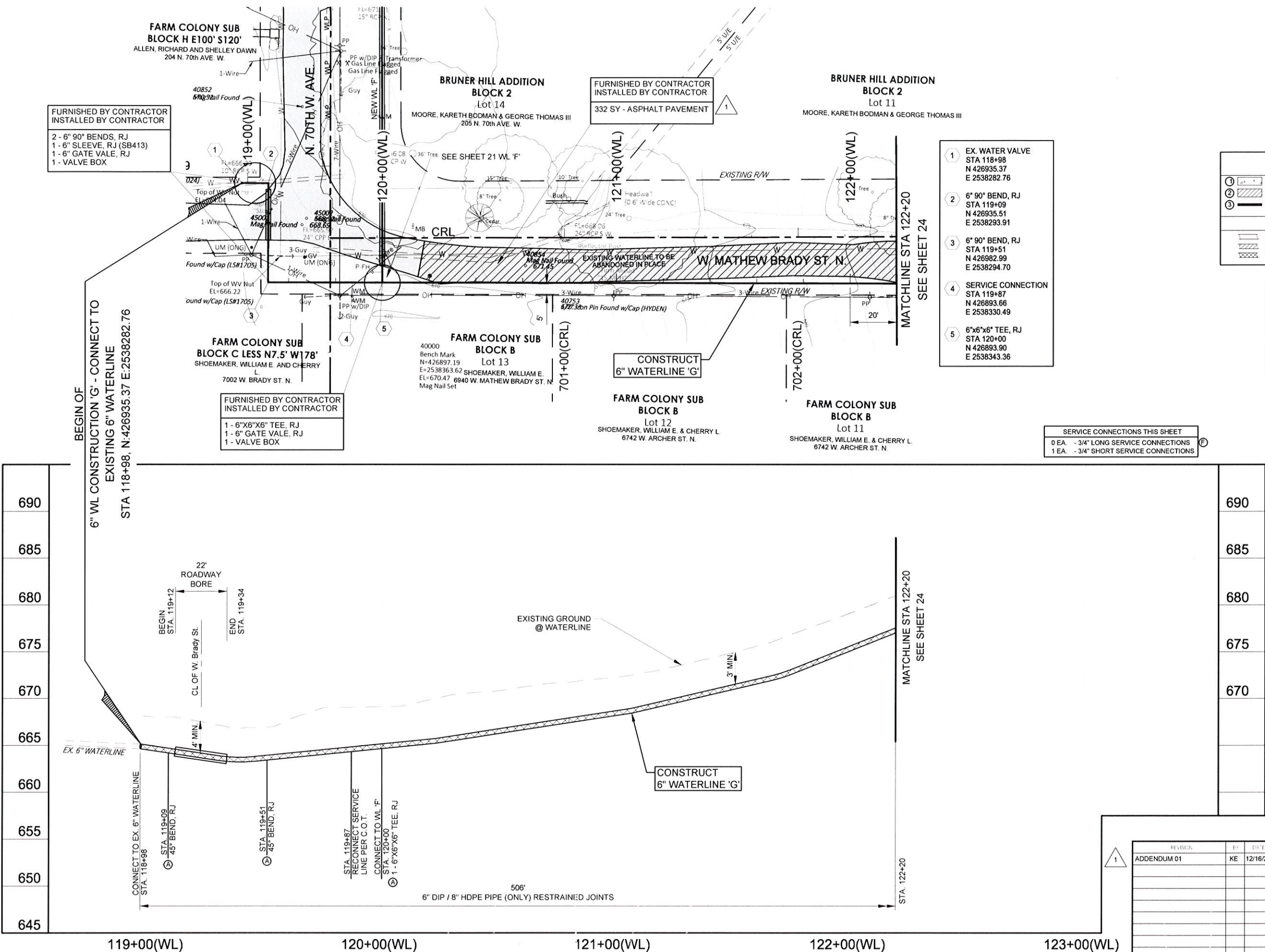
2" WATERLINE REPLACEMENT
TMUA-W 18-14

CITY OF TULSA, OKLAHOMA
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Plans and Estimates Prepared by:

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8556 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (918) 369-7911

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			HORIZONTAL	LEAD ENGINEER		
				FIELD MGR		
			VERTICAL	RECOMMENDED		
				DESIGN MANAGER	CITY ENGINEER	
			FILE	DATE		
			ATLAS PAGE NO.: 107	SHEET 23 OF 36 SHEETS		



1 6" 90° BEND, RJ
STA 122+41.85
N 426898.41
E 2538585.16

2 6"x6"x6" TEE, RJ
STA 122+63.94
N 426876.32
E 2538585.57

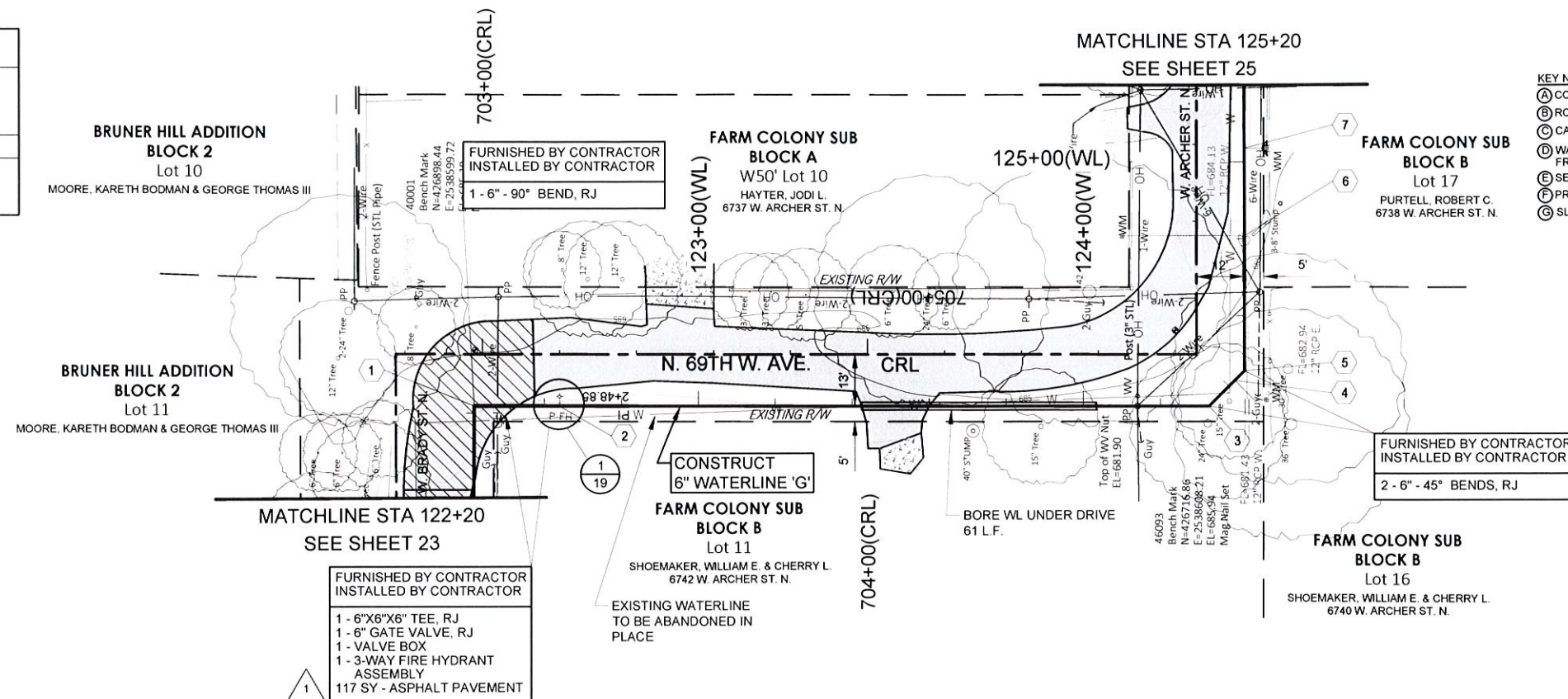
3 6" 45° BEND, RJ
STA 124+32.67
N 426707.62
E 2538588.68

4 SERVICE CONNECTION
STA 124+42.15
N 426701.04
E 2538595.50

5 6" 45° BEND, RJ
STA 124+45.64
N 426698.61
E 2538598.02

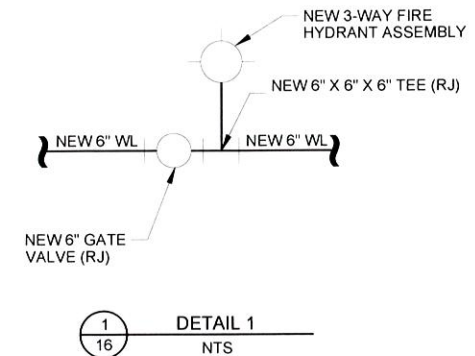
6 SERVICE CONNECTION
STA 124+80.79
N 426699.27
E 2538633.15

7 SERVICE CONNECTION
STA 125+03.56
N 426699.70
E 2538655.93

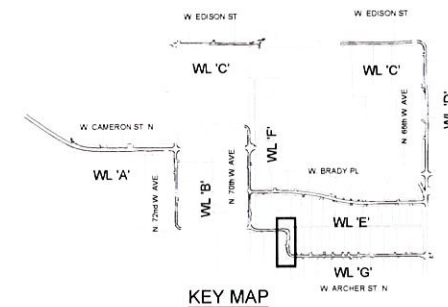


KEY NOTES:

- (A) CONC. THRUST BLOCKS 2'x2'x2'
- (B) ROTATE BEND TO ALIGN.
- (C) CAUTION POWER POLE.
- (D) WATERLINE JOINTS EQUAL DISTANCE FROM UTILITY CROSSING.
- (E) SEPARATE WITH 30# FELT
- (F) PRESSURE TEST
- (G) SLEEVE LOCATION APPROVED BY INSPECTOR



SERVICE CONNECTIONS THIS SHEET	
1 EA.	- 3/4" LONG SERVICE CONNECTIONS
1 EA.	- 3/4" SHORT SERVICE CONNECTIONS



PLAN & PROFILE
WATERLINE 'G'
STA 122+20 TO 125+20

2" WATERLINE REPLACEMENT
TMUA-W 18-14

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Plans and Estimates Prepared by:

KEITHLINE ENGINEERING GROUP

8556 E. 101ST ST., STE C Tulsa, Oklahoma 74133 (918) 369-7911

REVISION	BY	DATE	PLAN SCALE	DRAWN	XXX-XX-XX	APPROVED
ADDENDUM 01	KE	12/16/20		DESIGNED	XXX-XX-XX	
				S. FILED	XXX-XX-XX	
			PROFILE SCALE	PROJECT MGR		
			HORIZONTAL	LEAD ENGINEER		
			VERTICAL	FIELD MGR		
				RECOMMENDED		
				DESIGN MANAGER		
			FILE	CITY ENGINEER		
			ATLAS EAST END LOT	DATE		
				SHEET 24 OF 36		

- 1 SERVICE CONNECTION
STA 133+95.97
N 426717.23
E 2539548.15
- 2 6"x6"x6" TEE, RJ
STA 134+78
N 42671993
E 2539629.84

MATCHLINE STA 133+20
SEE SHEET 26

NY SUB
B
25
JAMES H JR
ST. N.

NY SUB
A
Lot 2
H. JR.
R ST. N.

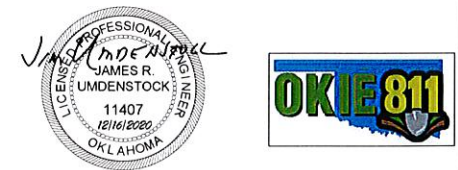
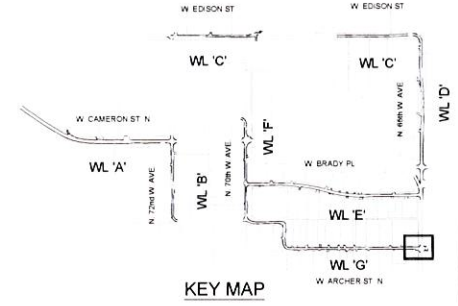
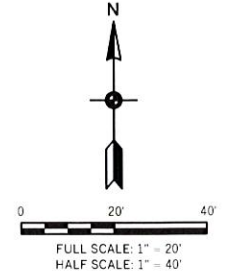
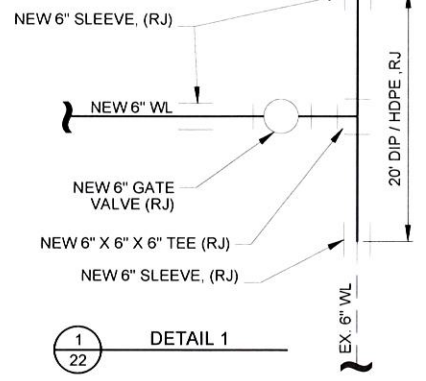
CONSTRUCT
6" WATERLINE 'G'

FARM COLONY SUB
BLOCK A
LESS W90' Lot 2
MULLINS, GABRIEL A.
100 N. 65th AVE. W.

FARM COLONY SUB
BLOCK B
N50' E/2 Lot 25
CHRONISTER, DALE
28 N. 65th AVE. W.

- FURNISHED BY CONTRACTOR
INSTALLED BY CONTRACTOR
- 1 - 6"x6"x6" TEE, RJ
 - 1 - 6" GATE VALVE, RJ
 - 1 - VALVE BOX
 - 3 - 6" SLEEVES, RJ
 - 220 SY - ASPHALT PAVEMENT

- SERVICE CONNECTIONS THIS SHEET
- 1 EA - 3/4" LONG SERVICE CONNECTIONS
 - 0 EA - 3/4" SHORT SERVICE CONNECTIONS



PLAN & PROFILE
WATERLINE 'G'
STA 133+20 TO 134+78

2" WATERLINE REPLACEMENT
TMUA-W 18-14

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Plans and Estimates Prepared by:
KEITHLINE ENGINEERING GROUP
8555 E 101st St, STE C, Tulsa, Oklahoma 74133 (918) 369-7911

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				DESIGNED	XX-XX-XX	
				SURVEY	XX-XX-XX	
			PROFILE SCALE	PROJECT MGR		
			HORIZONTAL	LEAD ENGINEER		
			VERTICAL	FIELD MGR		
				RECOMMENDED		
				DESIGN MANAGER		CITY ENGINEER
			FILE			DATE
			ATLAS PAGE NO. 107			SHEET 27 OF 36 SHEETS

