

LEGEND

	PROPOSED SEWER LINE		EXISTING POWER POLE
	EXISTING TELEPHONE		EXISTING ELECTRIC MANHOLE
	EXISTING TELEPHONE MANHOLE		EXISTING LIGHT POLE
	EXISTING TELEPHONE CONTROL BOX		EXISTING LIGHT (FLOOD, YARD ETC.)
	EXISTING CABLE PEDESTAL		EXISTING UNDERGROUND ELECTRIC CABLE
	EXISTING GAS METER		EXISTING OVERHEAD ELECTRIC WIRE
	EXISTING GAS VALVE		ASPHALT
	EXISTING GAS LINE		CONCRETE PATTERN
	EXISTING SEWER LINE		STREET SIGN
	EXISTING SS MANHOLE		MAILBOX
	EXISTING MANHOLE REMOVAL		IRON ROD/PIPE FOUND
	EXISTING WATER VALVE		TREE OR BUSH
	EXISTING IRRIGATION CONTROL VALVE		BENCHMARK
	EXISTING FIRE HYDRANT		CONTROL POINT
	EXISTING WATER METER		PROPOSED NEW MANHOLE
	EXISTING WATER		PROPOSED MANHOLE
	EXISTING STORM MANHOLE		ROW LINE
	EXISTING STORM LINE		PROPERTY LINE
	CHAIN LINK FENCE		CONCRETE DRIVEWAY REMOVAL & REPLACEMENT
	WIRE FENCE		CONCRETE PAVEMENT REMOVAL & REPLACEMENT
	FENCE OTHER		ASPHALT PAVEMENT REMOVAL & REPLACEMENT
	WOOD FENCE		GRAVEL DRIVEWAY REMOVAL & REPLACEMENT
	EXISTING ELECTRICAL PEDESTAL		LIMITS OF FLOOD ZONE BOUNDARY
	EXISTING FIBER OPTIC LINE		ABANDONMENT OF EXISTING SEWER
	EXISTING EASEMENT LINE		
	EXISTING ELECTRIC METER		

CONSTRUCTION PLANS FOR

**IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25**

**TMUA PROJECT NO. ES 2024-05
WATER AND SEWER DEPARTMENT
CITY OF TULSA, OKLAHOMA**

SHEET INDEX TO DRAWING

SHEET NO.	DESCRIPTION	
1	COVER SHEET	34 ATLAS PAGES 95 & 96 KEY MAP
2	LOCATION MAP	35 LINE H
3	GENERAL CONSTRUCTION NOTES	36 ATLAS PAGE 163 KEY MAP
4	PAY QUANTITIES & NOTES	37 LINE I
5	PAY ITEM SUMMARY	38 ATLAS PAGES 167,168,222 & 223 KEY MAP
6	MANHOLE WORK ITEM TABLE	39 LINE J
7	PIPE WORK ITEM TABLE	40-41 LINE K
8	SLIPLINE/CIPP WORK ITEM TABLE	42 ATLAS PAGE 281 KEY MAP - 1
9	STORM WATER MANAGEMENT PLAN	43 LINE L
10	SLIPLINE/CIPP ATLAS PAGE 29 & 30 KEY MAP - 1	44 LINE M
11	SLIPLINE/CIPP ATLAS PAGE 29 & 30 KEY MAP - 2	45 LINE N
12	SLIPLINE/CIPP ATLAS PAGE 52 KEY MAP - 1	46 LINE O
13	SLIPLINE/CIPP ATLAS PAGE 52 KEY MAP - 2	47 LINE P
14	SLIPLINE/CIPP ATLAS PAGE 119 KEY MAP	48 ATLAS PAGE 281 KEY MAP - 2
15	SLIPLINE/CIPP ATLAS PAGE 138 KEY MAP	49 LINE Q
16	SLIPLINE/CIPP ATLAS PAGE 167 & 168 KEY MAP	50 ATLAS PAGES 389 & 472 KEY MAP
17	SLIPLINE/CIPP ATLAS PAGE 281 KEY MAP	51 LINE R
18	CIPP ATLAS PAGE 386 & 469 KEY MAP	52 ATLAS PAGES 659 & 660 KEY MAP
19	SLIPLINE/CIPP ATLAS PAGE 659 & 660 KEY MAP	53 LINE S
20	CIPP ATLAS PAGE 767 KEY MAP	54 ATLAS PAGE 68 KEY MAP
21	ATLAS PAGES 28 & 29 KEY MAP	55-58 LINE T
22	LINE A	59 LINE U
23	ATLAS PAGE 29 KEY MAP	60 LINE V
24	LINE B	61 ATLAS PAGE 8 KEY MAP
25	ATLAS PAGE 52 KEY MAP - 1	62 LINE W
26	LINE C	63 LINE X
27	ATLAS PAGE 52 KEY MAP - 2	64 LINE X ABANDONMENT & SERVICE RELOCATION
28	LINE D	65 MANHOLE LAYOUT SHEET - 1
29	LINE E	66 MANHOLE LAYOUT SHEET - 2
30	ATLAS PAGES 60 & 61 KEY MAP	
31	LINE F	
32	ATLAS PAGES 81 & 82 KEY MAP	
33	LINE G	

PREPARED BY



CONSULTING ENGINEERS
4500 S. GARNETT ROAD, SUITE 110
TULSA, OKLAHOMA 74146
(918) 627-9737



CERTIFICATE OF AUTHORIZATION NO. CA1979, EXP. 6/30/2027

Engineer's Statement - Current City of Tulsa Standard Specifications and Standard Details and Asset Management Guidelines govern. All other construction and materials shall be in accordance with the 2019 Oklahoma Standard Specifications for Highway Construction.

UTILITY COORDINATION INFORMATION INSIDE OF RIGHT OF WAY		
COMPANY	CONTACT	OFFICE
City of Tulsa	Tony Glenn	918-596-9245
AEP/PSO	Emergency	888-216-3523
ONG	Emergency	800-664-5463
AT&T	Emergency	800-288-2020
Cox	Customer Service	918-806-6000
Verizon	Customer Service	888-294-6804
Windstream	Customer Service	800-347-1991
MTTA	Customer Service	918-830-0024
UTILITY COORDINATION INFORMATION TULSA ENGINEERING SERVICES DEPARTMENT		
WATER DESIGN		918-596-9580
WASTEWATER DESIGN		918-596-9564
TRANSPORTATION DESIGN		918-596-9636
TRAFFIC ENGINEERING DESIGN		918-596-9741
STORMWATER DESIGN		918-596-9498

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

PROJECT LOCATION
SEE SHEET 2



CITY OF TULSA STANDARD DETAILS

- 305 BEDDING DETAIL - FLEXIBLE PIPE
- 306 TRENCH DETAIL CONSTRUCTION ADJACENT TO ROADWAY
- 307 BORE/OPEN CUT CONDUIT DETAIL
- 315 THRUST BLOCKS AND TRENCH CONDITIONS
- 351 BEDDING DETAIL PVC FLEXIBLE SANITARY SEWER PIPE
- 353 REPLACEMENT FRAME AND LID FOR EXISTING 4' I.D. SANITARY SEWER
- 354 FRAME AND LID FOR 4' I.D. AND LARGER SANITARY SEWER MANHOLE
- 358 SANITARY SEWER PRE-CAST MANHOLES
- 361 IN-LINE TEES FOR SERVICE CONNECTIONS
- 362 RISER DETAIL
- 366 MANHOLE STEP LOCATION AND INVERT DETAILS
- 370 HYDRAULIC SLIDE MANHOLE DETAIL
- 401A CONCRETE COLLAR FOR PARTIAL MANHOLE REPLACEMENT
- 402 COVER, FRAME & FRAME SEAL
- 406 SHALLOW FLATTOP MANHOLE
- 407 BENCH AND INVERT REHABILITATION
- 409 CONCRETE MANHOLE COLLAR
- 410 CORBEL (CONE) REPLACEMENT
- 413 PATCH HOLE AND PLUG LIFT HOLE
- 416 PIPE BURST DROP
- 417 SLIPLINE DROP
- 419 MANHOLE OUTSIDE DROP CONNECTION
- 713 PAVEMENT REMOVAL & REPLACEMENT
- 714 STANDARD DETAIL FOR PAVEMENT CUTS
- 727 CONCRETE PAVEMENT STANDARD DETAILS
- 729 STANDARD PAVEMENT JOINTS DETAILS
- 730 STANDARD ASPHALT PAVEMENT CUT & REPAIR
- 731 STANDARD CONCRETE PAVEMENT CUT & REPAIR
- 733 STANDARD PAVEMENT REHABILITATION FOR UTILITY CONSTRUCTION
- 764 DOUBLE GRATE AND CURB INLET DESIGN 2



APPROVED BY

WATER AND SEWER DIRECTOR

3-23-2026

DATE



3-12-2026

DATE

Jacob Brumbaugh, P.E.

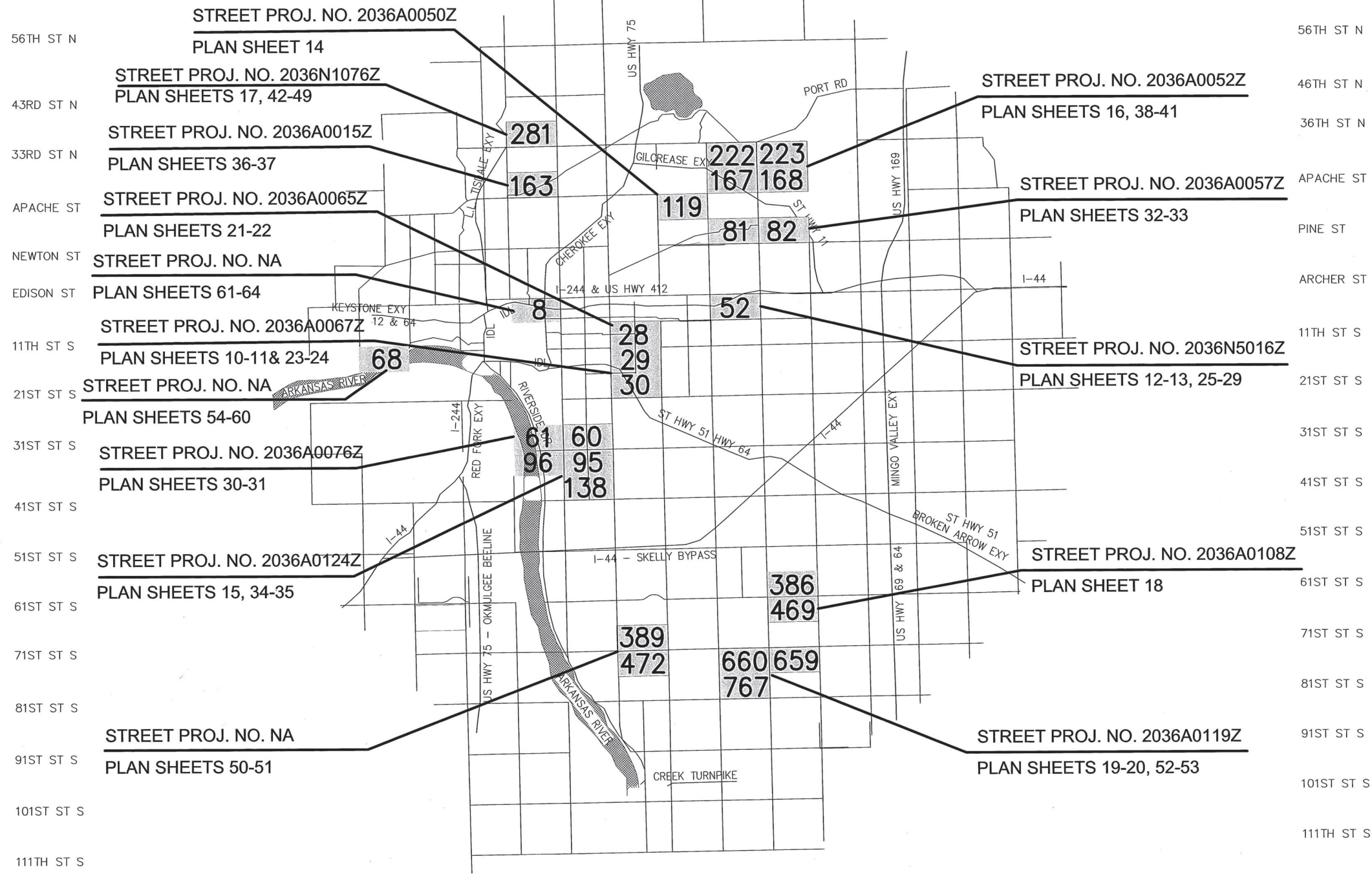
RJN GROUP, INC.

IMPROVE OUR TULSA 2 AREAWIDE SEWER REHABILITATION, FY25 PROJECT ES 2024-05



NOT TO SCALE

57TH W AVE
41ST W AVE
GILCREASE MUSEUM RD
UNION AVE
N OSAGE AVE
ELWOOD AVE
PEORIA AVE
LEWIS AVE
HARVARD AVE
YALE AVE
SHERIDAN RD
MEMORIAL DR
MINGO RD
GARNETT RD
129TH E AVE
145TH E AVE
161ST E AVE



LEGEND

243 ATLAS PAGE


NOTE:

1. THIS SHEET SHOWS THE VICINITY OF SANITARY SEWER MAINS TO BE REPAIRED, REHABILITATED, OR REPLACED BEFORE THE STREET REHABILITATION PROJECTS BEGIN.



LOCATION MAP
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 2 OF 66 SHEETS
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			FILE:	FIELD MGR.			
			ATLAS PAGE NO: NA	DRAWING:			

65TH W AVE
49TH W AVE
33RD W AVE
UNION AVE
ELWOOD AVE
PEORIA AVE
LEWIS AVE
HARVARD AVE
YALE AVE
SHERIDAN RD
MEMORIAL DR
MINGO RD
GARNETT RD
129TH E AVE
145TH E AVE
161ST E AVE

GENERAL NOTES

- THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SAFETY PLAN TO THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK. THE SAFETY PLAN SHALL ADDRESS, BUT NOT BE LIMITED TO ISSUES SUCH AS TRAFFIC CONTROL, WORK SITE SAFETY, MANHOLE VENTILATION, WORK EQUIPMENT, FIRST AID, HYGIENE, AND OTHER RELATED TOPICS. THE CONTRACTOR SHALL 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.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF TULSA ENGINEERING STANDARDS AND SPECIFICATIONS, IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF THIS CONTRACT, AND IN ACCORDANCE WITH ODOT STANDARDS.
- THE CONTRACTOR SHALL HAVE ONE (1) EXECUTED COPY OF THE CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL, IN COOPERATION WITH THE CITY, DEVELOP AND SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN (TCP), TO THE CITY OF TULSA PUBLIC WORKS, FIELD ENGINEERING. THIS TCP SHALL DETAIL SUCH MEASURES AS MAY BE REQUIRED TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE A COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROL SYSTEM DURING THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL FLAGMEN, BARRICADES, SIGNS, SIGNALS, OR OTHER DEVICES AS MAY BE REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION, PERMITTING, AND EXECUTION OF A STORMWATER POLLUTION PREVENTION PLAN (SWP3). THE CONTRACTOR SHALL PROVIDE ALL DOCUMENTATION REQUIRED OF SWP3 FOR REVIEW AND APPROVAL OF THE PLAN BY FEDERAL, STATE, AND LOCAL AUTHORITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, THE NOTICE OF INTENT AND THE NOTICE OF TERMINATION.
- THE 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 OF ORANGE SAFETY FENCING SHALL BE INCLUDED IN OTHER PAY ITEMS.
- PRIOR TO EXCAVATING, THE CONTRACTOR IS RESPONSIBLE FOR BRACING OR SUPPORTING ANY POWER OR UTILITY 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.
- ALL EXCAVATED MATERIAL REMOVED DURING TRENCHING OR EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. PRIOR TO TRENCHING AND EXCAVATION, THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE TO THE ENGINEER FOR REVIEW. STOCKPILING EXCAVATED MATERIALS IN STREET OR ALLEY RIGHT-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE ENGINEER. MAINTENANCE OF STOCKPILE SITE 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.
- BACKFILL UNDER ALL PAVED SURFACES SHALL BE TYPE "A" AGGREGATE BASE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED BY A VIBRATORY HAND TAMPER TO 95% OF THE STANDARD PROCTOR DENSITY, AS MEASURED BY THE NUCLEAR DENSITY METHOD.
- THE CONTRACTOR SHALL PROVIDE A DETAILED ACCESS PLAN FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS, CONSTRUCTION ACTIVITIES, AND PERMITS THAT MAY BE NEEDED FOR THE IMPLEMENTATION OF THIS PLAN.
- CONTRACTOR MUST NOTIFY THE HOMEOWNER A MINIMUM OF 48 HOURS (SPECIFICATION 400) PRIOR TO BEGINNING ANY REHAB WORK OR CONSTRUCTION ON HOMEOWNER'S PROPERTY.
- IN ALL AREAS WHERE EXCAVATION WILL OCCUR, CONTRACTOR SHALL VIDEO ALL CONCRETE PAVEMENT, BUILDINGS, FOUNDATIONS, LANDSCAPING, LAWNS AND TREES PRIOR TO CONSTRUCTION AND SUBMIT TO THE ENGINEER FOR PROJECT RECORDS.
- CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ANY EXISTING STORAGE SHEDS, LOCATED WITHIN THE CONSTRUCTION AREA, THAT ARE DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE CITY OF TULSA OR THE HOMEOWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATION OF ALL EXISTING SANITARY SEWER SERVICE LATERALS IN THE PROJECT AREA. IF ENCOUNTERED OR DAMAGED DURING CONSTRUCTION, EXISTING SERVICE LATERALS SHALL BE REMOVED AND REPLACED USING PIPE OF THE SAME SIZE AND MATERIAL AS THE EXISTING SEWER AT THE CONTRACTORS EXPENSE.
- CONTRACTOR MUST EXERCISE DILIGENCE WHEN WORKING AROUND TREES. HOWEVER, IF DAMAGE OCCURS TO TREES LOCATED WITHIN AN EASEMENT CONTRACTOR SHALL NOT BE RESPONSIBLE.
- ALL PAVEMENT REMOVAL SHALL BE SAW CUT AT THE NEAT LINES AS INDICATED IN THE SPECIFICATIONS AND STANDARD DETAILS. SAW CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE FULL DEPTH OF THE EXISTING PAVEMENT. SAW CUTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.
- ALL CONCRETE PAVEMENTS, FLEXIBLE PAVEMENTS, CURB AND GUTTER, AND UNPAVED SURFACES SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING, NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
- IF ANY BRICK SANITARY MANHOLES/STRUCTURES ASSOCIATED WITH THE IDENTIFIED SEWER LINES ARE FOUND, THE CITY SHALL BE NOTIFIED BEFORE WORK COMMENCES FOR AN EVALUATION OF REHABILITATION. REHABILITATION OF ANY BRICK SANITARY MANHOLES/STRUCTURES SHALL BE BY COMPLETED MANHOLE/STRUCTURE REPLACEMENT OR BY METHODS DESCRIBED IN SPECIFICATION 418.
- ALL SANITARY SEWER AND STORM SEWER MANHOLE CASTING AND LIDS THAT ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW ONES, AND THE OLD CASTINGS AND LIDS SHALL BE DELIVERED TO THE SEWER BASE AT 9319 E. 42nd STREET N. AND PLACED IN THE METAL RECYCLE BIN IN THE STOCKROOM AREA 918-669-6130, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
- ALL SANITARY SEWER MANHOLES LOCATED IN THE FLOODPLAIN SHALL BE BUILT IN ACCORDANCE WITH THE FLOODPLAIN MANHOLE SPECIFICATION WITH PADDLE - LOCK LID.
- THE CONTRACTOR SHALL SUBMIT A TRENCH EXCAVATION PLAN, SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF OKLAHOMA, FOR ALL LOCATIONS WHERE TRENCH OR SHAFT EXCAVATION EXCEEDS 20 FEET DEEP.
- IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE BYPASS PUMPING DURING SANITARY SEWER CONSTRUCTION. CONTRACTOR SHALL SUBMIT A SEWER BYPASS PLAN PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN SEWER FLOW AT ALL TIMES DURING BYPASS PUMPING OPERATIONS. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. LIQUID LEVELS SHALL NOT BE ALLOWED TO OVER FLOW OR BACK-UP INTO ANY CUSTOMER'S DWELLING OR BUSINESS.
- CONTRACTOR SHALL COMPLETE THE INSTALLATION OF FINAL STABILIZATION MEASURES WITHIN 14 DAYS OF PROJECT COMPLETION. COMPLETE THE INSTALLATION OF THE FINAL STABILIZATION MEASURES WITHIN 7 DAYS OF PROJECT COMPLETION FOR PROJECT GREATER THAN 40 ACRES, DISCHARGE TO AN APPROVED RECEIVING CHANNEL OR ARE WITHIN ONE (1) MILE OF AN IMPAIRED/TMDL WATERBODY.
- CONSTRUCTION VEHICLE WASH WATERS ARE NOT TO BE DISCHARGED INTO CITY OF TULSA WATERS OR WATERS OF THE STATE.

- CONTRACTOR SHALL MAINTAIN SEWER FLOW AT ALL TIMES DURING BYPASS PUMPING OPERATIONS. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. LIQUID LEVELS SHALL NOT BE ALLOWED TO OVER FLOW OR BACK-UP INTO ANY CUSTOMER'S DWELLING OR BUSINESS.
- THE COST OF BYPASS PUMPING INCLUDING THE PUMPS, LINES, LABOR AND ANY OTHER ASSOCIATED ITEMS REQUIRED TO MAINTAIN BYPASS PUMPING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. NO ADDITIONAL PAYMENT WILL BE MADE FOR BYPASS PUMPING. CONTRACTOR IS REQUIRED TO SUBMIT WRITTEN BYPASS PUMPING NOTIFICATION FORM TO SEWER OPERATIONS AND MAINTENANCE AT LEAST ONE WEEK PRIOR TO BYPASS PUMPING. SEE SPECIAL PROVISIONS.
- ALL MANHOLES, PIPE SIZES AND LENGTH, DEFECTS, SURFACE TYPES AND THEIR LOCATIONS SHOWN IN THE PLANS 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.

MANHOLE REHABILITATION NOTES

- REPLACEMENT MANHOLES SHALL HAVE FLOW LINE 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.
- CONTRACTOR SHALL ENSURE THAT ALL MANHOLE FRAME AND COVER CASTINGS HAVE MACHINED SEATING SURFACES WITH 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 SPOILS ON PLASTIC SHEETS, PLYWOOD OR OTHER SUITABLE GROUND PROTECTION.
- THE MANHOLE DEPTHS SHOWN ON THE PLANS ARE FROM SURVEY. HOWEVER, ACCURATE FIELD MEASUREMENTS SHALL BE UTILIZED FOR ANY MANHOLE REPLACEMENT OR REHABILITATION.
- ALL NEW, WALL REHABILITATION, AND REPLACEMENT MANHOLES SHALL NOT HAVE STEPS INSTALLED. MANHOLE WALL REHABILITATION TYPE Gg AND Gs REPAIRS, SHALL HAVE STEPS REMOVED AND ARE CONSIDERED INCIDENTAL TO WALL REHABILITATION PAY ITEMS.
- CONTRACTOR SHALL BE REQUIRED TO VACUUM TEST ALL NEW MANHOLE INSTALLATIONS AND EXISTING MANHOLES WHERE COMPLETE REHABILITATION IS PERFORMED, IN ACCORDANCE WITH THE CITY OF TULSA ENGINEERING STANDARDS AND SPECIFICATIONS.
- ALL FRAMES AND COVERS FOR NEW MANHOLES INSTALLED ON THE PROJECT SHALL HAVE A MINIMUM CLEAR OPENING OF 30-INCHES REGARDLESS OF MANHOLE SIZE. NEW MANHOLE FRAMES AND COVERS INSTALLED ON EXISTING MANHOLES MAY HAVE CLEAR OPENING LESS THAN 30-INCHES WITH ENGINEER APPROVAL.

PIPELINE REHABILITATION NOTES

- POST REHABILITATION TELEVISION INSPECTION OF LINES INSTALLED BY TRENCHLESS METHODS SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE COST OF OTHER PAY ITEMS.
- POINT REPAIR LOCATIONS ARE APPROXIMATE AND SHALL BE DETERMINED BY THE CONTRACTOR'S PRE-TELEVISION INSPECTION.
- QUANTITIES SHOWN IN THE SUMMARY TABLE ARE AN ESTIMATE OF QUANTITIES FOR THE WORK SHOWN AND DO NOT REFLECT FINAL WORK ITEM QUANTITIES NECESSARY TO REHABILITATE PIPELINE SEGMENTS.
- POINT REPAIR(S) SHALL BE PERFORMED USING LIKE PIPE ACCORDING TO CITY OF TULSA CONSTRUCTION SPECIFICATION SECTION 412.2.1. (I.E. EXISTING VCP WILL BE REPAIRED USING VCP, EXISTING PVC WILL BE REPAIRED USING PVC, AND EXISTING DIP WILL BE REPAIRED USING DIP). IF AN OBSTRUCTION IS ENCOUNTERED DURING CLEANING AND TELEVISION INSPECTION PRIOR TO OR DURING THE INSERTION OF THE NEW LINE THROUGH THE HOST PIPE, THE CONTRACTOR HAS THE OPTION OF USING VCP OR PVC TO REPAIR THE HOST PIPE AT THE LOCATION OF THE OBSTRUCTION. IN ALL CASES, CONCRETE PIPE SHALL BE REPLACED WITH PVC.
- PIPELINE REHABILITATION PLANS ARE FOR REFERENCE ONLY AND DO NOT DEPICT ALL OF THE EXISTING UTILITIES.
- PIPE EMBEDMENT WILL BE AS SHOWN IN CITY OF TULSA STANDARD DETAILS EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS.
- CONTRACTOR SHALL SUPPLY WITH HIS MONTHLY PAY REQUEST, A LIST SHOWING ALL SEWER LINES REPAIRED, THE ADDRESS OF ANY SERVICE LINES THAT ARE RECONNECTED, AND THE FOOTAGE OF THE RECONNECTION FROM THE NEAREST DOWNSTREAM MANHOLE.
- THE TERM "PIPE BURSTING" THAT IS USED THROUGHOUT THE CONSTRUCTION DRAWINGS IS INTENDED TO INCLUDE OTHER SIMILAR TRENCHLESS PIPE REPLACEMENT METHODS, SUCH AS PIPE REAMING AND PIPE CRUSHING. IT DOES NOT INCLUDE SPLITTING OR INSTALLATION OF CURED-IN-PLACE PIPE.

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 HOURS NOTIFICATION FOR ANY AND ALL STREET / LANE CLOSURES, MODIFICATION, OR CHANGES TO THE TRAFFIC CONTROL MEASURES TO:
 POLICE 918-596-9222
 FIRE 918-596-9977
 COT TRAFFIC 918-596-9744
 EMSA 918-596-3043
 MTTA 918-585-1195
- 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. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
- 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 A NON-HAZARDOUS MATERIAL WHEN NECESSARY OR WHEN DIRECTED BY THE CITY OR THE ENGINEER.
- ALL ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TYPE "A" WARNING LIGHTS.

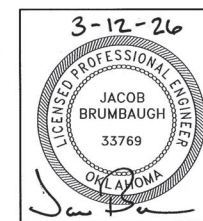
- ALL TYPE III BARRICADES SHALL BE FURNISHED WITH A MINIMUM OF TWO (2) TYPE "A" WARNING LIGHTS.
- ALL CHANNELING DEVICES SHALL BE PROVIDED WITH TYPE "C" WARNING LIGHTS.
- IF WARNING LIGHTS TO BE USED ON TRAFFIC CONTROL DEVICES, TYPE "A" LIGHTS SHALL ONLY BE USED ON DEVICES WARNING OF UNEXPECTED HAZARDS, AND SHALL NOT BE USED FOR DELINEATION OF THE TRAVELED WAY. ONLY TYPE "C" WARNING LIGHTS SHALL BE USED FOR DELINEATION OF THE TRAVELED WA, AND TYPE "C" LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.
- REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.

UTILITIES

- THE LOCATIONS OF THE UTILITY LINES, AS SHOWN ON THESE DRAWINGS, ARE BASED ON ATLAS INFORMATION, UTILITY COMPANY COMMENTS, AND OBSERVED FEATURES. NEITHER THE CITY NOR THE ENGINEER ASSUMES OR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA. SERVICE LINES FROM THE MAIN UTILITY LINES TO ANY BUILDING OR FACILITY MAY NOT BE SHOWN. CONTRACTOR SHALL OBTAIN THE LOCATION OF THESE FROM THE UTILITY COMPANY AND SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES TO THESE LINES OR ANY OTHER LINES OR UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL GIVE NOTIFICATION CENTER OF THE OKLAHOMA ONE-CALL SYSTEM, INC., A MINIMUM OF TWO (2) WORKING DAYS AND A MAXIMUM OF TEN (10) WORKING DAYS PRIOR TO BEGINNING WORK IN ANY AREA. PHONE: 1-800-522-6543.
- CONTRACTOR SHALL BRACE UTILITY POLES AND GUY WIRES WITHIN 5 FEET OF AN EXCAVATION. CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE PUBLIC SERVICE OF OKLAHOMA/AMERICAN ELECTRIC POWER (PSO/AEP) A MINIMUM OF THREE (3) WEEKS PRIOR TO ANY REQUIRED BRACING, REMOVAL, OR RELOCATION OF EXISTING UTILITY POLES.
- CONTRACTOR SHALL MEET MINIMUM CLEARANCE REQUIREMENTS SET BY PUBLIC SERVICE COMPANY OF OKLAHOMA(PSO).

PLAN & PROFILE SHEET NOTES

- CONTRACTOR MUST FIELD VERIFY ALL DEPTHS, DISTANCE ANGLES, AND GRADES OF EXISTING SANITARY SEWER PRIOR TO START OF CONSTRUCTION. (NO SEPARATE PAY ITEM).
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, SUPPORTING, AND PROTECTING THE INTEGRITY OF UNDERGROUND UTILITIES AND POWER POLES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL EXCAVATE ALL BURIED UTILITY CROSSINGS AHEAD OF PIPE LAYING OR THE INSTALLATION OF SHEETING-OR SHORING TO AVOID UTILITY CONFLICTS. ALL COSTS ASSOCIATED WITH THIS WORK IS CONSIDERED INCIDENTAL.
- IF DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, STRUCTURES, ETC. TO ITS ORIGINAL OR BETTER CONDITION. NO SEPARATE PAY ITEM IF LOCATED OUTSIDE OF STANDARD CONSTRUCTION PAY LIMITS.
- TRENCH EXCAVATION PROTECTION SHALL BE ACCOMPLISHED AS REQUIRED BY THE PROVISIONS OF PART 1926, SUBPART P-EXCAVATION, TRENCHING, AND SHORING OF THE OCCUPATIONAL SAFETY AND HEALTH'S STANDARDS AND INTERPRETATIONS.
- CONTRACTOR SHALL VERIFY AND REINSTATE ALL ACTIVE SERVICE CONNECTIONS.
- CONTRACTOR SHALL REPLACE ALL SERVICES TO WITHIN 2' OF THE EASEMENT LINE OR RIGHT-OF-WAY LINE.
- DISTANCE FROM DOWNSTREAM MANHOLE TO SERVICE CONNECTION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE RESIDENCES AT ALL TIMES.
- WHEN REHABILITATING OR REPLACING MANHOLES, CONTRACTOR SHALL MATCH GRADE OF EXISTING OR FINISHED CONDITIONS.
- FOR ABANDONMENT, REMOVE TOP 3 VF OF EXISTING MANHOLE/LAMPHOLE AND FILL EXISTING SANITARY SEWER AND MANHOLE/LAMPHOLE WITH CELLULAR CONCRETE. ABANDONMENT SHALL BE PERFORMED AFTER CONSTRUCTION OF ALL NEW SEWER MAINS.
- CONTRACTOR SHALL TELEVISION ANY SANITARY SEWER LINES CALLED OUT FOR ABANDONMENT TO DETERMINE LOCATION OF ACTIVE SERVICES. ANY ACTIVE SERVICES ON AN ABANDONED LINE SHALL BE RECONNECTED TO AN EXISTING OR PROPOSED SEWER MAIN IN THE IMMEDIATE VICINITY. ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THERE IS NO SEWER MAIN IN THE VICINITY TO CONNECT THE SERVICE.



GENERAL CONSTRUCTION NOTES
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/J GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			
			ATLAS PAGE NO:	NA			

DATE: March 2026
 SHEET 3 OF 66 SHEETS

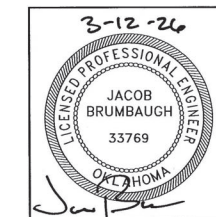
PAY ITEM NOTES

PAY ITEM	SPEC NO.	DESCRIPTION	PAY ITEM NOTE NOS.	UNIT	TOTAL
BASE BID					
1	301, SP-8	RIGHT-OF-WAY CLEARING AND RESTORING		SY	1,600
2	302	EXCAVATION AND BACKFILL, UNCLASSIFIED	2	CY	600
3	313, SP-1	INSTALL 8-INCH DIA. SEWER PIPE OPEN CUT, ASTM D3034 SDR 26 PVC	1,4,5,6,7,9	LF	716
4	314	CONSTRUCT STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	1,5,6,15,30,31	EA	7
5	314	MANHOLE DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	1,5,6,15,30,31	VF	21.0
6	319	INSTALL FLOWABLE FILL	27	CY	10
7	333	ABANDON EXISTING SANITARY SEWER MANHOLE	23,24	EA	6
8	333	ABANDON 8-INCH DIA. SANITARY SEWER PIPE	23,24	LF	540
9	334	CONSTRUCTION AS-BUILTS		LS	1
10	335	CONTRACTOR'S QUALITY CONTROL		LS	1
11	400	MOBILIZATION		EA	1
12	400	PHOTOGRAPHIC DOCUMENTATION		EA	1
13	402	FENCE REMOVAL & REPLACEMENT	4	LF	100
14	402	CONCRETE DRIVEWAY REMOVAL & REPLACEMENT	4,29,34	SY	160
15	402	ASPHALT PAVEMENT REMOVAL & REPLACEMENT	4,33,34	SY	970
16	402	GRAVEL PAVEMENT REMOVAL & REPLACEMENT	4	SY	60
17	402	CURB & GUTTER REPLACEMENT	4,29,34	LF	130
18	402	SOD REPLACEMENT	4,17	SY	2,060
19	405, SP-1	8-INCH OPEN CUT REPLACEMENT, ASTM D2241 SDR 26 PVC	1,4,5,6,7,9,16	LF	103
20	405, SP-1	8-INCH OPEN CUT REPLACEMENT, ASTM D3034 SDR 26 PVC	1,4,5,6,7,9,16	LF	751
21	405, SP-1	10-INCH OPEN CUT REPLACEMENT, ASTM D3034 SDR 26 PVC	1,4,5,6,7,9,16	LF	968
22	405, 408	SERVICE RECONNECTIONS	12,13,14,28	EA	108
23	405, 408	SERVICE LINE REPLACEMENT	12,13,14,28	LF	1,810
24	408, SP-6	8-INCH DIA. PIPE BURSTING REPLACEMENT, DR-17 DIPS HDPE	1,5,7,8,9,11,16,25	LF	2,435
25	408, SP-6	10-INCH DIA. PIPE BURSTING REPLACEMENT, DR-17 DIPS HDPE	1,5,7,8,9,11,16,25	LF	299
26	409, SP-5,6	7-INCH DIA. SLIPLINING INSTALLATION, DR-19 IPS HDPE/ 8-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16,35	LF	59
27	409, SP-5,6	7-INCH DIA. SLIPLINING INSTALLATION, DR-21 IPS HDPE/ 8-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16,35	LF	3,190
28	409, SP-5,6	12-INCH DIA. SLIPLINING INSTALLATION, DR-21 IPS HDPE/ 18-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16,35	LF	345
29	412	8-INCH DIA. PIPELINE POINT REPAIR, VCP ASTM C700 (0-10 LF)	1,2,4,5,6,8,9,11,16	EA	1
30	412	8-INCH DIA. PIPELINE POINT REPAIR, VCP ASTM C700 (>10 LF)	1,2,4,5,6,8,9,11,16	LF	10
31	412, SP-6	7-INCH DIA. PIPELINE POINT REPAIR, DR-21 IPS HDPE (0-10 LF)	1,2,4,5,6,8,9,11,16	EA	2
32	412, SP-6	7-INCH DIA. PIPELINE POINT REPAIR, DR-21 IPS HDPE (>10 LF)	1,2,4,5,6,8,9,11,16	LF	10
33	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	3,11,16,24	LF	7,170
34	416	COMPLETE MANHOLE REPLACEMENT, STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	1,5,6,10,15,16,30,31	EA	22
35	416	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	1,5,6,10,15,16,30,31	VF	67.5
36	416	COMPLETE DROP MANHOLE REPLACEMENT, STD. 4-FOOT DIA. DROP MANHOLE (0-6-FOOT DEPTH)	1,5,6,10,15,16,30,31	EA	3
37	416	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. DROP MANHOLE	1,5,6,10,15,16,30,31	VF	13.0
38	418	MANHOLE REHABILITATION COVER, FRAME AND FRAME SEAL REPLACEMENT (TYPE A REPAIR)	15,30	EA	8
39	418	MANHOLE REHABILITATION PRECAST CORBEL SECTION REPLACEMENT, TYPE Fc REPAIR	15,30	EA	1
40	421	MANHOLE REHABILITATION WALL REHABILITATION (TYPE Gg REPAIR)	15	SF	1,860.0
41	421	MANHOLE REHABILITATION BENCH AND INVERT REHABILITATION (TYPE Gh REPAIR)	15	EA	2
42	421	MANHOLE REHABILITATION PIPE SEAL COATING AND PRESSURE GROUTING (TYPE Gk REPAIR)	15	EA	1
43	423	OBSTRUCTION REMOVAL	18	EA	5
44	ODOT 220	SWPPP DOCUMENTATION AND MANAGEMENT	1	LS	1
45	ODOT 611 (A)	COMPLETE STORM MANHOLE REPLACEMENT, STD. 4-FOOT DIA. MANHOLE (0-5 FOOT DEPTH)		EA	2
46	ODOT 611 (A)	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE		VF	5.3
47	ODOT 611 (G)	REMOVE AND REPLACE STORM INLET, DESIGN 2		EA	1
48	ODOT 613 (A)	12-INCH R.C. PIPE CLASS III, ROUND	26,27	LF	60
49	ODOT 613 (A)	15-INCH R.C. PIPE CLASS III, ROUND	26,27	LF	10
50	ODOT 613 (A)	18-INCH R.C. PIPE CLASS III, ROUND	26,27	LF	30
51	ODOT 613 (A)	24-INCH R.C. PIPE CLASS III, ROUND	26,27	LF	20
52	ODOT 880 (J)	CONSTRUCTION TRAFFIC CONTROL	19,20,21,22	CD	365
53	SP-3	OWNER'S ALLOWANCE		ALLOW	100,000
ADDITIVE ALTERNATE NO. 1					
54	405, 408	SERVICE RECONNECTIONS	12,13,14,28	EA	20
55	405, 408	SERVICE LINE REPLACEMENT	12,13,14,28	LF	200
56	409, SP-5,6	7-INCH DIA. SLIPLINING INSTALLATION, DR-19 IPS HDPE/ 8-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16,35	LF	486
57	409, SP-5,6	7-INCH DIA. SLIPLINING INSTALLATION, DR-21 IPS HDPE/ 8-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16,35	LF	1,787
58	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	3,11,16,24	LF	2,273
59	416	COMPLETE MANHOLE REPLACEMENT, STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	1,5,6,10,15,16,30,31	EA	3
60	416	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	1,5,6,10,15,16,30,31	VF	7.5
61	418	MANHOLE REHABILITATION COVER, FRAME AND FRAME SEAL REPLACEMENT (TYPE A REPAIR)	15,30	EA	3
62	418	MANHOLE REHABILITATION REPLACEMENT OF COVER, FRAME, FRAME SEAL & CHIMNEY (TYPE C REPAIR)	15,30	EA	2
63	421	MANHOLE REHABILITATION WALL REHABILITATION (TYPE Gg REPAIR)	15	SF	450.1
64	421	MANHOLE REHABILITATION PIPE SEAL COATING AND PRESSURE GROUTING (TYPE Gk REPAIR)	15	EA	1
65	421	MANHOLE REHABILITATION PRECAST JOINT SEALING (TYPE Gp REPAIR)	15	EA	1
66	423	OBSTRUCTION REMOVAL	18	EA	3
ADDITIVE ALTERNATE NO. 2					
67	405, 408	SERVICE RECONNECTIONS	12,13,14,28	EA	5
68	405, 408	SERVICE LINE REPLACEMENT	12,13,14,28	LF	50
69	409, SP-5	8-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16	LF	216
70	409, SP-5	10-INCH DIA. CURED-IN-PLACE PIPE (CIPP)	1,5,7,8,9,11,16	LF	435
71	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	3,11,16,24	LF	651
72	418	MANHOLE REHABILITATION COVER, FRAME AND FRAME SEAL REPLACEMENT (TYPE A REPAIR)	15,30	EA	4
73	421	MANHOLE REHABILITATION WALL REHABILITATION (TYPE Gg REPAIR)	15	SF	966.6
74	423	OBSTRUCTION REMOVAL	18	EA	2
ADDITIVE ALTERNATE NO. 3					
75	405, 408	SERVICE RECONNECTIONS	12,13,14,28	EA	3
76	405, 408	SERVICE LINE REPLACEMENT	12,13,14,28	LF	30
77	412	8-INCH DIA. PIPELINE POINT REPAIR, VCP ASTM C700 (0-10 LF)	1,2,4,5,6,8,9,11,16	EA	1
78	408, SP-6	10-INCH DIA. PIPE BURSTING REPLACEMENT, DR-17 DIPS HDPE	1,5,7,8,9,11,16,25	LF	245
79	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	3,11,16,24	LF	528
80	416	COMPLETE MANHOLE REPLACEMENT, STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	1,5,6,10,15,16,30,31	EA	2
81	416	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	1,5,6,10,15,16,30,31	VF	4.6
82	416	COMPLETE DROP MANHOLE REPLACEMENT, STD. 4-FOOT DIA. DROP MANHOLE (0-6-FOOT DEPTH)	1,5,6,10,15,16,30,31	EA	1
83	416	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. DROP MANHOLE	1,5,6,10,15,16,30,31	VF	7.2
ADDITIVE ALTERNATE NO. 4					
84	301, SP-8	RIGHT-OF-WAY CLEARING AND RESTORING		SY	320
85	302	EXCAVATION AND BACKFILL, UNCLASSIFIED	2	CY	180
86	313, SP-1	INSTALL 8-INCH DIA. SEWER PIPE OPEN CUT, ASTM D3034 SDR 26 PVC	1,4,5,6,7,9,36	LF	51
87	313, SP-1	INSTALL 8-INCH DIA. SEWER PIPE IN STEEL CASING, ASTM D3034 SDR 26 PVC (RJ)	1,4,5,6,7,9,36	LF	92
88	309	12-INCH DIA. CLASS 51 DIP (RJ) BY OPEN CUT	37,38,39,40,41,42,43,44	LF	102
89	312	12-INCH DIA. DIP 45 DEGREE BEND (RJ)	37,38,39,40,41,42,43,44	EA	4
90	312	12-INCH DIA. SOLID SLEEVE	37,38,39,40,41,42,43,44	EA	2
91	314	CONSTRUCT STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	1,5,6,15,30,31	EA	1
92	314	MANHOLE DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	1,5,6,15,30,31	VF	12.2
93	314	CONSTRUCT STD. 4-FOOT DIA. DROP MANHOLE (0-6-FOOT DEPTH)	1,5,6,15,30,31	EA	1
94	314	MANHOLE DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. DROP MANHOLE	1,5,6,15,30,31	VF	7.1
95	315	CONNECT TO EXISTING SANITARY SEWER MANHOLE	9	EA	1
96	315	CONNECT TO EXISTING WATERLINE		EA	2
97	322	24-INCH DIA. BORED STEEL CASING	32	LF	92
98	333	ABANDON EXISTING SANITARY SEWER MANHOLE	23,24	EA	1
99	333	ABANDON 8-INCH DIA. SANITARY SEWER PIPE	23,24	LF	140
100	333	CUT AND PLUG EXISTING SANITARY SEWER	23,24	EA	1
101	402	CONCRETE PAVEMENT REMOVAL & REPLACEMENT	4,29,34	SY	172
102	402	CURB & GUTTER REPLACEMENT	4,29,34	LF	46
103	402	SOD REPLACEMENT	4,17	SY	135
104	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	3,11,16,24	LF	140

- 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 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 UNIT PRICE BID FOR THIS ITEM.
- PRICE TO INCLUDE ANY AND ALL ROCK EXCAVATION. NO BLASTING WILL BE ALLOWED. NO ADDITIONAL PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
- CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER QUANTITY CALCULATED BASED ON EXISTING MANHOLE LOCATIONS. CONTRACTOR SHALL USE VIDEO TO CONFIRM LOCATIONS AND DETERMINE POSITIONS OF SERVICE CONNECTIONS. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR VIDEO INSPECTION. NO ADDITIONAL PAYMENT SHALL BE MADE.
- FOR THE WORK BID UNDER "OPEN CUT", SURFACE RESTORATION ITEMS SHALL BE PAID FOR IN ACCORDANCE WITH SPECIFICATION SECTION 402.17 ONLY WHEN THE OPEN CUT METHOD OF REPLACEMENT IS USED. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PAID FOR IN SQUARE YARDS. THE PAY QUANTITY SHALL BE COMPUTED AS THE LENGTH ALONG THE CENTERLINE OF PIPE BEING REPLACED BY THE STANDARD PAY WIDTH (SEE CITY OF TULSA STANDARD DETAIL # 305 FOR PAY WIDTH). ALL RESTRIPING OF ARTERIAL ROADWAYS SHALL BE CONSIDERED INCIDENTAL.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE BYPASS PUMPING IF NECESSARY. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE ANTICIPATED WET WEATHER FLOW. THE COST OF THE BYPASS INCLUDING THE PUMPS, LINES, LABOR AND OTHER MISCELLANEOUS ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE AND/OR MANHOLE INSTALLATION. NO ADDITIONAL PAYMENT WILL BE MADE.
- ALL TRENCHES EXCAVATED ACROSS ANY ROADWAY, SIDEWALKS, DRIVEWAYS, PARKING LOTS, ALLEYS OR OTHER PAVED AREAS, SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH THE CITY OF TULSA STANDARD DETAIL # 713. BACKFILL IN STREET RIGHT-OF-WAY AND IN FRONT YARDS SHALL BE COMPACTED TO 95% PROCTOR DENSITY. PRICE OF AGGREGATE BASE IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE INSTALLATION. NO ADDITIONAL PAYMENT WILL BE MADE.
- RESTORATION WILL NOT BE PAID FOR TRENCHLESS CONSTRUCTION OR POINT REPAIRS. RESTORATION WILL BE PAID FOR OPEN CUT CONSTRUCTION METHODS.
- IF A LINE CANNOT BE REPLACED BY TRENCHLESS METHODS, OPEN CUT MAY BE USED UPON ENGINEER'S APPROVAL. WORK AND RESTORATION SHALL THEN BE PAID USING THE UNIT PRICE BID FOR OPEN CUT OF THE CORRESPONDING PIPE SIZE AND THE UNIT PRICE BID FOR THE APPROPRIATE RESTORATION ITEMS.
- CONNECTIONS TO ALL EXISTING MANHOLES SHALL BE CORED AND NOT BROKEN OR HAMMERED AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE REPLACEMENT.
- ALL EXTERNAL DROPS CONNECTED TO A MANHOLE WHICH IS CALLED OUT FOR REPLACEMENT SHALL BE REPLACED AND INCLUDED IN THE UNIT PRICE BID FOR "COMPLETE DROP MANHOLE REPLACEMENT". ALL DROP CONNECTIONS CALLED OUT ON THE PLANS FOR INSTALLATION TO AN EXISTING MANHOLE THAT IS NOT BEING REPLACED SHALL BE PAID FOR UNDER THE UNIT PRICE BID FOR "REPLACE MANHOLE OUTSIDE DROP CONNECTION". EXTERNAL DROPS SHALL BE CONSTRUCTED OF LIKE MATERIAL TO THE PIPE INCOMING.
- POST REHABILITATION TELEVISION INSPECTION OF ALL LINES INSTALLED SHALL BE PERFORMED BY THE CONTRACTOR. THE COST OF PRE CONSTRUCTION TELEVISION INSPECTION WILL NOT BE PAID FOR SEPARATELY.
- NUMBER OF SERVICE CONNECTIONS ARE APPROXIMATE, CONTRACTOR TO VERIFY WITH THE USE OF PRE-TELEVISION INSPECTION PER SPECIFICATION 415.
- SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY LINE. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
- PAYMENT FOR SERVICE LATERALS SHALL INCLUDE ALL INCIDENTAL COSTS ASSOCIATED WITH THE INSTALLATION, INCLUDING, BUT NOT LIMITED TO RESTORATION, PAVEMENT REMOVAL AND REPLACEMENT, EXCAVATION, BEDDING, BACKFILL, PIPE AND FITTINGS.
- THE MANHOLE RING, COVER, GROUT, WATERTIGHT SEAL, 80 MILS OF RAVEN 405 EPOXY OR APPROVED EQUAL AND OTHER MATERIALS INCIDENTAL TO THE CONSTRUCTION OF MANHOLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH ASSOCIATED MANHOLE PAY ITEM; NO ADDITIONAL PAYMENT SHALL BE MADE. 4' I.D. MANHOLES AND 5' I.D. SHALLOW MANHOLES SHALL NOT BE EPOXY COATED.
- IF ANY BRICK SANITARY MANHOLES/STRUCTURES ASSOCIATED WITH THE IDENTIFIED SEWER LINES ARE FOUND, THE CITY SHALL BE NOTIFIED BEFORE WORK COMMENCES FOR AN EVALUATION OF REHABILITATION. REHABILITATION OF ANY BRICK SANITARY MANHOLES/STRUCTURES SHALL BE BY COMPLETED MANHOLE/STRUCTURE REPLACEMENT OR BY METHODS DESCRIBED IN SPECIFICATION 418.
- GRASSED AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY SODDING. HYDROMULCH SEEDING WILL BE ALLOWED IN UNDEVELOPED LOTS. MAXIMUM PAY LIMIT FOR SODDING AND SEEDING SHALL BE STANDARD 10-FEET ON EITHER SIDE OF THE CENTERLINE OF PIPE. MAXIMUM PAY WIDTH OF 20-FEET.
- IF REQUIRED, PAYMENT FOR OBSTRUCTION REMOVAL SHALL BE UTILIZED TO REMOVE CONCRETE ENCASED OR DUCTILE IRON PIPE SEGMENTS DURING TRENCHLESS REPLACEMENT AND SHALL BE APPROVED BY ENGINEER. THIS PAY ITEM SHALL NOT BE PAID WHEN THE INSERTION / REMOVAL PIT IS LOCATED AT THE POINT OF OBSTRUCTION REMOVAL.
- CONTRACTOR TO PROVIDE BUSINESS ACCESS SIGNS AT ALL BUSINESS ACCESS POINTS. ALL COST TO BE INCIDENTAL TO OTHER BID ITEMS.
- THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE GENERAL AND TRAFFIC CONTROL NOTES ON THE GENERAL NOTES SHEET.
- ALL REFLECTORIZED SHEETING USED ON SIGN AND BARRICADES SHALL BE A CUBIC PRISMATIC TYPE AND SHALL MEET ASTM D-4956-01, TYPE IX. SHEETING ON DRUMS SHALL BE TYPE III SHEETING MEETING ASTM D-4956-04.
- TRAFFIC CONTROL SHALL BE 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.
- ABANDONMENT SHALL BE PERFORMED AFTER CONSTRUCTION AND ACCEPTANCE OF ALL NEW SANITARY SEWER MAINS.
- CONTRACTOR SHALL CCTV (CLOSED CIRCUIT TELEVISION INSPECTION) ALL SEWER LINES PRIOR TO ABANDONMENT TO DETERMINE LOCATION OF EXISTING SERVICE CONNECTIONS. SERVICE CONNECTIONS SHALL BE RECONNECTED TO PROPOSED SANITARY SEWER LOCATED IN THE IMMEDIATE VICINITY OF THE ABANDONED LINE. ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THERE IS NO PROPOSED SEWER TO COLLECT THE SERVICE.

- IN LIEU OF PIPE BURSTING, CONTRACTOR MAY ELECT TO INSTALL PIPE BY PIPE REAMING OR PIPE CRUSHING PER CITY OF TULSA STANDARD SPECIFICATIONS 406 AND 407 RESPECTIVELY.
 - REINFORCED CONCRETE PIPE TO BE CLASS III. ALL REINFORCED CONCRETE PIPE AND MANHOLES TO BE SUPPLIED WITH OMNI-FLEX JOINT GASKET OR APPROVED EQUAL. MASTIC JOINT SEALANT SHALL NOT BE ALLOWED.
 - QUICK SET CELLULAR CONCRETE OR FLOWABLE FILL TO BE USED TO BACKFILL AROUND STREET CURB INLETS AND PIPES AS DIRECTED BY THE ENGINEER.
 - WHEN CONNECTING PVC SERVICE LATERALS TO ANY PIPE OTHER THAN PVC, ROMAC STYLE 501 COUPLINGS OR ENGINEER APPROVED EQUAL SHALL BE USED. PVC COUPLINGS SHALL BE USED WHEN CONNECTING PVC PIPE. FLEXIBLE COUPLINGS SHALL NOT BE PERMITTED.
 - ALL CONCRETE USED FOR PAVING SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI.
 - ALL RISER RINGS INSTALLED ON EXISTING AND NEW MANHOLES SHALL BE CRETEX PRO-RING OR ENGINEER APPROVED EQUAL. NO CONCRETE RISER RINGS ARE PERMITTED FOR USE UNLESS APPROVED BY ENGINEER.
 - ALL NEW MANHOLES SHALL HAVE WALL JOINTS WRAPPED WITH 9-INCH INFISHIELD GATOR WRAP AS MANUFACTURED BY SEALING SYSTEMS INC. OR ENGINEER APPROVED EQUAL. (NO SEPARATE PAYMENT).
 - ALL STEEL CASING INSTALLED SHALL HAVE A MINIMUM WALL THICKNESS OF 1/2-INCH AND BE IN ACCORDANCE WITH AWWA C200.
 - ASPHALT PAVEMENT INSTALLED IN NON-ARTERIAL STREETS SHALL BE PG 64-22 WHILE ARTERIAL STREETS SHALL BE PG 70-28 OK-INSOLUBLE. ALL ASPHALT MIX DESIGNS SHALL BE PAID BY ASPHALT REMOVAL AND REPLACEMENT PAY ITEM. (NO SEPARATE PAYMENT).
 - PAVEMENT REMOVAL AND REPLACEMENT FOR WATER, SANITARY, AND STORMWATER MAIN INSTALLATIONS - THIS PAY ITEM SUPERSEDES CITY OF TULSA STANDARD SPECIFICATION SECTION 329.6 AND 402.17, WITH RESPECT TO SAW CUTTING AND DOWELS, AND INCLUDES THE FOLLOWING (THESE ITEMS SHALL NOT BE PAID SEPARATELY):
 - SAW CUTTING
 - DOWELS
 - DISPOSAL OF BROKEN PAVEMENT
 - TEMPORARY SURFACE
 - 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 PAY ITEM DOES NOT INCLUDE THE FOLLOWING WHICH WILL BE PAID SEPARATELY IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, DETAILS, AND DRAWINGS:
- CURB AND GUTTER
- THE CONTRACTOR MAY BID EITHER SLIPLINE OR CIPP FOR THE LINE SEGMENTS INCLUDED IN THIS PAY ITEM, EXCEPT WHERE NOTED.
 - ALL SANITARY SEWER PIPE INSTALLED IN STEEL CASINGS SHALL HAVE RESTRAINED JOINTS. SDR 26 ASTM D 3034 PVC SHALL BE RESTRAINED BY UTILIZING FORD 1390-P RESTRAINED HARNES OR ENGINEERED APPROVED EQUAL. THE COST OF THE RESTRAINED SYSTEM SHALL BE INCLUDED IN THE UNIT PRICE OF THE STEEL CASING. NO ADDITIONAL PAYMENT SHALL BE MADE.
 - MARKER BALLS SHALL BE INSTALLED ABOVE ALL FITTINGS, BLIND FLANGES, SERVICE TAPS AND EVERY 100 FEET IF THE DISTANCE BETWEEN FITTINGS IS GREATER THAN 100 FEET. THE COST OF MARKER BALLS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PIPE. MARKERS SHALL BE VIVAX WATER MARKER BALLS OR EQUAL THAT WORK WITH THE VIVAX VLOC3-PRO RECEIVER AND LOC3-10TX TRANSMITTER

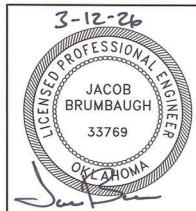
CONTINUED NEXT SHEET



PAY QUANTITIES & NOTES					
TMUA PROJECT NO. ES 2024-05					
IMPROVE OUR TULSA 2 AREA-WIDE SEWER REHABILITATION, FY25					
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT					
PLANS AND ESTIMATES PREPARED BY: R/JN GROUP, INC. CONSULTING ENGINEERS 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146					
REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP
			NA	DESIGNED	JWB
			PROFILE SCALE:	SURVEY	
			HORIZONTAL:	PROJ. MGR.	
			VERTICAL:	LEAD ENGR.	
			FILE:	FIELD MGR.	
			ATLAS PAGE NO: NA	DRAWING:	DATE: March 2026

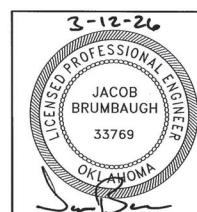
SHEET 4 OF 66 SHEETS

MANHOLE REHABILITATION WORK ITEM TABLE																								
ITEM NO.	COT MH ID	MH DEPTH (VF)	RELATED LINE ID	PLAN SHEET NO.	MANHOLE REHABILITATION WORK ITEM TABLE																			COMMENTS
					CONSTRUCT STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	MANHOLE DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	CONSTRUCT STD. 4-FOOT DIA. DROP MANHOLE (0-6-FOOT DEPTH)	MANHOLE DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. DROP MANHOLE	CONNECT TO EXISTING SANITARY SEWER MANHOLE	REMOVE EXISTING SANITARY SEWER MANHOLE (NO SEPARATE PAYMENT)	ABANDON EXISTING SANITARY SEWER MANHOLE	CUT & PLUG EXISTING SANITARY SEWER	COMPLETE MANHOLE REPLACEMENT, STD. 4-FOOT DIA. MANHOLE (0-6-FOOT DEPTH)	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. MANHOLE	COMPLETE DROP MANHOLE REPLACEMENT, STD. 4-FOOT DIA. DROP MANHOLE (0-6-FOOT DEPTH)	EXTRA DEPTH OVER 6-FOOT FOR STD. 4-FOOT DIA. DROP MANHOLE	MANHOLE REHABILITATION COVER, FRAME AND FRAME SEAL REPLACEMENT (TYPE A REPAIR)	MANHOLE REHABILITATION COVER, FRAME, FRAME SEAL AND CHIMNEY REPLACEMENT (TYPE C REPAIR)	MANHOLE REHABILITATION PRECAST CORBEL SECTION REPLACEMENT, (TYPE Fc REPAIR)	MANHOLE WALL REHABILITATION (TYPE Gg REPAIR)	MANHOLE REHABILITATION BENCH AND INVERT REHABILITATION (TYPE Gk REPAIR)	MANHOLE REHABILITATION PIPE SEAL COATING AND PRESSURE GROUTING (TYPE Gk REPAIR)	MANHOLE REHABILITATION PRECAST JOINT SEALING (TYPE Gp REPAIR)	
					EA	VF	EA	VF	EA	EA	EA	EA	EA	EA	VF	EA	VF	EA	EA	EA	SF	EA	EA	
BASE BID																								
1	092-0359	4.9	SL02	10																		86.8		
2	092-0360	5.2	SL02	10																		78.0		
3	092-0357	6.0	SL03	10																		88.0	1	
4	092-0362	11.2	SL03, SL04, SL05	10																		153.4		
5	092-0342	4.4	SL04	10																		67.9		
6	092-0380	8.0	SL06	10																				
7	090-0764	2.0	SL07	11																				
8	090-0504	9.4	SL08	11																				
9	093-0346	10.8	SL10	12																				
10	093-0414	7.6	SL11	12																				
11	097-0447	14.4	SL13	13																				
12	097-0454	12.5	SL13, SL14	13																				
13	097-0455	11.1	SL14	13																				
14	016-0018	6.4	SL16	14																				
15	016-0019	5.8	SL16	14																				
16	099-0071	7.4	SL20, SL21	16																				
17	090-0471	11.5	A	22																				
18	090-0680	12.0	B	24																				
19	090-0683	9.5	B, SL01	10,24																				
20	093-0415	6.1	C, SL11	12,26																				
21	093-0416	6.3	C	26																				
22	097-0599	7.7	D	28																				
23	097-0600	4.3	D	28																				
24	095-0581	5.7	E	29																				
25	045-0165	4.9	F	31																				
26	045-0780	5.6	F	31																				
27	099-0332	9.6	G	33																				
28	045-0639	9.8	H	35																				
29	045-0640	9.8	H	35																				
30	099-0053	11.0	J	39																				
31	099-0054	11.2	J	39																				
32	099-0065	11.1	K, SL19	16,40																				
33	099-0067	6.7	K	40																				
34	099-0066	6.0	K	40																				
35	099-0068	6.5	K	40																				
36	099-0069	7.1	K, SL20	16,41																				
37	099-0070	6.5	K	41																				
38	007-0086	9.0	L	43																				
39	007-0087	9.5	L	43																				
40	007-0072	4.1	N	45																				
41	007-0091	8.9	N	45																				
42	007-0069	9.1	P	47																				
43	007-0328	12.6	P	47																				
44	MH-1Q	7.7	Q	49																				
45	MH-2Q	4.2	Q	49																				
46	007-0148	7.2	Q	49																				
47	007-0149	4.2	Q	49																				
48	037-0108	13.2	T	55																				
49	037-0231	13.9	T	55																				
50	037-0109	13.5	T	56																				
51	MH-1T	12.0	T	56																				
52	037-0110	11.5	T	57																				
53	037-0111	11.4	T	58																				
54	037-0112	10.6	T,U,V	58																				
55	037-0113	9.3	U	59																				
56	037-0124	10.1	V	60																				
57	MH-1W	9.7	W	62																				
58	MH-2W	9.2	W	62																				
59	MH-3W	8.8	W	62																				
60	032-0018	9.5	X	63																				
61	MH-1X	9.6	X	63																				
62	032-0625	13.1	W,X	64																				
ADDITIVE ALTERNATE NO. 1																								
63	097-0448	11.1	SL12	13																				
64	095-0588	7.9	SL15	13																				
65	046-0271	9.0	SL17	15																				
66	046-0272	5.1	SL17	15																				
67	099-0063	13.3	SL18	16																				
68	099-0064	15.1	SL18, SL19	16																				
69	099-0072	6.5	SL21, SL22	16																				
70	099-0073	8.0	SL22	16																				
71	061-0241	10.5	SL28	19																				
72	061-0242	7.2	SL28	19																				
73	060-0511	11.6	SL29	19																				
ADDITIVE ALTERNATE NO. 2																								
74	070-0365	13.7	CIPP27	18																				
75	070-0366	10.7	CIPP27	18																				
76	060-0402	6.3	CIPP30	20																				
77	060-0403	10.3	CIPP30	20																				
78	060-0404	14.7	CIPP31	20																				
79	060-0405	15.2	CIPP31	20																				
ADDITIVE ALTERNATE NO. 3																								
80	007-0123	5.1	O	46																				
81	060-0510	13.2	S, SL29	19, 53																				
82	060-0514	10.6	S	53																				
ADDITIVE ALTERNATE NO. 4																								
83	049-0068	21.4	R	51																				
84	MH-1R	18.2	R	51																				
85	MH-2R	13.1	R	51																				
86	049-0069	13.3	R	51																				



MANHOLE WORK ITEM TABLE							
TMUA PROJECT NO. ES 2024-05							
IMPROVE OUR TULSA 2 AREAWIDE SEWER REHABILITATION, FY25							
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT							
PLANS AND ESTIMATES PREPARED BY: R/JN GROUP, INC. CONSULTING ENGINEERS 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146							
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR. <i>6/23/26</i>			
			VERTICAL:	FIELD MGR. <i>6/23/26</i>			
			NA	DESIGN MANAGER <i>Thomas M. ...</i>			

PIPE REHABILITATION WORK ITEM TABLE											
ITEM NO.	PIPE REPLACEMENT ID	PLAN SHEET NUMBER	ATLAS PAGE	MAINTENANCE AREA	DOWNSTREAM MANHOLE	UPSTREAM MANHOLE	BASE BID				
							LENGTH (FT)	PROPOSED PIPE DIAMETER (IN)	PROPOSED PIPE MATERIAL	PROPOSED REPLACEMENT METHOD	STANDARD SPECIFICATION NO.
BASE BID											
1	A	22	28, 29	90-N	090-0471	090-0472	244	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
2	B	24	29	90-N	090-0680	090-0683	303	8	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
3	C	26	52	93-N	093-0415	093-0416	265	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
4	D	28	52	97-N	097-0599	097-0600	236	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
5	E	29	52	95-N	095-0581	095-0582	77	8	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
6	F	31	60, 61	45-S	045-0165	045-0780	103	8	SDR 26 ASTM D2241 PVC	OPEN CUT	405, SP-1
7	G	33	81, 82	99-N	099-0330	099-0332	224	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
8	H	35	95, 96	45-S	045-0639	045-0640	284	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
9	I	37	163	11-N	011-0240	011-0241	20	8	VCP ASTM C700	POINT REPAIR	405, SP-1
10	J	39	222, 223	99-N	099-0053	099-0054	241	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
11	K	40	167, 168	99-N	099-0065	099-0067	299	10	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
12	K	40,41	167, 168	99-N	099-0067	099-0069	166	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
13	K	40	167, 168	99-N	099-0065	099-0066	38	8		ABANDON	333
14	K	40	167, 168	99-N	099-0067	099-0068	80	8		ABANDON	333
15	K	41	167, 168	99-N	099-0069	099-0070	38	8		ABANDON	333
16	L	43	281	7-N	007-0086	007-0087	243	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
17	M	44	281	7-N	007-0096	007-0097	20	7	DR-21 IPS HDPE	POINT REPAIR	412, SP-6
18	N	45	281	7-N	007-0072	007-0091	279	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
19	P	47	281	7-N	007-0069	007-0328	253	8	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
20	Q	49	281	7-N	007-0147	MH-1Q	73	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
21	Q	49	281	7-N	MH-1Q	MH-2Q	206	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
22	Q	49	281	7-N	MH-1Q	007-0148	32	8		ABANDON	333
23	Q	49	281	7-N	007-0148	007-0149	150	8		ABANDON	333
24	T	55	68	37-S	037-0105	037-0230	310	12	DR 21 IPS HDPE	SLIPLINE	409, SP-5,6
25	T	55	68	37-S	037-0230	037-0108	35	12	DR 21 IPS HDPE	SLIPLINE	409, SP-5,6
26	T	55,56	68	37-S	037-0108	MH-1T	397	10	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
27	T	56,57,58	68	37-S	MH-1T	037-0111	396	10	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
28	T	58	68	37-S	037-0111	037-0112	175	10	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
29	U	59	68	37-S	037-0112	037-0113	200	8	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
30	V	60	68	37-S	037-0112	037-0124	171	8	SDR 26 ASTM D3034 PVC	OPEN CUT	405, SP-1
31	W	62	8	32-S	MH-1W	MH-2W	197	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
32	W	62	8	32-S	MH-2W	MH-3W	194	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
33	X	63	8	32-S	MH-1W	MH-1X	46	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
34	W,X	64	8	32-S	MH-1X	032-0625	202	8		ABANDON	333
ADDITIVE ALTERNATE NO. 3											
35	O	46	281	7-N	007-0122	007-0123	10	8	VCP ASTM C700	POINT REPAIR	412
36	S	53	659, 660	60-HC	060-0510	060-0514	245	10	DR-17 DIPS HDPE	PIPE BURSTING	408, SP-6
ADDITIVE ALTERNATE NO. 4											
37	R	51	389,472	-	-	-	102	12	DIP CLASS 51 (RJ)	OPEN CUT	309
38	R	51	389, 472	49-S	049-0068	MH-1R	35	8	SDR 26 ASTM D3034 PVC	OPEN CUT	313, SP-1
39	R	51	389, 472	49-S	MH-1R	MH-2R	108	8	SDR 26 ASTM D3034 PVC (RJ) W/ 24-INCH DIA. 1/2-INCH THICK STEEL CASING	OPEN CUT AND BORE AND JACK	313, 322, SP-1
40	R	51	389, 472	49-S	049-0068	049-0069	108	8		ABANDON	333
41	R	51	389,472	49-S	049-0069	MH-1R	32	8		ABANDON	333



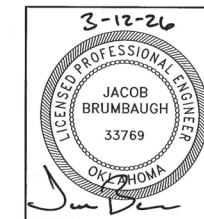
PIPE WORK ITEM TABLE
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			
			ATLAS PAGE NO: NA				

DATE: March 2026
 SHEET 7 OF 66 SHEETS

PIPE ID	PLAN SHEET NUMBER	ATLAS PAGE	MAINTENANCE AREA	DOWNSTREAM MANHOLE ID	DOWNSTREAM MANHOLE DEPTH (FT)	UPSTREAM MANHOLE ID	UPSTREAM MANHOLE DEPTH (FT)	NUMBER OF SERVICE RECONNECTIONS	EXISTING PIPE			PROPOSED PIPE		
									LENGTH (FT)	EXISTING NOMINAL DIAMETER (IN)	EXISTING PIPE MATERIAL	POINT REPAIRS	PROPOSED OUTSIDE PIPE DIAMETER (IN)	PROPOSED PIPE MATERIAL
BASE BID														
SL01	10	29,30	90-N	090-0683	9.5	090-P55581	UNK	1	299	8	VCP/DIP	STA. 2+28 - 2+38	7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL02	10	29	92-N	092-0359	4.9	092-0360	5.2	3	193	8	CP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL03	10	29	92-N	092-0362	11.2	092-0357	6.0	1	287	8	CP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL04	10	29	92-N	092-0362	11.2	092-0342	4.4	2	191	8	CP/VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL05	10	29	92-N	092-0361	6.5	092-0362	11.2	2	154	8	CP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL06	10	29	92-N	092-0380	8.0	092-0361	6.5	4	289	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL07	11	30	90-N	090-0573	3.7	090-0764	2.0	3	259	8	VCP/DIP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL08	11	29	90-N	090-0503	12.1	090-0504	9.4	2	100	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL09	11	29,30	90-N	090-0502	9.5	090-0772	7.2	0	94	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL10	12	52	93-N	093-0188	6.9	093-0346	10.8	3	174	8	CP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL11	12	52	93-N	093-0414	7.6	093-0415	6.1	2	225	8	CP/VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL13	13	52	97-N	097-0447	14.4	097-0454	12.5	0	59	8	VCP		7.125	SDR 19 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL14	13	52	97-N	097-0454	12.5	097-0455	11.1	1	294	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL16	14	119	16-N	016-0018	6.4	016-0019	5.8	8	302	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL20	16	168	99-N	099-0069	7.1	099-0071	7.4	2	270	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL24	17	281	7-N	007-0096	6.4	007-0097	4.3	0	79	8	VCP/DIP	STA. 0+25-0+45 (SEE LINE M)	7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
ADDITIVE ALTERNATE NO. 1														
SL12	13	52	97-N	097-0448	11.1	097-0799	10.1	1	223	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL15	13	52	95-N	095-0587	9.4	095-0588	7.9	1	60	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL17	15	138	46-S	046-0271	9.0	046-0272	5.1	4	324	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL18	16	168	99-N	099-0063	13.3	099-0064	15.1	3	236	8	VCP		7.125	SDR 19 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL19	16	168	99-N	099-0064	15.1	099-0065	11.1	1	250	8	VCP		7.125	SDR 19 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL21	16	168	99-N	099-0071	7.4	099-0072	6.5	0	244	8	VCP/DIP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL22	16	168	99-N	099-0072	6.5	099-0073	8.0	1	182	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL23	17	281	7-N	007-0112	5.6	007-0113	5.9	3	143	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL25	17	281	7-N	007-0116	6.3	007-0117	5.7	4	280	8	VCP/DIP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL26	17	281	7-N	007-0115	6.1	007-0116	6.3	0	21	8	VCP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL28	19	659	61-HC	061-0241	10.5	061-0242	7.2	0	23	8	VCP/DIP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
SL29	19	660	60-HC	060-0510	13.2	060-0511	11.6	1	287	8	VCP/DIP		7.125	SDR 21 HDPE IPS OR CURED-IN-PLACE-PIPE (CIPP)
ADDITIVE ALTERNATE NO. 2														
CIPP27	18	386,469	70-S	070-0365	13.7	070-0366	10.7	0	216	8	VCP/DIP		8	CURED-IN-PLACE-PIPE (CIPP)
CIPP30	20	767	60-HC	060-0402	6.3	060-0403	10.3	1	172	10	VCP		10	CURED-IN-PLACE-PIPE (CIPP)
CIPP31	20	767	60-HC	060-0404	14.7	060-0405	15.2	4	263	10	VCP		10	CURED-IN-PLACE-PIPE (CIPP)



SLIPLINE/CIPP WORK ITEM TABLE

TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			
			ATLAS PAGE NO. NA				

DATE: March 2026

DESIGN MANAGER

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

EROSION AND SEDIMENT CONTROLS

PROJECT LIMITS: AREA WIDE SANITARY SEWER REAHB. AND MANHOLE REHAB.

PROJECT DESCRIPTION: CONSTRUCTION OF SANITARY SEWER REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

- A. PLACE TEMPORARY SEDIMENT CONTROL MEASURES AT LOCATIONS SHOWN.
- B. PROVIDE AND PLACE ANY ADDITIONAL TEMPORARY SEDIMENT CONTROL MEASURES AS MAY BE NEEDED OR REQUIRED.
- C. WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MODIFY OR ADD ADDITIONAL SPECIFIC PRACTICES AND CONTROLS. THIS WORK IS INCIDENTAL AND WILL NOT BE MEASURED FOR PAYMENT.
- D. AS RESTORATION IS COMPLETED, SOD SHALL BE PLACED OVER ALL NON-PAVED AREAS TO RESTORE THE GROUND COVER.
- TOTAL AREA DISTURBED: LESS THAN ONE ACRE, NO CHANGE IN AMOUNT OF IMPERVIOUS OR VEGETATED AREA.

RUNOFF COEFFICIENT: 0.40

SOIL TYPE: REPLACE WITH SOIL TYPE

AREA TO BE DISTURBED: LESS THAN ONE ACRE, NO CHANGE IN AMOUNT OF IMPERVIOUS OR VEGETATED AREA

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

MAXIMUM ACRES TO BE DISTURBED AT ANY ONE TIME: NA
(FOR CONTRACTOR USE)

LATITUDE & LONGITUDE OF CENTER OF PROJECT: NA

NAME OF RECEIVING WATERS: NA

SENSITIVE WATERS OR WATERSHEDS: YES NO

303(d) IMPAIRED WATERS: YES NO

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

REVISED 04 / 24 / 2014

SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMS
- TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGE WAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

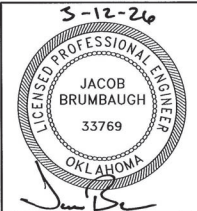
A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL.
- 221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, NOVEMBER 1, 2023.



STORM WATER MANAGEMENT PLAN

TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.I.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

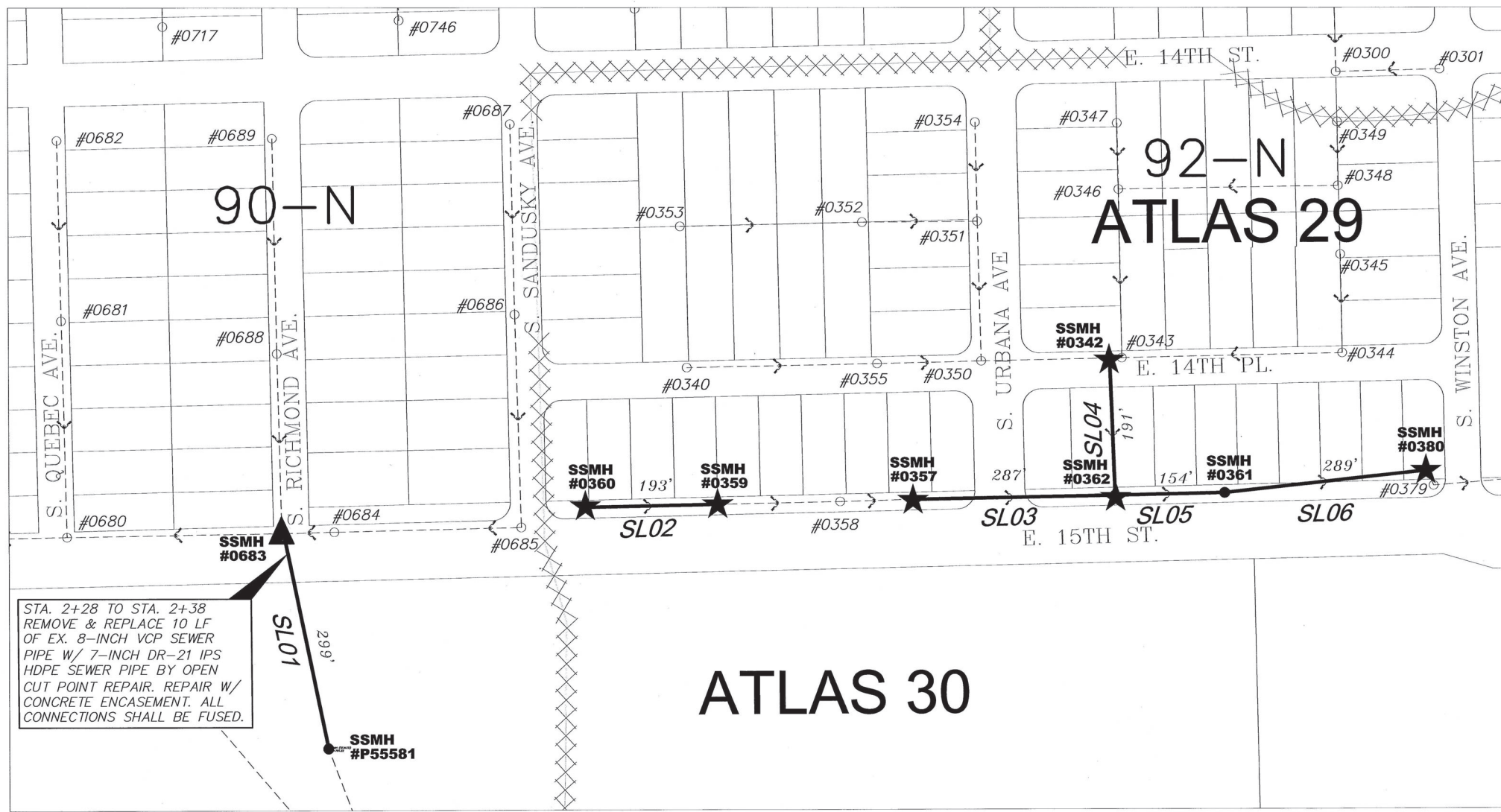
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	h2	3/26	
			VERTICAL:	FIELD MGR.	h2	3/26	
			NA	FILE:	DRAWING:		
			ATLAS PAGE NO: NA				SHEET 9 OF 66 SHEETS

1:\MS-PANZURA\OFFICE-30\TULSA\PROJECTS\20-3006-04 TULSA 1072 AREAWIDE SEWER REHABILITATION FY25\CADD\DRAWINGS\5 SWMP SHEETING
 8:21:36 AM

N.T.S.

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR SLIPLINING PIPE REHABILITATION ———

MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★

SLIPLINING ID SL05

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY ×××××

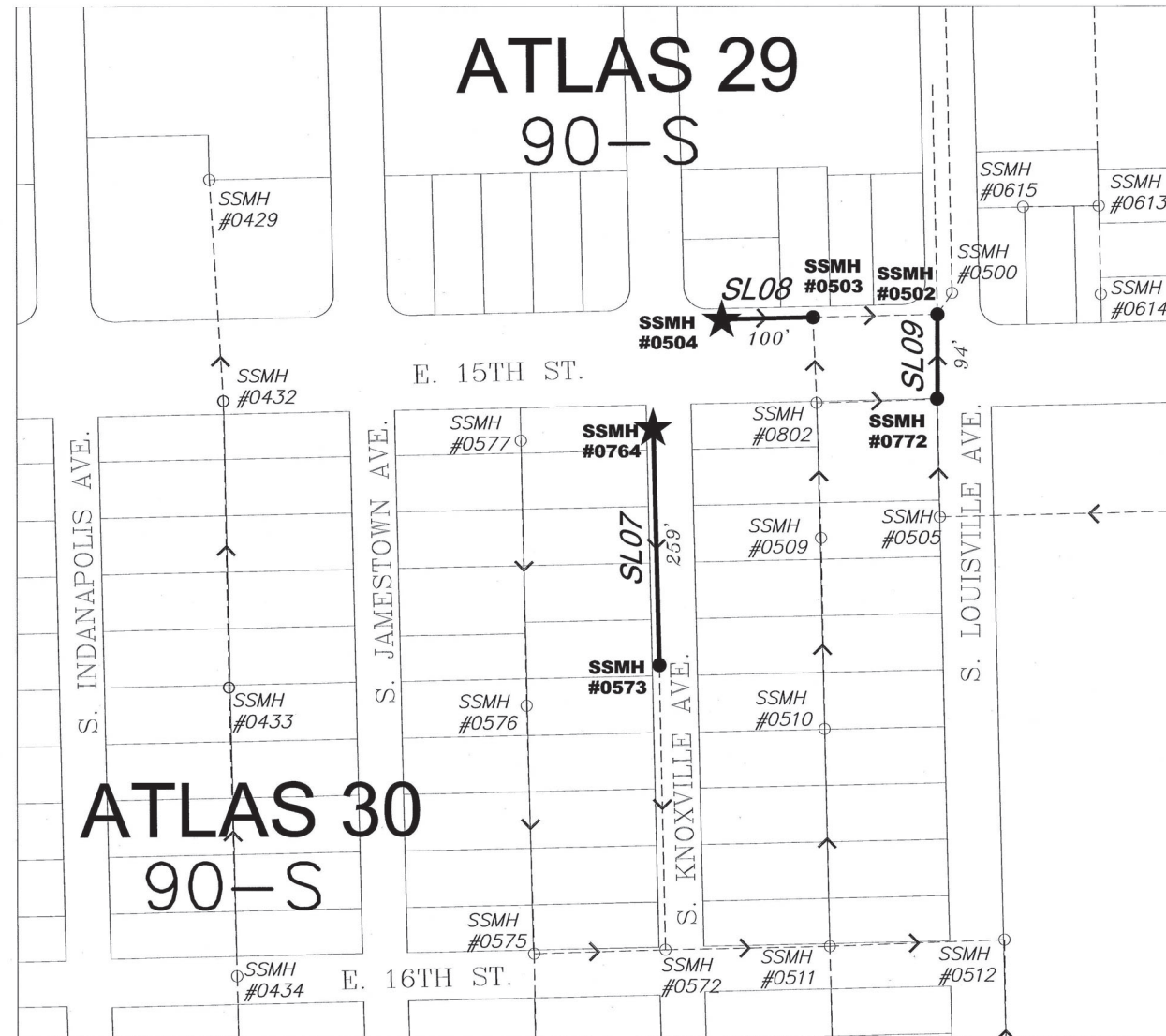


SLIPLINE/CIPP ATLAS PAGES 29 & 30 KEY MAP - 1
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/J GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	WJA 3/26		Thomas B. M.
			VERTICAL:	FIELD MGR.	JWB 3/26		DESIGN MANAGER
			NA	FILE:	DRAWING:		DATE: March 2026
			ATLAS PAGE NO: 29,30				SHEET 10 OF 66 SHEETS

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

MANHOLE REPLACEMENT
(SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR
SLIPLINING PIPE REHABILITATION ———

MANHOLE REHABILITATION
(SEE MH REHABILITATION WORK ITEM TABLE) ★

SLIPLINING ID SL05

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY XXXX

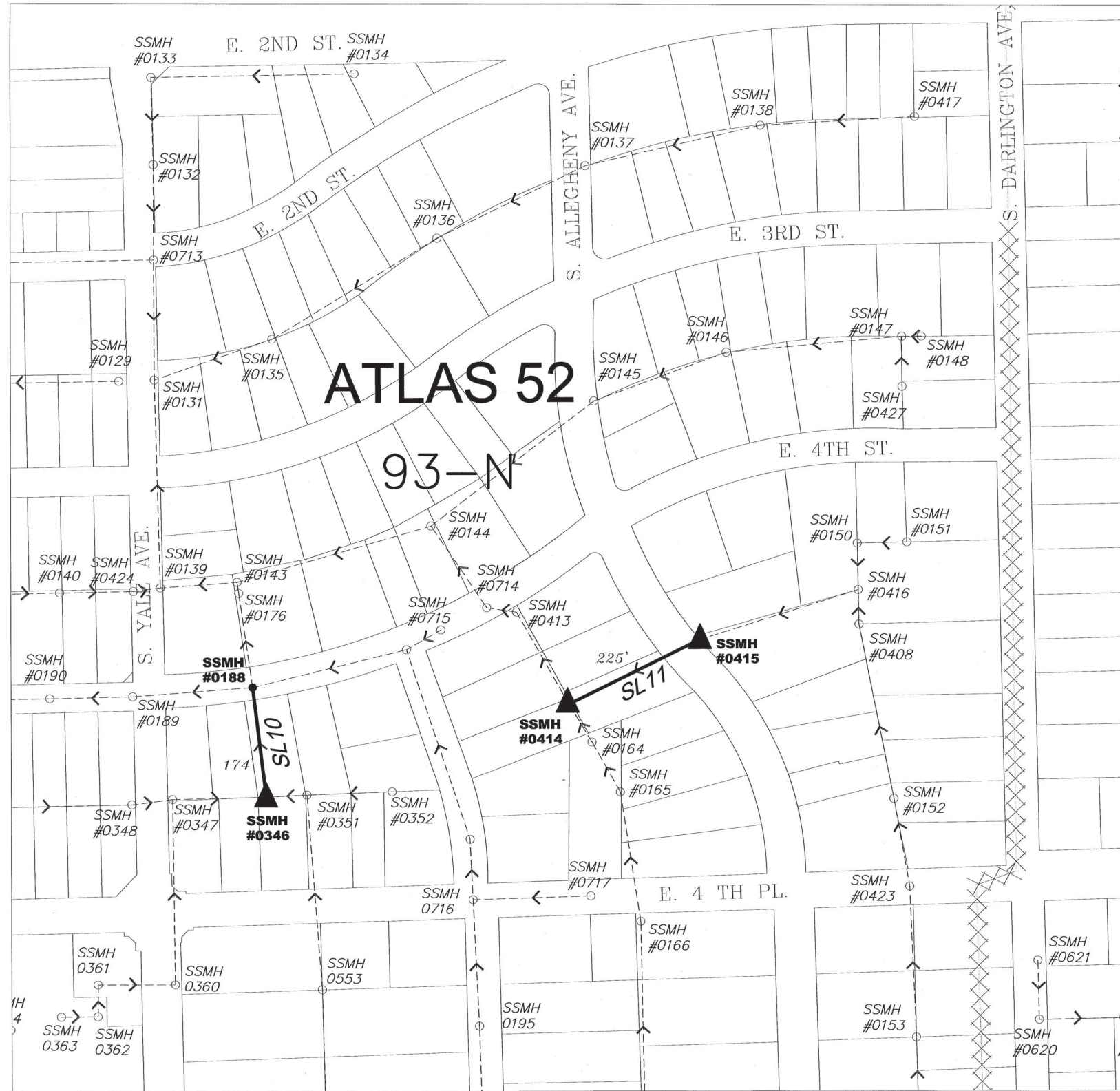


SLIPLINE/CIPP ATLAS PAGES 29 & 30 KEY MAP - 2

TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R.J.N GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

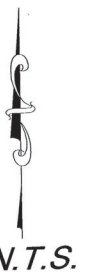
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 29,30				SHEET 11 OF 66 SHEETS



ATLAS 52
93-N

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

- MANHOLE REPLACEMENT
(SEE MANHOLE WORK ITEM TABLE)
- CURED-IN-PLACE (CIPP) OR
SLIPLINING PIPE
REHABILITATION
- MANHOLE REHABILITATION
(SEE MH REHABILITATION
WORK ITEM TABLE)
- SLIPLINING ID SL05
- EXISTING SEWER
- MAINTENANCE AREA ID 94-N
- MAINTENANCE AREA
BOUNDARY

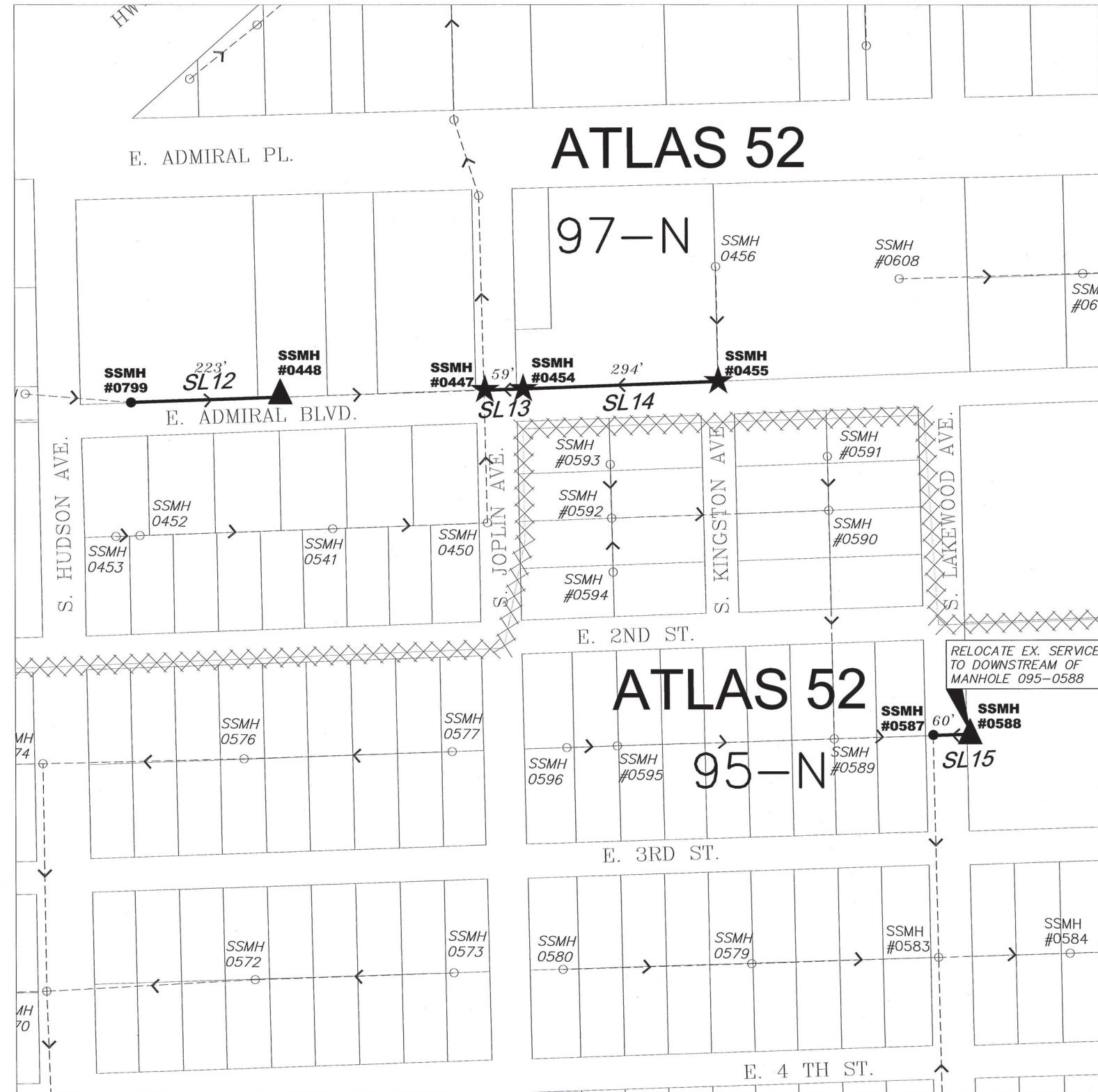


SLIPLINE/ CIPP ATLAS PAGE 52 KEY MAP - 1
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

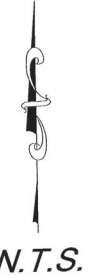
REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:	
			NA	DESIGNED	JWB	03/2026		
			PROFILE SCALE:	SURVEY				
			HORIZONTAL:	PROJ. MGR.				
			NA	LEAD ENGR.				
			VERTICAL:	FIELD MGR.				
			NA	DATE: March 2026				
			FILE:	DRAWING:				
			ATLAS PAGE NO: 52	SHEET 12 OF 66 SHEETS				

PATH NAME: drive:folder\folder\titleblock.dgn INITIALS MM/DD/YYYY



NOTES

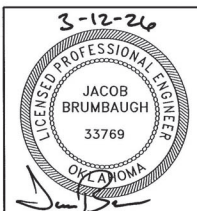
1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

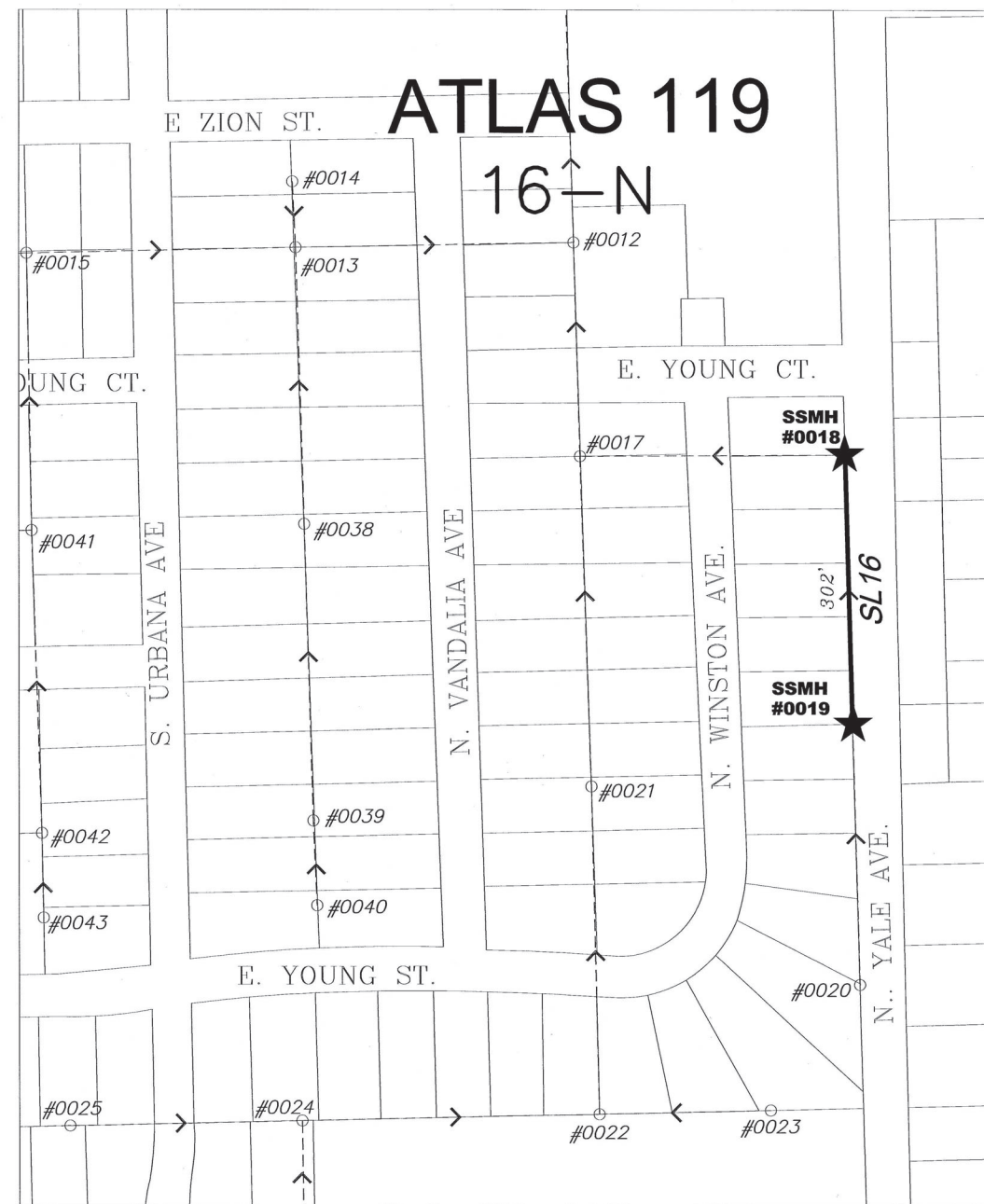
- MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE) ▲
- CURED-IN-PLACE (CIPP) OR SLIPLINING PIPE REHABILITATION ———
- MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★
- SLIPLINING ID SL05
- EXISTING SEWER - - - - -
- MAINTENANCE AREA ID 94-N
- MAINTENANCE AREA BOUNDARY XXXX

SL12 & SL15 ARE INCLUDED IN ADDITIVE ALTERNATE 1.



SLIPLINE/CIPP ATLAS PAGE 52 KEY MAP - 2	
TMUA PROJECT NO. ES 2024-05	
IMPROVE OUR TULSA 2 AREAWIDE SEWER REHABILITATION, FY25	
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: R/JN GROUP, INC. CONSULTING ENGINEERS 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146	

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			NA	FIELD MGR.			
			FILE:	DRAWING:			
			ATLAS PAGE NO: 52				



NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.

N.T.S.

LEGEND

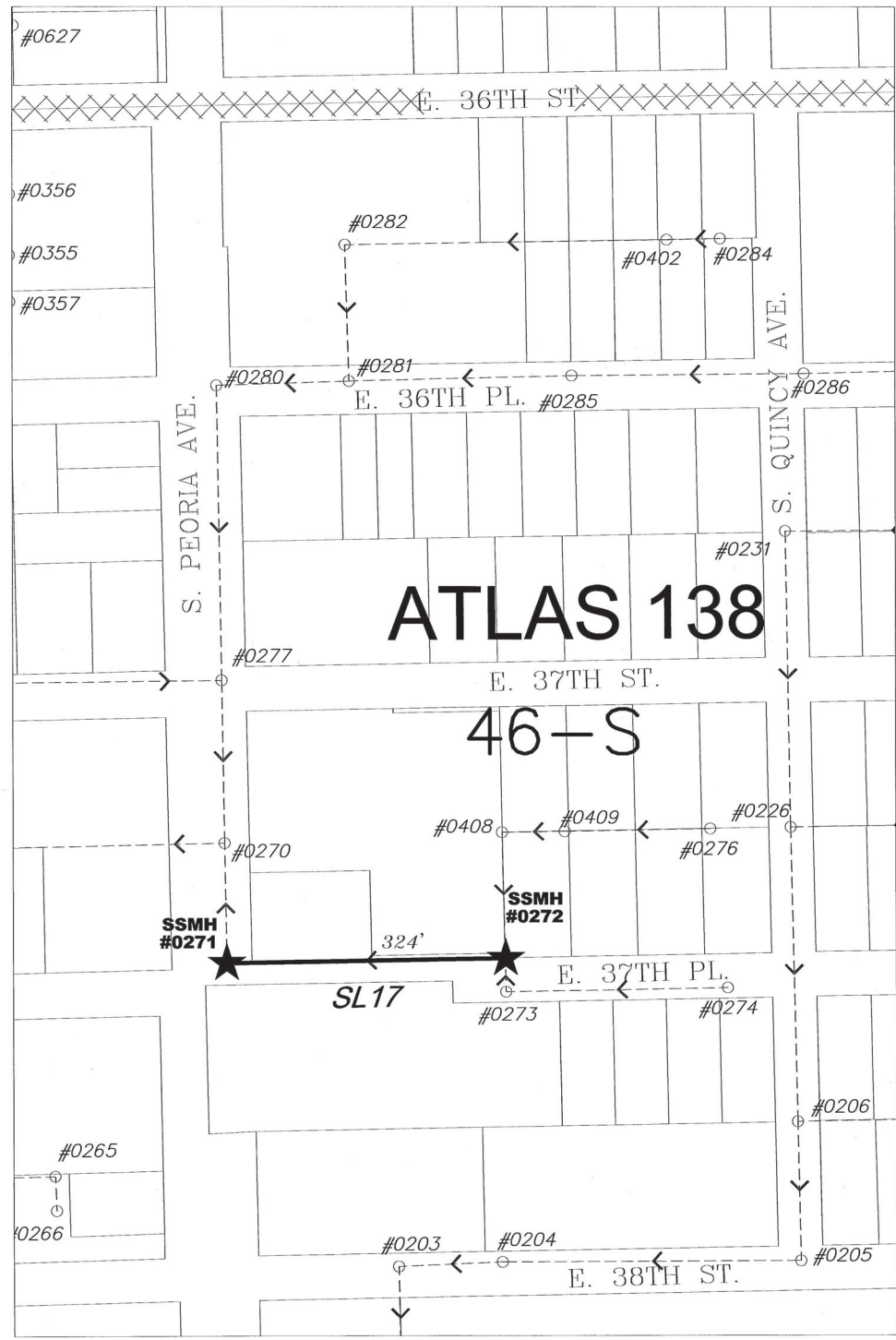
- MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE) ▲
- CURED-IN-PLACE (CIPP) OR SLIPLINING PIPE REHABILITATION ———
- MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★
- SLIPLINING ID SL05
- EXISTING SEWER - - - - -
- MAINTENANCE AREA ID 94-N
- MAINTENANCE AREA BOUNDARY ××××



SLIPLINE/CIPP ATLAS PAGE 119 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

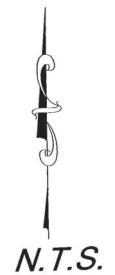
REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 THOMAS D. MYERS DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 119				SHEET 14 OF 66 SHEETS



SL17 IS INCLUDED IN ADDITIVE ALTERNATE 1.

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR SLIPLINING PIPE REHABILITATION ———

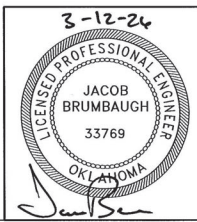
MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★

SLIPLINING ID SL05

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

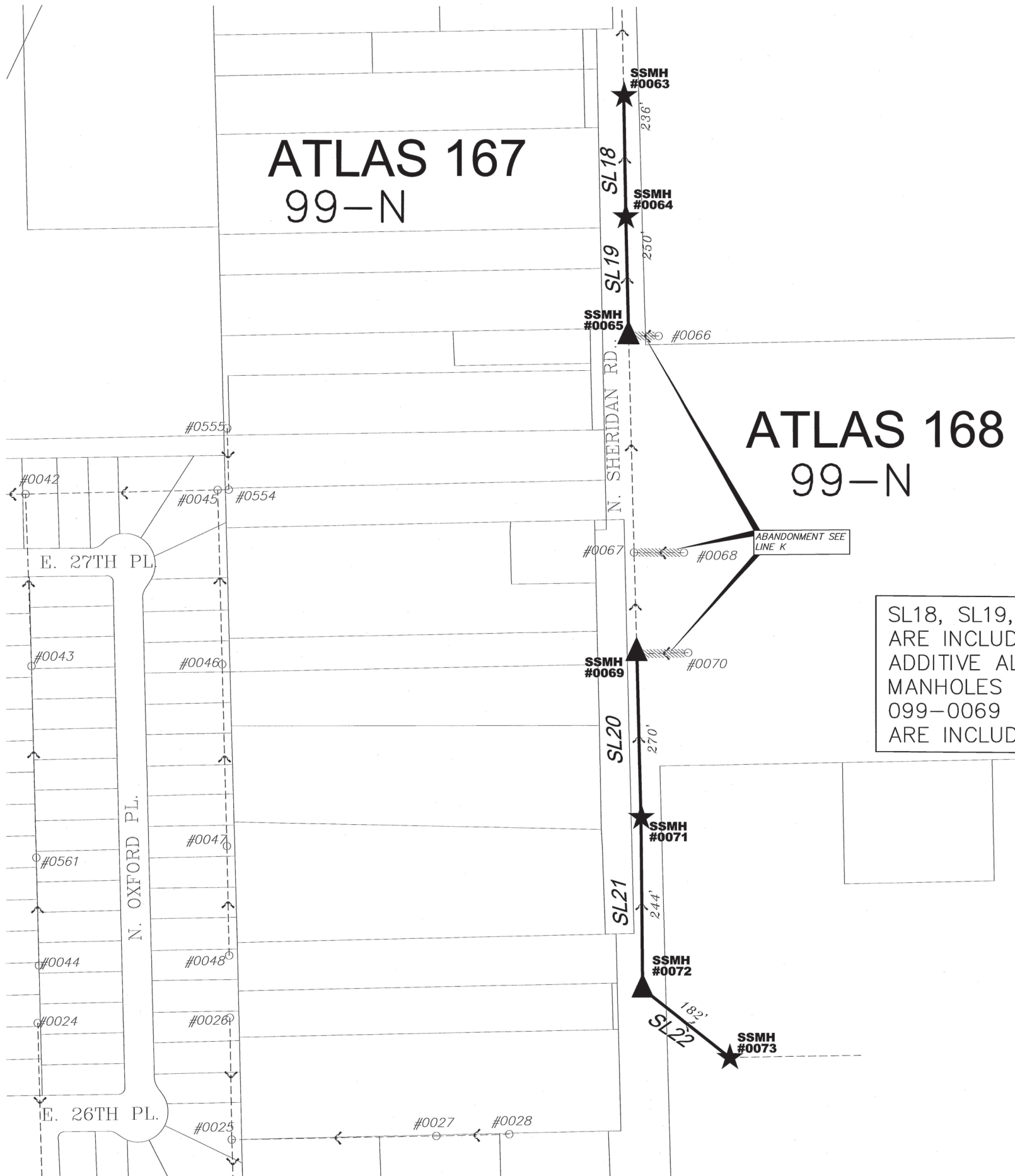
MAINTENANCE AREA BOUNDARY XXXXX



SLIPLINE/CIPP ATLAS PAGE 138 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR. <i>KZ 3/26</i>			
			VERTICAL:	FIELD MGR. <i>Jau 3/26</i>			
			NA	DESIGN MANAGER <i>Thomas D. M...</i>			
			FILE:	DATE: March 2026			
			DRAWING:	SHEET 15 OF 66 SHEETS			
			ATLAS PAGE NO: 138				



SL18, SL19, SL21 & SL22
 ARE INCLUDED IN
 ADDITIVE ALTERNATE 1.
 MANHOLES 099-0065,
 099-0069 & 099-0071
 ARE INCLUDED IN BASE BID

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.

N.T.S.

LEGEND

MANHOLE REPLACEMENT
 (SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR
 SLIPLINING PIPE REHABILITATION ———

MANHOLE REHABILITATION
 (SEE MH REHABILITATION WORK ITEM TABLE) ★

SLIPLINING ID SL05

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY ××××

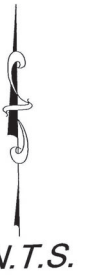
ABANDONMENT // // // //



SLIPLINE/CIPP ATLAS PAGE 167 & 168 KEY MAPS
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

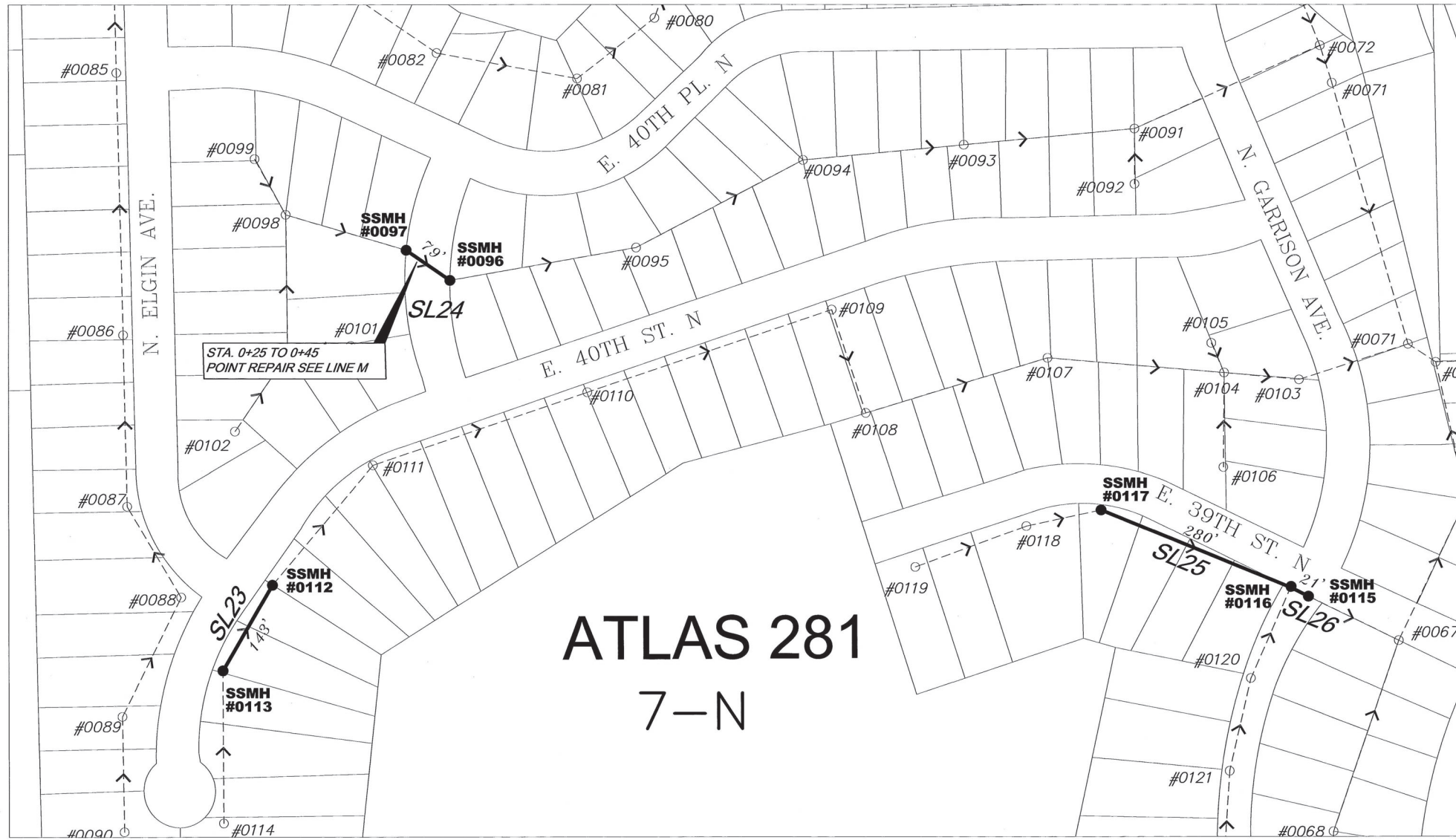
PLANS AND ESTIMATES PREPARED BY:
 RJN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
				FIELD MGR.			
			FILE:	DRAWING:			
ATLAS PAGE NO: 167,168							SHEET 16 OF 66 SHEETS



NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



**ATLAS 281
7-N**

SL23, SL25 & SL26
ARE INCLUDED IN
ADDITIVE ALTERNATE 1.

LEGEND

MANHOLE REPLACEMENT
(SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR
SLIPLINING PIPE REHABILITATION ———

MANHOLE REHABILITATION
(SEE MH REHABILITATION WORK ITEM TABLE) ★

SLIPLINING ID SL05

EXISTING SEWER - - - - -

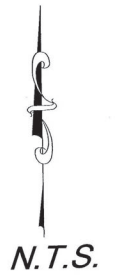
MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY XXXXX



SLIPLINE/CIPP ATLAS PAGE 281 KEY MAP
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

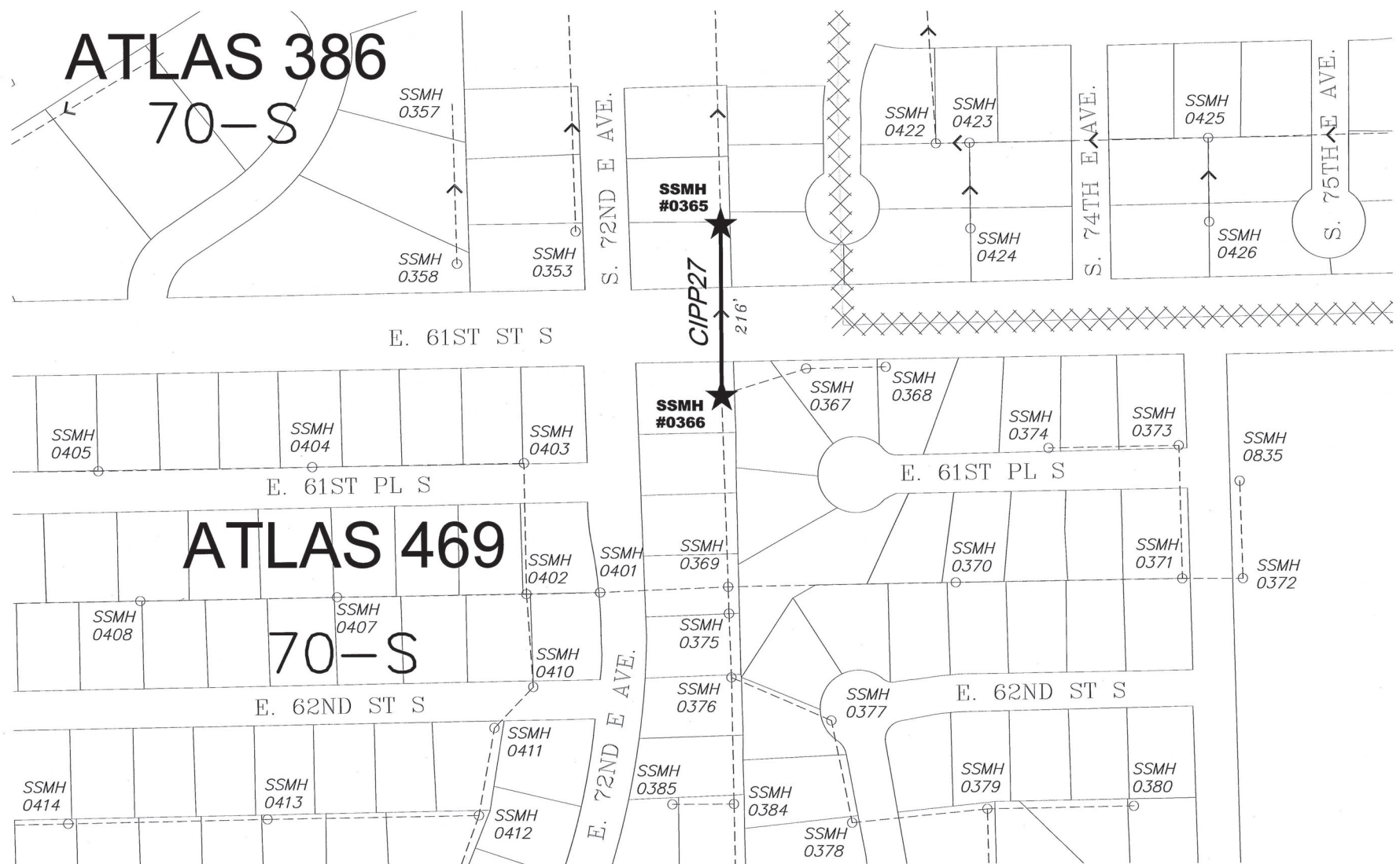
REVISION	BY	DATE	PLAN SCALE:	DRAWN	R.L.P.	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.		6/23/26	
			VERTICAL:	FIELD MGR.		Ben B/26	
			NA	DRAWING:			
			FILE:				
ATLAS PAGE NO: 281							SHEET 17 OF 66 SHEETS



NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.

CIPP27 SHALL BE CIPP AND IS NOT A CANDIDATE FOR SLIPLINE.



CIPP 27 IS INCLUDED IN ADDITIVE ALTERNATE 2.

LEGEND

MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) PIPE REHABILITATION ———

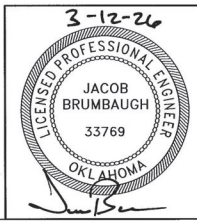
MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE) ★

CIPP ID CIPP10

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY XXXXX



CIPP ATLAS PAGES 386 & 469 KEY MAP

TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

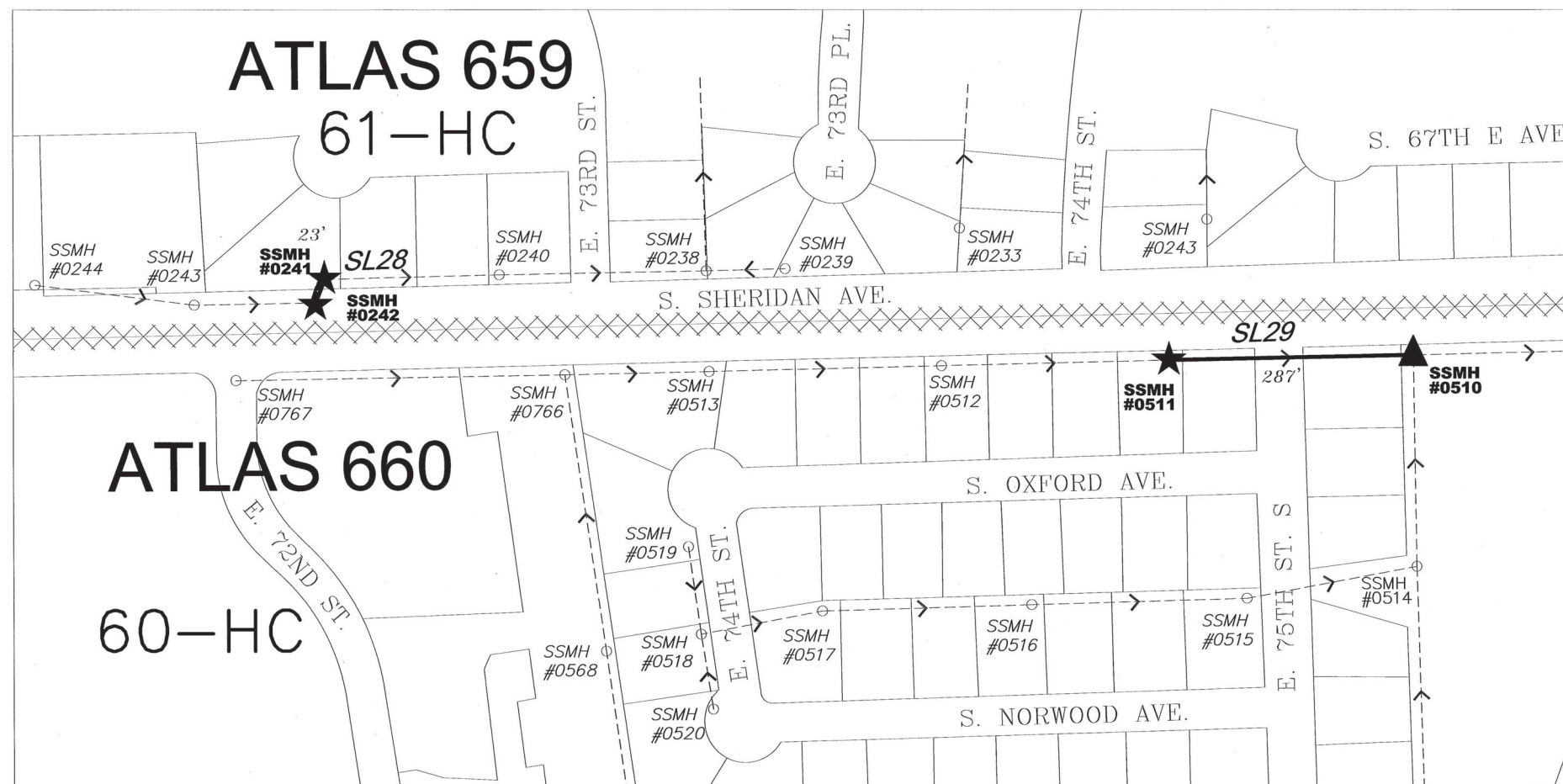
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:	
			NA	DESIGNED	JWB	03/2026		
			PROFILE SCALE:	SURVEY				
			HORIZONTAL:	PROJ. MGR.				
			NA	LEAD ENGR.				
			VERTICAL:	FIELD MGR.				
			NA					
			FILE:	DRAWING:				
			ATLAS PAGE NO: 469					

DATE: March 2026
SHEET 18 OF 66 SHEETS

N.T.S.

NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.



LEGEND

MANHOLE REPLACEMENT
(SEE MANHOLE WORK ITEM TABLE) ▲

CURED-IN-PLACE (CIPP) OR
SLIPLINING PIPE REHABILITATION ———

MANHOLE REHABILITATION
(SEE MH REHABILITATION WORK ITEM TABLE) ★

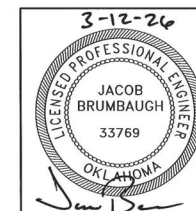
SLIPLINING ID SL05

EXISTING SEWER - - - - -

MAINTENANCE AREA ID 94-N

MAINTENANCE AREA BOUNDARY ×××

SL28 & SL29 ARE INCLUDED IN ADDITIVE ALTERNATE 1. MANHOLE 060-0510 IS INCLUDED IN ADDITIVE ALTERNATE 3.



SLIPLINE/CIPP ATLAS PAGES 659 & 660 KEY MAP

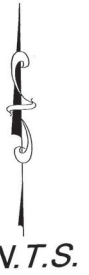
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

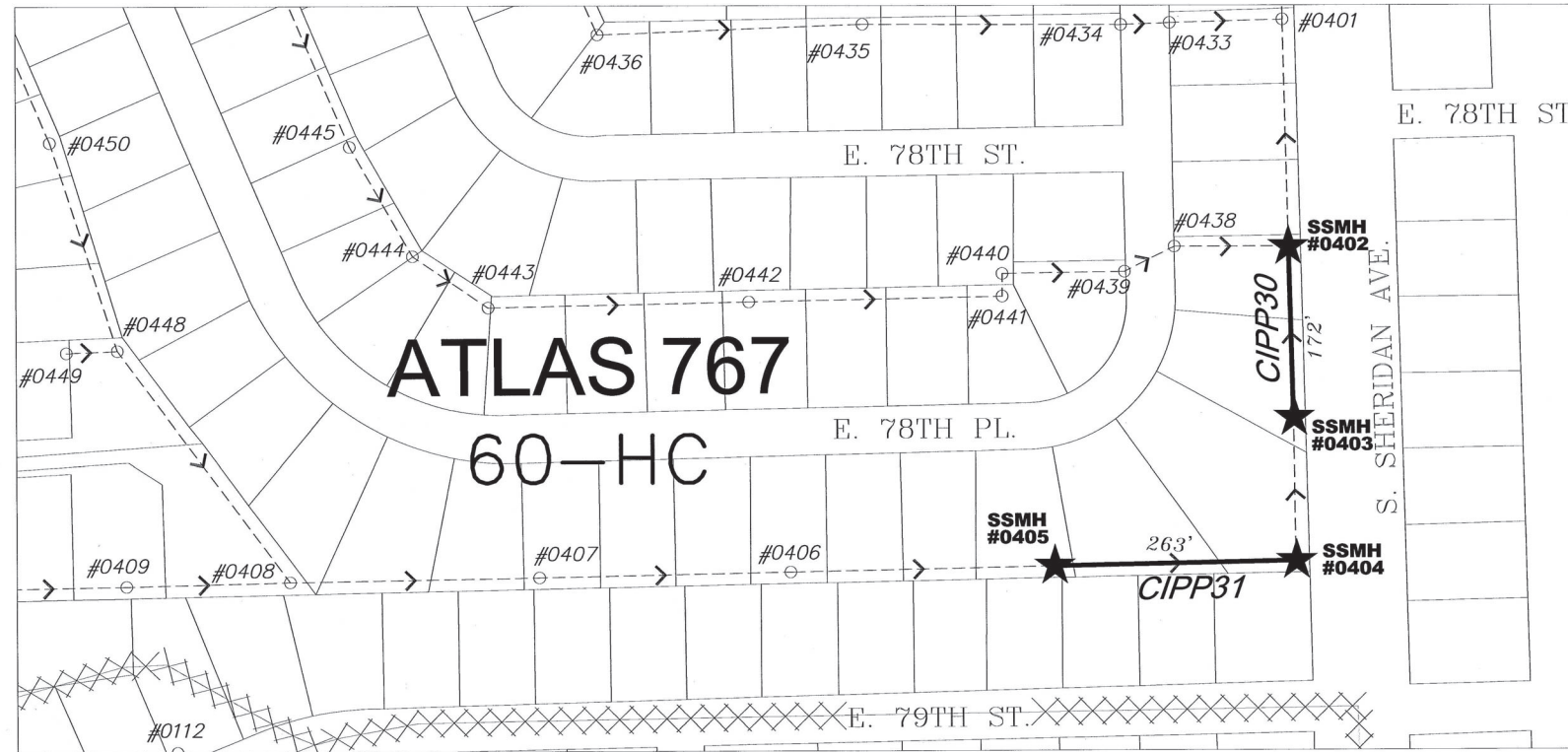
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:	
			NA	DESIGNED	JWB	03/2026		
			PROFILE SCALE:	SURVEY				
			HORIZONTAL:	PROJ. MGR.				
			NA	LEAD ENGR.				
			VERTICAL:	FIELD MGR.				
			NA	FILE:				
			DRAWING:	DATE: March 2026				
ATLAS PAGE NO: 659,660							SHEET 19 OF 66 SHEETS	



NOTES

1. CONTRACTOR SHALL INSTALL CURED-IN-PLACE PIPE IN ACCORDANCE WITH PART 410 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS. SLIPLINING SHALL BE IN ACCORDANCE WITH PART 409 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
2. DESIGN PARAMETERS FOR CURED-IN-PLACE PIPE (CIPP) REHABILITATION SHALL BE BASED ON FULLY DETERIORATED DESIGN WITH A SAFETY FACTOR OF 2 IN ACCORDANCE WITH ASTM F1216. CONTRACTOR SHALL SUBMIT DESIGN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND DESIGN SHALL BE INCLUDED WITH COMPLETE SUBMITTAL PACKAGE FOR CIPP SCOPE OF WORK. FLEXURAL MODULUS FOR THE RESIN SHALL BE A MINIMUM OF 400,000 PSI.
3. ANY SURFACE OBSTRUCTION REMOVAL & REPLACEMENT REQUIRED TO ACCESS MANHOLES SHALL BE INCLUDED IN THE BID ITEM FOR CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRUBBING AND FENCE REMOVAL AND REPLACEMENT.
4. CONTRACTOR SHALL VERIFY ALL ACTIVE SERVICE LOCATIONS AND POSITIONS PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION. ANY CLEANING REQUIRED, INCLUDING HEAVY CLEANING, SHALL BE INCLUDED IN UNIT PRICE BID FOR PRE-REHABILITATION CCTV PIPE INSPECTION.
5. SERVICE LATERALS LOCATED UNDER PAVEMENT SHALL BE REPLACED TO WITHIN 2' OF THE EASEMENT/RIGHT-OF-WAY BOUNDARY WITH POLYVINYL CHLORIDE PIPE (PVC). SERVICE LATERALS LOCATED OUTSIDE OF PAVEMENT SHALL BE RECONNECTED TO THE MAIN LINE WITH AN ADDITIONAL 10 LINEAR FEET OF REPLACEMENT. ANY ADDITIONAL PIPE OR FITTINGS REQUIRED TO MAKE A GOOD CONNECTION TO THE MAIN LINE OUTSIDE OF PAVEMENT SHALL BE INCLUDED IN THE COST OF SERVICE RECONNECTION.
6. ALL SERVICE RECONNECTIONS ON CIPP/SLIPLINE REHABILITATED PIPE SEGMENTS SHALL BE MADE EXTERNALLY AND IN ACCORDANCE WITH PART 409.17 OR 410.12.4 OF CITY OF TULSA'S MOST RECENT STANDARD SPECIFICATIONS.
7. ADDITIONAL SERVICE RECONNECTIONS, REPAIRS, AND/OR OBSTRUCTION REMOVALS MAY BE REQUIRED FOLLOWING PRE-CONSTRUCTION CCTV INSPECTION PRIOR TO CURED-IN-PLACE OR SLIPLINE PIPE REHABILITATION.
8. DETAILS REGARDING THE MANHOLES SCHEDULED FOR REHABILITATION ARE IN THE MANHOLE REHABILITATION WORK ITEM TABLE ON SHEET 6.

CIPP30 AND CIPP31 SHALL BE CIPP AND ARE NOT CANDIDATES FOR SLIPLINE.



CIPP 30 & CIPP31 ARE INCLUDED IN ADDITIVE ALTERNATE 2.

LEGEND

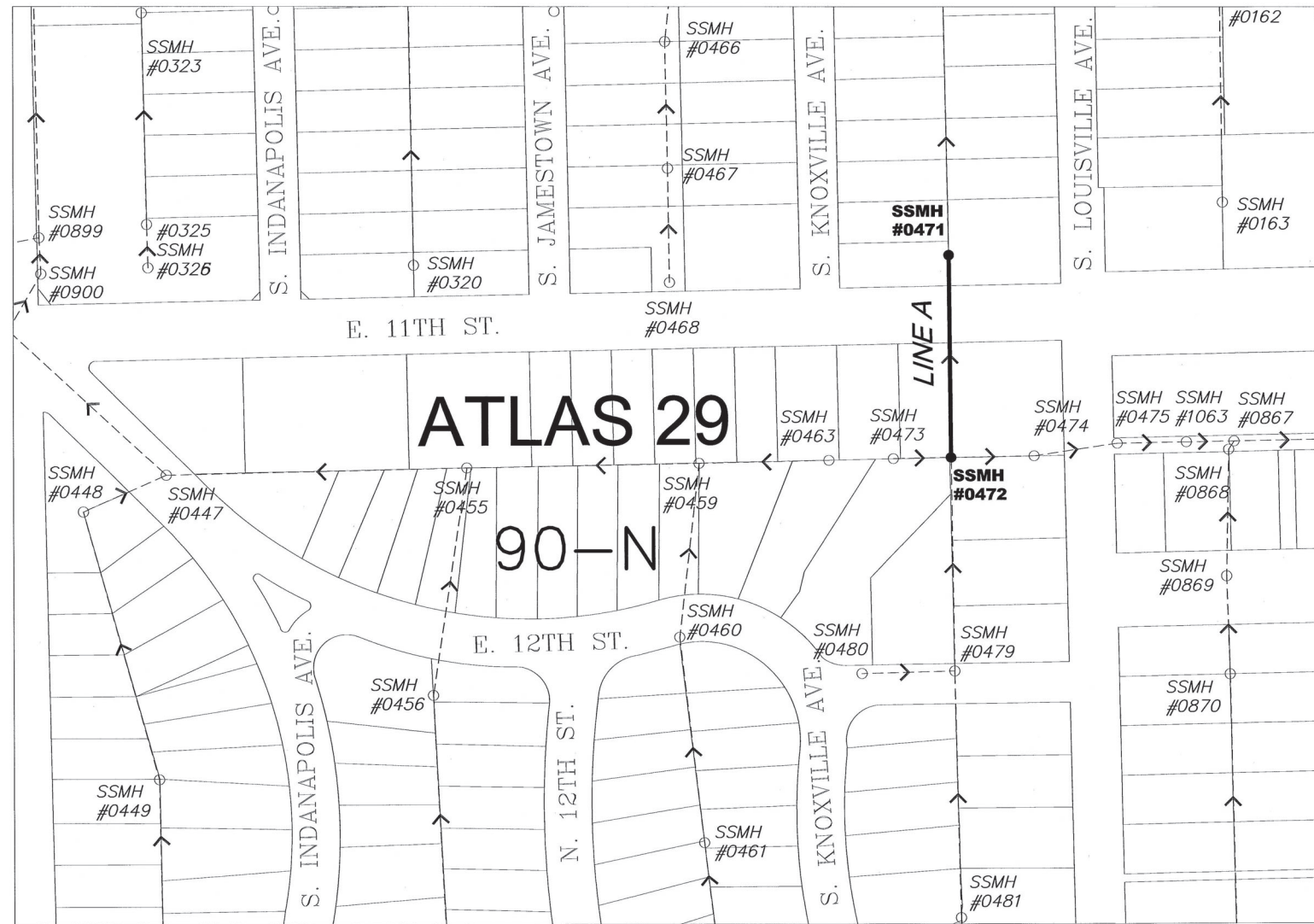
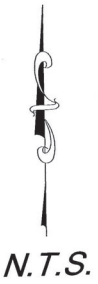
- MANHOLE REPLACEMENT (SEE MANHOLE WORK ITEM TABLE)
- CURED-IN-PLACE (CIPP) PIPE REHABILITATION
- MANHOLE REHABILITATION (SEE MH REHABILITATION WORK ITEM TABLE)
- CIPP ID CIPP10
- EXISTING SEWER
- MAINTENANCE AREA ID 94-N
- MAINTENANCE AREA BOUNDARY



CIPP ATLAS PAGE 767 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/J/N GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146


REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	WCB 3/26		
			FILE:	FIELD MGR.	POW 3/26		
			ATLAS PAGE NO: 767	DRAWING:			DATE: March 2026
							SHEET 20 OF 66 SHEETS

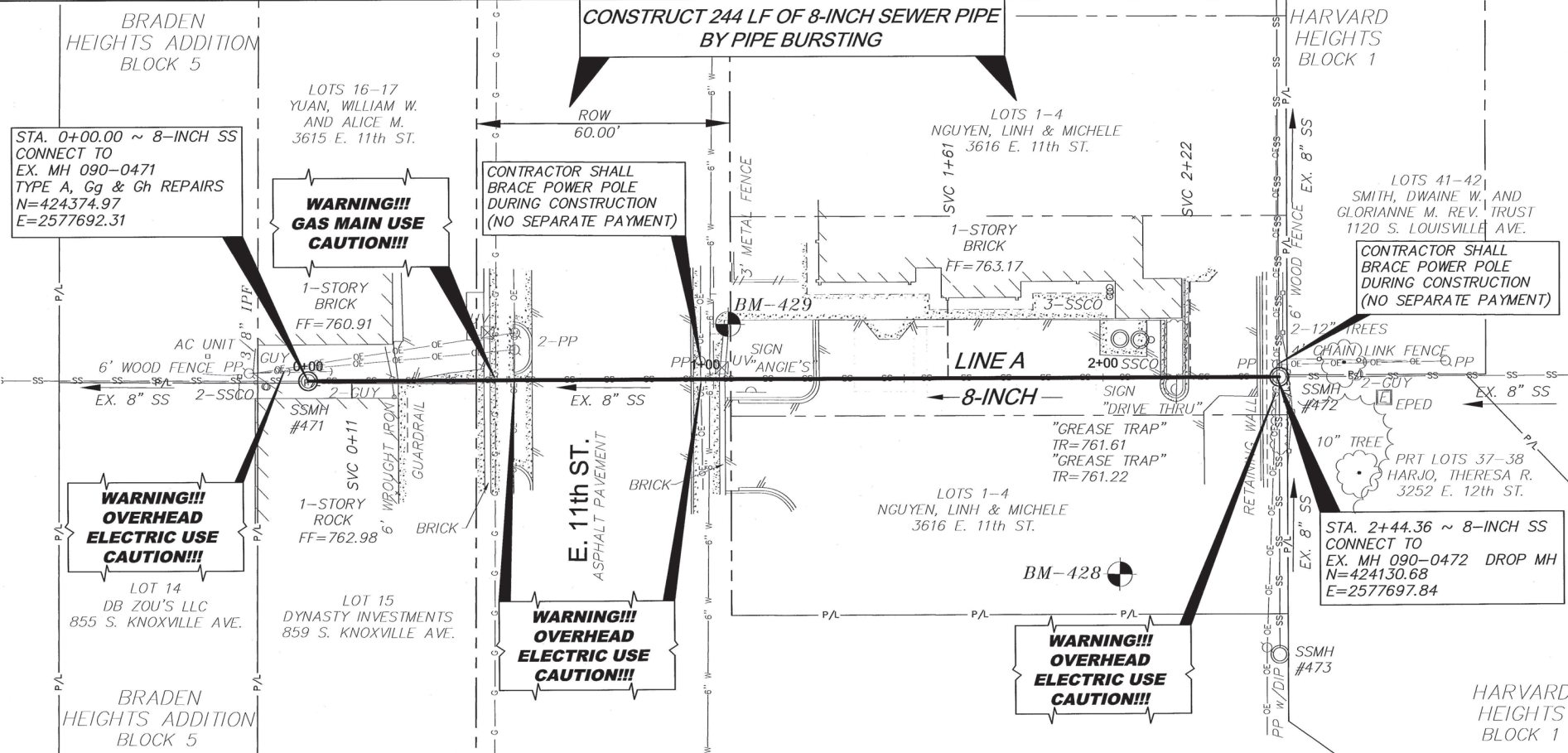


LINE A - SHEET 22



ATLAS PAGES 28 & 29 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

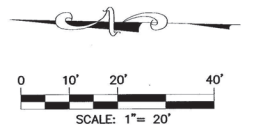
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	RJK 3/26		
			VERTICAL:	FIELD MGR.	RJK 3/26		
			NA				
			FILE:	DRAWING:			
ATLAS PAGE NO: 28, 29							SHEET 21 OF 66 SHEETS



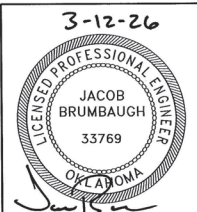
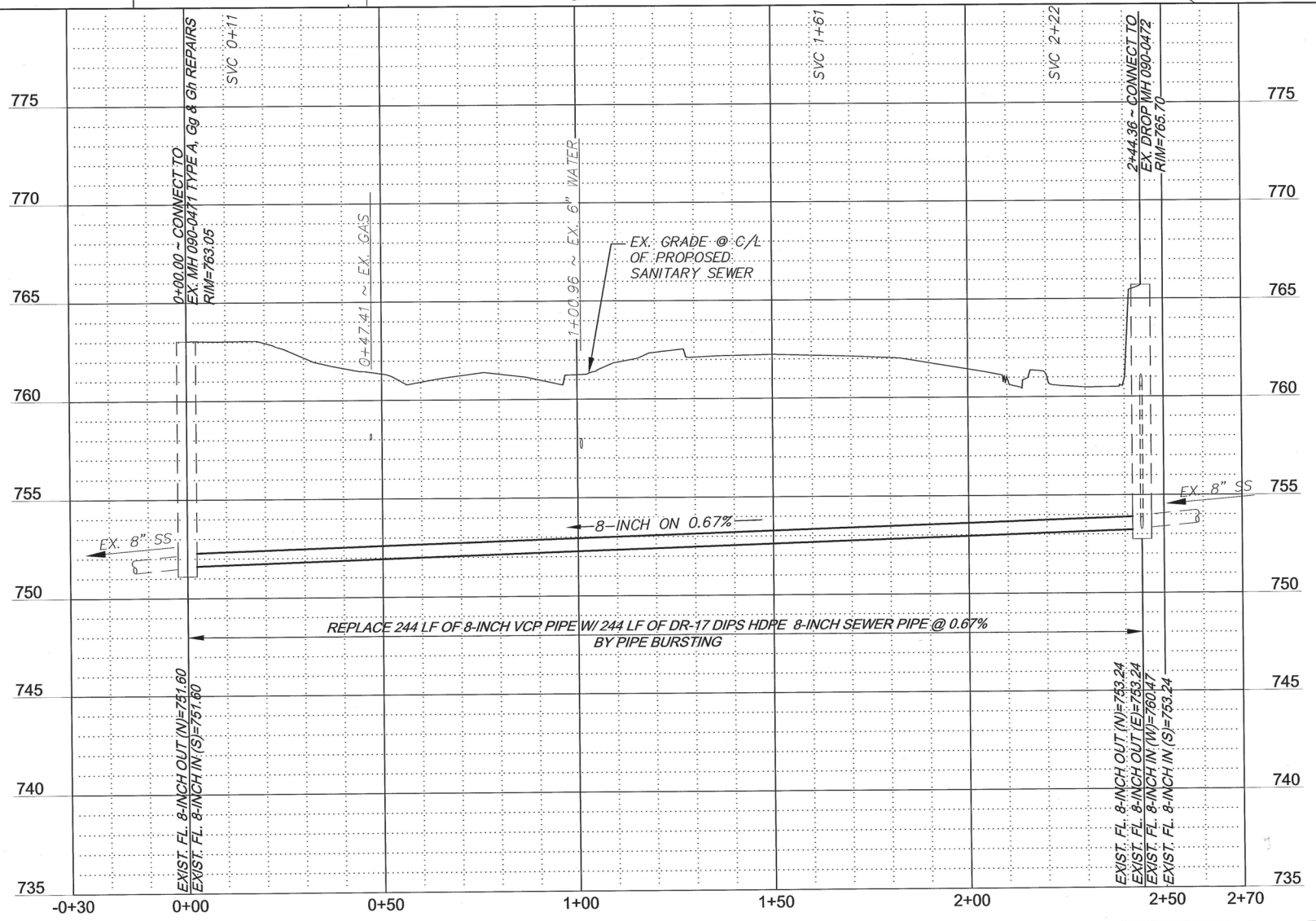
BENCHMARKS:

BM-428
CHISELED "X" SET 38- FEET NORTH AND 49- FEET WEST OF EX. MH 090-0472
N=424169.92
E=2577647.58
EL=762.39

BM-429
IRON PIN SET 106- FEET SOUTH AND 17- FEET EAST OF EX. MH 090-0471
N=424269.59
E=2577708.45
EL=761.03



WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE A

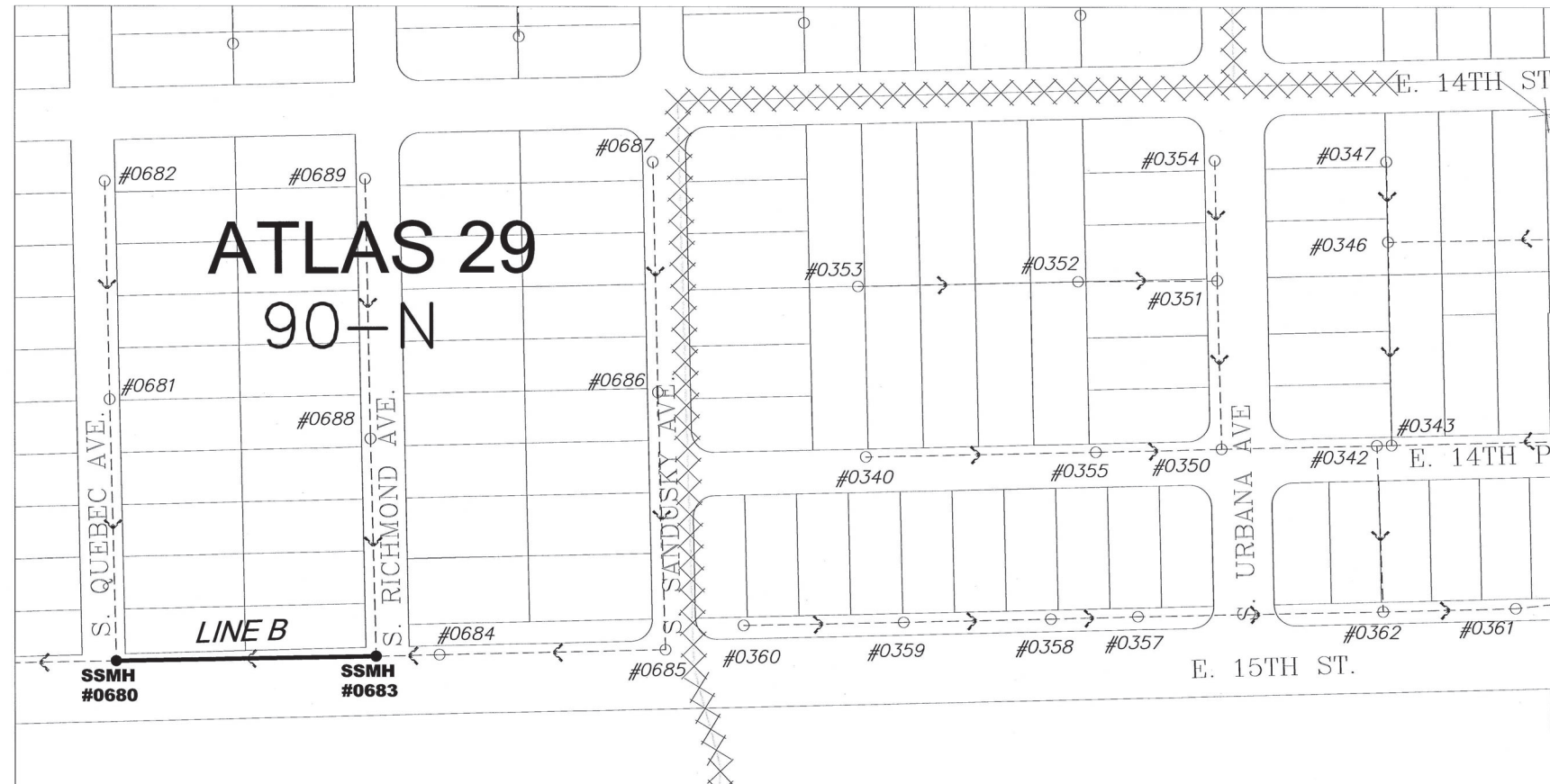
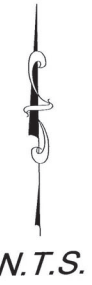
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	DATE	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL: 1" = 20'	PROJ. MGR.			
			VERTICAL: 1" = 4'	LEAD ENGR.	JWB	3/26	
			FILE:	FIELD MGR.	JWB	3/26	
				DRAWING:			
ATLAS PAGE NO: 28,29							SHEET 22 OF 66 SHEETS




LINE B - SHEET 24



ATLAS PAGE 29 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 29				SHEET 23 OF 66 SHEETS

CONSTRUCT 303 LF OF 8-INCH SEWER PIPE BY OPEN CUT

ELECTA HEIGHTS ADDITION BLOCK 4

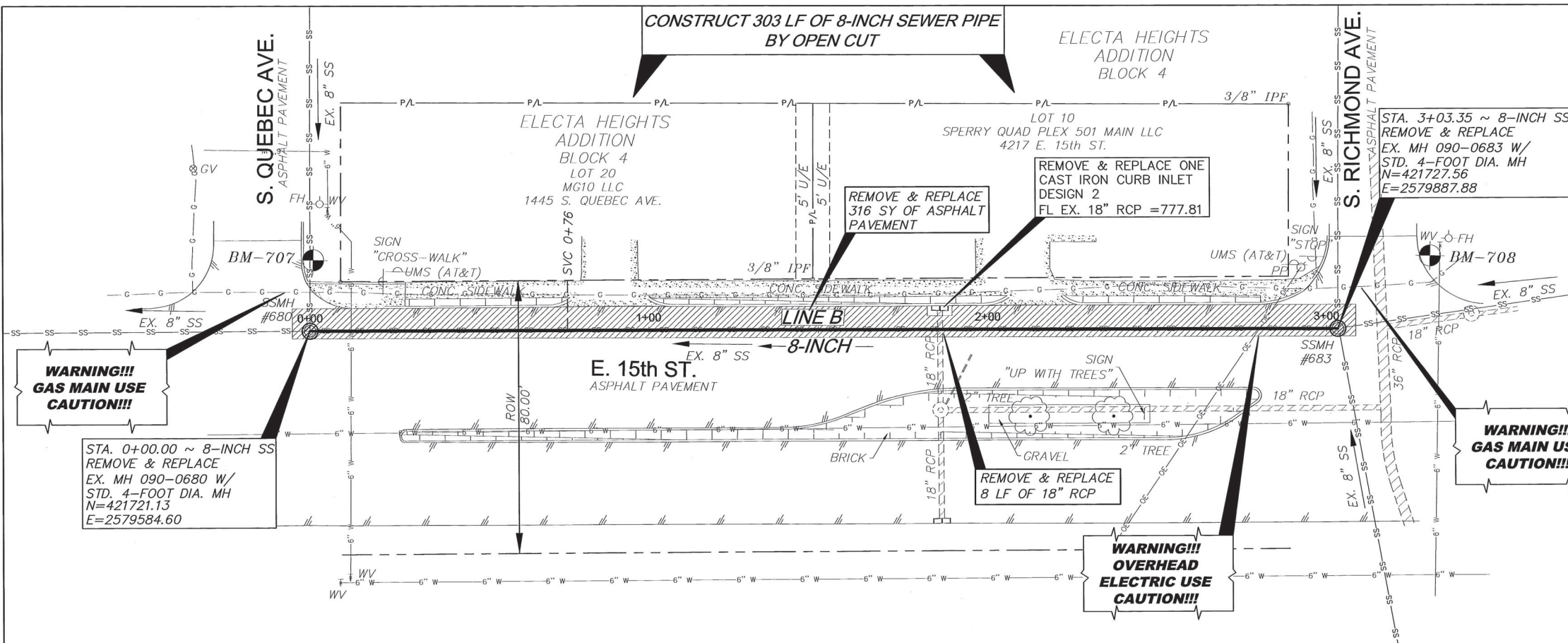
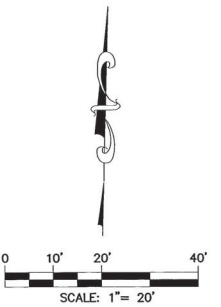
BENCHMARKS:

BM-707
IRON PIN SET 20- FEET NORTH AND 1- FOOT EAST OF EX. MH 090-0680

N=421741.81
E=2579585.11
EL=783.41

BM-708
IRON PIN SET 20- FEET NORTH AND 27- FEET EAST OF EX. MH 090-0683

N=421749.46
E=2579914.67
EL=782.84



**WARNING!!!
GAS MAIN USE
CAUTION!!!**

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

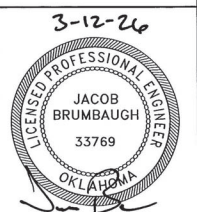
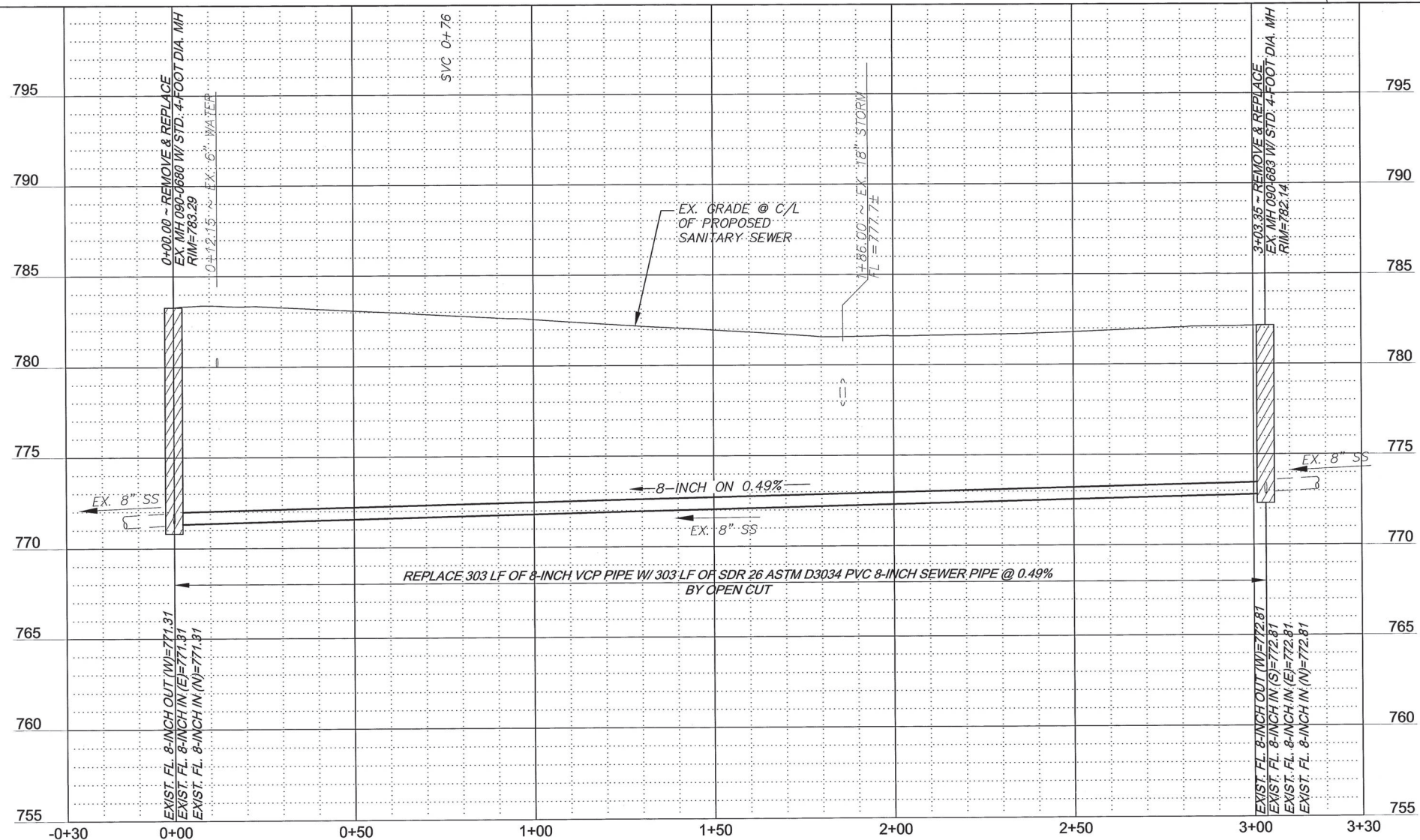
**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

OKIE811
Know what's below 811 before you dig.

**WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**

LEGEND

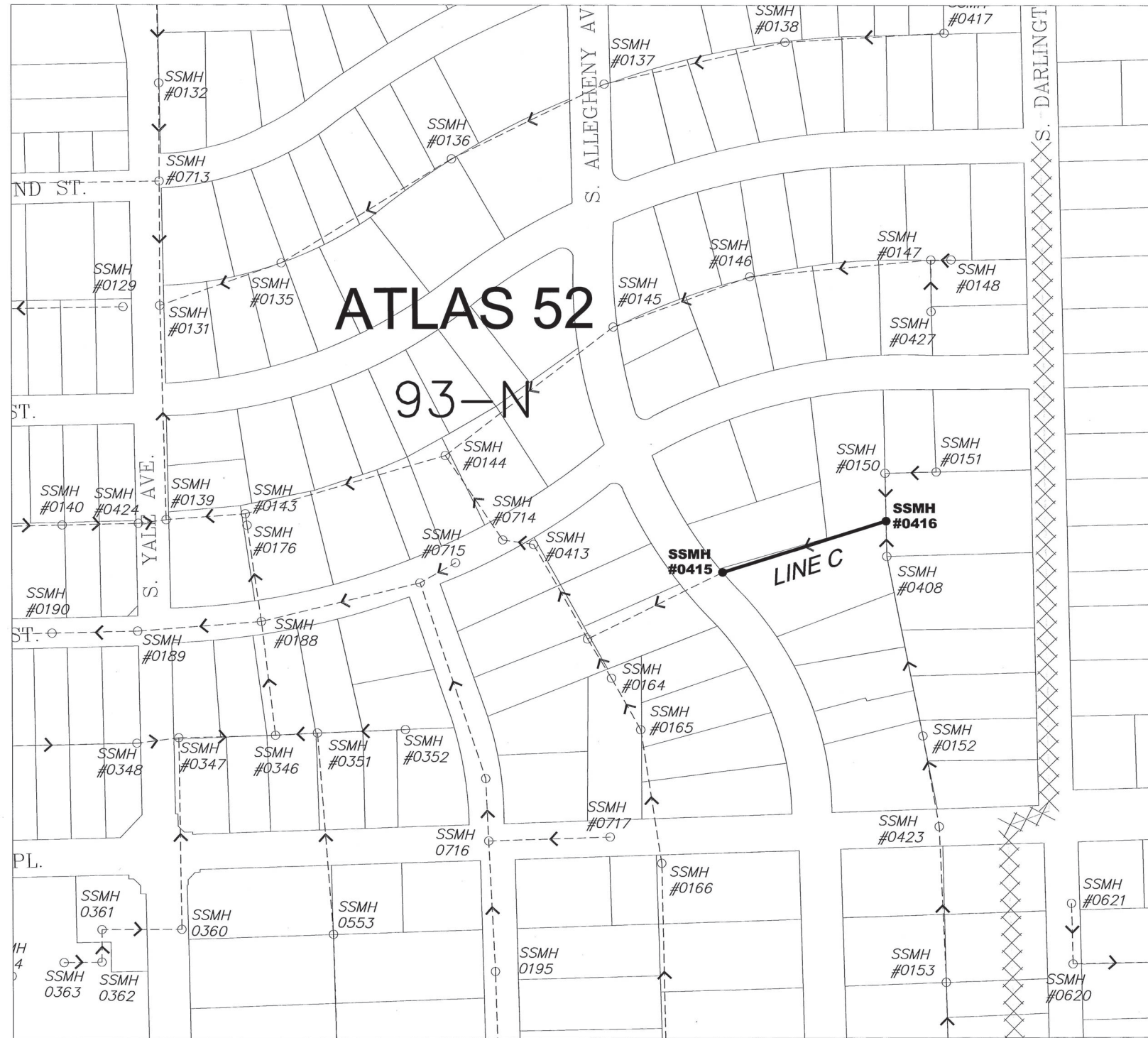
ASPHALT PAVEMENT REMOVAL & REPLACEMENT



PLAN & PROFILE LINE B
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA-WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			 DESIGN MANAGER
			VERTICAL:	FIELD MGR.			
			1" = 4'	FILE:	DRAWING:		DATE: March 2026
			ATLAS PAGE NO: 29				SHEET 24 OF 66 SHEETS



ATLAS 52

93-N

LINE C

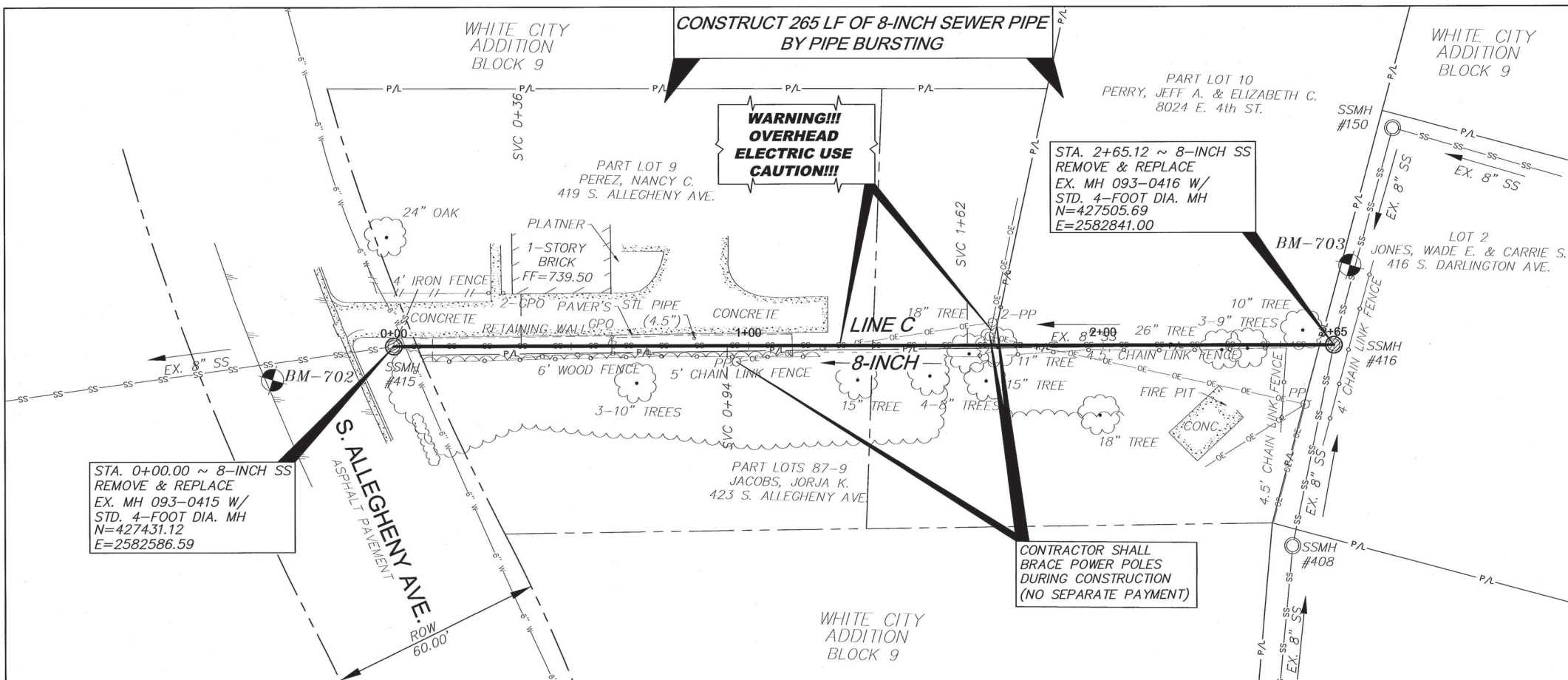
LINE C - SHEET 26



ATLAS PAGE 52 KEY MAP - 1
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R.J.N GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	hZ	3/26	Shannon G. M
			VERTICAL:	FIELD MGR.	Tom	3/26	DESIGN MANAGER
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 52				SHEET 25 OF 66 SHEETS



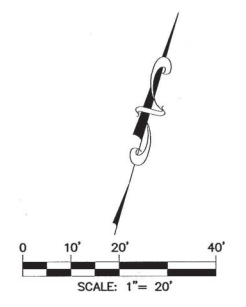
BENCHMARKS:

BM-702
MAG NAIL SET 25- FEET WEST AND 4- FEET SOUTH OF EX. MH 093-0414

N=427412.48
E=25682556.34
EL=738.05

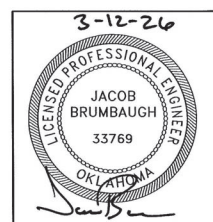
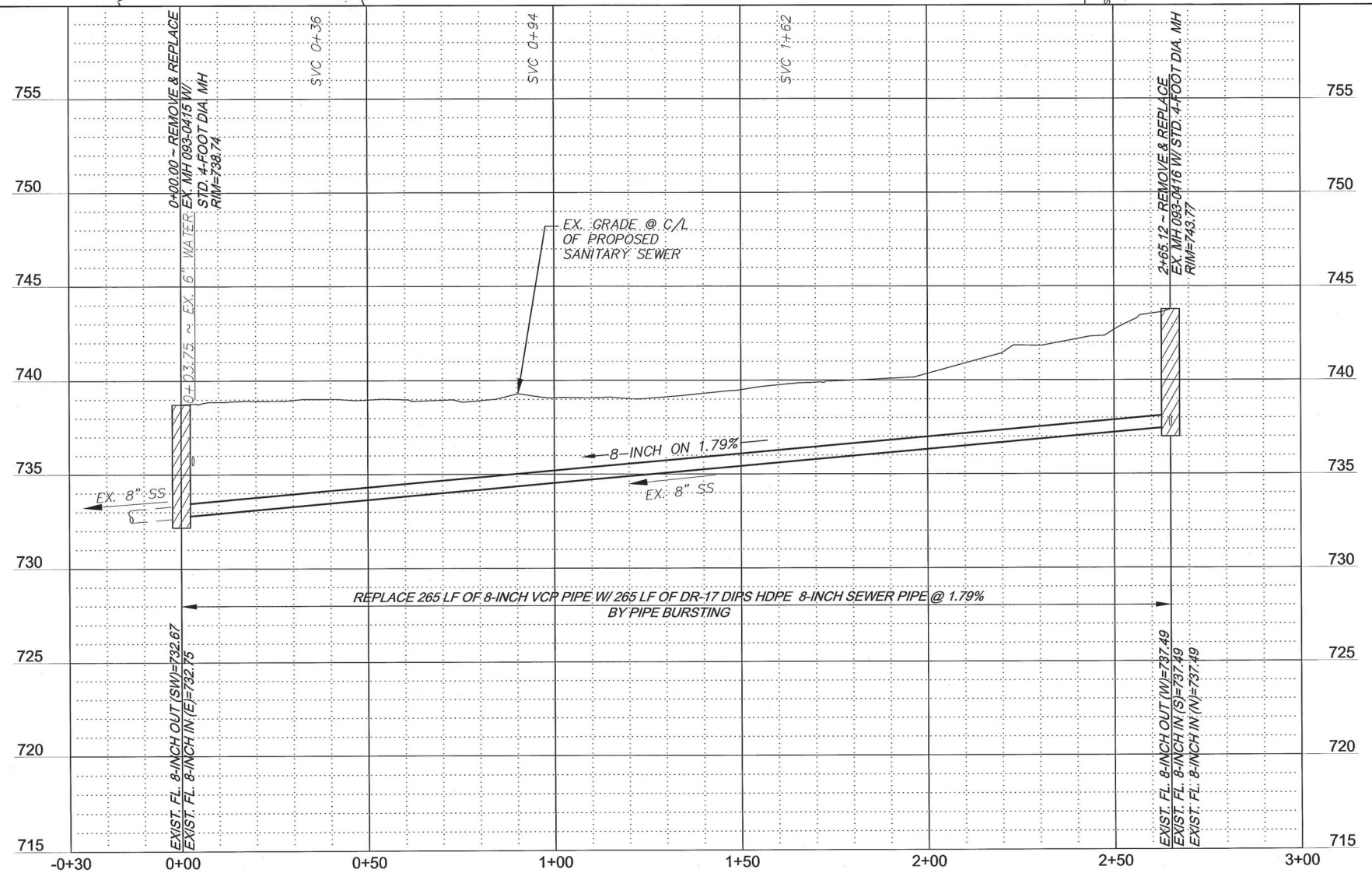
BM-703
IRON PIN SET 2- FEET EAST AND 23- FEET NORTH OF EX. MH 093-0416

N=423406.57
E=2568798.98
EL=756.96



WARNING!!!

EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE C

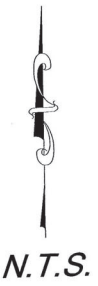
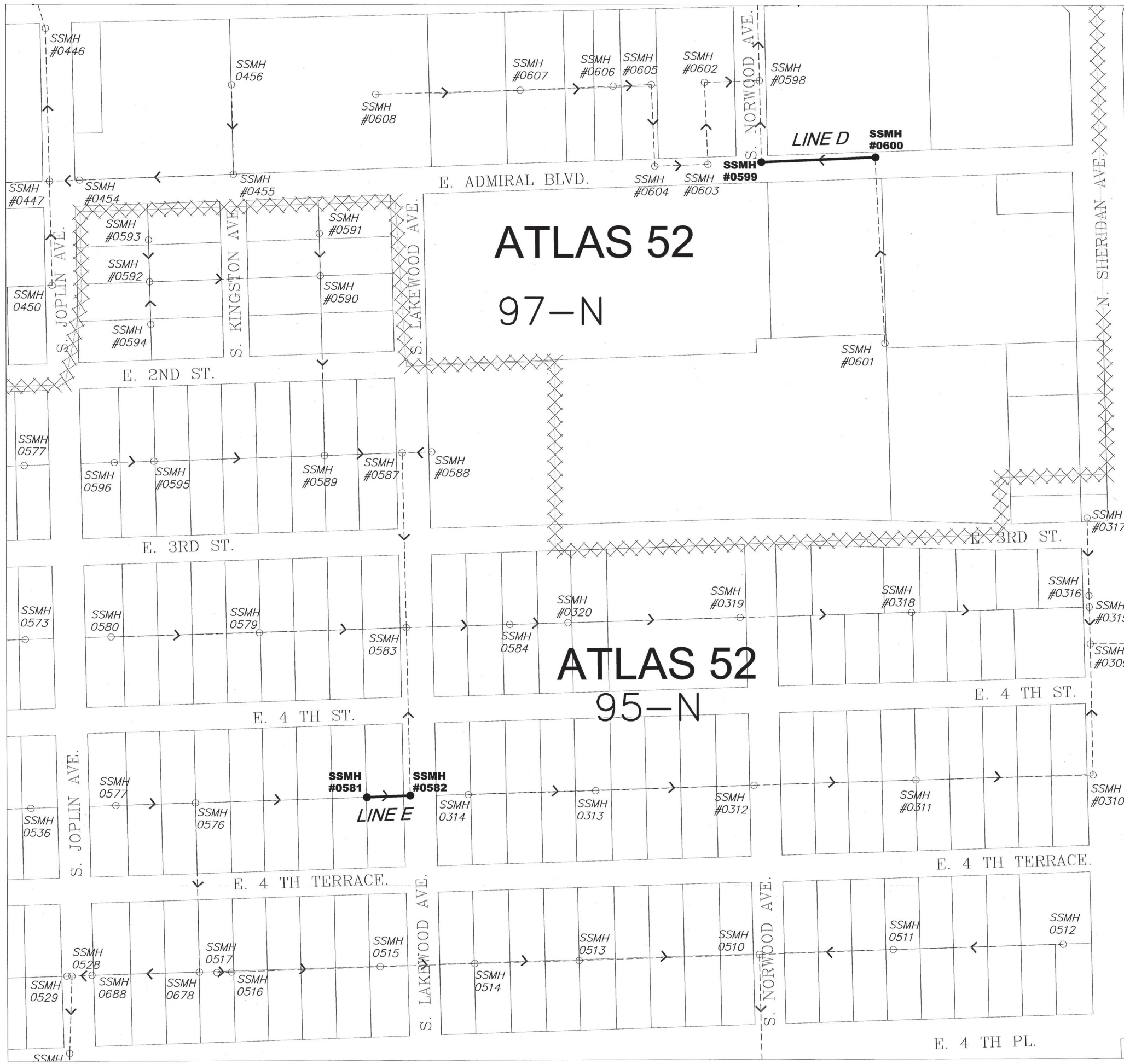
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25

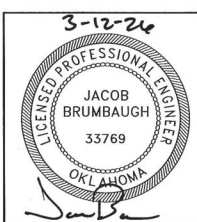
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N. GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.	JWB	3/26	
			VERTICAL:	FIELD MGR.	JWB	3/26	
			1"=4'	DATE:	March 2026		
			FILE:	DRAWING:			DESIGN MANAGER
			ATLAS PAGE NO. 52				SHEET 26 OF 66 SHEETS



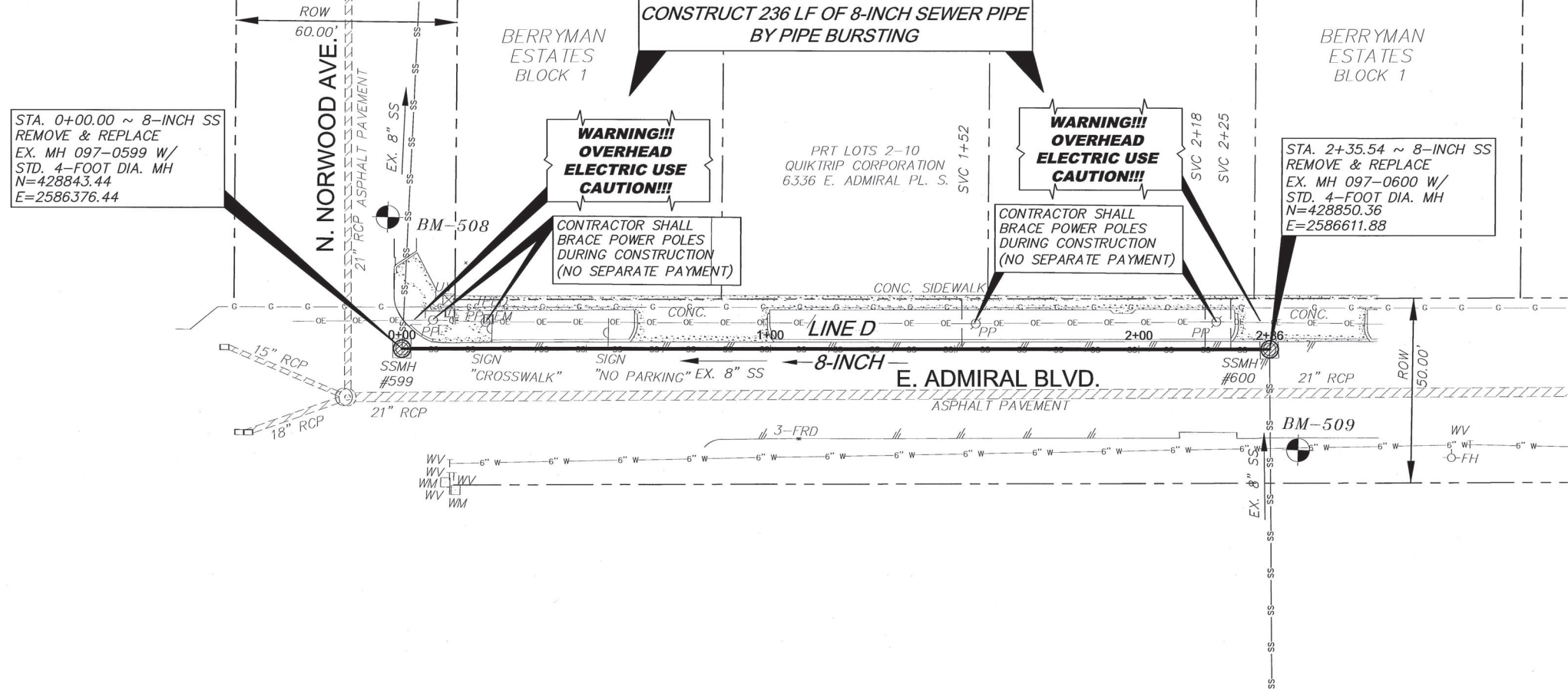
LINE D - SHEET 28
 LINE E - SHEET 29



ATLAS PAGE 52 KEY MAP - 2
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 RJN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	<i>3/26</i>		
			VERTICAL:	FIELD MGR.	<i>3/26</i>		
			NA				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO. 52				SHEET 27 OF 66 SHEETS



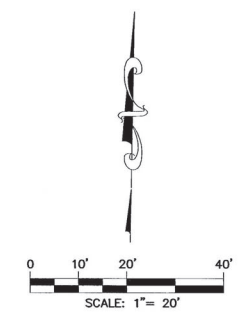
BENCHMARKS:

BM-508
MAG NAIL SET 35- FEET NORTH AND 4- FEET WEST OF EX. MH 097-0599

N=428878.91
E=2586371.58
EL=710.68

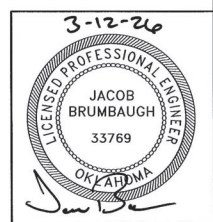
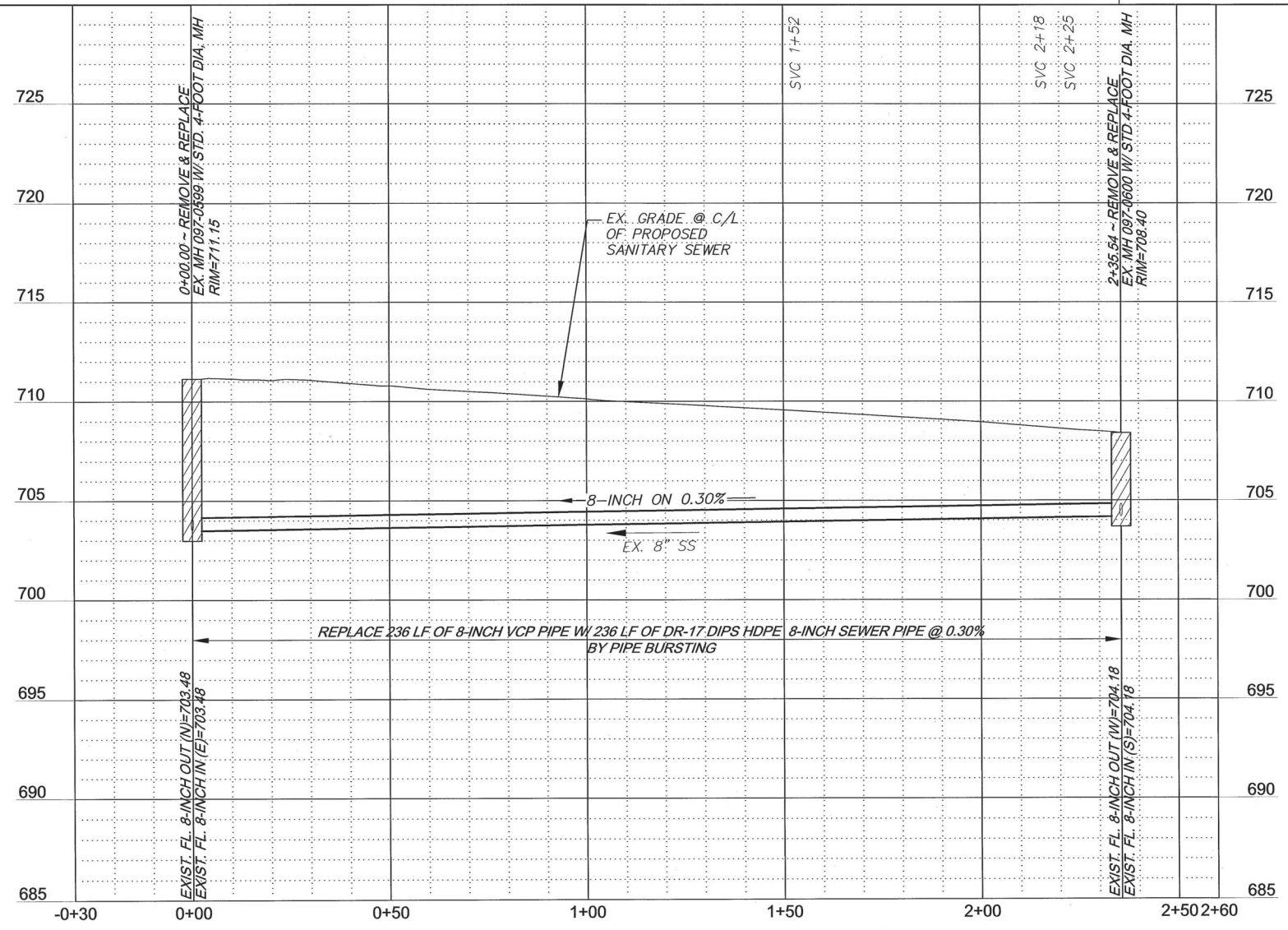
BM-509
IRON PIN SET 27- FEET SOUTH AND 8- FEET WEST OF EX. MH 097-0600

N=428823.32
E=2586620.35
EL=709.02



WARNING!!!

EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE D

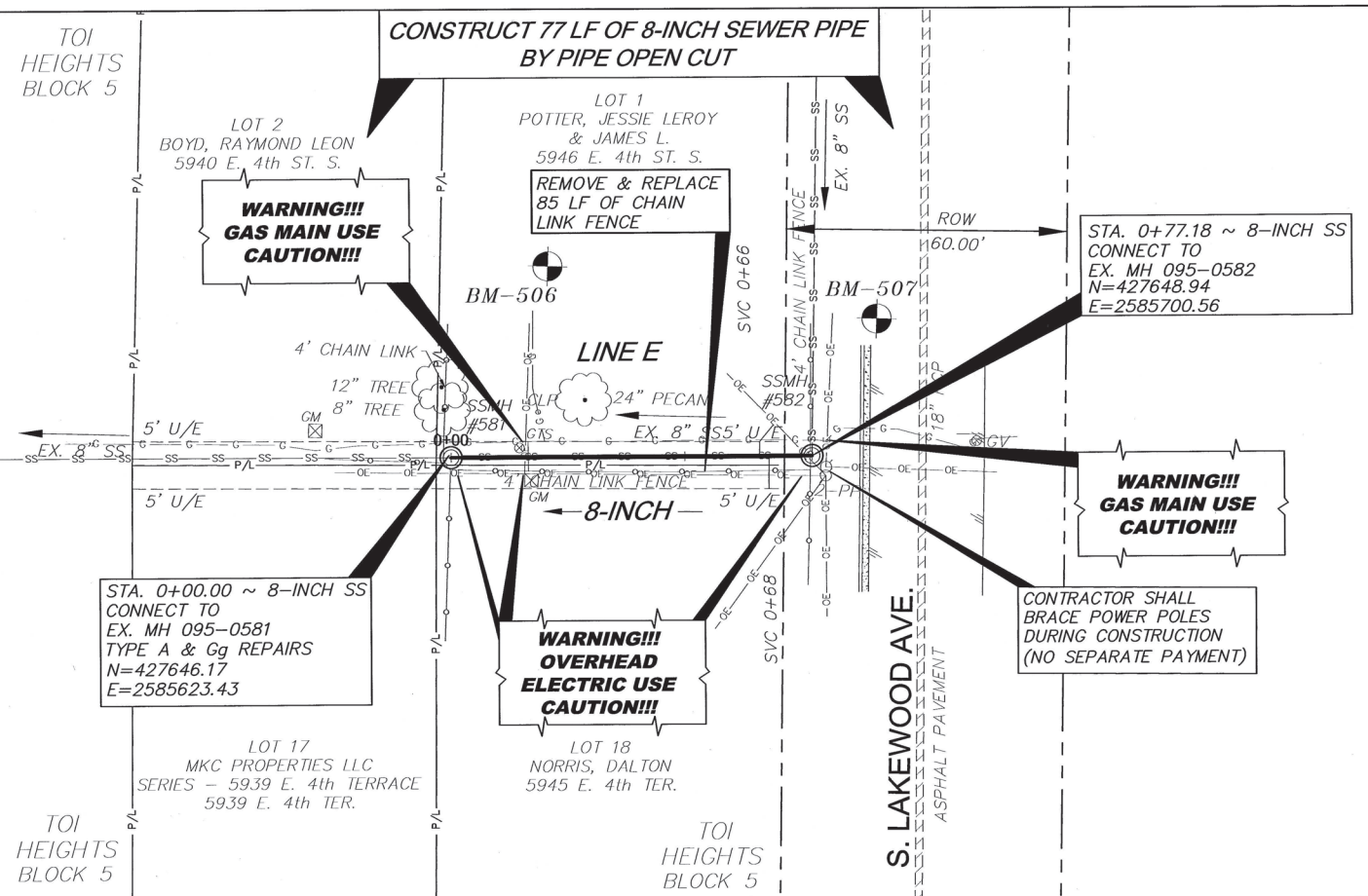
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	JK 3/26		 DESIGN MANAGER
			VERTICAL	FIELD MGR.	JWB 3/26		
			1" = 4'	FILE:	DRAWING:	DATE: March 2026	
			ATLAS PAGE NO: 52				SHEET 28 OF 66 SHEETS



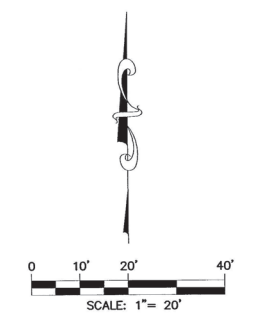
BENCHMARKS:

BM-506
IRON PIN SET 18- FEET EAST AND 40- FEET SOUTH
OF EX. MH 095-0581

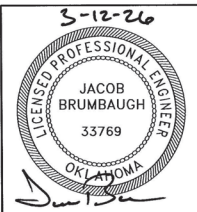
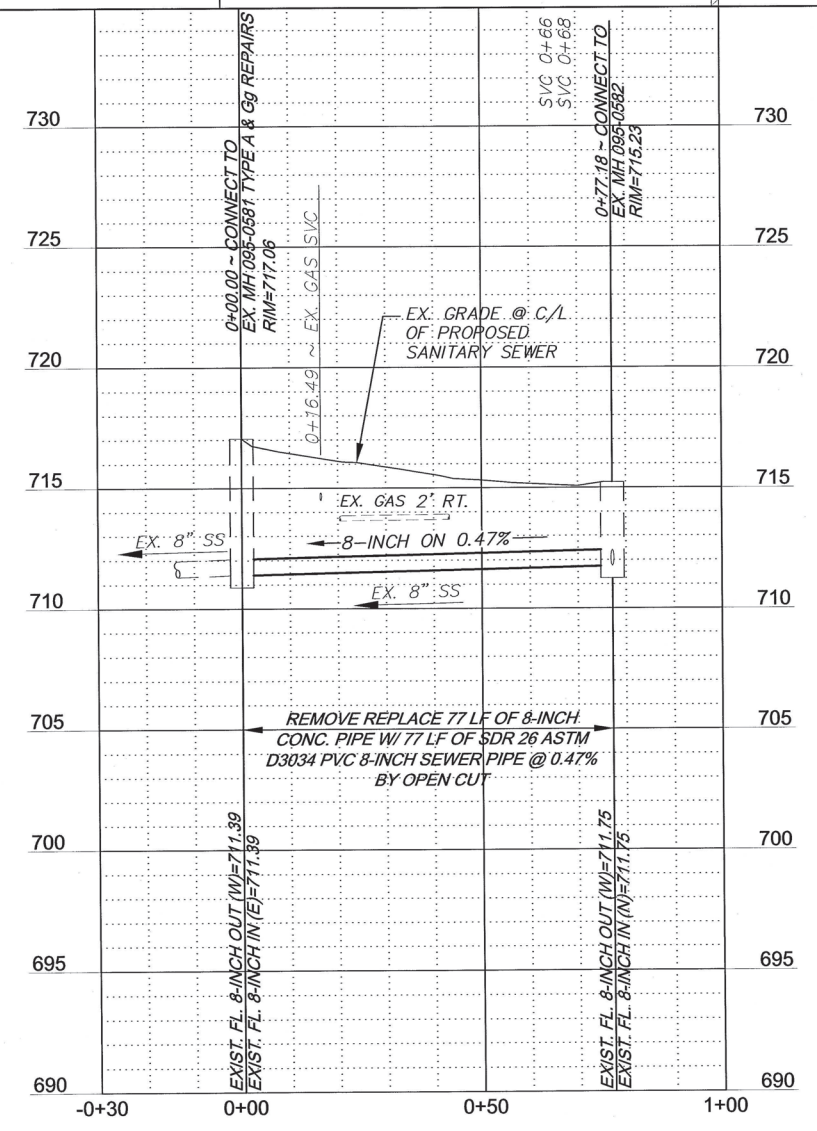
N=427687.50
E=2585642.82
EL=717.65

BM-507
MAG NAIL SET 13- FEET SOUTH AND 30- FEET WEST
OF EX. MH 095-0582

N=427678.49
E=2585713.48
EL=715.52



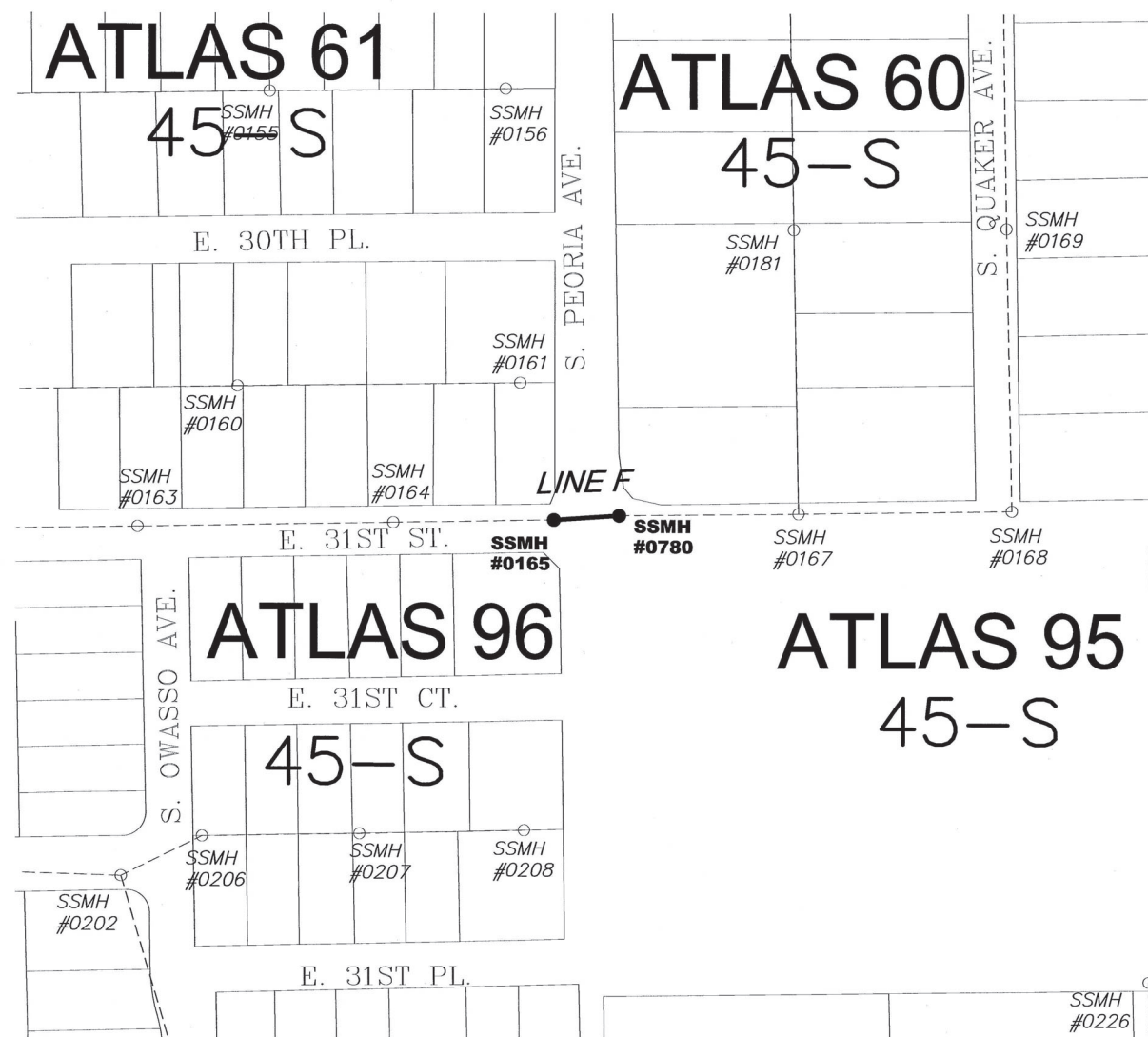
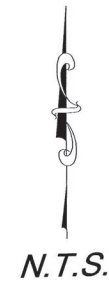
WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION**
1-800-522-6543



PLAN & PROFILE LINE E
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	DATE	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	KR 3/26		
			VERTICAL:	FIELD MGR.	JWB 3/26		
			1" = 4'	FILE:	DRAWING:	DATE: March 2026	
ATLAS PAGE NO: 52							SHEET 29 OF 66 SHEETS



LINE F - SHEET 31



ATLAS PAGES 60 & 61 KEY MAP

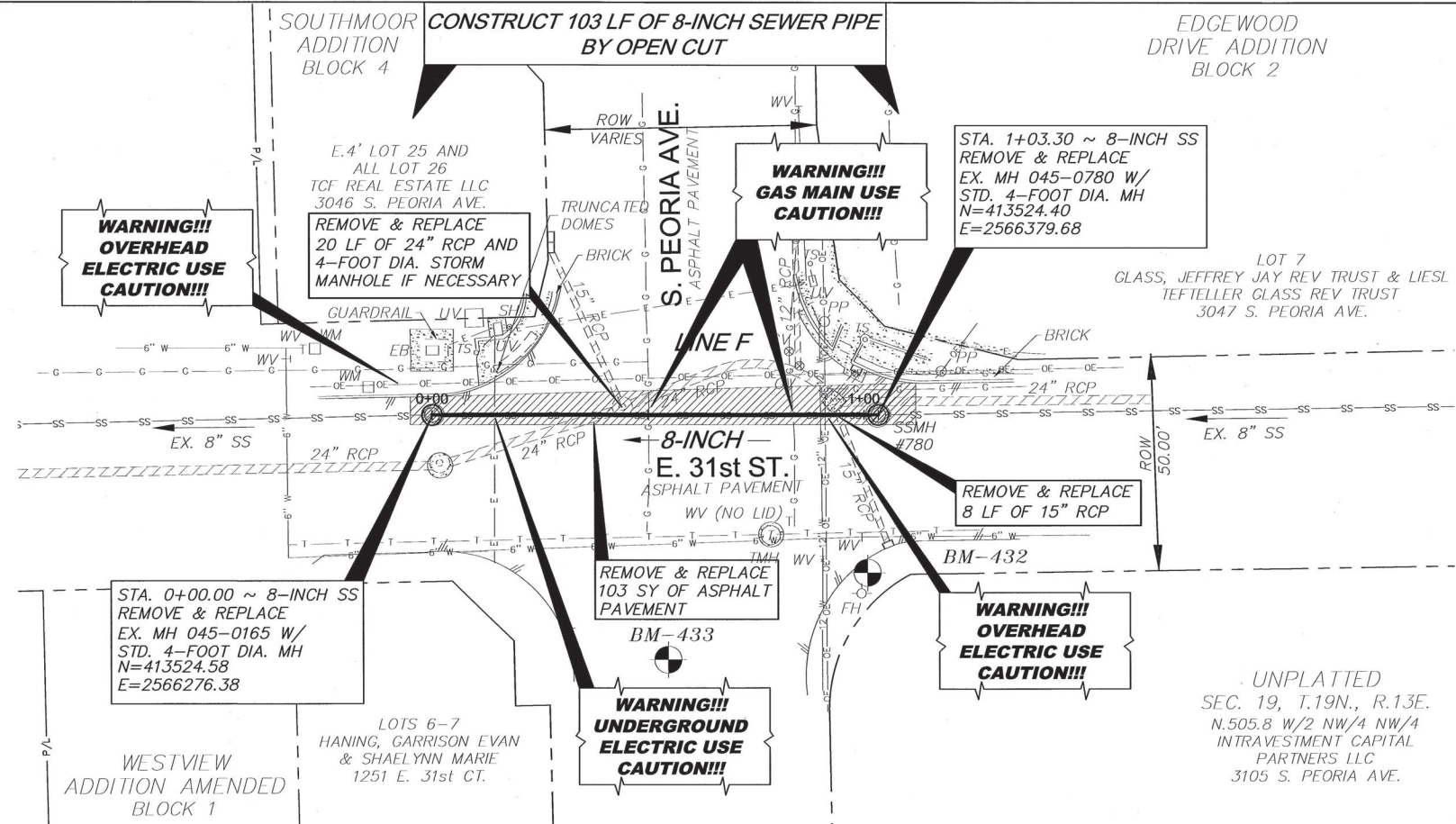
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

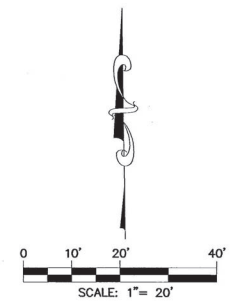
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	AK 3/26		
			VERTICAL:	FIELD MGR.	DM 3/26		DATE: March 2026
			NA	FILE:			SHEET 30 OF 66 SHEETS
							ATLAS PAGE NO: 60,61



BENCHMARKS:

BM-432
CHISELED "X" FOUND 6- FEET WEST AND 36- FEET SOUTH OF EX. MH 045-0780
N=413487.96
E=2566377.10
EL=666.71

BM-433
CHISELED "X" FOUND 53- FEET EAST AND 56- FEET SOUTH OF EX. MH 045-0165
N=413468.11
E=2566330.95
EL=665.60



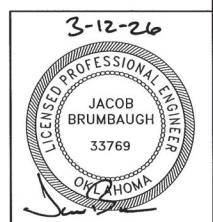
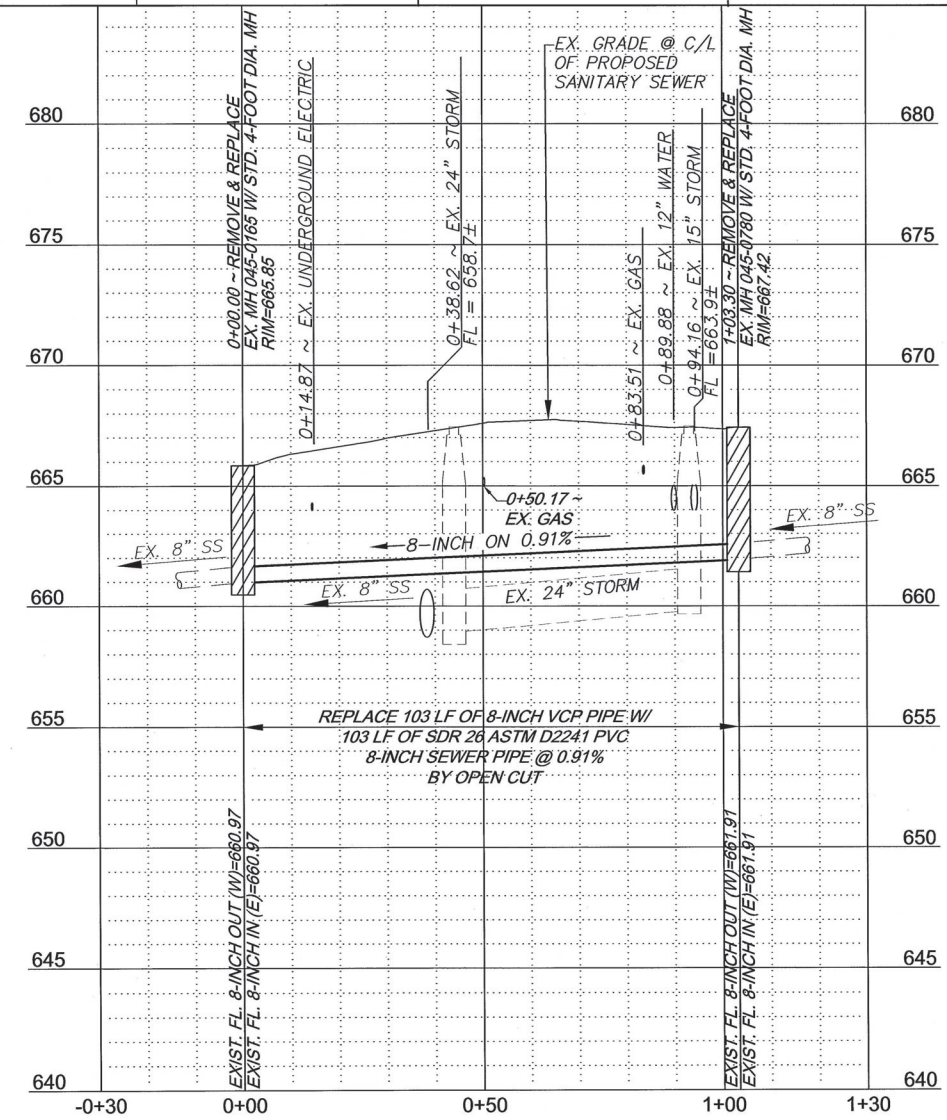
LEGEND

ASPHALT PAVEMENT REMOVAL & REPLACEMENT

LINE F SHALL BE THE LAST LINE CONSTRUCTED IN THE PROJECT.

OKIE811
Know what's below 811 before you dig.

WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE F

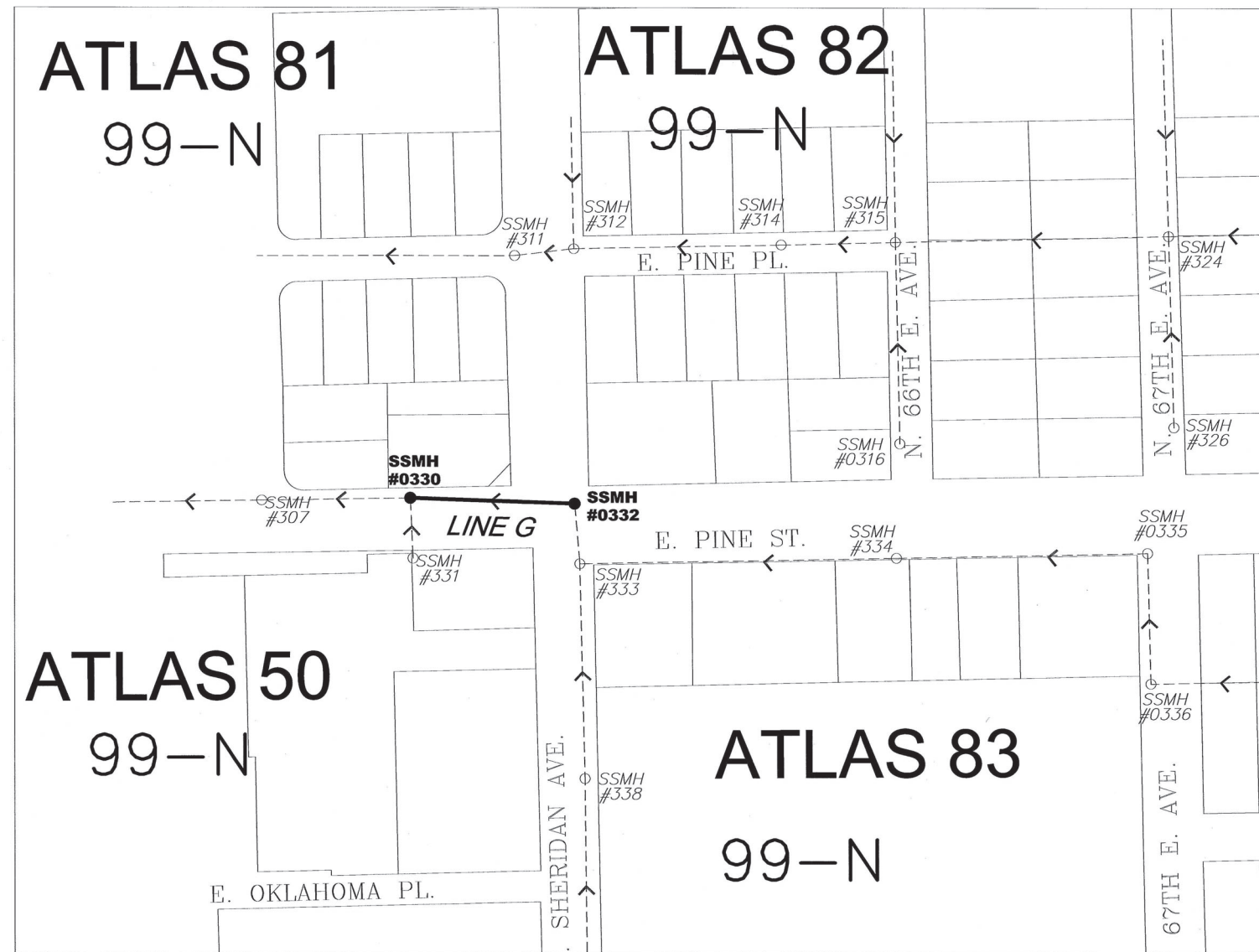
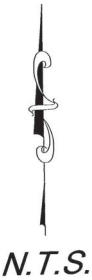
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	6/21/26		
			VERTICAL:	FIELD MGR.	Jim Blec		
			1" = 4'	FILE:	DRAWING:		DATE: March 2026
			ATLAS PAGE NO: 60,61				SHEET 31 OF 66 SHEETS



LINE G - SHEET 33



ATLAS PAGES 81 & 82 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R.J.N GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	KZ	3/26	
			VERTICAL:	FIELD MGR.	JWB	3/26	
			NA	FILE:	DRAWING:		
ATLAS PAGE NO: 81,82							SHEET 32 OF 66 SHEETS

DOUGLAS COURT
SECOND
BLOCK 1

DOUGLAS COURT
SECOND
BLOCK 1

CONSTRUCT 224 LF OF 8-INCH SEWER PIPE
BY PIPE BURSTING

N. SHERIDAN RD.
ASPHALT PAVEMENT

SPARTAN
COURT
BLOCK 2
W.156.6' RESERVE A
GOLDEN SEA LLC
6505 E. PINE ST.

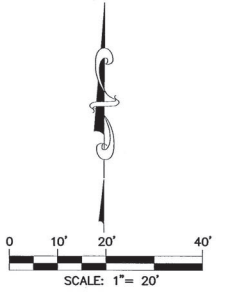
BENCHMARKS:

BM-515
IRON PIN SET 40- FEET EAST AND 25- FEET NORTH
OF EX. MH 099-0330

N=435216.60
E=2586742.72
EL=681.12

BM-517
MAG NAIL SET 4- FEET EAST AND 27- FEET NORTH OF
EX. MH 099-0332

N=435222.73
E=2586933.47
EL=682.11



STA. 0+00.00 ~ 8-INCH SS
CONNECT TO
EX. MH 099-0330
N=435189.83
E=2586703.53
15' B/L

LOTS 2 & 3
TALBOTT, ROBERT S. REV. TRUST
6415 E. PINE ST.

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

CONTRACTOR SHALL
BRACE POWER POLE
DURING CONSTRUCTION
(NO SEPARATE PAYMENT)

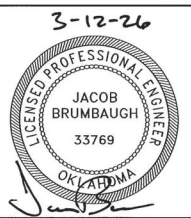
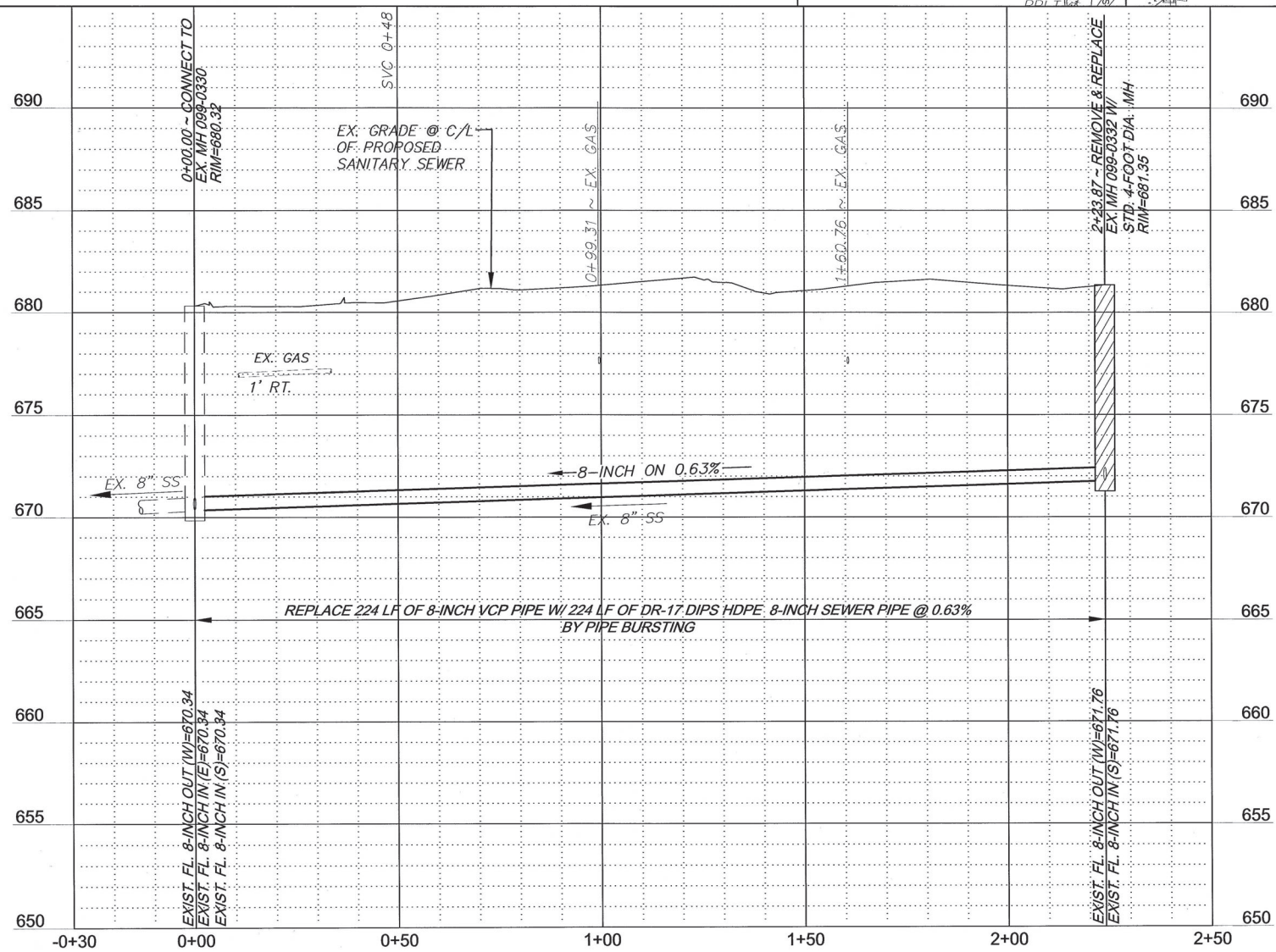
STA. 2+23.87 ~ 8-INCH SS
REMOVE & REPLACE
EX. MH 099-0332 W/
STD. 4- FOOT DIA. MH
N=435194.52
E=2586927.35

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

**WARNING!!!
GAS MAIN USE
CAUTION!!!**



**WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**

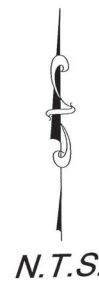


PLAN & PROFILE LINE G
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA-WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

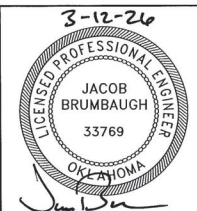
PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE: <td>SURVEY</td> <td>NP</td> <td>03/2026</td> <td></td>	SURVEY	NP	03/2026	
			HORIZONTAL: <td>PROJ. MGR.</td> <td></td> <td></td> <td></td>	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL: <td>FIELD MGR.</td> <td></td> <td></td> <td></td>	FIELD MGR.			
			1"=4'				
			FILE: <td>DRAWING:</td> <td></td> <td></td> <td></td>	DRAWING:			
			ATLAS PAGE NO: 81,82				


DATE: March 2026
DESIGN MANAGER
SHEET 33 OF 66 SHEETS



LINE H - SHEET 35



ATLAS PAGES 95 & 96 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 RJN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 34 OF 66 SHEETS
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR. <i>hjk 3/26</i>			
			FILE:	FIELD MGR. <i>JWB 3/26</i>			
			ATLAS PAGE NO: 95,96				

PEORIA GARDENS
ADDITION AMENDED
BLOCK 2

CONSTRUCT 284 LF OF 8-INCH SEWER PIPE
BY PIPE BURSTING

OLIVERS
ADDITION
BLOCK 3

BENCHMARKS:

BM-70245
IRON PIN SET 45- FEET EAST AND 34- FEET NORTH
OF EX. MH 045-0639

N=411210.61
E=25666341.08
EL=641.54



STA. 0+00.00 ~ 8-INCH SS
REMOVE & REPLACE
EX. MH 045-0639 W/
STD. 4-FOOT DIA. MH
N=411175.96
E=2566295.96

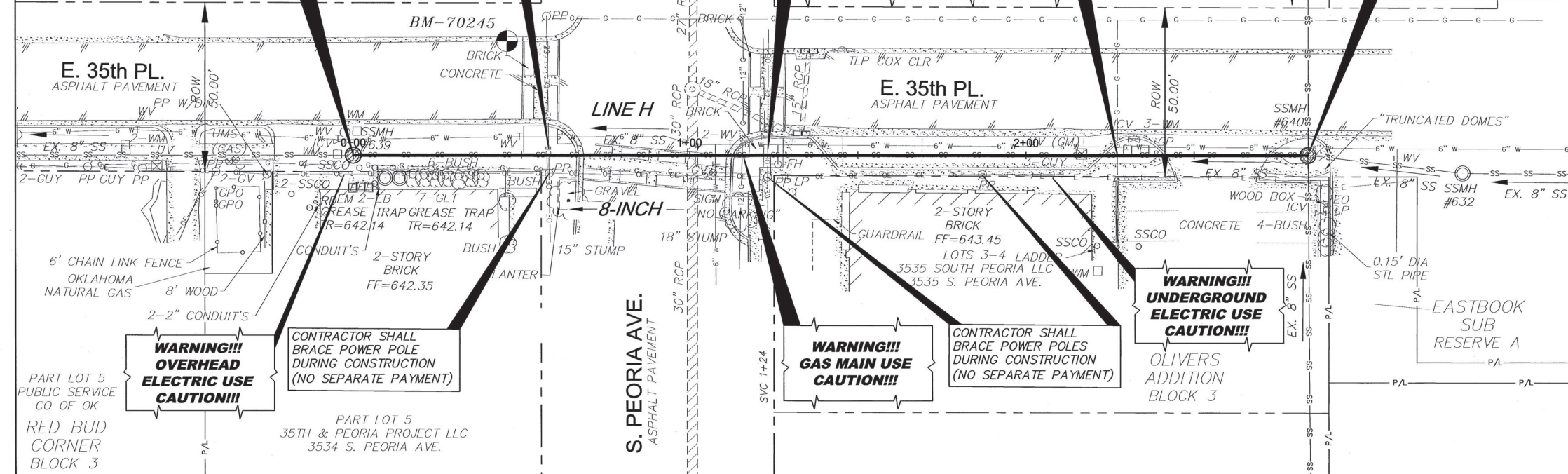
**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

PART LOTS 6-7
WHITE OWL LLC
3524 S. PEORIA AVE.

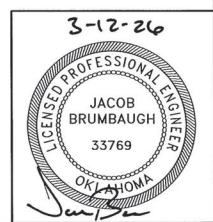
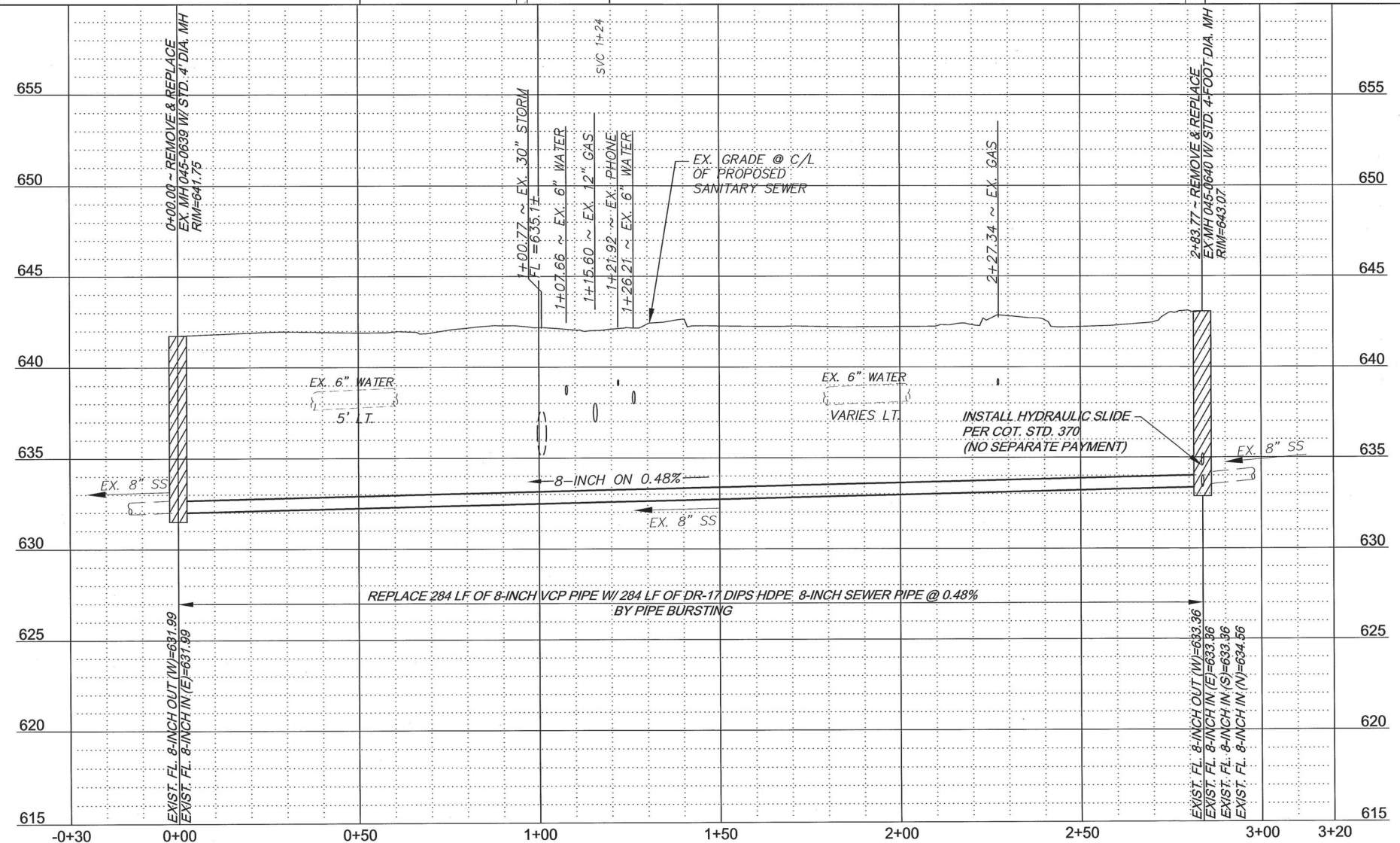
**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

STA. 2+83.77 ~ 8-INCH SS
REMOVE & REPLACE
EX. MH 045-0640 W/
STD. 4-FOOT DIA. MH
N=411181.05
E=2566579.68



WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**



PLAN & PROFILE LINE H
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 95,96				SHEET 35 OF 66 SHEETS




LINE I - SHEET 37



ATLAS PAGE 163 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R.J.N. GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	KZ	3/26	
			FILE:	FIELD MGR.	Jaw	3/26	
			ATLAS PAGE NO: 163				SHEET 36 OF 66 SHEETS

UNPLATTED
24-20-12

PRT SW/4
KASIM, MASOOD AND SONIA AND
ARIF AND ASIYA SABOOR
205 E. MOHAWK BLVD.

STA. 0+00.00 ~ 8-INCH SS
EX. MH 011-0240
N=440385.61
E=2560634.46

1-STORY
CONCRETE
FF=688.71

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

STA. 0+68 TO STA. 0+88
REPLACE 20 LF OF
EX. 8-INCH VCP SEWER
W/ 20 LF OF 8-INCH
ASTM C700 VCP PIPE @ 0.50%
BY OPEN CUT POINT REPAIR

STA. 1+58.16 ~ 8-INCH SS
EX. MH 011-0241
N=440381.83
E=2560476.35

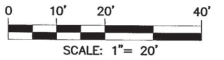
BENCHMARKS:

BM-500
IRON PIN SET 28- FEET WEST AND 25- FEET NORTH
OF EX. MH 011-0241

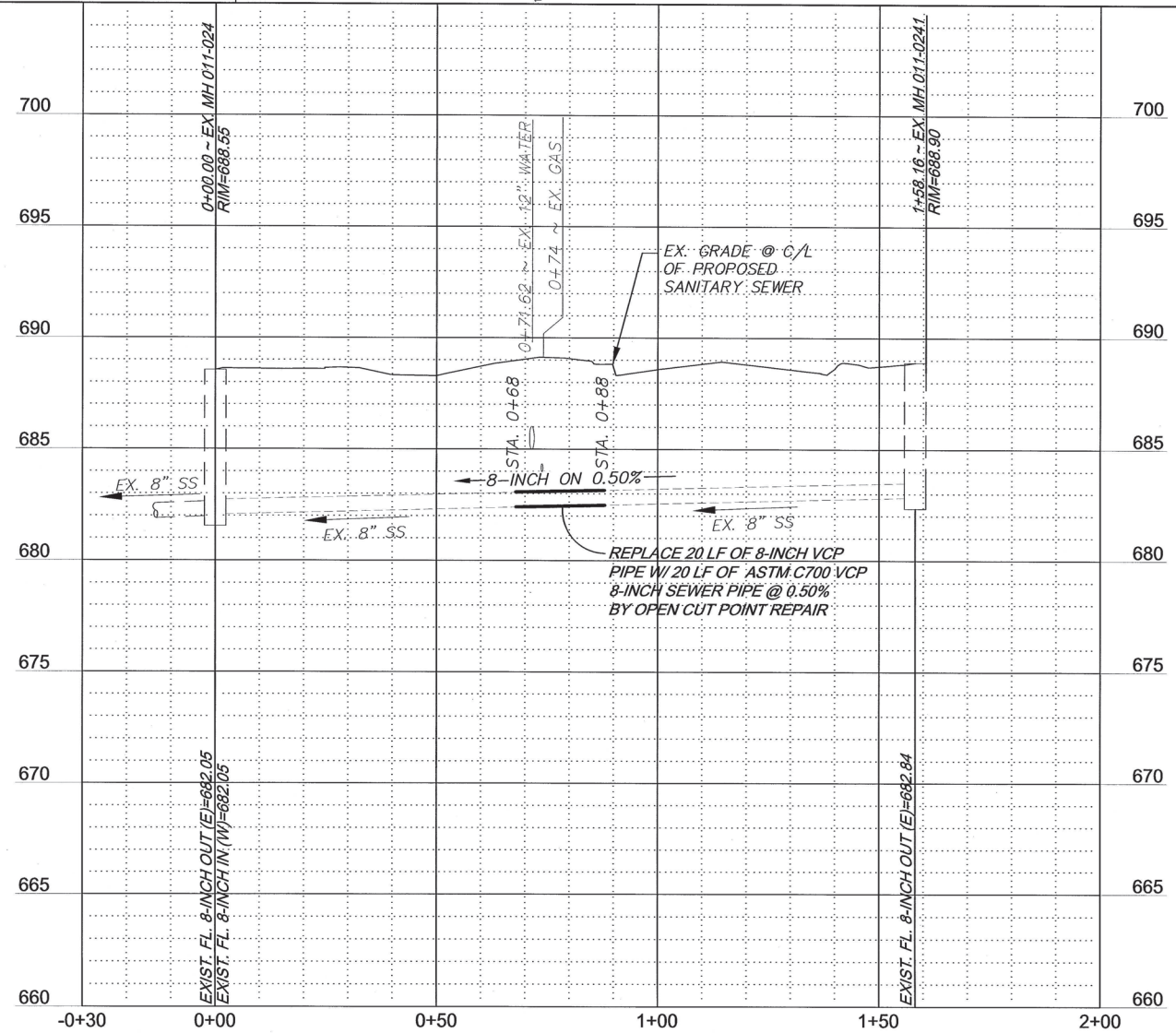
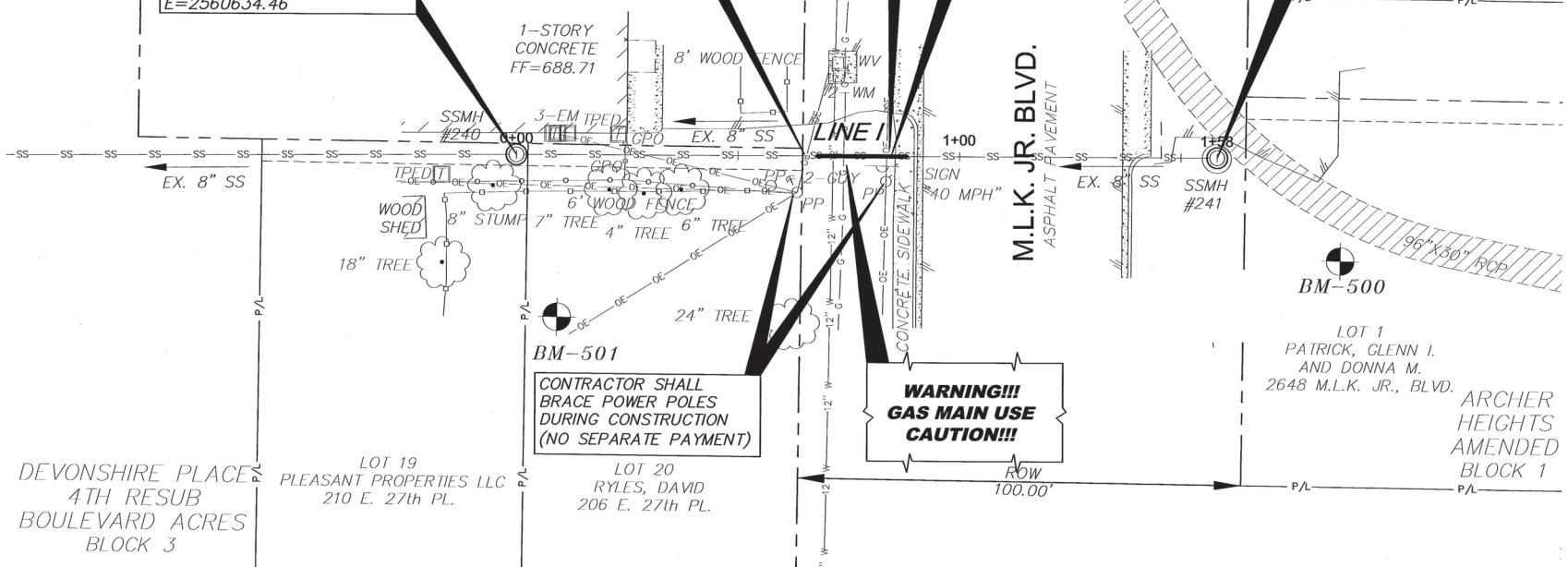
N=440404.27
E=2560447.95
EL=690.23

BM-501
IRON PIN SET 10- FEET WEST AND 36- FEET NORTH
OF EX. MH 011-0240

N=440421.80
E=2560624.35
EL=689.13



WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**



PLAN & PROFILE LINE I
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20"	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	JWB	3/26	
			FILE:	FIELD MGR.	JWB		DATE: March 2026
			ATLAS PAGE NO: 163				SHEET 37 OF 66 SHEETS

ATLAS 223
100-N

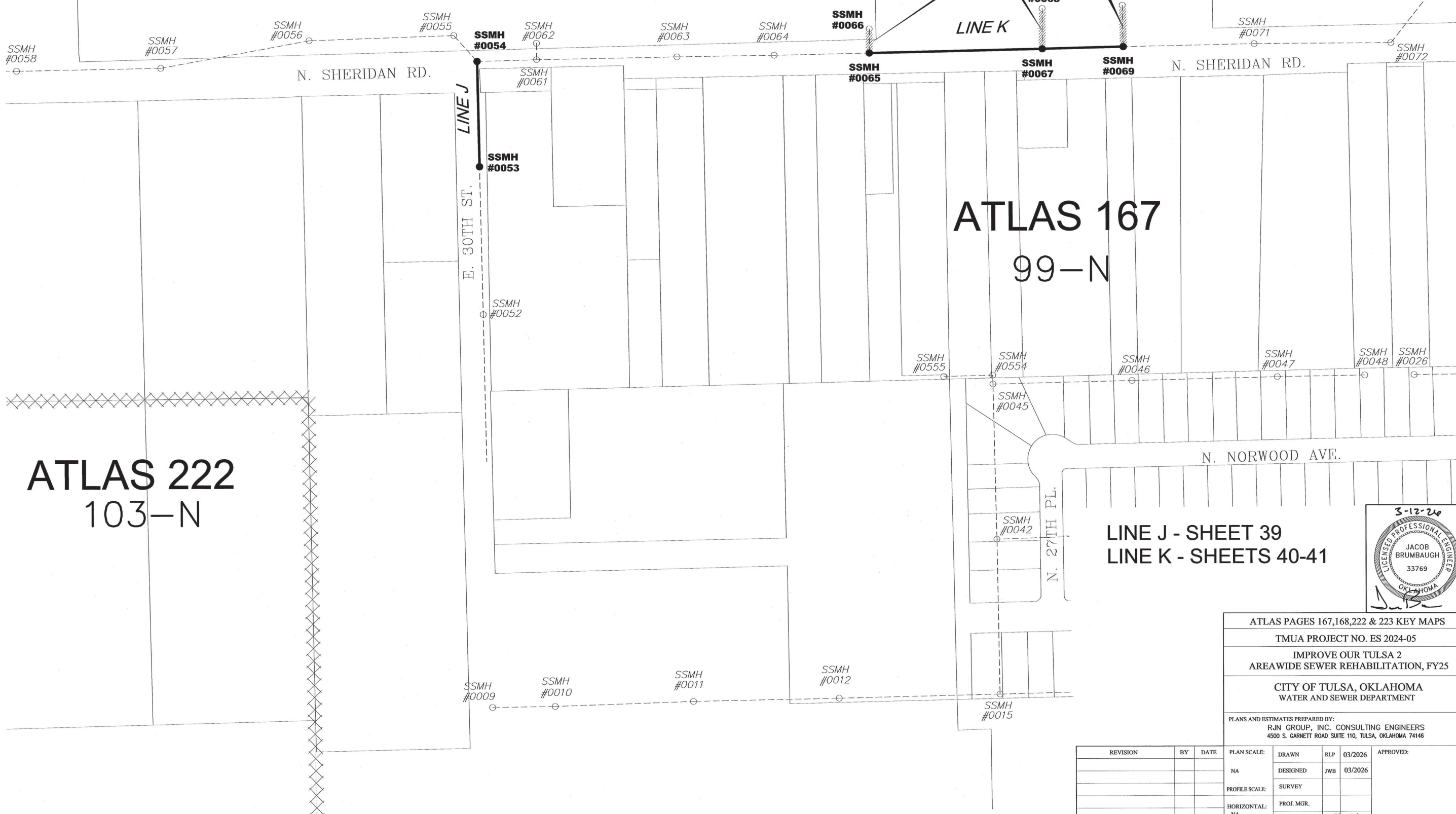
ATLAS 168

99-N

LEGEND

ABANDONMENT OF EXISTING SEWER

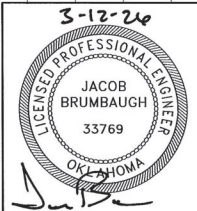
N.T.S.



ATLAS 222
103-N

ATLAS 167
99-N

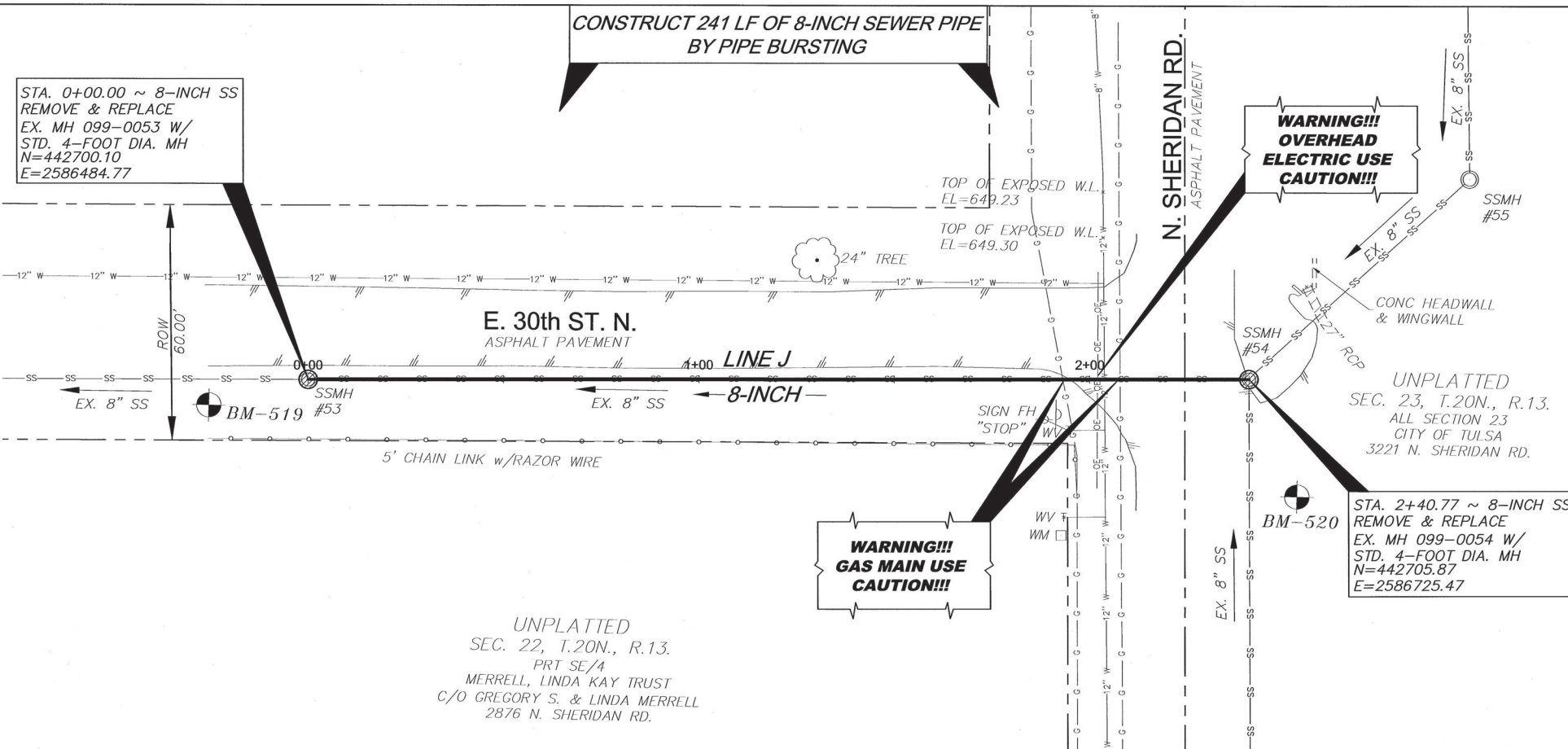
LINE J - SHEET 39
LINE K - SHEETS 40-41



ATLAS PAGES 167,168,222 & 223 KEY MAPS
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJM GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

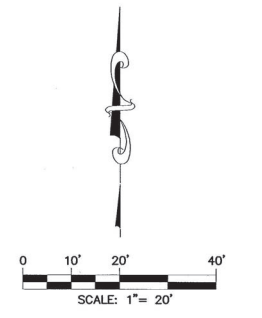
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	6/7 3/26		
			VERTICAL:	FIELD MGR.	3/26 3/26		
			NA				
			FILE:	DRAWING:			DATE: March 2026
ATLAS PAGE NO: 167,168,222 & 223							SHEET 38 OF 66 SHEETS



BENCHMARKS:

BM-519
IRON PIN SET 25- FEET WEST AND 7- FEET SOUTH OF EX. MH 099-0053
N=422692.94
E=2586459.51
EL=653.11

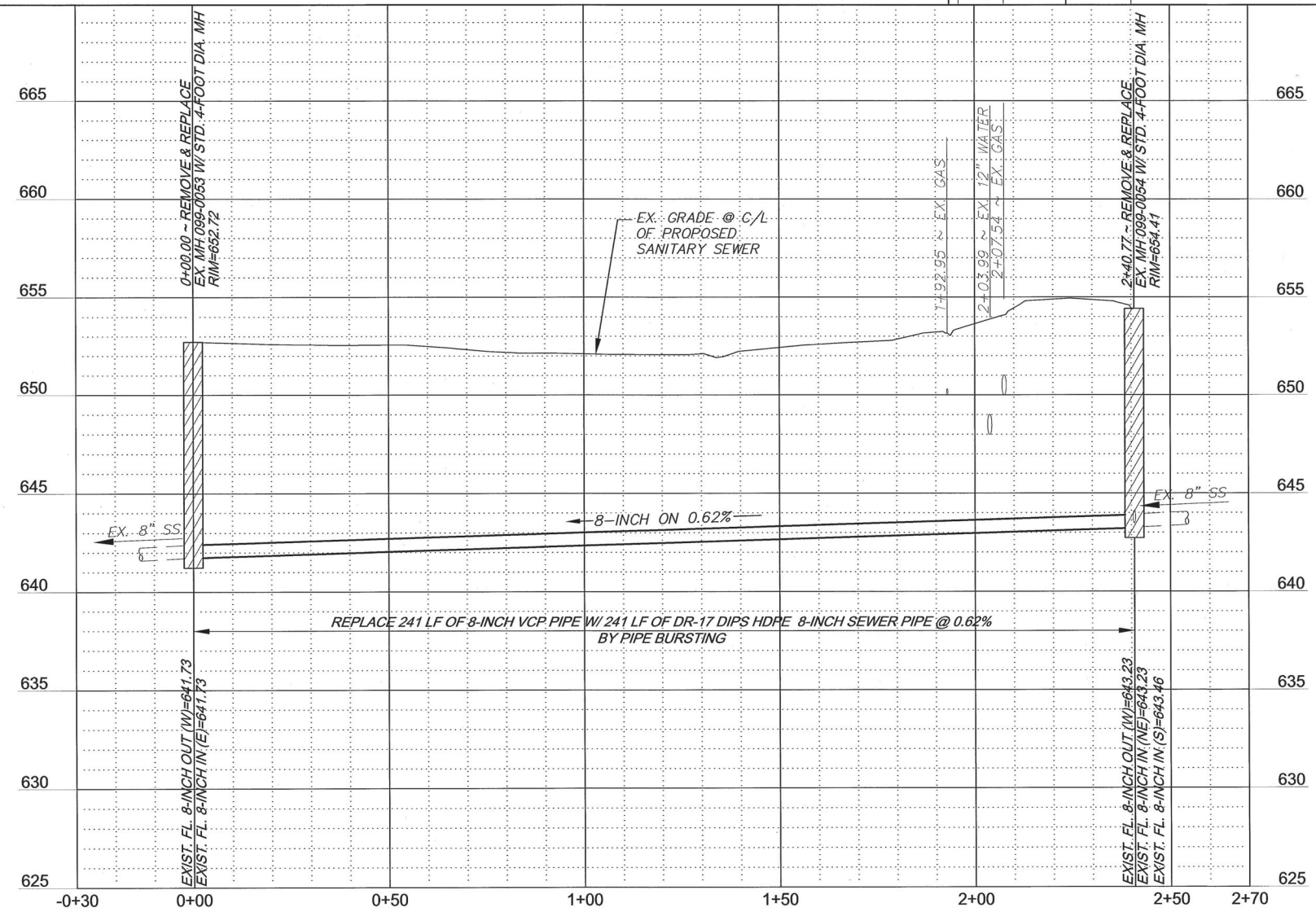
BM-520
MAG NAIL SET 32- FEET SOUTH AND 12- FEET EAST OF EX. MH 099-0054
N=422676.21
E=2586738.45
EL=654.77



UNPLATTED
SEC. 22, T.20N., R.13.
PRT SE/4
MERRELL, LINDA KAY TRUST
C/O GREGORY S. & LINDA MERRELL
2876 N. SHERIDAN RD.



WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543



PLAN & PROFILE LINE J
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1"=4'				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 222,223				

CONSTRUCT 299 LF OF 10-INCH & 51 LF OF 8-INCH SEWER PIPE BY PIPE BURSTING

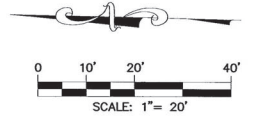
UNPLATTED
SEC. 23, T.20N., R.13.
ALL SECTION 23
CITY OF TULSA
3221 N. SHERIDAN RD.

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

BENCHMARKS:

BM-522
MAG NAIL SET 23- FEET NORTH AND 30- FEET EAST OF
EX. MH 099-0065

N=441872.18
E=2586776.12
EL=661.49

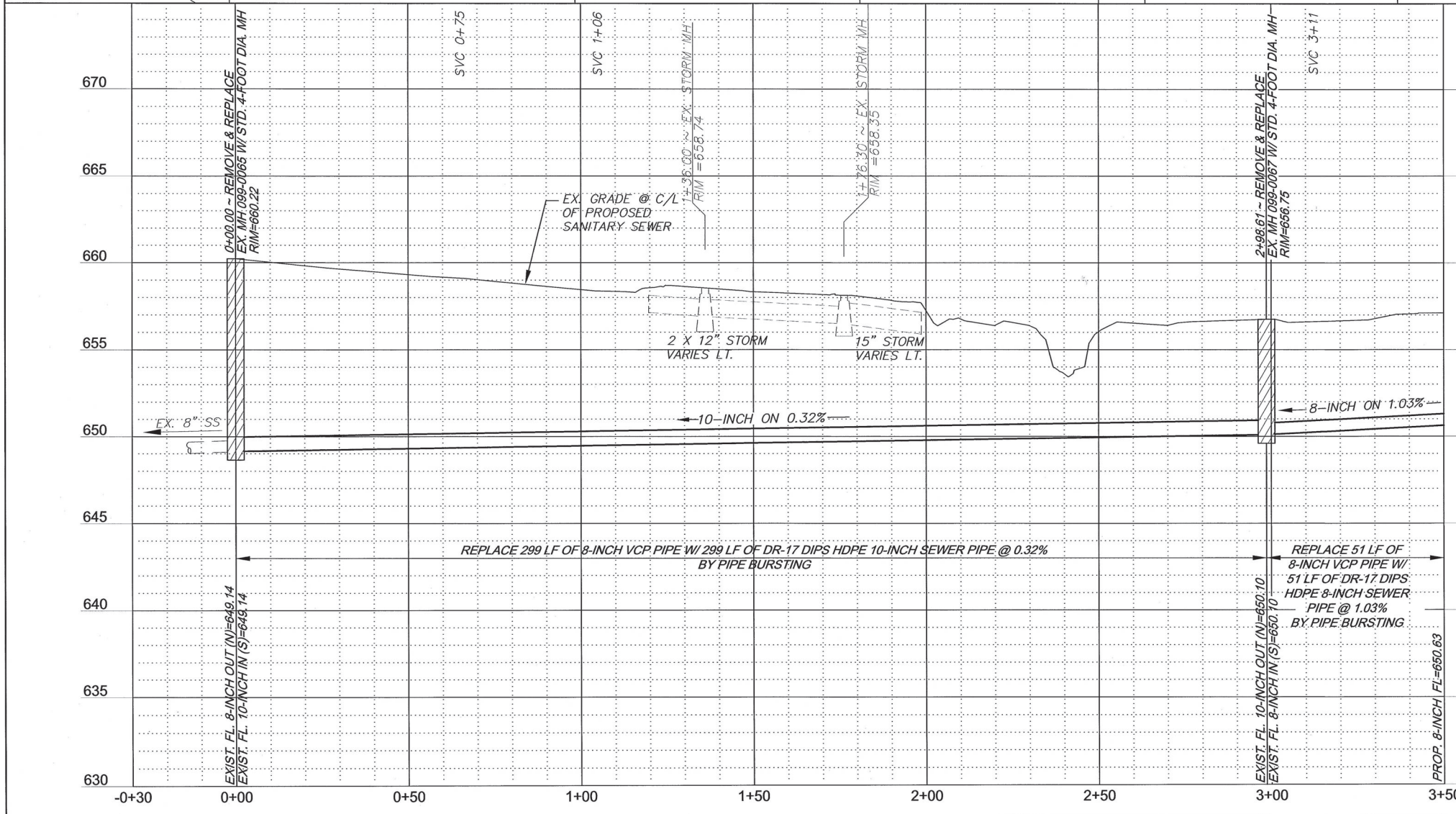
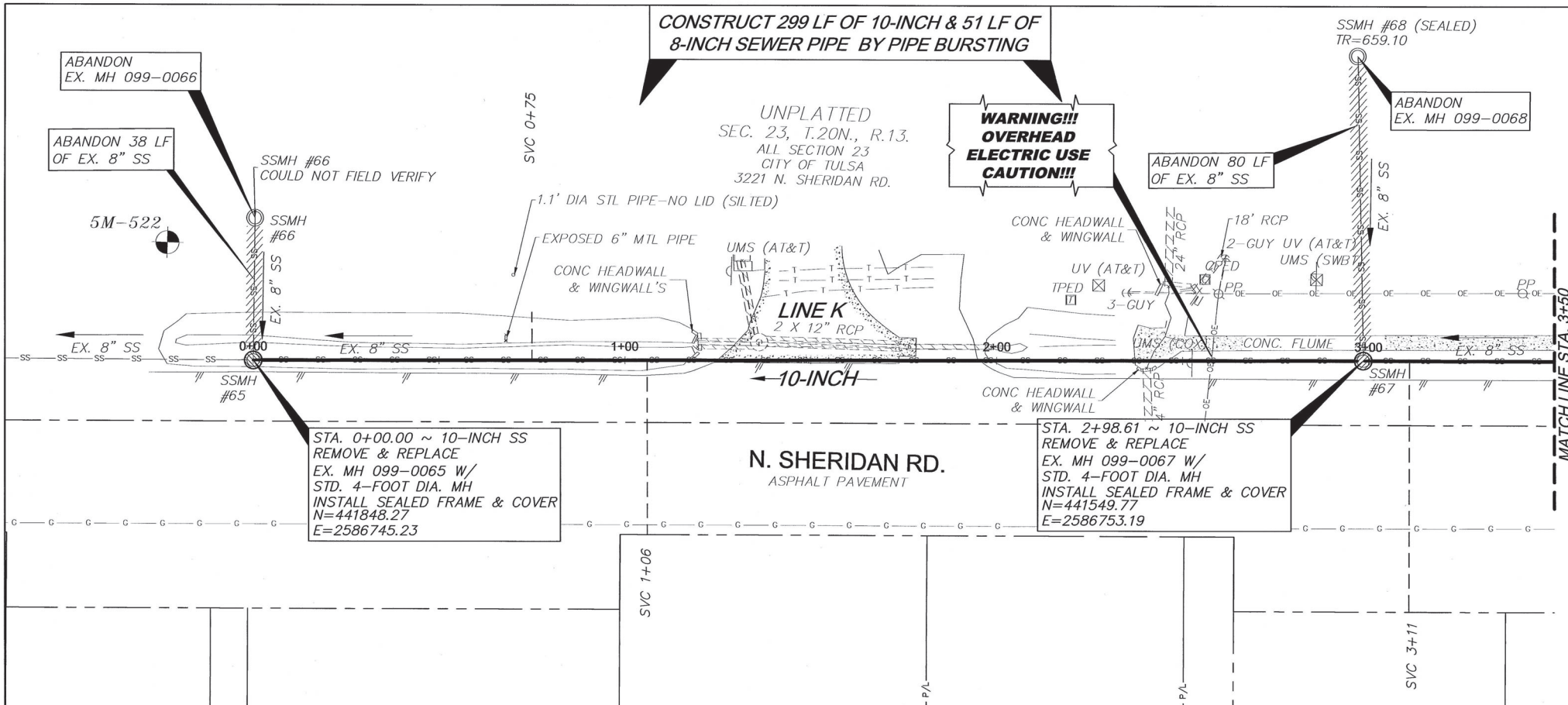


LEGEND

ABANDONMENT OF EXISTING SEWER



WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION**
1-800-522-6543



PLAN & PROFILE LINE K STA. 0+00 TO STA. 3+50
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE: <td>SURVEY</td> <td>NP</td> <td>03/2026</td> <td></td>	SURVEY	NP	03/2026	
			HORIZONTAL: <td>PROJ. MGR.</td> <td></td> <td></td> <td></td>	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL: <td>FIELD MGR.</td> <td></td> <td></td> <td></td>	FIELD MGR.			
			1"=4'				
			FILE: <td>DRAWING: <td></td> <td></td> <td></td> </td>	DRAWING: <td></td> <td></td> <td></td>			
			ATLAS PAGE NO: 167,168				

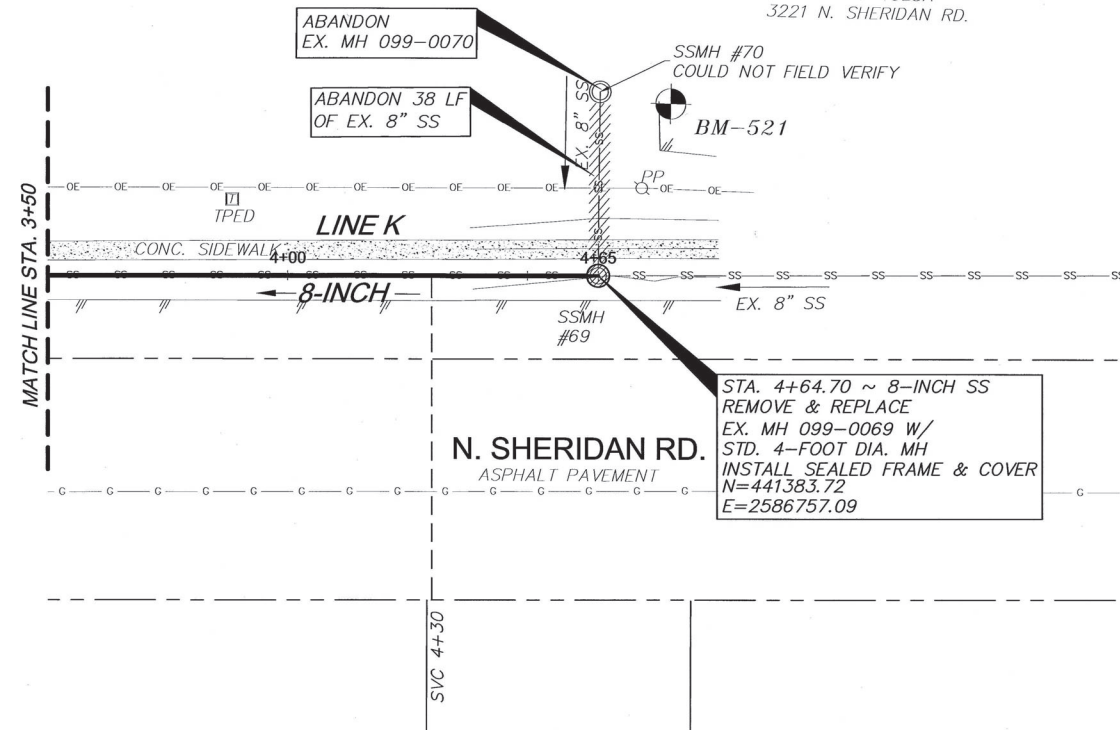
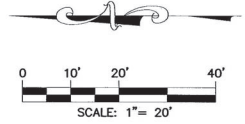
**CONSTRUCT 115 LF OF 8-INCH SEWER PIPE
BY PIPE BURSTING**

UNPLATTED
SEC. 23, T.20N., R.13.
ALL SECTION 23
CITY OF TULSA
3221 N. SHERIDAN RD.

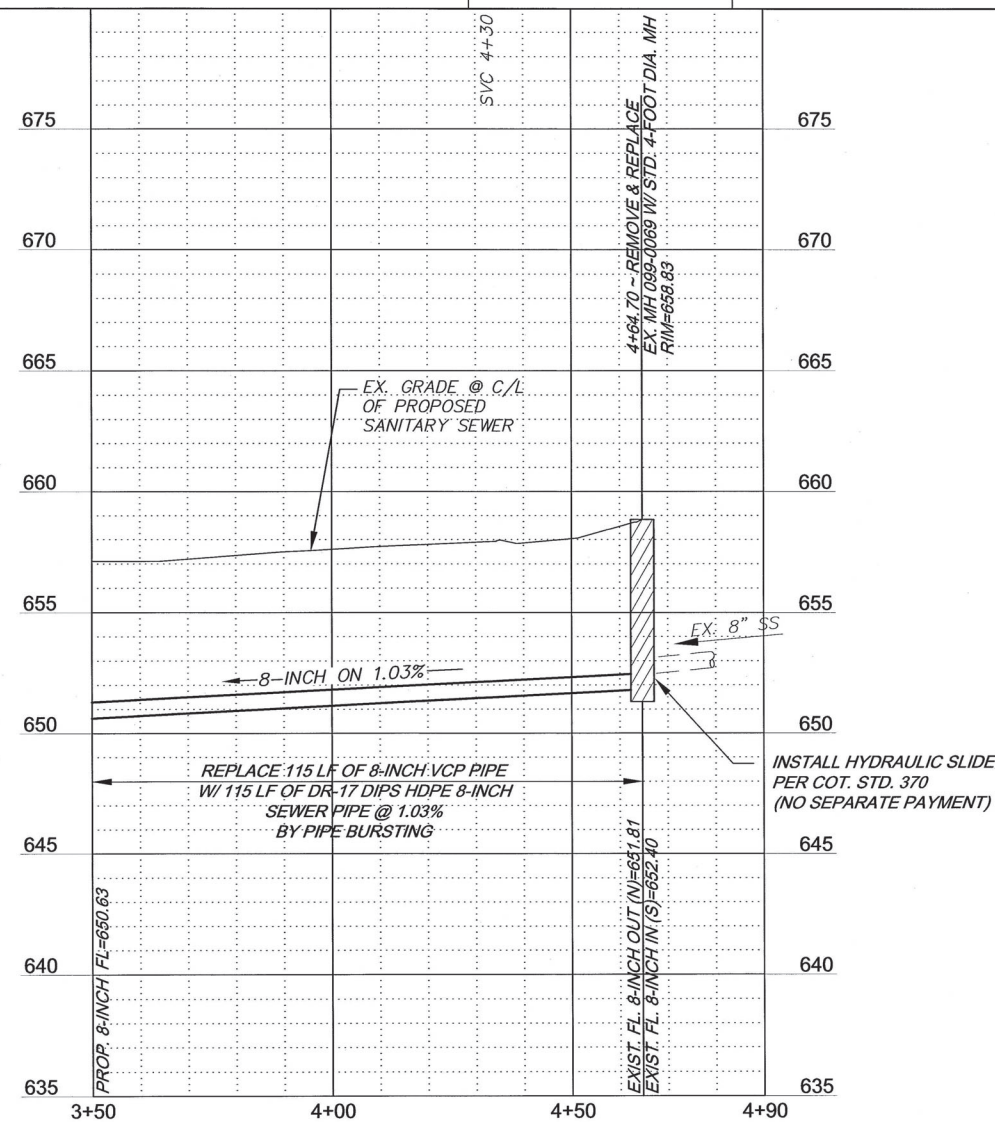
BENCHMARKS:

BM-521
MAG NAIL SET 35- FEET EAST AND 15- FEET SOUTH OF
EX. MH 099-0069

N=441369.41
E=2586793.11
EL=660.55

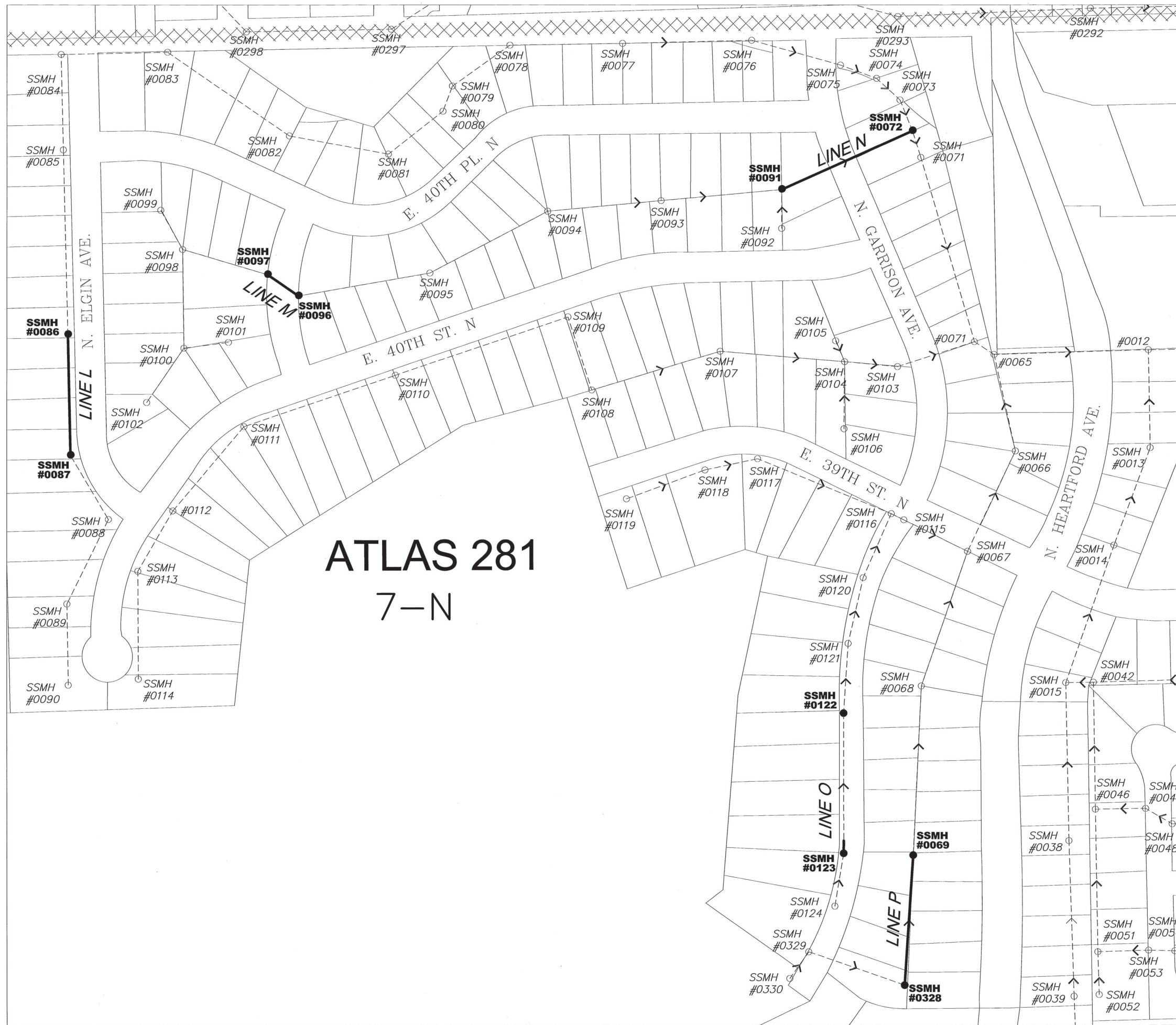


WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**

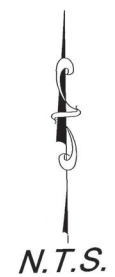


PLAN & PROFILE LINE K STA. 3+50 TO STA. 4+65
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA-WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	 3/26		
			1" = 4'	FIELD MGR.	 3/26		DATE: March 2026
			FILE:	DRAWING:			SHEET 41 OF 66 SHEETS
			ATLAS PAGE NO: 167,168				



**ATLAS 281
7-N**



- LINE L - SHEET 43
- LINE M - SHEET 44
- LINE N - SHEET 45
- LINE O - SHEET 46
- LINE P - SHEET 47

LINE O IS INCLUDED IN
ADDITIVE ALTERNATE 3.



ATLAS PAGE 281 KEY MAP - 1	
TMUA PROJECT NO. ES 2024-05	
IMPROVE OUR TULSA 2 AREA-WIDE SEWER REHABILITATION, FY25	
CITY OF TULSA, OKLAHOMA WATER AND SEWER DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: R.J.N GROUP, INC. CONSULTING ENGINEERS 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146	
REVISION	BY DATE
PLAN SCALE:	DRAWN RLP 03/2026
NA	DESIGNED JWB 03/2026
PROFILE SCALE:	SURVEY
HORIZONTAL:	PROJ. MGR.
NA	LEAD ENGR. <i>Paul 3/26</i>
VERTICAL:	FIELD MGR. <i>Paul 3/26</i>
NA	DATE: March 2026
FILE:	DRAWING:
ATLAS PAGE NO: 281	SHEET 42 OF 66 SHEETS

Thomas M. Mc
DESIGN MANAGER

CONSTRUCT 243 LF OF 8-INCH SEWER PIPE BY PIPE BURSTING

STA. 0+00.00 ~ 8-INCH SS REMOVE & REPLACE
EX. MH 007-0086 W/ 4-FOOT DIA. MH
N=447177.94
E=2561181.53

STA. 2+42.52 ~ 8-INCH SS CONNECT TO
EX. MH 007-0087
TYPE Fc REPAIR
N=446935.47
E=2561186.53

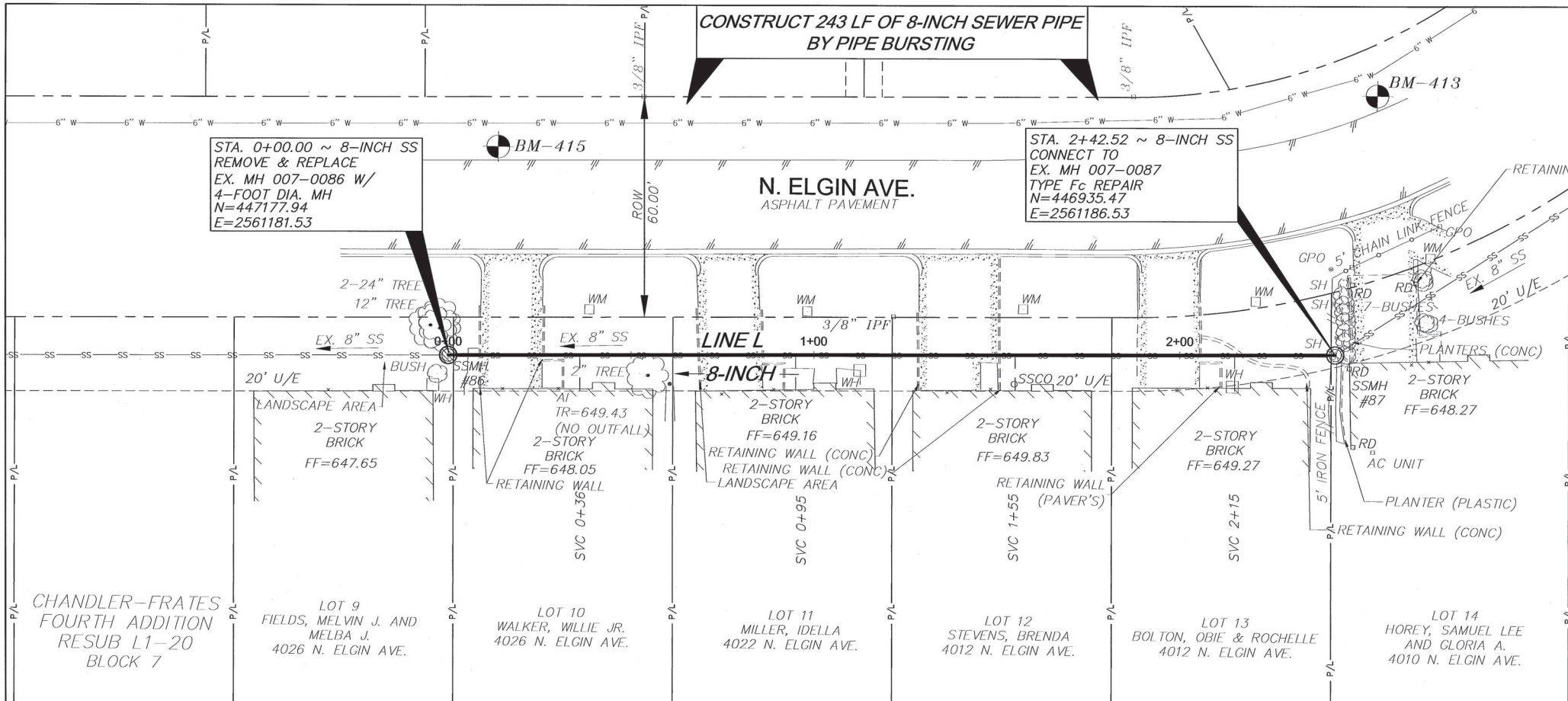
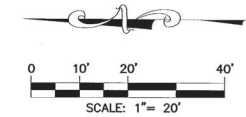
BENCHMARKS:

BM-413
IRON PIN SET 70-FEET EAST AND 12- FEET SOUTH OF EX. MH 007-0087

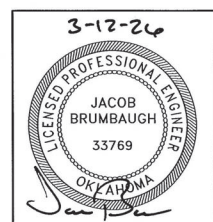
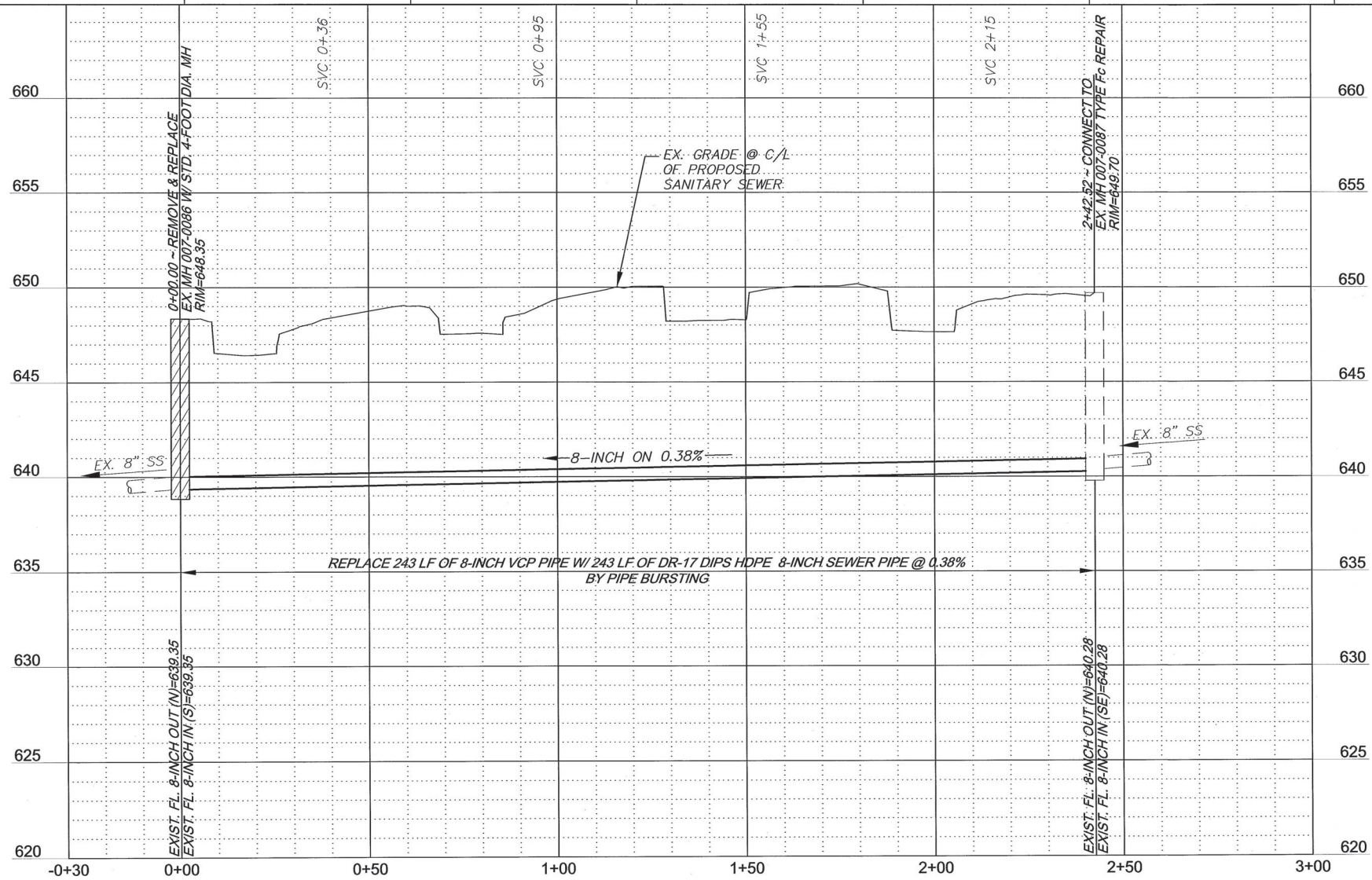
N=446925.35
E=2561257.35
EL=644.72

BM-415
IRON PIN SET 16- FEET SOUTH AND 57- FEET EAST OF EX. MH 007-0086

N=447165.37
E=2561238.64
EL=645.57



WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE L
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N. GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
				FIELD MGR.			
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 281				SHEET 43 OF 66 SHEETS

CHANDLER-FRATES
FOURTH
ADDITION
BLOCK 5

LOT 17
JEFFRIES, ELIZA MAE
505 E. 40th PL.

CONSTRUCT 20 LF OF 7-INCH SEWER PIPE
BY OPEN CUT POINT REPAIR

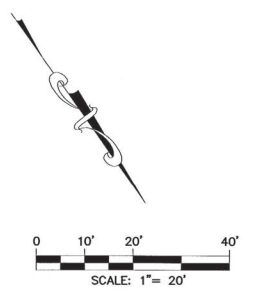
CHANDLER-FRATES
FOURTH
ADDITION
BLOCK 6

LOT 17
PONDS, VALERIE J.
4014 N. FRANKFORT AVE.

BENCHMARKS:

BM-412
CHISELED "X" SET 47- FEET WEST AND 2- FEET SOUTH
OF EX. MH 007-0096

N=447254.69
E=2561594.71
EL=631.87



NOTES:
1. LINE M IS INCLUDED IN THE LINES TO BE SLIPLINED SEE ATLAS PAGE 281 SLIPLINE KEY MAP (SL24).

LEGEND
▲ ▲ LIMITS OF FLOOD ZONE BOUNDARY

STA. 0+00.00 ~ 8-INCH SS
CONNECT TO
EX. MH 007-0096
N=447257.00
E=2561641.34

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

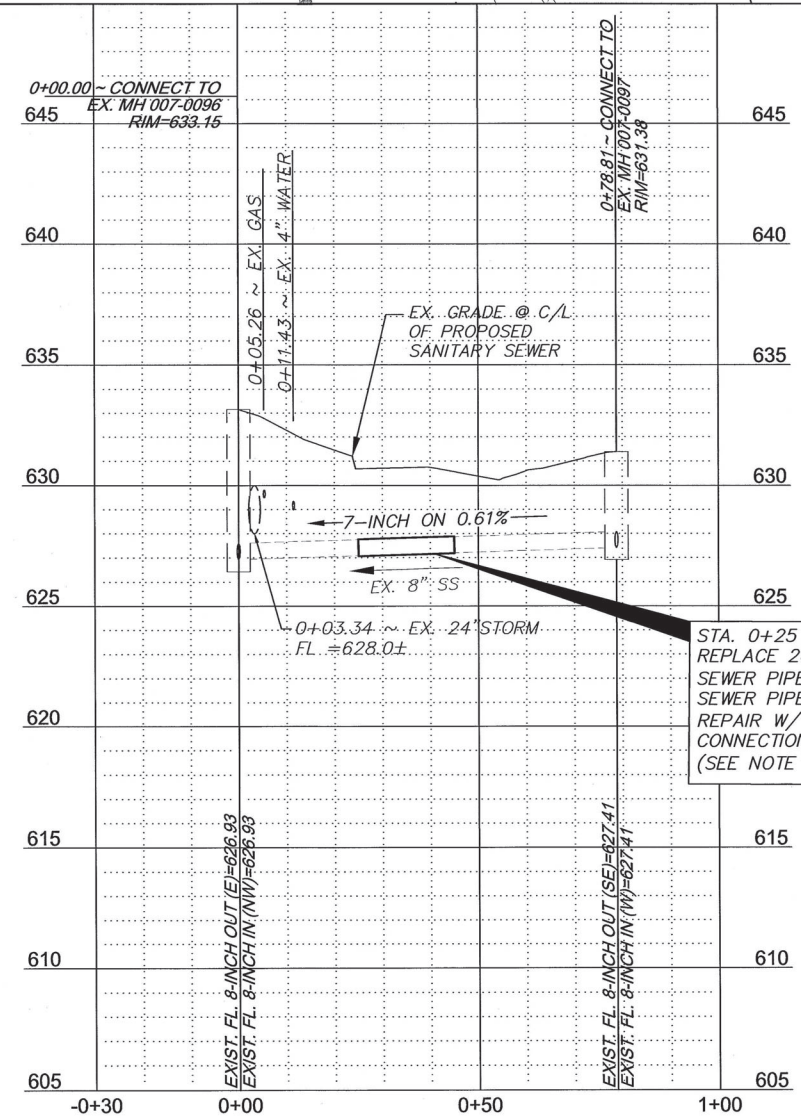
STA. 0+25 TO 0+45
REPLACE 20 LF OF EX. 8-INCH VCP
SEWER PIPE W/ 7-INCH DR21 IPS HDPE
SEWER PIPE @ 0.61% BY OPEN CUT POINT
REPAIR W/ CONCRETE ENCASEMENT. ALL
CONNECTIONS SHALL BE FUSED.
(SEE NOTE 1)

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

STA. 0+78.81 ~ 8-INCH SS
CONNECT TO
EX. MH 007-0097
N=447302.22
E=2561576.81

OKIE811
Know what's below
811 before you dig.

WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**



STA. 0+25 TO 0+45
REPLACE 20 LF OF EX. 8-INCH VCP
SEWER PIPE W/ 7-INCH DR21 IPS HDPE
SEWER PIPE @ 0.61% BY OPEN CUT POINT
REPAIR W/ CONCRETE ENCASEMENT. ALL
CONNECTIONS SHALL BE FUSED.
(SEE NOTE 1)



PLAN & PROFILE LINE M
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL: 1" = 20'	PROJ. MGR.			
			VERTICAL: 1" = 4'	LEAD ENGR.			
			FILE:	FIELD MGR.			
			ATLAS PAGE NO: 281	DRAWING:			

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

CHANDLER-FRATES
FOURTH
ADDITION
BLOCK 3

**CONSTRUCT 279 LF OF 8-INCH SEWER PIPE
BY PIPE BURSTING**

CHANDLER-FRATES
FOURTH
ADDITION
BLOCK 5

CONTRACTOR SHALL
BRACE POWER POLE
DURING CONSTRUCTION
(NO SEPARATE PAYMENT)

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

STA. 2+78.81 ~ 8-INCH SS
CONNECT TO
EX. MH 007-0091
TYPE Gg REPAIR
N=447464.12
E=2562598.95

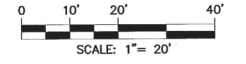
BENCHMARKS:

BM-416
IRON PIN SET 25- FEET SOUTH AND 3- FEET EAST
OF EX. MH 007-0072

N=447552.19
E=2562862.60
EL=625.602

BM-417
IRON PIN SET 25- FEET WEST AND 11- FEET NORTH OF EX.
MH 007-0091

N=447472.26
E=2562574.38
EL=632.57



LEGEND
▲ ▲ LIMITS OF FLOOD ZONE
BOUNDARY



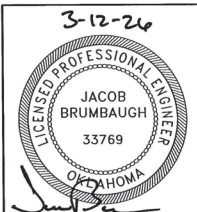
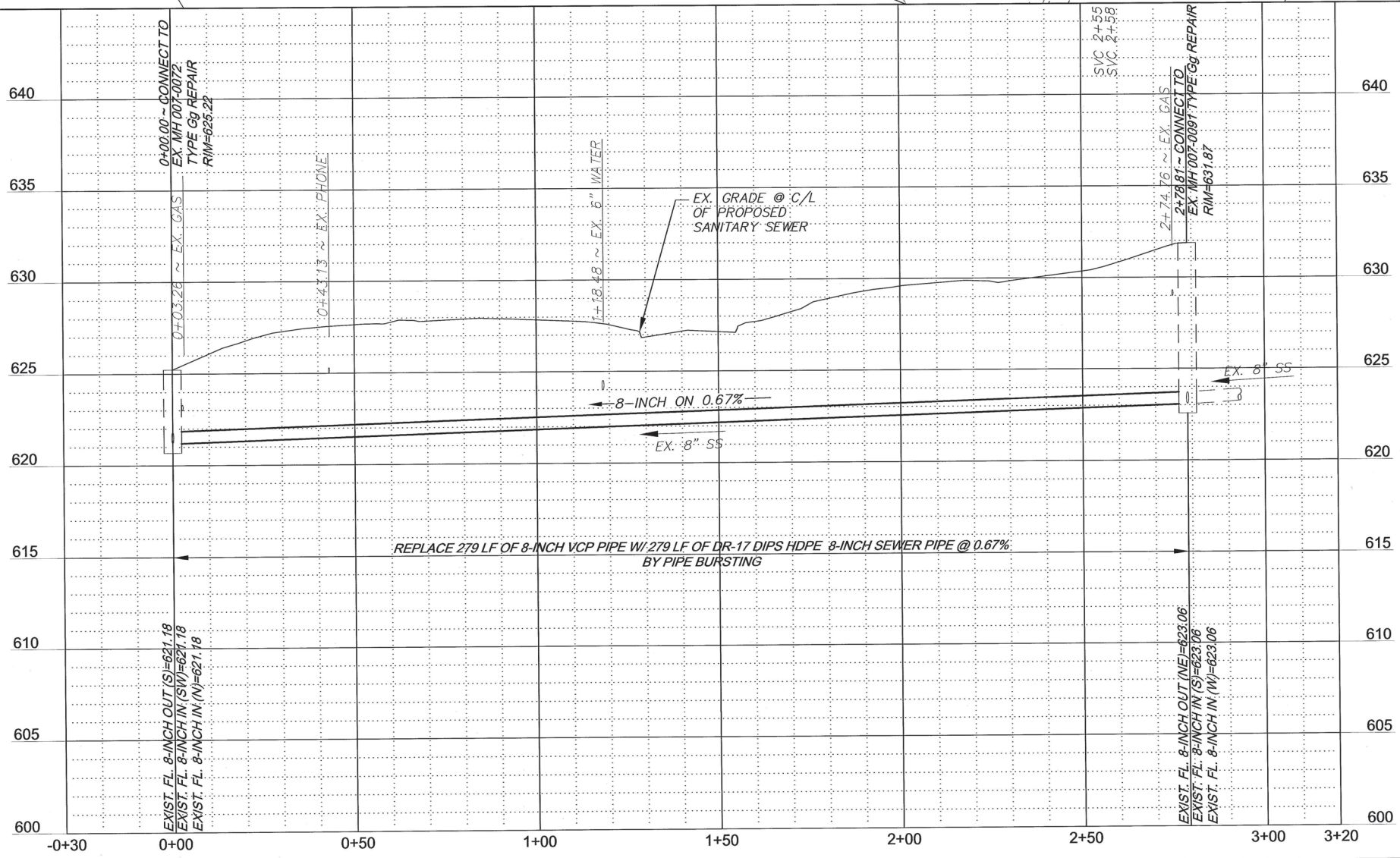
**WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**

CONTRACTOR SHALL
BRACE POWER POLES
DURING CONSTRUCTION
(NO SEPARATE PAYMENT)

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

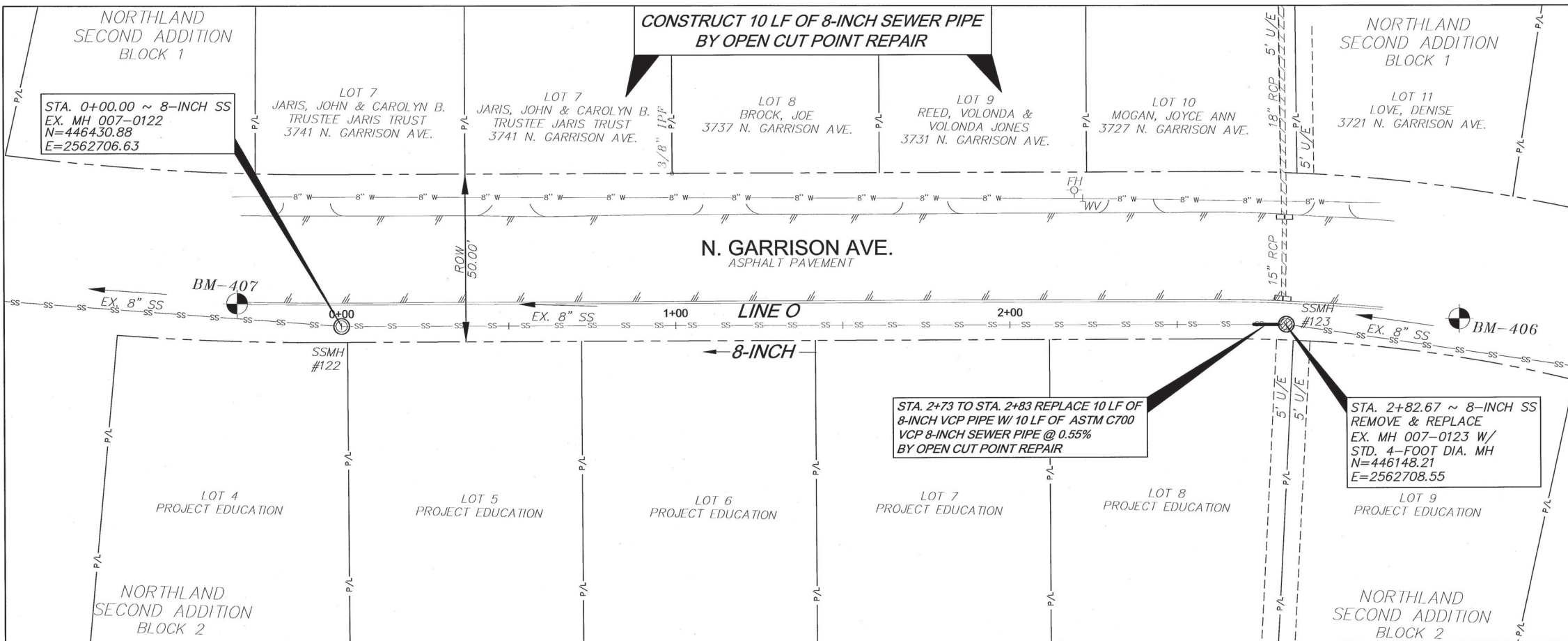
CONTRACTOR SHALL
BRACE POWER POLES
DURING CONSTRUCTION
(NO SEPARATE PAYMENT)

**WARNING!!!
GAS MAIN USE
CAUTION!!!**



PLAN & PROFILE LINE N
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT
PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

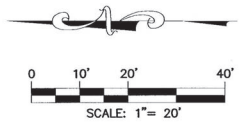
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20"	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 45 OF 66 SHEETS
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20"	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4"				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 281				



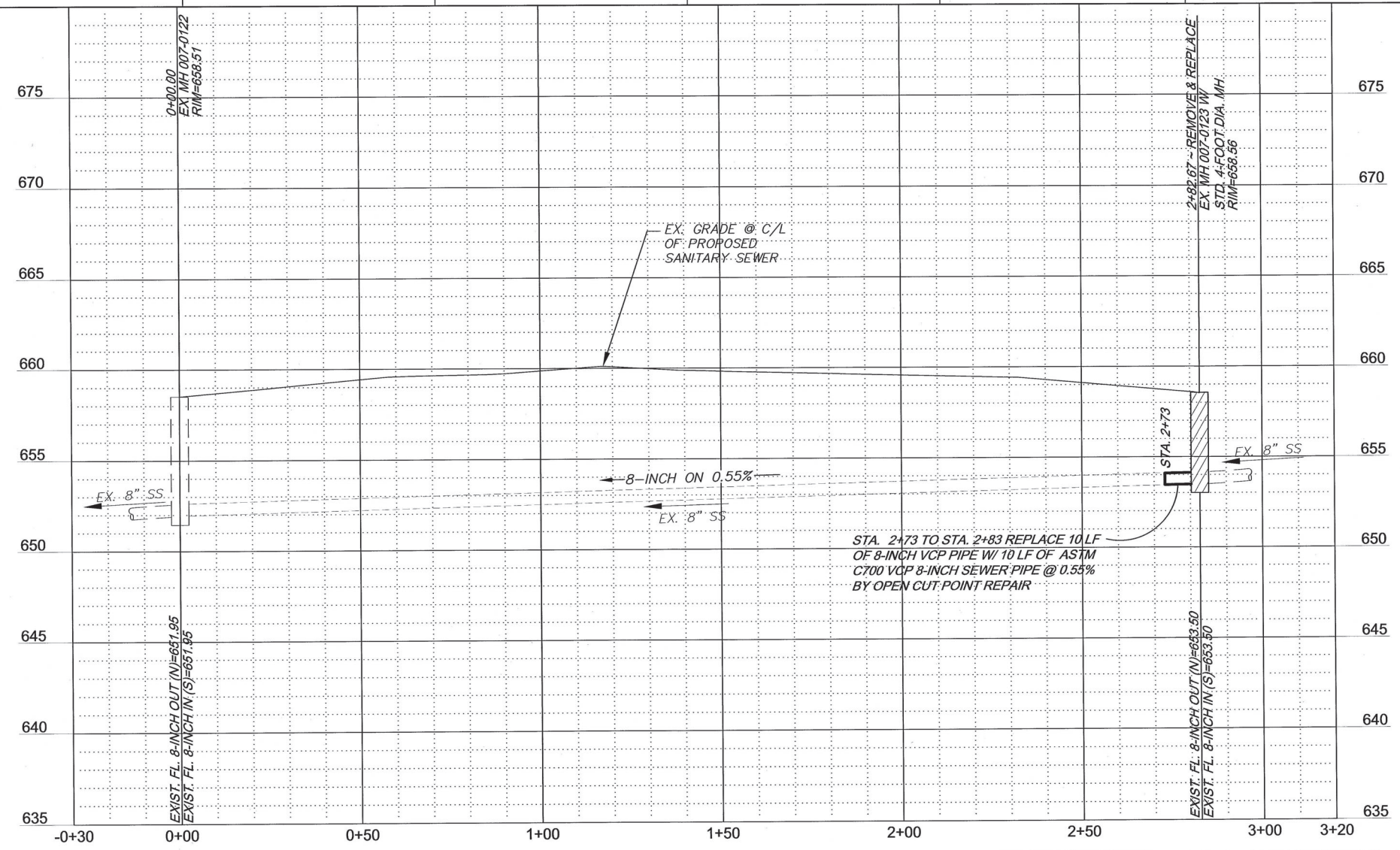
BENCHMARKS:

BM-406
CHISELED "X" SET 52- FEET SOUTH AND 1- FEET EAST OF EX. MH 007-0123
N=446096.44
E=2562710.46
EL=658.55

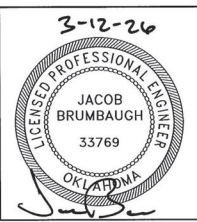
BM-407
CHISELED "X" SET 31- FEET NORTH AND 6- FEET EAST OF EX. MH 007-0122
N=446462.20
E=2562713.28
EL=657.06



WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



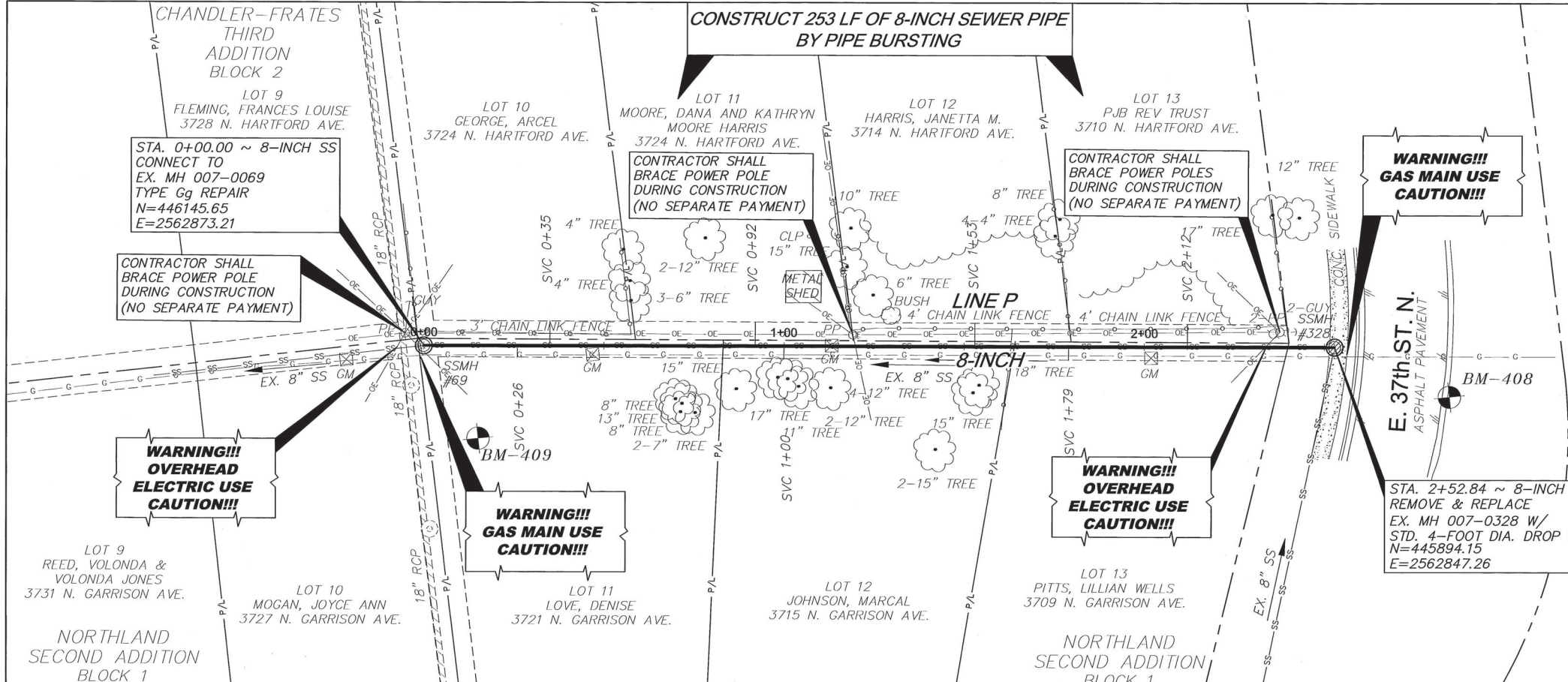
LINE 0 IS INCLUDED IN ADDITIVE ALTERNATE 3.



PLAN & PROFILE LINE 0
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4'				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 281				SHEET 46 OF 66 SHEETS



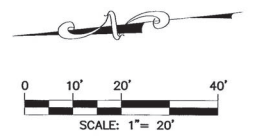
BENCHMARKS:

BM-408
CHISELED "X" 32- FEET SOUTH AND 14- FEET WEST OF EX. MH 007-0328

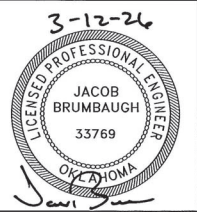
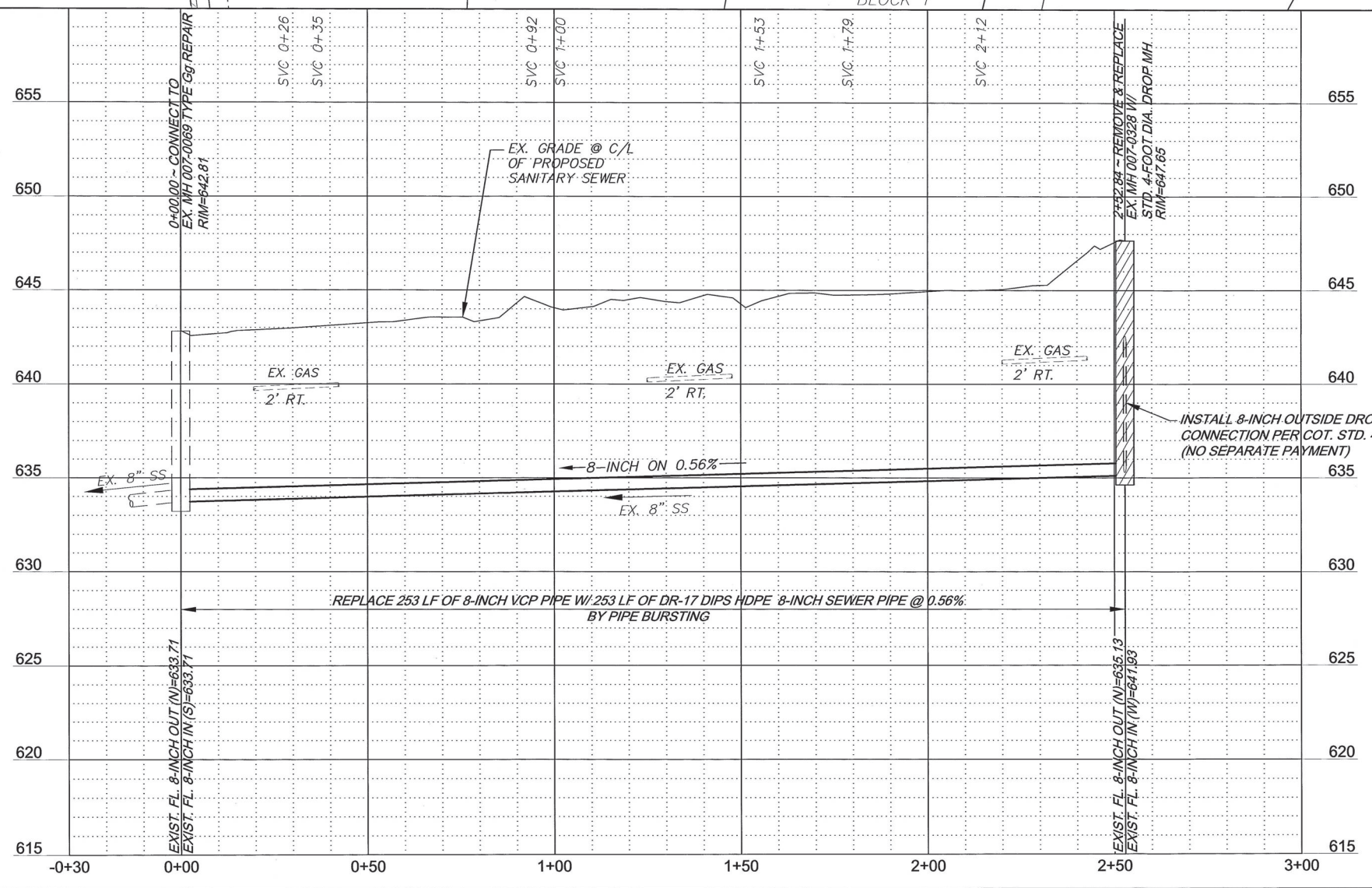
N=445863.80
E=2562830.28
EL=648.66

BM-409
IRON PIN SET 15- FEET SOUTH AND 25- FEET WEST OF EX. MH 007-0069

N=446133.25
E=252846.22
EL=652.83



WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



PLAN & PROFILE LINE P

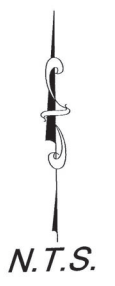
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

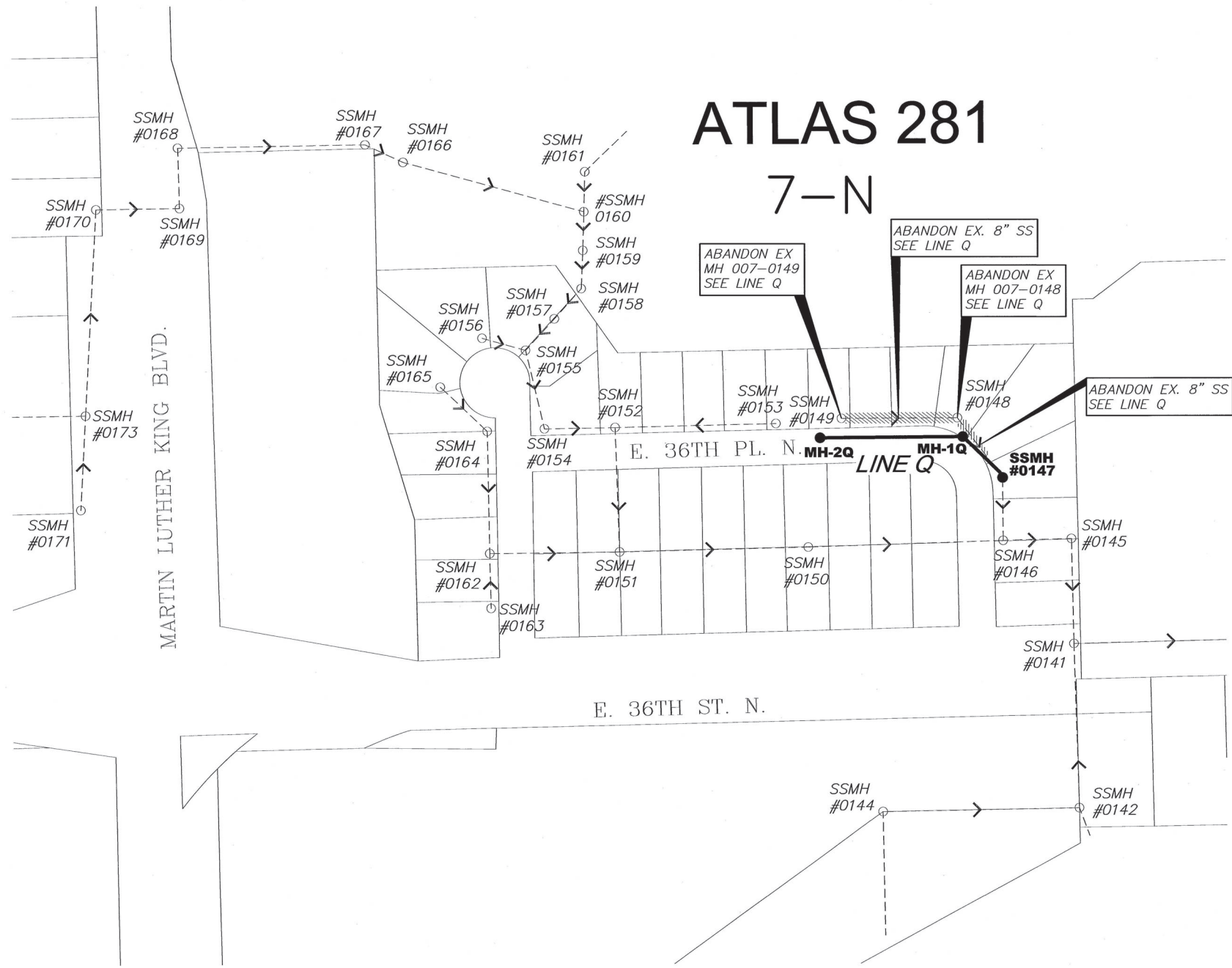
PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	AK 3/26		
			1" = 4'	FIELD MGR.	Jan 8/26		
			FILE:	DATE:	March 2026		DESIGN MANAGER
			ATLAS PAGE NO: 281				SHEET 47 OF 66 SHEETS



ATLAS 281

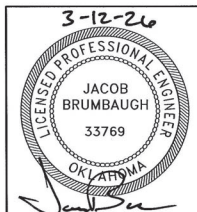
7-N



LEGEND

////// ABANDONMENT OF EXISTING SEWER

LINE Q - SHEET 49



ATLAS PAGE 281 KEY MAP - 2

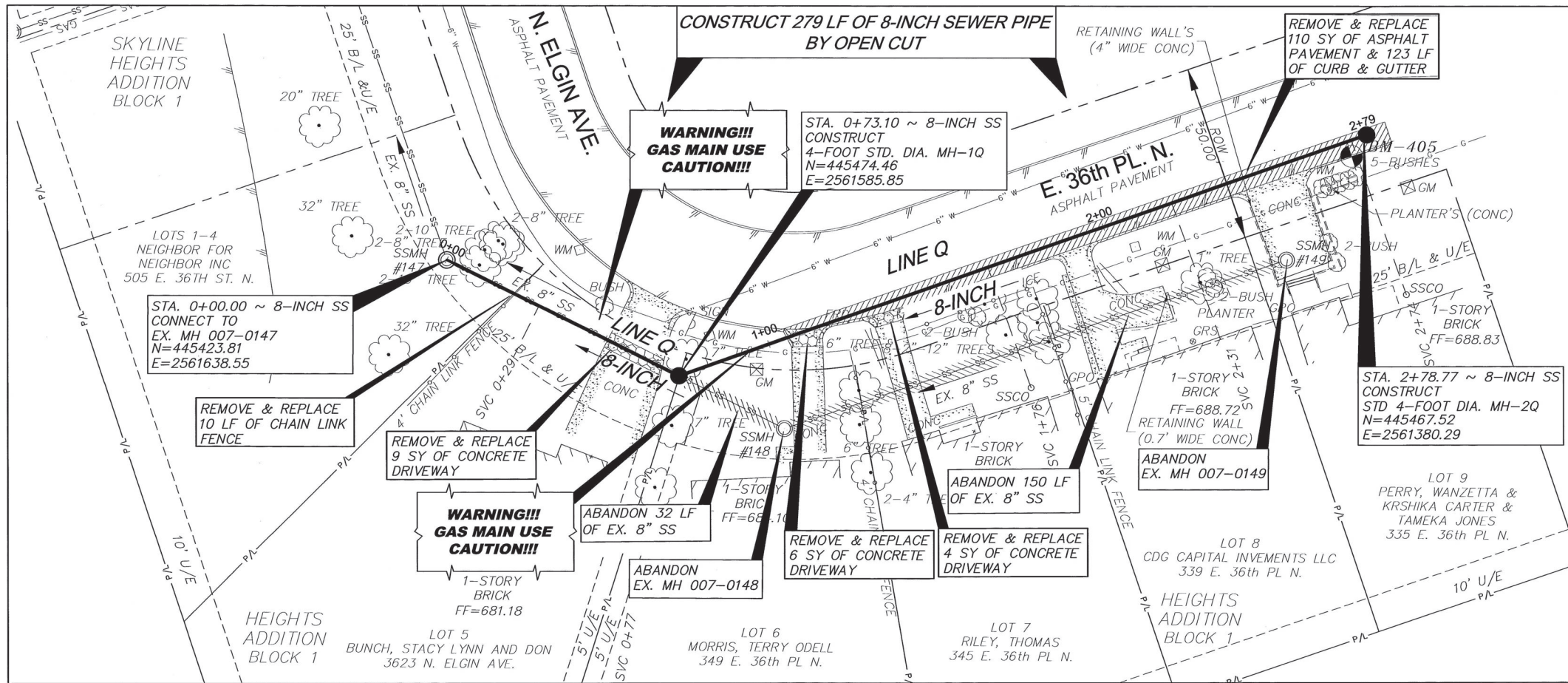
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
RJN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:	
			NA	DESIGNED	JWB	03/2026	THOMAS M. OZ DESIGN MANAGER	
			PROFILE SCALE:	SURVEY				
			HORIZONTAL:	PROJ. MGR.				
			VERTICAL:	LEAD ENGR.	JWB 3/26			
			FILE:	DRAWING:			DATE: March 2026	
							ATLAS PAGE NO: 281	SHEET 48 OF 66 SHEETS



BENCHMARKS:

BM-405
CHISELED "X" SET 22- FEET SOUTH AND 26- FEET WEST OF EX. MH 007-0149

N=445472.09
E=2561386.21
EL=684.71

BM-525
IRON PIN SET 131- FEET DUE SOUTH OF EX. MH 007-0147 (NOT SHOWN)

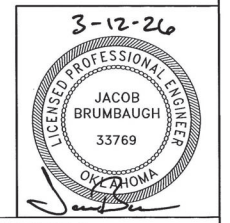
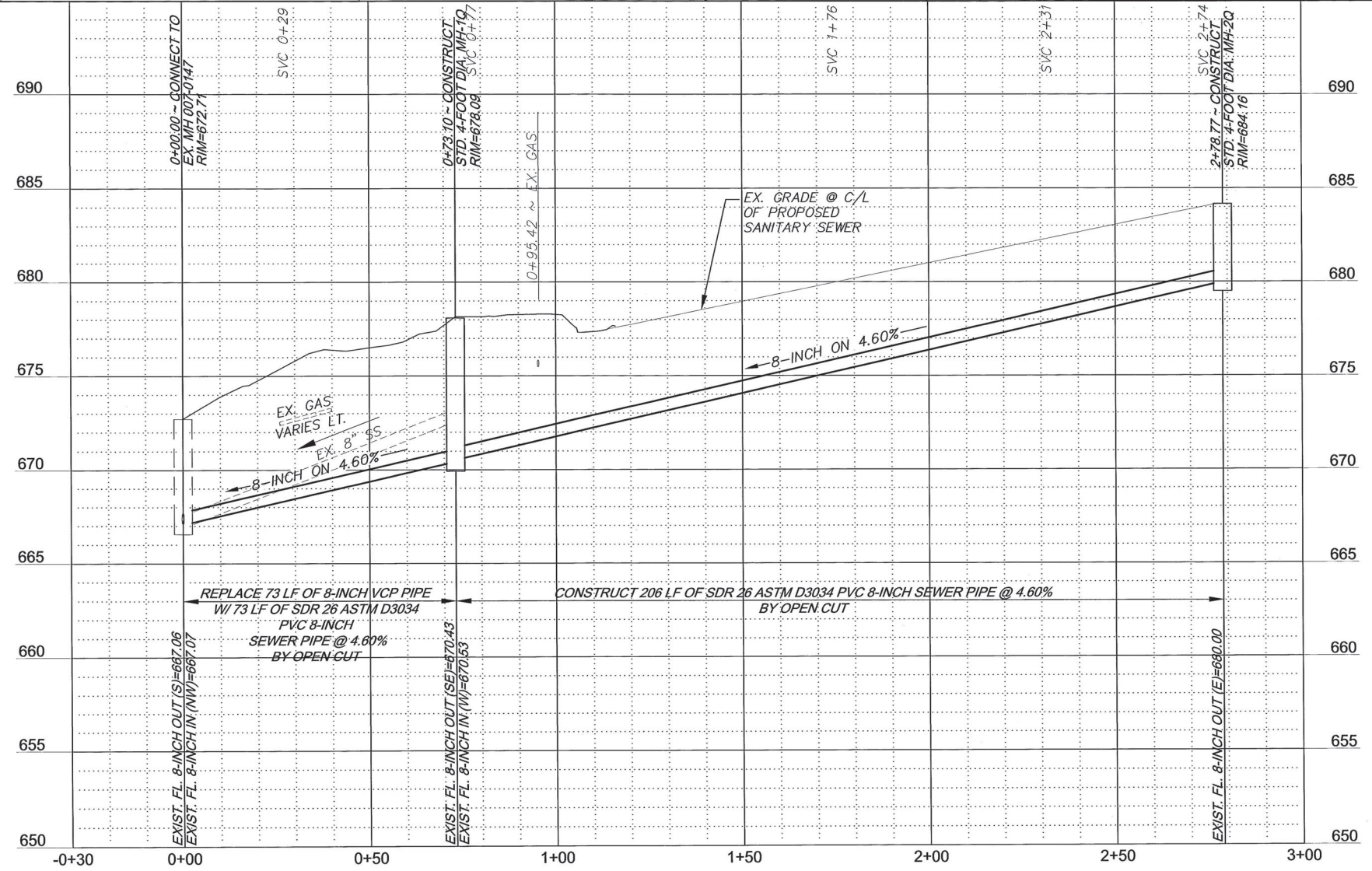
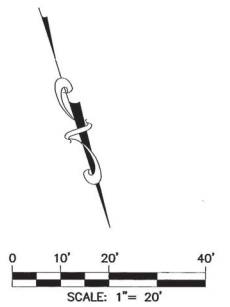
N=445292.15
E=2561641.94
EL=665.47

LEGEND

- ASPHALT PAVEMENT REMOVAL & REPLACEMENT
- CONCRETE DRIVEWAY REMOVAL & REPLACEMENT
- ABANDONMENT OF EXISTING SEWER



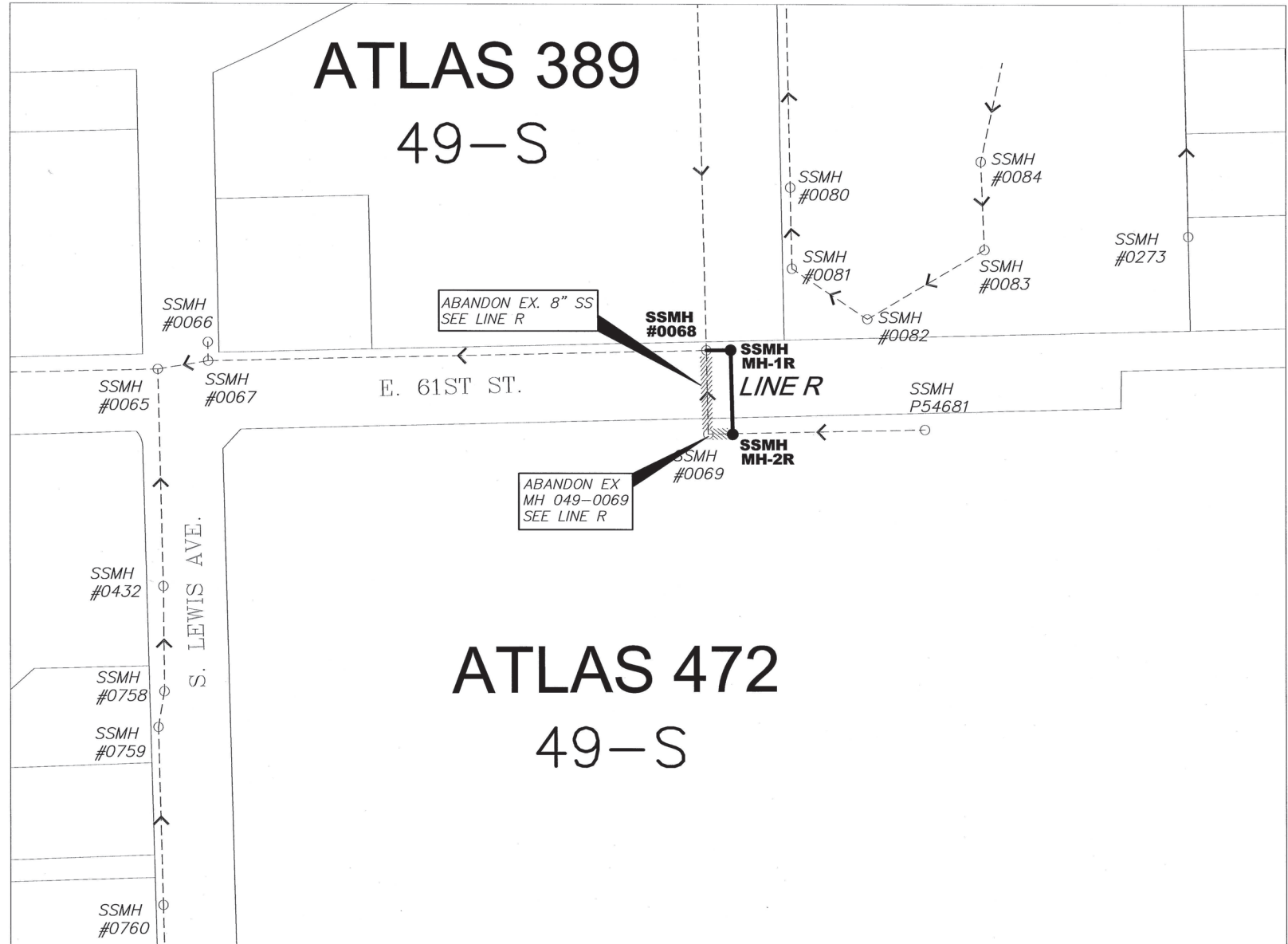
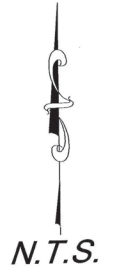
WARNING!!!
EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543



PLAN & PROFILE LINE Q
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREA WIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

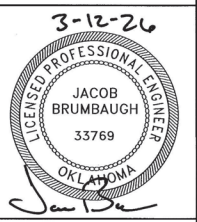
PLANS AND ESTIMATES PREPARED BY:
R.J.N GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 49 OF 66 SHEETS
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	JTB 3/26		
			FILE:	FIELD MGR.	JTB 3/26		
			ATLAS PAGE NO: 281	DRAWING:			



LINE R - SHEET 51

LINE R IS INCLUDED
IN ADDITIVE ALTERNATE 4.



ATLAS PAGES 389 & 472 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA WIDE SEWER REHABILITATION, FY24
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R.J.N GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	3/26		
			VERTICAL:	FIELD MGR.	3/26		
			NA				
			FILE:	DRAWING:			DATE: March 2026
ATLAS PAGE NO: 389,472							SHEET 50 OF 66 SHEETS

SOUTHERN HILLS PLAZA
BLOCK 1

CONSTRUCT 51 LF OF 8-INCH SEWER PIPE
BY OPEN CUT & 92 LF OF 8-INCH SEWER PIPE
WITH 24-INCH STEEL CASING BY BORE & JACK

UNPLATTED
BLOCK 1
SEC. 5, T.18N., R.13E.
SOUTHERN HILLS COUNTRY CLUB
2636 E. 61st ST. S.

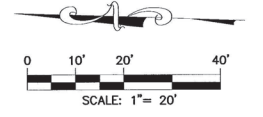
BENCHMARKS:

BM-500
IRON PIN SET 54' EAST AND 5' SOUTH OF
EX. MH 049-0068

N=397817.70
E=2572651.32
EL=644.82

BM-501
IRON PIN SET 59' WEST AND 13' SOUTH OF
EX. MH 049-0068

N=397807.26
E=2572537.83
EL=644.17



LINE R IS INCLUDED
IN ADDITIVE ALTERNATE 4.

**WARNING!!!
36-INCH WATER
USE CAUTION!!!**

**WARNING!!!
GAS MAIN USE
CAUTION!!!**

REMOVE & REPLACE 172 SY
OF CONCRETE DRIVEWAY &
46 LF OF CURB & GUTTER

STA. 0+00.00 ~ 8-INCH SS
CONNECT TO
EX. MH 049-0068
& CUT & PLUG
EX. 8-INCH SS (S)
N=397821.59
E=2572596.66

REMOVE & REPLACE
25 LF OF CHAIN LINK FENCE

STA. 1+43.37 ~ 8-INCH SS
CONSTRUCT STD. 4' DIA. DROP MH-2R
N=397713.38
E=2572633.69

ABANDON 32 LF EX. 8-INCH SS

ABANDON EX. MH 049-0069

ABANDON 108 LF OF
EX. 8-INCH SS

NOTES:

- CITY OF TULSA UTILITY LOCATES SUPERVISOR, GORDON BEUTLER II, SHALL BE NOTIFIED A MINIMUM OF 72-HOURS IN ADVANCE OF CONSTRUCTION CROSSING OF ANY CRITICAL INFRASTRUCTURE. THE CONTRACTOR SHALL CALL 918-519-8826 AND EMAIL GBEUTLER@CITYOFTULSA.ORG TO NOTIFY. CONSTRUCTION CROSSING CAN NOT PROCEED UNLESS CITY OF TULSA PERSONNEL IS ON SITE. CONTRACTOR IS STILL REQUIRED TO SUBMIT A CALL OKIE SERVICE TICKET IN ADDITION TO CONTACTING CITY OF TULSA PERSONNEL.
- PROPOSED WATER LINE SHALL HAVE A MINIMUM COVER OF 4 VERTICAL FEET.

LEGEND

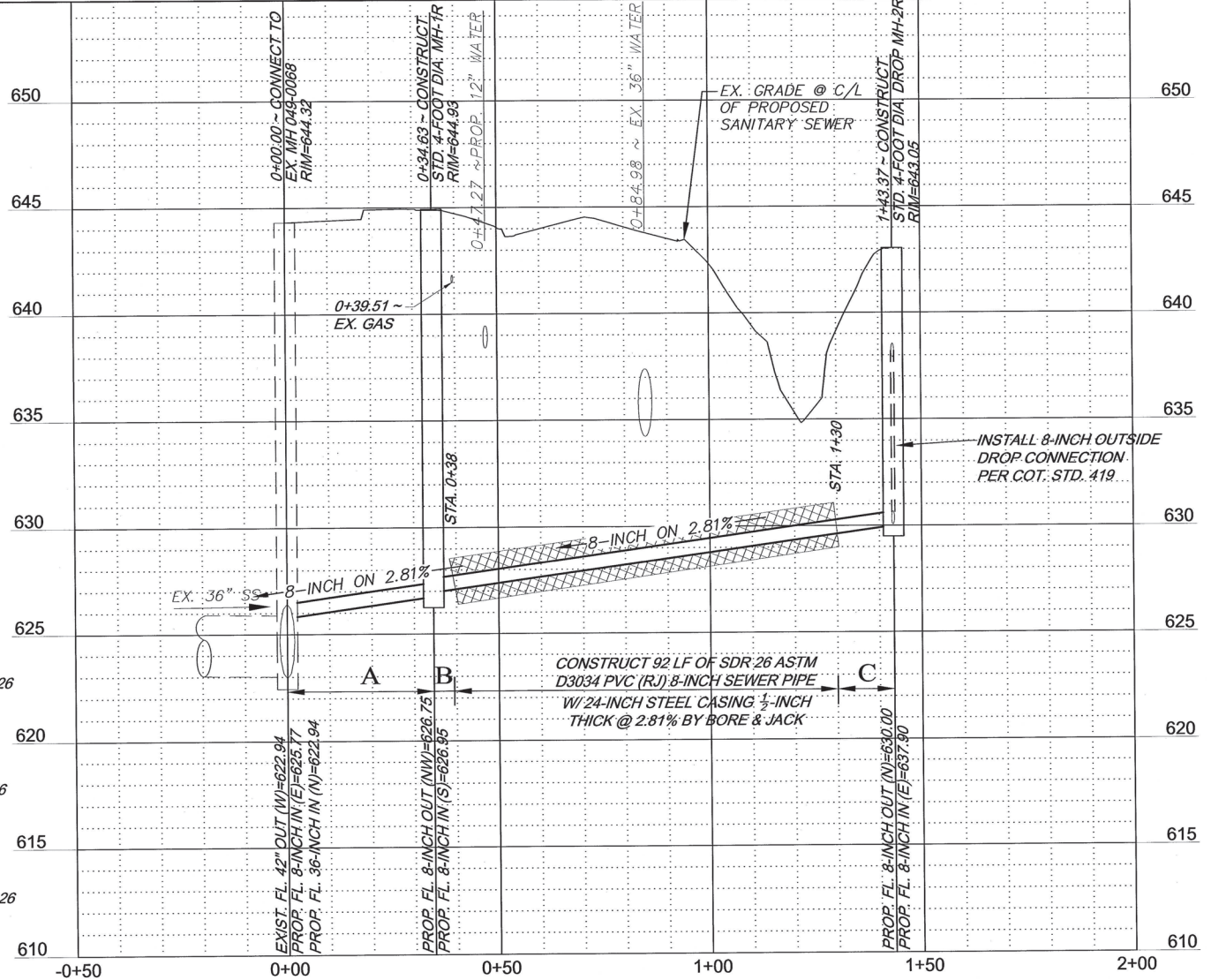
- CONCRETE PAVEMENT
REMOVAL & REPLACEMENT
- ABANDONMENT OF EXISTING
SEWER
- REMOVAL OF EXISTING
12-INCH WATER LINE



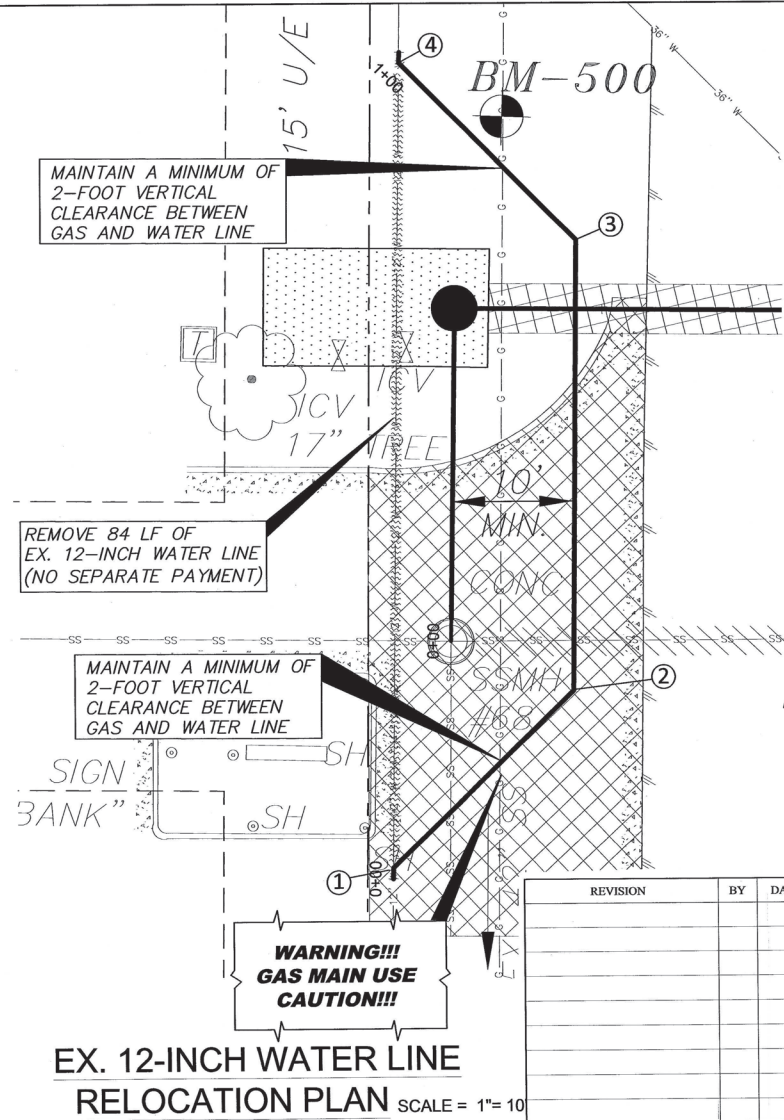
WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
AT OKIE AT 1-800-522-6543

LOT 1
CASE SOUTHERN HILLS LP C/O CASE
& ASSOC
2431 E. 61st ST. S.

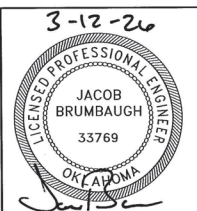
SOUTHERN HILLS PLAZA
BLOCK 1



- A= CONSTRUCT 35 LF OF SDR 26
ASTM D3034 PVC 8-INCH
SEWER PIPE @ 2.81%
BY OPEN CUT
- B= CONSTRUCT 3 LF OF SDR 26
ASTM D3034 PVC 8-INCH
SEWER PIPE @ 2.81%
BY OPEN CUT
- C= CONSTRUCT 13 LF OF SDR 26
ASTM D3034 PVC 8-INCH
SEWER PIPE @ 2.81%
BY OPEN CUT



- STA. 0+00.00
CONNECT TO EX. 12" WATER LINE
12" SOLID SLEEVE
28 LF OF 12" DIP CLASS 51
12" 45° BEND (RJ)
N=397827.01
E=2572572.99
- STA. 0+28 INSTALL:
12" 45° BEND (RJ)
47 LF OF 12" DIP CLASS 51
N=397808.68
E=2572591.90
- STA. 0+75 INSTALL:
12" 45° BEND (RJ)
27 LF OF 12" DIP CLASS 51
N=397809.63
E=2572638.78
- STA. 1+02 INSTALL:
12" 45° BEND (RJ)
CONNECT TO EX. 12" WATER LINE
12" SOLID SLEEVE
N=397828.60
E=2572656.56

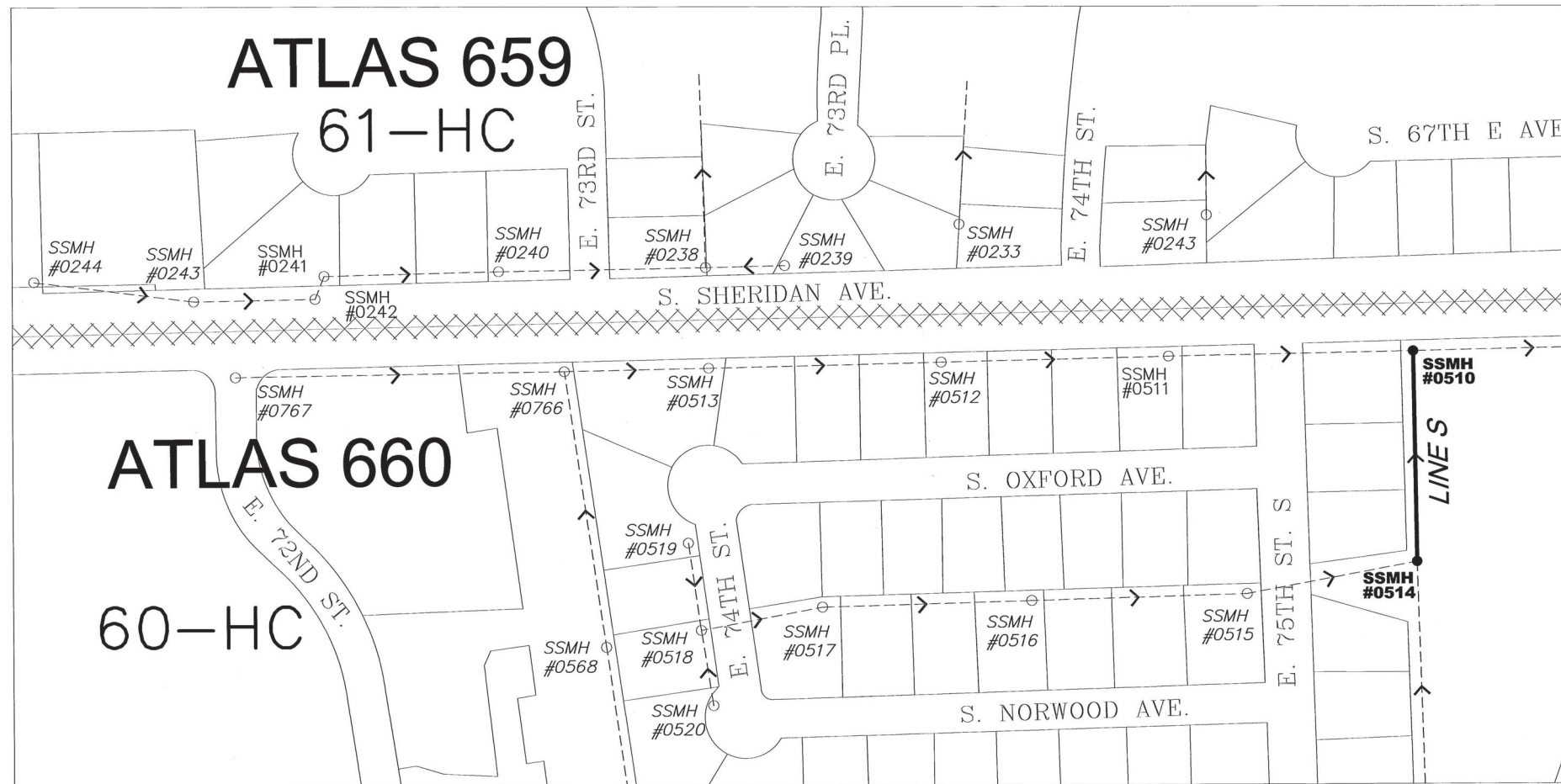


PLAN & PROFILE LINE R
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 389,472				DATE: March 2026
							SHEET 51 OF 66 SHEETS

N.T.S.



LINE S - SHEET 53

LINE S IS INCLUDED
IN ADDITIVE ALTERNATE 3.



ATLAS PAGES 659 & 660 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 52 OF 66 SHEETS
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.			
			FILE:	DRAWING:			
			ATLAS PAGE NO: 659,660				

CONSTRUCT 245 LF OF 10-INCH SEWER PIPE BY PIPE BURSTING

MINSHALL
PARK II
BLOCK 5

LOT 1
TED PARKS LLC
7400 S. SHERIDAN RD.

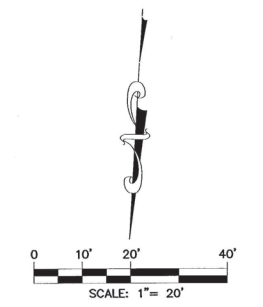
STA. 2+44.98 ~ 8-INCH SS
REMOVE & REPLACE
EX. MH 060-0514 W/
STD. 4-FOOT DIA. MH
N=390896.69
E=2587629.96

BENCHMARKS:
BM-404
IRON PIN SET 23- FEET SOUTH AND 17- FEET WEST OF
EX. MH 060-0514

N=390873.41
E=2587613.33
EL=759.92

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

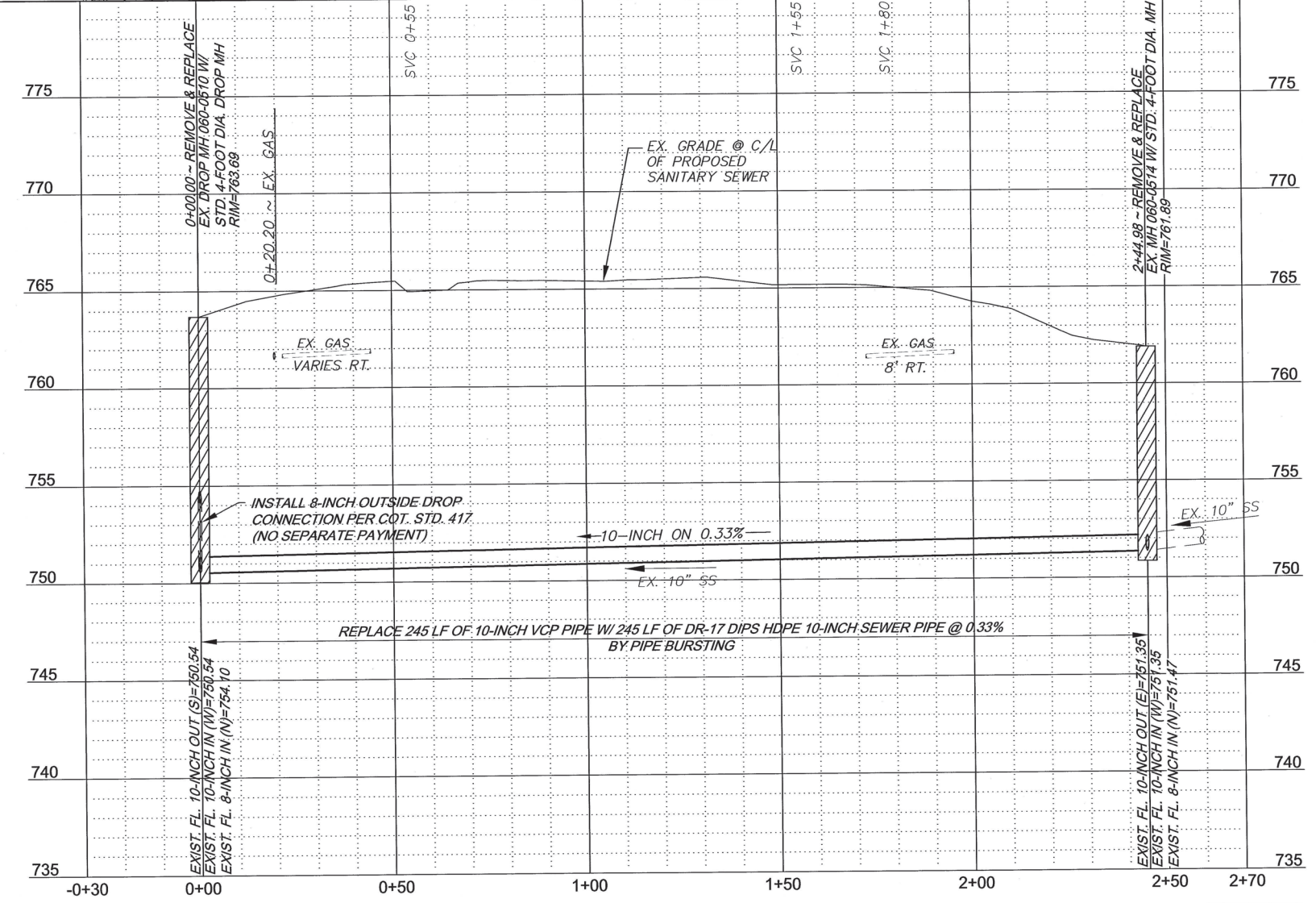
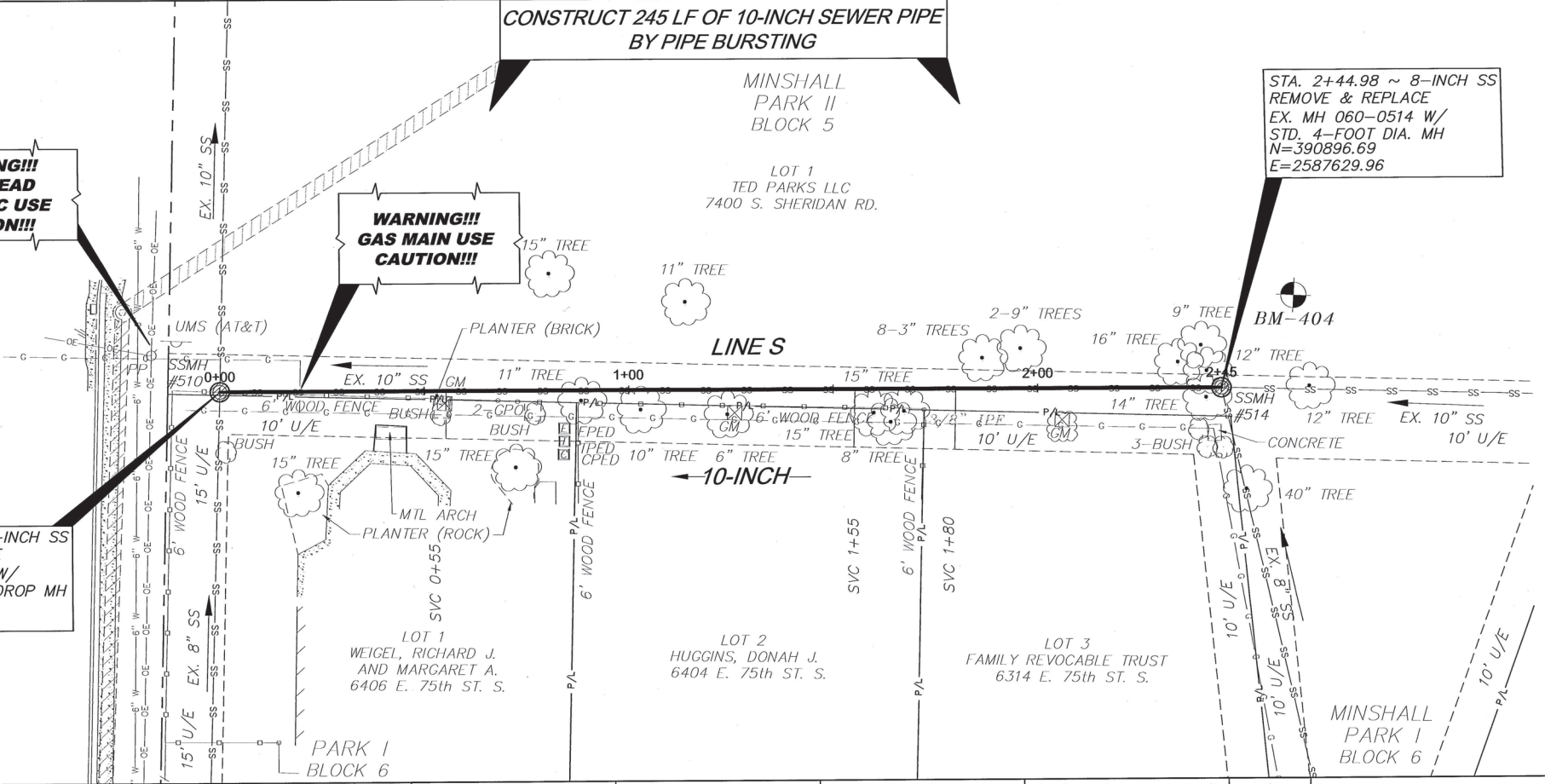
**WARNING!!!
GAS MAIN USE
CAUTION!!!**



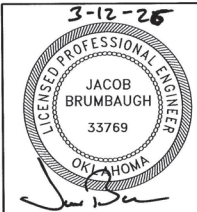
STA. 0+00.00 ~ 8-INCH SS
REMOVE & REPLACE
EX. MH 060-0510 W/
STD. 4-FOOT DIA. DROP MH
N=390908.68
E=2587874.65



**WARNING!!!
EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**



LINE S IS INCLUDED
IN ADDITIVE ALTERNATE 3.

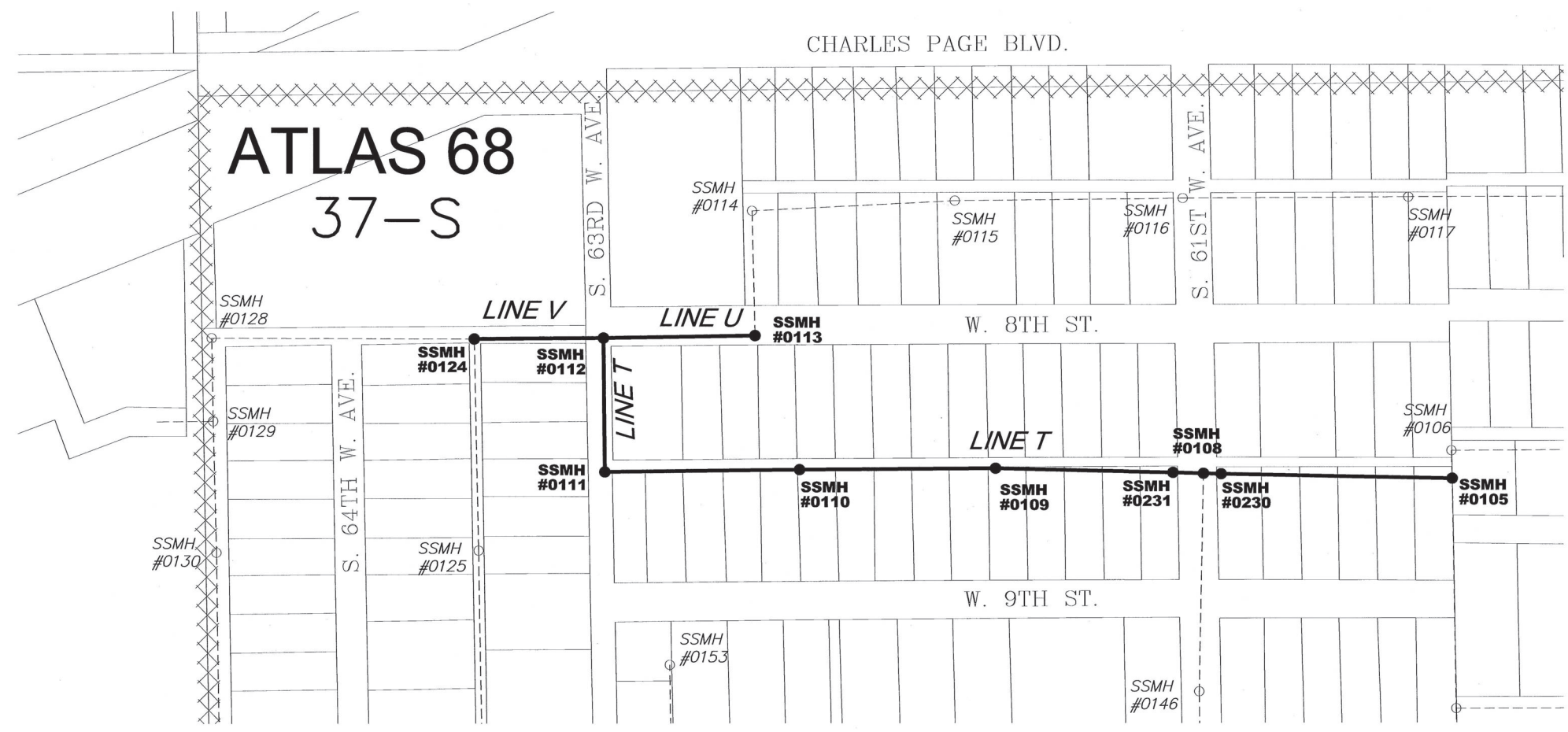


PLAN & PROFILE LINE S
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20"	DESIGNED	JWB	03/2026	 JACOB BRUMBAUGH LICENSED PROFESSIONAL ENGINEER 33769 OKLAHOMA
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL: 1" = 20"	PROJ. MGR.			
			VERTICAL: 1" = 4"	LEAD ENGR.			
			FILE:	FIELD MGR.			
			DRAWING:				
			ATLAS PAGE NO. 660				DATE: March 2026
							SHEET 53 OF 66 SHEETS



LINE T - SHEET 55-58
 LINE U - SHEET 59
 LINE V - SHEET 60



ATLAS PAGE 68 KEY MAP
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	<i>JWB</i>	3/26	
			VERTICAL:	FIELD MGR.	<i>JWB</i>	3/26	
			NA				
			FILE:	DRAWING:		DATE: March 2026	
			ATLAS PAGE NO. 68				SHEET 54 OF 66 SHEETS

CONSTRUCT 345 LF OF 12-INCH SEWER PIPE BY SLIPLINE & 55 LF OF 10-INCH SEWER PIPE BY OPEN CUT

LAWNWOOD ADDITION BLOCK 4

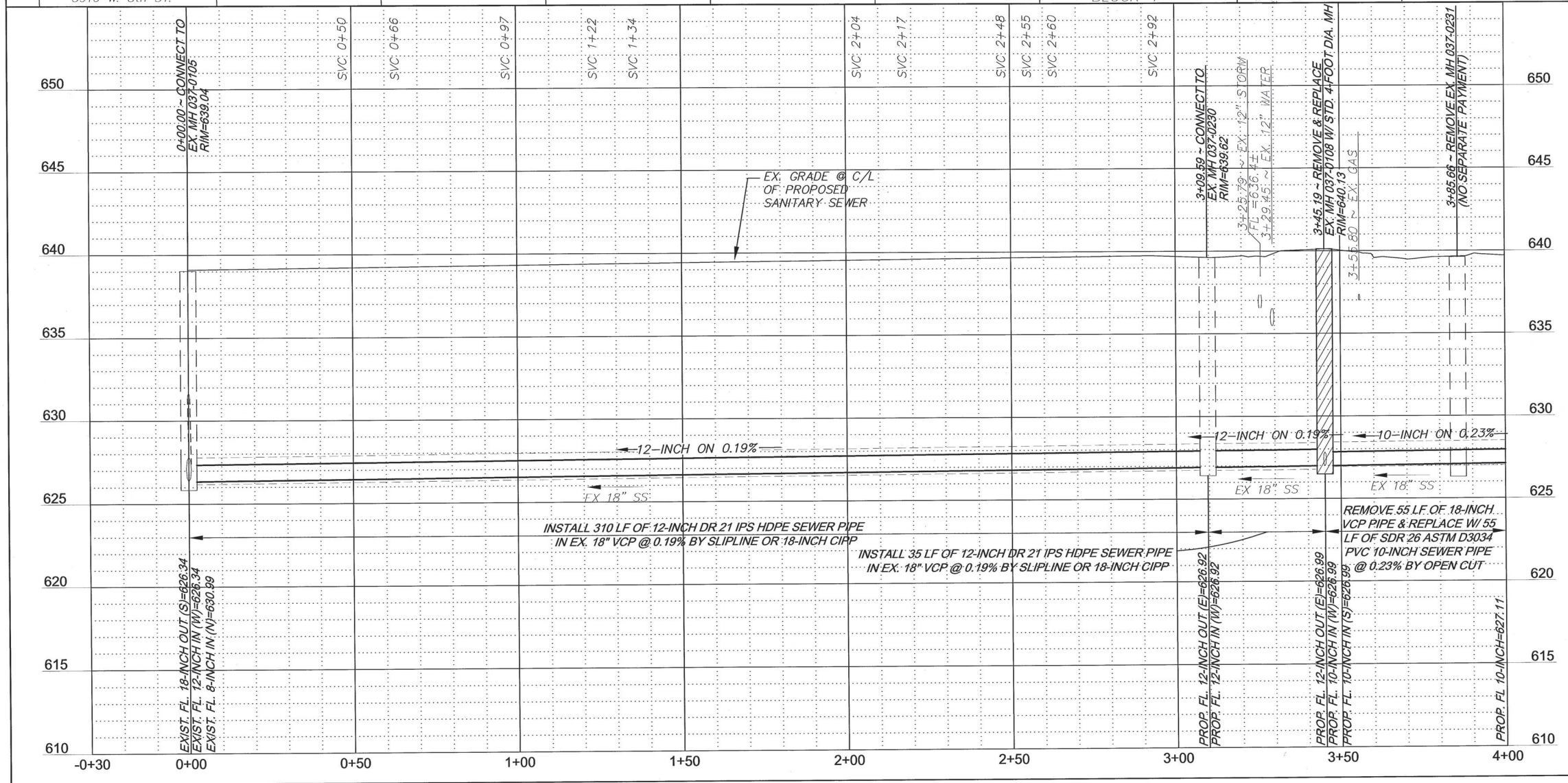
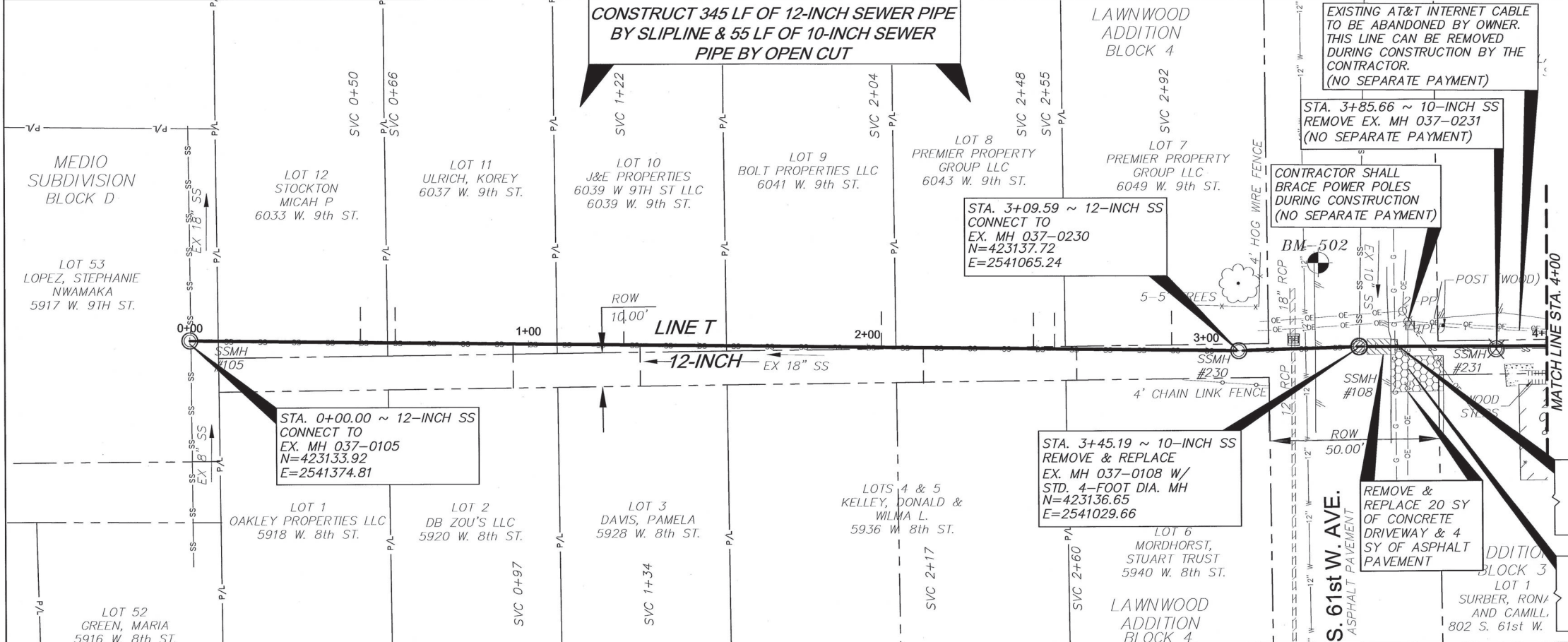
EXISTING AT&T INTERNET CABLE TO BE ABANDONED BY OWNER. THIS LINE CAN BE REMOVED DURING CONSTRUCTION BY THE CONTRACTOR. (NO SEPARATE PAYMENT)

BENCHMARKS:
 BM-502
 MAG NAIL SET 24- FEET SOUTH AND 12- FEET EAST OF EX. MH 037-0108
 N=423111.96
 E=2541041.67
 EL=640.28

LEGEND
 CONCRETE DRIVEWAY REMOVAL & REPLACEMENT
 ASPHALT PAVEMENT REMOVAL & REPLACEMENT

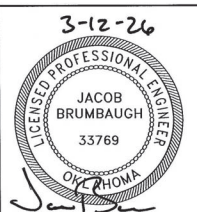


WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



WARNING!!!
 GAS MAIN USE CAUTION!!!

WARNING!!!
 OVERHEAD ELECTRIC USE CAUTION!!!



PLAN & PROFILE LINE T STA. 0+00 TO STA. 4+00
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 RJN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	DATE	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 JACOB BRUMBAUGH DESIGN MANAGER DATE: March 2026
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	AK 3/26		
			VERTICAL:	FIELD MGR.	BJM 3/26		
			1" = 4'				
			FILE:	DRAWING:			
			ATLAS PAGE NO: 68				

**WARNING!!!
OVERHEAD
ELECTRIC USE
CAUTION!!!**

**CONSTRUCT 400 LF OF 10-INCH SEWER PIPE
BY OPEN CUT**

STA. 7+41.65 ~ 10-INCH SS
CONSTRUCT
STD. 4-FOOT DIA. MH-1T
N=423136.73
E=2540633.20

STA. 6+19.87 ~ 10-INCH SS
REMOVE EX. MH 037-0109
(NO SEPARATE PAYMENT)

EXISTING AT&T INTERNET CABLE
TO BE ABANDONED BY OWNER.
THIS LINE CAN BE REMOVED
DURING CONSTRUCTION BY THE
CONTRACTOR.
(NO SEPARATE PAYMENT)

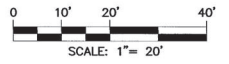
CONTRACTOR SHALL
BRACE POWER POLES
DURING CONSTRUCTION
(NO SEPARATE PAYMENT)

BENCHMARKS:

BM-502
MAG NAIL SET 24- FEET SOUTH AND 12- FEET EAST
OF EX. MH 037-0108

(SEE PREVIOUS SHEET)

N=423111.96
E=2541041.67
EL=640.28

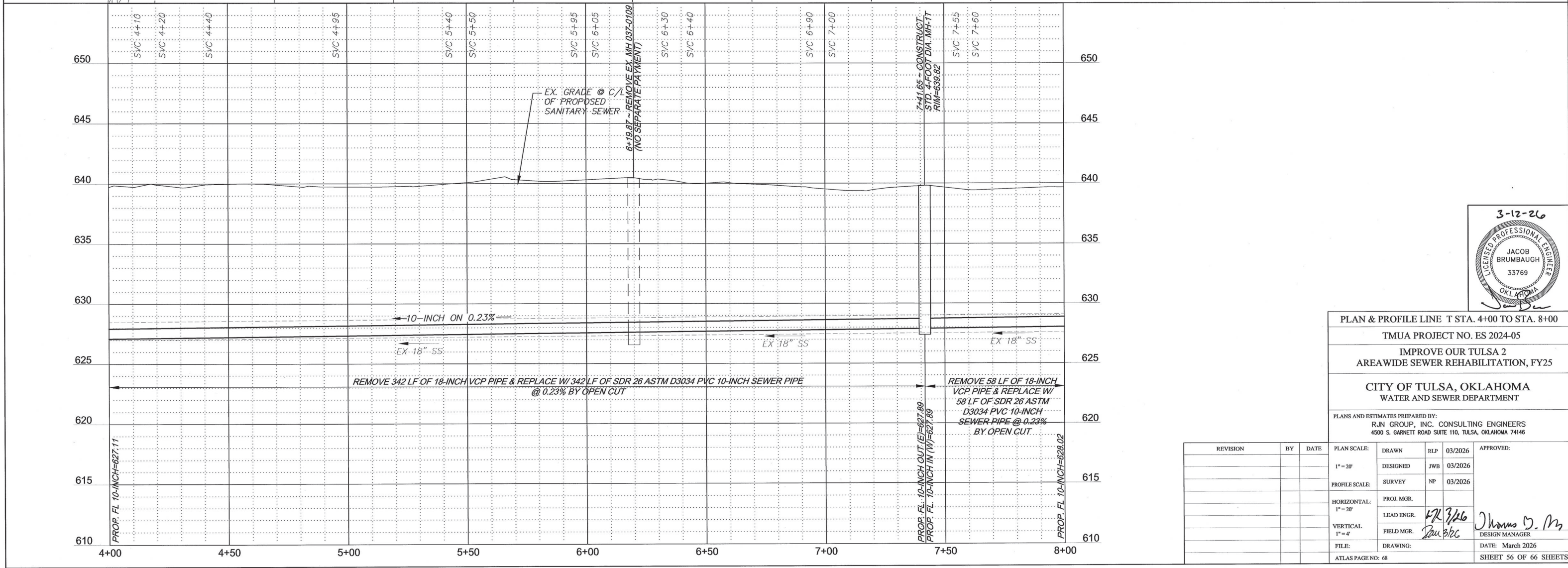
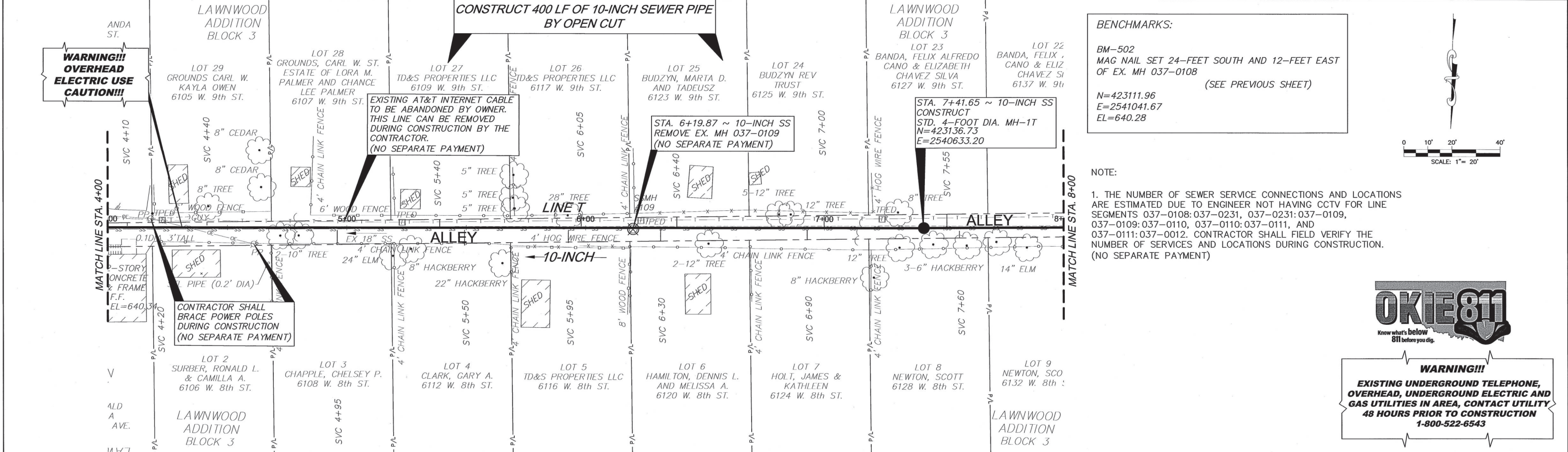


NOTE:

1. THE NUMBER OF SEWER SERVICE CONNECTIONS AND LOCATIONS ARE ESTIMATED DUE TO ENGINEER NOT HAVING CCTV FOR LINE SEGMENTS 037-0108; 037-0231, 037-0231; 037-0109, 037-0109; 037-0110, 037-0110; 037-0111, AND 037-0111; 037-0012. CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF SERVICES AND LOCATIONS DURING CONSTRUCTION. (NO SEPARATE PAYMENT)



WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**



PLAN & PROFILE LINE T STA. 4+00 TO STA. 8+00

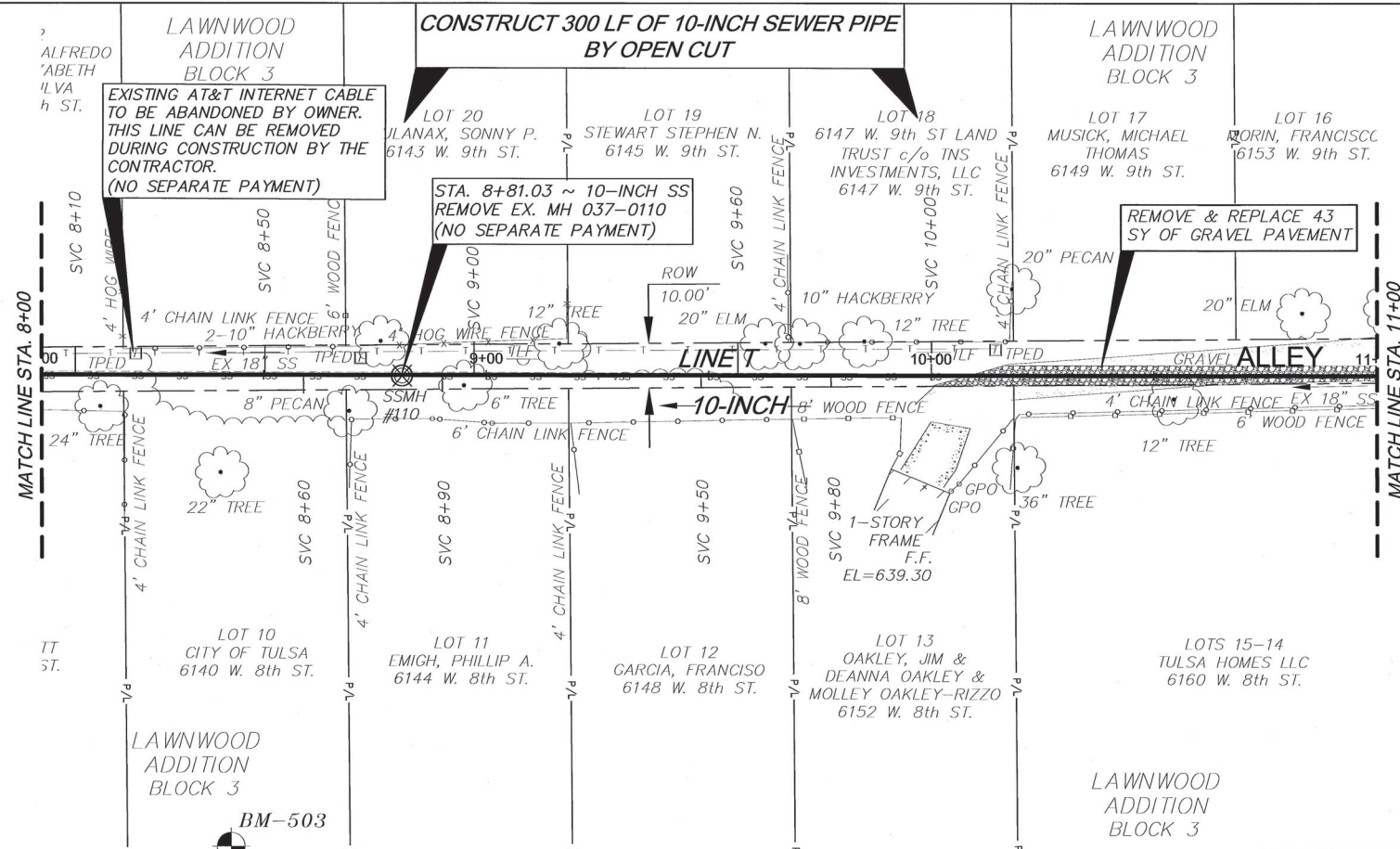
TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

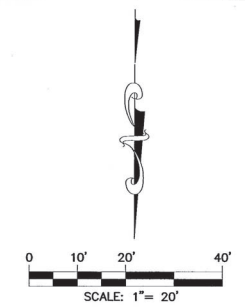
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R.J.N. GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 THOMAS D. M. DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	KR 3/26		
			FILE:	FIELD MGR.	Rau abc		DATE: March 2026
			ATLAS PAGE NO. 68	DRAWING:			SHEET 56 OF 66 SHEETS



BENCHMARKS:
 BM-503
 IRON PIN SET 105- FEET EAST AND 30- FEET SOUTH OF EX. MH 037-0110
 N=423241.68
 E=2540531.92
 EL=639.64

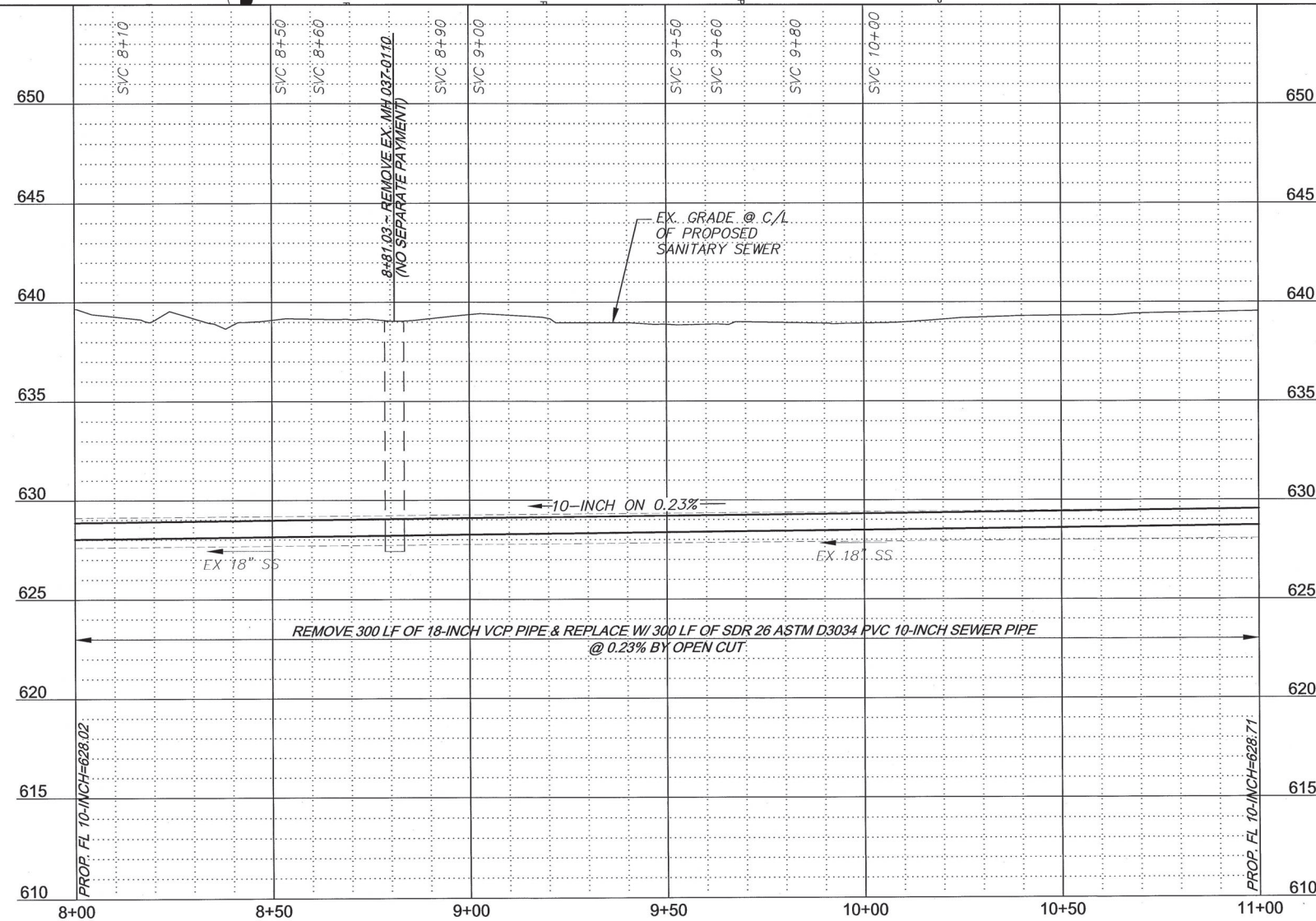


LEGEND
 GRAVEL PAVEMENT REMOVAL & REPLACEMENT

NOTE:
 1. THE NUMBER OF SEWER SERVICE CONNECTIONS AND LOCATIONS ARE ESTIMATED DUE TO ENGINEER NOT HAVING CCTV FOR LINE SEGMENTS 037-0108:037-0231, 037-0231:037-0109, 037-0109:037-0110, 037-0110:037-0111, AND 037-0111:037-0112. CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF SERVICES AND LOCATIONS DURING CONSTRUCTION. (NO SEPARATE PAYMENT)



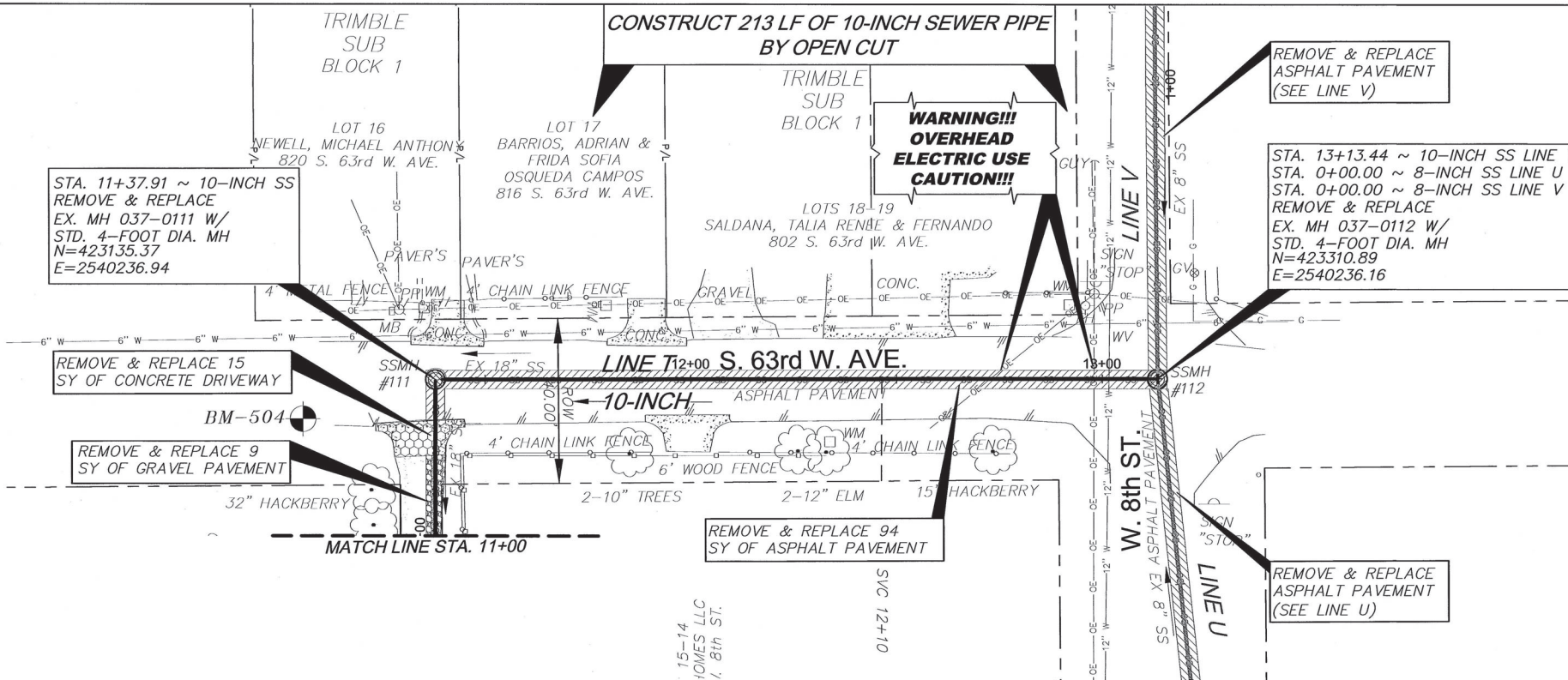
WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543



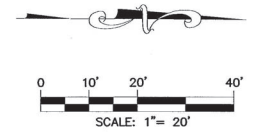
PLAN & PROFILE LINE T STA. 8+00 TO STA. 11+00
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.	KJR 3/26		
			VERTICAL:	FIELD MGR.	JWB 3/26		DESIGN MANAGER
			1" = 4'	FILE:	DRAWING:	DATE: March 2026	
			ATLAS PAGE NO: 68				SHEET 57 OF 66 SHEETS



BENCHMARKS:
 BM-504
 MAG NAIL SET 11- FEET EAST AND 31- FEET SOUTH OF EX. MH 037-0111
 N=423103.26
 E=2540246.49
 EL=639.94

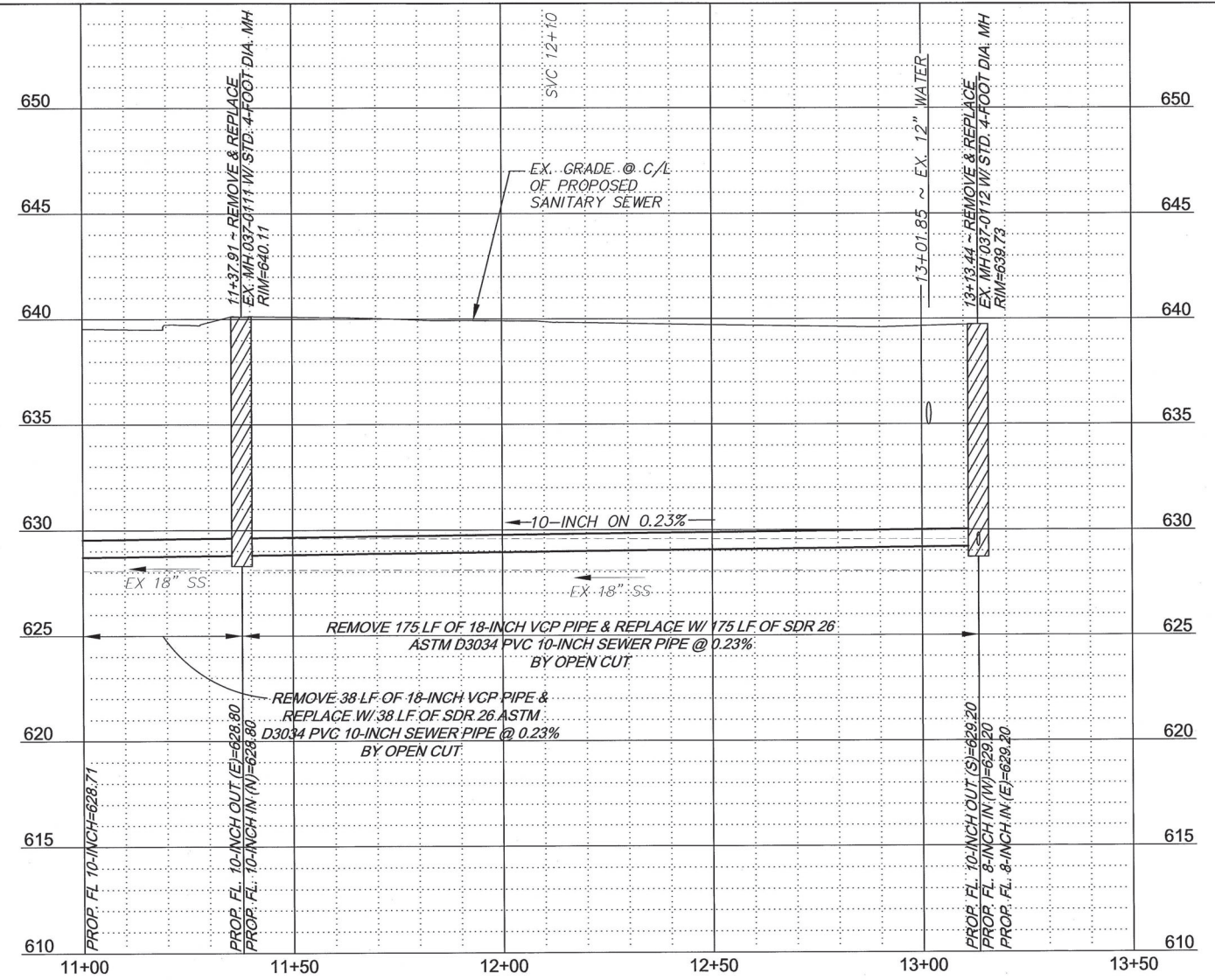


- LEGEND**
- GRAVEL PAVEMENT REMOVAL & REPLACEMENT
 - CONCRETE DRIVEWAY REMOVAL & REPLACEMENT
 - ASPHALT PAVEMENT REMOVAL & REPLACEMENT

NOTE:
 1. THE NUMBER OF SEWER SERVICE CONNECTIONS AND LOCATIONS ARE ESTIMATED DUE TO ENGINEER NOT HAVING CCTV FOR LINE SEGMENTS 037-0108; 037-0231, 037-0231; 037-0109, 037-0109; 037-0110, 037-0110; 037-0111, AND 037-0111; 037-0012. CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF SERVICES AND LOCATIONS DURING CONSTRUCTION. (NO SEPARATE PAYMENT)

OKIE811
 Know what's below 811 before you dig.

WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION
 1-800-522-6543



PLAN & PROFILE LINE A STA. 11+00 TO STA. 13+13

TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2 AREA WIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4'				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 68				SHEET 58 OF 66 SHEETS

UNPLATTED
SEC. 8, T.19N., R.12E.
WRIGHT, JOHN D. SR.
LIFE ESTATE c/o
PHILLIP R. WRIGHT
6440 CHARLES PAGE BLVD.

UNPLATTED
SEC. 8, T.19N., R.12E.
WRIGHT, JOHN D. SR.
LIFE ESTATE c/o
PHILLIP R. WRIGHT
6202 CHARLES PAGE BLVD.

LAWNWOOD
ADDITION
BLOCK 2
LOT 12
ALVES, JOHN
6143 W. 8th ST.

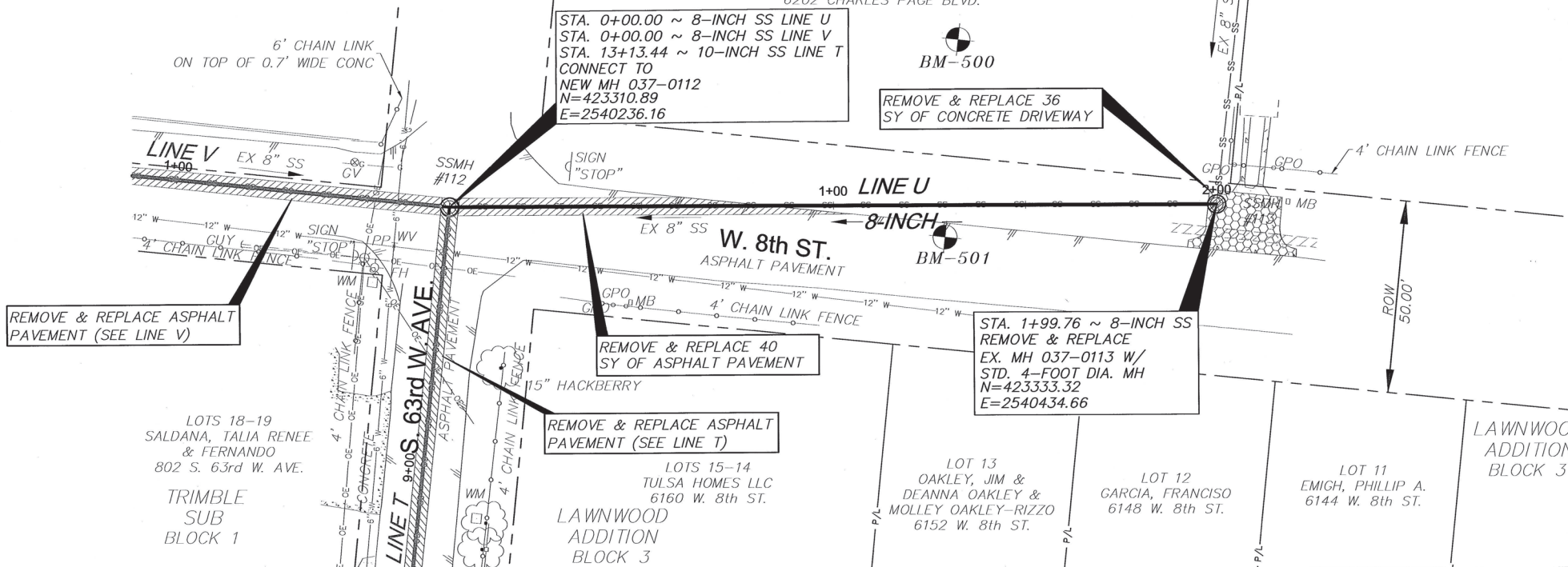
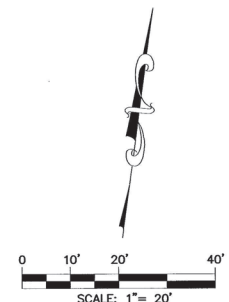
BENCHMARKS:

BM-500
IRON PIN SET 70- FEET WEST AND 42- FEET NORTH OF
EX. MH 037-0113

N=423368.40
E=2540363.18
EL=640.85

BM-501
MAG NAIL SET 70- FEET WEST AND 8- FEET SOUTH OF
EX. MH 037-0113

N=423317.13
E=2540365.28
EL=639.30

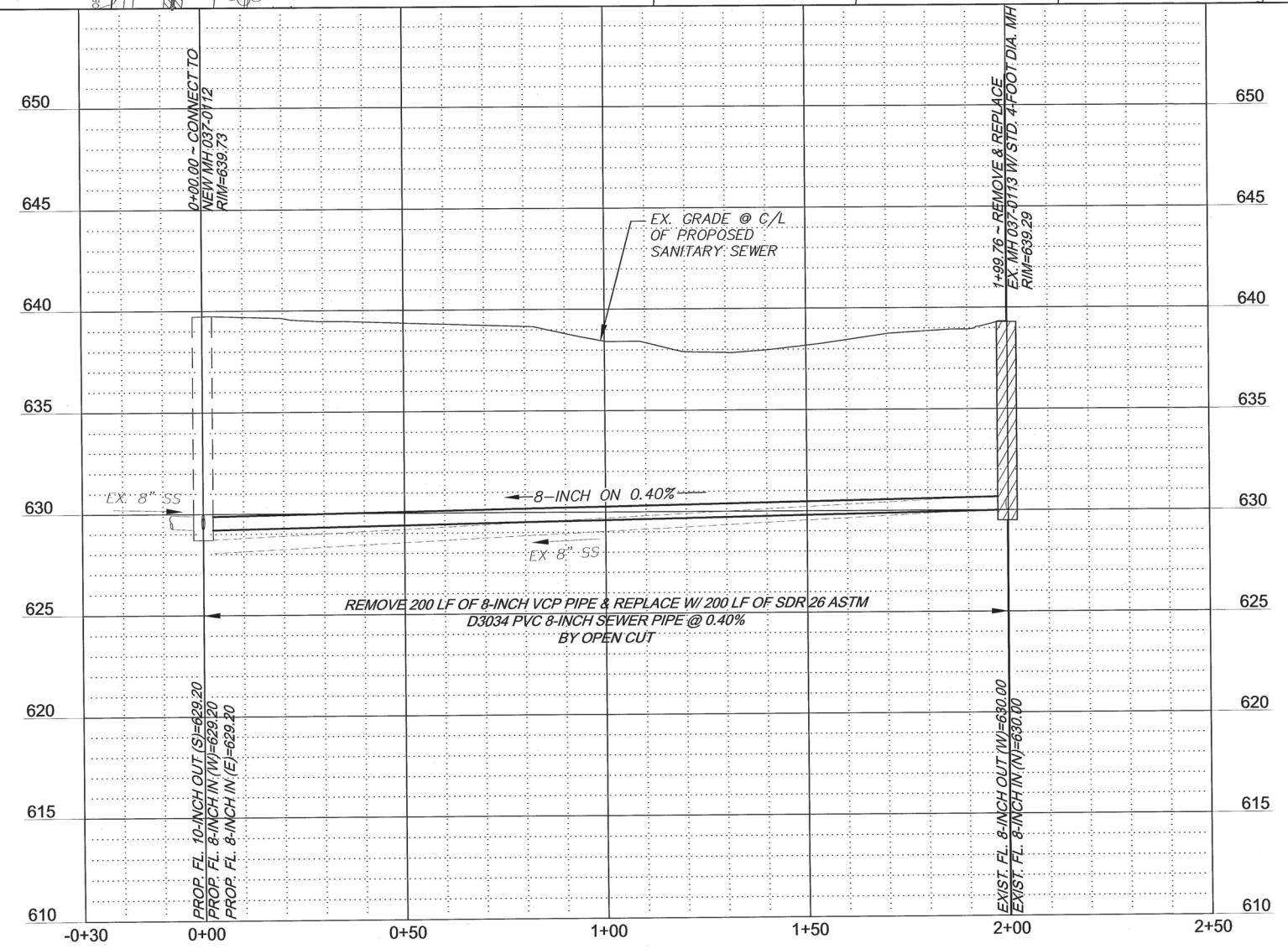


LEGEND

CONCRETE DRIVEWAY
REMOVAL & REPLACEMENT

ASPHALT PAVEMENT
REMOVAL & REPLACEMENT

WARNING!!!
**EXISTING UNDERGROUND TELEPHONE,
OVERHEAD, UNDERGROUND ELECTRIC AND
GAS UTILITIES IN AREA, CONTACT UTILITY
48 HOURS PRIOR TO CONSTRUCTION
1-800-522-6543**

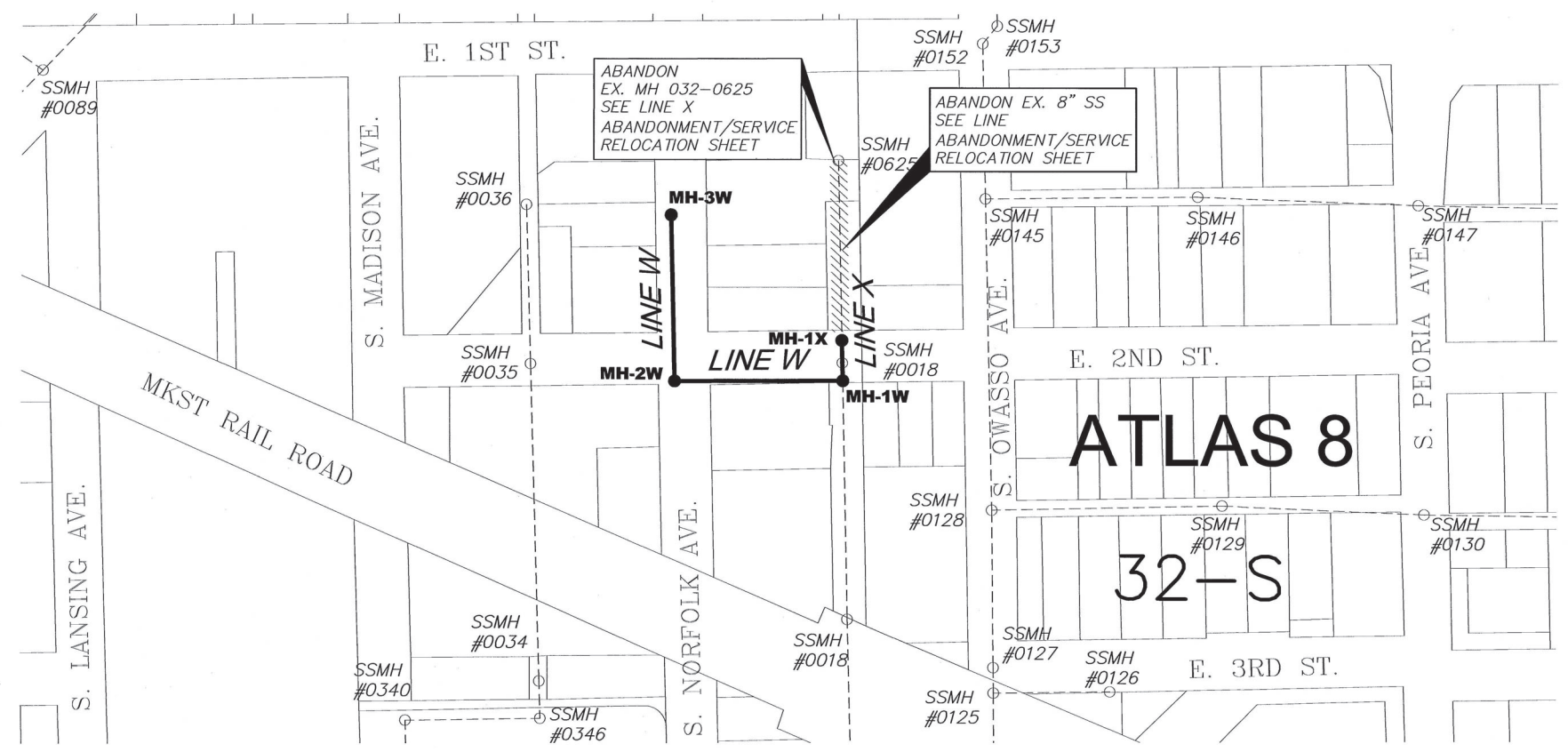
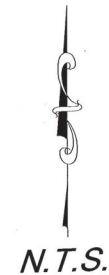


3-12-26
LICENSED PROFESSIONAL ENGINEER
JACOB BRUMBAUGH
33769
OKLAHOMA

PLAN & PROFILE LINE U
TMUA PROJECT NO. ES 2024-05
IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25
CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	02/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	02/2026	
			PROFILE SCALE:	SURVEY	NP	02/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4'	FILE:	DRAWING:	DATE: February 2026	
			ATLAS PAGE NO: 68				SHEET 59 OF 66 SHEETS

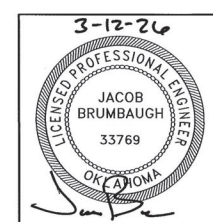


LEGEND

////// ABANDONMENT OF EXISTING SEWER

LINE W - SHEET 62

LINE X - SHEET 63



ATLAS PAGE 8 KEY MAP

TMUA PROJECT NO. ES 2024-05

IMPROVE OUR TULSA 2
AREAWIDE SEWER REHABILITATION, FY25

CITY OF TULSA, OKLAHOMA
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
R/JN GROUP, INC. CONSULTING ENGINEERS
4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

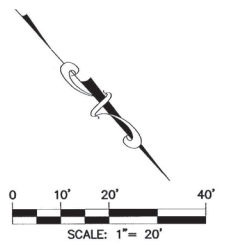
REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	624 3/26		
			VERTICAL:	FIELD MGR.	JWB 3/26		
			NA	FILE:	DRAWING:	DATE: March 2026	
ATLAS PAGE NO: 8							SHEET 61 OF 66 SHEETS

CONSTRUCT 391 LF OF 8-INCH SEWER PIPE BY OPEN CUT

REMOVE & REPLACE EX. 4-FOOT DIA. STORM MANHOLE & 10 LF OF 18" RCP (E)

HODGE ADDITION BLOCK 2

BENCHMARKS:
 BM-402
 IRON PIN SET 37- FEET NORTH AND 25- FEET WEST OF PROPOSED MH-3A
 N=427841.05
 E=2565182.64
 EL=701.99

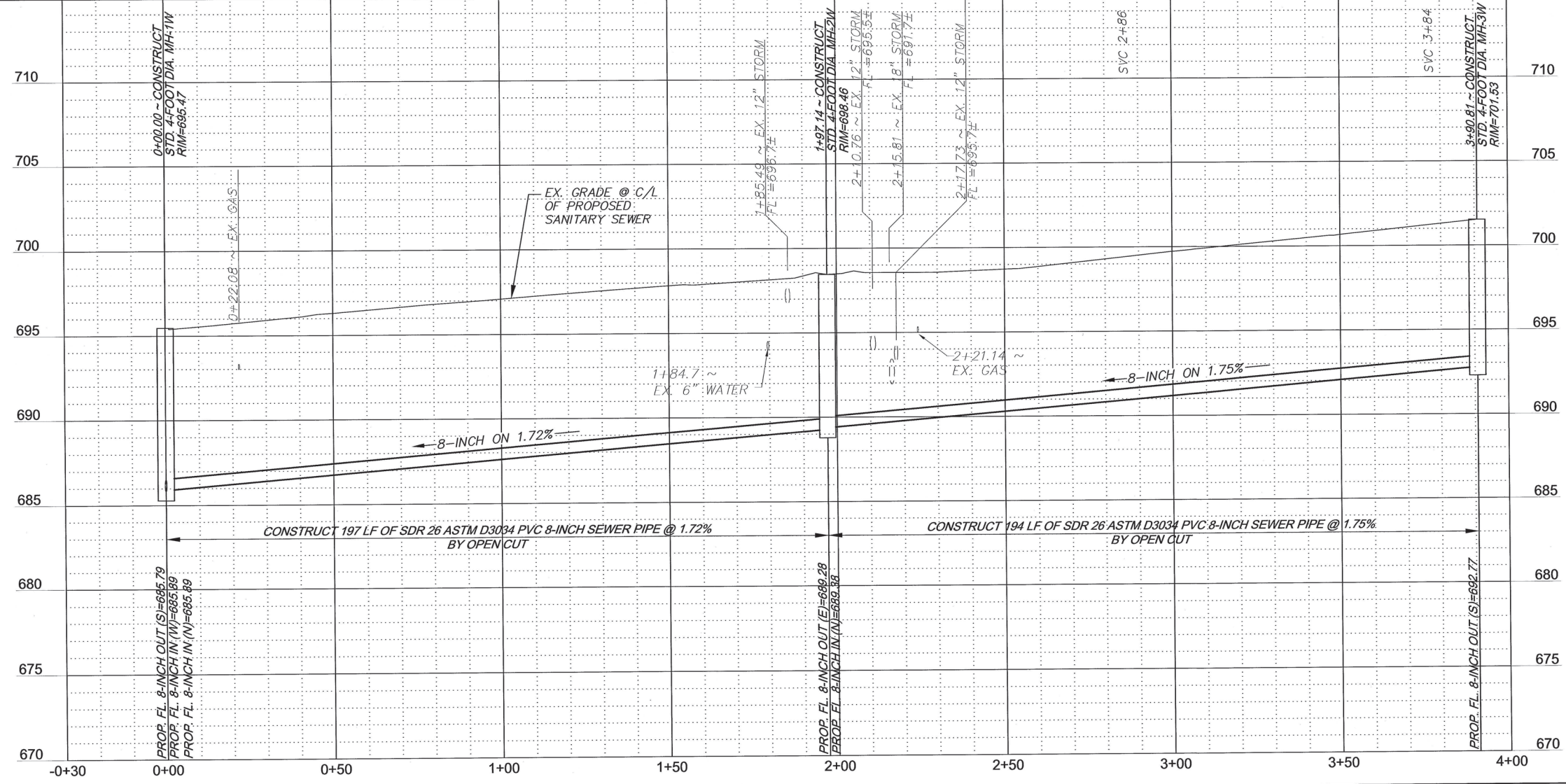
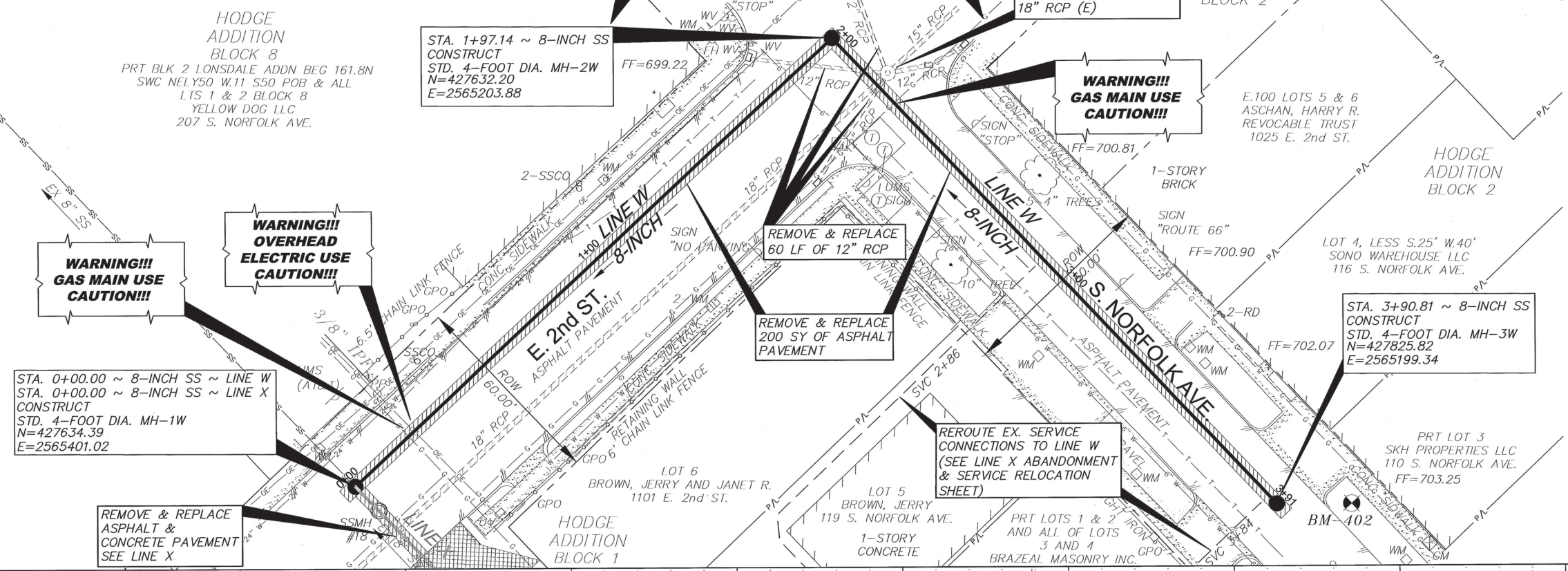


LEGEND
 ASPHALT PAVEMENT
 REMOVAL & REPLACEMENT

NOTE:
 1. CONTRACTOR SHALL VERIFY CLEAN OUT LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION OF PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)
 2. EXISTING CLEANOUTS ARE LOCATED INSIDE THE BUILDINGS. CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION AND DEPTH OF SERVICE LINES OUTSIDE OF EACH BUILDING PRIOR TO CONSTRUCTING PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)

OKIE811
 Know what's below 811 before you dig.

WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC AND GAS UTILITIES IN AREA, CONTACT UTILITY 48 HOURS PRIOR TO CONSTRUCTION 1-800-522-6543

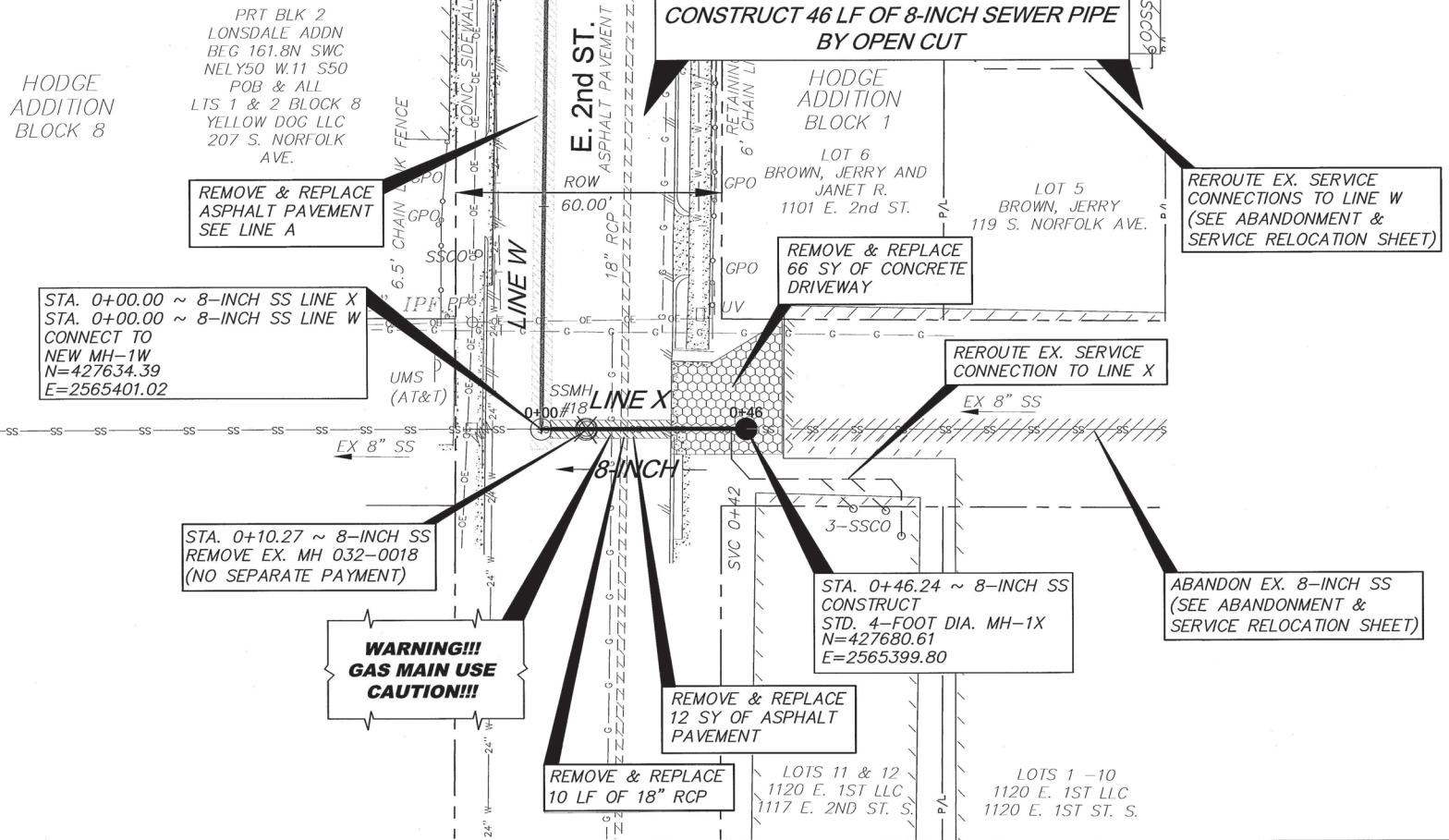


3-12-26
 LICENSED PROFESSIONAL ENGINEER
 JACOB BRUMBAUGH
 33769
 OKLAHOMA

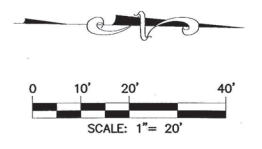
PLAN & PROFILE LINE W
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	DATE	APPROVED:
			1"=20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1"=20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1"=4'				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 8				SHEET 62 OF 66 SHEETS



BENCHMARKS:
 BM-402
 IRON PIN SET 37- FEET NORTH AND 25- FEET WEST
 OF PROPOSED MH-3A
 (SEE PREVIOUS SHEET)
 N=427841.05
 E=2565182.64
 EL=701.99

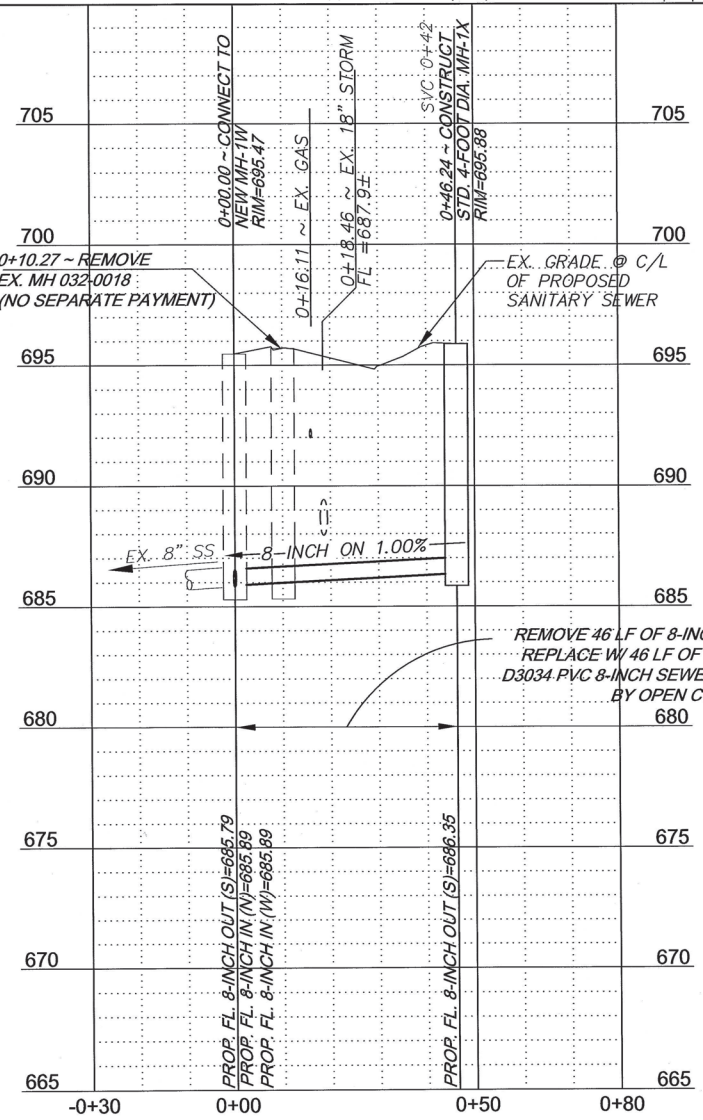


LEGEND

- CONCRETE DRIVEWAY
REMOVAL & REPLACEMENT
- ASPHALT PAVEMENT
REMOVAL & REPLACEMENT
- ABANDONMENT OF EXISTING
SEWER

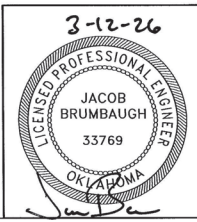


WARNING!!!
 EXISTING UNDERGROUND TELEPHONE,
 OVERHEAD, UNDERGROUND ELECTRIC AND
 GAS UTILITIES IN AREA, CONTACT UTILITY
 48 HOURS PRIOR TO CONSTRUCTION
 1-800-522-6543



NOTE:

- CONTRACTOR SHALL VERIFY CLEAN OUT LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION OF PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)
- EXISTING CLEANOUTS ARE LOCATED INSIDE THE BUILDINGS. CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION AND DEPTH OF SERVICE LINES OUTSIDE OF EACH BUILDING PRIOR TO CONSTRUCTING PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)

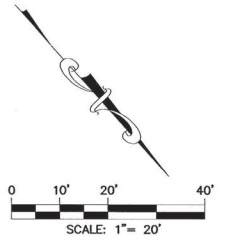


PLAN & PROFILE LINE X
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	R/LP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			1" = 20'	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			1" = 4'				
			FILE:	DRAWING:			DATE: March 2026
			ATLAS PAGE NO: 8				SHEET 63 OF 66 SHEETS

ABANDON 202 LF OF 8-INCH SEWER PIPE

BENCHMARKS:
 BM-402
 IRON PIN SET 37- FEET NORTH AND 25- FEET WEST OF PROPOSED MH-3A
 N=427841.05
 E=2565182.64
 EL=701.99



LEGEND

- CONCRETE DRIVE WAY PAVEMENT REMOVAL & REPLACEMENT
- ASPHALT PAVEMENT REMOVAL & REPLACEMENT
- ABANDONMENT OF EXISTING SEWER

NOTES:

1. REMOVE TOP 3 FEET ON EXISTING MANHOLES AND FILL EXISTING MANHOLES AND 8-INCH SS WITH CELLULAR CONCRETE.
2. CONTRACTOR SHALL TELEWISE ALL SANITARY SEWER LINES CALLED OUT FOR ABANDONMENT TO DETERMINE LOCATION OF ACTIVE SERVICES. ANY ACTIVE SERVICES ON AN ABANDONED LINE SHALL BE RECONNECTED TO AN EXISTING OR PROPOSED LINE IN THE IMMEDIATE VICINITY. ENGINEER SHALL BE CONTACTED IMMEDIATELY IF THERE IS NO SEWER MAIN IN THE VICINITY TO CONNECT THE SERVICE.
3. CONTRACTOR SHALL VERIFY CLEAN OUT LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION OF PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)
4. EXISTING CLEANOUTS ARE LOCATED INSIDE THE BUILDINGS. CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION AND DEPTH OF SERVICE LINES OUTSIDE OF EACH BUILDING PRIOR TO CONSTRUCTING PROPOSED SEWER MAINS. (NO SEPARATE PAYMENT)

HODGE ADDITION BLOCK 8
 PRT BLK 2 LONSDALE ADDN BEG 161.8N
 SWC NELY50 W.11 S50 POB & ALL
 LTS 1 & 2 BLOCK 8
 YELLOW DOG LLC
 207 S. NORFOLK AVE.

STA. 0+00.00 ~ 8-INCH SS ~ LINE W
 STA. 0+00.00 ~ 8-INCH SS ~ LINE X
 CONSTRUCT
 STD. 4-FOOT DIA. MH-1W
 N=427634.39
 E=2565401.02

STA. 0+46.24 ~ 8-INCH SS ~ LINE X
 CONSTRUCT
 STD. 4-FOOT DIA. MH-1X
 N=427680.61
 E=2565399.80

STA. 0+10.27 ~ 8-INCH SS
 REMOVE EX. MH 032-0018
 (NO SEPARATE PAYMENT)

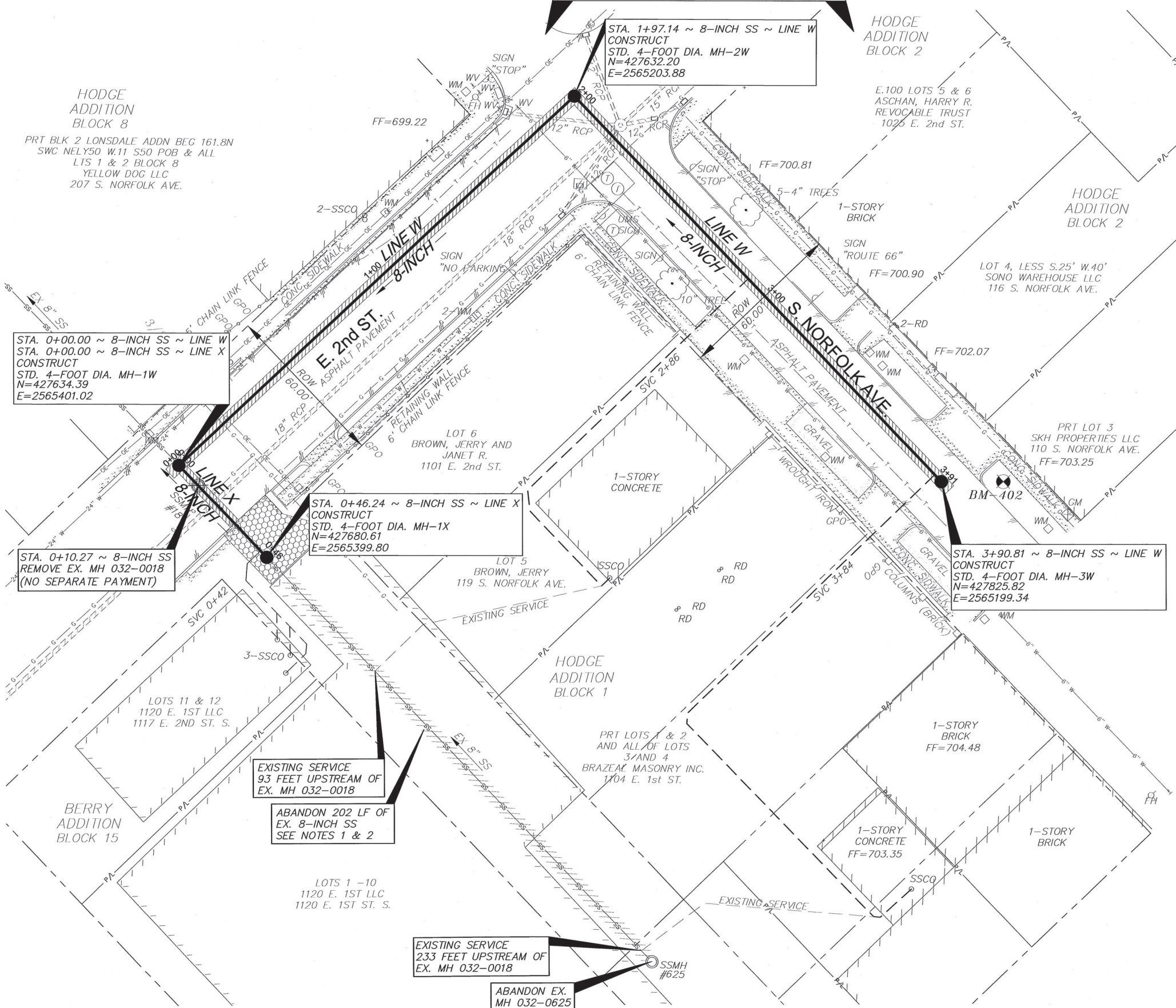
STA. 3+90.81 ~ 8-INCH SS ~ LINE W
 CONSTRUCT
 STD. 4-FOOT DIA. MH-3W
 N=427825.82
 E=2565199.34

EXISTING SERVICE
 93 FEET UPSTREAM OF
 EX. MH 032-0018

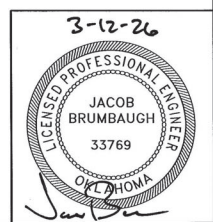
ABANDON 202 LF OF
 EX. 8-INCH SS
 SEE NOTES 1 & 2

EXISTING SERVICE
 233 FEET UPSTREAM OF
 EX. MH 032-0018

ABANDON EX.
 MH 032-0625
 SEE NOTE 1



WARNING!!!
 EXISTING UNDERGROUND TELEPHONE,
 OVERHEAD, UNDERGROUND ELECTRIC AND
 GAS UTILITIES IN AREA, CONTACT UTILITY
 48 HOURS PRIOR TO CONSTRUCTION
 1-800-522-6543

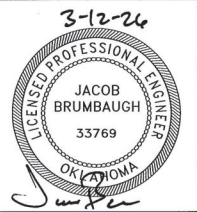
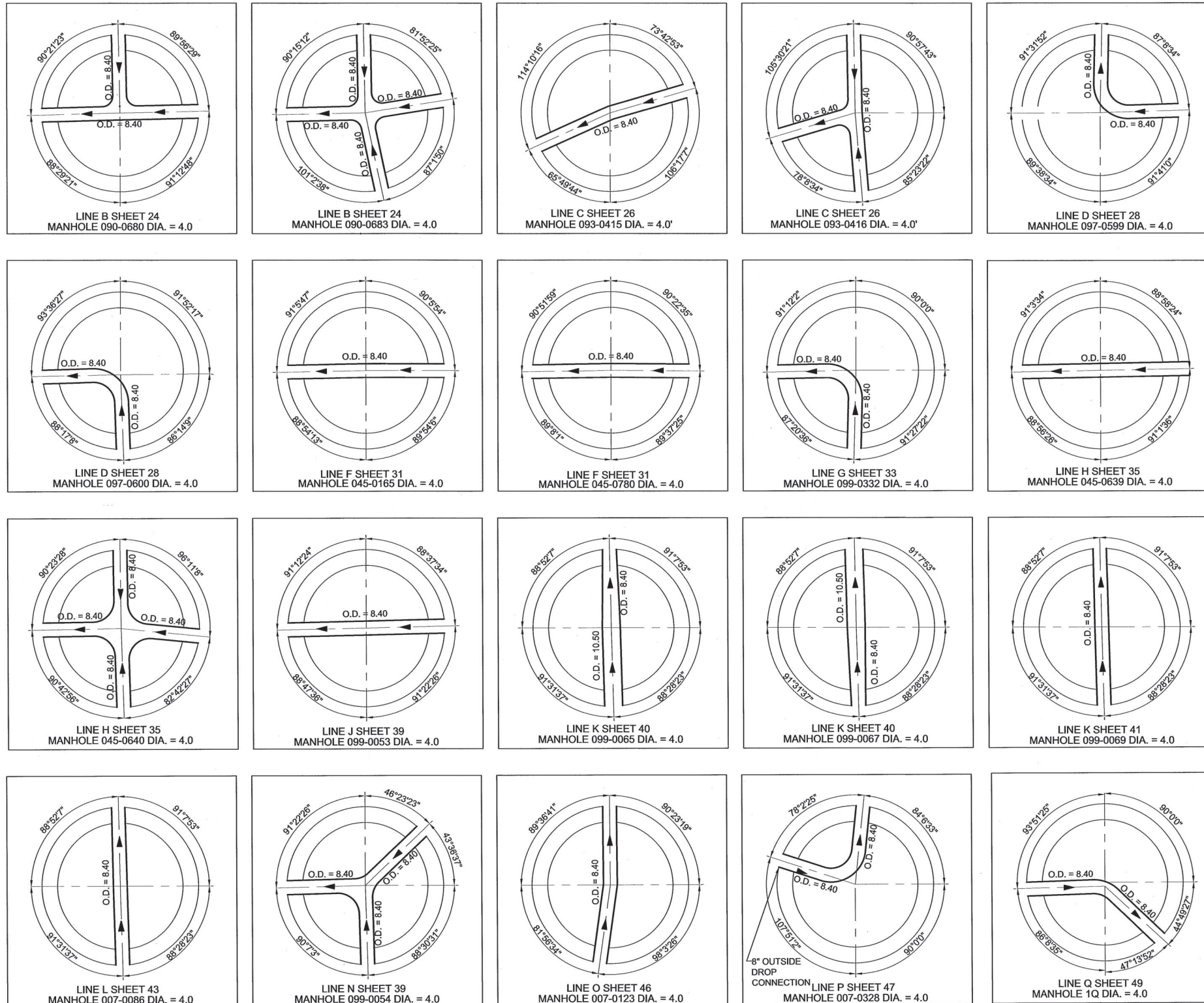


LINE X ABANDONMENT & SERVICE RELOCATION
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			1" = 20'	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 64 OF 66 SHEETS
			PROFILE SCALE:	SURVEY	NP	03/2026	
			HORIZONTAL:	PROJ. MGR.			
			VERTICAL:	LEAD ENGR.	3/26		
			1" = 4'	FIELD MGR.	3/26		
			FILE:	DRAWING:			
			ATLAS PAGE NO: 8				

NEW & REPLACEMENT MANHOLES

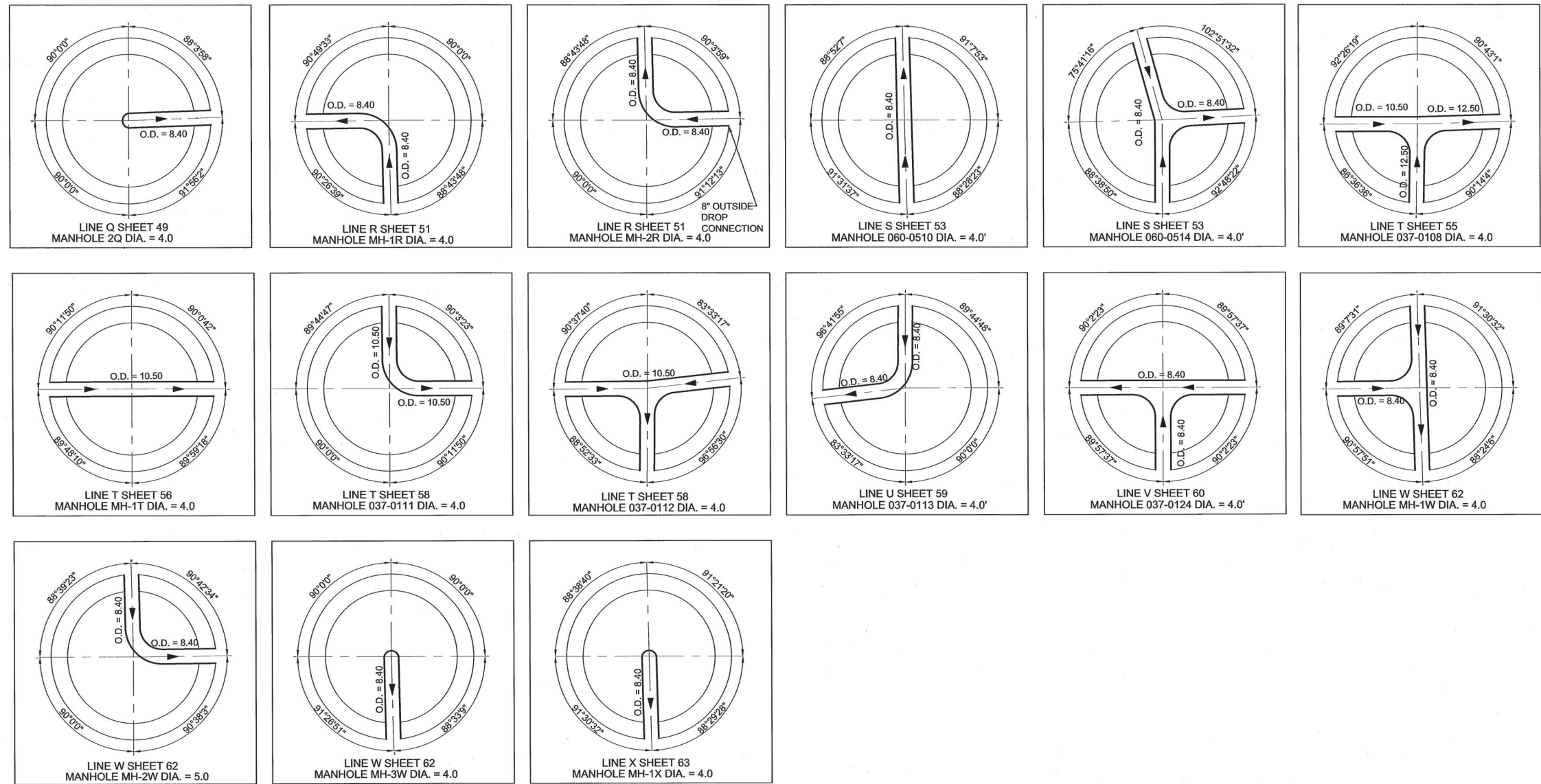


MANHOLE LAYOUT - 1
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREA-WIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/J GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 65 OF 66 SHEETS
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.			
			VERTICAL:	FIELD MGR.			
			NA				
			FILE:	DRAWING:			
			ATLAS PAGE NO: NA				

8" OUTSIDE DROP CONNECTION LINE P SHEET 47 MANHOLE 007-0328 DIA. = 4.0

NEW & REPLACEMENT MANHOLES



MANHOLE LAYOUT - 2
 TMUA PROJECT NO. ES 2024-05
 IMPROVE OUR TULSA 2
 AREAWIDE SEWER REHABILITATION, FY25
 CITY OF TULSA, OKLAHOMA
 WATER AND SEWER DEPARTMENT
 PLANS AND ESTIMATES PREPARED BY:
 R/JN GROUP, INC. CONSULTING ENGINEERS
 4500 S. GARNETT ROAD SUITE 110, TULSA, OKLAHOMA 74146

REVISION	BY	DATE	PLAN SCALE:	DRAWN	RLP	03/2026	APPROVED:
			NA	DESIGNED	JWB	03/2026	 DESIGN MANAGER DATE: March 2026 SHEET 66 OF 66 SHEETS
			PROFILE SCALE:	SURVEY			
			HORIZONTAL:	PROJ. MGR.			
			NA	LEAD ENGR.	<i>[Signature]</i>	3/26	
			VERTICAL:	FIELD MGR.	<i>[Signature]</i>	3/26	
			NA	DRAWING:			
			FILE:				
			ATLAS PAGE NO: NA				