

# LEGEND

ATLAS SHEET NUMBER	177
ATLAS SHEET BOUNDARY	
MANHOLE CALLOUT	MANHOLE NUMBER MANHOLE DEPTH (SEE NOTE 6 MANHOLE REHAB., PAGE 3)
MAINTENANCE BOUNDARY	
MAINTENANCE DISTRICT	80-N
WOOD FENCE	WD
CHAIN LINK FENCE	CL
OVERHEAD UTILITIES	OVH
POWER POLE	PP
APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN	
STORM SEWER LINE AND INLET	SD
MANHOLE/LAMPHOLE REPLACEMENT	
TOPSIDE MANHOLE/LAMPHOLE REPAIR	
INTERIOR MANHOLE REPAIR	
MANHOLE BUBBLE	MANHOLE # MANHOLE DEPTH (per atlas)
POINT REPAIR	X
SLIPLINE OR CURED IN PLACE PIPE	
OPEN CUT OR PIPEBURST	



## UTILITY COORDINATION INFORMATION

TULSA ENGINEERING SERVICES DEPARTMENT	
WATER DESIGN	596-9566
WASTEWATER DESIGN	596-9564
TRANSPORTATION DESIGN	596-9636
TRAFFIC ENGINEERING DESIGN	596-9741
STORMWATER DESIGN	596-9498
COT UTILITY COORDINATION	596-9649
OKLAHOMA NATURAL GAS CO.	831-8215
COX COMMUNICATIONS	286-4716
AEP/USO	250-6257
AT&T	596-4237
MTTA	830-0024

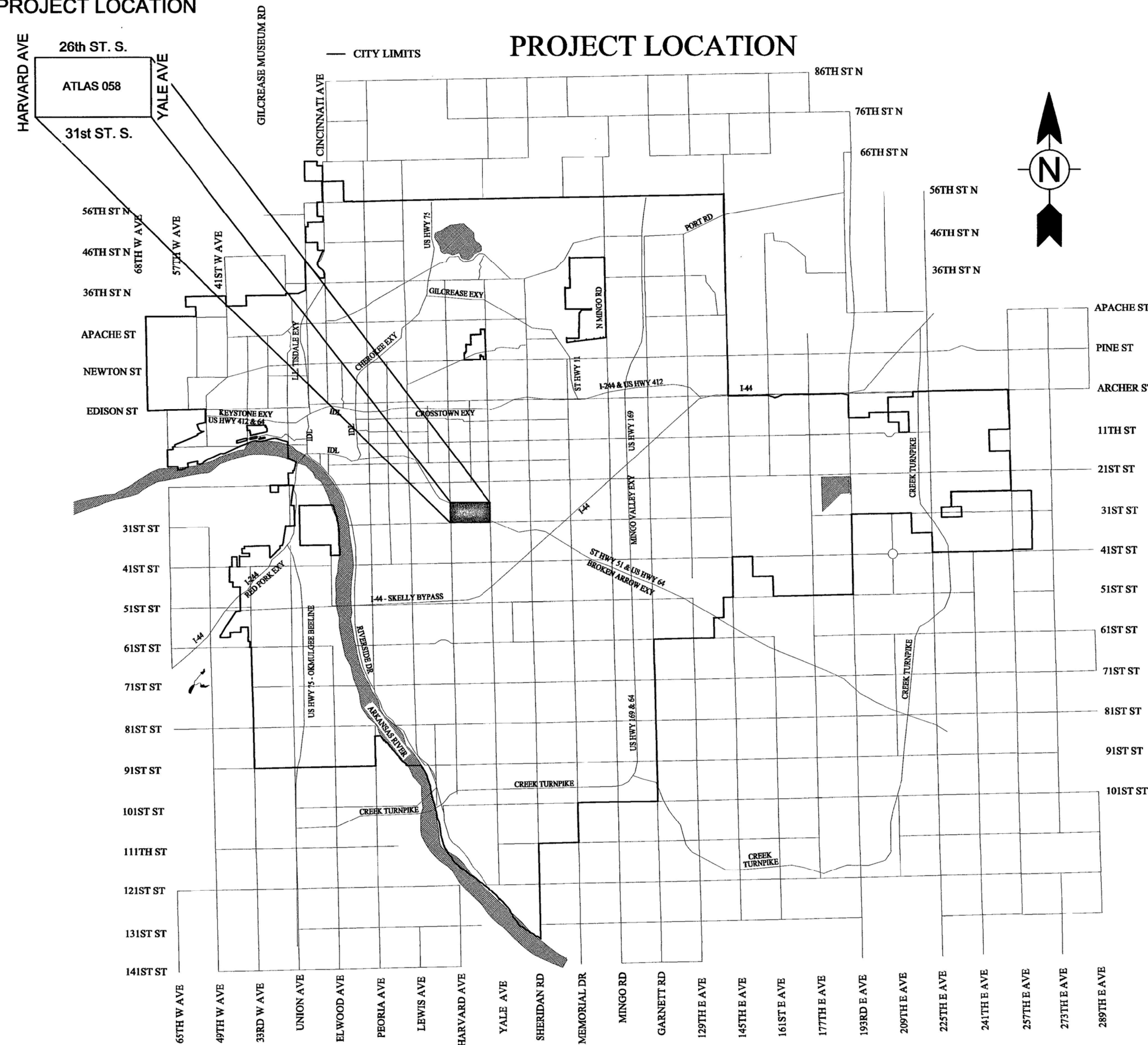
SURVEY DATUM:  
HORIZONTAL - OKLAHOMA STATE PLANE COORDINATE (NAD 1983)  
VERTICAL - (NAVD 1988)

# CONSTRUCTION PLANS FOR UPPER JOE CREEK EAST BRANCH SPECIFIC REMEDIATION PLAN, C2

TMUA PROJECT NO. ES 2022-03

WATER AND SEWER DEPARTMENT  
CITY OF TULSA, OKLAHOMA

## PROJECT LOCATION



**TETRA TECH**

7645 E. 63rd Street, Suite 301, Tulsa, OK 74133  
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CA NO. 2388 (EXP. 6-30-2025)

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APPROVED BY

*[Signature]*

WATER AND SEWER DIRECTOR

12-16-2024

DATE

*[Signature]*

RYAN L. MITTASCH, P.E. NO. 21102  
PROJECT MANAGER, TETRA TECH



DATE

TMUA PROJECT NO. ES 2022-03, UPPER JOE CREEK, EAST BRANCH SPECIFIC REMEDIATION PLAN, C2

ESTIMATED CONSTRUCTION QUANTITIES

PAY ITEM NOTES

Summary of Pipeline Improvements Schedule - BASE BID							
Item No.	Description	Specifications	Unit	Pay Item Note	ATLAS SHEET		
					58	Extra	Total
1	8" Point Repair	412	(EA)	12,14	2		2
2	Additional Footage (8" Point Repair)	412	(LF)	1,12,14		5	5
3	8" Slipline, SDR 21	409	(LF)	12	851		851
4	8" Pipebursting Replacement, DR-17 DIPS HDPE	405,408	(LF)	12,24	1257		1,257
5	8" Open Cut Only, SDR 26 PVC	405	(LF)	2,12,14	735		735
6	Obstruction Removal	423	(EA)	1,11,14		2	2
7	External Drop Replacement	Special	(EA)	23	3		3
8	Flowable Fill	202	(CY)	1,13		25	25
9	Pavement Removal and Replacement -Asphalt	402	(SY)	3	7		7
10	Pavement Removal and Replacement -Concrete Street	402	(SY)	3	13		13
11	Pavement Removal and Replacement -Concrete Driveway, Sidewalk	402	(SY)	3	12		12
12	Curb and Gutter Removal and Replacement	402	(LF)		20		20
13	Sodding	402	(SY)	5	1488		1,488
14	Service Reconnections	405,408,409,410	(EA)	9,10,20	68		68
15	PVC Service, Schedule 40	405,408,409,410	(LF)	4,9,10,18,21	340		340
16	Video Pre-Inspection	415	(LF)	12	3276		3,276

Summary of Manhole Rehabilitation Schedule - BASE BID							
Item No.	Description	Specifications	Unit	Pay Item Note	ATLAS SHEET		
					58	Extra	Total
17	Replace Cover, Frams and Frame Seal	418 (Type A)	(EA)		1		1
18	Replace Frame Seal	418 (Type B)	(EA)		4		4
19	Replace Cover, Frame and Frame Seal, and Chimney	418 (Type C)	(EA)	1,15		1	1
20	Replace Frame Seal, and Chimney	418 (Type D)	(EA)			1	1
21	Precast Corbel Section	418 (Type Fc)	(EA)	1,16,17,22		1	1
22	Interior Manhole Rehabilitation	421 (Type Gg)	(SF)	1		100	100
23	Bench and Invert Rehabilitation	419 (Type Gh)	(EA)	1		1	1
24	Grout and Coat Pipe Seal	421 (Type Gk)	(EA)		4		4
25	Plug Lift Holes , Plug Holes	419 (Type Go)	(EA)	1		1	1
26	Seal Precast Joints	421 (Type Gp)	(EA)		2		2
27	Patch Lift Hole/ Patch Hole	419 (Type Gr)	(EA)		9		9
28	Epoxy Coating	421 (Type Gs)	(SF)	6		25	25
29	Manhole Replacement (4' ID)	416	(EA)	16,17,22	3		3
30	Manhole (4' ID) Additional Vertical Foot over 6' depth	416	(VF)	6	3		3
31	Lamphole Replacement or Installation	417	(EA)		1		1
32	Lamphole Frame and Cover	417	(EA)		1	3	4
33	Sealed Lid	426	(EA)	15,17	1		1
34	Manhole Cleaning	Special (Type T)	(EA)	1,7		1	1

Summary of General Contract Quantities - BASE BID							
Item No.	Description	Specifications	Unit	Pay Item Note	ATLAS SHEET		
					58	Extra	Total
35	Traffic Control	ODOT Specification 880	(LS)	8			1
36	Mobilization	400.7.4	(EA)				1
37	Photographic Documentation	400.7.4	(EA)				1
38	Owner Allowance	SP-2	(EA)				1
39	Construction As-Builts	334	(LS)	19			1
40	Contractor's Quality Control	335	(LS)				1

ADD ALTERNATE 1

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	ATLAS SHEET		
					58	Extra	Total
41	8" Point Repair	412	(EA)	12,14,20	2		2
42	Additional Footage (8" Point Repair)	412	(LF)	12,14,20	19		19
43	12" Pipebursting Replacement, DR-17 DIPS HDPE	405,408	(LF)	12,24	165		165
44	Service Reconnections	405,408,409,410	(EA)	9,10,20	1		1
45	PVC Service, Schedule 40	405,408,409	(LF)	4,9,10,18,20,21	5		5
46	Video Pre-Inspection	415	(LF)	12	401		401

ADD ALTERNATE 2

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	ATLAS SHEET		
					58	Extra	Total
47	8" Pipebursting Replacement, DR-17 DIPS HDPE	405,408	(LF)	12,24	677		677
48	Service Reconnections	405,408,409,410	(EA)	9,10,20	22		22
49	PVC Service, Schedule 40	405,408,409	(LF)	4,9,10,18,20,21	110		110
50	Video Pre-Inspection	415	(LF)	12	677		677

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 402.7.
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. REMOVE ALL PLASTIC NETTING FROM SOD BEFORE INSTALLATION. SOD LAID WITH NETTING WILL NOT BE PAID FOR AND NO ADDITIONAL PAYMENT WILL BE MADE FOR NETTING REMOVAL. 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. NO NEW MANHOLES SHALL 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. 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 AS LUMP SUM FOR ALL NECESSARY TRAFFIC CONTROL.
9. 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.
10. 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.
11. 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.
12. POST REHABILITATION CCTV SHALL BE INCLUDED IN THE COST OF THE REHABILITATION PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE.
13. 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.
14. 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.
15. 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)
16. 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.
17. 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 (30)". SEE SPECIAL PROVISION 3.
18. 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.
19. 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.
20. SERVICE RECONNECT COVERS BOTH THE RECONNECTION OF 4" AND 6" SERVICES.
21. SERVICE LINE COVERS BOTH THE INSTALLATION OF 4" AND 6" LINES.
22. CONTRACTOR SHALL VERIFY REQUIRED DEPTHS, ANGLES, AND CONNECTING LINE DIAMETERS PRIOR TO ORDERING REPLACEMENT MANHOLE COMPONENTS.
23. 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, BYPASS PUMPING, GROUT, SEALS, FITTINGS, MANHOLE MODIFICATIONS, AND ALL LABOR AND OTHER MATERIALS FOR A COMPLETE INSTALLATION PER CITY STANDARDS.
24. REPLACEMENT PIPE USED IN PIPEBURSTING OPERATIONS SHALL BE HDPE UNLESS AN ALTERNATIVE MATERIAL IS PRE-APPROVED BY THE ENGINEER.



REVISION				BY	DATE	PLAN SCALE:				APPROVED:			
						DRAWN	TI	05/2024					
						DESIGNED	TI	05/2024					
						SURVEY	TI	05/2024					
						PROFILE SCALE:							
						HORIZONTAL							
						PROJ. MGR.	DN	12/01					
						LEAD ENGR.	AK	12/01					
						FIELD MGR.	AK	12/01					
						FILE:							
						DRAWING:							
						ATLAS PAGE NO.:	031,058						

PAY QUANTITIES AND PAY ITEM NOTES			
TMUA PROJECT NO. ES 2022-03			
UPPER JOE CREEK EAST BRANCH SPECIFIC REMEDIATION, C2			
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
<b>TETRA TECH</b> 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909			
APPROVED:			
DESIGN MANAGER			
DATE: DECEMBER 2024			
SHEET 2 OF 14 SHEETS			

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GENERAL NOTES

1.

ALL CONSTRUCTION SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH CITY OF TULSA, WATER AND SEWER DEPARTMENT AND CURRENT ODOT STANDARDS AND SPECIFICATIONS.
2.

THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORKSITE SAFETY, MANHOLE VENTILATION, WORKER EQUIPMENT, FIRST AID, HYGIENE, AND OTHER RELATED TOPICS. THE CONTRACTOR WILL BE EXPECTED TO PERFORM THE WORK IN A MANNER THAT BEST PROTECTS THE SAFETY OF WORKERS, INSPECTORS, BYSTANDERS, AND OTHERS WHO MAY BE IN THE VICINITY OF THE PROJECT. FAILURE TO PERFORM THE WORK AND MAINTAIN THE SITE IN A SAFE MANNER, IN THE OPINION OF THE ENGINEER OR OWNER, SHALL BE SUFFICIENT CAUSE TO STOP ALL WORK UNTIL SAFETY PROBLEMS ARE CORRECTED.
3.

THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
4.

UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON THE ENGINEER'S REVIEW OF UTILITY ATLASES AND UTILITY COMPANY COMMENTS. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UTILITIES. PRIOR TO EXCAVATING FOR MANHOLE OR PIPELINE REPAIR OR REPLACEMENT, CONTRACTOR SHALL CONTACT 1-800-CALL-OKIE (1-800-522-6543) TO LOCATE BURIED UTILITIES. UTILITIES DISTURBED BY THE CONTRACTOR SHALL BE THE CONTRACTORS FULL RESPONSIBILITY FOR REPAIR ACCORDING TO THE UTILITY'S SPECIFICATIONS AND REQUIREMENTS AT NO COST TO OWNER.
5.

CONTRACTOR SHALL PROVIDE TEMPORARY ORANGE SAFETY FENCING AROUND ALL EXCAVATION, INCLUDING TRENCHES, PITS, VAULTS, ETC. TO MAINTAIN SECURITY AND SAFETY FOR ANIMALS, CHILDREN OR ANY BYSTANDER. THE COST FOR ORANGE SAFETY FENCE TO BE INCLUDED IN OTHER PAY ITEMS.
6.

THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. FOR ALL ROAD CLOSURES, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AND APPROVED BY CITY OF TULSA, FIELD ENGINEERING. CONTRACTOR MUST NOTIFY EMSA, POLICE, FIRE AND MTTA 48 HOURS PRIOR TO STREET CLOSURE.
7.

PRIOR TO EXCAVATING, THE CONTRACTOR IS RESPONSIBLE FOR BRACING OR SUPPORTING ANY POWER POLE OR GUY WIRE WITHIN 5 FEET OF EXCAVATION TO THE SATISFACTION OF THE OWNER AND THE UTILITY COMPANY, AT NO ADDITIONAL COST TO THE OWNER.
8.

DRIVEWAYS, SIDEWALKS, FENCES AND OTHER AREAS PUBLIC AND PRIVATE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT PRIOR TO THE PROJECT AT THE CONTRACTOR'S OWN EXPENSE.
9.

ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEAT LINES SHOWN ON THE PLANS OR AS INDICATED IN THE SPECIFICATIONS. SAW-CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE FULL DEPTH OF THE EXISTING SURFACE. SAW-CUTS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.
10.

ALL UNSUITABLE MATERIALS REMOVED DURING TRENCHING OR EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. PRIOR TO TRENCHING OR EXCAVATION, THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE TO THE ENGINEER FOR HIS REVIEW. STOCKPILING OF EXCAVATED MATERIAL IN STREET OR ALLEY RIGHTS-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE ENGINEER. MAINTENANCE OF STOCKPILE SITES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST MAINTAIN STOCKPILE SITES IN A SAFE, POLLUTION FREE CONDITION THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA REGULATORY FLOODPLAIN.
11.

ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.
12.

IN ALL AREAS WHERE EXCAVATION WILL OCCUR, CONTRACTOR SHALL VIDEOTAPE ALL CONCRETE, PAVEMENT, BUILDINGS, FOUNDATIONS, LANDSCAPING, LAWNS, AND TREES PRIOR TO CONSTRUCTION AND SUBMIT THE VIDEO DATA TO ENGINEER FOR PROJECT RECORDS.
13.

CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES, HOWEVER IF DAMAGE OCCURS TO TREES WITHIN AN EASEMENT, THE CONTRACTOR SHALL NOT BE HELD RESPONSIBLE.
14.

TRAFFIC ON ALL STREETS AND ACCESS TO ALL BUSINESSES SHALL BE MAINTAINED DURING REGULAR BUSINESS HOURS FOR EACH ESTABLISHMENT. CONTRACTOR MUST MAINTAIN PROPER CONSTRUCTION SIGNAGE AND TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15.

CONTRACTOR MUST NOTIFY HOMEOWNER A MINIMUM OF 48 HOURS PRIOR TO ANY REHAB OR CONSTRUCTION BEING DONE ON HOMEOWNERS PROPERTY.
16.

ALL HIGH-PRESSURE GAS LINES IN THE AREA OF CONSTRUCTION SHALL BE POTHOLED BY THE CONTRACTOR TO VERIFY LOCATION. COST TO BE INCLUDED IN OTHER ITEMS, NO ADDITIONAL PAYMENT WILL BE MADE.
17.

CONTRACTOR TO BE RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ANY EXISTING STORAGE SHEDS LOCATED WITHIN THE CONSTRUCTION AREA DAMAGED DURING CONSTRUCTION, AT NO COST TO THE CITY OF TULSA OR THE HOMEOWNER.
18.

CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS DAMAGED OR DISTURBED DURING THE COURSE OF CONSTRUCTION. PAYMENT SHALL BE INCLUDED IN OTHER ITEMS. NO ADDITIONAL PAYMENT SHALL BE MADE.
19.

ALL WATER, SANITARY SEWER, AND STORM SEWER MANHOLE CASTINGS, LIDS, FRAMES, CURB HOODS, GRATES, HYDRANTS, VALVES, AND ANY OTHER FITTINGS REMOVED AS PART OF ANY CONSTRUCTION PROJECT ARE THE PROPERTY OF THE CITY OF TULSA. CONTRACTOR WILL NOT TAKE OWNERSHIP.
- ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE DELIVERED TO THE SEWER OPERATIONS MAINTENANCE BASE AT 9319 E. 42ND STREET N., AND PLACED IN THE METAL RECYCLE BIN IN THE STOCKROOM AREA BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM, MONDAY THROUGH FRIDAY. PHONE: 918-669-6130,
- ALL HYDRANTS, VALVES, AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE SALVAGED AND DELIVERED BY THE CONTRACTOR TO THE SOUTH YARD AT 2317 SOUTH JACKSON AVE. CONTRACTOR WILL COORDINATE THE RETURN OF SUCH ITEMS WITH THE SOUTH YARD PERSONNEL AT 918-596-9401.
20.

CONTRACTOR SHALL NOT DISTURB ANY NEWLY PAVED AREAS WITHOUT WRITTEN APPROVAL FROM THE OWNER.
21.

CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL OVERNIGHT IN THE FLOODPLAIN.

MANHOLE REHABILITATION NOTES

1.

ALL MANHOLES, PIPE SIZES AND LENGTHS, DEFECTS, SURFACE TYPES AND THEIR LOCATIONS SHOWN ON SCHEDULES ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING THE WORK.
2.

REPLACEMENT MANHOLES SHALL HAVE FLOWLINE AND RIM ELEVATIONS SET TO MATCH THOSE OF EXISTING MANHOLES UNLESS OTHERWISE NOTED BY THE ENGINEER. FRAMES AND COVERS SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. WHERE REPLACEMENT MANHOLES HAVE FLOWLINE AND OR RIM ELEVATIONS NOT MATCHING THE EXISTING, NEW FLOWLINE AND RIM ELEVATIONS SHALL BE MEASURED AND RECORDED ON THE PLANS FOR PURPOSES OF ACCURATE RECORD DRAWINGS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS. COST TO BE INCLUDED IN OTHER ITEMS.
3.

CONTRACTOR SHALL ENSURE THAT ALL MANHOLE FRAME AND COVER CASTINGS HAVE MACHINED SEATING SURFACES TO INSURE A TIGHT FIT AND COMPLY WITH THE OTHER PROVISIONS OF THE MATERIALS SPECIFICATION.
4.

ACTIVE LEAKING JOINTS OR OTHER DEFECTS OBSERVED BY THE CONTRACTOR BUT NOT SCHEDULED FOR REHABILITATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY UPON DETECTION.
5.

IN AREAS OF MANHOLE REPAIRS, CONTRACTOR SHALL PLACE SPOIL ON PLASTIC SHEETING, PLYWOOD OR OTHER SUITABLE GROUND PROTECTION.
6.

THE MANHOLE DEPTHS SHOWN ON THE REHABILITATION SCHEDULE ARE TAKEN FROM FIELD MEASUREMENTS AND SHALL GOVERN OVER MANHOLE DEPTHS SHOWN ON ATLAS DRAWINGS.
7.

WHEN TYPE I REPAIR IS SPECIFIED, CONTRACTOR SHALL REMOVE AND REPLACE ALL STEPS IN MANHOLE. PAYMENT SHALL BE MADE ON A PER MANHOLE BASIS, REGARDLESS OF SIZE OR HEIGHT OF MANHOLE.
8.

CONTRACTOR SHALL BE REQUIRED TO VACCUUM TEST MANHOLES WHEN A NEW MANHOLE IS INSTALLED OR REHABILITATION METHOD "TYPE Gg" (MANHOLE INTERIOR COATING) IS PERFORMED. OTHER REHABILITATION METHODS WILL NOT REQUIRE VACCUUM TESTING UPON COMPLETION.
9.

WHEN A MANHOLE IS WITHIN THE TULSA REGULATORY FLOOD PLAIN, ANY TOPSIDE REHABILITATION OR FULL REPLACEMENT SHALL INCLUDE A SEALED-LID AS SHOWN ON THE MANHOLE REHAB SCHEDULE.
10.

ALL NEW OR REHABBED MANHOLES IF CORBEL (TYPE Fc) IS REPLACED (REF 418.11.F.3) SHALL HAVE 30" LIDS AND HAVE NO STEPS.

PIPELINE REHABILITATION NOTES

1.

CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
2.

POST REHABILITATION TELEVISION INSPECTION OF ALL REPAIR WORK SHALL BE PERFORMED IN PACP FORMAT BY A CERTIFIED PACP TECHNICIAN. PAYMENT SHALL BE INCLUDED IN THE COST OF OTHER BID ITEMS.
3.

QUANTITIES SHOWN IN THE SUMMARY TABLES ARE AN ESTIMATE OF QUANTITIES FOR THE WORK SHOWN AND DO NOT REFLECT FINAL WORK ITEM(S) QUANTITIES NECESSARY TO REHABILITATE LINE SEGMENT(S).
4.

ALL LINE SEGMENTS SCHEDULED FOR SLIPLINING OR CURED-IN- PLACE PIPE SHALL BE CLEANED OF ALL ROOTS, DIRT, ROCKS, AND LOOSE DEBRIS PRIOR TO INSTALLING LINER IN HOST PIPE, AT NO ADDITIONAL COST.
5.

PIPELINE REHABILITATION PLANS AND PROFILES ARE FOR REFERENCE ONLY AND DO NOT DEPICT ALL OF THE EXISTING UTILITIES. THE LOCATIONS AND DEPTHS OF UTILITIES SHOWN IN THE PROFILE ARE APPROXIMATE. SEE GENERAL NOTE (4).
6.

SERVICES ASSOCIATED WITH CIPP LINE REHABILITATION SHALL BE RECONNECTED IN ACCORDANCE WITH SPECIFICATIONS 410.12.1. ALL SERVICE RECONNECTIONS ARE BID AS EXTERNAL PER SPECIFICATION 410.15. IN THE EVENT THAT EXTERNAL EXCAVATION IS NOT POSSIBLE, WITH ENGINEER APPROVAL, AN INTERNAL SERVICE LATERAL RECONNECTION (TOPHAT) WILL BE PERMITTED. THE TYPE OF SERVICE RECONNECTION MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
7.

CONTRACTOR MUST ENSURE PROPER PROTOCOL IN PLACE FOR 24-HOUR MONITOR BYPASS PUMPING AND THAT THE CONTRACTOR MUST COMPLETE A SOM BYPASS PUMPING FORM BEFORE COMPLETING ANY BYPASS PUMPING.
8.

POST REHAB TV INSPECTION SHALL BE PERFORMED IN PACP FORMAT BY A PACP CERTIFIED TECHNICIAN.
9.

PIPE EMBEDMENT WILL BE AS SHOWN IN THE STANDARD DETAIL EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
10.

MAXIMUM PIPE SDR FOR SLIPLINING APPLICATIONS SHALL BE SDR 21. NO GREATER SDR WILL BE APPROVED.

PIPELINE REHABILITATION NOTES CONT.

11.

CONTRACTOR SHALL SUBMIT A PROFESSIONALLY ENGINEERED TRENCH EXCAVATION PLAN FOR ALL EXCAVATIONS IN EXCESS OF 20 FEET OF DEPTH.
12.

THE PIPELINE LENGTHS SHOWN ON THE REHABILITATION SCHEDULE ARE TAKEN FROM FIELD MEASUREMENTS AND SHALL GOVERN OVER PIPELINE LENGTHS SHOWN ON ATLAS SHEETS.
13.

COUPLINGS (WHEN NEEDED, AS ONLY METHOD OF CONNECTION) USED TO CONNECT NEW PVC, VCP, AND DIP TO EXISTING SANITARY SEWER PIPE SHALL MEET OR EXCEED AWWA C-219 STANDARD. COUPLINGS SHALL PROVIDE A RANGE OF COUPLING O.D. CAPABILITIES IN ORDER BE EFFECTIVE WITH DIFFERENT PIPE MATERIALS FOUND DURING SANITARY SEWER REHABILITATION.
14.

WHERE OPEN CUT PIPELINE REPLACEMENT IS USED AND THE LINE SEGMENT IS CONSTRUCTED AT A DEPTH AND LENGTH NOT MATCHING THE EXISTING, THE UPSTREAM AND DOWNSTREAM ELEVATIONS OF THE NEW PIPE AND ITS LENGTH SHALL BE MEASURED AND RECORDED ON THE PLANS FOR PURPOSES OF ACCURATE RECORD DRAWINGS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS. COST TO BE INCLUDED IN OTHER ITEMS.
15.

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.

TRAFFIC CONTROL

1.

ALL TRAFFIC CONTROL DEVICES, CONSTRUCTION SIGNAGE, BARRICADING, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST REVISED EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). CONTRACTOR SHALL PREPARE, AND SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN (TCP).
2.

THE CONTRACTOR SHALL PROVIDE 48 HOUR NOTIFICATION FOR ANY AND ALL STREET / LANE CLOSURES, MODIFICATIONS, OR CHANGES TO THE TRAFFIC CONTROL MEASURES TO:

POLICE	918-569-9222
FIRE	918-596-9977
COT TRAFFIC	918-596-9744
EMSA	918-596-3043
MTTA	918-585-1195

3.

THE CONTRACTOR SHALL NOTIFY TRAFFIC OPERATIONS 48 HOURS PRIOR TO STARTING WORK OR PRIOR TO REMOVING OR RELOCATING ANY TRAFFIC SIGNS. ALL SIGNS SHALL BE HANDLED SO AS TO AVOID ANY DAMAGE TO THE SIGN OR POST. ALL SIGNS REMOVED DUE TO CONSTRUCTION SHALL BE REINSTALLED BY THE CONTRACTOR.
4.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL CONSTRUCTION SIGNAGE AND BARRICADING, INCLUDING, BUT NOT LIMITED TO, WASHING, REPLACEMENT, REPOSITIONING OF DEVICES. WHEN AND WHERE IT IS DEEMED NECESSARY BY THE CITY OR THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND INSTALL ANY ADDITIONAL TRAFFIC CONTROL DEVICES.
5.

LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AREA AT ALL TIMES. LOCAL TRAFFIC TO ALL PUBLIC AND PRIVATE STREETS SHALL BE ACCESSIBLE FROM ANY DETOURS DURING THE CONSTRUCTION OF THIS PROJECT.
6.

ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THEIR PERIMETER FOR SAFETY OF PEDESTRIANS AND VEHICLES. NO BARRICADES SHALL BE PLACED UNTIL ALL ADVANCED SIGNING IS IN PLACE.
7.

ALL CHANNELING DEVICES, TYPE III BARRICADES, ETC., SHALL BE WEIGHTED DOWN WITH NON-HAZARDOUS MATERIAL WHEN NECESSARY OR WHEN DIRECTED BY THE CITY OR THE ENGINEER.
8.

ALL ADVANCE SIGNS SHALL BE TYPE "A" WARNING LIGHTS.
9.

ALL TYPE III BARRICADES SHALL BE FURNISHED WITH A MINIMUM OF TWO (2) TYPE "A" WARNING LIGHTS.
10.

ALL CHANNELING DEVICES SHALL BE PROVIDED WITH TYPE "C" WARNING LIGHTS.



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	05/2024	APPROVED:
				DESIGNED	TI	05/2024	
				SURVEY	TI	05/2024	
			PROFILE SCALE:	PROJ. MGR.	RL	12/24	
			HORIZONTAL:	LEAD ENGR.	RL	12/24	
			VERTICAL:	FIELD MGR.	RL	12/24	
			FILE:	DRAWING:			
			ATLAS PAGE NO.:				

DESIGN MANAGER

DATE: DECEMBER 2024

SHEET 3 OF 14 SHEETS

GENERAL NOTES

TMUA PROJECT NO. ES 2022-03

UPPER JOE CREEK  
EAST BRANCH SPECIFIC REMEDIATION, C2

CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

TE

TETRA TECH

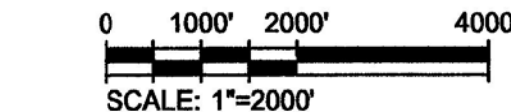
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133  
TEL.918.249.3909

APPROVED:

DESIGN MANAGER

DATE: DECEMBER 2024


SHEET 3 OF 14 SHEETS



**058**

= ATLAS SHEET  
NUMBER



PROJECT LOCATION MAP				
TMUA PROJECT NO. ES 2022-03				
UPPER JOE CREEK				
EAST BRANCH SPECIFIC REMEDIATION, C2				
CITY OF TULSA, OKLAHOMA				
WATER AND SEWER DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY:				
		<b>TETRA TECH</b> 7845 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909		
DATE	PLAN SCALE:	DRAWN	TI	05/2024
		DESIGNED	TI	05/2024
		SURVEY	TI	05/2024
PROFILE SCALE:	PROJ. MGR.	<i>SW</i>	<i>12/24</i>	
HORIZONTAL	LEAD ENGR.	<i>KZ</i>	<i>8/24</i>	
VERTICAL	FIELD MGR.	<i>Edm</i>	<i>12/24</i>	
FILE:	DRAWING:	---		DATE: DECEMBER 2024
ATLAS PAGE NO.: 031,058		SHEET 4 OF 14 SHEETS		



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	05/2024	APPROVED:  <div>John M. B.</div> DESIGN MANAGER	
				DESIGNED	TI	05/2024		
				SURVEY	TI	05/2024		
			PROFILE SCALE: HORIZONTAL	PROJ. MGR.	SV	11/2024		
			VERTICAL	LEAD ENGR.	SV	11/2024		
				FIELD MGR.	SV	11/2024		
			FILE:	DRAWING:	---			
			ATLAS PAGE NO.: 031.058					DATE: DECEMBER 2024
								SHEET 4 OF 14 SHEETS



ATLAS 58 MANHOLE REHAB SCHEDULE

REHABILITATION METHODS



Existing Condition									Repair Method																
Atlas	Basin	MH	Diameter (Ft)	Depth (Ft)	Grade to Rim	Drop Manhole?	Address	Surface Type	TYPE A	TYPE B	TYPE D	TYPE Fc	TYPE Gg	TYPE Gh	TYPE Gk	TYPE Go	TYPE Gp	Type Gr	Type Gs	Manhole Replacement (4' Dia.)	Additional Depth Over 6' 4' MH (VF)	Lamphole Replacement	Lamphole Cover and Frame	Sealed Lid	Paved?
31	68-S	068-0596	0.68	5.8	0.0	No	2308 S Toledo Ave	Grass/Dirt												1					No
58	64-S	064-0182	4	6.8	0.0	No	2668 S Winston Ave,	Grass/Dirt										1							No
58	64-S	064-0185	4	7.55	0.0	No	4628 E 26th St	Grass/Dirt										1							No
58	64-S	064-0196	4	15.2	0.0	Yes	4514 E 27th St	Grass/Dirt		1					1										No
58	64-S	064-0197	4	7.8	0.0	No	2668 S Urbana Ave	Grass/Dirt		1															No
58	64-S	064-0200	0.66	6.05	0.0	No	4514 E 26th St	Grass/Dirt												1					No
58	64-S	064-0201	4	18.5	0.0	No	4414 E 27th St	Grass/Dirt										1							No
58	64-S	064-0204	0.66	7.4	0.0	No	4308 E 28th St	Grass/Dirt															1		No
58	64-S	064-0206	4	7.93	0.6	No	2663 S Sandusky Ave	Grass/Dirt		1															No
58	64-S	064-0209	4	5.6	0.1	No	2539 S Sandusky Ave	Grass/Dirt										1							No
58	64-S	064-0212	4	7.05	0.0	No	2668 S Sandusky Ave	Grass/Dirt							1										No
58	64-S	064-0214	4	7.15	0.0	No	2625 S Richmond Ave	Grass/Dirt										1							No
58	64-S	064-0215	4	5.65	0.0	No	4324 E 26th St	Grass/Dirt										1							No
58	64-S	064-0220	4	16.65	1.4	Yes	4112 E 27TH St	Grass/Dirt									1								No
58	64-S	064-0224	4	8.49	0.0	No	2630 S Richmond Ave	Grass/Dirt												1	2.5				No
58	64-S	064-0226	0.66	6.5	0.0	No	2625 S Quebec Ave	Grass/Dirt														1			No
58	64-S	064-0229	4	5.85	0.0	No	4111 E 26th Pl	Grass/Dirt			1														No
58	64-S	064-0230	4	6.45	0.1	No	4212 E 26th St	Grass/Dirt										1							No
58	64-S	064-0235	4	5.9	0.0	Yes	4114 E 26th St	Grass/Dirt	1															1	No
58	64-S	064-0238	4	15	0.0	No	4106 E 27th St	Grass/Dirt									1								No
58	64-S	064-0239	4	14.84	0.0	No	4106 E 27th St,	Grass/Dirt										1							No
58	64-S	064-0273	4	6.35	0.0	No	4788 E 29th St	Grass/Dirt							1										No
58	64-S	064-0278	4	11.33	0.0	Yes	4528 E 28th St	Grass/Dirt										1							No
58	64-S	064-0320	4	5.95	0.0	No	4404 E 26th St	Grass/Dirt								1									No
58	64-S	064-0325	CNL	CNL			4210 E 26th Pl	Grass/Dirt												1					No
58	64-S	064-0326	4	7.33	0.0	No	2612 S Richmond Ave	Grass/Dirt							1										No

MANHOLE 064-0325 WAS NOT INSPECTED DUE TO NO ACCESS. ENGINEER WILL INSPECT DURING REHAB OF MANHOLE 064-0326, IF CONTRACTOR IS ABLE TO LOCATE DURING CONSTRUCTION.

- 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 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 T  
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

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




ATLAS 58 - MH SCHEDULE

TMUA PROJECT NO. ES 2022-03

UPPER JOE CREEK  
EAST BRANCH SPECIFIC REMEDIATION, C2

CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:  
 **TETRA TECH**  
7045 E. 83rd Street, Suite 301, Tulsa, OK 74133  
TEL.918.249.3909

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	05/2024	APPROVED:
				DESIGNED	TI	05/2024	
				SURVEY	TI	05/2024	
			PROFILE SCALE:	PROJ. MGR.	SV	12/14	
			HORIZONTAL	LEAD ENGR.	AK	12/14	
			VERTICAL	FIELD MGR.	AK	12/14	
			FILE:	DRAWING:			DATE: DECEMBER 2024
			ATLAS PAGE NO.:	058			SHEET 6 OF 14 SHEETS

ATLAS 58 LINE REHAB SCHEDULE

EXISTING CONDITION										Rehabilitation Type														
Video Year	Atlas	U/S Manhole	US Rim to Invert	D/S Manhole	DS Rim to Inver	Diameter	Material	CCTV Length	Incomplete CCTV (rehab estimated)	8" - Point Repair (EA)	Point Repair Location	8" - Add'l Footage	8" - Slipline SDR 21	8" - PipeBurst	12" - PipeBurst	8" Open Cut Only	External Drop Replacement	PVMT Removal & Replacement ASPHALT	PVMT Removal & Replacement CONCRETE	SIDEWALK DRIVEWAY Removal & Replacemen	CURB & GUTTER Removal and Replacement	Sodding	Rehab Services	Television Pre Inspection
			(VF)		(VF)	(INCH)						(LF)	(LF)	(LF)	(LF)	(LF)	(EA)	(SY)	(SY)	(SY)	(LF)	(SY)	(EA)	
	31/58	064-0193	7.5	064-0192	9.8	8	VCP/CP	37								37	1					82	0	37
	31/58	064-0195	8.51	064-0194	7.45	8	CP	255								255			13		10	500	6	255
2022	58	064-0149	6.92	064-0148	7.59	8	VCP	126						126									4	126
2022	58	064-0187	5.39	064-0186	10.65	8	CP	118					118										0	118
2022	58	064-0196	15.2	064-0641	16.60	8	CP/VCP	158						158									5	158
2022	58	064-0197	7.81	064-0196	15.20	8	CP	293					293										3	293
2022	58	064-0199	6.51	064-0198	6.44	8	CP	330					330										9	330
2022	58	064-0200	6.05	064-0199	6.51	8	CP/PVC	110					110										5	110
2022	58	064-0202	8.1	064-0340	10.05	8	VCP	89						89									2	89
2022	58	064-0203	6.37	064-0202	8.1	8	VCP	35	Yes					131									2	131
2022	58	064-0204	7.4	064-0324	7.14	8	VCP	31								31						69	2	31
*	58	064-0206	7.93	064-0205	18.9	8	VCP	310		1	0-10 ft from MH 0206												2	310
2022	58	064-0209	5.6	064-0320	5.95	8	VCP	123		1	0-10 ft from MH 0209												0	123
2022	58	064-0216	18.75	064-0220	16.65	8	VCP	320								320	1					711	6	320
2022	58	064-0229	5.85	064-0223	7.45	8	VCP	290						290									6	290
2022	58	064-0235	5.9	064-0229	5.85	8	VCP	150						150									3	150
2022	58	064-0273	6.35	064-0272	5.87	8	CP	45								45		7		12	10	22	0	45
2022	58	064-0279	5.3	064-0278	11.33	8	VCP	313						313			1						13	313
2022	58	068-0575	2.4	064-0236	4.2	8	VCP	47								47						104	0	47

NOTE: LINE SEGMENT 064-0195 TO 064-0194 IS SHOWN ON ATLAS 058, BUT IS ACTUALLY A PART OF ATLAS 031

ATLAS 58 LINE REHAB SCHEDULE - ADD ALTERNATE #1

ADD ALTERNATE #1

EXISTING CONDITION										e														
Video Year	Atlas	U/S Manhole	US Rim to Invert	D/S Manhole	DS Rim to Inver	Diameter	Material	CCTV Length	Incomplete CCTV (rehab estimated)	8" - Point Repair (EA)	Point Repair Location	8" - Add'l Footage	8" - Slipline SDR 21	8" - PipeBurst	12" - PipeBurst	8" Open Cut Only	External Drop Replacement	PVMT Removal & Replacement ASPHALT	PVMT Removal & Replacement CONCRETE	SIDEWALK DRIVEWAY Removal & Replacemen	CURB & GUTTER Removal and Replacement	Sodding	Rehab Services	Television Pre Inspection
			(VF)		(VF)	(INCH)						(LF)	(LF)	(LF)	(LF)	(LF)	(EA)	(SY)	(SY)	(SY)	(LF)	(SY)	(EA)	
**	58	064-0021	7.3	064-0020	6.00	12	VCP		165						165								0	165
2022	58	064-0144	5.05	064-0351	9.85	8	VCP/DIP	236		2	122-132 and 201-230 ft from MH 0144	19											1	236

ATLAS 58 LINE REHAB SCHEDULE - ADD ALTERNATE #2

ADD ALTERNATE #2

EXISTING CONDITION											Rehabilitation Type													
Video Year	Atlas	U/S Manhole	US Rim to Invert	D/S Manhole	DS Rim to Inver	Diameter	Material	CCTV Length	Incomplete CCTV (rehab estimated)	8" - Point Repair (EA)	Point Repair Location	8" - Add'l Footage	8" - Slipline SDR 21	8" - PipeBurst	12" - PipeBurst	8" Open Cut Only	External Drop Replacement	PVMT Removal & Replacement ASPHALT	PVMT Removal & Replacement CONCRETE	SIDEWALK DRIVEWAY Removal & Replacemen	CURB & GUTTER Removal and Replacement	Sodding	Rehab Services	Television Pre Inspection
			(VF)		(VF)	(INCH)						(LF)	(LF)	(LF)	(LF)	(LF)	(EA)	(SY)	(SY)	(SY)	(LF)	(SY)	(EA)	
2022	58	064-0152	6.83	064-0151	7.01	8	CP	341						341									11	341
2022	58	064-0153	No Access	064-0152	6.83	8	CP	336						336									11	336

- \* CCTV WAS NOT AVAILABLE FOR 064-0206 TO 064-0205. REHAB RECOMMENDATION MADE AFTER VIEWING PIPE CRACKS FRFROM MH 064-0206 ENGINEER TO CONFIRM REHAB NEEDS/METHOD AFTER PRE-CONSTRUCTION CCTV IS OBTAINED BY CONTRACTOR.
- \*\* CCTV WAS NOT AVAILABLE FOR 064-0021 TO 064-0020. REHAB RECOMMENDATION MADE AFTER VIEWING PIPE CRACKS FROM MH 064-0020. ENGINEER TO CONFIRM REHAB NEEDS/METHOD AFTER PRE-CONSTRUCTION CCTV IS OBTAINED BY CONTRACTOR.

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 58 - LINE SCHEDULES

TMUA PROJECT NO. ES 2022-03

UPPER JOE CREEK  
EAST BRANCH SPECIFIC REMEDIATION, C2

CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

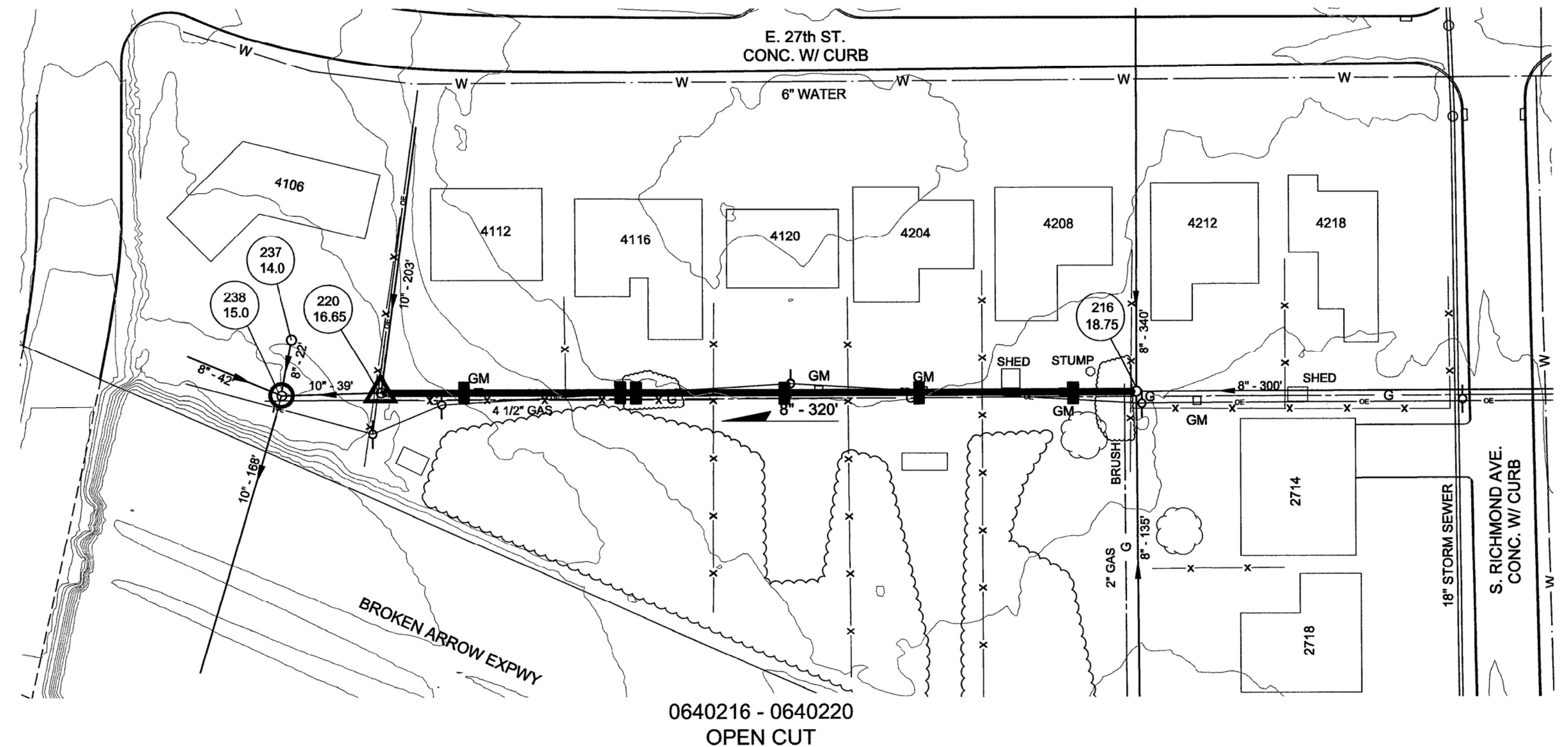
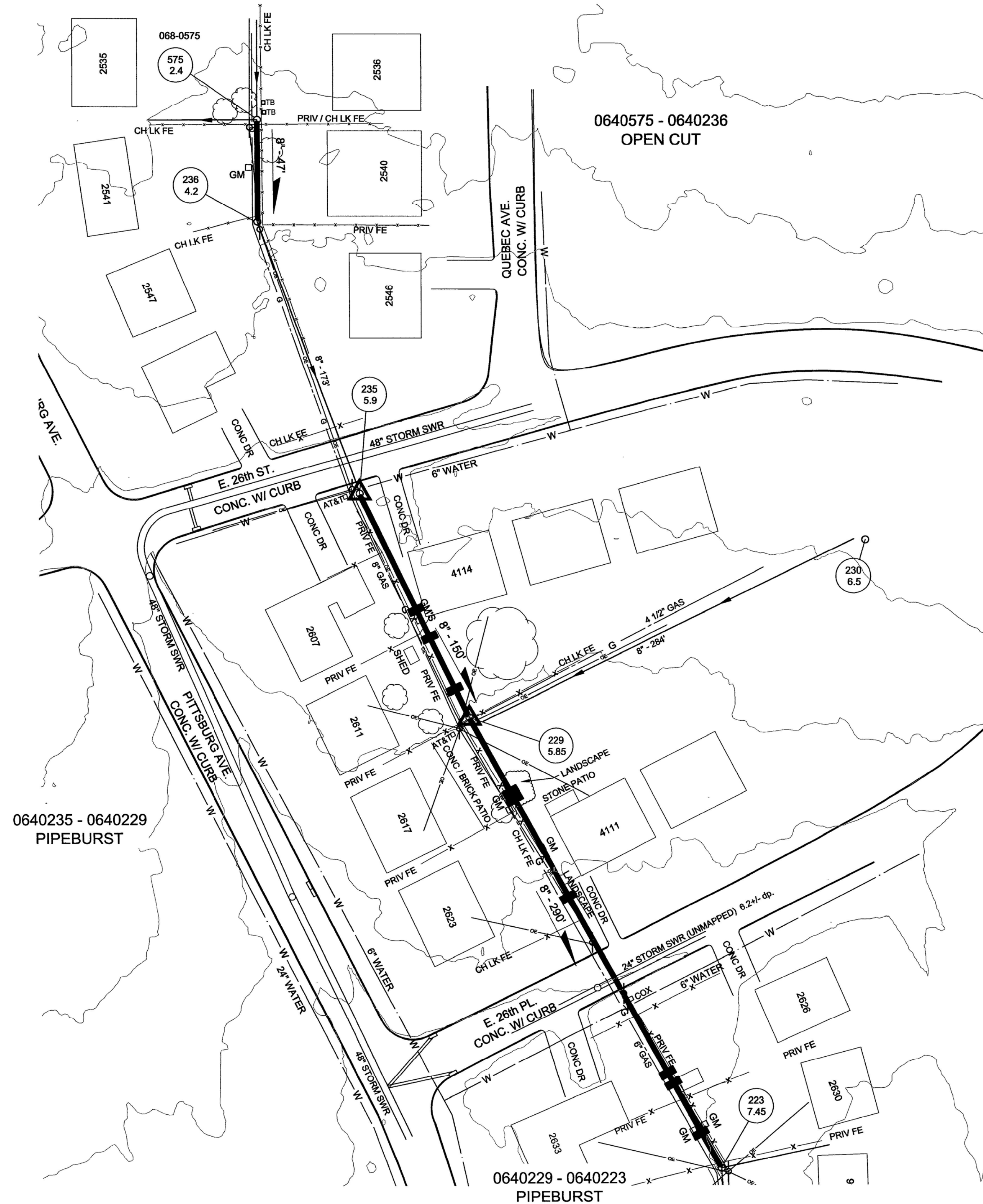
PLANS AND ESTIMATES PREPARED BY:

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

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	05/2024	APPROVED:
				DESIGNED	TI	05/2024	
				SURVEY	TI	05/2024	
			PROFILE SCALE:	PROJ. MGR.	9V	12/24	
			HORIZONTAL	LEAD ENGR.	KZ	12/24	
			VERTICAL	FIELD MGR.	KZ	12/24	
			FILE:	DRAWING:			
			ATLAS PAGE NO.:	058			

DATE: DECEMBER 2024

SHEET 7 OF 14 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, 714, 730, 731, 733.

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

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



REVISION				BY	DATE	PLAN SCALE:		DRAWN	TI	05/2024	APPROVED:	
								DESIGNED	TI	05/2024		
								SURVEY	TI	05/2024		
								PROJ. MGR.	RV	01/25		
								LEAD ENGR.				
								FIELD MGR.				
								DRAWING:				
								DATE:	DECEMBER 2024			
								ATLAS PAGE NO.:	058			SHEET 8 OF 14 SHEETS

ATLAS 58 - DETAILS - 1

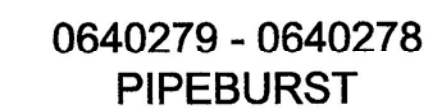
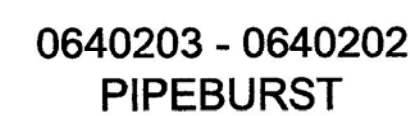
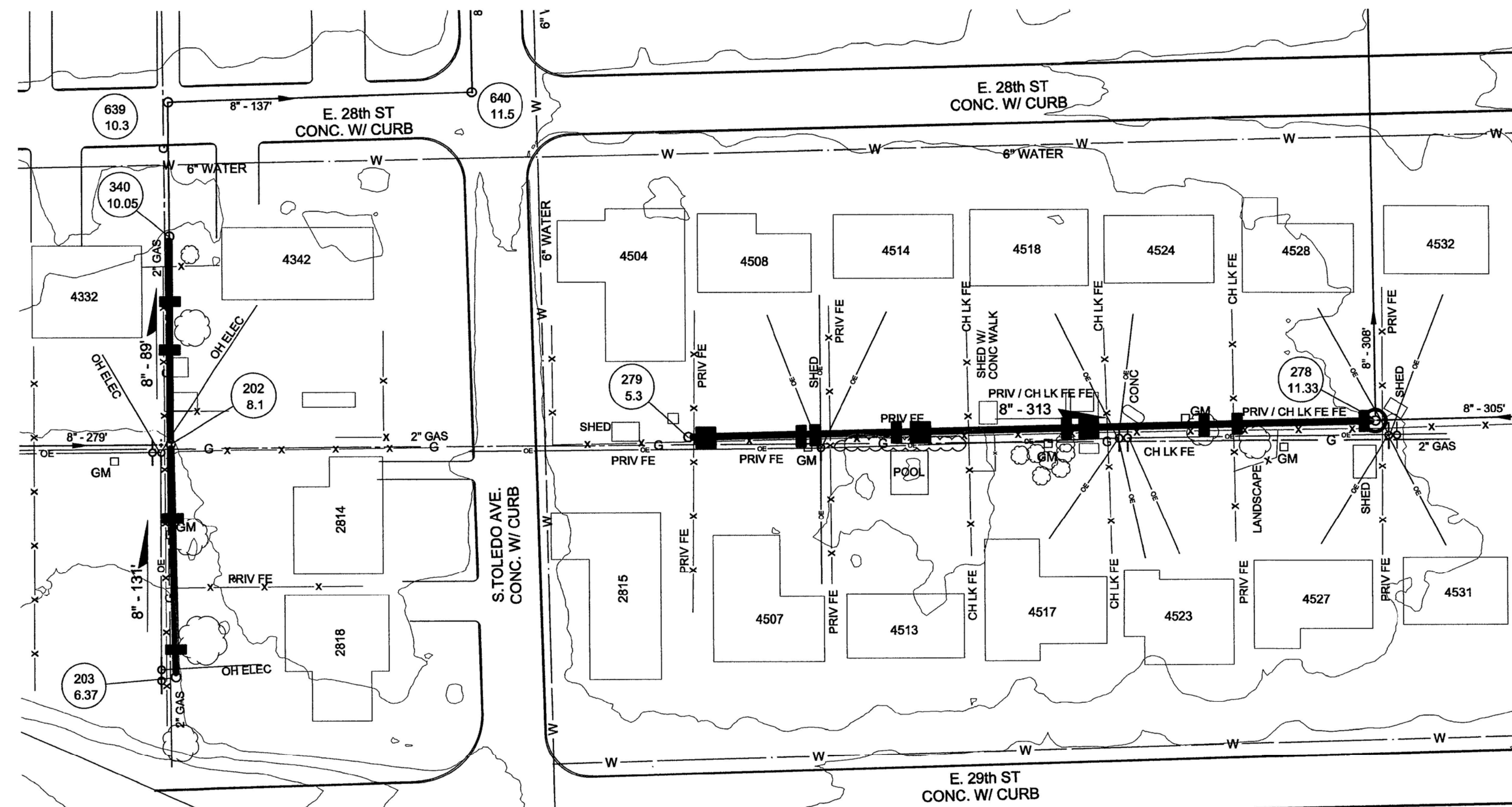
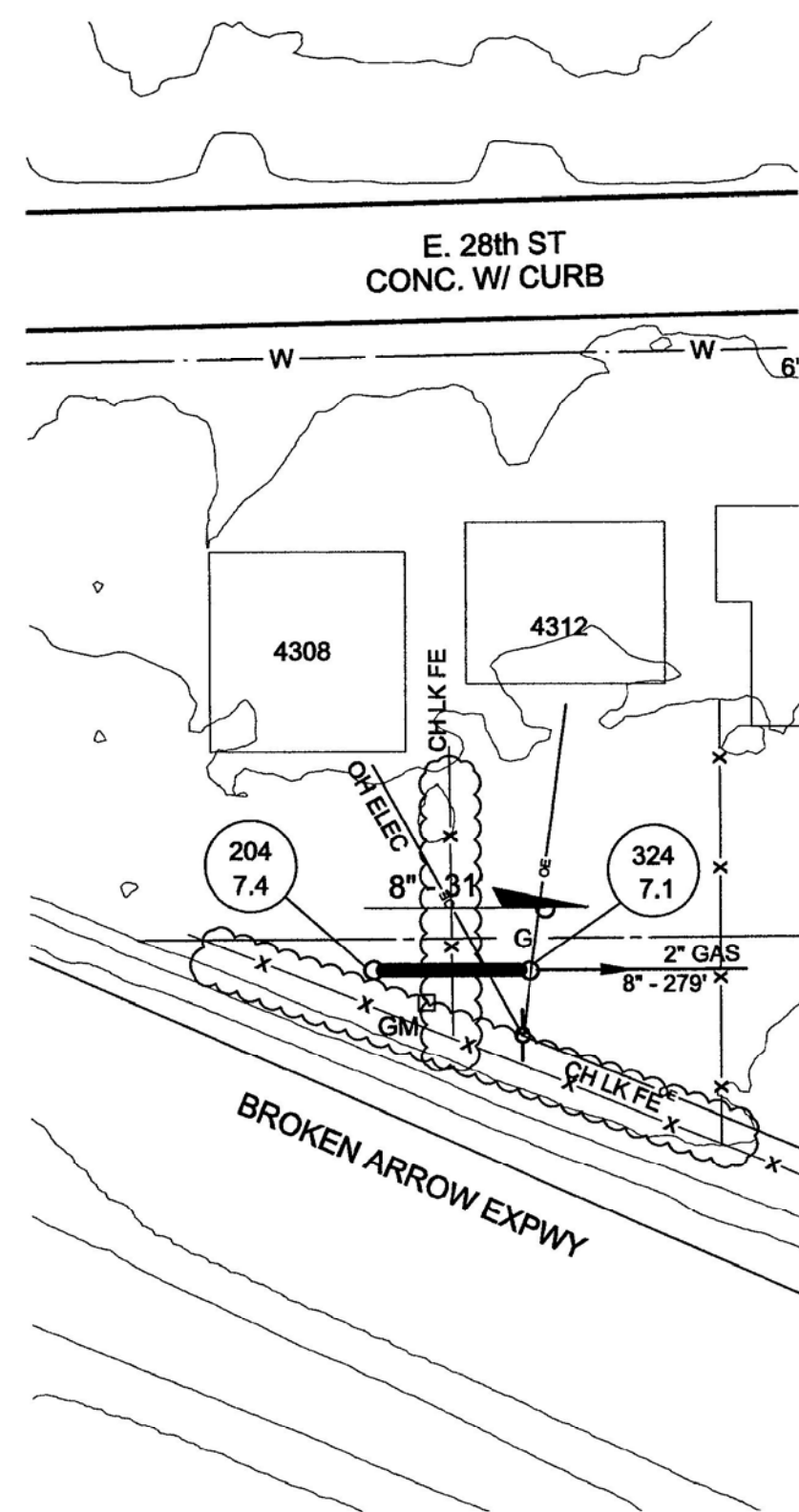
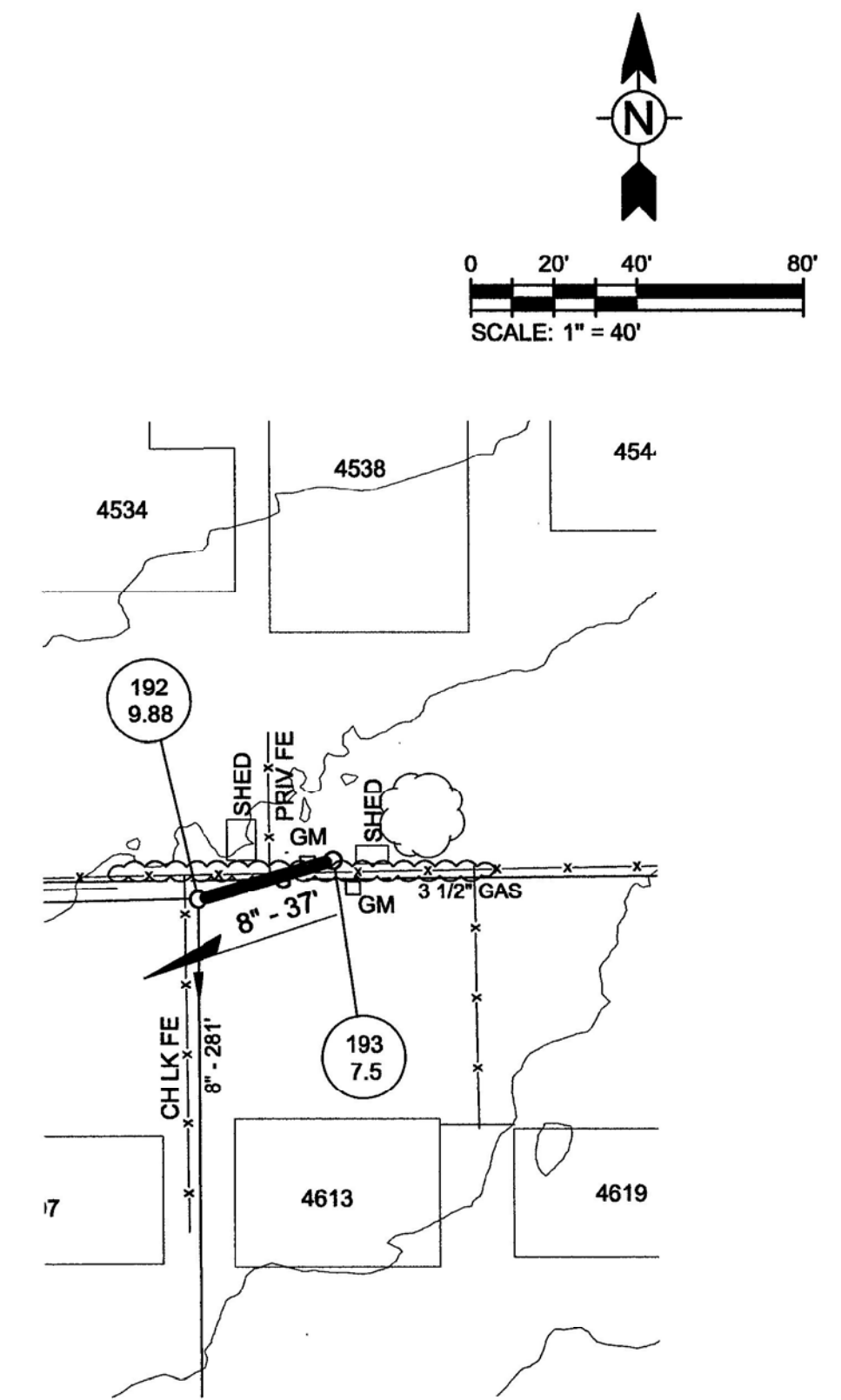
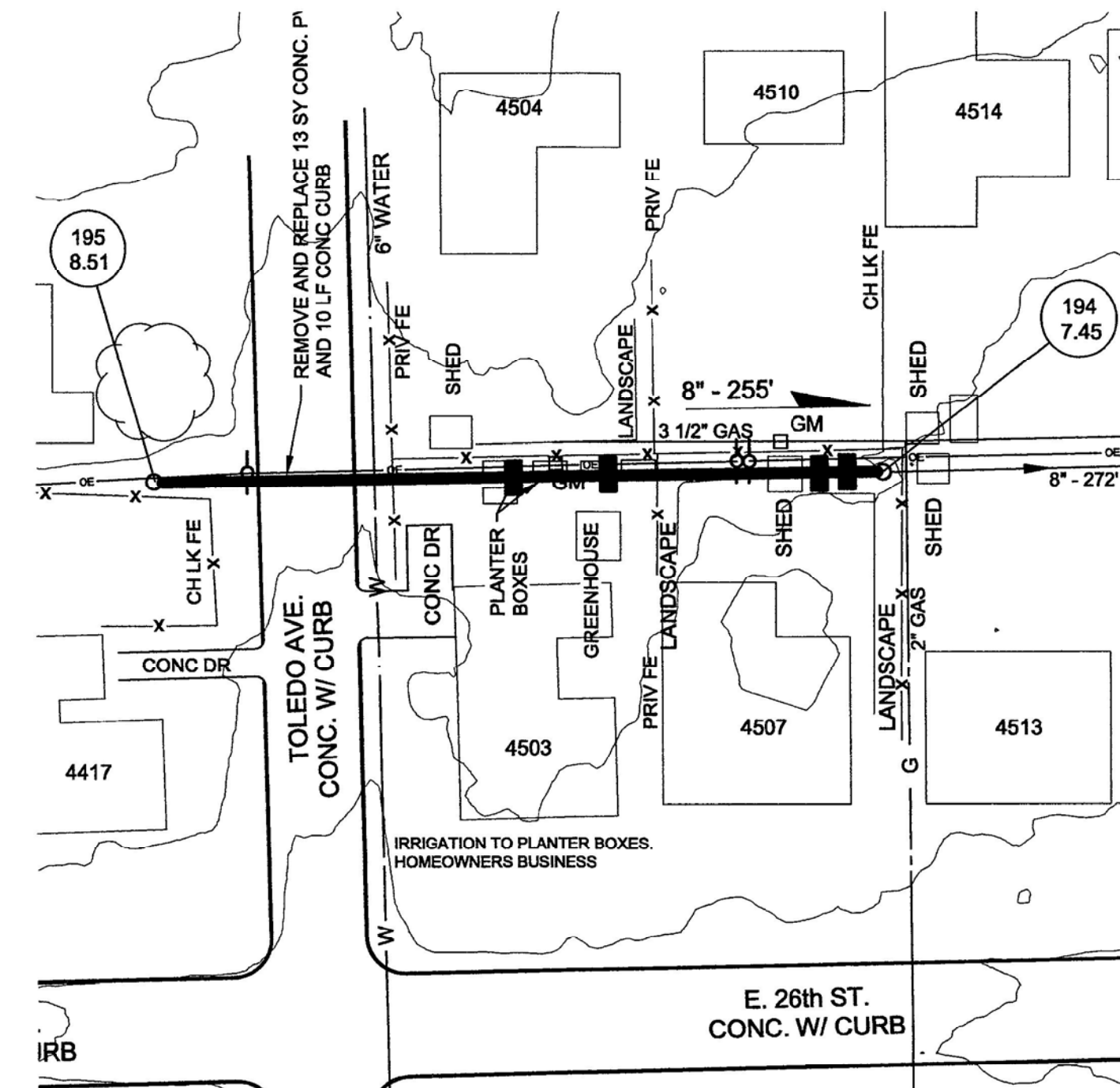
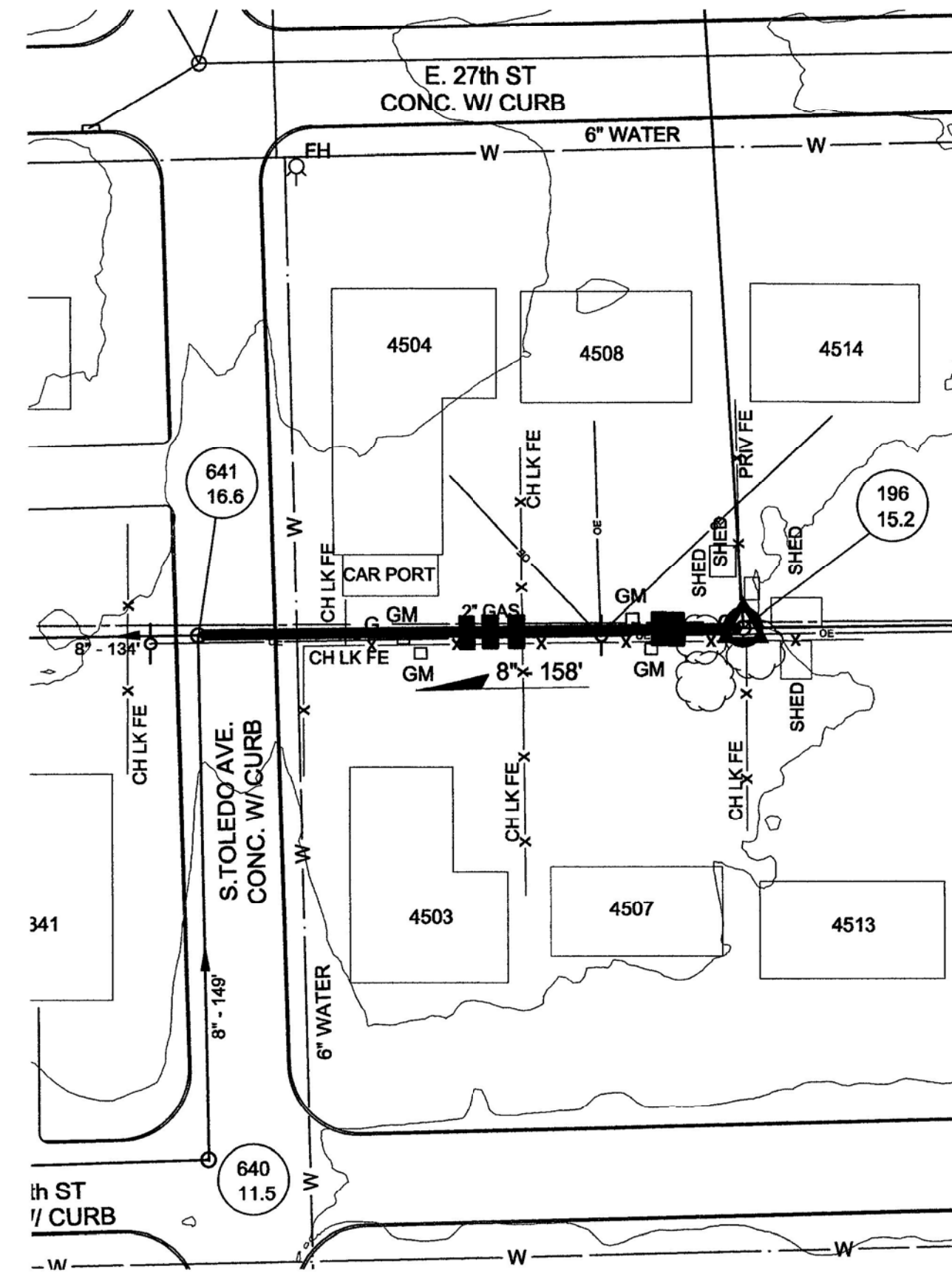
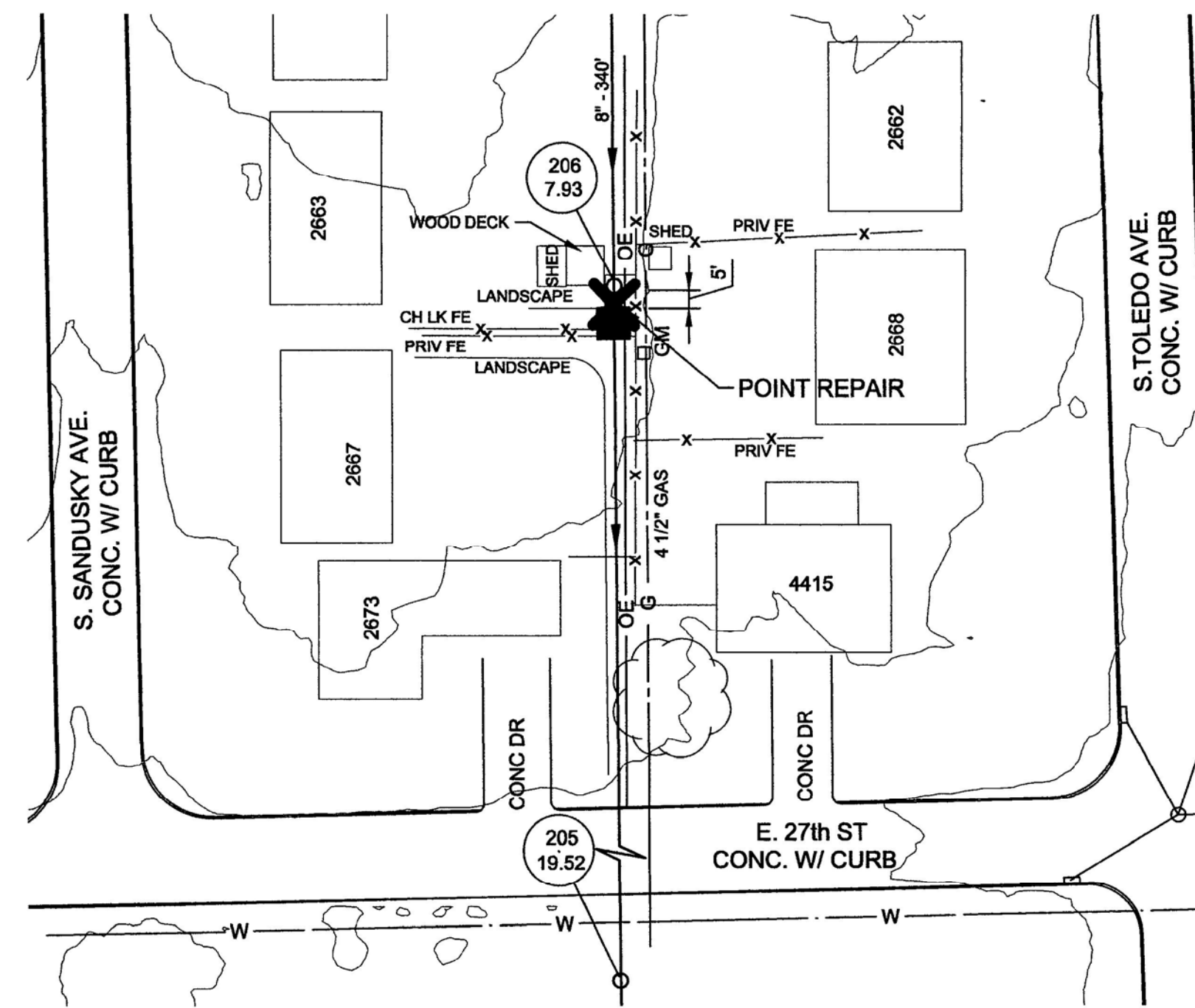
TMUA PROJECT NO. ES 2022-03

UPPER JOE CREEK  
EAST BRANCH SPECIFIC REMEDIATION, C2

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



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


**NOTE:**  
ODEQ REQUIREMENTS SPECIFY 10' MINIMUM HORIZONTAL  
SEPARATION AND 2' MINIMUM VERTICAL SEPARATION  
BETWEEN WATER LINES AND SANITARY SEWER LINES

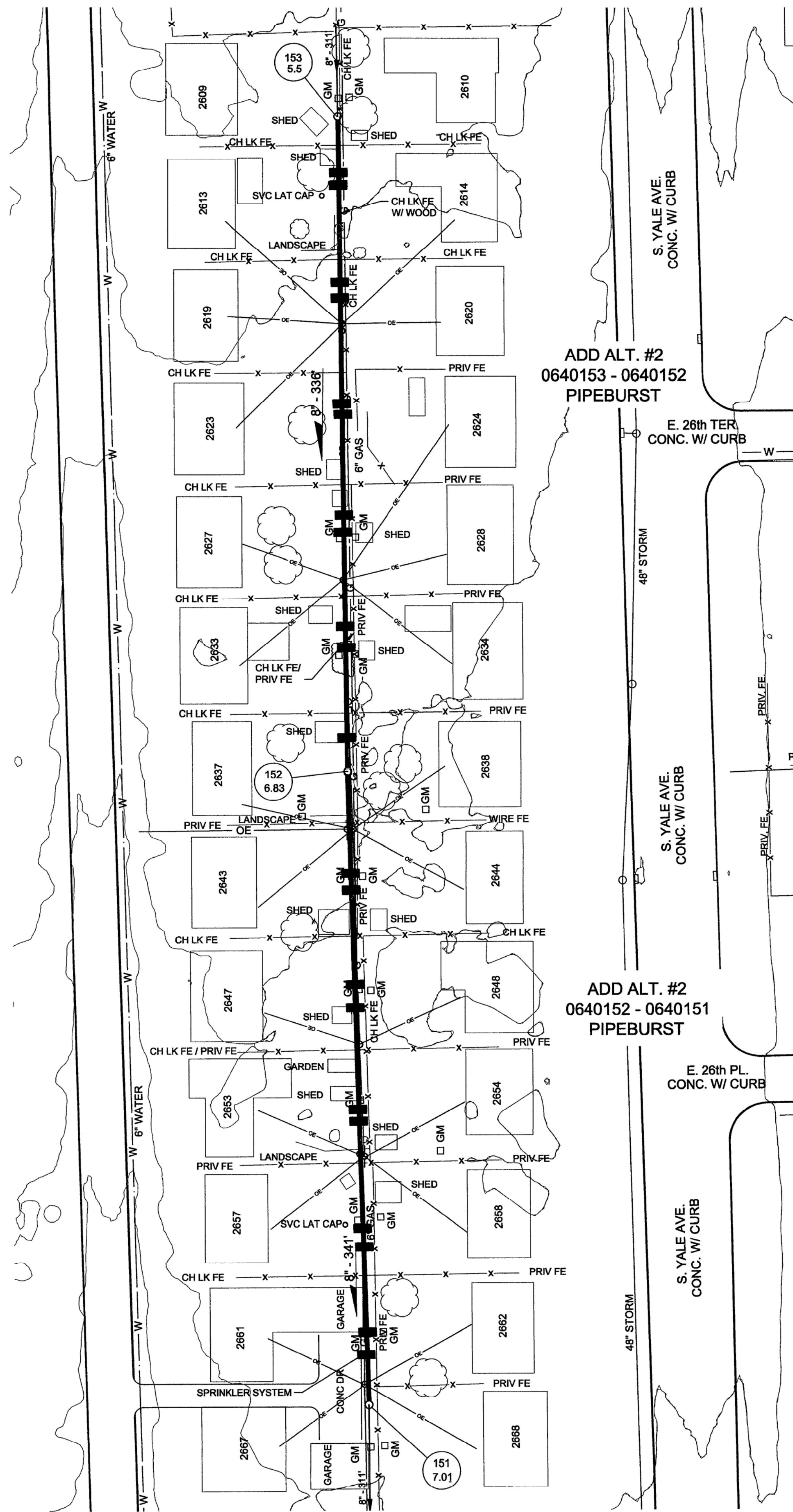
NOTE:  
FOR LINE WORK IN PAVED AREAS. PAVEMENT AND  
TRENCHING TO BE COMPLETED PER CITY OF TULSA  
STD. 713, 714, 730, 731, 733.

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

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



ATLAS 58 - DETAILS - 2			
TMUA PROJECT NO. ES 2022-03			
UPPER JOE CREEK			
EAST BRANCH SPECIFIC REMEDIATION, C2			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		<b>TETRA TECH</b> 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	
DATE:	05/24/24	APPROVED:	
PLAN SCALE:	DRAWN: TI DESIGNED: TI SURVEY: TI	05/20/24 05/20/24 05/20/24	
PROFILE SCALE:	PROJ. MGR.	05/24/24	
HORIZONTAL:	LEAD ENGR.	05/24/24	
VERTICAL:	FIELD MGR.	05/24/24	
FILE:	DRAWING:	DATE:	DECEMBER 2024
ATLAS PAGE NO.: 056		SHEET 9 OF 14 SHEETS	

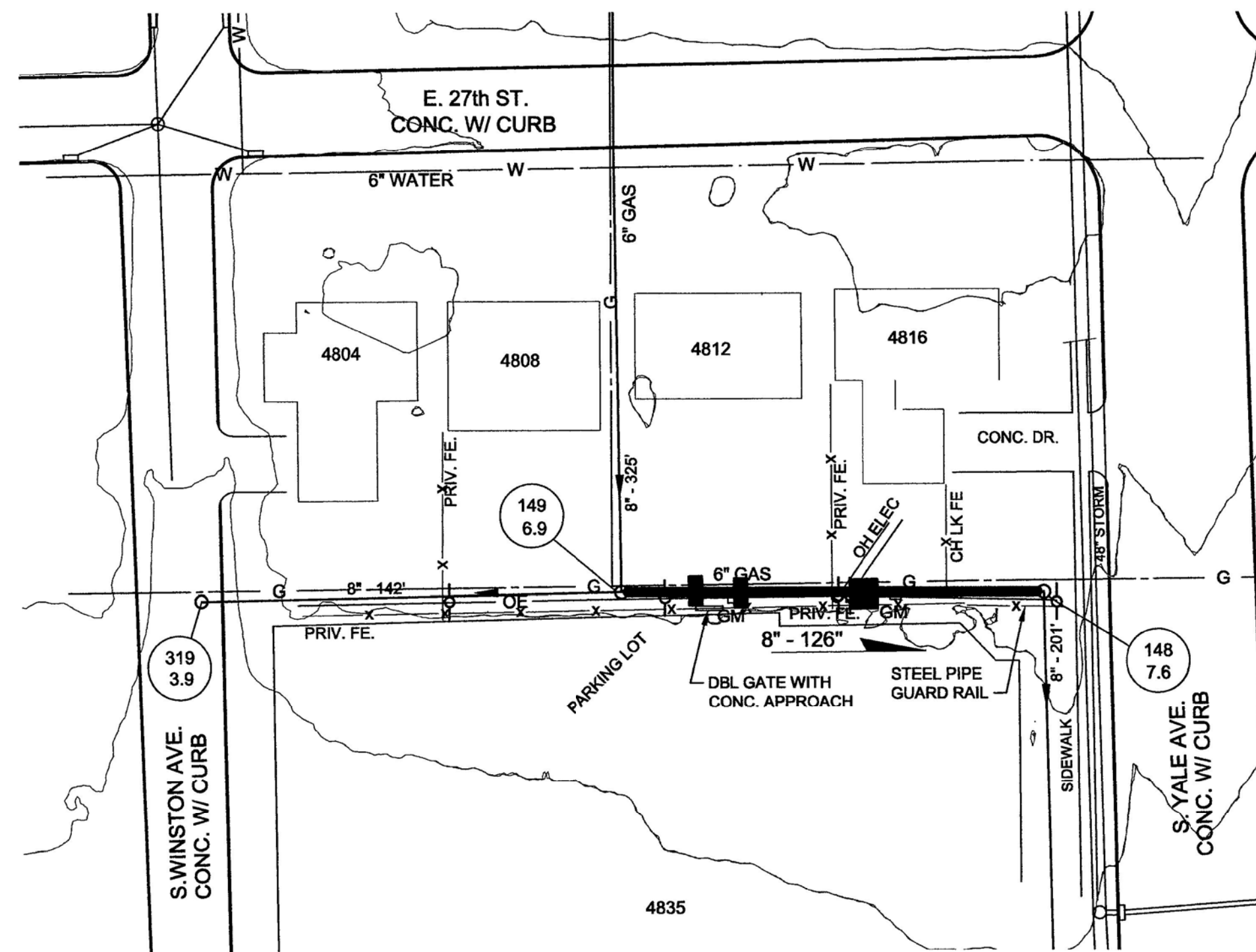


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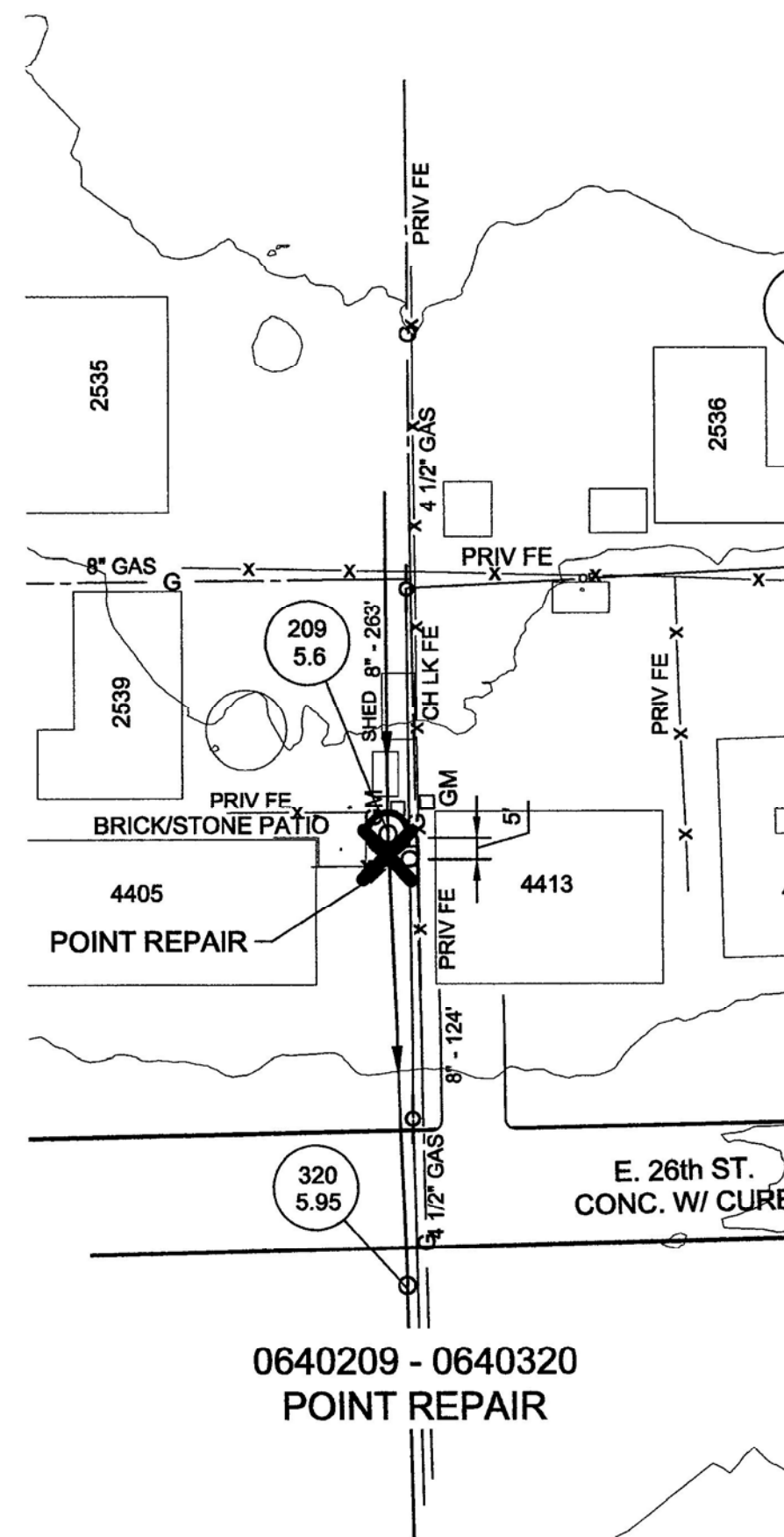
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ADD ALT. #2

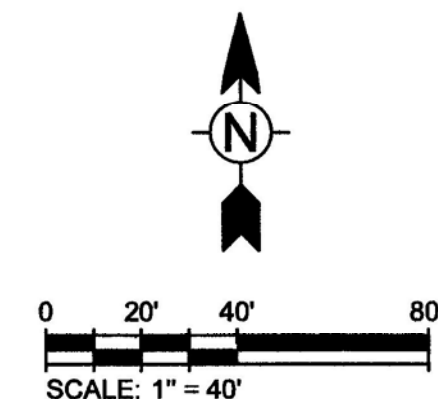
BASE BID



0640149 - 0640148  
PIPEBURST



0640209 - 0640320  
POINT REPAIR



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



NOTE:  
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REVISION			BY	DATE	PLAN SCALE:			APPROVED:		
					DRAWN	TI	05/2024			
					DESIGNED	TI	05/2024			
					SURVEY	TI	05/2024			
					PROJ. MGR.	SN	12/14			
					LEAD ENGR.	KZ	12/24			
					FIELD MGR.	SN	12/24			
					FILE:	DRAWING:	DATE:	DECEMBER 2024		
					ATLAS PAGE NO.:	058	SHEET 10 OF 14 SHEETS			

ATLAS 58 - DETAILS - ADD ALT

TMUA PROJECT NO. ES 2022-03

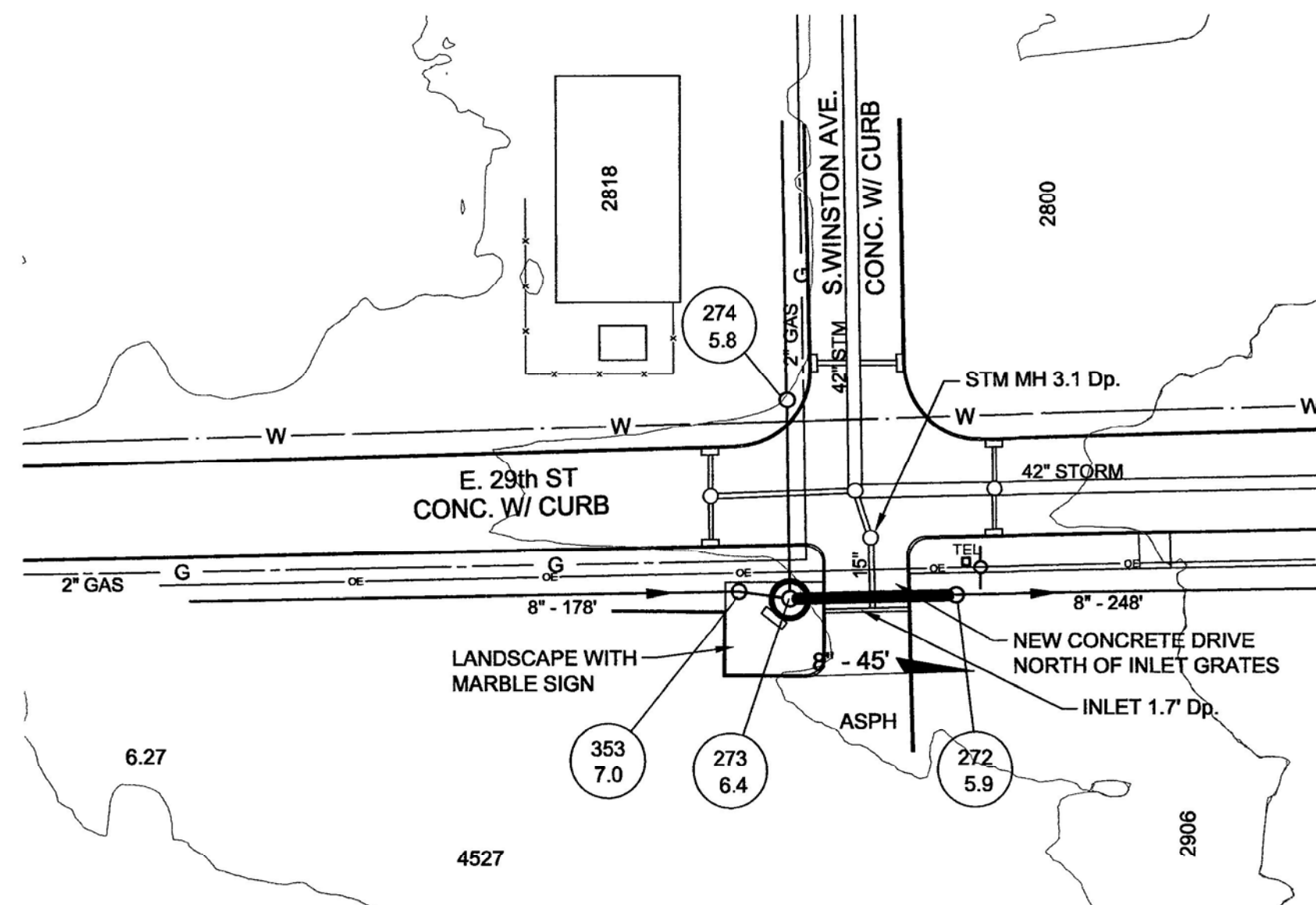
UPPER JOE CREEK  
EAST BRANCH SPECIFIC REMEDIATION, C2

CITY OF TULSA, OKLAHOMA  
WATER AND SEWER DEPARTMENT

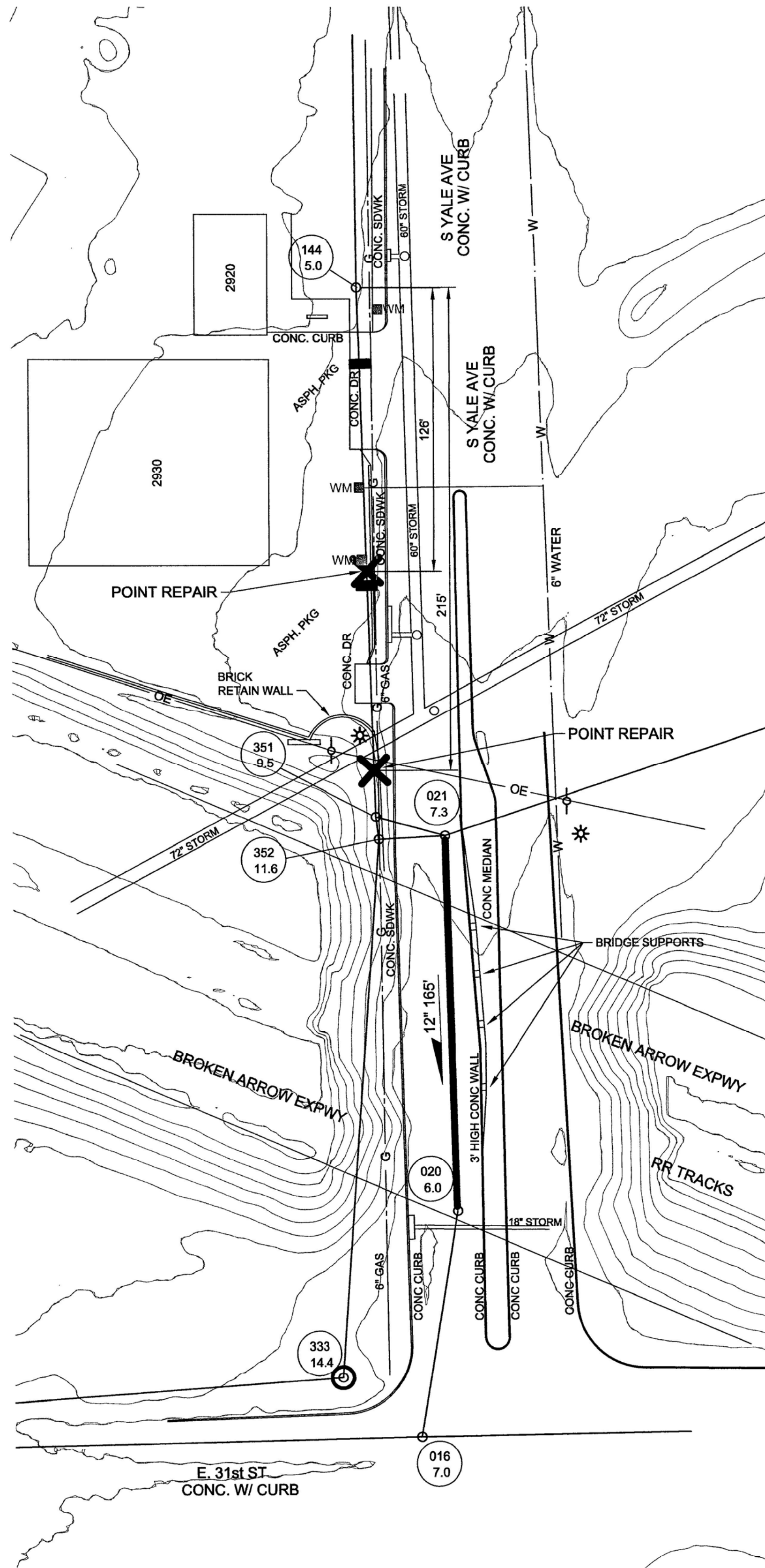
PLANS AND ESTIMATES PREPARED BY:

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

1/21/2025 8:55 AM  
P:\11983200-11983-22001\CAD\SheetFiles\Contract 2\ATLAS 58 - Details.dwg



0640273 - 0640272  
OPEN CUT



ADD ALT #1  
0640144 - 0640351  
2 - POINT REPAIRS

ADD ALT #1  
0640021 - 06400202  
PIPEBURST

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

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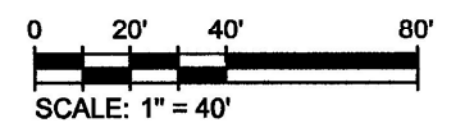
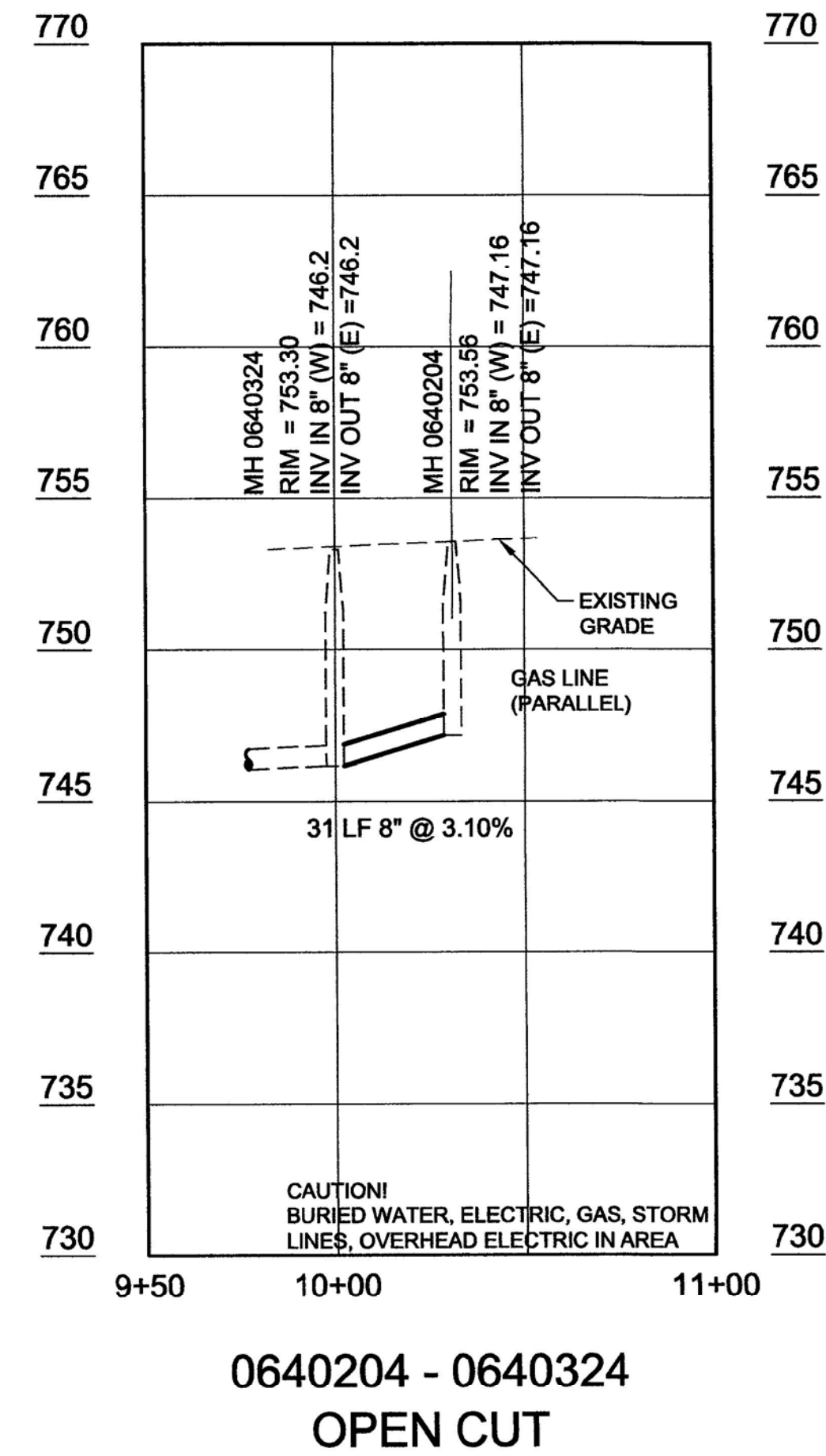
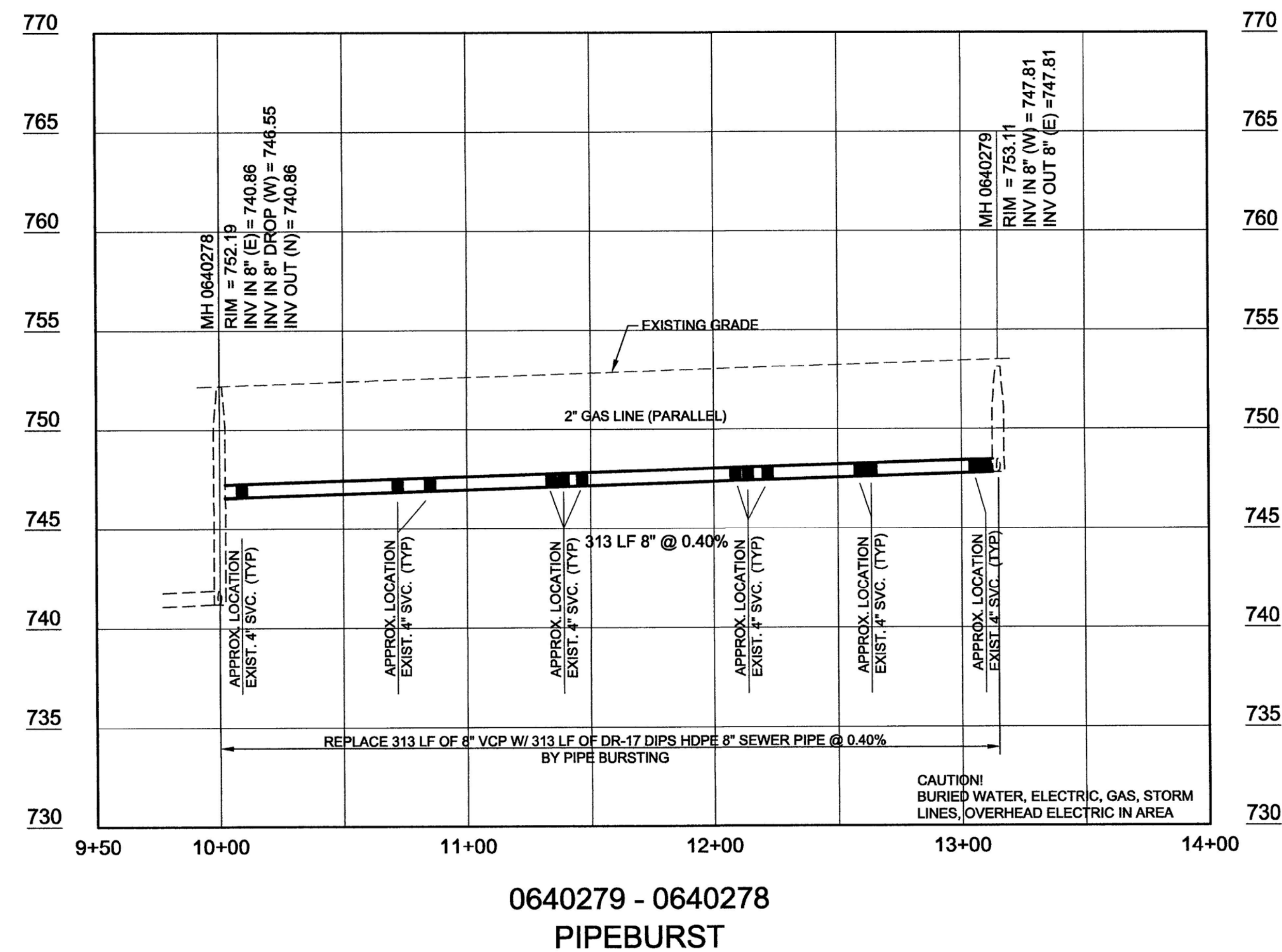
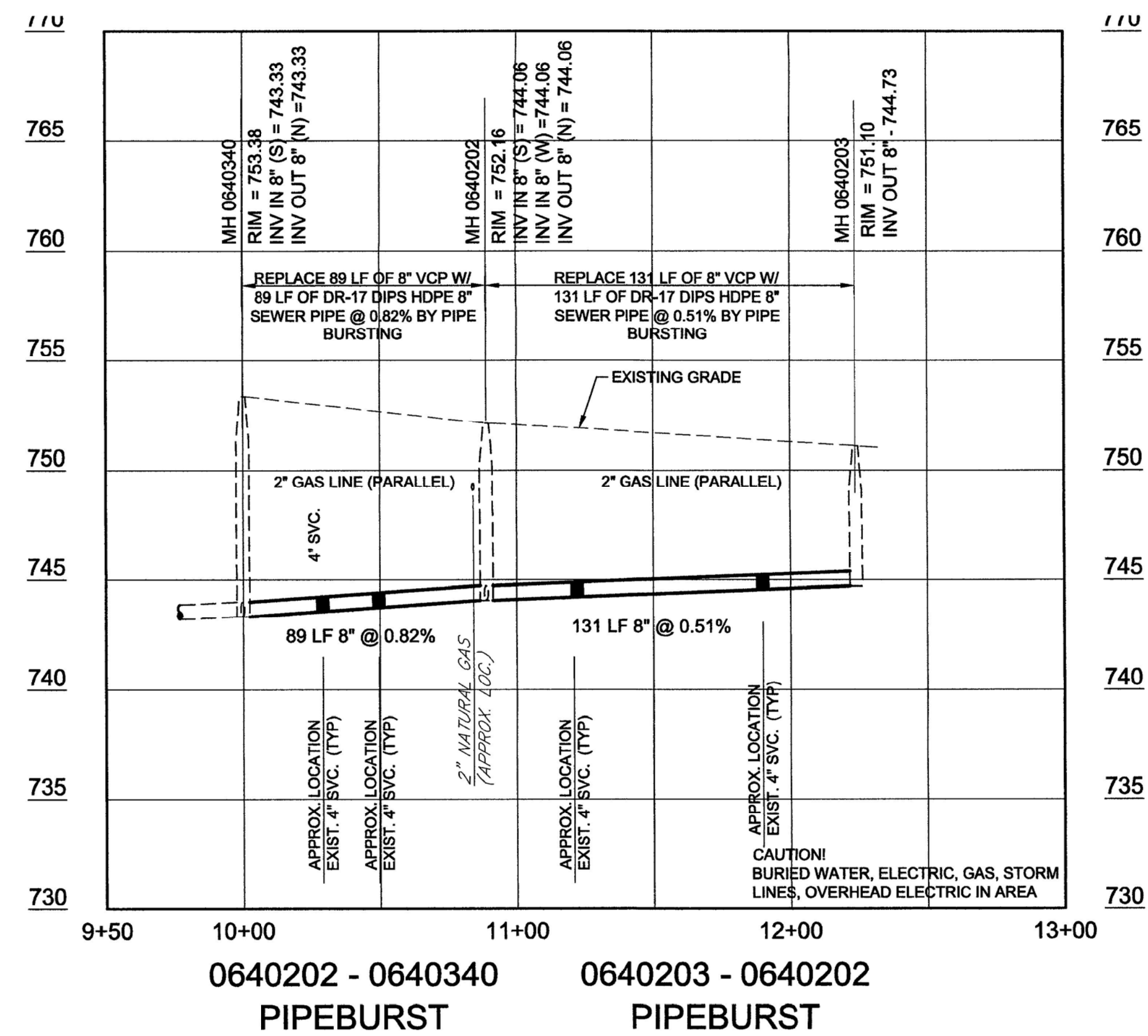
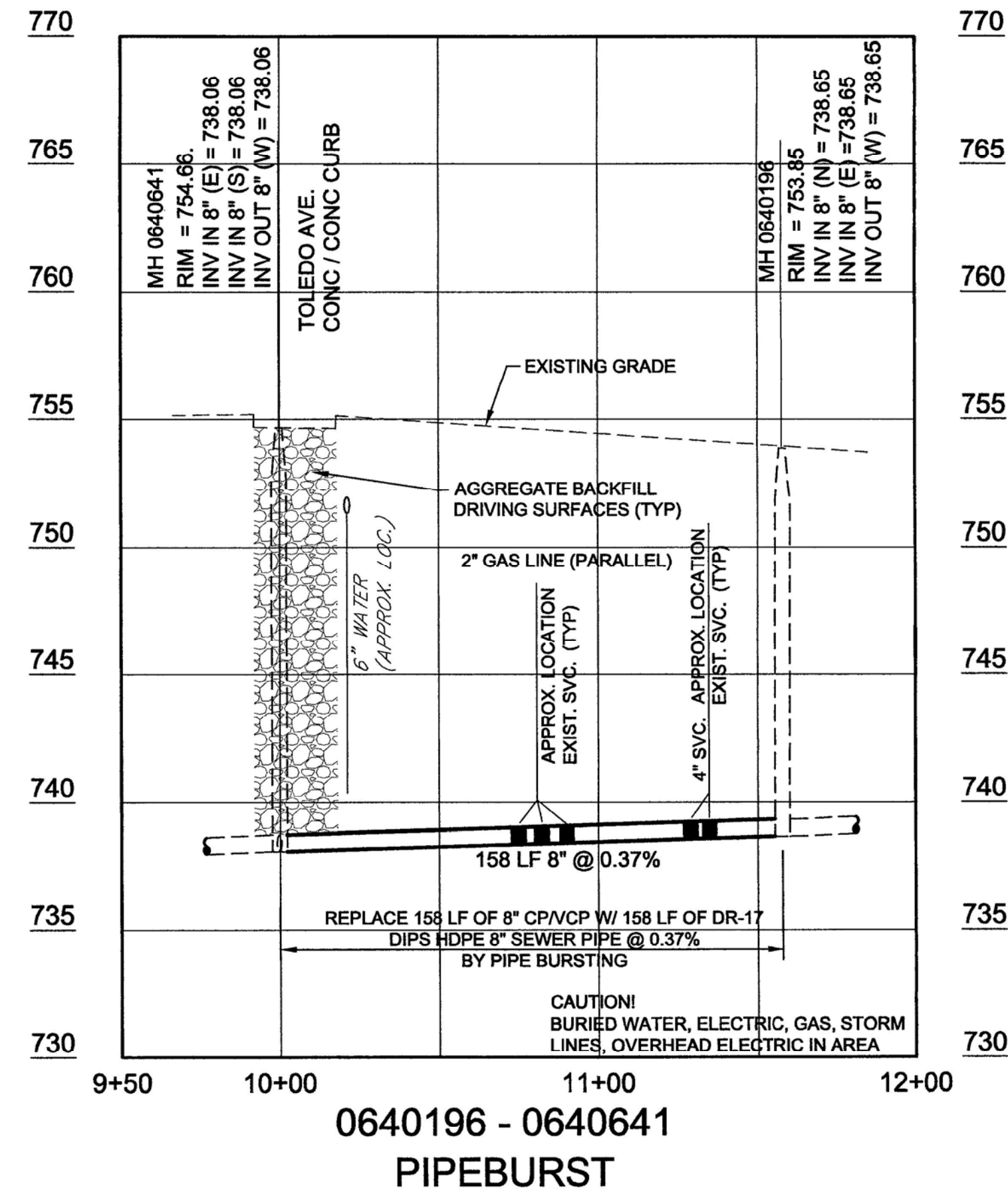
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ATLAS 58 - DETAILS - ADD ALT			
TMUA PROJECT NO. ES 2022-03			
UPPER JOE CREEK			
EAST BRANCH SPECIFIC REMEDIATION, C2			
CITY OF TULSA, OKLAHOMA			
WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
<b>TETRA TECH</b> 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL.918.249.3909			
REVISION		BY	DATE
DESIGNED		TI	05/2024
SURVEY		TI	05/2024
PROJ. MGR.		TV	01/25
LEAD ENGR.		JK	01/25
FIELD MGR.		JK	01/25
DRAWING			
FILE:			
ATLAS PAGE NO.:		058	
DATE:		DECEMBER 2024	
DESIGN MANAGER			
APPROVED:			
SHEET 11 OF 14 SHEETS			





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

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ATLAS 58 - PROFILE - 2			
TMUA PROJECT NO. ES 2022-03			
UPPER JOE CREEK EAST BRANCH SPECIFIC REMEDIATION, C2			
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
		TETRA TECH	
7845 E. 63rd Street, Suite 301, Tulsa, OK 74133		TEL 918.249.3909	
REVISION	BY	DATE	PLAN SCALE:
			DRAWN
			DESIGNED
			SURVEY
			PROJ. MGR.
			LEAD ENGR.
			FIELD MGR.
			DRAWING
			DATE: DECEMBER 2024
			ATLAS PAGE NO. 058
			APPROVED:
			DATE: DECEMBER 2024
			SHEET 13 OF 14 SHEETS

