PUBLIC STREET IMPROVEMENTS FOR
E. ZORA STREET & N. DUQUESNE ROAD
SECTIONS 29, 30, 31, 32, TOWNSHIP 28N, RANGE 32W
CITY OF JOPLIN, MISSOURI
JASPER COUNTY, MISSOURI

LEGEND

CTL	SURVEY CONTROL POINT	TS	TRAFFIC SIGNAL BOX
	SURVEY BENCHMARK	TM	TRAFFIC SIGNAL MANHOLE
TBM	SURVEY TEMPORARY BENCHMARK		TRAFFIC SIGNAL POLE W/ ARM
GM	GAS METER		TRAFFIC SIGNAL POLE
GAR	GAS RISER	TC	TRAFFIC SIGNAL CONTROL BOX
	GAS MANHOLE	TS	TRAFFIC SIGNAL PEDESTAL
GR	GAS REGULATOR		ELECTRIC MANHOLE
TVP	TELEVISION PEDESTAL	EM	ELECTRIC METER
F	FIBER BOX	ER	ELECTRIC RISER
	FIBER PEDESTAL	E	ELECTRIC BOX
C	CABLE BOX		ELECTRIC CABINET
CV	CABLE VAULT	J	ELECTRIC JUNCTION BOX
TP	TELEPHONE PEDESTAL	SPH	SPRINKLER HEAD
	STORM MANHOLE	SCV	SPRINKLER CONTROL VALVE
	STORM GRATE		WATER METER PIT
	SANITARY MANHOLE		FIRE HYDRANT
YL	YARD LIGHT	WM	WATER METER
LTP	LIGHT POLE	WV	WATER VALVE
	POWER POLE	FP	FLAG POLE
LPPP	POWER POLE W/ LIGHT		SIGN
	GUY WIRE		BOLLARD
BU	STUMP		WOOD POST
	BUSH		STEEL POST
	EVERGREEN TREE	COL	COLUMN
	DECIDUOUS TREE		BORE HOLE

- SECTION LINE
- PROPERTY LINE (PL)
- CENTER LINE
- PROPOSED ROW LINE
- EXISTING ROW LINE
- UTILITY EASEMENT
- 1371 EXISTING MINOR CONTOUR
- 1371 EXISTING MAJOR CONTOUR
- 1371 PROPOSED MINOR CONTOUR
- **1371** PROPOSED MAJOR CONTOUR
- TEL EXISTING TELEPHONE LINE
- SS EXISTING SANITARY LINE
- EXISTING STORM LINE
- GAS EXISTING GAS LINE
- W EXISTING WATER LINE
- EXISTING CHAIN LINK FENCE
- P-OH EXISTING OVERHEAD ELECTRIC
- FO EXISTING FIBER OPTIC CABLE
- P EXISTING PIPE LINE
- GRADING LIMITS
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED CHAIN LINK FENCE
- PROPOSED WOOD PRIVACY FENCE
- EXISTING TREELINE
- CONSTRUCTION LIMITS
- UNDERDRAIN

ABBREVIATION TABLE

M.G.	MATCH GRADE
TP	TOP OF PAVEMENT
TC	TOP OF CURB
BC	BACK OF CURB
EP	EDGE OF PAVEMENT
R/W	RIGHT-OF-WAY
TCE	TEMPORARY CONSTRUCTION EASEMENT
PROP.	PROPOSED
EXIST.	EXISTING
TYP.	TYPICAL
(R)	REMOVAL
CONST.	CONSTRUCT
TBM	TEMPORARY BENCMARK
C.P.	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
ADJ.	ADJUST
EL.	ELEVATION
ESMT.	EASEMENT
B-B	BACK OF CURB TO BACK OF CURB DIMENSION
℄	CENTERLINE
℄	BASE LINE

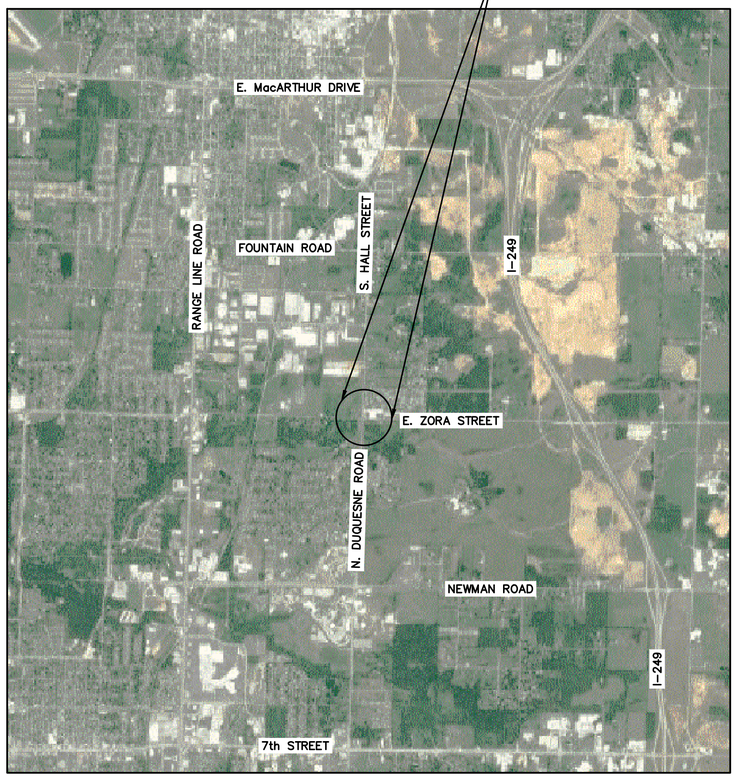
DESIGN DESIGNATION

MAJOR ARTERIAL
DESIGN SPEED: 35 MPH
POSTED SPEED: 35 MPH

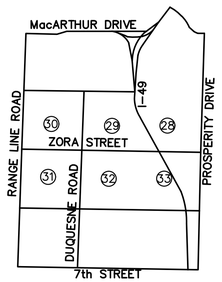
MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
www.mo1call.com

THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!

PROJECT LOCATION – PHASE 1



LOCATION MAP
NOT TO SCALE



SECTION 28, T-28-N, R-32-W
SECTION 29, T-28-N, R-32-W
SECTION 30, T-28-N, R-32-W
SECTION 31, T-28-N, R-32-W
SECTION 32, T-28-N, R-32-W
SECTION 33, T-28-N, R-32-W
JASPER COUNTY, MISSOURI

VICINITY MAP
NOT TO SCALE

UTILITIES INFORMATION

ELECTRIC – LIBERTY UTILITIES
ATTN: JIMMY TURNER
3400 S. KODIAK ROAD
JOPLIN, MO 64804
(417) 626-6842

NATURAL GAS – SPIRE
ATTN: KEN STEGALL
520 E. 5TH STREET
JOPLIN, MO 64801
(417) 626-4831

NATURAL GAS – SOUTHERN STAR
ATTN: MIKE DEGRAEVE
8195 COLE PARKWAY
SHAWNEE, KS 66227
(816) 810-4500

WATER – MISSOURI-AMERICAN WATER CO.
ATTN: GRANT ALUMBAUGH
2323 DAVIS BLVD.
JOPLIN, MO 64804
(417) 680-0311

TELEPHONE – AT&T
ATTN: JON FISK
321 W. 8TH STREET
JOPLIN, MO 64801
(417) 625-8092

CABLE TELEVISION – SPARKLIGHT
ATTN: RANDY KENNEDY
2600 DAVIS BLVD.
JOPLIN, MO 64804
(417) 206-5399

FIBER OPTIC – LIBERTY CONNECT
ATTN: LANDON DOBBS
720 SCHIFFERDECKER AVE
JOPLIN, MO 64801
(417) 625-5179

WEBB CITY – PUBLIC WORKS
ATTN: RICK ROTH
1060 N. MADISON ST
WEBB CITY, MO 64870
(417) 673-6297

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	GENERAL LAYOUT
3-4	ALIGNMENT DATA
5	EXISTING CONDITIONS & SURVEY CONTROL
6	GENERAL NOTES
7-9	SUMMARY OF QUANTITIES
10-12	RIGHT OF WAY PLANS
13-15	DEMOLITION AND REMOVAL PLANS
16-18	TYPICAL SECTIONS
19-24	ROADWAY PLAN & PROFILES
25-27	ROUNDABOUT DETAILS
28-29	SPLITTER ISLAND DETAILS
30-31	CONCRETE JOINT PLAN & DETAILS
32-36	DRIVE LAYOUTS
37-39	STANDARD DETAILS
40-41	STORM DRAINAGE MAP & CALCULATIONS
42-43	STORM SEWER PROFILES
44-48	STORM SEWER DETAILS
49-50	EROSION CONTROL/SEEDING & SODDING PLANS
51-53	EROSOIN CONTROL DETAILS
54-58	STREET LIGHTING PLANS & DETAILS
59-64	STRIPING AND SIGNING PLANS & DETAILS
65-71	TRAFFIC CONTROL PLANS & DETAILS
72-88	CROSS SECTIONS

PREPARED & SUBMITTED BY:

OLSSON
714 S. MAIN STREET
JOPLIN, MISSOURI 64801

JONATHAN PEITZ P.E. — DATE 04.26.2024

I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION.

APPROVED BY:

CITY OF JOPLIN, MISSOURI

CITY ENGINEER — DATE

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Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

Jonathan Peitz 2024.04.26 — STATE OF MISSOURI — JONATHAN W. PEITZ NUMBER PE-2017019023 — PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TITLE SHEET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

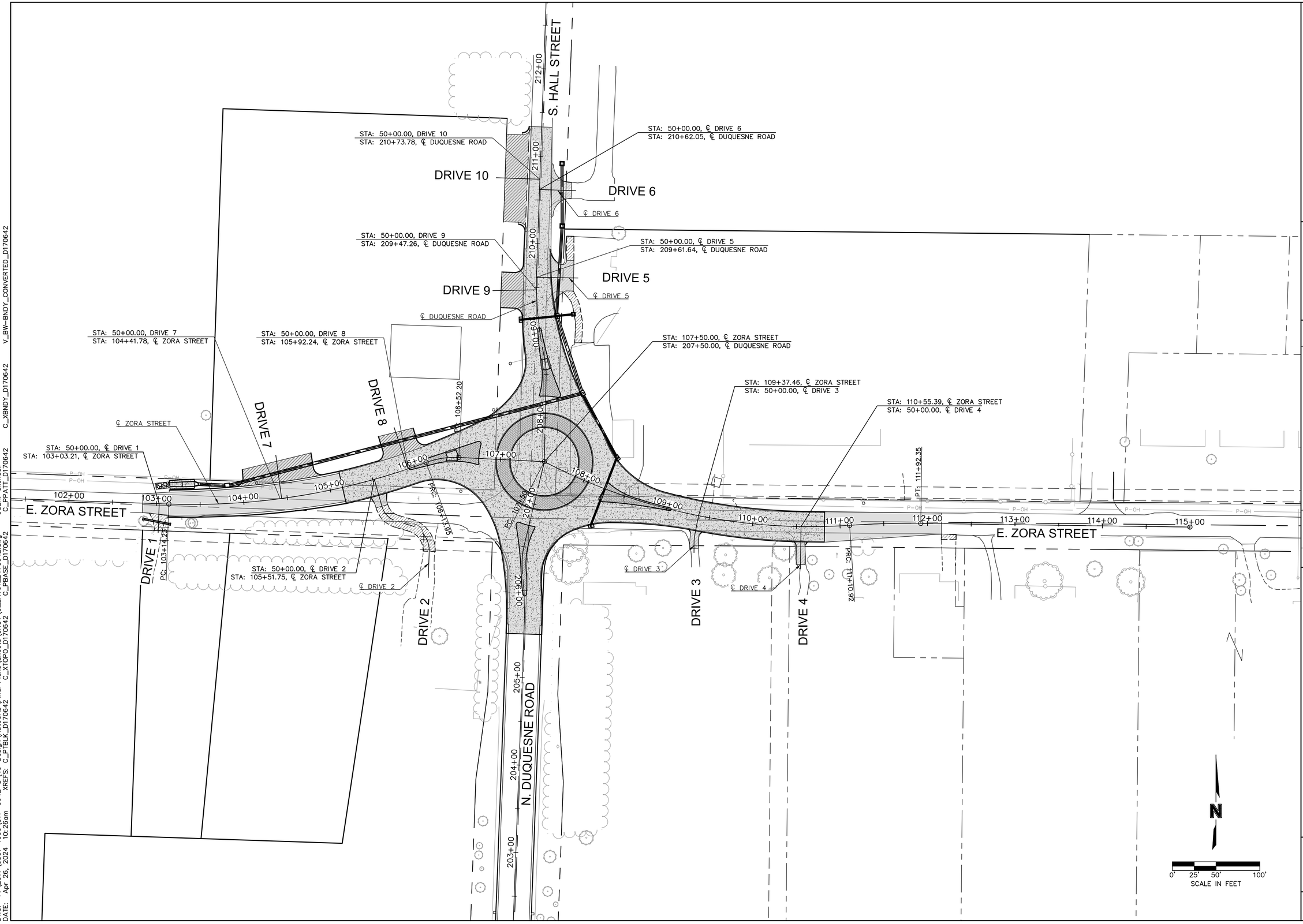
2024

JOPLIN, MISSOURI

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_TTL01_D170642
date: 4/26/2024

SHEET 1 of 88

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PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
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GENERAL LAYOUT

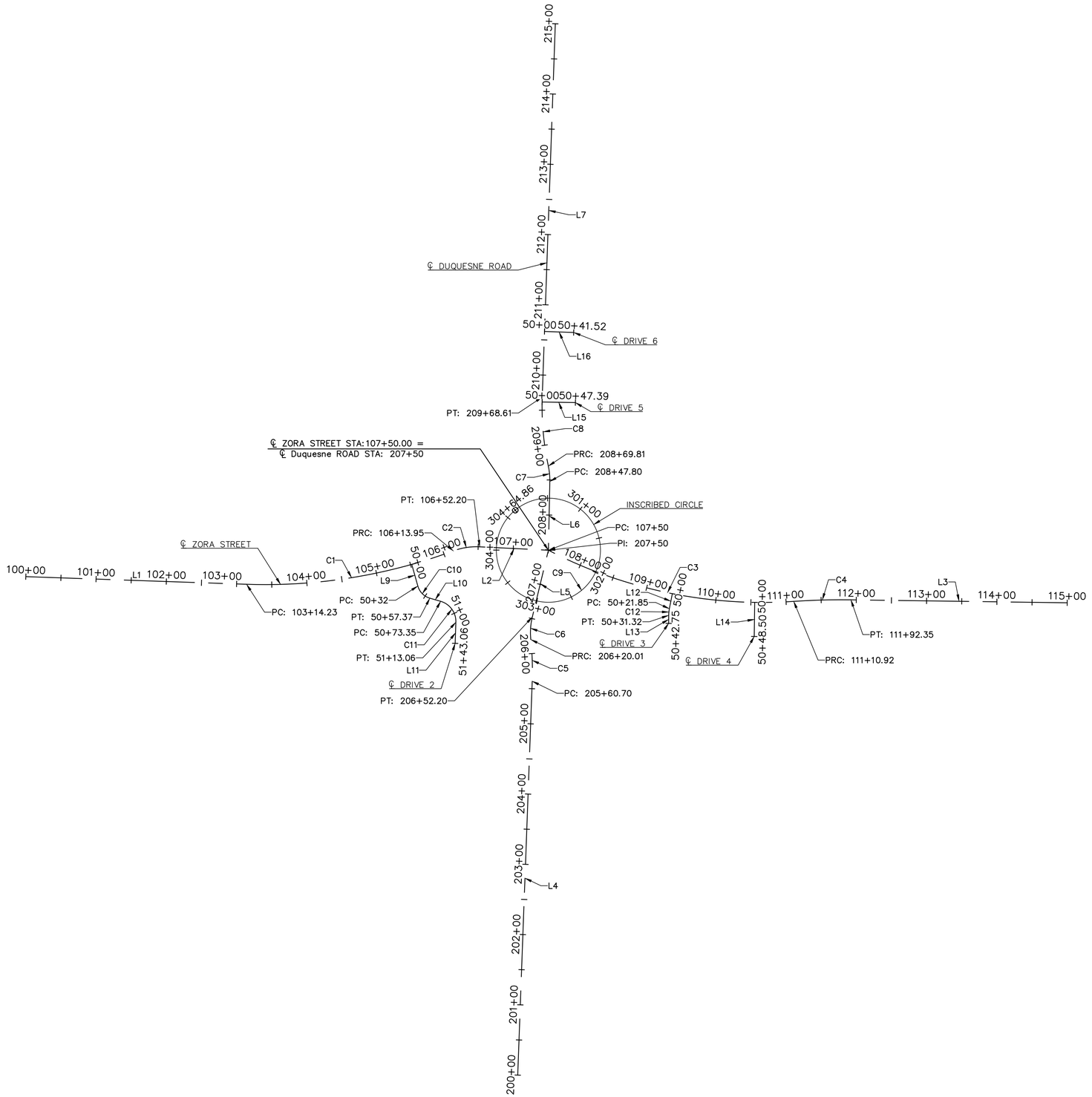
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

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SHEET
2 of 88



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Jonathan Peitz
2024.04.26 10:26:00

STATE OF MISSOURI
JONATHAN W. PEITZ
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PROFESSIONAL ENGINEER

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

ALIGNMENT DATA

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JOPLIN, MISSOURI

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SHEET
3 of 88

℄ ZORA STREET									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		100+00.00 103+14.23	344330.6008 344319.7277	2800330.2116 2800644.2535	314.23'	S88°01'01"E			
C1	PC= PI= PT=	103+14.23 104+66.02 106+13.95	344319.7277 344314.4755 344367.2545	2800644.2535 2800795.9477 2800938.2610	299.72'	N80°49'03"E	22°19'52"	151.79'	769.00'
C2	PC= PI= PT=	106+13.95 106+33.34 106+52.20	344367.2545 344373.9966 344373.0354	2800938.2610 2800956.4404 2800975.8058	38.25'	N81°14'49"E	23°11'23"	19.39'	94.50'
L2		106+52.20 107+50.00	344373.0354 344368.1865	2800975.8058 2801073.4902	97.80'	S87°09'30"E			
C3	PC= PI= PT=	107+50.00 109+35.10 111+10.92	344368.1865 344282.8715 344295.4143	2801073.4902 2801237.7521 2801422.4228	360.92'	S78°13'10"E	31°19'56"	185.10'	660.00'
C4	PC= PI= PT=	111+10.92 111+51.66 111+92.35	344295.4143 344298.1747 344297.6203	2801422.4228 2801463.0646 2801503.7963	81.43'	N88°26'50"E	4°39'55"	40.74'	1000.00'
L3		111+92.35 115+00.00	344297.6203 344293.4332	2801503.7963 2801811.4212	307.65'	S89°13'13"E			

℄ Duquesne ROAD									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L4		200+00.00 205+60.70	343621.5894 344181.9067	2801029.8949 2801050.4901	560.70'	N2°06'18"E			
C5	PC= PI= PT=	205+60.70 205+90.40 206+20.01	344181.9067 344211.5941 344241.1400	2801050.4901 2801051.5813 2801048.4878	59.32'	N1°56'10"W	8°04'56"	29.71'	420.50'
C6	PC= PI= PT=	206+20.01 206+36.26 206+52.20	344241.1400 344257.3008 344273.0986	2801048.4878 2801046.7958 2801050.5989	32.18'	N3°46'46"E	19°30'47"	16.25'	94.50'
L5		206+52.20 207+50.00	344273.0986 344368.1865	2801050.5989 2801073.4902	97.80'	N13°32'09"E			
L6		207+50.00 208+47.80	344368.1865 344465.9698	2801073.4902 2801075.5326	97.80'	N1°11'48"E			
C7	PC= PI= PT=	208+47.80 208+58.86 208+69.81	344465.9698 344477.0203 344487.8258	2801075.5326 2801075.7634 2801073.4379	22.01'	N5°28'28"W	13°20'32"	11.05'	94.50'
C8	PC= PI= PT=	208+69.81 209+19.46 209+68.61	344487.8258 344536.3647 344585.9845	2801073.4379 2801062.9916 2801064.7293	98.80'	N5°04'12"W	14°09'05"	49.65'	400.00'
L7		209+68.61 215+00.00	344585.9845 345117.0533	2801064.7293 2801083.3275	531.39'	N2°00'21"E			

Inscribed circle									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C9	PC= PI= PT=	300+00.00 299+99.95 304+64.86	344425.2204 344425.1886 344425.1566	2801026.3401 2801026.3016 2801026.2631	464.86'	S50°22'50"W	359°55'21"	0.05'	74.00'

℄ DRIVE 2									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L9		50+00.00 50+32.00	344348.0075 344317.2034	2800879.1333 2800887.8000	32.00'	S15°42'50"E			
C10	PC= PI= PT=	50+32.00 50+45.90 50+57.37	344317.2034 344303.8244 344299.9600	2800887.8000 2800891.5641 2800904.9147	25.37'	S44°47'07"E	58°08'35"	13.90'	25.00'
L10		50+57.37 50+73.35	344299.9600 344295.5155	2800904.9147 2800920.2696	15.99'	S73°51'24"E			
C11	PC= PI= PT=	50+73.35 50+96.73 51+13.06	344295.5155 344289.0174 344265.6603	2800920.2696 2800942.7191 2800941.9104	39.71'	S35°56'13"E	75°50'23"	23.37'	30.00'
L11		51+13.06 51+43.06	344265.6603 344235.6783	2800941.9104 2800940.8724	30.00'	S1°58'59"W			

℄ DRIVE 3									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L12		50+00.00 50+21.85	344306.4072 344284.9731	2801249.8058 2801245.5721	21.85'	S11°10'24"W			
C12	PC= PI= PT=	50+21.85 50+26.60 50+31.32	344284.9731 344280.3143 344275.5656	2801245.5721 2801244.6519 2801244.6252	9.47'	S5°44'52"W	10°51'03"	4.75'	50.00'
L13		50+31.32 50+42.75	344275.5656 344264.1326	2801244.6252 2801244.5609	11.43'	S0°19'21"W			

℄ DRIVE 4									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L14		50+00.00 50+48.50	344293.9828 344245.4895	2801366.9235 2801366.2634	48.50'	S0°46'47"W			

℄ DRIVE 5									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L15		50+00.00 50+47.39	344579.0184 344578.1851	2801064.5461 2801111.9286	47.39'	S88°59'33"E			

℄ DRIVE 6									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L16		50+00.00 50+41.52	344679.3682 344677.9151	2801067.9996 2801109.4951	41.52'	S87°59'39"E			

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Jonathan Peitz
2024.04.26 10:27:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ALIGNMENT DATA

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
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drawing no.: C_ALI01_D170642
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SHEET
4 of 88

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POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
225	343465.34	2800998.60	1015.78	CTL 5/8IP CAP
227	344783.13	2801100.05	1033.58	CTL 5/8IN IP CAP

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
100	344176.38	2809001.47	1071.63	CTL
106	344189.37	2804684.72	1060.81	CTL
112	344371.79	2798179.78	1027.36	CTL
116	344487.47	2799757.08	1030.81	CTL
224	344560.10	2801162.40	1035.72	TBM
225	343465.34	2800998.60	1015.78	CTL 5/8IP CAP
227	344783.13	2801100.05	1033.58	CTL 5/8IN IP CAP
100001	344276.82	2803700.01	1028.83	FOUND MONUMENT COPPERWELD
100003	344247.12	2806349.21	1063.67	FOUND MONUMENT COPPERWELD
100009	344350.05	2799734.76	1024.30	FOUND MONUMENT SIGNAL
100010	344440.07	2797097.63	1007.52	FOUND MONUMENT PIN

CONTROL POINT INFORMATION:

CONTROL:
HORIZONTAL CONTROL IS BASED ON MISSOURI STATE PLANE COORDINATE SYSTEM NAD 1983, WEST ZONE, U.S. FEET.

VERTICAL CONTROL IS: NAVD'88

COORDINATE DATUM: STATE PLANE GRID

VERTICAL CONTROL POINT TEMPORARY BENCH MARK INFORMATION:

OLSSON TBM "B" (PT 224): CHISLED SQUARE S/W CORNER OF CONCRETE PAD (GATE PAD TO LAWVER STORAGE) N/E CORNER OF ZORA & HALL STREET EL.=1035.724 (NAVD'88)

UTILITIES INFORMATION

ELECTRIC – LIBERTY UTILITIES
ATTN: JIMMY TURNER
3400 S. KODIAK ROAD
JOPLIN, MO 64804
(417) 626-6842

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(417) 206-5399

FIBER OPTIC – LIBERTY CONNECT
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720 SCHIFFERDECKER AVE
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(417) 625-5179

UTILITIES NOTE:

UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION (PROVIDED BY BARTLETT & WEST) AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. NO PRIVATE UTILITIES WERE LOCATED. LOCATES WILL BE THROUGH THE MISSOURI ONE CALL SYSTEM.

AN INFORMATION ONLY TICKET WAS ORDERED ON 2/7/2022 THROUGH MISSOURI ONE CALL:

THE COMPANIES LISTED ON THE TICKET ARE:
AT&T TRANSMISSION; AT&T DISTRIBUTION; CABLE ONE DIGITAL; LIBERTY UTILITIES; LIBERTY CONNECT; MISSOURI AMERICAN WATER; SPIRE; CITY OF JOPLIN; CITY OF WEBB CITY; SOUTHERN STAR CENTRAL GAS;

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Jonathan Peitz
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MO# PE-2017019023

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EXISTING CONDITIONS & SURVEY CONTROL

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5 of 88

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DATE: Apr 26, 2024 10:27am XREFS: C_PTBLK_D170642 C_XTOPO_D170642 V_BW-BNDY_CONVERTED_D170642

GENERAL NOTES:

1. ALL WORK PRESENTED, IMPLIED, AND/OR COMPLETED AS A PART OF THIS PLAN SET SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE CITY OF JOPLIN UNLESS SPECIFICALLY STATED OTHERWISE. ALL ITEMS AND WORK REFERENCING MODOT STANDARD DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS (APPROVED BY CITY OF JOPLIN) AND ONE (1) COPY OF ALL APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS, SPECIFICATIONS, AND SWPPP ON THE SITE AT ALL TIMES.
2. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
4. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
5. ALL SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE 2011 PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY.
6. ALL ROADWAY CONCRETE SHALL HAVE A TINE FINISH. ALL OTHER CONCRETE SHALL HAVE A BROOM FINISH.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST VERSION) THROUGHOUT THE PROJECT IN HIGHWAYS, SIDEWALKS, STREETS AND INTERSECTIONS. ALLEY ENTRANCES SHALL BE BLOCKED WITH BARRICADES WHILE THE ALLEY IS UNDER CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
8. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
9. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
10. THE CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER WITHIN 5 DAYS OF THE NOTICE TO PROCEED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND THE GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
12. NO EQUIPMENT OR MATERIAL SHALL BE DEPOSITED ON PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH ACTS AND SHALL REMOVE THE MATERIAL AND RESTORE THE PROPERTY AT THE EXPENSE OF THE CONTRACTOR.
13. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM TO 7:00 PM UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
14. THE CITY OF JOPLIN SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL DEMOLITION AND REMOVAL ITEMS SUCH AS SIGNAGE, POLES, SIGNAL EQUIPMENT, ETC. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS FOR A TIME AND LOCATION TO DELIVER THOSE ITEMS TO THE CITY. CONSTRUCTION DEBRIS SUCH AS BROKEN CONCRETE, EXCESS FILL, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR. MATERIAL SHALL BE COMPLETELY REMOVED FROM THE SITE PRIOR TO ACCEPTANCE OF THE PROJECT. ALL MATERIAL SHALL BE DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
15. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL STORM AND SANITARY MANHOLE RIMS TO MATCH THE PROPOSED FINISHED GRADE. THIS ITEM SHALL BE PAID FOR AS EXISTING MANHOLE RIM ADJUSTMENTS (SANITARY & STORM) EACH.
17. MISSOURI AMERICAN WATER SHALL BE RESPONSIBLE FOR ADJUSTING ALL WATER METERS, VALVE BOXES, HYDRANTS, ETC. TO MATCH PROPOSED FINISHED GRADE. THE CONTRACTOR SHALL CONTACT MISSOURI AMERICAN WATER TO COORDINATE THE ADJUSTMENT OF EXISTING WATER FACILITIES.
18. UNLESS SPECIFICALLY STATED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING METERS, VALVES, VALVE BOXES, BUILDING DRAIN LINES, ETC. TO MATCH FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
19. RIGHT-OF-WAY AND EASEMENTS SHOWN ARE APPROXIMATE, AND DO NOT DEPICT A LEGAL SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATION OF RIGHT-OF-WAY, PROPERTY LINES, AND EASEMENTS AND CONTAINING ACTIVITIES WITHIN THOSE LIMITS.
20. THE CONTRACTOR SHALL PROTECT EXISTING RIGHT-OF-WAY AND SURVEY MONUMENTS. ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI.
21. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A SCHEDULE OF OPERATIONS AT THE BEGINNING OF EACH WEEK. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
22. ANY ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES INCLUDING EARTHWORK. THE CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS AS SHOWN ON PLANS.
23. THE PROPOSED CONTOURS REPRESENT TOP OF FINISHED GRADE. QUANTITIES DO NOT TAKE INTO ACCOUNT CORE-OUT OR ANY OVER-EXCAVATION.
24. THE CONTOUR LINES & SPOT ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE OF PAVEMENT, TOP OF SIDEWALKS AND CURBS, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR GRADING LINE ELEVATIONS.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS. CLEAN STREETS OF CONSTRUCTION DEBRIS DAILY. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE EROSION DURING CONSTRUCTIONS AND UNTIL THE OWNER ACCEPTS THE WORK AS COMPLETE. THE CONTRACTOR SHALL UTILIZE AND COMPLY WITH ALL REQUIREMENTS OF THE CITY OF JOPLIN'S LAND DISTURBANCE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). ALL EROSION AND SEDIMENT CONTROL PLANS SHALL BE INCORPORATED INTO THE SWPPP. CONTRACTOR SHALL MAINTAIN THE SWPPP THROUGHOUT THE PROJECT AND COMPLETE THE REQUIRED DOCUMENTATION UNTIL THE SITE IS STABILIZED AND ACCEPTED BY THE ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
27. CONSTRUCTION ACCESS TO THE SITE SHALL BE LIMITED TO THE APPROVED TEMPORARY CONSTRUCTION ENTRANCE(S). TEMPORARY CONSTRUCTION ENTRANCE SHALL HAVE SHOT ROCK FOR ITS SURFACE. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
28. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
29. CONTRACTOR TO PROTECT ANY STORM INLETS FROM SEDIMENT THAT TAKE STORM WATER FROM THE AREA OF CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
30. THE DETENTION BASINS, WATER QUALITY BASIN AND STORM WATER CHANNELS (PIPES), IF SHOWN, SHALL BE FUNCTIONING BEFORE ANY OTHER WORK MAY BEGIN.
31. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN (SECP). THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
32. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BERMS, SILT FENCES, OR OTHER MEANS TO PREVENT ERODED MATERIALS FROM REACHING THE PUBLIC RIGHT-OF-WAY AND ADJACENT PROPERTIES. IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE, THE CONTRACTOR SHALL REMOVE ANY DEBRIS, SILT, OR MUD AND RESTORE THE RIGHT-OF-WAY TO ORIGINAL OR BETTER CONDITION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
33. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL PROCEDURES SHALL BE IN PLACE PRIOR TO BEGINNING GRADING ACTIVITIES. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SEDIMENT CONTROL BARRIERS DURING CONSTRUCTION OR UNTIL THEY ARE RELEASED FROM THIS RESPONSIBILITY BY THE ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
35. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITE WORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER & ENGINEER. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
36. THE CONTRACTOR IS RESPONSIBLE FOR ATTENDING TO AND CORRECTING UNSUITABLE SOIL CONDITIONS RELATED TO PLOW ZONES, WET SOILS, AND OTHER CONDITIONS. THE UNSUITABLE CONDITIONS MUST BE CORRECTED PER THE GEOTECHNICAL ENGINEER'S REPORT, WHERE REQUIRED, TO MEET PROJECT NEEDS.
37. THE SUBGRADE SOILS BENEATH THE PAVEMENT SECTION SHALL BE OVER EXCAVATED SUFFICIENTLY TO INSTALL THE NEW PAVEMENT SECTION.
38. IF THE CONTRACTOR'S OPERATIONS CAUSE AN UNSATISFACTORY SUBGRADE, THE CONTRACTOR SHALL RESTORE THE SUBGRADE TO A SATISFACTORY CONDITION AT THE CONTRACTOR'S EXPENSE.
39. STRIPPINGS ARE TO BE STOCKPILED. FOLLOWING THE COMPLETION OF THE GRADING, THIS TOPSOIL SHALL BE USED AS FILL MATERIAL ON ALL LANDSCAPED AREAS. IF STOCKPILE IS INACTIVE FOR MORE THAN 14 DAYS, STABILIZE OR PROTECT THE PERIMETER AS PER CITY OF JOPLIN "EROSION AND SEDIMENT CONTROL GUIDELINES". THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
40. ALL HERBACEOUS VEGETATION SHALL BE REMOVED FROM WITHIN THE LIMITS OF THE GRADING AND REDISTRIBUTED WITH THE TOPSOIL. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
41. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN IN THE PLANS, NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
42. ALL BACK FILL SHALL BE TAMPED. BACK FILL WITHIN THE RIGHT-OF-WAY SHALL BE COMPACTED TO 95% MAX. DENSITY AS PER ASTM-D698 (STANDARD PROCTOR COMPACTION). THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
43. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
44. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO ACTUAL LOCATION OF EXISTING FACILITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
45. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN WITHIN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS OF SUCH STRUCTURES WHEN BROKEN OR OTHERWISE DAMAGED BY CONSTRUCTION ACTIVITIES. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
46. ALL TRENCHING SHALL BE IN ACCORDANCE WITH SECTION 1700 OF THE JOPLIN STANDARD SPECIFICATIONS. NO SEPARATE MEASUREMENTS AND PAYMENT WILL BE MADE FOR TRENCH EXCAVATION AND BACKFILL REQUIRED FOR STORM SEWER CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF MATERIAL FROM STORM SEWER TRENCHING. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
47. CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE CONVEYANCE DURING CONSTRUCTION. NO PIPES OR RCB'S SHALL BE ABANDONED OR FILLED WITH FLOWABLE FILL UNTIL THE NEW STORM SEWER PIPE IS CONSTRUCTED AND CONNECTIONS ARE COMPLETE.
48. ALL ACTIVE DRAIN LINES (PUBLIC OR PRIVATE) THAT ARE CONNECTED TO THE EXISTING STORM SEWER SYSTEM TO BE REMOVED SHALL BE EXTENDED AND CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. IT IS ANTICIPATED THAT PRIVATE ROOF DRAINS AND/OR FOUNDATION DRAINS MAY NEED TO BE EXTENDED TO CONTINUE TO FUNCTION PROPERLY. ALL CONNECTIONS TO PROPOSED STORM SYSTEM THAT ARE NOT EXPLICITLY SHOWN AND IDENTIFIED ON THE BID FORM WILL BE CONSIDERED SUBSIDIARY TO THE PROPOSED STORM SEWER PIPE.
49. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PRECAST CONCRETE STRUCTURES AND PIPE FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER. THE SHOP DRAWINGS MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MISSOURI. THE CONTRACTOR MUST RECEIVE APPROVAL OF THE SUBMITTED SHOP DRAWINGS PRIOR TO FABRICATION. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
50. DESIGN PROFESSIONAL SHALL REVIEW SHOP DRAWINGS OR SAMPLES FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ON THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS, AND SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. THE DESIGN PROFESSIONAL'S REVIEW SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS IN WRITING CALLED DESIGN PROFESSIONAL'S ATTENTION TO EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND DESIGN PROFESSIONAL HAS GIVEN WRITTEN APPROVAL OF EACH SUCH VARIATION BY SPECIFIC WRITTEN NOTATION THEREOF INCORPORATED INTO OR ACCOMPANYING THE SHOP DRAWING OR SAMPLE; NOR WILL ANY APPROVAL BY THE DESIGN PROFESSIONAL RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS WITH CONFORMANCE TO CONTRACT DOCUMENTS.

BEFORE SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED:

A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY REVIEWED THE SUBMISSION AND CHECKED ALL DATA AND DETAILS. BY CONTRACTOR SIGNATURE, CONTRACTOR CERTIFIES SHOP DRAWING CONFORMANCE AND ACCURACY TO THE CONTRACT DOCUMENTS.

51. THE CONTRACTOR SHALL MAINTAIN AND COORDINATE OWNER, TENANT, DELIVERY AND EMERGENCY VEHICULAR AND/OR PEDESTRIAN ACCESS TO ALL RESIDENCES AT ALL TIMES IN ACCORDANCE WITH THE CITY OF JOPLIN, ADA, PROWAG, AND MUTCD REQUIREMENTS, INCLUDING TEMPORARY ACCESS AND SAFETY REQUIREMENTS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
52. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF CONTAMINATED MATERIAL IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS AND AS DETAILED IN JSP 1200-01.

TREE PRESERVATION NOTES:

1. MAINTAIN TREE PROTECTION FENCING AT THE DRIPLINE (IN ALL DIRECTIONS). THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
2. NO EQUIPMENT, MATERIALS, AND/OR DEBRIS SHALL BE STORED WITHIN THE TREE PROTECTION FENCING. THIS INCLUDES DURING THE INSTALLATION AND REMOVAL OF THE TREE PROTECTION FENCING.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY OR IN THE PRESENCE OF AN APPROVED LICENSED ARBORIST.
4. IF PROJECT REQUIRES AN ACCESS ROAD WITHIN THE DRIPLINE OF A TREE, PROVIDE A MINIMUM 12" OF MULCH FOR THE ACCESS ROAD. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
5. IF CONSTRUCTION ACTIVITIES REQUIRE WORK TO CROSS THE DRIPLINE, BORE MINIMUM 4' BELOW GROUND SURFACE THE DISTANCE OF THE DRIPLINE. IF BORING 4' CANNOT BE ACHIEVED CONTACT APPROVED LICENSED ARBORIST IMMEDIATELY TO MONITOR WORK. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.

ROOT PRUNING NOTES:

1. ROOT PRUNING SHOULD BE COORDINATED WITH THE TREE PROTECTION FENCING. IN SOME CASES, THAT FENCE LINE IS ON THE ROOT CUT, AND PROVISIONS FOR ROOT PRUNING MAY NEED TO BE ACCOMMODATED BEFORE FENCE IS ERECTED. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
2. CAREFULLY EXPOSE ROOTS WITHIN THE LIMITS OF CONSTRUCTION AND MARK FOR PRUNING. PROPOSED ROOTS SHALL BE REVIEWED BY AN APPROVED LICENSED ARBORIST PRIOR TO TRENCHING, EXCAVATION, OR CUTTING TO DETERMINE THE IMPACT ON ANY STRUCTURAL CRITICAL ROOTS AND THE CLOSEST POINT TO THE TREES THAT SOIL MAY BE DISTURBED. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS
3. ROOT PRUNING CAN BE ACCOMPLISHED WITH CIRCULAR SAWS OF VARYING TYPES AND/OR A ROTARY TYPE STUMP GRINDER TO A DEPTH OF 18" OR TO THE MAXIMUM DEPTH OF THE REQUIRED GRADING CUT, WHICHEVER IS LESS. SAW BLADE AND GRINDER TEETH SHOULD BE SHARPENED PRIOR TO USE. TRENCHING MACHINES ARE NOT ALLOWED IN ROOT PRUNING OPERATIONS.
4. ROOTS OVER 1 INCH IN DIAMETER MUST BE CLEANLY AND SHARPLY CUT WITH A HAND SAW. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS
5. PRUNING CUTS SHOULD BE FLUSH WITH THE SIDE OF THE TRENCH CLOSEST TO THE TREE.
6. AN APPROVED LICENSED ARBORIST SHOULD REVIEW ANY ROOTS OVER 2 INCHES IN DIAMETER ENCOUNTERED DURING EXCAVATION AND/OR CONSTRUCTION ACTIVITIES TO DETERMINE STRUCTURAL STABILITY OF THE TREE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS

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2024.04.26 10:27:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_GEN01_D170642
date: 4/26/2024

DWG: F:\2017\0501-1000\017-0642-D\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_GEN01_D170642.dwg USER: skendall
DATE: Apr 26, 2024 10:27am XREFS: C_PTBLK_D170642

ASPHALT SURFACING QUANTITIES								
STATION TO STATION		LOCATION	ASPHALTIC CONCRETE SURFACE (2") (TONS)*	ASPHALTIC CONCRETE BASE COURSE (8") (TONS)*	MODOT TYPE 5 AGGREGATE BASE (8") (SQ. YD.)	ASPHALT TACK COAT (GAL.)**	ASPHALT PRIMER (GAL.)**	MODOT TYPE 5 AGGREGATE BASE (8") (SQ. YD.)
102+84.27	105+14.21	ZORA WEST	83.1	332.3	738.3	118.1	59.1	738.3
110+82.19	112+16.03	ZORA EAST	49.3	197.2	438.2	70.1	35.1	438.2
		TOTALS	132	530	1177	188	94	1177

* COMPUTED AT A RATE OF 150 LBS./CU.FT.
** COMPUTED AT A RATE OF 0.08 GAL/SY

CONCRETE SURFACING QUANTITIES								
STATION TO STATION		STREET	LOCATION	CONCRETE ISLAND (6") (SQ. YD.)	CONCRETE PAVEMENT (10") (SQ. YD.)	MODOT TYPE 5 AGGREGATE BASE (8") (SQ. YD.)	MODOT TYPE 5 AGGREGATE BASE (18") (SQ. YD.)	NOTES
105+14.21	110+82.19	ZORA STREET	ROUNDABOUT ROADWAY		4367.6			205+50 TO 211+33.61 (DUQUESNE RD)
106+95	108+05.02	ZORA STREET	TRUCK APRON		497.4			
105+93.18	109+05.36	ZORA STREET	SPLITTER ISLANDS	348				205+93.71 TO 209+03.73 (DUQUESNE RD)
107+11	107+89.01	ZORA STREET	CENTER ISLAND	531			531.0	
105+14.21	110+82.19	ZORA STREET	CONCRETE AREA			5744.0		205+50 TO 211+33.61 (DUQUESNE RD)
			TOTALS	879	4865	5744	531	

ROCK BLANKET				
STATION	LOCATION	SIDE	SQ. YD.	NOTES
103+50	ZORA STREET	LT	12.4	7'x16'x1'
	TOTAL		12.4	

DRIVEWAY SURFACING QUANTITIES						
STATION	LOCATION	SIDE	MODOT TYPE 1 AGGREGATE SURFACE (6") (SQ. YD.)	CONCRETE PAVEMENT (6") (SQ. YD.)	CONCRETE PAVEMENT (8") (SQ. YD.)	NOTES
105+51.74	DRIVE 1	RT	28.9	0.0	0.0	ZORA WEST LEG
105+51.75	DRIVE 2	RT	126.1	22.9	0.0	ZORA WEST LEG
109+37.46	DRIVE 3	RT	0.0	23.8	0.0	ZORA EAST LEG
110+55.39	DRIVE 4	RT	0.0	30.2	0.0	ZORA EAST LEG
209+61.64	DRIVE 5	RT	81.7	0.0	107.2	DUQUESNE NORTH LEG
210+62.05	DRIVE 6	RT	0.0	0.0	73.9	DUQUESNE NORTH LEG
104+41.78	DRIVE 7	LT	0.0	0.0	213.7	ZORA WEST LEG
105+92.24	DRIVE 8	LT	0.0	0.0	118.8	ZORA WEST LEG
209+47.26	DRIVE 9	LT	0.0	0.0	115.0	DUQUESNE NORTH LEG
210+73.78	DRIVE 10	LT	0.0	0.0	301.9	DUQUESNE NORTH LEG
		TOTALS	237	77	931	

CURB AND GUTTER COMBINED										
STATION	OFFSET	STATION	OFFSET	LOCATION	SIDE	City of Joplin Standard C&G (LN. FT.)	MoDOT Type B Barrier Curb (LN. FT.)	MoDOT Type F Curb (LN FT.)	Truck Apron Curb (LN FT.)	NOTES
103+14.23	16.19	105+14.23	19.00	WEST ZORA	LT	195				
103+14.23	15.19	105+14.23	19.00	WEST ZORA	RT	204				
105+14.23	19.00	205+60.70	20.50	WEST ZORA TO SOUTH DUQ	RT		322			INTEGRAL CURB
205+60.70	20.50	205+50	20.5	SOUTH DUQUESNE	RT	11				
105+14.23	19.00	209+93.61	15.50	WEST ZORA TO NORTH DUQ	LT		391			INTEGRAL CURB
209+93.61	15.50	211+33.61	12.00	NORTH DUQUESNE	LT	140				
209+93.61	12.00	110+82.85	17.00	NORTH DUQ TO EAST ZORA	LT		508			INTEGRAL CURB
205+50	20.5	205+60.70	20.50	SOUTH DUQUESNE	LT	11				
205+60.70	20.5	110+81.52	17.96	SOUTH DUQ TO EAST ZORA	RT		413			INTEGRAL CURB
				ROUNDABOUT CENTER				251		
				TRUCK APRON					352	
105+93.18	-	106+75.16	-	ZORA WEST SPLITTER	-		197			INTEGRAL CURB
208+24.91	-	209+03.74	-	DUQ NORTH SPLITTER	-		178			INTEGRAL CURB
108+24.87	-	109+05.35	-	ZORA EAST SPLITTER	-		188			INTEGRAL CURB
205+93.57	-	206+75.04	-	DUQ SOUTH SPLITTER	-		189			INTEGRAL CURB
					TOTAL	561	2386	251	352	

EARTHWORK									
			UNCLASSIFIED EXCAVATION EXCAVATION						
STATION TO STATION		LOCATION	TOTAL CUT (Cu. Yd.)	EXISTING PAVEMENT (Cu. Yd.)	VMF DIRT	VMF PVMT	EMBANKMENT (Cu. Yd.)	IMPORTED FILL (Cu Yd.)	NOTES
102+84.27	112+16.03	ZORA	2600	998	0.85	1.00	1250	100	ZORA & DUQUESNE ENTIRE PROJECT
		TOTAL	2600.0	998.0			1250.0	100.0	

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SUMMARY OF QUANTITIES

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_QTY01_D170642
date: 4/26/2024

SHEET
8 of 88

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DATE: Apr 26, 2024 10:27am XREFS: C_PTBLK_D170642

STORM SEWER STRUCTURES & PIPE																
STATION	STATION	LOCATION	SIDE	STRUCTURE NO.	INLET (AREA) (3x3') (Each)	INLET (AREA) (4'x4') (Each)	INLET (CURB) (5'x3') TYPE C (Each)	INLET (CURB) (5'x4') TYPE C (Each)	INLET (CURB) (5'x5') TYPE C (Each)	RCP 15" (Ft.)	RCP 18" (Ft.)	RCP 24" (Ft.)	RCP 30" (Ft.)	END SECTION 15" RC (Each)	END SECTION 30" RC (Each)	NOTES
	103+00	ZORA STREET	RT	FES-1 & FES-2						32				2		STORM DRAIN: SD-1
103+62.75	107+53.13	ZORA STREET	LT	CI-6, CI-1, FES-3				1	1				444		1	STORM DRAIN: SD-2
107+53.13	108+26.80	ZORA STREET	LT	CI-2			1				79					STORM DRAIN: SD-3
108+26.80	108+26.39	ZORA STREET	LT TO RT	CI-3			1			80						STORM DRAIN: SD-4
208+29.87	209+15.16	DUQUESNE ROAD	RT	CI-5				1					88			STORM DRAIN: SD-5
209+15.16	210+21.20	DUQUESNE ROAD	RT	AI-2		1						99				STORM DRAIN: SD-6
210+21.20	210+92.50	DUQUESNE ROAD	RT	AI-3		1						67				STORM DRAIN: SD-7
209+15.09	209+15.31	DUQUESNE ROAD	LT TO RT	CI-4			1			39						STORM DRAIN: SD-8
209+15.13	209+15.31	DUQUESNE ROAD	RT	AI-1	1					16						STORM DRAIN: SD-9
				TOTAL	1	2	3	2	1	167	79	166	532	2	1	

INLET PROTECTION				
STATION	LOCATION	SIDE	EA	NOTES
103+82	ZORA STREET	LT	1	CURB INLET CI-6
108+25	ZORA STREET	RT	1	CURB INLET CI-3
108+25	ZORA STREET	LT	1	CURB INLET CI-2
208+25	DUQUESNE ROAD	RT	1	CURB INLET CI-1
209+15	DUQUESNE ROAD	LT	1	CURB INLET CI-4
209+15	DUQUESNE ROAD	RT	1	CURB INLET CI-5
209+15	DUQUESNE ROAD	RT	1	AREA INLET AI-1
210+21	ZORA STREET	RT	1	AREA INLET AI-2
210+92	ZORA STREET	RT	1	AREA INLET AI-3
		TOTAL	9	

ALTERNATE DITCH CHECK				
STATION	LOCATION	SIDE	LF	NOTES
103+28	ZORA STREET	RT	14	
103+59	ZORA STREET	RT	14	
103+94	ZORA STREET	RT	14	
104+23	ZORA STREET	RT	14	
104+50	ZORA STREET	RT	14	
104+81	ZORA STREET	RT	14	
102+97	ZORA STREET	LT	14	
103+21	ZORA STREET	LT	14	
103+46	ZORA STREET	LT	14	
		TOTAL	126	

REMOVAL OF EXISTING STRUCTURES (For Information Only)						
STATION	STATION	LOCATION	SIDE	ITEM	QUANTITY	UNITS
207+10.54	208+79.30	DUQUESNE ROAD	NE CORNER	PARKING LOT ASPHALT	10138	SF
207+55.06	207+99.98	DUQUESNE ROAD	RT	BUILDING	1	EA
103+14.23	110+82.17	ZORA STREET		ASPHALT PAVEMENT	18080	SF
205+50	206+71.04	DUQUESNE ROAD		ASPHALT PAVEMENT NORTH	11803	SF
206+98	211+33.61	DUQUESNE ROAD		ASPHALT PAVEMENT SOUTH	5325	SF
210+36.79	210+38.20	DUQUESNE ROAD		CULVERT PIPE	40	LF
109+22.30	109+45.45	ZORA STREET	RT	DRIVE 3	250	SF
110+37.96	110+67.72	ZORA STREET	RT	DRIVE 4	431	SF
210+41.34	210+77.39	DUQUESNE ROAD	RT	DRVE 6	560	SF
103+14.23	110+82.18	ZORA STREET	LT	RELOCATE BURRIED TELEPHONE	1	LS
103+14.23	110+82.18	ZORA STREET	LT	RELOCATE BURRIED FIBER-OPTIC	1	LS
104+83.87		ZORA STREET	LT	POWER POLE	1	EA
105+92.96		ZORA STREET	RT	SPEED LIMIT SIGN	1	EA
106+13.17		ZORA STREET	RT	WATER METER	1	EA
106+60.16		ZORA STREET	LT	STOP SIGN	1	EA
106+66.37		ZORA STREET	RT	POWER POLE	1	EA
106+79.89		ZORA STREET	RT	POWER POLE	1	EA
107+04.39		ZORA STREET	RT	POWER POLE	1	EA
107+76.76		ZORA STREET	RT	RETAIL SIGN	1	EA
108+03.92		ZORA STREET	RT	STOP SIGN	1	EA
108+56.58		ZORA STREET	LT	TELEPHONE BOX	1	EA
108+69.37		ZORA STREET	LT	TRUCK ROUTE SIGN	1	EA
108+83.57		ZORA STREET	RT	POWER POLE	1	EA
206+00.10		DUQUESNE ROAD	LT	SPEED LIMIT SIGN	1	EA
206+16.60		DUQUESNE ROAD	RT	STOP SIGN	1	EA
206+33.86		DUQUESNE ROAD	LT	STREET SIGN	1	EA
206+43.49		DUQUESNE ROAD	RT	FIRE HYDRANT	1	EA
207+62.91		DUQUESNE ROAD	RT	FIRE HYDRANT	1	EA
207+66.26		DUQUESNE ROAD	RT	BUCKLE UP SIGN	1	EA
208+42.69		DUQUESNE ROAD	RT	SPEED LIMIT SIGN	1	EA
208+79.95		DUQUESNE ROAD	RT	RADER ENFORSED SIGN	1	EA
205+50.00	211+33.35	DUQUESNE ROAD	RT	RELOCATE BURRIED WATER LINE	1	LS

SILT FENCE					
STATION	STATION	LOCATION	SIDE	L.F.	NOTES
103+10	105+79	ZORA WEST	RT	297	
105+91	205+50	SW QUADRANT	RT	173	ZORA TO DUQ STA
205+48	205+45	DUQUESNE SOUTH	RT	23	
206+15	109+28	SE QUADRANT	RT	186	
109+35	110+51	ZORA EAST	RT	121	
110+62	112+25	ZORA EAST	RT	171	
			TOTAL	971	

SEEDING, FERTILIZING & MULCH					
STATION	STATION	LOCATION	SIDE	SQ. YD.	NOTES
102+84.98	104+01.62	ZORA WEST	LT	191.8	
104+85.34	105+71.02	ZORA WEST	LT	216.4	
207+73.35	209+28.57	NW QUADRANT	LT	400.7	DUQUESNE ROAD STA
103+14.23	105+41.99	ZORA WEST	RT	829.2	
207+00.60	205+50	SW QUADRANT	LT	822.0	DUQUESNE ROAD STA
209+43.59	112+16.03	NE QUADRANT	LT	1552.6	DUQ TO ZORA STA
205+50	109+29.66	SE QUADRANT	RT	348.2	DUQ TO ZORA STA
109+45.45	110+47.64	ZORA EAST	RT	171.0	
110+63.23	112+16.03	ZORA EAST	RT	116.3	
209+66.04	210+23.78	DUQUESNE NORTH	LT	97.2	
211+23.86	211+33.67	DUQUESNE NORTH	LT	15.4	
209+77.36	210+53.05	DUQUESNE NORTH	RT	172.0	
210+71.05	211+33.61	DUQUESNE NORTH	RT	114.2	
			TOTAL	5047	

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2024.04.26 10:27:00

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CITY OF JOPLIN

JOPLIN, MISSOURI

2024

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LEGEND

- PROPOSED RIGHT–OF–WAY
- TEMPORARY CONSTRUCTION EASEMENT LINE
- PERMANENT DRAINAGE EASEMENT LINE
- LIMITS OF DISTURBANCE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED RIGHT–OF–WAY
- PERMANENT DRAINAGE EASEMENT

PARCEL 1
CROSSLAND HOLDING COMPANY
EXISTING = 73.79 ACRES
R/W ACQUISITION = 18 SQ. FT.
TEMP. CONST. ESMT. = 543 SQ. FT.
REMAINING = 73.79 ACRES

PARCEL 2
HOLLDAN, INC.
EXISTING = 3.17 ACRES
R/W ACQUISITION = 16,267 SQ. FT.
TEMP. CONST. ESMT. = 2,026 SQ. FT.
REMAINING = 2.80 ACRES

BEGIN CONSTRUCTION
ZORA STREET
STA 102+84.27

MATCHLINE SEE SHEET

STA 208+75.00
12

STA 108+40.00
11

EXISTING RIGHT–OF–WAY

PROPOSED RIGHT–OF–WAY

LIMITS OF DISTURBANCE

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

℄ DRIVE 8

℄ DRIVE 7

℄ ZORA STREET

℄ DRIVE 1

℄ DRIVE 2

℄ DUQUESNE ROAD

PROPOSED RIGHT–OF–WAY

EXISTING RIGHT–OF–WAY

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

EXISTING RIGHT–OF–WAY

PROPOSED RIGHT–OF–WAY

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

EXISTING RIGHT–OF–WAY

BEGIN CONSTRUCTION
N. DUQUESNE ROAD
STA 205+50.00

MATCHLINE SEE SHEET

+04.23 38.88' LT.
+04.23 28.88' LT.
+50.28 28.05' LT.
+68.81 37.03' LT.
+92.68 75.58' LT.
+92.45 91.75' LT.
+42.07 43.38' LT.
+41.07 48.20' LT.
+82.30 34.08' RT.
+48.71 69.45' RT.
+84.96 94.94' RT.
+85.30 30.82' RT.
+85.29 40.82' RT.
+80.90 43.99' RT.
+45.00 78.65' RT.
+69.68 87.57' RT.
+72.21 102.31' RT.
+92.85 110.84' RT.
+03.12 101.41' RT.
+86.71 104.91' RT.
+96.44 160.35' RT.
+12.67 96.14' RT.
+25.90 68.81' RT.
+32.22 89.98' RT.
+22.37 112.90' RT.
+37.48 184.36' RT.
+41.21 182.84' RT.

PT: 106+52.20
PRC: 106+13.95
PC: 107+50
PC: 104+14.23

103+00
104+00
105+00
106+00
107+00
108+00
207+00
208+00
206+00
205+00

10.00'
18.13'
5.00'
79.72'
21.51'
41.67'

ASPHALT
BLDG

PARCEL 3
JOE HUGHES
EXISTING = 5.20 ACRES
R/W ACQUISITION = 0 SQ. FT.
TEMP. CONST. ESMT. = 0 SQ. FT.
REMAINING = 5.20 ACRES

PARCEL 4
JOSEPH & COLEEN FOSTER
EXISTING = .71 ACRES
R/W ACQUISITION = 0 SQ. FT.
TEMP. CONST. ESMT. = 947 SQ. FT.
REMAINING = .71 ACRES

PARCEL 5
MARZELLE GOETZ
EXISTING = 1.37 ACRES
R/W ACQUISITION = 0 SQ. FT.
TEMP. CONST. ESMT. = 0 SQ. FT.
REMAINING = 1.37 ACRES

PARCEL 6
WILLIAM P. & PATRICIA EPPRIGHT
EXISTING = 3.28 ACRES
R/W ACQUISITION = 334 SQ. FT.
TEMP. CONST. ESMT. = 1528 SQ. FT.
REMAINING = 3.27 ACRES

N

0' 10' 20' 40'
SCALE IN FEET

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2024.04.26 10:28:00 -05'00'

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RIGHT-OF-WAY & EASEMENT PLANS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

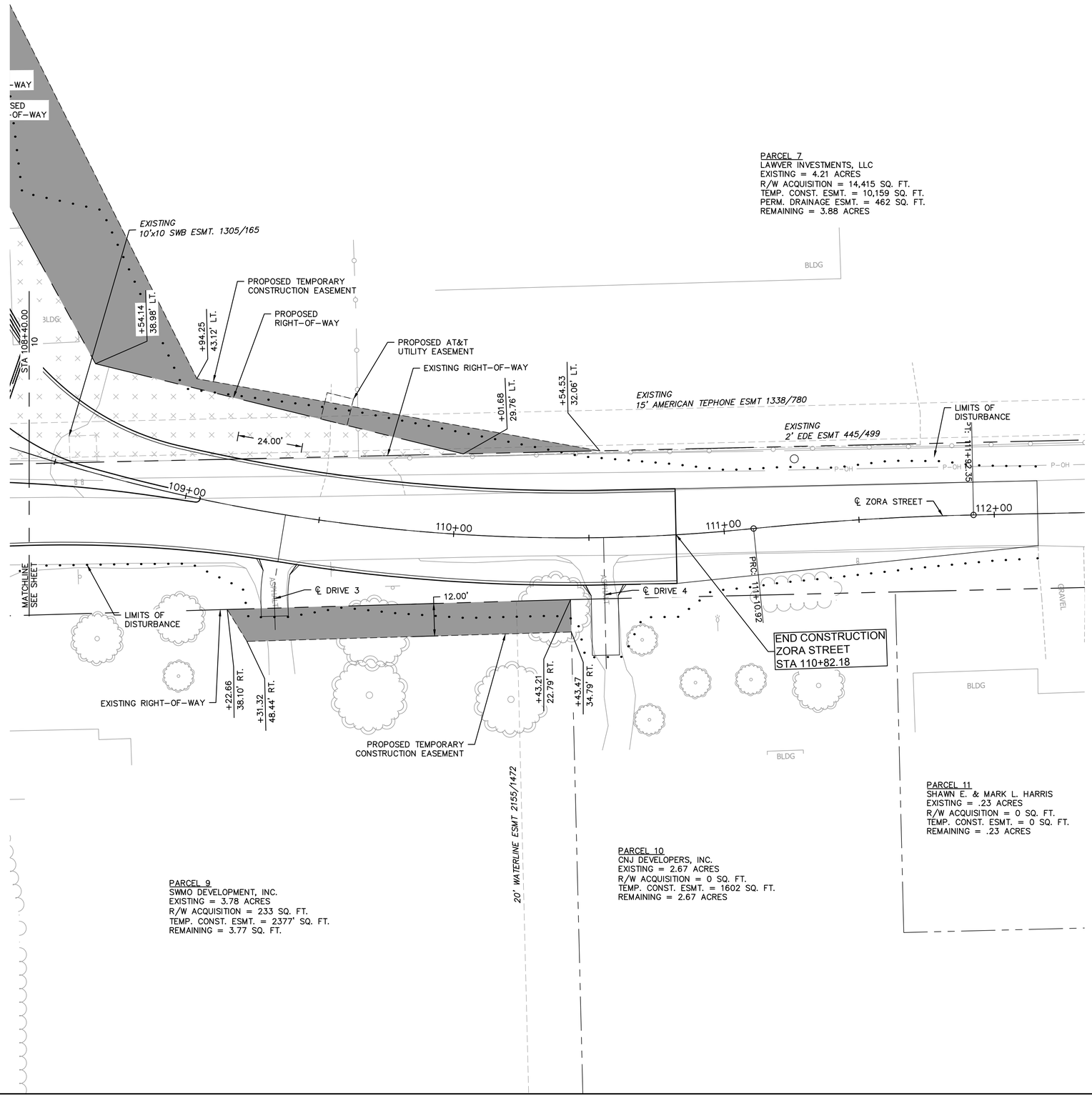
JOPLIN, MISSOURI

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SHEET
10 of 88

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LEGEND

- PROPOSED RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT LINE
- PERMANENT DRAINAGE EASEMENT LINE
- LIMITS OF DISTURBANCE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED RIGHT-OF-WAY
- PERMANENT DRAINAGE EASEMENT

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ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

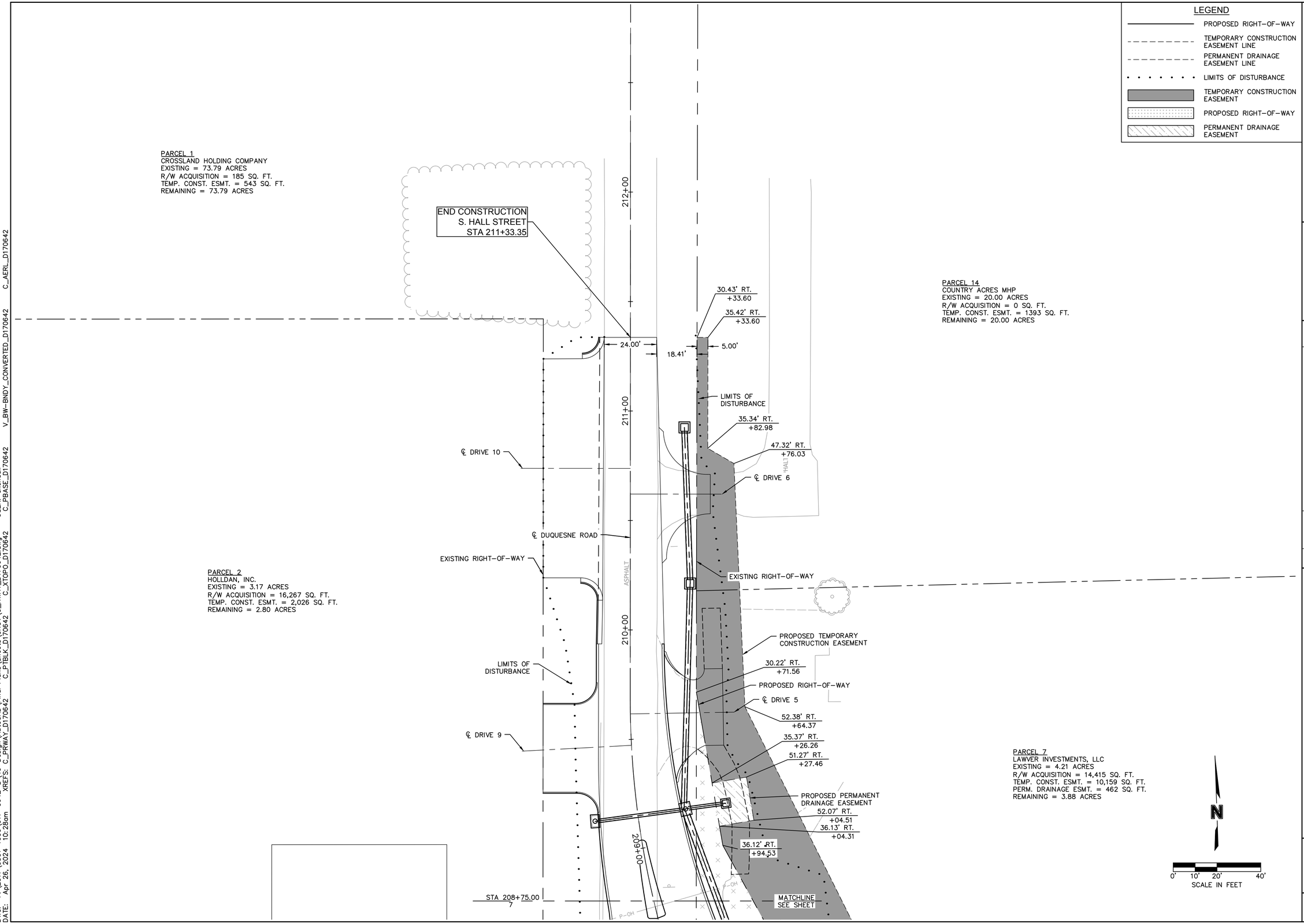
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11 of 88

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RIGHT-OF-WAY & EASEMENT PLANS

ZORA STREET IMPROVEMENTS - PHASE 1
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LEGEND

- PAVEMENT, CURB & GUTTER, AND SIDEWALK REMOVAL
- BUILDING REMOVAL
- STORM DRAIN REMOVAL
- TREE REMOVAL (AREA)
- TREE REMOVAL (INDIVIDUAL)
- SAWCUT

NOTE:
1. INDIVIDUAL TREE REMOVAL IS SHOWN FOR REFERENCE ONLY. ALL TREE REMOVAL SHALL BE SUBSIDIARY TO THE BID ITEM "CLEARING & GRUBBING". REFER TO DEMOLITION JSP IN THE SPECIFICATIONS.
2. THESE DEMOLITION & REMOVAL PLANS ARE THE ENGINEER'S BEST EFFORT TO IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND DURING CONSTRUCTION ARE TO BE INCLUDED WITH THE BID ITEM "DEMOLITION & REMOVAL".
3. ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.
4. SAWCUT SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING IMPROVEMENTS. THERE SHALL BE NO DIRECT PAY FOR SAWCUT.
5. SAWCUT OF EXISTING SIDEWALK SHALL BE AT THE NEAREST JOINT LINE.
6. ALL WORK SHALL BE COMPLETED WITH RIGHT-OF-WAY UNLESS NOTED.
7. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.

MATCHLINE SEE SHEET

STA 208+75.00

EXISTING RIGHT-OF-WAY

REMOVE ALL ASPHALT AND SEED BACK

LIMITS OF DISTURBANCE

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED RIGHT-OF-WAY

S. HALL STREET

208+00

REMOVE EXISTING SIGN

REMOVE EXISTING SIGN

EXISTING FIRE HYDRANT TO BE RELOCATED (BY OTHERS)

EXISTING WATER MAIN TO BE RELOCATED (BY OTHERS)

STA 108+40.00

107+00

EXISTING RIGHT-OF-WAY

BEGIN CONSTRUCTION
ZORA STREET
STA 102+84.27

BURIED FIBER-OPTIC TO BE RELOCATED (BY OTHER)

℄ ZORA STREET

106+00

POWER POLE TO BE RELOCATED (BY OTHERS)

BURIED TELEPHONE TO BE RELOCATED (BY OTHER)

POWER POLE TO BE RELOCATED (BY OTHERS)

108+00

REMOVE EXISTING SIGNS

105+00

207+00

E. ZORA STREET

103+00

104+00

18" R.C.P.

REMOVE EXISTING SIGN

EXISTING WATER MAIN TO BE RELOCATED (BY OTHERS)

EXISTING RIGHT-OF-WAY

POWER POLE TO BE RELOCATED (BY OTHERS)

PROPOSED RIGHT-OF-WAY

MATCHLINE SEE SHEET

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

LIMITS OF DISTURBANCE

HIGH PRESSURE EXISTING GAS LINE

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

HIGH PRESSURE EXISTING GAS LINE

PROPOSED RIGHT-OF-WAY

EXISTING WATER MAIN TO BE RELOCATED (BY OTHERS)

REMOVE EXISTING SIGNS

206+00

REMOVE EXISTING SIGNS

N. DUQUESNE ROAD

BLDG

EXISTING RIGHT-OF-WAY

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

EXISTING RIGHT-OF-WAY

℄ DUQUESNE ROAD

BEGIN CONSTRUCTION
N. DUQUESNE ROAD
STA 205+50.00

℄ DUQUESNE ROAD

205+00

BLDG

0' 5' 10' 20'
SCALE IN FEET

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DEMOLITION AND REMOVAL PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

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USER: skendall

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3. ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.
4. SAWCUT SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING IMPROVEMENTS. THERE SHALL BE NO DIRECT PAY FOR SAWCUT.
5. SAWCUT OF EXISTING SIDEWALK SHALL BE AT THE NEAREST JOINT LINE.
6. ALL WORK SHALL BE COMPLETED WITH RIGHT-OF-WAY UNLESS NOTED.
7. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.

LEGEND
- PAVEMENT, CURB & GUTTER, AND SIDEWALK REMOVAL
- BUILDING REMOVAL
- STORM DRAIN REMOVAL
- TREE REMOVAL (AREA)
- TREE REMOVAL (INDIVIDUAL)
- SAWCUT

REMOVE BUILDING INCLUDING FOUNDATION. COORDINATE WITH OWNER BEFORE DEMO.
PROPOSED TEMPORARY CONSTRUCTION EASEMENT
PROPOSED RIGHT-OF-WAY
EXISTING TELEPHONE BOX TO BE RELOCATED (BY OTHERS)
PROPOSED AT&T UTILITY EASEMENT
EXISTING RIGHT-OF-WAY
RELOCATE EXISTING FENCE OUTSIDE PROPOSED RIGHT-OF-WAY
HIGH PRESSURE EXISTING GAS LINE
BURIED TELEPHONE TO BE RELOCATED (BY OTHER)
BURIED FIBER-OPTIC TO BE RELOCATED (BY OTHER)
HIGH PRESSURE EXISTING GAS LINE
LIMITS OF DISTURBANCE
STA 108+40.00
BLDG
E. ZORA STREET
109+00
110+00
111+00
112+00
℄ ZORA STREET
MATCHLINE SEE SHEET
POWER POLE TO BE RELOCATED (BY OTHERS)
LIMITS OF DISTURBANCE
REMOVE EXISTING SIGNS
EXISTING RIGHT-OF-WAY
PROPOSED TEMPORARY CONSTRUCTION EASEMENT
HIGH PRESSURE EXISTING GAS LINE
EXISTING RIGHT-OF-WAY
END CONSTRUCTION ZORA STREET STA 112+16.03
GRAVEL
BLDG
BLDG

N
0' 10' 20' 40'
SCALE IN FEET

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Joplin, MO 64801
TEL 417.781.0643
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Jonathan Peitz
2024.04.26 10:29:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DEMOLITION AND REMOVAL PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

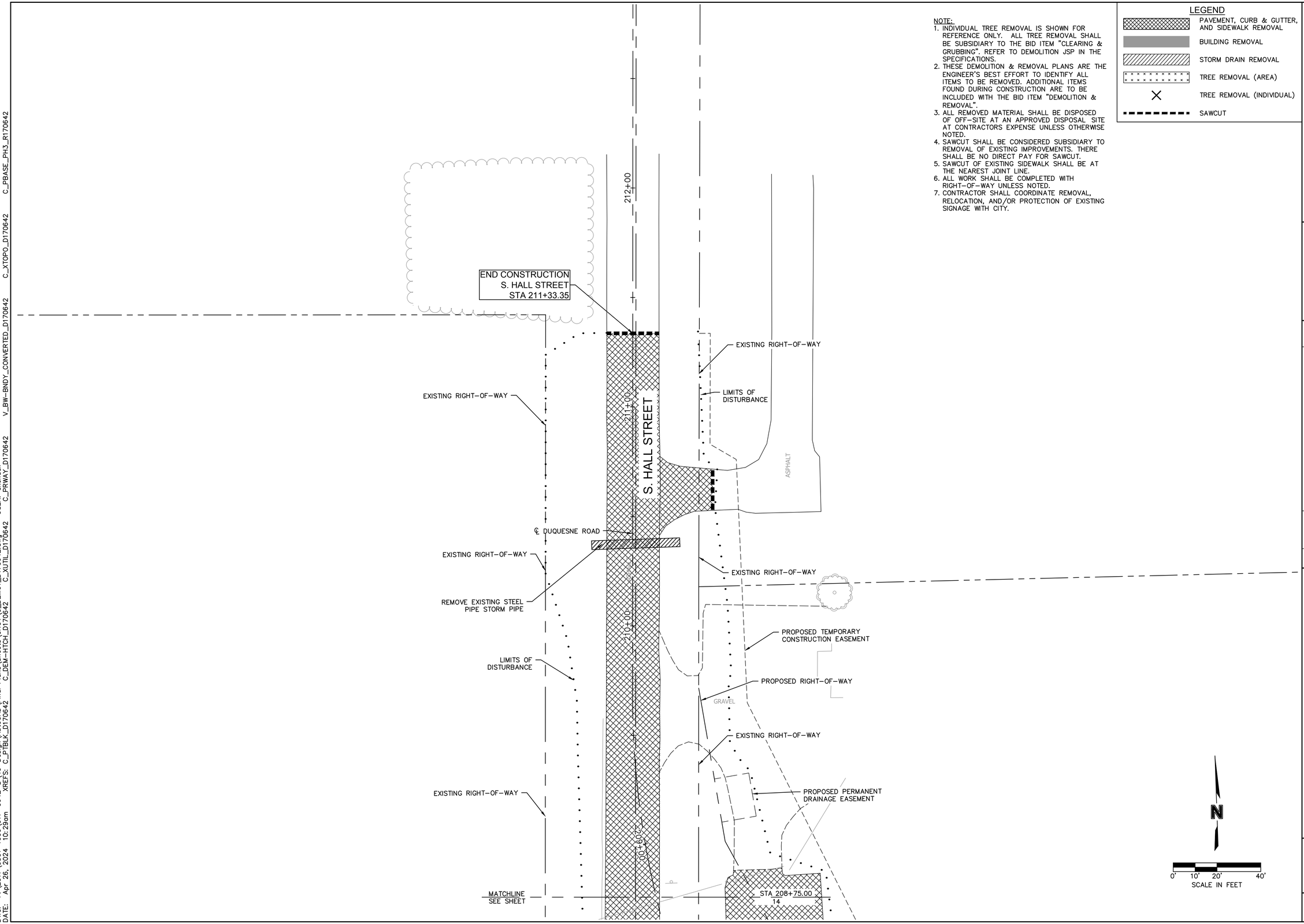
2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_DEM01_D170642
date: 4/26/2024

SHEET
14 of 88

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V_BW-BNDY_CONVERTED_D170642 C_XTOPO_D170642 C_PBASE_PH3_R170642



NOTE:
1. INDIVIDUAL TREE REMOVAL IS SHOWN FOR REFERENCE ONLY. ALL TREE REMOVAL SHALL BE SUBSIDIARY TO THE BID ITEM "CLEARING & GRUBBING". REFER TO DEMOLITION JSP IN THE SPECIFICATIONS.
2. THESE DEMOLITION & REMOVAL PLANS ARE THE ENGINEER'S BEST EFFORT TO IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND DURING CONSTRUCTION ARE TO BE INCLUDED WITH THE BID ITEM "DEMOLITION & REMOVAL".
3. ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.
4. SAWCUT SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING IMPROVEMENTS. THERE SHALL BE NO DIRECT PAY FOR SAWCUT.
5. SAWCUT OF EXISTING SIDEWALK SHALL BE AT THE NEAREST JOINT LINE.
6. ALL WORK SHALL BE COMPLETED WITH RIGHT-OF-WAY UNLESS NOTED.
7. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.

LEGEND
- PAVEMENT, CURB & GUTTER, AND SIDEWALK REMOVAL
- BUILDING REMOVAL
- STORM DRAIN REMOVAL
- TREE REMOVAL (AREA)
- TREE REMOVAL (INDIVIDUAL)
- SAWCUT

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Jonathan Peitz
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

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		REVISIONS	

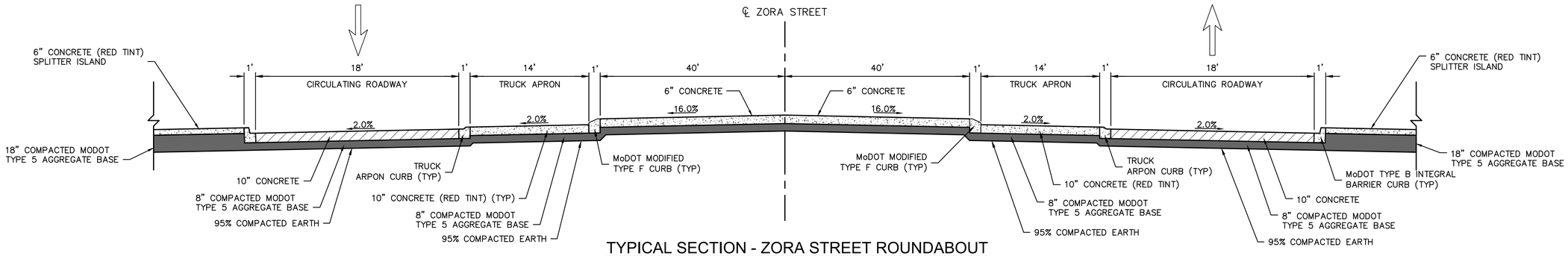
DEMOLITION AND REMOVAL PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

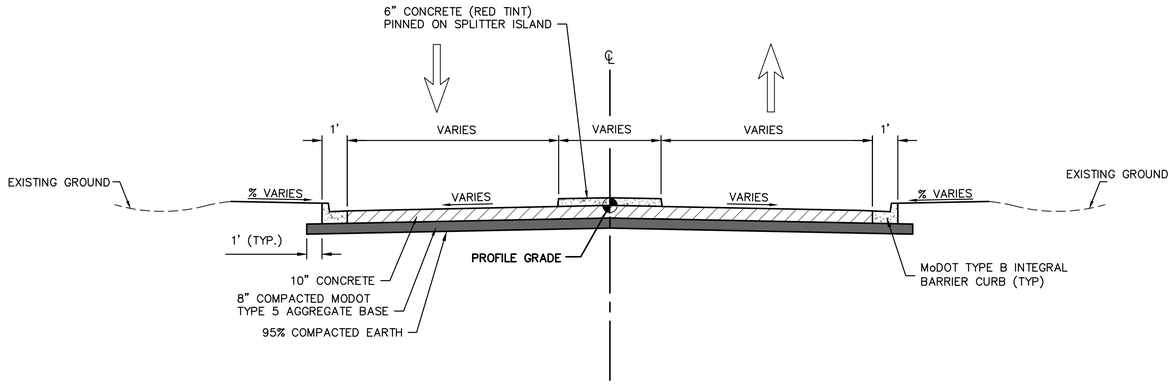
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approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_DEM01_D170642
date: 4/26/2024



TYPICAL SECTION - ZORA STREET ROUNDABOUT

NOT TO SCALE

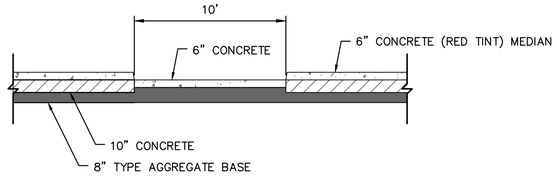
STA. 106+60.00 TO STA. 108+40.00



TYPICAL SECTION - SPLITTER ISLAND

NOT TO SCALE

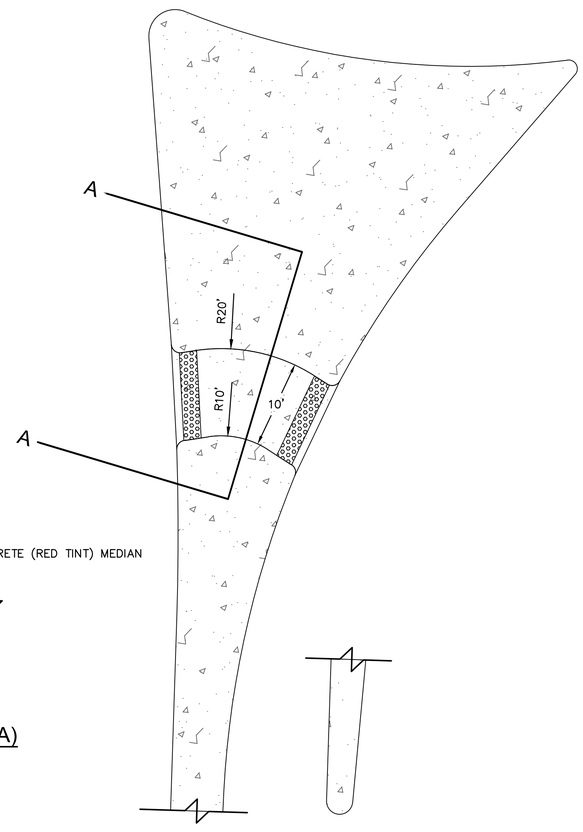
NOTE:
AGGREGATE AREA SHALL BE CONSIDERED AS EXTENDING 1' BEYOND THE BACK OF CURB FOR PURPOSES OF PAY LIMITS



TYPICAL PINNED ON SPLITTER ISLAND (A - A)

NOT TO SCALE

* PINNED ON ISLAND.
SEE MoDOT DETAIL ON SHEET 39
FOR ADDITIONAL DETAIL.



TYPICAL PINNED ON SPLITTER ISLAND

NOT TO SCALE

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

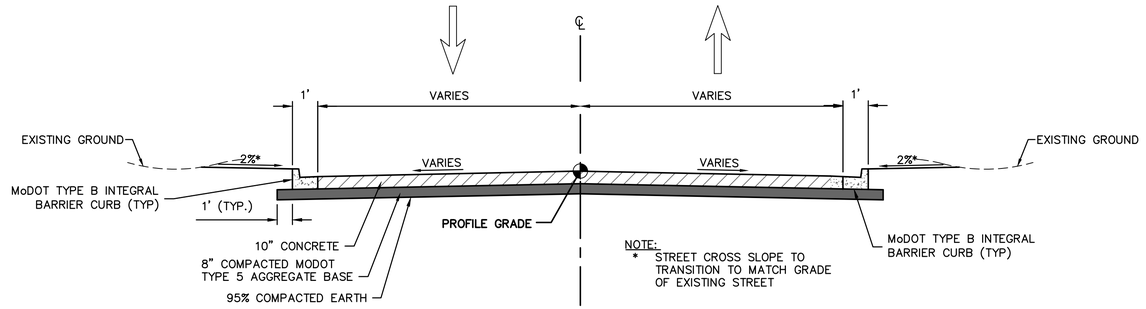
JOPLIN, MISSOURI

2024

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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_TYP01_D170642
date: 4/26/2024

SHEET
16 of 88

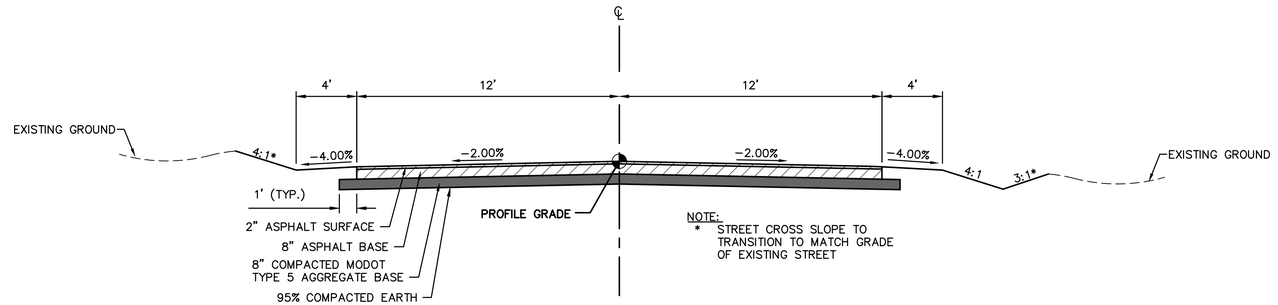
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TYPICAL SECTION - ZORA STREET

NOT TO SCALE

STA. 103+14.23 TO STA. 105+92.18
STA. 109+06.35 TO STA. 110+82.36



TYPICAL SECTION - ZORA STREET

NOT TO SCALE

STA. 102+84.27 TO STA. 103+14.23
STA. 110+82.36 TO STA. 112+16.03

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
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JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

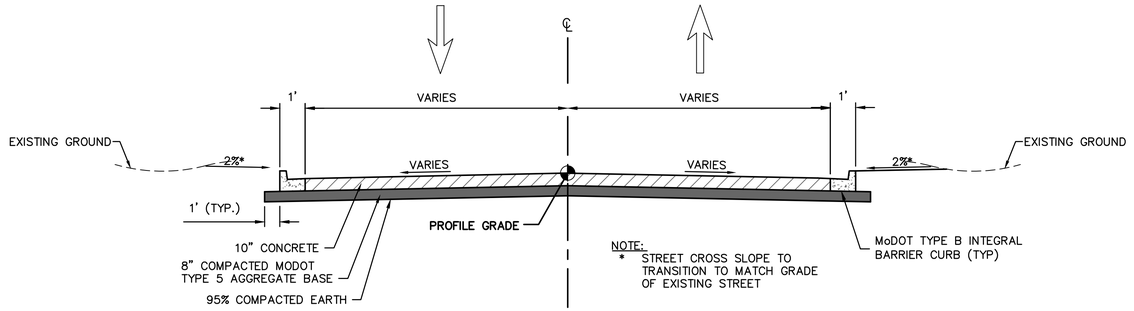
JOPLIN, MISSOURI

2024

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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_TYP01_D170642
date: 4/26/2024

SHEET
17 of 88

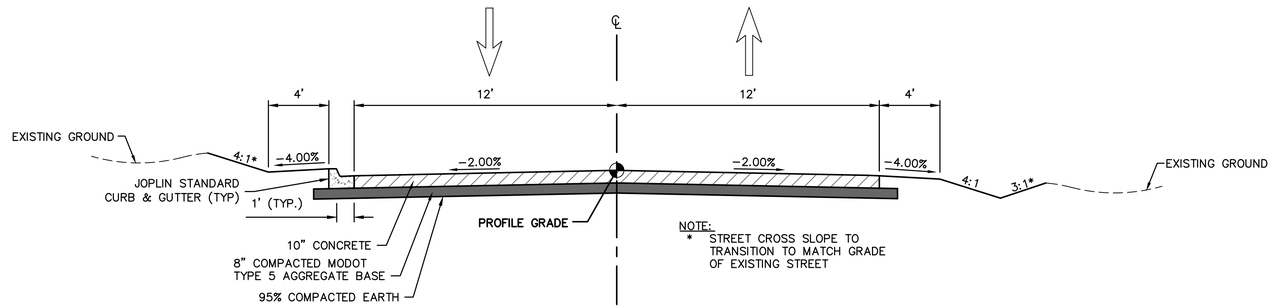
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TYPICAL SECTION - DUQUESNE ROAD

NOT TO SCALE

STA. 205+50.00 TO STA. 205+92.66
STA. 209+04.73 TO STA. 209+93.61



TYPICAL SECTION - DUQUESNE ROAD

NOT TO SCALE

STA. 209+93.61 TO STA. 211+33.61

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

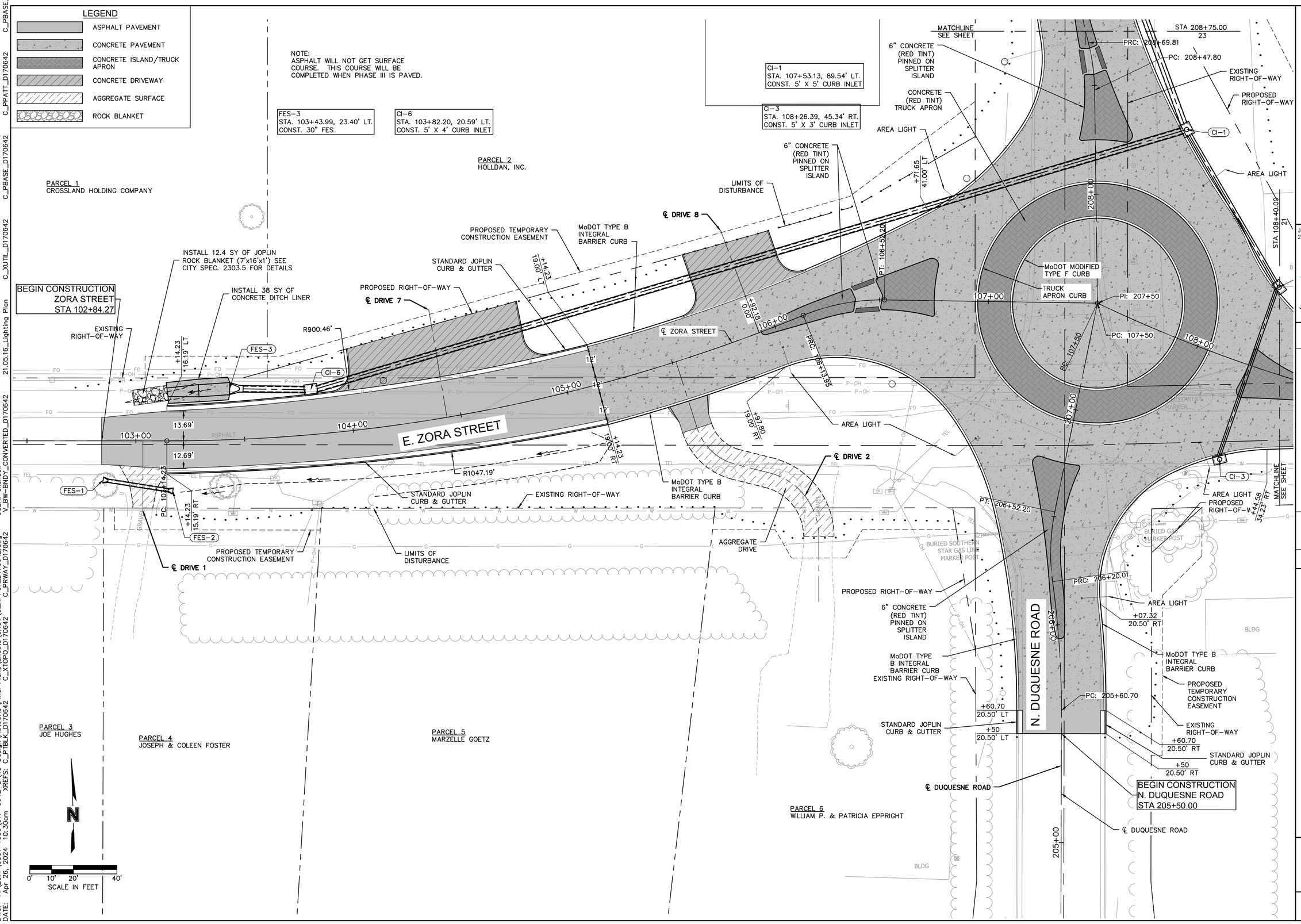
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SHEET
18 of 88

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN & PROFILES
WEST SIDE - ZORA ST

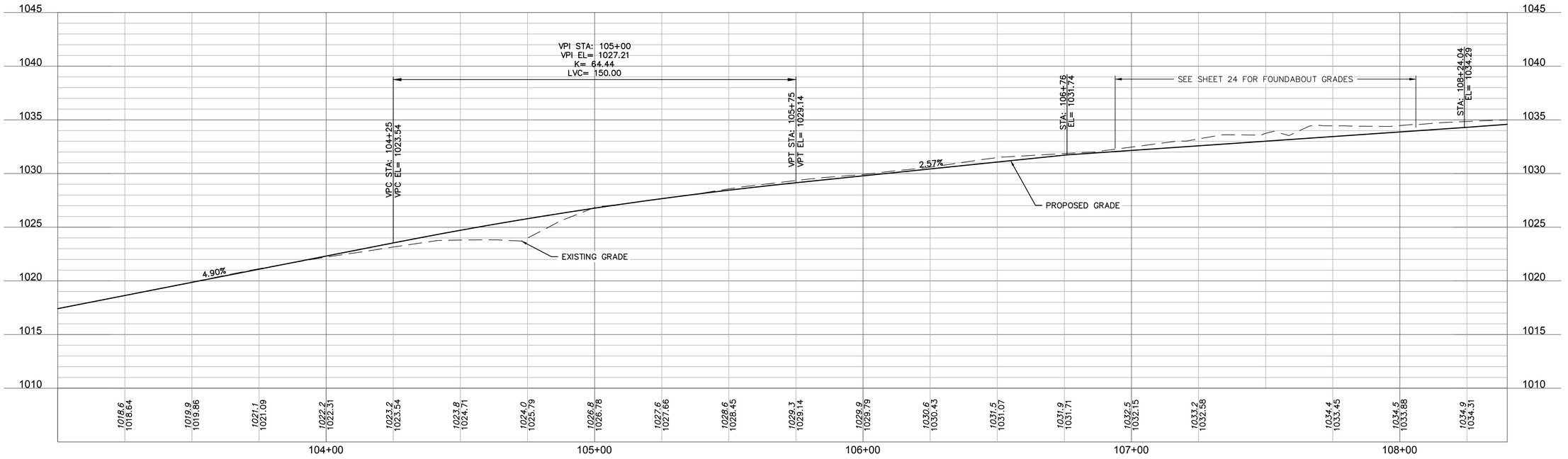
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

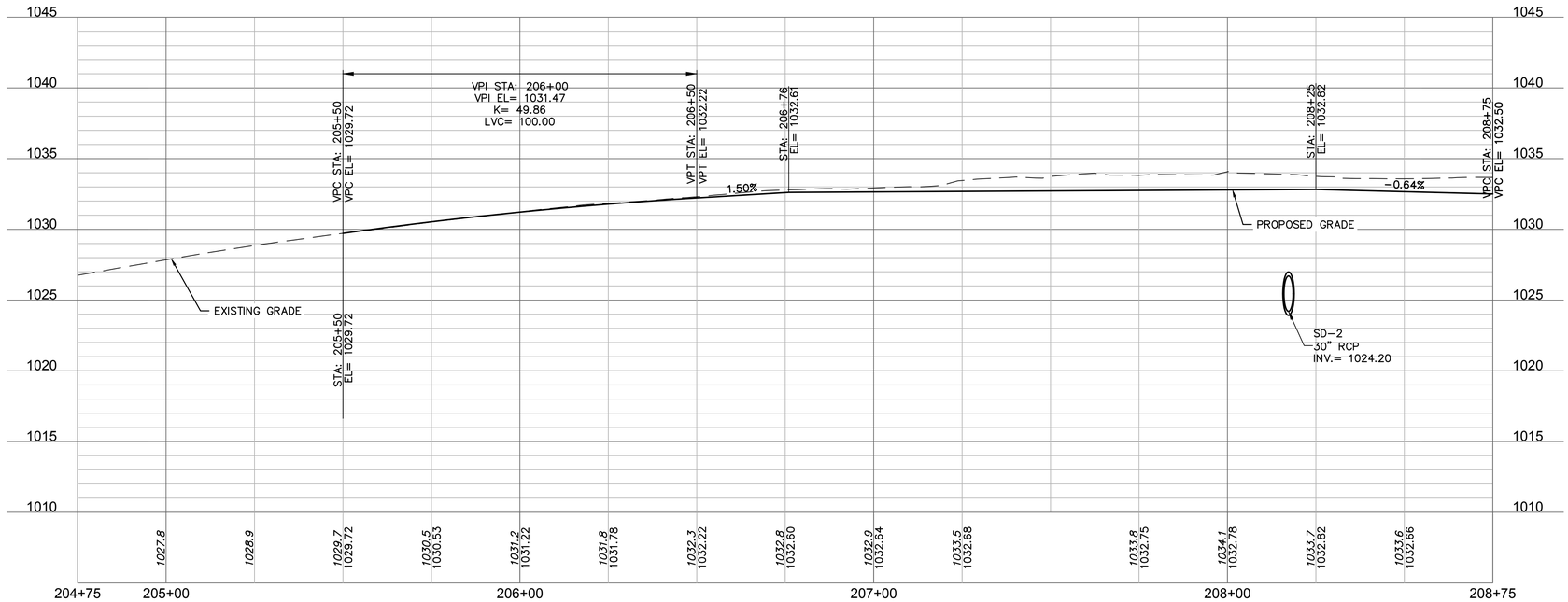
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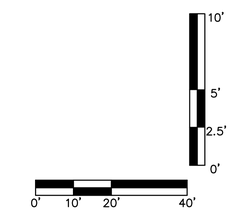
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project no.:	017-0642-D
drawing no.:	C_RPP01_D170642
date:	4/26/2024

℄ ZORA STREET (103+00 - 108+40)



℄ DUQUESNE ROAD (204+75 - 208+75)





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2024.04.26 [illegible]

STATE OF MISSOURI
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NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN & PROFILE
PROFILE 1

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
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project no.: 017-0642.D
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SHEET
20 of 88

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USER: skendall

MATCHLINE SEE SHEET

STA 208+75.00
23

CI–2
STA. 108+26.80, 38.27' LT.
CONST. 5' X 3' CURB INLET

PARCEL 7
LAWVER INVESTMENTS, LLC

6" CONCRETE (RED TINT) PINNED ON SPLITTER ISLAND

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED RIGHT–OF–WAY

PROPOSED AT&T UTILITY EASEMENT

EXISTING RIGHT–OF–WAY

RELOCATE FENCE

MoDOT TYPE B INTEGRAL BARRIER CURB

END CONSTRUCTION
ZORA STREET
STA 112+16.03

LIMITS OF DISTURBANCE
PT: 111+92.35

STA 108+40.00
19

+82.85
17.01' LT

+62.44
0.00'

E. ZORA STREET

℄ ZORA STREET

℄ DRIVE 3

℄ DRIVE 4

PRC: 111+10.92

+81.52
17.96' RT

34.23' RT

LIMITS OF DISTURBANCE

MATCHLINE SEE SHEET

EXISTING RIGHT–OF–WAY

MoDOT TYPE B INTEGRAL BARRIER CURB

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PARCEL 9
SWMO DEVELOPMENT, INC.

PARCEL 10
CNJ DEVELOPERS, INC.

PARCEL 11
SHAWN E. & MARK L. HARRIS

109+00 110+00 111+00 112+00 113+00

ASPHALT GRAVEL BLDG

0' 10' 20' 40'
SCALE IN FEET

LEGEND

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE ISLAND/TRUCK APRON
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET

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2024.04.26 10:30:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE–2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN & PROFILE
EAST SIDE - E ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

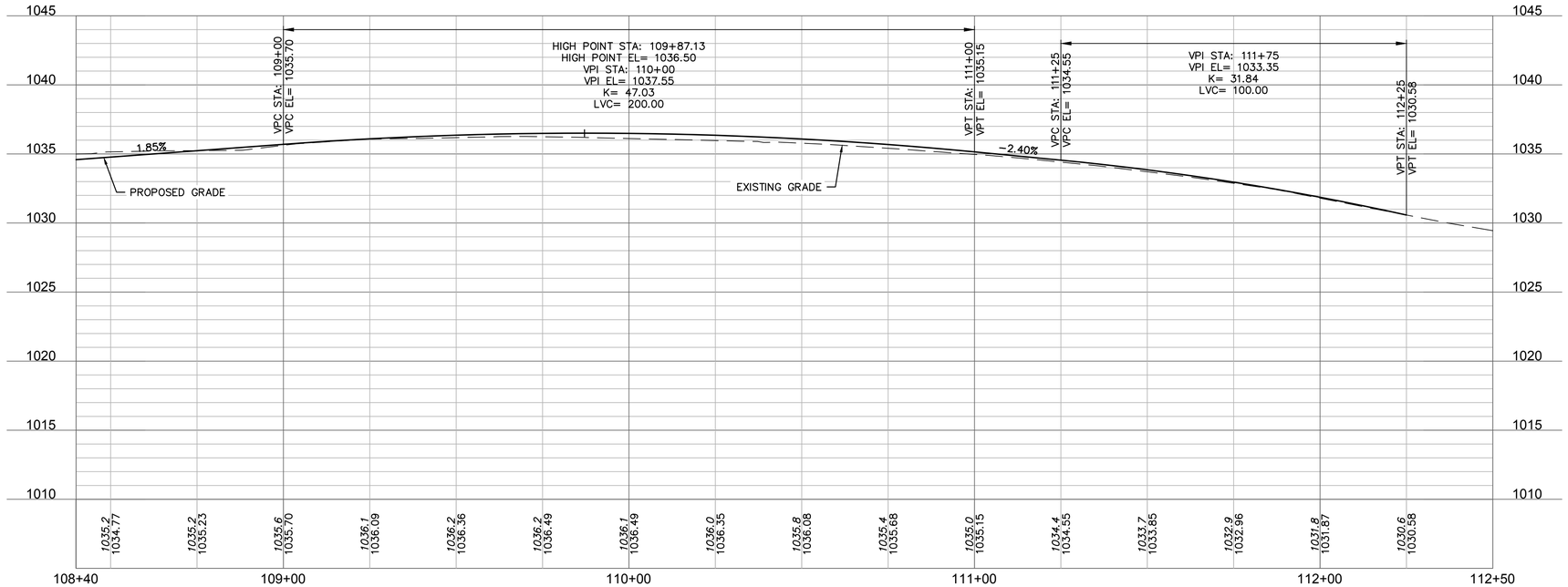
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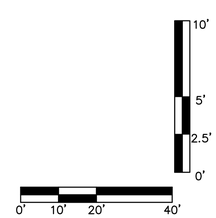
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21 of 88

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USER: skendall
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21.05.16_Lighting Plan

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℄ ZORA STREET (108+40 - 112+50)





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MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

ROADWAY PLAN & PROFILE
PROFILE 2

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
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USER: skendall V_BW-BNDY_CONVERTED_D170642 21.05.16_Lighting Plan C_XUTIL_D170642 C_PBASE_D170642 C_PPATT_D170642 C_PBASE_PH3

PARCEL 1
CROSSLAND HOLDING COMPANY
EXISTING = 73.79 ACRES
R/W ACQUISITION = 185 SQ. FT.
TEMP. CONST. ESMT. = 543 SQ. FT.
REMAINING = 73.79 ACRES

AI–3
STA. 210+92.50, 24.73' RT.
CONST. 4' x 4' AREA INLET

AI–2
STA. 210+21.20, 27.32' RT.
CONST. 4' x 4' AREA INLET

AI–1
STA. 209+15.31, 40.53' RT.
CONST. 3' x 3' AREA INLET

CI–5
STA. 209+15.13, 21.88' RT.
CONST. 5' X 4' CURB INLET

CI–4
STA. 209+15.09, 19.77' LT.
CONST. 5' X 3' CURB INLET

PARCEL 2
HOLLDAN, INC.

212+00

END CONSTRUCTION
S. HALL STREET
STA 211+33.35

+33.61
12.00' LT

+33.61
12.00' RT

211+00

S. HALL STREET

LIMITS OF
DISTURBANCE

AI–3

℄ DRIVE 10

℄ DRIVE 6

℄ DUQUESNE ROAD

EXISTING RIGHT–OF–WAY

EXISTING RIGHT–OF–WAY

AI–2

+93.61
15.50' LT

210+00

+93.61
15.50' RT

PROPOSED TEMPORARY
CONSTRUCTION EASEMENT

LIMITS OF
DISTURBANCE

PROPOSED RIGHT–OF–WAY

PT: 209+68.61

℄ DRIVE 5

℄ DRIVE 9

MoDOT TYPE B
INTEGRAL
BARRIER CURB

AI–1

PROPOSED PERMANENT
DRAINAGE EASEMENT

CI–4

CI–5

6" CONCRETE
(RED TINT)
PINNED ON
SPLITTER
ISLAND

+03.73
0.00'

209+38

MoDOT TYPE B
INTEGRAL
BARRIER CURB

AREA LIGHT

OH

MATCHLINE
SEE SHEET

STA 208+75.00
21

PARCEL 14
COUNTRY ACRES MHP

PARCEL 7
LAWVER INVESTMENTS, LLC

LEGEND

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE ISLAND/TRUCK APRON
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET

N

0' 10' 20' 40'
SCALE IN FEET

olsson
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

Jonathan Peitz
2024.04.26 10:31:00 -05'00'

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		ROADWAY PLAN & PROFILE	

REVISIONS

ROADWAY PLAN & PROFILE
NORTH SIDE - S. HALL STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

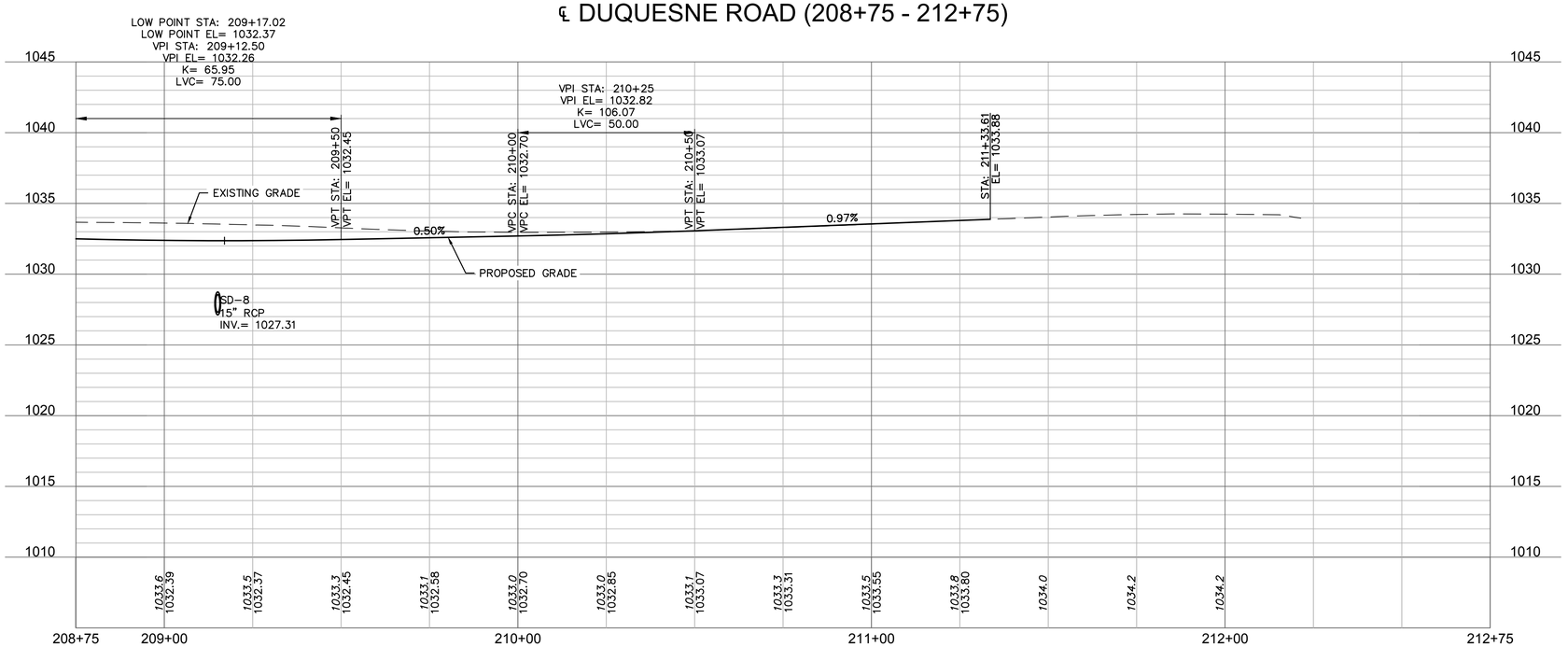
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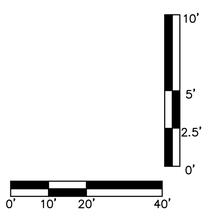
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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_RPP01_D170642
date: 4/26/2024

SHEET
23 of 88

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DATE: Apr 26, 2024 10:31am XREFS: C_PTBLK_D170642 C_XTOPO_D170642 C_PRWAY_D170642
USER: skendall V_BW-BNDY_CONVERTED_D170642 21.05.16_Lighting Plan C_XUTIL_D170642 C_PBASE_D170642 C_PPATT_D170642 C_PBASE_PH3

℄ DUQUESNE ROAD (208+75 - 212+75)





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MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN & PROFILE
PROFILE 3

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_RPP01_D170642
date: 4/26/2024

Ⓐ STA: 214+56.80, 411.20' LTT. ℄ DUQUESNE ROAD
STA: 106+13.95, 769.00' LTT. ℄ ZORA STREET
R=751.00'
Δ=12°52'47"
L=168.82'

Ⓑ STA: 209+11.90, 120.23' LTT. ℄ DUQUESNE ROAD
STA: 106+38.05, 144.60' LTT. ℄ ZORA STREET
R=116.00'
Δ=30°20'31"
L=61.43'

Ⓒ STA: 208+79.47, 75.87' LTT. ℄ DUQUESNE ROAD
STA: 106+67.89, 111.01' LTT. ℄ ZORA STREET
R=56.00'
Δ=41°20'22"
L=40.40'

Ⓓ STA: 209+93.61, 365.50' RTT. ℄ DUQUESNE ROAD
STA: 111+33.16, 301.82' LTT. ℄ ZORA STREET
R=351.00'
Δ=34°46'07"
L=213.00'

Ⓔ STA: 208+15.12, 162.44' RTT. ℄ DUQUESNE ROAD
STA: 108+93.33, 117.51' LTT. ℄ ZORA STREET
R=101.00'
Δ=54°20'55"
L=95.80'

Ⓕ STA: 213+47.25, 299.90' RTT. ℄ DUQUESNE ROAD
STA: 111+10.92, 660.00' LTT. ℄ ZORA STREET
R=643.50'
Δ=14°13'28"
L=159.76'

N

0' 10' 20' 40'
SCALE IN FEET

S. HALL STREET
E. ZORA STREET
℄ ZORA STREET
℄ DUQUESNE ROAD

STA: 403+91.91, 0.00 T.
EL. 1032.38 EP
PT: 209+68.61
STA: 209+64.93, 14.52 LTT.
EL. 1032.21 EP
STA: 209+42.00, 15.42 LTT.
EL. 1032.06 EP
STA: 209+15.31, 17.25 LTT.
EL. 1031.95 EP
LOW POINT
STA: 208+93.83, 18.73 LTT.
EL. 1032.03 EP
STA: 208+76.41, 19.92 LTT.
EL. 1032.14 EP
STA: 107+15.94, 82.15 LTT.
EL. 1032.33 EP
HIGH POINT
STA: 106+72.13, 40.12 LTT.
EL. 1031.67 EP
PT: 106+52.20
PRC: 106+13.95
STA: 105+14.23, 18.00 LTT.
EL. 1026.93 EP
PT: 206+52.20

STA: 209+93.61
EL. 1032.38 EP
EL. 1032.24 EP
EL. 1032.12 EP
EL. 1032.01 EP
EL. 1031.95 EP
EL. 1032.02 EP
EL. 1032.12 EP
PRC: 208+6[illegible]
EL. 1032.37 EP
PC: 208+47.80
EL. 1032.73 EP
EL. 1033.09 EP
STA: 207+91.34
EL. 1033.32 EP
STA: 602+28.64
EL. 1033.48 EP
EL. 1033.70 EP
EL. 1034.05 EP
EL. 1034.61 EP
STA: 108+93.33
EL. 1035.23 EP
EL. 1035.65 EP
EL. 1035.94 EP
EL. 1036.11 EP
EL. 1036.17 EP
EL. 1036.12 EP
EL. 1035.94 EP
STA: 110+57.18
EL. 1035.65 EP
STA: 110+82.81
EL. ??? EP
HIGH POINT

EL. 1030.58 EP
EL. 1030.01 EP
EL. 1029.45 EP
EL. 1028.89 EP
EL. 1028.31 EP
EL. 1027.65 EP

88°21'17"'
PI: 207+50
79°18'22"'
PC: 107+50

105+00
106+00
107+00
108+00
109+00
110+00
207+00
208+00
209+00
210+00

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Jonathan Peitz
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STATE OF MISSOURI
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NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

ROUNDABOUT DETAIL

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

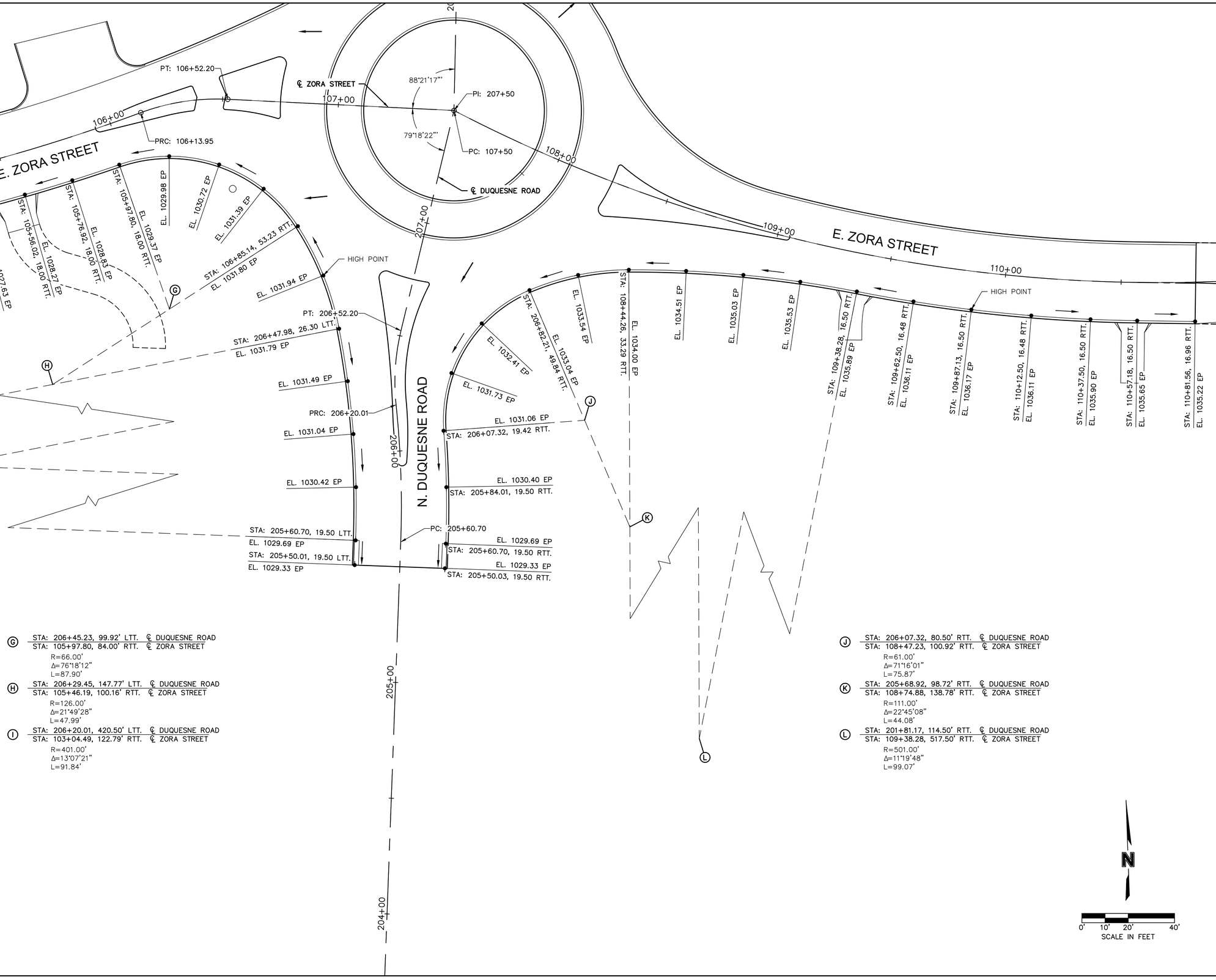
JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_DTL01_ROUND_D170642
date: 4/26/2024

SHEET
25 of 88

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DATE: Apr 26, 2024 10:31am XREFS: C_PBASE_D170642 C_PSTRM_D170642
C_PTBLK_D170642



Ⓖ STA: 206+45.23, 99.92' LTT. ℄ DUQUESNE ROAD
STA: 105+97.80, 84.00' RTT. ℄ ZORA STREET
R=66.00'
Δ=76°18'12"
L=87.90'

Ⓗ STA: 206+29.45, 147.77' LTT. ℄ DUQUESNE ROAD
STA: 105+46.19, 100.16' RTT. ℄ ZORA STREET
R=126.00'
Δ=21°49'28"
L=47.99'

Ⓘ STA: 206+20.01, 420.50' LTT. ℄ DUQUESNE ROAD
STA: 103+04.49, 122.79' RTT. ℄ ZORA STREET
R=401.00'
Δ=13°07'21"
L=91.84'

Ⓙ STA: 206+07.32, 80.50' RTT. ℄ DUQUESNE ROAD
STA: 108+47.23, 100.92' RTT. ℄ ZORA STREET
R=61.00'
Δ=71°16'01"
L=75.87'

Ⓚ STA: 205+68.92, 98.72' RTT. ℄ DUQUESNE ROAD
STA: 108+74.88, 138.78' RTT. ℄ ZORA STREET
R=111.00'
Δ=22°45'08"
L=44.08'

Ⓛ STA: 201+81.17, 114.50' RTT. ℄ DUQUESNE ROAD
STA: 109+38.28, 517.50' RTT. ℄ ZORA STREET
R=501.00'
Δ=11°19'48"
L=99.07'

N

0' 10' 20' 40'
SCALE IN FEET

DWG: F:\2017\0501-1000\017-0642-D\40-Design\AutoCAD\Final Plans\Sheets\GNCV\T_DTL01_ROUND_D170642.dwg
DATE: Apr 26, 2024 10:32am XREFS: C_PTBLK_D170642 C_PBASE_D170642 C_PSTRM_D170642
USER: skendall

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Jonathan Peitz
2024.04.26 10:32:00 -05'00'

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MO# PE-2017019023

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REVISIONS

ROUNDABOUT DETAIL

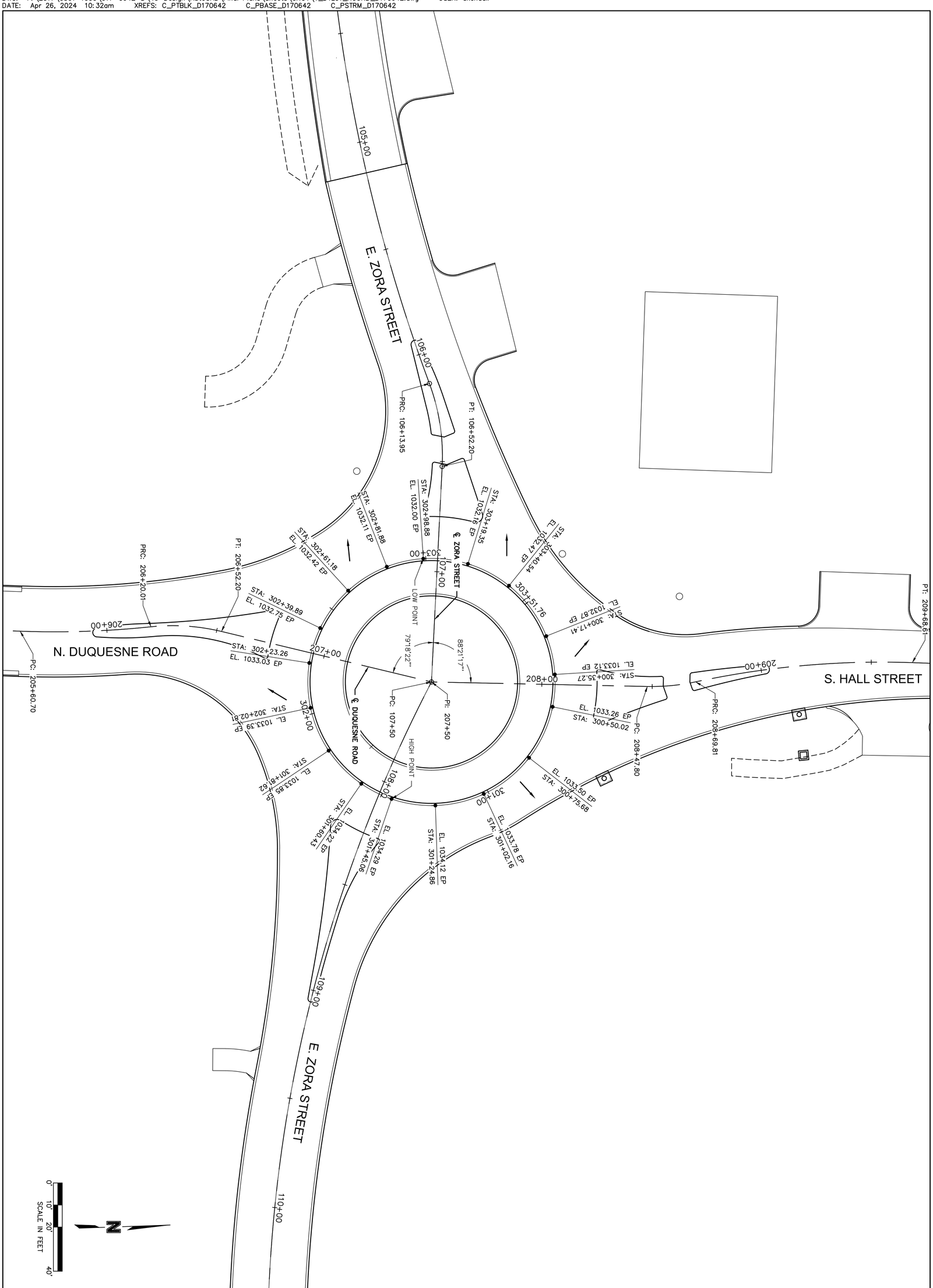
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: DTL01_ROUND_D170642
date: 4/26/2024

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SHEET 27 of 88

drawn by: ZLL/SMK/CTK
checked by:
approved by:
CAD operator:
project no.: 017-0642-D
drawing file no.: T_DTL01_ROUND_D170642
date: 4/26/2024

ROUNDABOUT DETAIL

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI 2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

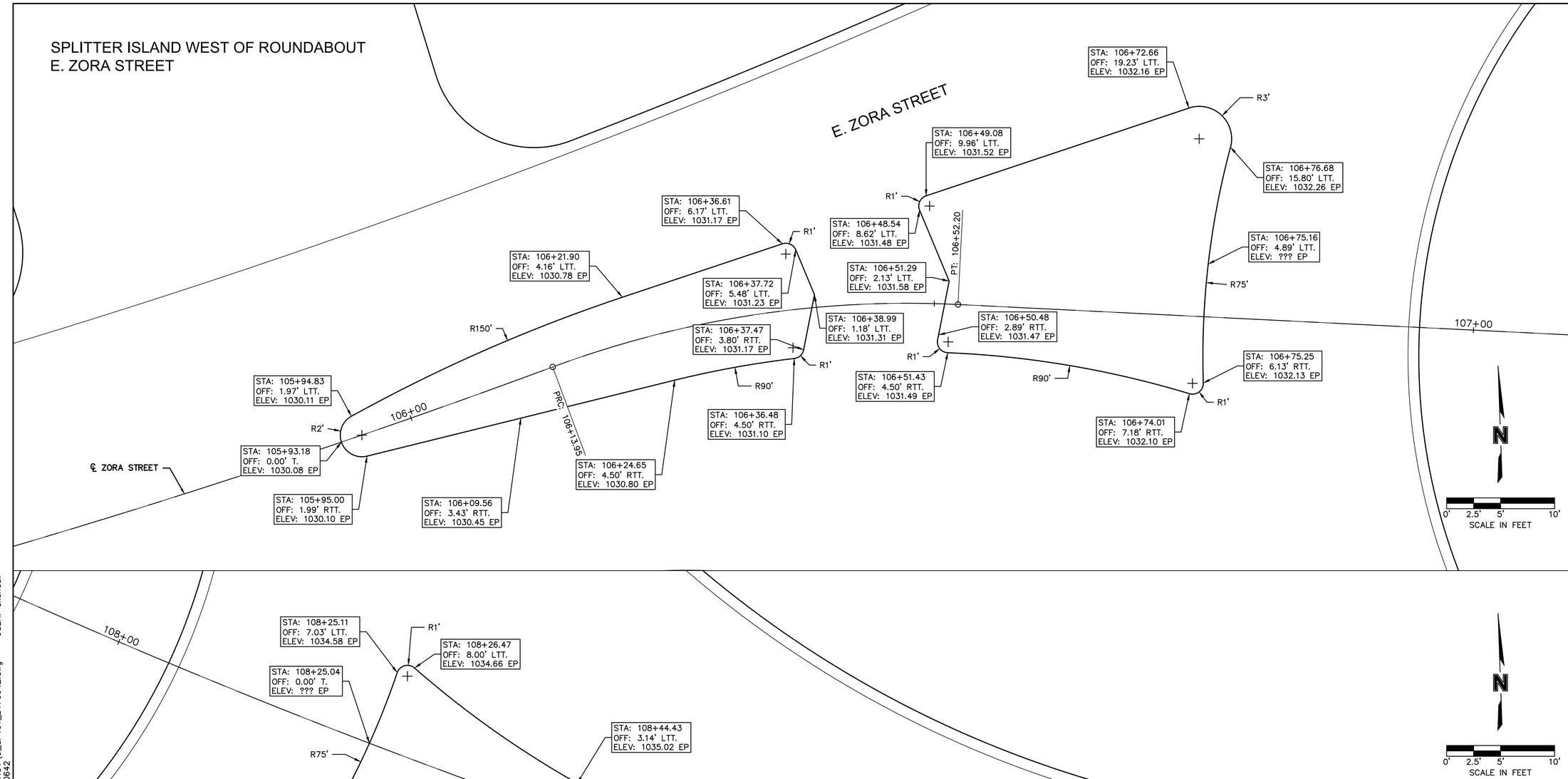
REVISIONS

Jonathan Petz
2024.04.26 10:32:30 -05'00'

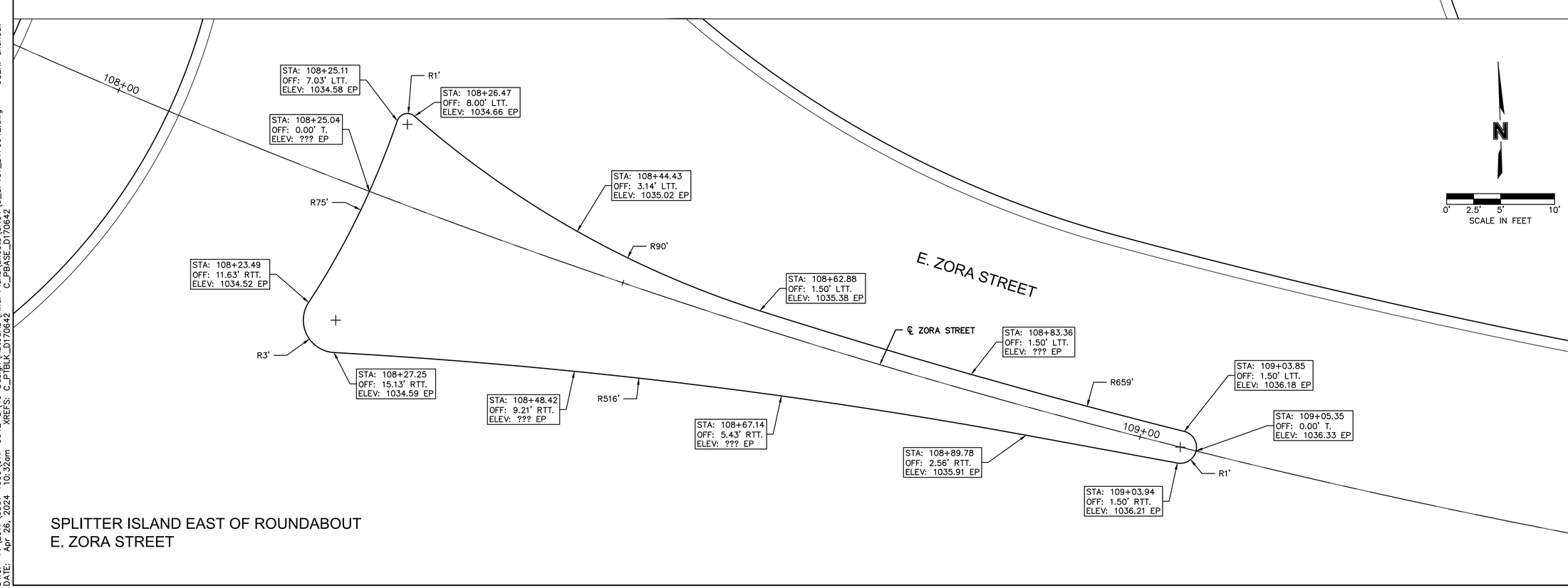
JONATHAN W. PETZ - CIVIL ENGINEER
Reg # E-2007019023

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Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801 TEL 417.781.0643 www.olsson.com

SPLITTER ISLAND WEST OF ROUNDABOUT
E. ZORA STREET



SPLITTER ISLAND EAST OF ROUNDABOUT
E. ZORA STREET



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2024.04.26 10:32:00 -05'00'

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SPLITTER ISLAND DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

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checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_SPT01_D170642
date:	4/26/2024

SHEET
28 of 88

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SPLITTER ISLAND NORTH OF ROUNDABOUT
S. HALL STREET

S. HALL STREET

STA: 209+01.84
OFF: 1.85' RTT.
ELEV: 1032.86 EP

R2'

STA: 208+85.30
OFF: 2.77' RTT.
ELEV: 1032.92 EP

209+00

STA: 209+03.73
OFF: 0.00' T.
ELEV: 1032.88 EP

STA: 209+01.87
OFF: 2.14' LTT.
ELEV: 1032.84 EP

STA: 208+85.44
OFF: 3.27' LTT.
ELEV: 1032.92 EP

R400'

STA: 208+68.77
OFF: 3.76' RTT.
ELEV: 1032.99 EP

PRC: 208+69.81

R1'

STA: 208+69.01
OFF: 4.38' LTT.
ELEV: 1033.00 EP

STA: 208+67.74
OFF: 2.90' RTT.
ELEV: 1033.01 EP

STA: 208+67.30
OFF: 0.00' T.
ELEV: 1033.07 EP

STA: 208+67.94
OFF: 3.60' LTT.
ELEV: 1033.03 EP

STA: 208+56.33
OFF: 4.80' RTT.
ELEV: 1033.05 EP

STA: 208+55.01
OFF: 0.00' T.
ELEV: 1033.12 EP

STA: 208+55.29
OFF: 3.42' LTT.
ELEV: 1033.10 EP

STA: 208+41.92
OFF: 10.97' RTT.
ELEV: 1033.15 EP

STA: 208+55.65
OFF: 6.03' RTT.
ELEV: 1033.04 EP

R366'

PC: 208+47.80

℄ DUQUESNE ROAD

STA: 208+54.26
OFF: 4.50' LTT.
ELEV: 1033.07 EP

R90'

STA: 208+39.87
OFF: 4.85' LTT.
ELEV: 1033.14 EP

STA: 208+25.99
OFF: 7.18' LTT.
ELEV: 1033.21 EP

STA: 208+27.93
OFF: 16.84' RTT.
ELEV: 1033.32 EP

R3'

STA: 208+23.77
OFF: 13.55' RTT.
ELEV: 1033.39 EP

R75'

STA: 208+25.00
OFF: 0.00' T.
ELEV: 1033.30 EP

208+00

STA: 208+24.75
OFF: 6.13' LTT.
ELEV: 1033.25 EP

N

0' 2.5' 5' 10'
SCALE IN FEET

SPLITTER ISLAND SOUTH OF ROUNDABOUT
N. DUQUESNE ROAD

N. DUQUESNE ROAD

207+00

STA: 107+71.59
OFF: 71.47' RTT.
ELEV: 1033.16 EP

R1'

STA: 107+72.75
OFF: 72.47' RTT.
ELEV: 1033.15 EP

STA: 107+66.24
OFF: 73.02' RTT.
ELEV: 1033.08 EP

R75'

STA: 107+25.24
OFF: 70.80' RTT.
ELEV: 1032.93 EP

R3'

STA: 107+21.33
OFF: 74.29' RTT.
ELEV: 1032.79 EP

R416'

PT: 206+52.20

STA: 107+26.76
OFF: 103.20' RTT.
ELEV: ??? EP

STA: 107+75.15
OFF: 98.11' RTT.
ELEV: ??? EP

R2'

STA: 107+83.45
OFF: 122.02' RTT.
ELEV: 1032.17 EP

PRC: 206+20.01

R150'

℄ DUQUESNE ROAD

206+00

STA: 107+81.00
OFF: 129.54' RTT.
ELEV: 1032.05 EP

R150'

STA: 107+92.41
OFF: 145.56' RTT.
ELEV: 1031.55 EP

R2'

STA: 107+91.59
OFF: 148.01' RTT.
ELEV: 1031.51 EP

STA: 107+89.50
OFF: 147.33' RTT.
ELEV: 1031.58 EP

N

0' 2.5' 5' 10'
SCALE IN FEET

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Jonathan Peitz
2024.04.26 10:32:00

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MO# PE–2017019023

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REVISIONS

SPLITTER ISLAND DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

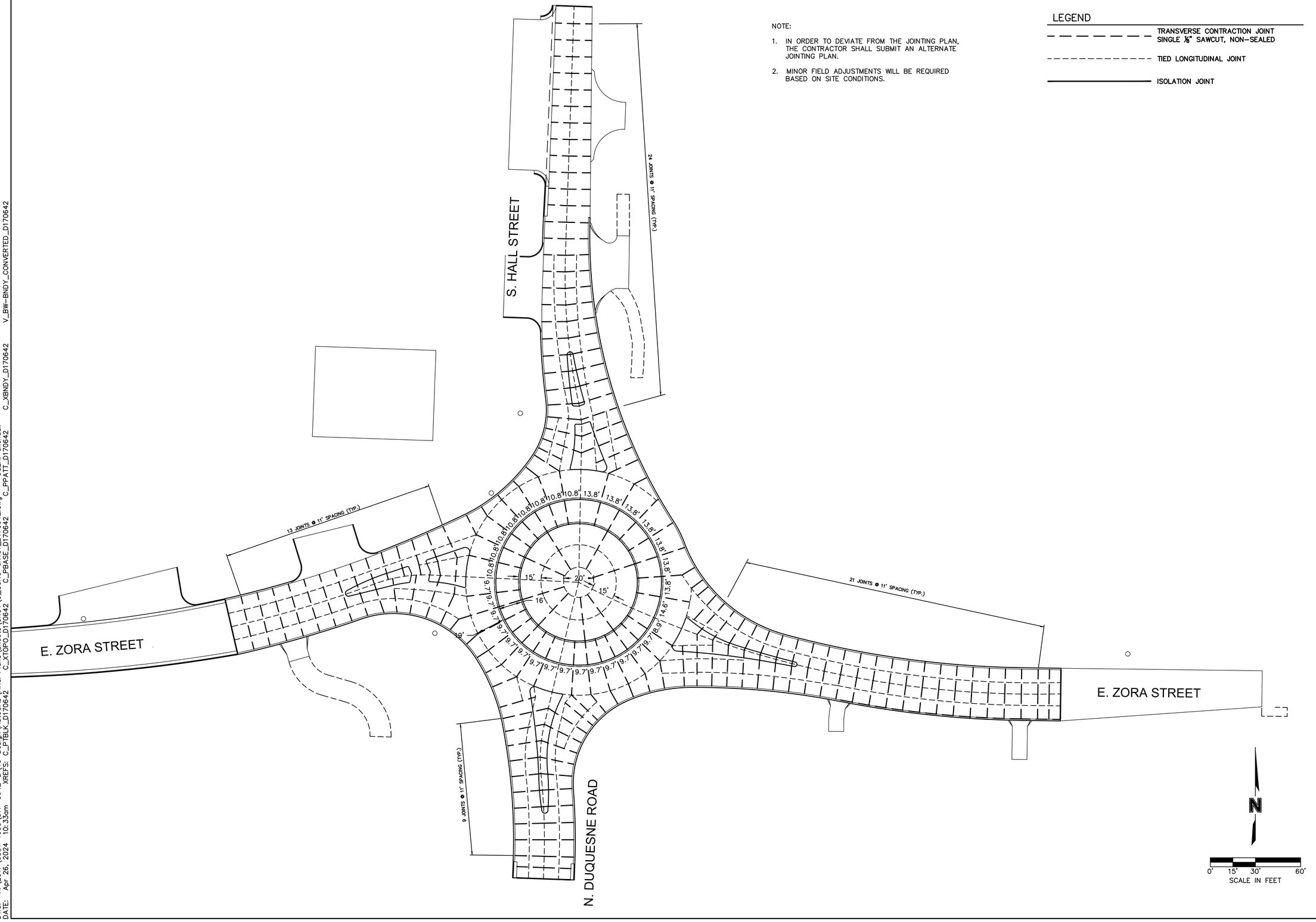
JOPLIN, MISSOURI

2024

drawn by:	ZLL/SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_SPT01_D170642
date:	4/26/2024

SHEET
29 of 88

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DATE: Apr 26, 2024 10:32am XREFS: C_PTBLK_D170642 C_PBASE_D170642



NOTE:

1. IN ORDER TO DEVIATE FROM THE JOINTING PLAN, THE CONTRACTOR SHALL SUBMIT AN ALTERNATE JOINTING PLAN.
2. MINOR FIELD ADJUSTMENTS WILL BE REQUIRED BASED ON SITE CONDITIONS.

LEGEND

- TRANSVERSE CONTRACTION JOINT SINGLE ⅛" SAWCUT, NON-SEALED
- TIED LONGITUDINAL JOINT
- ISOLATION JOINT

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Jonathan Peitz
2024.04.26 10:33:00

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		REVISIONS	

CONCRETE JOINT PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

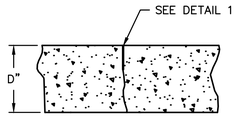
JOPLIN, MISSOURI

2024

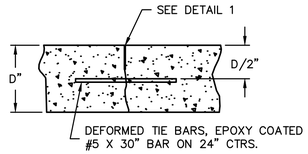
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project no.: 017-0642-D
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date: 4/26/2024

SHEET
30 of 88

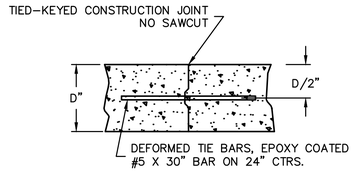
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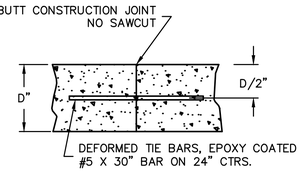
TRANSVERSE CONTRACTION JOINT
SINGLE 1/8" SAWCUT, NON-SEALED
NO SCALE



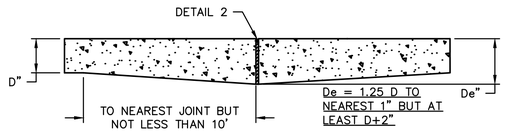
TIED LONGITUDINAL CONTRACTION JOINT
SINGLE 1/8" SAWCUT, NON-SEALED
NO SCALE



TIED-KEYED CONSTRUCTION JOINT
NO SCALE

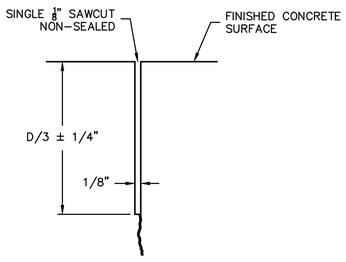


TIED-BUTT CONSTRUCTION JOINT
NO SCALE

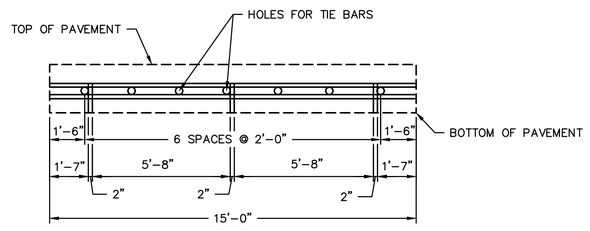


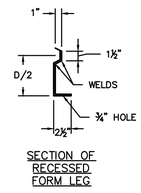
ISOLATION JOINT - TYPE 'A' THICKENED EDGE
NO SCALE

NOTE: FOR LONGITUDINAL CONSTRUCTION JOINTS, THE CONTRACTOR
HAS THE OPTION OF USING EITHER THE KEYED OR THE BUTT TYPE



DETAIL 1 - NON-SEALED CONTRACTION JOINT
NO SCALE

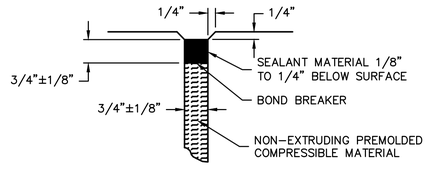




SECTION OF
RECESSED
FORM LEG

NOTE: TO BE USED ONLY AGAINST FORMS, DO
NOT EXTEND THROUGH CONTRACTION JOINTS

METAL STRIPS FOR LONGITUDINAL CONSTRUCTION JOINT
NO SCALE



DETAIL 2 - ISOLATION JOINT
NO SCALE

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PROFESSIONAL ENGINEER

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REVISIONS

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CONCRETE JOINT DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

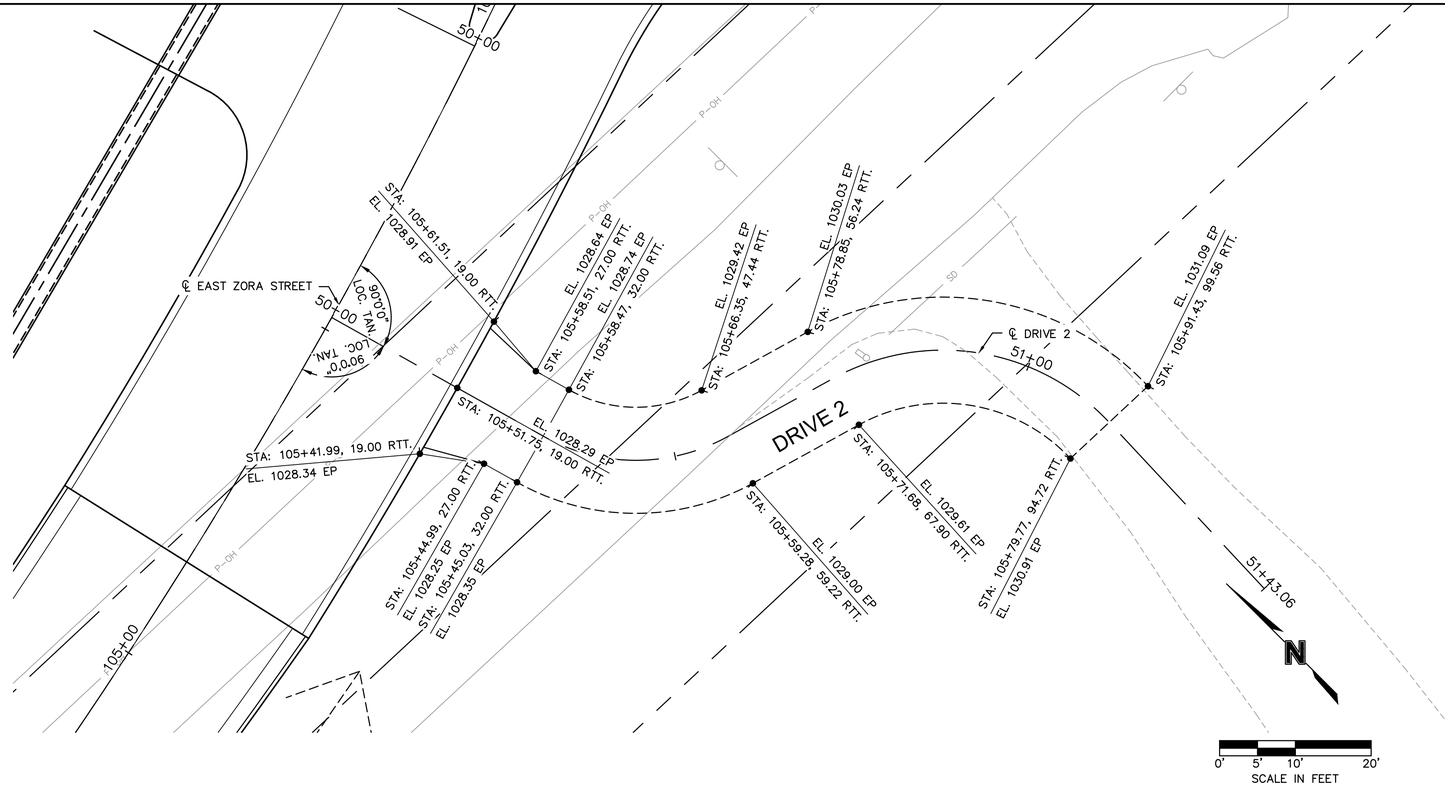
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2024

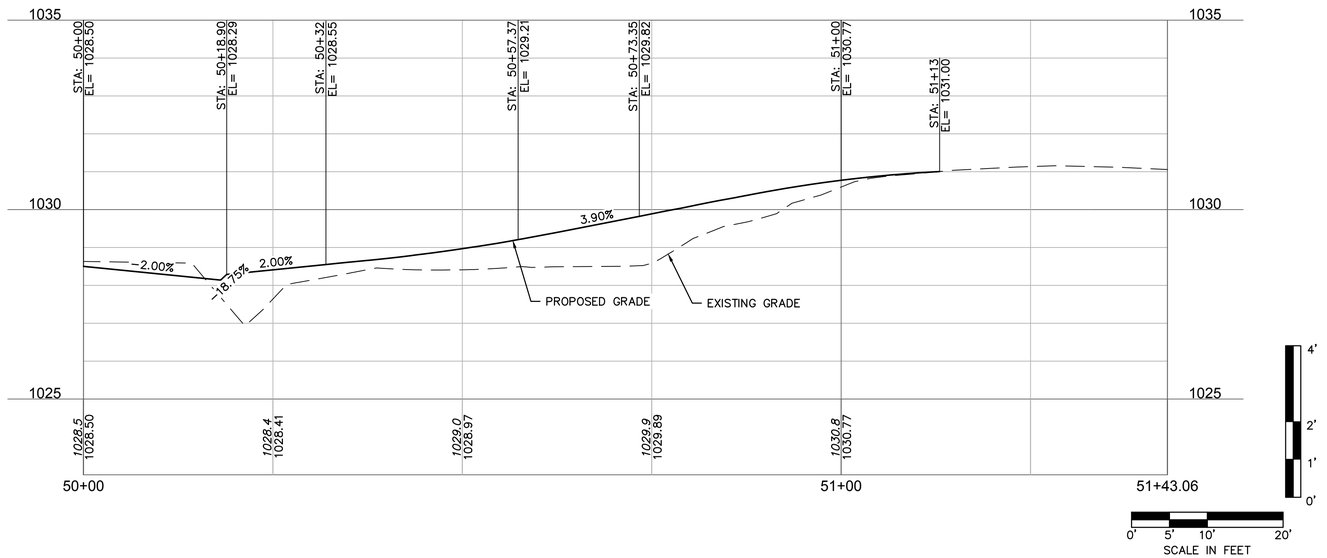
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drawing no.: C_CONC-JNT01_D170642
date: 4/26/2024

SHEET
31 of 88

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℄ DRIVE 2 (50+00 - 51+43.06)



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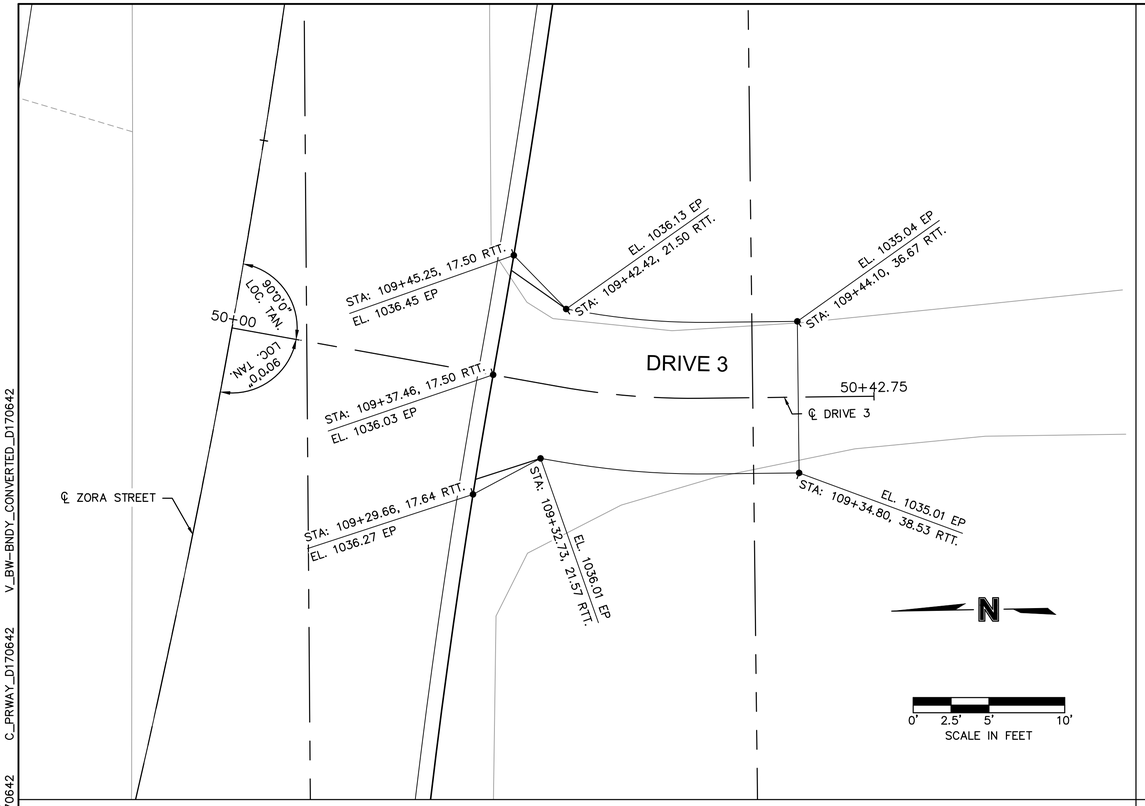
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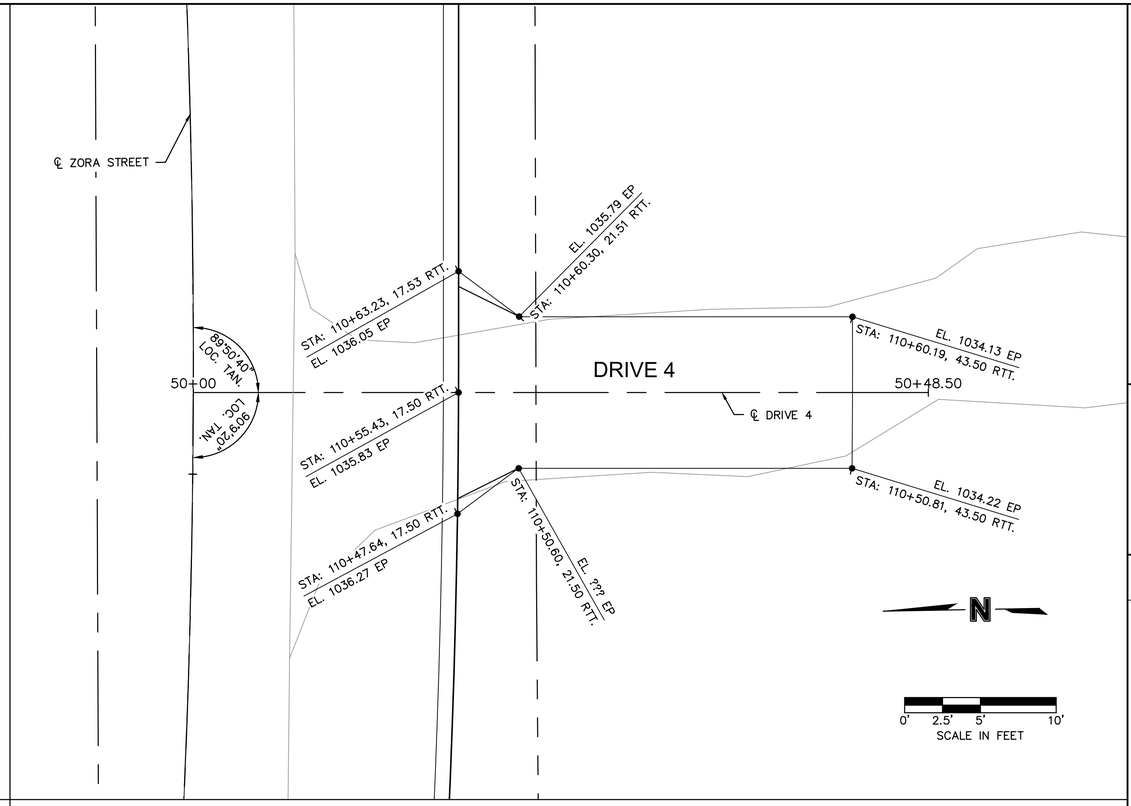
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

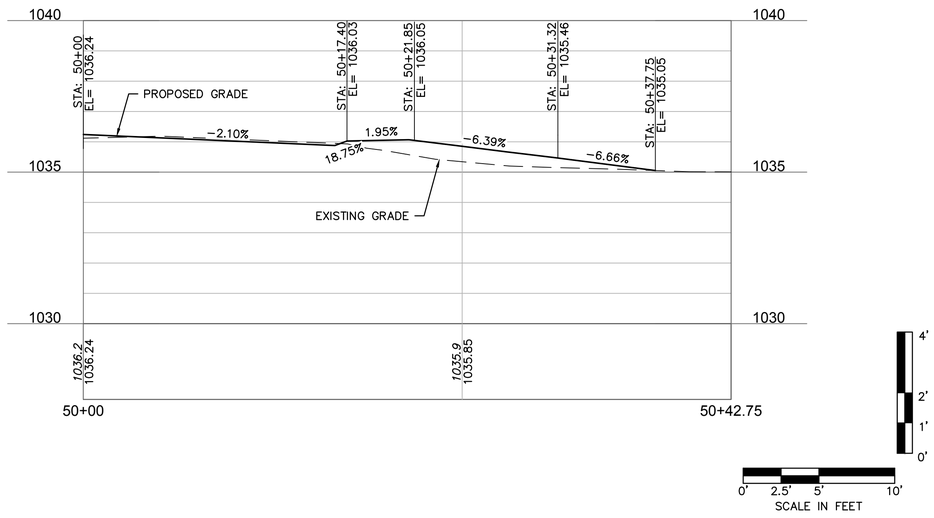
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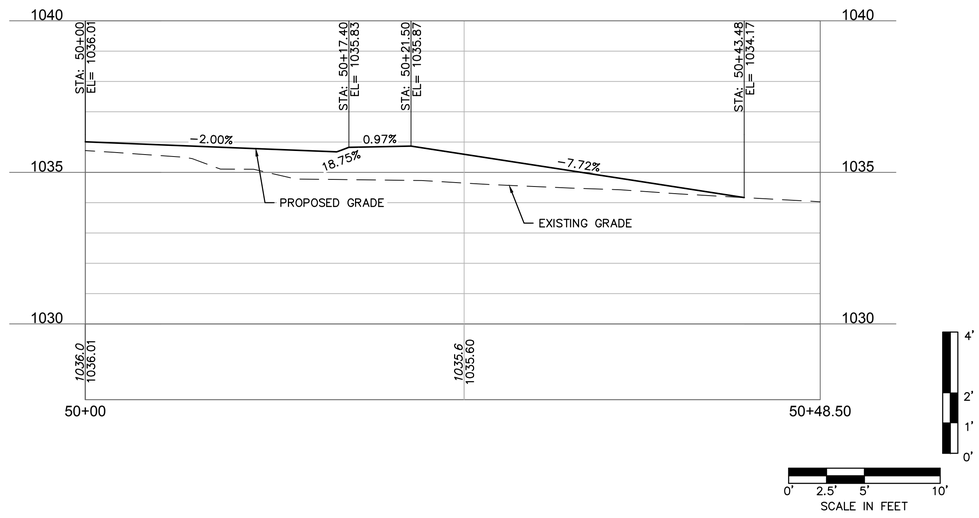




℄ DRIVE 3 (50+00 - 50+42.75)



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CITY OF JOPLIN

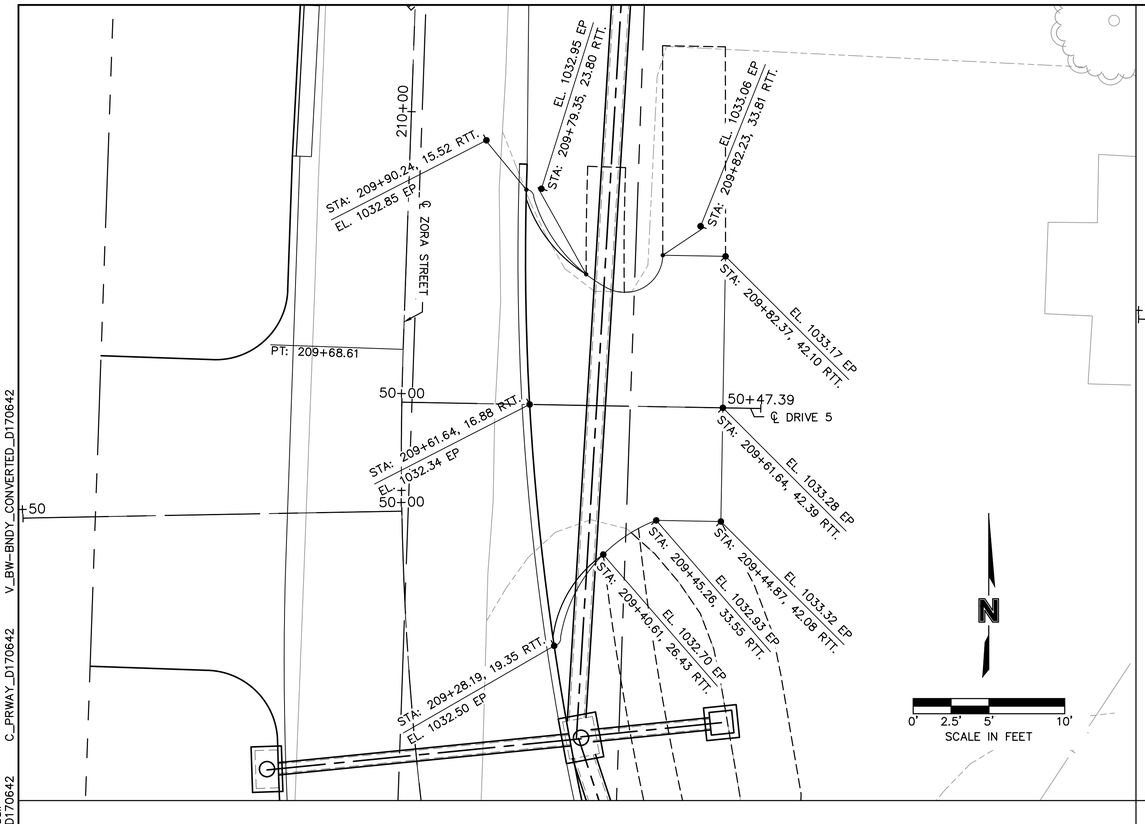
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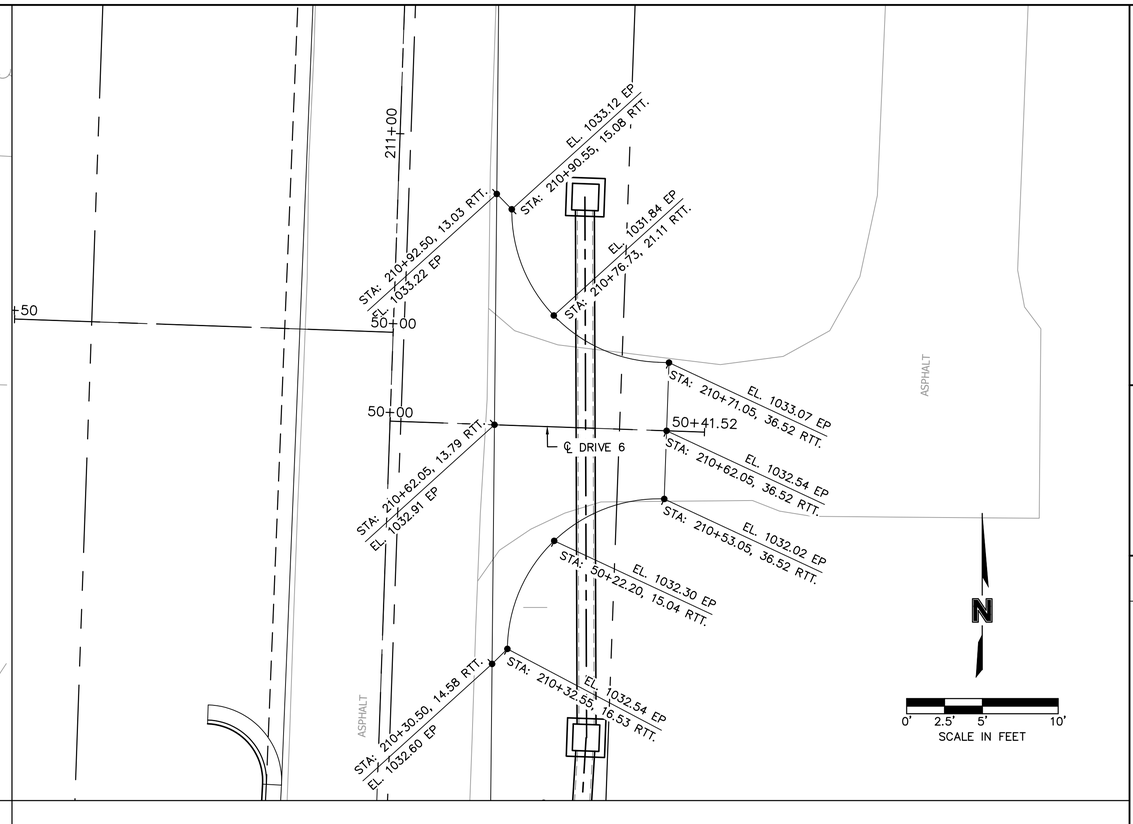
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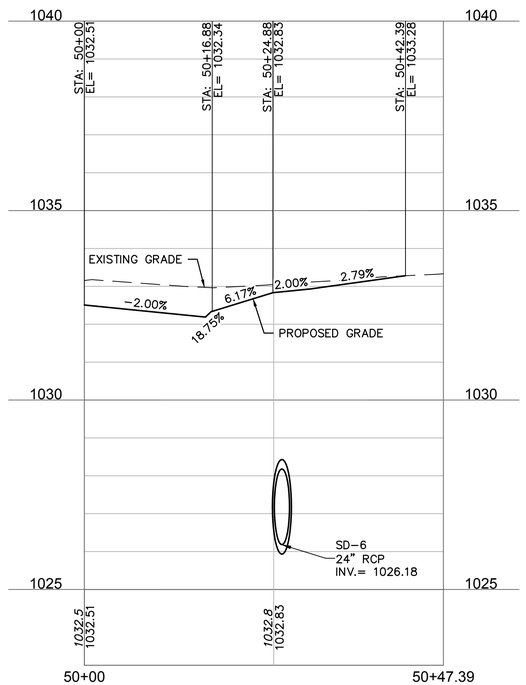
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33 of 88

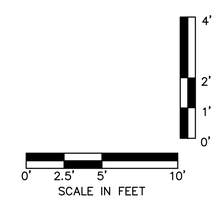
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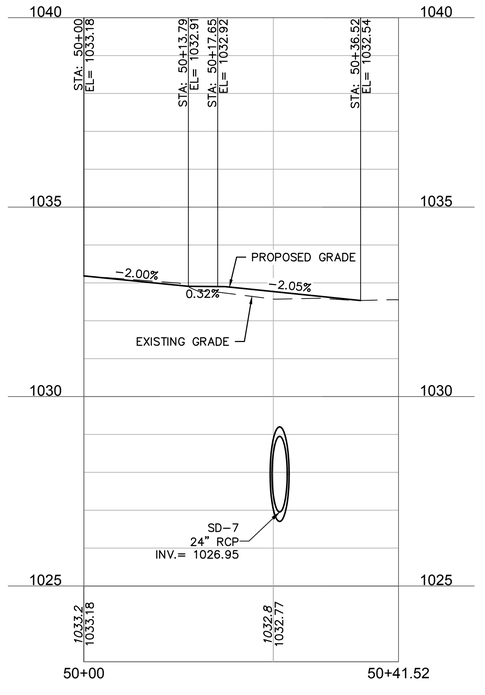


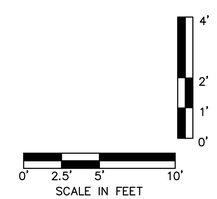
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℄ DRIVE 6 (50+00 - 50+41.52)





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CITY OF JOPLIN

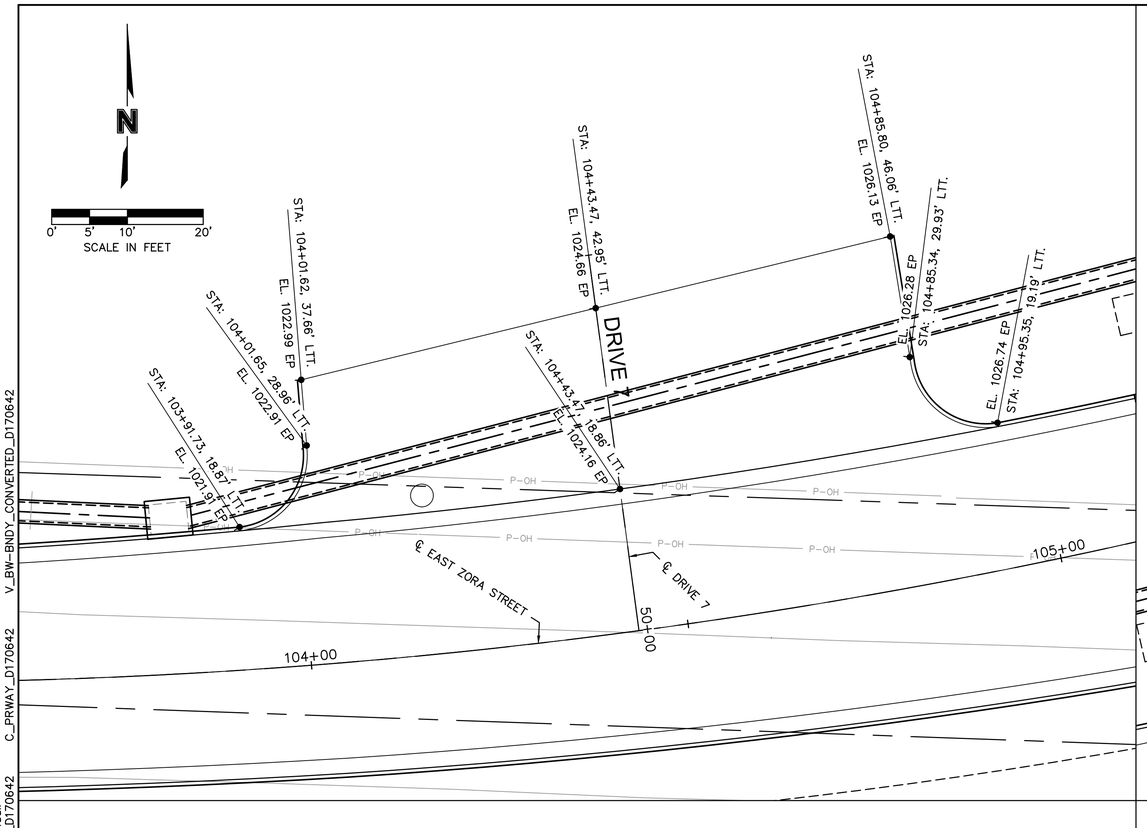
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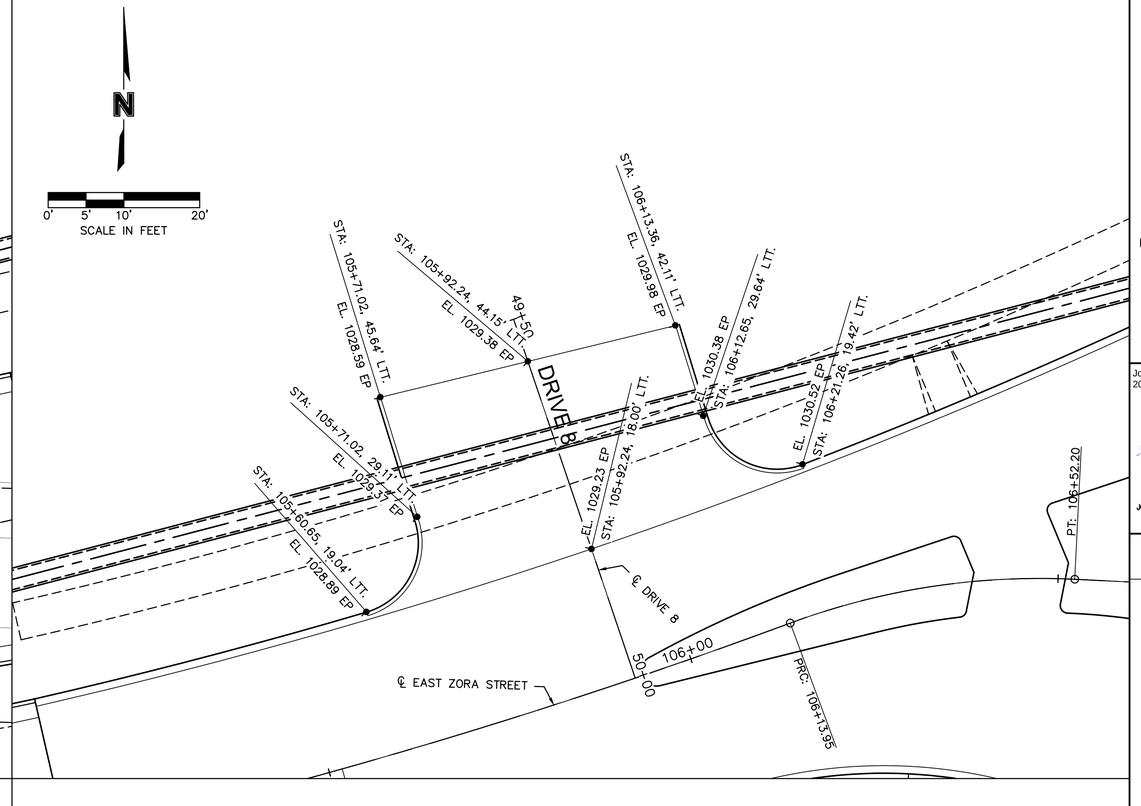
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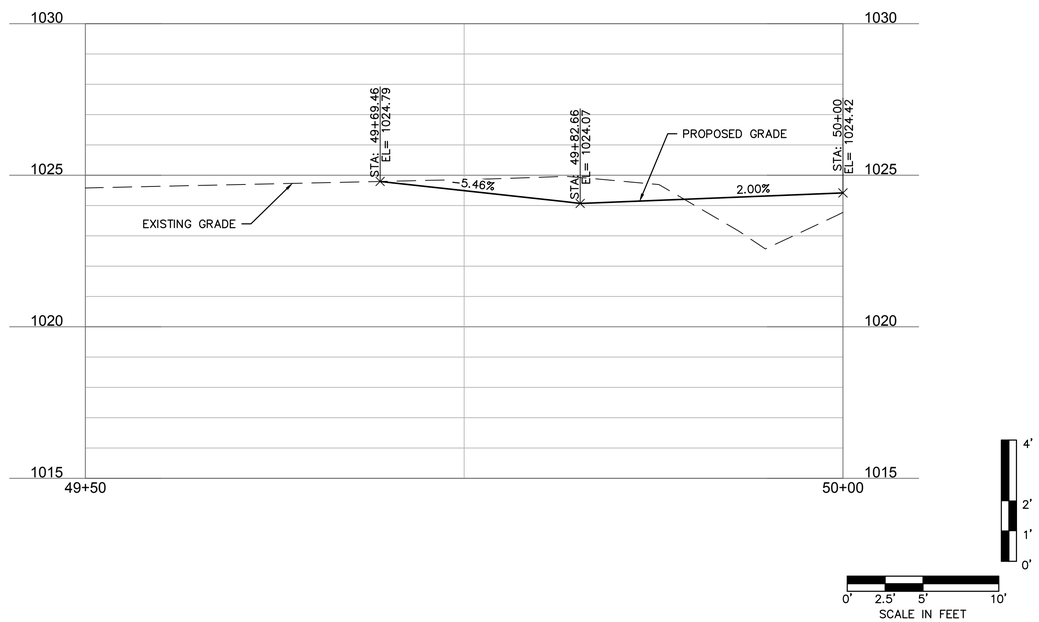
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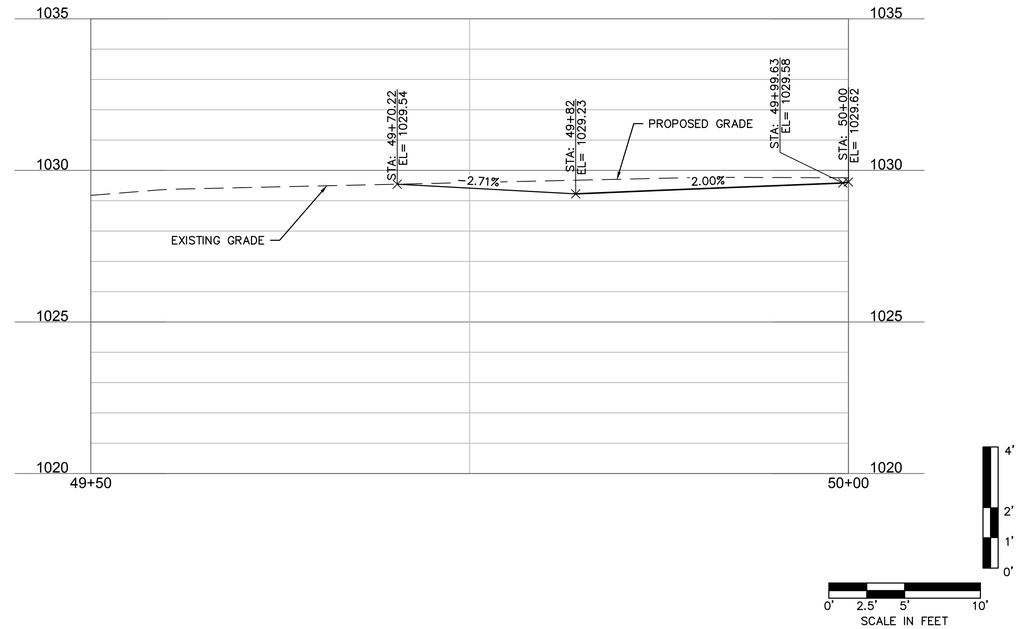




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℄ DRIVE 8 (49+50 - 50+00)



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DRIVEWAY LAYOUTS

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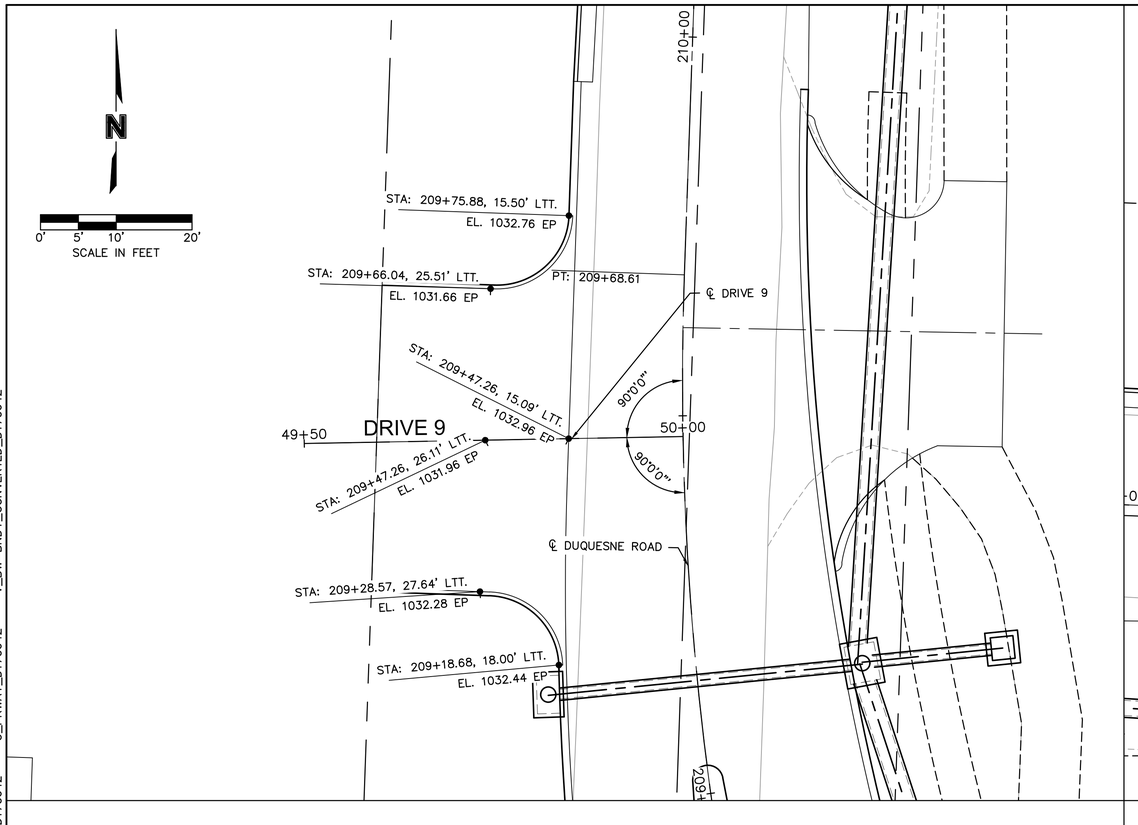
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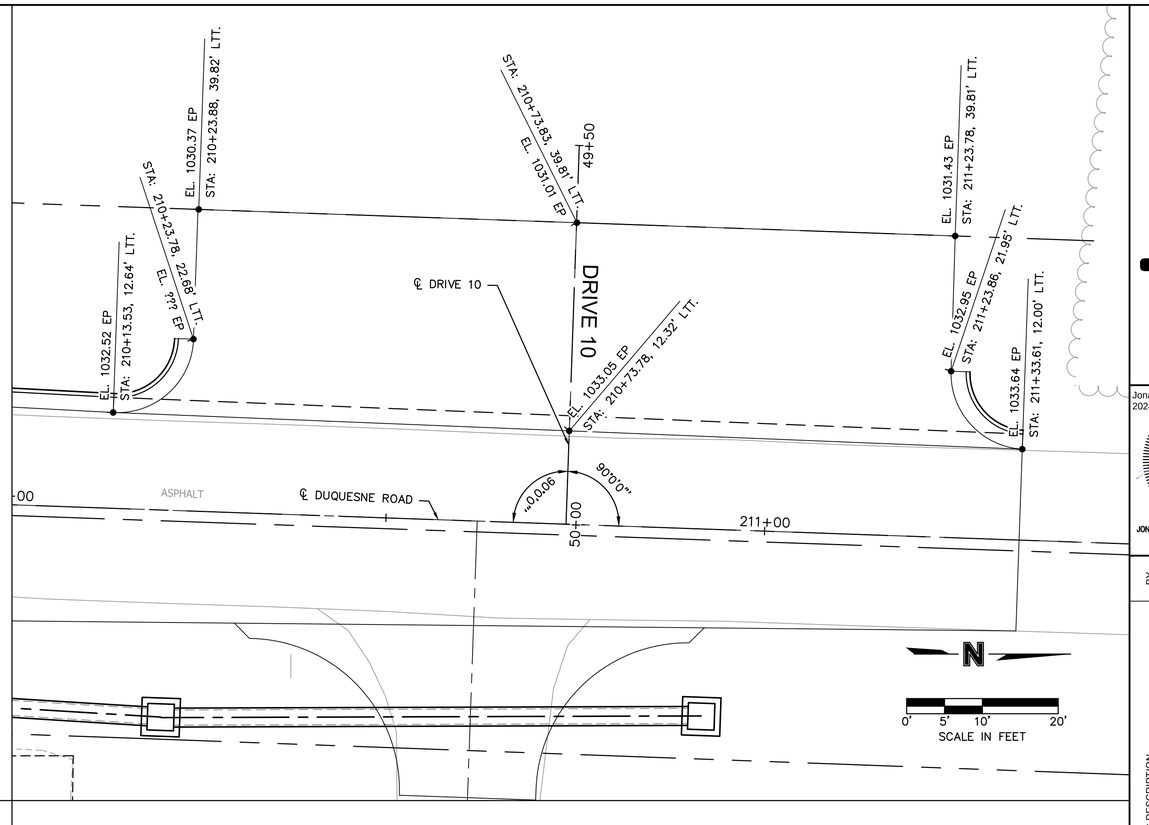
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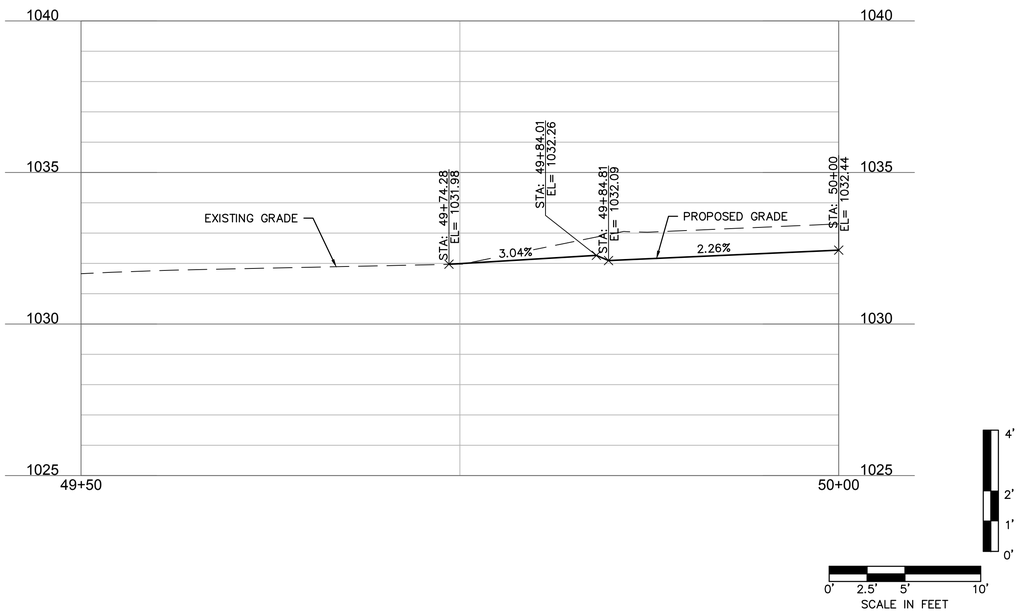
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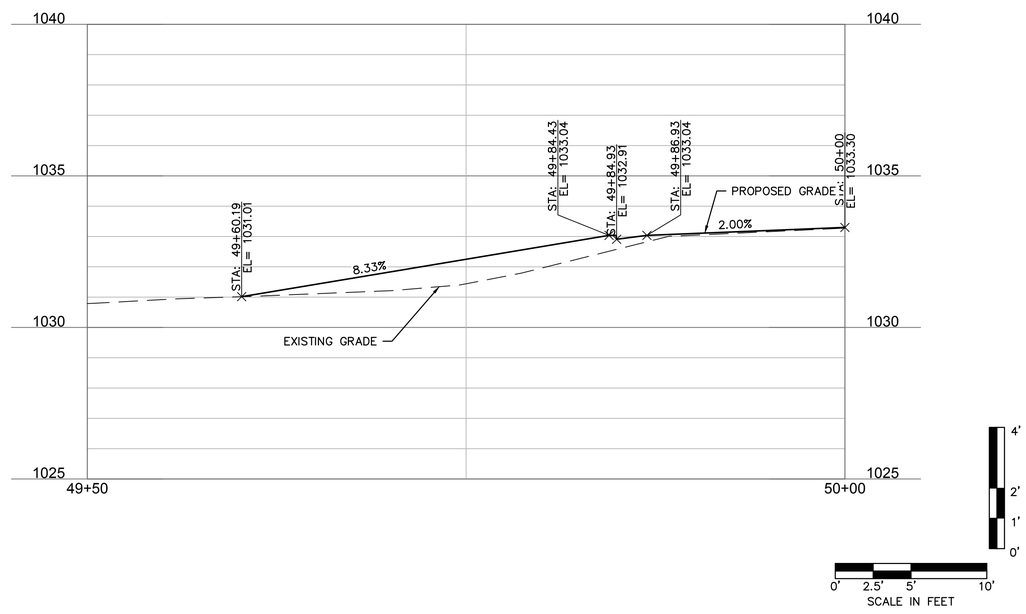




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℄ DRIVE 10 (49+50 - 50+00)



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REVISIONS

DRIVEWAY LAYOUTS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

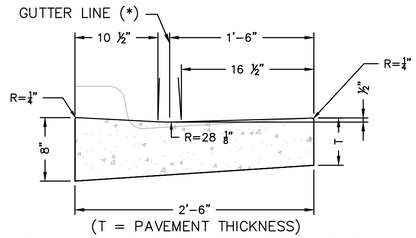
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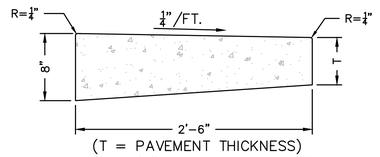
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* – 0.5% MINIMUM POSITIVE SLOPE IN GUTTER LINE SHALL BE MAINTAINED THROUGH TRANSITION FROM STANDARD CURB TO RAMP CURB



USE WITH STANDARD CONCRETE CURB & GUTTER

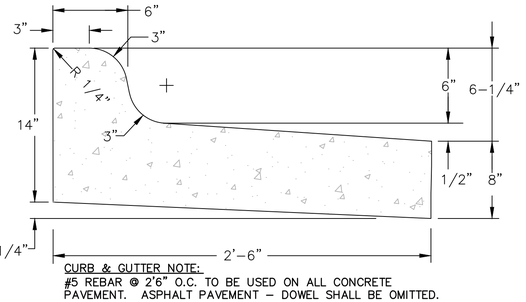


USE WITH 1/4" SPILL CURB & GUTTER

NOTE:
SEE STANDARD CURB DETAIL FOR ADDITIONAL REQUIREMENTS

STREET CURB DETAIL AT RAMP

NTS

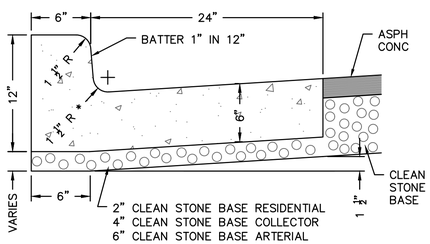


CURB & GUTTER NOTE:
#5 REBAR @ 2'6" O.C. TO BE USED ON ALL CONCRETE PAVEMENT. ASPHALT PAVEMENT – DOWEL SHALL BE OMITTED.

1/4" SPILL CURB & GUTTER DETAIL

NTS

* = OPTIONAL WITH APPROVAL BY CITY ENGINEER.



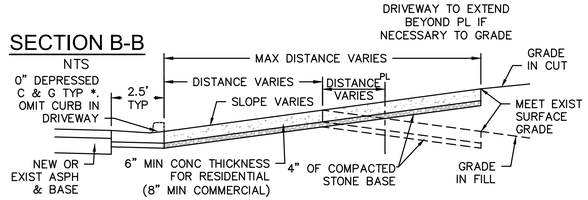
NOTES:
1. JOINT MATERIAL TO EXTEND THRU C & G, FRONT TO BACK, & NEATLY TRIMMED TO MATCH CONC SURFACE.
2. FLOAT GROUT TO SURFACE ON EXPOSED SURFACES.
3. ALL POURED CONCRETE SHALL BE CLASS 'B'.

STANDARD UPRIGHT CURB & GUTTER

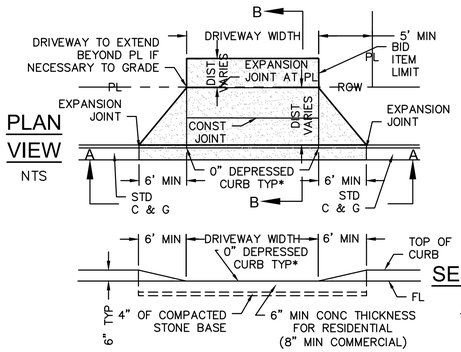
N.T.S.

SECTION B-B

NTS



NOTES:
1. ALL POURED CONCRETE SHALL BE CLASS 'B1'.
2. STEEL REINFORCEMENT IS NOT ALLOWED.
3. ALL GUTTER CONST IN FRONT OF DRIVEWAY & ALL C & G IN DRIVEWAY TRANSITIONS SHALL BE INCLUDED IN THE BID PRICE OF THE CURB & GUTTER.
4. BID PRICE FOR ALL DRIVEWAYS SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONSTRUCT DRIVEWAY.
5. * = 1.5" DEPRESSED CURB ALLOWED WHEN NEEDED FOR DRAINAGE OR SIDEWALK GRADE.
6. 5' INCREMENTS FOR GRADE CHANGES IN DRIVEWAY ARE ALLOWED TO MEET EXIST GRADE.
7. ALGEBRAIC DIFFERENCE AT GRADE CHANGES ARE NOT TO EXCEED 13%.
8. EXPANSION JOINTS SHALL BE CONSTRUCTED NEAR PROPERTY LINE & THROUGH C & G ADJACENT TO DRIVEWAY.
9. OPTIONAL CONSTRUCTION JOINTS MAY BE USED AT GRADE CHANGES IN DRIVEWAY.



PLAN VIEW
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SECTION A-A
NTS

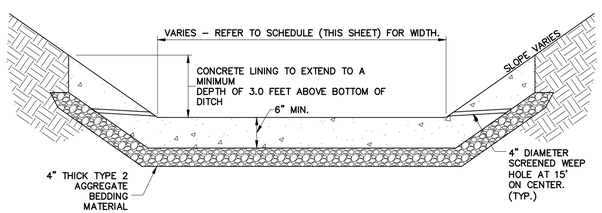
DRIVEWAY WITH NO SIDEWALK

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BEDDING MATERIAL FOR DITCH LINING SHALL BE TYPE 2 AGGREGATE AS PER SECTION 1007 OF THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CONCRETE LINING SHALL EXTEND TO A MINIMUM DEPTH OF 3.0 FEET ABOVE BOTTOM OF DITCH.

CONCRETE LINING SHALL BE SAW CUT AT A MAXIMUM OF 15 FOOT INTERVALS TO A MINIMUM DEPTH OF 1 1/2" WITHIN 48 HOURS OF POUR.

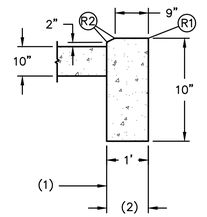


CONCRETE DITCH LINER

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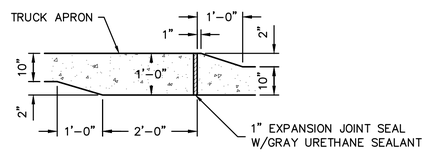
LEGEND

- (B) TIE BARS – 30" X #5 Ø AT 30" CTRS.
- (C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.
- (D) #4 Ø TIE BAR AT 24" CENTERS LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3 INCHES.
- (L2) LONGITUDINAL JOINT WITH TIE BARS.
- (P) TOP OF PAVEMENT OR CONCRETE BASE.
- (R1) ROUND TO ¼" RADIUS (EXCEPT FOR SAWED JOINTS).
- (R2) ROUND TO ¾" RADIUS.
- (R3) CONSTRUCT TO 9" RADIUS.
- (1) PAY LIMIT FOR PAVEMENT
- (2) PAY LIMIT FOR CURB, OR CURB & GUTTER.



MoDOT MODIFIED TYPE F (SEPARATED)

NOT TO SCALE



TRUCK APRON CURB

NOT TO SCALE

olsson
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Missouri Certificate of Authority #001592
702 S. Main Street
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TEL 417.781.0643
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Jonathan Peitz
2024.04.26 11:07:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

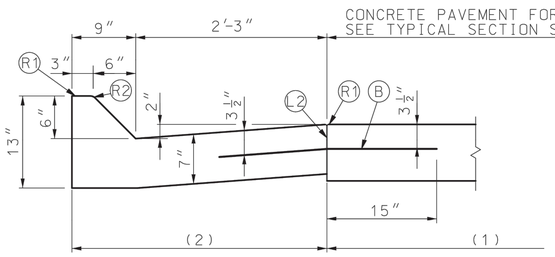
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

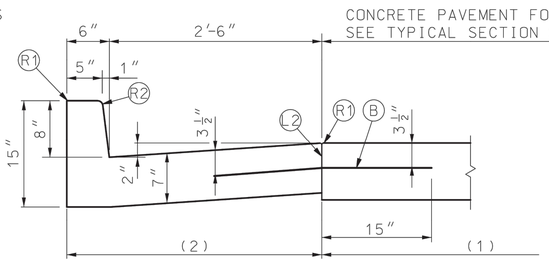
2024

drawn by:	ZLL/SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_DTL01_D170642
date:	4/26/2024

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DATE: Apr 26, 2024 10:35am XREFS: C_PTBLK_D170642

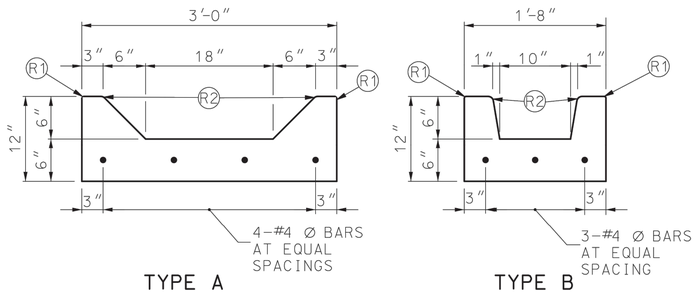


TYPE A
(MOUNTABLE)



TYPE B
(BARRIER)

CURB & GUTTER

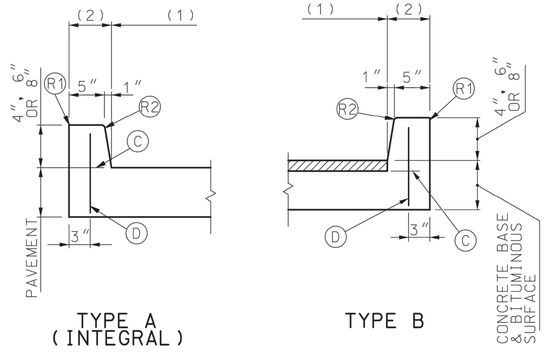


TYPE A

TYPE B

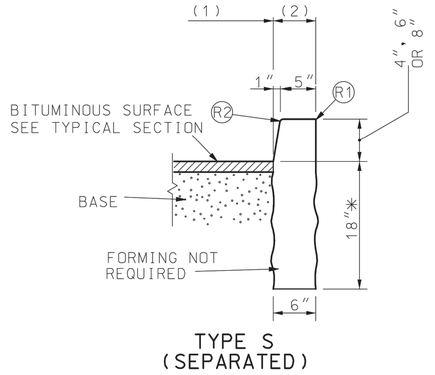
GUTTERS

SEE STANDARD PLAN 607.11 FOR MODIFIED TYPE A AND B GUTTERS



TYPE A
(INTEGRAL)

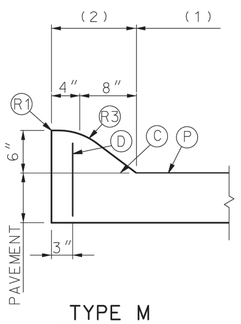
TYPE B



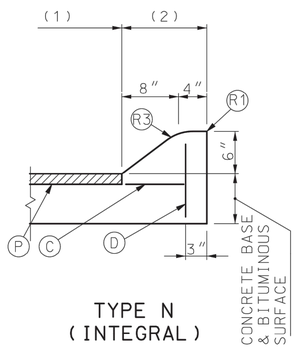
TYPE S
(SEPARATED)

✳ DEPTH MAY BE REDUCED IF KEYED 6″ IN ROCK

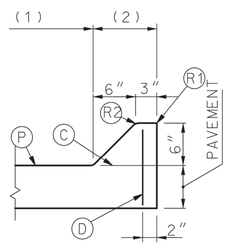
BARRIER CURBS



TYPE M
(INTEGRAL)

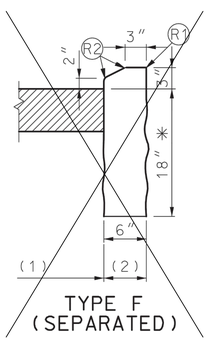


TYPE N
(INTEGRAL)

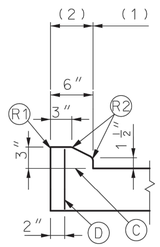


TYPE O
(INTEGRAL)

MOUNTABLE CURBS



TYPE F
(SEPARATED)



TYPE E
(INTEGRAL)

BEGINNING AND ENDING OF INTRODUCED LOW PROFILE CURB SHALL UTILIZE CURB HEIGHT RUNOUT FORM O INCHES TO 3 INCHES IN 5 FEET. PAYMENT LENGTH SHALL INCLUDE TAPERS.

✳ DEPTH MAY BE REDUCED IF KEYED 6″ IN ROCK.

LOW PROFILE CURB

LEGEND

- (B) TIE BARS – 30″ X #5 Ø AT 30″ CTRS.
- (C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.
- (D) #4 Ø TIE BAR AT 24″ CENTERS LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3 INCHES.
- (L2) LONGITUDINAL JOINT WITH TIE BARS.
- (P) TOP OF PAVEMENT OR CONCRETE BASE.
- (R1) ROUND TO ¼″ RADIUS (EXCEPT FOR SAWED JOINTS).
- (R2) ROUND TO ¾″ RADIUS.
- (R3) CONSTRUCT TO 9″ RADIUS.
- (1) PAY LIMIT FOR PAVEMENT
- (2) PAY LIMIT FOR CURB, OR CURB & GUTTER.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
TRAVIS D. KOESTNER
NUMBER PE-30042
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE CURB, CURB AND GUTTER AND GUTTER

DATE EFFECTIVE: 10/01/2022
DATE PREPARED: 7/19/2022

609.00Q

SHEET NO. 2 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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Jonathan Peitz
2024.04.26 10:35:00 -05'00'
STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STANDARD DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

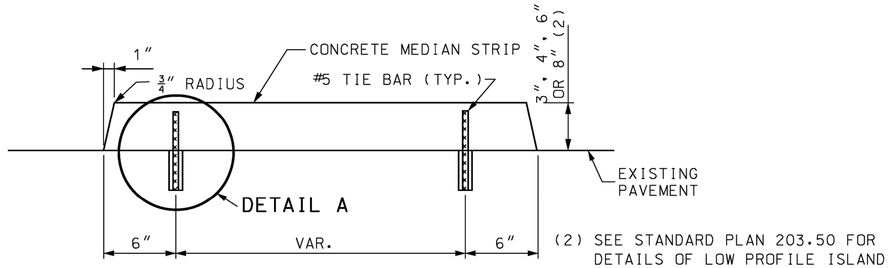
JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_DTL01_D170642
date: 4/26/2024

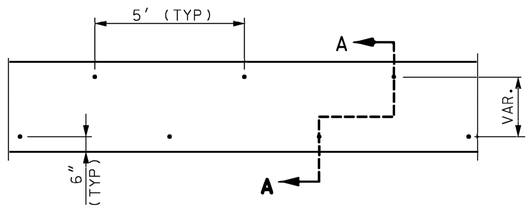
SHEET 38 of 88

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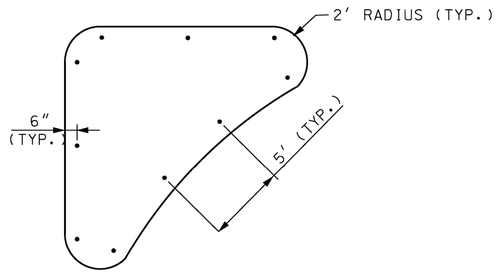


(2) SEE STANDARD PLAN 203.50 FOR DETAILS OF LOW PROFILE ISLAND

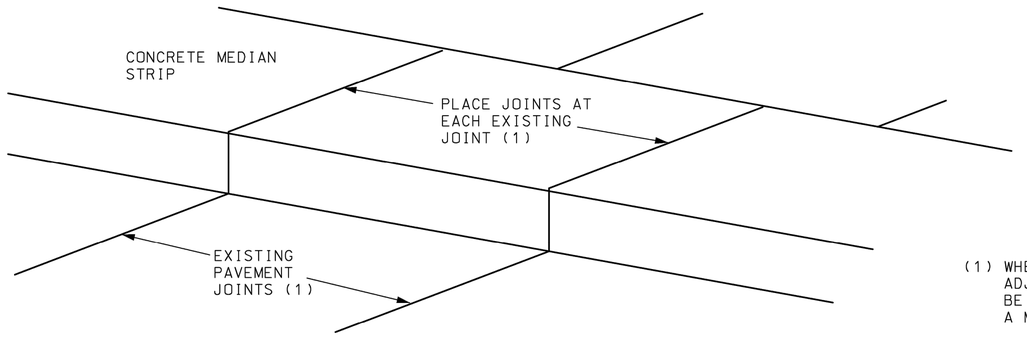
SECTION A–A
CONCRETE MEDIAN STRIP



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP

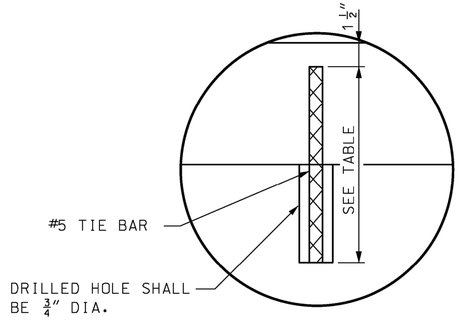


TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP (ISLAND)



CONCRETE MEDIAN STRIP JOINT LOCATION

(1) WHEN THERE ARE NO VISIBLE JOINTS IN THE ADJACENT PAVEMENT. THE JOINT SPACING WILL BE EQUAL TO THE MEDIAN STRIP WIDTH, WITH A MINIMUM SPACING OF 10′.



DETAIL A

MEDIAN HEIGHT	BAR LENGTH
3″	8″
4″	9″
6″	11″
8″	13″

GENERAL NOTES:

TIE BARS SHALL BE EPOXY COATED, DEFORMED REINFORCING BARS MEETING THE REQUIREMENTS OF SECTION 710 AND 1057.

BONDING FOR TIE BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS AS SPECIFIED IN SECTION 1039.

THE FACE OF THE MEDIAN MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6′ OR LESS.

WHEN CONCRETE MEDIANS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, THE MEDIAN HEIGHT WILL BE 4″.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI — TRAVIS D. KOESTNER — NUMBER PE-90042 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE MEDIAN STRIP

DATE EFFECTIVE: 10/01/2020
DATE PREPARED: 7/21/2020

608.30A

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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Jonathan Peitz
2024.04.26 10:35:00

STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER
JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_DTL01_D170642
date: 4/26/2024

SHEET 39 of 88

DWG: F:\2017\0501-1000\017-0642-D\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DTL01_D170642.dwg
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USER: skendall
XREFS: C_PTBLK_D170642

DA = Z1
C = 0.59
I = 7.20 IN/HR
A = 0.16 AC.
Q (10) = 0.68 CFS

DA = Z2
C = 0.40
I = 7.20 IN/HR
A = 0.37 AC.
Q (10) = 1.07 CFS

DA = Z3
C = 0.78
I = 7.20 IN/HR
A = 0.24 AC.
Q (10) = 1.35 CFS

DA = Z4
C = 0.59
I = 7.20 IN/HR
A = 0.43 AC.
Q (10) = 1.83 CFS

DA = Z5
C = 0.59
I = 7.20 IN/HR
A = 0.34 AC.
Q (10) = 1.44 CFS

DA = Z6
C = 0.66
I = 7.20 IN/HR
A = 0.17 AC.
Q (10) = 0.81 CFS

DA = Z7
C = 0.65
I = 5.32 IN/HR
A = 4.97 AC.
Q (10) = 17.17 CFS

DA = Z8
C = 0.90
I = 7.20 IN/HR
A = 0.04 AC.
Q (10) = 0.26 CFS

DA = Z9
C = 0.75
I = 7.20 IN/HR
A = 2.12 AC.
Q (10) = 11.45 CFS

DA = D1
C = 0.79
I = 7.20 IN/HR
A = 0.13 AC.
Q (10) = 0.74 CFS

DA = D2
C = 0.66
I = 7.20 IN/HR
A = 0.33 AC.
Q (10) = 1.57 CFS

DA = D3
C = 0.72
I = 6.25 IN/HR
A = 0.53 AC.
Q (10) = 2.39 CFS

DA = D4
C = 0.85
I = 7.20 IN/HR
A = 0.12 AC.
Q (10) = 0.73 CFS

DA = D5
C = 0.86
I = 7.20 IN/HR
A = 0.23 AC.
Q (10) =1.42 CFS

DA = D6
C = 0.59
I = 5.88 IN/HR
A = 0.97 AC.
Q (10) = 3.36 CFS

DA = D7
C = 0.72
I = 5.05 IN/HR
A = 3.27 AC.
Q (10) = 11.91 CFS

DA = D8
C = 0.72
I = 5.52 IN/HR
A = 1.18 AC.
Q (10) = 4.69 CFS

DUQUESNE ROAD

ZORA STREET

Tc = 16.27 MIN
L = 934'
S = 1.26%
Cf = 2

Tc = 12.23 MIN.
L = 595
S = 1.08%
Cf = 2

Tc = 9.93 MIN
L = 466'
S = 1.14%
Cf = 2

Tc = 8.05 MIN
L = 331'
S = 0.99%
Cf = 2

Tc = 13.93 MIN.
L = 957'
S = 1.99%
Cf = 2

Tc = 5 MIN.
L = 589'
S = 2.25%
Cf = 0.2

Tc = 5 MIN.
L = 133'
S = 2.64%
Cf = 1

Tc = 5 MIN
L = 193'
S = 3.79%
Cf = 0.2

Tc = 5 MIN
L = 318'
S = 5.24%
Cf = 0.2

Tc = 5 MIN.
L = 207'
S = 5.24%
Cf = 1

Tc = 5 MIN
L = 184'
S = 1.24%
Cf = 2

Tc = 5 MIN
L = 294'
S = 4.18%
Cf = 0.2

Tc = 5 MIN
L = 288'
S = 4.82%
Cf = 1

Tc = 5 MIN
L = 227'
S = 4.36%
Cf = 0.2

Tc = 5 MIN
L = 100'
S = 1.05%
Cf = 0.2

Tc = 5 MIN
L = 240'
S = 2.36%
Cf = 0.2

Tc = 5 MIN.
L = 144'
S = 1.02%
Cf = 0.2

AI–1 AI–2 AI–3 AI–4 AI–5
CI–1 CI–2 CI–3 CI–4 CI–5
SD–1 SD–2 SD–3 SD–4 SD–5 SD–6 SD–7 SD–8 SD–9 SD–10 SD–11
FES–1 FES–2 FES–4

PC: 105+14.37
PT: 111+92.35
PRC: 111+10.92

0' 30' 60' 120'
SCALE IN FEET

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Missouri Certificate of Authority #001592
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Jonathan Peitz
2024.04.26 10:56:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DRAINAGE MAP

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_PDRN01_D170642
date: 4/26/2024

SHEET
40 of 88

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XREFS: C_PBASE_D170642 C_PTBLK_D170642 C_XTOPO_D170642
USER: skendall C_DRN_170642D

10 YEAR STORM DESIGN STRUCTURES																	
Label	Inlet	Inlet Location	Elevation (Rim) (Ft)	Elevation (Invert) (Ft)	Inlet C	Inlet Drainage Area (Acres)	Total Inlet Tc (Min)	Local Intensity (In/Hr)	Curb Opening Length (Ft)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Bypass Target	Longitudinal Slope (Inlet) (%)	Road Cross Slope (%)	Spread / Top Width (Ft)	Depth (Gutter) (In)
AI-1	AREA INLET	On Sag	1031.71	1027.71	0.59	0.97	0:09:55	5.88	N/A	3.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AI-2	AREA INLET	On Sag	1031.60	1026.60	0.72	1.18	0:12:13	5.52	N/A	4.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AI-3	AREA INLET	On Sag	1031.20	1027.20	0.72	3.27	0:16:16	5.06	N/A	11.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AI-4	AREA INLET	On Sag	1025.75	1022.45	0.65	4.97	0:13:55	5.32	N/A	17.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AI-5	AREA INLET	On Sag	1025.00	1022.05	0.75	2.12	0:05:00	7.20	N/A	11.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CI-1	TYPE C NON-SETBACK INLET	On Grade	1033.25	1025.00	0.72	0.53	0:08:03	6.25	5.00	1.49	0.93	61.62	CI-5	1.78	2.00	6.19	0.33
CI-2	TYPE C NON-SETBACK INLET	On Grade	1034.23	1028.23	0.59	0.34	0:05:00	7.20	5.00	1.18	0.26	82.09	CI-1	1.08	2.00	4.94	0.31
CI-3	TYPE C NON-SETBACK INLET	On Grade	1034.05	1029.05	0.66	0.17	0:05:00	7.20	5.00	0.69	0.11	85.76	Off-Site	2.02	2.00	5.51	0.28
CI-4	TYPE C NON-SETBACK INLET	On Sag	1032.43	1027.93	0.85	0.12	0:05:00	7.20	5.00	0.73	N/A	N/A	N/A	N/A	2.00	5.01	0.25
CI-5	TYPE C NON-SETBACK INLET	On Sag	1032.46	1025.37	0.86	0.23	0:05:00	7.20	5.00	1.55	N/A	N/A	N/A	N/A	2.00	9.02	0.37
FES-1	FLARED END SECTION	N/A	N/A	1014.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FES-2	FLARED END SECTION	N/A	N/A	1015.00	0.4000	0.37	0:05:00	7.20	N/A	1.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FES-3	FLARED END SECTION	N/A	N/A	1023.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FES-4	FLARED END SECTION	N/A	N/A	1021.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10 YEAR STORM DESIGN PIPES															
Label	Upstream Structure	Downstream Structure	Length (Ft)	Upstream Invert Elevation	Downstream Invert Elevation	Slope (%)	Pipe Size (In)	Material	Time (Pipe Flow) (Min)	Velocity (Ft/Sec)	Flow (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (Ft)	Hydraulic Grade Line (Out) (Ft)
SD-1	FES-2	FES-1	23.32	1015.00	1014.69	1.33	15	Concrete	0.10	3.78	1.06	7.45	14	1015.01	1015.38
SD-2	CI-1	FES-3	291.69	1025.00	1023.83	0.40	30	Concrete	0.61	8.02	17.43	25.98	67	1024.41	1026.7
SD-3	CI-2	CI-1	84.09	1028.23	1026.00	2.65	18	Concrete	0.24	5.96	1.81	17.11	11	1026.70	1028.59
SD-4	CI-3	CI-2	83.51	1029.05	1028.48	0.68	15	Concrete	0.49	2.85	0.67	5.34	12	1028.59	1029.37
SD-5	CI-5	CI-1	93.02	1025.37	1025.00	0.40	30	Concrete	0.35	4.40	16.67	22.42	74	1026.70	1027.32
SD-6	AI-2	CI-5	103.01	1026.60	1025.87	0.71	24	Concrete	0.29	5.82	14.92	19.04	78	1027.32	1028.31
SD-7	AI-3	AI-2	71.34	1027.20	1026.60	0.84	24	Concrete	0.27	4.42	11.88	20.75	57	1028.31	1028.76
SD-8	CI-4	CI-5	41.57	1027.93	1026.62	3.15	15	Concrete	0.14	4.88	0.72	11.47	6	1028.16	1027.32
SD-9	AI-1	CI-5	18.83	1027.71	1026.62	5.79	15	Concrete	0.04	7.54	3.36	15.54	22	1028.24	1027.32
SD-10	AI-4	AI-5	64.61	1022.45	1022.05	0.62	24 R.E.	Concrete	0.20	5.40	17.18	17.66	97	1024.61	1023.78
SD-11	AI-5	FES-4	60.00	1022.05	1021.65	0.67	24 R.E.	Concrete	0.17	5.87	17.26	18.32	94	1023.78	1022.81

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DRAINAGE CALCULATIONS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

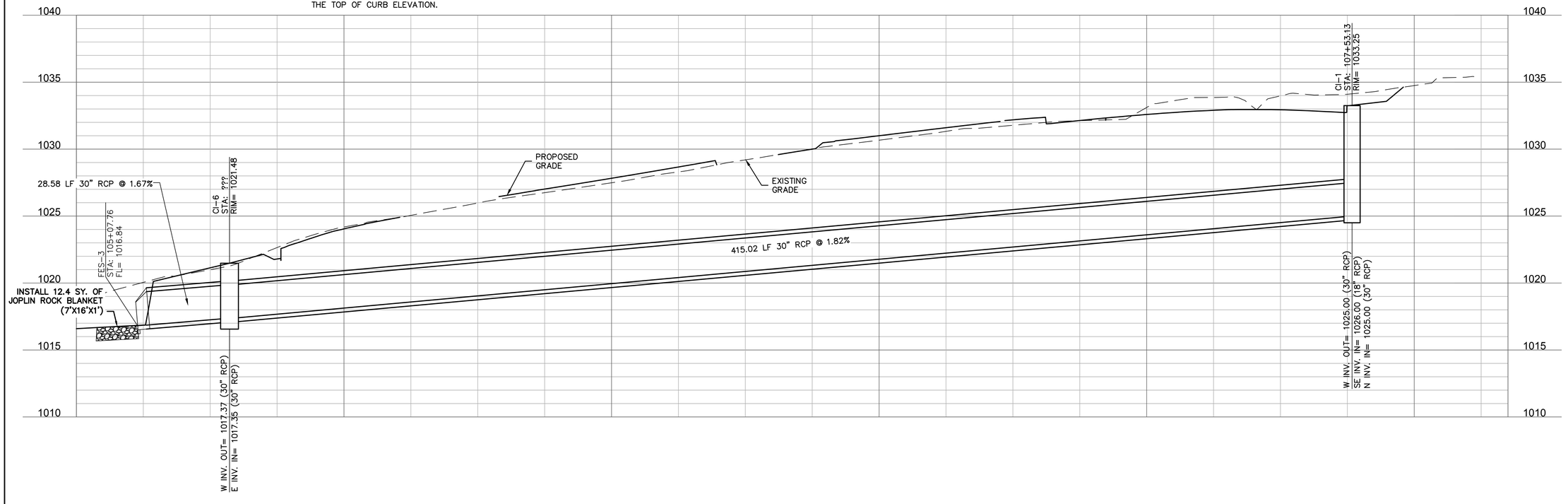
2024

drawn by: JRC
checked by: JSS
approved by: JSS
QA/QC by: JSS
project no.: 017-0642-D
drawing no.: C_PCALCS_D170642
date: 4/26/2024

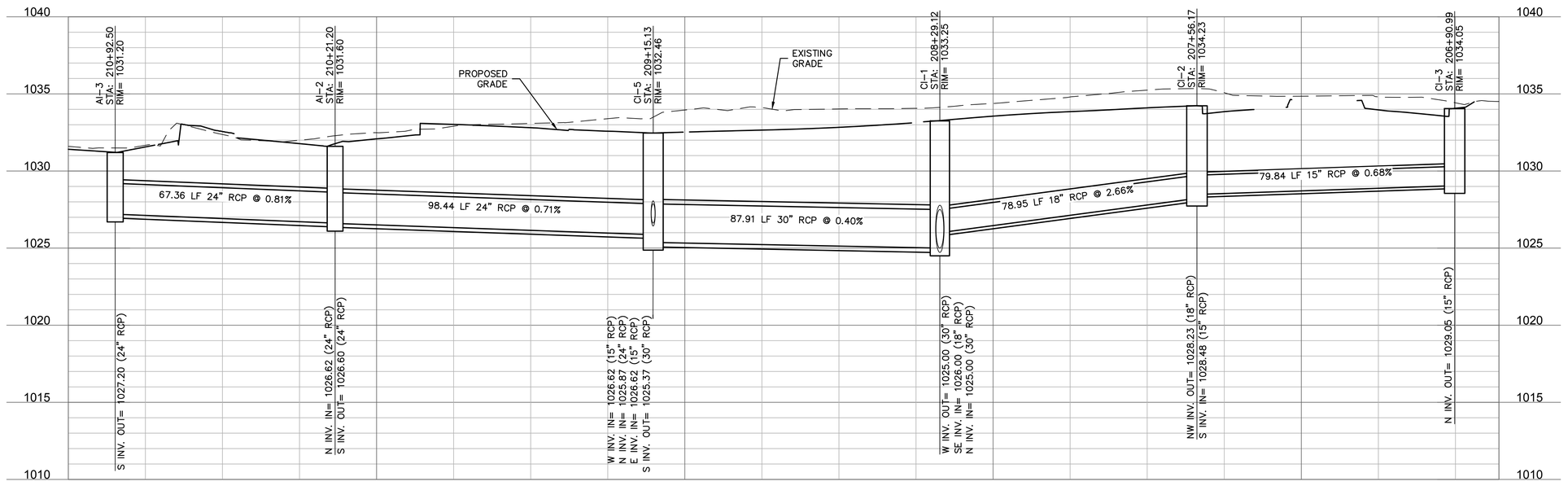
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NOTE:
THE RIM ELEVATION SHOWN
FOR ALL CURB INLETS IS
THE TOP OF CURB ELEVATION.

SD-2 (0+00 - 5+35.03)



SD-3 THRU SD-7 (0+00 - 4+64.12)



8'
4'
2'
0'

0' 10' 20' 40'
SCALE IN FEET

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MO# PE-2017019023

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		REVISIONS	

STORM SEWER PROFILES

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

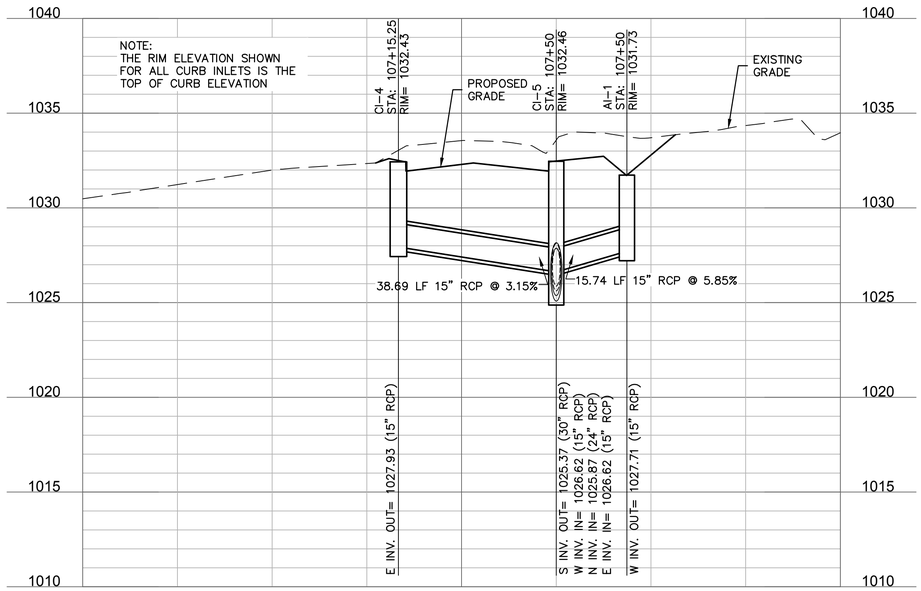
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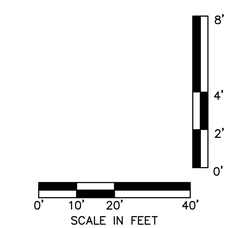
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QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_STM01_D170642
date:	4/26/2024

SHEET
42 of 88

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SD-8 & SD-9 (0+00 - 2+00)





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REVISIONS

STORM SEWER PROFILES

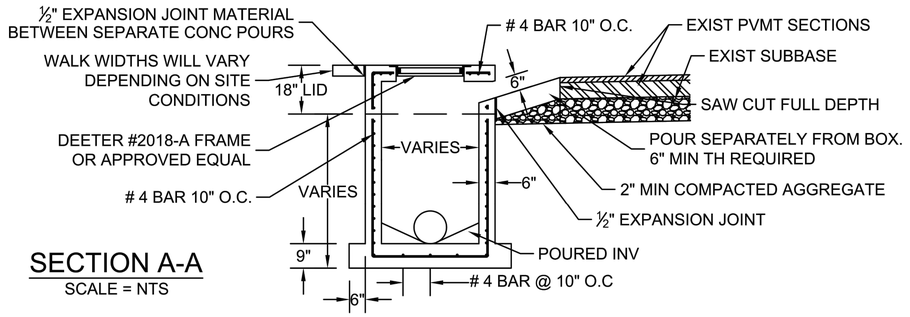
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CITY OF JOPLIN

JOPLIN, MISSOURI

2024

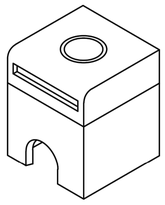
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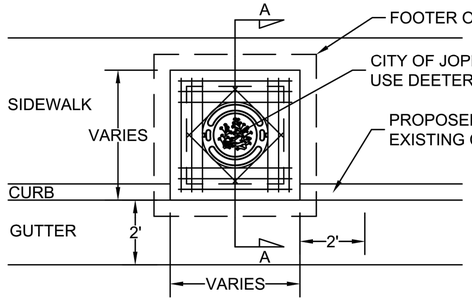


SECTION A-A
SCALE = NTS

TYPE 'C' CURB INLET
N.T.S.



INLET NOTES:
1. BOTTOM OF INLET SHALL BE 9" TH WITH #4 REBAR SPACED 10" OC BOTH WAYS.
2. FLOOR OF INLET SHALL BE SHAPED WITH INVERT TO PROVIDE SMOOTH FLOW.
3. STEPS ARE NOT ALLOWED.
4. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
5. THE SUM OF "L" & "W" SHALL NOT EXCEED 14' WITHOUT SPECIAL DESIGN.
6. ALL GUTTER CONSTRUCTED IN FRONT OF INLET, ALL C&G IN CURB REPAIRS OR REPLACEMENTS & ALL SIDEWALK CONST AROUND INLET SHALL BE INCLUDED IN THE BID PRICE OF THE INLET.
7. SAW CUT & REPL AN EXTRA 2' OF CURB ON BOTH SIDES WHEN CONST IN EXIST CURB.
8. ALL POURED CONCRETE SHALL BE CLASS 'B'.
9. EDGE OF BOX SHALL BE A MINIMUM OF 15' FROM CURB RADIUS PC.
10. BEDDING SHALL BE IN ACCORDANCE WITH CITY OF JOPLIN STANDARD SPECIFICATIONS SECTION 4400.3.4

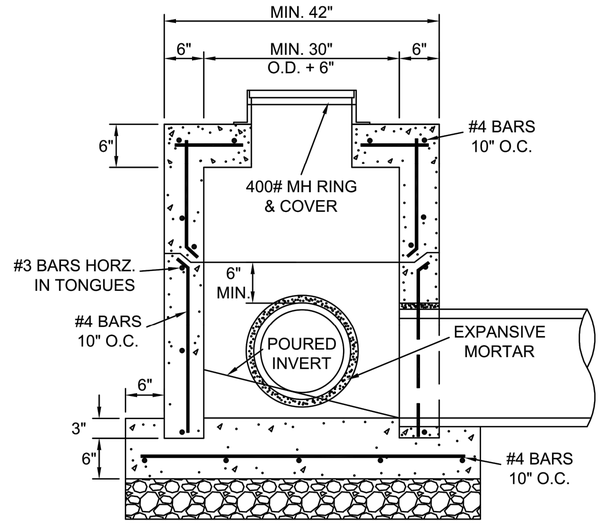


PLAN VIEW
SCALE = NTS

NOTES:
1. BID ITEM LIMIT TO INCLUDE THE C & G, SIDEWALK, & ANY SEED & MULCH NEEDED WITHIN 2' OF BOX FACES.
2. BOX CAN BE CAST-IN-PLACE OR PRECAST.

STM-03

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 10/2021	TYPE 'C' CURB INLET
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: TYPECCB	



CONC JNCT BOX W/ MH RING & COVER
N.T.S.

NOTES:
1. BEDDING SHALL BE IN ACCORDANCE WITH CITY OF JOPLIN STANDARD SPECIFICATIONS SECTION 4400.3.4

STM-05

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 10/2021	CONC JUNCTION BOX W/ MH RING & COVER
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: MHBOX	

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NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

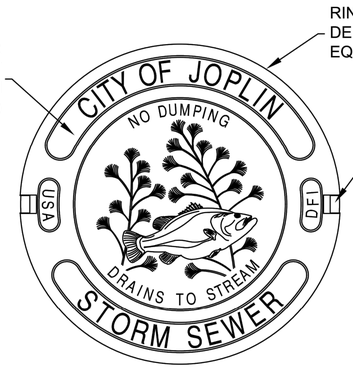
JOPLIN, MISSOURI

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checked by: CAD
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QA/QC by: ENG
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drawing no.: STM-DTL01_D170642
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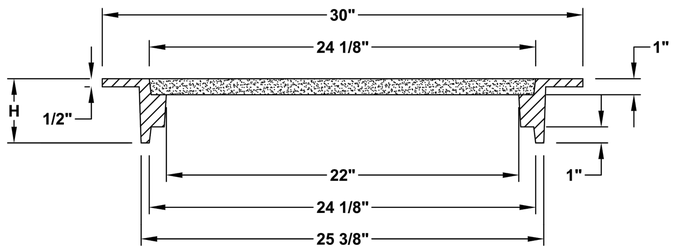
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44 of 88

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PLAN
N.T.S.

NOTE:
THIS LID IS FOR INSTALLATIONS BEHIND STREET CURBS.
FOR INSTALLATIONS SUBJECT TO TRAFFIC LOADS IN
PUBLIC ROADS, USE STANDARD SANITARY SEWER MH LID.



SECTION
N.T.S.

NOTES:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. RING IS REVERSIBLE AND CAN BE INSTALLED WITH FLANGE UP OR DOWN.
3. AVAILABLE HEIGHTS (H) ARE 4", 7.5", & 8".

MATERIAL: CAST GRAY IRON ASTM A-48,
CLASS 35B FINISH: NO PAINT

STM-06

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	STANDARD STORM SEWER RING & COVER
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: STM LID	

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PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

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STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

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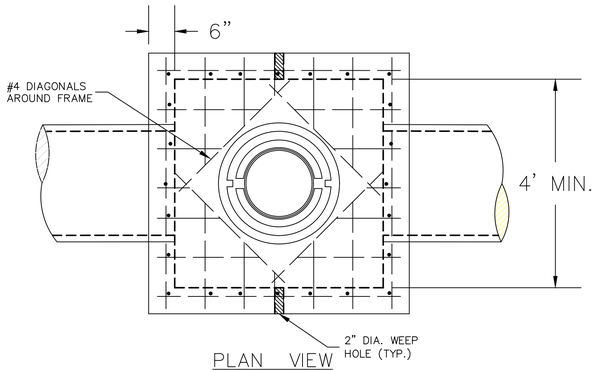
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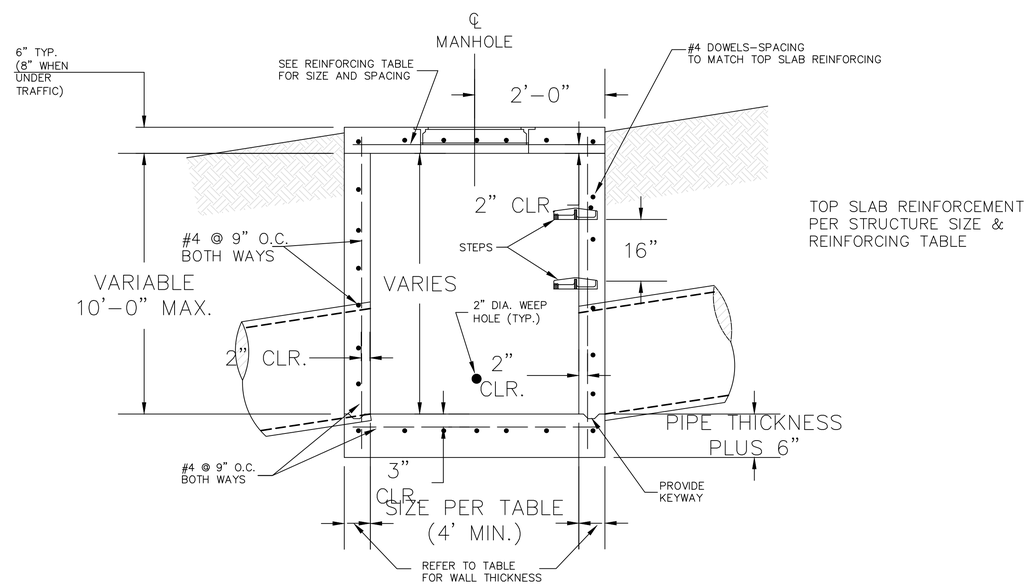
AREA INLET NOTES

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 2" COVER UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI –TOP 18" SHALL BE CAST–IN–PLACE.
4. INVERTS SHALL BE POURED MONOLITHICALLY WITH FOOTING.
5. PIPES MAY ENTER BOX FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 2".
6. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT 4 FT OF DEPTH AND GREATER (FROM INVERT TO RIM). CENTERLINE OF MANHOLE LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
7. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.

INSIDE DIMENSION	MIN. WALL THICKNESS	*TOP CONCRETE SLAB REINFORCING	MIN. TOP SLAB THICKNESS	SPECIFIED GRATE
4'	6"	# 4'S @ 7" O.C. E.W.	7"	NEENAH R–3437
4.5'	6"	# 5'S @ 9" O.C. E.W.	8"	NEENAH R–3438–A
7'	6"	# 5'S @ 9" O.C. E.W.	8"	NEENAH R–3452–C2 x2

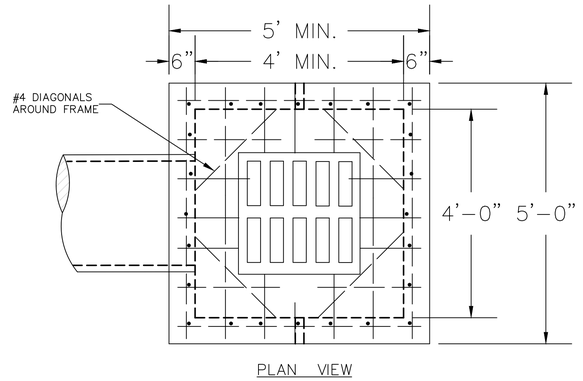


PLAN VIEW

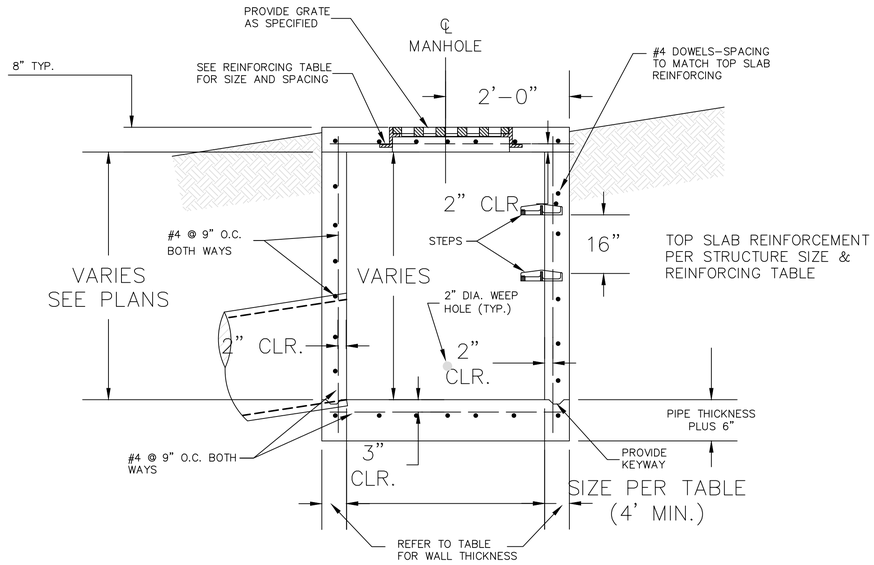


ELEVATION

JUNCTION BOX



PLAN VIEW



ELEVATION

AREA INLET

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STORM SEWER DETAILS

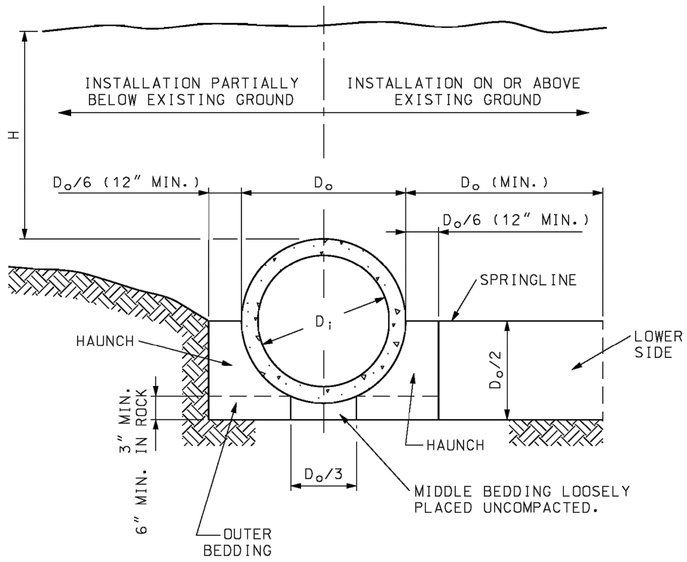
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: STM-DTL02_D170642
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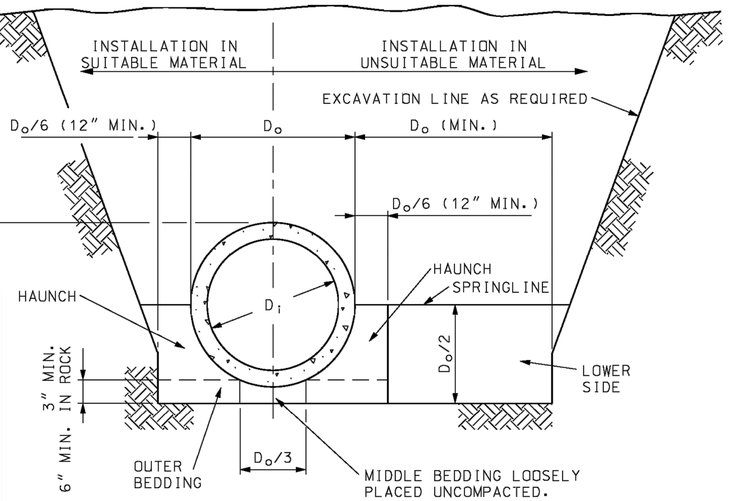
EMBANKMENT INSTALLATIONS

CONSTRUCTION SEQUENCE
1. PLACE BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

MAXIMUM DIAMETER AND MAXIMUM FILL HEIGHT

INSTALLATION TYPE	CLASS OF PIPE				
	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V
	MAXIMUM DIAMETER (INCHES)				
	108	108	108	84	72
	MAXIMUM FILL HEIGHT IN (FEET)				
TYPE 1	12	15	21	33	51
TYPE 2	9	12	17	26	39
TYPE 3	7	9	13	20	30
TYPE 4	4	6	9	13	20

IF FILL HEIGHT EXCEEDS 51 FEET AND PIPE DIAMETER IS 36 INCHES OR LESS A SPECIAL PIPE DESIGN AND INSTALLATION PROCEDURE SHALL BE REQUIRED. IF FILL HEIGHT EXCEEDS 51 FEET AND PIPE DIAMETER IS GREATER THAN 36 INCHES A SPECIAL DESIGN PIPE IS NOT ALLOWED.

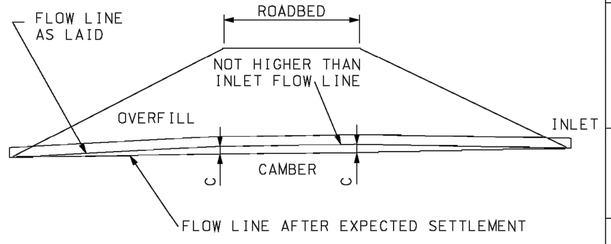


TRENCH INSTALLATION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

- LEGEND -

D_i = NORMAL INSIDE DIAMETER OF PIPE.
D_o = OUTSIDE DIAMETER OF PIPE.
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL



NOTE:
ON YIELDING SOIL, PIPE CULVERTS SHALL BE PLACED ON A CAMBERED FLOW LINE. THE AMOUNT OF CAMBER WILL VARY WITH SOIL CONDITION AND SHALL BE SPECIFIED ON THE DESIGN PLANS.

TYPICAL CAMBERED FLOW LINE

BEDDING AND COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	COMPACTION REQUIREMENTS (MIN. STANDARD PROCTOR %)					
		HAUNCH AND OUTER BEDDING			LOWER SIDE BEDDING		
		CATEGORY 1 SOIL (A)	CATEGORY 2 SOIL (B)	CATEGORY 3 SOIL (C)	CATEGORY 1 SOIL (A)	CATEGORY 2 SOIL (B)	CATEGORY 3 SOIL (C)
1	D_o/24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE D_o/12 MIMIMUM, NOT LESS THAN 6".	95	N/A	N/A	90	95	100
2	D_o/24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE D_o/12 MIMIMUM, NOT LESS THAN 6".	90	95	N/A	85	90	95
3	D_o/24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE D_o/12 MIMIMUM, NOT LESS THAN 6".	85	90	95	85	90	95
4	D_o/24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE D_o/12 MIMIMUM, NOT LESS THAN 6".	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED	85	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED	85

(A) GRAVELLY SAND
(B) SANDY-SILT
(C) SILTY CLAY

GENERAL NOTES:

MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE BETWEEN PIPES OF $\frac{1}{2}$ D_o OR 12", WHICHEVER IS GREATER, BUT NOT TO EXCEED 36".

CLASS I AND CLASS II REINFORCED CONCRETE PIPE SHALL ONLY BE USED FOR SEWERS IN TRENCHES OUTSIDE ROADBED AND STREET LIMITS.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ERIC E SCHROETER NUMBER PE-28411 STATE OF MISSOURI PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

RIGID CULVERT INSTALLATION METHODS
REINFORCED CONCRETE PIPE CULVERTS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

726.30J

SHEET NO. 1 OF 2

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Jonathan Peitz 2024.04 STATE OF MISSOURI JONATHAN W. PEITZ NUMBER PE-2017019023 PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER MO# PE-2017019023

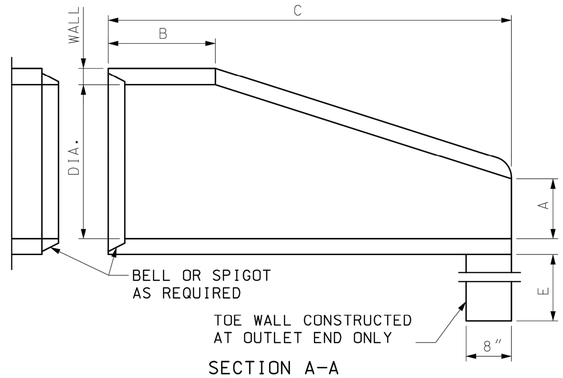
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CITY OF JOPLIN
JOPLIN, MISSOURI
2024

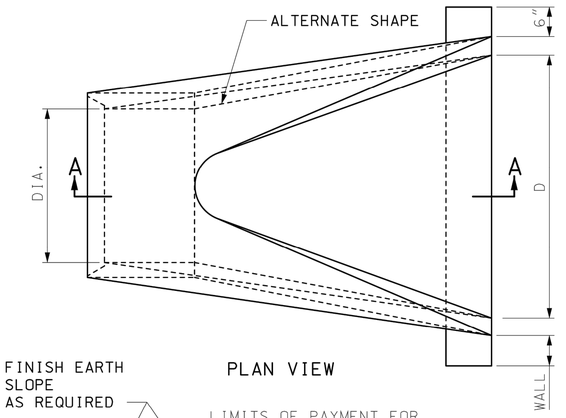
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date: 4/26/2024

SHEET 47 of 88

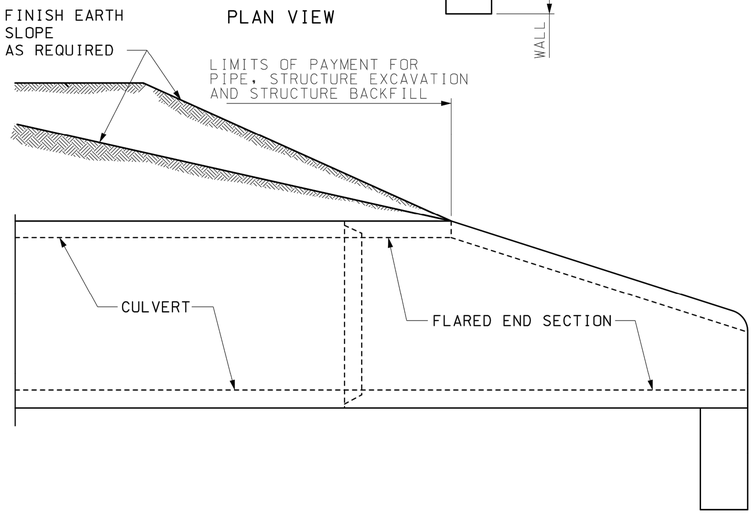
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SECTION A-A



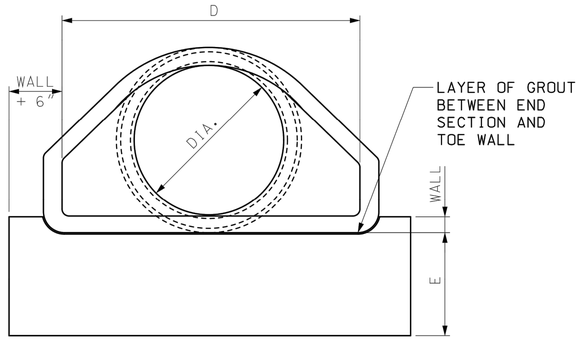
PLAN VIEW



INSTALLATION DETAILS

DIMENSIONS						
DIA.	WALL	A	B MIN.	C MIN.	D	E
12"	2"	4"	4'-0"	6'	2'-0"	18"
15"	2 1/4"	6"	3'-10"	6'	2'-6"	18"
18"	2 1/2"	9"	3'-10"	6'	3'-0"	18"
21"	2 3/4"	9"	3'-2"	6'	3'-6"	18"
24"	3"	9 1/2"	2'-6"	6'	4'-0"	24"
27"	3 1/4"	10 1/2"	2'-1"	6'	4'-6"	24"
30"	3 1/2"	1'-0"	1'-7"	6'	5'-0"	24"
33"	3 3/4"	1'-2"	1'-7"	6'	5'-6"	24"
36"	4"	1'-3"	2'-10"	8'	6'-0"	24"
42"	4 1/2"	1'-9"	2'-11"	8'	6'-6"	24"
48"	5"	2'-0"	2'-2"	8'	7'-0"	24"
54"	5 1/2"	2'-3"	2'-11"	8'	7'-6"	36"
60"	6"	2'-6"	3'-3"	8'	8'-0"	36"
66"	6 1/2"	2'-0"	1'-9"	8'	8'-6"	36"
72"	7"	2'-0"	2'-9"	10'	9'-0"	36"
78"	7 1/2"	2'-3"	2'-3"	10'	9'-6"	36"
84"	8"	2'-6"	2'-0"	10'	10'-0"	36"

REINFORCEMENT					
ADJOINING PIPE DIA.	BARREL SECTION REINFORCEMENT			FLARE SECTION REINFORCEMENT (ONE LAYER ONLY IN CENTER OF WALL)	
	CIRCULAR		ELLIPTICAL		
	INNER CAGE SQ. IN./ LIN. FT.	OUTER CAGE SQ. IN./ LIN. FT.	SQ. IN./ LIN. FT.	AREA OF LONGITUDINAL SQ. IN./ LIN. FT.	AREA OF TRANSVERSE SQ. IN./ LIN. FT.
12"	0.07			0.048	0.048
15"	0.07			0.054	0.054
18"	0.07		0.07	0.060	0.060
21"	0.07		0.07	0.066	0.066
24"	0.07		0.07	0.072	0.072
27"	0.13		0.11	0.078	0.078
30"	0.14		0.12	0.084	0.084
33"	0.15		0.13	0.090	0.090
36"	0.12	0.09	0.13	0.096	0.096
42"	0.15	0.12	0.17	0.108	0.108
48"	0.18	0.14	0.20	0.120	0.120
54"	0.22	0.16	0.24	0.132	0.132
60"	0.25	0.19	0.28	0.144	0.144
66"	0.31	0.23	0.34	0.156	0.156
72"	0.35	0.21	0.39	0.170	0.170
78"	0.40	0.24	0.44	0.185	0.185
84"	0.46	0.28	0.51	0.205	0.205



END VIEW

GENERAL NOTES:

SLIGHT VARIATIONS IN BOTH SHAPE AND DIMENSIONS FROM THOSE SHOWN MAY BE ACCEPTED IF APPROVED BY THE ENGINEER.

NOT MORE THAN THREE LIFT HOLES MAY BE DRILLED OR CAST IN THE END SECTION FOR HANDLING AND LAYING.

LIFT LUGS OR BARS WILL BE PERMITTED IN PRECAST TOE WALLS.

TOE WALLS MAY BE CAST-IN-PLACE OR PRECAST.

STEEL FIBERS MAY BE USED IN LIEU OF REBAR OR COLD DRAWN STEEL WIRE AS PER SECTION 1032.3.4.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FLARED END SECTION

PRECAST CONCRETE

DATE EFFECTIVE: 04/01/2016
DATE PREPARED: 2/11/2016

732.00S

SHEET NO. 1 OF 3

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

olsson
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

Jonathan Peitz
2024.04.26 10:58:00 -05'00'

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: STM-DTL02_D170642
date: 4/26/2024

SHEET 48 of 88

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C_PCORR_D170642
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DATE: Apr 26, 2024 10:59am
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LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- SILT FENCE
- SEEDED AREA

N

0' 10' 20' 40'
SCALE IN FEET

MATCHLINE SEE SHEET

STA 209+50.00
49

STA 108+57.84
50

DUQUESNE ROAD

211+00

210+00

209+00

208+00

207+00

206+00

ZORA STREET

104+00

105+00

106+00

107+00

108+00

103+00

LIMITS OF DISTURBANCE

EXISTING RIGHT-OF-WAY

PROPOSED PERMANENT DRAINAGE EASEMENT

PROPOSED RIGHT-OF-WAY

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

℄ DRIVE 1

℄ DRIVE 2

℄ DRIVE 7

℄ DRIVE 8

℄ ZORA STREET

PC: 103+14.23

PT: 209+68.61

PRC: 208+69.81

PC: 208+47.80

PT: 106+52.20

PRC: 106+13.95

PT: 206+52.20

PRC: 206+20.01

PC: 107+50

PI: 207+50

PC: 205+60.70

ASPHALT

GRAVEL

BURIED AT&T MARKER

BURIED SOUTH STAR GAS LINE MARKER POST

BURIED GAS MARKER POST

BLDG

NOTE:
CONTRACTOR SHALL ADJUST THE SWPPP AND THE EROSION CONTROL PLAN PER CONSTRUCTION PHASE AND FIELD CONDITIONS.

olsson
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

Jonathan Peitz
2024.04.26 10:59:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

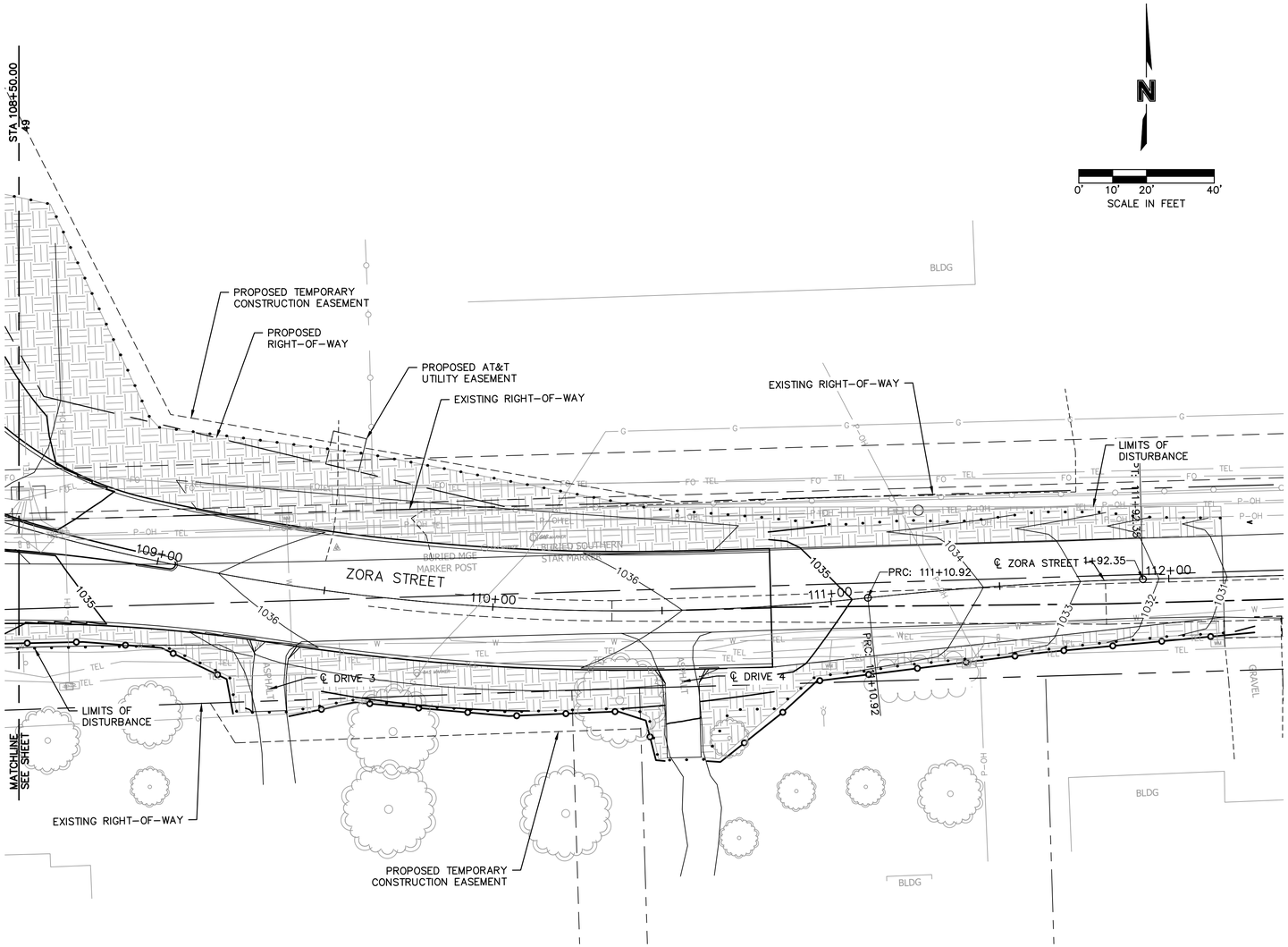
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checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_SOD01_D170642
date:	4/26/2024

SHEET
49 of 88

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USER: skendall C_XTOPO_ALL-POINTS_D170642

LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- SILT FENCE
- SEEDED AREA



NOTE:
CONTRACTOR SHALL ADJUST THE SWPPP AND THE EROSION CONTROL PLAN PER CONSTRUCTION PHASE AND FIELD CONDITIONS.

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Jonathan Peitz
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MO# PE-2017019023

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REVISIONS

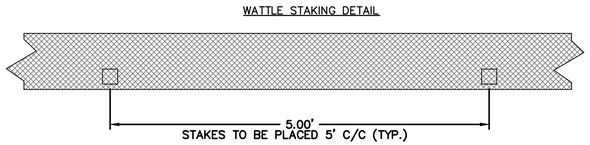
EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

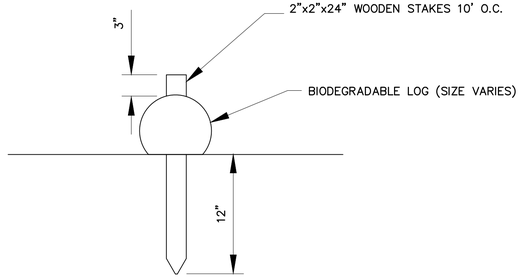
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by:	ZLL/SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	C_SOD01_D170642
date:	4/26/2024



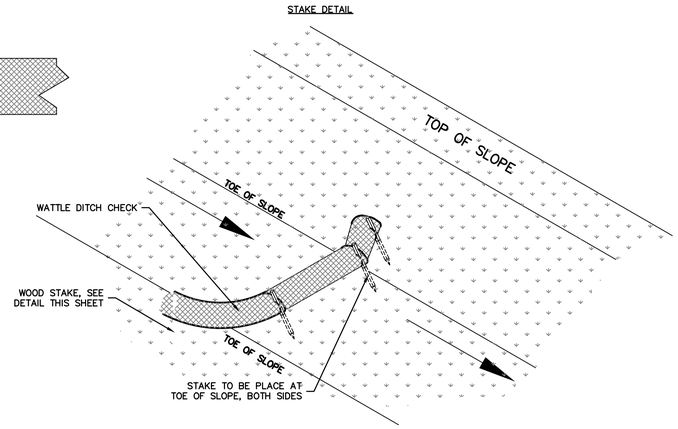


BIODEGRADABLE LOG

N.T.S.

NOTE:

8" BIODEGRADABLE LOG LOCATED ALONG THE PROJECT BOUNDARIES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS.



INSTALLATION DETAIL

NOTES:

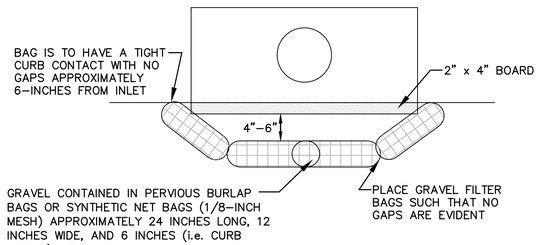
1. WATTLE BARRIER SHALL BE MAINTAINED UNTIL ADJACENT VEGETATION IS ESTABLISHED, OR AS DIRECTED BY ENGINEER.
2. 12" BIODEGRADABLE LOGS WILL BE USED FOR DITCH CHECKS.
3. WATTLE BARRIER SHALL BE INSPECTED AND REPAIRED, WEEKLY, IF NECESSARY, OR AS REQUIRED BY NPDES PERMIT.
4. WATTLE BARRIER REMOVALS WILL BE THE CONTRACTORS RESPONSIBILITY.
5. WATTLE BARRIER ARE TO BE INSTALLED AT LOCATION SHOWN ON PLANS.
6. 2" X 2" X 48" WOODEN STAKES ARE REQUIRED FOR WATTLES.
7. ALL MATERIAL SHALL BE ON LOCAL STATE APPROVED PRODUCT LIST.

WATTLE BARRIER DETAIL

NO SCALE

EROSION CONTROL NOTES

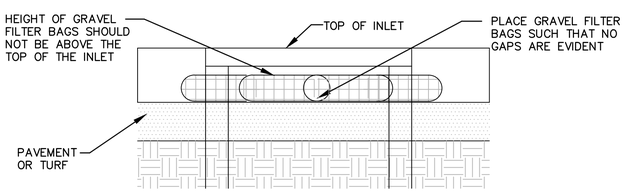
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN SHOULD BE USED AS A GUIDE AND REPRESENTS THE MINIMUM EROSION CONTROL DEVICES REQUIRED.
3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION & SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
4. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EROSION & SEDIMENT CONTROL DEVICES AFTER EACH RAINFALL EVENT.
5. THE CONTRACTOR SHALL PROVIDE ANY FURTHER EROSION CONTROL MEASURES IN ADDITION TO THOSE LISTED TO ENSURE THAT SILT WILL NOT LEAVE THE PROJECT CONFINES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION & SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AT COMPLETION OF CONSTRUCTION.
8. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
9. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY STABILIZATION AS REQUIRED.
10. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA OF THE ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, CITY OF JOPLIN, MISSOURI.
11. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE STREETS OF DEPOSITED MUD AS FREQUENTLY AS NEEDED AS DETERMINED BY THE ENGINEER IN ORDER TO KEEP THEM USABLE AND TO CONTROL DUST.
12. CONTRACTOR IS RESPONSIBLE FOR PHASED INSTALLATION OF EROSION CONTROL BMP'S IN ORDER TO PREVENT SEDIMENT FROM BREACHING THE LIMITS OF DISTURBANCE.
13. WATER HAUL ROUTES AND GRADING AREAS AS REQUIRED TO CONTROL DUST. ALL REQUESTS FOR WATER SHALL BE COMPLETED IMMEDIATELY. ALL WORK, MATERIALS, AND EQUIPMENT REQUIRED IS CONSIDERED SUBSIDIARY TO EROSION CONTROL.
14. ALL SEEDING AND MULCHING ASSOCIATED WITH THE CONTRACTOR'S STAGING AREA AND HAUL ROUTES IS CONSIDERED SUBSIDIARY TO MOBILIZATION.
15. SEE GENERAL NOTES ON SHEET 2 FOR ADDITIONAL REQUIREMENTS.



TOP VIEW

* 5/8" CRUSHED LIMESTONE

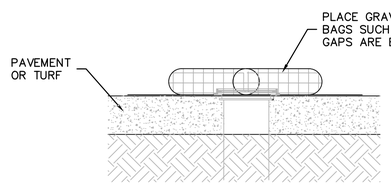
BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.



FRONT VIEW

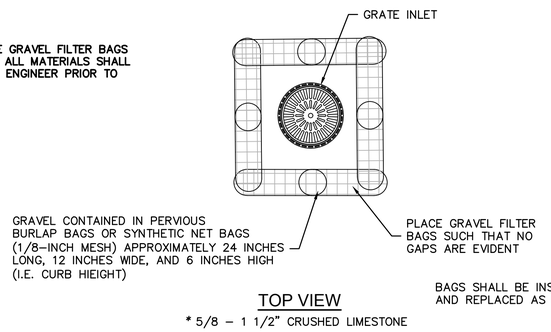
GRAVEL FILTER BAG AT CURB INLET DETAIL

NOT TO SCALE



FRONT VIEW

NOTE:
CONTRACTOR MAY USE GRAVEL FILTER BAGS OR APPROVED EQUAL. ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK BEGINNING.



TOP VIEW

* 5/8 - 1 1/2" CRUSHED LIMESTONE

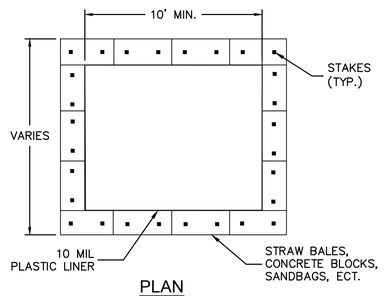
BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.

GRAVEL FILTER BAGS AROUND GRATE DETAIL

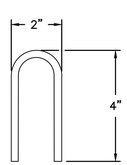
NOT TO SCALE

NOTES:

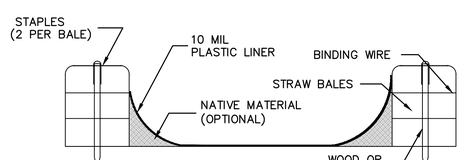
1. ACTUAL LAYOUT LOCATIONS & NUMBER OF WASHOUTS TO BE DETERMINED BY CONTRACTOR IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASHOUTS SHALL BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAINS, OPEN DRAINAGE FACILITIES AND WATER COURSES. AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
4. INSTALL BEFORE THE START OF ANY CONCRETE ACTIVITIES OR DELIVERIES.
5. INSPECT AND REPAIR, WEEKLY, IF NECESSARY OR AS REQUIRED BY NPDES PERMIT. REMOVE AND DISPOSE OF HARDENED CONCRETE AND RETURN THE FACILITY TO A FUNCTIONAL CONDITION. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
6. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE WASHOUT SHALL BE BACKFILLED AND REPAIRED.



PLAN



STAPLE



SECTION

CONCRETE WASHOUT DETAIL

NOT TO SCALE

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Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

Jonathan Peitz
2024.04.26 10:59:00 -05'00'

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

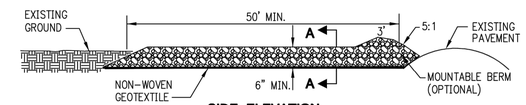
2024

drawn by:	ZLL/SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
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drawing no.C_ERC-DTL_D170642	
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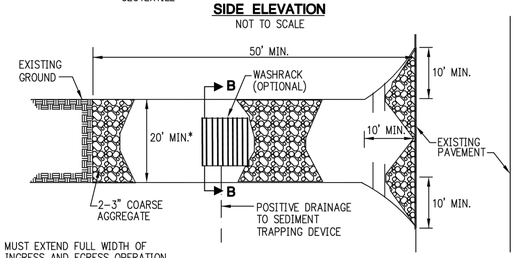
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51 of 88

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TEMPORARY CONSTRUCTION ENTRANCE

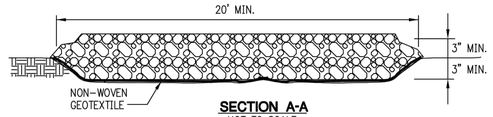


SIDE ELEVATION
NOT TO SCALE

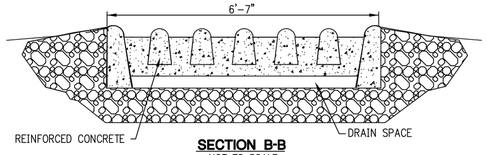


* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

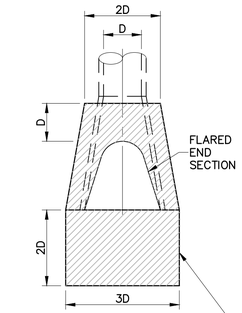
TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

A. INSTALLATION
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2% CONSTRUCT A 6-TO 8-INCH HIGH RIDE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITION ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

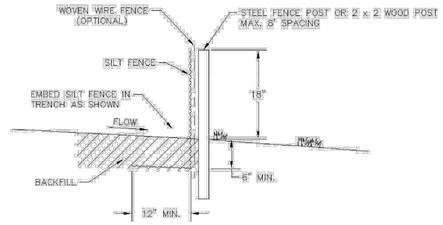
B. TROUBLESHOOTING
1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURE.
   b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ASS GEOTEXTILE FABRIC.
   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C. INSPECTION AND MAINTENANCE
1. INSPECT AND REPAIR STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY, IF NECESSARY, OR AS REQUIRED BY MDNR.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. AS SOON AS PRACTICABLE REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKE ROAD PAVEMENT AS SOON AS PRACTICABLE.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.



EITHER 12" THICK TYPE 2 ROCK BLANKET (CITY OF JOPLIN SPEC.) OR SCOUR STOP

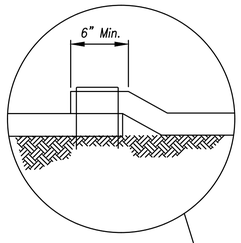
SLOPE PROTECTION DETAIL
N.T.S.



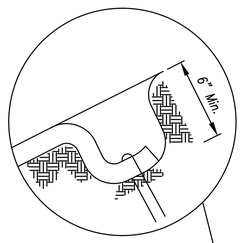
NOTES:
1. PLACE SILT FENCE AT DOWNSLOPE LIMIT OF AREA TO BE GRADED.
2. SILT FENCE SHALL BE PLACED ALONG A LEVEL CONTOUR WITH AN ALLOWANCE OF ± 4 INCHES.
3. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.
8. AT EACH END OF SILT FENCE, TURN FENCE UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES 18 INCHES.

SILT FENCE DETAIL
NOT TO SCALE

Longitudinal Seam



Anchor Slot

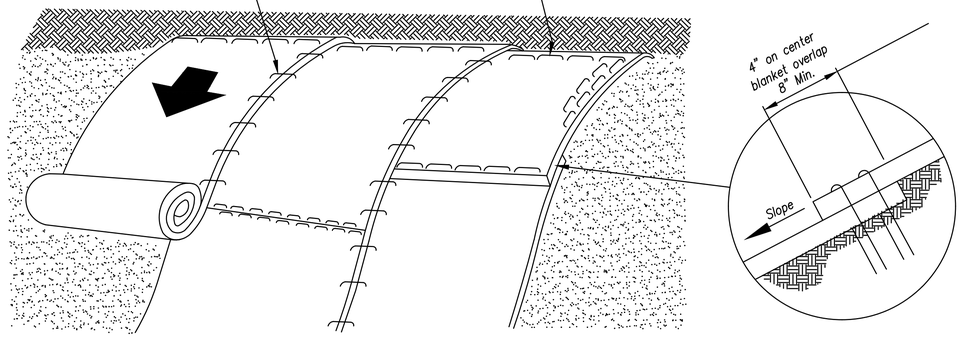


General Notes:

1. *APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.*
2. *Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.*
3. *LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.*

Maintenance:

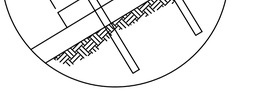
1. *Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.*
2. *Edges or seams that are loose or frayed shall be secured.*



Installation on Slopes

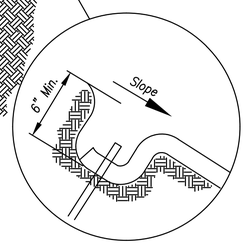
Splice Seam

Longitudinal Seam



Anchor Fold





Edge Anchor

Splice Seam

EROSION CONTROL BLANKET
NOT TO SCALE

Notes for Installation in Channels:

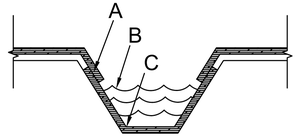
1. *Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.*
2. *ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.*
3. *SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.*
4. *CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.*
5. *EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.*
6. *TERMINUS: The bottom edge of the mat shall be anchored.*

Critical Points:

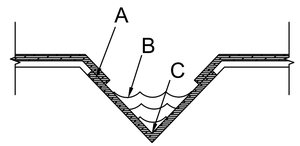
A – *Overlaps and seams;*

B – *Projected water line;*

C – *Channel bottom / side slope vertices;*



Trapezoidal Channel



V Channel

Installation in Channels

olsson
Olsson - Civil Engineering
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Jonathan Peitz
2024.04.26 10:59:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAILS

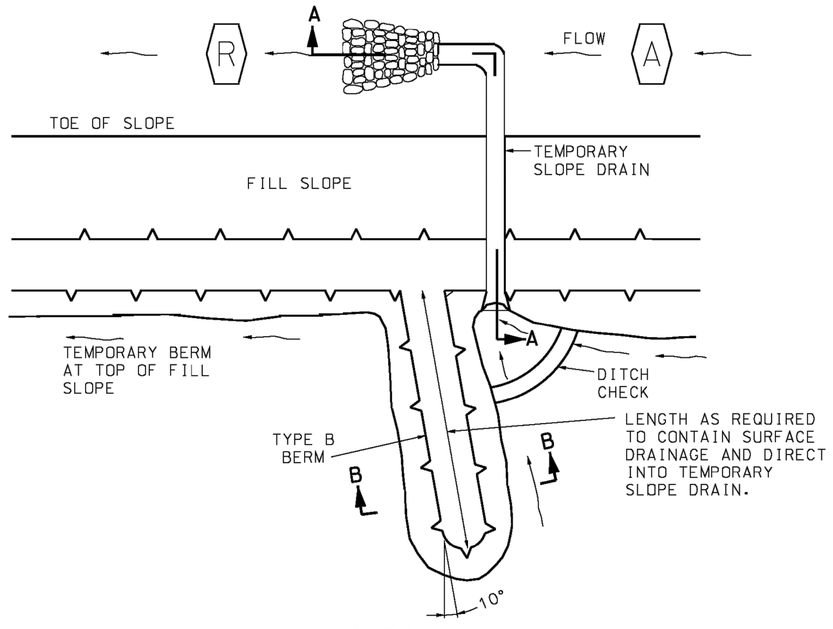
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

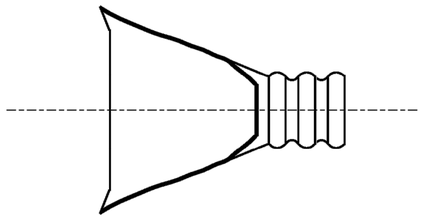
2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.C_ERC-DTL_D170642
date: 4/26/2024

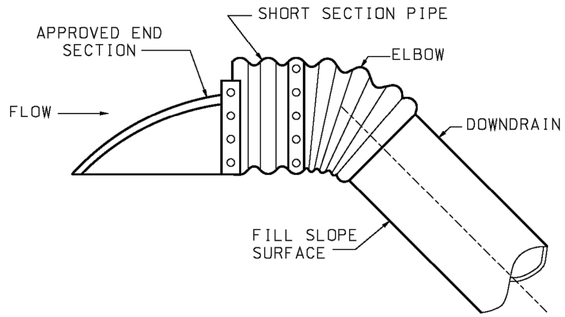
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DATE: Apr 26, 2024 10:59am XREFS: C_PTBLK_D170642



PLAN VIEW

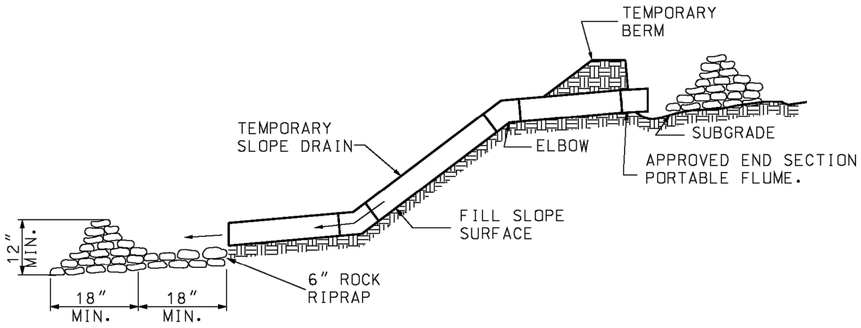


PLAN VIEW



SECTION VIEW

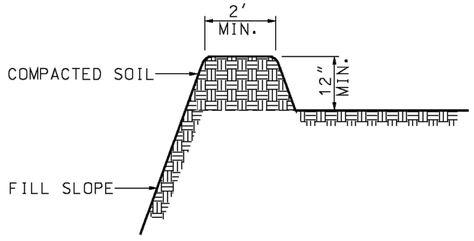
TEMPORARY SLOPE DRAIN INLET TREATMENT



NOTE:

IN SOME CASES IT MAY BE NECESSARY TO EMBED METAL OR PLASTIC PIPE INTO THE FILL SLOPE TO SECURE PROPER ANCHORAGE.

SECTION A-A



SECTION B-B
TYPE B BERM

TEMPORARY BERM

(METAL, FLEXIBLE RUBBER OR PLASTIC PIPE)

NOTE:
MAXIMUM LENGTH BETWEEN SLOPE DRAINS SHALL BE APPROXIMATELY 500 FEET.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES
SLOPE DRAINS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

806.10J

SHEET NO.
4 OF 6

olsson
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2024.04.26 11:00:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.C_ERC-DTL_D170642
date: 4/26/2024

SHEET
53 of 88

DWG: F:\2017\0501-1000\017-0642-D\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ERC-DTL_D170642.dwg USER: skendall
DATE: Apr 26, 2024 11:00am XREFS: C_PTBLK_D170642

GENERAL NOTES

ALL WORK SHALL COMPLY WITH THE CITY OF JOPLIN, MO., DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS, SECTION 7000 AND OTHER SECTIONS REQUIRED TO RESTORE THE CITY'S "RIGHT-OF-WAY" TO ITS ORIGINAL CONDITION.

1. CLASSIFICATION:
   1.1. MAIN STREET – INTERSECTION LIGHTING ZORA STREET AND DUQUESNE ROAD INTERSECTION CLASSIFICATION IS MAJOR/MAJOR WITH PEDESTRIAN CONFLICT CLASSIFICATION LOW. PAVEMENT CLASSIFICATION IS R3. LIGHT LOSS FACTOR IS 0.91.

2. THE STREET LIGHTING LAYOUT WAS BASED ON THE AUTOBAHN ATB2-AMERICAN ELECTRIC LIGHTING (OR APPROVED EQUAL). LUMINAIRES ARE TO BE TYPE II LED DISTRIBUTION PATTERN WITH 4000 CCT RATING. LUMINAIRES SHALL BE ADJUSTED AND LEVELED TO MATCH THE ELEVATION OF THE PAVEMENT. LUMINAIRE MOUNTING HEIGHT SHALL BE AS FOLLOWS:
   2.1 88W LED COBRA HEAD LUMINAIRE WITH 30' NOMINAL MOUNTING HEIGHT ON 27.5' BRUSHED ALUMINUM POLE WITH 8' LUMINAIRE ARM (SINGLE MEMBER ARM, 2.5' RISE). (ATB2_40BLEDE70_XXXXX_R2 OR APPROVED EQUAL)

3. ALL DISTRIBUTION CABLE SHALL BE PLACED IN A 2" SCHEDULE 40 PVC CONDUIT. ALL CONDUIT RUNS SHALL BE PLACED 1.5' BACK OF CURB WHERE POSSIBLE AND AT A MINIMUM DEPTH OF 24". CIRCUITS ARE 240V, 1ø.

4. INDIVIDUAL AND SYSTEM GROUNDS SHALL BE INSTALLED ON ALL CIRCUITS (POLE GROUNDING RODS AND A GROUND WIRE FROM POLE TO POLE).

5. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF EXISTING UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE. THE CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND PIPE LINES, CONDUITS AND STRUCTURES BY CONTACTING OWNERS OF UNDERGROUND UTILITIES.

6. ALL CONDUITS ARE TO BE TRENCHED IN PLACE AFTER ROADWAY ROUGH GRADE IS ESTABLISHED AND PRIOR TO ANY FINAL ROADWAY PAVING, CURB & GUTTER, MEDIAN OR SIDEWALK SECTIONS ARE PLACED. AT OPTION OF CONTRACTOR, CONDUITS UNDER STREET SECTIONS MAY BE BORED AFTER ROADWAY IMPROVEMENTS ARE COMPLETED.

7. ALL CONDUIT MAY BE TRENCHED UNLESS IT CROSSES NEW OR EXISTING PAVEMENT, THEN IT MUST BE BORED HORIZONTALLY FOR A 2" CONDUIT, 30" BELOW TOP OF PAVEMENT.

8. TYPICAL POLE STYLE SHALL BE A ROUND TAPERED ALUMINUM FOR 30' MOUNTING HEIGHT POLES WITH 8' ARM. THE POLE SHALL BE INSTALLED PER PLANS. PLACE POLE/FIXTURE 6' B.C. UNLESS OTHERWISE NOTED.

9. ALL STREET LIGHT POLES, MATERIALS AND CONTROLLER MUST BE INSTALLED WITHIN THE CITY'S "RIGHT OF WAY".

10. DISTRIBUTION CABLE MUST BE PER "ONE LINE DIAGRAM", 2-1C #4 DISTRIBUTION AND 1-1C #4 GROUND, TYPE RHH/RHW/USE, 600V, COPPER STRANDED, U.L. LISTED, AND COLOR CODED RED, BLACK, AND GREEN FOR A GROUNDED 240V SYSTEM (SINGLE PHASE).

11. CABLE USED WITHIN THE POLES SHALL BE 3-1C #10, TYPE RHW/USE, 600V RATED, COPPER STRANDED, U.L. LISTED AND COLOR CODED RED, BLACK, AND GREEN ACCORDING TO THE NEC.

12. PROVIDE AND INSTALL IN EACH POLE BASE, 3 SINGLE-POLE, SET-SCREW, IN-LINE, BREAKAWAY, FUSEHOLDERS. USE BUSSMAN (OR APPROVED EQUAL) MODEL NO. HEB-JW-RYC AND HEB-JW-RLC-J (LAST POLE). FOR THE 2 "HOT" BREAKAWAY CONDUCTORS, PLACE A 10AMP KTK FUSE IN EACH BREAKAWAY FUSEHOLDER AND A NNB COPPER SLUG IN THE SYSTEM GROUND FUSEHOLDER.

13. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE PUBLIC WORKS DEPARTMENT.

14. THE CONTRACTOR SHALL INSTALL A CABLE RETAINER ASSEMBLY MOUNTED BETWEEN A LUMINAIRE TYPE POLE AND FOUNDATION ANCHOR. THE RETAINER IS DESIGNED TO SECURE THE ELECTRICAL CONDUCTORS TO PREVENT CONDUCTOR THEFT.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION OF THE CONSTRUCTION SITE TO CITY SPECIFICATIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH ANY DAMAGE, INCLUDING BUT NOT LIMITED TO LANDSCAPING, SPRINKLER SYSTEMS, WATER, SEWER, CURBS AND SIDEWALK, GAS MAIN, ETC..., CAUSED BY THE CONSTRUCTION.

16. LUMINAIRE AND CONTROLLER CABINET LABELS: THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE AND CONTROLLER CABINET IDENTIFICATION LABELS ACCORDING TO THE CONSTRUCTION PLANS. IDENTIFICATION LABELS SHALL CONSIST OF THREE LETTERS AND FOUR NUMERALS IN VERTICAL ORIENTATION WITH THE LETTERS AT THE TOP SO AS TO READ DOWNWARD. LEGEND SHALL BE 2 INCH SERIES "C" UPPER CASE BLACK CHARACTERS ON SILVER RETRO-REFLECTIVE SHEETING WITH PRESSURE SENSITIVE ADHESIVE BACKING, AS PRESCRIBED FOR USE ON STANDARD HIGHWAYS SIGNS IN THE FHWA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. LABELS FOR DECORATIVE POLES MUST BE COORDINATED WITH THE STREET LIGHTING SECTION.

    THE LABEL SHALL BE POSITION ON THE VERTICAL AXIS OF THE POLE FACING THE STREET AND 8-10 FEET ABOVE THE PAVEMENT SURFACE. LABELS ON CABINETS SHALL BE POSITIONED NEAR THE TOP OF THE DOOR ADJACENT TO THE DOOR HINGE.

17. ALL EQUIPMENT REMOVED SHALL BE RETURNED IN GOOD CONDITION TO THE CITY OF JOPLIN, MO AT THE CONTRACTORS EXPENSE. ANY EQUIPMENT DAMAGED DURING REMOVAL SHALL BE PAID FOR BY THE CONTRACTOR.

SUMMARY OF STREET LIGHTING QUANTITIES*

ITEM	UNIT	QUANTITY
EDA PARTICIPATING		
27.5' ALUMINUM POLE, 30' MOUNTING HEIGHT	EA	9
STREET LIGHT FOUNDATION	EA	9
COBRA HEAD LUMINAIRE (240V), 88 WATT LED, TYPE II	EA	9
BRACKET ARM, 8' LENGTH W/2'6" RISE, SINGLE ARM	EA	9
POWER PEDESTAL-PAD MOUNTED, 4-CIRCUIT	EA	1
PEDESTAL-PAD FOUNDATION	EA	1
TYPE II JUNCTION BOX	EA	6
2" SCHEDULE 40 PVC CONDUIT (LIGHTING)	L.F.	1,010
3" SCHEDULE 40 PVC CONDUIT (CONTROLLER TO TRANSFORMER)	L.F.	150
3-1c #2 RHH/RHW/USE CU (POWER)	L.F.	200
3-1c #4 USE CU (DISTRIBUTION)	L.F.	1,070
1-1c #10 TYPE RHW/USE CU (POLE & BRACKET)	L.F.	378
FUSED CONNECTOR KIT w/8AMP FUSE	EA	18
UNFUSED CONNECTOR	EA	9
MULTITAP CONNECTOR	EA	27
GROUND ROD (1/2"X10')	EA	10
BREAKAWAY POLE DEVICE	EA	9
EDA NON-PARTICIPATING		
EMPIRE SERVICE PEDESTAL (CITY LEASE EQUIPMENT)	EA	1

* THESE QUANTITIES WERE PREPARED FOR THE CONTRACTORS CONVENIENCE AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED ON THE CONTENTS OF THESE PLANS.

INTERSECTION LEVELS FOR ZORA STREET/DUQUESNE ROAD:

1. ROADWAY CLASSIFICATION: MAJOR/MAJOR
2. PEDESTRIAN CONFLICT: LOW
3. ILLUM. AVE.: 1.7 FC
4. ILLUM. AVE/MIN: 3.0 TO 1
5. LLF = 0.91

LEGEND

- 30' COBRA HEAD LUM. STREET LIGHT POLE
- STREET LIGHT CONDUIT
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- STREET LIGHT TYPE II JUNCTION BOX
- STREET LIGHT POWER PEDESTAL

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STATE OF MISSOURI
JEREMY SCOTT STREET
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
04/26/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES AND LEGEND

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: JRC
checked by: JSS
approved by: JSS
QA/QC by: JSS
project no.: 017-0642-D
drawing no.: F_LTG_D170642
date: 4/26/2024

SHEET
54 of 88

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S. HALL STREET

R/W

LCA 4-4 (8')
STA: 107+16.20, 130.3' LT

PROPOSED R/W

LCA 4-3 (8')
STA: 106+73.60, 48.5' LT

INSTALL TYPE 2 JUNCTION BOX
STA: 106+40.40, 28.4' LT

LCA 4-2 (8')
STA: 105+60.99, 25.0' LT

PROPOSED R/W

E. ZORA STREET

104+00

105+00

106+00

107+00

108+00

109+00

110+00

111+00

112+00

INSTALL TYPE 2 JUNCTION BOX
STA: 106+44.66, 39.1' RT

LCA 4-1 (8')
STA: 106+84.05, 64.2' RT

INSTALL 3-1c#4 CABLES
(CIRCUIT 4) IN 2" CONDUIT

INSTALL TYPE 2 JUNCTION BOX
STA: 106+94.05, 85.7' RT

R/W

N. DUQUESNE ROAD

R/W

R/W

LCA 1-2 (8')
STA: 107+79.31, 78.2' LT

INSTALL 3-1c#4 CABLES
(CIRCUIT 1) IN 2" CONDUIT

LCA 1-1 (8')
STA: 108+66.47, 26.6' LT

INSTALL TYPE 2 JUNCTION BOX
STA: 108+72.91, 26.1' LT

INSTALL TYPE 2
JUNCTION BOX
STA: 108+18.63,
54.9' RT

LCA 3-1 (8')
STA: 108+10.85,
65.6' RT

INSTALL 3-1c#4 CABLES
(CIRCUIT 3) IN 2" CONDUIT

LCA 3-2 (8')
STA: 108+11.70, 139.6' RT

INSTALL TYPE 2 JUNCTION BOX
STA: 108+84.90, 17.0' RT

INSTALL 12-1c#4 CABLES
(CIRCUIT 1,2,3,4) IN 2-2" CONDUITS

INSTALL STREET LIGHTING
POWER PEDESTAL. COORDINATE
POWER FEED WITH LIBERTY UTILITIES
FROM ADJACENT POLE.
STA: 108+81.26, 35.0' RT

R/W

LCA 2-1 (8')
STA: 110+80.65, 22.2' RT

INSTALL 3-1c#4 CABLES
(CIRCUIT 2) IN 2" CONDUIT

R/W

E. ZORA STREET

R/W

BURIED AT&T MARKER

BURIED SOUTHERN STAR GAS LINE MARKER POST

GAS MARKER

BURIED MCI MARKER POST

BURIED SOUTHERN STAR MARKER

LEGEND

- 30' COBRA HEAD LUM. STREET LIGHT POLE
- STREET LIGHT CONDUIT
- STREET LIGHT TYPE II JUNCTION BOX
- STREET LIGHT POWER PEDESTAL

MISSOURI ONE CALL SYSTEM
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0' 15' 30' 60'
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STATE OF MISSOURI
JEREMY SCOTT STRETZ
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
04/26/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STREET LIGHTING PLAN

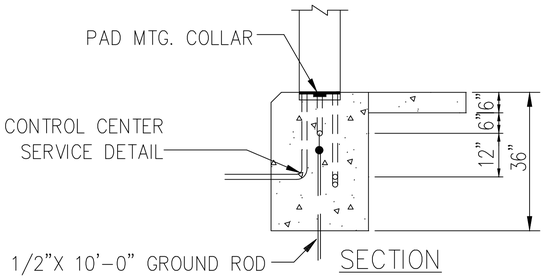
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

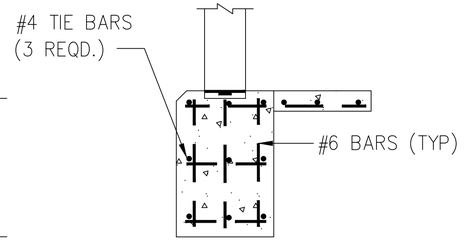
2024

drawn by:	JRC
checked by:	JSS
approved by:	JSS
QA/QC by:	JSS
project no.:	017-0642-D
drawing no.:	F LTG D170642
date:	4/26/2024

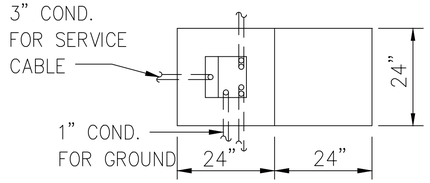
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55 of 88



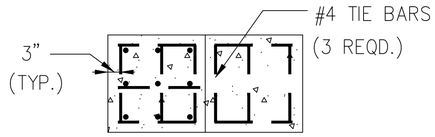
SECTION



SECTION



PLAN

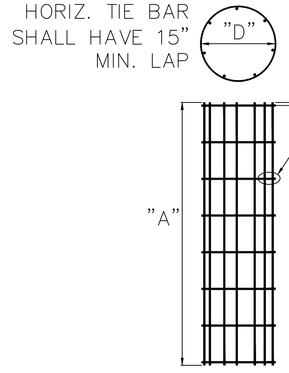


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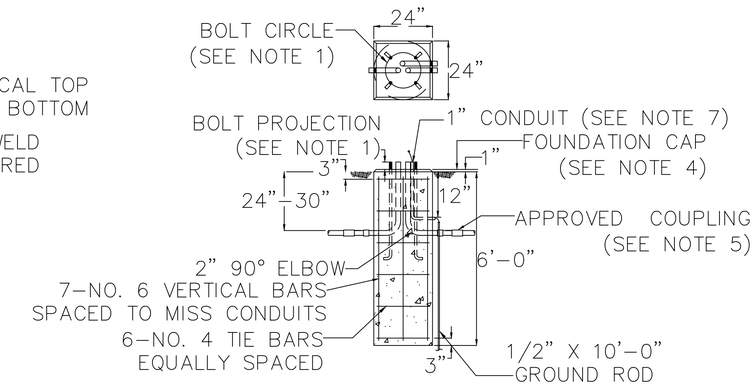
POWER PEDESTAL FOUNDATION

NOT TO SCALE

1) PROVIDE 1/2"X10' GROUND ROD(S) AS REQUIRED FOR MAXIMUM OF 25 OHMS RESISTANCE TO GROUND. EXOTHERMIC WELD ONE END OF NO. 6 AWG GROUND CONDUCTOR TO THE GROUND ROD(S) AND BRUSH ON 2 COATS OF AN INSULATING VARNISH TO THE WELDED AREAS.
2) CONCRETE SLAB TO PROVIDE SEMI-DRY WORKING AREA IN FRONT OF CONTROLLER CABINET.
3) COORDINATE WITH POWER PROVIDER TO INSTALL SECONDARY POWER SERVICE (DIRECT BURY) THRU 2" CONDUIT AND ELBOW.



REBAR CAGE DETAIL



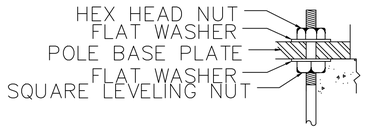
STREET LIGHT FOUNDATION

CONCRETE FOUNDATION NOTES:

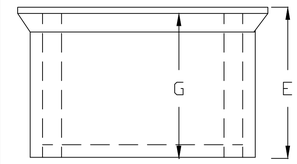
1. *FINAL POLE, ANCHOR BOLT SIZE, ANCHOR BOLT PROJECTION, AND BOLT CIRCLE SHALL BE AS PER MANUFACTURER'S RECOMMENDED PRACTICES.*
2. *ALL CONDUITS AND ANCHOR BOLTS FOR ALL THE NEW POLE BASES SHALL BE RIGIDLY INSTALLED BEFORE CONCRETE IS PLACED. ANCHOR BOLTS SHALL BE SPACED BY MEANS OF A FACTORY CERTIFIED TEMPLATE OR DRAWING, THE CENTER OF WHICH SHALL COINCIDE WITH THE CENTER OF THE BASE.*
3. *ALL CONCRETE POLE BASES SHALL BE CONSOLIDATED BY AN INTERNAL TYPE VIBRATOR.*
4. *FINAL 6" OF CONCRETE FOUNDATION (POLE CAP) SHALL BE FORMED SQUARE. THE CAP SHALL BE FORMED AND POURED AFTER THE ARMS ARE ATTACHED AND THE POLE PLUMB.*
5. *CONDUIT ELBOWS IN CONCRETE FOUNDATIONS SHALL BE CONNECTED TO CONDUIT WITH PVC PIPE NIPPLE AND APPROVED COUPLING. ALL CONDUIT ELBOWS SHALL BE CONSIDERED SUBSIDIARY TO THE POLE BASE.*
6. *ALL CONCRETE USED IN THIS WORK SHALL MEET THE REQUIREMENTS OF THE CITY OF JOPLIN CODE.*
7. *BARE NO. 6 SOLID COPPER GROUND CONDUCTOR FROM INTERNAL POLE GROUNDING NUT TO CLAMP ON GROUND ROD. 1" CONDUIT SHALL BE SUBSIDIARY TO THE COST OF THE FOUNDATION.*
8. *ALL REINFORCING STEEL SHALL BE ASTM A615 GR60.*

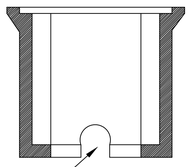
STREETLIGHTING FOUNDATION HORIZONTAL REBAR			
POLE FND. DIA.	*POLE FND. DEPTH*	*REBAR CIR. "D"*	*SPACING*
24"	*6'*	*20"*	*12" MAX.*

STREETLIGHTING FOUNDATION VERTICAL REBAR	
POLE FOUNDATION DEPTH	*LENGTH "A"*
6'-0"	*5'-8"*



ANCHOR BOLT DETAIL



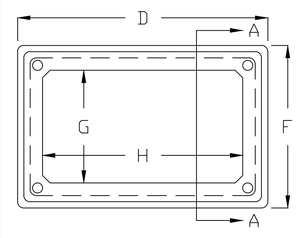


GENERAL NOTE: JUNCTION BOX SHALL MEET ANSI/SCTE77-2002, TIER 8

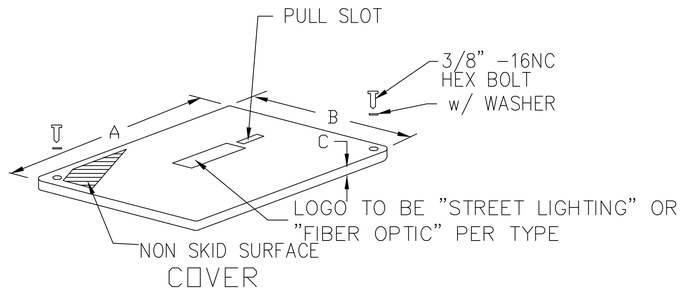
MATERIAL TO BE USED: PRECAST POLYMER CONCRETE

2 - 2 1/2" X 2 1/2" MOUSEHOLES TYPE 11 LIGHTING ONLY

SECTION A-A



BOX

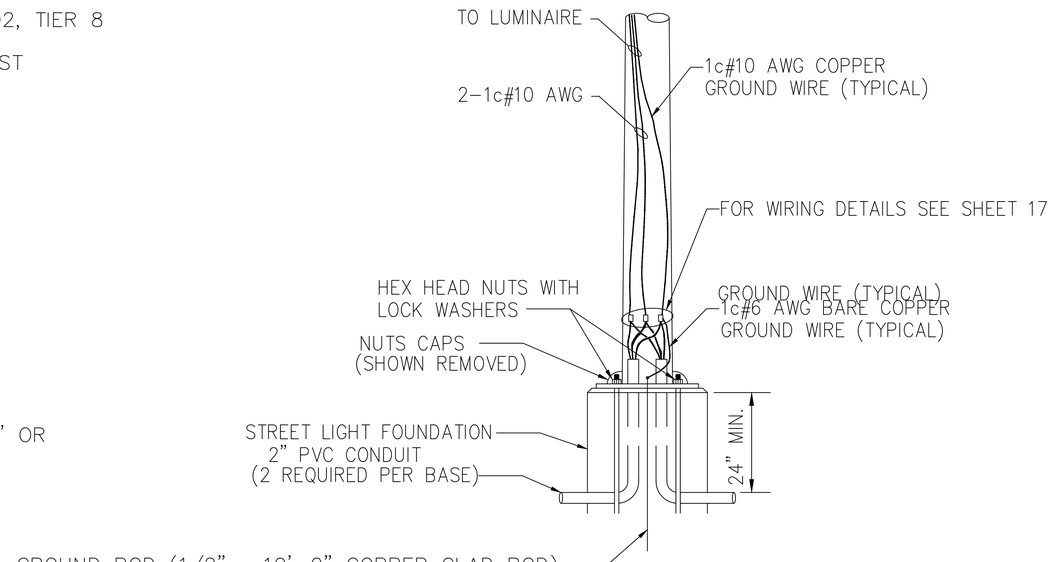


COVER

TYPE	DIMENSIONS (IN.)							
	A	B	C	D	E	F	G	H
II LIGHTING	18 1/2	11 1/2	3/4	20 1/2	13 1/2	12	10 1/4	17 1/4
II FIBER*	35 5/8	24	3	36	36	24	22 1/4	33 7/8

*BOXES MAY BE STACKABLE TO ACHIEVE DIMENSIONS SHOWN

PULL BOX



CAUTION!
CONTRACTOR SHALL REFER TO UTILITY NOTE (ON PLAN) WHEN INSTALLING LIGHT PEDESTAL IN VICINITY OF UTILITIES.

POLE TO BASE CONNECTIONS

NOT TO SCALE

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STREET LIGHTING PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

JOPLIN, MISSOURI

drawn by: JRC
checked by: JSS
approved by: JSS
QA/QC by: JSS
project no.: 017-0642-D
drawing no.: F_LTG_D170642
date: 4/26/2024

SHEET
56 of 88

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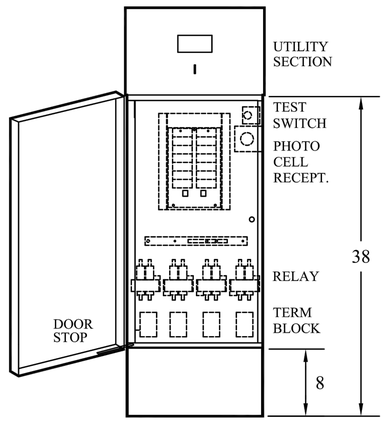
MYERS Pacific Utility Products

USP16-MoDOT1

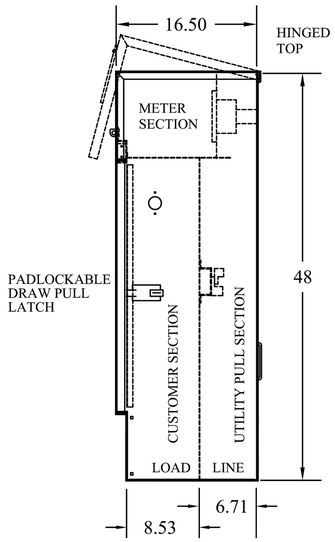
- STYLE 1 -

0 - 200 AMPERES 0 - 600 VOLTS

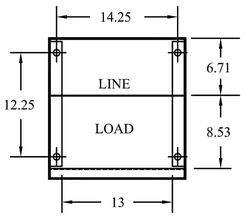
FRONT VIEW



RIGHT SIDE VIEW



TO DEADFRONT



FRONT MOUNTING PLAN

STANDARD PEDESTAL OF MISSOURI DEPARTMENT OF TRANSPORTATION

SINGLE METER SERVICE PEDESTAL

TYPICAL APPLICATIONS INCLUDE PARKING LOT LIGHTING, HIGHWAY, STREET AND SIGN LIGHTING AND TRAFFIC SIGNAL CIRCUITS.

STANDARD FEATURES

METER SOCKET 5th clip JAW ASSY
UTILITY LANDING LUGS 250 KCMIL
STANDARD VOLTAGE 120/240VAC 1 PHASE 3 WIRE
CIRCUIT BREAKER INTERIOR COPPER BUS 12 CIRCUIT
LIGHTNING ARRESTER AVAILABLE 650 VAC (OPTION)
MERCURY RELAY AND TERMINAL BLOCK SIZED FOR EACH LIGHTING CIRCUIT AS REQUIRED
DOOR STOP TO PREVENT CUSTOMER DOOR SWINGING CLOSED
PHOTOELECTRIC SOCKET

SPECIFICATIONS

* NEMA 3R CONSTRUCTION
* .125 ALUMINUM NON-ANODIZED
* OPTION 12 GA. STEEL
  + POLYESTER POWDER-COATED FINISH EXCEEDS ASTM B-117 SPECIFICATIONS
  + FABRICATED FROM CORROSION-RESISTANT ZINC COATED STEEL
  + FOREST GREEN COLOR STANDARD CUSTOM COLORS AVAILABLE
* ALL FACTORY WIRING 600 VOLT RATED COPPER
* ALL COMPONENTS UL LISTED
* ALL EXTERIOR DOORS AND COVERS PADLOCKABLE
* UTILITY COVERS SEALABLE

5/14

MYERS Pacific Utility Products

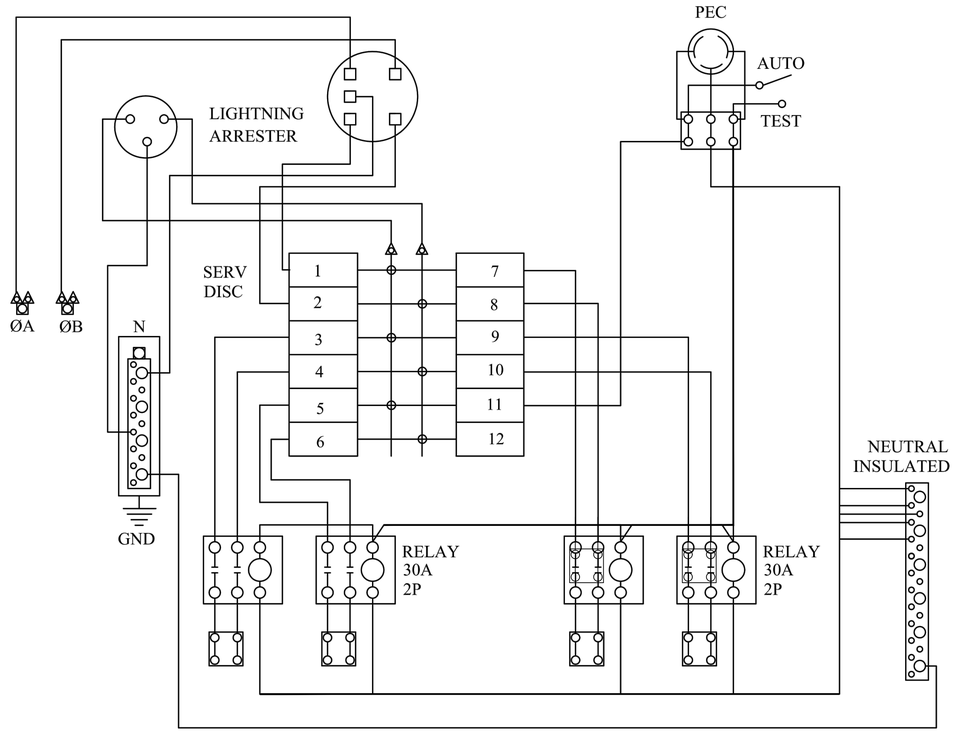
USP16-MODOT1

0 - 100 AMPERES 0 - 240 VOLTS

STANDARD CATALOG NUMBERS

CATALOG NUMBER	AMPS	VOLTAGE	PHASE	MAIN	BRANCH CIRCUITS	AIC RATING
USP16-M2100-112C-MODOT	100	120/240	1PH 3W	YES	10	10,000

CAT. NO. USP16-M2100-112C-MODOT



5/14

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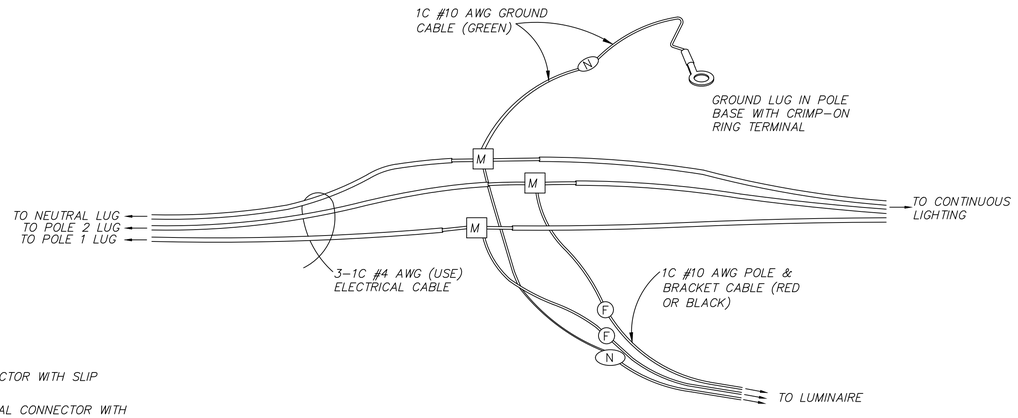
STREET LIGHTING PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: JRC
checked by: JSS
approved by: JSS
QA/QC by: JSS
project no.: 017-0642-D
drawing no.: F LTG D17062
date: 4/26/2024

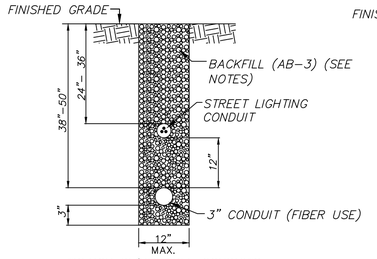


LEGEND

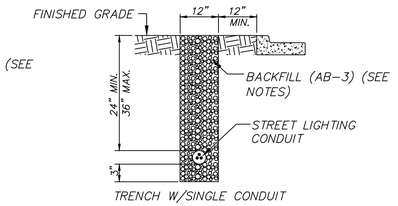
- M — MULTI-TAP ELECTRICAL CONNECTOR WITH SLIP OVER BOOT
- F — BREAK-AWAY FUSED ELECTRICAL CONNECTOR WITH 8 AMP FUSE
- N — BREAK-AWAY NON-FUSED ELECTRICAL CONNECTOR WITH GROUND "SLUG"

ELECTRICAL CONNECTOR KIT SCHEMATIC

(SINGLE LUMINAIRE)



TRENCH W/MULTIPLE CONDUITS

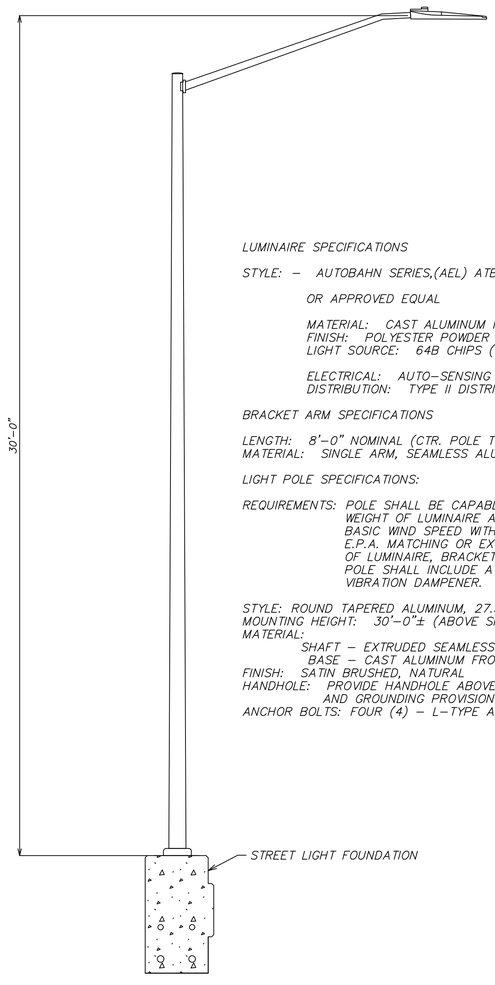


TRENCH W/SINGLE CONDUIT

TRENCHING NOTES:

1. ALL TRENCHES FOR CONDUIT UNDER ROADWAYS SHALL BE BACKFILLED WITH FLOWABLE FILL.
2. CONDUITS SHALL BE PITCHED TO DRAIN.

TRENCHING DETAILS



LUMINAIRE SPECIFICATIONS

STYLE: - AUTOBAHN SERIES,(AEL) ATB2-40BLEDE70-MVOLT-R2,

OR APPROVED EQUAL

MATERIAL: CAST ALUMINUM HOUSING
FINISH: POLYESTER POWDER PAINT, GRAY
LIGHT SOURCE: 64B CHIPS (700 MA) LED, 4000K CCT,

ELECTRICAL: AUTO-SENSING (120 - 277)
DISTRIBUTION: TYPE II DISTRIBUTION

BRACKET ARM SPECIFICATIONS

LENGTH: 8'-0" NOMINAL (CTR. POLE TO CTR. LUMINAIRE)
MATERIAL: SINGLE ARM, SEAMLESS ALUMINUM ALLOY

LIGHT POLE SPECIFICATIONS:

REQUIREMENTS: POLE SHALL BE CAPABLE OF SUPPORTING TOTAL WEIGHT OF LUMINAIRE AND WITHSTAND A 90 MPH BASIC WIND SPEED WITH 1.3 GUST WITH MAXIMUM E.P.A. MATCHING OR EXCEEDING THE TOTAL E.P.A. OF LUMINAIRE, BRACKET ARM AND ALL HARDWARE. POLE SHALL INCLUDE A FACTORY INSTALLED VIBRATION DAMPENER.

STYLE: ROUND TAPERED ALUMINUM, 27.5'±
MOUNTING HEIGHT: 30'-0"± (ABOVE SIDEWALK)
MATERIAL:
SHAFT - EXTRUDED SEAMLESS ALUMINUM ALLOY
BASE - CAST ALUMINUM FROM 356 ALLOY ALUMINUM
FINISH: SATIN BRUSHED, NATURAL
HANDHOLE: PROVIDE HANDHOLE ABOVE BASE WITH COVER,ALL HARDWARE, AND GROUNDING PROVISION
ANCHOR BOLTS: FOUR (4) - L-TYPE ANCHOR BOLTS, HOT DIP GALVANIZED.

STREETLIGHT LUMINAIRE & POLE ASSEMBLY

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04/26/2024

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STREET LIGHTING PLAN

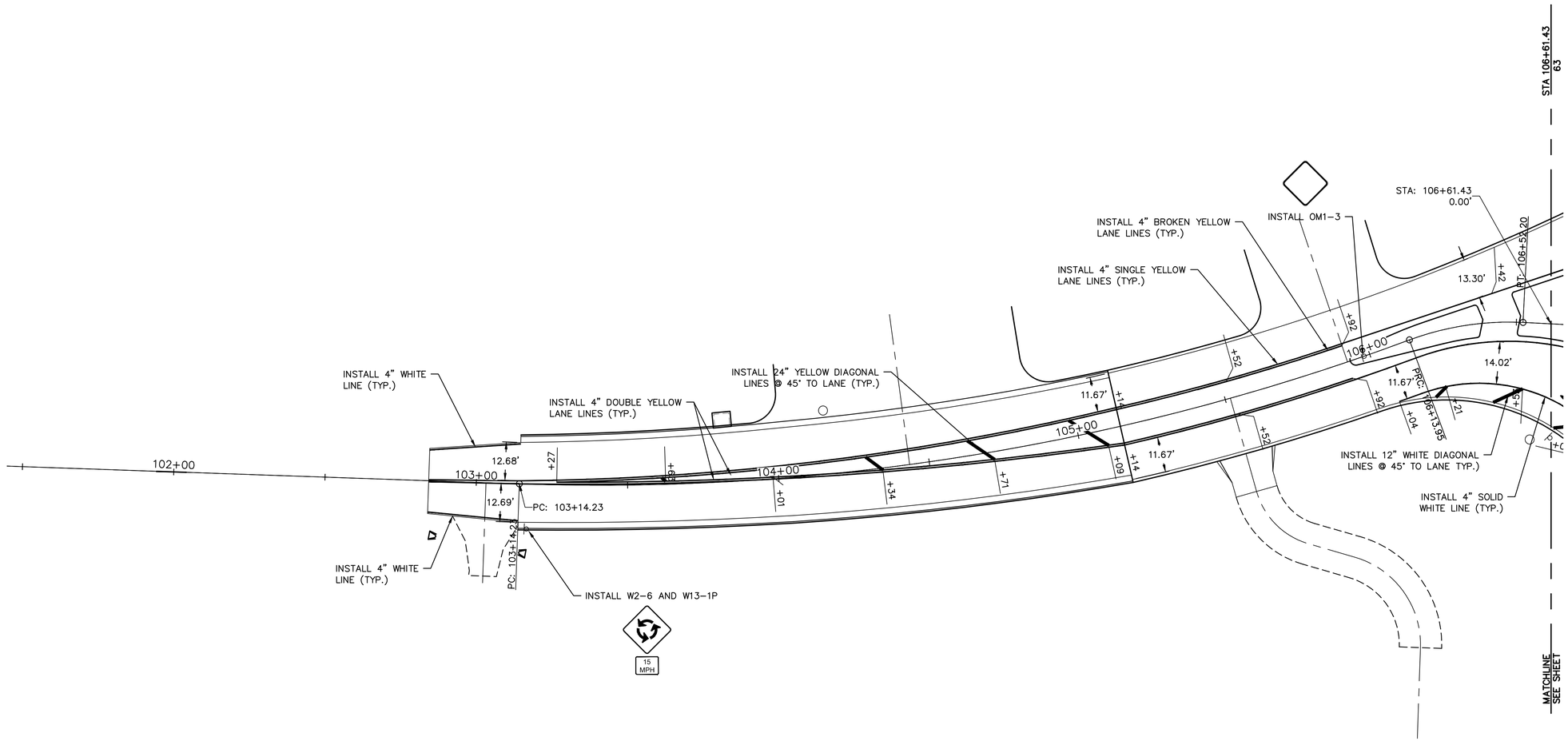
ZORA STREET IMPROVEMENTS - PHASE 1
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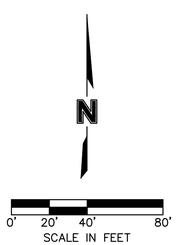
JOPLIN, MISSOURI

2024

drawn by: JRC
checked by: JSS
approved by: JSS
QA/QC by: JSS
project no.: 017-0642-D
drawing no.: F_LTG_D170642
date: 4/26/2024

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PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

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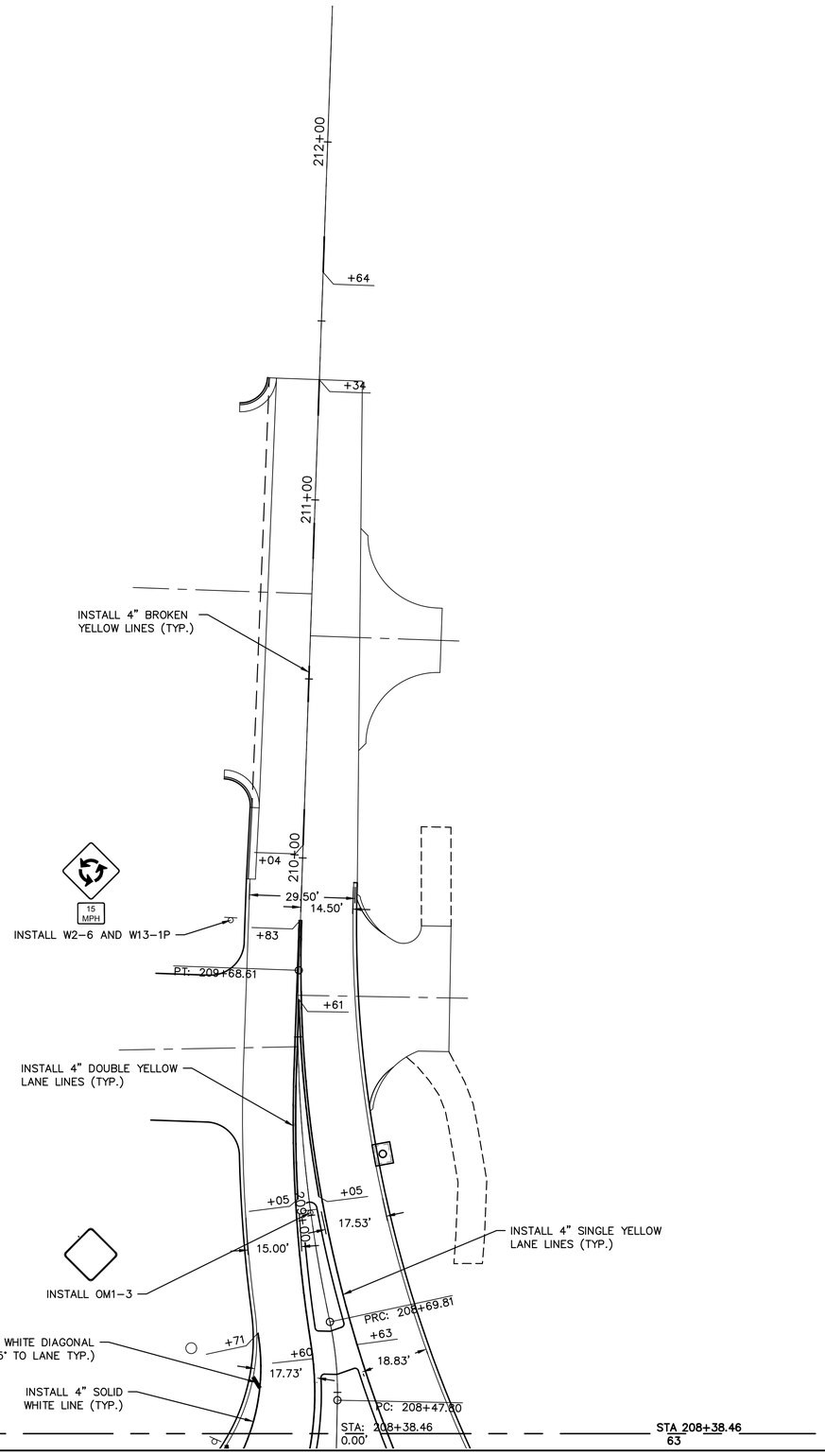
STRIPING AND SIGNING PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_STP01_D170642
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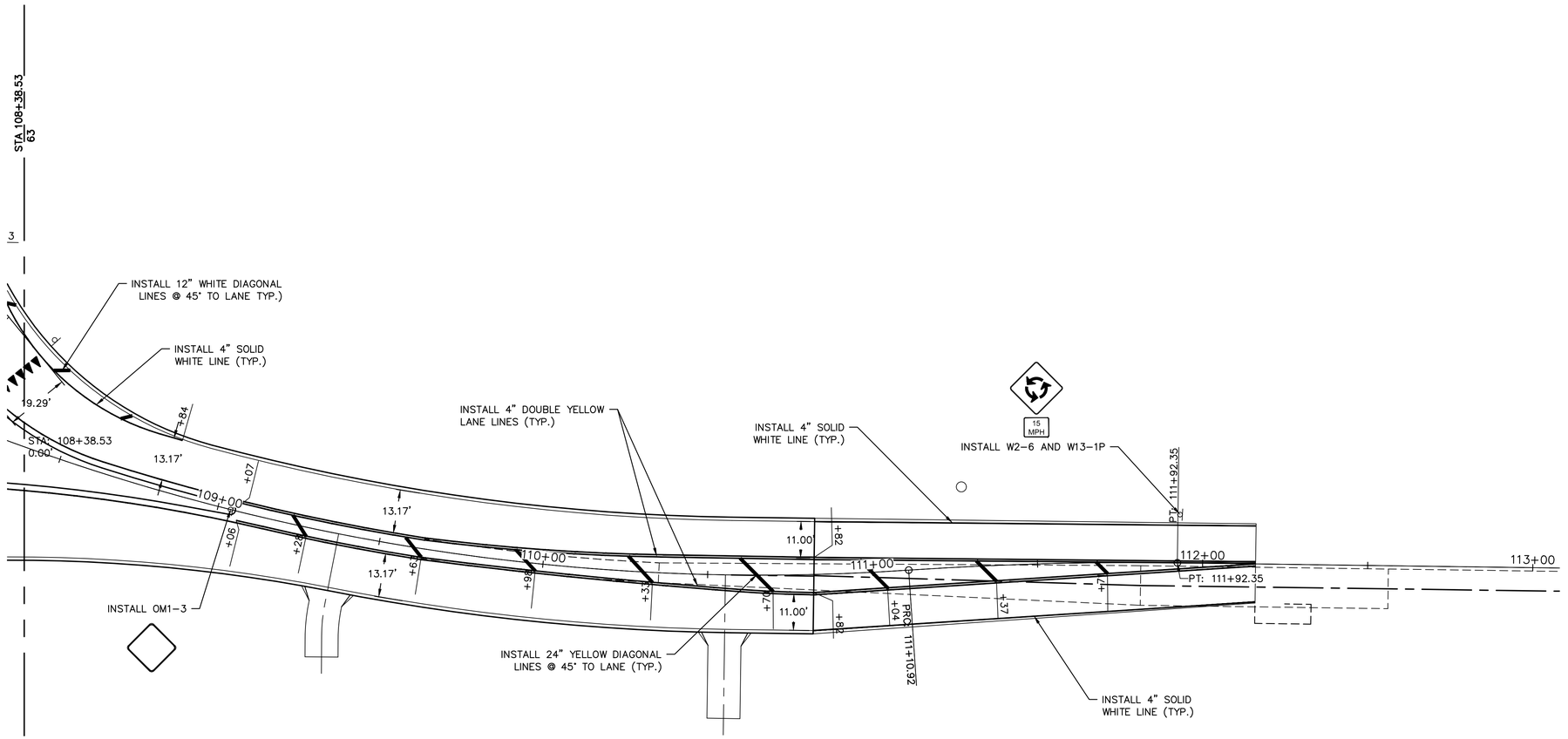
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SHEET
60 of 88



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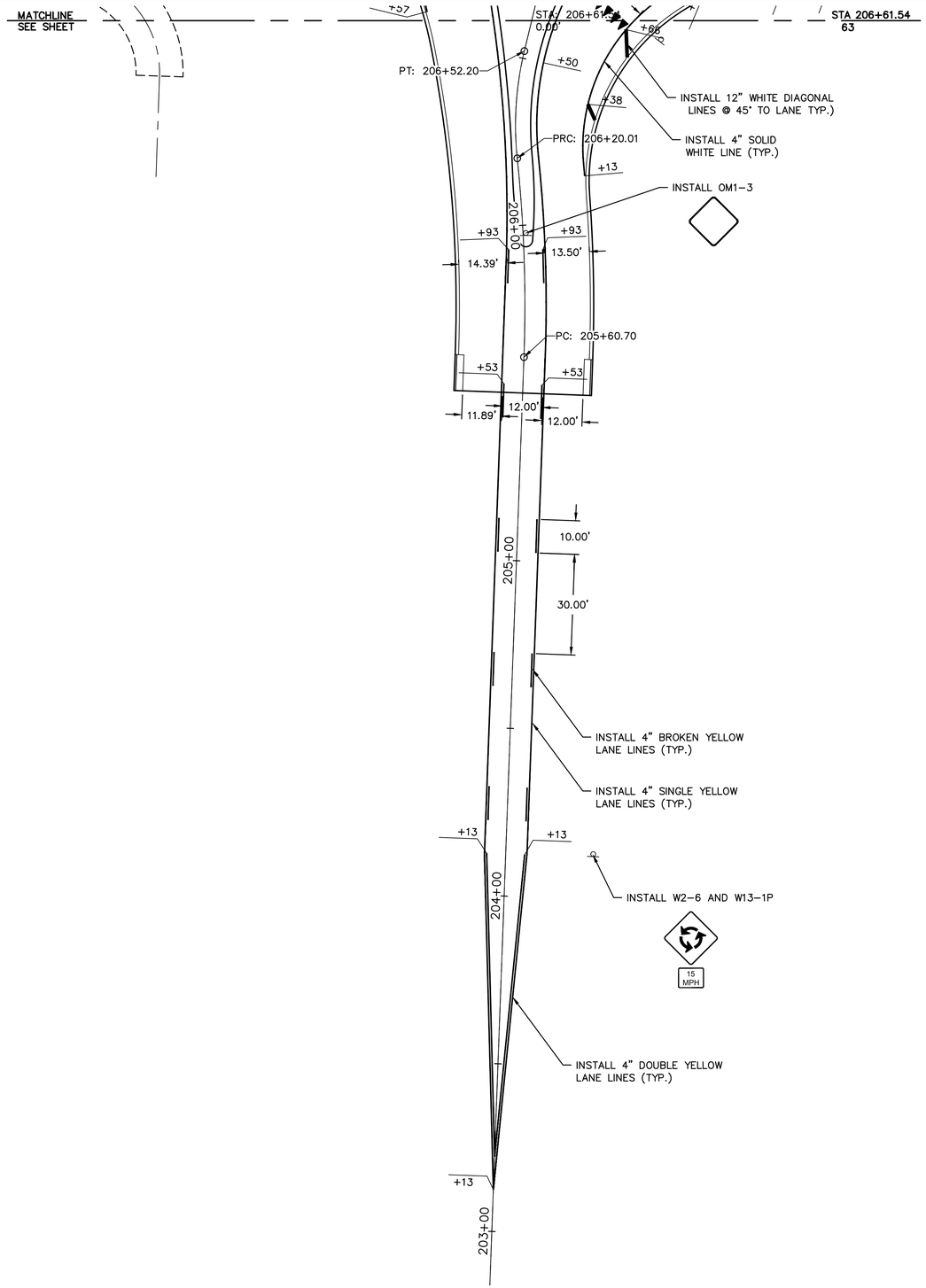
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

drawn by: ZLL/SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-D
drawing no.: C_STP01_D170642
date: 4/26/2024

SHEET
61 of 88



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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

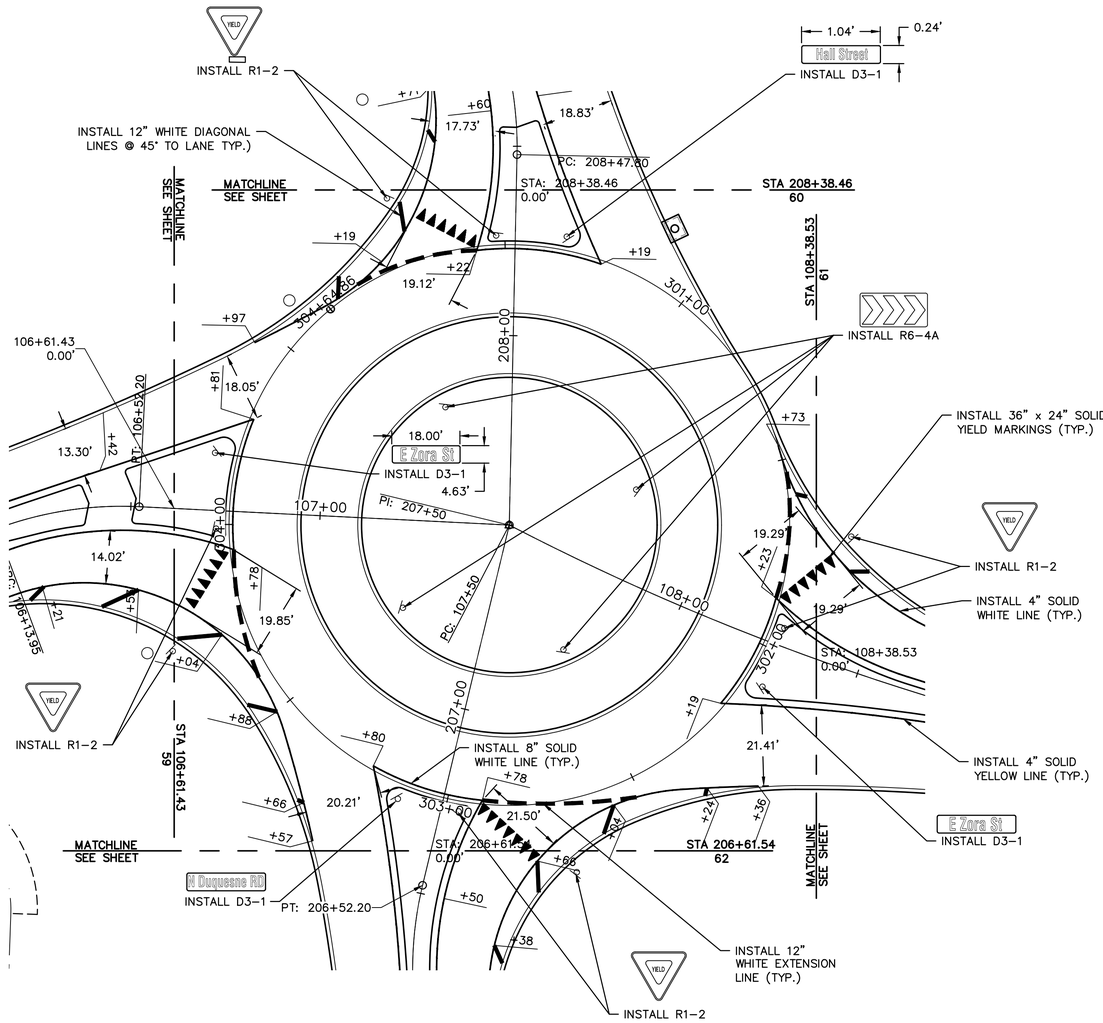
STRIPING AND SIGNING PLAN

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

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N

0' 20' 40' 80'

SCALE IN FEET

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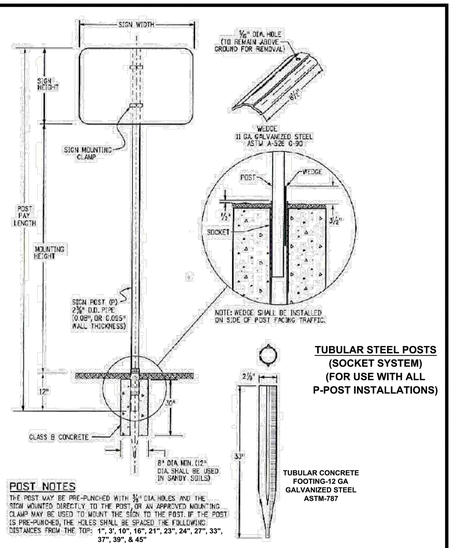
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SHEET
63 of 88

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TUBULAR STEEL POSTS (SOCKET SYSTEM) (FOR USE WITH ALL P-POST INSTALLATIONS)

POST NOTES

THE POST MAY BE PRE-PUNCHED WITH 3/4" DIA HOLES AND THE SIGN MOUNTED DIRECTLY TO THE POST, OR AN APPROVED MOUNTING CLAMP MAY BE USED TO MOUNT THE SIGN TO THE POST. IF THE POST IS PRE-PUNCHED, THE HOLES SHALL BE SPACED THE FOLLOWING DISTANCES FROM THE TOP: **1", 3", 10", 16", 21", 23", 24", 27", 33", 37", 39", & 45"**

POST SPECIFICATIONS

POST SIZE	OUTSIDE Ø	WALL TH	MATERIAL	** COATING	MAX ALLOW MOMENT	PAID FOR AS:
P	2.375"	.080"	ASTM-513	ASTM A-653 G-210 WITH 3.0 MIL POLYMER	1.47 KIP FT	STEEL SIGN SUPPORT (2 INCH ROUND)
P1	2.875"	.160"	ASTM-513	COATING PER ASTM A123 CLEAR COATING	4.02 KIP FT	STEEL SIGN SUPPORT (2 1/2 INCH ROUND NP-40)
P2	2.875"	.276"	ASTM-500	GC HOT DIPPED PER ASTM-123	5.13 KIP FT	STEEL SIGN SUPPORT (2 1/2 INCH ROUND SCH 80)

** COLOR POWDER COATING MAY BE ADDED ACCORDING TO MANUFACTURER SPECIFICATIONS FOR SPECIAL LOCATIONS WHEN SHOWN ON PLANS.

SHEET 1 — ST-18

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 03/2019	**SIGN SUPPORT & INSTALLATION DETAILS**
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: SIGN POST 1	

CHART NOTES:
1. TYPICAL POST MOUNTING HEIGHTS FROM GROUND TO BOTTOM OF SIGN PANEL ARE 7', 8', OR 9'. OTHER HEIGHTS MAY BE REQUIRED WHEN SIGNS ARE MOUNTED ON STEEPER FILL OR CUT SLOPES.
2. FOR SIGNS MOUNTED ON TWO POSTS, THE MINIMUM DISTANCE BETWEEN POSTS SHALL BE 2' & THE MAXIMUM DISTANCE SHALL BE 8'. DISTANCE FROM POST TO EDGE OF SIGN PANELS SHALL 0" TO 4". WHEN BACKING ZEES ARE USED, POSTS SHALL BE INSTALLED WITH A MINIMUM OF 2" TO THE EDGE OF THE BACKING ZEE.
3. ALL SIDE PANELS GREATER THAN 60" IN WIDTH MUST BE MOUNTED ON 2 POSTS TO PREVENT TURNING.
4. THE POST SIZES SHOWN ARE THE MINIMUM SIZES REQUIRED. TWO P1 POSTS MAY SUBSTITUTED WHEN ONE P2 POST IS INDICATED. P2 POSTS MAY BE SUBSTITUTED FOR P1 POSTS WHEN DIRECTED BY THE ENGINEER.

SIGN POST SELECTION GUIDE (90 MPH WIND LOAD DESIGN) (FOR SOCKET SYSTEM & SLIPBASE INSTALLATIONS USING P, P1, OR P2 POSTS)

7' MOUNTING HEIGHT

SIGN HEIGHT (FT) \ SIGN WIDTH (FT)	1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P	P1				
2.5	P	P	P	P	P1	P1	TWO P1'S			
3	P	P	P	P1	P1	P1				
4	P	P1	P1	P1	P1	P1				
5	SIZES NOT USED		P1	P1	P1	P1	SIZE NOT USED			TWO P2'S
6			P1	P1	P1	P2				
7			P1	P1	P2	TWO P1'S				

* SEE CHART NOTE 4

8' MOUNTING HEIGHT

SIGN HEIGHT (FT) \ SIGN WIDTH (FT)	1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P1	P1				
2.5	P	P	P	P1	P1	P1	TWO P1'S			
3	P	P	P1	P1	P1	P1				
4	P	P1	P1	P1	P1	P1				
5	SIZES NOT USED		P1	P1	P1	P2	SIZES NOT USED			TWO P2'S
6			P1	P1	P2	TWO P1'S				
7			P1	P1	TWO P1'S	TWO P1'S	TWO P2'S			

* SEE CHART NOTE 4

9' MOUNTING HEIGHT

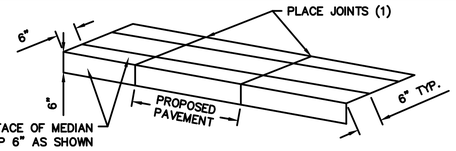
SIGN HEIGHT (FT) \ SIGN WIDTH (FT)	1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P1	P1				
2.5	P	P	P	P1	P1	P1	TWO P1'S			
3	P	P1	P1	P1	P1	P1				
4	P	P1	P1	P1	P1	P1				
5	SIZES NOT USED		P1	P1	P1	P2	SIZES NOT USED			TWO P2'S
6			P1	P1	P2	TWO P1'S				
7			P1	P2	TWO P1'S	TWO P1'S	TWO P2'S			

* SEE CHART NOTE 4

GENERAL NOTES:
1. SIGNS BETWEEN 37" & 60" WIDTH WITH ONE POST INSTALLATION REQUIRE A 'T' OR 'U' SIGN SUPPORT BRACKET IN ADDITION TO THE BACKING ZEE REQUIREMENTS. WHEN DIRECTED BY THE ENGINEER, SIGN PANELS LESS THAN 48" MAY BE ATTACHED DIRECTLY TO 'T' OR 'U' BRACKETS WITHOUT ZEES.
2. U-BRACKETS MAY BE USED FOR MULTIPLE SIGN INSTALLATIONS.

SHEET 2 — ST-19

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 03/2019	**SIGN SUPPORT & INSTALLATION DETAILS**
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: SIGN POST 2	



(1) WHEN THERE ARE NO VISIBLE JOINTS IN THE ADJACENT PAVEMENT, THE JOINT SPACING WILL BE EQUAL TO THE MEDIAN STRIP WIDTH, WITH A MINIMUM SPACING OF 10'.

CONCRETE MEDIAN JOINT LOCATION

TYPICAL CONCRETE MEDIAN AND ISLAND DETAILS

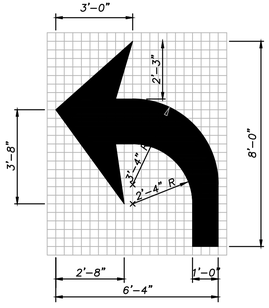
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Permanent Signing General Notes

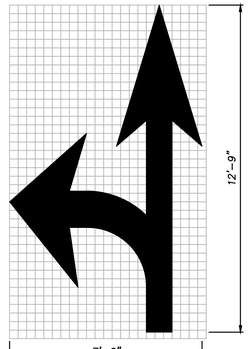
1. All permanent signing shall be provided and installed by the contractor as indicated in the plans and specifications.
2. All letter, number and symbol sizes, spacing and sign colors shall conform to the current Manual on Uniform Traffic Control Devices (MUTCD).
3. The contractor is responsible for avoiding any and all utilities when setting sign posts and will be required to coordinate his activities with all utility companies, for street light, traffic signal and fiber optic facilities whether their facility is indicated on the plans or not.
4. All new signs shall be located within public right-of-way.
5. All retro-reflective micro-encapsulated prismatic sheeting shall be ASTM Type XI. All signs shall be made from a combination retro-reflective sheeting background with electronic cuttable film applied to the surface. (Unless otherwise indicated in the plans or specifications). Process color inks or silk screening signs are not allowed.
6. All sign blank material shall be made of 0.08" aluminum except all overhead street name signs shall be made of 0.125" aluminum.
7. Existing street name signs in the way of construction:
   The street name signs shall be relocated out of the way of construction but in a conspicuous location for the driving public and emergency providers. The street name signs shall be reinstalled in their proper location as soon as possible unless otherwise indicated. The removal and re-installation of existing signs will be considered subsidiary to other bid items.
8. Signs shown to be installed on the side of poles shall be mounted by stainless steel mounting bands as detailed in the plans. All R10 series signs installed on a traffic signal mast arm shall be mounted with Astro-Brackets as specified.
9. All signs and posts shown in the plans shall be new unless otherwise indicated in the plans or by the Traffic Service Inspector.
10. All existing regulatory signs, warning signs, and street name signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the contractor damages any existing sign or posts during construction, he shall be required to reinstall new signs and posts of the same type to replace the damaged equipment.
11. Any existing permanent signs shown to be removed by the contractor for construction purposes other than stop signs, yield signs or street name signs shall be stockpiled in one location and delivered to the City's public works facility. At least 24-hour advance notice shall be provided. The contractor shall be responsible for removing and stockpiling equipment in good condition and is fully responsible for the equipment until they are delivered to the maintenance facility.
12. All stop, yield, warning signs, and street name signs shall be maintained in a conspicuous location for the driving public. All stop and yield signs removed for construction purposes can be temporarily erected (no less than 7 feet vertical from grade) until they can be permanently re-installed. Any temporary stop or yield sign installation to be left in place overnight will require prior approval from the Traffic Services Inspector.
13. All existing signs, other than stop, yield, warning signs, or street name signs, shown to be used in place shall be protected from damage by the contractor. The contractor may temporarily remove the sign and post to prevent damage at the approval of the inspector. Storage of the signs & posts is the responsibility of the contractor.

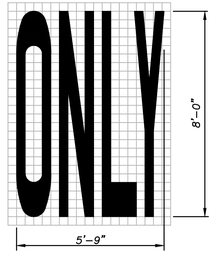
Pavement Marking General Notes

1. All permanent pavement markings shall be provided and installed by the contractor as indicated in the plans or as directed by the City Inspector.
2. Pavement markings on concrete shall be per the Standard Specifications, Section 2306 unless otherwise indicated on the plans or directed by the City Inspector. See the Pavement Marking Material Matrix.
   2.1. All longitudinal lines shall be epoxy material, or inlaid patterned cold plastic as indicated in the plans.
   2.2. All transverse lines and symbol markings shall be inlaid patterned cold plastic.
   2.3. All patterned cold plastic pavement marking material, including symbols and words, installed on concrete surfaces shall have a black contrasting edge.
3. Pavement markings on asphalt shall be per the Standard Specifications, Section 2306 unless otherwise indicated on the plans or directed by the City Inspector. See the Pavement Marking Material Matrix.
   3.1. All longitudinal lines shall be hot applied thermoplastic material.
   3.2. All transverse lines and symbol markings shall be pre-formed thermoplastic material unless otherwise stipulated below.
4. ~~Liquid pavement marking material may be used for transverse lines under the following stipulations:~~
   ~~4.1. Shall be applied by a push cart.~~
   ~~4.2. Only one pass with the thermoplastic pavement marking equipment shall be allowed in order to provide the required line width according to the plans. Multiple passes of narrower lines with overlaps to provide the required width shall not be allowed.~~
   ~~4.3. Liquid pavement marking material shall not be used for word or symbol markings, unless applied with appropriate templates as indicated in the plans.~~
5. Crosswalk lines shall be installed such that the minimum distance between the inside edge of the line to the inside edge of line is 6 feet.
6. Stop lines shall be installed such that the minimum distance between the outside edge of the back crosswalk line and the trailing edge of the stop line is 4 feet.
7. Skip lines shall not extend past the stop bar or into the crosswalk.
8. White broken lane lines shall be carried through intersections with private streets unless there is a left turn bay into the private street. Then a gap should be left in the broken white lane lines for the left turn movement to pass through.
9. The proposed permanent markings shall be laid out by the contractor in advance of the marking installation. Markings shall not be applied until the layout and conditions of the surface have been approved by the City Inspector.

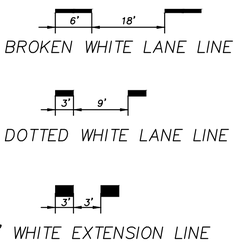


Turn Arrow Marking





Word and Symbol Details



Notes:
1) Word & symbol markings shall be white.
2) Right Turn and Combination Right Turn/Straight arrows are reverse of arrows shown.

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Jonathan Peitz 2024.04.26 — STATE OF MISSOURI — JONATHAN W. PEITZ NUMBER PE-2017019023 — PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STRIPING & SIGNING DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

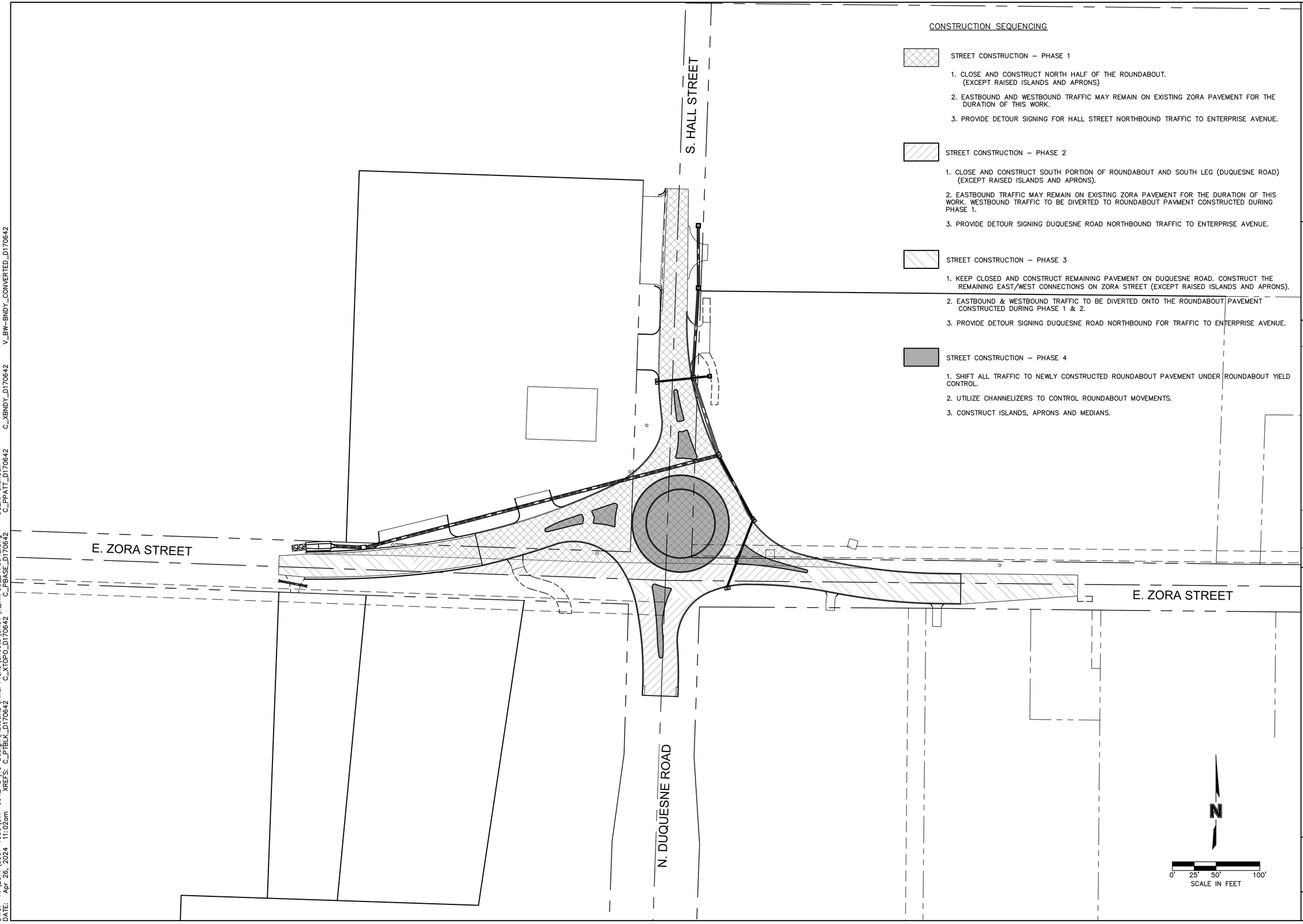
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64 of 88

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CONSTRUCTION SEQUENCING

STREET CONSTRUCTION – PHASE 1

1. CLOSE AND CONSTRUCT NORTH HALF OF THE ROUNDABOUT. (EXCEPT RAISED ISLANDS AND APRONS)
2. EASTBOUND AND WESTBOUND TRAFFIC MAY REMAIN ON EXISTING ZORA PAVEMENT FOR THE DURATION OF THIS WORK.
3. PROVIDE DETOUR SIGNING FOR HALL STREET NORTHBOUND TRAFFIC TO ENTERPRISE AVENUE.

STREET CONSTRUCTION – PHASE 2

1. CLOSE AND CONSTRUCT SOUTH PORTION OF ROUNDABOUT AND SOUTH LEG (DUQUESNE ROAD) (EXCEPT RAISED ISLANDS AND APRONS).
2. EASTBOUND TRAFFIC MAY REMAIN ON EXISTING ZORA PAVEMENT FOR THE DURATION OF THIS WORK. WESTBOUND TRAFFIC TO BE DIVERTED TO ROUNDABOUT PAVMENT CONSTRUCTED DURING PHASE 1.
3. PROVIDE DETOUR SIGNING DUQUESNE ROAD NORTHBOUND TRAFFIC TO ENTERPRISE AVENUE.

STREET CONSTRUCTION – PHASE 3

1. KEEP CLOSED AND CONSTRUCT REMAINING PAVEMENT ON DUQUESNE ROAD. CONSTRUCT THE REMAINING EAST/WEST CONNECTIONS ON ZORA STREET (EXCEPT RAISED ISLANDS AND APRONS).
2. EASTBOUND & WESTBOUND TRAFFIC TO BE DIVERTED ONTO THE ROUNDABOUT PAVEMENT CONSTRUCTED DURING PHASE 1 & 2.
3. PROVIDE DETOUR SIGNING DUQUESNE ROAD NORTHBOUND FOR TRAFFIC TO ENTERPRISE AVENUE.

STREET CONSTRUCTION – PHASE 4

1. SHIFT ALL TRAFFIC TO NEWLY CONSTRUCTED ROUNDABOUT PAVEMENT UNDER ROUNDABOUT YIELD CONTROL.
2. UTILIZE CHANNELIZERS TO CONTROL ROUNDABOUT MOVEMENTS.
3. CONSTRUCT ISLANDS, APRONS AND MEDIANS.

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REVISIONS

TRAFFIC CONTROL
CONSTRUCTION SEQUENCE

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CITY OF JOPLIN

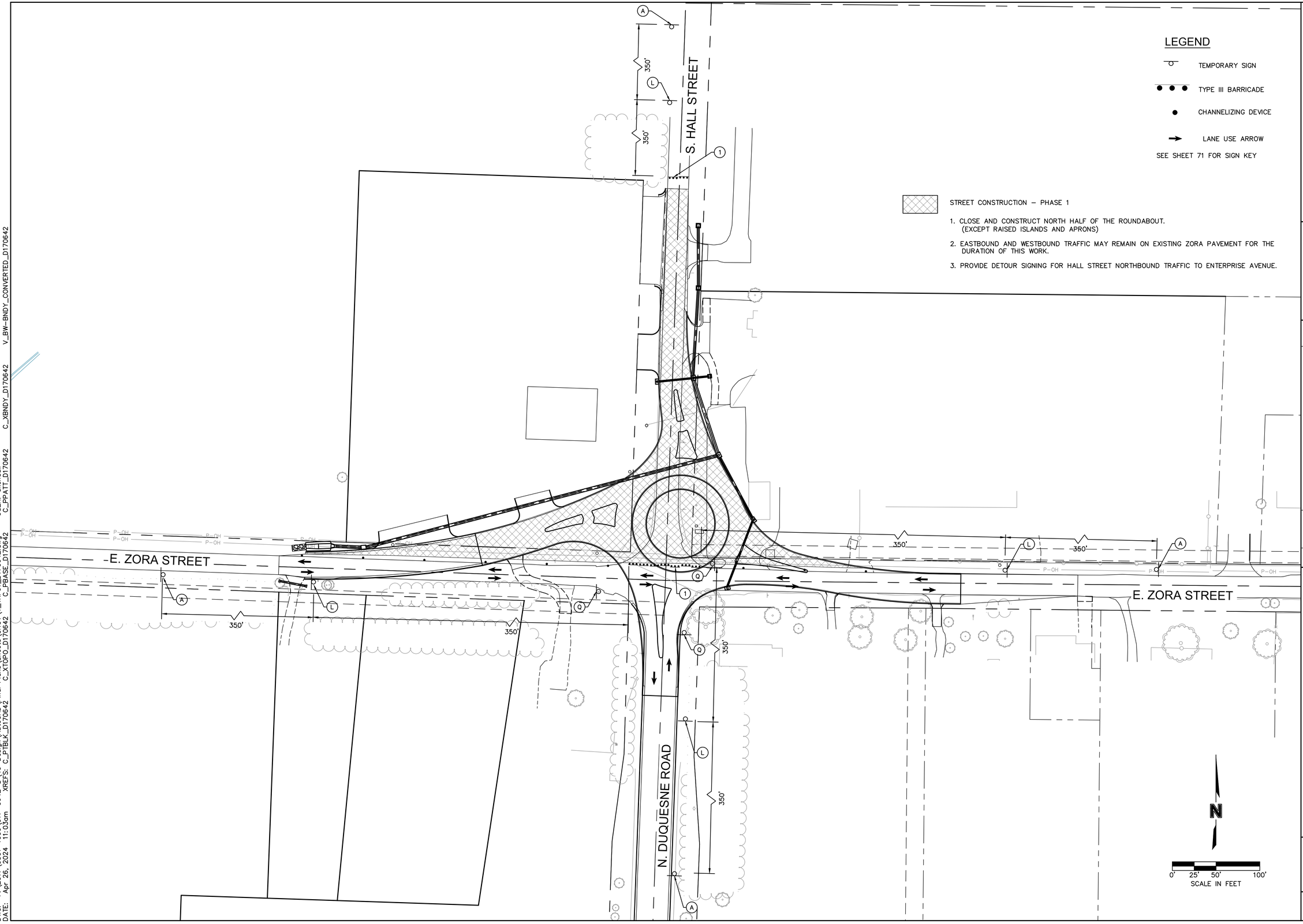
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JONATHAN W. PEITZ–CIVIL ENGINEER
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TRAFFIC CONTROL
PHASE 1

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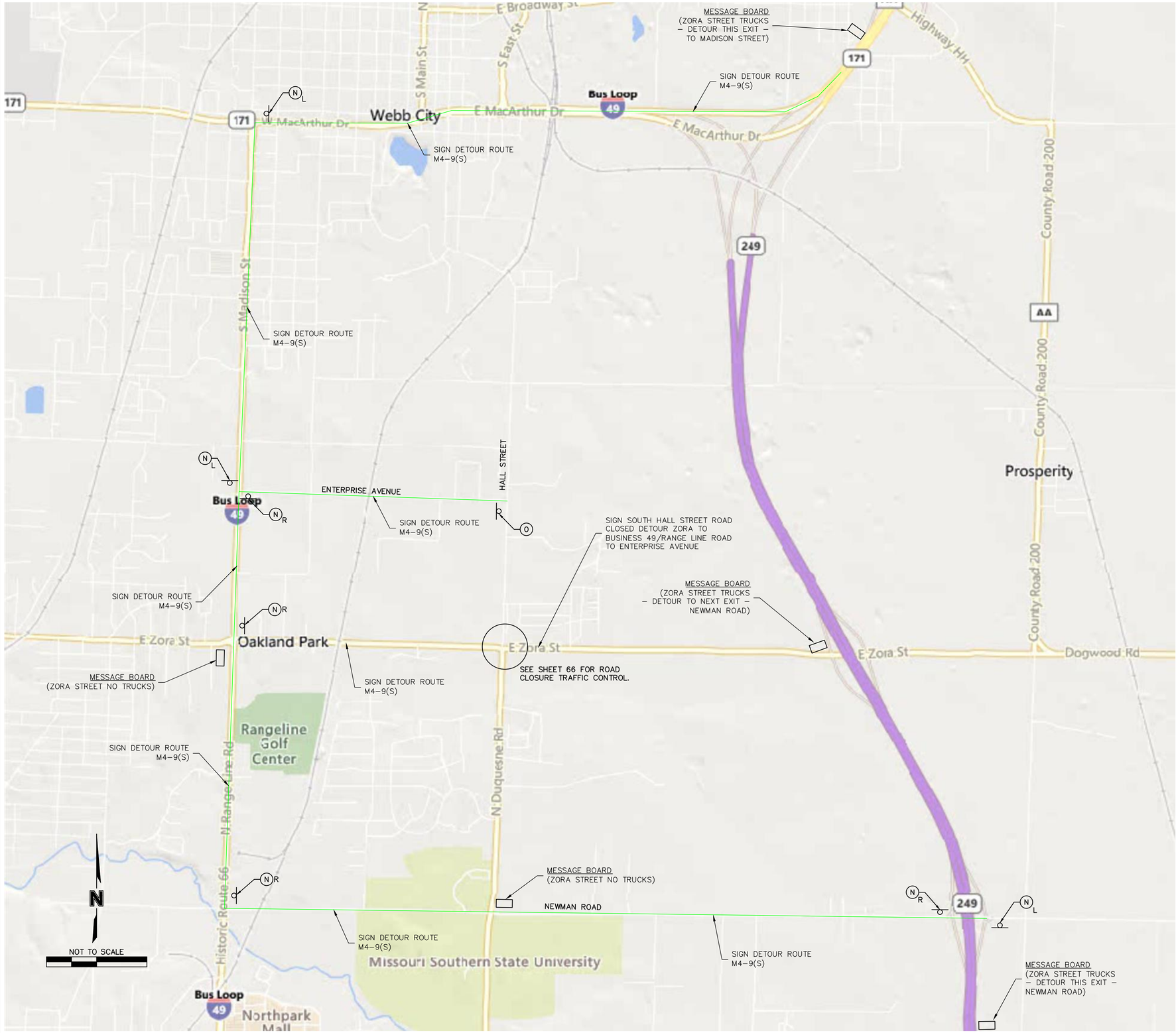
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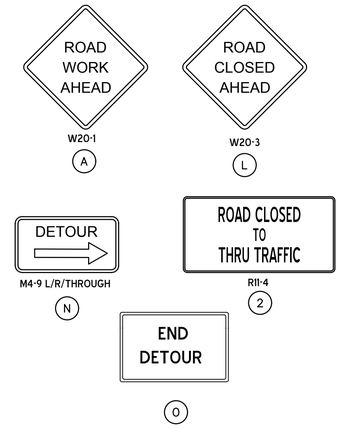
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Legend

- TEMPORARY SIGN
- MESSAGE BOARD
- TRUCK ROUTE

NOTE: TRUCKS SHALL BE DETOURED THRU ALL PHASES OF THE CONSTRUCTION.



NOTES:

1. CONTRACTOR MAY CLOSE THE STREET IN SEGMENTS UPON APPROVAL BY THE CITY OF JOPLIN.
2. CONTRACTOR SHALL PROVIDE ACCESS FOR ALL PROPERTIES TO THE EXTENT NEEDED BY THE PROPERTY AT ALL TIMES EXCEPT FOR MINIMUM INTERRUPTIONS AS REQUIRED BY CONSTRUCTION ON THAT FRONTAGE. CONTRACTOR SHALL COORDINATE TIMES OF ACCESS RESTRICTIONS WITH PROPERTY OWNERS.
3. ALL TRAFFIC CONTROL PROCEDURES AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (MUTCD).
4. CONTRACTOR SHALL INSTALL TRAFFIC CONTROL DEVICES SUCH AS CONES, DRUMS, FLASHERS, BARRICADES, SIGNS, ETC. TO SAFELY CHANNEL OR DIRECT TRAFFIC. WHEN NECESSARY, FLAGGER SHALL BE USED IN CONJUNCTION WITH TRAFFIC CONTROL DEVICES. FLAGGER AHEAD SIGN REQUIRED IN ADVANCE OF FLAG–MEN EXCEPT DURING BRIEF PERIODS AND IN EMERGENCY SITUATIONS.
5. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED WHENEVER NECESSARY, REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED, AND BE REMOVED IMMEDIATELY THEREAFTER.
6. CONTRACTOR SHALL INSTALL ADVANCED WARNING SIGNS WHEN NECESSARY SUCH AS WATCH FOR TRUCK TURNING, TRUCKS CROSSING, ETC. AND PLACE FLAG–MEN AS DIRECTED BY THE ENGINEER ALONG PUBLIC ROADS OR CROSSING OF ROADS.
7. NO OPEN CUTS SHALL BE LEFT UNPROTECTED WHEN THERE IS NO CONSTRUCTION ACTIVITY AT THE WORK SITE.
8. DETOUR SIGNS SHALL BE INSTALLED AS NEEDED AND REMOVED WHEN WORK HAS BEEN COMPLETED.
9. NO PAYMENT FOR ANY DEVIATION FROM TRAFFIC CONTROL PLANS.
10. THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR DURING CONSTRUCTION. ANY ADDITIONAL QUANTITIES OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THE CONTRACT, NECESSARY BASED ON CONTRACTOR'S SELECTED MEANS AND METHODS OF CONSTRUCTION, OR AS ORDERED BY THE ENGINEER SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND BE INCLUDED IN THE CONTRACT LUMP SUM BID PRICE FOR "TEMPORARY TRAFFIC CONTROL."
11. CONTRACTOR SHALL INSTALL AND MAINTAIN NO PARKING SIGNS WITHIN EXISTING PARKING AREAS THAT RESIDE WITHIN STREET CONSTRUCTION AREA LIMITS.
12. CONTRACTOR SHALL MAINTAIN A MIN. 10' WIDE LANE IN EACH DIRECTION OF TRAVEL, AT ALL TIMES. DURING CONSTRUCTION.

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Jonathan Peitz
2024.04.26 11:03:00

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL
TRUCK DETOUR ROUTE

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

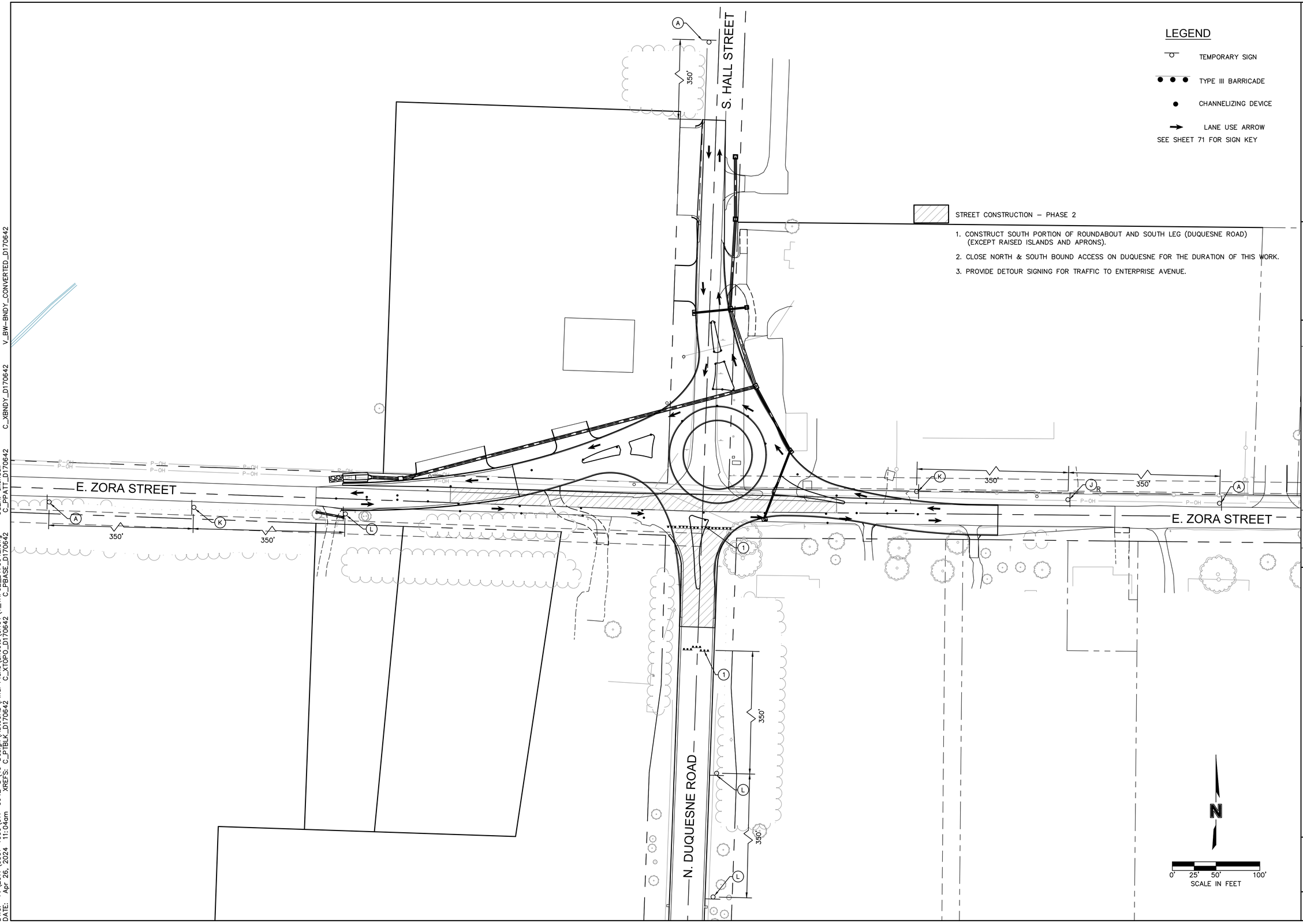
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checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	TRF04_N DETOUR_D170642
date:	4/26/2024

SHEET
67 of 88

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TRAFFIC CONTROL
PHASE 2

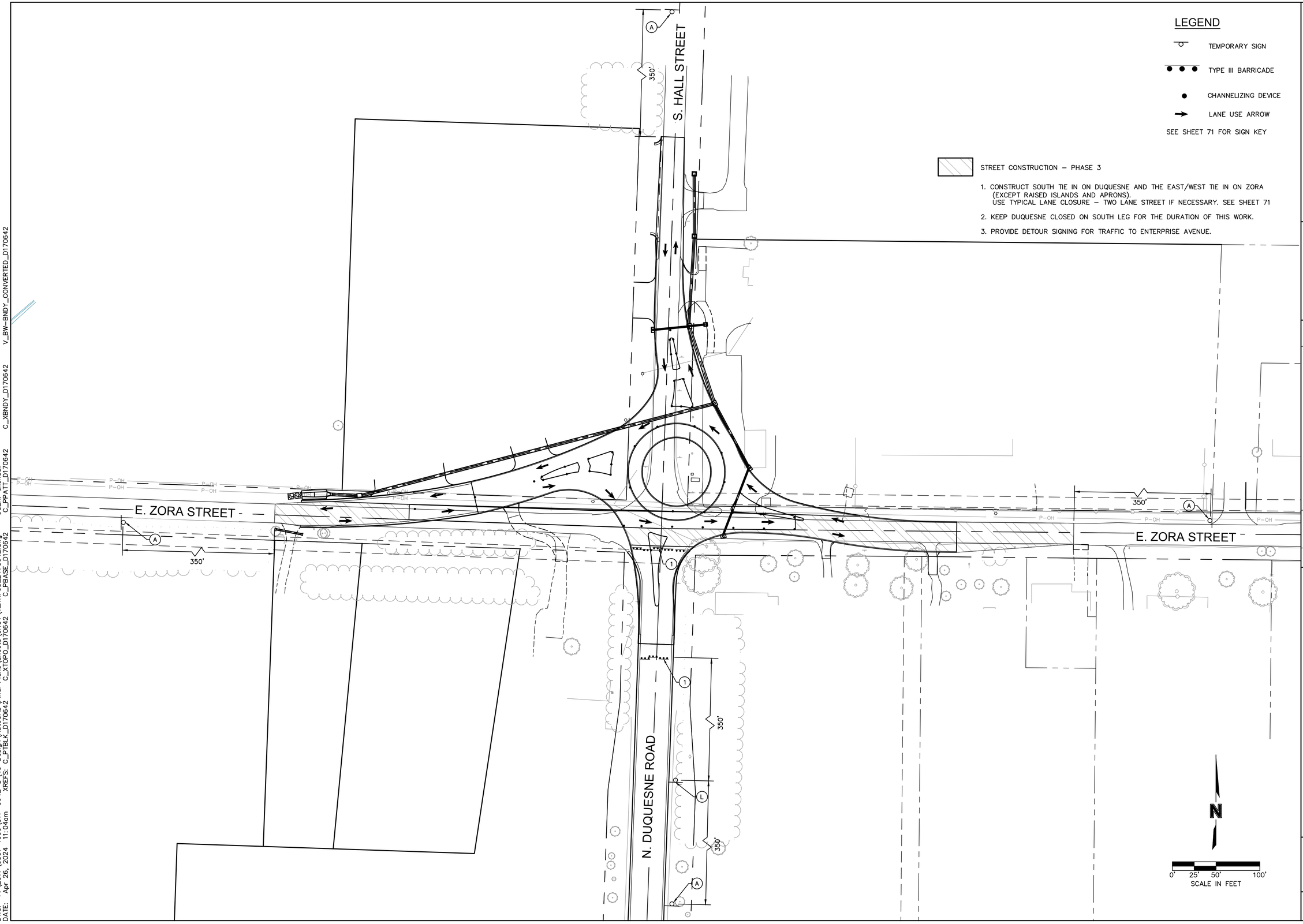
ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

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QA/QC by:	ENG
project no.:	017-0642-D
drawing no.:	T_TRF02_D170642
date:	4/26/2024

SHEET
68 of 88



LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- LANE USE ARROW

SEE SHEET 71 FOR SIGN KEY

STREET CONSTRUCTION – PHASE 3

1. CONSTRUCT SOUTH TIE IN ON DUQUESNE AND THE EAST/WEST TIE IN ON ZORA (EXCEPT RAISED ISLANDS AND APRONS). USE TYPICAL LANE CLOSURE – TWO LANE STREET IF NECESSARY. SEE SHEET 71
2. KEEP DUQUESNE CLOSED ON SOUTH LEG FOR THE DURATION OF THIS WORK.
3. PROVIDE DETOUR SIGNING FOR TRAFFIC TO ENTERPRISE AVENUE.

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REVISIONS

TRAFFIC CONTROL
PHASE 3

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

2024

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drawing no.:	T_TRF03_D170642
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69 of 88

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NO THRU TRUCKS AT HALL STREET USE ALTERNATE ROUTE

PLACE SIGN AT ENTERPRISE AVE.

S. HALL STREET

A

350'

Z

350'

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- LANE USE ARROW

SEE SHEET 71 FOR SIGN KEY

STREET CONSTRUCTION – PHASE 4

1. SHIFT ALL TRAFFIC TO NEWLY CONSTRUCTED ROUNDABOUT PAVEMENT UNDER ROUNDABOUT YIELD CONTROL.
2. UTILIZE CHANNELIZERS TO CONTROL ROUNDABOUT MOVEMENTS.
3. CONSTRUCT ISLANDS, APRONS AND MEDIANS.
4. PERMANENT ROUNDABOUT REGULATORY AND WARNING SIGNAGE SHALL BE PROVIDED AND MAINTAINED DURING CONSTRUCTION. CONTRACTOR MAY ELECT TO PROVIDE TEMPORARY REGULATORY/WARNING SIGNAGE, IN LIEU OF PERMANENT SIGNAGE, AT NO DIRECT PAYMENT.

NO THRU TRUCKS AT HALL STREET USE ALTERNATE ROUTE

PLACE SIGN AT HWY 249

E. ZORA STREET

P–OH

NO THRU TRUCKS AT HALL STREET USE ALTERNATE ROUTE

PLACE SIGN AT RANGELINE ROAD

N. DUQUESNE ROAD

NO THRU TRUCKS AT HALL STREET USE ALTERNATE ROUTE

PLACE SIGN AT NEWMAN ROAD

N

0' 25' 50' 100'

SCALE IN FEET

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MO# PE–2017019023

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REVISIONS

TRAFFIC CONTROL
PHASE 4

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

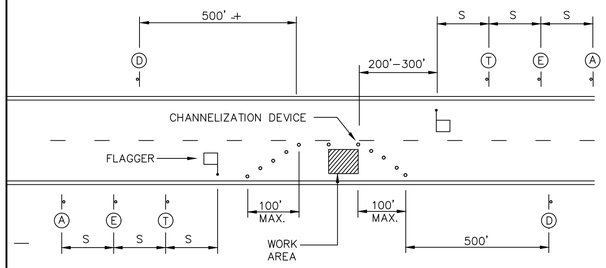
JOPLIN, MISSOURI

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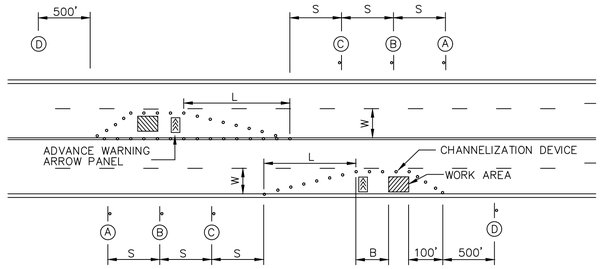
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approved by: JWP
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project no.: 017-0642-D
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70 of 88

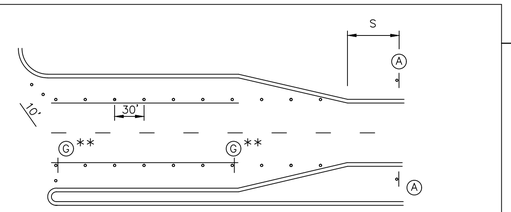
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DETAIL 1: TYPICAL CLOSURE – TWO–LANE STREET

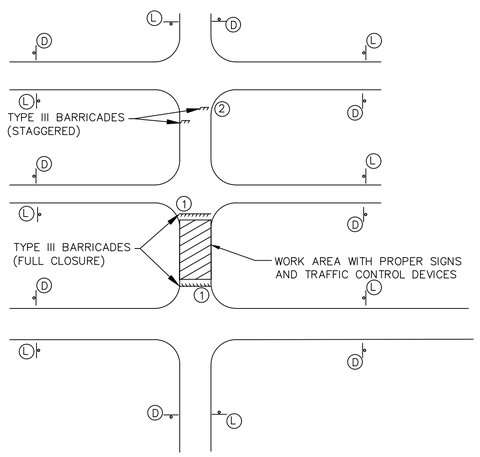


DETAIL 2: TYPICAL LANE CLOSURE – FOUR–LANE STREET



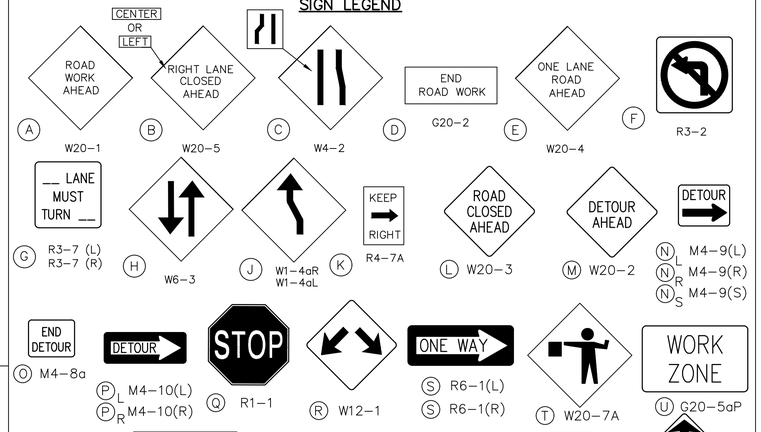
** USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER

DETAIL 3: TYPICAL RIGHT–TURN LANE AND LEFT–TURN LANE CLOSURES

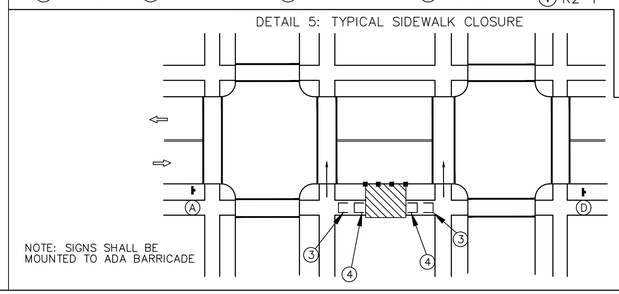


DETAIL 4: TYPICAL SIDE ROAD SIGNING FOR ROAD CLOSURE

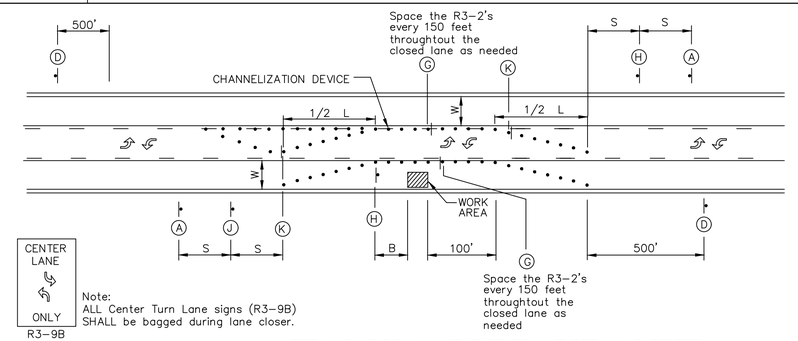
SIGN LEGEND



DETAIL 5: TYPICAL SIDEWALK CLOSURE



NOTE: SIGNS SHALL BE MOUNTED TO ADA BARRICADE



DETAIL 6: TYPICAL LANE CLOSURE – THREE–LANE STREET

Guidelines for length of longitudinal buffer space (B)	
Speed* (mph)	Length (Feet)
20	35
25	55
30	85
35	120
40	170
45	220
50	300

*Posted speed

SIGN SPACING(S)	
Speed Limit M.P.H.	Spacing (Feet)
≤ 30	100
35 – 45	350
55	500

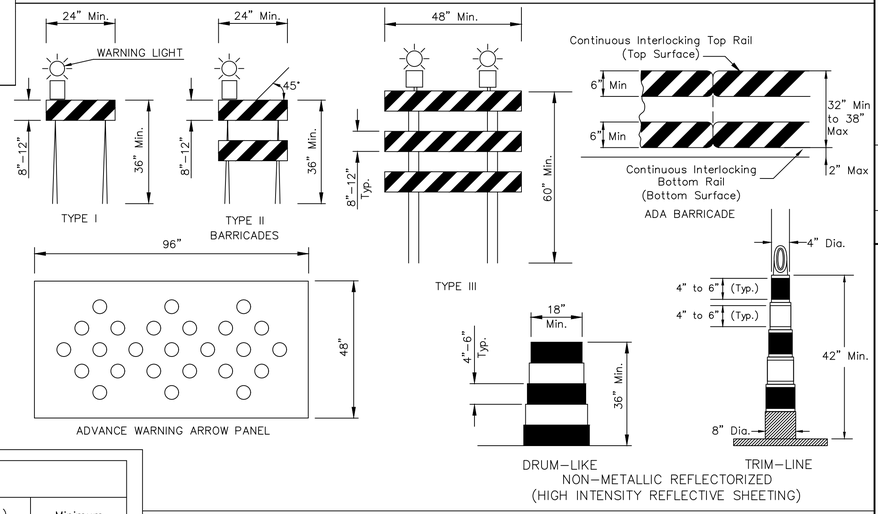
MAXIMUM CHANNELIZATION SPACING IN FEET *		
Speed Limit M.P.H.	Along Taper	After Taper
20	20	40
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90
50	50	100
55	55	100

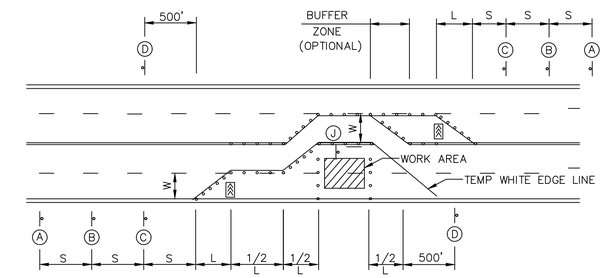
TAPER DETAIL				
Speed Limit M.P.H.	Minimum Taper Length (L) Lane Width (W) 10	11	12	Minimum Number of Channelizing Devices for Taper
20	70	75	80	5
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13
50	500	550	600	13
55	550	605	660	13

* The maximum distance in feet between devices in a taper should not exceed 1.0 times the speed limit in MPH.

GENERAL NOTES:

1. All signs, barricades, drums, markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), most current edition.
2. All traffic control devices shall be standard in size, shape, color and message, in good condition, and reflectorized. All signs and barricades in place at night shall be reflectorized with high intensity sheeting. All signs shall be securely mounted with height and lateral location as described in the MUTCD.
3. Warning lights shall be used on all channelization devices and warning signs in place at night except drums that are fully reflectorized with high intensity reflective sheeting. Type A Low Intensity Flashing Warning lights shall be mounted on warning signs as well as barricades where used singley. Type C Steady–Burn lights shall be mounted on barricades where used in series to delineate the edge of the travel way.
4. Advance Warning Arrow Panels shall be used for all lane closures on multi–lane streets but should not be used in lieu of proper traffic control signs, barricades and channelization devices.
5. Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic or where construction activities impose a restriction on traffic, as directed by the Engineer in charge of construction. Where flaggers are used, advance signing shall be erected as shown above or as specified in the MUTCD. Flaggers shall meet the requirements in the MUTCD in regard to charactor, training, attire and behavior.
6. Channelization devices used in the street shall be either drums, cones or Trimline channelizers.
7. Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
8. The Contractor shall place as many barricades as needed to effectively shield pedestrians and traffic from exposed objects, excavations and construction activities. ADA Pedestrian Barricades shall be installed around all excavations left open during non–construction times or as directed by the Engineer in charge of construction.
9. Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
10. Construction materials shall be kept off of sidewalks, consolidated in one location within City Right–Of–Way, and removed daily unless otherwise approved by the Engineer in charge of construction.
11. Dirt, mud and other construction debris on streets and sidewalks shall be removed immediately.
12. The Contractor shall not perform any work that will restrict traffic in any way between the hours of 7:00 a.m. and 8:30 a.m. or 4:30 p.m. and 6:00 p.m.
13. The Contractor shall be responsible for maintaining all traffic control devices on an around–the–clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
14. The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of motorist, pedestrians, and workers at all times. Any additional quantities of traffic control devices necessary to complete the contract or as ordered by the Engineer shall be considered subsidiary to the contract bid price.
15. Construction vehicles parked along streets and construction signs shall not restrict sight distance for vehicles exiting at streets or any drives.
16. Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the Engineer or representative, the City/Controlling Jurisdiction may take one or more of the following actions:
    A) Employ another agency to correct deficiencies in signing or warning devices and deduct the cost from the contractor's pay estimate
    B) Suspend all pay Estimates until deficiencies are corrected.
    C) Stop the work until deficiencies are corrected.
    D) Place the contractor in default.
17. The Contractor shall keep roadway closures due to construction activities to a minimum.
18. The Contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.
19. The Contractor should, at the request of the Engineer, place reduced speed limit signing and work zone speed limit signing in advance of all active work zone areas. Work zone speed limit shall be 20 mph throughout construction areas. Contractor shall cover or replace all speed limit signs in conflict with the work zone speed limit throughout the construction area.





DETAIL 7: TYPICAL LANE CLOSURE – FOUR–LANE STREET

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE–2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TRAFFIC CONTROL DETAILS

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

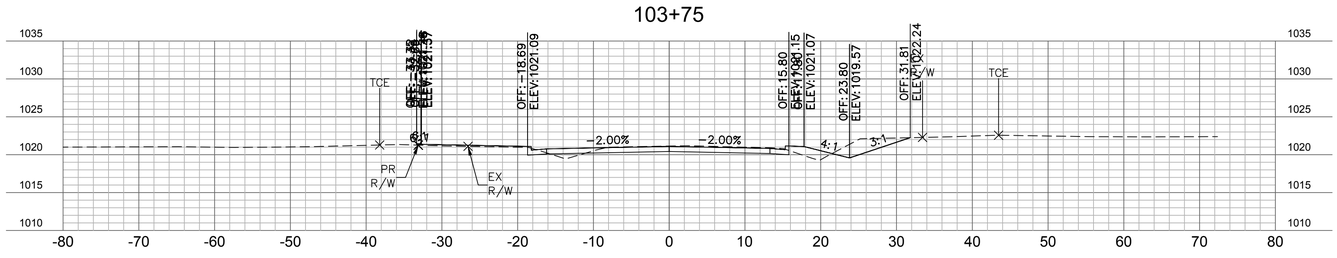
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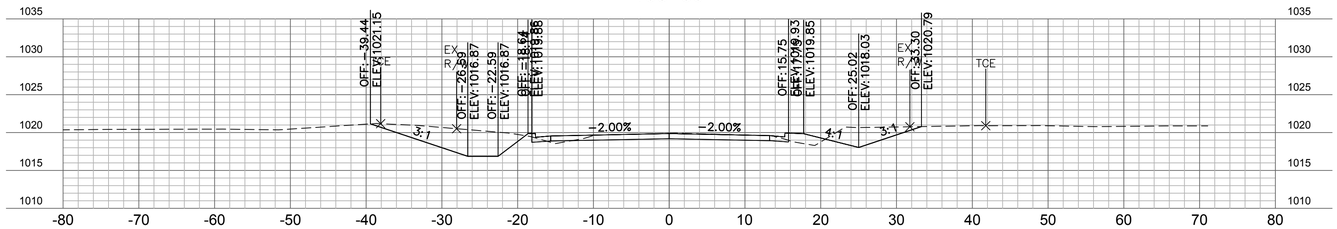
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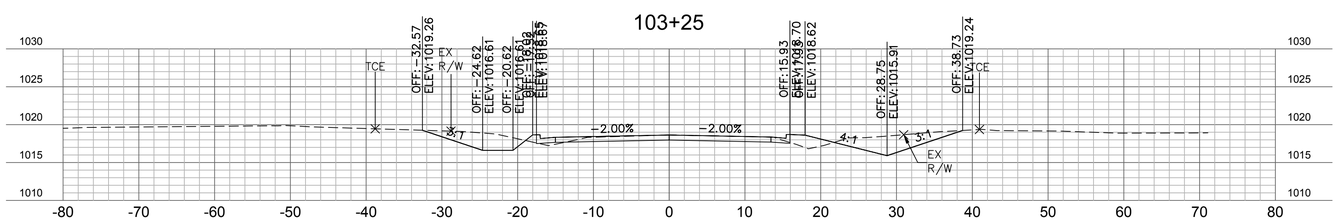
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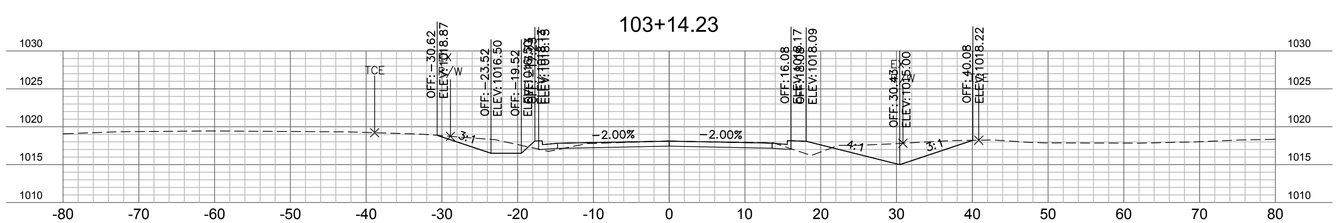
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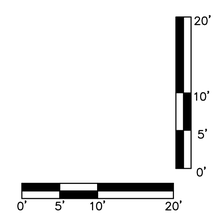
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REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

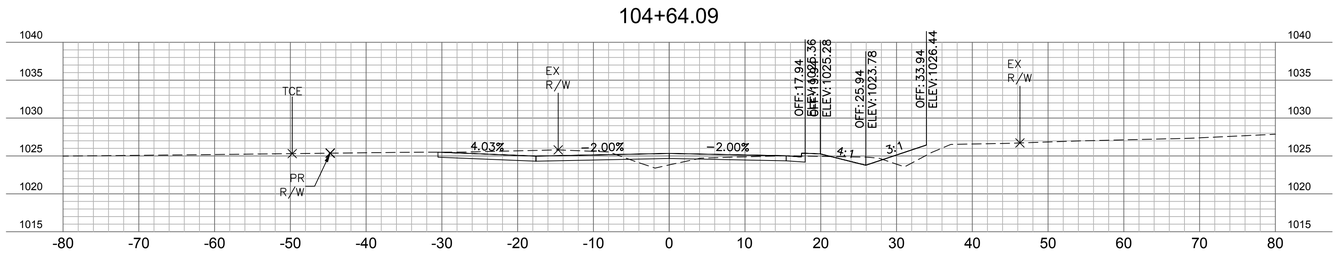
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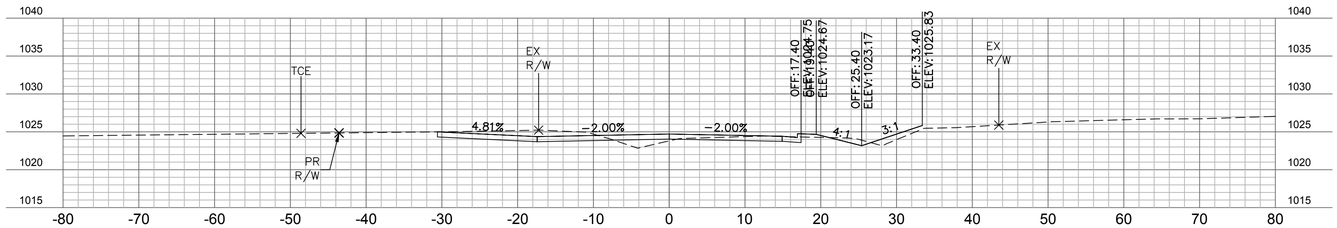
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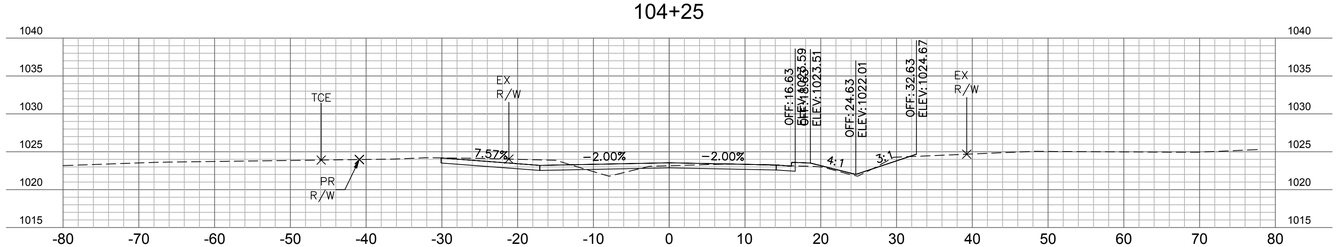
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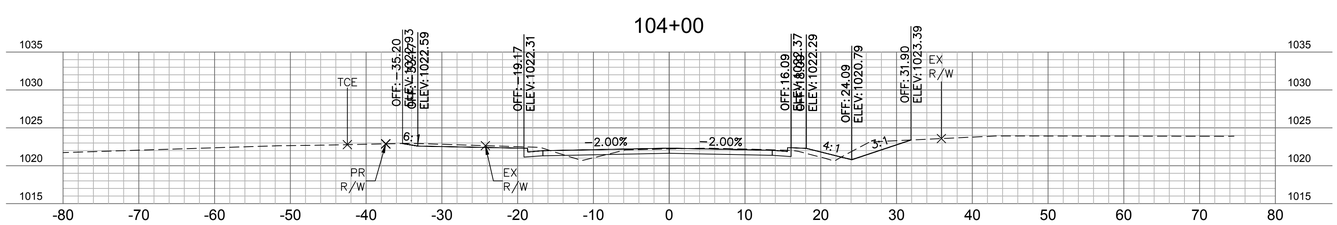
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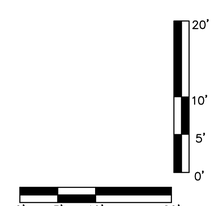
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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

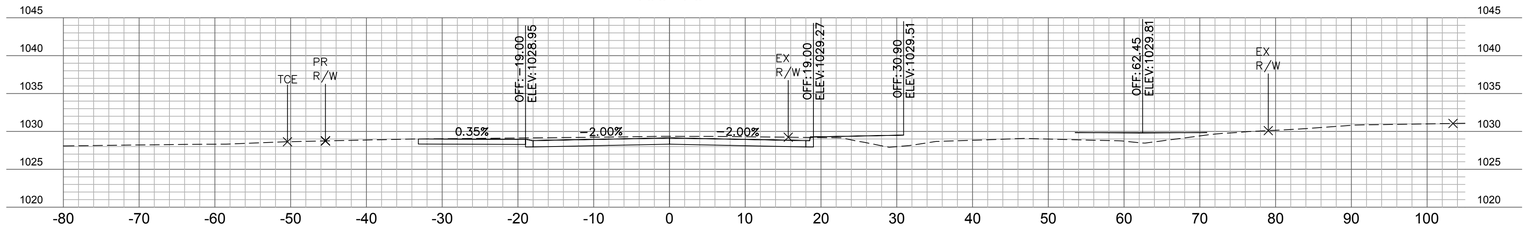
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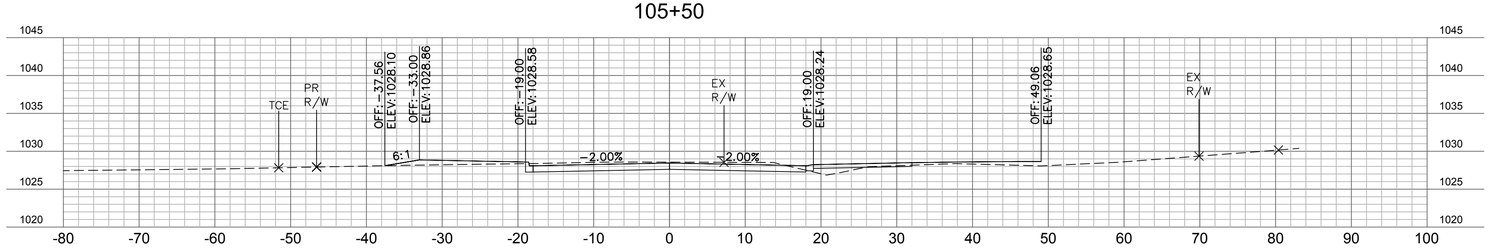
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73 of 88

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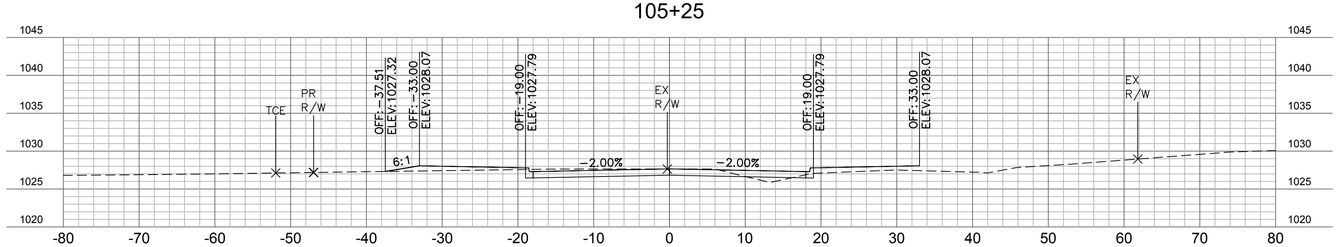
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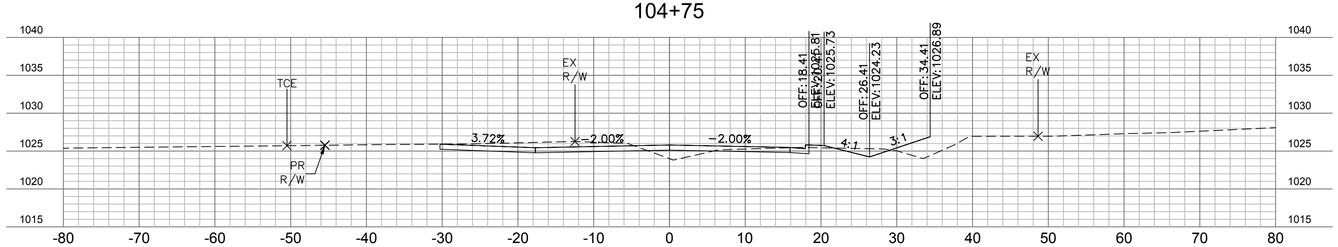
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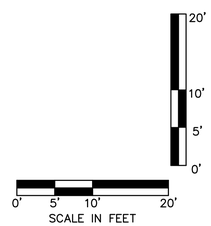


105+25



104+75





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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

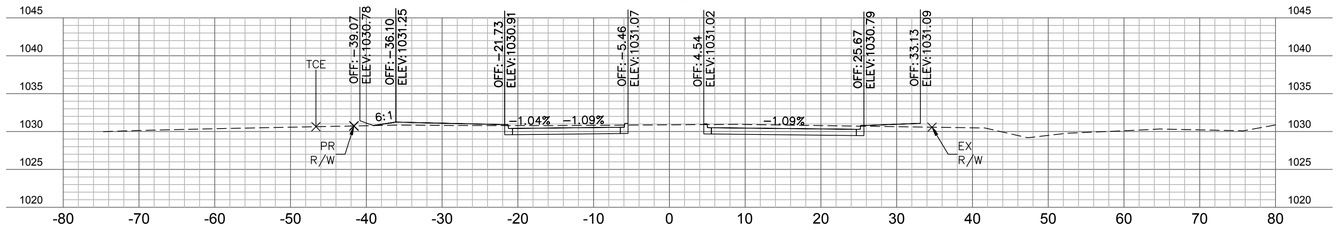
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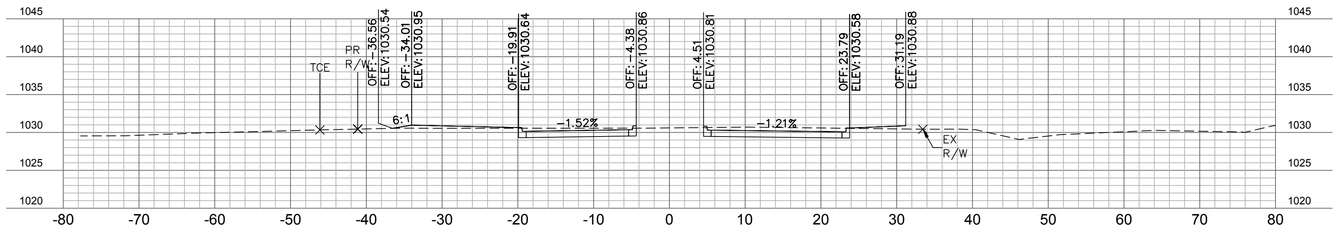
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74 of 88

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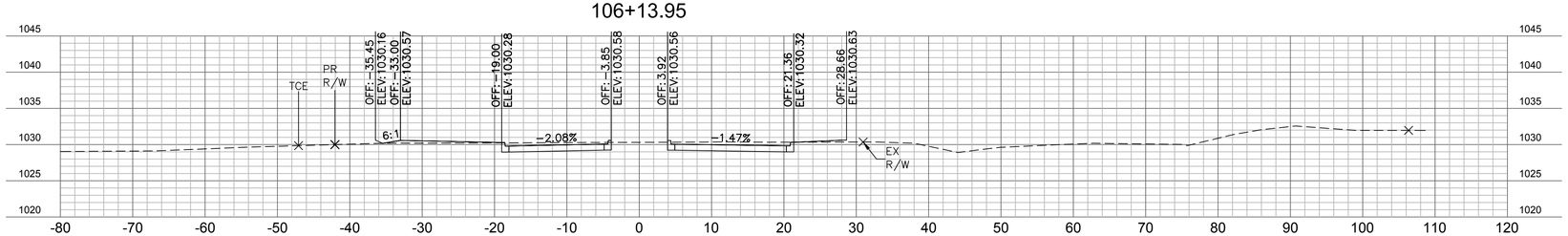
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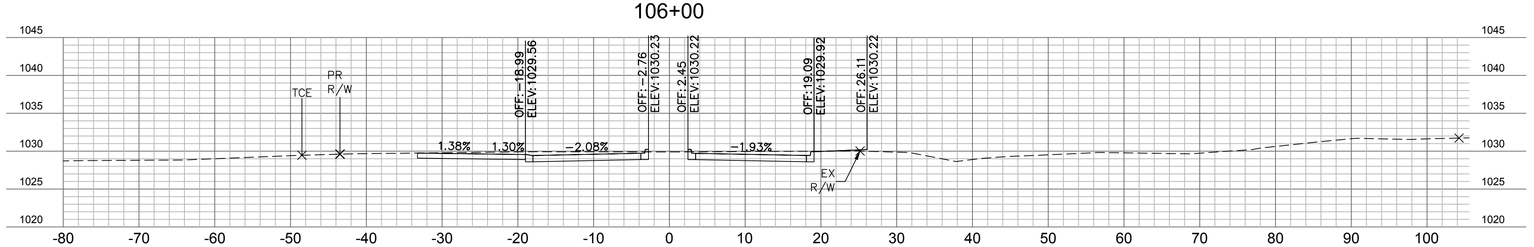
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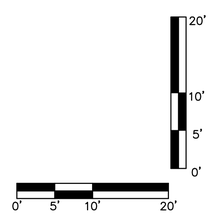


106+13.95



106+00





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STATE OF MISSOURI
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JONATHAN W. PEITZ–CIVIL ENGINEER
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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

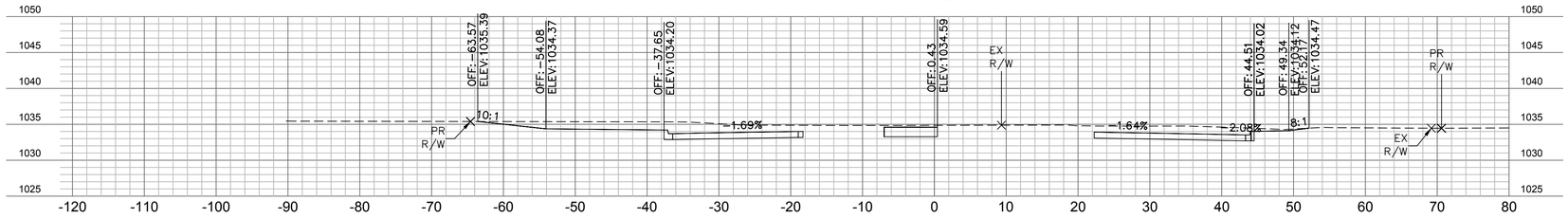
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date:	4/26/2024

SHEET
75 of 88

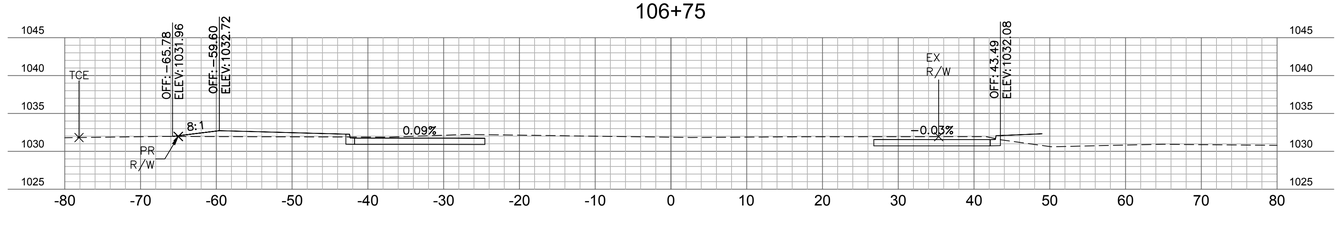
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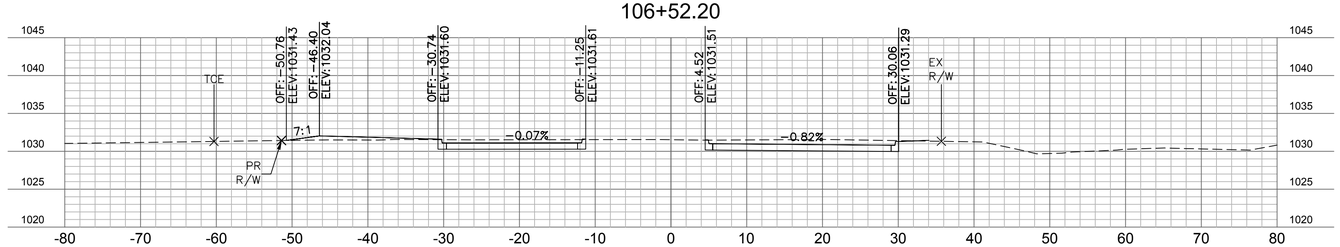


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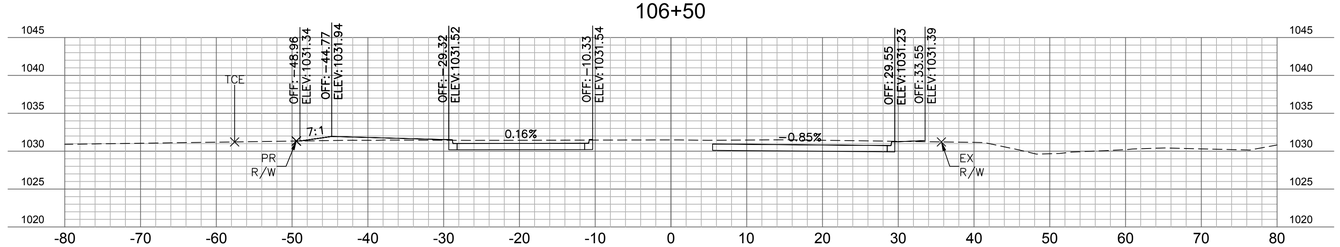
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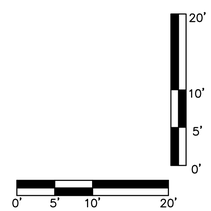


106+52.20



106+50





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JOPLIN, MISSOURI

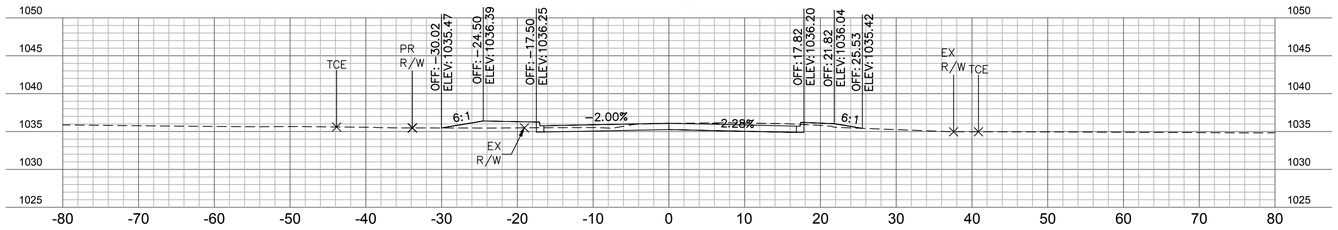
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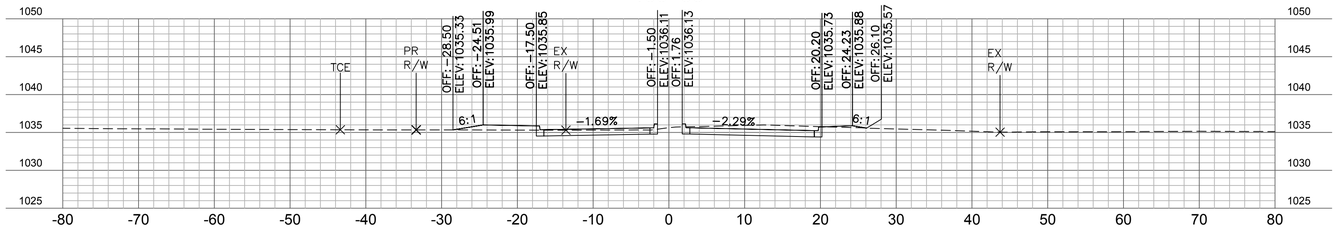
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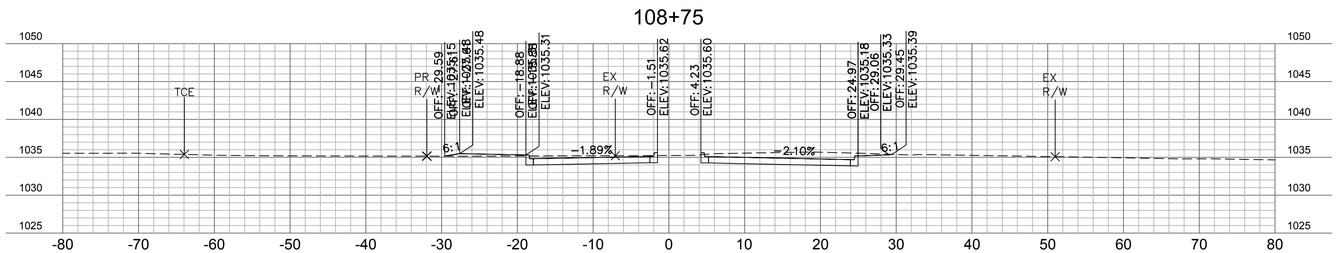
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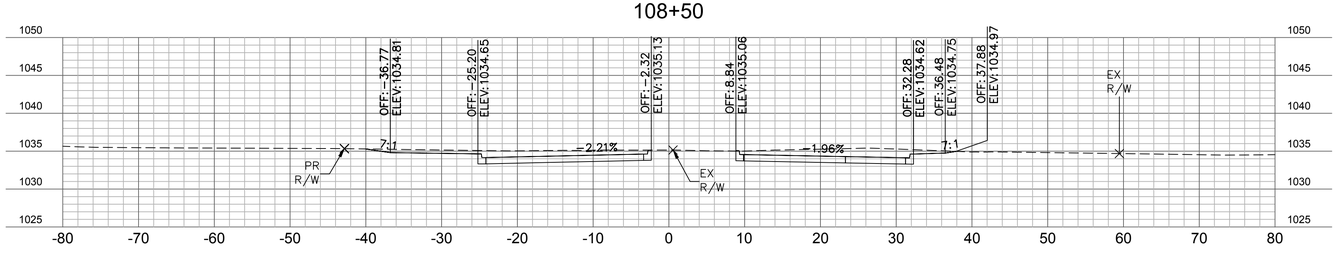
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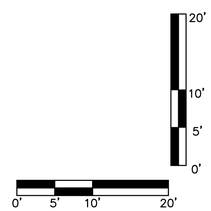


108+75



108+50





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MO# PE-2017019023

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CROSS SECTIONS
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ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

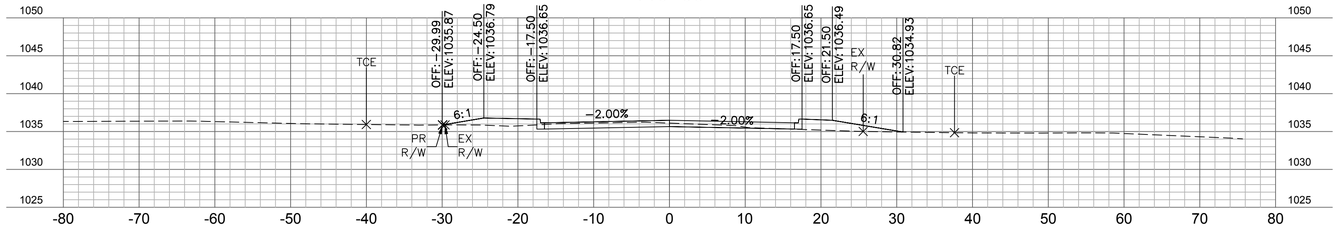
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drawing no.:	C_XSC02_D170642
date:	4/26/2024

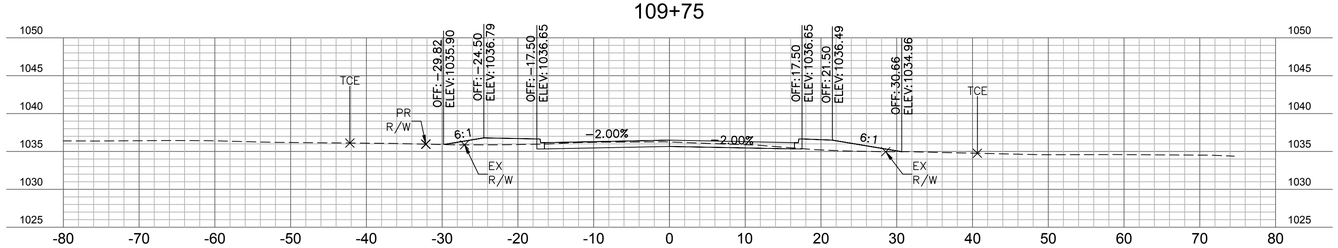
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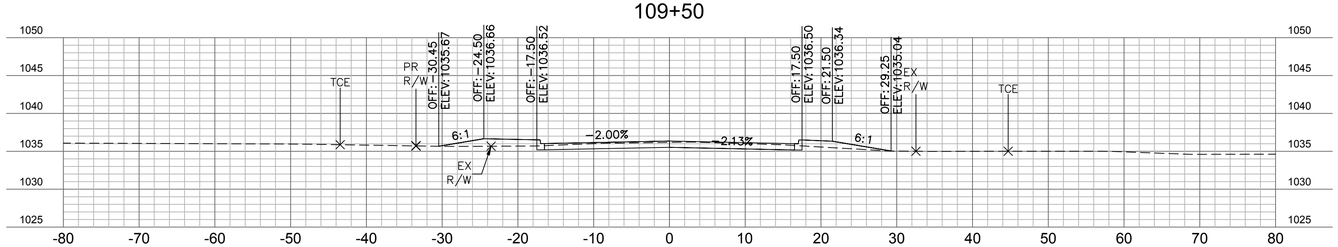
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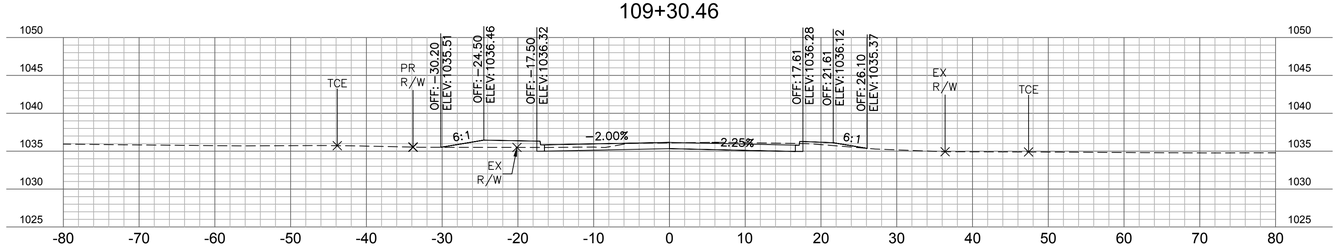
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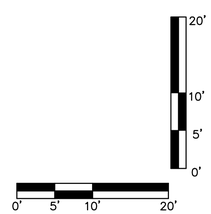


109+50



109+30.46





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NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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MO# PE-2017019023

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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

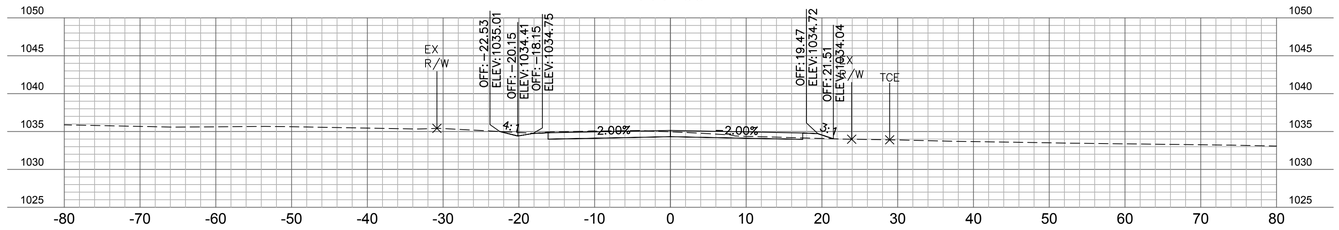
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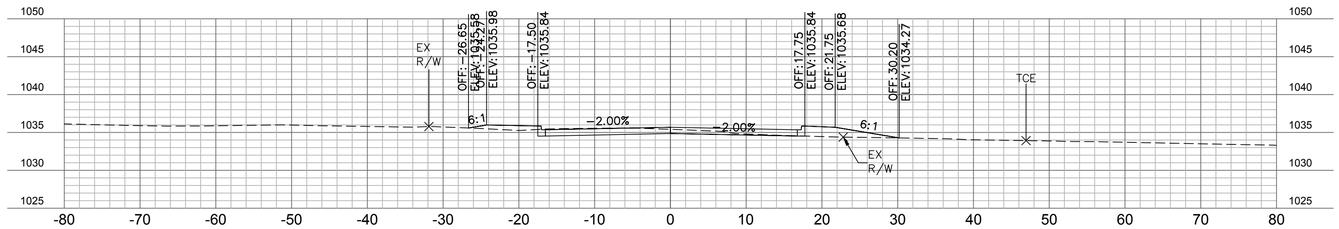
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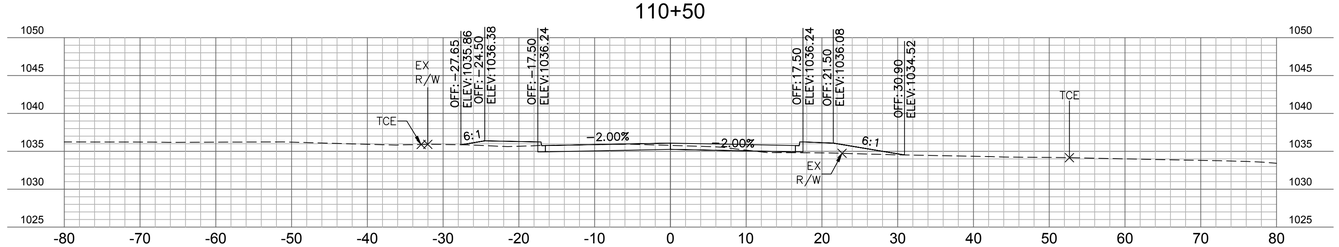
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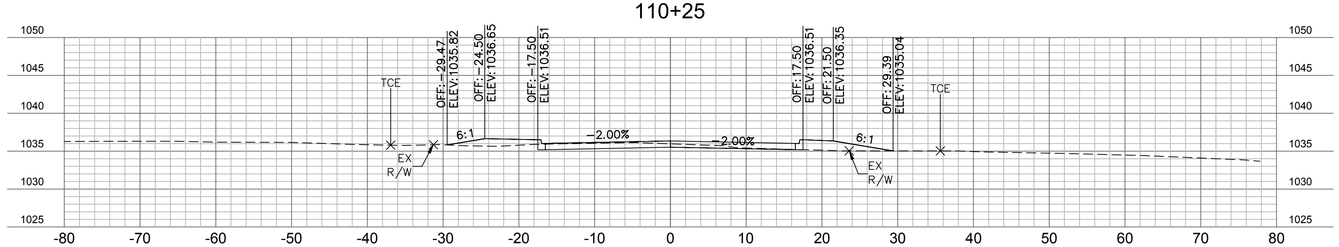
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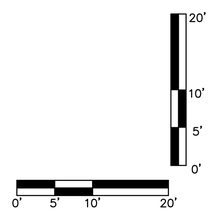


110+50



110+25





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ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

JOPLIN, MISSOURI

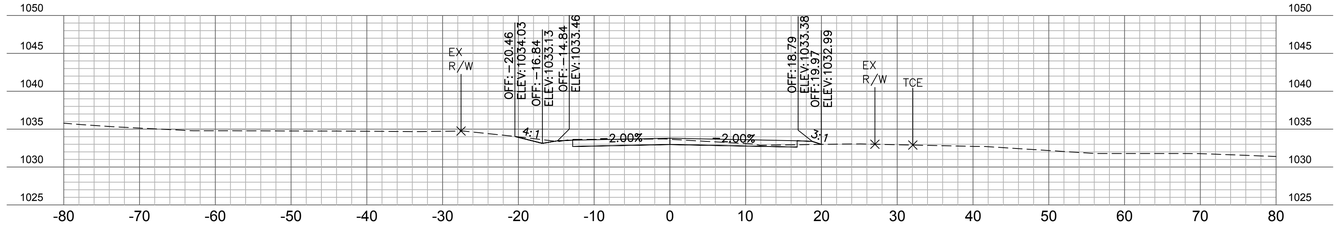
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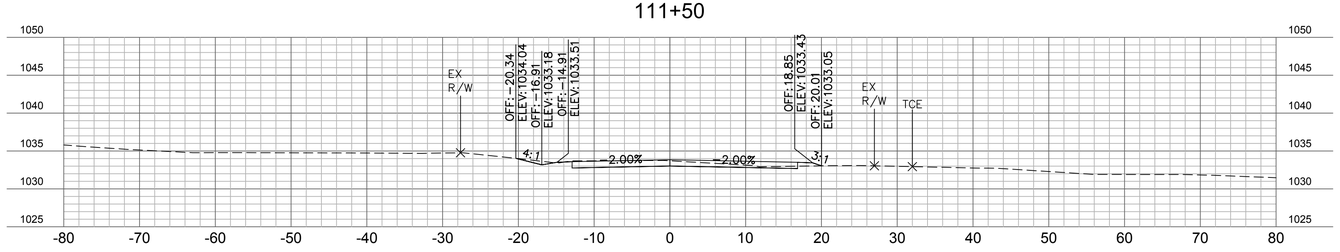
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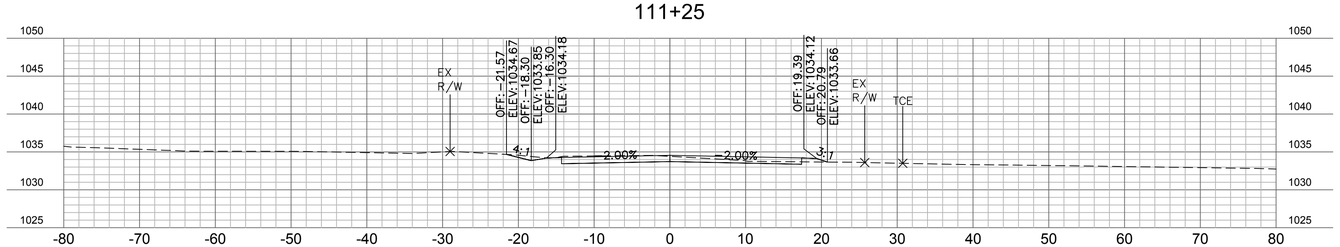
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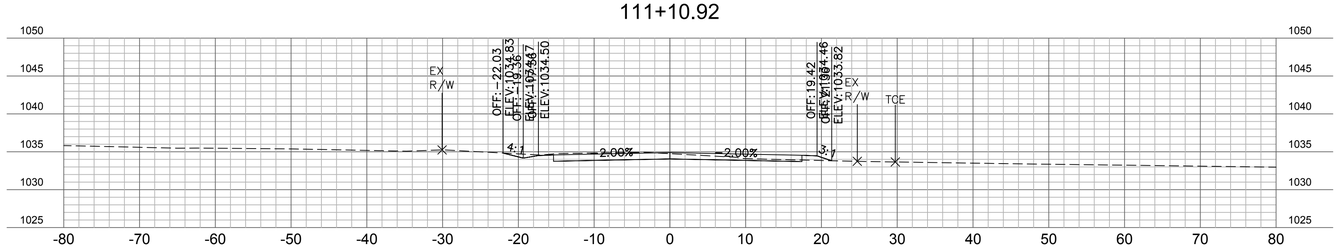
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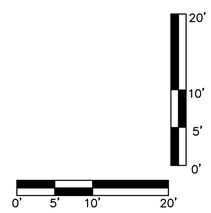


111+25



111+10.92





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REVISIONS

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ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

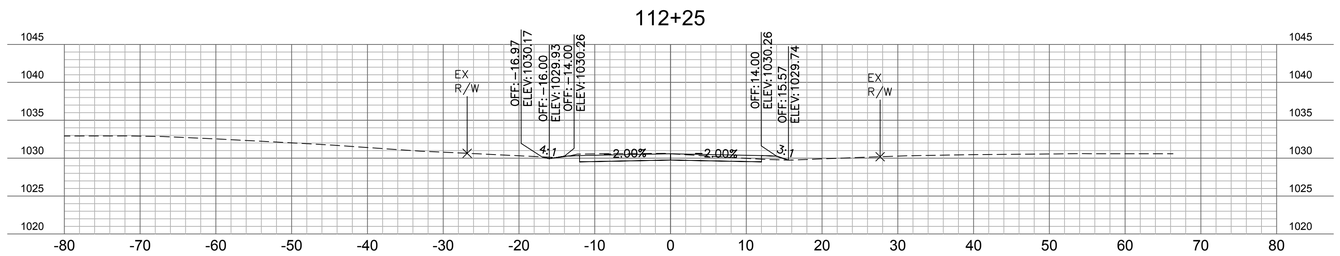
JOPLIN, MISSOURI

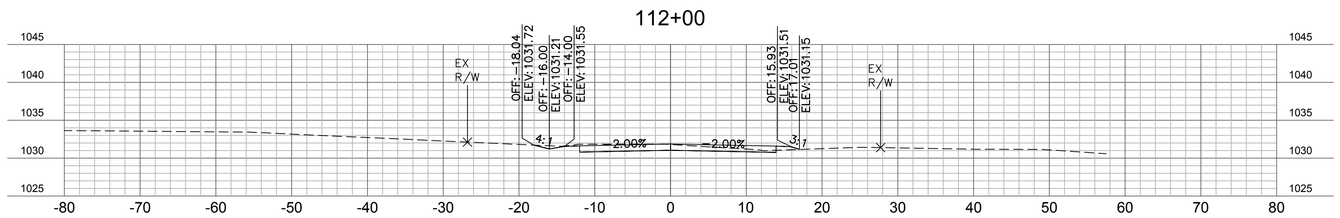
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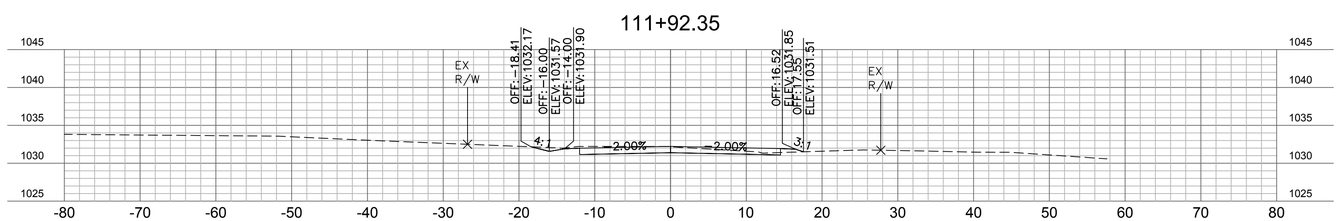
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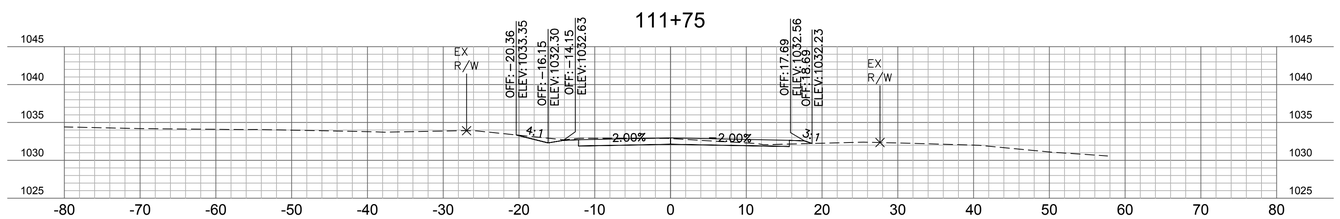
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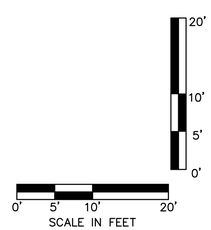
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
ZORA STREET

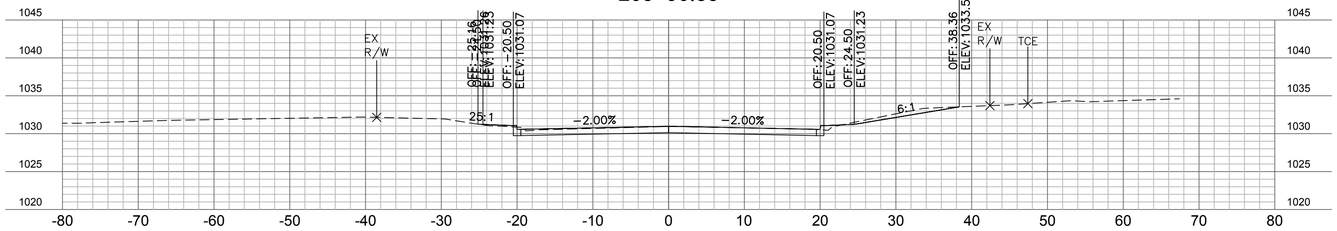
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CITY OF JOPLIN

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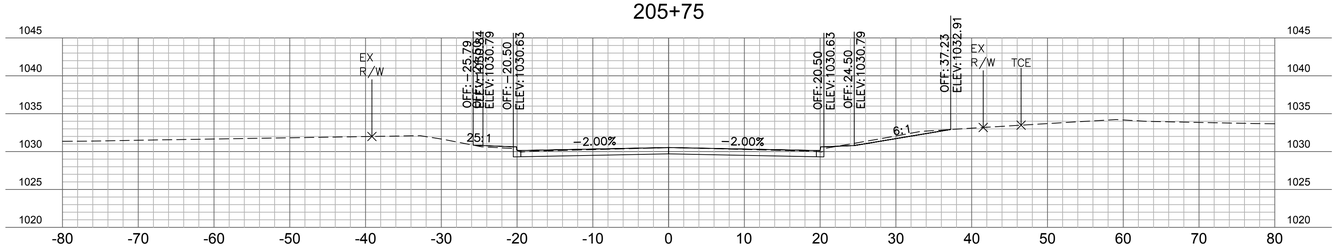
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project no.: 017-0642-D
drawing no.: C_XSC02_D170642
date: 4/26/2024

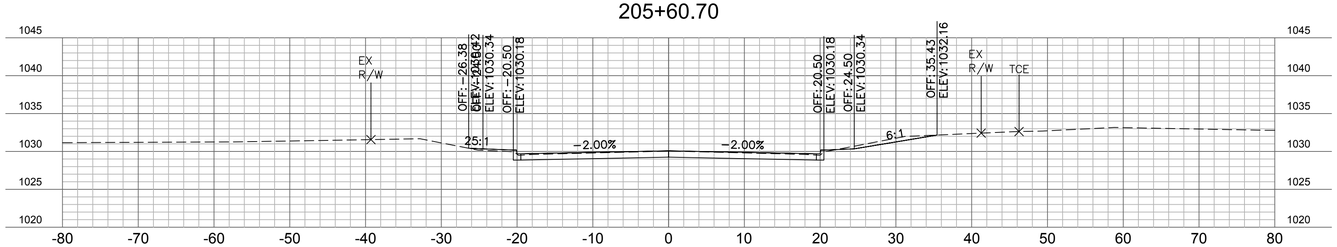
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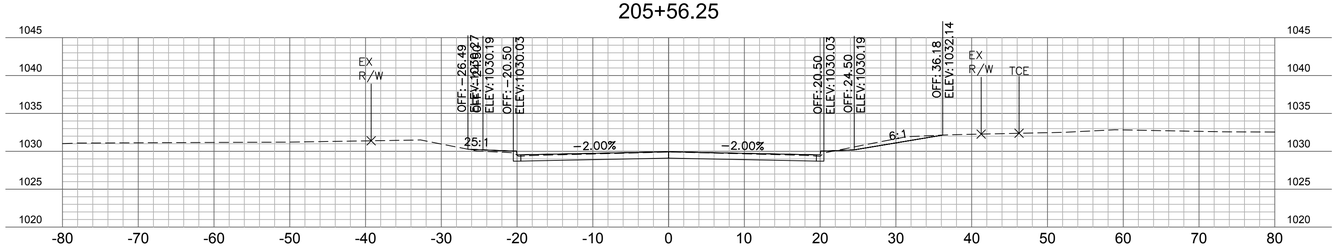
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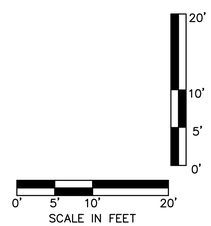


205+60.70



205+56.25





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DUQUESNE ROAD

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CITY OF JOPLIN

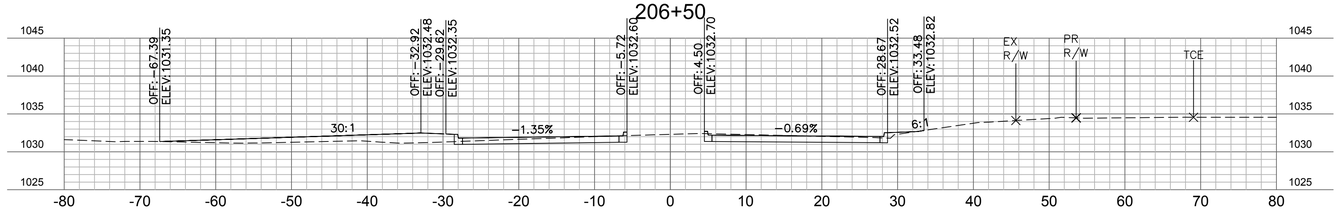
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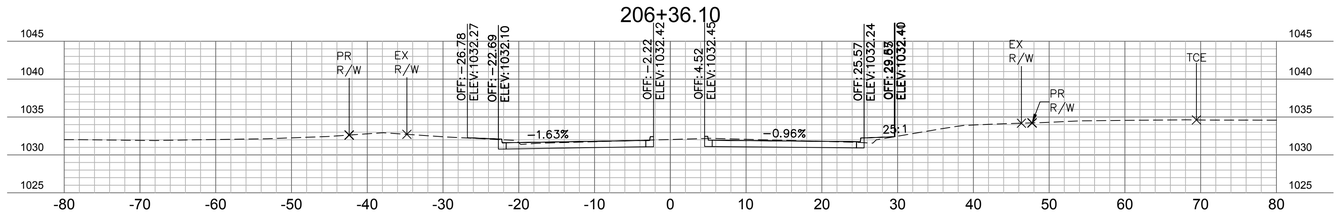
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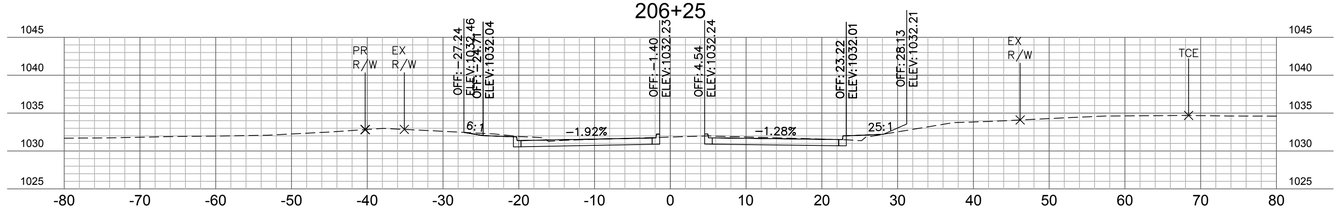
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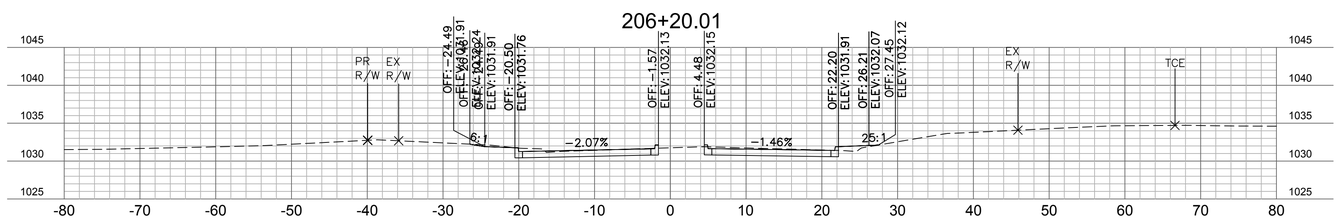
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82 of 88

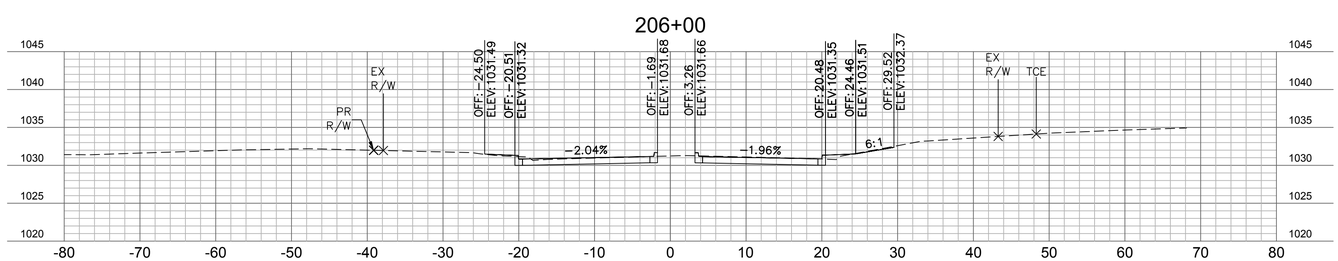
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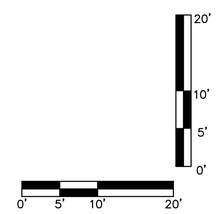












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CITY OF JOPLIN

JOPLIN, MISSOURI

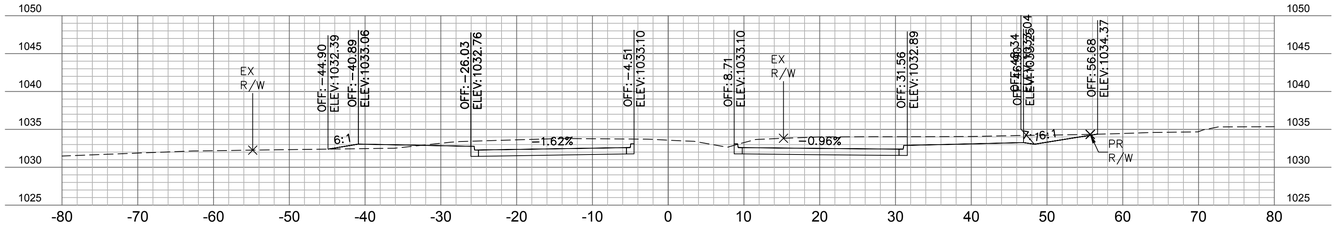
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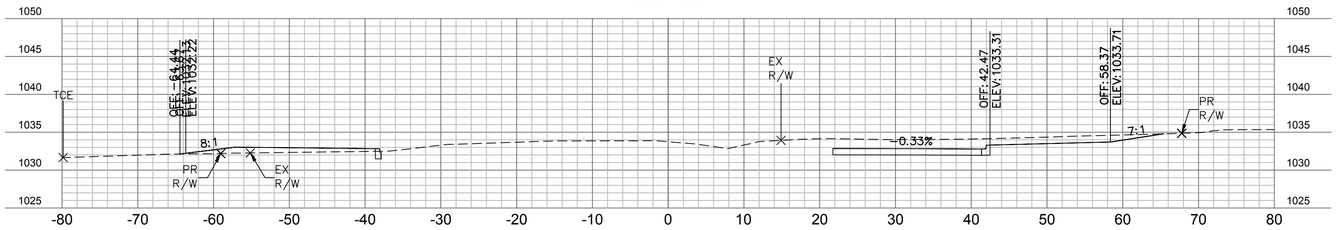
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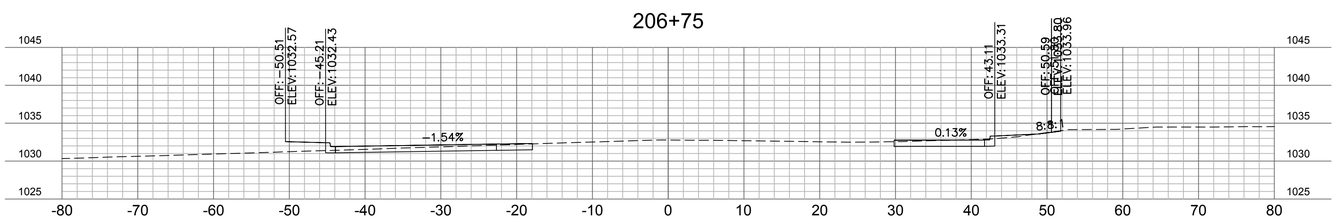


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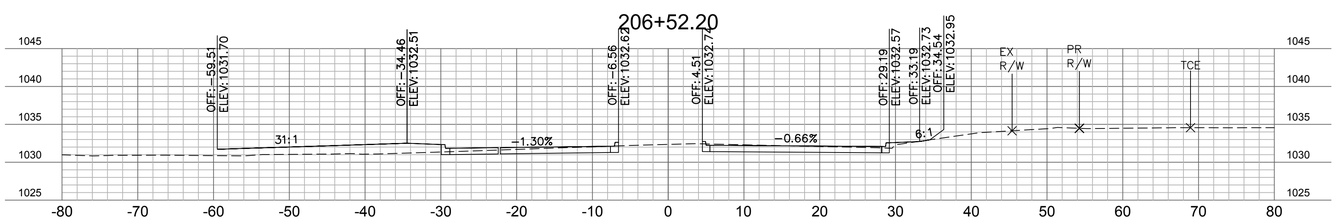


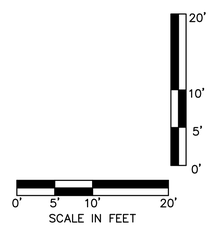
CROSS SECTIONS 207+00 THROUGH 208+00 SEE ROUNDABOUT GEOMETRIC SHEETS 25-27

206+75



206+52.20





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CITY OF JOPLIN

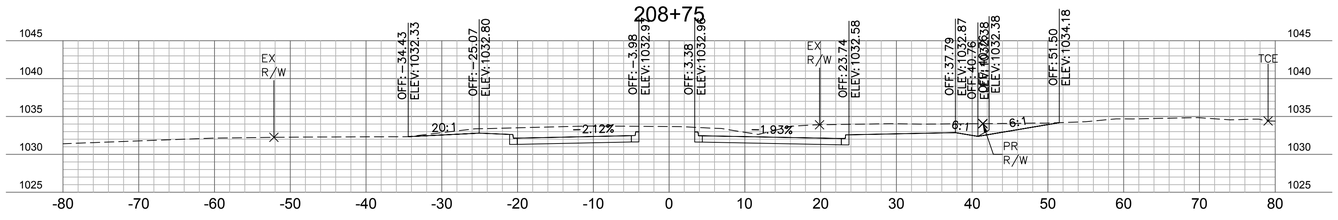
JOPLIN, MISSOURI

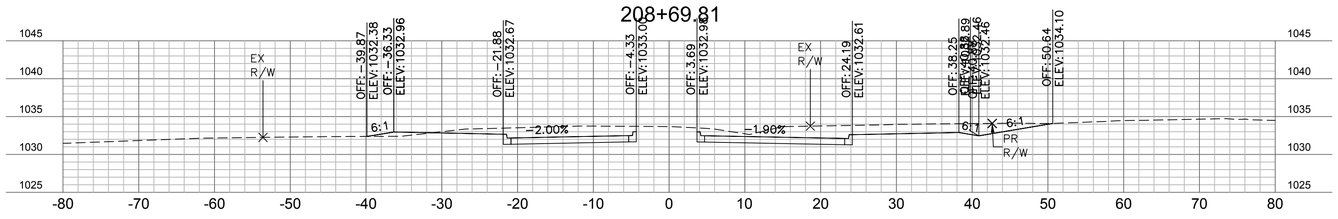
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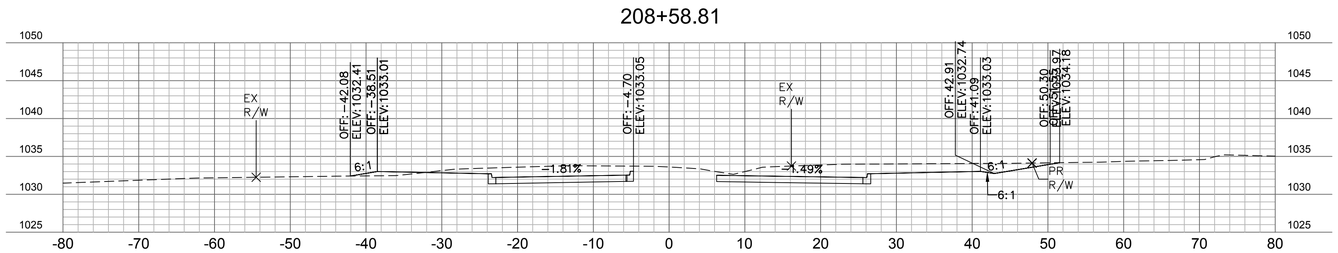
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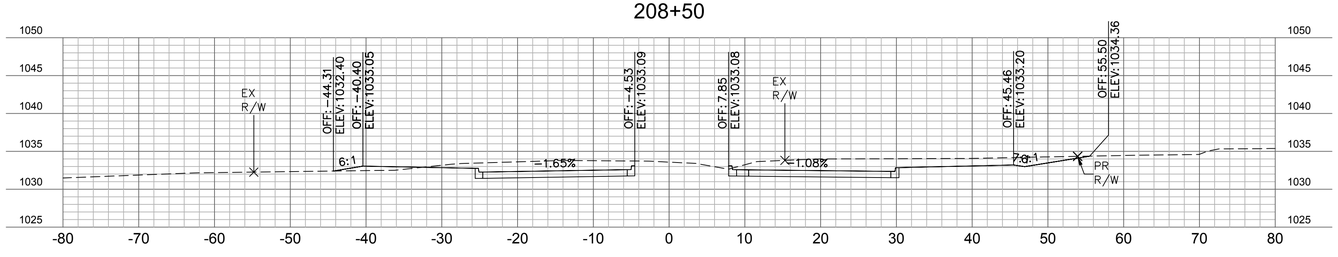
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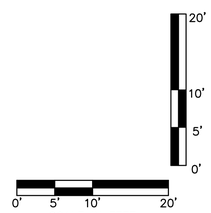
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CROSS SECTIONS
DUQUESNE ROAD

ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

2024

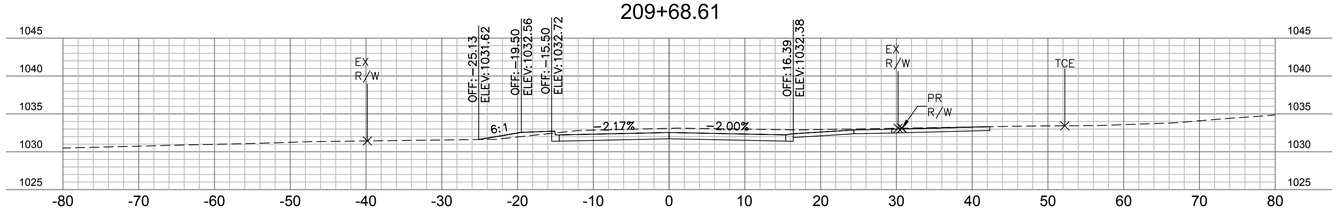
JOPLIN, MISSOURI

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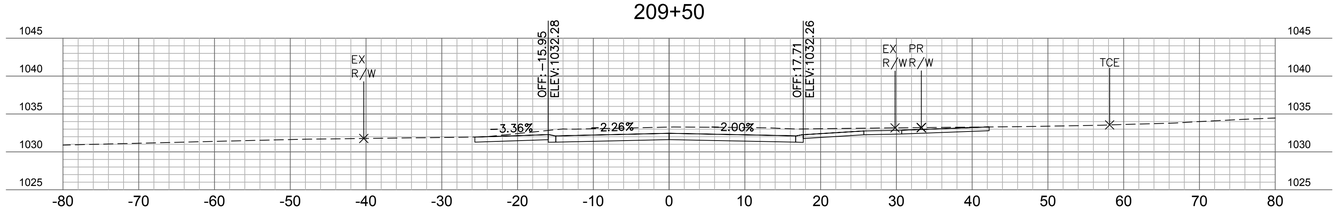
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85 of 88

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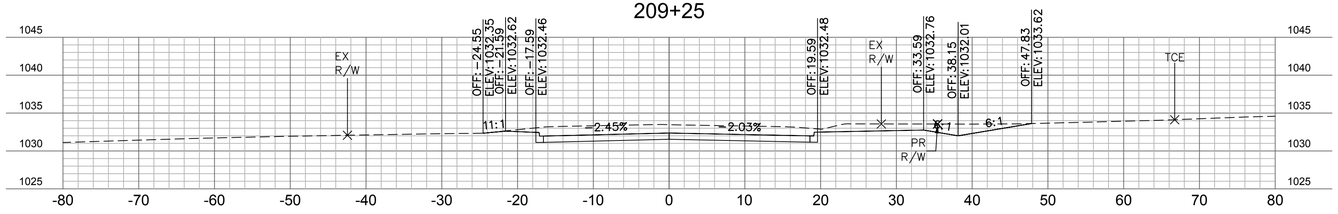
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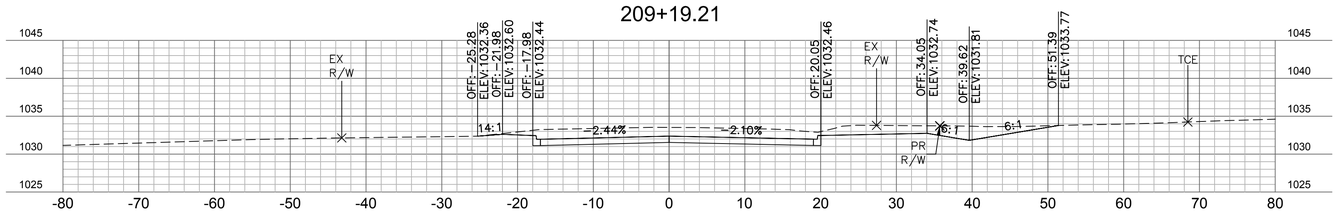
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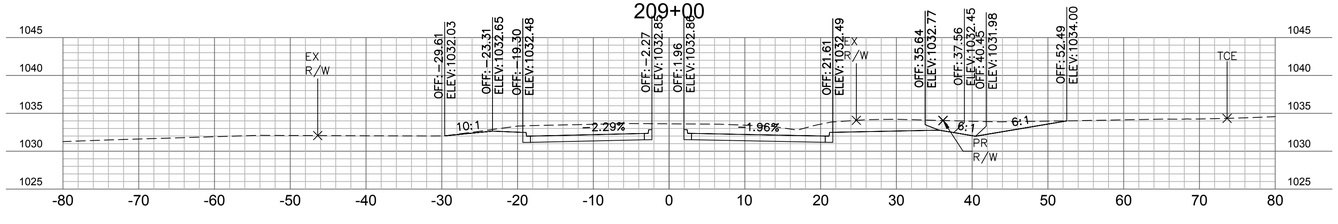
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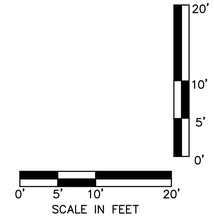


209+19.21



209+00





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ZORA STREET IMPROVEMENTS - PHASE 1
CITY OF JOPLIN

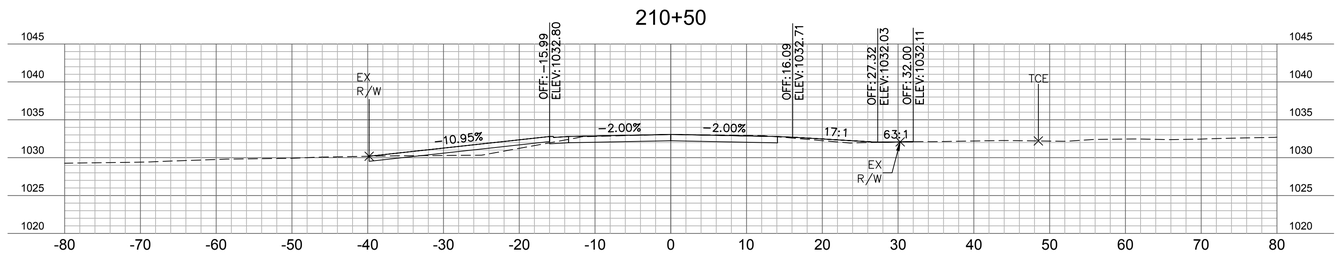
JOPLIN, MISSOURI

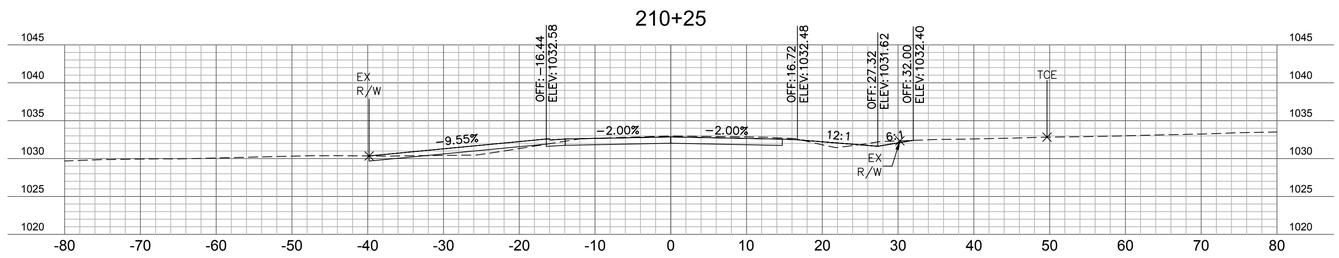
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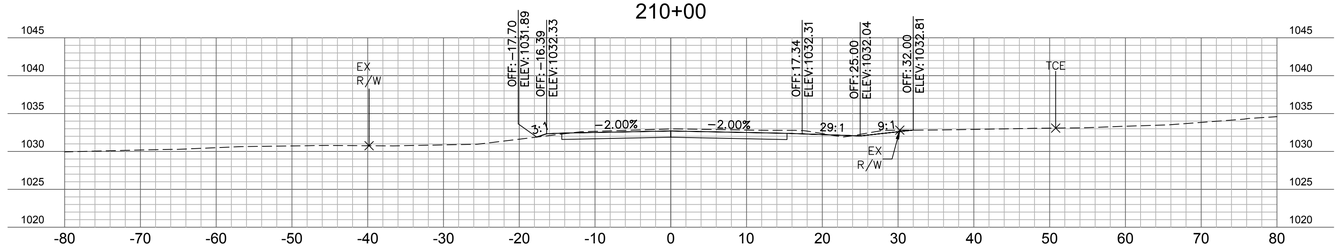
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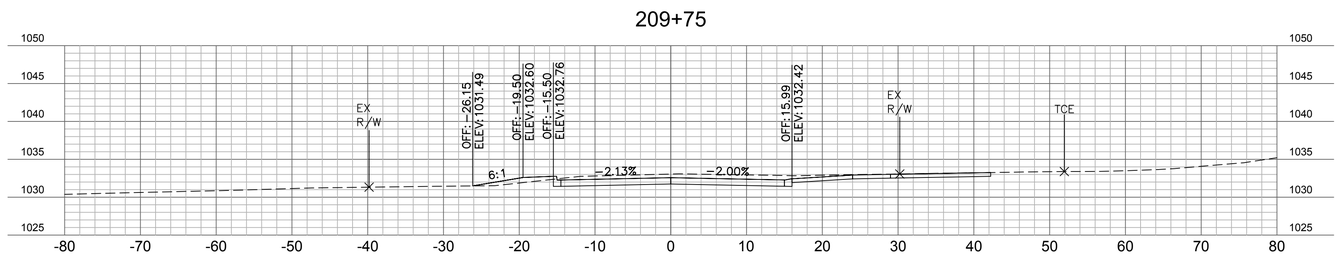
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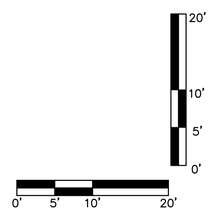
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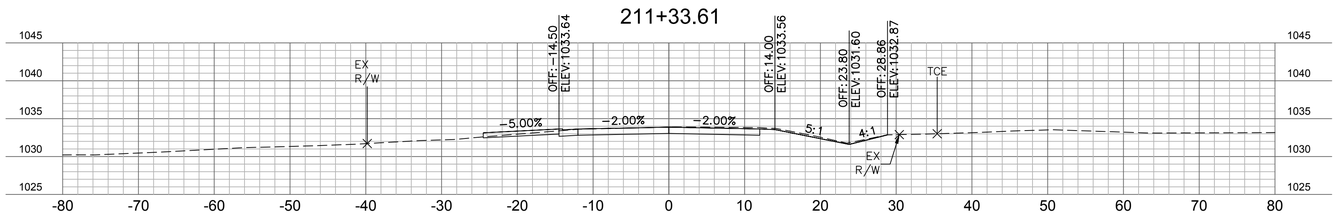
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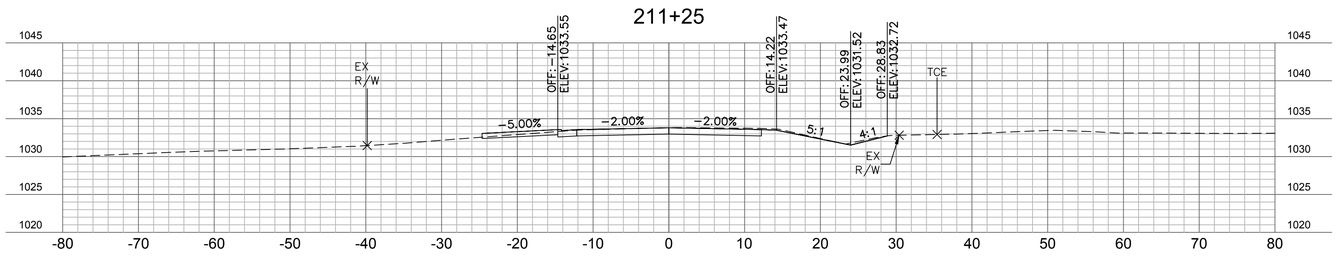
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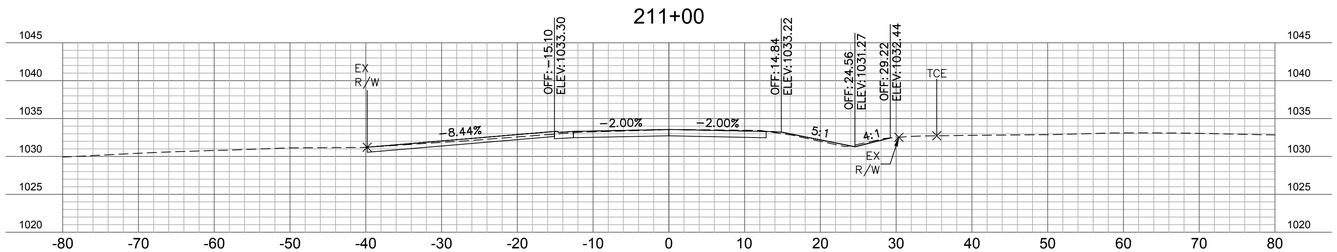
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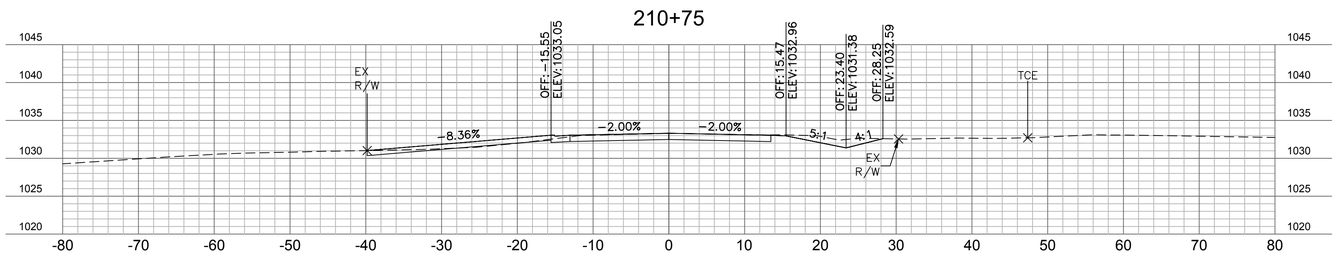
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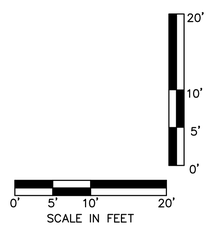
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SHEET
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