

CONSTRUCTION DRAWINGS
FOR
CITY OF TULSA
TMUA PROJECT NO. ES-2019-14
HAIKEY CREEK INTERCEPTOR
REHABILITATION - PHASE 1
ACCOUNT NO. 2131S0011Z.SEWER.7500.75003122.541101
ENGINEERING SERVICES DEPARTMENT

OCTOBER 2021

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APPROVED BY:

CLAYTON EDWARDS 10-28-21
DIRECTOR, WATER AND SEWER DEPT. DATE

APPROVED BY:

[Signature] 11-01-21
CITY ENGINEER ADVERTISE DATE

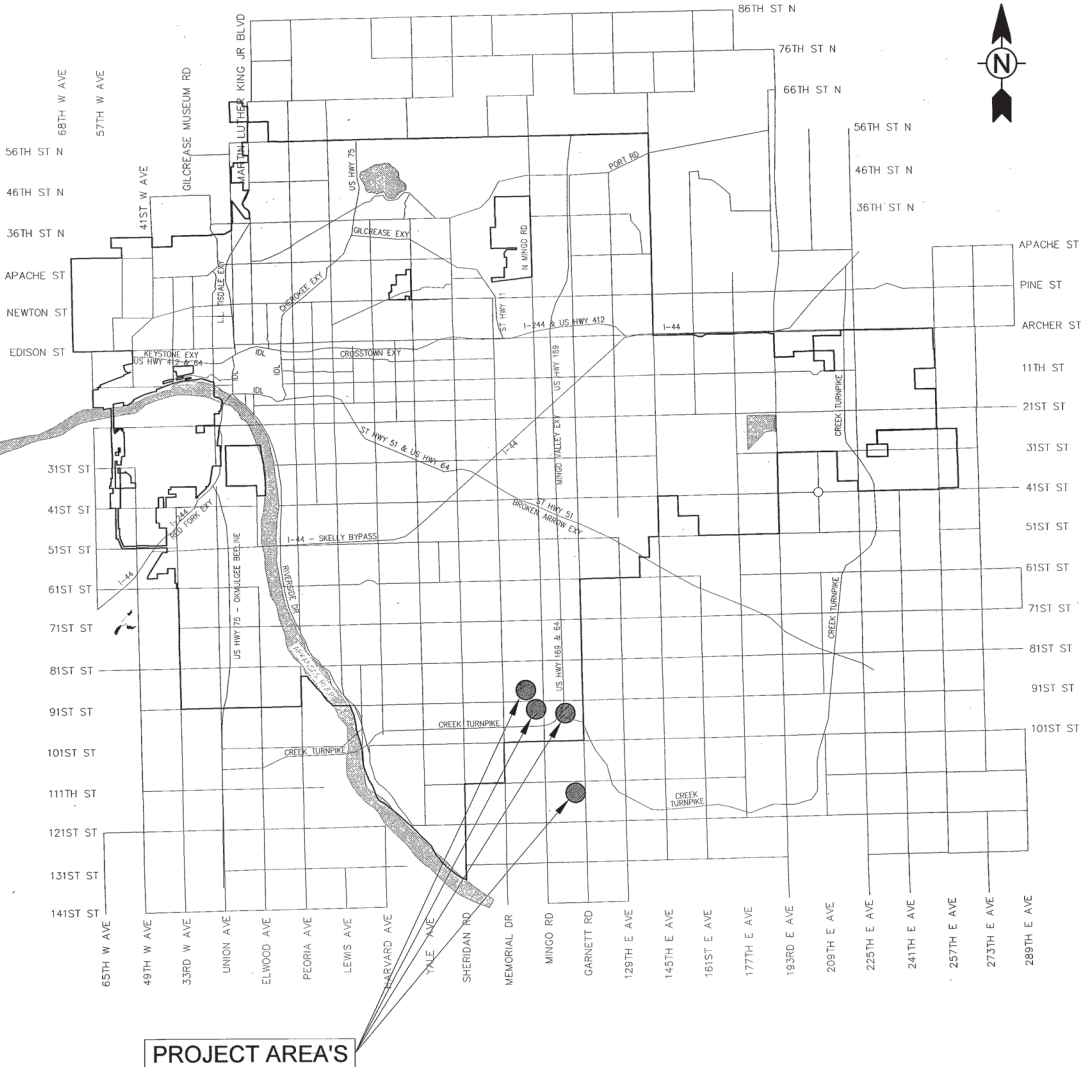
APPROVED BY:

[Signature]
RYAN L. MITTASCH, P.E. NO. 21102
PROJECT MANAGER, TETRA TECH DATE



LEGEND

ATLAS SHEET NUMBER	177
ATLAS SHEET BOUNDARY	—————
MANHOLE CALLOUT	MANHOLE NUMBER 233 MANHOLE DEPTH (SEE NOTE 6 MANHOLE REHAB., PAGE 3)
MAINTENANCE BOUNDARY	XXXXXXXXXX
MAINTENANCE DISTRICT	80-N
SLIPLINE	—————
REPLACEMENT	—————
WOOD FENCE	—XX—WD—XX—
PRIVACY FENCE	—XX—PRV—XX—
CHAIN LINK FENCE	—XX—CL—XX—
OVERHEAD UTILITIES	—OVH—OVH—
POWER POLE	ØPP
APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN	[Shaded Area]
STORM SEWER LINE AND INLET	—SD— SD



PROJECT AREA'S

PREPARED BY



TETRA TECH

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

CA NO. 2388 (EXP. 6-30-2023)

UTILITY COORDINATION BOX		
ENGINEERING SERVICES		
UTILITY COORDINATOR	596-9649	MR. CHRIS KOVAC
WATER DESIGN	596-9566	MRS. CHERYL WILSON
WASTEWATER DESIGN	596-9564	MR. AARON JOHNSON
TRANSPORTATION DESIGN	596-9636	MR. DOUG HELT
TRAFFIC ENGINEERING DESIGN	596-9741	MR. KURT KRAFT
STORMWATER DESIGN	596-9498	MS. BROOKE CAVINESS
OKLAHOMA NATURAL GAS	831-8261	MR. RANDY STALLCUP
COX COMMUNICATIONS	669-7866	MR. JOE BUTHOD
PUBLIC SERVICE CO.	599-2757	MR. RICHARD FORNEY
SOUTHWESTERN BELL TELEPHONE	596-6702	MR. JESSEE WEBB

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TMUA PROJECT NO. ES-2019-14, HAIKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1

ESTIMATED CONSTRUCTION QUANTITIES

Summary of Pipeline Improvements Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	Estimated Quantity		
						Extra	Total
1	Obstruction Removal	423	(EA)	1,8		2	2
2	24" Cured-In-Place-Pipe	410	(LF)	9	1,883		1,883
3	30" Cured-In-Place-Pipe	410	(LF)	9	2,882		2,882
4	Service Reconnections	410	(EA)	1,2,6,7,14		2	2
5	PVC Pipe Service, Schedule 40	405	(LF)	1,2,7,8,14		25	25
6	Video Pre-Inspection	415	(LF)	9	4,765		4,765






Summary of Manhole Rehabilitation Schedule							
Item No.	Description	Specifications	Unit	Pay Item Note	Estimated Quantity		
						Extra	Total
7	Replace Cover, Frame and Frame Seal	418 (Type A)	(EA)	10,13	1		1
8	Replace Frame Seal	418 (Type B)	(EA)	1,13		1	1
9	Replace Frame Seal and Chimney	418 (Type D)	(EA)	13		1	1
10	Bench and Invert Rehabilitation	419 (Type Gh)	(EA)		1		1
11	Grout and Coat Pipe Seal	421 (Type Gk)	(EA)		1		1
12	Manhole Replacement (5' ID)	416	(EA)	3,10,11,12,15	1		1
13	Manhole Additional Vertical Foot over 6' Depth (5' ID)	416	(VF)	3,10,11,12	15		15

Summary of General Contract Quantities							
Item No.	Description	Specifications	Unit	Pay Item Note	Estimated Quantity		
						Extra	Total
14	Traffic Control	ODOT Specification 880	(LS)	5			1
15	Mobilization	400.7.4	(EA)		1		1
16	Photographic Documentation	400.7.4	(EA)		1		1
17	Owner Allowance	Special	(EA)		1		1

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. 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.
3. ALL MANHOLES 5' DIAMETER AND LARGER SHALL RECEIVE INTERIOR EPOXY COATING. MANHOLES WITH INTERIOR EPOXY COATINGS SHALL NOT RECEIVE STEPS.
4. 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.
5. 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.
6. 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 KENNETH TABOR AT (918) 591-4390.
7. 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.
8. 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.
9. POST REHABILITATION CCTV SHALL BE INCLUDED IN THE COST OF THE REHABILITATION PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE.
10. THE CONTRACTOR SHALL INSTALL A SEALED FRAME AND COVER, (SEALED FRAME AND COVER SHALL BE 30" REGARDLESS OF MANHOLE DIAMETER) WHEN PERFORMING MANHOLE REPAIR TYPES "A" , WITHIN THE CITY OF TULSA REGULATORY FLOOD PLAIN BOUNDARY, AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. (SEE SPECIFICATION SECTION 426)
11. MANHOLES REQUIRING FULL REPLACEMENT OR TYPE Fc - PRECAST CORBEL SECTION, SHALL BE CONSTRUCTED 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.
12. 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.
13. MANHOLE RESTORATION SHALL INCLUDE ALL SURFACE QUANTITIES, NO ADDITINAL PAYMENT SHALL BE MADE FOR CONCRETE, ASPHALT, SOD OR ANY OTHER SURFACE RESTORATION NEEDED FOR A COMPLETE REPLACEMENT.
14. 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.
15. MANHOLES REQUIRING FULL REPLACEMENT, SHALL BE CONSTRUCTED 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.



REVISION		BY	DATE	PLAN SCALE:	DRAWN	TI	APPROVED:  CITY ENGINEER	
					DESIGNED	TI		
					SURVEY	TETRA TECH		
				PROFILE SCALE: HORIZONTAL	PROJ. MGR.	 10/14/21		
					LEAD ENGR.	 10/14/21		
				VERTICAL	FIELD MGR.	 10/14/21		
					RECOMMENDED:	 10-14		
					DESIGN MANAGER			
				FILE:	DRAWING:			DATE: OCTOBER 2021
				ATLAS PAGE NO.:		SHEET 2 OF 13 SHEETS		

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GENERAL NOTES

- ALL CONSTRUCTION SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH CITY OF TULSA, ENGINEERING SERVICES DEPARTMENT STANDARDS AND SPECIFICATIONS.
- 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.
- THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL PROVIDE SUFFICIENT MATERIALS, EQUIPMENT, AND LABOR TO GUARANTEE THE COMPLETION OF THE PROJECT WITHIN THE CONTRACT TIME. CONTRACTOR SHALL SUBMIT AN AS-PLANNED PROGRESS SCHEDULE TO THE ENGINEER FOR REVIEW AND ACCEPTANCE BEFORE STARTING WORK. THE PROGRESS SCHEDULE WILL ESTABLISH THE CONTRACTOR'S PLANNED CONSTRUCTION OPERATIONS. THE ENGINEER WILL USE THE PROGRESS SCHEDULE TO MONITOR THE PROGRESS OF THE WORK. THE PROGRESS SCHEDULE WILL PROVIDE FOR COMPLETION OF THE PROJECT WITHIN THE CONTRACT TIME AND WILL USE ALL OF THE TIME AS PROVIDED BY THE CONTRACT.
- 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.
- 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.
- 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.
- 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 HIS OWN EXPENSE.
- ALL UNSUITABLE MATERIALS REMOVED DURING TRENCHING, EXCAVATION OR CLEANING 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.
- ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.
- 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.
- CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES, HOWEVER IF DAMAGE OCCURS TO TREES WITHIN AN EASEMENT, THE CONTRACTOR SHALL NOT BE HELD RESPONSIBLE.
- 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.
- CONTRACTOR MUST NOTIFY HOMEOWNER A MINIMUM OF 48 HOURS PRIOR TO ANY REHAB OR CONSTRUCTION BEING DONE ON HOMEOWNERS PROPERTY.
- 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.
- 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.
- 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,
- CONTRACTOR SHALL NOT DISTURB ANY NEWLY PAVED AREAS WITHOUT WRITTEN APPROVAL FROM THE OWNER.
- CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL OVERNIGHT IN THE FLOODPLAIN.

MANHOLE REHABILITATION NOTES

- 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.
- 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.
- 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.
- ACTIVE LEAKING JOINTS OR OTHER DEFECTS OBSERVED BY THE CONTRACTOR BUT NOT SCHEDULED FOR REHABILITATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY UPON DETECTION.
- IN AREAS OF MANHOLE REPAIRS, CONTRACTOR SHALL PLACE SPOIL ON PLASTIC SHEETING, PLYWOOD OR OTHER SUITABLE GROUND PROTECTION.
- THE MANHOLE DEPTHS SHOWN ON THE REHABILITATION SCHEDULE ARE TAKEN FROM FIELD MEASUREMENTS AND SHALL GOVERN OVER MANHOLE DEPTHS SHOWN ON ATLAS DRAWINGS.
- 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.
- 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.
- 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.

PIPELINE REHABILITATION NOTES

- CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
- 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.
- 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).
- ALL LINE SEGMENTS SCHEDULED FOR CURED-IN- PLACE PIPE SHALL BE CLEANED OF ALL ROOTS, DIRT, ROCKS, AND LOOSE DEBRIS PRIOR TO INSTALLING LINER IN HOST PIPE.
- PIPELINE REHABILITATION PLANS 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).
- 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.
- THE PIPELINE LENGTHS SHOWN ON THE REHABILITATION SCHEDULE ARE TAKEN FROM FIELD MEASUREMENTS AND SHALL GOVERN OVER PIPELINE LENGTHS SHOWN ON ATLAS SHEETS.
- 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

- 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).
- 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

- 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.
- 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.
- 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.
- 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.
- 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.
- ALL ADVANCE SIGNS SHALL BE TYPE "A" WARNING LIGHTS.
- ALL TYPE III BARRICADES SHALL BE FURNISHED WITH A MINIMUM OF TWO (2) TYPE "A" WARNING LIGHTS.
- ALL CHANNELING DEVICES SHALL BE PROVIDED WITH TYPE "C" WARNING LIGHTS.

ADDITIONAL NOTES

- THE CITY HAS A PERMANENT METER ON THE UPSTREAM END OF THIS PROJECT AND THE AVERAGE DAILY FLOW SEEN OVER THE PREVIOUS YEAR IN THIS LINE IS APPROXIMATELY 1 MGD.
- WET WEATHER EVENTS - WHEN RAIN EVENTS EXCEEDING A 1 YEAR, 3 HOUR OCCURRENCE INTERVAL OCCUR (2 INCHES OF RAIN IN A 3 HR TIMEFRAME), TIME WILL BE SUSPENDED UNTIL FLOW BEGINS TO RETURN TO THE NORMAL RANGE.
- THERE ARE NO KNOWN PERMITS OR EXPENSES FOR THIS PROJECT.
- DUE TO THE LARGE FILE SIZE, IT IS NOT FEASIBLE TO PROVIDE CCTV DATA TO BIDDERS PRIOR TO BIDDING.
- ALTERNATIVE PRODUCTS TO THOSE SPECIFIED MAY BE SUBMITTED FOR APPROVAL POST-BID. THEY ARE NOT TO BE ASSUMED TO BE APPROVED PRE-BID. THEY MAY OR MAY NOT BE APPROVED FOR USE POST-BID.
- THE CITY WILL PROVIDE A HYDRANT METER FOR MEASUREMENT AND PAYMENT OF WATER CONSUMED.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO HAUL DEBRIS TO AN ACCEPTABLE LOCATION FOR DISPOSABLE AT NO COST TO THE OWNER.
- THE OWNER PREFERS EXTERNAL RECONNECTS (SERVICE SADDLES) UNLESS A SITE CANNOT BE EXCAVATED FOR SOME REASON. SERVICE SADDLES IF NECESSARY FOLLOW SUBMITTAL PROCEDURE. FOR MEASUREMENT AND PAYMENT THE SERVICE RECONNECTION BID PRICE COVERS BOTH 4 AND 6 INCH SERVICE RECONNECTIONS.
- THERE ARE NO KNOWN TRAFFIC CONTROL ISSUES OR SPECIAL REQUIREMENTS FOR THE TURNPIKE.



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	APPROVED:
				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	Ben W	
			HORIZONTAL	LEAD ENGR.	10/12/21	
				FIELD MGR.	10/12/21	
			VERTICAL	RECOMMENDED	10/12/21	
				DESIGN MANAGER	10/12/21	
			FILE:	DRAWING:	DATE:	10/13/2021
			ATLAS PAGE NO.:	1133, 1272	SHEET	3 OF 13 SHEETS

GENERAL NOTES

TMUA PROJECT NO. ES-2019-14

HAKEY CREEK INTERCEPTOR
REHABILITATION - PHASE 1

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:



TETRA TECH

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

LINE REHABILITATION SCHEDULE

ATLAS PAGE	Maint. Area	U/S Manhole	Depth (VF)	Grade to Rim	D/S Manhole	Depth (VF)	Grade to Rim	Diameter (Inch)	Existing Material	Length (ft)	Spec	24" - CIPP	30" - CIPP	Television Pre Inspection
												(LF)	(LF)	(LF)
1003	55-HC	055-0012	20.2	-	055-0011	19.3	1.0	24	PVC	340	410	340		340
1003	55-HC	055-0011	19.3	1.0	055-0774	15.4	-	24	RCP	80	410	80		80
1003	55-HC	055-0774	15.4	-	055-0010	16.4	2.0	24	RCP	260	410	260		260
1003	55-HC	055-0010	16.4	2.0	055-0842	16.0	1.5	24	RCP	155	410	155		155
1003	55-HC	055-0842	16.0	1.5	055-0009	14.4	1.3	24	DIP/RCP	185	410	185		185
1003	55-HC	055-0009	14.4	1.3	055-0008	18.4	-	24	DIP/RCP	340	410	340		340
1133	113-HC	113-0291	21.4	2.7	113-0290	21.2	3.9	24	RCP	10	410	10		10
1133	113-HC	113-0290	21.2	3.9	113-0465	19.6	0.3	24	RCP	120	410	120		120
1133	113-HC	113-0465	19.6	0.3	113-0464	19.5	-	24	RCP	20	410	20		20
1133	113-HC	113-0464	19.5	-	113-0463	22.5	0.3	24	DIP/RCP	160	410	160		160
1133	113-HC	113-0463	22.5	0.3	113-0462	22.9	0.2	24	RCP	23	410	23		23
1133	113-HC	113-0462	22.9	0.2	113-0010	26.1	2.2	24	RCP	190	410	190		190
1133	113-HC	113-0010	26.1	2.2	113-0009	22.5	3.1	30	RCP	275	410		275	275
1133	113-HC	113-0009	22.5	3.1	113-0008	21.3	3.4	30	RCP	290	410		290	290
1272	113-HC	113-0008	21.3	3.4	113.0007	20.8	5.1	30	RCP	410	410		410	410
1272	113-HC	113-0007	20.8	5.1	113-0006	20.7	2.1	30	RCP	336	410		336	336
1737	114-HC	114-0009	17.6	5.6	114-0008	20.7	3.5	30	RCP	345	410		345	345
1737	114-HC	114-0008	20.7	3.5	114-0007	25.8	4.2	30	RCP	346	410		346	346
1737	114-HC	114-0007	25.8	4.2	114-0006	23.5	2.6	30	RCP	440	410		440	440
1737	114-HC	114-0006	23.5	2.6	114-0005	19.3	1.3	30	RCP	440	410		440	440

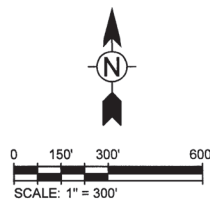
MANHOLE REHABILITATION


Atlas	Maintenance Area	Manhole ID	MH Type	Depth (ft.)	Rim to Grade (ft.)	Diameter (ft.)	Location	Elevation	Northing	Easting	Rehab Type	Specification	Rehab Description
1003	55-HC	055-0009	Standard	14.4	1.3	5.00	Esmt/Field	674.92	382756.1	2596271.1	None		
1003	55-HC	055-0842	Drop	16.0	1.5	4.00	Esmt/Field	675.00	382951.1	2596209.2	None		
1003	55-HC	055-0010	Standard	16.4	2.0	5.00	Esmt/Field	675.96	383116.9	2596156.5	None		
1003	55-HC	055-0774	Drop	17.7	5.0	5.00	Backyard	677.00	383370.3	2596114.3	Gk	421	Pipe Seal Rehab
1003	55-HC	055-0011	Drop	19.3	1.0	5.00	Backyard	679.80	383458.3	2596099.4	None		
1003	55-HC	055-0012	Standard	20.2		5.00	Homeowners would not allow access	682.50	383817.3	2596013.4			Rehab to be field determined during construction
1133	113-HC	113-0008	Standard	21.3	3.4	5.00	Esmt/Field	656.50	379946.5	2600364.3	None		
1133	113-HC	113-0009	Standard	22.5	3.1	5.00	Esmt/Field	657.50	380076.3	2600153	None		
1133	113-HC	113-0010	Standard	26.1	2.2	5.00	Esmt/Field	660.50	380216	2599925.7	None		
1133	113-HC	113-0462	Special	22.9	0.2	6.00	OTA - R/W	659.10	380421	2599921	A, Gh	418, 419	Replacement of Manhole Cover, Frame and Seal, Bench and Invert Rehabilitation
1133	113-HC	113-0463	Special	22.5	0.3	6.00	OTA - R/W	658.56	380450.4	2599961.1	None		
1133	113-HC	113-0464	Special	19.5	0.0	6.00	OTA - R/W	657.90	380620.6	2599958.9	None		
1133	113-HC	113-0465	Special	19.6	0.3	6.00	OTA - R/W	657.46	380643.0	2599917.0	None		
1133	113-HC	113-0290	Special	21.2	3.9	6.00	OTA - R/W	658.00	380718.5	2599915.8	None		
1133	113-HC	113-0291	Special	21.4	2.7	6.00	OTA - R/W	658.00	380724.1	2599898.3	None		
1272	113-HC	113-0006	Standard	20.7	2.1	5.00	Esmt/Field	654.00	379339.2	2600800.6	None		
1272	113-HC	113-0007	Standard	20.8	5.1	5.00	Esmt/Field	655.00	379618.1	2600565.7	Manhole Replacement	416	Manhole Removal and Replacement
1737	114-HC	114-0005	Standard	19.3	1.3	5.00	Esmt/Field	629.77	370830.3	2604092.5	None		
1737	114-HC	114-0006	Standard	23.5	2.6	5.00	Esmt/Field	634.76	371270.2	2604084.1	None		
1737	114-HC	114-0007	Standard	25.8	4.2	5.00	Esmt/Field	643.57	371710.2	2604075.6	None		
1737	114-HC	114-0008	Standard	20.7	3.5	5.00	Esmt/Field	633.74	371837.1	2603757.7	None		
1737	114-HC	114-0009	Standard	17.6	5.6	5.00	Esmt/Field	631.62	371968.9	2603427.7	None		



SCHEDULES	
TMUA PROJECT NO. ES-2019-14	
HAKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES 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: TT
	DESIGNED: TT
	SURVEY: TETRA TECH
PROFILE SCALE:	PROJ. MGR. <i>ADJ 10/12</i>
HORIZONTAL:	LEAD ENGR. <i>ADJ 10/12</i>
VERTICAL:	FIELD MGR. <i>ADJ 10/12</i>
	RECOMMENDED: <i>ADJ 10/12</i>
	DESIGN MANAGER: <i>ADJ 10/12</i>
FILE:	DRAWING:
ATLAS PAGE NO.:	DATE: OCT 08 2021
	SHEET 4 OF 13 SHEETS

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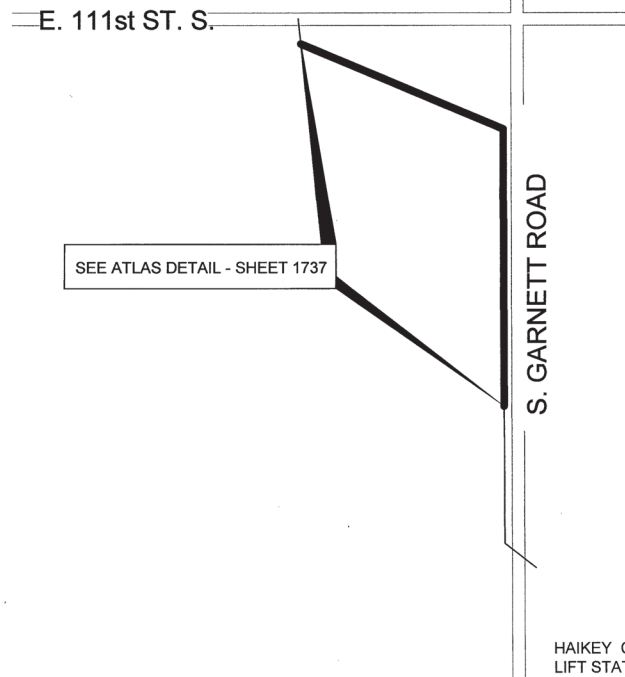
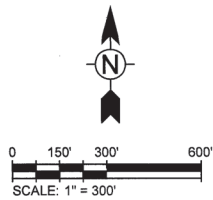
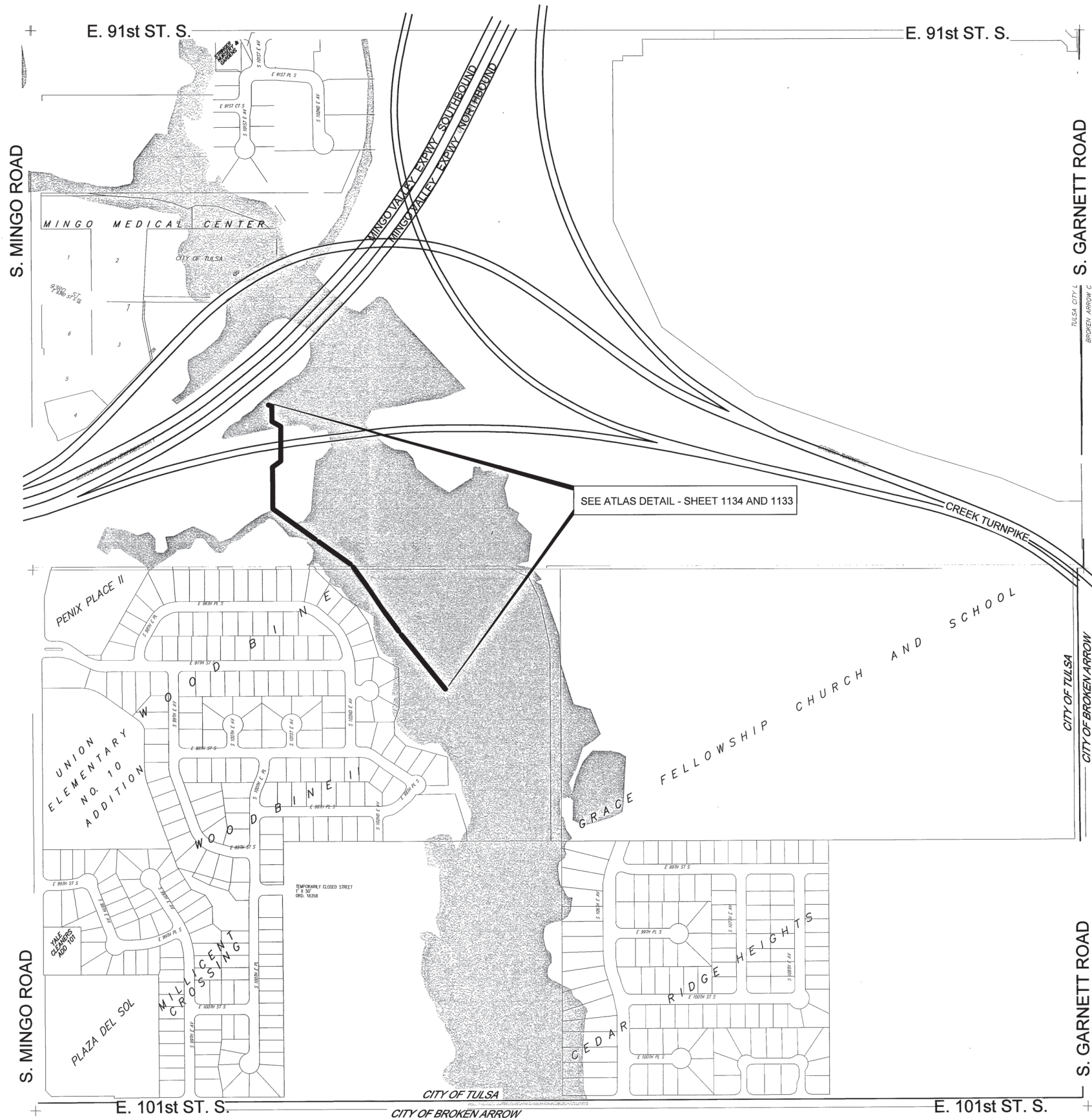



LOCATION MAP - 1			
TMUA PROJECT NO. ES-2019-14			
HAIKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH		7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909	
FILE:		DRAWING:	DATE: OCTOBER 2021
ATLAS PAGE NO.:		1003, 1134	SHEET 5 OF 13 SHEETS



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				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	10/21	
			HORIZONTAL	LEAD ENGR.	10/21	
				FIELD MGR.	10/21	
			VERTICAL	RECOMMENDED	10/21	
				DESIGN MANAGER	10/21	
			FILE:	DRAWING:	DATE:	
			ATLAS PAGE NO.:	1003, 1134	SHEET 5 OF 13 SHEETS	

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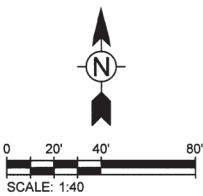


LOCATION MAP - 2			
TMUA PROJECT NO. ES-2019-14			
HAIKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY:			
 TETRA TECH 7645 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909			
REVISION		BY	DATE
PLAN SCALE:		DRAWN	TI
		DESIGNED	TI
		SURVEY	TETRA TECH
PROFILE SCALE:		PROJ. MGR.	10/21/21
HORIZONTAL		LEAD ENGR.	10/21/21
		FIELD MGR.	10/21/21
VERTICAL		RECOMMENDED	10/21/21
		DESIGN MANAGER	10/21/21
FILE:		DRAWING:	DATE: 10/21/21
ATLAS PAGE NO.:		1133, 1272, 1737	SHEET 6 OF 13 SHEETS



SEE ATLAS 880

E. 86th ST. S.









SEE ATLAS 1002

S. MINGO RD.

E. 91st ST. S.

SEE ATLAS 1134

LEGEND

- MANHOLE REHABILITATION 
- SLIPLINE / CIPP 
- APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN 
- MANHOLE BUBBLE 
- MANHOLE # 
- MANHOLE DEPTH (per atlas) 

NOTES:

ALL SURFACE RESTORATION FOR OBSTRUCTION REMOVAL OR POINT REPAIR, AND NECESSARY OBSTRUCTION REMOVAL REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CIPP LINER. THIS INCLUDES CLEARING AND GRUBBING, FENCE REMOVAL AND REPLACEMENT, ETC.

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

ATLAS 1003

TMUA PROJECT NO. ES-2019-14
HAIKEY CREEK INTERCEPTOR
REHABILITATION - PHASE 1

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:



TETRA TECH

7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3809



REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	APPROVED:
				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	PROJ. MGR.	
			HORIZONTAL	LEAD ENGR.	LEAD ENGR.	
				FIELD MGR.	FIELD MGR.	
			VERTICAL	RECOMMENDED	RECOMMENDED	
				DESIGN MANAGER	DESIGN MANAGER	
			FILE:	DRAWING	DATE:	
			ATLAS PAGE NO.:	1003	SHEET 7 OF 13 SHEETS	

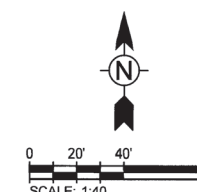


LEGEND

12.5 MANHOLE DEPTH (per atlas)

REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	APPROVED:
				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	<i>John 10/71</i>	
			HORIZONTAL	LEAD ENGR.	<i>AGJ 10/71</i>	
				FIELD MGR.	<i>John 10/71</i>	
			VERTICAL	RECOMMENDED:	<i>HBJ 10-71</i>	
				DESIGN MANAGER	<i>Handwritten Signature</i>	
			FILE:	DRAWING:	DATE: OCTOBER 2021	
			ATLAS PAGE NO.:	1003	SHEET 8 OF 13 SHEETS	

U.S. HWY 169 & 64



SEE ATLAS 1132



BOKE 811
Know what's below.
Call before you dig.

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				DESIGNED	TT	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	<i>Chy Wlzl</i>	
			HORIZONTAL	LEAD ENGR.	<i>AD 5 10/21</i>	
				FIELD MGR.	<i>BW 10/21</i>	
			VERTICAL	RECOMMENDED:	<i>HHS 10-21</i>	
				DESIGN MANAGER	<i>Chy Wlzl</i>	
			FILE:	DRAWING:		DATE: OCTOBER 2021
			ATLAS PAGE NO.:	1133		SHEET 9 OF 13 SHEETS

LEGEND

-
- MANHOLE REHABILITATION
- SLIPLINE / CIPP
- APPROXIMATE LOCATION OF TULSA
REGULATORY FLOODPLAIN
- MANHOLE BUBBLE
- MANHOLE #
- MANHOLE DEPTH (per atlas)

SEE ATLAS 1134

TULSA CITY LIMITS

ATLAS 1133
PROJECT NO. ES-2019-14
CREEK INTERCEPTOR
ABILITATION - PHASE 1
OF TULSA, OKLAHOMA
ING SERVICES DEPARTMENT
PREPARED BY:
TETRA TECH
645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL918 249.3909

PLANS AND ESTIMATES PREPARED BY:

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

TE	PLAN SCALE:	DRAWN	TI	APPROVED:
		DESIGNED	TI	
		SURVEY	TETRA TECH	
PROFILE SCALE: HORIZONTAL		PROJ. MGR.	<i>Barry W. [Signature]</i>	
		LEAD ENGR.	<i>ADD T. [Signature]</i>	
		FIELD MGR.	<i>Brian [Signature]</i>	
VERTICAL		RECOMMENDED:	<i>HBK 10-21</i>	<i>[Signature]</i>
		DESIGN MANAGER		
	FILE:	DRAWING:		CITY ENGINEER
	ATLAS PAGE NO.:	1133		DATE: OCTOBER 20, 2011
				SHEET 9 OF 13 SHEETS

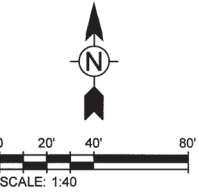
CONTRACTOR SHALL NOT STOCKPILE MATERIAL OR
STORE ANY EQUIPMENT OVERNIGHT IN THE TULSA
REGULATORY FLOODPLAIN

SEE ATLAS 1272

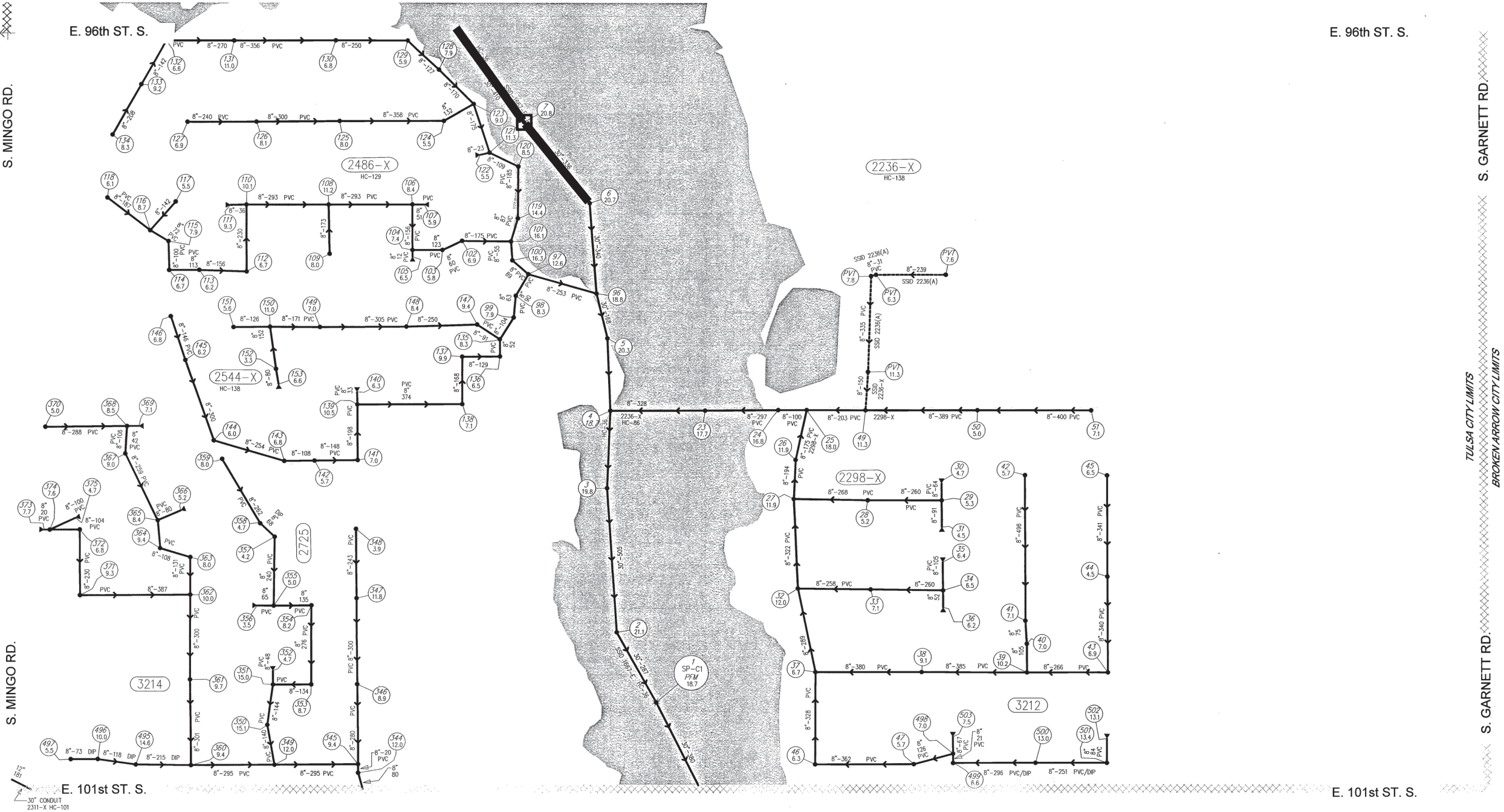
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SEE ATLAS 1133

E. 96th ST. S.



SEE ATLAS 1273



SEE ATLAS 1419

LEGEND

- MANHOLE REHABILITATION: Represented by a square symbol.
- SLIPLINE / CIPP: Represented by a thick black line.
- APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN: Represented by a shaded gray area.
- MANHOLE BUBBLE: Represented by a circle with a number inside.
- MANHOLE #: Represented by a circle with a number inside.
- MANHOLE DEPTH (per atlas): Represented by a circle with a number inside.

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



ATLAS 1272

TMUA PROJECT NO. ES-2019-14

HAIKEY CREEK INTERCEPTOR

REHABILITATION - PHASE 1

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:



TETRA TECH

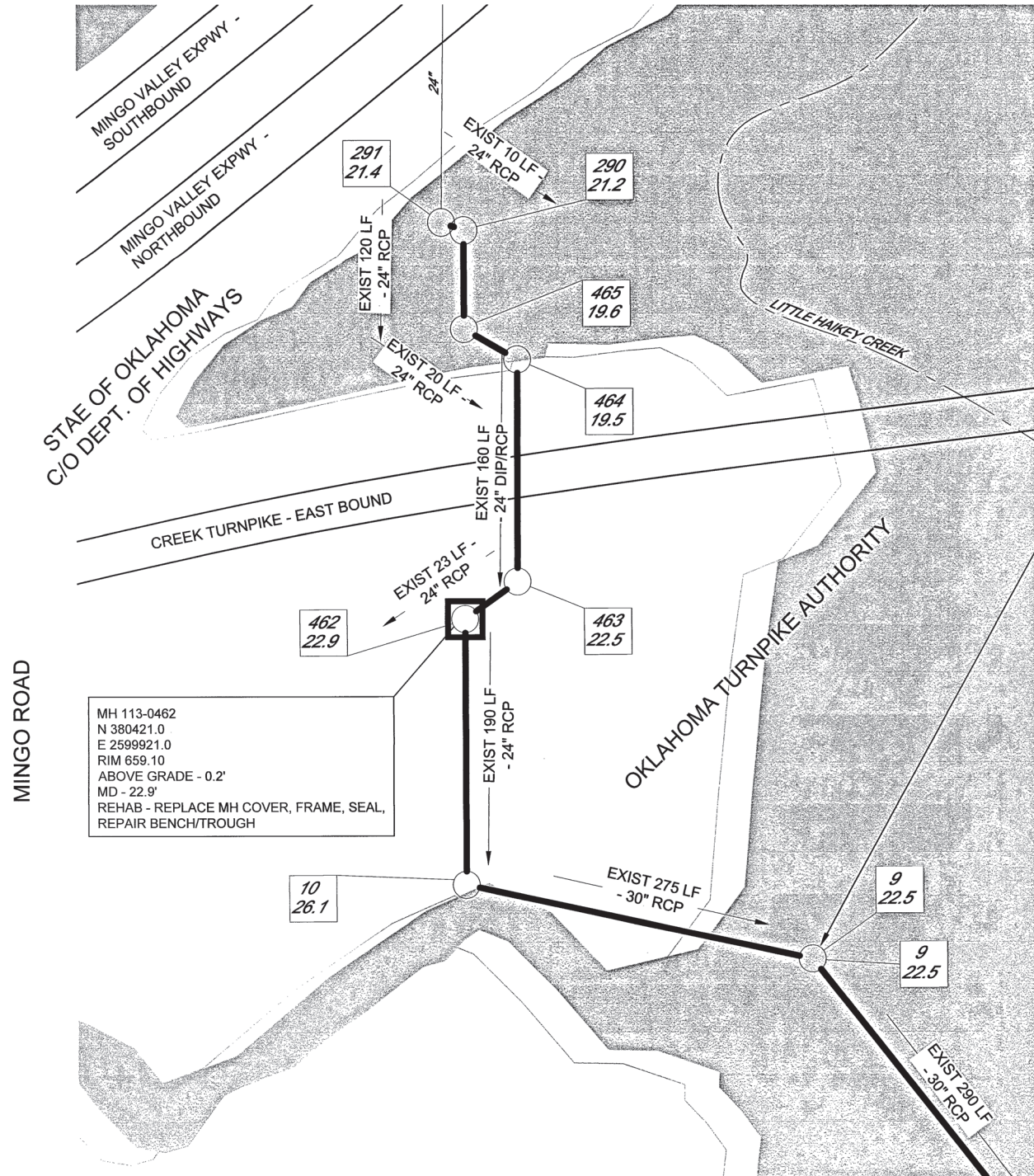
7645 E. 63rd Street, Suite 301, Tulsa, OK 74133
TEL 918.249.3909



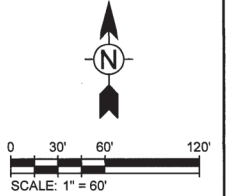
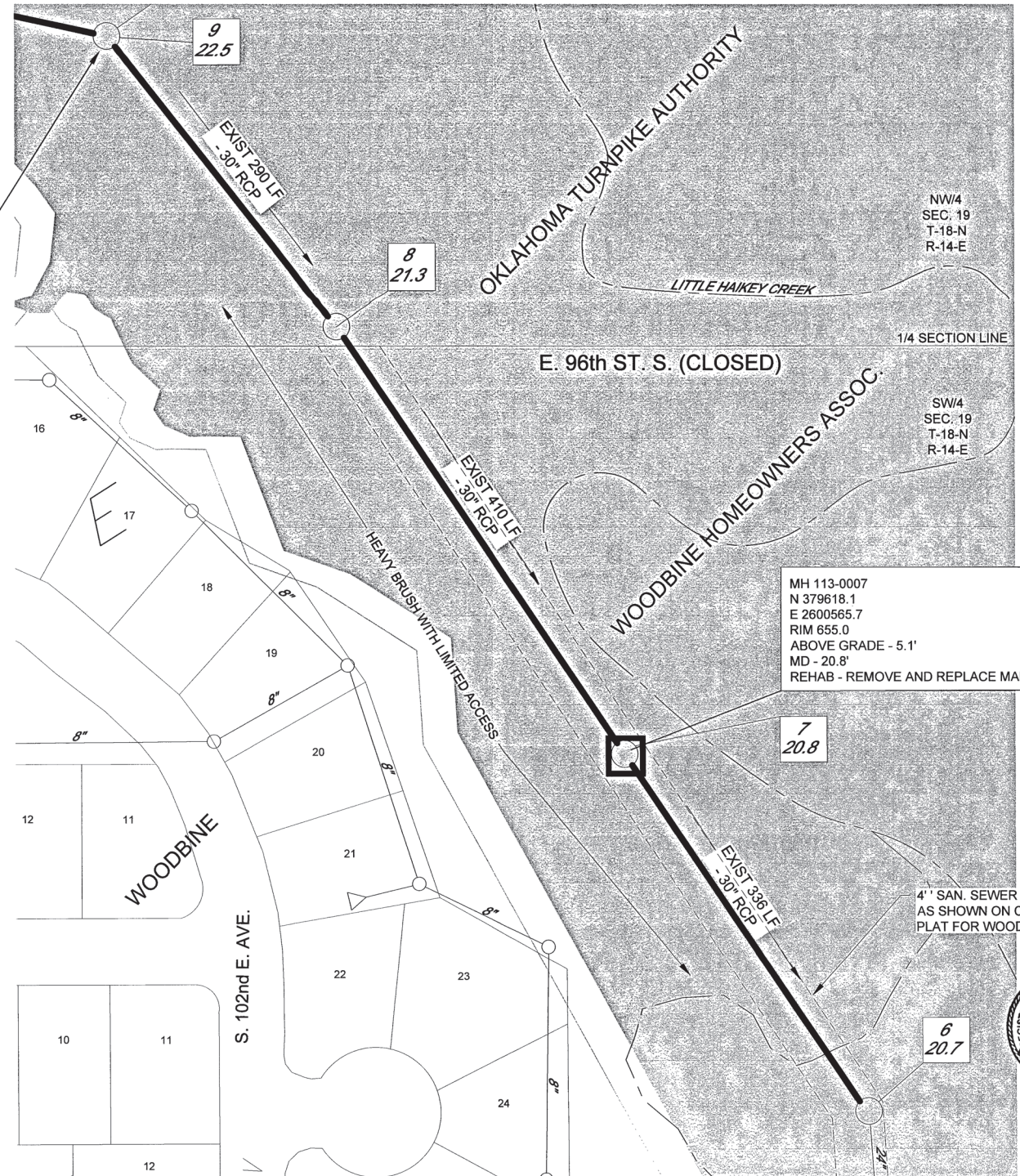
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				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	ADT	
			HORIZONTAL	LEAD ENGR.	ADT	
				FIELD MGR.	ADT	
			VERTICAL	RECOMMENDED	ADT	
				DESIGN MANAGER	ADT	
			FILE:	DRAWING:		
			ATLAS PAGE NO.:	1272		

E. 91st ST. S.

SEC. 19, T-18-N, R-13-E



IDENTICAL POINTS



MH 113-0462
N 380421.0
E 2599921.0
RIM 659.10
ABOVE GRADE - 0.2'
MD - 22.9'
REHAB - REPLACE MH COVER, FRAME, SEAL,
REPAIR BENCH/TROUGH

MH 113-0007
N 379618.1
E 2600565.7
RIM 655.0
ABOVE GRADE - 5.1'
MD - 20.8'
REHAB - REMOVE AND REPLACE MANHOLE

4\"/>



LEGEND

- MANHOLE REHABILITATION
- SLIPLINE / CIPP
- APPROXIMATE LOCATION OF TULSA REGULATORY FLOODPLAIN
- MANHOLE BUBBLE
- MANHOLE #
- MANHOLE DEPTH (per atlas)

INSTALL 523 LF OF CIPP LINER ON EXISTING 24\"/>

NOTES:

ALL SURFACE RESTORATION FOR OBSTRUCTION REMOVAL OR POINT REPAIR, AND NECESSARY OBSTRUCTION REMOVAL REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CIPP LINER. THIS INCLUDES CLEARING AND GRUBBING, FENCE REMOVAL AND REPLACEMENT, ETC.

EXISTING EASEMENTS ARE SHOWN IN A CALCULATED LOCATION, NO SURVEY WAS PERFORMED. NO PROPERTY CORNERS WERE RECORDED.

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

ATLAS 1133 & 1272 - DETAIL
TMUA PROJECT NO. ES-2019-14
HAIKEY CREEK INTERCEPTOR
REHABILITATION - PHASE 1
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES 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	TI	APPROVED:
				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE: HORIZONTAL	PROJ. MGR.	<i>[Signature]</i> 10/24	
				LEAD ENGR.	<i>[Signature]</i> 10/24	
			VERTICAL	FIELD MGR.	<i>[Signature]</i> 10/24	
				RECOMMENDED:	<i>[Signature]</i> 10-24	
				DESIGN MANAGER	<i>[Signature]</i>	
			FILE:	DRAWING:		CITY ENGINEER
			ATLAS PAGE NO.:	1133, 1272		OCTOBER 2021
						SHEET 11 OF 13 SHEETS

CITY ENGINEER
DATE: OCT 06 2021
SHEET 11 OF 13 SHEETS

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ATLAS 1738
S. MINGO ROAD

ATLS 1574
E. 111th ST. S.

E. 116th ST. S. (CLOSED)

ATLS 1908

LEGEND

MANHOLE REHABILITATION



SLIPLINE / CIPP



APPROXIMATE LOCATION OF TULSA
REGULATORY FLOODPLAIN



MANHOLE BUBBLE



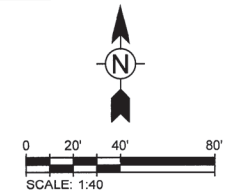
MANHOLE #

MANHOLE DEPTH (per atlas)


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



HAIKEY CREEK
LIFT STATION



S. GARNETT ROAD
ATLAS 1736

ATLAS 1737	
TMUA PROJECT NO. ES-2019-14	
HAIKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES 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: T1
	DESIGNED: T1
	SURVEY: TETRA TECH
PROFILE SCALE:	PROJ. MGR. <i>[Signature]</i> 10/14/21
HORIZONTAL:	LEAD ENGR. <i>[Signature]</i> 10/21/21
	FIELD MGR. <i>[Signature]</i> 10/14/21
VERTICAL:	RECOMMENDED: <i>[Signature]</i> 10/10/21
	DESIGN MANAGER
FILE:	DRAWING:
ATLAS PAGE NO.:	1737
DATE:	09 OCT 2021
SHEET	12 OF 13 SHEETS

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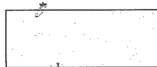
MANHOLE REHABILITATION



SLIPLINE / CIPP



APPROXIMATE LOCATION OF TULSA
REGULATORY FLOODPLAIN



MANHOLE BUBBLE

MANHOLE #
462
MANHOLE DEPTH (per atlas)
22.9

NE/4, NE/4
SEC. 31, T-18-N, R-14-E

114-HC

ROCKWALL BLUE STAR OK, LLC.

E. 111th ST. S.

S. GARNETT ROAD

7
CORTEZ, UMAR

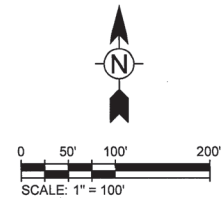
INSTALL 1571 LF OF SLIPLINE / CIPP LINER ON EXISTING 30" SEWER - THIS SHEET

NOTES:

ALL SURFACE RESTORATION FOR OBSTRUCTION
REMOVAL OR POINT REPAIR, AND NECESSARY
OBSTRUCTION REMOVAL REQUIRED TO ACCESS
MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR
CIPP LINER. THIS INCLUDES CLEARING AND GRUBBING,
FENCE REMOVAL AND REPLACEMENT, ETC.

EXISTING EASEMENTS ARE SHOWN IN A CALCULATED
LOCATION, NO SURVEY WAS PERFORMED. NO
PROPERTY CORNERS WERE RECORDED.

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



ATLAS 1737 - DETAIL
TMUA PROJECT NO. ES-2019-14
HAKEY CREEK INTERCEPTOR REHABILITATION - PHASE 1
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

	TETRA TECH 7845 E. 63rd Street, Suite 301, Tulsa, OK 74133 TEL 918.249.3909
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REVISION	BY	DATE	PLAN SCALE:	DRAWN	TI	APPROVED:
				DESIGNED	TI	
				SURVEY	TETRA TECH	
			PROFILE SCALE:	PROJ. MGR.	Ben 10/21	
			HORIZONTAL	LEAD ENGR.	Ben 10/21	
				FIELD MGR.	Ben 10/21	
			VERTICAL	RECOMMENDED	Has 10-21	
				DESIGN MANAGER		
			FILE:	DRAWING:		
			ATLAS PAGE NO.:	1737		
						CITY ENGINEER DATE: OCTOBER 2021 SHEET 13 OF 13 SHEETS