



WATER AND SEWER
Engineering Design

DATE:
November 19, 2025

TO:
Plan Holders
Contractors

FROM:
Jenna Richardson
918-596-9637
jennarichardson@cityoftulsa.org

EMAIL TRANSMITTAL

ADDENDUM NO. 1

PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN

Number of pages: **27**

All addenda to the contract documents should be denoted on the
last page of the Proposal in the space provided.

Thank you,
Contract Administration



WATER AND SEWER
Engineering Design

DATE:

November 19, 2025

**ADDENDUM NO. 1
TO
PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN**

This Addendum No. 1 consisting of two (2) Items, submitted by City of Tulsa, and two (2) Items, submitted by Tetra Tech, 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. **All addenda to the contract documents should be denoted on the last page of the Proposal in the space provided.**

This Addendum No. 1 consists of the following:

1. **Replace** the Contract Document Pages (C1-C4) with the **attached Contract Document Pages (C1-C4).**
2. **Replace** the Notice to Bidder Pages (NTB1-NTB2) with the **attached Notice to Bidder Page (NTB1-NTB3).**
3. The attached documents list the detailed 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

A blue ink signature of Eric Lee, consisting of a stylized 'E' and 'L'.

Eric Lee
Director

Handwritten initials in blue ink, appearing to be "HAS" and "AL/JR".
HAS/TGP/AL/JR/kt

CONTRACT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS

TULSA, OKLAHOMA

THIS CONTRACT made and entered into this _____ day of _____, 2025, by and between __, an (list state)_____ (Corporation or Limited Liability Company) of __, Oklahoma hereinafter called the "CONTRACTOR", and the TULSA METROPOLITAN UTILITY AUTHORITY, Tulsa, Oklahoma, a Public Trust, herein called the "Authority".

WITNESSETH:

WHEREAS, the Authority has caused to be prepared the necessary Drawings, Specifications, and other Contract Documents for the public improvements herein described, and has invited bids for the construction thereof in accordance with the terms of the Contract, all of which is hereby designated as:

PROJECT NO. ES 2024-04 CROW CREEK SPECIFIC REMEDIATION PLAN

WHEREAS, the Contractor, in response to the Advertisement, has submitted to the Authority, in the manner and at the time specified, a sealed bid in accordance with the terms of this Contract; and,

WHEREAS, the Authority, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the above named Contractor to be the lowest responsible bidder for the work and has duly awarded to the said Contractor therefore, for the sum or sums named in the Contractor's bid, a copy of the Bid Form being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements and covenants herein contained, the parties to this Contract have agreed and hereby agree, as follows:

ARTICLE I. That the contractor shall (a) furnish all tools, equipment, supplies, superintendence, transportation, and other construction accessories, services, and facilities; (b) furnish all materials, supplies, and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good, substantial, and workmanlike manner and in accordance with the requirements, stipulations, provisions and conditions of the Contract as defined in the attached General Conditions, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct, and complete all work included in and covered by the Authority's official award of this Contract to the said Contractor, such award being based on the acceptance by the Authority of the Contractor's bid, or part thereof, as follows:

PROJECT NO. ES 2024-04 CROW CREEK SPECIFIC REMEDIATION PLAN

ARTICLE II. That the Authority shall pay to the Contractor for performance of the work embraced in this Contract, and the Contractor will accept as full compensation therefor, the sum (subject to adjustment as provided by the Contract) of AND /100 Dollars (\$_____) for all work covered by and included in the Contract award and designated in the foregoing Article I; payments therefore to be made in cash or its equivalent, in the manner provided in the General Conditions.

ARTICLE IIA. All materials and supplies to be purchased under the terms of this contract shall be ordered by the Contractor from the vendor or supplier who shall be directed to invoice the Tulsa Metropolitan Utility Authority direct. The invoice shall reflect any contractor discount and no sales tax shall be added. The invoice will be paid direct by the Tulsa Metropolitan Utility Authority in accordance with the terms and conditions of the invoice (Oklahoma Tax Commission Rules Part 27 Trust Authority 710:65-13-140). The monies paid direct by Tulsa Metropolitan Utility Authority to the vendor or supplier shall be deducted from the total contract price. The Contractor shall accept delivery and be responsible for and shall warrant and hold the Authority harmless for the safety and security of all of the materials and supplies furnished for the project under this contract.

ARTICLE III. That the Contractor shall start work within ten (10) days following the date stipulated in a written order from the Authority to proceed with the work to be performed hereunder, and shall complete the work within the number of consecutive calendar days after the authorized starting date, as stipulated below:

All Work Completed: __ calendar days

ARTICLE IV. The sworn, notarized statement below shall be signed and notarized before this Contract will become effective.

ARTICLE V. Prior to submitting a final payment request, the Contractor shall furnish a lien waiver certifying that all subcontractors and suppliers have been paid.

ARTICLE VI. If the Contractor has 10 or more full-time employees, and this contract exceeds \$100,000 in total value, Contractor acknowledges and agrees that, in accordance with and pursuant to 21 O.S. 1289.31, Contractor verifies to City that: (i) it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and (ii) will not discriminate against a firearm entity or firearm trade association during the term of this Contract.

IN WITNESS WHEREOF, the Authority and the Contractor hereto have set their hands and seals, respectively, this _____ day of _____, 2025.

APPROVED AS TO SUBSTANCE:

Director Date: _____

TULSA METROPOLITAN UTILITY AUTHORITY, a Public Trust

By:

Chairman Date: _____

ATTEST:

Secretary Date: _____

APPROVED AS TO FORM:

Attorney for the Trust Date: _____

CONTRACTOR

By: _____

Print Name: _____

Title Date: _____ Title Date: _____

ATTEST:

Corporate Secretary

(SEAL)

AFFIDAVIT

STATE OF _____)
)ss
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath that
(s)he is the agent authorized by the Contractor to submit the above Contract to the Tulsa
Metropolitan Utility Authority, Tulsa, Oklahoma.

Signature

SUBSCRIBED AND SWORN to before me this _____ day of _____ 2025.

NOTARY PUBLIC

My Commission Expires:

_____, _____

Published in the Tulsa World:
October 24, 27, 28, 29, 30 and 31, 2025

**NOTICE TO BIDDERS
SEALED BIDS FOR
TULSA METROPOLITAN UTILITY AUTHORITY
PROJECT NO. ES 2024-04**

Notice is hereby given that pursuant to an order by the Tulsa Metropolitan Utility Authority, a Public Trust, sealed bids will be received in Room 260 of the Office of the City Clerk, City of Tulsa, 175 E. 2nd Street, Tulsa, Oklahoma 74103 until **8:30 a.m., 5th day of December, 2025** for furnishing all tools, materials and labor and performing the work necessary to be done in the construction of the following:

**PROJECT NO. ES 2024-04 CROW CREEK SPECIFIC
REMEDATION PLAN**

The entire cost of the improvement shall be paid from Account No.
2131S0005Z.SewerLines.Sewer.7500N.75003300.541101
203320004Z.SewerLines.SwrLine.7500N.75003300.541101
2331S00008.SewerLines.Sewer.7500N.75003300-541101
2431S00008.SewerLines.Sewer.7500N.75003300.541101

A **MANDATORY** Pre-Bid Conference is scheduled for
Tuesday, November 4th, 2025 at 9:30 a.m. and will be held
through video conferencing with Microsoft Teams, invitation
presented on the City of Tulsa's website at this link:
<https://www.cityoftulsa.org/government/departments/engineering-services/construction-bids/>

Attendance at the Pre-Bid Conference is MANDATORY. Bids will not be received from contractors who did not attend the Pre-Bid Conference.

Bids will be accepted by the City Clerk from the holder of valid pre-qualification certificates from the City of Tulsa in one or more of the following classifications: **A or D**

Drawings, specifications and contract documents for construction of said public improvements of the said project have been adopted by the Mayor of said City. Copies of same may be obtained at the Office of Contract Administration, 175 E. 2nd St., 13th Floor, Tulsa, OK 74103 for a non-refundable fee in the amount of **\$50.00** made payable to the Tulsa Metropolitan Utility Authority by check or money order.

Contract requirements shall include compliance as required by law pertaining to the practice of non-discrimination in employment. Attention is called to Resolution No. 18145 of August 23, 1988, requiring bidders to commit to the goal of employing on the project at least fifty percent bona fide residents of the City of Tulsa and/or MSA in each employment classification.

Attention is called to Resolution 7404 of November 8, 2006, requiring bidders, their subcontractors and their lower-tier subcontractors to hire only citizens of the United States.

The Authority, acting on behalf of the City of Tulsa, is exempt from the payment of any sales or use taxes, and pursuant to Title 68 O.S. Section 1356(10), direct vendors to the Authority are also exempt from those taxes. A bidder may exclude from his bid appropriate sales taxes which he will not have to pay while acting for and on behalf of the Tulsa Metropolitan Utility Authority. See Contract Article IIB.

A Certified or Cashier's Check or Bidder's Surety Bond, in the sum of 5% of the amount of the bid will be required from each bidder to be retained as liquidated damages in the event the successful bidder fails, neglects or refuses to enter into said contract for the construction of said public improvements for said project and furnish the necessary bonds within thirty days from and after the date the award is made.

The bidder to whom a contract is awarded will be required to furnish public liability and workmen's compensation insurance; Performance, Statutory, and Maintenance bonds acceptable to the Authority, in conformity with the requirements of the proposed contract documents. The Performance, Statutory, and Maintenance bonds shall be for one hundred percent (100%) of the contract price.

The bidding for this project is subject to a local preference law as defined in Oklahoma Statutes, Title 61, Section 103. For purposes of Section 103 a "local bid" means a bid submitted by a business entity that is authorized to do business in the State of Oklahoma and maintains its primary office or principal place of business within the State of Oklahoma. If the conditions outlined in Title 61 are met, The City of Tulsa must select the second lowest bid if within 5% of the lowest bid and the second lowest bid is a local bid and the lowest bid is not a local bid (i.e. non-local/out of state). Accordingly, when the local bid is required to be selected under the State law, the local bidder must agree to do the work at the lowest bid price to be awarded the project.

All bids will be opened and considered by the Bid Committee of said City at a meeting of said Committee to be held in the City Council Room of City Hall, 175 E. 2nd Street, in said City at 9:00 a.m. on the 5th day of December, 2025.

Dated at Tulsa, Oklahoma, this 24th day of October, 2025.

(SEAL)

Richard Sevenoaks
Tulsa Metropolitan Utility Authority



TETRA TECH

November 18, 2025

**ADDENDUM NO. 1
TO
PROJECT NO. TMUA ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5**

This Addendum No. 1, consisting of Two (2) 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.**

CONTRACT DOCUMENTS

1. The Bid Proposal has been revised to reflect pay item and quantity changes. The updated Electronic Bid Proposal must be downloaded for bidding from the City of Tulsa website:
<https://www.cityoftulsa.org/government/departments/public-works/engineering-services/construction-bids/>

PLAN SET

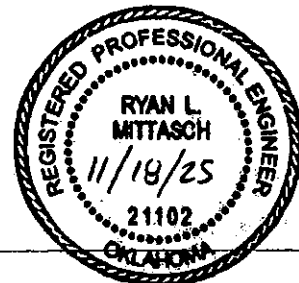
2. Replace Plan Sheets 2, 8-10, 12, 17, 19-22, 28, and 30 with the attached sheets. Some of the proposed manhole rehabilitation has been modified due to site restrictions.

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

BY: _____


Ryan L. Mittasch, P.E.

DATE/SEAL: _____



ELECTRONIC BID PROPOSAL INSTRUCTIONS - EXCEL SPREADSHEET
TMUA PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5

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.

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: Tetra Tech, Inc. , (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. ES 2024-04, CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5. 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!!!

PROPOSAL
TMUA PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5

TO: TULSA METROPOLITAN UTILITY AUTHORITY
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 referred to therein; to complete said work within 400 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 Engineers as set forth in the Contract.

Basis of Award

IT SHOULD BE NOTED THAT THE LOWEST RESPONSIBLE BID SHALL BE DETERMINED BY THE TOTAL BASE BID PLUS ADD ALTERNATES 1 & 2. THE ITEMS IN ADDITIVE ALTERNATES NO. 1 & NO. 2 MAY OR MAY NOT BE INCLUDED IN THE CONTRACT AWARD AT THE SOLE DISCRETION OF THE CITY OF TULSA. ANY PROPOSAL SUBMITTED WITH THE ADDITIVE ALTERNATES INCOMPLETE SHALL BE CONSIDERED NON-RESPONSIVE

Note: - Item numbers omitted are not a part of the Contract.

**PROPOSAL FOR TMUA PROJECT NUMBER ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5**

BASE BID

ITEM NUMBER	SPEC NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
1	COT 412	8 Inch Point Repair	(EA)	4		
2	COT 412	Additional Footage (8 Inch Point Repair)	(LF)	2		
3	COT 409	8 Inch Slipline, SDR 21	(LF)	675		
4	COT 409	8 Inch Slipline, SDR 17	(LF)	284		
5	COT 410	8 Inch Cured-In-Place-Pipe	(LF)	301		
6	COT 408	8 Inch Pipeburst, DR-17 DIPS HDPE	(LF)	2,150		
7	COT 405	8 Inch Open Cut Only, SDR 26 PVC	(LF)	242		
8	COT 409	12 Inch Slipline, SDR 21	(LF)	58		
9	COT 410	12 Inch Cured-In-Place-Pipe	(LF)	25		
10	COT 408	12 Inch Pipeburst, DR-17 DIPS HDPE	(LF)	25		
11	COT 412	15 Inch Point Repair	(EA)	1		
12	COT 412	Additional Footage (15 Inch Point Repair)	(LF)	10		
13	COT 409	15 Inch Slipline, SDR 21	(LF)	25		
14	COT 410	15 Inch Cured-In-Place-Pipe	(LF)	1,577		
15	COT 408	15 Inch Pipeburst, DR-17 DIPS HDPE	(LF)	150		
16	COT 405	15 Inch Open Cut Only, SDR 26 PVC	(LF)	15		
17	COT 408	24 Inch Pipeburst, DR-17 DIPS HDPE	(LF)	188		
18	COT 423	Obstruction Removal	(EA)	2		
19	Special Provision 6	External Drop Replacement	(EA)	1		
20	COT 202	Flowable Fill	(CY)	25		
21	COT 402	Pavement Removal and Replacement -Asphalt	(SY)	10		
22	COT 402	Pavement Removal and Replacement -Concrete	(SY)	30		
23	COT 402	Pavement Removal and Replacement -Concrete Driveway, Sidewalk	(SY)	10		
24	COT 402	Curb and Gutter Removal and Replacement	(LF)	25		
25	COT 402	Sodding	(SY)	518		
26	COT 405,408,409,410	Service Reconections	(EA)	70		
27	COT 405,408,409,410	PVC Service, Schedule 40	(LF)	350		
28	COT 415	Video Pre-Inspection	(LF)	7,006		
29	COT 418 (Type A)	Replace Cover, Frame and Frame Seal	(EA)	42		
30	COT 418 (Type B)	Replace Frame Seal	(EA)	34		
31	COT 418 (Type C)	Replace Cover, Frame and Frame Seal, and Chimney	(EA)	6		
32	COT 418 (Type D)	Replace Frame Seal, and Chimney	(EA)	45		
33	COT 418 (Type Fc)	Partial Manhole Replacement - Precast Corbel Section	(EA)	14		
34	COT 421 (Type Gg)	Interior Manhole Wall Rehabilitation	(SF)	3,342		
35	COT 419 (Type Gh)	Bench and Invert Rehabilitation	(EA)	12		
36	COT 421 (Type Gk)	Grout and Coat Pipe Seal	(EA)	76		
37	COT 419 (Type Go)	Plug Lift Holes , Plug Holes	(EA)	3		
38	COT 421 (Type Gp)	Seal Precast Joints	(EA)	22		
39	COT 419 (Type Gr)	Patch Lift Hole/ Patch Hole	(EA)	19		
40	COT 421 (Type Gs)	Epoxy Coating	(SF)	100		
41	COT 420 (Type I)	Manhole Step Removal and Replacement	(EA)	10		
42	COT 416	Manhole Replacement (4 Ft ID)	(EA)	15		
43	COT 416	Manhole (4 Ft ID) Additional Vertical Foot over 6 Ft depth	(VF)	50		
44	COT 416	Drop Manhole Replacement (4 Ft ID)	(EA)	1		
45	COT 416	Drop Manhole (4 Ft ID) Additional Vertical Foot over 6 Ft Depth	(VF)	9		
46	COT 416	Manhole Replacement (5 Ft ID)	(EA)	1		
47	COT 416	Manhole (5 Ft ID) Additional Vertical Foot over 6 Ft Depth	(VF)	10		
48	COT 416	Drop Manhole Replacement (5 Ft ID)	(EA)	1		
49	COT 416	Drop Manhole (5 Ft ID) Additional Vertical Foot over 6 Ft Depth	(VF)	10		
50	COT 417	Lamphole Replacement	(EA)	4		
51	COT 417	Lamphole Frame and Cover	(EA)	8		
52	COT 428	Sealed Lid	(EA)	35		
53	Special Provision 4	Clean Manhole	(EA)	2		
54	MUTCD	Construction Traffic Control	(CD)	400		
55	COT 400.7.4	Mobilization	(EA)	1		
56	COT 400.7.4	Photographic Documentation	(EA)	1		
57	Special Provision 2	Owner Allowance	(EA)	50,000	\$1.00	\$50,000.00
58	COT 334	Construction As-Builts	(LS)	1		
59	COT 335	Contractor's Quality Control	(LS)	1		
60	ODOT SPEC 220	SWPPP Documentation and Management	(LS)	1		
SUB TOTAL BASE BID						\$50,000.00

ADD ALTERNATE 1

ITEM NUMBER	SPEC NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
61	COT 412	8 Inch Point Repair	(EA)	3		
62	COT 409	8 Inch Slipline SDR 21	(LF)	241		
63	COT 408	8 Inch PipeBurst, DR-17 DIPs HDPE	(LF)	731		
64	COT 405	8 Inch Open Cut Only, SDR 26 PVC	(LF)	163		
65	COT 405	10 Inch Open Cut Only, SDR 26 PVC	(LF)	39		
66	COT 410	10 Inch Cured-In-Place-Pipe	(LF)	156		
67	COT 402	Pavement Removal and Replacement - Asphalt	(SY)	20		
68	COT 402	Pavement Removal and Replacement - Concrete	(SY)	20		
69	COT 402	Pavement Removal and Replacement - Concrete Driveway, Sidewalk	(SY)	2		
70	COT 402	Curb and Gutter Removal and Replacement	(LF)	10		
71	COT 402	Sodding	(SY)	73		
72	COT 405,408,409,410	Service Reconnections	(EA)	36		
73	COT 405,408,409,410	PVC Service, Schedule 40	(LF)	180		
74	COT 415	Video Pre-Inspection	(LF)	1,830		
SUB TOTAL ADD ALTERNATE NO. 1						

ADD ALTERNATE 2

ITEM NUMBER	SPEC NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
75	COT 412	8 Inch Point Repair	(EA)	5		
76	COT 409	8 Inch Slipline SDR 21	(LF)	858		
77	COT 410	8 Inch Cured-In-Place-Pipe	(LF)	343		
78	COT 408	8 Inch PipeBurst, DR-17 DIPs HDPE	(LF)	956		
79	COT 405	8 Inch Open Cut Only, SDR 26 PVC	(LF)	57		
80	COT 402	Sodding	(SY)	387		
81	COT 405,408,409,410	Service Reconnections	(EA)	44		
82	COT 405,408,409,410	PVC Service, Schedule 40	(LF)	220		
83	COT 415	Video Pre-Inspection	(LF)	3,059		
SUB TOTAL ADD ALTERNATE NO. 2						

PAY ITEM NOTES

1. QUANTITIES UNDER THE "EXTRA" COLUMN HEADING ARE NOT ASSOCIATED WITH ANY SPECIFIC REPAIR SHOWN ON THE PLANS AND WILL ONLY BE USED TO COMPENSATE THE CONTRACTOR FOR ADDITIONAL COSTS INCURRED DUE TO CHANGED FIELD CONDITIONS.
2. SURFACE RESTORATION ITEMS SHALL BE PAID FOR IN ACCORDANCE WITH SPECIFICATION SECTION 402.17.
3. PER SECTION 402.17.2 PAYMENT FOR "SIDEWALK AND DRIVEWAY REMOVAL AND REPLACEMENT" AND "PAVEMENT REMOVAL AND REPLACEMENT" SHALL BE PAID FOR IN SQUARE YARDS. THE PAY QUANTITY SHALL BE COMPUTED AS THE LENGTH ALONG THE CENTERLINE OF THE PIPE BEING REPLACED MULTIPLIED BY THE STANDARD PAY WIDTH. (SEE STANDARD NO. 713)
4. QUANTITY INCLUDES REQUIRED SURFACE RESTORATION FOR PLACING SERVICE LINES IN STREET R/W. NO ADDITIONAL PAYMENT WILL BE MADE FOR SURFACE RESTORATION ASSOCIATED WITH THE SERVICE LINE REPLACEMENTS.
5. THE SOD QUANTITY SHALL BE COMPUTED AS FOLLOWS - LENGTH OF GRASS ALONG SEGMENT DISTURBED x 20' WIDE DIVIDED BY 9 FOR A TOTAL SQUARE YARDS PER SEGMENT. SOD RESTORATION WIDTHS BEYOND 20' SHALL BE AT THE EXPENSE OF THE CONTRACTOR AND NO SEPARATE PAYMENT SHALL BE MADE.
6. MANHOLES WITH INTERIOR EPOXY COATINGS SHALL NOT RECEIVE STEPS. NEW MANHOLES SHALL NOT HAVE STEPS.
7. THE CONTRACTOR SHALL REMOVE ALL DEBRIS OR FOREIGN MATERIALS FROM THE MANHOLE, CORBEL, WALL, BENCH, STEPS AND INVERT. DEBRIS SHALL BE KEPT FROM ENTERING THE SEWER LINES. CONTRACTOR SHALL AT NO EXTRA COST TO OWNER, REPLACE ANY PORTION OF THE EXISTING MANHOLE WHICH IS DAMAGED DURING CLEANING.
8. STEP REMOVAL AND REPLACEMENT (TYPE I REPAIR) WHEN SPECIFIED, SHALL BE PAID FOR ON A PER MANHOLE BASIS AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE.
9. TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THIS ITEM SHALL BE PAID PER CALENDAR DAYS FOR ALL NECESSARY TRAFFIC CONTROL. PAYMENT IS NOT GUARANTEED FOR FULL AMOUNT OF CALENDAR DAYS LISTED. PAYMENT FOR TRAFFIC CONTROL WILL BE BASED ON ACTUAL CALENDAR DAYS THAT TRAFFIC CONTROL ITEMS AND/OR DEVICES ARE USED.
10. EXTERNAL SERVICE CONNECTIONS SHALL BE REPLACED AT LEAST ONE FOOT BEYOND THE UPPER BEND. IF CUSTOMER SIDE OF SERVICE LINE IS IN POOR CONDITION, THE CONTRACTOR SHALL MAKE TEMPORARY CONNECTION AND NOTIFY QUALITY ASSURANCE FOR CUSTOMER REPAIR. CONTACT BREN SUMMERLIN AT (918) 591-4393.
11. CONTRACTOR SHALL COMPLETE A SERVICE REPORT FORM FOR EACH SERVICE RECONNECTED. THIS FORM IS PROVIDED IN THE SPECIAL PROVISIONS AND SHALL BE COMPLETED AND SUBMITTED WITH EACH MONTHLY PAY REQUEST.
12. OBSTRUCTION REMOVALS MUST BE APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. ALL NECESSARY MATERIAL, LABOR, BACKFILLING, SURFACE RESTORATION, TESTING, AND INCIDENTALS SHALL BE INCLUDED. NO ADDITIONAL PAYMENT WILL BE MADE.
13. POST REHABILITATION CCTV SHALL BE INCLUDED IN THE COST OF THE REHABILITATION PAY ITEM, WITH THE EXCEPTION OF OPEN CUT, WHICH WILL BE DONE BY SEWER OPERATION MAINTENANCE. NO SEPARATE PAYMENT SHALL BE MADE.
14. FLOWABLE FILL MAY BE PERMISSIBLE WHEN NORMAL COMPACTION METHODS ARE NOT FEASIBLE, WITH ENGINEERS APPROVAL ONLY. NO MORE THAN 0.6 CY PER FOOT OF EXCAVATED DEPTH WILL BE PERMITTED.
15. WHERE PVC SEWER PIPE IS USED, THE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM D-3034 LATEST REVISION, UNLESS OTHERWISE SPECIFIED. THE STANDARD DIMENSIONS RATIO OF PVC PIPE SHALL NOT EXCEED 26. REFER TO SECTIONS 405,406,407 AND 408 FOR THE REQUIREMENTS OF PIPE MATERIALS OTHER THAN PVC.
16. THE CONTRACTOR SHALL INSTALL A SEALED FRAME AND COVER WHEN PERFORMING MANHOLE REPAIR TYPES "A" AND "C", WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN BOUNDARY, AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. (SEE SPECIFICATION SECTION 426)
17. MANHOLES REQUIRING FULL REPLACEMENT OR TYPE Fc - PRECAST CORBEL SECTION, SHALL BE CONSTRUCTED WITH NO STEPS AND TO INCORPORATE, AND INCLUDE A 30" FRAME AND COVER REGARDLESS OF THE MANHOLE DIAMETER, NO ADDITIONAL PAYMENT WILL BE MADE. SEE CITY OF TULSA STANDARD DETAIL 354.
18. ALL MANHOLES DESIGNATED FOR FULL REPLACEMENT OR TYPE "Fc" REHABILITATION AND ARE WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN WILL REQUIRE THE INSTALLATION OF AN "EJ 3200 SERIES FRAME & COVER". SEE SPECIAL PROVISION 3 AND COT STD 359.
19. THIS ITEM TO BE USED AS APPROVED BY THE ENGINEER FOR SEGMENTS WHICH MAY REQUIRE NEW SERVICE LINES DUE TO OBSTRUCTIONS/OBSTACLES FORCING THE RE-ROUTING OF EXISTING SERVICE LINES; REPLACEMENT OF EXISTING SERVICE LINES IN POOR CONDITION, OR CONSTRUCTED OF UNSATISFACTORY MATERIAL; OR REPLACEMENT OF SERVICE LINES SHOWING EXCESSIVE AMOUNTS OF INFLOW OR INFILTRATION. SERVICE LINE REPLACEMENT SHALL ONLY BE PERFORMED ON LINES AUTHORIZED BY THE ENGINEER AND SHALL BE LOCATED WITHIN THE STREET ROW OR SEWER EASEMENT AND NOT ON PRIVATE PROPERTY. NO ADDITIONAL PAYMENT WILL BE MADE FOR SURFACE RESTORATION.
20. SPECIFICATION 334.2.M ONLY APPLIES TO SEGMENTS WHERE OPEN CUT REPLACEMENT OCCURS. ALSO *SPOT ELEVATIONS ON THE MAIN SEWER LINE... CAN EITHER BE SURVEYED ELEVATIONS OR MEASURE DOWNS RELATIVE TO FINISHED GRADE.
21. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID FOR EACH COMPLETE MANHOLE DROP PIPING ASSEMBLY REGARDLESS OF DEPTH OR DIAMETER OF THE ASSOCIATED MANHOLE. THIS ITEM SHALL INCLUDE ALL COST FOR EXCAVATION, BACKFILL, DEWATERING, BY PASS PUMPING, GROUT, SEALS, FITTINGS, MANHOLE MODIFICATIONS, AND ALL LABOR AND OTHER MATERIALS FOR A COMPLETE INSTALLATION PER CITY STANDARDS.
22. SERVICE RECONNECT COVERS BOTH THE RECONNECTION OF 4" AND 6" SERVICES.
23. SERVICE LINE COVERS BOTH THE INSTALLATION OF 4" AND 6" LINES.
24. CONTRACTOR SHALL VERIFY REQUIRED DEPTHS, ANGLES, AND CONNECTING LINE DIAMETERS PRIOR TO ORDERING REPLACEMENT MANHOLE COMPONENTS.
25. PAVEMENT REMOVAL AND REPLACEMENT FOR WATER, SANITARY, AND STORMWATER MAIN INSTALLATIONS - WITH RESPECT TO SAWCUTTING AND DOWELS, AND INCLUDES THE FOLLOWING, (THESE ITEMS SHALL NOT BE PAID SEPARATELY): SAW CUTTING, DOWELS, DISPOSAL OF BROKEN PAVEMENT, TEMPORARY SURFACES, ASSOCIATED EXCAVATION, PREPARATION OF SUBGRADE, FORMS OR REINFORCING, REMOVAL OR REPLACEMENT OF GRAVEL, ADDITIONAL SAW CUTTING OR REPLACEMENT OF PAVEMENT DAMAGED BY THE CONTRACTOR, JOINT SEALER, TACK COATS, OR EDGE SEALING. THIS PAYMENT ITEM DOES NOT INCLUDE THE FOLLOWING WHICH SHALL BE PAID SEPARATELY IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, DETAILS AND DRAWINGS: CURB AND GUTTER.
26. BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8 INCH MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH THE STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE LUMP SUM BID FOR THIS ITEM.

ESTIMATED CONSTRUCTION QUANTITIES

Summary of Pipeline Improvements Schedule										
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet					
					14	33	69	60	95	Extra Total
1	8 Inch Point Repair	COT 412	(EA)	13,15,25,26				4		4
2	Additional Footage (8 Inch Point Repair)	COT 412	(LF)	13,15				2		2
3	8 Inch Slipline SDR 21	COT 409	(LF)	13,15			210	465		675
4	8 Inch Slipline SDR 17	COT 409	(LF)	13,15				284		284
5	8 Inch Cured-In-Place-Pipe	COT 410	(LF)	13					301	301
6	8 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13				1,695	255	2,150
7	8 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15,20				52	190	242
8	12 Inch Slipline SDR 21	COT 409	(LF)	13,15		58				58
9	12 Inch Cured-In-Place-Pipe	COT 410	(LF)	1,13						25
10	12 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	1,2,13						25
11	15 Inch Point Repair	COT 412	(EA)	13,15				1		1
12	Additional Footage (15 Inch Point Repair)	COT 412	(LF)	13,15				10		10
13	15 Inch Slipline SDR 21	COT 409	(LF)	1,13,15						25
14	15 Inch Cured-In-Place-Pipe	COT 410	(LF)	13		353		1,194		1,577
15	15 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13		150				150
16	15 Inch Open Cut Only, SDR 26 PVC	COT 405	(LF)	2,13,14,15,20				15		15
17	24 Inch PipeBurst, DR-17 DIPS HDPE	COT 408	(LF)	2,13,14,15				188		188
18	Obstruction Removal	COT 423	(EA)	1,12,15						2
19	External Drop Replacement	SPECIAL PROVISION 6	(EA)	1,21						1
20	Flowable Fill	COT 202	(CY)	1						25
21	Pavement Removal and Replacement - Asphalt	COT 402	(SY)	3,25,26				10		10
22	Pavement Removal and Replacement - Concrete	COT 402	(SY)	1,3,25,26				20		30
23	Pavement Removal and Replacement - Concrete Driveway, Sidewalk	COT 402	(SY)	1,3,25,26						10
24	Curb and Gutter Removal and Replacement	COT 402	(LF)	25				25		25
25	Sodding	COT 402	(SY)	5				96	422	518
26	Service Reconnections	COT 405,408,409,410	(EA)	10,11,22		1	4	53	12	70
27	PVC Service, Schedule 40	COT 405,408,409,410	(LF)	4,10,11,19,23		5	20	265	60	350
28	Video Pre-Inspection	COT 415	(LF)	13		591	210	5,459	746	7,006

Summary of Manhole Rehabilitation Schedule										
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet					
					14	33	59	60	95	Extra Total
29	Replace Cover, Frame and Frame Seal	COT 418 (Type A)	(EA)	16	2	7	1	18	14	42
30	Replace Frame Seal	COT 418 (Type B)	(EA)		1	5	3	13	12	34
31	Replace Cover, Frame and Frame Seal, and Chimney	COT 418 (Type C)	(EA)	16		1		3	2	6
32	Replace Frame Seal and Chimney	COT 418 (Type D)	(EA)		7	6	3	14	15	45
33	Partial Manhole Replacement - Precast Corbel Section	COT 418 (Type Fc)	(EA)	17,18	3			3	8	14
34	Interior Manhole Wall Rehabilitation	COT 421 (Type Gg)	(SF)		263	957		1528	594	3342
35	Bench and Invert Rehabilitation	COT 419 (Type Gh)	(EA)			1	1	6	4	12
36	Grout and Coat Pipe Seal	COT 421 (Type Gk)	(EA)		3	13	4	33	23	76
37	Plug Lift Holes, Plug Holes	COT 419 (Type Go)	(EA)		1	1		1		3
38	Seal Precast Joints	COT 421 (Type Gp)	(EA)		1	8		6	7	22
39	Patch Lift Hole/ Patch Hole	COT 419 (Type Gr)	(EA)		2	3		8	6	19
40	Epoxy Coating	COT 421 (Type Gs)	(SF)	1,6						100
41	Manhole Step Removal and Replacement	COT 420 (Type I)	(EA)	1,6,8						10
42	Manhole Replacement (4 Ft ID)	COT 416	(EA)	17,18,24	1	1		8	5	15
43	Manhole (4 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	24	10	14		16	10	50
44	Drop Manhole Replacement (4 Ft ID)	COT 416	(EA)	17,18,24	1					1
45	Drop Manhole (4 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	24	9					9
46	Manhole Replacement (5 Ft ID)	COT 416	(EA)	1,17,18,24						1
47	Manhole (5 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	1,24						10
48	Drop Manhole Replacement (5 Ft ID)	COT 416	(EA)	1						1
49	Drop Manhole (5 Ft ID) Additional Vertical Foot over 6 Ft Depth	COT 416	(VF)	1						10
50	Lamphole Replacement	COT 417	(EA)			3			1	4
51	Lamphole Replace Frame and Cover	COT 417	(EA)			1		2	5	8
52	Sealed Lid	COT 426	(EA)	16,18		6		19	10	35
53	Clean Manhole	SPECIAL PROVISION 4	(EA)	1,7						2

Summary of General Contract Quantities										
Item No.	Description	Specifications	Unit	Pay Item Note	Atlas Sheet					
					14	33	59	60	95	Extra Total
54	Construction Traffic Control	MUTCD	(CD)	9						400
55	Mobilization	COT 400.7.4	(EA)							1
56	Photographic Documentation	COT 400.7.4	(EA)							1
57	Owner Allowance	SPECIAL PROVISION 2	(EA)							50,000
58	Construction As-Built	COT 334	(LS)							1
59	Contractor's Quality Control	COT 335	(LS)							1
60	SWPPP Documentation and Management	ODOT Spec 220	(LS)	27						1

PAY QUANTITIES AND PAY ITEM NOTES

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 5

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 83rd Street, Suite 301, Tulsa, OK 74133
TEL 918 249 3909

REVISION
ADDENDUM A
BY
TT
DATE
11-25
PLAN SCALE:
DRAWN
DESIGNED
SURVEY
PROJ. MGR.
LEAD ENGR.
FIELD MGR.
FILE
DRAWING
ATLAS PAGE NO.: 014, 033, 059, 060, 065
APPROVED:
DATE: OCTOBER 2025
SHEET 2 OF 44 SHEETS



SEE ATLAS 3

15th ST

SEE ATLAS 15

S. Peoria Ave.

S. Lewis Ave.

SEE ATLAS 13

21st ST

SEE ATLAS 33

26th ST

LEGEND

MANHOLE/LAMPPOLE REPLACEMENT



TOPSIDE MANHOLE/LAMPPOLE REPAIR



INTERIOR MANHOLE REPAIR



APPROXIMATE LOCATION
OF TULSA REGULATORY
FLOODPLAIN



MANHOLE BUBBLE



MANHOLE #

MANHOLE DEPTH (per atlas)

POINT REPAIR



LINE REPLACEMENT
OPEN CUT OR PIPEBURST



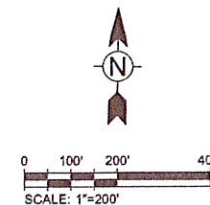
SLIPLINE OR CIPP



COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION

CNL

NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP.



CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

ATLAS 14

TMUA PROJECT NO. ES 2024-04
CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 5

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	01/2025	APPROVED:
ADDENDUM A	TT	11-25		DESIGNED	TI	01/2025	wzh for TGP
				SURVEY	TI	01/2025	
			PROFILE SCALE: HORIZONTAL	PROJ. MGR.			
				LEAD ENGR.			
			VERTICAL				
				FIELD MGR.			
			FILE:	DRAWING:			DESIGN MANAGER
			ATLAS PAGE NO.:	14			DATE: OCTOBER 2025
							SHEET 8 OF 44 SHEETS

ATLAS 14 - MANHOLE REHAB SCHEDULE

[illegible]

REHABILITATION METHODS

TYPE A
REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B
REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C
REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D
REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY
(418)

TYPE F_c
PRECAST CORBEL SECTION (418)

TYPE Gg
INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh
BENCH AND INVERT REHABILITATION (419)

TYPE Gk
PIPE SEAL REHABILITATION (421)

TYPE G₀
PLUG LIFT HOLES, PLUG HOLES (419)

TYPE G_p
SEAL PRE-CAST JOINTS (421)

TYPE Gr
PATCH HOLE (419)

TYPE G_s
EPOXY COATING (421)

TYPE I
REPLACEMENT OF MANHOLE STEPS - AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE T
CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT
COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMP HOLE REPLACEMENT (417)

16.4'(*italicised*) - DENOTES MANHOLE DEPTH FROM CITY OF TULSA ATLAS



CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN



ATLAS 14 MANHOLE SCHEDULE			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 5			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		<b style="font-size: 2em;">TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	
PLAN SCALE:	DRAWN	Tt:	01/20/2025
	DESIGNED	Tt:	01/20/2025
	SURVEY	Tt:	01/20/2025
	PROFILE SCALE: HORIZONTAL		
VERTICAL	PROJ. MGR.		APPROVED 
	LEAD ENGR.		
	FIELD MGR.		
	DESIGN MANAGER		
FILE:	DRAWING:	DATE:	OCTOBER 2025
ATLAS PAGE NO.: 14		SHEET 9 OF 40 SHEETS	

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SEE ATLAS 14
21st ST

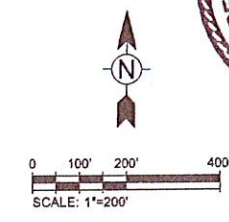
SEE ATLAS 34
S. Peoria Ave.

S. Lewis Ave.
SEE ATLAS 32

26th PL
SEE ATLAS 60

LEGEND

- | | | | |
|---|------------|---|-----|
| MANHOLE/LAMPHOLE REPLACEMENT | □ | POINT REPAIR | X |
| TOPSIDE MANHOLE/LAMPHOLE REPAIR | △ | LINE REPLACEMENT | — |
| INTERIOR MANHOLE REPAIR | ○ | OPEN CUT OR PIPEBURST | |
| APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN | ■ | SLIPLINE OR CIPP | |
| MANHOLE BUBBLE | 78
12.5 | COULD NOT LOCATE or ACCESS.
RECOMMENDATION TO BE MADE
DURING CONSTRUCTION | CNL |
| MANHOLE # | 78 | NOTE:
REFER TO LINE REHAB SCHEDULE TO DETERMINE IF LINE
REHAB IS OPEN CUT OR PIPEBURST, SLIPLINE OR CIPP. | |
| MANHOLE DEPTH (per atlas) | 12.5 | | |



ATLAS 33			
TMUA PROJECT NO. ES 2024-04			
CROW CREEK			
SPECIFIC REMEDIATION PLAN, CONTRACT 5			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
TETRA TECH			
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133			
TEL 918.248.3909			
REVISION	BY	DATE	PLAN SCALE:
ADDENDUM A	TT	11-25	DRAWN
			DESIGNED
			SURVEY
			PROJ. MGR.
			LEAD ENGR.
			FIELD MGR.
			FILE
			DRAWING
			ATLAS PAGE NO.: 33
			APPROVED
			DATE: OCTOBER 2025
			SHEET 10 OF 44 SHEETS

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

ATLAS 33 - MANHOLE REHAB SCHEDULE

Atlas	Basin	MH	Diameter (Ft)	Depth (Ft) (Rim to Invert)	Grade to Rim	Drop Manhole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fe (EA)	TYPE Gg (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Go (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. (VF)	DROP MANHOLE REPLACEMENT 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. DROP (VF)	MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. (VF)	DROP MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. DROP (VF)	LAMP/POLE REPLACEMENT (EA)	REPLACE LAMP/POLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)
33	44	044-0178	4	13.55	0	No	2435 S Peoria Ave	Grass/Dirt						170.2				1														
33	44	044-0179	4	13.31	0	No	2435 S Peoria Ave	Grass/Dirt						167.2				1														
33	44	044-0234	4	11.06	0.6	No	1516 E 21st St	Grass/Dirt				1																				
33	44	044-0237	4	12.44	.02	No	2124 S Saint Louis Ave	Grass/Dirt								1																
33	44	044-0244	4	9.05	0.6	No	2112 Terwilliger Blvd	Grass/Dirt		1						1																
33	44	044-0245	4	13.5	0	No	2208 Terwilliger Blvd	Grass/Dirt								1																
33	44	044-0247	4	13.39	0	Yes	2124 S Saint Louis Ave	Concrete Collar								1																
33	44	044-0249	4	10.69	0	No	2227 Terwilliger Blvd	Grass/Dirt	1																							
33	44	044-0250	4	14.4	0	No	1570 E 22nd Pl	Grass/Dirt								1																
33	44	044-0251	4	13.84	0	No	2240 S Troost Ave	Grass/Dirt						173.8				1	1													
33	44	044-0253	4	8.32	0.22	No	2431 S Trenton Ave	Grass/Dirt						104.5				1												1		
33	44	044-0254	0.667	7.09	-0.2	No	1615 E 26th St	Grass/Dirt																								
33	44	044-0257	4	10.5	0.35	No	2225 S Troost Ave	Grass/Dirt				1				1																
33	44	044-0260	4	9.6	0	No	2201 S Saint Louis Ave	Grass/Dirt						120.6				1														
33	44	044-0261	4	9.25	1.1	No	1505 E 22nd Pl	Grass/Dirt								1																
33	44	044-0541	6	13.42	0	No	1368 E 21st St S	Grass/Dirt	1									1													1	
33	44	044-0545	4	21.1	0	Yes	1411 E 21st St	Grass/Dirt		1																						
33	44	044-0595	4	8.48	0	No	2214 S Utica Ave	Grass/Dirt	1																					1		
33	44	044-0596	0.667	6.7	0.2	No	1505 E 22nd Pl	Grass/Dirt																								
33	45	045-0040	4	10.08	0	Yes	1304 E 26th Pl	Grass/Dirt								1																
33	45	045-0041	4	13.45	-0.24	No	1303 E 26th Pl	Grass/Dirt				1																				
33	45	045-0042	4	13.68	2.02	Yes	1323 E 26th Pl	Concrete Pavement				1																				
33	45	045-0044	0.667	9.2	0	No	1363 E 26th Pl	Grass/Dirt																								
33	45	045-0045	4	17.8	0	No	1318 E 25th St	Grass/Dirt				1																				
33	45	045-0046	0.667	12.95	0	No	1305 E 26th St	Grass/Dirt																								
33	45	045-0047	4	14.4	0	Yes	1336 E 25th St	Grass/Dirt		1																						
33	45	045-0735	4	7.80	0	No	1324 E 26th St	Concrete Collar				1																				
33	45	045-0824	4	6.46	0	No	1304 E 26th Pl	Grass/Dirt			1					1																
33	62	062-0001	4	8.74	1.40	No	1803 E 27th St	Grass/Dirt	1																							1
33	62	062-0002	Not Found	17.65	UNK	No	2546 S Yorktown Ave	Grass/Dirt																								
33	62	062-0003	4	16.2	0	No	2584 S Yorktown Ave	Asphalt	1							1			1													1
33	62	062-0005	4	17.54	0	No	2560 S Yorktown Ave	Grass/Dirt						220.3				1														1
33	62	062-0012	4	15.9	0	No	2520 S Yorktown Ave	Grass/Dirt																								
33	62	062-0014	4	14.83	0	No	2004 E 22nd Pl	Other	1							1																1
33	62	062-0015	4	15.6	0	No	2049 E 22nd Pl S	Asphalt	1							1																1
33	62	062-0021	4	20.09	0.3	No	2057 E 22nd Pl S	Gravel													1	14.1										
33	62	062-0982	4	18.15	0	No	2520 S Yorktown Ave	Grass/Dirt									1															
33	62	062-1049	4	18	0	Yes	2055 E 22nd Pl S	Gravel			1				1	1																
33	62	062-1055	4	9.9	0	No	1824 E 22nd Pl	Grass/Dirt			1																					
33	62	062-1056	4	15.47	0	Yes	1824 E 22nd Pl	Concrete Collar									1	1														

MH 062-0002 IS LISTED AS "NOT FOUND", ACTUAL REHABILITATION WILL BE DETERMINED BY ONSITE ENGINEER DURING LINE SEGMENT 062-0003 TO 062-0002 CONSTRUCTION

REHABILITATION METHODS

TYPE A

REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B

REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C

REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D

REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY
(418)

TYPE Fc

PRECAST CORBEL SECTION (418)

TYPE Gc

INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE GH

BENCH AND INVERT REHABILITATION (419)

TYPE GR

PIPE SEAL REHABILITATION (421)

TYPE Gc

PLUG LIFT HOLES, PLUG HOLES (419)

TYPE Gp

SEAL PRE-CAST JOINTS (421)

TYPE Gr

PATCH HOLE (419)

TYPE Gs

EPOXY COATING (421)

TYPE I

REPLACEMENT OF MANHOLE STEPS -- AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE I

CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT

COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT

ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT

LAMP HOLE REPLACEMENT (417)



ATLAS 33 - MANHOLE SCHEDULE				
TMUA PROJECT NO. ES 2024-04				
CROW CREEK				
SPECIFIC REMEDIATION PLAN, CONTRACT 5				
CITY OF TULSA, OKLAHOMA				
WATER AND SEWER DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY:				
		TETRA TECH 7645 E 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918 249 3908		
PLAN SCALE:	DRAWN	Ti	01/2025	APPROVED 
	DESIGNED	Ti	01/2025	
	SURVEY	Ti	01/2025	
PROFILE SCALE: HORIZONTAL	PROJ MGR.			
	LEAD ENGR.			
VERTICAL				
	FIELD MGR.			
FILE:		DRAWING:		DESIGN MANAGER
ATLAS PAGE NO.: 33		DATE: OCTOBER 2025		
		SHEET 12 OF 44 SHEETS		

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

16 4**(Italicised)* - DENOTES MANHOLE DEPTH FROM CITY OF TULSA ATLAS

1/18/2025 2:11 PM
2-113831200-113831CADI ShopFiles\Contract 51New\10-A\las 33 MH Schedule.dwg

SEE ATLAS 61
S. Peoria Ave.

NOTE: VUC VEHICLES DO NOT CROSS BRIDGE

S. Peoria Ave.

S. Lewis Ave.

S. Peoria Ave.

SEE ATLAS 59

11/18/2025 2:14 PM
P:\113831200-11383-24003\CAD\ShootFiles\Contract 5\New\16-ATLAS 60_Base.dwg

ATLAS 60 - MANHOLE SCHEDULE - 1

Atlas	Basin	MH	Diameter (ft)	Depth (ft) (Rim to Invert)	Grade to Rim	Drop Manhole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fc (EA)	TYPE Gc (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Gs (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. (VF)	DROP MANHOLE REPLACEMENT 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. DROP (VF)	MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. (VF)	DROP MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. DROP (VF)	LAMPHOLE REPLACEMENT (EA)	REPLACE LAMPHOLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)
60	45	045-0059	4	10.64	0.59	No	1307 E 27th Pl	Grass/Dirt		1									1													
60	45	045-0060	4	8.90	1.50	No	1304 E 27th St	Grass/Dirt					1						1													
60	45	045-0061	4	12.89	1.63	No	1316 E 27th St	Grass/Dirt													1	6.9								1		
60	45	045-0081	0.66	7.79			1316 E 27th Pl	Grass/Dirt																								
60	45	045-0167	4	7.33	0	No	3047 S Peoria Ave	Concrete Pavement	1							1																
60	45	045-0168	4	7.25	0	No	1325 E 31st St	Concrete Collar		1																						
60	45	045-0169	4	4.25	0	No	3025 S Quaker Ave	Grass/Dirt								1																
60	45	045-0174	4	8.79	0	No	1345 E 29th St	Grass/Dirt						136.8		1																
60	45	045-0175	4	10.89	0.24	Yes	1359 E 29th St	Grass/Dirt								1																
60	45	045-0176	4	11.39	0	No	1385 E 29th St	Grass/Dirt								1																
60	45	045-0178	4	12.19	0	Yes	1359 E 29th St	Grass/Dirt								1																
60	45	045-0180	4	5.1	0	No	1329 E 29th St	Grass/Dirt		1						1																
60	45	045-0181	4	13.10	0	No	3024 S Quaker Ave	Grass/Dirt	1																							
60	45	045-0182	4	12.35	0	No	3007 S Peoria Ave	Grass/Dirt				1				1																
60	45	045-0184	4	9.04	0	No	2930 S Quaker Ave	Grass/Dirt								1																1
60	45	045-0237	4	13.4	0.25	No	1550 E 29th St	Grass/Dirt	1					168.3		1																1
60	45	045-0238	4	15.23	0	No	1615 E 29th St	Concrete Pavement	1																							1
60	45	045-0239	5	14.83	.3	No	1615 E 29th St	Grass/Dirt		1				232.8				1														1
60	45	045-0240	4	14.1	0.4	Yes	1615 E 29th St	Grass/Dirt				1																				1
60	45	045-0242	4	15.4	0	No	2737 S Rockford Rd	Grass/Dirt	1							1																1
60	45	045-0243	4	11.5	0	No	2733 S Rockford Rd	Grass/Dirt						144.4																		1
60	45	045-0244	5	10.86	0	Yes	2745 S Rockford Rd	Grass/Dirt						170.5																		1
60	45	045-0246	4	8.75	0.1	Yes	2690 Terwilliger Blvd	Grass/Dirt	1						1	1																1
60	45	045-0311	4	7.0	0	No	1530 E 27th St	Other	1																							1
60	45	045-0312	4	12.51	0	No	2707 S Rockford Rd	Grass/Dirt	1							1																
60	45	045-0314	4	14.95	0	Yes	1550 E 29th St	Grass/Dirt											1													
60	45	045-0315	4	14.23	0.8	No	1550 E 29th St	Grass/Dirt								1																
60	45	045-0316	4	16.6	0	No	1550 E 29th St	Grass/Dirt							1	1																
60	45	045-0318	4	13.30	0	No	1360 E 29th St	Grass/Dirt		1																						
60	45	045-0329	4	8.4	0.24	Yes	1623 E 29th St	Grass/Dirt											1													
60	45	045-0331	4	5.45	0	No	2820 S Utica Ave	Grass/Dirt		1				68.5																		
60	45	045-0337	4	5.6	0	No	1626 E 29th St	Other								1																
60	45	045-0338	4	4.4	0	No	1708 E 30th St	Concrete Pavement								1																
60	45	045-0339	4	7.05	0	No	2929 S Utica Ave	Grass/Dirt								1																
60	45	045-0341	4	10.33	0	No	1731 E 30th St	Other							1																	
60	45	045-0342	4	8.50	-0.1	No	1744 E 29th St	Grass/Dirt								1			1													
60	45	045-0345	4	12.85	0.2	No	1641 E 31st St	Grass/Dirt				1																				
60	45	045-0347	4	7.4	0	No	1708 E 30th St	Grass/Dirt	1																							
60	45	045-0348	4	10.53	1	No	1735 E 30th Pl	Grass/Dirt		1																						
60	45	045-0349	4	7.5	1	No	1742 E 30th St	Grass/Dirt	1																							
60	45	045-0350	4	9.14	0	No	1754 E 30th St	Grass/Dirt	1																							
60	45	045-0351	4	10.4	0	No	3020 S Wheeling Ave	Grass/Dirt				1																				
60	45	045-0353	4	6.60	0	No	1919 E 30th Pl	Grass/Dirt													1	0.6										
60	45	045-0355	4	7.2	0	No	3021 S Wheeling Ave	Asphalt		1																						

REHABILITATION METHODS

TYPE A
REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B
REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C
REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D
REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY
(418)

TYPE Fc
PRECAST CORBEL SECTION (418)

TYPE Gg
INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh
BENCH AND INVERT REHABILITATION (419)

TYPE Gk
PIPE SEAL REHABILITATION (421)

TYPE Go
PLUG LIFT HOLES, PLUG HOLES (419)

TYPE G_D
SEAL PRE-CAST JOINTS (421)

TYPE Gr
PATCH HOLE (419)

TYPE Gs
EPOXY COATING (421)

TYPE I
REPLACEMENT OF MANHOLE STEPS - AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE I
CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT
COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMP HOLE REPLACEMENT
LAMP HOLE REPLACEMENT (417)



ATLAS 60 - MANHOLE SCHEDULE - 1

TMUA PROJECT NO. ES 2024-04

CROW CREEK
SPECIFIC REMEDIATION PLAN, CONTRACT 5

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:



REVISION	BY	DATE	PLAN SCALE:	DRAWN	T:	01/2025	APPROVED:  T. G. B.
ADDENDUM A	TT	11-25		DESIGNED	T:	01/2025	
				SURVEY	T:	01/2025	
			PROFILE SCALE:	PROJ. MGR.			
			HORIZONTAL	LEAD ENGR.			
			VERTICAL	FIELD MGR.			
			FILE:	DRAWING:			
			ATTACH PAGE NO.:	80			DESIGN MANAGER
							DATE: OCTOBER 2025
							SHEET 19 OF 44 SHEETS

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

16.4* (*italicised*) - DENOTES MANHOLE DEPTH FROM CITY OF TULSA ATLAS

ATLAS 60 - MANHOLE SCHEDULE - 2

Atlas	Basin	MH	Diameter (ft)	Depth (ft) (Rim to Invert)	Grade to Rim	Drop Manhole	Address	Surface Type	TYPE A (EA)	TYPE B (EA)	TYPE C (EA)	TYPE D (EA)	TYPE Fc (EA)	TYPE Gg (SF)	TYPE Gh (EA)	TYPE Gk (EA MH)	TYPE Go (EA MH)	TYPE Gp (EA)	TYPE Gr (EA MH)	TYPE Gs (SF)	MANHOLE REPLACEMENT, 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. (VF)	DROP MANHOLE REPLACEMENT 4' I.D. (EA)	Additional Depth OVER 6' FOR 4' I.D. DROP (VF)	MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. (VF)	DROP MANHOLE REPLACEMENT 5' I.D. (EA)	Additional Depth OVER 6' FOR 5' I.D. DROP (VF)	LAMPHOLE REPLACEMENT (EA)	REPLACE LAMPHOLE FRAME AND COVER (EA)	SEALED LID (EA)	MANHOLE STEP REMOVAL AND REPLACEMENT, TYPE I (PER MH)
60	45	045-0356	4	6.33	0	No	3001 S Wheeling Ave	Concrete Pavement		1											1											
60	45	045-0357	4	5	0	No	1905 E 30th St	Grass/Dirt													1											
60	45	045-0358	4	5.55	0	No	1817 E 30th St	Grass/Dirt													1											
60	45	045-0359	4	7.38	0	No	2936 S Yorktown Ave	Grass/Dirt													1	1.4										
60	45	045-0362	4	11.89	0	No	2109 E 30th Pl	Grass/Dirt		1																						
60	45	045-0363	4	8.83	0.5	No	2126 E 30th St	Grass/Dirt				1																				
60	45	045-0365	4	5.42	0	No	2121 E 30th St	Grass/Dirt				1																				
60	45	045-0366	4	7.9	0	No	2141 E 30th St	Grass/Dirt								1			1													
60	45	045-0367	4	7.14	0	No	2141 E 30th St	Grass/Dirt								1			1													
60	45	045-0369	4	5.94	0	No	2121 E 30th St	Grass/Dirt				1																				
60	45	045-0403	4	9.05	0	Yes	3091 S 2nd St	Concrete Collar				1																				
60	45	045-0404	4	14.24	1.9	Yes	2151 E 31st St	Grass/Dirt	1							1																
60	45	045-0405	4	11.66	0	No	2131 E 31st St	Grass/Dirt											1													
60	45	045-0406	4	12.05	0	No	3049 S Yorktown Ave	Grass/Dirt																								
60	45	045-0407	4	5.7	0	No	2222 E 30th Pl	Grass/Dirt				1																				
60	45	045-0408	4	8.10	0	No	2222 E 30th Pl	Grass/Dirt											1													
60	45	045-0409	4	10.51	0	Yes	2215 E 30th Pl	Grass/Dirt				1																				
60	45	045-0411	4	7	0	No	2242 E 31st St	Grass/Dirt																								
60	45	045-0412	4	8.4	0	No	2252 E 31st St	Grass/Dirt		1																						
60	45	045-0413	4	9.03	0	No	2240 E 31st St	Grass/Dirt				1																				
60	45	045-0414	4	6.28	0.14	No	2242 E 30th Pl	Grass/Dirt					1																			
60	45	045-0416	4	10.63	0.3	No	2375 E 31st St	Grass/Dirt				1																				1
60	45	045-0558	4	10.1	-0.16	No	1550 E 29th St	Grass/Dirt			1																					1
60	45	045-0559	5	13.9	0	No	1606 E 29th St	Grass/Dirt																								
60	45	045-0576	4	6.54	0	No	2733 S Utica Ave	Grass/Dirt				1																				
60	45	045-0580	4	6.5	0	No	2701 S Victor Ave	Grass/Dirt																								
60	45	045-0581	4	6.49	0	No	2701 S Victor Ave	Grass/Dirt																								
60	45	045-0582	4	7.04	0.2	No	1836 E 27th St	Grass/Dirt	1																							
60	45	045-0586	4	6.26	0	No	2845 S Victor Ave	Concrete Pavement					1																			
60	45	045-0587	4	7.25	0	No	2847 S Victor Ave	Grass/Dirt																								
60	45	045-0589	4	5.23	0	No	2801 S Victor Ave	Grass/Dirt																								
60	45	045-0723	4	8.82	0	Yes	1345 E 29th St	Grass/Dirt																								
60	45	045-0724	0.667	4.70	0	No	1329 E 29th St	Grass/Dirt																								
60	45	045-0732	4	5.45	0	No	3031 S Rockford Rd	Asphalt				1																				
60	45	045-0757	4	5.9	0	No	2222 E 30th Pl	Grass/Dirt																								
60	45	045-0767	4	12.1	0	No	2707 S Rockford Rd	Grass/Dirt																								
60	45	045-0775	4	8.87	0.3	Yes	2687 S Utica Ave	Grass/Dirt	1																							
60	45	045-0788	4	6.9	0.15	No	3007 S Rockford Rd	Grass/Dirt	1																							
60	45	045-0791	4	4.32	0.2	No	3015 S Rockford Rd	Other	1																							
60	45	045-0792	4	8.48	0	Yes	3015 S Rockford Rd	Grass/Dirt				1																				
60	45	045-0795	4	16.19	0	No	3020 S Trenton Ave	Grass/Dirt	1																							
60	45	045-0796	4	14.15	0	No	3020 S Trenton Ave	Grass/Dirt	1																							
60	62	062-0934	4	11.05	1.32	No	1831 E 27th St	Grass/Dirt																								
60	62	062-0935	4	11.87	0	No	1831 E 27th St	Grass/Dirt		1																						
60	62	062-0936	4	11.61	0	No	1831 E 27th St	Grass/Dirt				1																				

REHABILITATION METHODS

TYPE A
REPLACEMENT OF MANHOLE COVER, FRAME AND FRAME SEAL (418)

TYPE B
REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C
REPLACEMENT OF MANHOLE COVER, FRAME, FRAME SEAL AND CHIMNEY (418)

TYPE D
REPLACEMENT OF MANHOLE FRAME SEAL AND CHIMNEY (418)

TYPE Fc
PRECAST CORBEL SECTION (418)

TYPE Gg
INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh
BENCH AND INVERT REHABILITATION (419)

TYPE Gk
PIPE SEAL REHABILITATION (421)

TYPE Go
PLUG LIFT HOLES, PLUG HOLES (419)

TYPE Gp
SEAL PRE-CAST JOINTS (421)

TYPE Gq
PATCH HOLE (419)

TYPE Gs
EPOXY COATING (421)

TYPE I
REPLACEMENT OF MANHOLE STEPS - AT THE TIME OF MANHOLE REHABILITATION, MANHOLE STEPS SHALL BE EVALUATED AND REPLACED ON A PER-MANHOLE BASIS, AND INCLUDE ALL THE STEPS IN THE MANHOLE REGARDLESS OF SIZE OR HEIGHT OF THE MANHOLE. (420)

TYPE T
CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT
COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT
LAMPHOLE REPLACEMENT (417)



ATLAS 60 - MANHOLE SCHEDULE - 2

TMUA PROJECT NO. ES 2024-04

CROW CREEK

SPECIFIC REMEDIATION PLAN, CONTRACT 5

CITY OF TULSA, OKLAHOMA

WATER AND SEWER DEPARTMENT

TETRA TECH

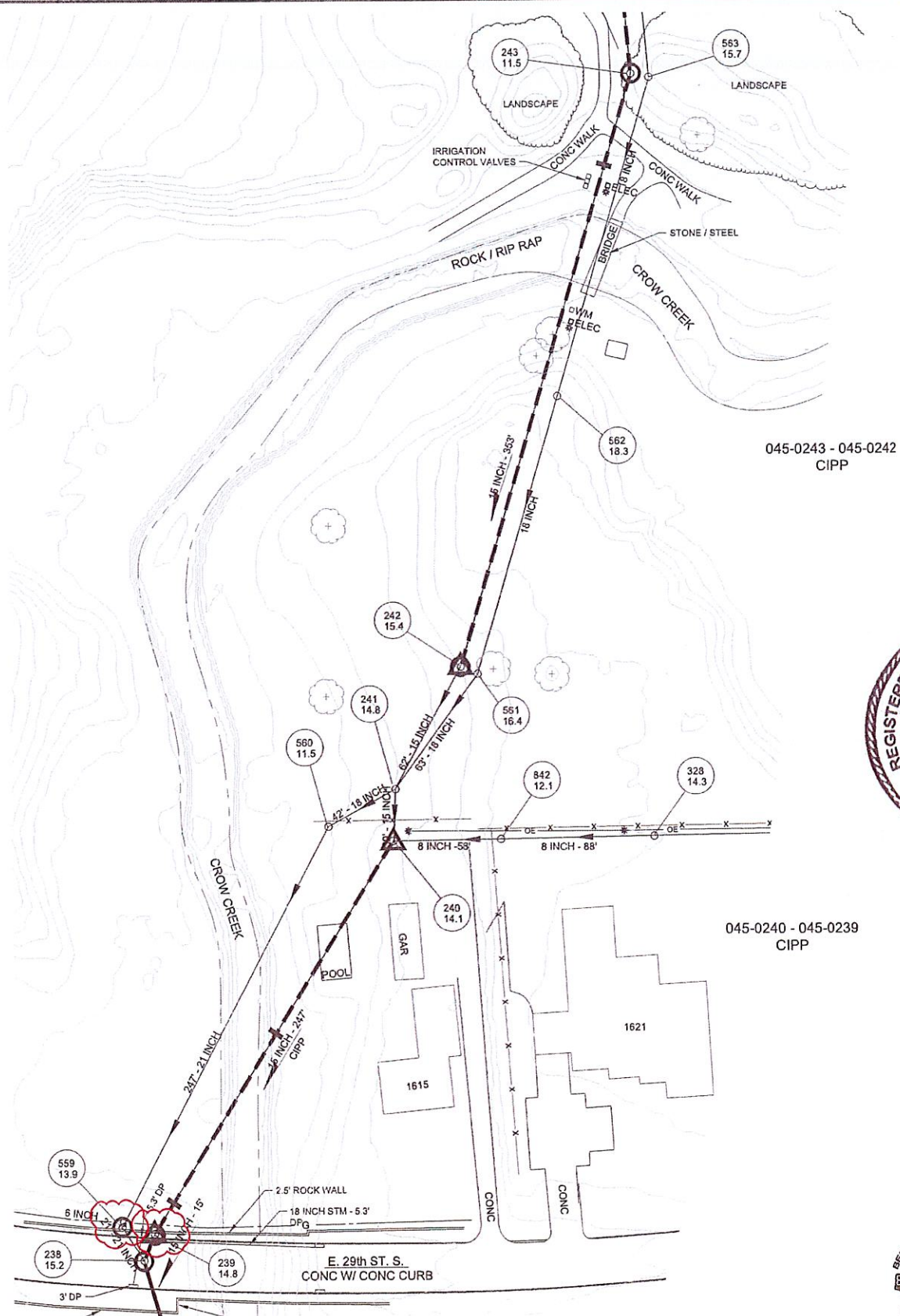
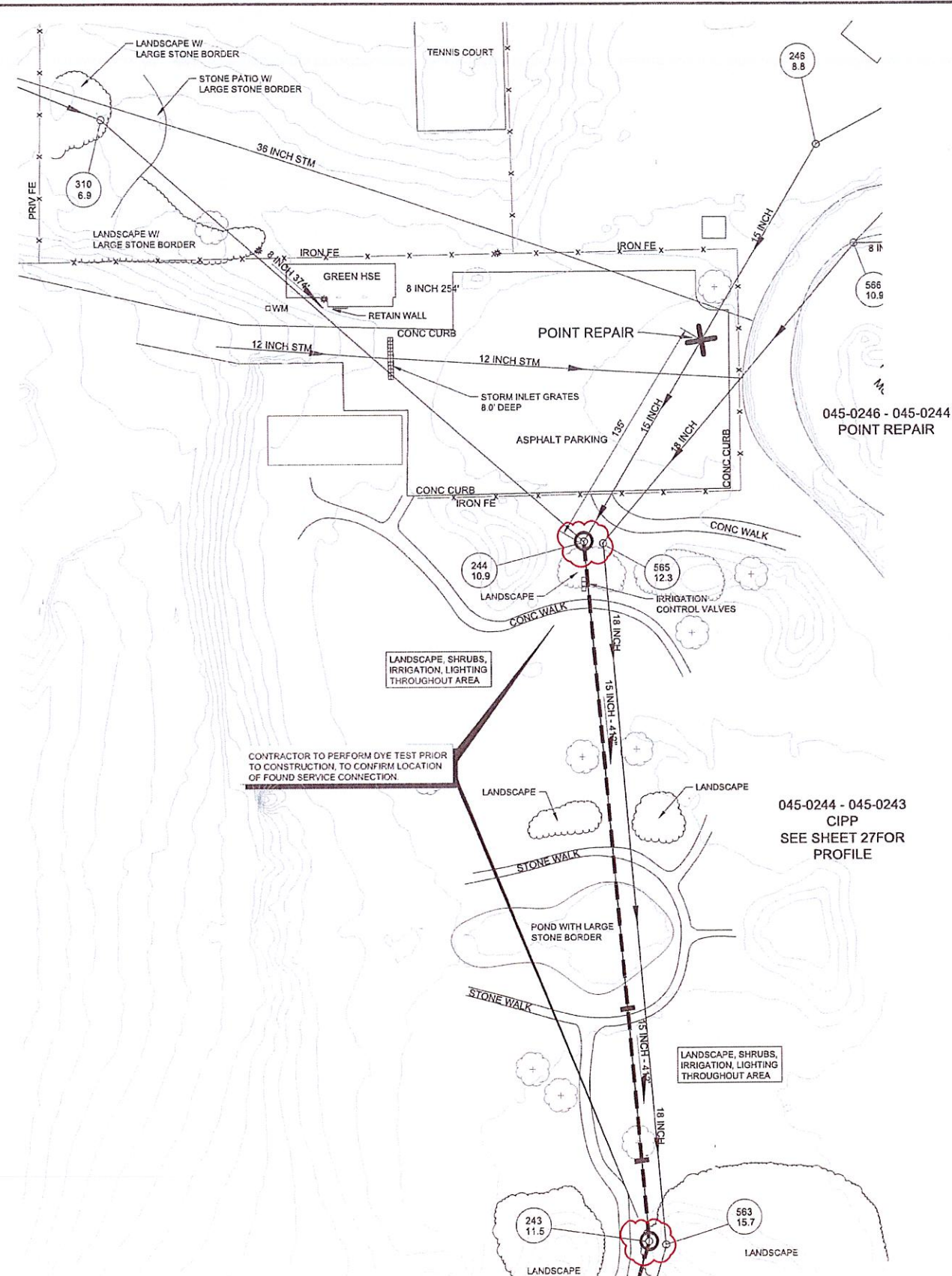
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133

TEL 918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	T1	01/2025	APPROVED:
ADDENDUM A	TT	11-25		DESIGNED	T1	01/2025	a2c for T6P
				SURVEY	T1	01/2025	
			PROFILE SCALE:	PROJ MGR.			
			HORIZONTAL	LEAD ENGR.			
			VERTICAL	FIELD MGR.			DESIGN MANAGER
			FILE:	DRAWING:			DATE: OCTOBER 2025
			ATLAS PAGE NO.:	60			SHEET 20 OF 44 SHEETS

CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA REGULATORY FLOODPLAIN

16.4' (italicised) - DENOTES MANHOLE DEPTH FROM CITY OF TULSA ATLAS



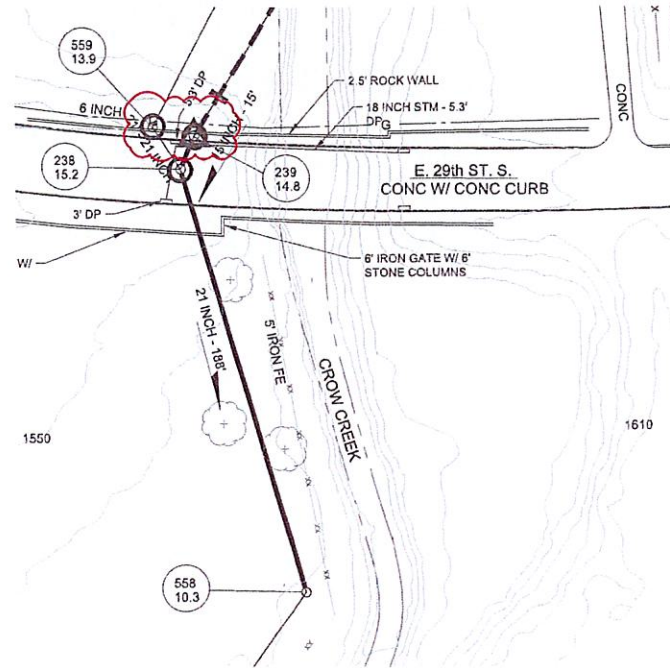
APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

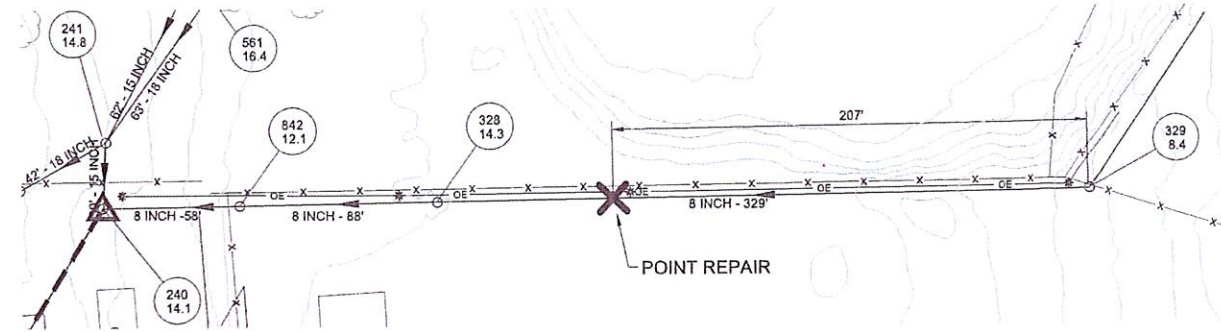
ATLAS 60 - DETAILS - 1
TMUA PROJECT NO. ES 2024-04
CROW CREEK SPECIFIC REMEDIATION PLAN, CONTRACT 5
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL918.249.3809

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TL	01-2025	APPROVED: 	
ADDENDUM A	TT	11-25		DESIGNED	TL	01-2025		
				SURVEY	TL	01-2025		
				PROFILE SCALE: HORIZONTAL	PROJ. MGR.			
				VERTICAL	LEAD ENGR.			
				FIELD MGR.			DESIGN MANAGER	
			FILE:	DRAWING:			DATE: OCTOBER 2025	
			ATLAS PAGE NO:	80			SHEET 21 OF 44 SHEETS	

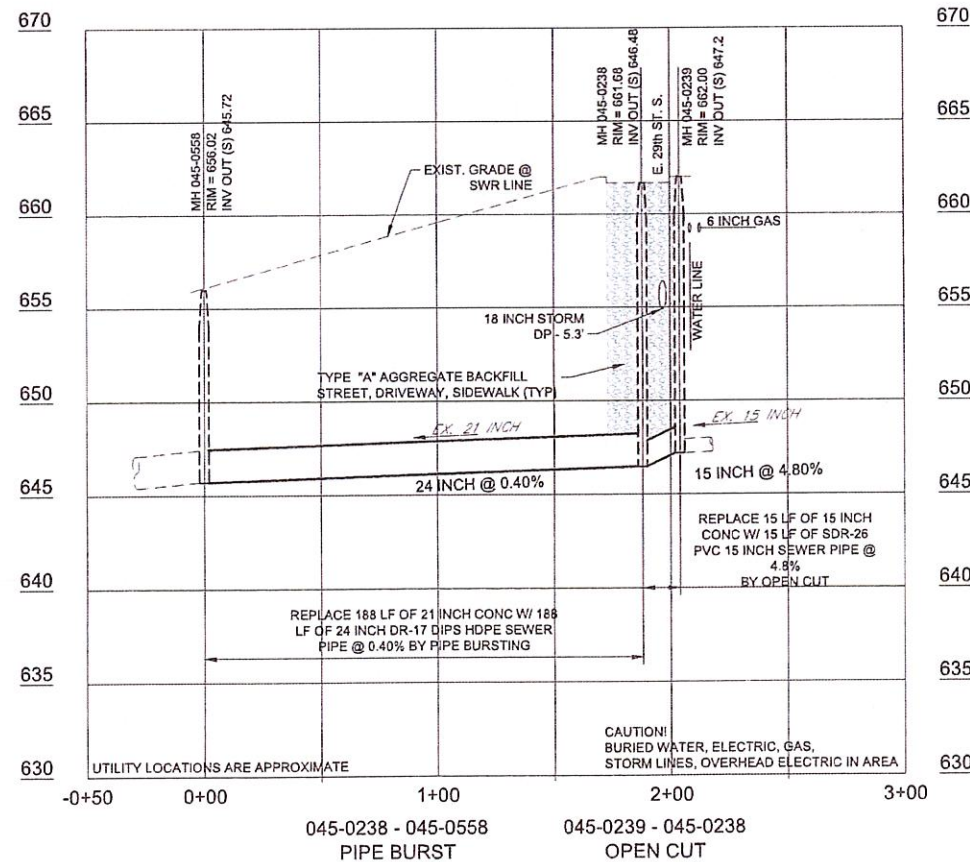
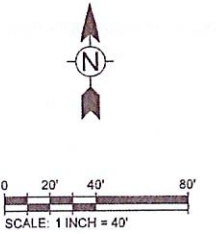


045-0239 - 045-0238
OPEN CUT

045-0238 - 045-0558
PIPE BURST EXISTING 21 INCH
WITH 24 INCH



045-0329 - 045-0328
POINT REPAIR



045-0238 - 045-0558
PIPE BURST

045-0239 - 045-0238
OPEN CUT



ATLAS 60 - DETAILS - 2	
TMUA PROJECT NO. ES 2024-04	
CROW CREEK	
SPECIFIC REMEDIATION PLAN, CONTRACT 5	
CITY OF TULSA, OKLAHOMA	
WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
	TETRA TECH
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133	
TEL 918 249 3808	

REVISION	BY	DATE	PLAN SCALE	DRAWN	TT	01/2025	APPROVED
ADDENDUM A	TT	11-25					
				DESIGNED	TT	01/2025	
				SURVEY	TT	01/2025	
			PROFILE SCALE: HORIZONTAL	PROJ MGR.			
			VERTICAL	LEAD ENGR.			
				FIELD MGR.			
			FILE	DRAWING			DESIGN MANAGER
			ATLAS PAGE NO. 60				DATE: OCTOBER 2025
							SHEET 22 OF 44 SHEETS

APPROXIMATE LOCATION EXISTING SERVICE TAP,
CONTRACTOR TO VERIFY LOCATIONS THROUGH
PRECONSTRUCTION CCTV DATA

NOTE:
FOR LINE WORK IN PAVED AREAS, PAVEMENT AND
TRENCHING TO BE COMPLETED PER CITY OF TULSA
STD. 713.

GAS LINE LOCATIONS SHOWN ARE FROM OKLAHOMA
NATURAL GAS ATLAS AND ARE APPROXIMATE

SEE ATLAS 96

S. Peoria Ave.

S. Lewis Ave.
SEE ATLAS 94

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	01/2025	
ADDENDUM A	TT	11-25		DESIGNED	TI	01/2025	
				SURVEY	TI	01/2025	
			PROFILE SCALE:	PROJ. MGR.			
			HORIZONTAL	LEAD ENGR			
			VERTICAL	FIELD MGR.			
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	95			

APPROVED
 DATE: OCTOBER 2025
 SHEET 28 OF 44 SHEETS

REHABILITATION METHODS

TYPE A
REPLACEMENT OF MANHOLE COVER, FRAME AND
FRAME SEAL (418)

TYPE B
REPLACEMENT OF MANHOLE FRAME SEAL (418)

TYPE C
REPLACEMENT OF MANHOLE COVER, FRAME, FRAME
SEAL AND CHIMNEY (418)

TYPE D
REPLACEMENT OF MANHOLE FRAME SEAL & CHIMNEY
(418)

TYPE Fc
PRECAST CORBEL SECTION (418)

TYPE Gg
INTERIOR MANHOLE WALL REHABILITATION (421)

TYPE Gh
BENCH AND INVERT REHABILITATION (419)

TYPE Gk
PIPE SEAL REHABILITATION (421)

TYPE Go
PLUG LIFT HOLES, PLUG HOLES (419)

TYPE Gp
SEAL PRE-CAST JOINTS (421)

TYPE Gr
PATCH HOLE (419)

TYPE Gs
EPOXY COATING (421)

TYPE I
REPLACEMENT OF MANHOLE STEPS - AT THE
TIME OF MANHOLE REHABILITATION, MANHOLE
STEPS SHALL BE EVALUATED AND REPLACED ON
A PER-MANHOLE BASIS, AND INCLUDE ALL THE
STEPS IN THE MANHOLE REGARDLESS OF SIZE
OR HEIGHT OF THE MANHOLE. (420)

TYPE I
CLEAN MANHOLE (Special)

MANHOLE REPLACEMENT
COMPLETE MANHOLE REPLACEMENT (416)

MANHOLE REPLACEMENT
ADDITIONAL FOOTAGE (416)

LAMPHOLE REPLACEMENT
LAMPHOLE REPLACEMENT (417)

16.4**(italicised)* - DENOTES MANHOLE DEPTH FROM CITY OF TULSA ATLAS



ATLAS 95 - MANHOLE SCHEDULE					
TMUA PROJECT NO. ES 2024-04					
CROW CREEK					
SPECIFIC REMEDIATION PLAN, CONTRACT 5					
CITY OF TULSA, OKLAHOMA					
WATER AND SEWER DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY:					
		TETRA TECH 7545 E 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3509			
TE 25	PLAN SCALE:	DRAWN	Tl	01/2025	APPROVED  DESIGN MANAGER DATE: OCTOBER 2025
		DESIGNED	Tl	01/2025	
		SURVEY	Tl	01/2025	
	PROFILE SCALE: HORIZONTAL	PROJ. MGR.			
		LEAD ENGR.			
	VERTICAL	FIELD MGR.			
FILE:	DRAWING:				DATE: 30 OF 4 SHEETS
ATLAS PAGE NO.	95				