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REQUIRED ODOT STANDARD DRAWINGS

2019 STANDARDS	2009 STANDARDS
ROADWAY	TRAFFIC
SSS-2-1	TC31-1-01
TESC-1-0	TC32-1-00
ISD-0	TC34-1-01
ASCD-6-1	TC35-1-00
PSE-2-1	TC36-1-02
PCI-1-1	TC37-1-02
PDI-2-2	TC38-1-00
	TC39-1-01
	TC314-1-00
	TC319-1-01
	TC320-1-00

CITY OF TULSA, OKLAHOMA
CONSTRUCTION PLANS FOR

NON-ARTERIAL STREET MAINTENANCE
AT VARIOUS LOCATIONS IN
STREET MAINTENANCE ZONE 3081
PROJECT NO. 2036N3081Z
ACCOUNT NO. 2036N3081Z.Streets.NArthb.4281.42813122.541106
ENGINEERING SERVICES DEPARTMENT
TULSA, OKLAHOMA

SURVEY DATA

NORTHING	EASTING	ELEV.	DESCRIPTION
435334.2090	2594694.7950	628.68	CITY OF TULSA BM "COT-510"
435387.7970	2599285.9860	616.70	CITY OF TULSA BM "TD12"

1. HORIZONTAL CONTROL:

A. HORIZONTAL CONTROL FOR THIS SURVEY IS
NAD 83 (1993) OKLAHOMA STATE PLANE
COORDINATE SYSTEM, NORTH ZONE 3501.

B. ACCURACY - 1ST ORDER OR BETTER.

2. VERTICAL CONTROL:

A. LEVEL DATUM IN NAVD 1988.

B. ACCURACY - 1st ORDER OR BETTER.

3. PERMANENT BENCHMARKS:

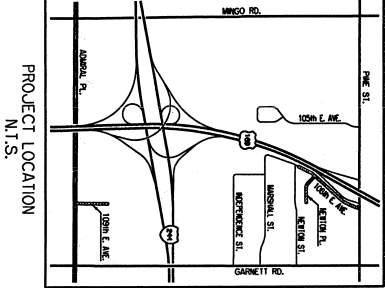
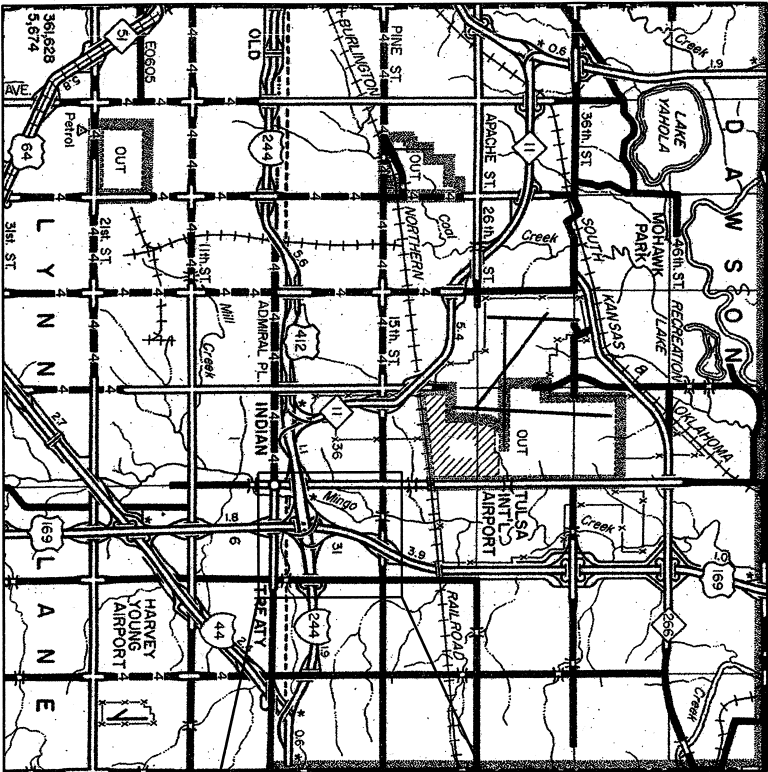
COT-510
TD12
JJ

UTILITY CONTACTS

UTILITY	CONTACT	PHONE
AT&T	AL NICHOLS	918-596-4237
COX COMMUNICATIONS	BRANDON WADE	918-286-4716
ONG	JONATHON MEADOWS	918-831-8215
AEP/PSO	ADAM FIELDS	918-250-6257
CITY OF TULSA UTILITY COORDINATOR	CHRIS KOVAC	918-596-9649
MTA	ERIC SMITH	918-830-0024

CONVENTIONAL SYMBOLS

PROPOSED ROAD	
RAILROADS	
TOWNSHIP AND RANGE	
SECTION LINES	
QUARTER SECTION LINES	
FENCES	
GROUND LINE	
EXISTING ROADS	
BASE LINE	
GRADE LINES	
TELEPHONE AND TELEGRAPH	
POWER LINES	
BUILDINGS	
OIL WELL	
DRAINAGE STRUCTURES - IN PLACE	
DRAINAGE STRUCTURES - NEW	
RIGHT-OF-WAY LINES - EXISTING	
RIGHT-OF-WAY LINES - NEW	
CONTROLLED ACCESS	
RIGHT-OF-WAY FENCE	



DESIGN INFO	
DESIGN SPEED	25 MPH
LANE MILES OF REHAB	0.98 MILES

CITY OF TULSA

POPULATION 400,689 (2018)

ENTIRE PROJECT IS WITHIN THE CORPORATE
AND URBAN LIMITS OF THE CITY OF TULSA



APPROVED BY:

CITY ENGINEER

11.10.23

ADVERTISEMENT DATE:

11/3/2023

DATE

PREPARED BY: EST, INC. 615 N. HUDSON, STE. 300
C.A. NO. 3639 OKLAHOMA CITY, OK 73102
(405) 815-3600

MOHAMED ALI ELYAZGI, OKLA. REG. NO. 30818 DATE 10/10/23



CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND DETAILS GOVERN.
ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH
2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SUMMARY OF PAY QUANTITIES - ROADWAY

ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY
1	201(A)	CLEANING AND GRUBBING	(E-1, 2)	ACRE	1
2	202(A)	UNCLASSIFIED EXCAVATION	(E-3, 4)(R-1)	CY	586
3	220	SWPPP DOCUMENTATION AND MANAGEMENT	(E-6)	EA	1
4	221(D)	TEMPORARY SEDIMENT FILTER	(E-7, 8, 9)	EA	4
5	230(A)	SOLID SLAB SODDING	(E-10, 11)	SY	26
6	303(A)	AGGREGATE BASE TYPE A	(S-1, 2)	CY	390
7	310(B)	SUBGRADE METHOD B		SY	880
8	325	SEPARATOR FABRIC	(S-3)	SY	2,418
9	COT 334	CONSTRUCTOR AS-BUILT S		EA	1
10	409	FABRIC REINFORCEMENT	(S-4)	SY	7,588
11	411(C)	SUPERPAVE, TYPE S4 (PG 64-22 OK)	(S-5, 6, 7, 8)	TON	842
12	411(E)	SUPERPAVE, TYPE S6 (PG 64-22 OK)	(S-5, 6, 7, 8)	TON	84
13	412	COLD MILL PAVEMENT	(S-9)	SY	6,307
14	609(B)	COMBINED CURB AND GUTTER (6' BARRIER)	(S-12, 13, 15, 16)	LF	325
15	610(B)	CONCRETE DRIVEWAY (6' H.E.S.)	(S-12, 13, 16, 17)	SY	503
16	612(A)	MANHOLE ADJUSTED TO GRADE (PUBLIC)	(S-12)(R-2)(D-1, 2, 6)	EA	1
17	612(E)	VALVE BOX ADJUSTED TO GRADE	(S-12)(R-2)(D-6)	EA	2
18	619(B)	REMOVAL OF CURB AND GUTTER	(R-1, 2, 5, 6)	LF	564
19	619(B)	REMOVAL OF CONCRETE DRIVEWAY	(R-1, 2, 5, 6)	SY	270
20	619(B)	REMOVAL OF ASPHALT DRIVEWAY	(R-1, 2, 5, 6)	SY	16
21	641	MOBILIZATION	(G-2)	EA	1
22	642	CONSTRUCTION STAKING	(G-3, 4)	EA	1
23	(SP) COT 643	CONTRACTOR'S QUALITY CONTROL		EA	1
24	SPECIAL	TYPE I AC PATCH	(S-21, G-1)	CY	198
25	SPECIAL	URBAN RIGHT-OF-WAY RESTORATION	(G-5, 6, 9, 10)	EA	1
26	SPECIAL	OWNER ALLOWANCE		ALLOW	50,000

SUMMARY OF PAY QUANTITIES - TRAFFIC

ITEM NO.	SPEC. NO.	DESCRIPTION	PAY ITEM NOTE	UNIT	QUANTITY
27	COT 608(A)	POST-MOUNTED TRAFFIC / STREET NAME SIGNS		SF	99
28	COT 608(E)	2" SIGN POST		LF	45
29	COT 608(D)	1 3/4" SIGN POST		LF	228
30	COT 608(C)	1 1/2" SIGN POST		LF	12
31	880(B)	SIGNS 0 TO 6.25 SF	(T-2, 4, 5)	SD	1,890
32	880(B)	SIGNS 6.26 TO 15.99 SF	(T-2, 4, 5)	SD	1,350
33	880(B)	SIGNS 16.00 AND UP	(T-2, 4, 5)	SD	540
34	880(C)	BARRICADES (TYPE III)	(T-2, 4, 5)	SD	1,350
35	880(E)	TYPE "A" WARNING LIGHT	(T-5)	SD	3,240
36	880(E)	TYPE "C" WARNING LIGHT	(T-5)	SD	9,630
37	880(F)	DRUMS	(T-2, 4, 5)	SD	9,630
38	880(I)	FLAGGER	(T-6)	FD	450
39	SPECIAL	PROJECT SIGN (CITY OF TULSA)	(T-7)	EA	3

ITEMS LISTED OR SHOWN ON DRAWINGS AND/ OR DESCRIBED IN THE SPECIFICATIONS THAT ARE NOT INCLUDED AS A SEPARATE PAY ITEM QUANTITY SHALL BE CONSIDERED INCIDENTAL AND THE COST SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS. THE PRICE BID FOR ALL WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, INCIDENTALS, AND ALL OTHER REQUIRED ITEMS TO COMPLETE THE WORK AS SHOWN ON PLANS AND SPECIFICATIONS.

SURFACING / STRUCTURES (S1-S21)

PAY ITEM NOTES (VERSION: 8/9/2017)

- S-1: TYPE A AGGREGATE BASE WAS ESTIMATED TO BE USED AS THE BASE MATERIAL FOR 90% OF THE PATCHING. QUICK SET FLOWABLE FILL WAS ESTIMATED TO BE USED AS THE BASE MATERIAL FOR 10% OF THE PATCHING. ACTUAL QUANTITIES TO BE DETERMINED BY THE ENGINEER.
- S-2: INCLUDES COMPACTION OF AGGREGATE TO 98% AASHTO 1180 MODIFIED PROCTOR.
- S-3: SEPARATOR FABRIC SHALL BE USED AT ALL PAVEMENT PATCHES AND RECONSTRUCTION SECTIONS. THE SEPARATOR FABRIC SHALL BE CUT AND OVERLAPPED A MINIMUM OF 2 FT AT ALL EDGES OF THE REPAIR.
- S-4: FABRIC REINFORCEMENT SHALL BE USED ON OVERLAY AREAS. THE COST OF BITUMINOUS BINDER FOR FABRIC REINFORCEMENT SHALL BE INCLUDED IN THE UNIT COST OF THIS PAY ITEM. THE BITUMINOUS BINDER SHALL MEET DOT STANDARD SPECIFICATIONS AND THE RECOMMENDATIONS OF THE FABRIC REINFORCEMENT MANUFACTURER.
- S-5: THE COST OF TACK COAT, EDGE JOINT SEAL MATERIAL AND SCREENINGS FOR BLOTTING, AND ALL LABOR ASSOCIATED WITH THESE ITEMS, SHALL BE INCLUDED IN ASPHALT CONCRETE.
- S-6: ESTIMATED AT 112 LBS PER SQ YD PER 1 INCH THICK.
- S-7: DDOT PAY FACTOR FOR AVERAGE LOT DENSITY SHALL NOT BE USED FOR THIS PROJECT. FAILURE TO REACH AVERAGE LOT DENSITY OF 92%-97% WILL RESULT IN REJECTION OF WORK.
- S-8: A HIGHER GRADE OF ASPHALT BINDER THAN IS INDICATED ON THE PLANS MAY BE USED, BUT AT NO ADDITIONAL COST TO THE CITY.

BINDER ²	MEASALS	ADT ¹	NOTES
PG 64-22 OK	<3	<5,000	USE WHEN MORE THAN 4-6 INCHES BELOW THE SURFACE. ALSO USE FOR SHOULDER, DRIVEWAYS, BELOW P.C. AND TEMPORARY CONSTRUCTION.
PG 70-28 OK	<10	<10,000	USE ONLY IN THE TOP 4-6 INCHES FOR DRIVING LANES.
PG 76-28 OK	>=10	>=10,000	USE ONLY IN THE TOP 4-6 INCHES FOR DRIVING LANES.
PG 76-28 E			CONTACT DDOT MATERIALS DIVISION FOR RECOMMENDED USE

¹USE ADT ONLY WHEN ESAL COMPUTATIONAL DATA IS NOT AVAILABLE. CALCULATE THE DESIGN ESALS BASED ON 20 YEARS.

²PG 70-28 OK OR PG 76-28 OK MAY BE DESIRABLE IN HIGH VOLUME AREAS WHERE SLOW, STANDING, OR TURNING TRAFFIC OCCURS, SUCH AS URBAN INTERSECTIONS OR OFF-RAMPS. OFF RAMPS SHOULD AT LEAST USE THE SAME BINDER AS THE MAINLINE.

- S-9: THIS ITEM INCLUDES ALL COSTS ASSOCIATED WITH COLD MILLING AND TO PROVIDE BUTT JOINTS AS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR COLD MILLING BEYOND THE AVERAGE DEPTH SHOWN ON THE TYPICAL SECTIONS.

- S-10: NOT USED.
- S-11: NOT USED.
- S-12: THE USE OF FLY-ASH IN CONCRETE IS PROHIBITED.

- S-13: INCLUDES ALL COST OF SAWED JOINTS AND SEALING OF ALL JOINTS INCLUDING LONGITUDINAL JOINTS.

- S-14: NOT USED.

- S-15: THIS ITEM SHALL BE MEASURED AS THE ACTUAL AMOUNT OF CURB AND/OR GUTTER INSTALLED. NO PAYMENT WILL BE MADE FOR CURB AND/OR GUTTER THROUGH DRIVEWAYS AND INLETS.

- S-16: CURB, GUTTER, AND/OR SIDEWALK ASSOCIATED WITH THE DRIVEWAY AND THROUGH THE DRIVEWAY IS INCLUDED IN THE COST OF THE DRIVEWAY.

- S-17: ONE SIDEWALK PANEL ON EACH SIDE OF DRIVEWAYS SHALL BE A MINIMUM OF 6" THICK OR MATCH EXISTING DRIVEWAY THICKNESS, WHICHEVER IS GREATER. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE COST OF THE THICKENED SIDEWALK THROUGH THIS AREA.

- S-18: NOT USED.
- S-19: NOT USED.
- S-20: NOT USED.

- S-21: THIS PAY ITEM INCLUDES THE FOLLOWING:

- A. SAW CUTTING
- B. REMOVAL OF THE EXISTING CONCRETE AND/OR ASPHALTIC CONCRETE ROADWAY (CY)
- C. TYPE S3 ASPHALTIC CONCRETE OR PC CONCRETE COMPLETE AND IN PLACE PER DETAIL
- D. SEALING OF EDGES AND TACK COAT
- DOES NOT INCLUDE THE FOLLOWING:
- A. UNCLASSIFIED EXCAVATION
- B. SUBGRADE METHOD B (SY)
- C. SEPARATOR FABRIC (SY)
- D. AGGREGATE BASE (TYPE A)
- E. ASPHALT CONCRETE LEVELING OR SURFACE COURSE

EARTHWORK / SITE PREPARATION (E1-E11)

- E-1: ALL COSTS FOR REMOVING TREES, SHRUBS, STUMPS, POSTS, AND ALL OTHER DEBRIS AND/OR OBSTRUCTIONS NOT COVERED BY A SEPARATE PAY ITEM ARE INCLUDED IN THE PRICE BID.
- E-2: ALL EXISTING DRAINAGE STRUCTURES SHALL BE CLEANED AND CLEARED OF ALL SEDIMENTATION AND DEBRIS TO THE RIGHT-OF-WAY. COST OF CLEANING SHALL BE INCLUDED IN THE PRICE BID.
- E-3: THE CONTRACTOR SHALL BE PAID FOR UNCLASSIFIED EXCAVATION ON THE BASIS OF PLAN QUANTITY. ANY ADDITIONAL EXCAVATION REQUIRED OR OVERTURN OF PLAN QUANTITY WILL BE PAID FOR ON THE BASIS OF UNIT PRICE BID FOR THE ITEM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SURVEY TO VERIFY ANY ADDITIONAL QUANTITIES.
- E-4: UNCLASSIFIED EXCAVATION INCLUDES REMOVAL OF AGGREGATE BASE AND MODIFIED SUBGRADE UNDER EXISTING PAVEMENT TO BE REPAIRED.
- E-5: NOT USED.
- E-6: 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.
- E-7: EROSION PROTECTION SHALL BE PLACED AS FOLLOWS:

- A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM.
- B) IN LOCATIONS THROUGHOUT PROJECT SITE AS DETERMINED BY THE ENGINEER TO PREVENT WASH OF ERODED MATERIAL ONTO ADJACENT PROPERTY.
- C) FOR ENTIRE DURATION OF PROJECT WITH MAINTENANCE AND REPLACEMENTS, AS DIRECTED BY THE ENGINEER.
- D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.

- ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

- E-8: PRICE BID SHALL INCLUDE MAINTENANCE, SEDIMENT REMOVAL, DISPOSAL, AND REMOVAL OF FILTERS AT PROJECT COMPLETION.

- E-9: INCLUDES 4 TYPE I FILTERS.

- E-10: ESTIMATED QUANTITY IS BASED ON SODDING OF ALL DISTURBED AREAS OUTSIDE THE FINAL PAVING LIMITS AND WITHIN THE FINAL GRADING LIMITS AS INDICATED BY THE TOP-OF-CUT/TOE-OF-SLOPE LINE ON THE PLANS (EXCLUDING SURFACES OF STRUCTURES, FIXTURES AND APPURTENANCES). SOD SHALL BE OF LIKE-KIND TO EXISTING SOD. PRICE BID INCLUDES PLACEMENT AND COMPACTION OF SUITABLE BACKFILL. ANY EXISTING GRASSED AREAS BEYOND THE ABOVE STATED LIMITS THAT ARE DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESODDED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE.

- E-11: COST OF WATERING AND FERTILIZING SHALL BE INCLUDED. FERTILIZERS SHALL BE 10-20-10 AND SHALL BE APPLIED AT THE RATE OF 1.5 LBS PER 10 SQ YDS. FERTILIZER SHALL BE APPLIED PER SECTION 230.04-G OF DOT STANDARD SPECIFICATIONS. WATERING SHALL BE APPLIED AS NECESSARY UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE WORK IS ACCEPTED AS COMPLETE.

PAY QUANTITIES AND NOTES
(SHEET NO. 1 OF 3)

PROJECT NO. 2036N3081Z

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141



PLAN SCALE DRAWN RF 4/21 APPROVED: 4/21

PROJ. SCALE DRAWN CH 3/21

HORIZONTAL: LEAD MGR. 11/18

VERTICAL: FIELD MGR. 10/15

RECOMMENDED: 11/15

DESIGN MANAGER: 11/15

CITY ENGINEER: 11/15

FILE: DRAWING: DATE: 11/15/2023

SHEET 2 OF 38 SHEETS



PAY ITEM NOTES (VERSION: 8/9/2017) CONTINUED

DRAINAGE (D1-D16)

D-1: THIS ITEM SHALL INCLUDE THE COST OF NEW MANHOLE FRAME AND COVER PER CITY OF TULSA STD NOS.752, 753, 754, 761, 762, 769A, 769B AND 775.

D-2: THE TOTAL COST FOR RUBBERIZED ASPHALT AND/OR SILICONE AT MANHOLES, VALVE BOXES, INLETS, AND INLET APRONS, SHALL BE INCLUDED.

D-3: ~~NO MANHOLE, VALVE BOX, OR INLET SHALL BE CONSTRUCTED WITHOUT THE PRESENT OF A MANHOLE.~~ NOT USED.

D-4: NOT USED.

D-5: NOT USED.

D-6: ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW LIDS AND CASTINGS AND THE OLD ONES SHALL BE SALVAGED AND DELIVERED TO THE METAL RECYCLE BINS IN THE STOCKROOM AREA AT SEWER OPERATIONS AND MAINTENANCE, 9319 E. 42ND STREET NORTH, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.

D-7: INCLUDES THE COST REQUIRED TO MAKE CONNECTION AND REMOVAL OF EXISTING INLETS. THE COST OF PC CONCRETE CURB AND GUTTER THROUGH THE INLET, 5' EACH SIDE OF THE INLET, AND THE PC CONCRETE INLET APRON SHALL BE INCLUDED. GRATE AND FLOWLINE ELEVATIONS SHALL MATCH EXISTING CONDITIONS UNLESS OTHERWISE NOTED IN THE PLANS.

D-8: QUICKSET FLOWABLE FILL SHALL BE USED TO BACKFILL AROUND STREET CURB INLETS AND REINFORCED CONCRETE PIPE, AS NEEDED, AT THE DIRECTION OF THE ENGINEER.

D-9: ALL INLETS, COMPLETE IN PLACE, SHALL BE CAST IN PLACE CONCRETE OR PRECAST CONCRETE. THIS PAY ITEM INCLUDES ANY INLET FRAME(S), GRATE(S), HOOD(S) AND CONCRETE REQUIRED FOR COMPLETE INSTALLATION OF STRUCTURE PER THE CONSTRUCTION DOCUMENTS.

D-10: NOT USED.

D-11: CAST IRON CURB INLET CONFIGURATION NAMING CONVENTION PROVIDED IN COT STANDARD NO.755. SEPARATE DETAILS SHALL BE REFERENCED OR PROVIDED IN THE PLANS FOR NON-CITY-STANDARD INLETS.

STANDARD NAMING: CICI DES G(1) [W/AMH]
G- NUMBER OF GRATES.

1: LETTER(S) CORRESPONDING TO ARRANGEMENT OF CAST IRON HOODS TO BE INSTALLED UPSTREAM OF GRATES.

W/AMH: IF SHOWN, INLET TO BE CONSTRUCTED WITH ATTACHED ACCESS MANHOLE.

D-12: NOT USED.

D-13: NOT USED.

D-14: NOT USED.

D-15: NOT USED.

D-16: CONTRACTOR SHALL PROVIDE REDLINED PLANS FOR ALL STORMWATER CONSTRUCTION, INCLUDING:

- MANHOLES: NORTHING AND EASTING, INNER DIAMETER
- INLETS: NORTHING AND EASTING, DESIGN TYPE
- PIPES: DIAMETER, MATERIAL, LENGTH
- ANY MODIFICATIONS TO DESIGN PLANS AS REQUIRED DURING CONSTRUCTION.

REDLINED PLANS SHALL BE SUBMITTED TO THE CITY INSPECTOR, IN BOTH HARD COPY AND ELECTRONIC (PDF) FORMAT, PRIOR TO APPLICATION FOR FINAL PAYMENT.

REMOVAL / ADJUSTMENT (R1-R6)

R-1: WASTE MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE IN A MANNER APPROVED BY THE ENGINEER.

R-2: ALL SAW CUTTING AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE ITEM TO BE ADJUSTED, REMOVED, REPAIRED, OR REPLACED.

R-3: PAY ITEM INCLUDES REMOVAL OF ALL STRUCTURES AND OBSTRUCTIONS WITHIN PROJECT LIMITS NOT SPECIFIED BY OTHER ITEMS OF WORK.

R-4: INCLUDES SAWING NOT INCLUDED IN OTHER ITEMS OF WORK.

R-5: ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED CONDITION.

R-6: SHALL INCLUDE ALL COSTS ASSOCIATED WITH PLUGGING/ PATCHING HOLES IN EXISTING STRUCTURES TO REMAIN.

GENERAL (G1-G10)

G-1: LOCATIONS TO BE DETERMINED IN THE FIELD AND WORK TO BE PERFORMED AT THE DIRECTION OF THE FIELD ENGINEER. QUANTITY IS ESTIMATED AND MAY BE OMITTED IN ITS ENTIRETY.

G-2: MAXIMUM OVERALL DOLLAR AMOUNT AND SCHEDULE OF PAYMENTS SHALL BE IN ACCORDANCE SECTION 641 OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CURRENT EDITION. EXCLUDES MOBILIZATION FOR WATERLINE WORK.

G-3: CONSTRUCTION STAKING SHALL INCLUDE SURVEYING AND THE FURNISHING, PLACING, AND MAINTAINING OF THE CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION AND INSPECTION OF THE ENTIRE PROJECT.

G-4: THE COST TO REPLACE REMOVED OR DAMAGED SECTION CORNERS AND ALL OTHER PERMANENT RIGHT-OF-WAY MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE.

G-5: CONTRACTOR SHALL REPAIR ANY IRRIGATION SYSTEMS DAMAGED OR REQUIRING RELOCATION DURING THE CONSTRUCTION OF THIS PROJECT TO THE SATISFACTION OF THE PROPERTY OWNER AND CITY ARBORIST. COST SHALL BE INCLUDED IN THE PRICE BID.

G-6: ALL HOUSE NUMBERS SHALL BE REPLACED/REESTABLISHED THROUGHOUT PROJECT LIMITS. COST TO BE INCLUDED IN URBAN RIGHT-OF-WAY RESTORATION. CONTRACTOR SHALL REESTABLISH DRAINS, ROOF DRAINS AND OTHER DRAINAGE THROUGH THE CURBS IN ACCORDANCE WITH CITY OF TULSA STANDARD 758. NO NEW CURB OUTLETS SHALL BE CONSTRUCTED WITHOUT APPROVAL OF THE ENGINEER.

G-7: NOT USED.

G-8: NOT USED.

G-9: CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS TO RESET ALL PAVERS, LANDSCAPE STONE, PRIVATE SIDEWALKS AND FENCES THAT ARE DISTURBED DURING CONSTRUCTION OPERATIONS. ALL MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR RESETING OF SUCH ITEMS IS TO BE INCLUDED IN PRICE BID FOR URBAN RIGHT-OF-WAY RESTORATION.

G-10: PAY ITEM INCLUDES ALL MOVING WITHIN THE RIGHT-OF-WAY AS DIRECTED DURING CONSTRUCTION.

TRAFFIC (T2-T7)

T-1: NOT USED.

T-2: 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.

T-3: NOT USED.

T-4: PAYMENT SHALL BE MADE ON A SIGN-DAY BASIS ONLY FOR TRAFFIC CONTROL DEVICES THAT ARE PROPERLY INSTALLED AND IN GOOD WORKING ORDER. COSTS FOR DELIVERY, INSTALLATION, RELOCATION, MAINTENANCE REMOVAL, AND REPLACEMENT, AS NEEDED AT THE DISCRETION OF THE ENGINEER, INCLUDED IN UNIT PRICE BID.

T-5: IF WARNING LIGHTS ARE 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 WAY, AND TYPE "C" LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.

T-6: THE PAY ITEM FOR FLAGGER SHALL BE PAID FOR ON A FLAG DAY (F.D.) BASIS. ONE F.D. IS ONE COMPLETE WORKDAY PERFORMED BY THE CONTRACTOR AS SET FORTH IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS.


T-7: PRICE BID FOR THIS ITEM INCLUDES INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF PROJECT SIGN.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING SIGNS AND MARKINGS REMOVED OR DAMAGED AS LISTED IN THE SIGN SCHEDULE FOR THE PROJECT. ALL SIGNS AND POLES PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608. ALL TRAFFIC MATERIAL REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.

\$DATE\$ \$TIME\$ \$FILEL\$



REVISION	BY	DATE

PAY QUANTITIES AND NOTES (SHEET NO. 2 OF 3)	
PROJECT NO. 2036N30812	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST. SUITE 1601 TULSA, OK 74103 (918) 660-7141	
	
EST, INC. Certificate of Authorization No. 3639 (RE/LS), Expires 6/30/24	
PLAN SCALE	DRAWN RF 4/21 APPROVED:
N/A	DESIGNED DRA 4/21
PROFILE SCALE	SURVEY CH 3/21
N/A	PROJ. MGR. 4/21
HORIZONTAL:	LEAD MGR. 4/21
N/A	FIELD MGR. 4/21
VERTICAL:	RECOMMENDED: 4/21
N/A	DESIGN MANAGER: 4/21
FILE:	CITY ENGINEER: 4/21
ATLAS PAGE NO.:	DATE: 11/3/2023
SHEET 3 OF 38 SHEETS	

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2009 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DETAILS AND STANDARD DRAWINGS AND CITY OF TULSA SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT AND TAKE ANY OTHER NEEDED ACTION ON AS HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
3. PAY ITEMS SHALL BE AS SPECIFIED ON THE CITY OF TULSA OR ON THE ODOT STANDARD DRAWINGS EXCEPT AS MODIFIED BY THE CONTRACT.
4. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
5. THE LOCATIONS OF THE UTILITIES ARE SHOWN ACCORDING TO ALL AVAILABLE INFORMATION. THE CONTRACTOR SHALL NOTIFY EACH UTILITY OWNER PRIOR TO COMMENCEMENT OF WORK TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATIONS. A LIST OF ALL UTILITY OWNERS IS PROVIDED ON SHEET 1 OF THESE PLANS.
6. THE CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF OKLAHOMA-CELL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO SOONER THAN TEN (10) DAYS NOR LATER THAN 48 HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAY, PRIOR TO THE COMMENCEMENT OF WORK. PHONE: 1-800-522-6543.
7. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PREVENT EXCESS MOISTURE FROM INCLEMENT WEATHER OR OTHER SOURCES FROM ENTERING ANY STREET EXCAVATION. IF EXCESS MOISTURE DOES ENTER THE EXCAVATION THROUGH THE NEGLIGENCE OF THE CONTRACTOR AND THE ADJOINING PAVEMENT IS ADVERSELY EFFECTED BY THE EXCESS MOISTURE, THE CONTRACTOR SHALL REPLACE THE ADJOINING PAVEMENT AND SUBBASE AT HIS SOLE EXPENSE.
8. THE CONTRACTOR SHALL PRESERVE THE INTEGRITY OF THE SANITARY SEWER STRUCTURES AND ALL OTHER UTILITY STRUCTURES WITHIN THE PROJECT EXTENTS.
9. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL FLAGMEN, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE FIELD ENGINEERING REPRESENTATIVE.
10. CONSTRUCTION SIGNAGE WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND APPLICABLE ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.
11. THE CONTRACTOR SHALL NOTIFY THE CITY OF TULSA FIELD ENGINEERING, 918-596-9404, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK OR PRIOR TO REMOVING TRAFFIC SIGNS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS LISTED IN THE SIGNAGE SCHEDULE FOR THE PROJECT. ALL SIGNS AND POLES PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608 TRAFFIC SIGNS. ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARATION AND DISTRIBUTION OF A WRITTEN NOTICE TO RESIDENTS 48 HOURS PRIOR TO BEGINNING PAVEMENT REMOVAL AND MILLING AND OVERLAY OPERATIONS.
14. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AT ALL TIMES.
15. ALL PUBLIC AND PRIVATE STREETS AND DRIVES SHALL BE ACCESSIBLE AT ALL TIMES.
16. ALL BROKEN CONCRETE, WASTE MATERIAL, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
17. ALL EXCAVATED MATERIAL NOT REQUIRED IN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY MATERIAL IS STORED ON THE PROJECT SITE AND/OR DISPOSED OF WITHIN THE CITY LIMITS.
18. ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-OF-WAY LINE IN A MANNER APPROVED BY THE ENGINEER. ALL COSTS TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK. TREES OUTSIDE THE FILL SLOPES AND THE TOP OF CUT SLOPES SHALL NOT BE DISTURBED EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
19. WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE CAPACITY RECOMMENDED BY THE VEHICLE MANUFACTURER OR AS PRESCRIBED BY ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION.
20. ANY DAMAGE TO THE ROADWAY PAVEMENT, CURB, DRIVEWAYS OR SIDEWALK CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S SOLE EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
21. IF THE CONTRACTOR ENCOUNTERS VOIDS WHEN PATCHING STREETS, THE CONTRACTOR SHALL CALL FIELD ENGINEERING AT 918-596-7814 FOR AN INSPECTION BEFORE PROCEEDING WITH WORK.

GENERAL CONSTRUCTION NOTES (CONTINUED)

22. THE PROJECT SHALL BE CONSTRUCTED WITH CONTINUOUS FLOW OF MATERIAL SUPPLIED TO THE PROJECT SUCH THAT THE LAYDOWN MACHINE WILL REMAIN IN MOTION. ANY DELAY IN FORWARD PROGRESSION OF THE LAYDOWN MACHINE MAY REQUIRE A TRANSVERSE JOINT AS DIRECTED BY THE ENGINEER.
23. NO FLY ASH IS ALLOWED TO BE USED ON THIS PROJECT.
24. PHYSICAL TESTING FOR QUALITY ASSURANCE SHALL BE FURNISHED BY THE CITY.
25. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY QUALITY CONTROL TESTING TO ENSURE THAT PROJECT REQUIREMENTS ARE MET.
26. MASONRY STRUCTURES SHALL NOT BE CONSTRUCTED WITHIN THE STREET RIGHT-OF-WAY.
27. ALL CONCRETE CURB AND GUTTERS SHALL BE MONOLITHIC POURS. DOWELED-ON CURBS WILL NOT BE ALLOWED.
28. NO LIFTING HOLES WILL BE ALLOWED ON ANY REINFORCED CONCRETE PIPES OR REINFORCED CONCRETE BOXES.
29. CURB RAMP CONSTRUCTION SHALL COMPLY WITH THE CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
30. 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.
31. ALL SANITARY AND STORM SEWER MAN-PILE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW LIDS AND CASTINGS AND THE OLD ONES SHALL BE SALVAGED AND DELIVERED TO THE METAL RECYCLE BINS IN THE STOCKROOM AREA AT SEWER OPERATIONS AND MAINTENANCE, 9319 E. 42ND STREET NORTH, BETWEEN THE HOURS OF 730 AM AND 300 PM MONDAY THROUGH FRIDAY.
32. THE SIGN PLACEMENT STATIONING AND LOCATIONS SHOWN ON THE PLAN SHEETS AND SUMMARY SHEETS ARE APPROXIMATE. EXACT STATIONING AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH CITY OF TULSA STANDARDS. CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES, OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.
33. POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE. EXACT LENGTHS SHALL BE DETERMINED BY A FIELD SURVEY CONDUCTED BY THE CONTRACTOR.
34. ALL ASPHALT STREETS THAT ARE TO BE RECONSTRUCTED SHALL BE LEFT WITH A DRIVEABLE SURFACE AT ALL TIMES. THE CONTRACTOR WILL NOT BE ALLOWED TO MILL OFF ALL THE ASPHALT BEFORE EXCAVATION BEGINS.
35. THE CONTRACTOR SHALL REPLACE ANY SECTION CORNERS OR OTHER PERMANENT RIGHT-OF-WAY MARKERS REMOVED OR DISTURBED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT. REPLACEMENT OF SECTION CORNERS OR ANY OTHER MONUMENTS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR AUTHORIZED TO PERFORM WORK IN THE STATE OF OKLAHOMA.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND MAINTENANCE OF THE STORMWATER DRAINAGE. STORMWATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED.
37. STRAW OR HAY BALES AS STORMWATER BEST MANAGEMENT PRACTICES ARE NO LONGER ALLOWED ON CONSTRUCTION PROJECTS.
38. THE CONTRACTOR MUST CALL 1-800-458-4251 IMMEDIATELY IF A NATURAL GAS PIPELINE IS CUT, DAMAGED, OR OTHERWISE DISTURBED.
39. PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.
40. ALL FEATURES OF THIS PROJECT INCLUDING, BUT NOT LIMITED TO, SIDEWALKS, CURB RAMPS, AND CROSSWALKS, SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, ACCESSIBILITIES GUIDELINES, AND THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY, PUBLISHED ON JULY 26, 2011 BY THE U.S. ACCESS BOARD. WHERE SPATIAL LIMITATIONS OR EXISTING FEATURES WITHIN THE LIMITS OF THE PROJECT PREVENT FULL COMPLIANCE WITH THIS ACT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERY OF SUCH FEATURES. THE CONTRACT SHALL NOT PROCEED WITH ANY ASPECT OF THE WORK, WHICH IS NOT IN FULL COMPLIANCE WITH THE ADA, WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. ANY WORK WHICH IS NOT PERFORMED WITHIN THE GUIDELINES OF THE ADA, FOR WHICH THE CONTRACTOR DOES NOT HAVE WRITTEN APPROVAL, SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
41. ALL TRENCH WIDTHS AND BEDDING MATERIAL SHALL BE AS SHOWN ON COT STANDARD PIPE BEDDING DETAIL, STANDARD NO. 75.1. SPECIFIED TRENCH WIDTHS SHALL BE MAINTAINED FULL DEPTH FROM THE FLOWLINE TO THE GRADING TEMPLATE. THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED.
42. THE CONTRACTOR SHALL NOTIFY THE METROPOLITAN TULSA TRANSIT AUTHORITY (MTTA), ERIC SMITH 918-830-0024, A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK, LANE CLOSURES, OR PRIOR TO DETOURING TRAFFIC.
43. CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.
44. DRIVES TO BE REPLACED ARE AN ESTIMATED LOCATION AND QUANTITY ONLY. CONTRACTOR TO REPLACE DRIVES PER CITY OF TULSA FIELD ENGINEERING.

PAY QUANTITIES AND NOTES
(SHEET NO. 3 OF 3)

PROJECT NO. 2036N3081Z

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

EST
Comprehensive Engineering Services
EST, INC. Certificate of Authorization No. 3639 (PE/LS). Expires 6/30/24

PLAN SCALE: DRAWN: RF 4/21 APPROVED:

DESIGNED: DRA 4/21

SURVEY: CH 3/21

PROFILE SCALE: PROJ. MGR. 4/21 8/21

LEAD MGR. 4/21 8/21

FIELD MGR. 4/21 8/21

DESIGNED BY: 9/23

DESIGN MANAGER: 9/23

CITY ENGINEER: 9/23

DATE: 11/3/2023

SHEET 4 OF 38 SHEETS



SUMMARY OF CURB & GUTTER						
SHEET NO.	STATION TO STATION	LOCATION		AGGREGATE BASE TYPE A	SUBGRADE METHOD B	SEPARATOR FABRIC
20	11+90.00 TO 12+06.00	RT.	1.88	C.Y.	S.Y.	S.Y.
20	13+25.00 TO 14+03.49	L.T.	6.30	1.83	18.37	16.00
20	16+52.64 TO 16+55.96	L.T.	1.07	12.68	78.49	13.32
20	16+71.33 TO 16+84.64	L.T.	1.07	2.34	12.33	13.31
20	16+71.40 TO 16+76.40	RT.	0.59	0.60	5.74	5.00
20	17+62.06 TO 17+68.06	RT.	1.88	1.93	18.37	16.00
21	22+16.81 TO 22+30.05	RT.	1.06	1.59	12.26	13.24
21	22+17.63 TO 22+32.81	L.T.	1.22	1.83	14.06	15.18
21	22+35.43 TO 22+40.43	RT.	0.40	0.60	4.63	5.00
21	22+38.18 TO 22+43.18	L.T.	0.40	0.60	4.63	5.00
23	22+71.00 TO 22+78.44	RT.	0.60	0.90	6.89	7.44
23	41+36.07 TO 41+57.42	RT.	1.71	2.57	19.77	21.35
23	42+07.43 TO 42+29.35	RT.	1.76	2.64	20.30	21.92
23	42+35.75 TO 42+46.64	L.T.	0.87	1.31	10.08	10.89
23	43+32.50 TO 43+48.50	L.T.	1.28	1.93	14.82	16.00
23	44+40.65 TO 44+46.40	L.T.	0.46	0.69	5.32	5.75
23	45+47.85 TO 46+08.10	L.T.	4.84	7.25	55.79	60.25
TOTALS			27.39	44.86	308.38	324.14

SUMMARY OF DRIVEWAYS									
SHEET NO.	STATION	LOCATION	LEFT RADIUS	RIGHT RADIUS	LENGTH	WIDTH	EXISTING SLOPE	PROPOSED SLOPE	303(A) 6" CONCRETE DRIVEWAY (F.F.S.)
20	12+62.30	RT.	15	15	8	19	8.34%	8.32%	4.89
20	16+51.03	RT.	5	15	9	20	7.59%	7.84%	27.14
21	18+48.07	RT.	15	15	25	20	10.60%	10.20%	8.38
21	19+63.22	RT.	15	15	8	20	8.99%	8.99%	30.56
22	32+69.57	L.T.	15	15	20	15	5.83%	5.83%	5.22
22	34+22.96	L.T.	15	15	17	15	6.85%	7.07%	46.70
23	40+68.44	RT.	5	15	9	12	4.01%	4.11%	19.18
23	41+15.36	RT.	15	8	8	13	3.69%	4.37%	3.58
23	41+60.30	L.T.	15	15	8	20	5.38%	5.11%	4.98
23	41+82.81	RT.	15	15	14	21	6.12%	6.20%	49.33
23	42+49.97	RT.	15	15	13	20	4.79%	4.82%	44.05
23	42+76.74	L.T.	15	15	14	20	5.47%	5.20%	52.64
23	44+16.14	L.T.	15	15	13	20	5.12%	4.86%	46.52
TOTALS									83.73

SUMMARY OF SURFACING						
SHEET NO.	STATION TO STATION	FABRIC REINFORCEMENT		SUPERPAVE TYPE S4 (PG 64-22 OK)	SUPERPAVE TYPE S6 (PG 64-22 OK)	COLD MILLING PAVEMENT
		S.Y.	TON			S.Y.
20	10+67.35 TO 18+00.00	1.98	222.63	111.32	1.98	7.68
21	18+00.00 TO 22+77.53	1.21	15.00	136.06	68.03	1,214.80
21	22+77.53 TO 26+00.78	1.28	0.00	135.24	67.62	1.00
22	30+76.00 TO 36+50.00	1.66	0.00	195.87	92.93	1,659.46
23	40+40.00 TO 46+07.73	1.44	5.00	161.83	80.92	1,444.89
TOTALS		7.58	8.00	841.64	420.82	6,306.83

SUMMARY OF PATCHING						
SHEET NO.	STATION TO STATION	LOCATION	AGGREGATE BASE TYPE A	SUBGRADE METHOD B	SEPARATOR FABRIC	SPECIAL
20	11+60.00 TO 11+80.00	L.T. & RT.	7.41	22.22	55.56	5.25
20	11+80.00 TO 12+10.00	L.T. & RT.	16.67	50.00	116.67	11.81
20	12+10.00 TO 12+40.00	L.T.	11.11	33.33	82.22	7.87
20	12+52.50 TO 12+77.60	L.T.	11.11	33.33	80.44	7.87
20	12+52.50 TO 12+62.50	RT.	18.33	55.00	132.44	12.99
20	14+05.00 TO 14+55.00	L.T. & RT.	28.19	84.56	192.22	19.96
20	14+44.09 TO 14+63.56	RT.	4.85	14.56	44.67	3.44
20	14+78.50 TO 15+25.00	L.T.	20.63	61.89	147.33	14.61
20	14+94.72 TO 15+06.76	RT.	2.74	8.22	24.44	1.94
20	15+68.50 TO 15+83.50	L.T. & RT.	8.33	25.00	60.00	5.90
21	19+29.00 TO 19+59.00	RT.	10.37	31.11	75.33	7.35
21	19+85.00 TO 20+15.00	RT.	7.78	23.33	61.56	5.51
21	20+40.00 TO 20+65.00	RT.	13.33	40.00	101.78	9.44
21	22+34.53 TO 23+10.05	RT.	18.22	54.67	129.56	12.91
21	22+99.94 TO 23+10.05	RT.	1.89	5.67	16.67	1.34
21	23+14.77 TO 23+30.81	L.T.	9.44	28.33	67.56	6.69
21	23+30.81 TO 23+37.81	L.T. & RT.	4.67	14.00	37.56	3.31
21	23+59.81 TO 25+09.81	L.T.	27.78	83.33	234.44	19.68
22	31+00.00 TO 31+10.00	L.T.	1.85	5.56	16.67	1.31
22	31+45.00 TO 32+35.00	L.T. & RT.	16.67	50.00	141.11	11.81
22	34+00.59 TO 34+30.59	L.T.	7.78	23.33	61.56	5.51
22	34+77.50 TO 34+87.50	L.T.	1.85	5.56	16.67	1.31
23	40+50.00 TO 40+70.00	L.T.	7.41	22.22	55.56	5.25
23	41+60.00 TO 41+80.00	L.T. & RT.	7.41	22.22	55.56	5.25
23	43+19.44 TO 43+26.44	L.T.	1.81	5.44	15.56	1.29
23	45+40.00 TO 45+60.00	L.T.	7.41	22.22	55.56	5.25
23	45+40.00 TO 45+45.00	RT.	1.48	4.44	13.56	1.05
23	45+60.00 TO 45+70.00	L.T.	1.85	5.56	16.67	1.31
TOTALS			278.37	835.11	2,108.89	197.18

SUMMARY OF REMOVALS				
SHEET NO.	STATION TO STATION	REMOVAL OF CURB & GUTTER		REMOVAL OF ASPHALT DRIVEWAY
		L.F.	S.Y.	
26	10+67.35 TO 18+00.00	165.45	44.92	
27	18+00.00 TO 26+00.78	72.69	43.26	
28	30+76.00 TO 36+50.00	93.36		
29	40+40.00 TO 46+07.73	231.95	181.13	15.02
TOTALS		563.45	269.31	15.02

SUMMARY OF EARTHWORK		
STATION TO STATION	UNCLASSIFIED EXCAVATION	
	202(A)	C.Y.
10+67.35 TO 26+00.78	415.53	
30+76.00 TO 36+50.00	63.92	
40+40.00 TO 46+07.73	105.86	
TOTAL		585.32

SUMMARY OF EROSION CONTROL			
SHEET NO.	STATION TO STATION	LOCATION	TEMPORARY SEDIMENT FILTER
20	16+68.64	L.T.	EA.
20	16+68.72	RT.	S.Y.
21	22+33.44	RT.	1.00
21	22+35.49	L.T.	1.00
20	13+25.00 TO 14+03.49	L.T.	8.90
20	16+52.64 TO 16+84.64	L.T.	3.56
21	22+17.63 TO 22+43.18	L.T.	2.84
22	32+64.45 TO 32+81.40	L.T.	2.70
22	32+97.74 TO 33+12.07	L.T.	2.77
22	34+00.57 TO 34+14.79	L.T.	2.46
22	34+31.12 TO 34+45.65	L.T.	2.43
TOTALS			4.00



PROJECT NO. 2036N3081Z

SUMMARY SHEETS
(SHEET NO. 1 OF 2)

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 54th ST. SUITE 1601
TULSA, OK 74103
(918) 660-7141

COMPENSATORY Engineering Services
EST. INC. Certificate of Authorization No. 3639 (PE/LS), Expires 6/30/24

DESIGNED: DRA 5/21

DRAWN: RM 5/21

CHECKED: CH 3/21

PROJ. MGR: LEAD MGR. 8/13

FIELD MGR. 8/13

DATE: 07/31/2023

REVISION

BY

DATE

FILE: DRAWING: SHEET 5 OF 38 SHEETS

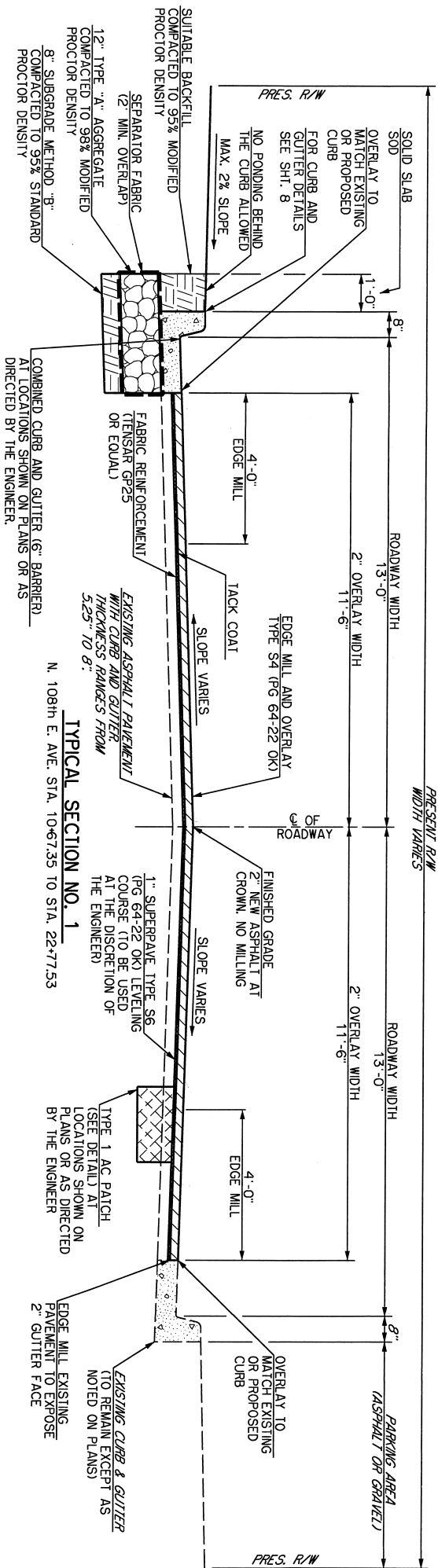
ATLAS PAGE NO:

SUMMARY OF SIGNS											
SHEET NO.	SIGN NO.	STATION	LOCATION	STREET NAME	DESCRIPTION	TYPE OF SIGN	SIGN DIMENSIONS	608(A)	608(C)	608(D)	608(E)
								GROUND SIGN	1-1/2" SIGN POST	1-3/4" SIGN POST	2" SIGN POST
30	1	10+47.10	R.T.	108th E. AVE.	STREET NAME (E. NEWTON ST.) (2-SINGLE-SIDED)	D3-1	6" X 30"	S.F.	L.F.	L.F.	L.F.
30	2	10+47.10	R.T.	108th E. AVE.	STREET NAME (N. 108th E. AVE.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50			
30	3	10+47.10	R.T.	108th E. AVE.	STOP SIGN	D3-1	6" X 30"	2.50			
30	4	14+92.86	R.T.	108th E. AVE.	STREET NAME (E. NEWTON PL.) (2-SINGLE-SIDED)	R1-1	30" X 30"	6.25	2.00	15.00	3.00
30	5	14+92.86	R.T.	108th E. AVE.	STREET NAME (N. 108th E. AVE.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50			
30	6	14+92.86	R.T.	108th E. AVE.	STOP SIGN	R1-1	30" X 30"	6.25	2.00	15.00	3.00
31	7	25+73.50	R.T.	108th E. AVE.	NO LEFT TURN	R3-2	24" X 24"	4.50	2.00		
31	8	25+73.50	R.T.	108th E. AVE.	STREET NAME (E. PINE ST.) (2-SINGLE-SIDED)	D3-1	9" X 36"	4.50			
31	9	25+73.50	R.T.	108th E. AVE.	STREET NAME (1400 BLK. N. 108th E. AVE.) (2-SINGLE-SIDED)	D3-1	9" X 36"	4.50			
31	10	25+73.50	R.T.	108th E. AVE.	STOP SIGN	R1-1	30" X 30"	6.25	2.00	18.00	3.00
32	11	30+59.36	L.T.	109th E. AVE.	STREET NAME (N. 109th E. AVE.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50			
32	12	30+59.36	L.T.	109th E. AVE.	STREET NAME (E. ADMIRAL PL.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50			
32	13	30+59.36	L.T.	109th E. AVE.	STOP SIGN	R1-1	30" X 30"	6.25	2.00	15.00	3.00
32	14	31+93.00	R.T.	109th E. AVE.	SPEED LIMIT 25	R2-1(25)	24" X 30"	5.00			
32	15	32+02.75	L.T.	109th E. AVE.	NO PARKING THIS SIDE	SPECIAL SIGN NO. 1	12" X 18"	1.50		15.00	3.00
32	16	32+71.50	R.T.	109th E. AVE.	NO PARKING THIS SIDE	SPECIAL SIGN NO. 1	12" X 18"	1.50		15.00	3.00
32	17	36+30.00	L.T.	109th E. AVE.	COT TRAINING CENTER	SPECIAL SIGN NO. 2	30" X 30"	6.25		15.00	3.00
32	18	36+30.00	L.T.	109th E. AVE.	CITY OF TULSA	SPECIAL SIGN NO. 3	18" X 12"	1.50		15.00	3.00
32	19	36+30.00	R.T.	109th E. AVE.	COT TRAINING CENTER	SPECIAL SIGN NO. 2	30" X 30"	6.25		15.00	3.00
32	20	36+30.00	R.T.	109th E. AVE.	CITY OF TULSA	SPECIAL SIGN NO. 3	18" X 12"	1.50		15.00	3.00
33	21	40+25.15	L.T.	NEWTON PL.	STREET NAME (E. NEWTON PL.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50			
33	22	40+25.15	L.T.	NEWTON PL.	STREET NAME (N. 108th E. AVE.) (2-SINGLE-SIDED)	D3-1	6" X 30"	2.50	2.00	15.00	3.00
33	23	40+25.15	R.T.	NEWTON PL.	STOP SIGN	R1-1	30" X 30"	6.25		15.00	3.00
33	24	40+25.15	R.T.	NEWTON PL.	DEAD END	W14-1	18" X 18"	2.25		15.00	3.00
33	25	46+07.75	C/L	NEWTON PL.	TYPE 4 OBJECT MARKER	OM4-3	18" X 18"	2.25		15.00	3.00
33	26	46+07.75	C/L	NEWTON PL.	TYPE 4 OBJECT MARKER	OM4-3	18" X 18"	2.25		15.00	3.00
TOTALS								98.50	12.00	228.00	45.00

SUMMARY OF TRAFFIC CONTROL																		
			880(B)		880(B)		880(B)		880(C)		880(E)		880(F)		880(I)			
TYPE	SIGN DIMENSIONS	SIGN AREA	CONST. SIGNS 0 S.F. TO 625 S.F.		CONST. SIGNS 626 S.F. TO 1599 S.F.		CONST. SIGNS 160 S.F. AND UP		CONSTRUCTION BARRICADES (TYPE III)		WARNING LIGHTS (TYPE A)		WARNING LIGHTS (TYPE C)		DRUMS		FLAGGER	
	IN. X IN.	S.F.	EA.	S.D.	EA.	S.D.	EA.	S.D.	EA.	S.D.	EA.	S.D.	EA.	S.D.	EA.	S.D.		
CS-13	24" X 12"	2.00	4.00	360.00							EA.	S.D.			EA.	S.D.		
CS-14	24" X 18"	3.00	4.00	360.00														
G20-2A	36" X 18"	4.50	9.00	810.00														
R2-1(2S)	24" X 30"	5.00	4.00	360.00														
R11-2(LANE)	48" X 30"	10.00			15.00	1,350.00												
W20-1(AHEAD)	48" X 48"	16.00					6.00	540.00				6.00	540.00					
TYPE III BARRICADES											15.00	1,350.00						
WARNING LIGHTS (TYPE A)																		
DRUMS																		
FLAGGER													107.00	9,630.00	107.00	9,630.00		
TOTALS			21.00	1,890.00	15.00	1,350.00	6.00	540.00	15.00	1,350.00	36.00	3,240.00	107.00	9,630.00	107.00	9,630.00	5.00	450.00

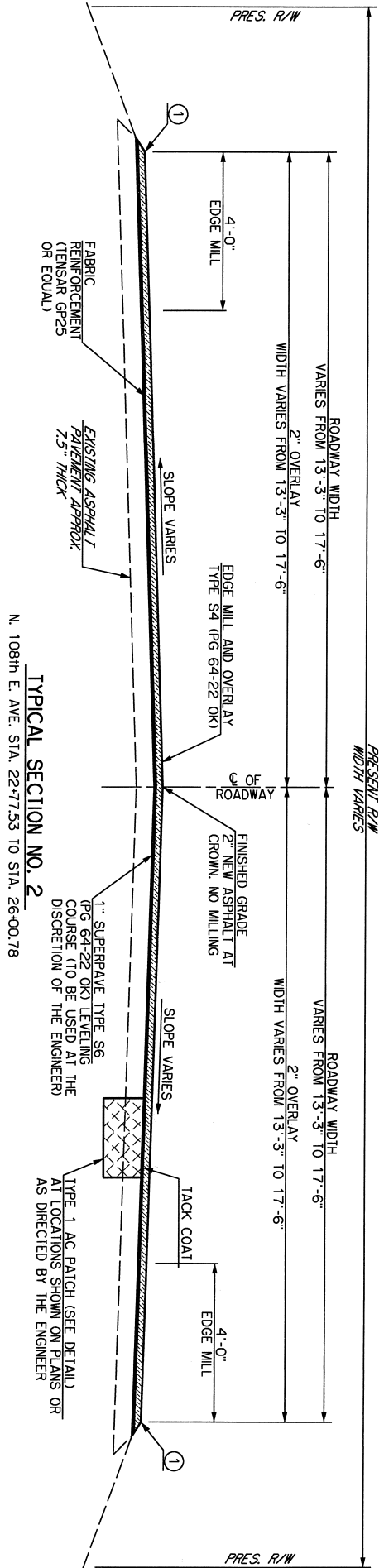
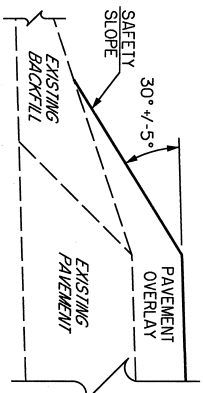
REVISION	BY	DATE

<p>PROJECT NO. 2036N3081Z</p>	
<p>SUMMARY SHEETS (SHEET NO. 2 OF 2)</p>	
<p>NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081</p>	
<p>CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT</p>	
<p>PLANS AND ESTIMATES PREPARED BY: 1'S E. 3th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141</p>	
<p>COMPENSATION: Engineering Services EST. INC. Certificate of Authorization No. 3639 (PE/LSH, Expires 6/30/24)</p>	
PLAN SCALE	DRAWN: RM 5/21 APPROVED:
MA	DESIGNED: DRA 5/21
	SURVEY: CH 3/21
SCALE	PROJ. MGR. AND 11/23
HORIZONTAL:	LEAD MGR. 10/23
MA	FIELD MGR. 10/23
VERTICAL:	RECOMMENDED: 11/23
MA	DESIGN MANAGER
FILE:	DATE: 11/13/2023
TITLE:	CITY ENGINEER
PLANS PAGE NO.:	SHEET 6 OF 38 SHEETS



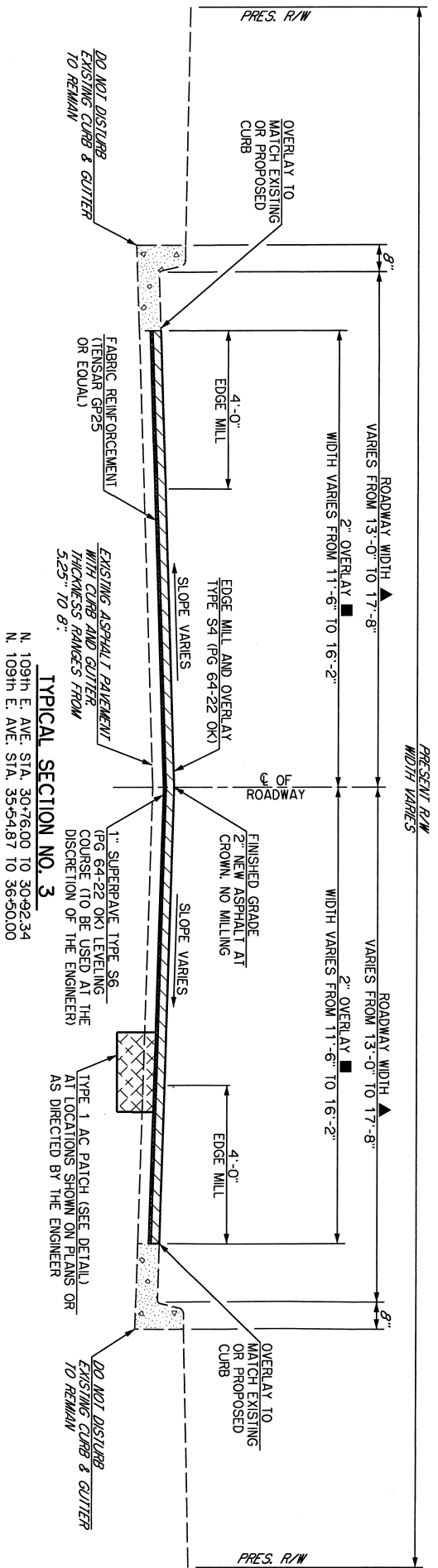
① CONSTRUCT ASPHALT SAFETY EDGE AS SHOWN IN ODOT STANDARD PSE-2-1.

SAFETY EDGE DETAIL



N. 108th E. AVE. STA. 22+77.53 TO STA. 26+00.78

TYPICAL SECTION NO. 2



N. 109th E. AVE. STA. 30+76.00 TO 30+92.34

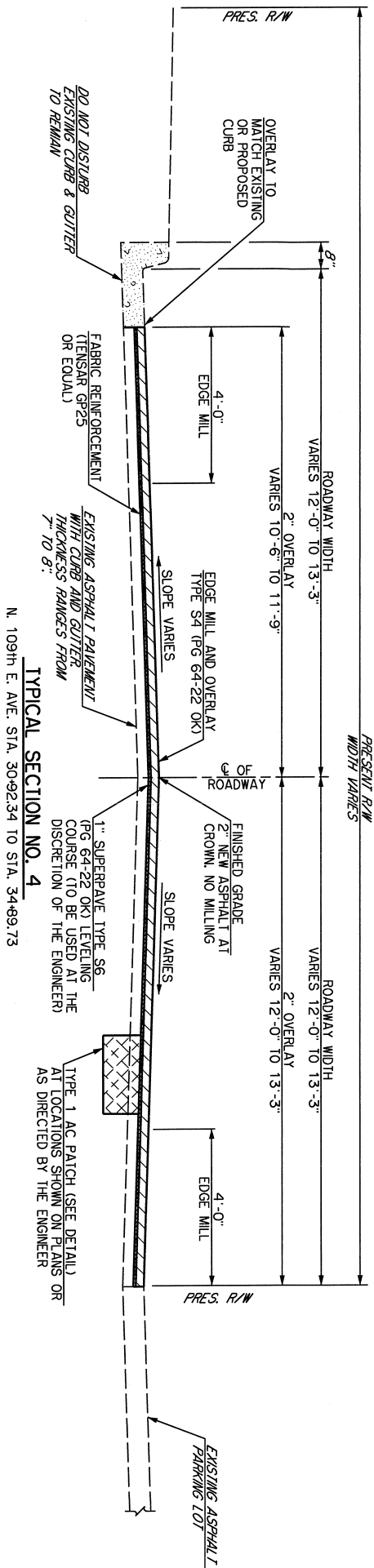
TYPICAL SECTION NO. 3

TYPICAL SECTION NO. 3 ROADWAY WIDTHS					
STREET	STATION TO STATION	▲ L.I.	▲ R.I.	■ L.I.	■ R.I.
N. 109th E. AVE.	30+76.00 TO 30+90.50	17'-8"	17'-8"	16'-2"	16'-2"
N. 109th E. AVE.	35+54.87 TO 36+50.00	13'-0" TO 13'-3"	13'-0" TO 13'-3"	11'-6" TO 11'-9"	11'-6" TO 11'-9"

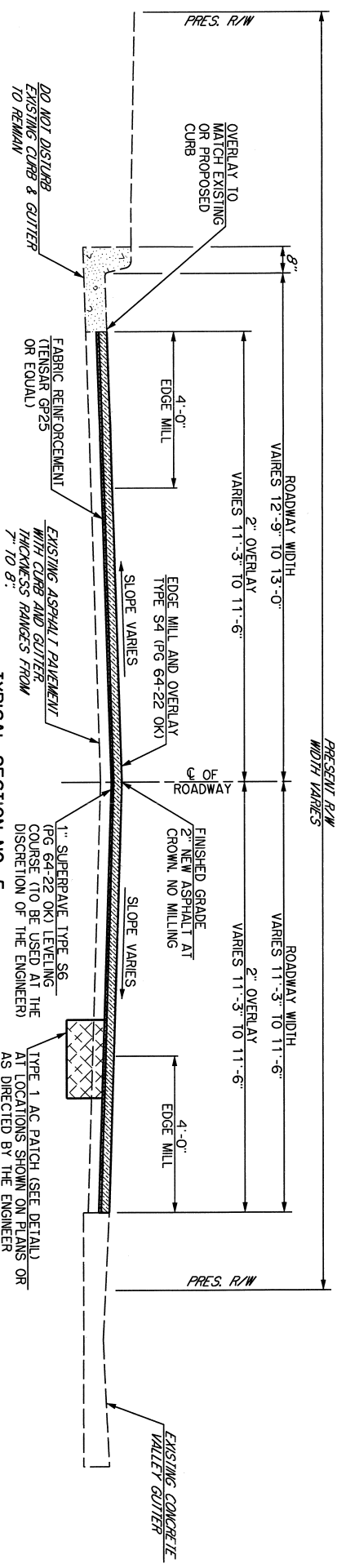


REVISION	BY	DATE

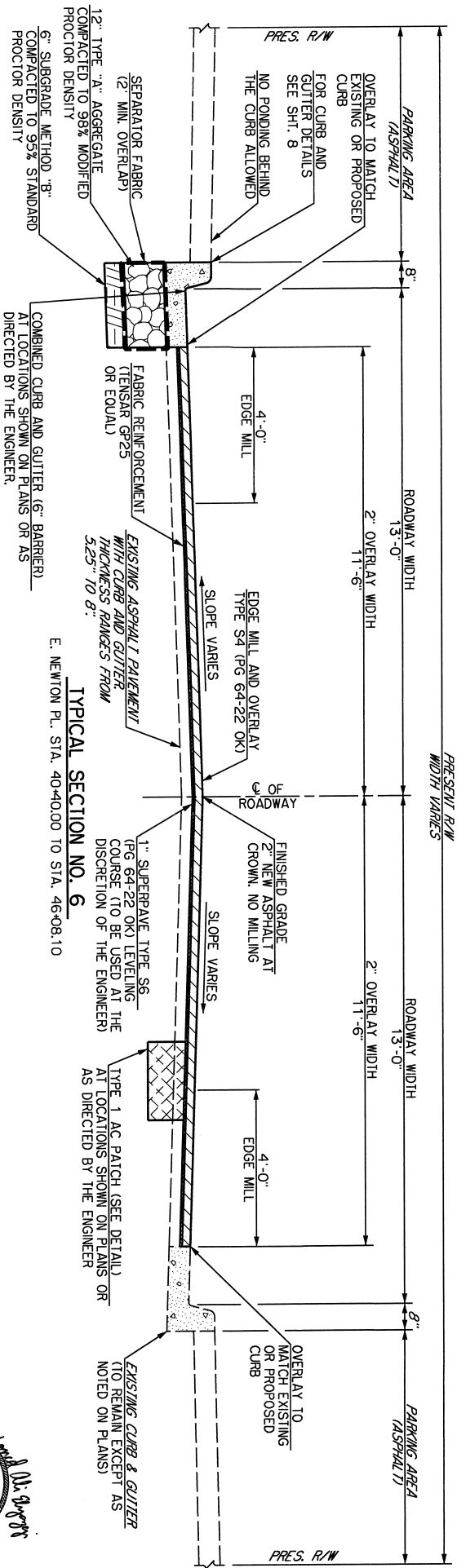
PROJECT NO. 2036N30817	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
Comprehensive Engineering Services EST, INC. Certificate of Authorization No. 3639 (FE/LS), Expires 6/30/24	
PLAN SCALE	DRAWN: RM 3/21 APPROVED:
N/A	DESIGNED: DMA 3/21
PROFILE SCALE	SURVEY: CH 3/21
N/A	PROJ. MGR: JMM 1/23
HORIZONTAL:	LEAD MGR: S 1/23
VERTICAL:	FIELD MGR: JMM 1/23
N/A	DESIGN MANAGER: JMM 1/23
FILE:	DRAWING: DATE: 11/13/2023
ATLAS PAGE NO.:	SHEET 7 OF 38 SHEETS



TYPICAL SECTION NO. 4
N. 109th E. AVE. STA. 30+92.34 TO STA. 34+93.73



TYPICAL SECTION NO. 5
N. 109th E. AVE. STA. 34+93.73 TO STA. 35+54.87

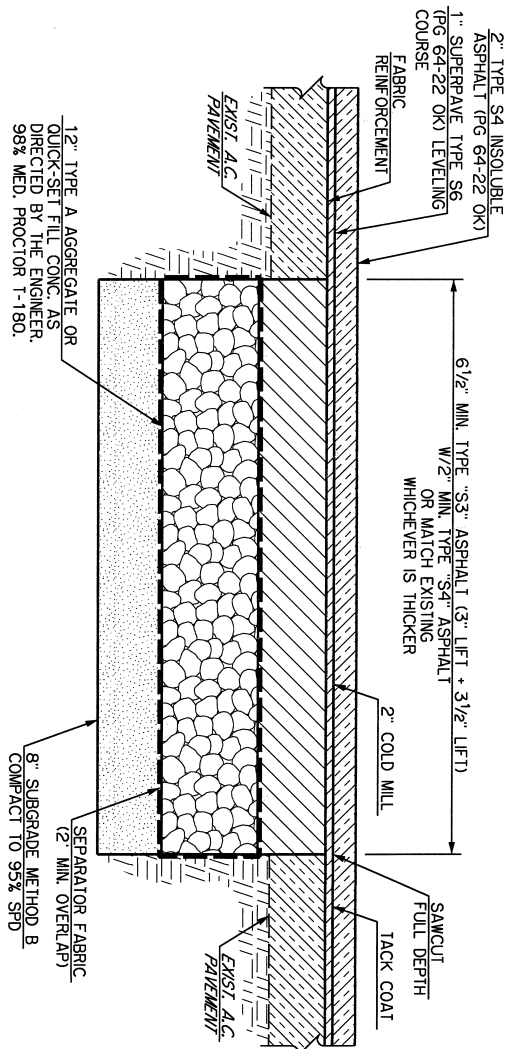


TYPICAL SECTION NO. 6
E. NEWTON PL. STA. 40+40.00 TO STA. 46+08.10

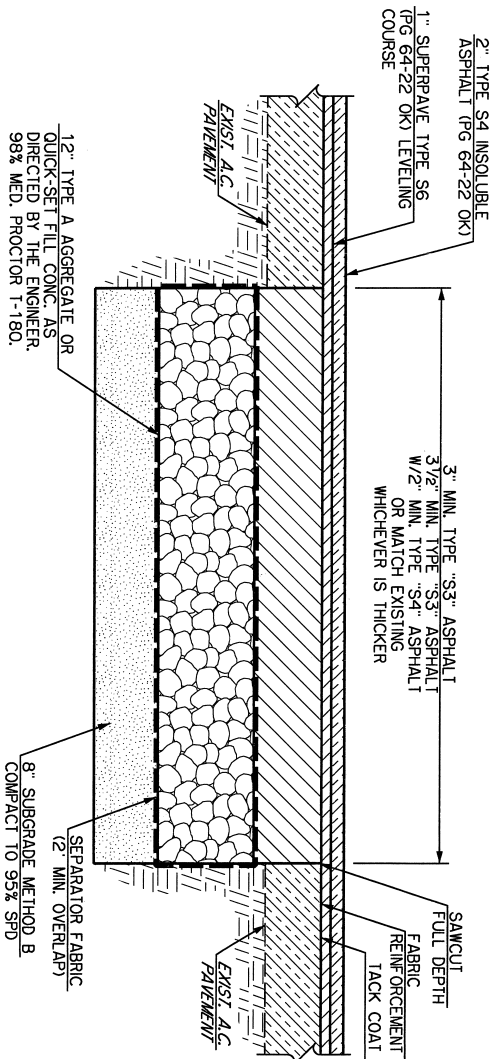


REVISION	BY	DATE

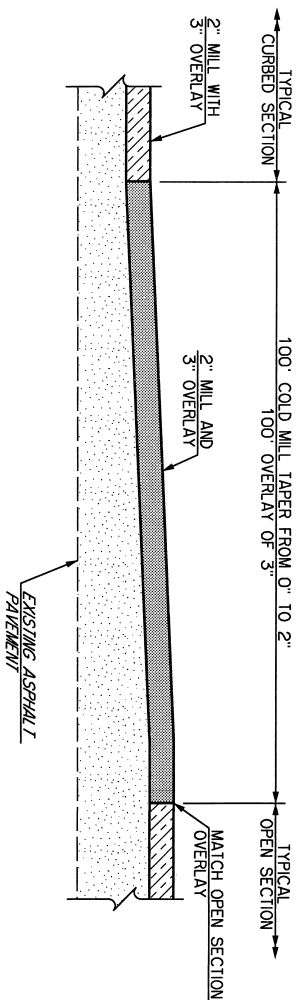
TYPICAL SECTIONS (SHEET NO. 2 OF 3)	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
EST. INC. Certificate of Authorization No. 3639 (RE/LS), Expires 6/30/24	
PROFILE SCALE	APPROVED:
HORIZONTAL:	DESIGNED: RA 3/21
VERTICAL:	DRAWN: CH 3/21
RECOMMENDED:	SLURRY: CH 3/21
DESIGN MANAGER:	PROJ. MGR. AMH 4/23
CITY ENGINEER:	FIELD MGR. (D) 4/23
DATE: 11/3/2023	LEAD MGR. 204 4/23
SHEET 8 OF 38 SHEETS	



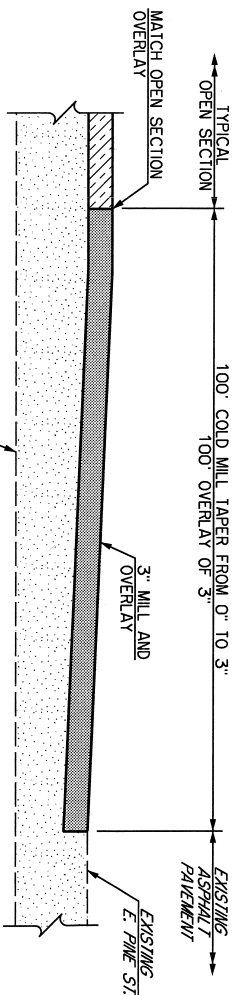
TYPE 1 AC PATCH NON-ARTERIAL
N. 108th E. AVE. STA. 10+67.35 TO STA. 22+77.53
E. NEWTON PL. STA. 30+40.00 TO STA. 36+12.55
N. 109th E. AVE. STA. 40+76.00 TO STA. 46+50.00



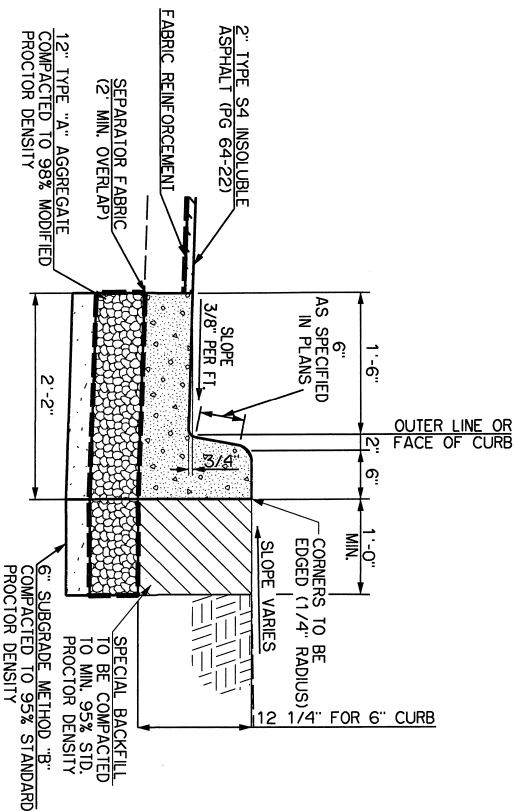
TYPE 1 AC PATCH NON-ARTERIAL
N. 108th E. AVE. STA. 22+77.53 TO STA. 26+02.56



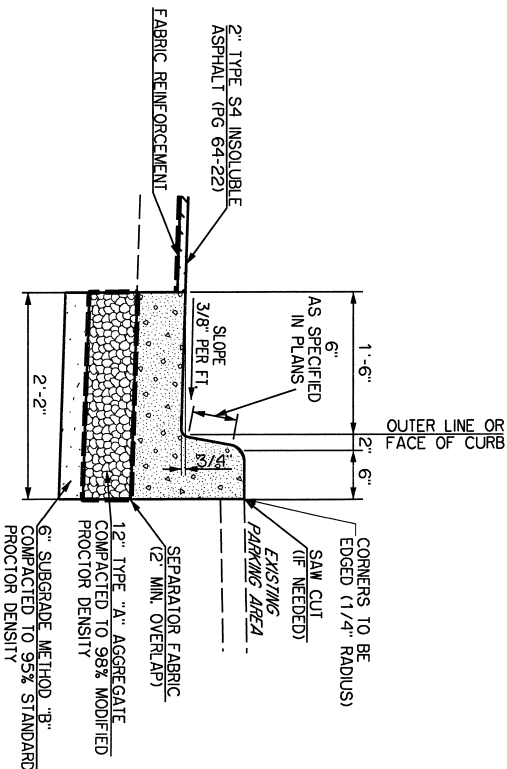
**PROFILE OF TRANSITION BETWEEN 108th E. AVE.
TYPICAL CURBED SECTION AND TYPICAL OPEN SECTION**
STA. 22+77.53 TO STA. 23+44.53



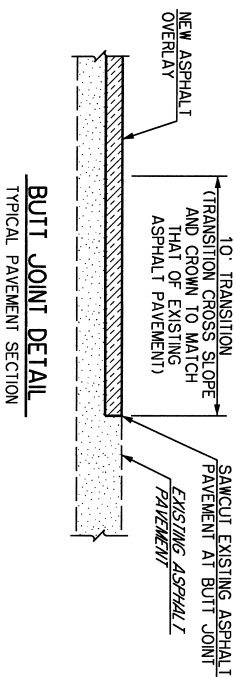
**PROFILE OF TRANSITION BETWEEN 108th E. AVE.
TYPICAL OPEN SECTION AND EXISTING PINE ST. PAVEMENT**
STA. 25+02.56 TO STA. 26+02.56



CURB REPLACEMENT DETAIL
WEST SIDE OF N. 108th E. AVE.



CURB REPLACEMENT DETAIL
EAST SIDE OF N. 108th E. AVE.
E. NEWTON PLACE



BUTT JOINT DETAIL
TYPICAL PAVEMENT SECTION

**TYPICAL SECTIONS
(SHEET NO. 3 OF 3)**

PROJECT NO. 2036N30812

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OKLAHOMA 74103
(918) 660-7141

EST
Engineering Services
EST, INC. Certificate of Authorization No. 2639 (07/13). Expires 6/30/24

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

PROF. INGR. 8/12
LEAD INGR. 8/12
FIELD INGR. 8/12
DESIGN MANAGER 8/12

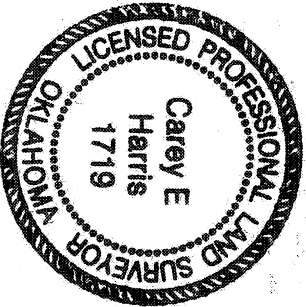
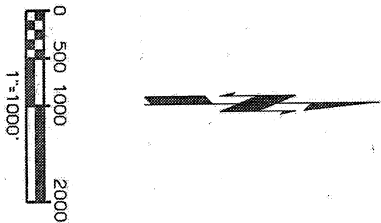
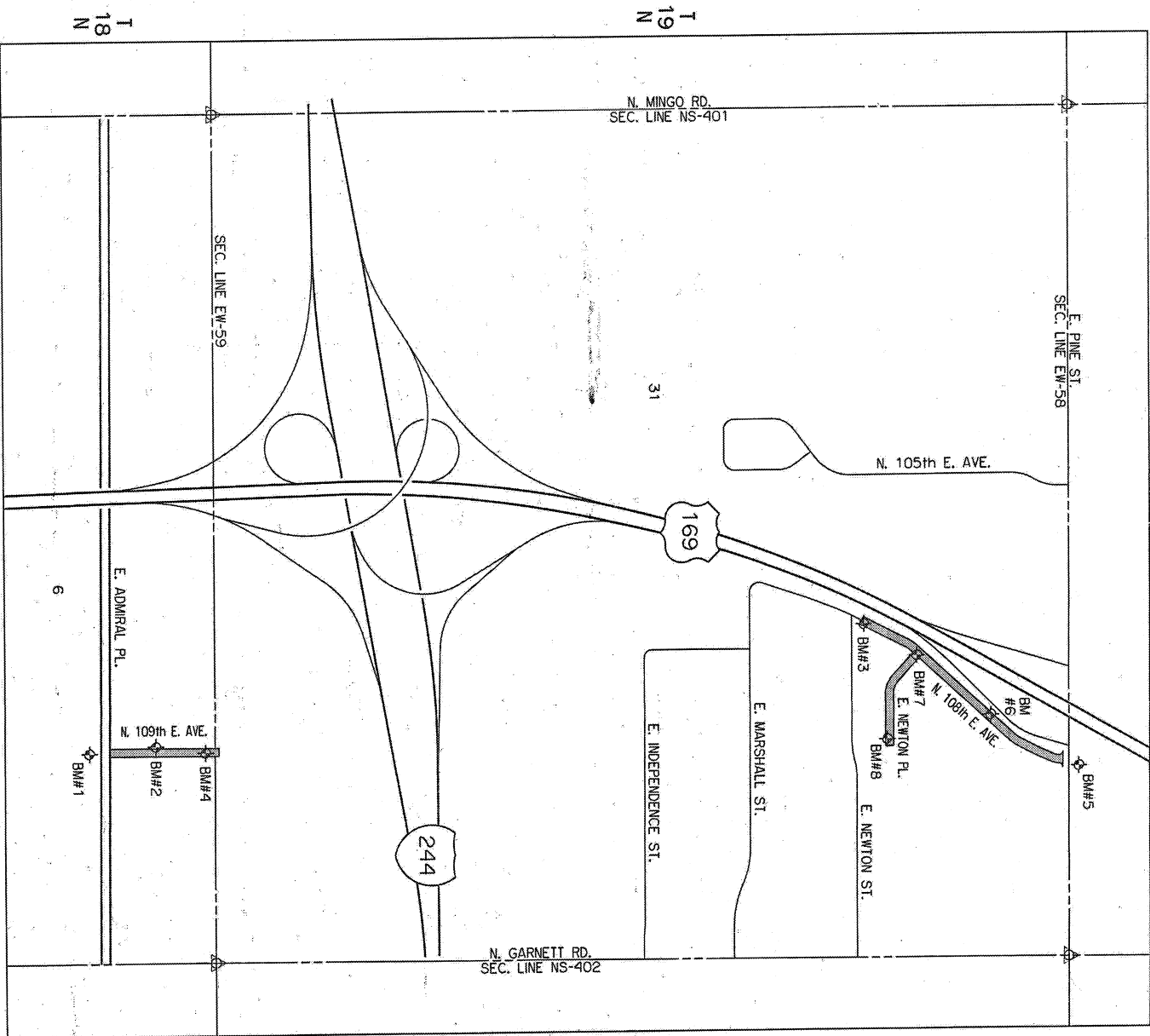
SURVEY CONTROL DATA

- HORIZONTAL CONTROL:
 - HORIZONTAL CONTROL FOR THIS SURVEY IS NAD 83 (1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM, NORTH ZONE 3501.
 - ACCURACY-1ST ORDER OR BETTER.
- VERTICAL CONTROL:
 - LEVEL DATUM IN NAVD 1989.
 - ACCURACY-1st ORDER OR BETTER.
- PERMANENT BENCHMARKS:

COT-510
TD12
JU

BENCHMARK TABLE

BM #	NORTHING	EASTING	ELEV.	DESCRIPTION	STATION/OFFSET
1	429449.6778	2601473.1438	638.42	BM 1/2" REBAR WITH CAP	29+55.22 1.44' LT.
2	429881.0517	2601430.7230	638.36	BM 1/2" REBAR WITH CAP	33+87.34 35.39' LT.
3	434048.1095	2600590.4437	627.66	BM 1/2" REBAR WITH CAP	9+69.83 24.96' RT.
4	430290.6609	2601497.8454	628.56	BM 1/2" REBAR WITH CAP	37+95.56 39.75' RT.
5	435498.6693	2601498.5705	622.73	BM 1/2" REBAR WITH CAP	26+87.55 59.89' RT.
6	435031.0245	2601186.4916	621.11	BM 1/2" REBAR WITH CAP	21+24.48 52.18' LT.
7	434561.5071	2600809.7400	625.84	BM 1/2" REBAR WITH CAP	15+22.85 31.38' LT.
8	434313.6816	2601365.4123	624.03	BM 1/2" REBAR WITH CAP	46+23.04 24.45' RT.
9	435334.2090	2594694.7950	628.68	CITY OF TULSA BM "COT-510"	
10	435387.7970	2599285.9860	616.70	CITY OF TULSA BM "TD12"	
11	438479.6620	2602343.4800	629.21	CITY OF TULSA BM "JU"	



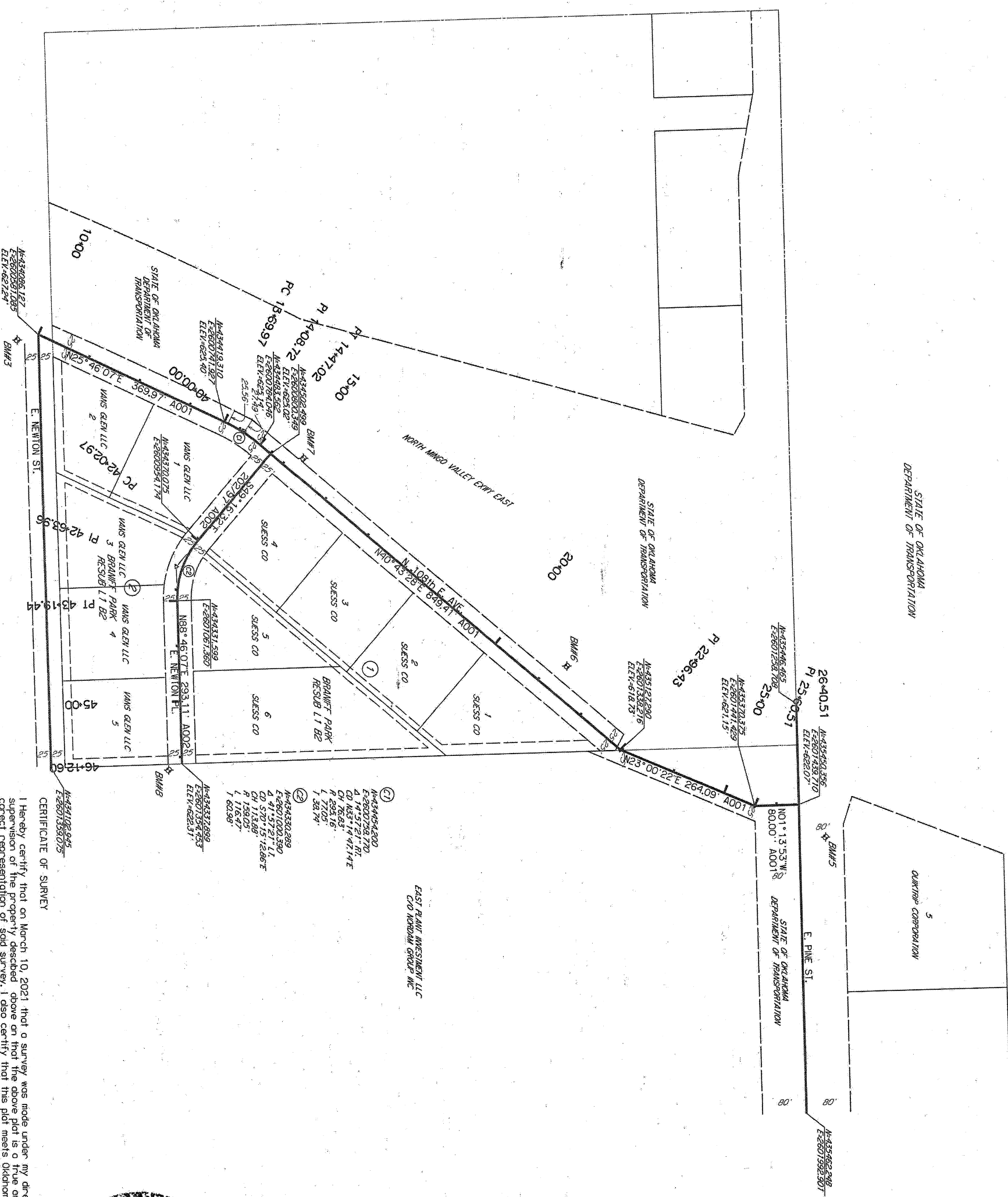
CERTIFICATE OF SURVEY

I Herby certify that on March 10, 2021 that a survey was made under my direct supervision of the property described above on that the above plot is a true and correct representation of said survey. I also certify that this plot meets Oklahoma Minimum Standards for practice of Land Surveying as adopted by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors.

Cary E. Harris, Oklahoma Licensed Professional Land Surveyor No. 1719 Date 3/21/22

REVISION	BY	DATE

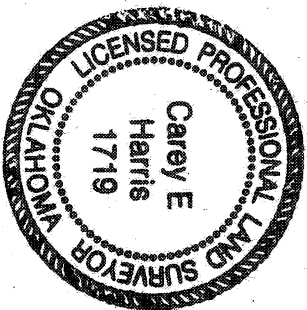
ROW & SURVEY DATA SHEETS (SHEET NO. 1 OF 3)	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th St., SUITE 1601 TULSA, OK 74103 (918) 680-7141	
FILE	EST
EST Engineering Services EST, INC. Certificate of Authorization No. 3639 (RE-EST) Expires 6/30/22	
PLAN SCALE	DRAWN: RM 5/21 APPROVED:
1" = 1,000'	DESIGNED: DBA 5/21
PROFILE SCALE	SURVEY: CH 3/21
VERTICAL: N/A	PROJ. MGR. MJ 5/20
FIELD MGR. H 8/22	LEAD MGR. H 8/22
RECOMMENDED BY: H 8/22	CITY ENGINEER: H 8/22
DESIGN MANAGER: H 8/22	DATE: 11/3/2023
ATLAS PAGE NO:	SHEET 10 OF 38 SHEETS




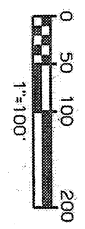
CERTIFICATE OF SURVEY

I Hereby certify that on March 10, 2021 that a survey was made under my direct supervision of the property described above on that the above plot is a true and correct representation of said survey, I also certify that this plot meets Oklahoma Minimum Standards for practice of Land Surveying as adopted by the Oklahoma State board of Registration for Professional Engineers and Land Surveyors.

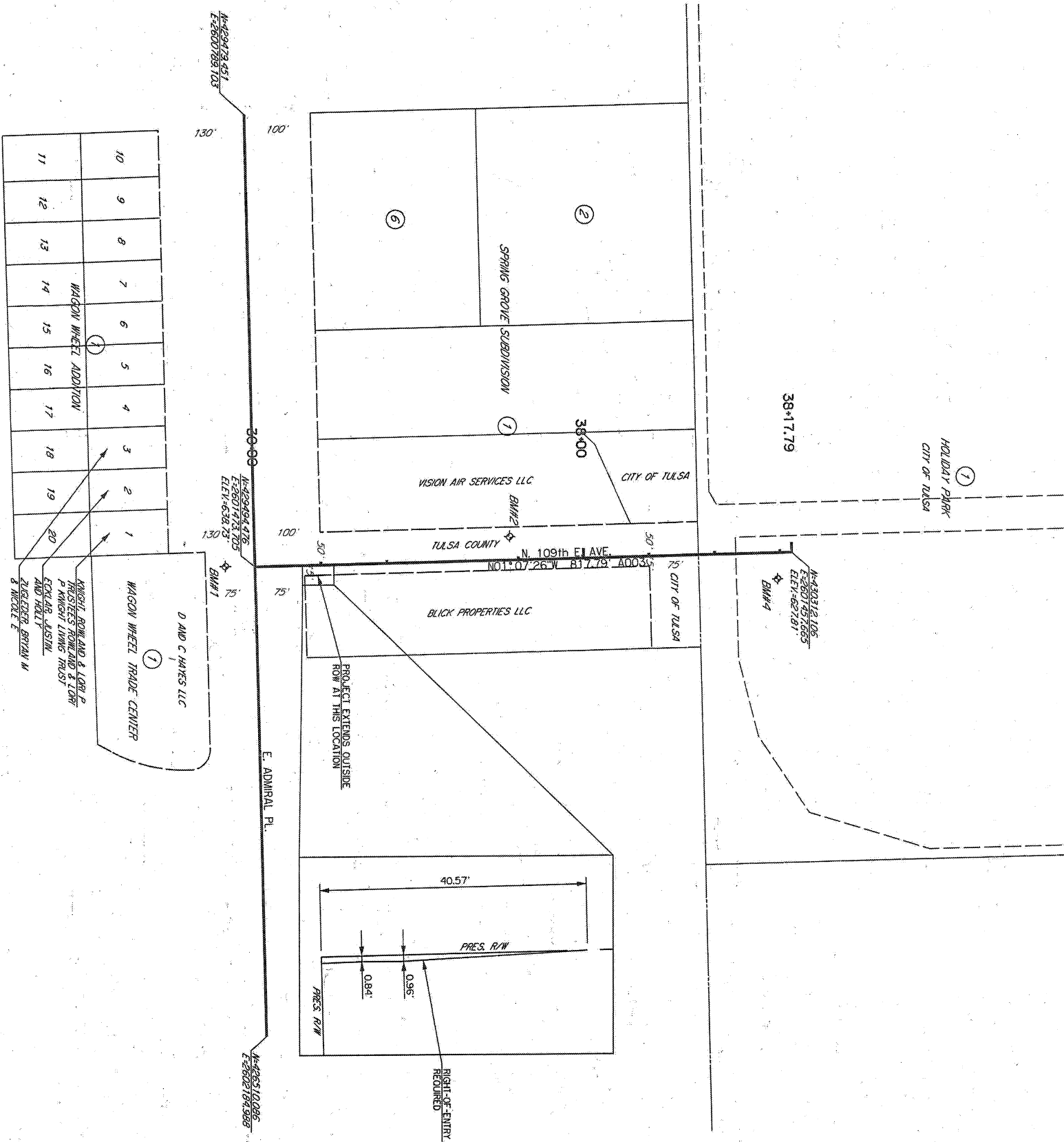
Cary E. Harris, Oklahoma Licensed Professional Land Surveyor No. 1719 Date 11/21/2024

[illegible]

ROW & SURVEY DATA SHEETS (SHEET NO. 2 OF 3)	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 680-7141	
	
Comprehensive Engineering Services ESI, INC. Certificate of Authorization No. 3639 (PE/S); Expires 6/30/22	
PLAN SCALE: 1" = 100'	DRAWN: RM 5/21
VERTICAL: 1" = 100'	DESIGNED: DMA 5/21
RODENT SCALE	SURVEY: CEH 3/21
HORIZONTAL: N/A	PROJ. MGR. WOA 5/12
VERICAL: N/A	LEAD MGR. DOB 7/12
RECOMMENDED: <i>YES</i>	FIELD MGR. <i>Pringle</i>
DESIGN MANAGER: <i>Hu Bie</i>	
CITY ENGINEER: <i>Tolle</i>	
DATE: 11/3/2022	
SHEET 11. OF 38. SHEETS	



PARCEL TABLE					
PARCEL	OWNER NAME	OWNER MAILING ADDRESS	PROPERTY ADDRESS	COT PARCEL NO.	BOOK/PAGE
1	BLICK PROPERTIES LLC	1401 S. 69th EAST AVE. TULSA, OK 74112-6801	10759 E. ADMIRAL PL.	18910-94-06-6710	DOC #2020101489
					PRI BLK 1 BEG MOST SECR TH W125 N52S41 E125 S52S41 P08
					LEGAL DESCRIPTION
					RIGHT-OF-ENTRY REQUIRED

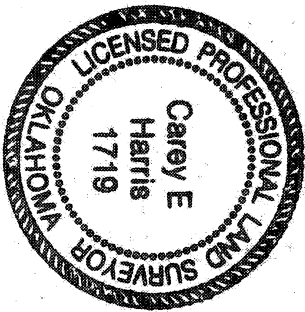


CERTIFICATE OF SURVEY

I Herby certify that on March 10, 2021 that a survey was made under my direct supervision of the property described above on that the above plot is a true and correct representation of said survey. I also certify that this plot meets Oklahoma Minimum Standards for Practice of Land Surveying as adopted by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors.

[Signature] 7 Mar 22

Cory E. Harris, Oklahoma Licensed Professional Land Surveyor No. 1719 Date



ROW & SURVEY DATA SHEETS (SHEET NO. 3 OF 3)	
PROJECT NO. 2036N3081Z	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 650-7141	
EST. INC. Certificate of Authorization No. 3639 (RE/ST) Expires 6/30/22	
PLAN SCALE: 1" = 100'	
DESIGNED: RMI 5/21	
SURVEY: PROJ. MGR. WJL 5/1/22	
FIELD MGR. JEW 7/22	
CHECKED: HAI 8/12	
DRAWING: DATE: 11/3/2023	
SHEET 12 OF 38 SHEETS	

BM #3 STA. 9+69.83
1/2" REBAR W/CAP
24.96' RT. ELEV. -627.66

BEGIN CRI
STA. 10+00.00
N: 434086.1267
E: 2600581.0852

BEGIN PROJECT
STA. 10+67.35
N: 434146.7769
E: 2600610.3635

PC
STA. 13+69.97
N: 434419.3105
E: 2600741.9267

BM #7 STA. 15+22.85
1/2" REBAR W/CAP
31.38' LT. ELEV. -625.84

PT
STA. 14+7.02
N: 434483.5619
E: 2600784.0460

STA. 14+72.01 N. 108th E. AVE.
STA. 40+00.00 E. NEWTON PL.
N: 434502.4995
E: 2600800.3489

BM #7

SEC. 31
T-20-N, R-14-E

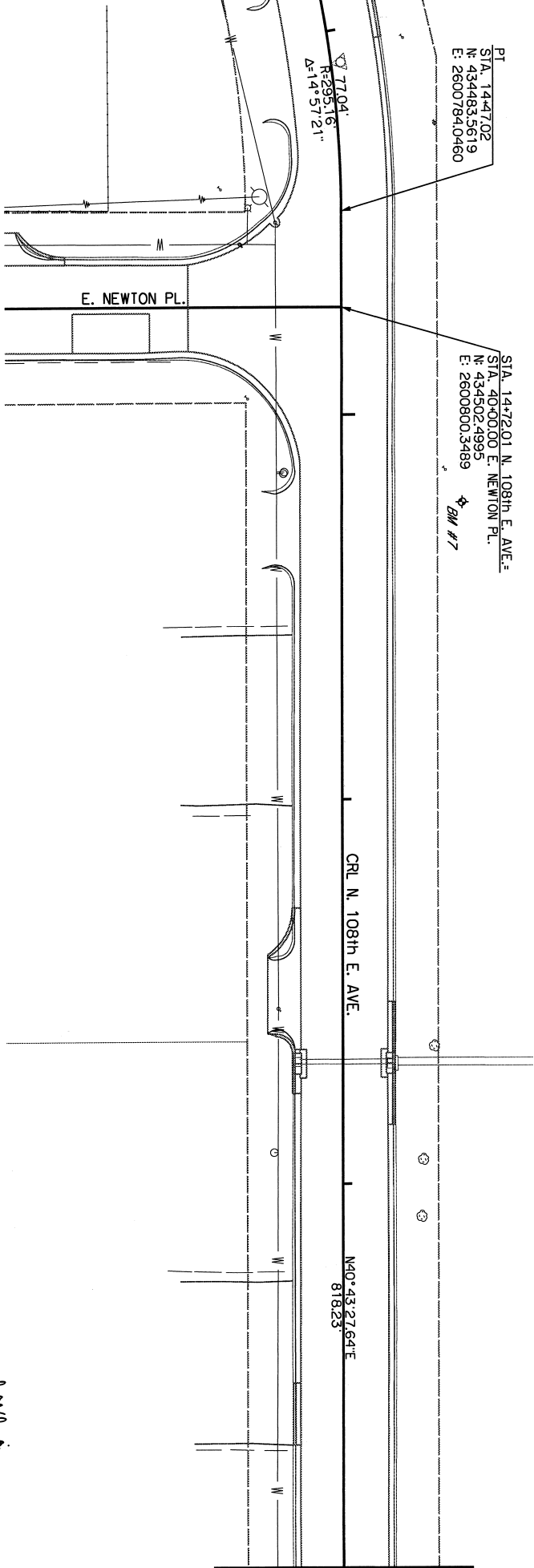
SEC. 31
T-20-N, R-14-E



MATCHLINE STA. 13+80.00

MATCHLINE STA. 13+80.00

MATCHLINE STA. 18+00.00
SEE SHEET 13



REVISION	BY	DATE

GEOMETRIC DATA N. 108th E. AVE. (1) STA. 10+00.00 TO STA. 18+00.00	
PROJECT NO. 2036N30812	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
ESI, INC. Certificate of Authorization No. 3639 (PE/LSI Expires 8/30/24)	
PLAN SCALE 1" = 20'	DRAWN RM 3/21 APPROVED: 1" = 20'
PROFILE SCALE 1" = 20'	DESIGNED DRA 3/21
HORIZONTAL: LEAD MGR. 1/20/20	SURVEY CH 3/21
VERTICAL: LEAD MGR. 1/20/20	PROJ. MGR. 1/20/20
RECOMMENDED DATE: 11/3/2023	CITY ENGINEER DATE: 11/3/2023
FILE: DRAWING	DATE: 11/3/2023
ATLAS PAGE NO.: 173	SHEET 13 OF 38 SHEETS

SEE SHEET 12
MATCHLINE STA. 18+00.00

19+00

20+00

21+00

22+00

SEC. 31
T-20-N, R-14-E

BM #6

BM #6 STA. 21+24.48
1/2" REBAR W/RED FSI CAP
2x18" LT. ELEV.=621.11

PC
STA. 22+65.25
N: 435103.6661
E: 2601317.8770

M40°43.2764'E
818.23

CRL N. 108th E. AVE.

SC1.85
R200.00
Δ=17°43'06"

MATCHLINE STA. 23+00.00



SEC. 31
T-20-N, R-14-E

24+00

25+00

26+00

SEC. LINE NS-4015
OIR N°06°49'51"W

PT
STA. 23+27.10
N: 435155.9849
E: 2601350.3969

PC
STA. 25+17.07
N: 435330.8457
E: 2601424.6451

END PROJECT
STA. 26+00.78
N: 435412.4099
E: 2601440.5235

END CRL
STA. 26+38.73
N: 435448.1282
E: 2601438.5994

BM #5 STA. 26+93.77
1/2" REBAR W/CAP
5x8x9" RT. ELEV.=622.73

SEC. 30
T-20-N, R-14-E

MATCHLINE STA. 23+00.00

CRL N. 108th E. AVE.

M23°00'21.62"E
189.97

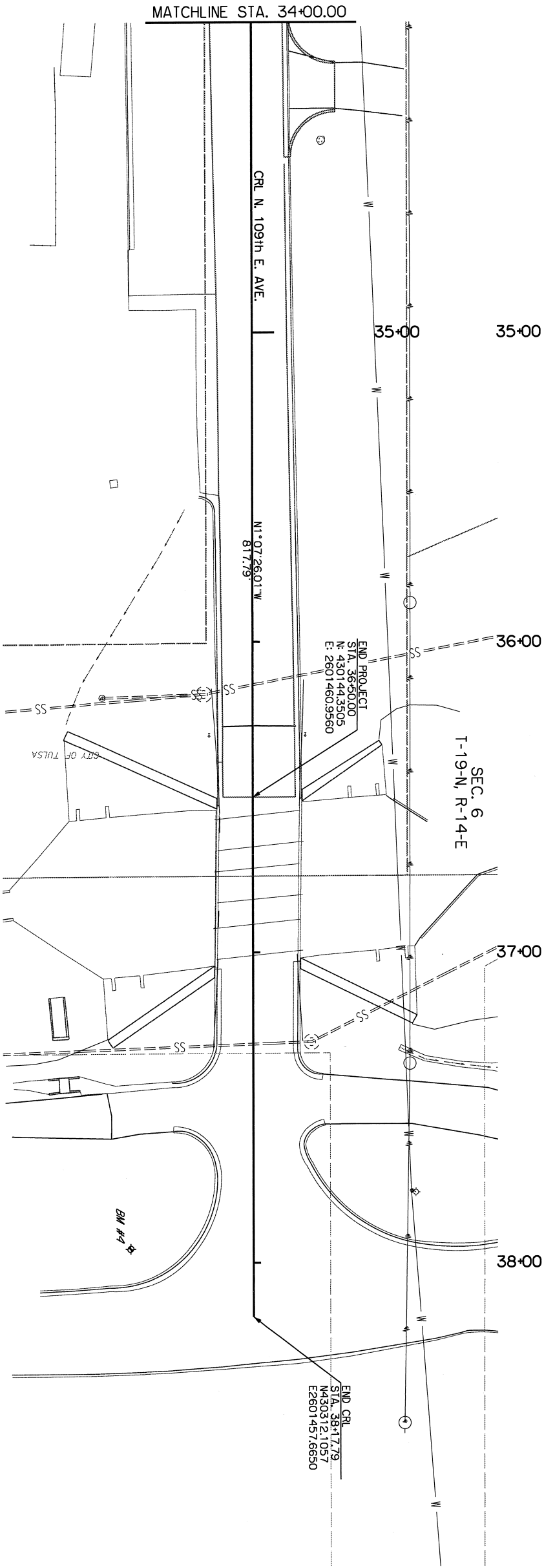
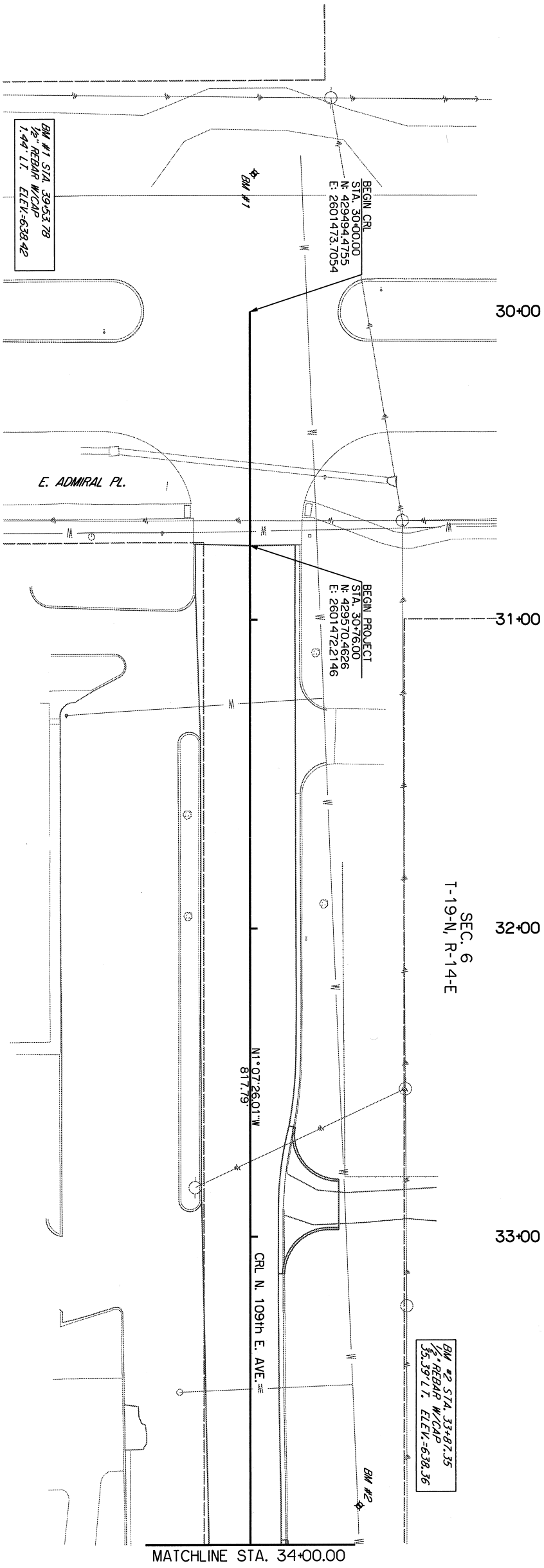
PT
STA. 26+01.67
N: 435411.0815
E: 2601439.3958

E. PINE ST.



REVISION	BY	DATE

GEOMETRIC DATA N. 108th E. AVE. (2) STA. 18+00.00 TO STA. 26+02.56	
PROJECT NO. 2036N30812	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
Comprehensive Engineering Services, Inc. ESI, INC. Certificate of Authorization No. 3639 (PE/LS/Expire 6/30/24)	
PLAN SCALE 1" = 20'	DRAWN RM 3/21 DESIGNED DRG 3/21 SURVEY CH 3/21
PROFILE SCALE	PROJ. MNGR. <i>MM</i> 8/12 LEAD MNGR. <i>MM</i> 8/12 FIELD MNGR. <i>MM</i> 8/12
HORIZONTAL: N/A	RECOMMENDED DESIGN MANAGER DATE: 11/3/2023
VERTICAL: N/A	CITY ENGINEER DATE: 11/3/2023
FILE: _____	DRAWING: _____
ATLAS PAGE NO.: 173	SHEET 14 OF 38 SHEETS



BM #3 STA. 37+95.56
1/2" REBAR W/CAP
39.75' RT. ELEV.-628.56

BM #2 STA. 33+87.35
1/2" REBAR W/CAP
35.39' LT. ELEV.-638.36

END CRL
STA. 38+17.79
N: 430312.1057
E: 2601457.6650

END PROJECT
STA. 36+50.00
N: 430144.3505
E: 2601460.9560

BEGIN CRL
STA. 30+00.00
N: 429494.4755
E: 2601473.7054

BM #1 STA. 39+53.78
1/2" REBAR W/CAP
1.44' LT. ELEV.-638.42



REVISION	BY	DATE

GEOMETRIC DATA

N. 109th E. AVE.

STA. 30+00.00 TO STA. 38+17.79

PROJECT NO. 2036N30812

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

Comprehensive Engineering Services, Inc.
EST. INC. Certificate of Authorization No. 36539 (RE/LS) Expires 6/30/24

PLAN SCALE

DRAWN

DATE

3/21

APPROVED:

1" = 20'

DESIGNED

DRA

3/21

APPROVED:

PROFILE SCALE

PROJ. MGR.

DATE

3/21

APPROVED:

VERTICAL:

FIELD MGR.

DATE

3/21

APPROVED:

FILE:

DRAWING

DATE

11/3/2023

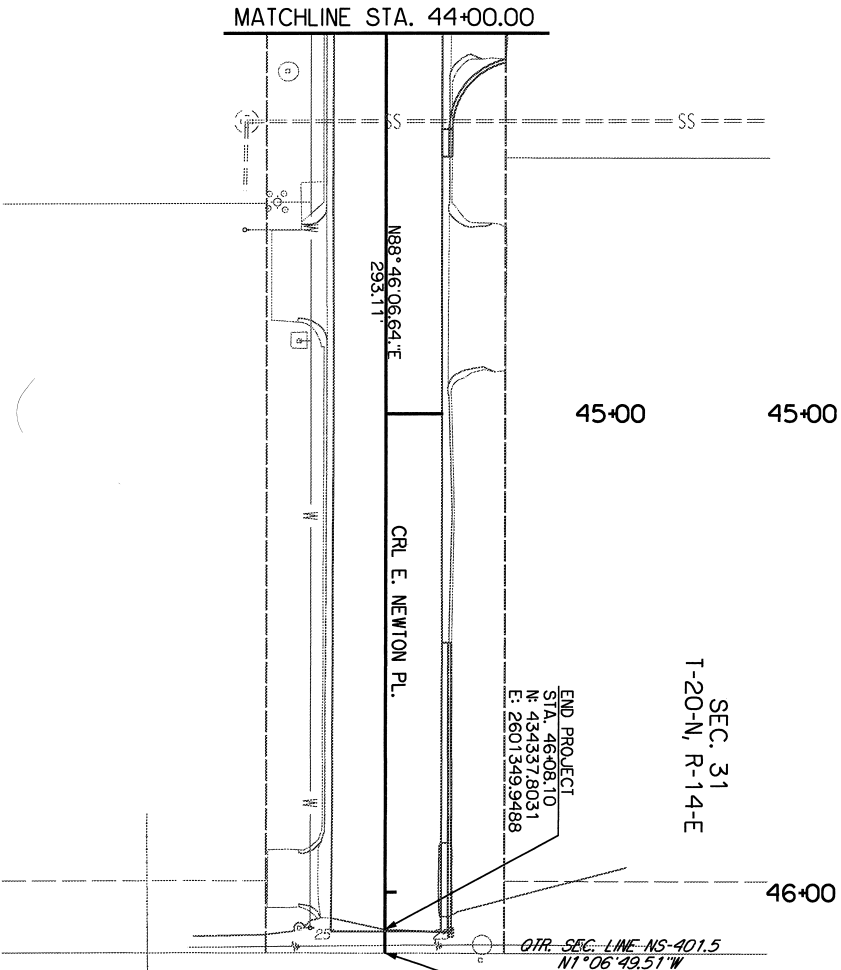
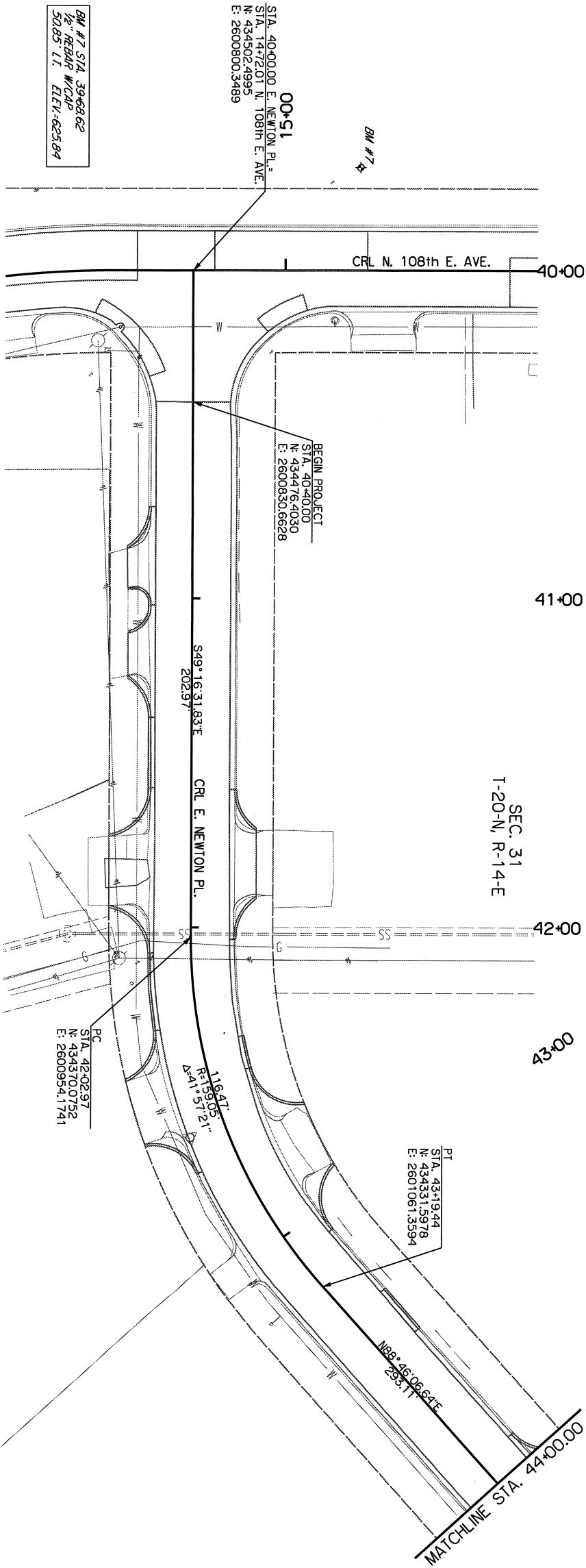
APPROVED:

ATLAS PAGE NO:

175

SHEET 15 OF 38 SHEETS





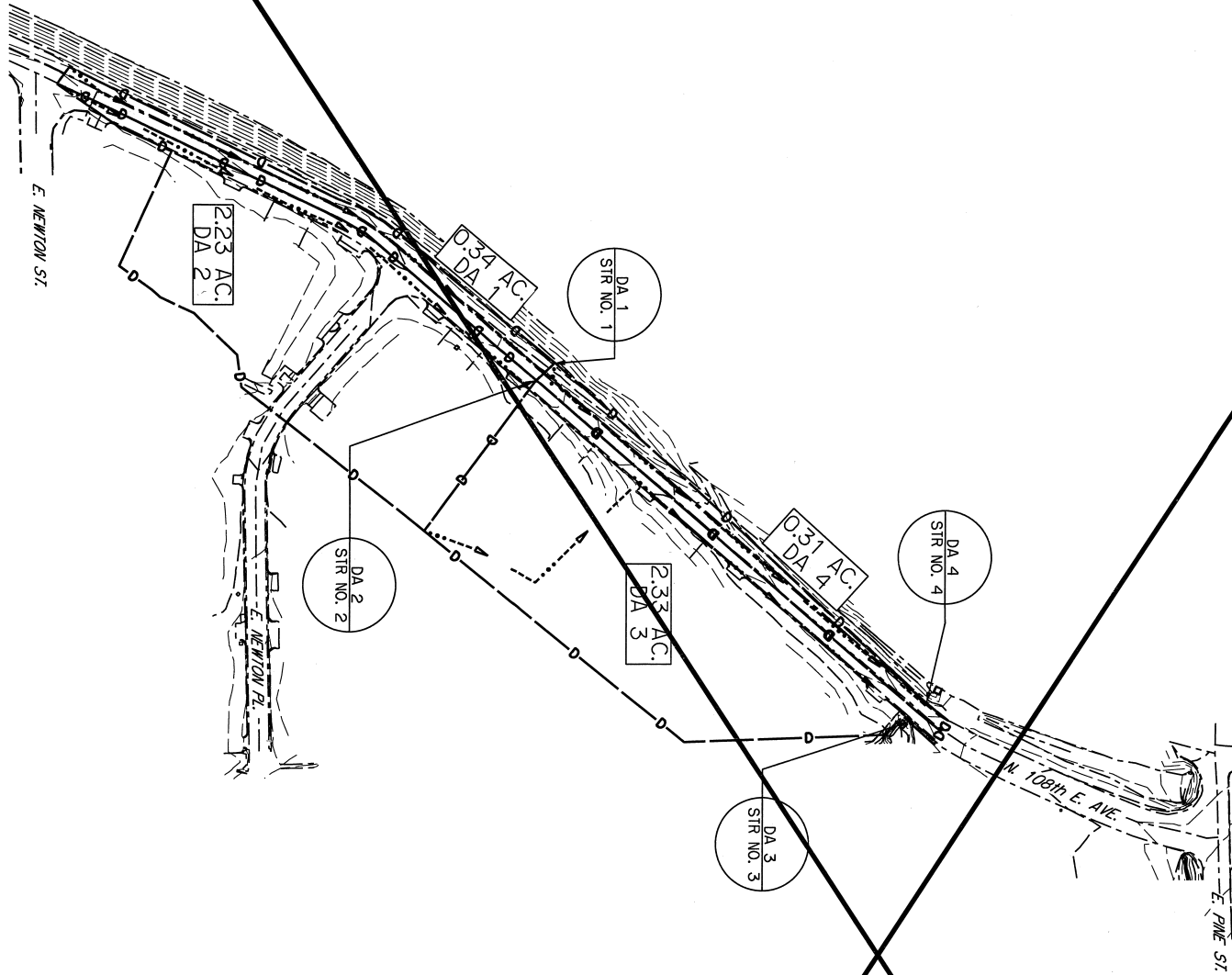
BM #8 STA. 46+23.04
1/2" REBAR W/CAP
24.45' L.I. ELEV. 624.03



REVISION	BY	DATE

GEOMETRIC DATA E. NEWTON PL. STA. 40+00.00 TO STA. 46+07.73	
PROJECT NO. 2036N30817	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
Comprehensive Engineering Services EST. INC. Certificate of Authorization No. 3639 (P/L/S); Expires 6/30/24	
PLAN SCALE 1" = 20'	DRAWN RM 3/21 DESIGNED ORA 3/21 SURVEY CH 3/21
PROFILE SCALE	PROJ. MNGR. <i>MD</i> LEAD INGR. <i>MD</i> FIELD INGR. <i>MD</i> DESIGN MANAGER <i>MD</i>
VERTICAL: N/A	RECOMMENDED DATE: 11/3/2023
FILE: ATLAS PAGE NO.: 173	CITY ENGINEER DATE: 11/3/2023 SHEET 16 OF 38 SHEETS

SUMMARY OF HYDROLOGIC DATA AND RUNOFF CALCULATIONS																	
D.A. NO.	AREA	INTENSITY	FACTORED RUNOFF COEFF.	DESIGN YEAR RUNOFF	COLLECTING STR NO.	OVERLAND FLOW						SHALLOW CONCENTRATED FLOW				TOTAL TIME OF CONCENTRATION	DESIGN TOTAL TIME OF CONCENTRATION
	A	I ₁₀₀	C	DESIGN YEAR DISCHARGE (Q ₁₀₀)		ACTUAL FLOWPATH LENGTH	DESIGN FLOWPATH LENGTH (MAX=150 LF)	AVG SLOPE	VELOCITY	To	FLOWPATH LENGTH	AVG SLOPE	VELOCITY	Tch	Tc = To+tch	Tc = To+tch	
	ACRES	IN/HR		CFS		LF	LF	%	FPS	MIN	LF	%	FPS	MIN	MIN	MIN	
1	2.33	10.55	0.90	22.22	1	300	150	0.67	1.70	1.47	558	1.17	2.10	4.42	5.89	5.89	
2	0.31	11.14	0.80	2.78	2	0	0	0.00	0.00	0.00	550	1.07	2.03	4.52	4.52	4.52	
3	2.23	10.32	0.91	20.87	3	0	0	0.00	0.00	0.00	636	0.60	1.64	6.47	6.47	6.47	
4	0.34	10.29	0.76	2.68	4	0	0	0.00	0.00	0.00	643	0.60	1.64	6.54	6.54	6.54	



REVISION	BY	DATE

PROJECT NO. 2036N30812

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:

15 E. 5th ST. SUITE 1601
TULSA, OK 74103
(918) 680-7141

EST

Comprehensive Engineering Services

EST, INC. Certificate of Authorization No. 3639 (PE/LS); Expires 6/30/24

PLAN SCALE

1" = 100'

PROFILE SCALE

1" = 10'

HORIZONTAL:

DESIGNED RF 4/21

SURVEY CH 3/21

VERTICAL:

DESIGNED RF 4/21

SURVEY CH 3/21

PROJ. MGR.

LEAD MGR.

FIELD MGR.

DESIGN MGR.

DATE: 11/5/2023

CITY ENGINEER

FILE: DRAWING: 173

ATLAS PAGE NO: 173

SHEET 17 OF 38 SHEETS

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: N. 108th EAST AVE. FROM E. NEWTON ST. TO E. PINE ST., E. NEWTON PL. FROM N. 108th EAST AVE. TO THE DEAD-END, AND N. 109th EAST AVE. FROM E. ADMIRAL PL. TO THE ENTRANCE OF THE CITY OF TULSA SAFETY TRAINING CENTER.

PROJECT DESCRIPTION: PAVEMENT REHABILITATION, MILLING, PATCHING AND OVERLAY, AND REPLACEMENT OF STORM WATER INLETS, AS DIRECTED BY THE ENGINEER.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: _____

PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS, AS PRACTICAL, WITH CONSTRUCTION OPERATIONS. REPLACE SALVAGED TOPSOIL AND IMMEDIATELY INSTALL PERMANENT GRASSING ITEMS. REMOVE TEMPORARY SEDIMENT DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS, AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: DENNIS SILT LOAM, OKEMAH-PARSONS-PHAROAH COMPLEX, RADLEY SILT LOAM.

TOTAL AREA OF THE CONSTRUCTION SITE: 1.91 AC.

ESTIMATED AREA TO BE DISTURBED: 1.68 AC.

OFFSITE AREA TO BE DISTURBED: _____
(FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 1.88 AC.

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 1.91 AC.

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.89

LATITUDE & LONGITUDE OF CENTER OF PROJECT: LATITUDE 36° 10' 10.96" N, LONGITUDE 96° 51' 21.36" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: COOLEY CREEK, MINCO CREEK.

SENSITIVE WATERS OR WATERSHEDS: YES ☐ NO ☒

303(d) IMPAIRED WATERS: YES ☐ NO ☒

IF YES, LIST IMPAIRMENT: _____

LOCATED IN A TMDL: YES ☐ NO ☒

LAKE THUNDERBIRD TMDL: YES ☐ NO ☒

MS4 ENTITY YES ☒ NO ☐

IF YES, LOCATION: TULSA

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.

EROSION AND SEDIMENT CONTROLS

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, DRAINAGEWAYS, 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 (ODES) 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, CONTAMINMENT 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, SEPTEMBER 13, 2017.

STORMWATER MANAGEMENT PLAN	
PROJECT NO. 2036N30812	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5TH ST., SUITE 1607 TULSA, OK 74103 (918) 660-7141	
	
EST, INC. Certificate of Authorization No. 3639 (RE/LS), Expires 6/30/24	
PLAN SCALE: DRAWN: RM: 3/21 APPROVED:	
N/A DESIGNED: DMA 3/21	
N/A SLURRY: CH 3/21	
PORTLE SCALE: PROJ. MGR. <u>1/10/17/23</u>	
HORIZONTAL: LEAD MGR. <u>1506/9/123</u>	
N/A FIELD MGR. <u>1204/9/23</u>	
N/A RECOMMENDED: <u>9.1.3</u>	
N/A DESIGN MANAGER: <u>9.1.3</u>	
DATE: <u>11/13/2023</u>	
SHEET 18 OF 39 SHEETS	

REVISION

BY

DATE

FILE: DRAWING

DATE: 11/13/2023

ATLAS PAGE NO.:

SHEET 18 OF 39 SHEETS

REGISTERED PROFESSIONAL ENGINEER

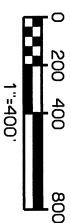
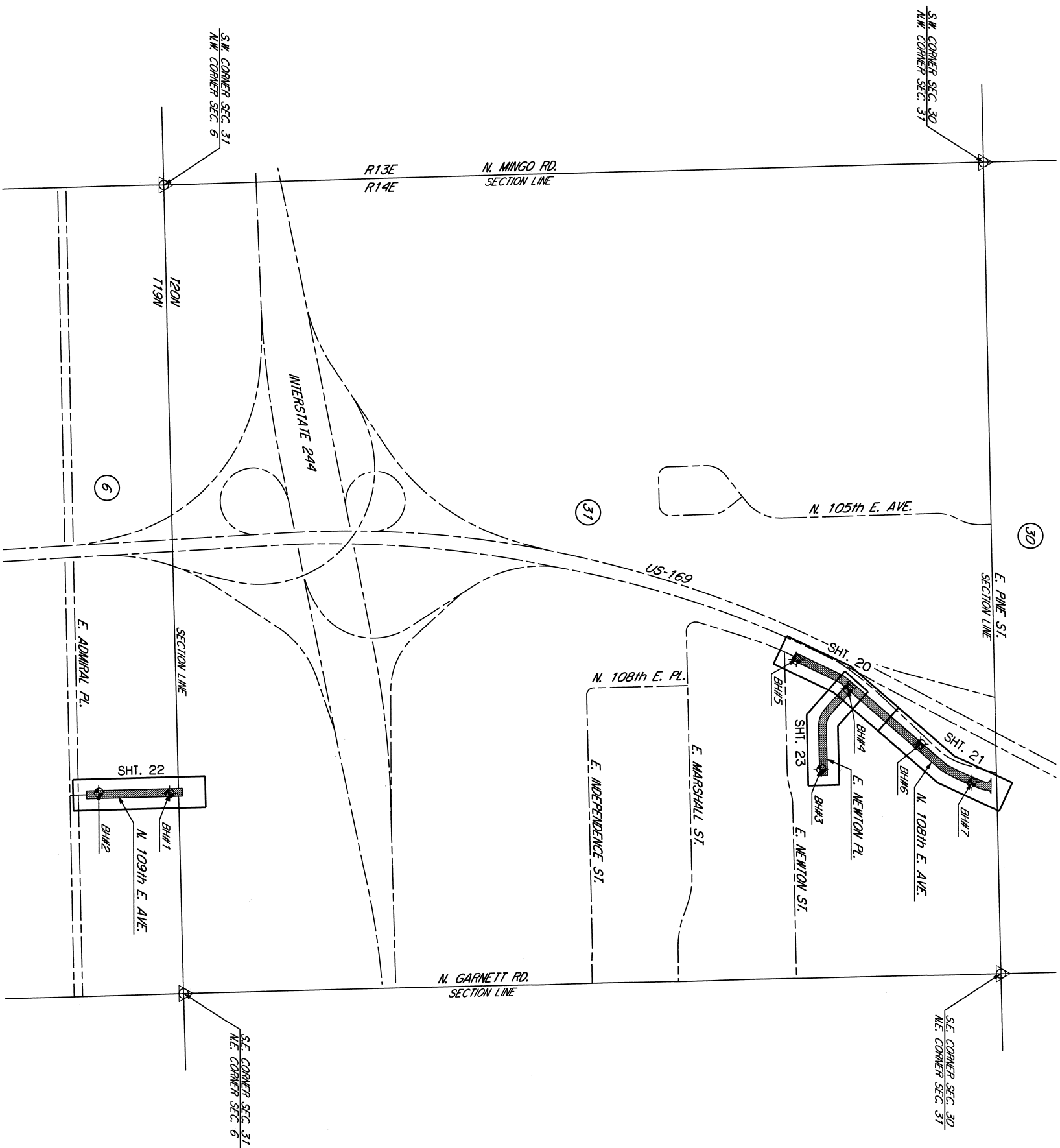
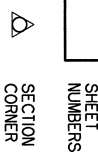
OKLAHOMA

EXPIRATION DATE

30510

9/11/23

LEGEND



REVISION	BY	DATE

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

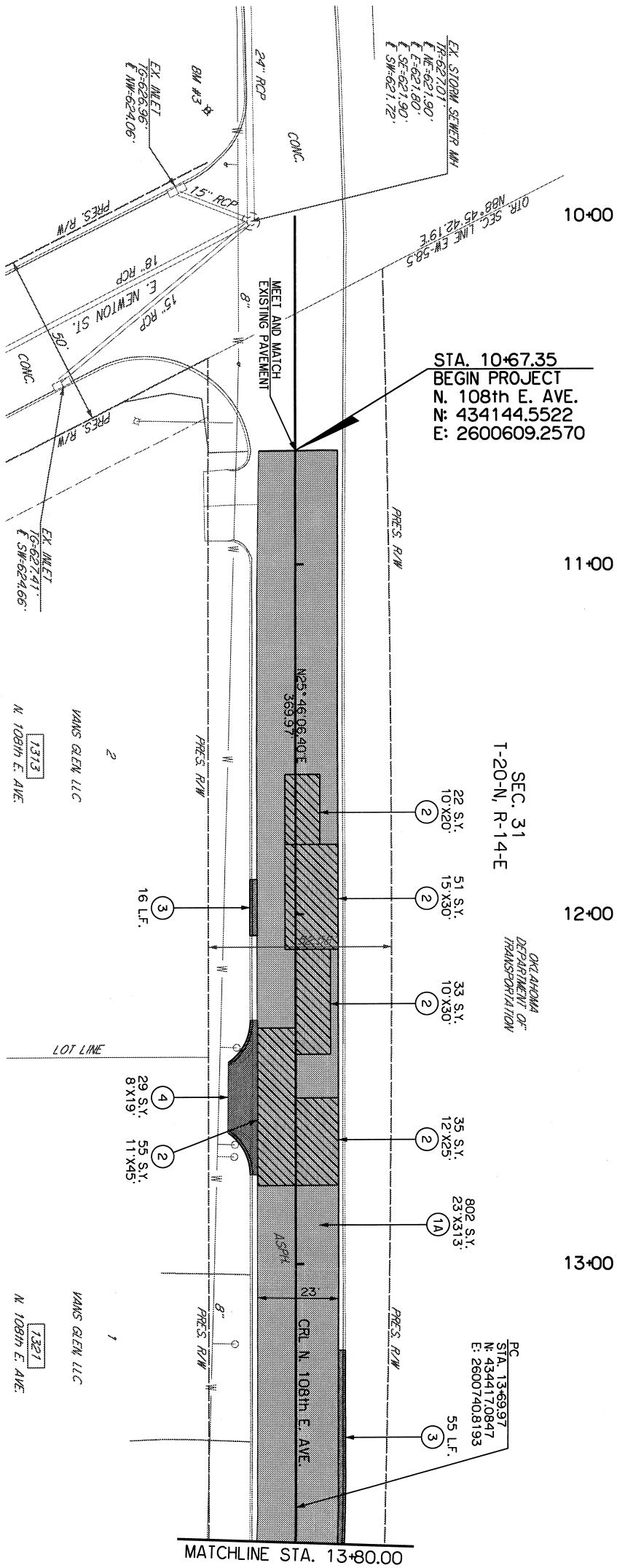
HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES 9-23
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES 9-23
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES 9-23
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES

HORIZONTAL:	LEAD MGR.	(S) WES
N/A	FIELD MGR.	MIA WBS
VERTICAL:	REQUIREMENTS	
N/A	DESIGN MANAGER	WES 9-23
FILE:	DRAWING:	
ATLAS PAGE NO.:	173 & 175	
SHEET 19 OF 38 SHEETS	DATE: 11/13/03	CITY ENGINEER T. J. JONES



STA. 10+67.35
BEGIN PROJECT
N. 108th E. AVE.
N: 434144.5522
E: 2600609.2570

SEC. 31
T-20-N, R-14-E
OKLAHOMA
DEPARTMENT OF
TRANSPORTATION

PC
STA. 13+69.97
N: 434170.847
E: 2600740.8193



14+00
15+00
16+00
17+00
18+00

OKLAHOMA
DEPARTMENT OF
TRANSPORTATION
SEC. 31
T-20-N, R-14-E

PI
STA. 14+47.02
N: 434481.3363
E: 2600782.9386

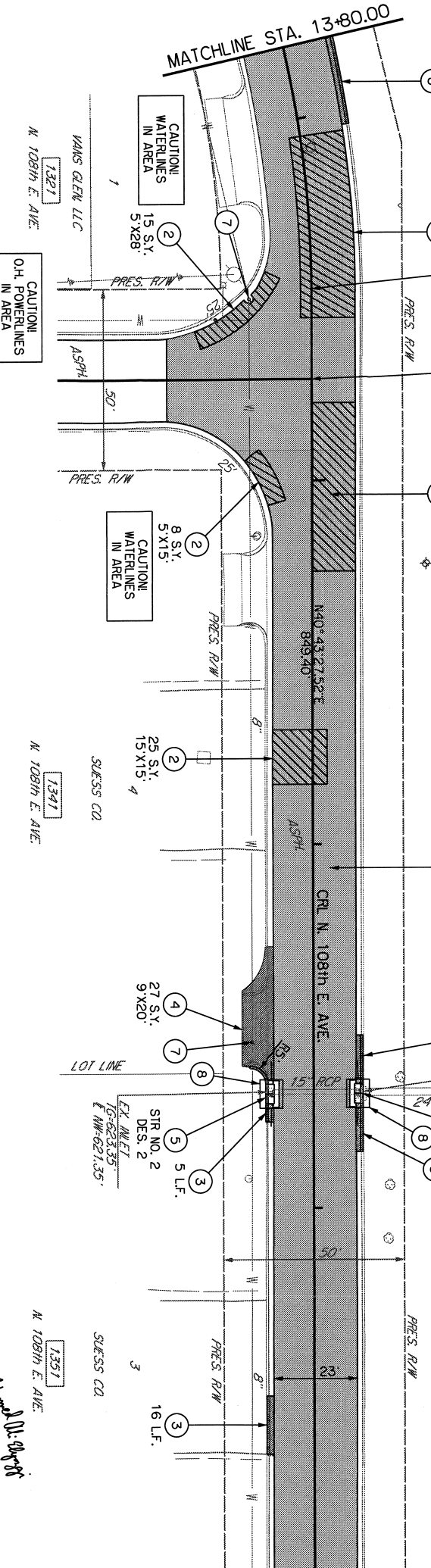
STA. 14+72.01 N. 108th E. AVE.
N: 434500.2737
E: 2600793.2413

EX. MEET
15+62.337
15+62.085
15+62.080

SIR NO. 1
DES. 2
13 L.F.

- LEGEND**
- (1A) COLD MILL & 2" ASPHALT OVERLAY
W/ LEVELING COURSE
 - (1B) 2" ASPHALT OVERLAY W/LEVELING COURSE
 - (2) FULL DEPTH AC PATCH
 - (3) CONSTRUCT 6" COMBINED CURB & GUTTER
 - (4) CONSTRUCT CONCRETE DRIVEWAY
 - (5) CONSTRUCT INLET
 - (6) ADJUST MANHOLE TO GRADE
 - (7) ADJUST WATER VALVE TO GRADE
 - (8) TEMPORARY SEDIMENT FILTER

MATCHLINE STA. 18+00.00
SEE SHEET 21



CAUTION!
WATERLINES
IN AREA
15 S.Y.
5 X28"

CAUTION!
WATERLINES
IN AREA
8 S.Y.
5 X15"

CAUTION!
WATERLINES
IN AREA
25 S.Y.
15 X15"

SIR NO. 2
DES. 2
5 L.F.

HORIZONTAL AND VERTICAL CONTROL POINTS

BM NO.	STATION	OFF-SET	NORTHING	EASTING	ELEV.	DESCRIPTION
3	9+69.83	24.96'	434048.1095	2600590.4437	627.66	1/2" REBAR W/CAP
7	15+22.85	31.38' L.T.	434561.5071	2600809.7400	625.84	1/2" REBAR W/CAP



REVISION	BY	DATE

FILE:	DRAWING:	DATE: 11/14/2023
ATLAS PAGE NO:	173	SHEET 20 OF 38 SHEETS

PLAN SHEETS
N. 108th E. AVE. (1)
STA. 10+00.00 TO STA. 18+00.00

PROJECT NO. 2036N3081Z

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

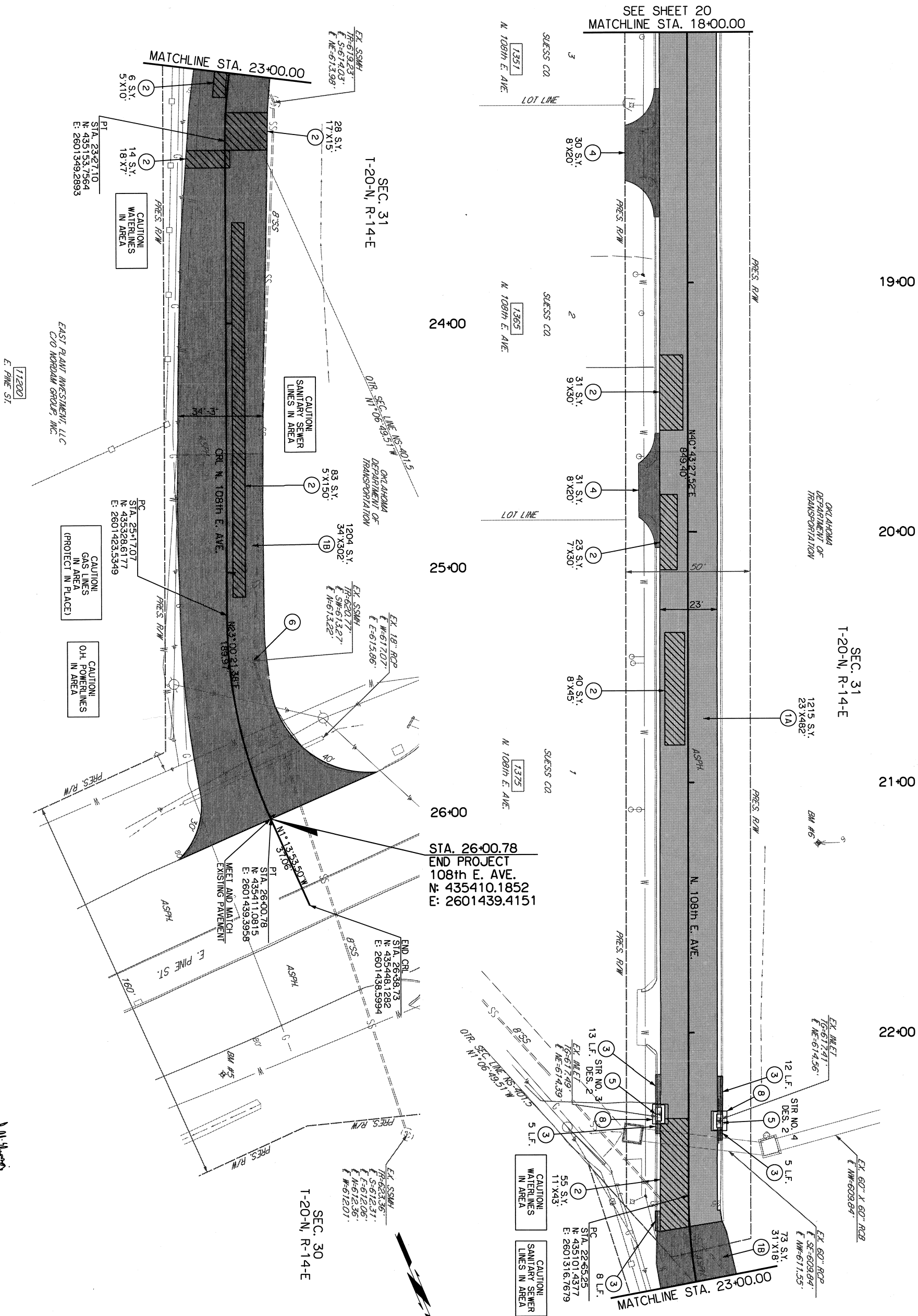
WEST
Engineering Services
EST. INC. Certificate of Authorization No. 3839 (RELIST. Expires 6/30/24)

PLAN SCALE: DRAWN: 3/21 APPROVED: 3/21
1" = 20'

PROFILE SCALE: PROJ. MGR. 3/21
1" = 20'

HORIZONTAL: LEAD MGR. 3/21
N/A FIELD MGR. 3/21
RECOMMENDED: 3/21
N/A DESIGN MANAGER 3/21

CITY ENGINEER: 3/21



HORIZONTAL AND VERTICAL CONTROL POINTS					
BM NO.	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
5	26+67.55	59.89'	435498.6693	2601498.5705	622.73 1/2" REBAR W/CAP
6	21+24.48	52.18'	435031.0245	2601186.4916	623.94 1/2" REBAR W/CAP



REVISION	BY	DATE

PROJECT NO. 2036N3081Z

PLAN SHEETS

N. 108th E. AVE. (2)

STA. 18+00.00 TO STA. 26+02.56

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

COMPENSATION ENGINEERING SERVICES

EST. NO. CERTIFICATE OF AUTHORIZATION NO. 3639 (RE/LS) Expires 6/30/24

PROJECT NO. 2036N3081Z

PLAN SCALE: 1" = 20'

PROFILE SCALE: 1" = 20'

DESIGNED: DRA 3/21

SURVEY: CH 3/21

PROJ. MGR. CH 3/21

LEAD MGR. CH 3/21

FIELD MGR. CH 3/21

RECOMMENDED: CH 3/21

DESIGN MANAGER: CH 3/21

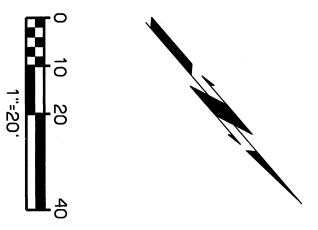
DATE: 11/3/2023

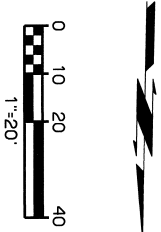
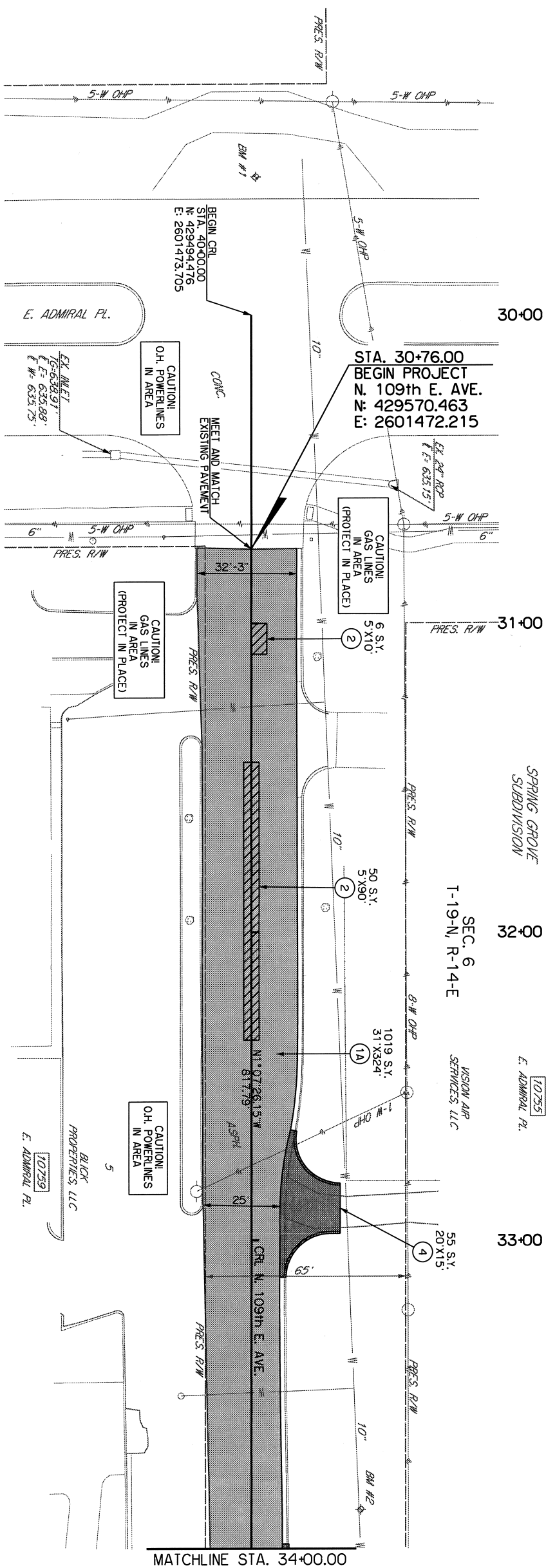
CITY ENGINEER: [Signature]

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT

FOR MAINTENANCE ZONE 3081

- LEGEND**
- 1A COLD MILL & 2" ASPHALT OVERLAY W/ LEVELING COURSE
 - 2 2" ASPHALT OVERLAY W/LEVELING COURSE
 - 3 FULL DEPTH AC PATCH
 - 4 CONSTRUCT 6" COMBINED CURB & GUTTER
 - 5 CONSTRUCT CONCRETE DRIVEWAY
 - 6 ADJUST MANHOLE TO GRADE
 - 7 ADJUST WATER VALVE TO GRADE
 - 8 TEMPORARY SEDIMENT FILTER





HORIZONTAL AND VERTICAL CONTROL POINTS

BM NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
1	29+53.78	1.44' L.T.	429449.6778	2601473.1438	638.42	1/2" REBAR W/CAP
2	33+87.35	35.39' L.T.	429881.0517	2601430.7230	638.36	1/2" REBAR W/CAP
4	37+95.56	39.75' R.T.	430290.6609	2601497.8454	628.56	1/2" REBAR W/CAP

MATTHEW D. WRIGHT
REGISTERED PROFESSIONAL ENGINEER
OKLAHOMA
NO. 30910

REVISION

HORIZONTAL AND VERTICAL CONTROL POINTS					
BM NO.	STATION	OFFSET	NORTHING	ELEV.	DESCRIPTION
1	29.55.75	1.44' L.I.	429449.6778	638.42	1/2" REBAR W/CAP
2	33.87.38	35.39' L.I.	429881.0517	638.36	1/2" REBAR W/CAP
4	37.95.56	39.75' RT.	430290.6609	628.56	1/2" REBAR W/CAP



REVISION	BY	DATE

PLAN SHEETS
N. 109th E. AVE.
STA. 30+00.00 TO STA. 36+50.00

PROJECT NO. 2036N3081Z

**NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081**

CITY OF LOS ANGELES
ENGINEERING SERVICES DEPARTMENT

WEST
10134, OK 73103
(918) 660-7141

EST, INC. Certificate of Authorization No. 3639 (PE/LS); Expires 6/30/2004	DATE	BY	APPROVED
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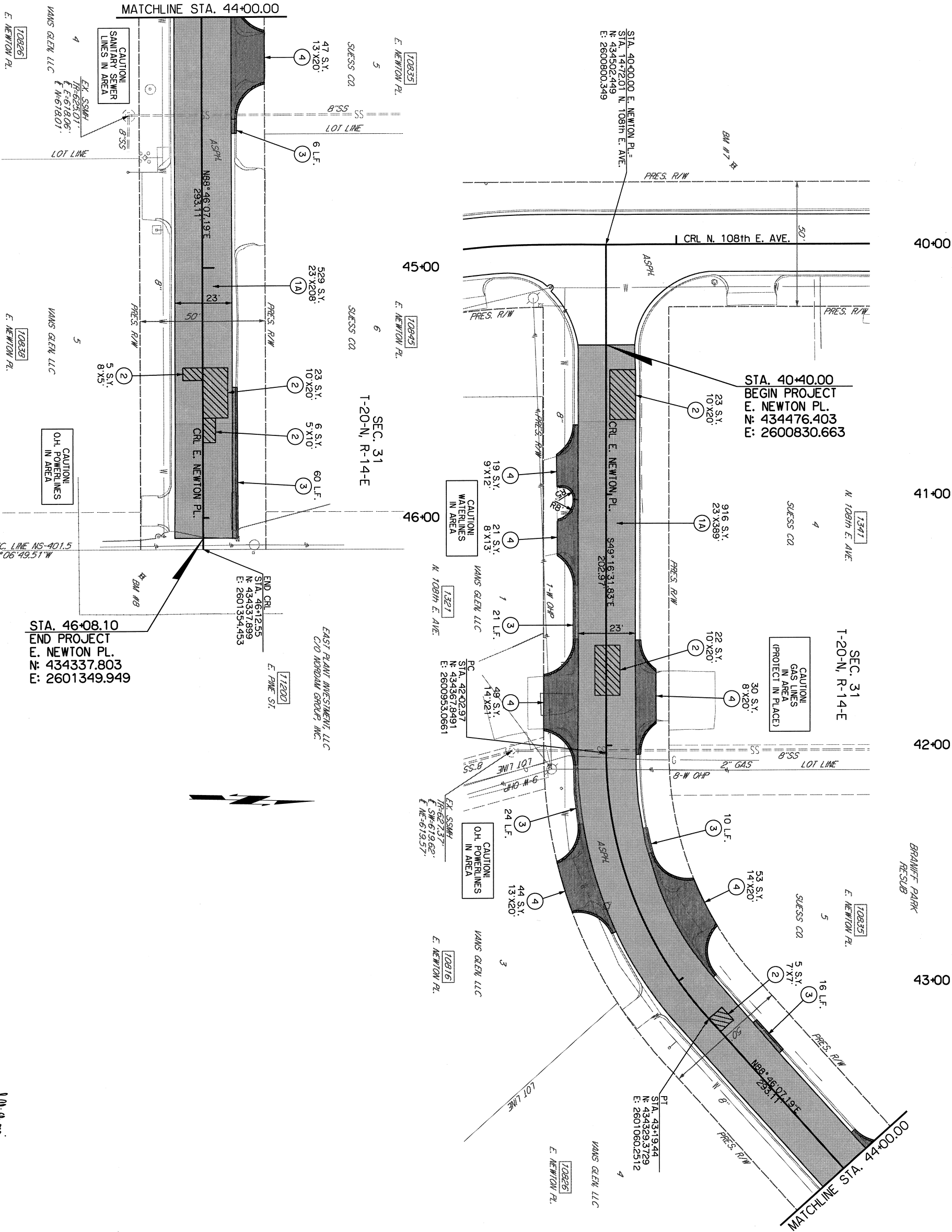
DESIGNED	DRA	3/21
SUBVEY	CH	3/21

HORIZONTAL:	LEAD MNGR.	8/23
PROFILE SCALE	FINOC. MINOR.	8/5

RECOMMENDED: Has 9.23

FILE: _____	DRAWING: _____	DATE: 11/3/2023
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ATLAS PAGE NO: 175 SHEET 22 OF 38 SHEETS



HORIZONTAL AND VERTICAL CONTROL POINTS						
BM NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
7	39+68.62	50.85	434561.5071	2600809.7400	625.84	1/2" REBAR W/CAP
8	46+23.04	24.45	434313.6816	2601365.4123	624.03	1/2" REBAR W/CAP

STA. 46+08.10
END PROJECT
E. NEWTON PL.
N: 434337.803
E: 2601349.949

END CRL
STA. 46+12.55
N: 434337.899
E: 2601354.453

EAST PLANT INVESTMENT, LLC
C/O NORBAM GROUP, INC.

E. FINE ST.

SEC. 31
T-20-N, R-14-E

STA. 40+00.00
BEGIN PROJECT
E. NEWTON PL.
N: 434476.403
E: 2600830.663

SEC. 31
T-20-N, R-14-E

N 108th E. AVE.

E. NEWTON PL.

BRANIFF PARK
RESUB

LEGEND

- 1A COLD MILL & 2" ASPHALT OVERLAY W/ LEVELING COURSE
- 1B 2" ASPHALT OVERLAY W/ LEVELING COURSE
- 2 FULL DEPTH AC PATCH
- 3 CONSTRUCT 6" COMBINED CURB & GUTTER
- 4 CONSTRUCT CONCRETE DRIVEWAY
- 5 CONSTRUCT INLET
- 6 ADJUST MANHOLE TO GRADE
- 7 ADJUST WATER VALVE TO GRADE
- 8 TEMPORARY SEDIMENT FILTER

PLAN SHEETS
E. NEWTON PL.
STA. 40+00.00 TO STA. 46+08.10

PROJECT NO. 2036N30812

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th St., Suite 1601
TULSA, OK 74103
(918) 660-7141

EST. INC. Certificate of Authorization No. 3639 (RELS) Expires 6/30/24

PLAN SCALE: DRAWN: RM 3/21 APPROVED: RM 3/21

PROFILE SCALE: DESIGNED: DBA 3/21

HORIZONTAL: FIELD INGR. 8/22

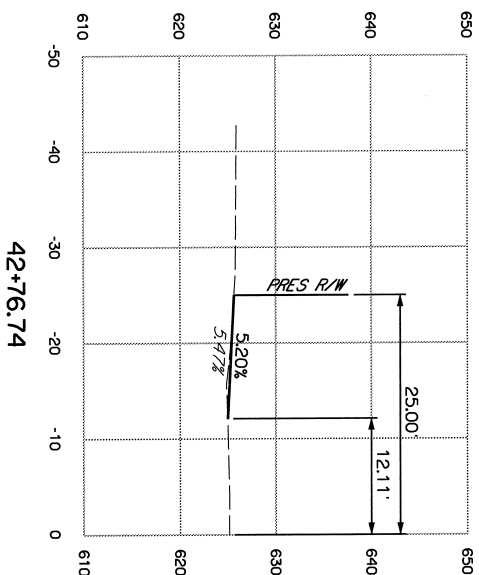
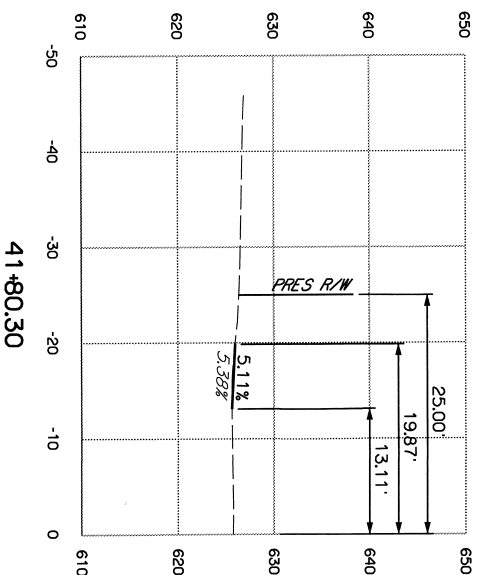
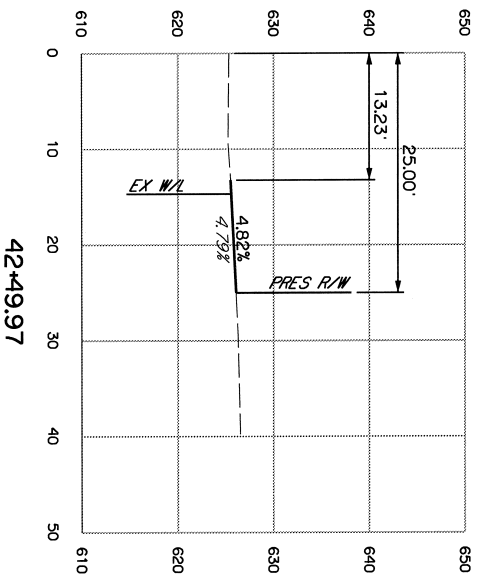
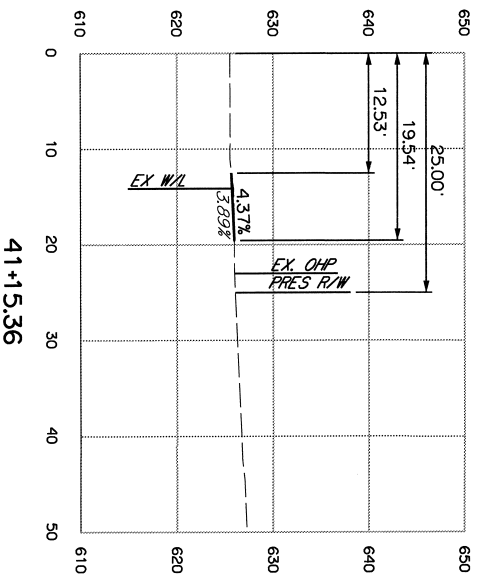
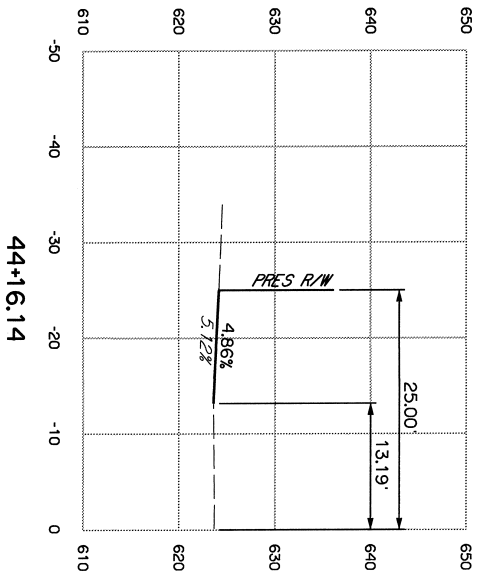
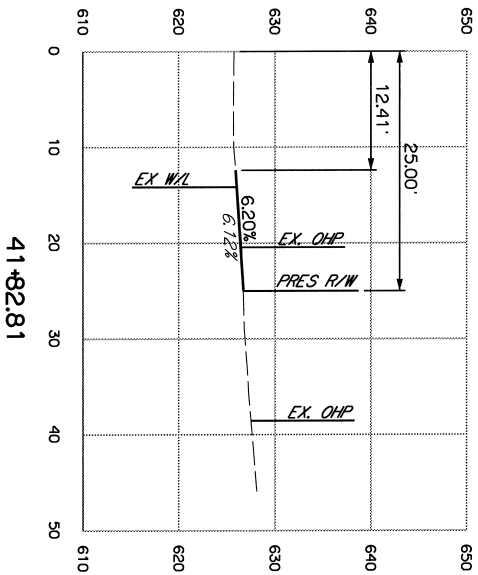
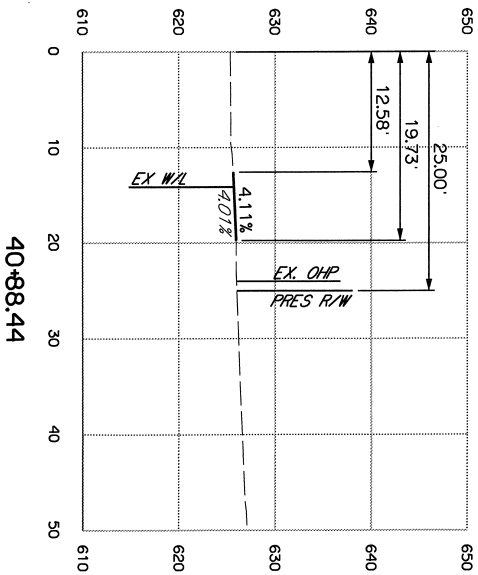
VERTICAL: FIELD INGR. 8/22

FILE: DRAWING: DATE: 11/13/2023

ATLAS PAGE NO: 173 SHEET 23 OF 38 SHEETS



NEWTON PL.



DRIVEWAY PROFILES
(SHEET NO. 2 OF 2)

PROJECT NO. 2036N3081Z

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

EST
Comprehensive Engineering Services
EST, INC. Certificate of Authorization No. 3639 (PE/LS); Expires 6/30/24

FILE: DRAWINGS: 173 SHEET 25 OF 38 SHEETS

DATE: 11/27/2022

DESIGNED: CH 3/21

DRAWN: RM 3/21

SURVEY: CH 3/21

PROJ. MGR: JLP 4/13

LEAD MGR: JLP 4/13

FIELD MGR: JLP 4/13

RECORDS: JLP 4/13

DATE: 11/27/2022

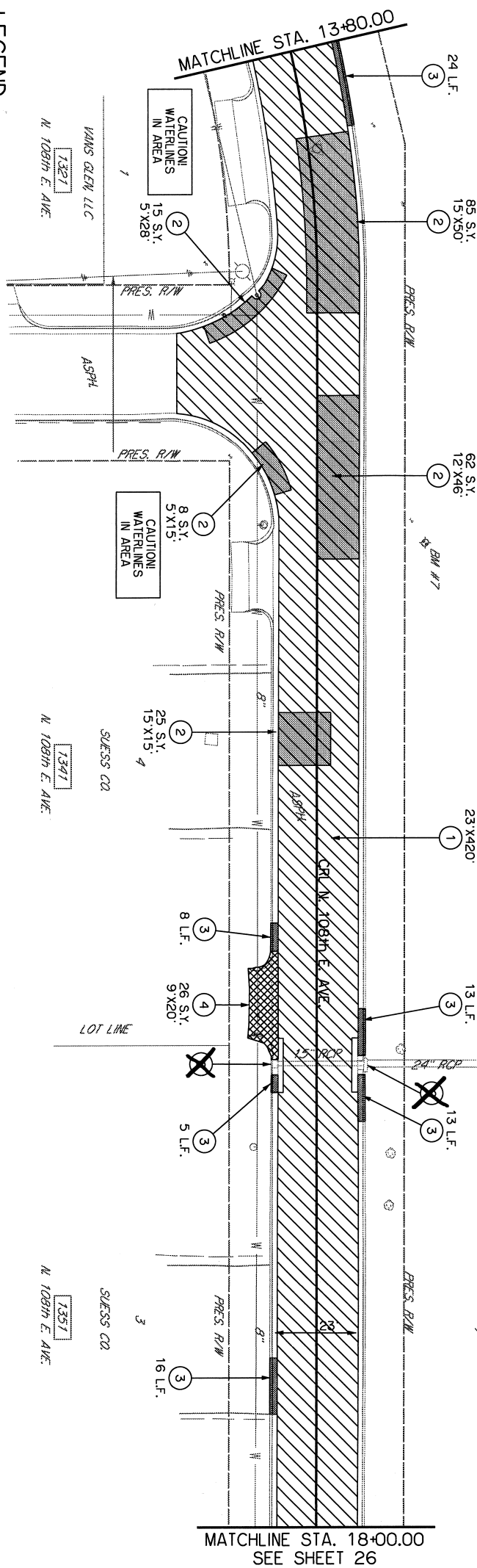
DESIGNED: CH 3/21

DRAWN: RM 3/21



REVISION	BY	DATE

LEGEND



OKLAHOMA
DEPARTMENT OF
TRANSPORTATION

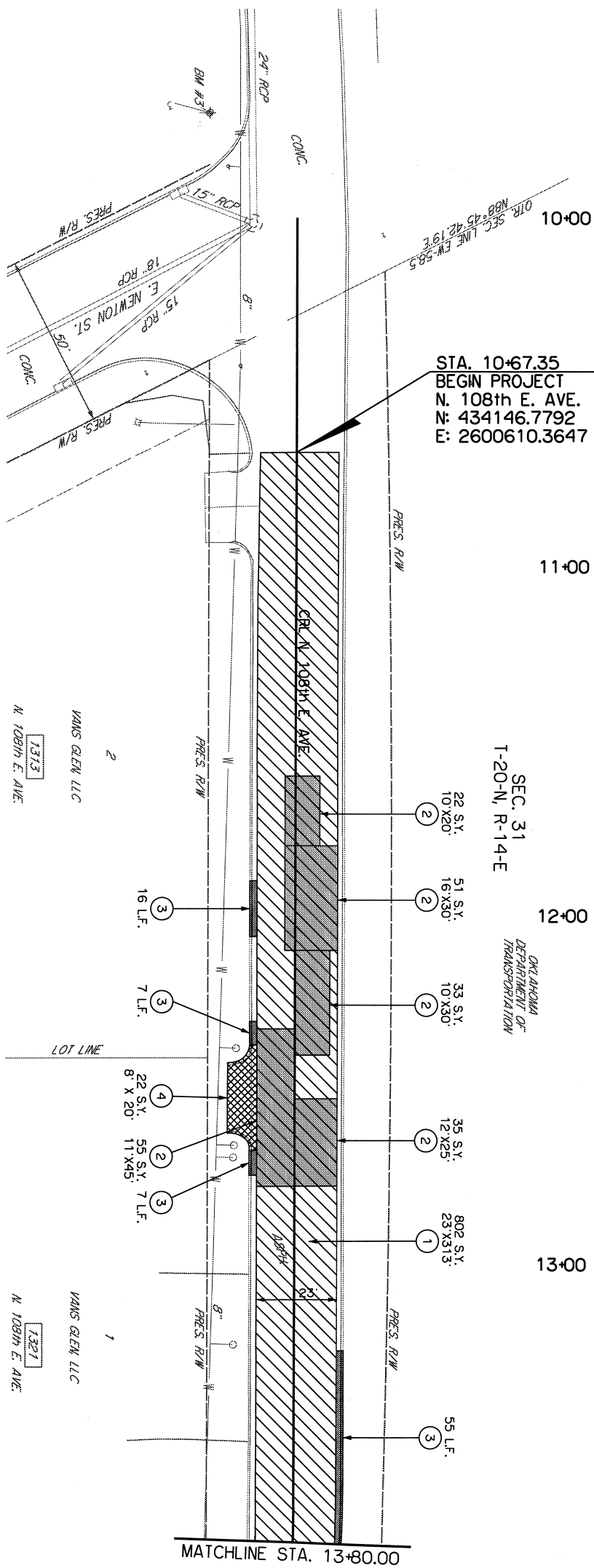
SEC. 31
T-20-N, R-14-E

4+00

15+00

16+00

17:00



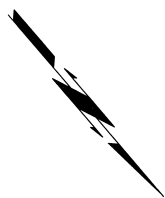
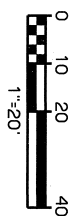
STA. 10+67.35
BEGIN PROJECT
N. 108th E. AVE.
N: 434146.7792
E: 2600610.3647

SEC. 31
T-20-N, R-14-E

OKLAHOMA
DEPARTMENT OF
TRANSPORTATION

12+00

13+00



REVISION	BY	DATE

REMOVAL SHEETS N. 108th E. AVE. (1) STA. 10+00.00 TO STA. 18+00.00	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141
Copyrighted Engineering Services EST, INC. Certificate of Authorization No. 3639 (PE/AS) Expires 6/30/24	
PLAN SCALE	APPROVED:
1" = 20'	
DRAWN	RM 5/2/21
DESIGNED	DRA 5/2/21
SURVEY	CH 3/2/21
PROJECT SCALE	
HORIZONTAL:	PROJ. MNGR. <i>WJ</i> 1/1/21
V/A	LEAD MNGR. <i>WJ</i> 9/23
VERTICAL:	FIELD MNGR. <i>WJ</i> 9/23
V/A	RECOMMENDED: <i>WJ</i> 9/23
	DESIGN MANAGER <i>WJ</i> 9/23
DRAWING:	DATE: <i>11/13/23</i>
SHEET 26 OF 38 SHEETS	

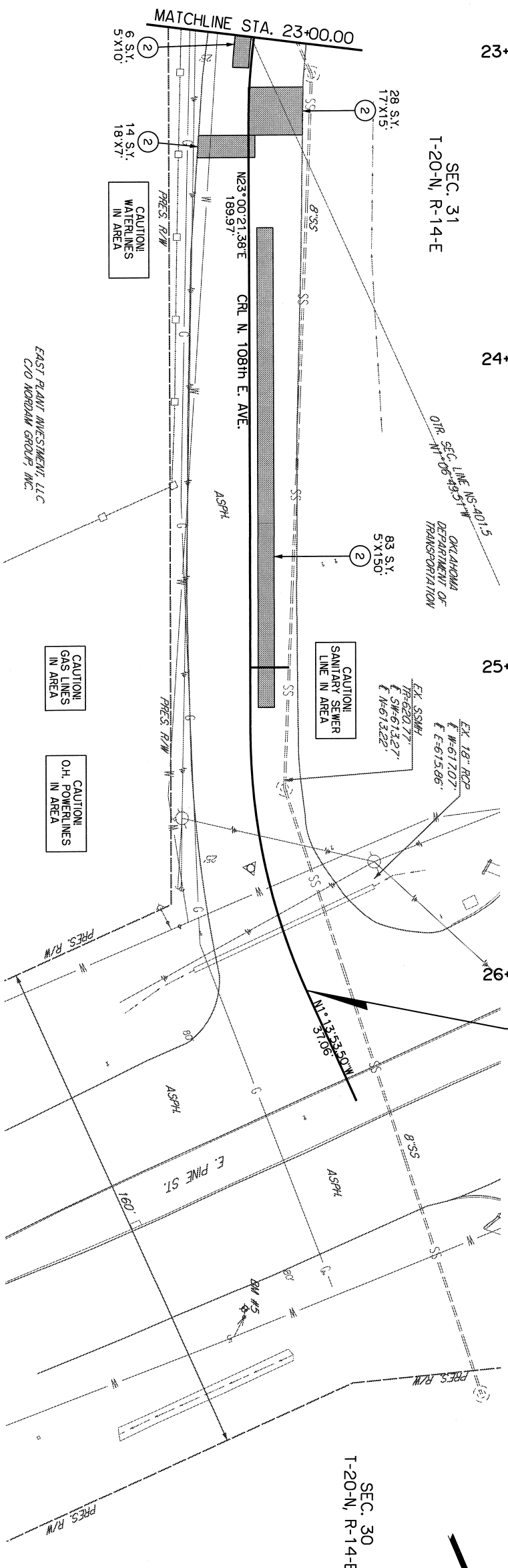
- 1 COLD MILL
2 PAVEMENT AND SUBBASE REMOVAL
3 REMOVE CURB AND GUTTER
- 4 REMOVE CONCRETE DRIVEWAY
5 REMOVE ASPHALT DRIVEWAY
6 REMOVE INTERSECT

LEGEND

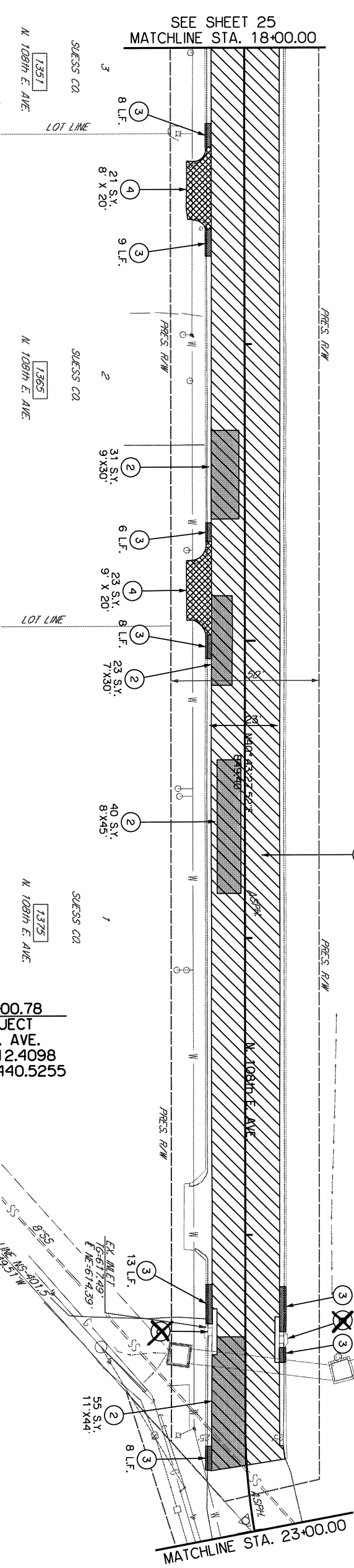
EAST PLANT INVESTMENT, LLC
C/O MORDAM GROUP, INC.

CAUTION!
GAS LINES
IN AREA

CAUTION!
O.H. POWERLINES
IN AREA



STA. 26+00.78
END PROJECT
108th E. AVE.
N: 435412.4098
E: 2601440.5255



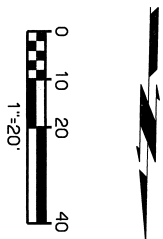
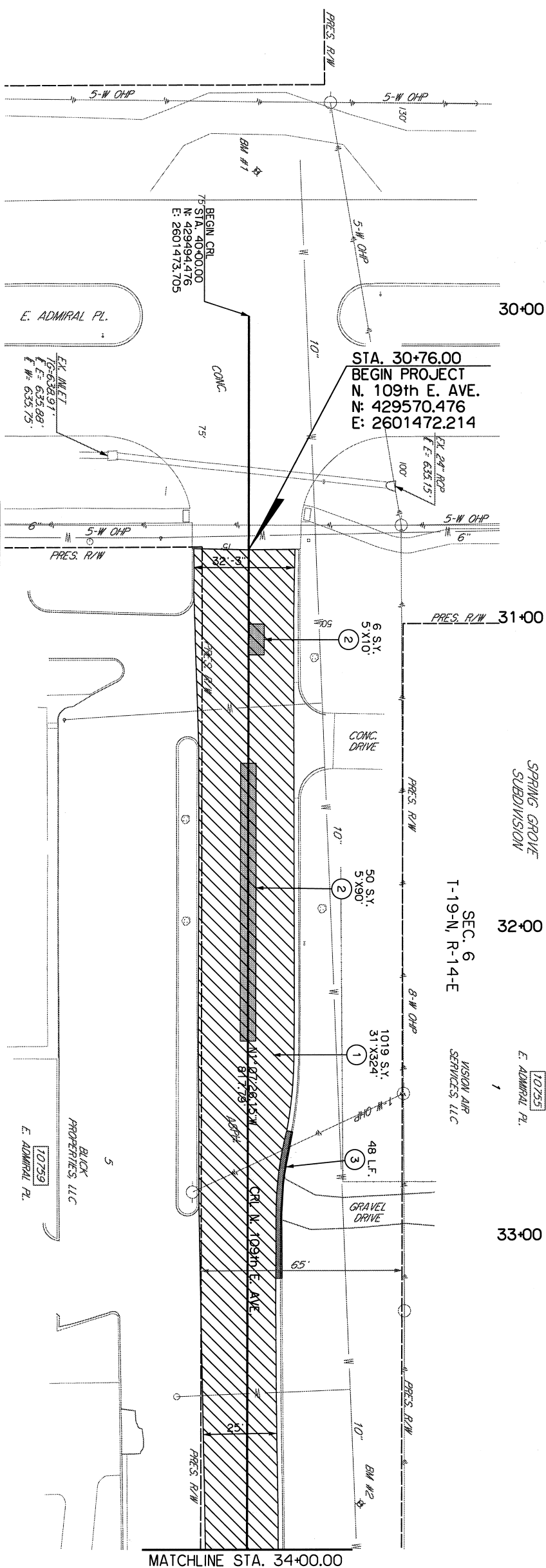
REVISION	BY	DATE

PROJECT NO. 2036N30812	
CITY OF TULSA, OKLAHOMA	
ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
EST. INC. Certificate of Authorization No. 3639 (REVISED) Expires 6/30/24	
PLAN SCALE: 1" = 20'	DRAWN: RM 5/21
DESIGNED: DBA 5/21	APPROVED: RM 5/21
PROJECT SCALE: PROJ. MGR. 6/23	
SURVEY: CH 3/21	
FIELD MGR. 8/23	
RECOMMENDED: 8/23	
DESIGN MANAGER: 8/23	
DATE: 11/12/23	
SHEET 27 OF 39 SHEETS	



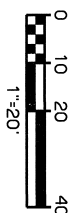
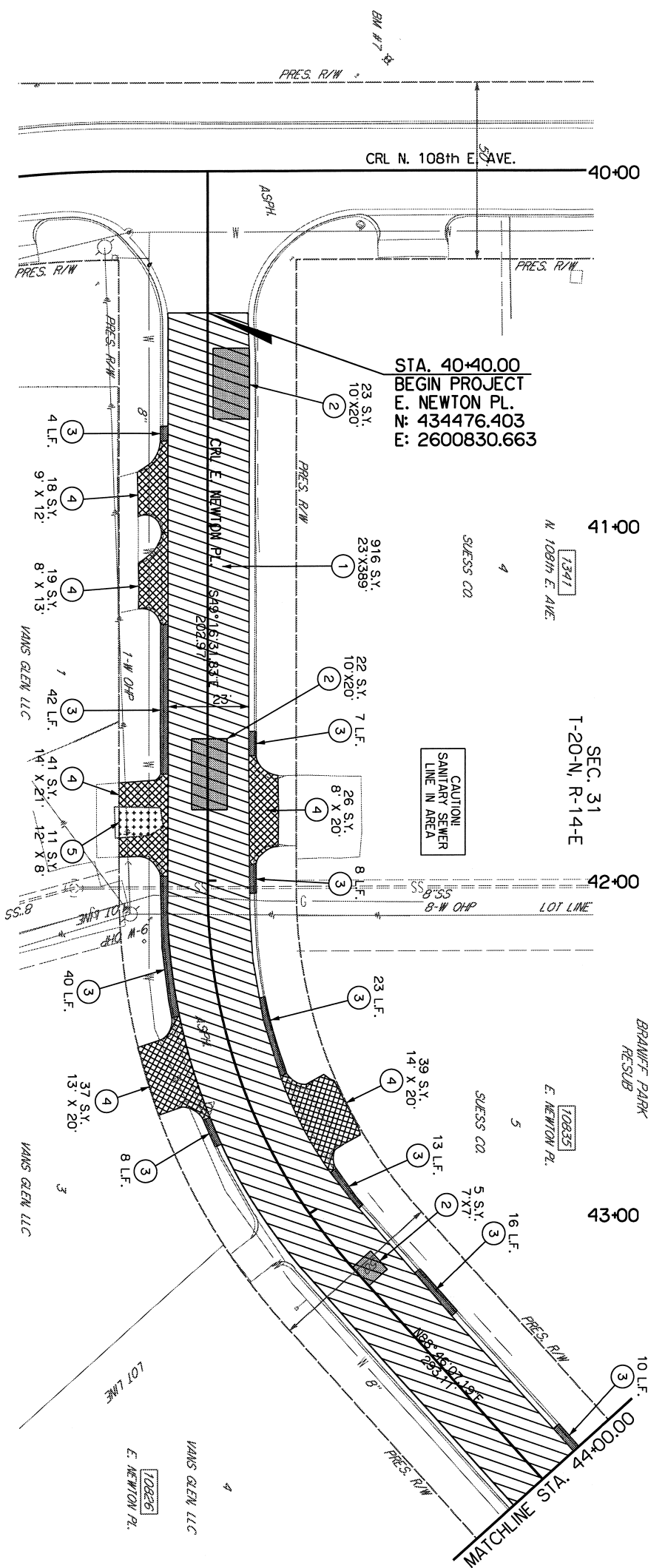
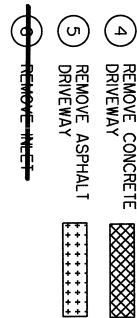
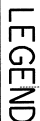
PROPERTIES, LLC
E. ADMIRAL PL.
10759

STA. 36+50.00
END PROJECT
N. 109th E. AVE.
N: 430144.351
E: 2601460.956



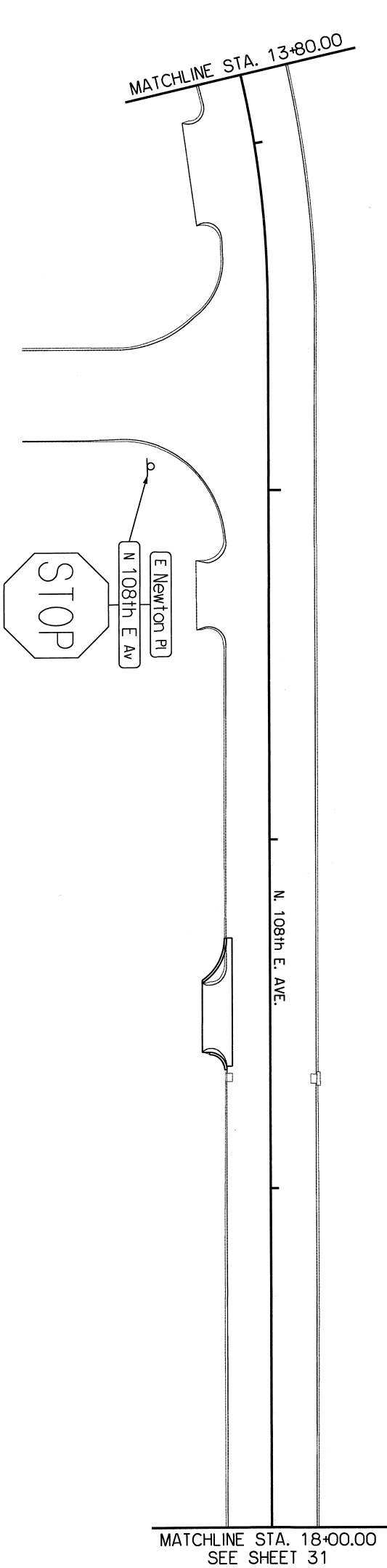
REVISION	BY	DATE

<div>REMOVAL SHEETS</div> <div>N. 109th E. AVE.</div> <div>STA. 30+00.00 TO STA. 36+50.00</div>	
<div>PROJECT NO. 2036N3081Z</div>	
<div>NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT</div> <div>FOR MAINTENANCE ZONE 3081</div>	
<div>CITY OF TULSA, OKLAHOMA</div> <div>ENGINEERING SERVICES DEPARTMENT</div>	
<div>PLANS AND ESTIMATES PREPARED BY: 1 S. 2nd ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141</div>	<div>Capri Engineering Services</div> <div>EST. INC. Certificate of Authorization No. 3639 (RE/AS) Expires 6/30/24</div>
<div>PLAN SCALE</div> <div>1" = 20'</div>	<div>DRAWN</div> <div>RM</div> <div>5/2/21</div>
<div>DESIGNED</div> <div>DRA</div> <div>5/2/21</div>	<div>SURVEY</div> <div>CH</div> <div>3/2/21</div>
<div>PROFILE SCALE</div> <div>HORIZONTAL: N/A</div> <div>VERTICAL: 1% 4.23</div>	<div>PROJ. INVR.</div> <div>11/19</div> <div>6/1/21</div>
<div>N/A</div>	<div>LEAD INVR.</div> <div>11/23</div> <div>6/1/21</div>
<div>FIELD INVR.</div> <div>12/04</div> <div>6/1/21</div>	<div>DESIGN MANAGER</div> <div>11/23</div> <div>6/1/21</div>
<div>DRAWING: 175</div>	<div>CITY ENGINEER</div> <div>11/23</div> <div>6/1/21</div>
<div>DATE: 11/13/2022</div>	<div>SHEET 28 OF 30 SHEETS</div>



REVISION	BY	DATE

<p>STATION: STA. 40+00.00 TO STA. 46+07.73</p> <p>PROJECT NO. 2036N3081Z</p>		<p>REMOVAL SHEETS</p> <p>E. NEWTON PL.</p>	
<p>NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081</p>		<p>CITY OF TULSA, OKLAHOMA</p> <p>ENGINEERING SERVICES DEPARTMENT</p>	
<p>PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141</p>		<p>COMPENSATIVE ENGINEERING SERVICES EST. INC. Certificate of Authorization No. 36399 (PE/LS). Expires 6/30/24</p>	
<p>PLAN SCALE</p> <p>1" = 20'</p>	<p>DRAWN</p> <p>DESIGNED</p> <p>SURVEY</p>	<p>RM 5/21</p> <p>DRA 5/21</p> <p>CH 3/21</p>	<p>APPROVED:</p>
<p>PROFILE SCALE</p> <p>HORIZONTAL:</p> <p>VERTICAL:</p> <p>V/A</p>	<p>PROJ. MGR. <i>WJ</i> 7/13</p> <p>LEAD MGR. <i>WJ</i> 11/23</p> <p>FIELD MGR. <i>Rm</i> 9/65</p> <p>DESIGNED: <i>HR</i> 9/23</p> <p>DATE: <i>11/13/23</i></p>	<p>DATE: <i>11/13/23</i></p> <p>SHEET 29 OF 38 SHEETS</p>	<p>CITY ENGINEER</p> <p><i>[Signature]</i></p>



14+00

15+00

16+00

17+00

18+00

10+00

11+00

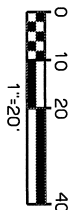
12+00

13+00

N. 108th E. AVE.

MATCHLINE STA. 13+80.00

MATCHLINE STA. 18+00.00
SEE SHEET 31



LEGEND
SIGN

SIGNING PLAN
N. 108th E. AVE. (1)
STA. 10+00.00 TO STA. 18+00.00

PROJECT NO. 2036N3081Z

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: T5 E. 5th ST., SUITE 1601
TULSA, OK 74104
(918) 660-7141

EST, INC. Certificate of Authorization No. 3639 (PE/LS). Expires 6/30/24



1" = 20'

DESIGNED: DRA 9/21 APPROVED:

SURVEY CH 3/21

PROJ. MGR. 11/18

LEAD MGR. 11/18

FIELD MGR. 11/18

RECOMMENDED: 11/18

DESIGN MANAGER: 11/18

CITY ENGINEER: 11/18

DATE: 11/13/2023

FILE: DRAWING: 173 SHEET 30 OF 39 SHEETS



REVISION	BY	DATE

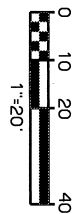
SEE SHEET 30
MATCHLINE STA. 18+00.00

19+00

20+00

21+00

22+00



24+00

25+00

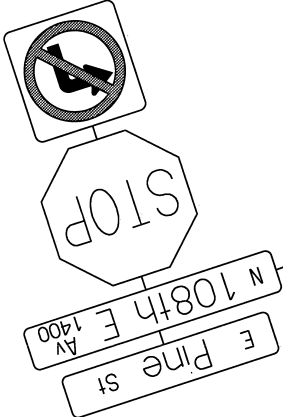
26+00

LEGEND
SIGN


N. 108th E. AVE.

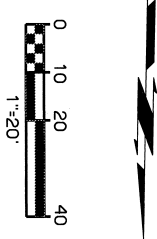
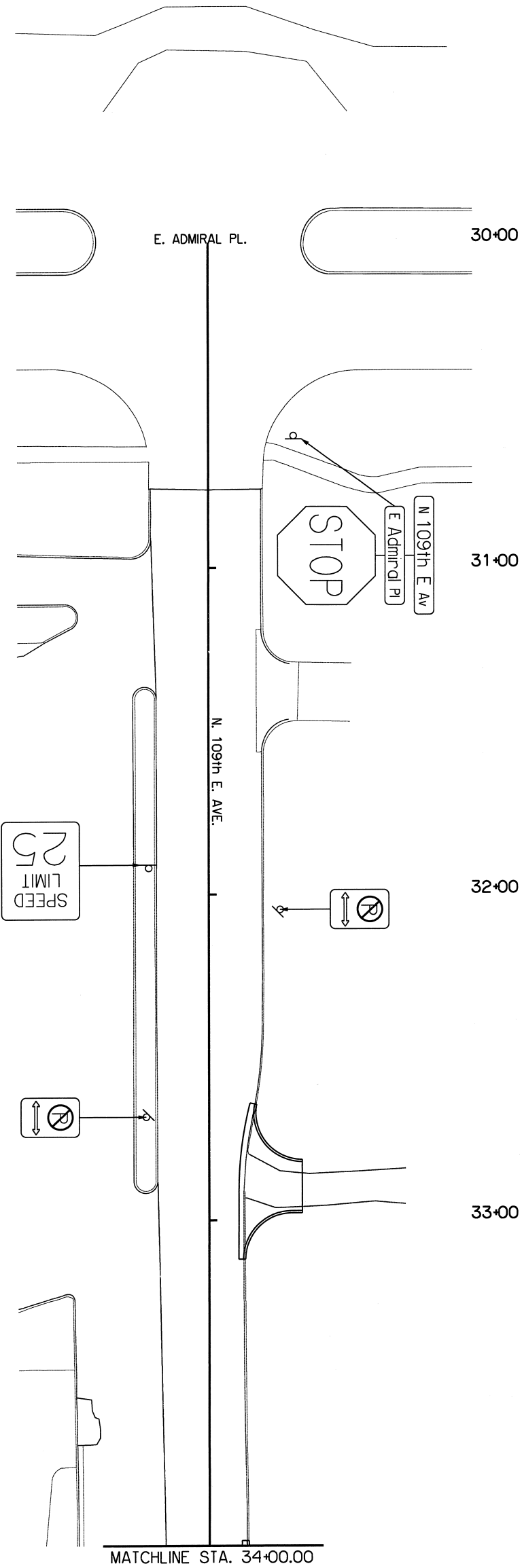
MATCHLINE STA. 23+00.00

MATCHLINE STA. 23+00.00

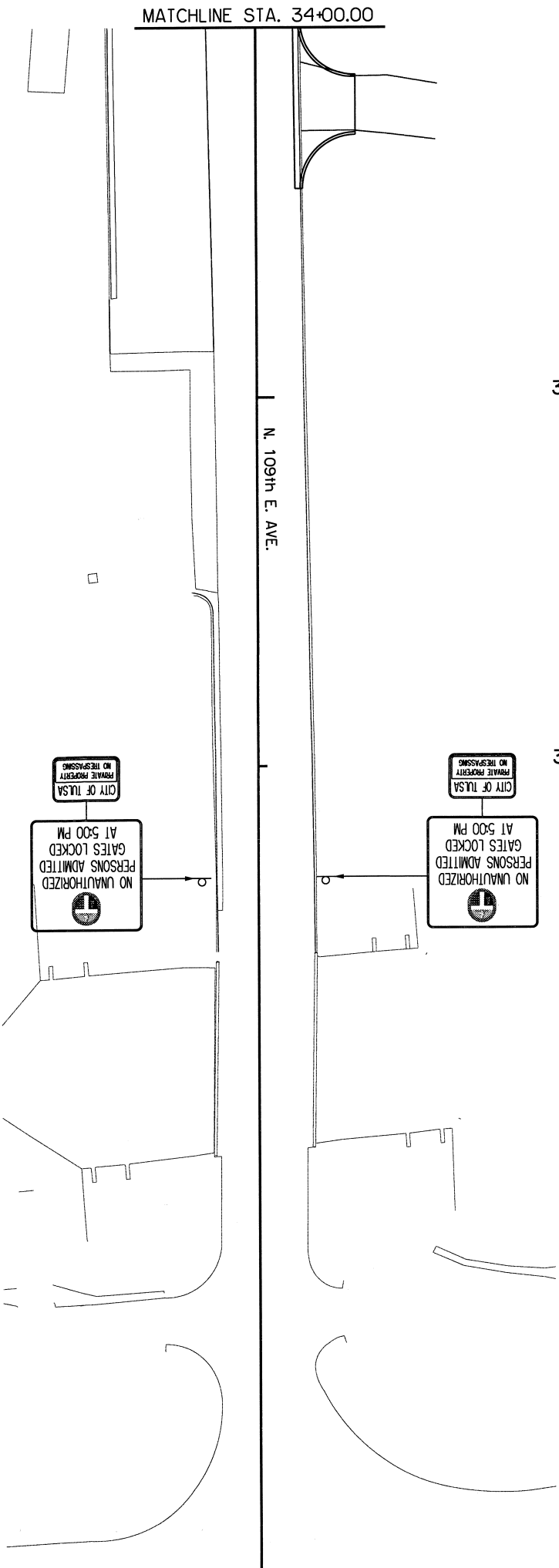


REVISION	BY	DATE

SIGNING PLAN N. 108th E. AVE. (2) STA. 18+00.00 TO STA. 26+02.56	
PROJECT NO. 2036N30812	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
 Comprehensive Engineering Services EST, INC. Certificate of Authorization No. 3639 (RE/LS) Expires 6/30/24	
PLAN SCALE	DRAWN AA 9/21 APPROVED:
1" = 20'	DESIGNED DRA 9/21
PROFILE SCALE	SURVEY CH 3/21
N/A	PROJ. MGR. <i>MM</i> 8/23
HORIZONTAL:	LEAD MGR. <i>MS</i> 8/23
N/A	FIELD MGR. <i>MM</i> 8/23
VERTICAL:	RECOMMENDED <i>MM</i> 9.2.3
N/A	DESIGN MANAGER
FILE:	DRAWING
DATE: <i>11/7/2022</i>	CITY ENGINEER
ATLAS PAGE NO.: 173	SHEET 31 OF 36 SHEETS



LEGEND
= SIGN

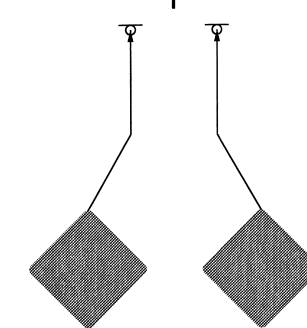
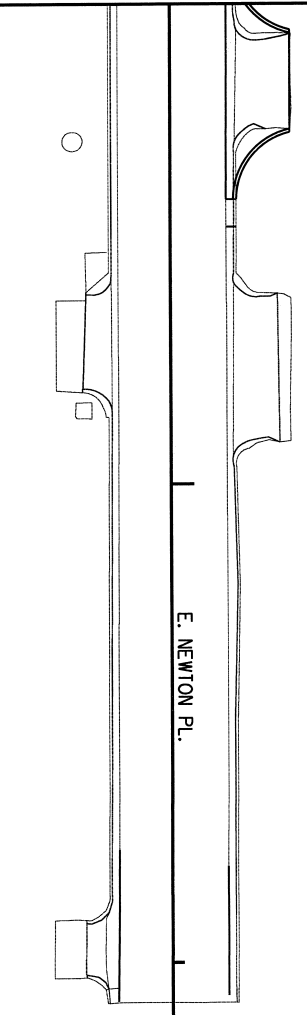


REVISION	BY	DATE

SIGNING PLAN N. 109th E. AVE. STA. 30+00.00 TO STA. 36+50.00	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST. SUITE 1601 TULSA, OK 74103 (918) 660-7141	
EST Engineering Services EST. INC. Certificate of Authorization No. 3639 (RE/ST Expires 6/30/24)	
PLAN SCALE	1" = 20'
PROFILE SCALE	1" = 20'
HORIZONTAL:	DESIGNED: DRA 9/21 APPROVED:
VERTICAL:	SURVEY: CH 3/21
FILE:	PROJ. MGR. 11/12
DATE: 11/12/23	FIELD MGR. 11/12
DESIGN MANAGER: 11/12/23	RECOMMENDED: 11/12/23
DATE: 11/12/23	CITY ENGINEER: 11/12/23
FILE:	DRAWING: 11/12/23
ATLAS PAGE NO.: 175	SHEET 32 OF 38 SHEETS



MATCHLINE STA. 44+00.00



45+00

46+00

N. 108th E. AVE.

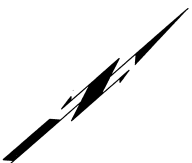
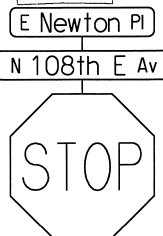
40+00

41+00

42+00

43+00

MATCHLINE STA. 44+00.00



LEGEND
SIGN

SIGNING PLAN
E. NEWTON PL.
STA. 40+00.00 TO STA. 46+08.10

PROJECT NO. 2036N30812

NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

COMPENSATIVE Engineering Services
EST, INC. Certificate of Authorization No. 3639 (RE/AS) Expires 6/30/24

PLAN SCALE
1" = 20'

DESIGNED DRA 9/21 APPROVED:

SURVEY CH 3/21

PROJ. MGR. CH 11/18

FIELD MGR. CH 10/23

RECOMMENDED: CH 11/18

DESIGN MANAGER: CH 11/18

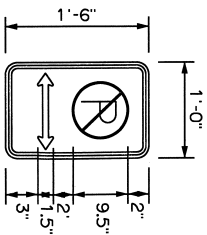
CITY ENGINEER: CH 11/18

DATE: 11/21/23

SHEET 33 OF 38 SHEETS

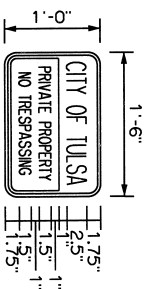
REVISION	BY	DATE





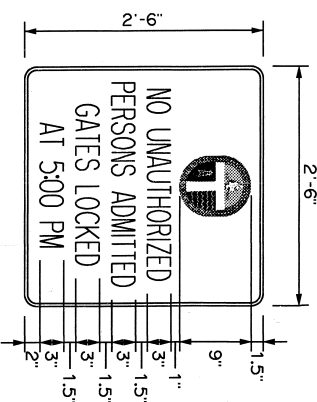
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WITH X HIGHT.	1'-0" x 1'-6"
BORDER WIDTH	0.375"
CORNER RADIUS	1.5"
MOUNTING	Ground
SIGN AREA	1.50 S.F.
BACKGROUND	TYPE: Reflective
	COLOR: White/Red
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
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[illegible]

SIGN NUMBER	Speed Sign No. 3
WIDTH x HEIGHT	1'-6" x 1'-0"
BORDER WIDTH	0.375"
CORNER RADIUS	1.5"
MOUNTING	Ground
SIGN AREA	1.50 S.F.
BACKGROUND	TYPE: Reflective COLOR: White/Red
LEGEND/BORDER	TYPE: Reflective COLOR: White/Red

	COLOR: White/Red

[illegible][illegible]

SIGN NUMBER	Special Sign No. 2
WIDTH x HEIGHT	2'-6" x 2'-6"
BORDER WIDTH	0.375"
CORNER RADIUS	1.5"
MOUNTING	Ground
SIGN AREA	6.25 S.F.
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
--------	---	---	-----	----

[illegible][illegible]

SPECIAL SIGN DETAILS

PROJECT NO. 2036N3081Z

**NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081**

**CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT**

PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601
TULSA, OK 74103
(918) 660-7141

Comprehensive Engineering Services

PLAN SCALE	DRAWN	AA	9/21	APPROVED:
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N/A	DESIGNED	DRA	9/21
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	SURVEY	CH	3/21
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PROFILE SCALE	PROJ. MNGR.		
	1000	11	23

HORIZONTAL:	LEAD MNGR.	(21)	10/25
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N/A	FIELD MNGR.	10/93
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RECOMMENDED: 11/2/23

N/A	DESIGN MANAGER
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FILE: _____ DRAWING: _____

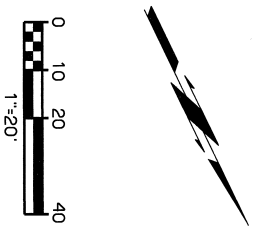
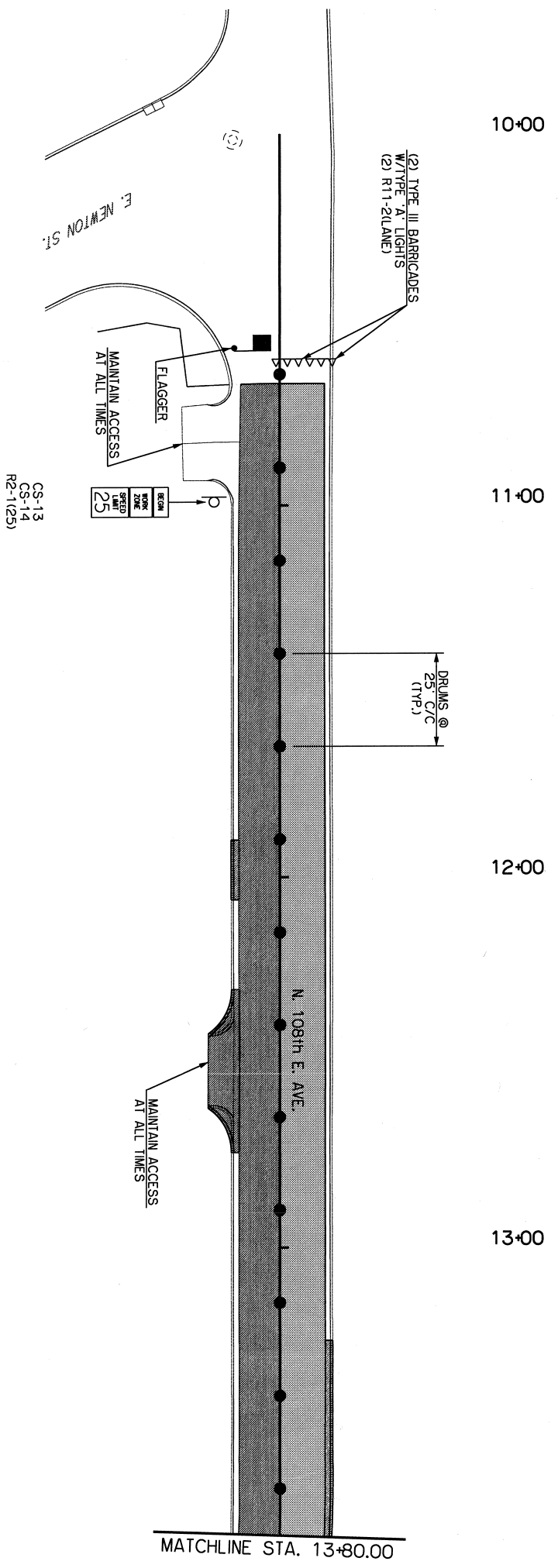
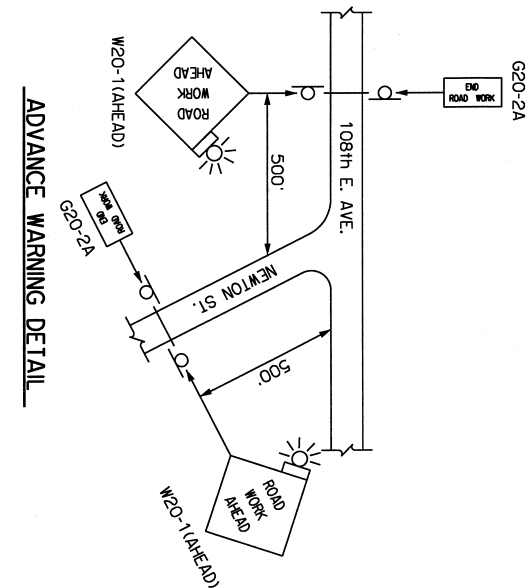
ATLAS PAGE NO.: 1/5

6/10/23

REGISTERED PROFESSIONAL ENGINEER
OKLAHOMA
MOHAMED
ALI
EL YAZGI
30510

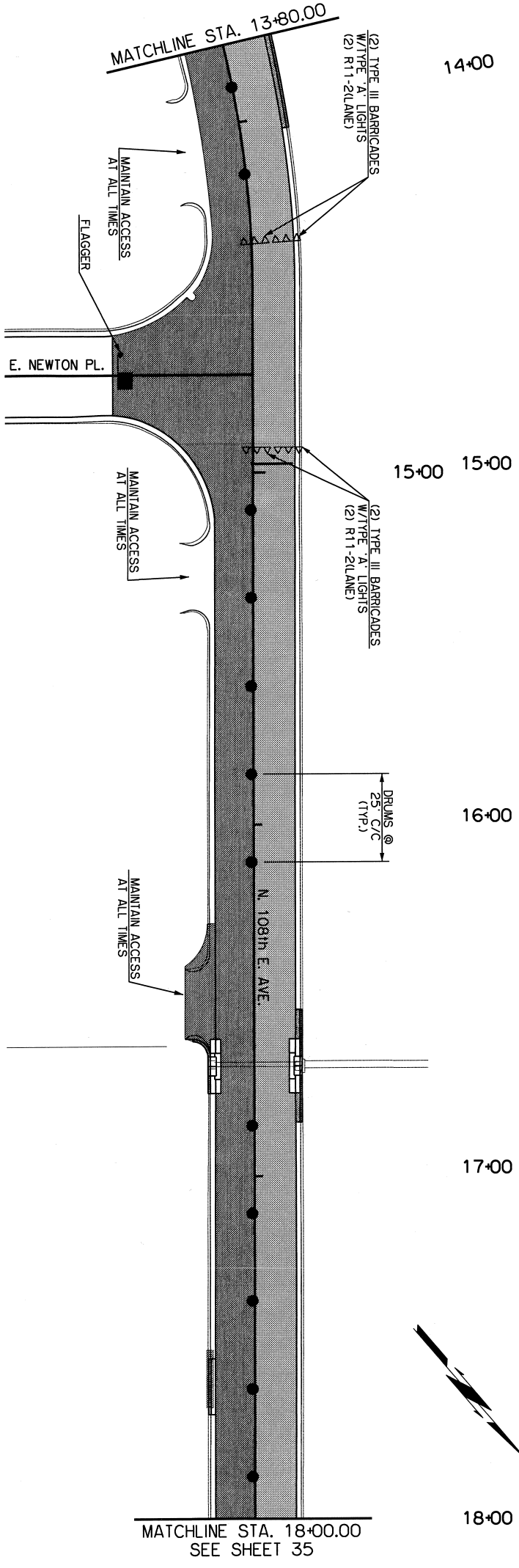
Muhammad Ali El-Yazgi

REVISION	BY	DATE



SUGGESTED CONSTRUCTION SEQUENCING

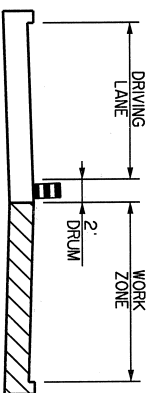
1. CLOSE WEST HALF OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
2. COLD MILL PAVEMENT ON THE CLOSED HALF OF 108th E. AVE. FROM NEWTON ST. TO STA. 22+77.53. VERIFY PATCH LOCATIONS WITH FIELD ENGINEER AFTER MILLING AND BEFORE PATCHING OPERATIONS.
3. PERFORM PATCHING AND CRACK SEALING OPERATIONS ON CLOSED SECTION OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
4. PERFORM PAVEMENT OVERLAY OF CLOSED SECTION OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
5. MOVE TRAFFIC CONTROL DEVICES TO EAST SIDE OF 108th E. AVE. AND MOVE TRAFFIC TO WEST SIDE.
6. REPEAT STEPS 2 THRU 4 ON EAST SIDE OF 108th E. AVE.
7. REOPEN BOTH SIDES OF 108th EAST AVE. TO TRAFFIC, AND PERFORM STRIPING AND SIGNING OPERATIONS.
8. FULLY REOPEN 108th E. AVE. TO TRAFFIC.



FOR TRAFFIC CONTROL
NOTES SEE SHEET 36.

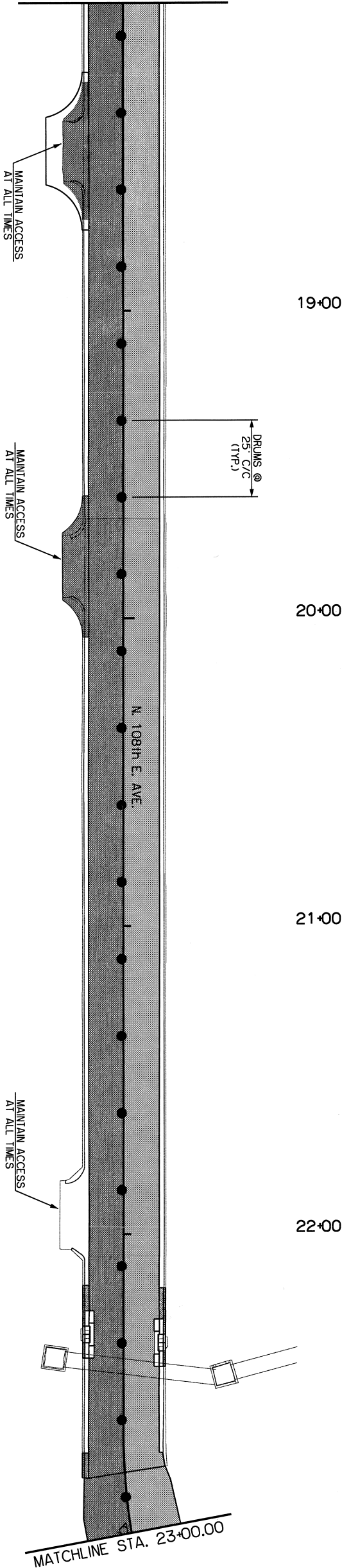
LEGEND

- PHASE 1 CONSTRUCTION
- PHASE 2 CONSTRUCTION
- TYPE III BARRICADE
- DRUM



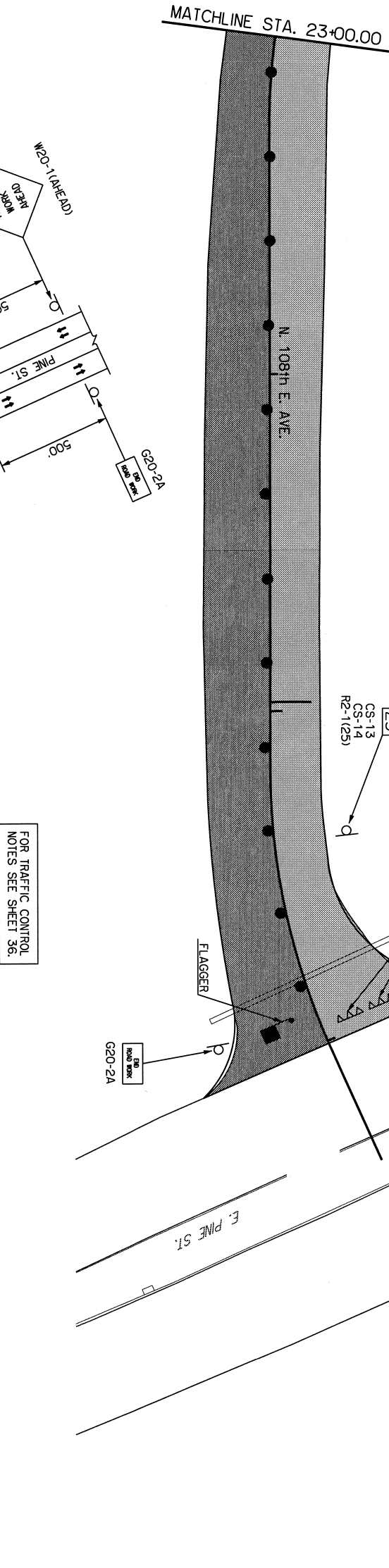
TRAFFIC CONTROL PLANS	
N. 108th E. AVE. (1)	
STA. 10+00.00 TO STA. 18+00.00	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA	
ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601	
TULSA, OK 74103	
(918) 660-7141	
EST. INC. Certificate of Authorization No. 3639 (RE/EST Expires 6/30/24)	
1" = 20'	
PLAN SCALE	DRAWN: RM 5/21
DESIGNED: DBA 5/21	APPROVED:
SURVEY: CH 3/21	
PROFILE SCALE	PROJ. MNGR. J. H. H. H.
HORIZONTAL: N/A	FIELD MNGR. J. H. H. H.
VERTICAL: N/A	RECOMMENDED: H. H. H. H.
FILE: N/A	DESIGN MANAGER: H. H. H. H.
CITY ENGINEER: J. H. H. H.	DATE: 11/3/2023
ATLAS PAGE NO.: 173	SHEET 35 OF 38 SHEETS

SEE SHEET 34
MATCHLINE STA. 18+00.00

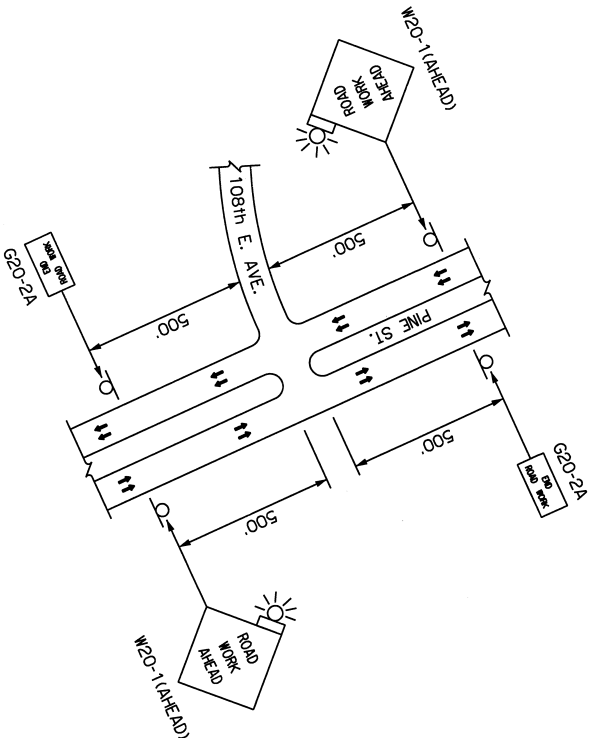


SUGGESTED CONSTRUCTION SEQUENCING

1. CLOSE WEST HALF OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
2. COLD MILL PAVEMENT ON THE CLOSED HALF OF 108th E. AVE. FROM NEWTON ST. TO STA. 22+77.53. VERIFY PATCH LOCATIONS WITH FIELD ENGINEER AFTER MILLING AND BEFORE PATCHING OPERATIONS.
3. PERFORM PATCHING AND CRACK SEALING OPERATIONS ON CLOSED SECTION OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
4. PERFORM PAVEMENT OVERLAY OF CLOSED SECTION OF 108th E. AVE. BETWEEN NEWTON ST. AND PINE ST.
5. MOVE TRAFFIC CONTROL DEVICES TO EAST SIDE OF 108th E. AVE., AND MOVE TRAFFIC TO WEST SIDE.
6. REPEAT STEPS 2 THRU 4 ON EAST SIDE OF 108th E. AVE.
7. REOPEN BOTH SIDES OF 108th EAST AVE. TO TRAFFIC, AND PERFORM STRIPING AND SIGNING OPERATIONS.
8. FULLY REOPEN 108th E. AVE. TO TRAFFIC.



ADVANCE WARNING DETAIL

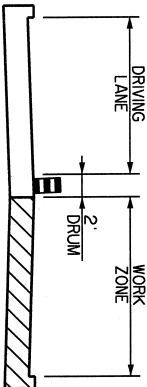


FOR TRAFFIC CONTROL
NOTES SEE SHEET 36.

LEGEND

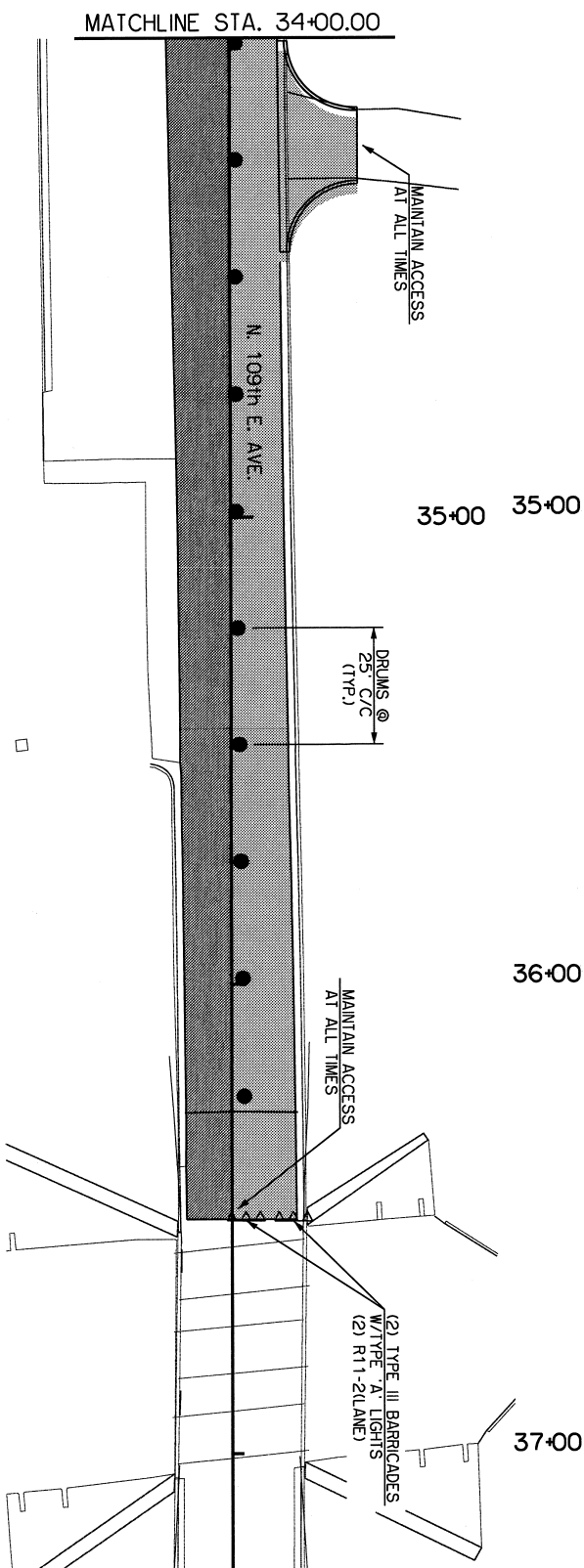
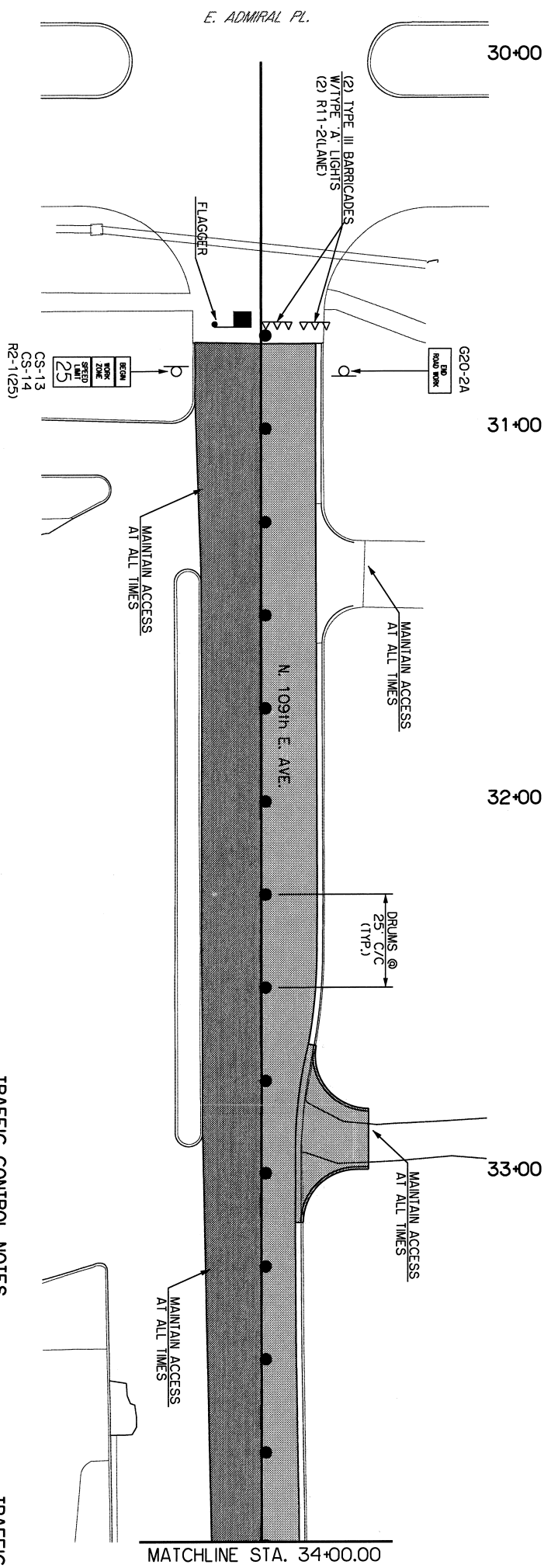
- PHASE 1 CONSTRUCTION
- PHASE 2 CONSTRUCTION
- TYPE III BARRICADE
- DRUM

TRAFFIC CONTROL TYPICAL



REVISION	BY	DATE

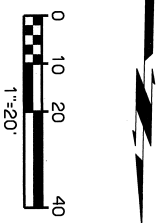
TRAFFIC CONTROL PLANS N. 108th E. AVE. (2) STA. 18+00.00 TO STA. 26+02.56	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th ST., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
COMPENSATORY Engineering Services EST. INC. Certificate of Authorization No. 3639 (RE/LS), Expires 6/30/24	
PLAN SCALE	1" = 20'
PROFILE SCALE	1" = 20'
HORIZONTAL:	N/A
VERTICAL:	N/A
DESIGNER:	DESIGNED:
CHECKED:	APPROVED:
DATE:	DATE:
FILE:	FILE:
ATLAS PAGE NO.:	173
SHEET 36 OF 38 SHEETS	



TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN AND OPERATE COMPLETE, ADEQUATE AND SAFE TRAFFIC CONTROL DURING THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL DEVICES WITHIN THE VICINITY OF THE CONSTRUCTION AS REQUIRED. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND APPROVED BY THE CITY OF TULSA.
 2. LOCAL TRAFFIC SHALL BE MAINTAINED THROUGHOUT THE PROJECT AT ALL TIMES. ALL PUBLIC AND PRIVATE STREETS AND DRIVES SHALL BE ACCESSIBLE FOR LOCAL TRAFFIC FROM ANY DETOUR DURING CONSTRUCTION OF THIS PROJECT.
 3. CONTRACTOR SHALL SEQUENCE CONSTRUCTION SO LANE CLOSURES WILL BE KEPT TO A MINIMUM AND BE CLOSED FOR AS SHORT A DURATION AS POSSIBLE. ACCESS TO DRIVEWAYS AND FOR EMERGENCY VEHICLES, ETC. SHALL BE MAINTAINED EXCEPT WHEN CLOSURE IS ABSOLUTELY NECESSARY. PROPER NOTIFICATION MUST BE GIVEN PRIOR TO ANY CLOSURE.
 4. LOCAL TRAFFIC, I.E. A BUSINESS OR RESIDENT WITH DRIVEWAY ON THE STREET BEING CONSTRUCTED, SHALL BE ALLOWED VEHICULAR ACCESS TO AND FROM THEIR DRIVEWAY AT ALL TIMES EXCEPT WHEN THE DRIVEWAY IS BEING DEMOLISHED OR RECONSTRUCTED OR AT SUCH TIMES WHEN EXCAVATION OR PLACEMENT OF ROADWAY MATERIALS IS OCCURRING IMMEDIATELY IN FRONT OF THE DRIVEWAY. 18 TO 24 HOURS PRIOR TO THESE ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE BUSINESS(ES) OR RESIDENT(S) THAT ACCESS TO THE DRIVEWAY SHALL BE RESTRICTED. THE CONTRACTOR SHALL ADVISE THE BUSINESS OR RESIDENT THROUGH PERSONAL CONTACT, OR THE USE OF DOOR HANGERS WHICH WILL OUTLINE SPECIFICALLY THE BEGINNING DATE, TIME AND DURATION THE DRIVEWAY WILL BE INACCESSIBLE. DOOR HANGERS SHALL PROVIDE A PHONE NUMBER AND CONTACT PERSON WHICH THE BUSINESS OR RESIDENT MAY CONTACT IN CASE OF QUESTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ADVISE BUSINESSES OR RESIDENTS EACH DIFFERENT TIME PERIOD IN WHICH THE DRIVEWAY IS TO BE INACCESSIBLE.
 5. UNDER NO CIRCUMSTANCES SHALL A STREET UNDER CONSTRUCTION BE INACCESSIBLE OVER A WEEKEND OR HOLIDAY. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT AS A MINIMUM BUSINESSES OR RESIDENTS WITH DRIVEWAYS ON THE STREET BEING CONSTRUCTED SHALL BE ABLE TO ACCESS THEIR DRIVEWAY FROM A COMPACTED AGGREGATE BASE SURFACE DURING A WEEKEND PERIOD OR HOLIDAY. A WEEKEND PERIOD IS DEFINED AS BEING FROM 5:00 PM ON FRIDAY TO 8:00 AM ON MONDAY.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL CONSTRUCTION SIGNAGE AND BARRICADES INCLUDING, BUT NOT LIMITED TO, WASHING, REPLACING AND REPOSITIONING THE DEVICES. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES DEEMED NECESSARY BY THE CITY OF TULSA, DUE TO CHANGING TRAFFIC CONDITIONS.
 7. NO BARRICADES SHALL BE PLACED IN THE ROADWAY UNTIL ALL ADVANCE WARNING SIGNAGE IS IN PLACE.
 8. ROADSIDE HAZARDS SHALL BE COMPLETELY BARRICADED AROUND THE PERIMETER FOR THE SAFETY OF PEDESTRIANS AS WELL AS VEHICLES.
 9. ALL CHANNELING DEVICES SHALL BE WEIGHED DOWN WITH A NON-HAZARDOUS MATERIAL IF DEEMED NECESSARY AND SO DIRECTED BY THE CITY OF TULSA.
 10. ALL ADVANCE WARNING SIGNS SHALL REQUIRE ONE TYPE A LIGHT. ALL TYPE III BARRICADES SHALL REQUIRE TWO TYPE A LIGHTS. ALL CHANNELING DEVICES SHALL REQUIRE ONE TYPE C LIGHT.
 11. ALL SIGNAGE SHALL BE SUBMITTED TO AND APPROVED BY THE CITY OF TULSA.
 12. REFERENCE MUTCD FOR ADVANCE WARNING SIGNS AND PLACEMENT.
 13. USE TYPE III BARRICADES FOR LANE CLOSURE WITHIN ACTIVE WORK ZONES.
 14. PLACE DRUMS AT 25' CENTERS THROUGH ACTIVE WORK ZONES.

TRAFFIC CONTROL NOTES, CONTINUED



TRAFFIC CONTROL PLANS
N. 109th E. AVE.
STA. 30+00.00 TO STA. 36+50.00

PROJECT NO. 2036N3081Z

NON-ARTERIAL SIREL REHABILITATION AND WATERLINE REPLACEMENT
FOR MAINTENANCE ZONE 3081

CITY OF OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
J. E. JIMMIE, JR., SOILS
TULSA, OK 74103
(918) 566-2141



Comprehensive Engineering Services

PLAN SCALE	DRAWN	RM	5/21	APPROVED
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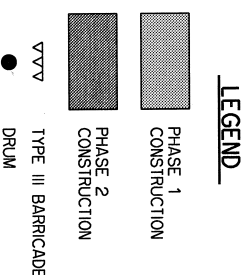
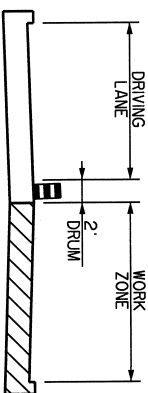
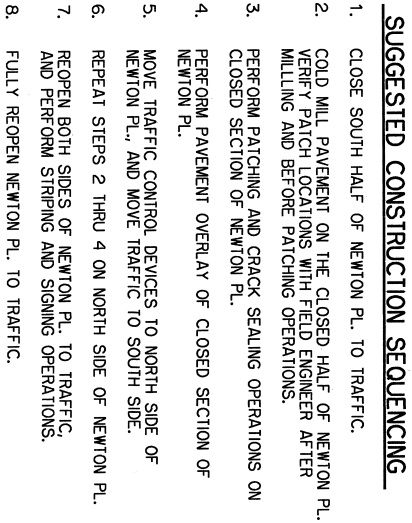
DESIGNED	DATE	BY
SURVEY	CH	3/21



PROFILE SCALE	
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LEAD MNGR	8/22

N/A	FIELD MNGR.	2200	4/23
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N/A	<u>110-71.63.</u>	<u>2</u>
DESIGN MANAGER		CITY ENGINEER

FILE: _____ DRAWING NO: _____
 ATLAS PAGE NO: 175 SHEET 37



TRAFFIC CONTROL PLANS E. NEWTON PL. STA. 40+00.00 TO STA. 46+08.10	
PROJECT NO. 2036N3081Z	
NON-ARTERIAL STREET REHABILITATION AND WATERLINE REPLACEMENT FOR MAINTENANCE ZONE 3081	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: 15 E. 5th St., SUITE 1601 TULSA, OK 74103 (918) 660-7141	
	
Comprehensive Engineering Services EST. INC. Certificate of Authorization No. 3659 (ref./st). Expires 6/30/24	
PLAN SCALE	1" = 20'
DRAWN	RM 5/2/1
DESIGNED	DRA 5/2/1
SURVEY	CH 3/2/1
PROJ. MGR.	4/11/1 6/7/3
LEAD MGR.	10/1/3
FIELD INGR.	7/24/13
RECOMMENDED BY	4/13
DESIGN MANAGER	
CITY ENGINEER	
DATE	11/3/2023
FILE:	
PLANS PAGE NO.:	173
SHEET 38 OF 38 SHEETS	