PUBLIC STREET IMPROVEMENTS FOR
E. ZORA STREET
(DUQUESNE ROAD TO I-249)
SECTIONS 28, 29, 32, 33, TOWNSHIP 28N, RANGE 32W
CITY OF JOPLIN, MISSOURI
JASPER COUNTY, MISSOURI

LEGEND

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

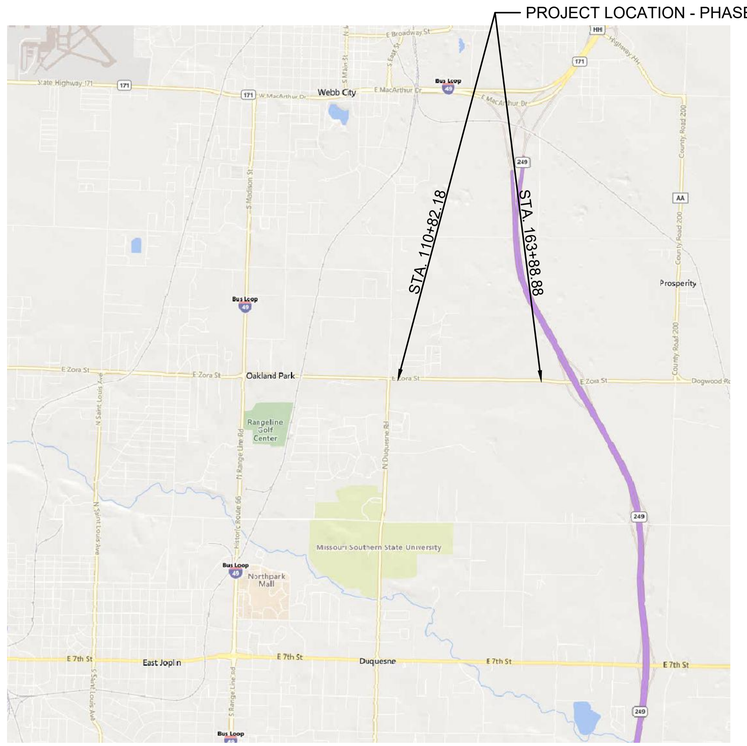
- SECTION LINE
- PROPERTY LINE (PL)
- CENTER LINE
- PROPOSED ROW LINE
- EXISTING ROW LINE
- UTILITY EASEMENT
- 1371 EXISTING MINOR CONTOUR
- 1371 EXISTING MAJOR CONTOUR
- 1371 PROPOSED MINOR CONTOUR
- **1371** PROPOSED MAJOR CONTOUR
- TEL EXISTING TELEPHONE LINE
- SS EXISTING SANITARY LINE
- EXISTING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

ABBREVIATION TABLE

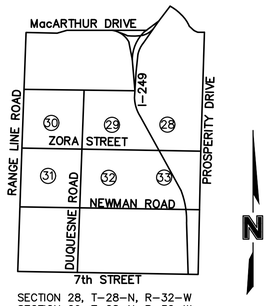
M.G.	MATCH GRADE
TP	TOP OF PAVEMENT
TC	TOP OF CURB
BC	BACK OF CURB
EP	EDGE OF PAVEMENT
R/W	RIGHT-OF-WAY
TCE	TEMPORARY CONSTRUCTION EASEMENT
PROP.	PROPOSED
EXIST.	EXISTING
TYP.	TYPICAL
(R)	REMOVAL
CONST.	CONSTRUCT
TBM	TEMPORARY BENCHMARK
C.P.	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
ADJ.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

DESIGN DESIGNATION

MAJOR ARTERIAL
DESIGN SPEED: 35 MPH (STA 110+57.18 TO STA 120+16.93)
45 MPH (STA 120+16.93 TO 163+89.00)
POSTED SPEED: 35 MPH (STA 110+57.18 TO STA 120+16.93)
45 MPH (STA 120+16.93 TO STA 163+89.00)



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

MISSOURI 811

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!!

INDEX OF SHEETS

SHEET NO.	TITLE
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2-7	EXISTING CONDITIONS & SURVEY CONTROL
8-9	ALIGNMENT DATA
10	GENERAL NOTES
11-15	SUMMARY OF QUANTITIES
16-25	RIGHT OF WAY & EASEMENT PLANS
26-30	DEMOLITION & REMOVALS
31-33	TYPICAL SECTIONS
34-44	ROADWAY PLAN & PROFILE
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63-73	STORM SEWER DETAILS
74-78	EROSION CONTROL PLAN
79-81	EROSION CONTROL DETAILS
82-86	PAVEMENT MARKING & SIGNING PLANS
87	PAVEMENT MARKING & SIGNING DETAILS
88-92	TRAFFIC CONTROL PLANS
93	TRAFFIC CONTROL DETAILS
94-120	CROSS SECTIONS

UTILITIES INFORMATION

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

NATURAL GAS - SPIRE
ATTN: RICHI GARCIA
520 E. 5TH STREET
JOPLIN, MO 64801
(816) 507-0713

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

FIBER OPTIC - AT&T
ATTN: KEVIN WINGARD (SDT)
2749 NW HUNTER DR. STE. E
BLUE SPRINGS, MO 64015
(580) 931-7688

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

PREPARED & SUBMITTED BY:

OLSSON
1027 S. MAIN STREET
SUITE 503
JOPLIN, MISSOURI 64801

JONATHAN PEITZ P.E. — DATE

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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TEL 417.781.0643
www.olsson.com

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TITLE SHEET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_TTL01_R170642
date: 3/28/2025

SHEET
1 of 120

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_TTL01_R170642.dwg USER: skendall
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V_BW-BNDY_CONVERTED_R170642
C_XUTIL_R170642
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C_AERL_R170642
XREFS: C_PBASE_R170642
DWG: Mar 26, 2025 5:40pm
DATE:

BEGIN CONSTRUCTION
ZORA STREET
STA 110+82.18

PARCEL 7
LAWVER INVESTMENTS, LLC

PARCEL 8
SCHLEGEL PROPERTIES, LLC

PARCEL 9
SCHLEGEL PROPERTIES, LLC

15' EXISTING AMERICAN TELEPHONE EASEMENT
2.00' EMPIRE DISTRICT ELECTRIC EASEMENT
SECTION LINE
PROPOSED ℄ E ZORA STREET
EXISTING RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY VARIES
℄ DRIVEWAY STA 114-00 LT
DRIVEWAY STA 114-00 LT 49+35
FLOWLINE ELEVATION 1024.08
STA 115+50.00
110+00
111+00
112+00
113+00
114+00
115+00
PT: 110+57.18
PI: 110+82.18
PI: 111+99.92
ZORA ST - EAST
50+00
DRIVEWAY STA 112-25 RT 50+50
DRIVEWAY STA 112-80 RT 50+75
℄ DRIVEWAY STA 112-25 RT
℄ DRIVEWAY STA 112-80 RT
FLOWLINE ELEVATION 1022.23
MATCHLINE SEE SHEET

PARCEL 9
SWMO DEVELOPMENT, INC.

PARCEL 10
CNJ DEVELOPERS, INC.

PARCEL 11
SHAWN E. & MARK L. HARRIS

PARCEL 12
GIL L. SALGADO

PARCEL 13
ROBERT D. & CLARICE A. McLAUGHLIN TRUST

0' 10' 20' 40'
SCALE IN FEET

PARCEL 9
SCHLEGEL PROPERTIES

STA 115+50.00

PARCEL 14
ZORA 4551

PARCEL 15
JOPLIN LAND & RENTALS

PARCEL 16
ZORA 4551

℄ DRIVEWAY STA 117-25 LT
DRIVEWAY STA 117-25 LT 49+50
CONCRETE PADS
PI: 49+69.20
15' EXISTING AMERICAN TELEPHONE EASEMENT
2.00' EMPIRE DISTRICT ELECTRIC EASEMENT
EXISTING RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY WIDTH VARIES
PROPOSED ℄ E ZORA STREET
CONCRETE RETAINING WALL
℄ CENTER LANE
CENTER LANE
STA 121+00.00
SANITARY SEWER MANHOLE RIM ELEVATION 1026.39
FLOWLINE ELEVATION 1023.04
116+00
117+00
118+00
119+00
120+00
121+00
ZORA ST - EAST
DRIVEWAY STA 115-75 RT 50+00
DRIVEWAY STA 115-75 RT 50+50
℄ DRIVEWAY STA 115-75 RT
POWER POLE
SANITARY SEWER MANHOLE RIM ELEVATION 1022.61
FLOWLINE ELEVATION 1021.68
MATCHLINE SEE SHEET

PARCEL 13
ROBERT D. & CLARICE A. McLAUGHLIN TRUST

PARCEL 13
ROBERT D. & CLARICE A. McLAUGHLIN TRUST

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

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EXISTING CONDITIONS

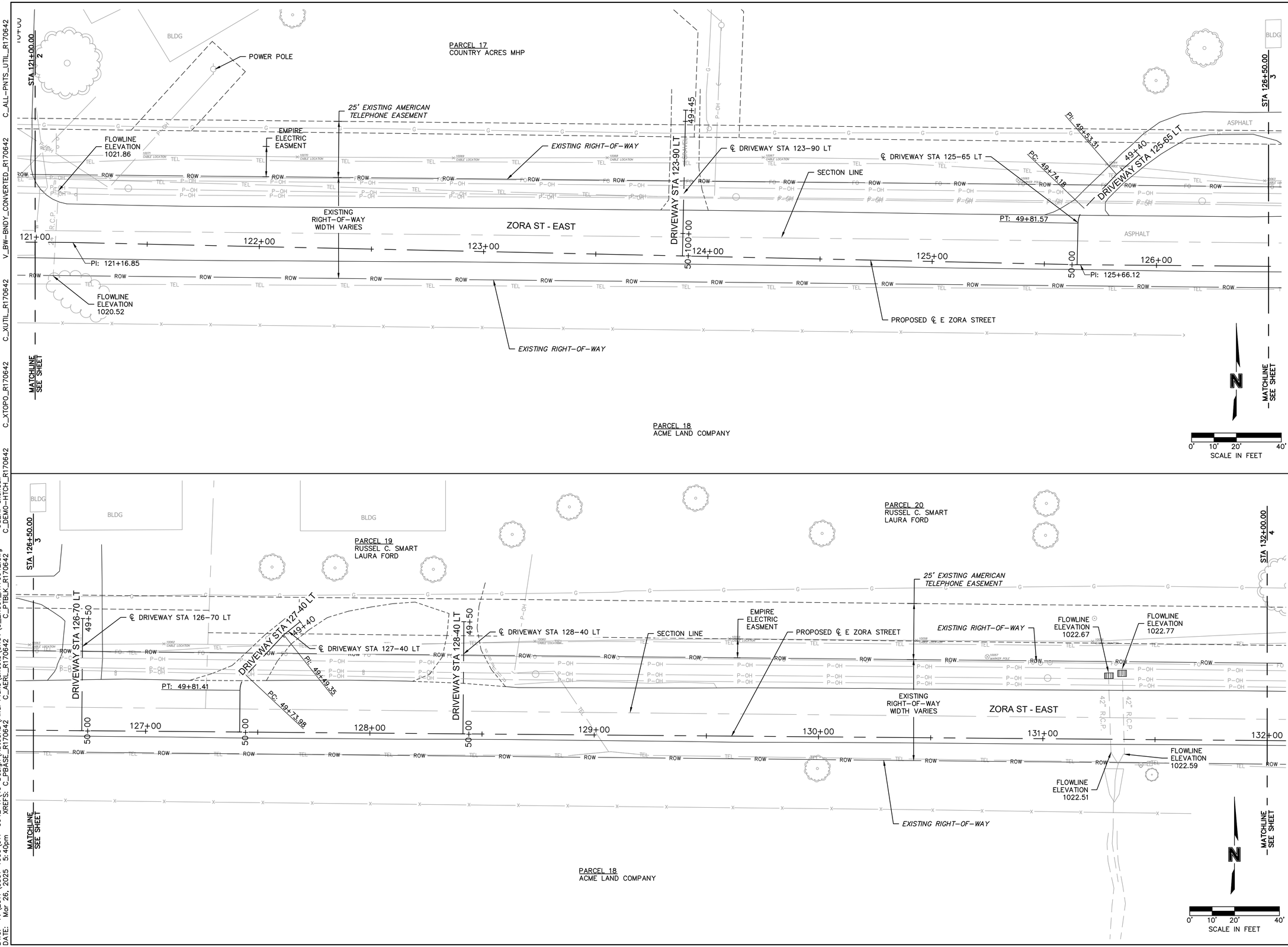
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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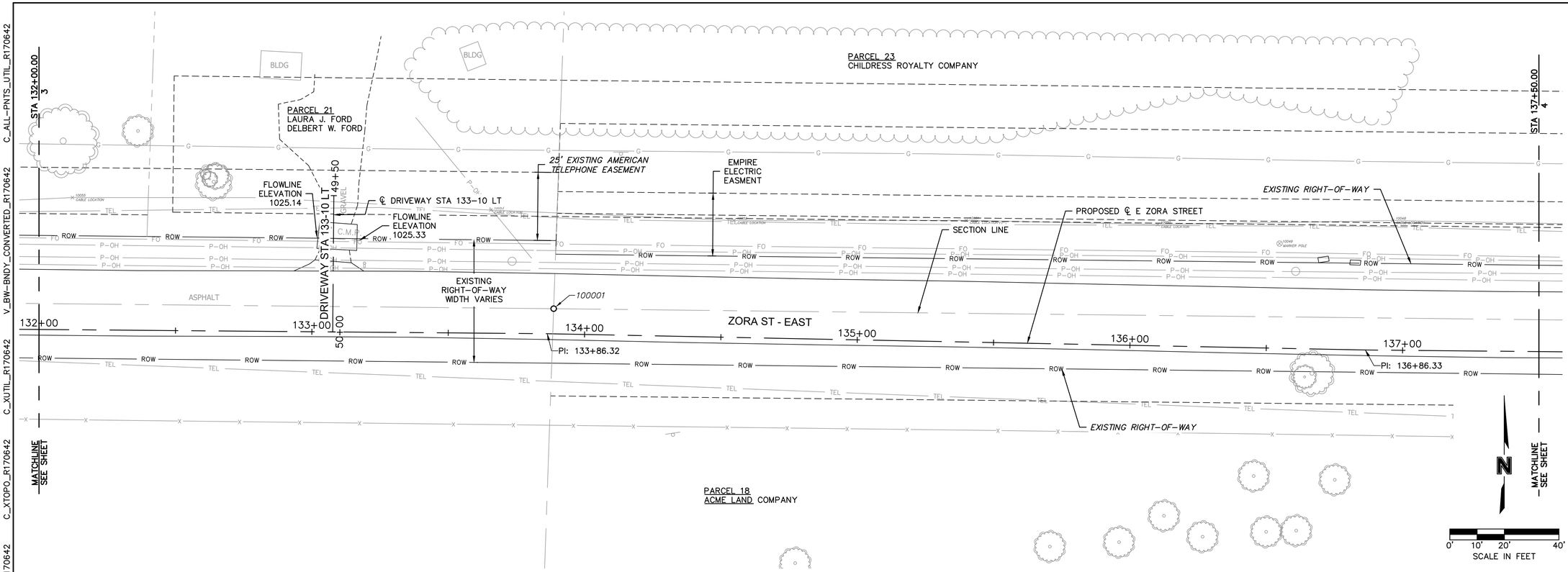
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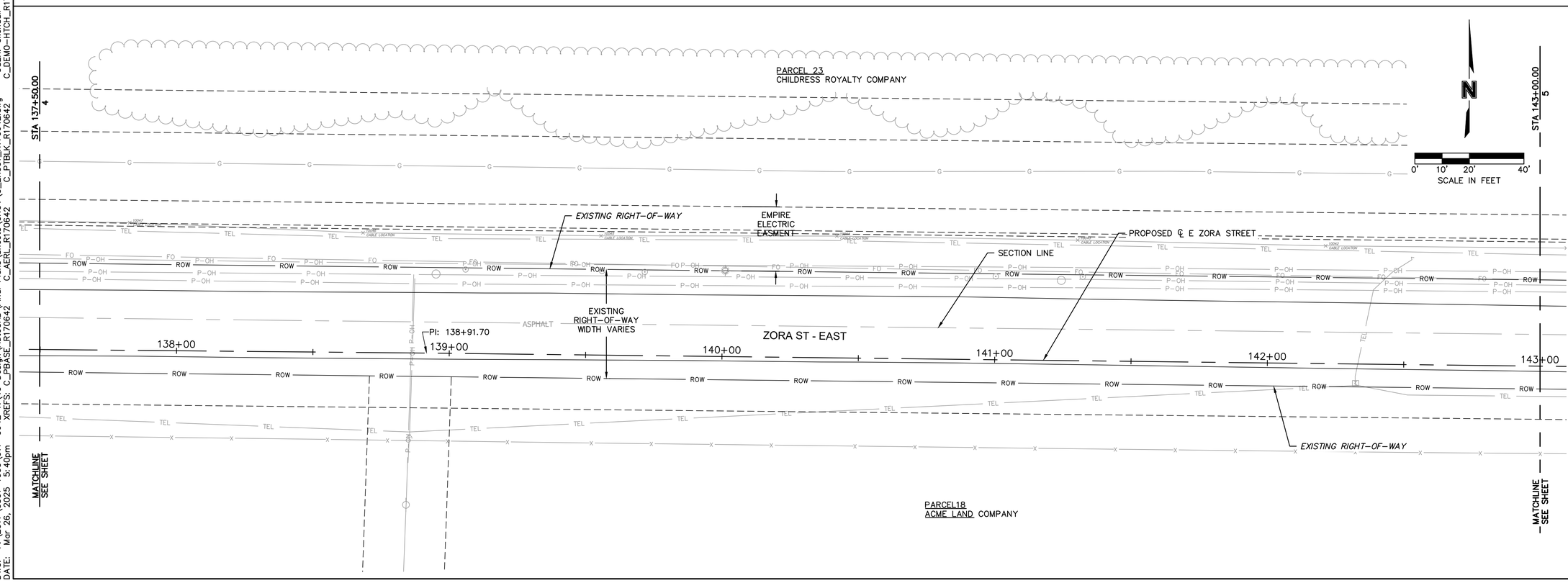
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CITY OF JOPLIN

2025

JOPLIN, MISSOURI

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MO# PE-2017019023

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SHEET
4 of 120

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V_BW-BNDY_CONVERTED_R170642
C_XUTIL_R170642
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C_AERL_R170642
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DWG:
DATE: Mar 26, 2025 5:40pm

PARCEL 23
CHILDRESS ROYALTY COMPANY

PARCEL 24
DUSTIN W. HOLT

STA 143+00.00
4

STA 148+50.00
5

℄ DRIVEWAY STA 143-80 LT

229

FLOWLINE ELEVATION 1058.27

FLOWLINE ELEVATION 1057.95

49+50

DRIVEWAY STA 143-80 LT

50+00

EMPIRE ELECTRIC EASMENT

SECTION LINE

EXISTING RIGHT-OF-WAY

15' EXISTING AMERICAN TELEPHONE EASEMENT

℄ DRIVEWAY STA 147-30 LT

49+50

DRIVEWAY STA 147-30 LT

50+00

ASPHALT

143+00 144+00 145+00 146+00 147+00 148+00

ZORA ST - EAST

PI: 147+11.08

EXISTING RIGHT-OF-WAY WIDTH VARIES

FLOWLINE ELEVATION 1058.01

GRAVEL

FLOWLINE ELEVATION 1058.33

℄ DRIVEWAY STA 143-90 RT

50+00

DRIVEWAY STA 143-90 RT

50+50

106

PROPOSED ℄ E ZORA STREET

EXISTING RIGHT-OF-WAY

MATCHLINE SEE SHEET

MATCHLINE SEE SHEET

PARCEL 18
ACME LAND COMPANY

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 25
DONNA GAGE

PARCEL 24
DUSTIN W. HOLT

PARCEL 24
DUSTIN W. HOLT

STA 148+50.00
5

STA 154+00.00
6

15' EXISTING AMERICAN TELEPHONE EASEMENT

EMPIRE ELECTRIC EASMENT

℄ DRIVEWAY STA 149+20 LT

49+50

DRIVEWAY STA 149-20 LT

50+00

℄ DRIVEWAY STA 151-40 LT

49+50

DRIVEWAY STA 151-40 LT

50+00

EXISTING RIGHT-OF-WAY

SECTION LINE

15' EXISTING AMERICAN TELEPHONE EASEMENT

ASPHALT

PI: 150+36.12

ZORA ST - EAST

149+00 150+00 151+00 152+00 153+00 154+00

EXISTING RIGHT-OF-WAY WIDTH VARIES

EXISTING RIGHT-OF-WAY

PROPOSED ℄ E ZORA STREET

MATCHLINE SEE SHEET

MATCHLINE SEE SHEET

PARCEL 18
ACME LAND COMPANY

N

0' 10' 20' 40'
SCALE IN FEET

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CITY OF JOPLIN

2025

JOPLIN, MISSOURI

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C_AERL_R170642
XREFS: C_PBASE_R170642
DWG: Mar 26, 2025 5:40pm
DATE:

PARCEL 24
DUSTIN W. HOLT

STA 154+00.00
5

STA 159+50.00
6

FLOWLINE ELEVATION 1052.00

SECTION LINE

EMPIRE ELECTRIC EASMENT

15' EXISTING AMERICAN TELEPHONE EASEMENT

PROPOSED ℄ E ZORA STREET

36" C.M.P.

ASPHALT

ZORA ST - EAST

EXISTING RIGHT-OF-WAY WIDTH VARIES

PI: 154+86.09

154+00 155+00 156+00 157+00 158+00 159+00

FLOWLINE ELEVATION 1051.40

PC: 157+64.95

PT: 158+14.97

EXISTING RIGHT-OF-WAY

MATCHLINE SEE SHEET

PARCEL 18
ACME LAND COMPANY

0' 10' 20' 40'
SCALE IN FEET

PARCEL 27
BURDEN FAMILY TRUST

PARCEL 27
BURDEN FAMILY TRUST.

EXISTING RIGHT-OF-WAY

EMPIRE ELECTRIC EASMENT

15' EXISTING AMERICAN TELEPHONE EASEMENT

EXISTING AMERICAN TELEPHONE EASEMENT

EXISTING RIGHT-OF-WAY

℄ DRIVEWAY STA 163-35 LT

SECTION LINE

100003

EXISTING RIGHT-OF-WAY WIDTH VARIES

ZORA ST - EAST

160+00 161+00 162+00 163+00 164+00 165+00

PROPOSED ℄ E ZORA STREET

DRIVEWAY STA 162-55 RT 50+00

DRIVEWAY STA 162-55 RT 50+49.86

℄ DRIVEWAY STA 162-55 RT

℄ DRIVEWAY STA 163-35 RT

DRIVEWAY STA 163-35 RT 50+00

DRIVEWAY STA 163-35 LT 49+50

PC: 163+40.20

50+50

END CONSTRUCTION
ZORA STREET
STA 163+88.88

EXISTING RIGHT-OF-WAY

PARCEL 18
ACME LAND COMPANY

0' 10' 20' 40'
SCALE IN FEET

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JONATHAN W. PEITZ
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PROFESSIONAL ENGINEER
12/31/2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

EXISTING CONDITIONS

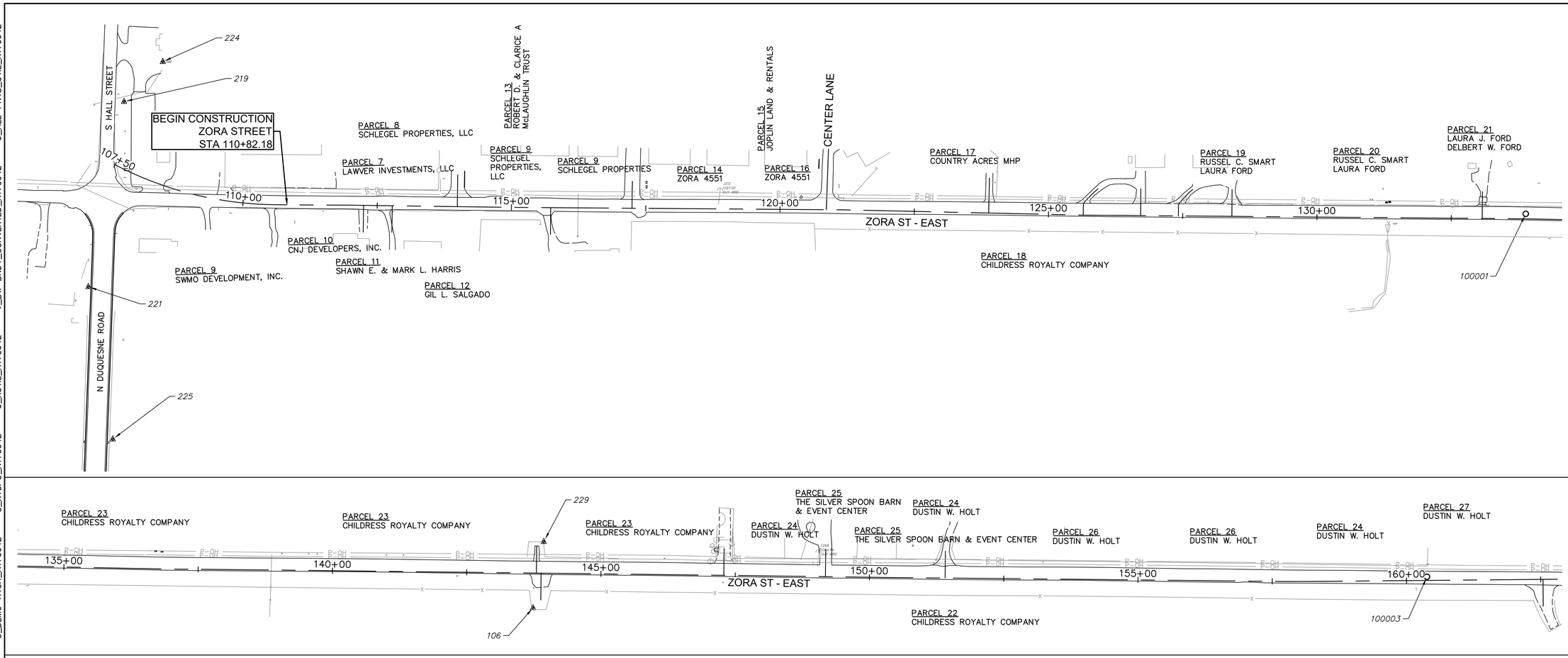
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JOPLIN, MISSOURI

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SHEET
6 of 120



CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
106	344189.3710	2804684.7230	1060.810	CTL
211	344232.6090	2807434.9610	1064.764	CTL 60D
214	344124.0010	2807572.0270	1066.827	CTL 60D
217	344417.9560	2807417.1350	1067.413	TBM
219	344485.8700	2801090.3100	1033.893	CTL 60D
221	344141.1220	2801023.7100	1028.964	CTL 60D
224	344560.1010	2801162.3990	1035.724	TBM
225	343857.5300	2801069.1830	1017.365	TBM
229	344312.5750	2804704.8860	1058.628	TBM
100001	344276.8210	2803700.0080	1028.832	FOUND MONUMENT COPPERWELD
100003	344247.1240	2806349.2080	1063.667	FOUND MONUMENT COPPERWELD

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 "A" (PT 217): TBM "A" 60D S/E SIDE POWER POLE N/E CORN I-49 & ZORA AVE. 200' N OF ZORA
EL.=1067.413 (NAVD'88)

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)

OLSSON TBM "C" (PT 225): 60D NAIL WEST SIDE POWER POLE. 2ND POWER POLE NORTH OF SOUTH END OF GUARDRAIL. SOUTH OF ZORA EAST SIDE OF HALL STREET.
EL.=1017.365 (NAVD'88)

OLSSON TBM "E" (PT 229): 60D EAST SIDE OF GATE POST. 50' NORTH OF CL ZORA, 13.4' EAST OF GRAVEL DRIVE.
EL.=1058.628 (NAVD'88)

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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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EXISTING CONDITIONS & SURVEY CONTROL

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

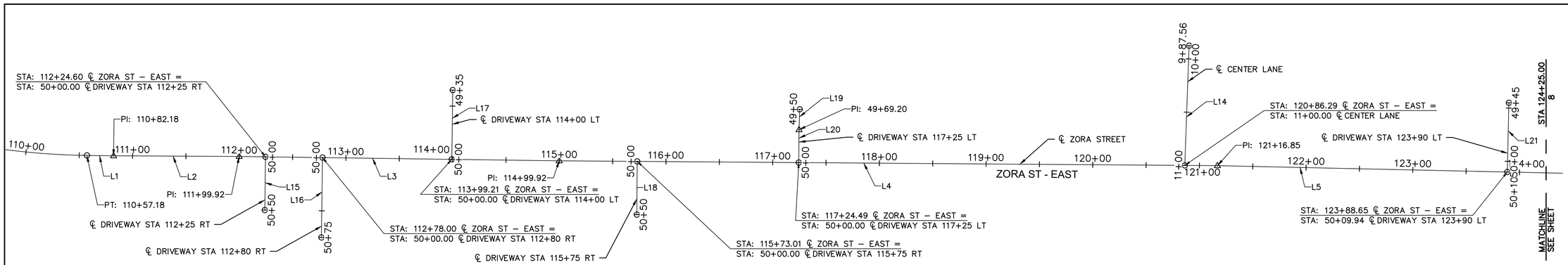
2025

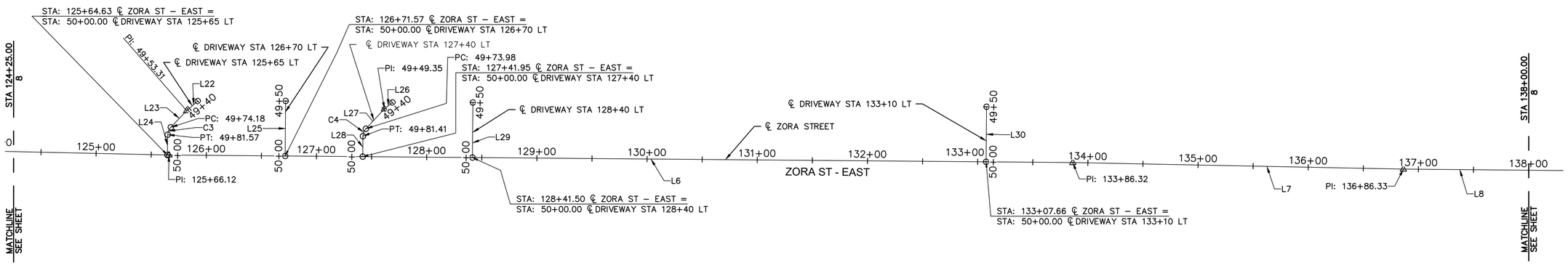
JOPLIN, MISSOURI

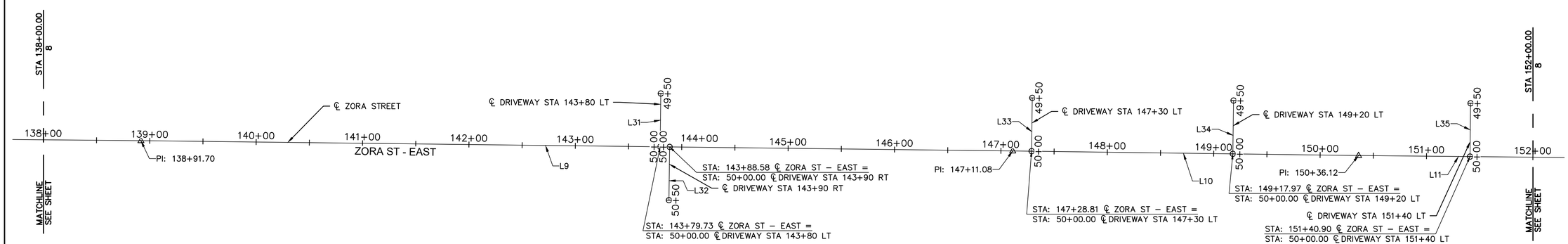
drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_EXC02_R170642
date: 3/28/2025

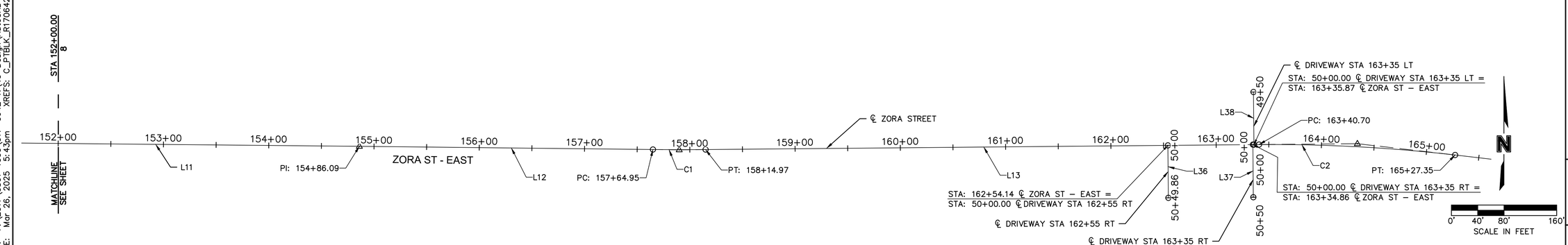
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7 of 120

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REVISIONS

ALIGNMENT DATA

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by:	SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_ALI01_R170642
date:	3/28/2025

SHEET
8 of 120

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ZORA ST - EAST

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		110+57.18 110+82.18	344293.9584 344293.6181	2801368.7164 2801393.7140	25.00'	S89°13'13"E			
L2		110+82.18 111+99.92	344293.6181 344293.0161	2801393.7140 2801511.4489	117.74'	S89°42'25"E			
L3		111+99.92 114+99.92	344293.0161 344288.9332	2801511.4489 2801811.4212	300.00'	S89°13'13"E			
L4		114+99.92 121+16.85	344288.9332 344284.3971	2801811.4212 2802428.3378	616.93'	S89°34'43"E			
L5		121+16.85 125+66.12	344284.3971 344274.4874	2802428.3378 2802877.4991	449.27'	S88°44'10"E			
L6		125+66.12 133+86.32	344274.4874 344267.6503	2802877.4991 2803697.6679	820.20'	S89°31'21"E			
L7		133+86.32 136+86.33	344267.6503 344261.6767	2803697.6679 2803997.6246	300.02'	S88°51'33"E			
L8		136+86.33 138+91.70	344261.6767 344259.7831	2803997.6246 2804202.9815	205.37'	S89°28'18"E			
L9		138+91.70 147+11.08	344259.7831 344250.1427	2804202.9815 2805022.3029	819.38'	S89°19'33"E			
L10		147+11.08 150+36.12	344250.1427 344245.8527	2805022.3029 2805347.3150	325.04'	S89°14'38"E			
L11		150+36.12 154+86.09	344245.8527 344241.5438	2805347.3150 2805797.2671	449.97'	S89°27'05"E			
L12		154+86.09 157+64.95	344241.5438 344238.4842	2805797.2671 2806076.1124	278.86'	S89°22'17"E			
C1	PC= PI= PT=	157+64.95 157+89.96 158+14.97	344238.4842 344238.2098 344238.4357	2806076.1124 2806101.1202 2806126.1285	50.02'	S89°56'40"E	1°08'47"	25.01'	2500.00'
L13		158+14.97 163+40.70	344238.4357 344243.1854	2806126.1285 2806651.8412	525.73'	N89°28'56"E			
C2	PC= PI= PT=	163+40.70 164+34.15 165+27.35	344243.1854 344244.0296 344233.2709	2806651.8412 2806745.2792 2806838.0997	186.64'	S86°57'11"E	7°07'45"	93.44'	1500.00'

CENTER LANE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L14		9+87.56 11+00.00	344396.9936 344284.6217	2802401.7668 2802397.7814	112.44'	S2°01'52"W			

DRIVEWAY STA 112+25 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L15		50+00.00 50+50.00	344292.6803 344242.6849	2801536.1256 2801535.4451	50.00'	S0°46'47"W			

DRIVEWAY STA 112+80 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L16		50+00.00 50+75.00	344291.9535 344216.9604	2801589.5206 2801588.4999	75.00'	S0°46'47"W			

DRIVEWAY STA 114+00 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L17		49+35.00 50+00.00	344355.2952 344290.3037	2801711.6139 2801710.7293	65.00'	S0°46'47"W			

DRIVEWAY STA 115+75 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L18		50+00.00 50+50.00	344288.3958 344238.3971	2801884.5111 2801884.1435	50.00'	S0°25'17"W			

DRIVEWAY STA 117+25 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L19		49+50.00 49+69.20	344337.2741 344318.0833	2802036.7775 2802036.2119	19.20'	S1°41'18"W			
L20		49+69.20 50+00.00	344318.0833 344287.2820	2802036.2119 2802035.9854	30.80'	S0°25'17"W			

DRIVEWAY STA 123+90 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L21		49+45.00 50+10.00	344343.3861 344278.4019	2802701.5029 2802700.0692	65.00'	S1°15'50"W			

DRIVEWAY STA 125+65 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L22		49+40.00 49+53.31	344323.4733 344314.7431	2802903.6059 2802893.5585	13.31'	S49°00'45"W			
L23		49+53.31 49+74.18	344314.7431 344299.6271	2802893.5585 2802879.1696	20.87'	S43°35'18"W			
C3	PC= PI= PT=	49+74.18 49+78.05 49+81.57	344299.6271 344296.8232 344292.9530	2802879.1696 2802876.5005 2802876.4151	7.39'	S22°25'34"W	42°19'28"	3.87'	10.00'
L24		49+81.57 50+00.00	344292.9530 344274.5202	2802876.4151 2802876.0085	18.44'	S1°15'50"W			

DRIVEWAY STA 126+70 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L25		49+50.00 50+00.00	344323.6066 344273.6084	2802983.3594 2802982.9426	50.00'	S0°28'39"W			

DRIVEWAY STA 127+40 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L26		49+40.00 49+49.35	344322.1767 344316.3525	2803080.3069 2803072.9918	9.35'	S51°28'25"W			
L27		49+49.35 49+73.98	344316.3525 344298.3589	2803072.9918 2803056.1751	24.63'	S43°03'49"W			
C4	PC= PI= PT=	49+73.98 49+77.88 49+81.41	344298.3589 344295.5115 344291.6142	2803056.1751 2803053.5139 2803053.4814	7.43'	S21°46'14"W	42°35'10"	3.90'	10.00'
L28		49+81.41 50+00.00	344291.6142 344273.0216	2803053.4814 2803053.3264	18.59'	S0°28'39"W			

DRIVEWAY STA 128+40 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L29		49+50.00 50+00.00	344322.1901 344272.1918	2803153.2896 2803152.8729	50.00'	S0°28'39"W			

DRIVEWAY STA 133+10 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L30		49+50.00 50+00.00	344318.3043 344268.3060	2803619.4251 2803619.0083	50.00'	S0°28'39"W			

DRIVEWAY STA 143+80 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L31		49+50.00 50+00.00	344304.0377 344254.0411	2804691.5677 2804690.9794	50.00'	S0°40'27"W			

DRIVEWAY STA 143+90 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L32		50+00.00 50+50.00	344253.9370 344203.9405	2804699.8267 2804699.2384	50.00'	S0°40'27"W			

DRIVEWAY STA 147+30 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L33		49+50.00 50+00.00	344299.9043 344249.9086	2805040.6934 2805040.0335	50.00'	S0°45'22"W			

DRIVEWAY STA 149+20 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L34		49+50.00 50+00.00	344297.4076 344247.4120	2805229.8417 2805229.1818	50.00'	S0°45'22"W			

DRIVEWAY STA 151+40 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L35		49+50.00 50+00.00	344294.8470 344244.8493	2805452.5720 2805452.0932	50.00'	S0°32'55"W			

DRIVEWAY STA 162+55 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L36		50+00.00 50+49.86	344242.4034 344192.5494	2806565.2815 2806565.7319	49.86'	S0°31'04"E			

DRIVEWAY STA 163+35 RT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L37		50+00.00 50+50.00	344243.1326 344193.1347	2806645.9986 2806646.4504	50.00'	S0°31'04"E			

DRIVEWAY STA 163+35 LT

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L38		49+50.00 50+00.00	344293.1398 344243.1418	2806646.5607 2806647.0124	50.00'	S0°31'04"E			

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ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_ALI01_R170642
date: 3/28/2025

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ALI01_R170642.dwg USER: skendall
DATE: Mar 26, 2025 5:43pm XREFS: C_PTBLK_R170642

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 AND SPECIFICATIONS 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. 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. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
6. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
7. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
8. 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.
9. 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.
10. 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.
11. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM TO 7:00 PM UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
12. 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.
13. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
14. 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.
15. MISSOURI AMERICAN WATER SHALL BE RESPONSIBLE FOR ADJUSTING ALL WATER METERS, VALVES, HYDRANTS, ETC. TO MATCH PROPOSED FINISHED GRADE. THE CONTRACTOR SHALL CONTACT MISSOURI AMERICAN WATER TO COORDINATE THE ADJUSTMENT OF EXISTING WATER FACILITIES.
16. UNLESS SPECIFICALLY STATED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING METER BOXES, VALVE BOXES, BUILDING DRAIN LINES, ETC. TO MATCH FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
17. 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.
18. 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.
19. 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.
20. 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.
21. THE PROPOSED CONTOURS REPRESENT TOP OF FINISHED GRADE. QUANTITIES DO NOT TAKE INTO ACCOUNT CORE-OUT OR ANY OVER-EXCAVATION.
22. 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.
23. 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.
24. 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.
25. 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.
26. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
27. CONTRACTOR TO PROTECT ANY STORM INLETS FROM SEDIMENT THAT TAKE STORM WATER FROM THE AREA OF CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
28. THE DETENTION BASINS, WATER QUALITY BASIN AND STORM WATER CHANNELS (PIPES), IF SHOWN, SHALL BE FUNCTIONING BEFORE ANY OTHER WORK MAY BEGIN.
29. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN (SECP). THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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.
35. THE SUBGRADE SOILS BENEATH THE PAVEMENT SECTION SHALL BE OVER EXCAVATED SUFFICIENTLY TO INSTALL THE NEW PAVEMENT SECTION.
36. IF THE CONTRACTOR'S OPERATIONS CAUSE AN UNSATISFACTORY SUBGRADE, THE CONTRACTOR SHALL RESTORE THE SUBGRADE TO A SATISFACTORY CONDITION AT THE CONTRACTOR'S EXPENSE.
37. 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.
38. 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.
39. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN IN THE PLANS, NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL OR 1 FOOT VERTICAL IN 2 FEET HORIZONTAL IN GUARDRAIL AREAS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
40. 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.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. 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.
49. 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.
50. 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.

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GENERAL NOTES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_GEN01_R170642
date: 3/28/2025

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DATE: Mar 26, 2025 5:44pm XREFS: C_PTBLK_R170642

RECAPITULATION OF QUANTITIES - BASE BID				
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	GOVERNING TECHNICAL SPECIFICATION
1	Mobilization	LS	1	JSP-0400-03
2	Contractor Furnished Construction Staking and Surveying	LS	1	JSP-0400-04
3	Miscellaneous Demolition & Removal	LS	1	JSP-1100-02
4	Clearing & Grubbing / Tree & Brush Removal	LS	1	JSP-1100-01
5	Existing Road Pavement Removal (Full Depth)	SY	15043	City 1100
6	Existing Storm Removal	LF	312	City 1100
7	Unclassified Excavation	CY	9859	City 1200
8	Embankment	CY	6250	City 1200
9	Backfill of Unsuitable Material*	CY	2962	City 1200
10	Removal of Unsuitable Material*	CY	2962	City 1200
11	Driveway Approach Concrete (8" Concrete) (Incl. 4" MoDOT Type 5 Aggr. Base)	SY	410	City 3400
12	Driveway Asphalt Surface (6" MoDOT Bituminous Base)	SY	355	City 2200
13	Driveway Gravel Surface (6" MoDOT Type 1 Aggr. Base)	SY	142	JSP-1400-02
14	Asphalt Tack Coat	GAL	2490	City 2100
15	Aggregate Base (8" MoDOT Type 5)	SY	25015	JSP-1400-01
16	Asphaltic Concrete Surface (2") (MoDOT BP-1)	TONS	1751	City 2200
17	Asphaltic Concrete Base (9") (MoDOT Bituminous Base)	TONS	7038	City 2200
18	Temporary Surfacing Material (HMA MoDOT BP-1)	TONS	60	City 2200
19	Temporary Surfacing Material (Aggregate)(MoDOT Type 1)	TONS	168	JSP-1400-02
20	Type A2 Shoulder	SY	8662	City 2200
21	Rock Blanket	SY	133	JSP-4200-01
22	MoDOT Paved Ditch	SY	40	MoDOT 609
23	Joplin Standard Upright Curb & Gutter	LF	2088	City 3200
24	15" Class III RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	245	City 4200
25	18" Class III RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	76	City 4200
26	18" Class V RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	20	City 4200
27	24" Class III RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	343	City 4200
28	30" Class III RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	142	City 4200
29	30" Class V RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	20	City 4200
30	36" Class III RCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	82	City 4200
31	60"X36" Class III RCBC (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	132	City 4200
32	34"X22" Class III HERCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	64	City 4200
33	38"X24" Class III HERCP (including trenching, bedding, backfill, gaskets, and concrete collars)	LF	59	City 4200
34	15" RCP FES (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	9	City 4200
35	18" RCP FES (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	2	City 4200
36	30" RCP FES (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	2	City 4200
37	36" RCP FES (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	2	City 4200
38	Cast-in-Place Headwalls and Wingwalls (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	4	City 4400
39	Area Inlet 3'x3' I.D.	EA	2	City 4400
40	Area Inlet 4'x4' I.D.	EA	1	City 4400
41	Area Inlet 4.5'x4.5' I.D.	EA	2	City 4400
42	Area Inlet 10.5'x7' I.D.	EA	1	City 4400
43	Type C Curb Inlet 5'x3' I.D.	EA	7	City 4400
44	Combination Grated Inlet 7'x 4' I.D.	EA	2	City 4400
45	Junction Box 10.5'x3.5' I.D.	EA	1	City 4400
46	Seeding, Fertilizing and Mulch	SY	7873	City 5100
47	Special Seeding	SY	10461	JSP-5100-01
48	Erosion Control Culvert Inlet Protection	LF	700	JSP-1000-01
49	Erosion Control Curb Inlet Protection	EA	14	JSP-1000-01
50	Erosion Control Biodegradable Ditch Check	LF	1983	JSP-1000-01
51	Erosion Control Silt Sock	LF	2904	JSP-1000-01
52	Removal & Resetting Existing Signs	LS	1	JSP-2300-01
53	Permanent Signage W2-6	SF	6	JSP-2300-01
54	Permanent Signage W13-1P	SF	14	JSP-2300-01
55	Permanent Signage R1-1	SF	5	JSP-2300-01
56	Permanent Signage D3-1	SF	12	JSP-2300-01
57	Construction Signs	SF	524	JSP-6700-01
58	Traffic Control Signage Changeable Message Board	EA	3	JSP-6700-01
59	Traffic Control Signage Type III Barricade	EA	12	JSP-6700-01
60	Pavement Marking Removal	LF	1158	City 2306
61	4" Solid Yellow Thermoplastic Lane Line	LF	12462	City 2306
62	4" Broken Yellow Thermoplastic Lane Line	LF	500	City 2306
63	4" Solid White Thermoplastic Edge Line	LF	7554	City 2306
64	12' Solid Yellow Preformed Diagonal Cross Hatch Marking	LF	106	City 2306
65	Solid White Preformed Left Turn Arrow	EA	10	City 2306
66	24" Solid White Preformed Stop Bar	LF	19	City 2306
67	Barb Wire Fence (4 Strand with Steel T-Posts)	LF	4474	City 2307
68	Temporary Barb Wire Fence (Cattle Rated)	LF	4474	City 2307

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SUMMARY OF QUANTITIES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_QTY01_R170642
date: 4/9/2025

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11 of 120

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DATE: Apr 10, 2025 4:45pm XREFS: C_PTBLK_R170642

ASPHALT SURFACING QUANTITIES

STATION TO STATION		LOCATION	SIDE	ASPHALTIC CONCRETE SURFACE (2") (TONS)*	ASPHALTIC CONCRETE BASE COURSE (8") (TONS)*	MODOT TYPE 5 AGGREGATE BASE (8") (SQ. YD.)	ASPHALT TACK COAT (GAL.)**
110+82.18	163+88.55	CL	LT&RT	1750.7	7037.7	16353.6	2489.8
121+56.7	163+88.55	CL	LT&RT			8661.7	
			TOTALS	1750.7	7037.7	25015.3	2489.8

EARTHWORK

STATION TO STATION		LOCATION	UNCLASSIFIED EXCAVATION EXCAVATION TOTAL CUT (Cu. Yd.)	EXISTING PAVEMENT (Cu. Yd.)	VMF DIRT	VMF PVMT	COMPACTION (Cu. Yd.)	REMARKS
110+82.18	163+88.88	CL	9859	2894.74507			6250	
		TOTAL	9859.0	2894.7			6250.0	

CURB AND GUTTER

STATION	OFFSET	STATION	OFFSET	LOCATION	SIDE	City of Joplin Standard (LN. FT.)	REMARKS	
110+82	17.5	112+00	19.0	E. ZORA	LT	118	UPRIGHT CURB	
110+82	17.5	112+00	19.0	E. ZORA	RT	118	UPRIGHT CURB	
112+00	19.0	117+08	32.0	E. ZORA	LT	515	UPRIGHT CURB	
117+41	31.0	120+68	58.0	E. ZORA	LT	371	UPRIGHT CURB	
121+08	54.0	121+57	19.0	E. ZORA	LT	86	UPRIGHT CURB	
112+00	19.0	112+12	19.0	E. ZORA	RT	12	UPRIGHT CURB	
112+38	19.0	112+65	19.0	E. ZORA	RT	27	UPRIGHT CURB	
112+90	19.0	115+60	19.0	E. ZORA	RT	270	UPRIGHT CURB	
115+86	19.0	121+57	18.8	E. ZORA	RT	571	UPRIGHT CURB	
					TOTAL	2088		

DRIVEWAY SURFACING QUANTITIES

STATION TO STATION		LOCATION	SIDE	GRAVEL SURFACE (6" MoDOT Type 1 Aggr) (SQ. YD.)	ASPHALT SURFACE (6" MoDOT Bit. Base) (SQ. YD.)	APPROACH CONCRETE (8") (SQ. YD.)
112+12	112+38	DRIVE 112+24	RT	17.4	0.0	18.9
112+65	112+91	DRIVE 112+80	RT	0.0	47.9	18.9
113+67	114+32	DRIVE 114+00	LT	0.0	0.0	56.2
115+60	115+86	DRIVE 115+73	RT	26.9	0.0	18.9
116+95	117+53	DRIVE 117+25	LT	0.0	27.3	39.1
123+79	124+01	DRIVE 123+90	LT	38.8	0.0	12.6
125+49	125+83	DRIVE 125+65	LT	0.0	24.0	16.2
126+57	126+87	DRIVE 126+70	LT	0.0	23.7	16.0
127+19	127+62	DRIVE 127+41	LT	26.3	0.0	20.7
128+25	128+58	DRIVE 128+41	LT	22.3	0.0	16.8
132+95	133+21	DRIVE 133+10	LT	0.0	28.3	13.0
143+67	143+92	DRIVE 143+80	LT	0.0	15.0	12.2
143+67	144+12	DRIVE 143+88	RT	10.6	0.0	23.4
147+12	147+46	DRIVE 147+30	LT	0.0	35.2	18.7
149+01	149+35	DRIVE 149+20	LT	0.0	29.3	18.8
151+19	151+63	DRIVE 151+40	LT	0.0	6.6	24.9
162+25	162+79	DRIVE 162+55	RT	0.0	57.4	29.9
163+19	163+51	DRIVE 163+35	RT	0.0	15.9	17.4
163+20	163+52	DRIVE 163+35	LT	0.0	44.2	17.4
TOTALS				142.3	354.8	410.0

ROCK BLANKET

STATION	LOCATION	SIDE	SQ. YD.
121+08	ZORA STREET	RT	15.5
128+60	ZORA STREET	LT	11.1
131+33	ZORA STREET	LT	44.5
131+36	ZORA STREET	RT	22.2
136+95	ZORA STREET	LT	39.6
	TOTAL		132.9

TYPE A2 SHOULDER

STATION TO STATION		LOCATION	SIDE	TYPE A2 SHOULDER (SY)
121+56	163+88	ZORA STREET	LT	4266.0
112+56	163+88	ZORA STREET	RT	4395.7
			TOTALS	8661.7

FLUME INLET & SLOPE DRAIN

STATION	LOCATION	SIDE	FLUME INLET (EACH)	SLOPE DRAIN (Ft.)
10+31	CENTER LANE	RT	1	
10+31	CENTER LANE	LT	1	
	TOTAL		2	0

PAVED DITCH

STATION	LOCATION	SIDE	SQ. YD.
156+94	ZORA STREET	LT	39.6
	TOTAL		40

CONSTRUCTION SIGNS

SIGN	SIZE	AREA	QUANTITY	TOTAL AREA	NOTES
G20-2	48X24	8.00	3	24	END ROAD WORK
R11-2	48X30	10.00	3	30	ROAD CLOSED
W4-2	48X48	16.00	4	64	MERGE (SYMBOL FROM LEFT/RIGHT)
W20-1	48X48	16.00	7	112	ROAD/BRIDGE/RAMP WORK AHEAD
W20-3	48X48	16.00	4	64	ROAD CLOSED AHEAD
W20-5	48X48	16.00	2	32	RIGHT/LEFT LANE CLOSED AHEAD
M4-9	30X24	5.00	5	25	DETOUR
R11-4	60x30	12.50	6	75	ROAD CLOSED TO THRU TRAFFIC
M4-8	30x15	3.13	9	28.17	DETOUR PLAQUE
M4-8A	24x18	3.00	2	6	END DETOUR
SPECIAL SIGN	96x48	32.00	2	64	ZORA STREET CLOSED DETOUR 49B
CHANGEABLE MESSAGE BOARD			3		
TYPE III BARRICADE			12		
			TOTALS	524.2	

PERMANENT SIGNAGE

STATION	OFFSET	SIGN NUMBER	SIZE	QUANTITY	SIDE	SQUARE FEET
111+59.81	+21.13	W13-1P	18X18	1	RT	2.3
111+99.35	+20.89	W2-6	30X30	1	LT	6.3
111+99.35	+20.89	W13-1P	18X18	1	LT	2.3
120+15.14	+21.78	W13-1P	18X18	1	LT	2.3
120+68.80	+31.	R1-1	30X30	1	LT	5.2
120+68.80	+31.	D3-1	18X48	2	LT	12.0
121+81.72	+18.31	W13-1P	18X18	1	RT	2.3
153+24.50	+31.41	W13-1P	18X18	1	LT	2.3
160+14.78	+16.3	W13-1P	18X18	1	RT	2.3
					TOTALS	36.9

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SHEET
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DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_QTY01_R170642.dwg
DATE: Apr 10, 2025 4:45pm
USER: mmayfarth
XREFS: C_PTBLK_R170642

	STORM SEWER STRUCTURES & PIPE																												
	STATION	FEET	STATION	FEET	LOCATION	SIDE	STRUCTURE NO.	INLET (AREA) (3'X3') (Each)	INLET (AREA) (4'x4') (Each)	INLET (AREA) (4.5'x4.5') (Each)	INLET (AREA) (10.5'x7') (Each)	INLET (CURB) (5'x3') TYPE C (Each)	INLET (COMBINATION GRADED INLET) (7'x 4') (Each)	JUNCTION BOX (10.5' x 3.5") (Each)	RCP 15" (Ft.)	RCP 18" (Ft.)	CLASS V RCP 18" (Ft.)	RCP 24" (Ft.)	RCP 30" (Ft.)	CLASS V RCP 30" (Ft.)	RCP 36" (Ft.)	RCBC 48"x24" (FT)	RCBC 60"x36" (FT)	HERCP 34"x22" (Ft.)	HERCP 38"x24" (Ft.)	END SECTION 15" RC (Each)	END SECTION 18" RC (Each)	END SECTION 30" RC (Each)	END SECTION 36" RC (Each)	HEADWALL AND WINGWALL (LS)
	113+80	33.91			ZORA STREET	LT	AI-110			1																			
	113+80	33.91	114+48	34.53	ZORA STREET	LT	P-110																	63.51					
	114+48	34.53			ZORA STREET	LT	AI-120			1																			
	114+48	34.53	114+48	19	ZORA STREET	LT	P-120																	10.28					
	114+48	19			ZORA STREET	LT	CI-130					1																		
	114+48	19	114+48	19	ZORA STREET	RT	P-130																	38					
	114+48	+19.			ZORA STREET	RT	CI-140					1																		
	114+48	+19.	114+48.28	+27.5	ZORA STREET	RT	P-140																	11.08					
	114+48.28	+27.5			ZORA STREET	RT	FES-150																						1
	112+47	+19.			ZORA STREET	LT	CI-210					1																		
	112+47	+19.	112+47	+19.	ZORA STREET	LT/RT	P-210									38														
	112+47	+19.			ZORA STREET	RT	CI-220					1																		
	112+47	+19.	114+48	+19.	ZORA STREET	RT	P-220											196												
	116+00	+19.			ZORA STREET	LT	CI-230					1																		
	119+00	+19.	116+00	+19.	ZORA STREET	LT/RT	P-230									37.96														
	116+00	+19.			ZORA STREET	RT	CI-240					1																		
	119+00	+19.	114+48	+19.	ZORA STREET	RT	P-240											147.13												
	120+19.20	+34.64			ZORA STREET	LT	AI-310		1																					
	120+18.20	+34.64	120+18.20	+19.	ZORA STREET	LT	P-310												10.64											
	120+18.20	+19.			ZORA STREET	LT	CI-320					1																		
	120+18.20	+19.	120+18.20	+19.	ZORA STREET	LT/RT	P-320												37.78											
	120+18.20	+19.			ZORA STREET	RT	GI-330						1																	
	120+18.20	+17.3	121+11.16	+17.3	ZORA STREET	RT	P-330												86.93											
	121+11.16	+17.3	121+24.52	+19.55	ZORA STREET	RT	P-340												6.36											
	121+24.52	+17.3			ZORA STREET	RT	GI-420						1																	
	121+20.15	+34.73			ZORA STREET	LT	AI-410				1																			
	121+20.15	+34.73	121+11.61	+17.3	ZORA STREET	LT/RT	P-410															95.46								
	121+11.61	+17.3			ZORA STREET	LT	JB-430							1																
	121+11.61	+17.3	121+09.18	+31.04	ZORA STREET	LT	P-415															40.18								
	121+09.18	+31.04			ZORA STREET	LT	FES-400																							1
	131+33.24	+32.03			ZORA STREET	LT	WING WALL-510																							1
	131+33.24	+32.03	131+35.74	+29.18	ZORA STREET	LT/RT	P-510																132.08							
	131+35.74	+29.18			ZORA STREET	RT	WING WALL-520																							1
	156+94.53	+32.05			ZORA STREET	LT	FES-710																						1	
	156+94.53	+32.05	156+93.83	+35.83	ZORA STREET	LT/RT	P-710														82.45									
	156+93.83	+35.83			ZORA STREET	RT	FES-720																						1	
	127+24.68	+25.9			ZORA STREET	LT	AI-810	1																						
	127+24.68	+25.9	128+25	+30.31	ZORA STREET	LT	P-810								100.42															
	128+25	+30.31			ZORA STREET	LT	AI-820	1																						
	128+25	+30.31	128+57.76	+31.75	ZORA STREET	LT	P-820								35.04															
	128+57.76	+31.75			ZORA STREET	LT	FES-830																		1					
	123+76.14	+34.83			DRIVEWAY STA 123-90 LT	LT	FES-123-1																			1				
	123+76.14	+34.83	124+01.14	+33.95	DRIVEWAY STA 123-90 LT	LT	P-123										20													
	124.01.14	+33.95			DRIVEWAY STA 123-90 LT	LT	FES-123-2																			1				
	132+96.76	+35.71			DRIVEWAY STA 133-10 LT	LT	FES-133-1																					1		
	132+96.76	+35.71	133+20.66	+33.53	DRIVEWAY STA 133-10 LT	LT	P-133													24										
	133+20.66	+33.53			DRIVEWAY STA 133-10 LT	LT	FES-133-2																					1		
	143+67.44	+39.65			DRIVEWAY STA 143-80 LT	LT	FES-143-1																		1					
	143+67.44	+39.65	143+91.44	+39.65	DRIVEWAY STA 143-80 LT	LT	P-143								18															
	143+91.44	+39.65			DRIVEWAY STA 143-80 LT	LT	FES-143-2																		1					
	143+65.65	+29.86			DRIVEWAY STA 143-90 RT	RT	FES-144-1																		1					
	143+65.65	+29.86	144+11.65	+29.47	DRIVEWAY STA 143-90 RT	RT	P-144								40															
	144+11.65	+29.47			DRIVEWAY STA 143-90 RT	RT	FES-144-2																		1					
	147+12.87	+40.53			DRIVEWAY STA 147-30 LT	LT	FES-147-1																		1					
	147+12.87	+40.53	147+44.86	+39.59	DRIVEWAY STA 147-30 LT	LT	P-147								26															
	147+44.86	+39.59			DRIVEWAY STA 147-30 LT	LT	FES-147-2																		1					
	149+02.01	+29.28			DRIVEWAY STA 149-20 LT	LT	FES-149-1																		1					
	149+02.01	+29.28	149+33.94	+31.31	DRIVEWAY STA 149-20 LT	LT	P-149								26															
	149+33.94	+31.31			DRIVEWAY STA 149-20 LT	LT	FES-149-2																		1					
							TOTAL	2	1	2	1	7	2	1	245	76	20	343	142	24	82		132	64	59	9	2	2	2	4

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
12/31/2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SUMMARY OF QUANTITIES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_QTY01_R170642
date: 3/28/2025

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_QTY01_R170642.dwg
DATE: Mar 27, 2025 2:52pm XREFS: C_PTBLK_R170642
USER: skendall

SEEDING, FERTILIZING & MULCH				
STATION	STATION	LOCATION	SIDE	SQ. YD.
110+57	113+87	East Zora	LT	311.1
110+82	112+17	East Zora	RT	93.7
112+33	112+73	East Zora	RT	50.9
112+83	115+66	East Zora	RT	423.7
114+12	117+10	East Zora	LT	295.9
117+39	120+75	East Zora	LT	433.8
115+78	120+65	East Zora	RT	592.3
121+00	123+82	East Zora	LT	555.2
123+95	125+63	East Zora	LT	190.4
125+73	126+63	East Zora	LT	58.3
126+81	127+27	East Zora	LT	48.4
132+39	143+74	East Zora	LT	2170.4
143+88	147+18	East Zora	LT	813.9
147+40	149+07	East Zora	LT	334.0
149+29	151+26	East Zora	LT	326.1
151+56	163+26	East Zora	LT	1174.6
TOTAL				7872.8

SPECIAL SEEDING				
STATION	STATION	LOCATION	SIDE	SQ. YD.
120+65	163+25	East Zora	RT	10461
		TOTAL		10461

INLET PROTECTION			
STATION	LOCATION	SIDE	EA
112+47	East Zora	RT	1
112+47	East Zora	LT	1
113+80	East Zora	LT	1
114+48	East Zora	LT	1
114+48	East Zora	RT	1
116+00	East Zora	RT	1
116+00	East Zora	LT	1
120+18	East Zora	LT	1
120+18	East Zora	LT	1
120+18	East Zora	RT	1
121+21	East Zora	LT	1
121+25	East Zora	RT	1
127+25	East Zora	LT	1
128+25	East Zora	LT	1
55+39.61	East Zora	RT	
		TOTAL	14

124+03			
128+59	East Zora	LT	30
131+36	East Zora	RT	76
131+34	East Zora	LT	76
132+92	East Zora	LT	36
133+23	East Zora	LT	36
143+69	East Zora	LT	42
143+90	East Zora	LT	42
143+66	East Zora	RT	42
144+08	East Zora	RT	42
147+15	East Zora	LT	42
147+41	East Zora	LT	42
149+04	East Zora	RT	42
149+31	East Zora	RT	42
TOTAL			700

122+57	East Zora	LT	16
123+07	East Zora	LT	16
123+57	East Zora	LT	16
124+09	East Zora	LT	16
124+39	East Zora	LT	16
124+69	East Zora	LT	16
124+99	East Zora	LT	16
125+25	East Zora	LT	16
128+05	East Zora	LT	6
128+14	East Zora	LT	10
128+76	East Zora	LT	12
129+25	East Zora	LT	12
129+75	East Zora	LT	12
130+26	East Zora	LT	12
130+76	East Zora	LT	12
129+54	East Zora	RT	17
130+03	East Zora	RT	17
130+53	East Zora	RT	17
131+03	East Zora	RT	17
131+68	East Zora	RT	18
132+18	East Zora	RT	18
132+68	East Zora	RT	18
133+18	East Zora	RT	18
133+67	East Zora	RT	18
134+18	East Zora	RT	18
134+68	East Zora	RT	18
135+18	East Zora	RT	18
135+68	East Zora	RT	18
136+37	East Zora	RT	18
136+87	East Zora	RT	18
137+37	East Zora	RT	18
137+87	East Zora	RT	18
138+37	East Zora	RT	18
TOTAL			556
BIOLOG DITCH CHECK			
TOTAL	East Zora		1983
INLET PROTECTION			

139+87			
140+37	East Zora	RT	16
140+87	East Zora	RT	16
141+37	East Zora	RT	16
141+87	East Zora	RT	16
142+37	East Zora	RT	16
142+87	East Zora	RT	16
143+37	East Zora	RT	16
136+65	East Zora	LT	6
137+24	East Zora	LT	10
137+83	East Zora	LT	12
138+41	East Zora	LT	12
139+00	East Zora	LT	12
139+59	East Zora	LT	12
140+18	East Zora	LT	12
140+77	East Zora	LT	17
141+35	East Zora	LT	17
141+94	East Zora	LT	17
142+53	East Zora	LT	17
143+12	East Zora	LT	17
145+35	East Zora	LT	17
146+85	East Zora	LT	17
144+30	East Zora	RT	16
144+80	East Zora	RT	16
145+30	East Zora	RT	16
145+80	East Zora	RT	16
146+30	East Zora	RT	16
146+80	East Zora	RT	16
148+16	East Zora	LT	16
148+80	East Zora	LT	16
149+59	East Zora	LT	16
149+97	East Zora	LT	16
150+33	East Zora	RT	16
TOTAL			531

149+41			
149+91	East Zora	RT	16
150+40	East Zora	RT	16
150+90	East Zora	RT	16
151+40	East Zora	RT	16
191+90	East Zora	RT	16
152+40	East Zora	RT	16
152+90	East Zora	RT	16
153+40	East Zora	RT	16
153+90	East Zora	RT	16
154+40	East Zora	RT	16
154+90	East Zora	RT	16
155+40	East Zora	RT	16
155+90	East Zora	RT	16
156+40	East Zora	RT	16
157+12	East Zora	LT	16
157+42	East Zora	LT	16
157+72	East Zora	LT	16
158+02	East Zora	LT	16
158+32	East Zora	LT	16
158+62	East Zora	LT	16
158+92	East Zora	LT	16
159+22	East Zora	LT	16
159+52	East Zora	LT	16
159+82	East Zora	LT	16
160+12	East Zora	LT	16
160+42	East Zora	LT	16
160+72	East Zora	LT	16
161+02	East Zora	LT	16
161+32	East Zora	LT	16
161+62	East Zora	LT	16
161+92	East Zora	LT	16
162+22	East Zora	LT	16
TOTAL			560

163+12			
157+11	East Zora	RT	16
157+41	East Zora	RT	16
157+71	East Zora	RT	16
158+01	East Zora	RT	16
158+30	East Zora	RT	16
158+60	East Zora	RT	16
158+90	East Zora	RT	16
159+20	East Zora	RT	16
159+50	East Zora	RT	16
159+80	East Zora	RT	16
160+10	East Zora	RT	16
160+40	East Zora	RT	16
160+70	East Zora	RT	16
161+00	East Zora	RT	16
161+30	East Zora	RT	16
161+60	East Zora	RT	16
161+90	East Zora	RT	16
162+20	East Zora	RT	16
TOTAL			336

SILT SOCK				
	STATION	LOCATION	SIDE	L.F.
110+82	112+17	East Zora	RT	136
112+33	112+73	East Zora	RT	34
112+90	114+45	East Zora	RT	147
114+55	115+66	East Zora	RT	117
109+78	121+00	East Zora	RT	531
117+39	120+75	East Zora	LT	352
121+15	129+55	East Zora	LT	860
133+25	136+65	East Zora	LT	330
140+85	143+66	East Zora	RT	282
162+72	163+25	East Zora	RT	65
163+45	163+89	East Zora	RT	50
TOTAL				2904

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2025

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SUMMARY OF QUANTITIES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_QTY01_R170642
date: 4/9/2025

SHEET
14 of 120

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_QTY01_R170642.dwg USER: mmayfarth
DATE: Apr 10, 2025 1:23pm XREFS: C_PTBLK_R170642

REMOVAL OF EXISTING STRUCTURES (For Information Only)							
STATION	STATION	LOCATION	SIDE	ITEM	QUANTITY	UNITS	NOTES
110+82.18	163+88.88	ZORA		PAVEMENT REMOVAL	130479	SF	
112+15.89	112+32.60	DRIVEWAY STA 112+25 RT	RT	GRAVEL DRIVEWAY	430	SF	
112+51.56	112+76.63	DRIVEWAY STA 112+80 RT	RT	PAVEMENT DRIVEWAY	417	SF	
113+72.08	114+26.26	DRIVEWAY STA 114+00 LT	LT	PAVEMENT DRIVEWAY	669	SF	
115+59.11	115+74.30	DIRVEWAY STA 115-75 RT	RT	GRAVEL DRIVEWAY	374	SF	
117+03.13	117+46.30	DRIVEWAY STA 117+25 LT	LT	PAVEMENT DRIVEWAY	710	SF	
120+57.26	121+14.08	CENTER LANE	RT	PAVEMENT REMOVAL	1129	SF	
123+78.50	123+99.73	DRIVEWAY STA 123+90 LT	LT	GRAVEL DRIVEWAY	469	SF	
125+49.62	125+78.69	DRIVEWAY STA 125+65 LT	LT	PAVEMENT DRIVEWAY	333	SF	
126+56.06	126+80.02	DRIVEWAY STA 126+70 LT	LT	PAVEMENT DRIVEWAY	340	SF	
127+19.66	127+53.68	DRIVEWAY STA 127+40 LT	LT	GRAVEL DRIVEWAY	377	SF	
128+18.81	128+60.30	DRIVEWAY STA 128+40 LT	LT	GRAVEL DRIVEWAY	428	SF	
132+93.21	133+18.90	DRIVEWAY STA 133+10 LT	LT	GRAVEL DRIVEWAY	215	SF	
132+93.21	133+18.90	DRIVEWAY STA 133+10 LT	LT	CONCRETE DRIVEWAY	198	SF	
143+73.74	143+86.19	DRIVEWAY STA 143+80 LT	LT	GRAVEL DRIVEWAY	257	SF	
143+67.39	144+09.77	DRIVEWAY STA 143+90 RT	RT	GRAVEL DRIVEWAY	788	SF	
147+11.11	147+47.30	DRIVEWAY STA 147+30 LT	LT	GRAVEL DRIVEWAY	422	SF	
149+07.02	149+29.52	DRIVEWAY STA 149+20 LT	LT	PAVEMENT DRIVEWAY	400	SF	
151+17.16	151+61.91	DRIVEWAY STA 151+40 LT	LT	GRAVEL DRIVEWAY	246	SF	
162+19.95	162+83.43	DRIVEWAY STA 162+55 RT	RT	GRAVEL DRIVEWAY	820	SF	
163+25.75	163+45.73	DRIVEWAY STA 163+35 LT	LT	CONCRETE DRIVEWAY	363	SF	
163+24.97	163.45.18	DRIVESAY STA 163+35 RT	RT	CONCRETE DRIVEWAY	352	SF	
110+82.18	160+55.33	ZORA	RT	TELEPHONE LINE REMOVAL AND REPLACE	4973	LF	
110+98.81		ZORA	RT	WATER METER RELOCATE	1	EA	BY OTHERS
111+39.95		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	2	EA	BY OTHERS
111+48.92		ZORA	RT	MAILBOX RELOCATE	1	EA	
112+13.79		ZORA	RT	WATER METER RELOCATE	1	EA	BY OTHERS
114+12.49		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
114+32.90		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
114+46.85	114+45.16	ZORA	LT/RT	REMOVE 15" RCP	33	LF	
114+43.74	115+53.35	ZORA	RT	FENCE REMOVAL	110	LT	
115+51.53		ZORA	RT	RELOCATE FIRE HYDRANT	1	EA	BY OTHERS
115+53.44		ZORA	RT	RELOCATE MAIL BOX	1	EA	
116+73		ZORA	RT	WATER METER RELOCATE	1	EA	BY OTHERS
117+22.53		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
117+23.61	162+36.23	ZORA	RT	RELOCATE EXISTING FENCE	4513	LF	
118+84.73		ZORA	LT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
120+29.53		ZORA	LT	SIGN RELOCATION	1	EA	
120+38.49	120+73.55	ZORA	LT/RT	REMOVE 18" CMP	50	LF	
121+05.37		ZORA	LT	WATER METER RELOCATE	1	EA	BY OTHERS
121+08.22	121+10.27	ZORA	LT/RT	REMOVE 24" RCP	38	LF	
123+76.94		ZORA	LT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
126+86.47		ZORA	LT	RELOCATE MAIL BOX	1	EA	
127+96.88		ZORA	LT	RELOCATE MAIL BOX	1	EA	
128+63.01		ZORA	LT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
129+06.55		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
128+50		ZORA	LT	CONCRETE BLOCKS	17	LF	
128+63.01	129+06.55	ZORA	LT/RT	TELEPHONE LINE REMOVAL AND REPLACE	1	EA	BY OTHERS
131+29.10	131+30.26	ZORA	LT/RT	REMOVE 42" RCP & INLET	36	LF	
113+34.96	131+36.42	ZORA	LT/RT	REMOVE 42" RCP & INLET	37	LF	
133+01.60	133+17.20	ZORA	LT	REMOVE 22" CMP	16	LF	
133+19.13		ZORA	LT	MAILBOX RELOCATE	1	LF	
134+33.15		ZORA	RT	SIGN RELOCATION	1	EA	
136+76		ZORA	LT	CONCRETE BLOCKS	2	EA	
138+84.72		ZORA	RT	RELOCATE EXISTING GUY WIRE	1	EA	BY OTHERS
142.32.06		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
143+70.17	143+90.23	ZORA	LT	REMOVE 12" RCP	20	FT	
143+68.57	144+08.35	ZORA	RT	REMOVE 14" RCP	40	FT	
147+12.22	147+46.05	ZORA	LT	REMOVE CULVERT	34	FT	
147+52.97	160+38.91	ZORA	LT	RELOCATE EXISTING FENCE	1285	FT	
148+94.50		ZORA	LT	MAILBOX RELOCATE	1	EA	
149+03.25	149+30.46	ZORA	LT	REMOVE 9" STEEL CULVERT	27	FT	
151+19.45		ZORA	LT	MAILBOX RELOCATE	1	EA	
153+23.37		ZORA	LT	REMOVE SIGN	1	EA	
156+94.41	156+94.12	ZORA	LT/RT	REMOVE 36" CMP	31	LF	
160+18.36		ZORA	RT	REMOVE SIGN	1	EA	
160+55.33		ZORA	RT	TELEPHONE PEDISTAL RELOCATE	1	EA	BY OTHERS
160+40		ZORA	LT	REMOVE SIGN	1	EA	
160+41		ZORA	LT	REMOVE SIGN	1	EA	

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
12/31/2025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SUMMARY OF QUANTITIES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_QTY01_R170642
date: 3/28/2025

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USER: skendall

LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 7
LAWVER INVESTMENTS, LLC
BOOK 2262, PAGE 1487
EXISTING = 4.21 ACRES (183286.63 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
TEMP. CONST. ESMT. = 0.00 SQ. FT.
REMAINING = 4.21 ACRES

PARCEL 8
SCHLEGEL PROPERTIES, LLC
BOOK 2284, PAGE 1463
EXISTING = 1.70 ACRES (73931.9 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
TEMP. CONST. ESMT. = ACQUIRED PHASE 1
PERM. DRAINAGE ESMT. = ACQUIRED PHASE 1
REMAINING = 1.70 ACRES

BEGIN CONSTRUCTION
ZORA STREET
STA 110+82.18

15.00' AMERICAN TELEPHONE EASEMENT
2.00' EMPIRE DISTRICT ELECTRIC EASEMENT
GRADING LIMITS
EXISTING RIGHT-OF-WAY WIDTH VARIES
ASPHALT
BLDG
℄ DRIVEWAY STA 114-00 LT
℄ ZORA STREET
PT: 110+57.18
PI: 110+82.18
PI: 111+99.92
PI: 114+99.92
℄ DRIVEWAY STA 112-25 RT
DRIVEWAY STA 112+25 RT
DRIVEWAY STA 112+80 RT
DRIVEWAY STA 114+00 LT
49+35
STA 115+50.00
17
30'
5'
35'
25'
S89°22'23"E 80.16'
N89°25'30"W 80.15'
S89°25'30"E 52.38'
N02°03'07"E 6.32'
S89°22'23"E 199.83'
N89°25'30"W 199.83'
S02°09'30"W 6.06'
N89°25'30"W 192.20'
S89°25'30"E 140.00'
S89°25'30"E 98.24'
S89°25'30"E 27.65'
S00°46'47"W 5.00'
S89°25'30"E 35.00'
S00°46'47"W 25.00'
S89°25'30"E 17.43'
N00°46'47"E 25.00'
N00°46'47"E 10.00'
S02°09'30"W 40.02'
N00°46'21"E 30.00'
N89°25'30"W 6.67'
S89°25'30"E 18.33'
N00°46'28"E 10.00'
N00°46'28"E 30.00'
+62.60 22.74' RT
+62.40 29.05' RT
+62.25 34.05' RT
+14.92 34.18' RT
+14.92 39.18' RT
+60 39.02' RT
+95 38.89' RT
+42.95 22.84' RT
+42.80 29.08' RT
+42.57 39.08' RT
+60 64.02' RT
+95 63.89' RT
+42.79 22.36' RT
+35 28.39' RT
+35 38.39' RT
+60 38.30' RT
+60 28.30' RT
+35 68.39' RT
+41.67 68.37' RT
+60 68.30' RT
50+00
50+50
50+75

10.00' EMPIRE DISTRICT ELECTRIC EASEMENT

PARCEL 9
SWMO DEVELOPMENT, INC.
BOOK 2143, PAGE 0104
EXISTING = 3.78 ACRES (162914.4 SQ FT.)
R/W ACQUISITION = ACQUIRED PHASE 1
TEMP. CONST. ESMT. = ACQUIRED PHASE 1
REMAINING = 3.77 ACRES

PARCEL 10
CNJ DEVELOPERS, INC.
BOOK 2376, PAGE 0429
EXISTING = 2.67 ACRES (116305.2 SQ. FT.)
TEMP. CONST. ESMT. = ACQUIRED PHASE 1
REMAINING = 2.67 ACRES

PARCEL 11
SHAWN E & MARK L HARRIS
BOOK 2587, PAGE 0123
EXISTING = 0.23 ACRES (10064.90 SQ. FT.)
R/W ACQUISITION = 503 SQ. FT.
TEMP. CONST. ESMT. = 539 SQ. FT.
REMAINING = 0.22 ACRES

PARCEL 12
GIL L. SALGADO
BOOK 2222, PAGE 0806
EXISTING = 2.90 ACRES (126171.53 SQ. FT.)
R/W ACQUISITION = 1229 SQ. FT.
TEMP. CONST. ESMT. = 2798 SQ. FT.
PERM. DRAINAGE ESMT. = 286 SQ. FT.
REMAINING = 2.87 ACRES

PARCEL 13
ROBERT D & CLARICE A McLAUGHLIN TRUST
BOOK 1479, PAGE 0820
EXISTING = 9.7 ACRES (422,532 SQ. FT.)
R/W ACQUISITION = 3598 SQ. FT.
TEMP. CONST. ESMT. = 5381 SQ. FT.
PERM. DRAINAGE ESMT. = 714 SQ. FT.
REMAINING = 9.62 ACRES

MATCHLINE SEE SHEET

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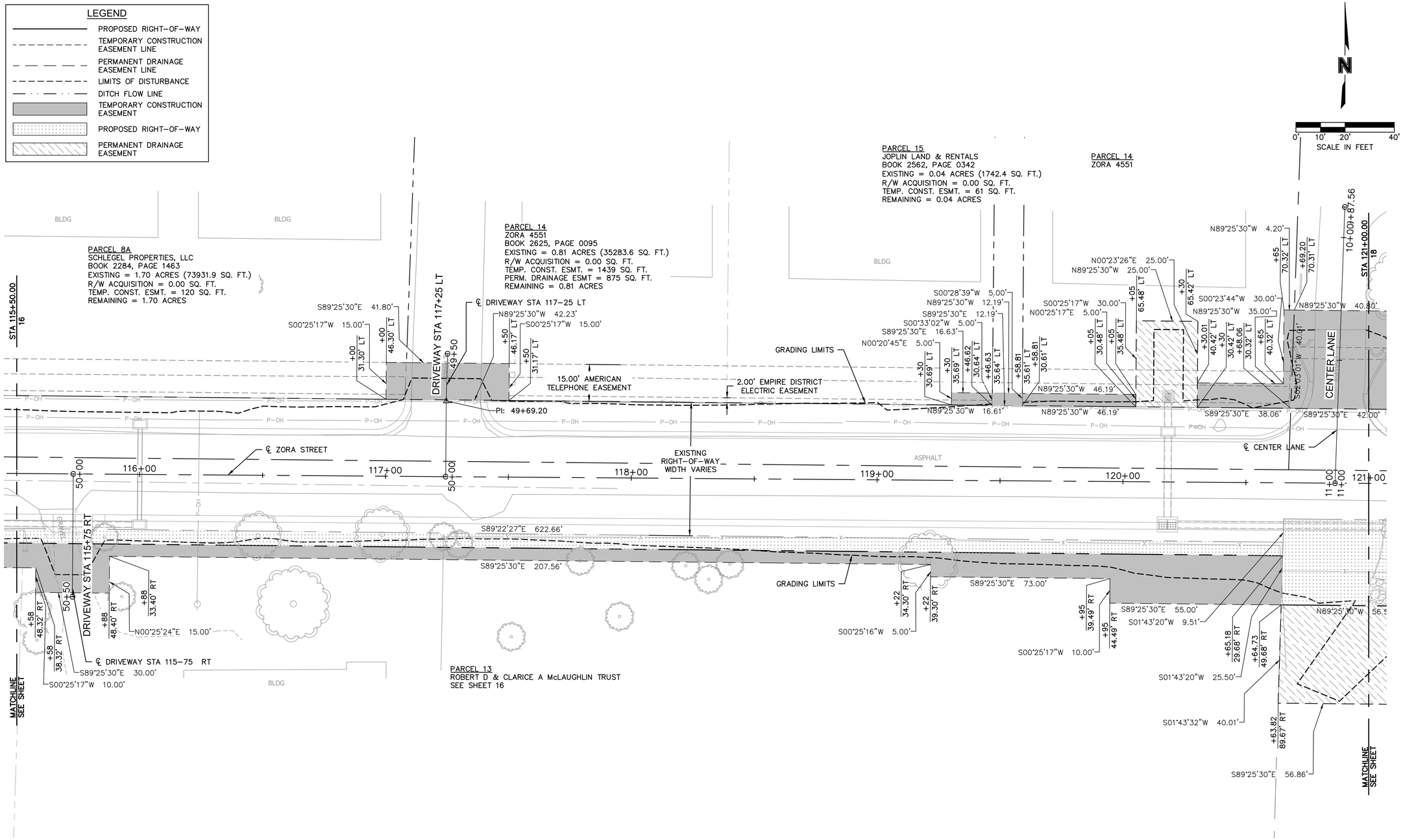
RIGHT OF WAY & EASEMENT PLANS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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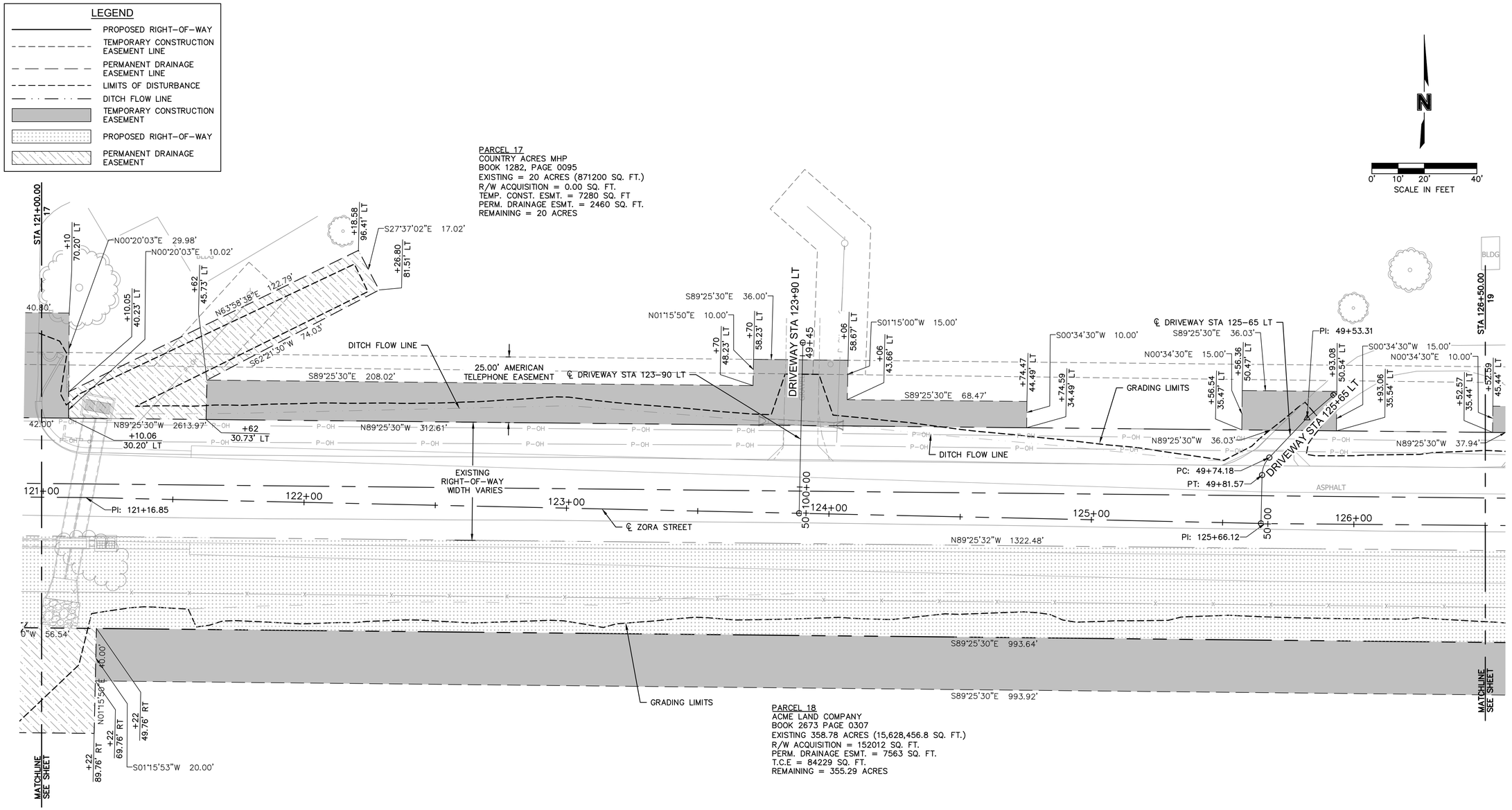
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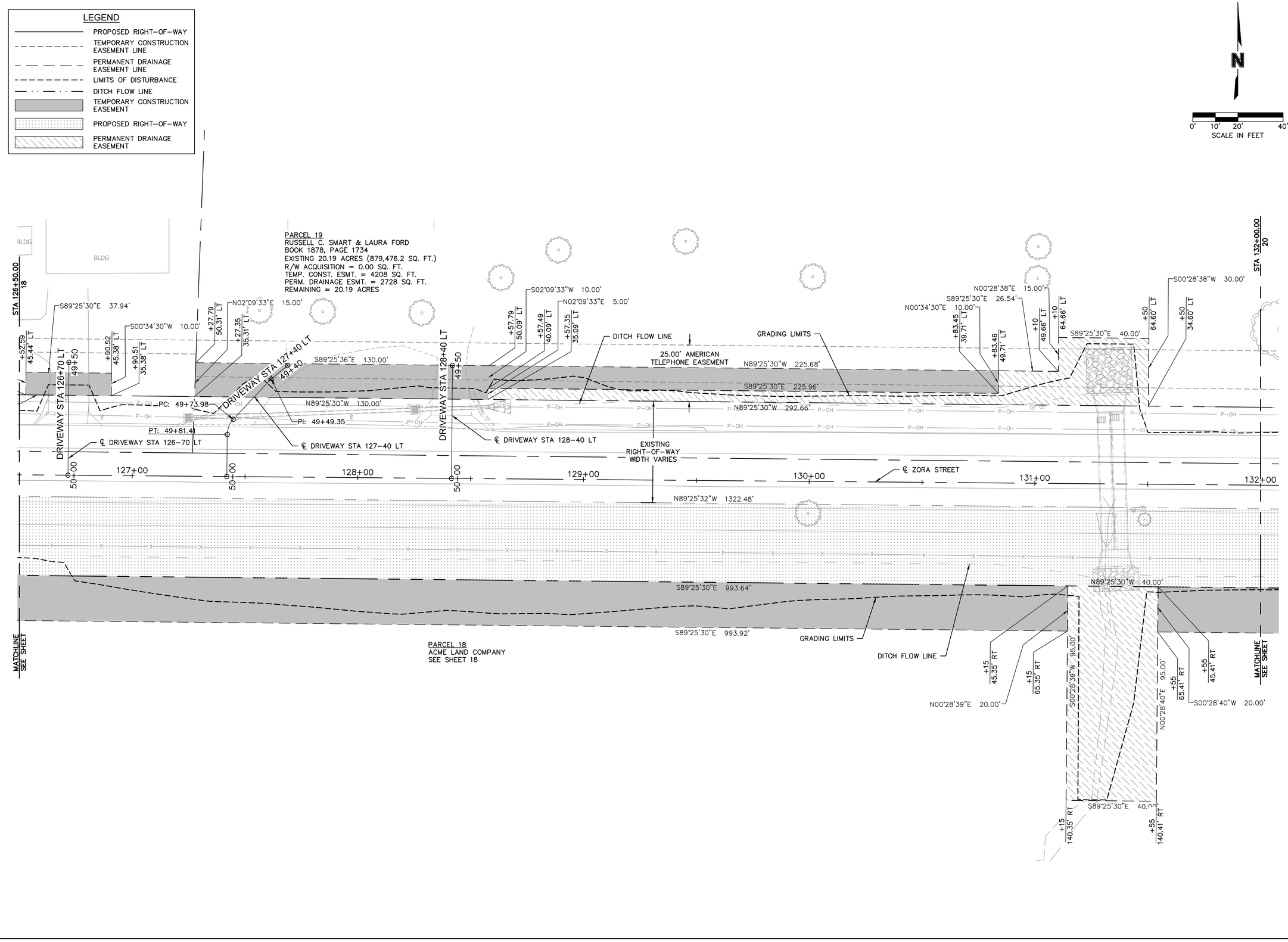
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RIGHT-OF-WAY & EASEMENT PLANS

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CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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USER: skendall

LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET

STA 132+00.00
19

PARCEL 21
LAURA J. FORD
DELBERT W. FORD
BOOK 1622, PAGE 1955
EXISTING = 0.95 ACRES (41294.3806 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
PERM. DRAINAGE ESMT. = 1000 SQ. FT.
REMAINING = 0.95 ACRES

BLDG

N00°34'31"E 20.00'
S89°25'29"E 49.99'
℄ DRIVEWAY STA 133+10 LT
S00°34'31"W 20.00'

+82.89 54.37' LT
+82.86 34.37' LT
+32.88 54.28' LT
+32.84 34.28' LT
+88.97 39.22' LT
+88.80 29.22' LT

25.00' AMERICAN TELEPHONE EASEMENT

S02°04'40"W 10.00'

N89°25'30"W 49.99'

DRIVEWAY STA 133+10 LT
49.50

5.00'

50.00' EXISTING RIGHT-OF-WAY

EXISTING RIGHT-OF-WAY WIDTH VARIES

ASPHALT

132+00 133+00 50+00 134+00 135+00 136+00 137+00

PI: 133+86.32

℄ ZORA STREET

PI: 136+86.33

N89°21'28"W 2649.33'

S89°25'29"E 233.47'

S89°25'30"E 233.42'

S89°21'28"E 2286.40'

S89°21'28"E 2286.39'

DITCH FLOW LINE

PARCEL 18
ACME LAND COMPANY
SEE SHEET 18

+88.18 10.78' RT
+87.66 45.60' RT
S00°11'58"E 17.51'

MATCHLINE SEE SHEET

PARCEL 23
CHILDRESS ROYALTY COMPANY
BOOK 1230, PAGE 2449
EXISTING = 44.40 ACRES (1934148.07 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
TEMP. CONST. ESMT. = 2612 SQ. FT.
PERM. DRAINAGE ESMT. = 21282 SQ. FT.
REMAINING = 44.40 ACRES

STA 137+50.00
21

N00°58'29"E 10.00'
+49.97 51.49' LT

N00°38'32"E 10.00'
+50 41.49' LT
+50.09 31.49' LT

GRADING LIMITS

DITCH FLOW LINE

23.30' EMPIRE ELECTRIC EASEMENT

S89°21'25"E 1063.71'

N89°21'28"W 261.04'

S89°21'28"E 261.30'

N89°21'25"W 1063.39'

GRADING LIMITS

MATCHLINE SEE SHEET

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2025

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MO# PE-2017019023

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RIGHT OF WAY & EASEMENT PLANS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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USER: skendall

LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET

STA 137+50.00
20

STA 143+00.00
22

PARCEL 23
CHILDRESS ROYALTY COMPANY
SEE SHEET 20

DITCH FLOW LINE

GRADING LIMITS

23.85'
EMPIRE
ELECTRIC
EASEMENT

S89°21'25"E 1063.71'

N89°21'25"W 1063.39'

P-OH

ASPHALT

EXISTING
RIGHT-OF-WAY
WIDTH VARIES

PI: 138+91.70

138+00 139+00 140+00 141+00 142+00 143+00

℄ ZORA STREET

N89°21'28"W 2649.33'

S89°21'28"E 2286.40'

DITCH FLOW LINE

PARCEL 18
ACME LAND COMPANY

PARCEL 18
ACME LAND COMPANY
SEE SHEET 18

GRADING LIMITS

MATCHLINE
SEE SHEET

MATCHLINE
SEE SHEET

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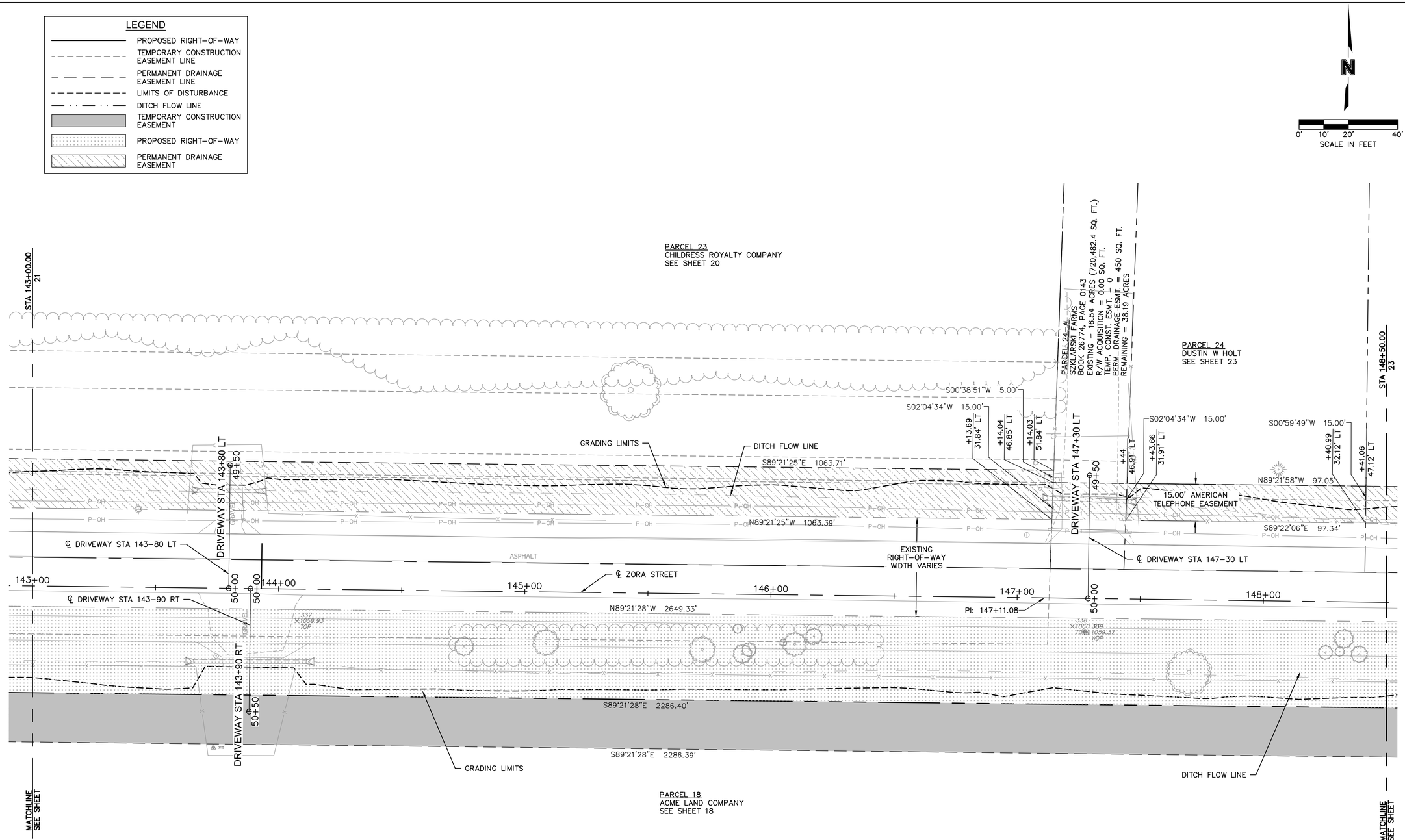
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CITY OF JOPLIN

JOPLIN, MISSOURI

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USER: skendall

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LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 25
DONNA GAGE
BOOK 2602, PAGE 0061
EXISTING = 0.90 ACRES (39161.3273 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
PERM. DRAINAGE ESMT. = 3131 SQ. FT.
REMAINING = 0.90 ACRES

PARCEL 24
DUSTIN W HOLT
BOOK 2514, PAGE 0115
EXISTING = 38.19 ACRES (1662556.4 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
TEMP. CONST. ESMT. = 1170 SQ. FT.
PERM. DRAINAGE ESMT. = 16457 SQ. FT.
REMAINING = 38.19 ACRES

PARCEL 24
DUSTIN W HOLT

STA 148+50.00
22

STA 154+00.00
24

DRIVEWAY STA 149+20 LT
49+50

DRIVEWAY STA 151+40 LT
49+50

℄ DRIVEWAY STA 149-20 LT

℄ DRIVEWAY STA 151-40 LT

N89°21'28"W 208.70'

S89°21'24"E 208.79'

N89°21'28"W 61.04'

S89°21'49"E 57.33'

N89°26'42"W 59.78'

N89°21'32"W 379.99'

S89°21'25"E 379.99'

N00°38'20"E 5.00'

S00°38'26"W 10.00'

N20°58'33"E 10.66'

+49.93 47.48' LT

+49.92 42.48' LT

+49.91 32.48' LT

+07.24 32.40' LT

+10.96 42.38' LT

S89°21'28"E 55.96'

S00°00'00"E 10.01'

S00°38'28"W 19.99'

+66.92 42.29' LT

+67.02 32.28' LT

+00.05 32.08' LT

+00.08 52.07' LT

DITCH FLOW LINE

GRADING LIMITS

15.00' AMERICAN TELEPHONE EASEMENT

EXISTING RIGHT-OF-WAY WIDTH VARIES

℄ ZORA STREET

GRAVEL

ASPHALT

PI: 150+36.12

149+00 150+00 151+00 152+00 153+00 154+00

N89°21'28"W 2649.33'

S89°21'28"E 2286.40'

S89°21'28"E 2286.39'

DITCH FLOW LINE

GRADING LIMITS

MATCHLINE SEE SHEET

MATCHLINE SEE SHEET

PARCEL 18
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Joplin, MO 64801

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

RIGHT OF WAY & EASEMENT PLANS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_RWAY01_R170642
date: 3/28/2025

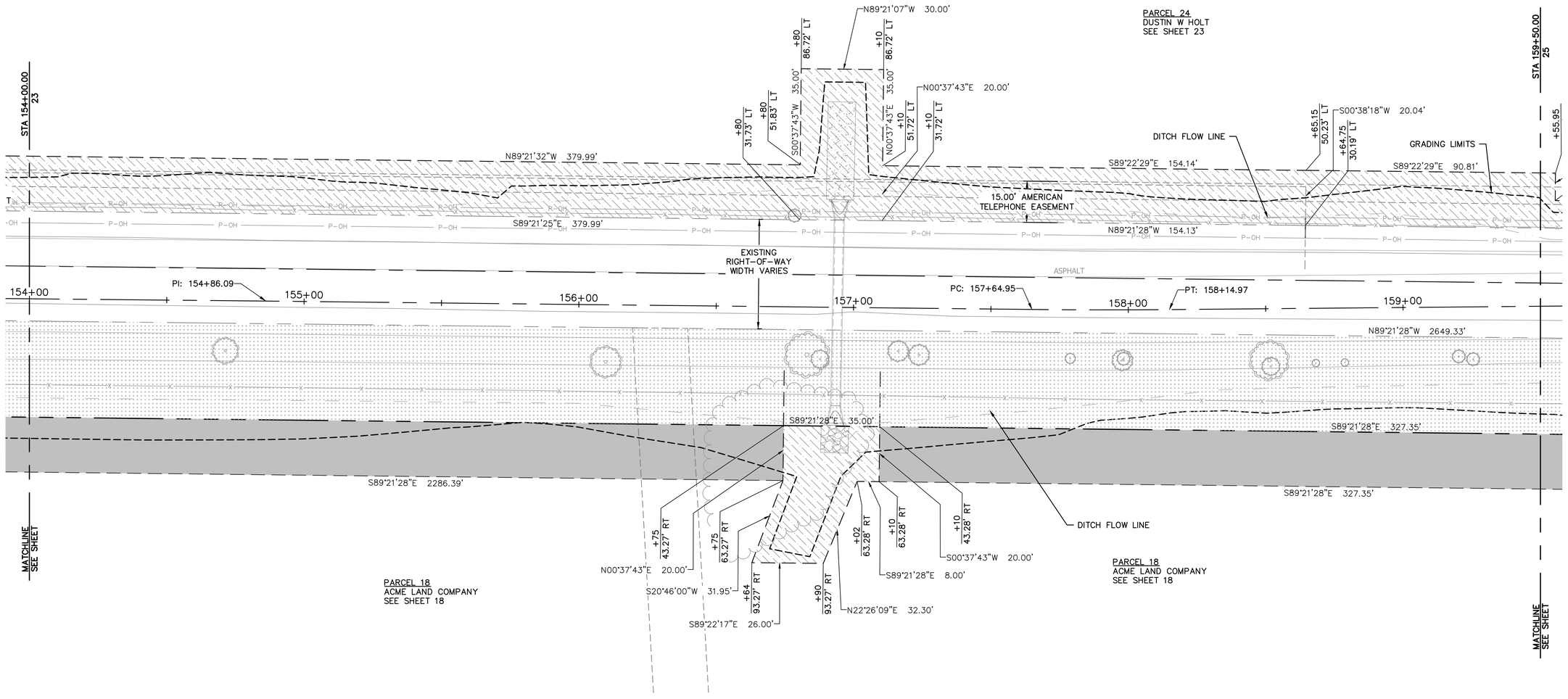
SHEET
23 of 120

LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET



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LEGEND

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

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 27
BURDEN FAMILY TRUST.
BOOK 2458, PAGE 0199
EXISTING = 26.51 ACRES (1157161.5 SQ. FT.)
R/W ACQUISITION = 0.00 SQ. FT.
TEMP. CONST. ESMT. = 961 SQ. FT.
PERM DRAINAGE ESMT. = 2821 SQ. FT.
REMAINING = 26.51 ACRES

STA 159+50.00
24
+55.95 48.42' LT
+55.75 38.42' LT
S00°37'31"W 10.00'
S89°22'29"E 83.70'
N89°21'39"W 174.28'
+38.99 26.67' LT
+39.43 36.75' LT
DRIVEWAY STA 160+72 LT
DITCH FLOW LINE
GRADING LIMITS
S89°22'29"E 280.63'
15.00' AMERICAN TELEPHONE EASEMENT
N89°23'31"W 280.86'
EXISTING RIGHT-OF-WAY WIDTH VARIES
N00°31'04"W 5.00'
N00°36'23"E 10.00'
+19.80 21.16' LT
+20 31.16' LT
+20 36.16' LT
DRIVEWAY STA 163+35 LT
GRAVEL
S89°23'13"E 30.01'
S00°31'04"E 5.00'
+49.78 35.59' LT
+49.81 30.59' LT
S01°44'10"W 10.00'
+00 30.76' LT
+00 20.75' LT
S89°23'37"E 51.21'
N89°23'37"W 81.02'
℄ DRIVEWAY STA 163-35 LT
FC: 163+40.70
℄ ZORA STREET
160+00
161+00
162+00
163+00
164+00
℄ ZORA STREET
N89°23'37"W 370.39'
℄ DRIVEWAY STA 162-55 RT
DRIVEWAY STA 162+55 RT
50+00
50+49.86
DRIVEWAY STA 163+35 RT
CONCRETE
50+00
50+50
℄ DRIVEWAY STA 163-35 RT
END CONSTRUCTION
ZORA STREET
STA 163+88.88
+08.42 19.06' RT
N00°36'23"E 35.00'
S89°23'37"E 370.48'
S89°23'37"E 370.50'
+09.34 54.05' RT
N00°36'23"E 20.00'
+09.89 74.05' RT
GRAVEL
MATCHLINE SEE SHEET
GRADING LIMITS
+34.69 68.26' RT
+36.43 48.30' RT
+37.21 13.31' RT
S00°45'17"W 35.00'
S00°38'32"W 20.00'
DITCH FLOW LINE
GRADING LIMITS

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CITY OF JOPLIN

2025

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V_XTOPO_R170642 C_XUTIL_D170642 C_DEM0-HTCH_D170642 C_PBASE_D170642 C_XTOPO_R170642 C_XTOPO_R170642

LEGEND

- PAVEMENT REMOVAL
- TREE REMOVAL (AREA)
- GRAVEL DRIVEWAY
- STORM SEWER REMOVAL
- TREE REMOVAL (INDIVIDUAL)
- SAWCUT

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BEGIN CONSTRUCTION
ZORA STREET
STA 110+82.18

PARCEL 7
LAWVER INVESTMENTS, LLC

PARCEL 8
SCHLEGEL PROPERTIES, LLC

PARCEL 9
SWMO DEVELOPMENT, INC.

PARCEL 10
CNJ DEVELOPERS, INC.

PARCEL 11
SHAWN E. & MARK L. HARRIS

PARCEL 12
GIL L. SALGADO

PARCEL 13
ROBERT D. & CLARICE A. McLAUGHLIN TRUST

ZORA ST - EAST

DND FENCE
EXISTING ELECTRIC EASEMENT
EXISTING TELEPHONE EASEMENT
TEMPORARY CONSTRUCTION EASEMENT
PROPOSED DRAINAGE EASEMENT
EXISTING 15" RCP TO BE REMOVED
GRADING LIMITS
EXISTING RIGHT-OF-WAY
DND POLE
PT: 110+57.18
PI: 110+82.18
PI: 111+99.92
PI: 114+99.92
+82.82 17.06' LT
+86.85 37.00' LT
+11.59 36.98' LT
STA 115+50.00 26
+82.18 17.50' RT
RELOCATE EXISTING MAILBOX
EXISTING WATER METER TO BE RELOCATED (BY OTHERS)
EXISTING POWER POLE TO BE RELOCATED (BY OTHERS)
RELOCATE EXISTING WATER METER BY OTHERS
EXISTING TELEPHONE PEDESTAL TO BE RELOCATED (BY OTHERS)
+17.09 34.01' RT
+32.48 34.01' RT
+73.71 58.00' RT
+83.07 58.00' RT
PROPOSED RIGHT-OF-WAY
RELOCATE EXISTING TELEPHONE PEDESTAL AND BOX (BY OTHERS)
RELOCATE EXISTING TELEPHONE PEDESTAL (BY OTHERS)
EXISTING FENCE TO BE RELOCATED
PROPOSED DRAINAGE EASEMENT
MATCHLINE SEE SHEET
SCALE IN FEET

PARCEL 8A
SCHLEGEL PROPERTIES, LLC

PARCEL 14
ZORA 4551

PARCEL 15
JOPLIN LAND & RENTALS

PARCEL 16
ZORA 4551

ADJUST SANITARY MANHOLE TO FINISH GRADE BY OTHERS
PROPOSED DRAINAGE EASEMENT
EXISTING SIGN TO BE RELOCATED
TEMPORARY CONSTRUCTION EASEMENT
N CENTER LANE
STA 121+18.00 27
+76.87 39.30' LT
+97.34 39.32' LT
+10.47 40.08' LT
+38.53 39.96' LT
REMOVE EXISTING 18" CMP
+66.78 43.72' RT
+79.29 43.71' RT
EXISTING WATER METER TO BE RELOCATED (BY OTHERS)
EXISTING TELEPHONE PEDESTAL TO BE RELOCATED (BY OTHERS)
PROPOSED RIGHT-OF-WAY
RELOCATE EXISTING FENCE
SANITARY MANHOLE TO BE ADJUSTED TO FINISH GRADE (BY OTHERS)
EXISTING FIRE HYDRANT & WATER VALVE TO BE RELOCATED (BY OTHERS)
EXISTING MAILBOX TO BE RELOCATED
FOUND MONUMENT 1/4" DRILL STEEL
SCALE IN FEET

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2025

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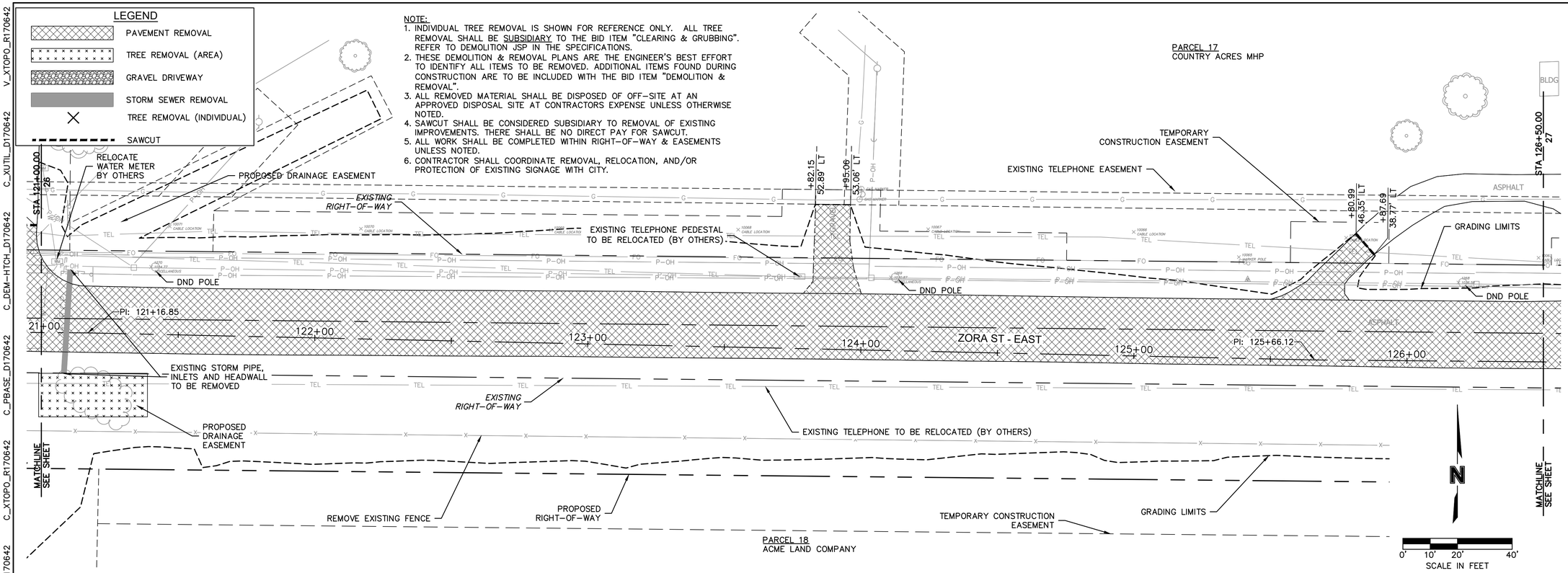
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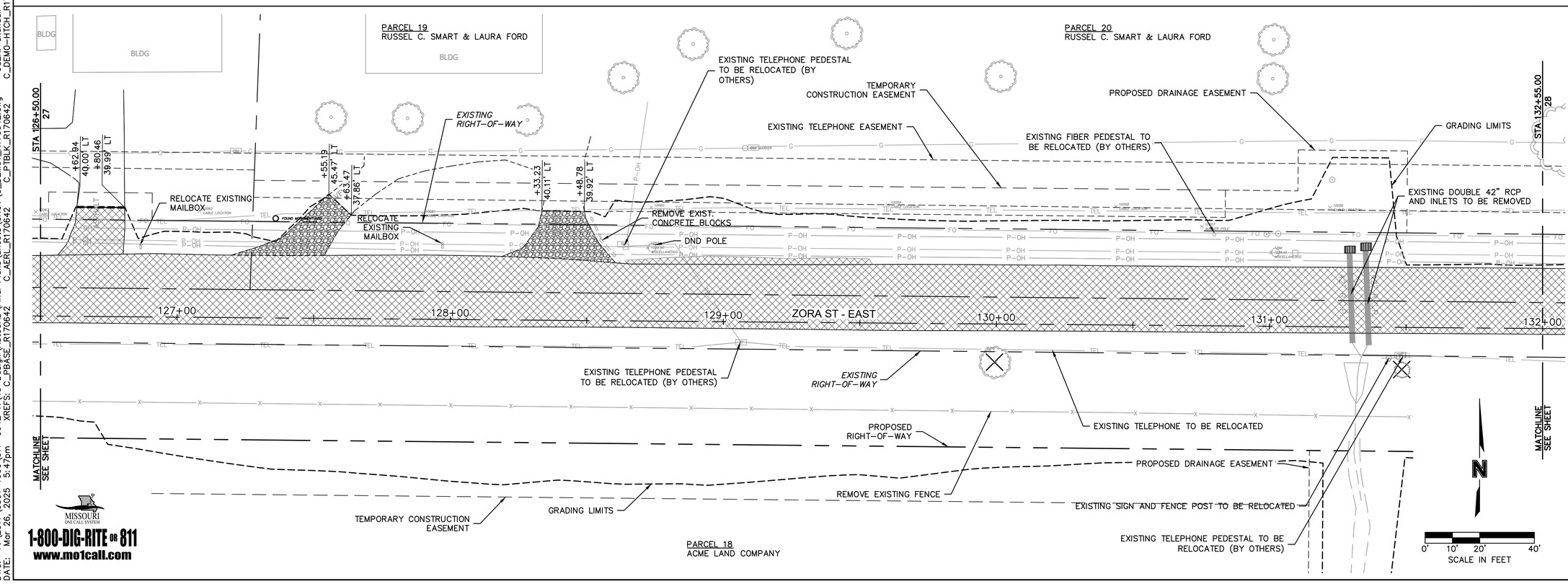
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XREFS: C_PBASE_R170642
5:47pm Mar 26, 2025
DWG:
DATE:

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JOPLIN, MISSOURI

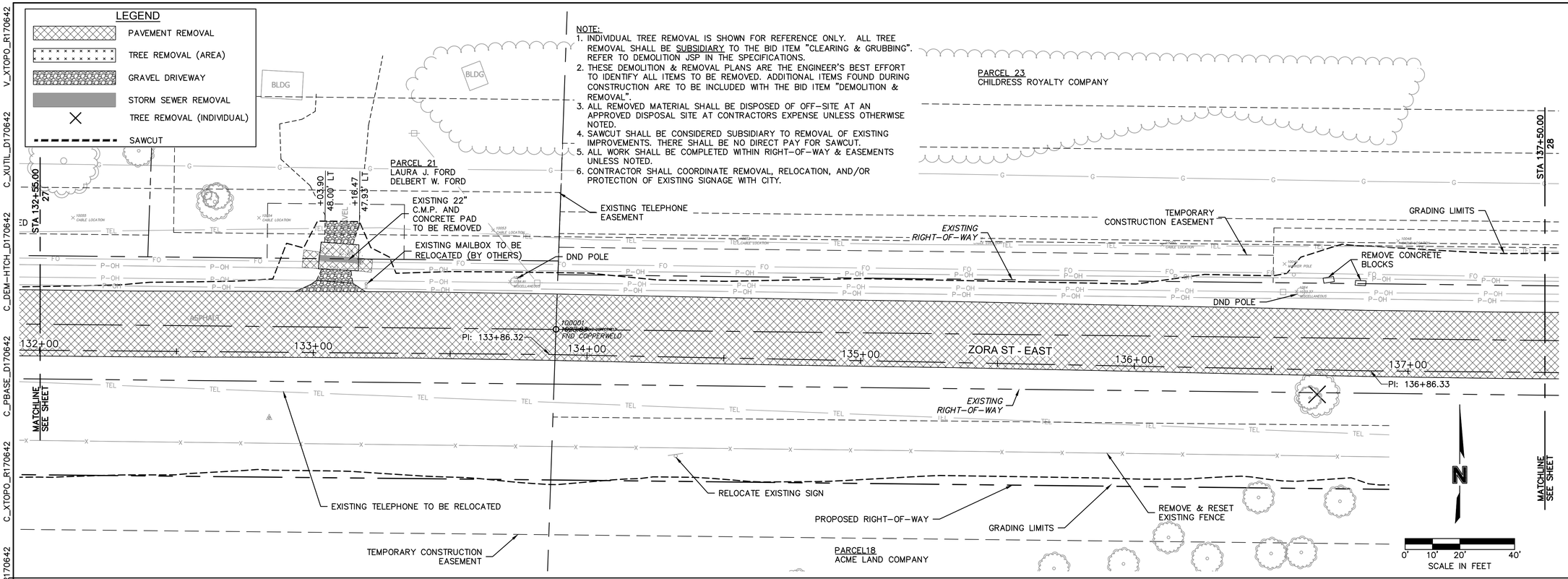
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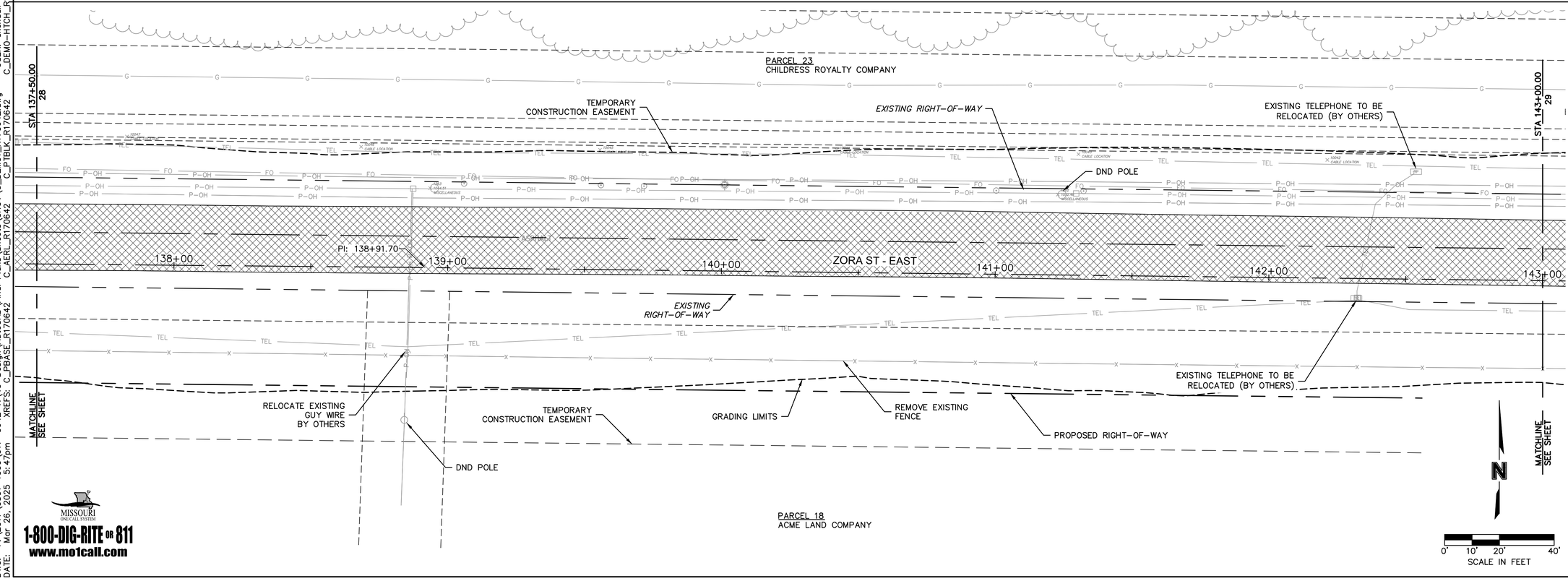
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C_XTOPO_R170642
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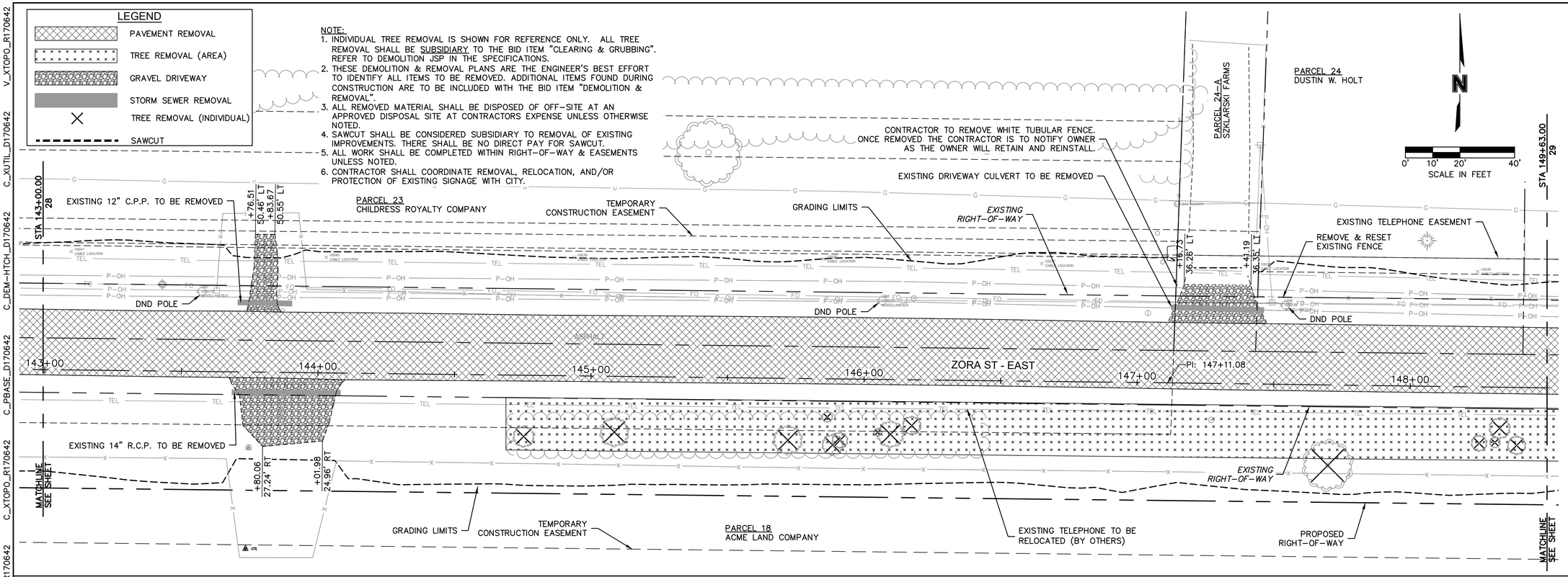
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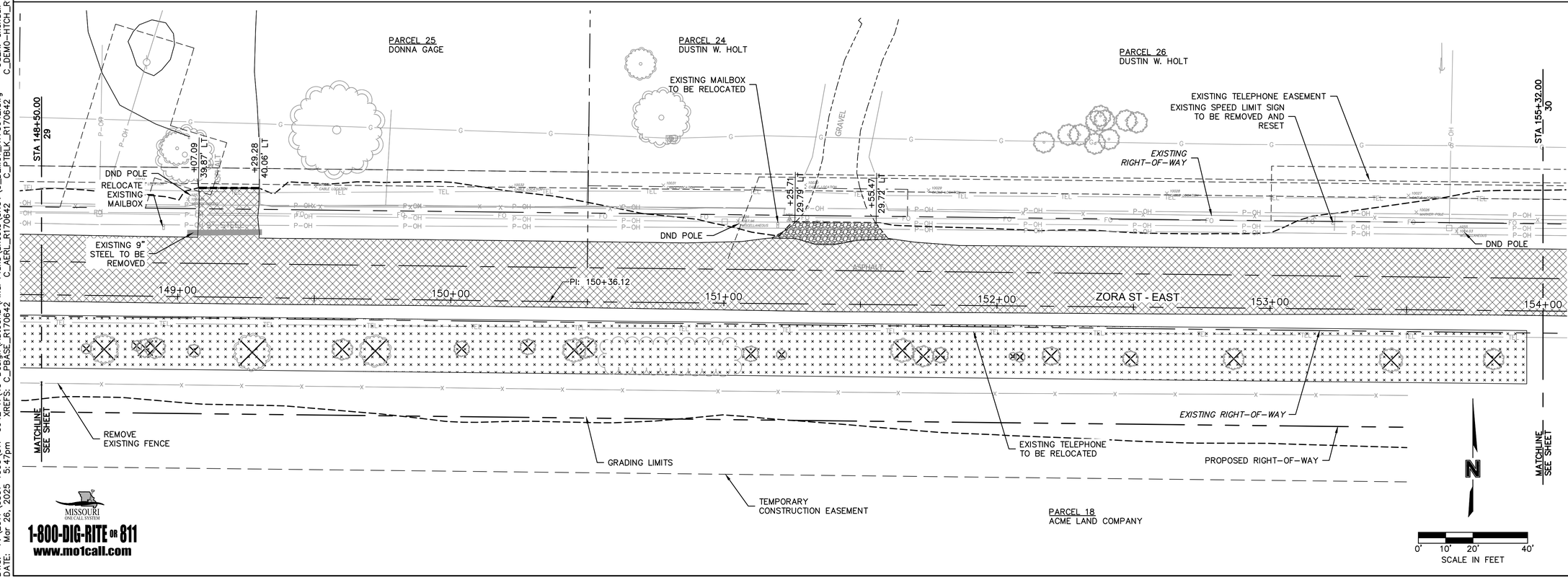
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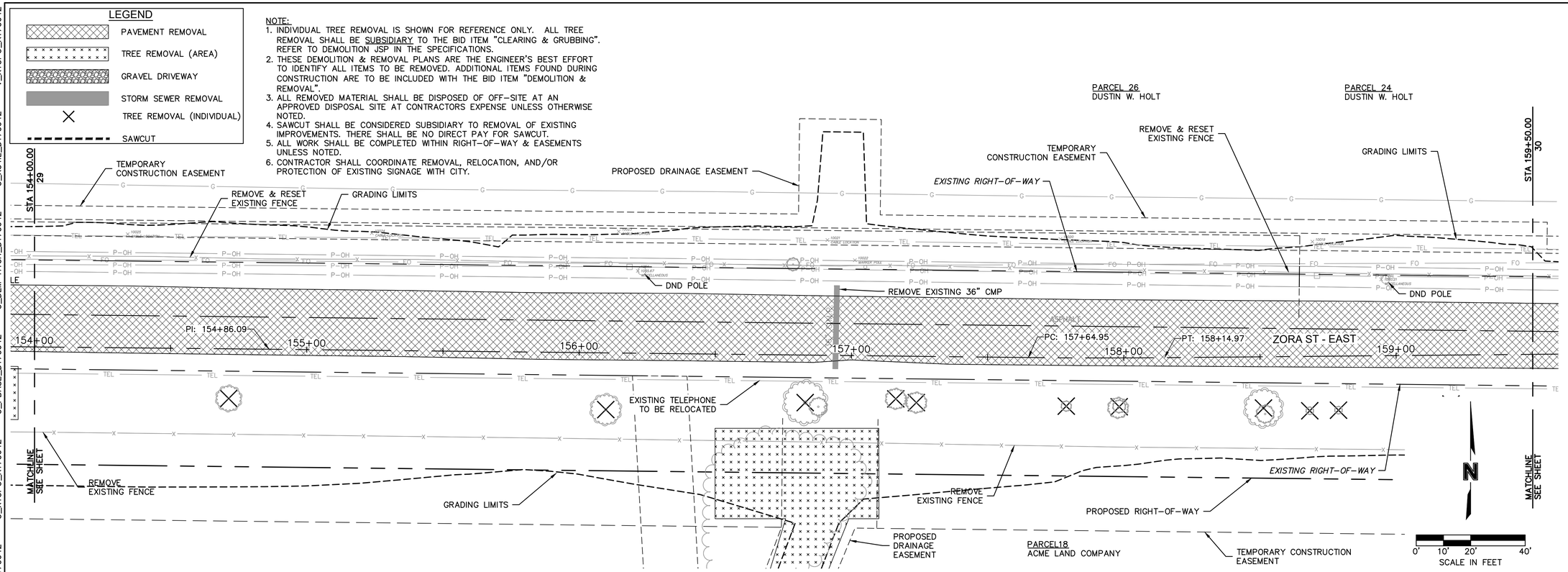
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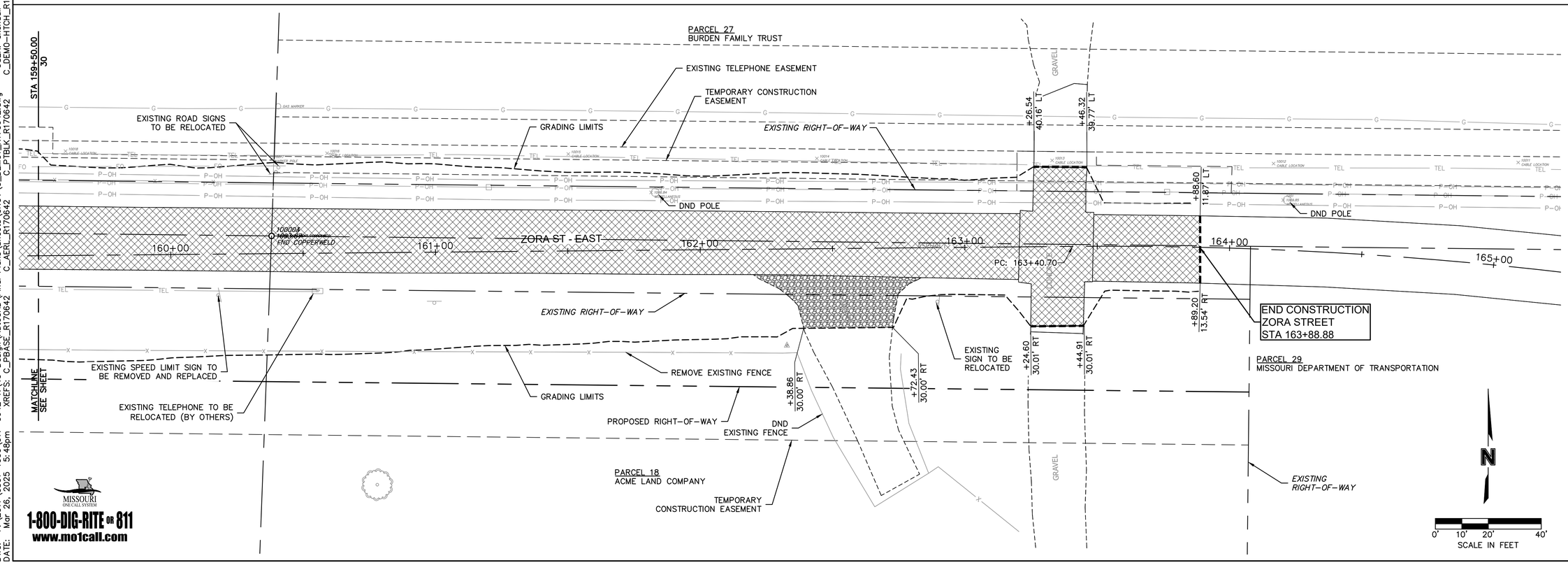
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2. THESE DEMOLITION & REMOVAL PLANS ARE THE ENGINEER'S BEST EFFORT TO IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND DURING CONSTRUCTION ARE TO BE INCLUDED WITH THE BID ITEM "DEMOLITION & REMOVAL".
3. ALL REMOVED MATERIAL SHALL BE DISPOSED 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. ALL WORK SHALL BE COMPLETED WITHIN RIGHT-OF-WAY & EASEMENTS UNLESS NOTED.
6. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.





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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

DEMOLITION & REMOVALS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

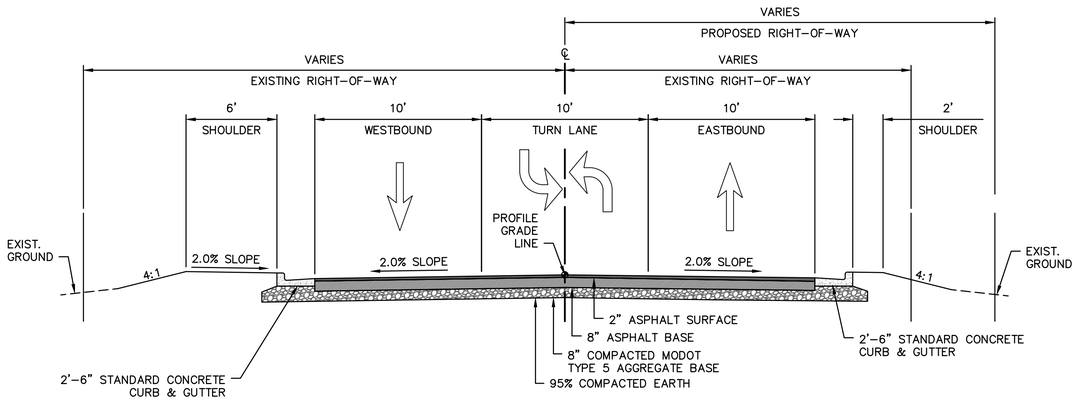
2025

JOPLIN, MISSOURI

drawn by:	SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_DEM01_R170642
date:	3/28/2025

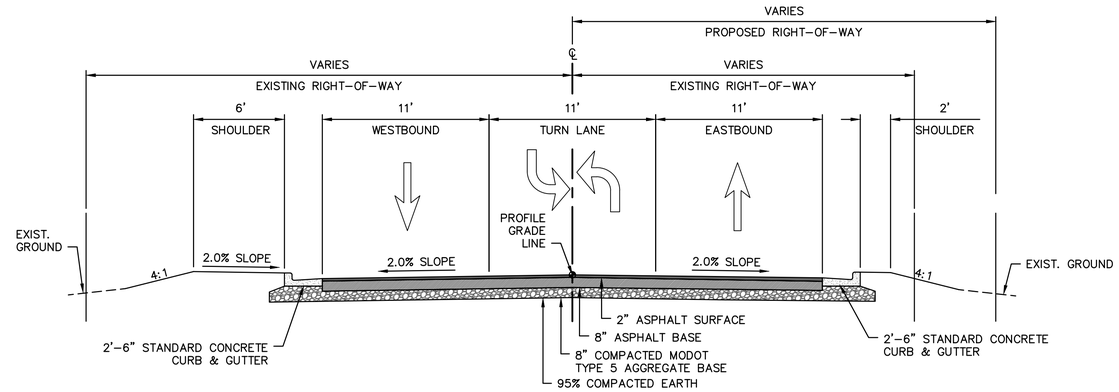
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DWG: Mar 26, 2025 5:48pm
DATE:



ZORA STREET - FULL DEPTH PVMT (CURB & GUTTER)

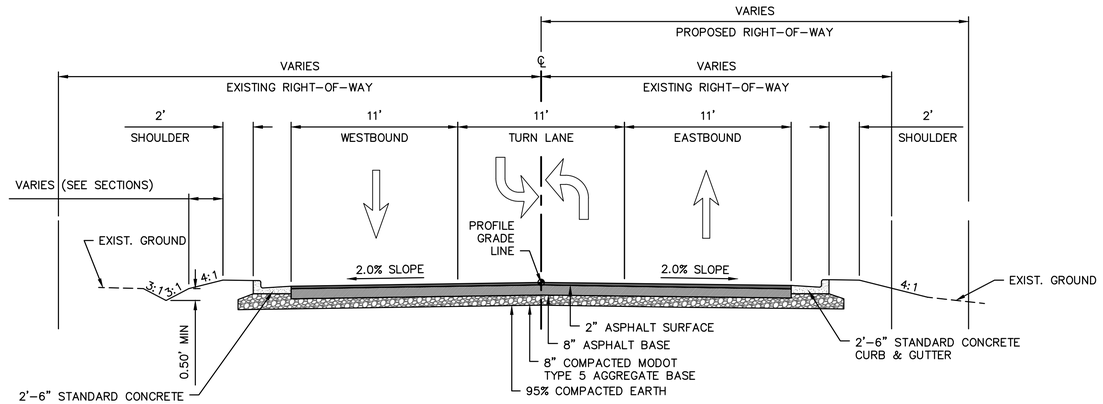
STA. 110+82.18 TO STA. 112+00.00
NOT TO SCALE



ZORA STREET - FULL DEPTH PVMT (CURB & GUTTER)

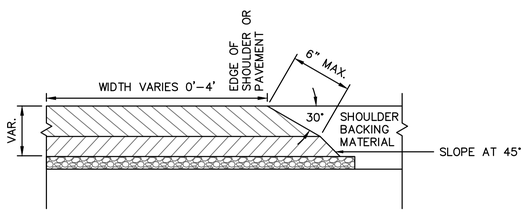
STA. 112+00.00 TO STA. 117+53.47
STA. 119+00.00 TO STA 121+56.73
NOT TO SCALE

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

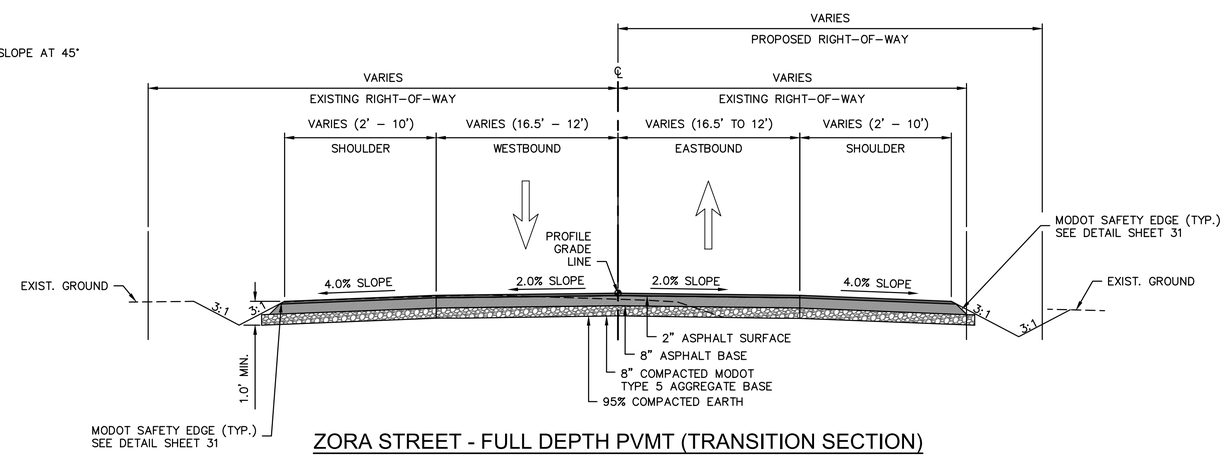


ZORA STREET - FULL DEPTH PVMT (CURB & GUTTER) DITCH LEFT

STA. 117+53.47 TO STA. 119+00.00
NOT TO SCALE



MODOT SAFETY EDGE DETAIL



ZORA STREET - FULL DEPTH PVMT (TRANSITION SECTION)

STA. 121+56.73 TO STA. 125+66.12
STA. 148+25.00 TO STA. 156+00.00
STA. 157+75.00 TO STA. 163+00.00
NOT TO SCALE

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

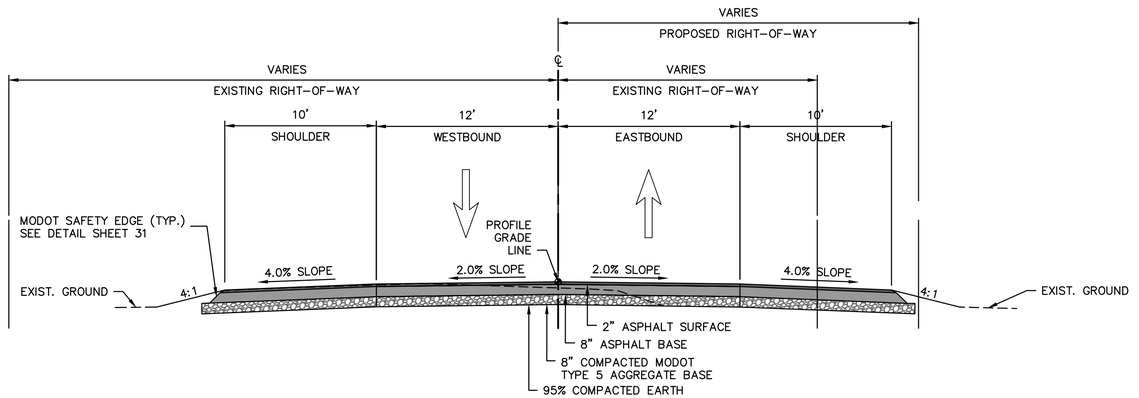
JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_TYP01_R170642
date: 4/9/2025

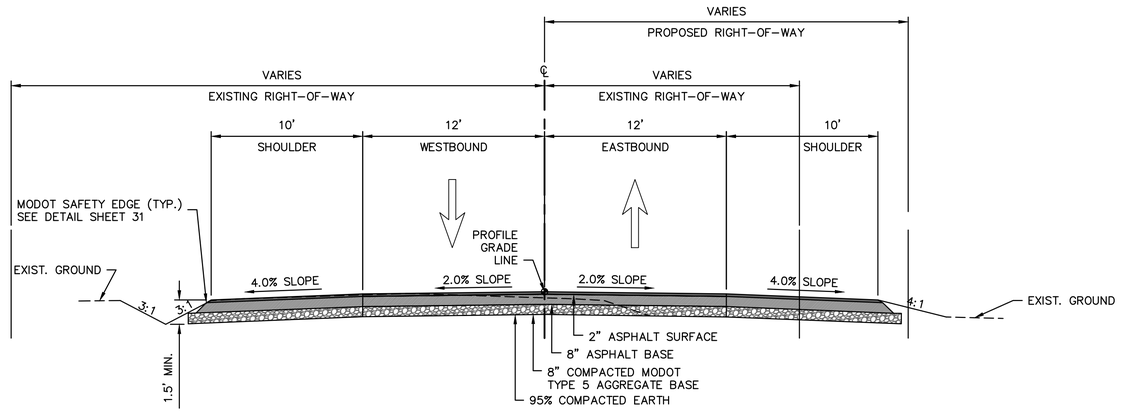
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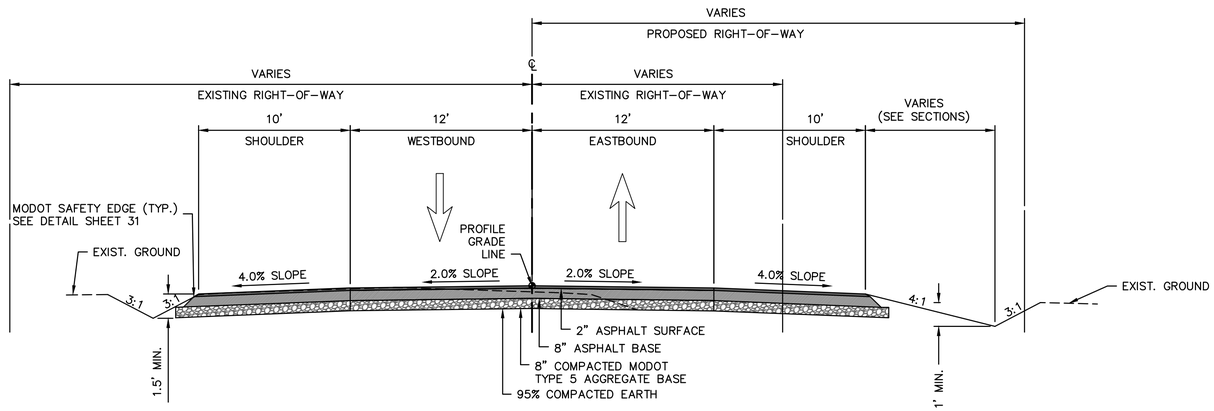
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STA. 125+66.12 TO STA. 127+75.00
STA. 131+30.00 TO STA. 133+05.00
NOT TO SCALE



ZORA STREET - FULL DEPTH PVMT (DITCH LT)

STA. 127+75.00 TO STA. 131+00.00
STA. 136+75.00 TO STA. 144+25.00
STA. 162+50.00 TO STA. 163+00.00
NOT TO SCALE



ZORA STREET - FULL DEPTH PVMT (DITCH LT & RT)

STA. 144+25.00 TO STA. 148+25.00
NOT TO SCALE

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

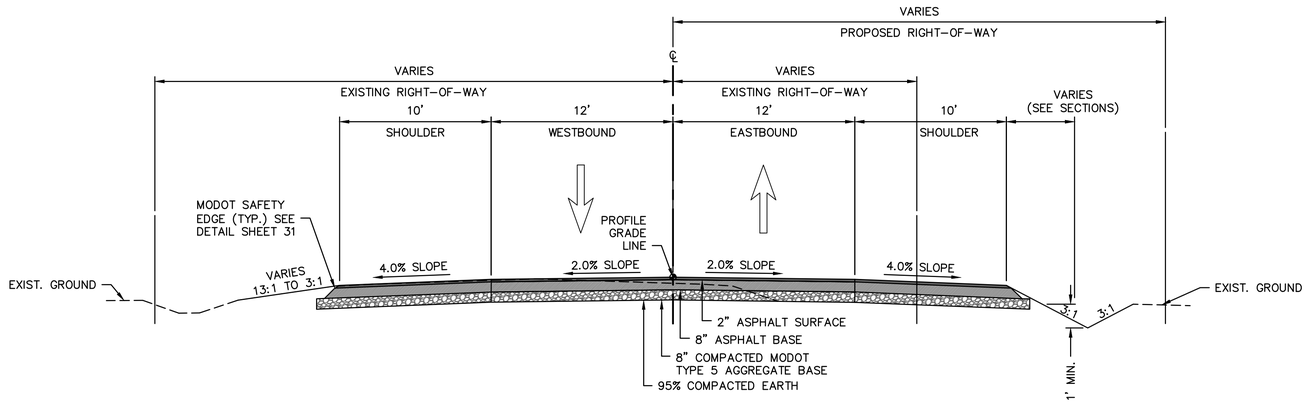
JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_TYP01_R170642
date: 4/9/2025

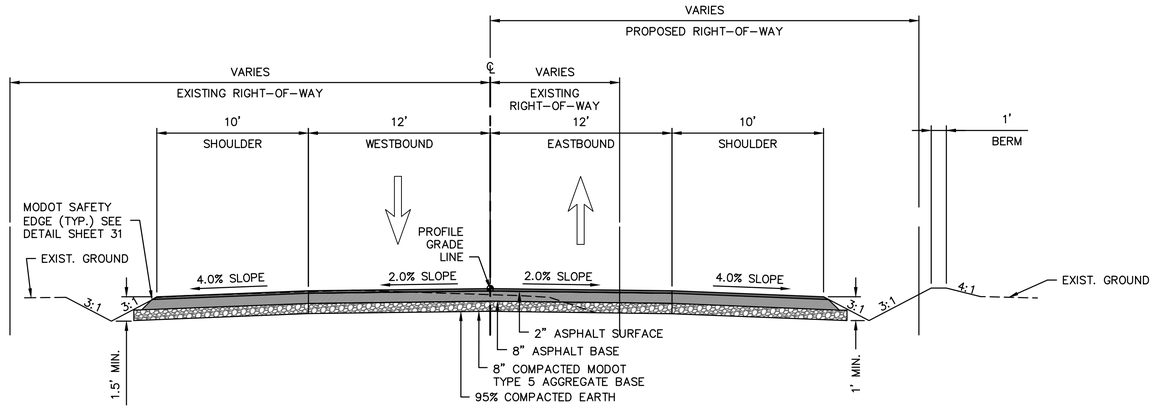
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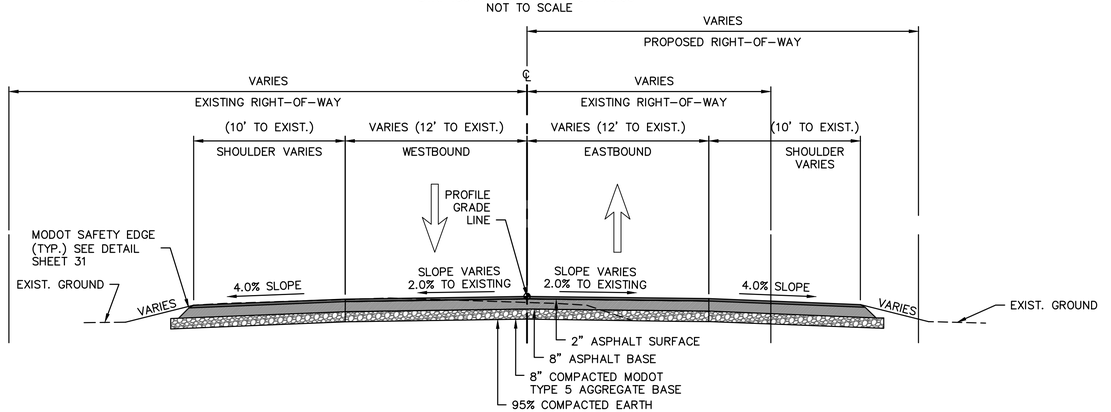
ZORA STREET - FULL DEPTH PVMT (DITCH RT)

STA. 133+05.00 TO STA. 136+75.00
NOT TO SCALE



ZORA STREET - FULL DEPTH PVMT (DITCH 3:1 LT & RT)

STA. 126+75.00 TO STA. 127+75.00
STA. 156+00.00 TO STA. 157+75.00
NOT TO SCALE



ZORA STREET - FULL DEPTH PVMT (TRANSITION TO EXISTING MODOT)

STA. 163+00.00 TO STA. 163+88.88
NOT TO SCALE

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TYPICAL SECTIONS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

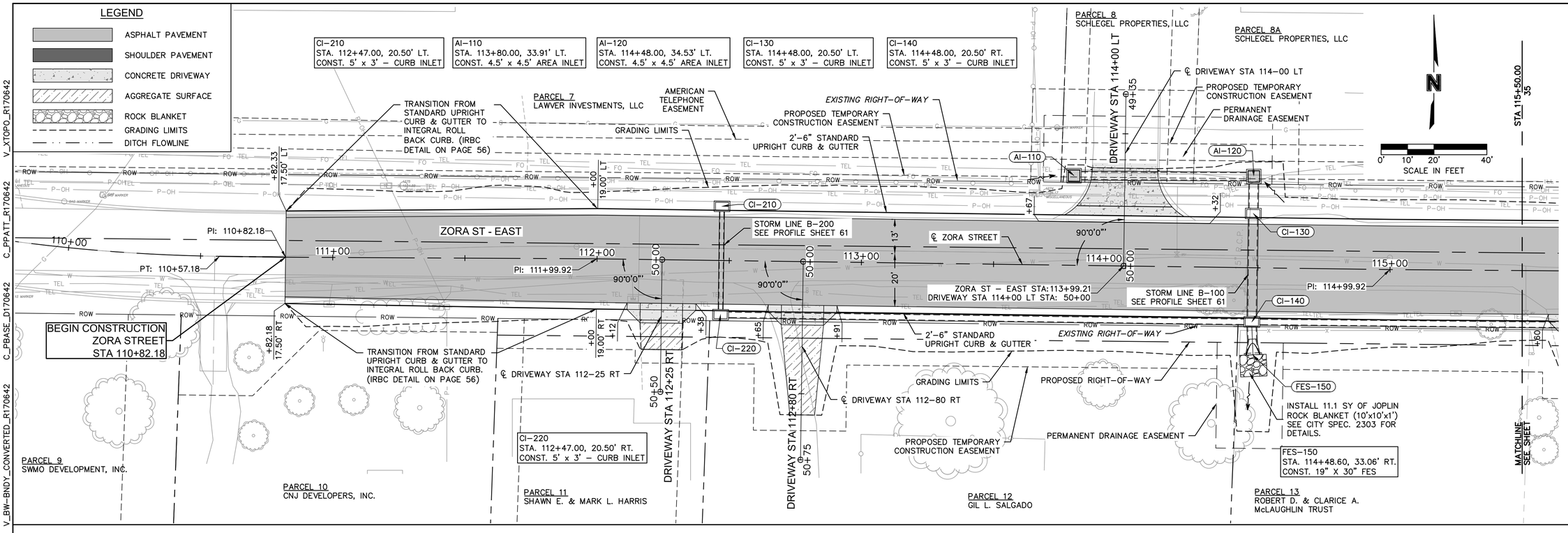
JOPLIN, MISSOURI

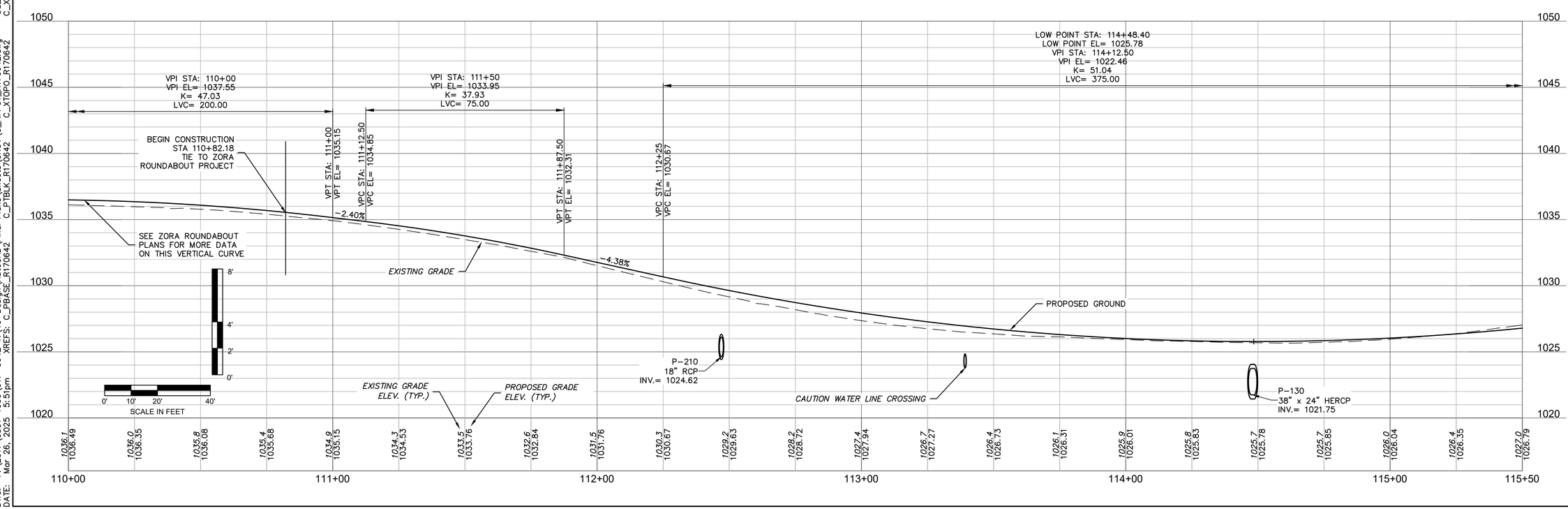
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project no.:	017-0642-R
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date:	4/9/2025

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33 of 120

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ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

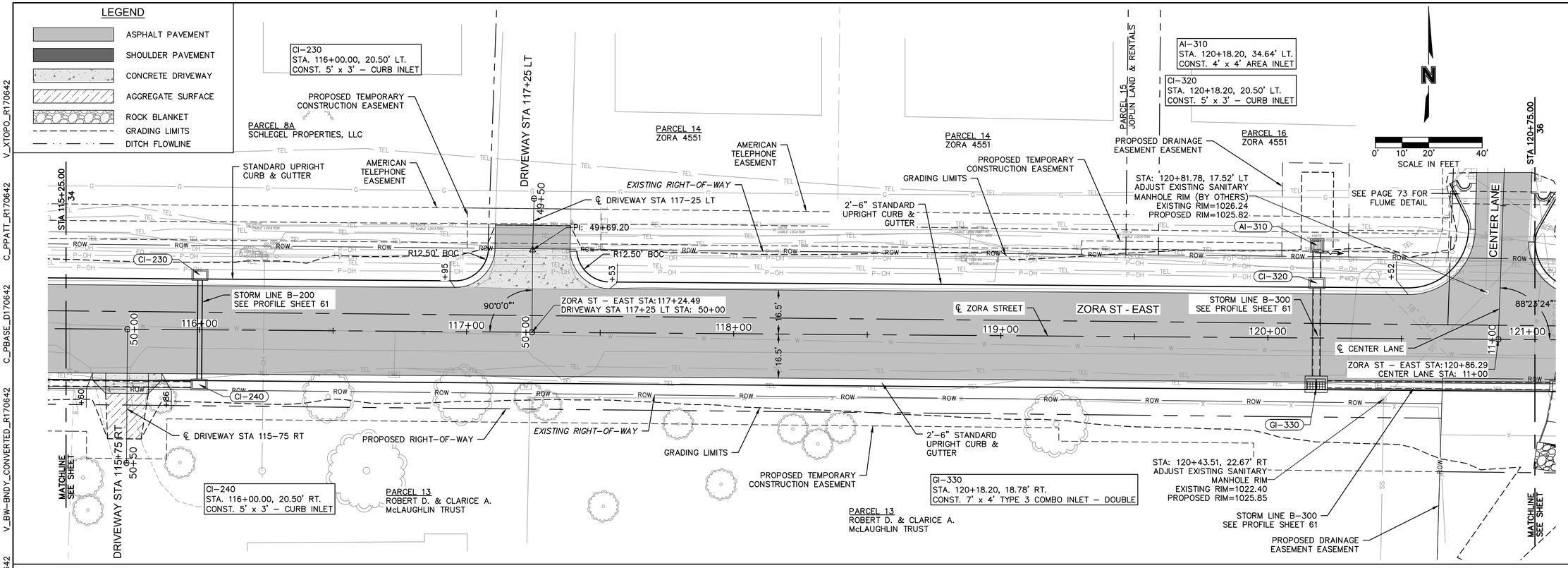
JOPLIN, MISSOURI

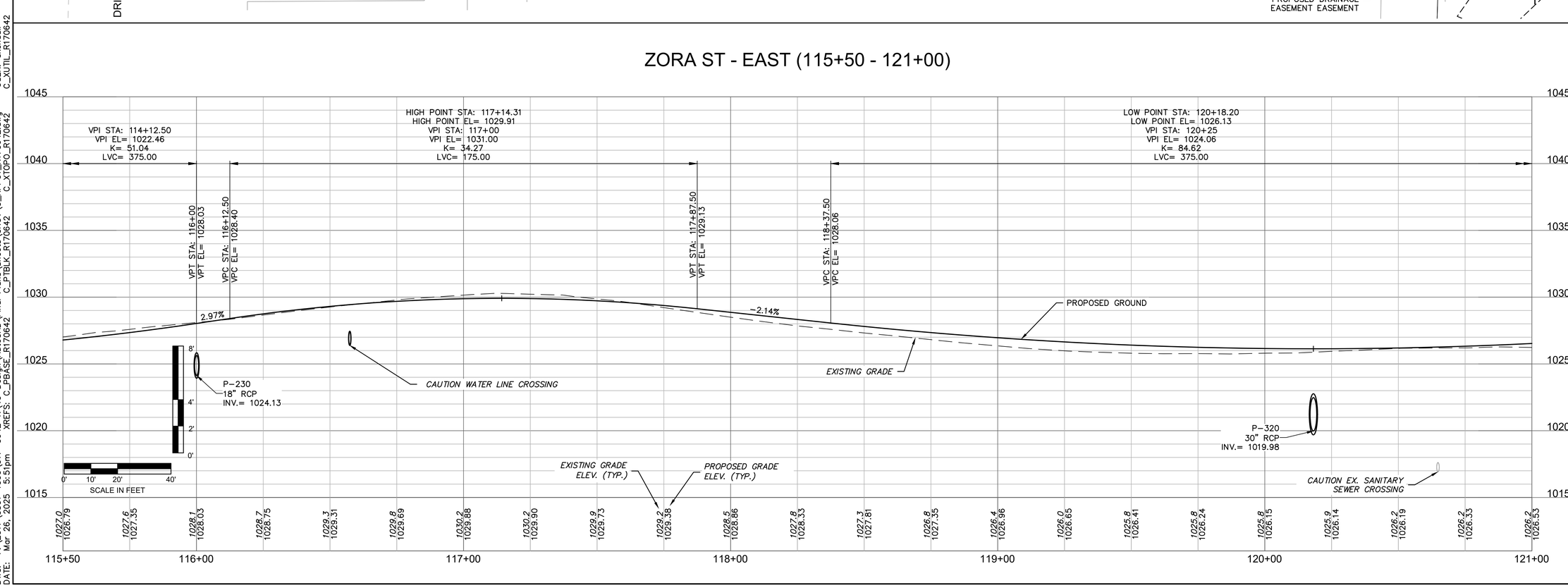
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approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_RPP01_R170642
date: 3/28/2025

SHEET
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CITY OF JOPLIN

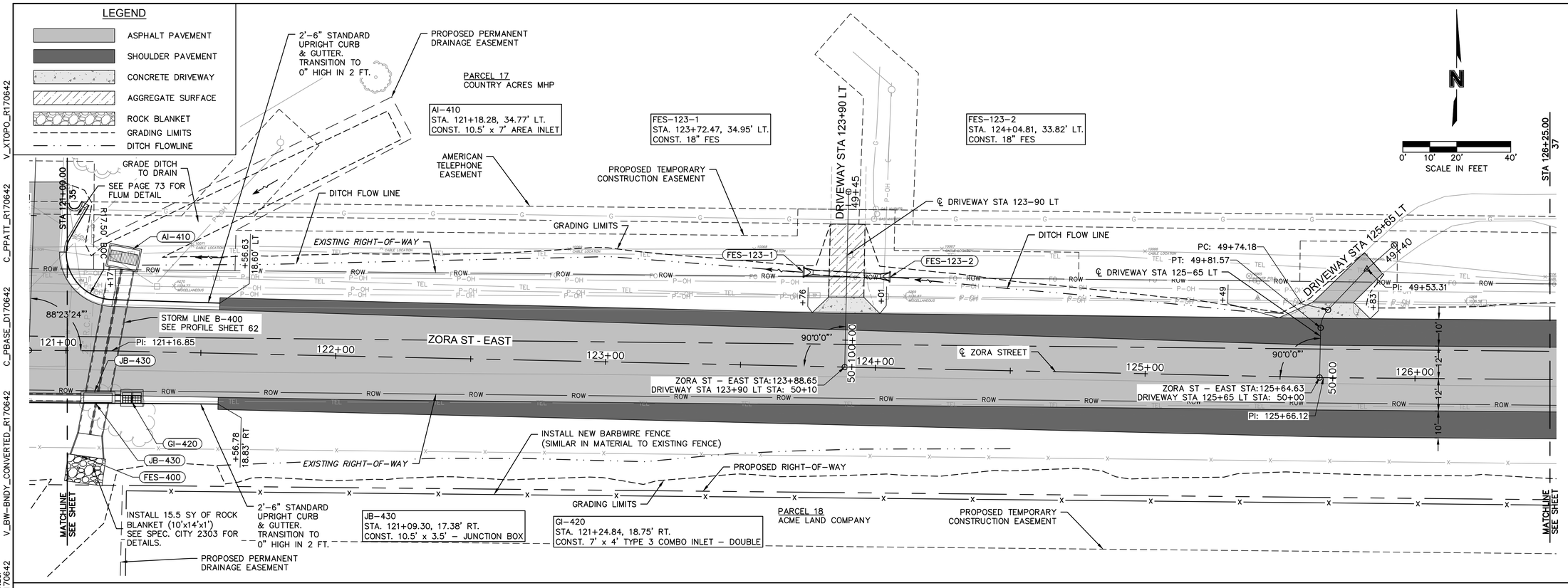
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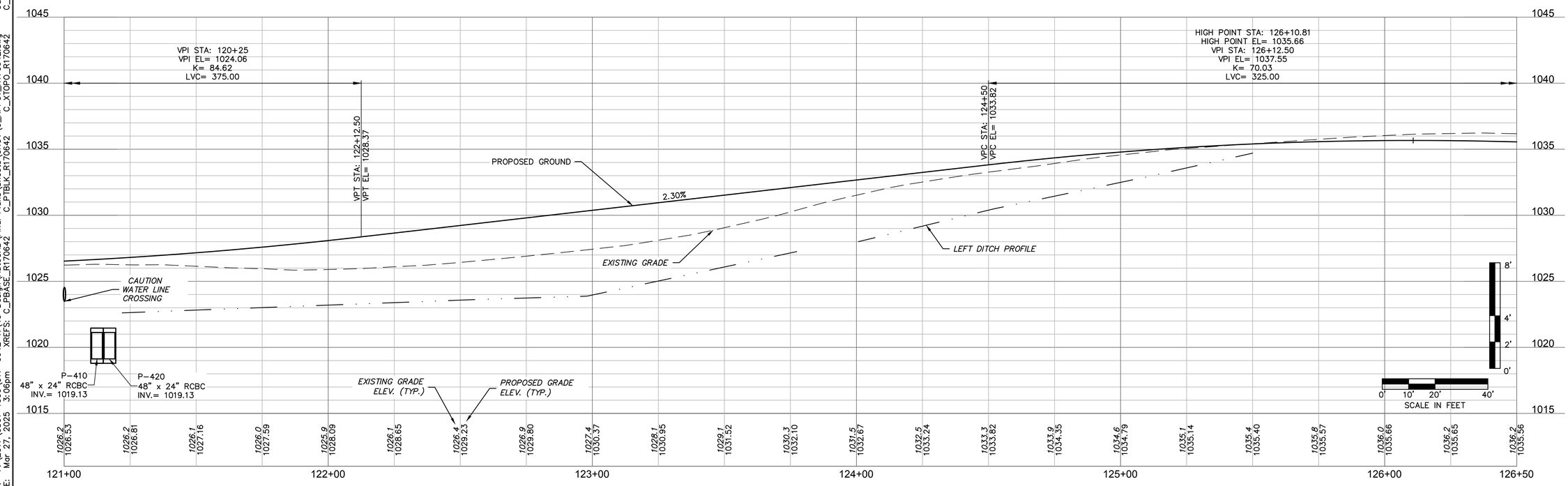
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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

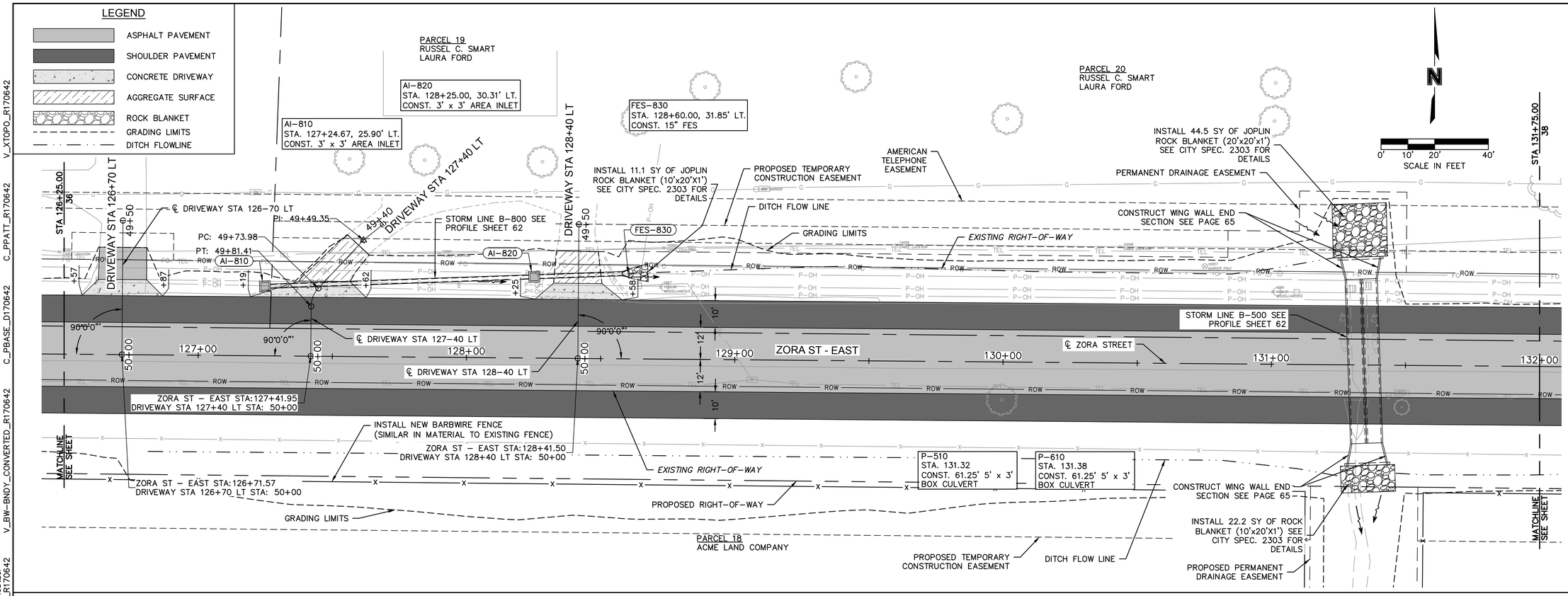
JOPLIN, MISSOURI

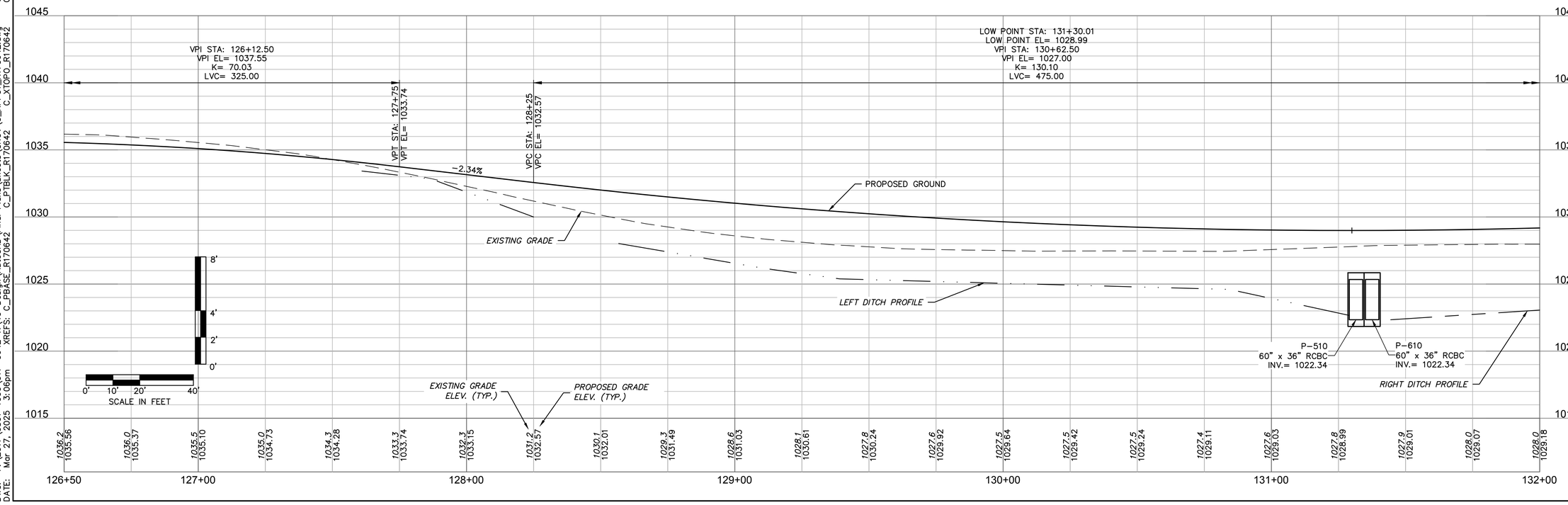
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date: 3/28/2025

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36 of 120

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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

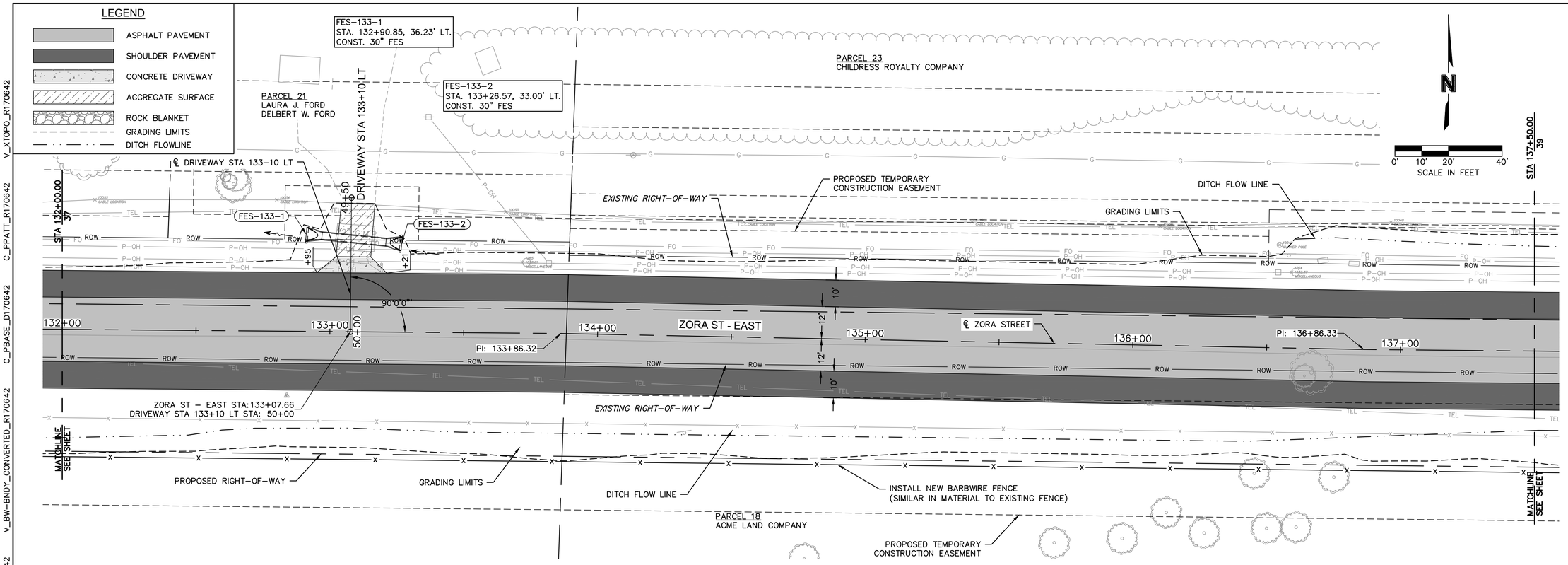
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JOPLIN, MISSOURI

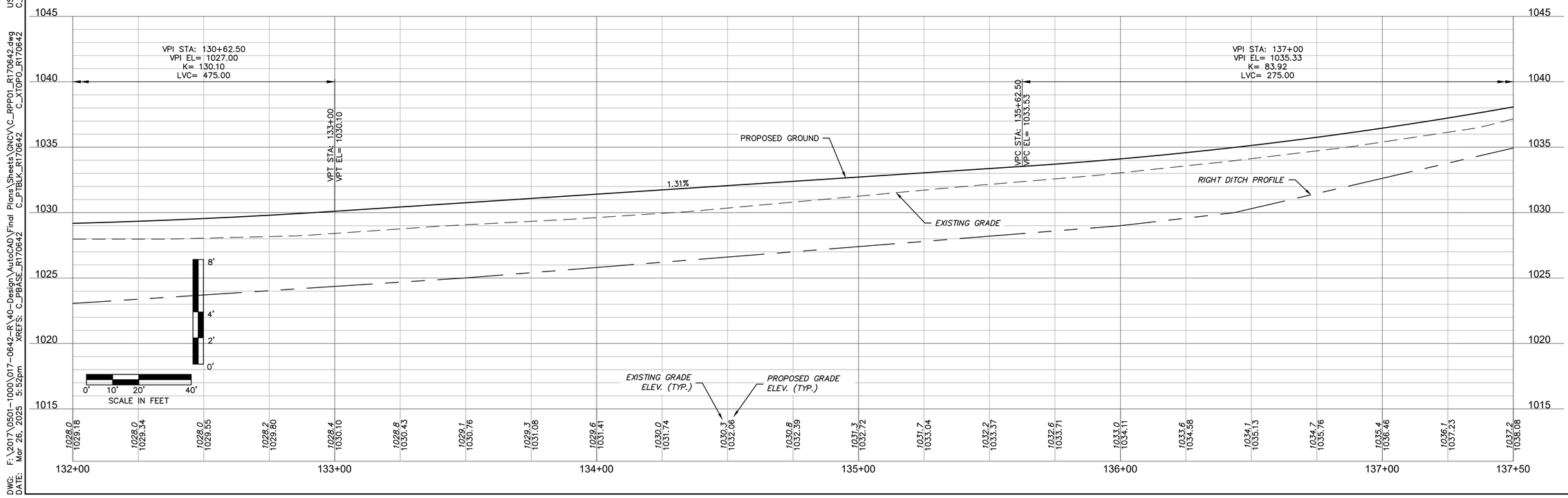
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37 of 120

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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
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JOPLIN, MISSOURI

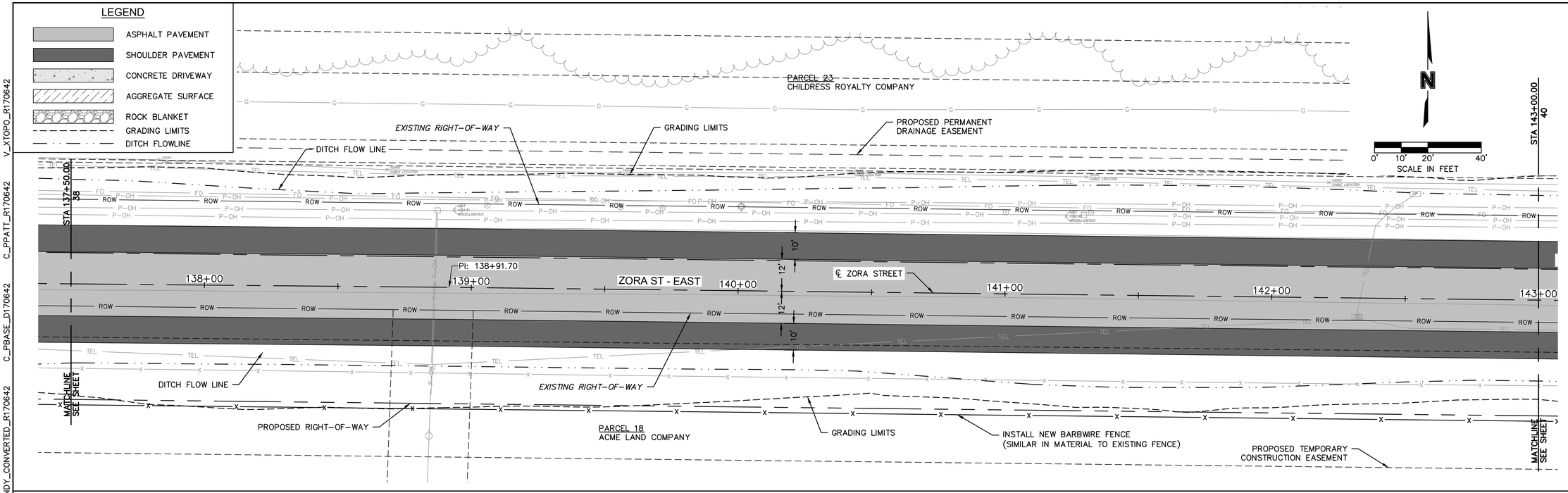
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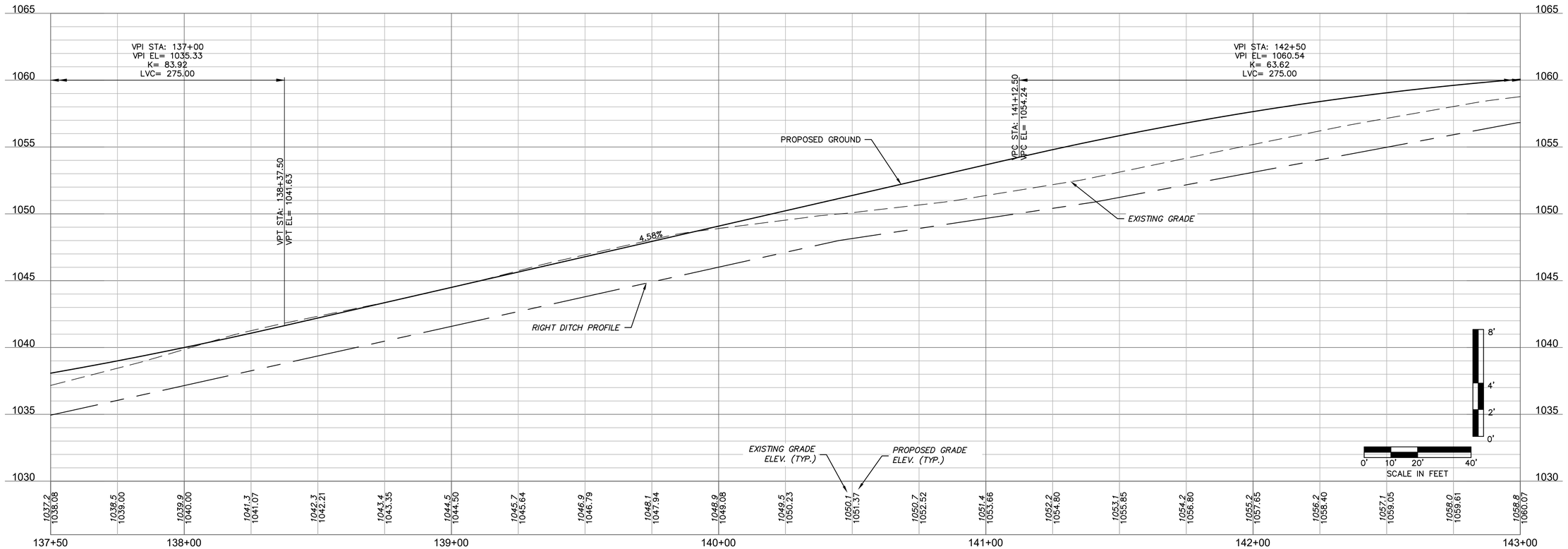
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V_BW-BNDY_CONVERTED_R170642 C_PBASE_D170642 C_PPATT_R170642 V_XTOPO_R170642
C_XUTIL_R170642

LEGEND

- ASPHALT PAVEMENT
- SHOULDER PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH FLOWLINE

FES-143-1
STA. 143+64.31, 39.66' LT.
CONST. 15" FES

FES-143-2
STA. 143+94.57, 39.66' LT.
CONST. 15" FES

FES-147-1
STA. 147+09.82, 40.63' LT.
CONST. 15" FES

FES-147-2
STA. 147+47.97, 39.51' LT.
CONST. 15" FES

PARCEL 23
CHILDRESS ROYALTY COMPANY

PROPOSED PERMANENT DRAINAGE EASEMENT

AMERICAN TELEPHONE EASEMENT

GRADING LIMITS

DITCH FLOW LINE

EXISTING RIGHT-OF-WAY

PARCEL 24
DUSTIN W. HOLT

DRIVEWAY STA 143+80 LT

DRIVEWAY STA 147+30 LT

℄ DRIVEWAY STA 143-80 LT

℄ DRIVEWAY STA 147-30 LT

ZORA ST – EAST STA:143+88.58
DRIVEWAY STA 143+90 RT STA: 50+00

ZORA ST – EAST STA:147+28.81
DRIVEWAY STA 147+30 LT STA: 50+00

ZORA ST - EAST

℄ ZORA STREET

PI: 147+11.08

ZORA ST – EAST STA:143+79.73
DRIVEWAY STA 143+80 LT STA: 50+00

DRIVEWAY STA 143+90 RT

℄ DRIVEWAY STA 143-90 RT

PROPOSED RIGHT-OF-WAY

GRADING LIMITS

INSTALL NEW BARBWIRE FENCE
(SIMILAR IN MATERIAL TO EXISTING FENCE)

DITCH FLOW LINE

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

FES-144-1
STA. 143+62.52, 29.82' RT.
CONST. 15" FES

FES-144-2
STA. 144+14.77, 29.39' RT.
CONST. 15" FES

PARCEL 18
ACME LAND COMPANY

MATCHLINE SEE SHEET 41

SCALE IN FEET 0' 10' 20' 40'

ZORA ST - EAST (143+00 - 148+50)

VPI STA: 142+50
VPI EL= 1060.54
K= 63.62
LVC= 275.00

VPT STA: 143+87.50
VPT EL= 1060.90

VPI STA: 148+25
VPI EL= 1062.04
K= 79.73
LVC= 200.00

VPC STA: 147+25
VPC EL= 1061.78

EXISTING GRADE

PROPOSED GROUND

0.26%

RIGHT DITCH PROFILE

RIGHT DITCH PROFILE

EXISTING GRADE ELEV. (TYP.)

PROPOSED GRADE ELEV. (TYP.)

143+00	144+00	145+00	146+00	147+00	148+00	148+50
1058.8 / 1060.07	1059.4 / 1060.43	1058.8 / 1060.69	1060.1 / 1060.85	1060.0 / 1060.93	1059.8 / 1061.00	1059.7 / 1061.06
1059.6 / 1061.13	1059.6 / 1061.19	1059.7 / 1061.26	1059.7 / 1061.32	1059.6 / 1061.39	1059.7 / 1061.45	1059.9 / 1061.52
1060.1 / 1061.58	1060.2 / 1061.65	1060.4 / 1061.71	1060.6 / 1061.78	1060.7 / 1061.88	1060.8 / 1062.07	1061.0 / 1062.33
1061.3 / 1062.67	1061.7 / 1063.09					

SCALE IN FEET 0' 10' 20' 40'

8' 4' 2' 0'

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

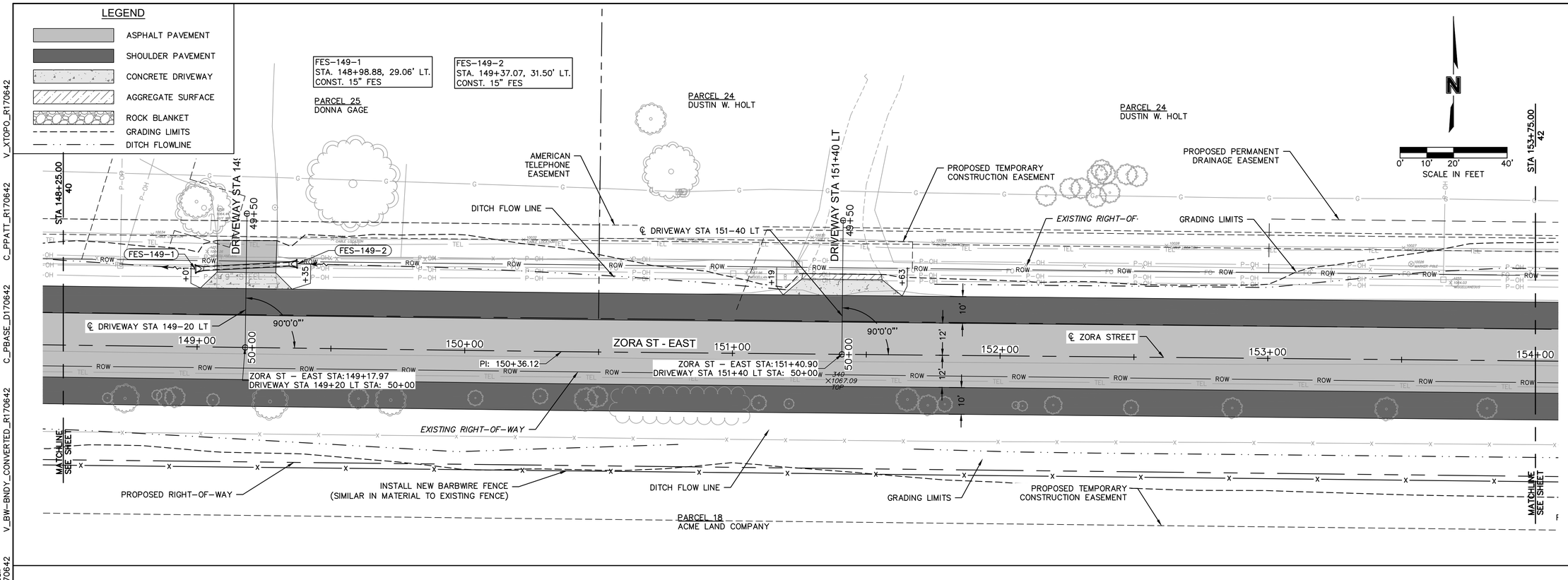
ROADWAY PLAN & PROFILE

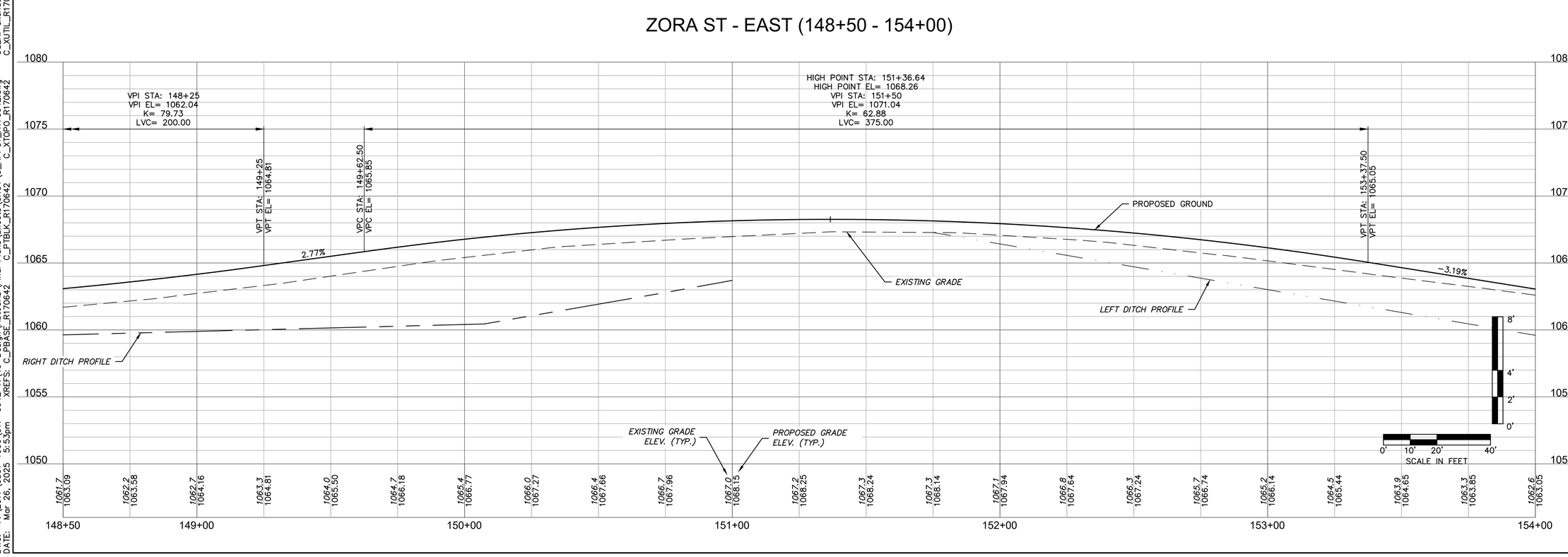
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_RPP01_R170642
date: 3/28/2025





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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

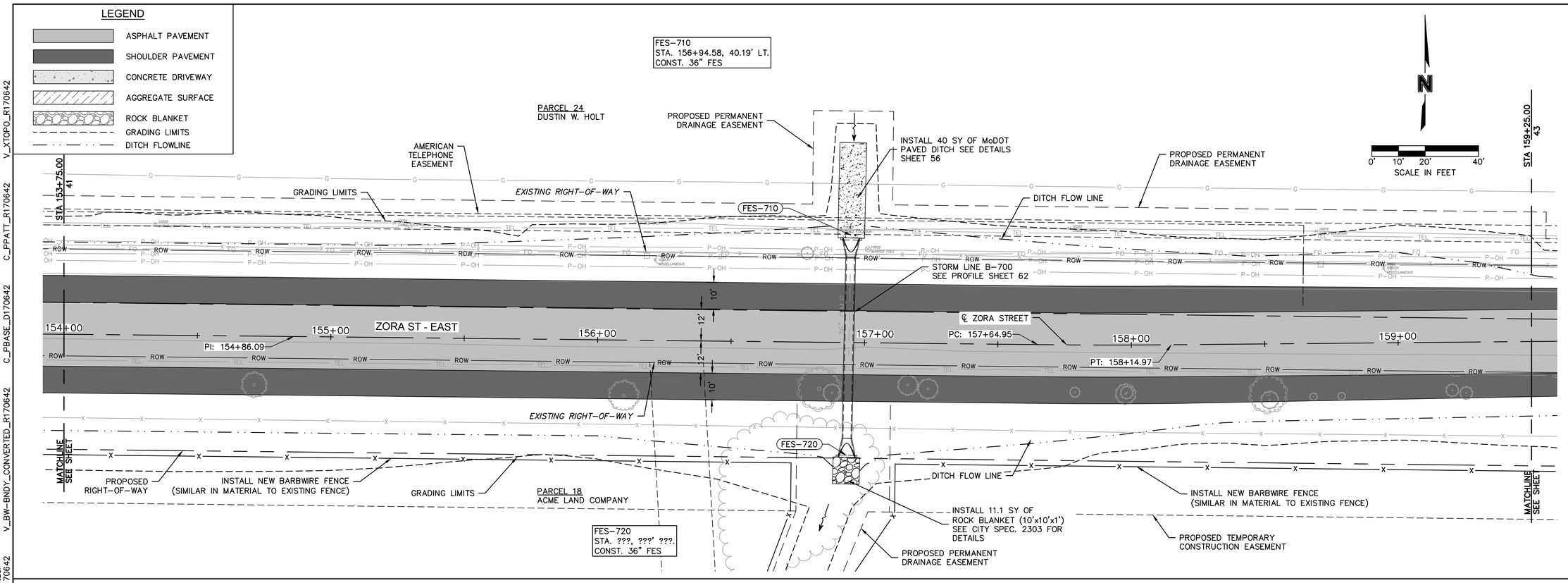
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JOPLIN, MISSOURI

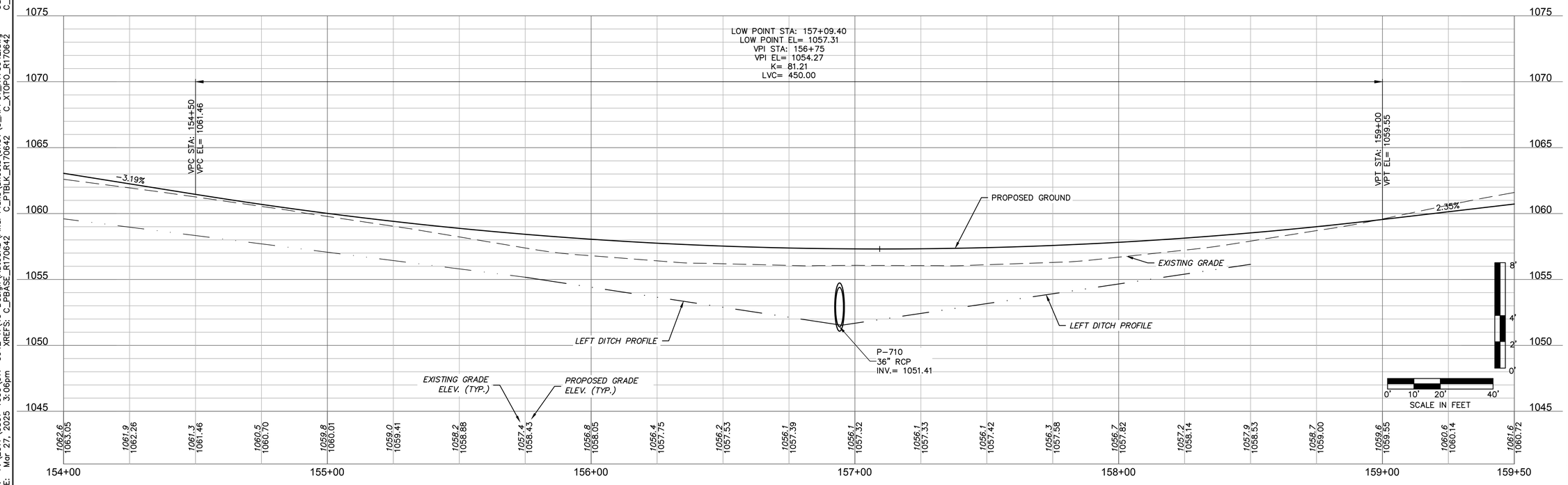
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approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_RPP01_R170642
date: 3/28/2025

SHEET
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C_XUTIL_R170642 V_BW-BNDY_CONVERTED_R170642 C_PBASE_D170642 C_PPATT_R170642 V_XTOPO_R170642



ZORA ST - EAST (154+00 - 159+50)



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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_RPP01_R170642
date:	3/28/2025

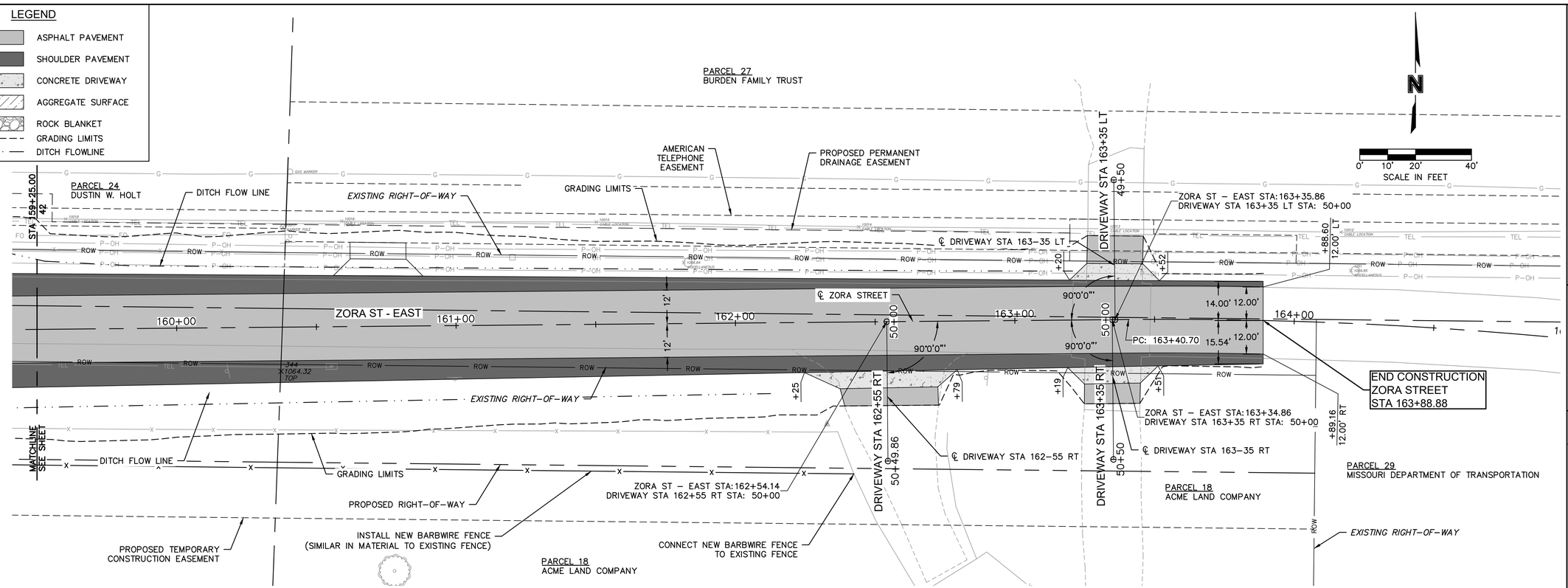
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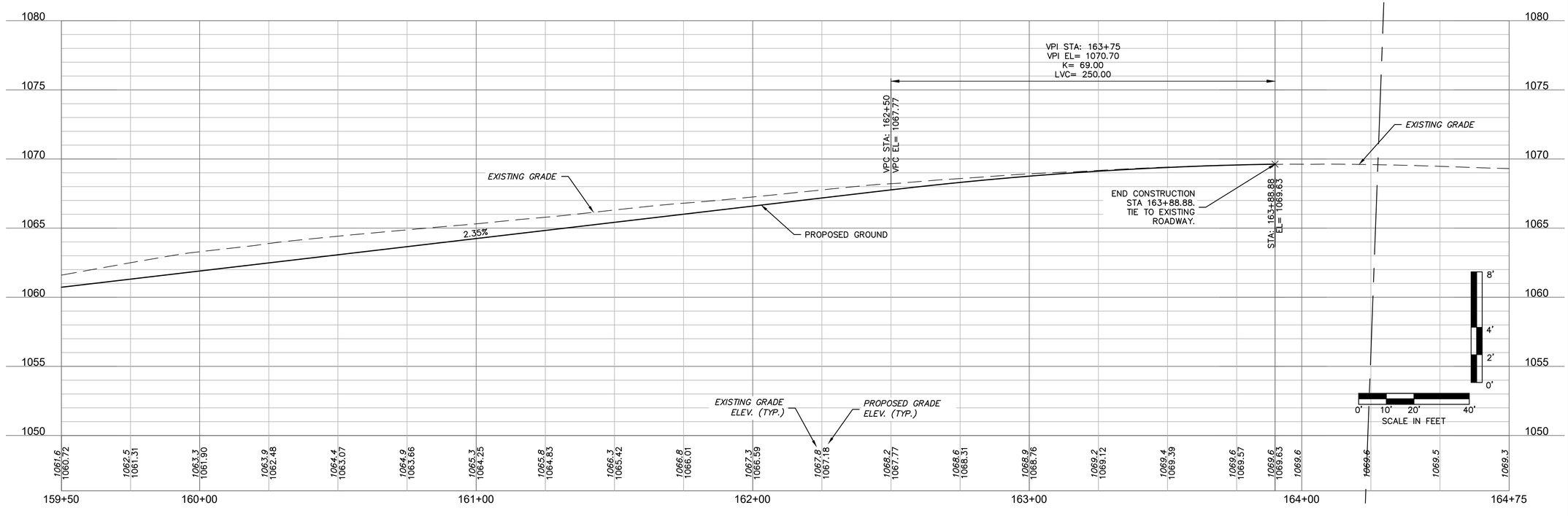
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USER: skendall C_XUTIL_R170642 V_BW-BNDY_CONVERTED_R170642 C_PBASE_D170642 C_PPATT_R170642 V_XTOPO_R170642

LEGEND

- ASPHALT PAVEMENT
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ZORA ST - EAST (159+50 - 163+88.88)



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ROADWAY PLAN & PROFILE

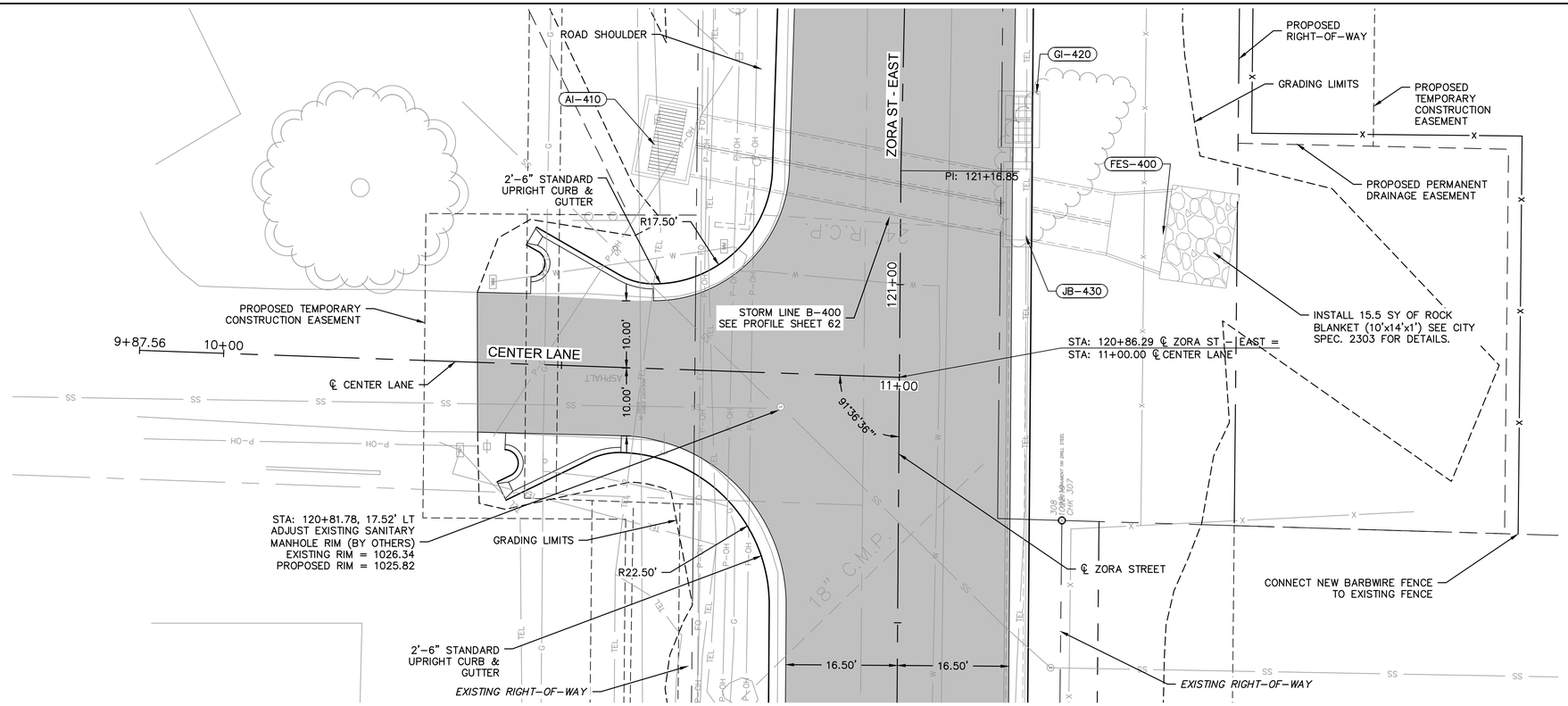
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

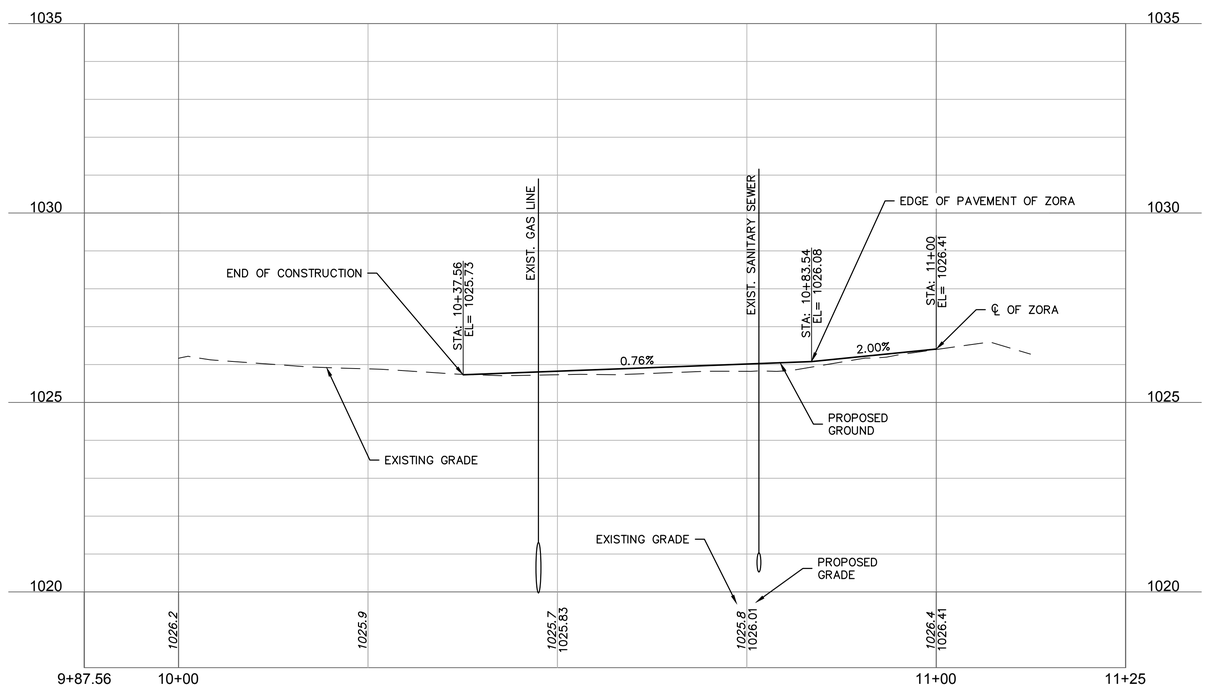
2025

drawn by:	SMK/CTK
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approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_RPP01_R170642
date:	3/28/2025

SHEET
43 of 120



CENTER LANE (9+87.56 - 11+25)



ACTUAL DEPTH OF UTILITIES SHOWN IS UNKNOWN. FIELD VERIFY DEPTH.

4' 2' 1' 0'

0' 5' 10' 20'
SCALE IN FEET

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ROADWAY PLAN & PROFILE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

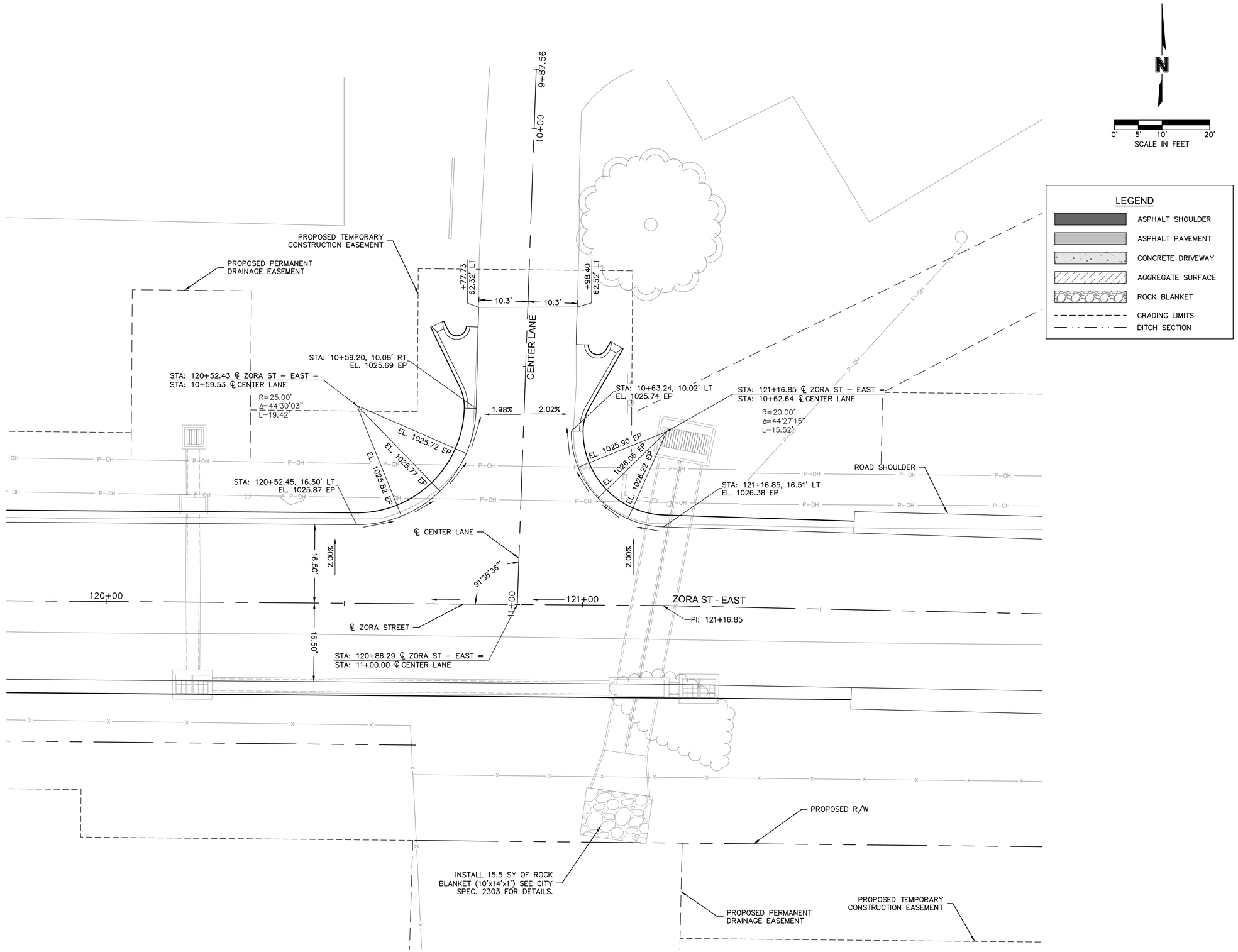
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JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_RPP02_R170642
date: 3/28/2025

SHEET
44 of 120

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REVISIONS

INTERSECTION LAYOUT

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

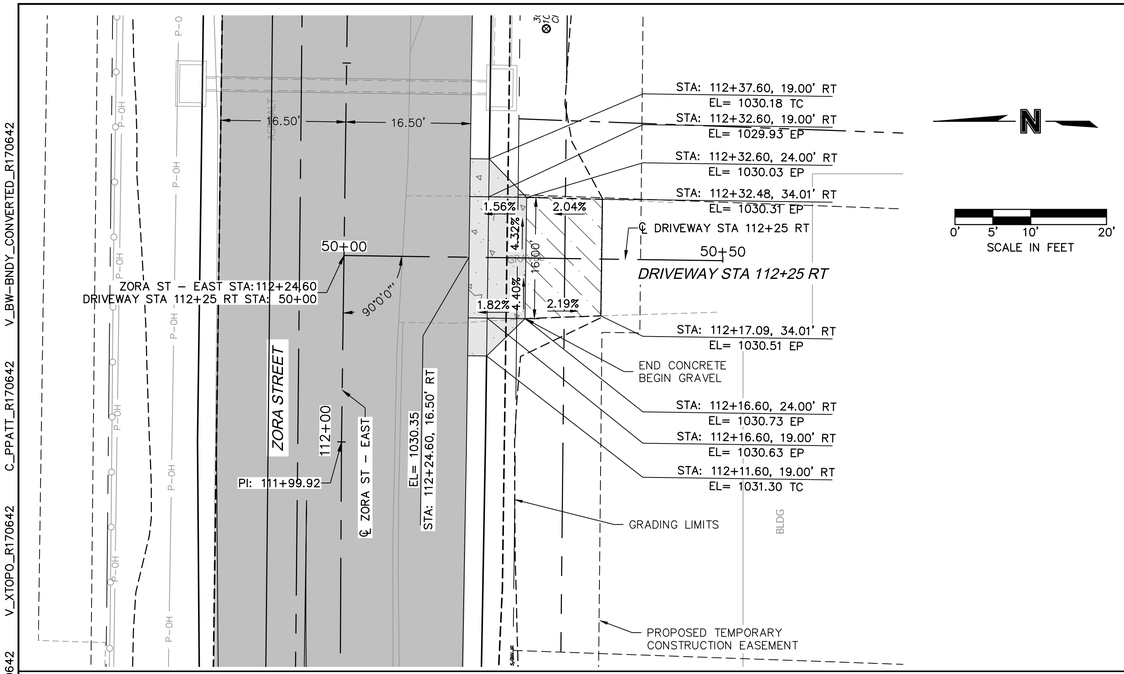
JOPLIN, MISSOURI

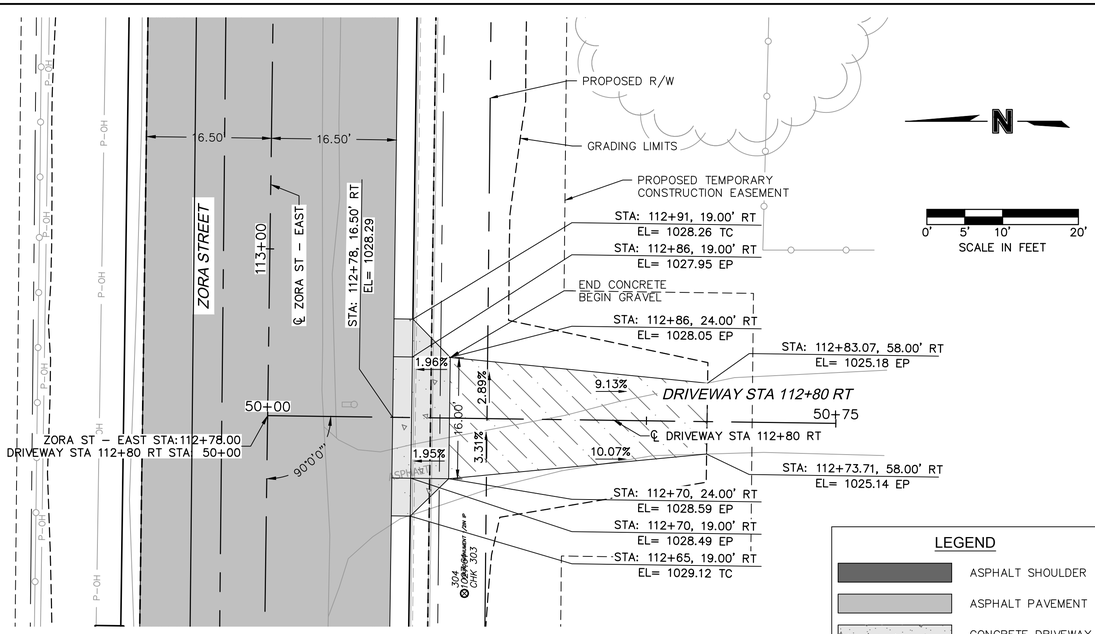
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drawn by:	SMK/CTK
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approved by:	JWP
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project no.:	017-0642-R
drawing no.:	C_INT01_R170642
date:	3/28/2025

SHEET
45 of 120

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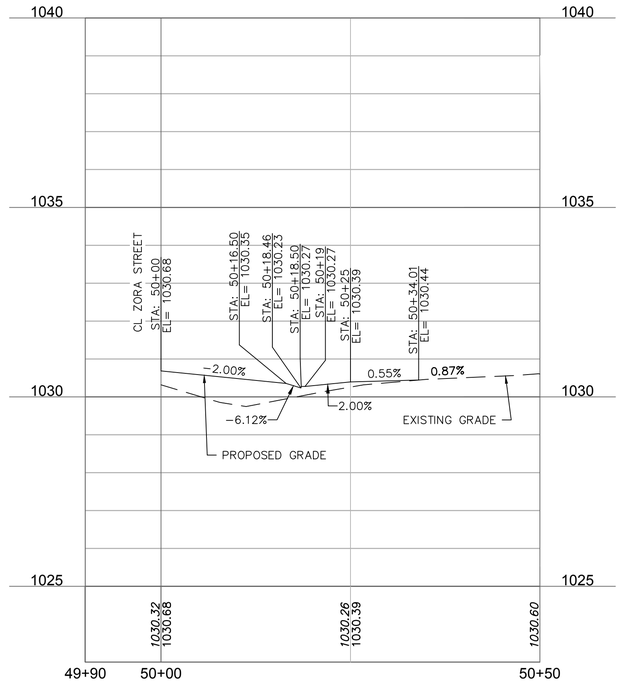


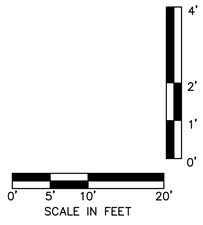


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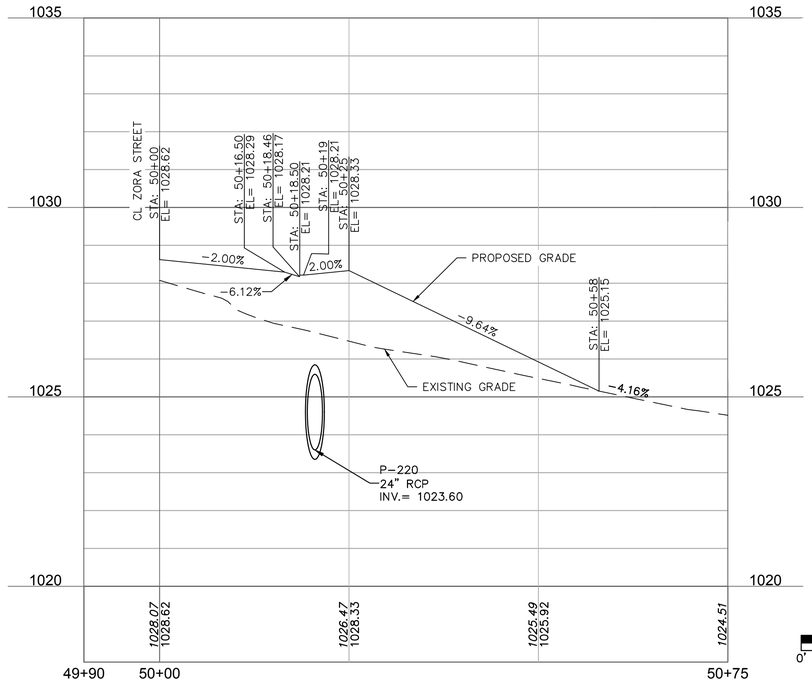
- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

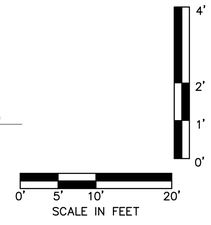
DRIVEWAY STA 112+25 RT (49+90 - 50+50)





DRIVEWAY STA 112+80 RT (49+90 - 50+75)





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2025
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DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

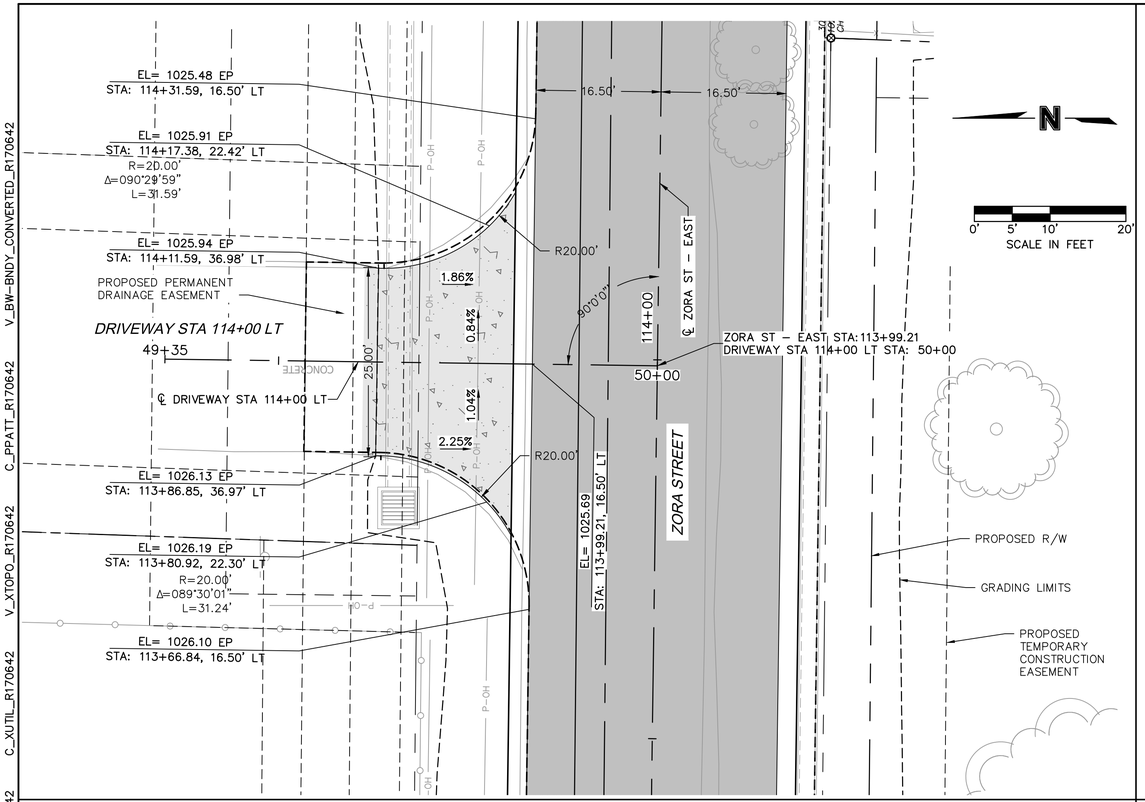
JOPLIN, MISSOURI

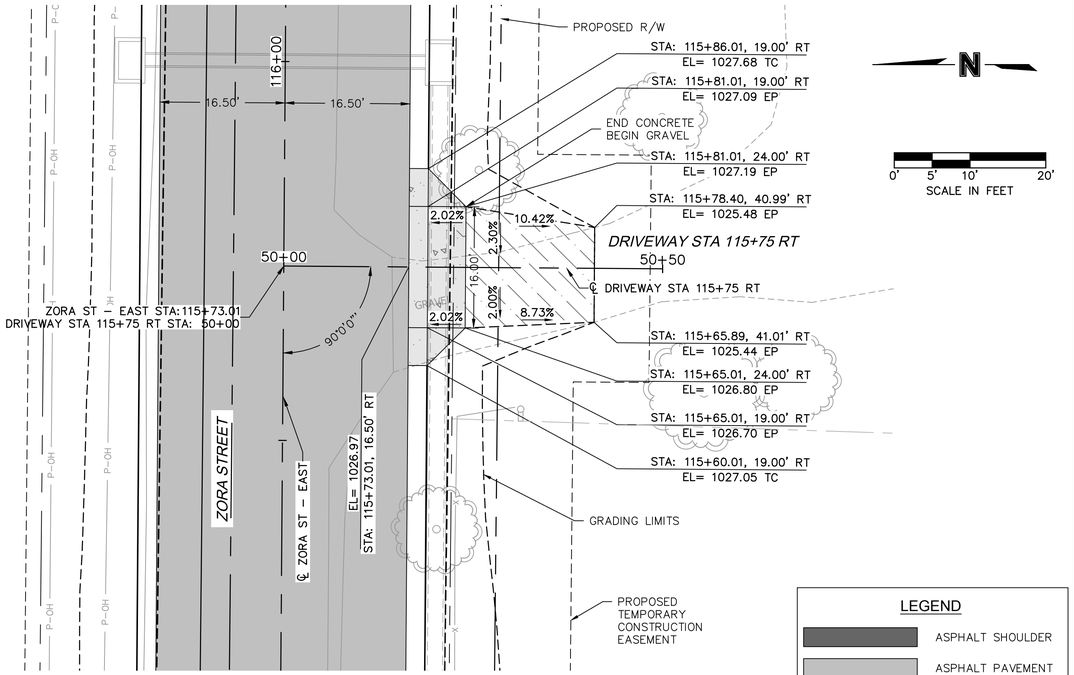
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

SHEET
46 of 120

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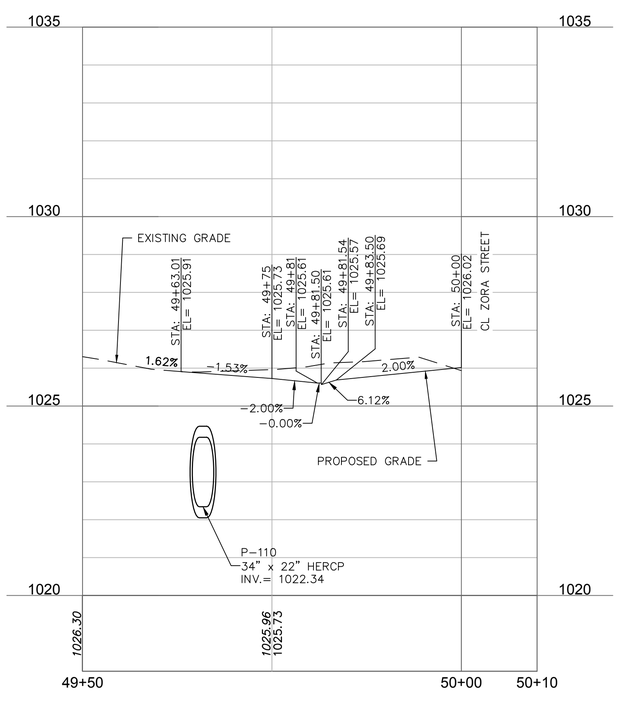


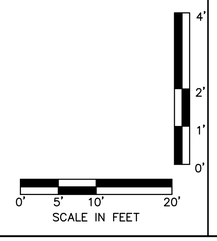


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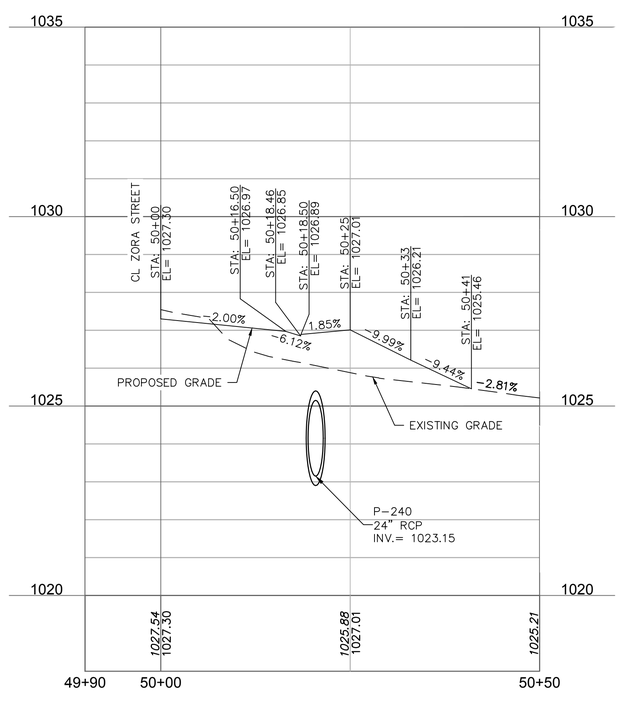
- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
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- DITCH SECTION

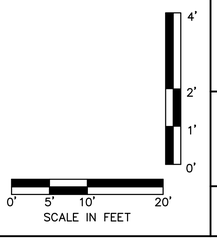
DRIVEWAY STA 114+00 LT (49+50 - 50+10)





DRIVEWAY STA 115+75 RT (49+90 - 50+50)





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2025
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MO# PE-2017019023

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REVISIONS

DRIVEWAY LAYOUT SHEETS

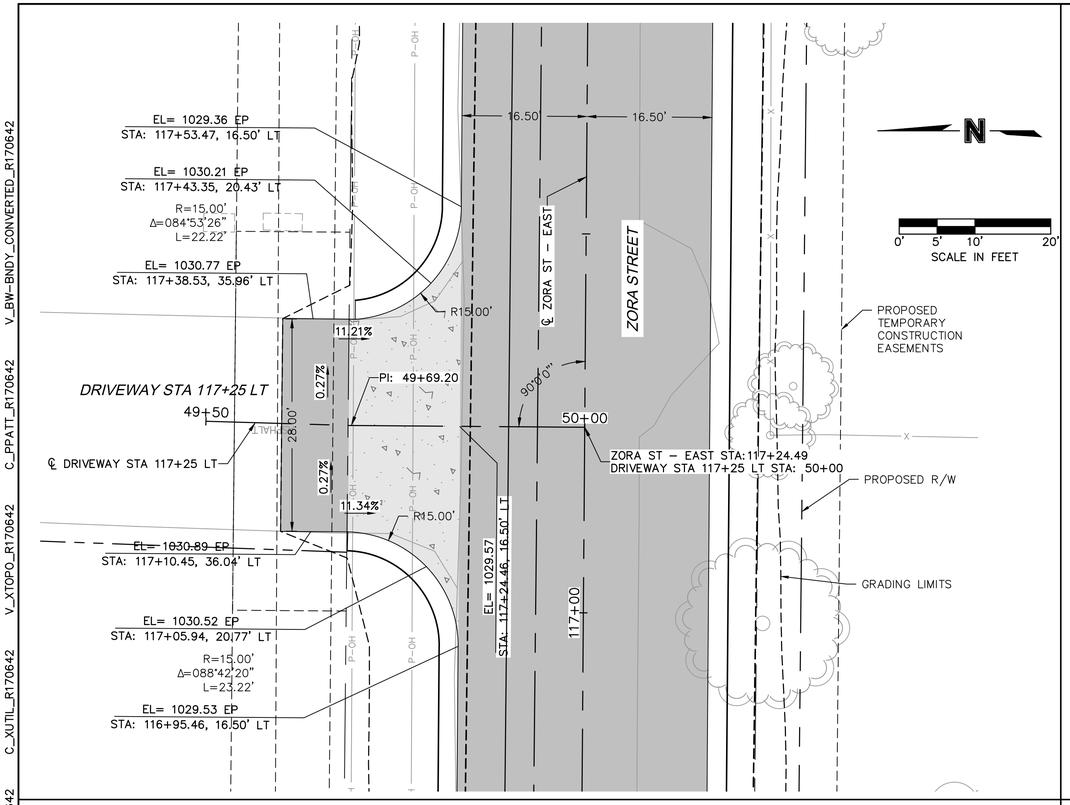
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

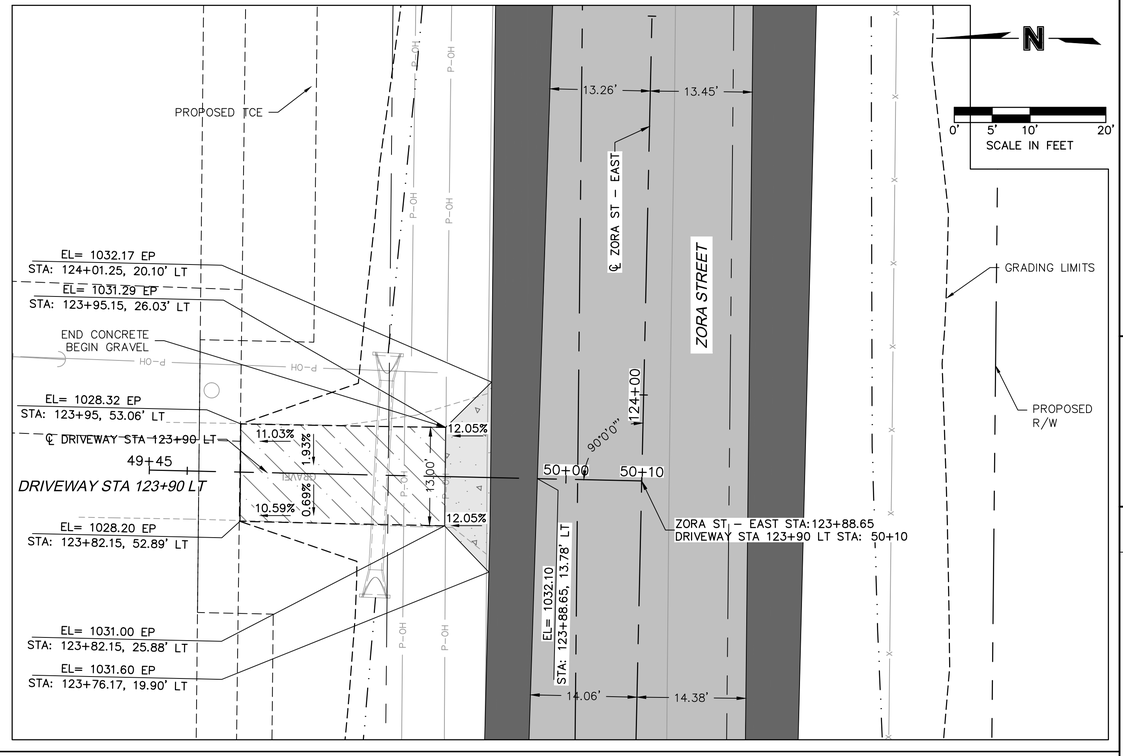
JOPLIN, MISSOURI

2025

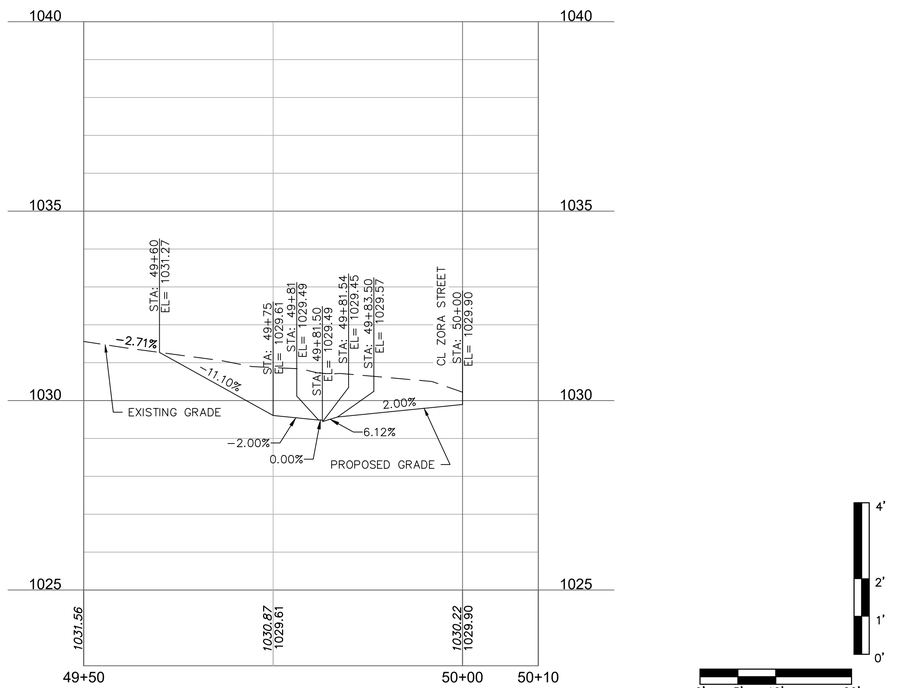
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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

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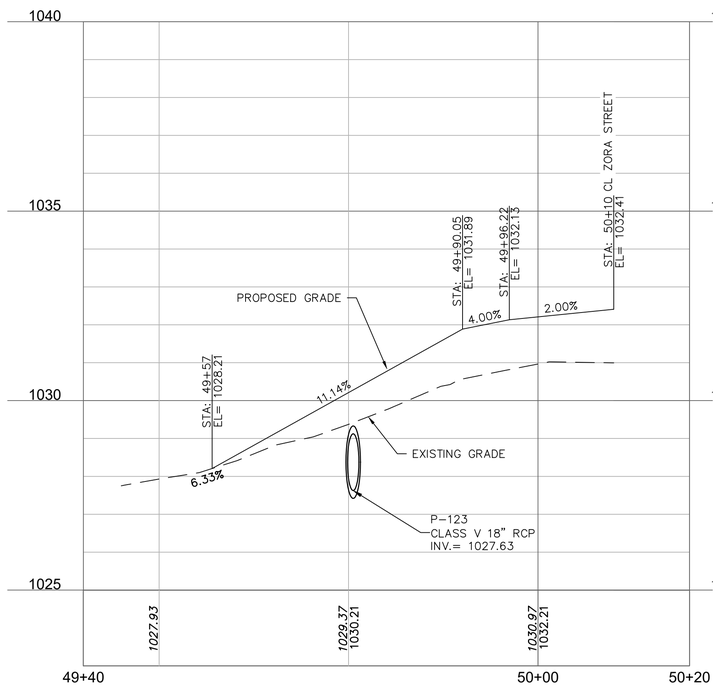


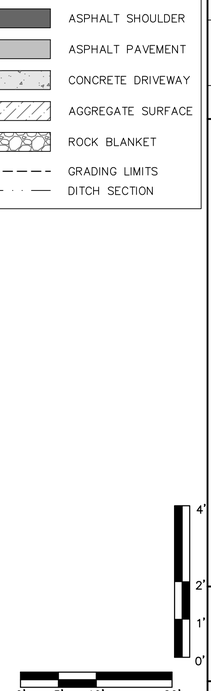


DRIVEWAY STA 117+25 LT (49+50 - 50+10)



DRIVEWAY STA 123+90 LT (49+40 - 50+20)





LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

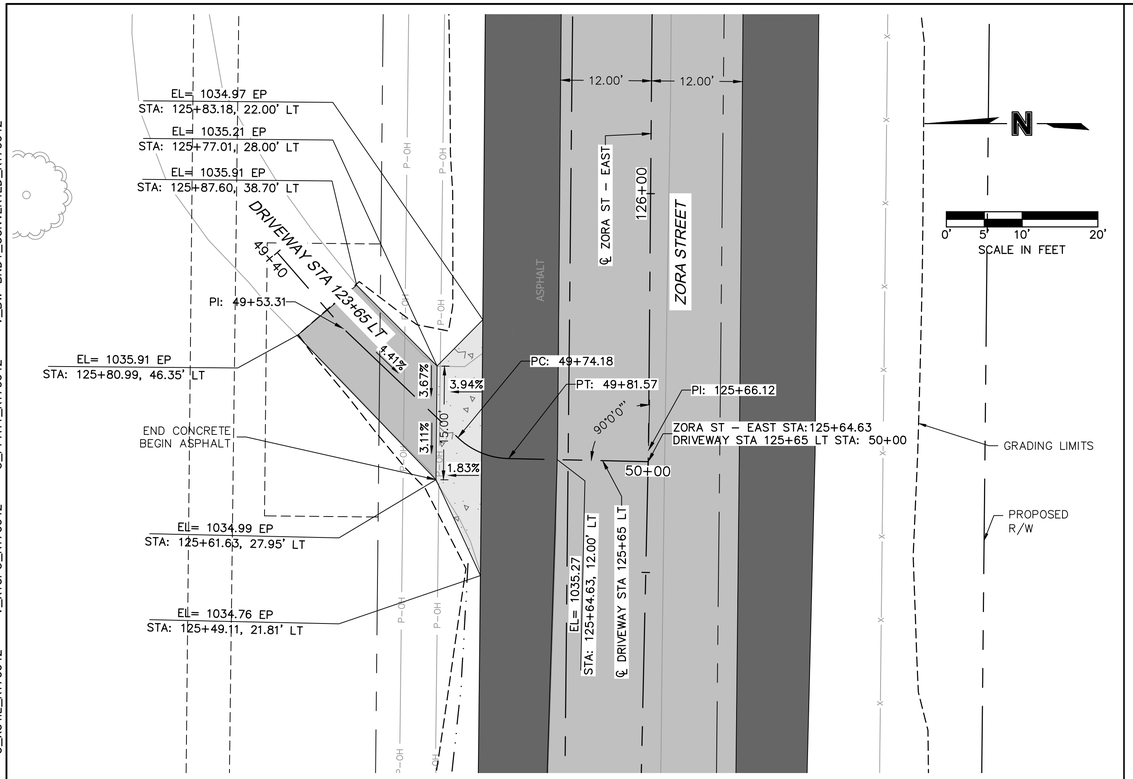
JOPLIN, MISSOURI

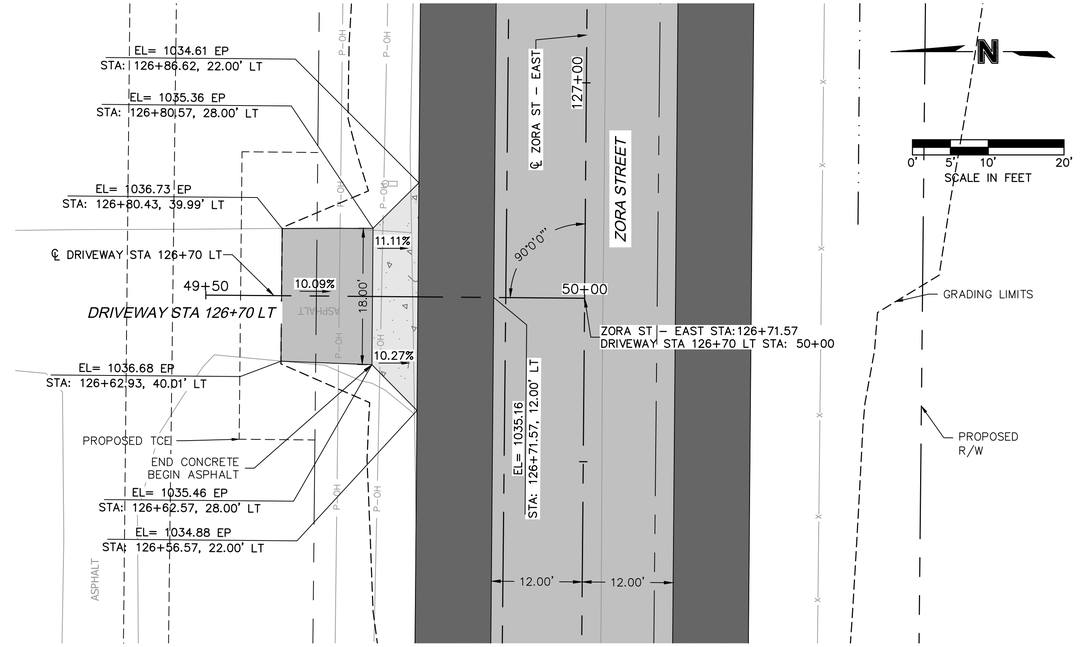
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

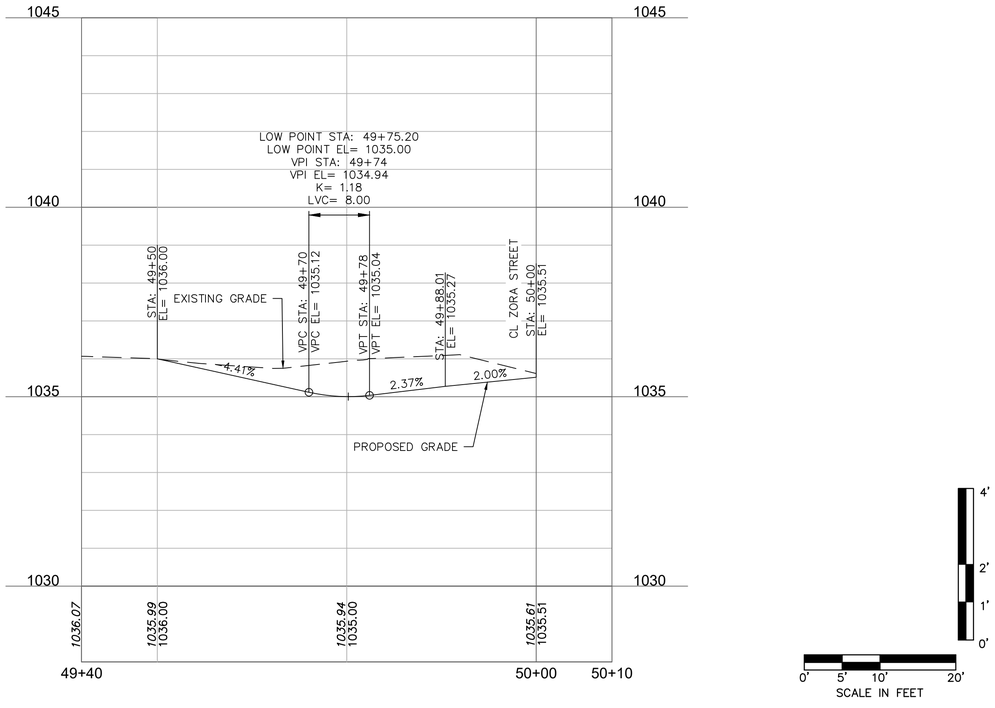
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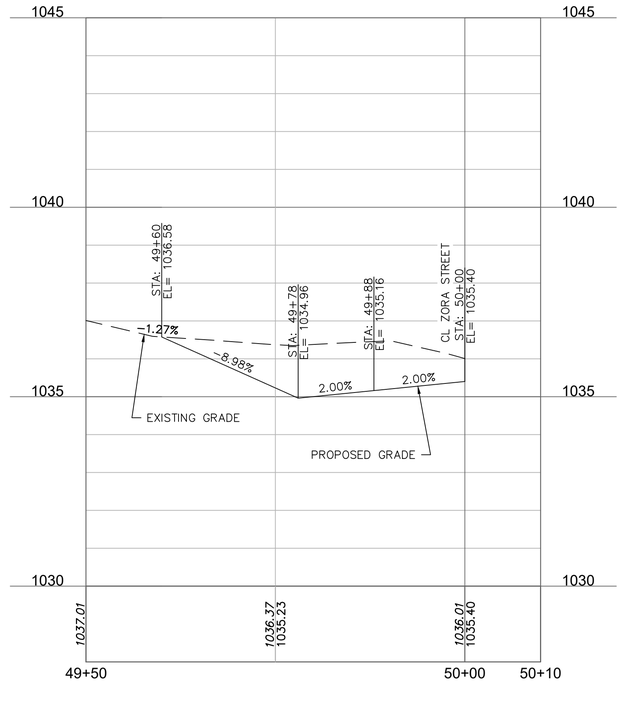


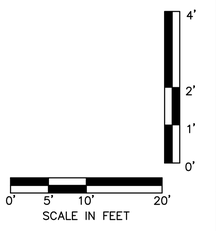


DRIVEWAY STA 125+65 LT (49+40 - 50+10)



DRIVEWAY STA 126+70 LT (49+50 - 50+10)





LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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PROFESSIONAL ENGINEER
12/31/2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

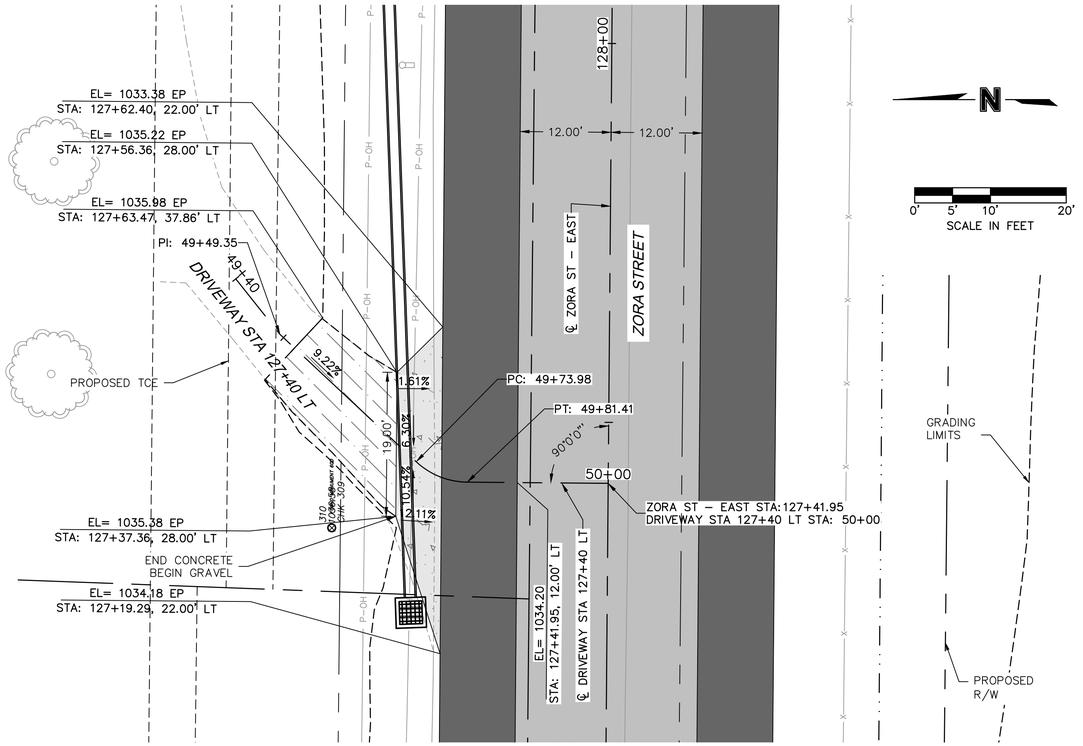
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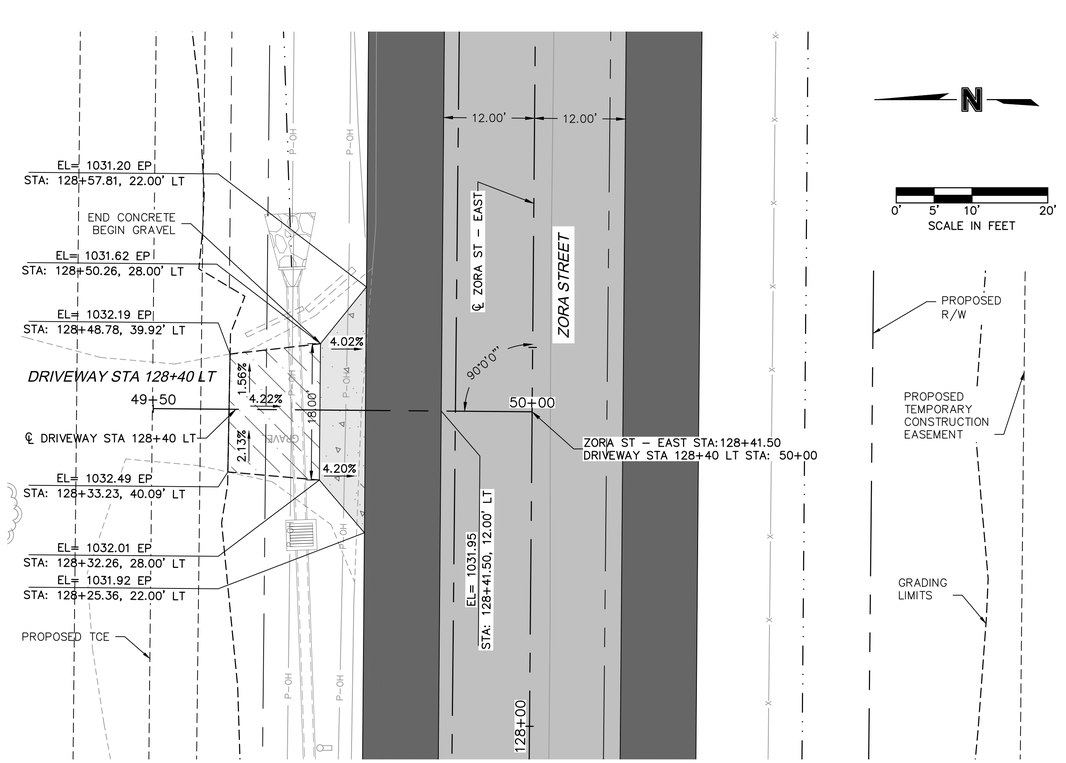
JOPLIN, MISSOURI

drawn by:	SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_DRV01_R170642
date:	3/28/2025

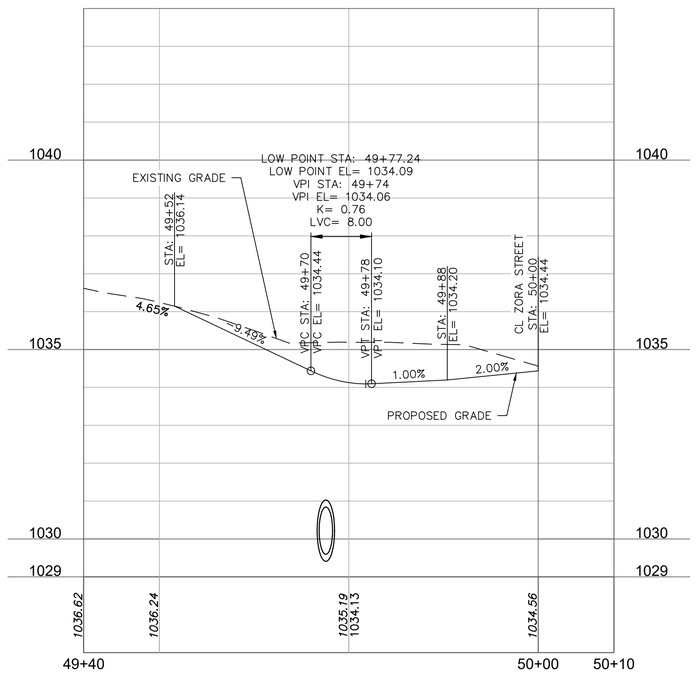
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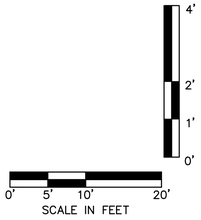
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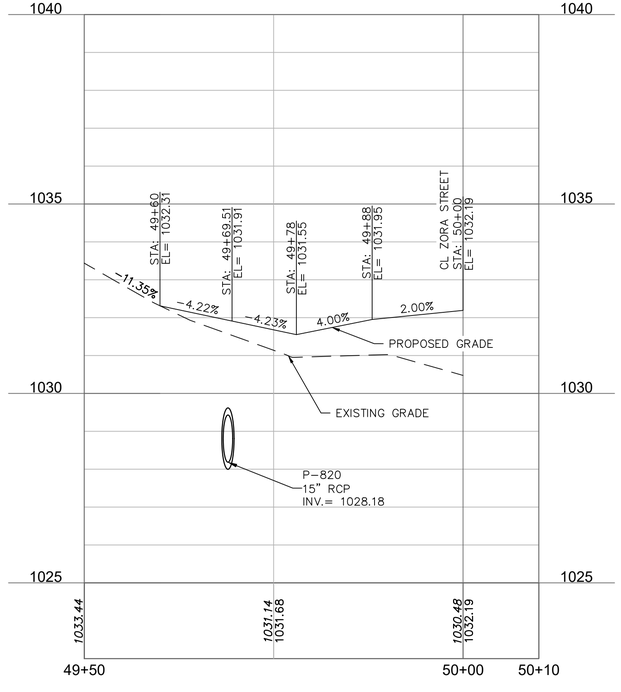


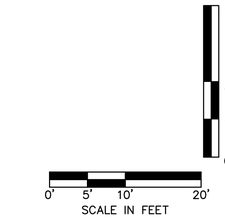
DRIVEWAY STA 127+40 LT (49+40 - 50+10)





DRIVEWAY STA 128+40 LT (49+50 - 50+10)





LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

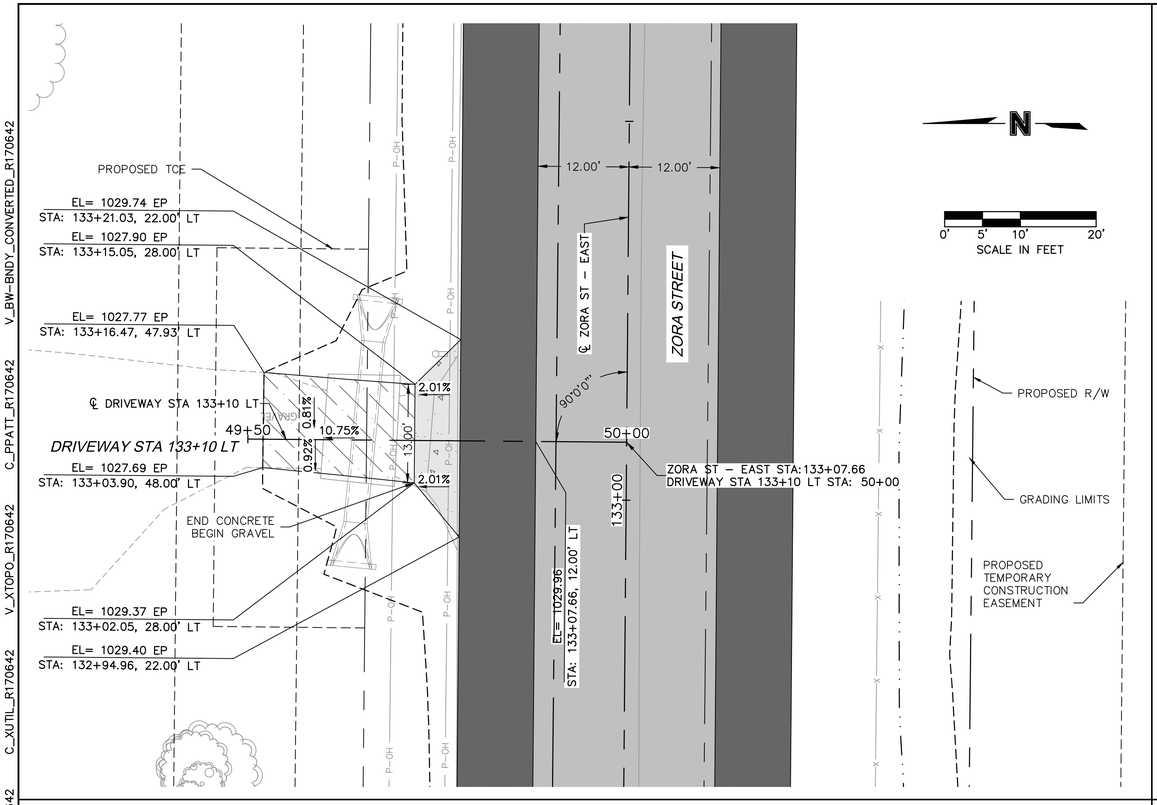
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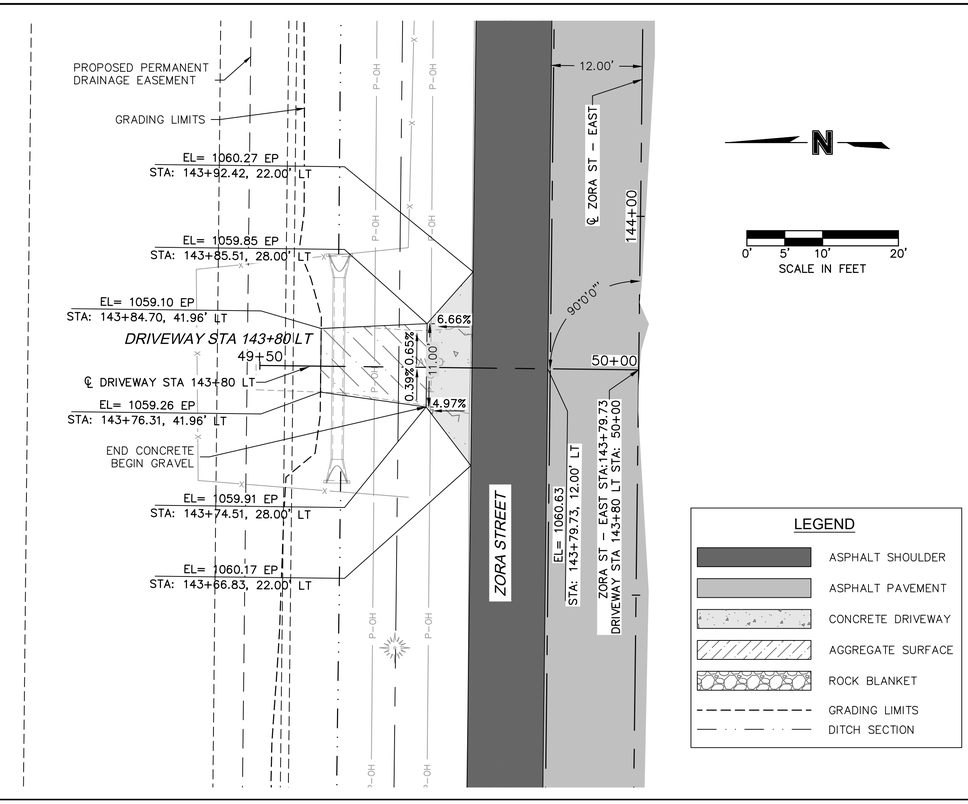
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drawn by:	SMK/CTK
checked by:	CAD
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QA/QC by:	ENG
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drawing no.:	C_DRV01_R170642
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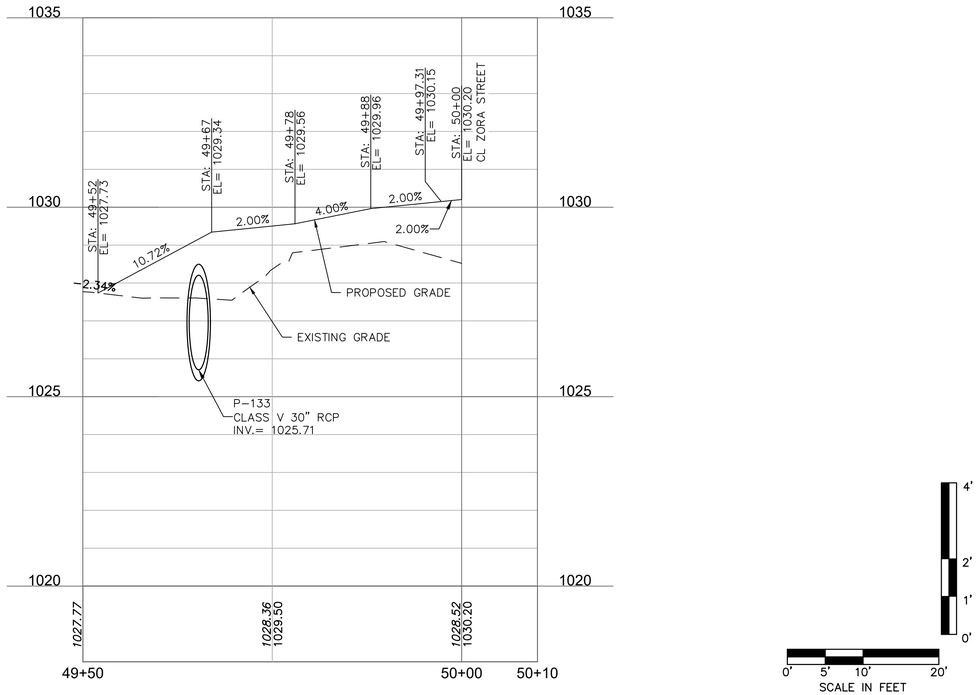
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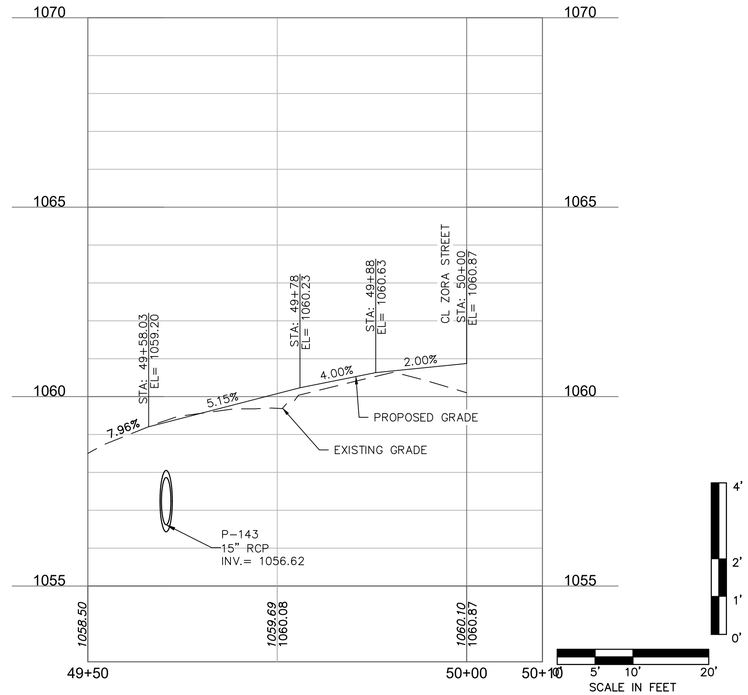




DRIVEWAY STA 133+10 LT (49+50 - 50+10)



DRIVEWAY STA 143+80 LT (49+50 - 50+10)



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

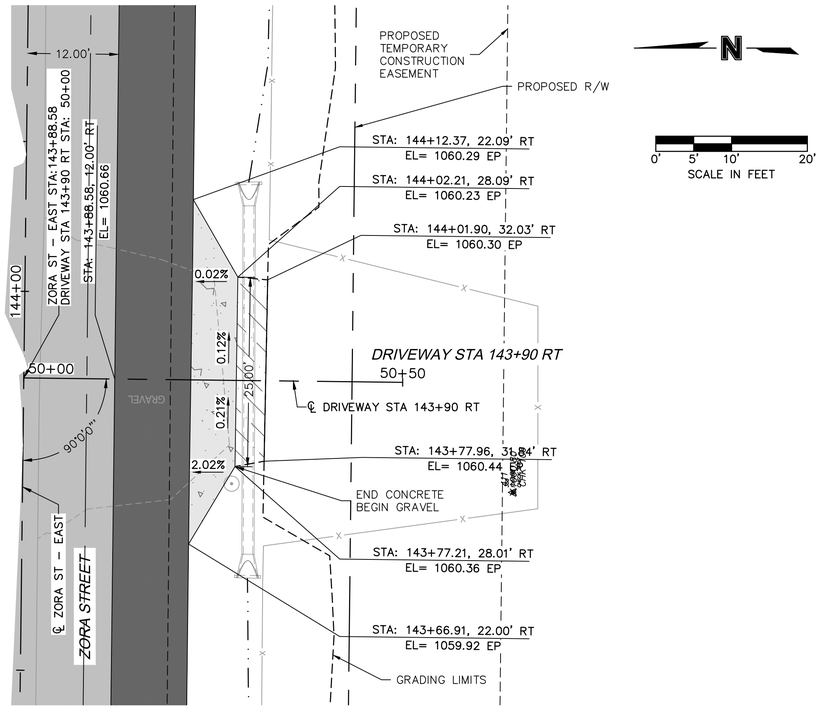
JOPLIN, MISSOURI

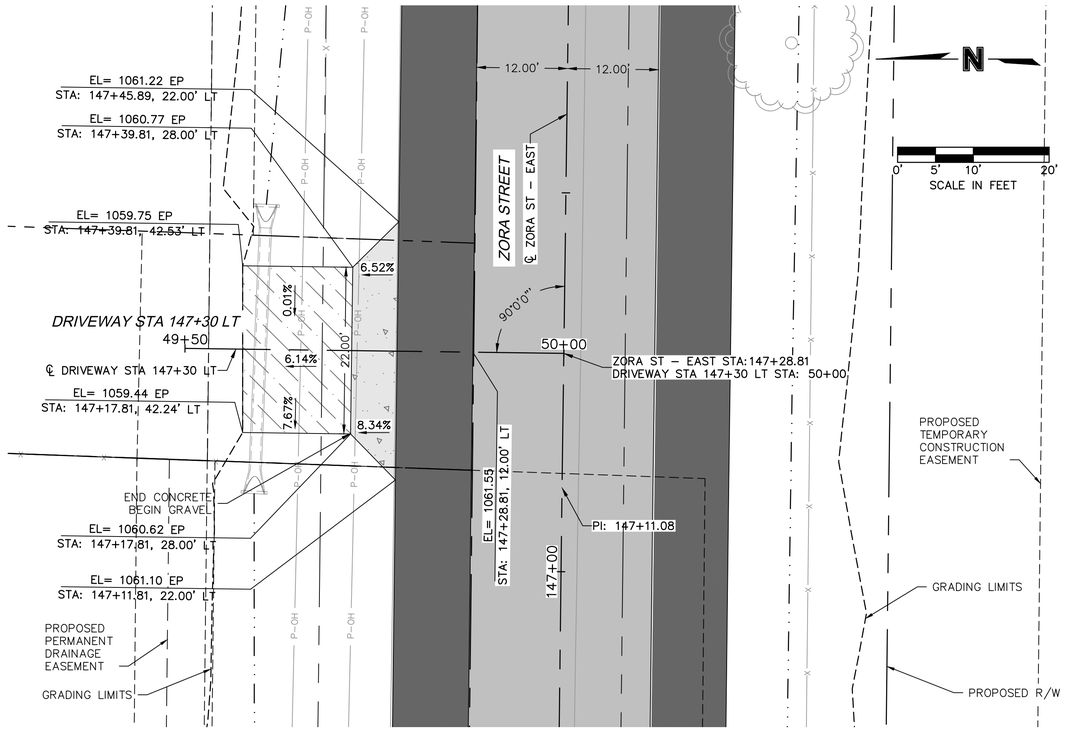
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drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
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drawing no.: C_DRV01_R170642
date: 3/28/2025

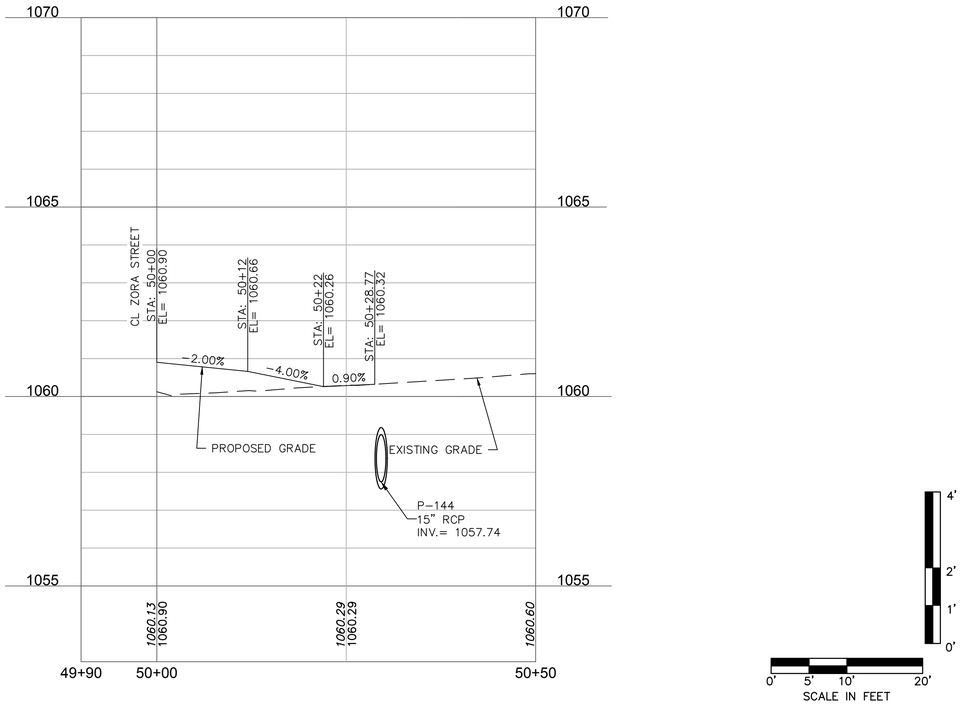
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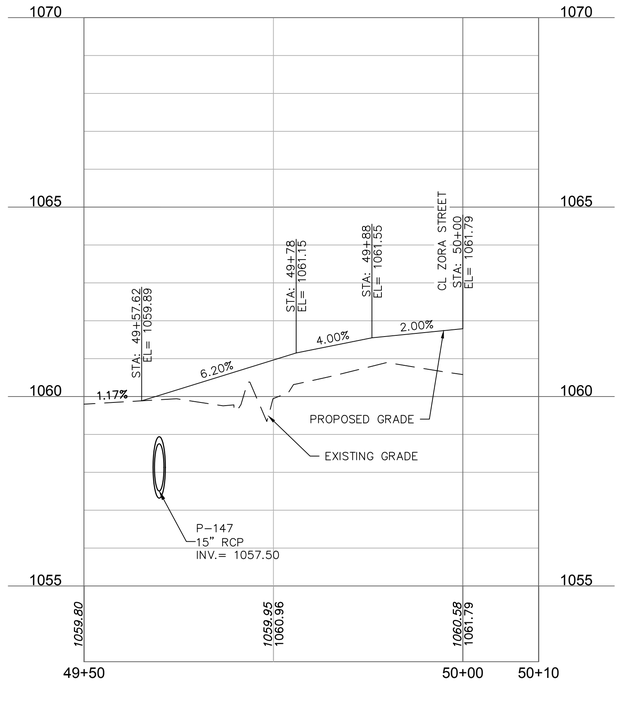




DRIVEWAY STA 143+90 RT (49+90 - 50+50)



DRIVEWAY STA 147+30 LT (49+50 - 50+10)



LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

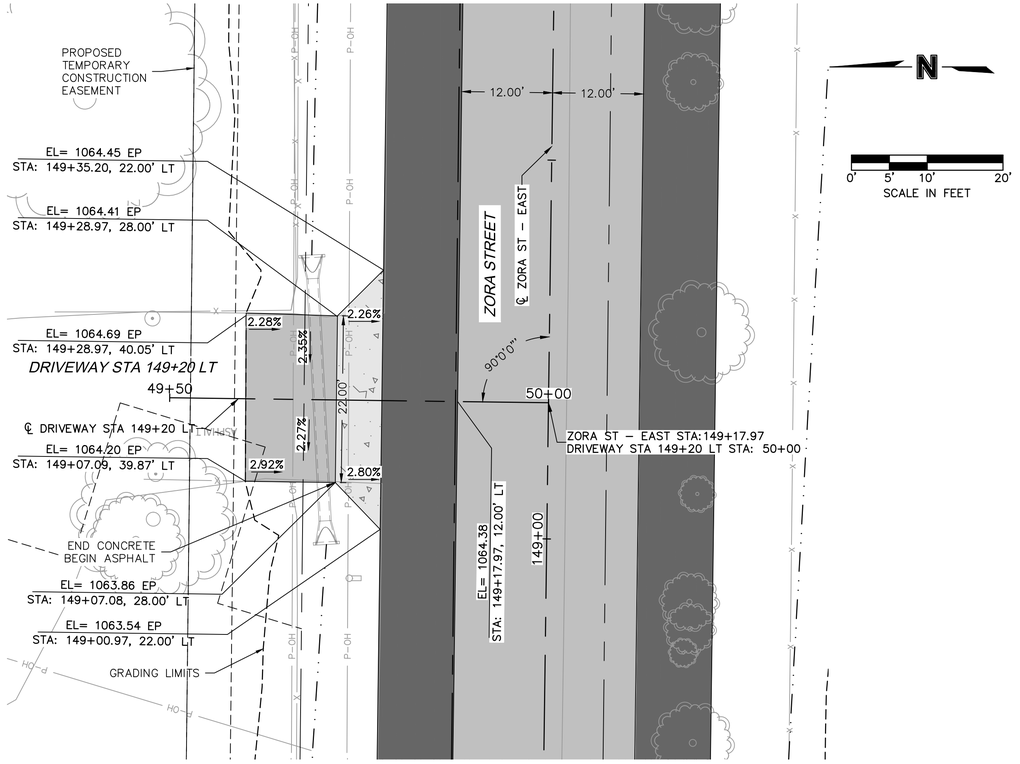
JOPLIN, MISSOURI

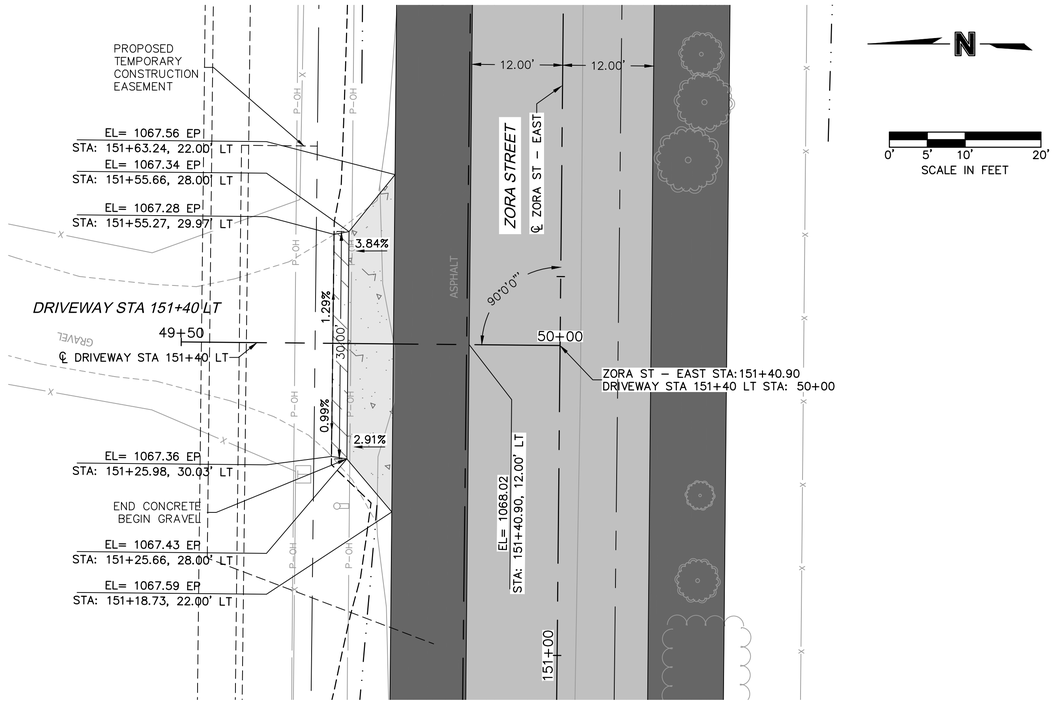
2025

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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

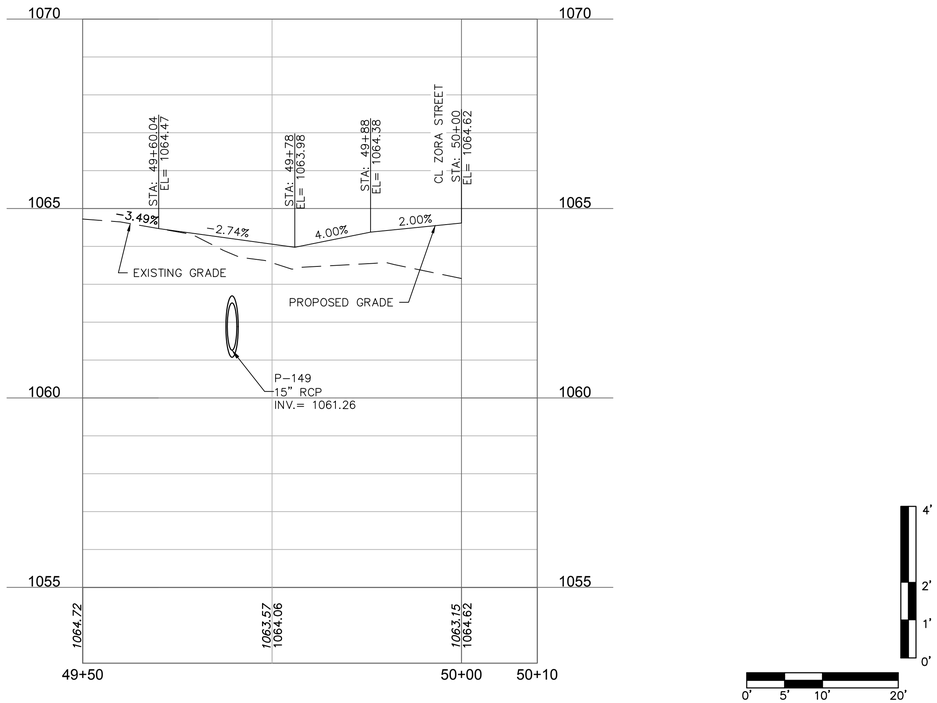
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52 of 120

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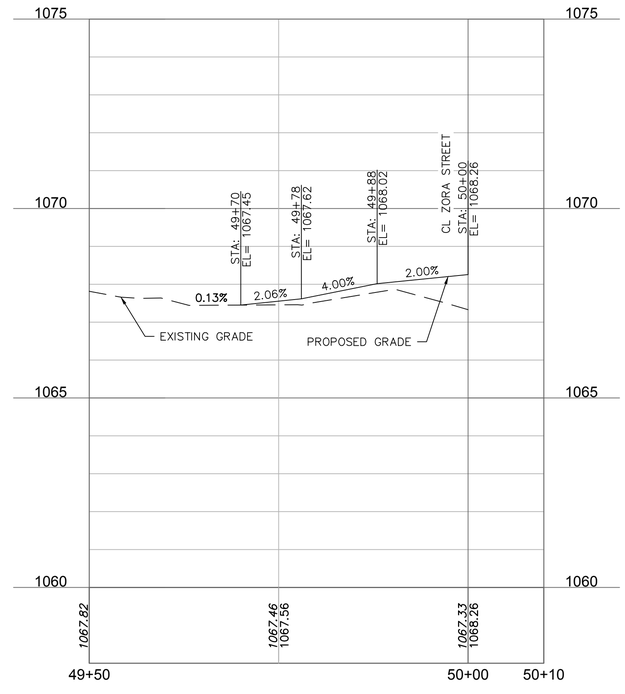




DRIVEWAY STA 149+20 LT (49+50 - 50+10)



DRIVEWAY STA 151+40 LT (49+50 - 50+10)



LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

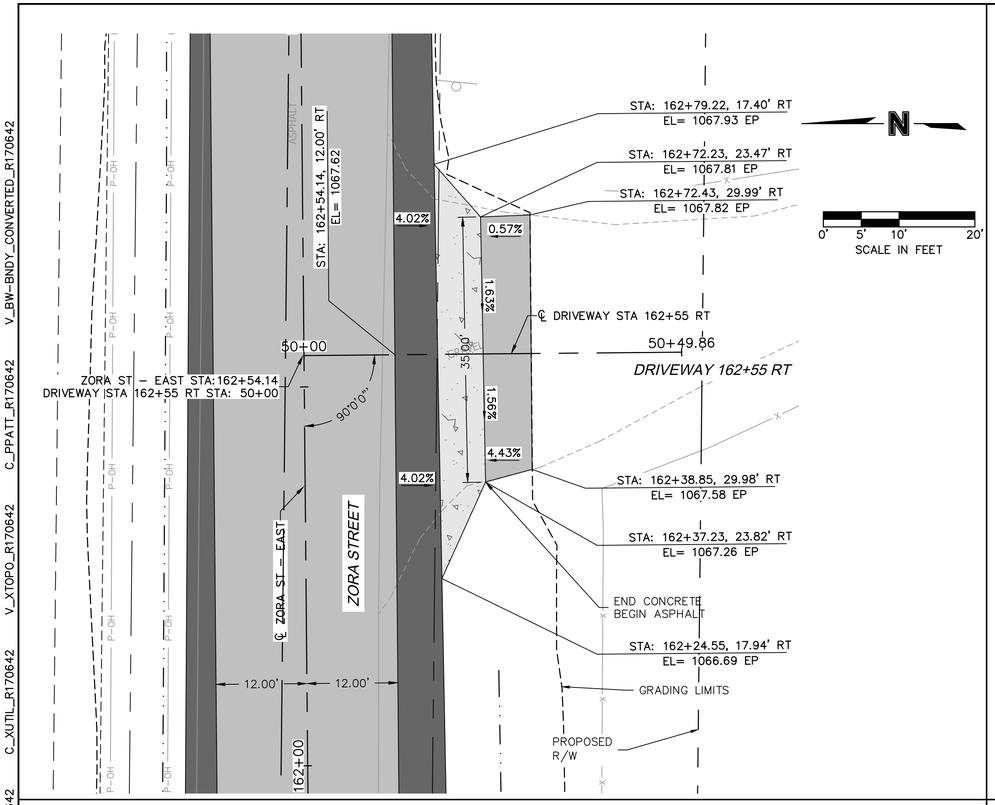
JOPLIN, MISSOURI

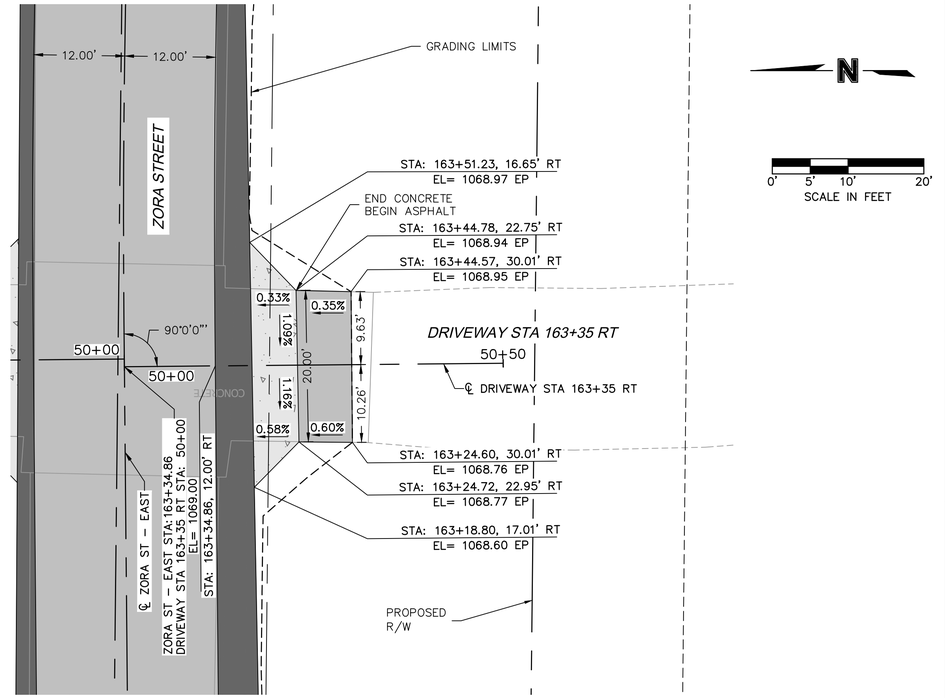
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drawn by: SMK/CTK
checked by: CAD
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QA/QC by: ENG
project no.: 017-0642-R
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date: 3/28/2025

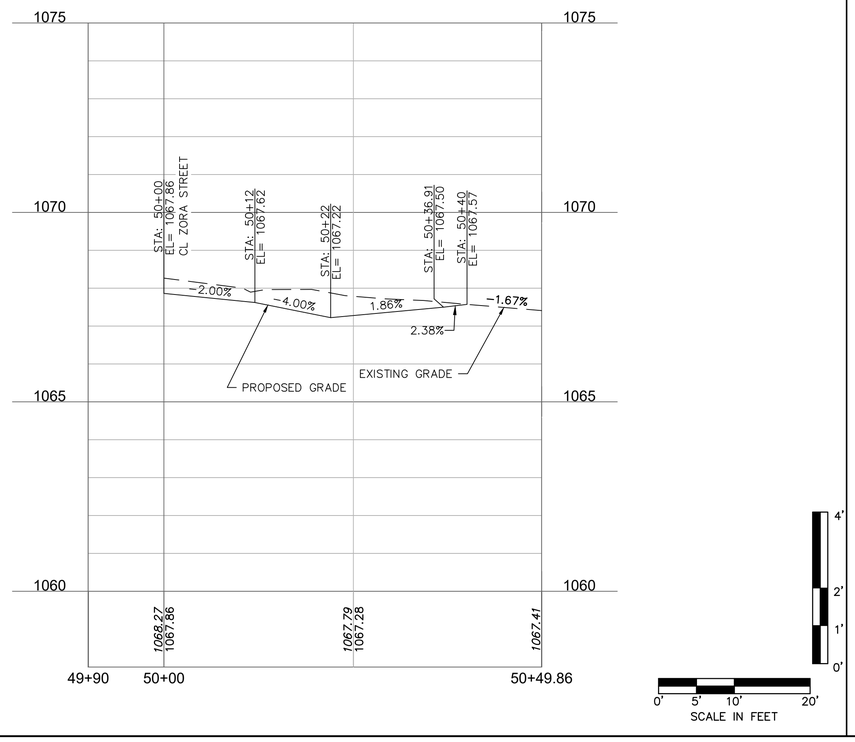
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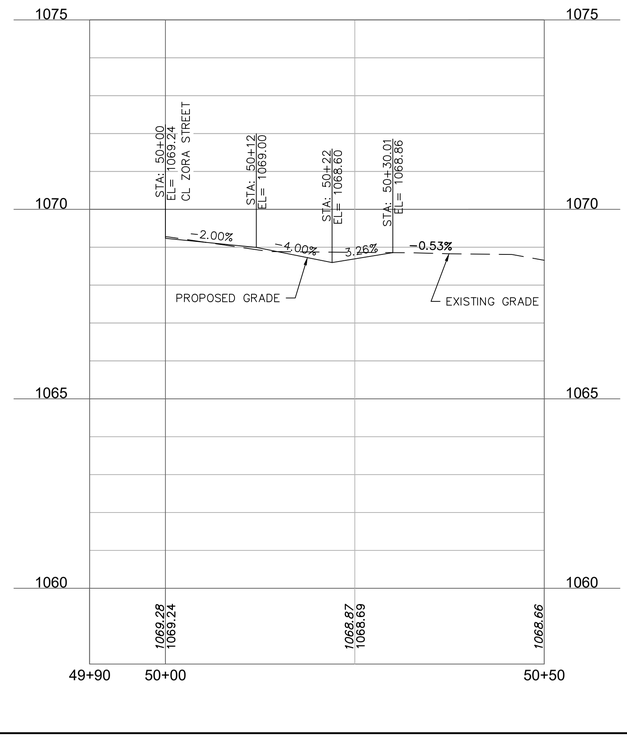




DRIVEWAY STA 162+55 RT (49+90 - 50+49.86)



DRIVEWAY STA 163+35 RT (49+90 - 50+50)



LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

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2025

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

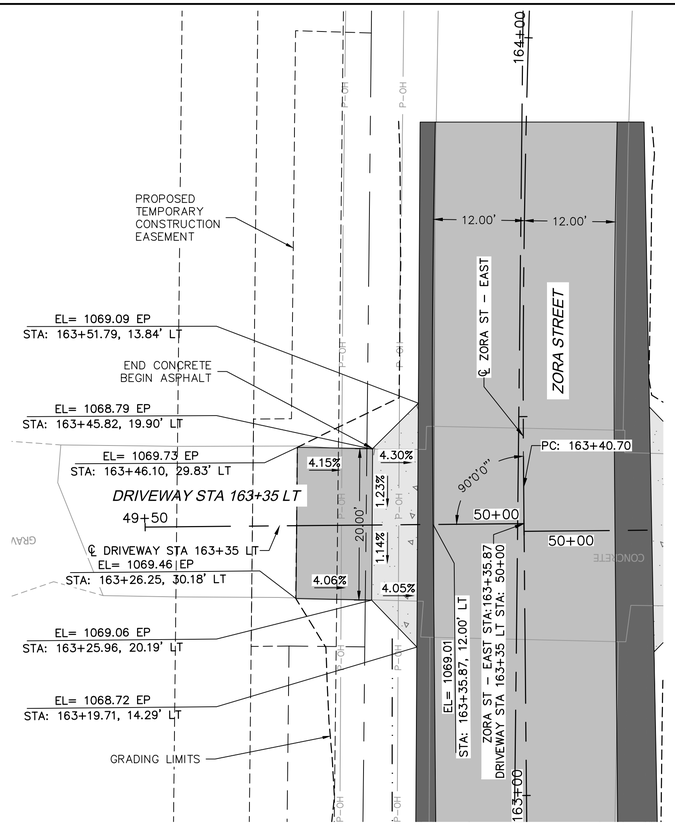
JOPLIN, MISSOURI

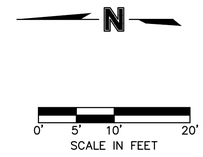
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

SHEET
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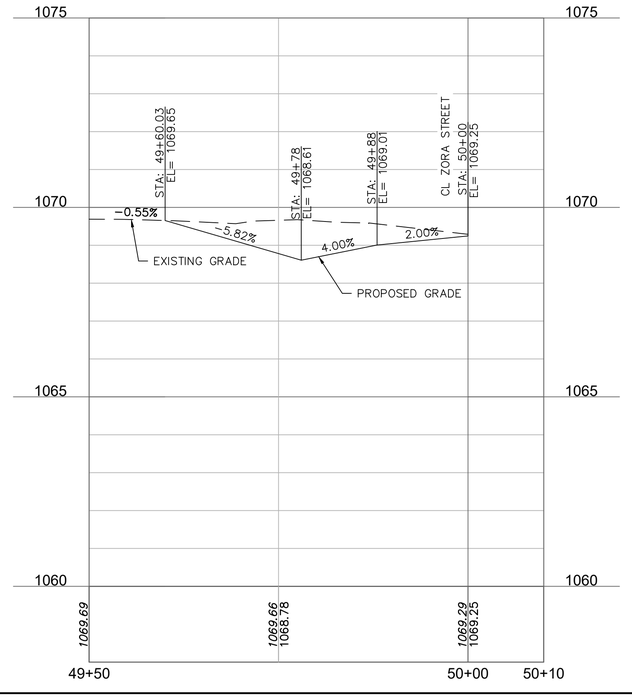


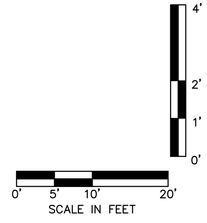


LEGEND

- ASPHALT SHOULDER
- ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- AGGREGATE SURFACE
- ROCK BLANKET
- GRADING LIMITS
- DITCH SECTION

DRIVEWAY STA 163+35 LT (49+50 - 50+10)





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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025

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

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DRIVEWAY LAYOUT SHEETS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

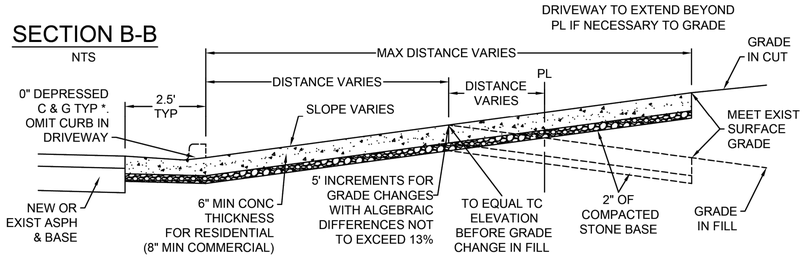
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DRV01_R170642
date: 3/28/2025

SHEET
55 of 120

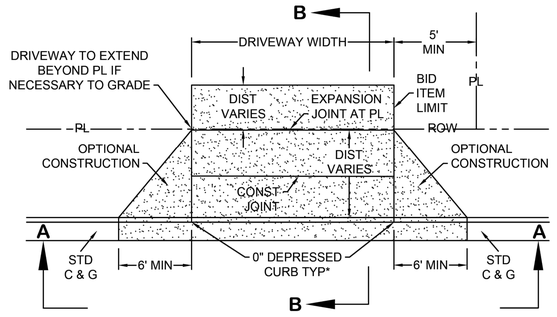
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DATE: Mar 26, 2025 6:00pm
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C_XUTIL_R170642 V_XTOPO_R170642 C_PPAIT_R170642 V_BW-BNDY_CONVERTED_R170642
USER: skendall
C_XTOPO_R170642

SECTION B-B
NTS

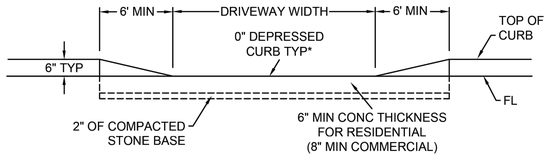


NOTES:
1. FIBER REINFORCEMENT REQUIRED.
2. ALL GUTTER CONST IN FRONT OF DRIVEWAY & ALL C & G IN DRIVEWAY TRANSITIONS SHALL BE INCLUDED IN THE BID PRICE OF THE DRIVEWAY.
3. BID PRICE FOR ALL DRIVEWAYS SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONSTRUCT DRIVEWAY.
4. * = 1.5" DEPRESSED CURB (CHAMFERED) ALLOWED WHEN NEEDED FOR DRAINAGE OR SIDEWALK GRADE.
5. 5' INCREMENTS FOR GRADE CHANGES IN DRIVEWAY ARE ALLOWED TO MEET EXIST GRADE.
6. ALGEBRAIC DIFFERENCE AT GRADE CHANGES ARE NOT TO EXCEED 13%.
7. EXPANSION JOINTS SHALL BE CONSTRUCTED NEAR PROPERTY LINE & THROUGH C & G ADJACENT TO DRIVEWAY.
8. OPTIONAL CONSTRUCTION JOINTS MAY BE USED AT GRADE CHANGES IN DRIVEWAY.
9. RAMPS NOT TO EXCEED 30" VERTICALLY WITHOUT 5' X 5' LANDING.

PLAN VIEW
NTS



SECTION A-A
NTS



ST-08

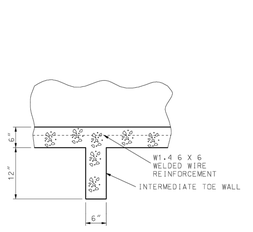
CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY:	JOHNSON
	PUBLIC WORKS DEPT	DATE:	2/2019
	ENGINEERING DIVISION	ENGINEER:	HERTZBERG
	602 S MAIN ST 64801	FILE:	TYPEADRIVE

PROJECT

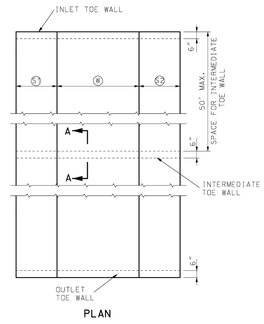
TYPE A DRIVEWAY WITH NO SIDEWALK

SECTION THROUGH DITCH
(SHOWING TOE WALL)

LEGEND
- (D) VERTICAL PAVED DITCH HEIGHT.
- (E) SOD, GEOTEXTILE FABRIC, OR EROSION CONTROL MAT, IF REQUIRED.
- (S1) THE WIDTH OF THE STEEPER SIDEWALL OF ALL DITCHES.
- (S2) THE WIDTH OF THE FLATTER SIDEWALL OF ALL DITCHES.
- (W) THE WIDTH OF THE BOTTOM OF A FLAT BOTTOM DITCH



SECTION A-A



PLAN

GENERAL NOTES:

STEEL WELDED WIRE REINFORCEMENT SHALL BE IN ACCORDANCE WITH SEC 1036.3.3.

SOD, GEOTEXTILE FABRIC, OR EROSION CONTROL MATS SHALL BE USED ALONG THE SIDES IF SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

TOE WALLS SHALL BE CONSTRUCTED AT INLET AND OUTLET ENDS OF PAVED DITCHES AND AT 50' MAXIMUM SPACING FOR INTERMEDIATE TOE WALLS.

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

STATE OF MISSOURI — MATTHEW D. SCHWEITER — NUMBER PE-2011 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN DIGITALLY SIGNED AND SEALED ELECTRONICALLY.

PAVED DITCHES

DATE EFFECTIVE:	07/01/2016	609.15D	SHEET NO. 1 OF 1
DATE PREPARED:	5/13/2016		

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

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STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER — 2025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

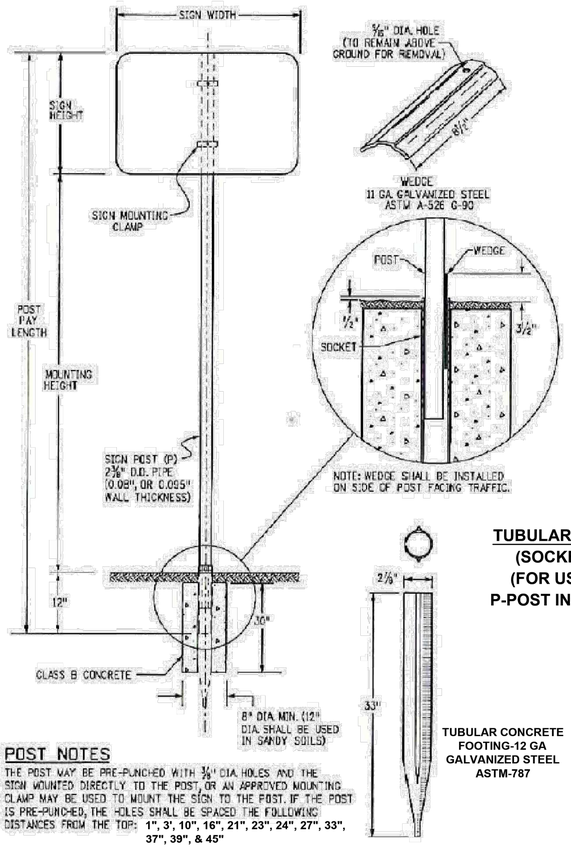
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DTL01_R170642
date: 3/28/2025

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DTL01_R170642.dwg USER: skendall
DATE: Mar 26, 2025 6:02pm XREFS: C_PTBLK_R170642



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

TUBULAR CONCRETE FOOTING-12 GA GALVANIZED STEEL ASTM-787

POST NOTES

THE POST MAY BE PRE-PUNCHED WITH ⅜" 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 COATING PER ASTM A123 CLEAR COATING	1.47 KIP FT	STEEL SIGN SUPPORT (2 INCH ROUND)
P1	2.875"	.160"	ASTM-513		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	TWO P1'S			
2.5	P	P	P	P	P1	P1				
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			TWO P2'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	TWO P1'S			
2.5	P	P	P	P1	P1	P1				
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	P1	*P2				
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	TWO P1'S			
2.5	P	P	P	P1	P1	P1				
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			TWO P2'S	
7			P1	P2	TWO P1'S	TWO P1'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	

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Joplin, MO 64801

STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER — 2025
JONATHAN W. PEITZ-CIVIL ENGINEER MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

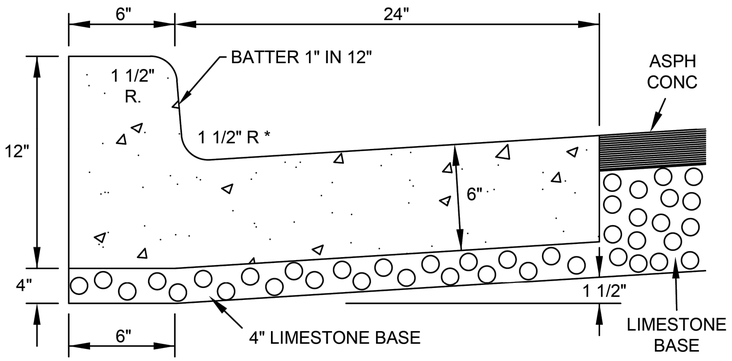
STANDARD DETAILS
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN
JOPLIN, MISSOURI
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_DTL01_R170642
date: 3/28/2025

SHEET 57 of 120

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DTL01_R170642.dwg USER: skendall
DATE: Mar 26, 2025 6:02pm XREFS: C_PTBLK_R170642

* = OPTIONAL WITH APPROVAL BY CITY ENGINEER.



NOTES:

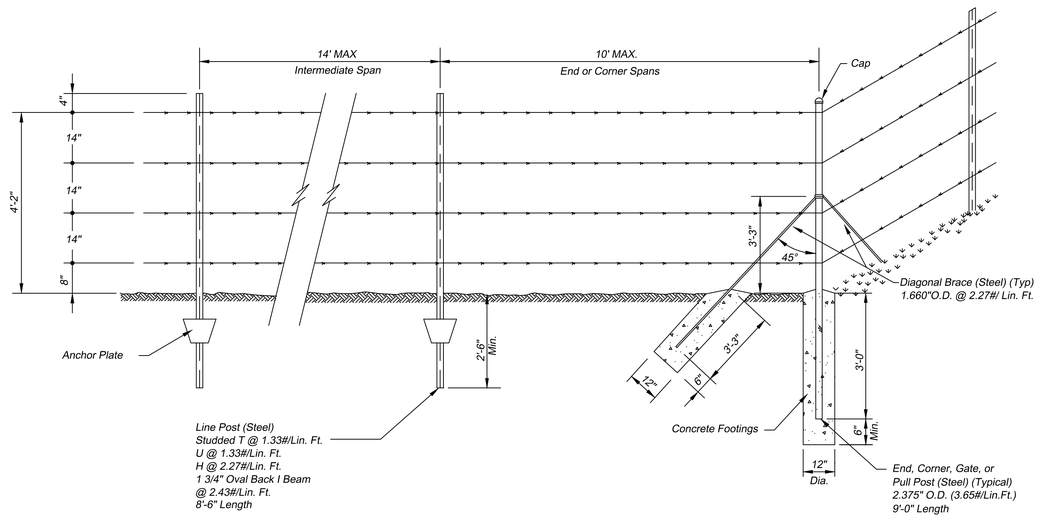
1. CONSTRUCT EXPANSION JOINTS AT THE START & END OF CURB INLETS.
2. CONSTRUCT CONTRACTION JOINTS EVERY 12.5' MAXIMUM.
3. JOINT MATERIAL TO EXTEND THRU C & G, FRONT TO BACK, & NEATLY TRIMMED TO MATCH C0NC SURFACE.
4. FLOAT GROUT TO SURFACE ON EXPOSED SURFACES.
5. ALL POURED CONCRETE SHALL BE CLASS 'B' WITH FIBER REINFORCEMENT.

STD UPRIGHT C & G

N.T.S.

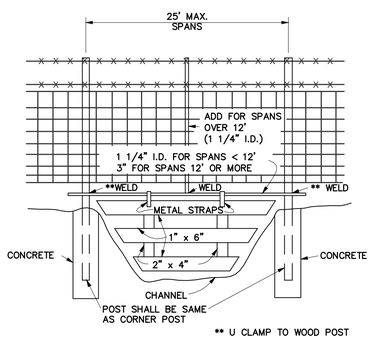
ST-04

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 12/2020	STD UPRIGHT CURB & GUTTER
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: CURBDET	



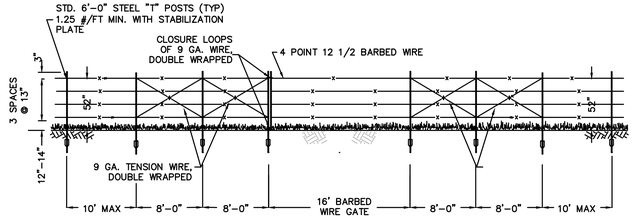
BARBED WIRE FENCE DETAIL

No Scale

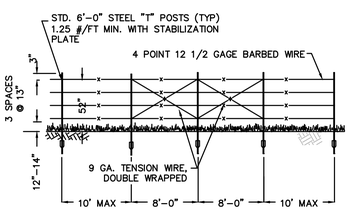


TYPICAL WATER CROSSING GATE

No Scale



TYPICAL BARBED WIRE GATE AND BRACING



TYPICAL CORNER AND BRACING

TYPICAL TEMPORARY FENCE

N.T.S.

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

drawn by:	SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_DTL01_R170642
date:	3/28/2025

SHEET
58 of 120

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Z8	0.900	7.25	0.11	0.72	5	265	2.40
Z9	0.900	7.25	0.13	0.85	5	264	2.40
Z10	0.900	7.25	2.00	13.05	5	468	2.20
Z11	0.900	7.25	0.19	1.24	5	213	2.12
Z12	0.900	7.25	0.16	1.04	5	214	2.12
Z13	0.900	7.25	0.04	0.26	5	110	1.91
Z14	0.900	7.25	0.04	0.26	5	114	1.91
Z15	0.620	4.52	8.82	24.72	22	1331	2.75
Z16	0.900	7.25	0.22	1.44	5	326	1.35
Z17	0.900	7.25	0.18	1.17	5	319	1.35
Z18	0.900	7.25	0.11	0.72	5	525	2.10
Z19	0.620	4.92	26.86	81.93	17	1715	3.10
Z20	0.240	3.42	193.71	159.00	45	4069	1.40
Z21	0.240	3.97	30.56	29.12	33	1943	1.65

N

0' 100' 200' 400'
SCALE IN FEET

DA = D7
DA = D5
DA = D8
DA = D6
DA = Z7
DA = Z10
DA = Z11
DA = D3
DA = Z5
DA = Z9
DA = Z13
DA = Z15
DA = Z16
DA = Z6
DA = D2
DA = Z8
DA = Z12
DA = Z14
DA = Z17
DA = Z18
DA = Z19
DA = Z20
DA = Z21
DA = D4
HALL STREET
DUQUESNE ROAD

Notes:
1- DA = D1 THROUGH DA = D8 SEE ZORA PHASE 1 PLANS.
2- DA = Z1 THROUGH DA = Z6 SEE ZORA PHASE 1 PLANS.

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DRAINAGE MAP

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
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project no.: 017-0642-R
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SHEET
59 of 120

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_PDRN01_R170642.dwg
DATE: Mar 26, 2025 6:14pm
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USER: skendall C_PBASE_R170642
V_XTOPO_R170642 T_DRN_R170642

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)	System Intensity (in/h)	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)	Notes
110	AREA INLET	In Sag	1026.17	1022.42	0.62	4.79	14.0	5.34	5.34	(N/A)	15.99	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
120	AREA INLET	In Sag	1025.28	1021.94	0.76	2.00	5.0	7.25	5.31	(N/A)	11.11	0.00	100.00	(N/A)	(N/A)	2.0	39.00	9.40	
130	TYPE C NON-SETBACK INLET	In Sag	1025.83	1021.89	0.90	0.04	5.0	7.25	5.31	5.00	0.42	0.00	100.00	(N/A)	(N/A)	2.0	3.80	2.40	
140	TYPE C NON-SETBACK INLET	In Sag	1025.83	1021.60	0.90	0.04	5.0	7.25	5.29	5.00	0.40	0.00	100.00	(N/A)	(N/A)	2.0	3.70	2.40	
210	TYPE C NON-SETBACK INLET	On Grade	1029.80	1024.86	0.90	0.13	5.0	7.25	7.25	5.00	0.70	0.16	81.80	CI-130	2.57	2.0	4.30	2.10	
220	TYPE C NON-SETBACK INLET	On Grade	1029.80	1023.88	0.90	0.11	5.0	7.25	7.21	5.00	0.59	0.13	81.60	CI-140	2.40	2.0	3.40	1.80	
230	TYPE C NON-SETBACK INLET	On Grade	1028.08	1024.37	0.90	0.04	5.0	7.25	7.25	5.00	0.26	0.00	99.90	CI-130	2.12	2.0	1.70	1.30	
240	TYPE C NON-SETBACK INLET	On Grade	1028.08	1023.39	0.90	0.04	5.0	7.25	7.20	5.00	0.26	0.00	99.90	CI-140	2.12	2.0	1.70	1.30	
310	AREA INLET	In Sag	1024.37	1020.24	0.62	8.82	22.0	4.67	4.67	(N/A)	25.72	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
320	TYPE C NON-SETBACK INLET	In Sag	1026.18	1020.13	0.90	0.24	5.0	7.25	4.66	5.00	1.58	0.00	100.00	(N/A)	(N/A)	2.0	9.30	4.70	
330	COMBINATION GRADED INLET	In Sag	1026.18	1019.77	0.90	0.18	5.0	7.25	4.66	5.00	1.18	0.00	100.00	(N/A)	(N/A)	2.0	7.70	4.40	
410	AREA INLET	In Sag	1022.14	1019.30	0.62	26.74	17.0	5.02	5.02	(N/A)	83.87	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
420	TYPE C NON-SETBACK INLET	On Grade	1026.88	1019.08	0.90	0.11	5.0	7.25	7.25	5.00	0.65	0.08	89.50	(N/A)	1.30	2.0	4.20	2.00	
810	AREA INLET	In Sag	1035.07	1029.88	0.24	0.19	5.0	7.25	7.25	(N/A)	0.33	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
820	AREA INLET	In Sag	1030.81	1028.40	0.24	0.09	5.0	7.25	7.13	(N/A)	0.16	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	

* Drainage data for Storm Line 500, 600 and 700 have been provided via memo

10 YEAR STORM DESIGN PIPES

Label	Upstream Structure	Downstream Structure	Upstream Inlet Area (acres)	Upstream Inlet C	Upstream Inlet Tc (min)	System CA (acres)	Time (Pipe Flow) (Min)	System Flow Time (min)	System Rational Flow (cfs)	Upstream Invert Elevation	Downstream Invert Elevation	Slope (%)	Material	Pipe Size (In)	Length (Ft)	Flow (cfs)	Velocity (Ft/Sec)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (Ft)	Hydraulic Grade Line (Out) (Ft)
110	AI-110	AI-120	4.79	0.62	14.00	2.97	0.15	14.00	15.99	1022.42	1021.94	0.76	Concrete	34x22 HERCP	63.50	15.99	6.88	26.38	60.60	1024.11	1024.09
120	AI-120	CI-130	2.00	0.76	5.00	4.49	0.02	14.15	24.04	1021.94	1021.89	0.54	Concrete	38x24 HERCP	9.30	24.04	6.55	29.64	81.10	1024.02	1023.89
130	CI-130	CI-140	0.04	0.90	5.00	4.55	0.08	14.18	24.33	1021.89	1021.60	0.81	Concrete	38x24 HERCP	36.00	24.33	7.78	36.27	67.10	1023.88	1023.82
140	CI-140	O-1	0.04	0.90	5.00	4.85	0.03	14.26	25.88	1021.60	1021.55	0.47	Concrete	38x24 HERCP	10.60	25.88	6.20	27.78	93.20	1023.80	1023.60
210	CI-210	CI-220	0.13	0.90	5.00	0.10	0.17	5.00	0.70	1024.86	1024.38	1.26	Concrete	18	38.00	0.70	3.66	11.81	5.90	1025.17	1024.63
220	CI-220	CI-140	0.11	0.90	5.00	0.18	0.84	5.17	1.28	1023.88	1021.92	1.00	Concrete	24	196.00	1.28	3.89	22.62	5.70	1024.27	1023.80
230	CI-230	CI - 240	0.04	0.90	5.00	0.04	0.23	5.00	0.26	1024.37	1023.89	1.26	Concrete	18	38.00	0.26	2.73	11.81	2.20	1024.56	1024.04
240	CI - 240	CI-140	0.04	0.90	5.00	0.07	0.82	5.23	0.52	1023.39	1021.92	1.00	Concrete	24	147.10	0.52	2.97	22.61	2.30	1023.79	1023.80
310	AI-310	CI-320	8.82	0.62	22.00	5.47	0.02	22.00	25.72	1020.24	1020.16	0.83	Concrete	30	9.70	25.72	8.20	37.32	68.90	1021.97	1021.91
320	CI-320	CI-330	0.24	0.90	5.00	5.68	0.07	22.02	26.72	1020.13	1019.81	0.89	Concrete	30	36.00	26.72	8.50	38.66	69.10	1021.89	1021.68
330	CI-330	JB-430	0.18	0.90	5.00	5.85	0.16	22.09	27.46	1019.77	1019.02	0.91	Concrete	30	82.80	27.46	8.62	39.04	70.30	1021.56	1020.58
410	AI-410	JB-430	26.74	0.62	17.00	16.58	0.12	17.00	83.87	1019.30	1019.04	0.51	Concrete	48x24 RCB	50.90	83.87	7.26	99.75	84.10	1020.81	1020.77
415	JB-430	O-2	(N/A)	(N/A)	0.00	22.51	0.04	22.25	105.47	1019.01	1018.93	0.47	Concrete	48x24 RCB	16.90	105.47	6.59	95.97	109.90	1020.76	1020.68
340	CI-420	JB-430	0.11	0.90	5.00	0.09	0.04	5.00	0.65	1019.08	1019.02	0.79	Concrete	24	7.60	0.65	2.92	20.10	3.20	1020.77	1020.77
810	AI-810	AI-820	0.19	0.24	5.00	0.05	0.52	5.00	0.33	1029.88	1028.46	1.46	Concrete	15	97.40	0.33	3.16	7.80	4.30	1030.10	1028.64
820	AI-820	FES-830	0.09	0.24	5.00	0.07	0.16	5.52	0.48	1028.40	1027.91	1.44	Concrete	15	34.10	0.48	3.51	7.75	6.20	1028.67	1028.12

* Drainage data for Storm Line 500, 600 and 700 have been provided via memo

100 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)	System Intesity (in/h)	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)	Notes
110	AREA INLET	In Sag	1026.17	1022.42	0.62	4.79	14.0	7.52	7.52	(N/A)	22.52	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
120	AREA INLET	In Sag	1025.28	1021.94	0.76	2.00	5.0	10.20	7.49	(N/A)	15.63	0.00	100.00	(N/A)	(N/A)	2.0	44.30	10.60	
130	TYPE C NON-SETBACK INLET	In Sag	1025.83	1021.89	0.90	0.04	5.0	10.20	7.48	5.00	0.72	0.00	100.00	(N/A)	(N/A)	2.0	5.50	2.80	
140	TYPE C NON-SETBACK INLET	In Sag	1025.83	1021.60	0.90	0.04	5.0	10.20	7.46	5.00	0.66	0.00	100.00	(N/A)	(N/A)	2.0	5.20	2.70	
210	TYPE C NON-SETBACK INLET	On Grade	1029.80	1024.86	0.90	0.13	5.0	10.20	10.20	5.00	0.87	0.33	72.20	CI-130	2.5700	2.0	5.30	2.30	
220	TYPE C NON-SETBACK INLET	On Grade	1029.80	1023.88	0.90	0.11	5.0	10.20	10.15	5.00	0.74	0.28	72.60	CI-140	2.4000	2.0	4.30	2.10	
230	TYPE C NON-SETBACK INLET	On Grade	1028.08	1024.37	0.90	0.04	5.0	10.20	10.20	5.00	0.36	0.01	96.80	CI-130	2.1200	2.0	2.00	1.50	
240	TYPE C NON-SETBACK INLET	On Grade	1028.08	1023.39	0.90	0.04	5.0	10.20	10.13	5.00	0.36	0.01	96.80	CI-140	2.1200	2.0	2.00	1.50	
310	AREA INLET	In Sag	1024.37	1020.24	0.62	8.82	22.0	6.62	6.62	(N/A)	36.50	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
320	TYPE C NON-SETBACK INLET	In Sag	1026.18	1020.13	0.90	0.24	5.0	10.20	6.62	5.00	2.22	0.00	100.00	(N/A)	(N/A)	2.0	11.60	5.30	
330	COMBINATION GRADED INLET	In Sag	1026.18	1019.77	0.90	0.18	5.0	10.20	6.61	5.00	1.67	0.00	100.00	(N/A)	(N/A)	2.0	9.60	4.80	
410	AREA INLET	In Sag	1022.14	1019.30	0.62	26.74	17.0	7.09	7.09	(N/A)	118.39	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
420	TYPE C NON-SETBACK INLET	On Grade	1026.88	1019.08	0.90	0.11	5.0	10.20	10.20	5.00	0.82	0.20	80.30	(N/A)	1.3000	2.0	5.20	2.30	
810	AREA INLET	In Sag	1035.07	1029.88	0.24	0.19	5.0	10.20	10.20	(N/A)	0.47	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	
820	AREA INLET	In Sag	1030.81	1028.40	0.24	0.09	5.0	10.20	10.05	(N/A)	0.22	0.00	100.00	(N/A)	(N/A)	2.0	0.00	(N/A)	

* Drainage data for Storm Line 500, 600 and 700 have been provided via memo

100 YEAR STORM DESIGN PIPES

Label	Upstream Structure	Downstream Structure	Upstream Inlet Area (acres)	Upstream Inlet C	Upstream Inlet Tc (min)	System CA (acres)	Time (Pipe Flow) (Min)	System Flow Time (min)	System Rational Flow (cfs)	Upstream Invert Elevation	Downstream Invert Elevation	Slope (%)	Material	Pipe Size (In)	Length (Ft)	Flow (cfs)	Velocity (Ft/Sec)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (Ft)	Hydraulic Grade Line (Out) (Ft)
110	AI-110	AI-120	4.79	0.62	14.00	2.97	0.15	14.00	15.99	1022.42	1021.94	0.76	Concrete	34x22 HERCP	63.50	15.99	6.88	26.38	60.60	1024.11	1024.09
120	AI-120	CI-130	2.00	0.76	5.00	4.49	0.02	14.15	24.04	1021.94	1021.89	0.54	Concrete	38x24 HERCP	9.30	24.04	6.55	29.64	81.10	1024.02	1023.89
130	CI-130	CI-140	0.04	0.90	5.00	4.55	0.08	14.18	24.33	1021.89	1021.60	0.81	Concrete	38x24 HERCP	36.00	24.33	7.78	36.27	67.10	1023.88	1023.82
140	CI-140	O-1	0.04	0.90	5.00	4.85	0.03	14.26	25.88	1021.60	1021.55	0.47	Concrete	38x24 HERCP	10.60	25.88	6.20	27.78	93.20	1023.80	1023.60
210	CI-210	CI-220	0.13	0.90	5.00	0.10	0.17	5.00	0.70	1024.86	1024.38	1.26	Concrete	18	38.00	0.70	3.66	11.81	5.90	1025.17	1024.63
220	CI-220	CI-140	0.11	0.90	5.00	0.18	0.84	5.17	1.28	1023.88	1021.92	1.00	Concrete	24	196.00	1.28	3.89	22.62	5.70	1024.27	1023.80
230	CI-230	CI - 240	0.04	0.90	5.00	0.04	0.23	5.00	0.26	1024.37	1023.89	1.26	Concrete	18	38.00	0.26	2.73	11.81	2.20	1024.56	1024.04
240	CI - 240	CI-140	0.04	0.90	5.00	0.07	0.82	5.23	0.52	1023.39	1021.92	1.00	Concrete	24	147.10	0.52	2.97	22.61	2.30	1023.79	1023.80
310	AI-310	CI-320	8.82	0.62	22.00	5.47	0.02	22.00	25.72	1020.24	1020.16	0.83	Concrete	30	9.70	25.72	8.20	37.32	68.90	1021.97	1021.91
320	CI-320	CI-330	0.24	0.90	5.00	5.68	0.07	22.02	26.72	1020.13	1019.81	0.89	Concrete	30	36.00	26.72	8.50	38.66	69.10	1021.89	1021.68
330	CI-330	JB-430	0.18	0.90	5.00	5.85	0.16	22.09	27.46	1019.77	1019.02	0.91	Concrete	30	82.80	27.46	8.62	39.04	70.30	1021.56	1020.58
410	AI-410	JB-430	26.74	0.62	17.00	16.58	0.12	17.00	83.87	1019.30	1019.04	0.51	Concrete	48x24 RCB	50.90	83.87	7.26	99.75	84.10	1020.81	1020.77
415	JB-430	O-2	(N/A)	(N/A)	0.00	22.51	0.04	22.25	105.47	1019.01	1018.93	0.47	Concrete	48x24 RCB	16.90	105.47	6.59	95.97	109.90	1020.76	1020.68
340	CI-420	JB-430	0.11	0.90	5.00	0.09	0.04	5.00	0.65	1019.08	1019.02	0.79	Concrete	24	7.60	0.65	2.92	20.10	3.20	1020.77	1020.77
810	AI-810	AI-820	0.19	0.24	5.00	0.05	0.52	5.00	0.33	1029.88	1028.46	1.46	Concrete	15	97.40	0.33	3.16	7.80	4.30	1030.10	1028.64
820	AI-820	FES-830	0.09	0.24	5.00	0.07	0.16	5.52	0.48	1028.40	1027.91	1.44	Concrete	15	34.10	0.48	3.51	7.75	6.20	1028.67	1028.12

* Drainage data for Storm Line 500, 600 and 700 have been provided via memo

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DRAINAGE CALCULATIONS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

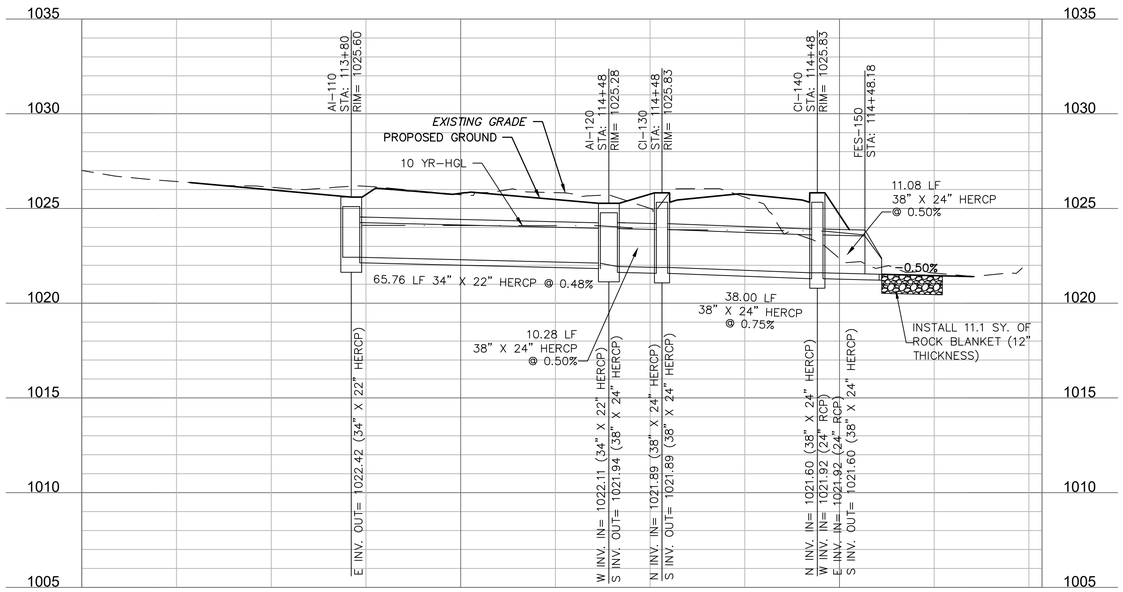
2025

JOPLIN, MISSOURI

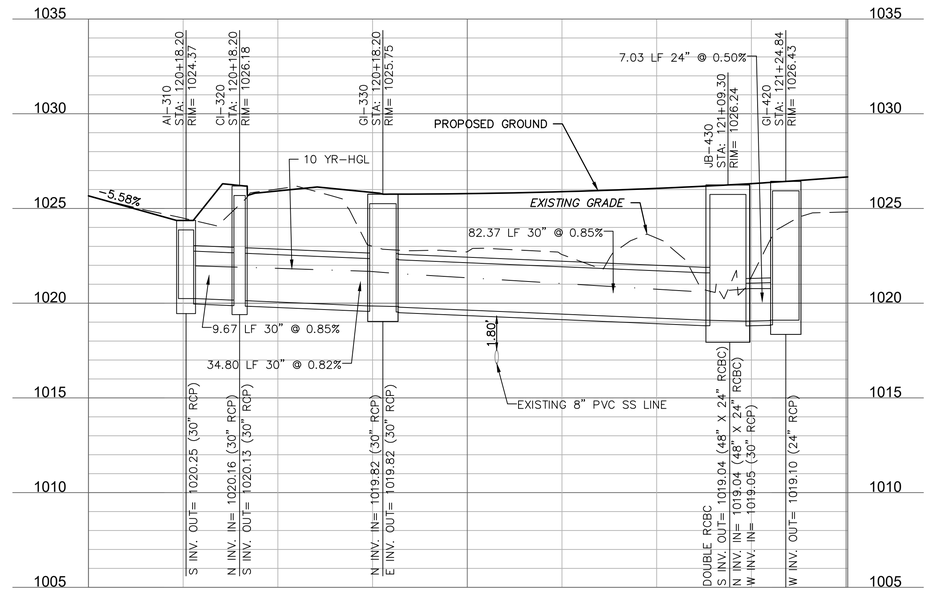
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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_PCALCS_R170642
date: 3/28/2025

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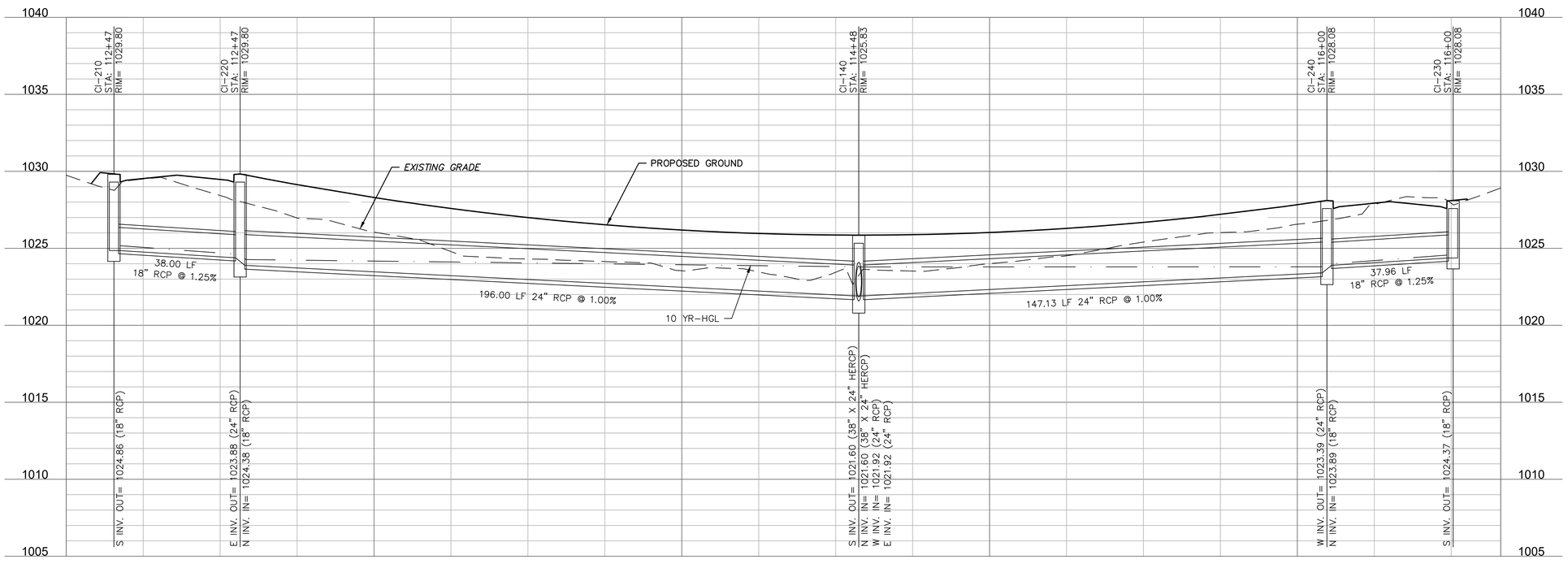
STORM LINE B-100



STORM LINE B-300



STORM LINE B-200



NOTES:

1. UTILITY DEPTHS UNKNOWN. CONTRACTOR TO FIELD VERIFY. APPROXIMATE DEPTH PROVIDED.
2. CAST-IN-PLACE BOX CULVERTS SHALL FOLLOW MODOT STANDARD DETAILS. CONTRACTOR MAY USE PRECAST BOX CULVERTS. FOR PRECAST CONCRETE BOX CULVERT SECTIONS, THE HEADWALL, WINGWALLS, AND 3 FEET OF BOX SHALL BE CAST IN PLACE. REINFORCEMENT AND DIMENSIONS FOR WINGS AND HEADWALL SHALL BE IN ACCORDANCE WITH MISSOURI STANDARD PLANS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, FOR APPROVAL PRIOR TO INSTALLATION, IN ACCORDANCE WITH LRFD HL-93 LOADING.
3. STORM STRUCTURE STATIONS AND OFFSETS REFERENCE THE CENTER OF THE STRUCTURE.
4. STORM STRUCTURE STATIONS REFERENCE ZORA STREET.
5. THE RIM ELEVATION SHOWN FOR ALL CURB INLETS IS THE BACK OF CURB ELEVATION AT CENTER OF THE STRUCTURE.

8'
4'
2'
0'
0' 10' 20' 40'
SCALE IN FEET

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER PROFILES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

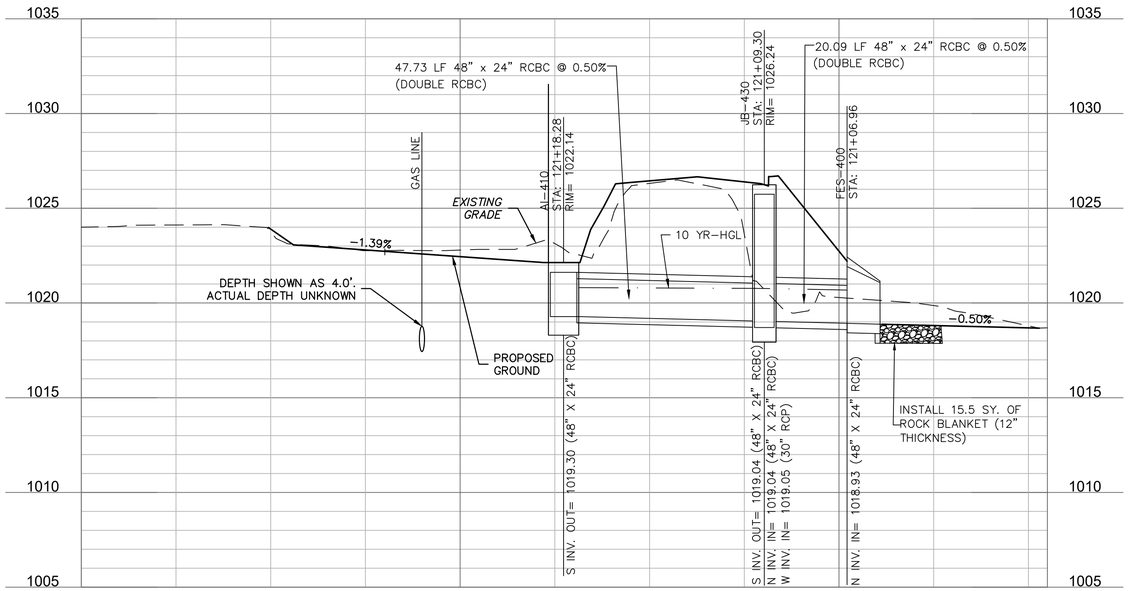
JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_STM01_R170642
date: 3/28/2025

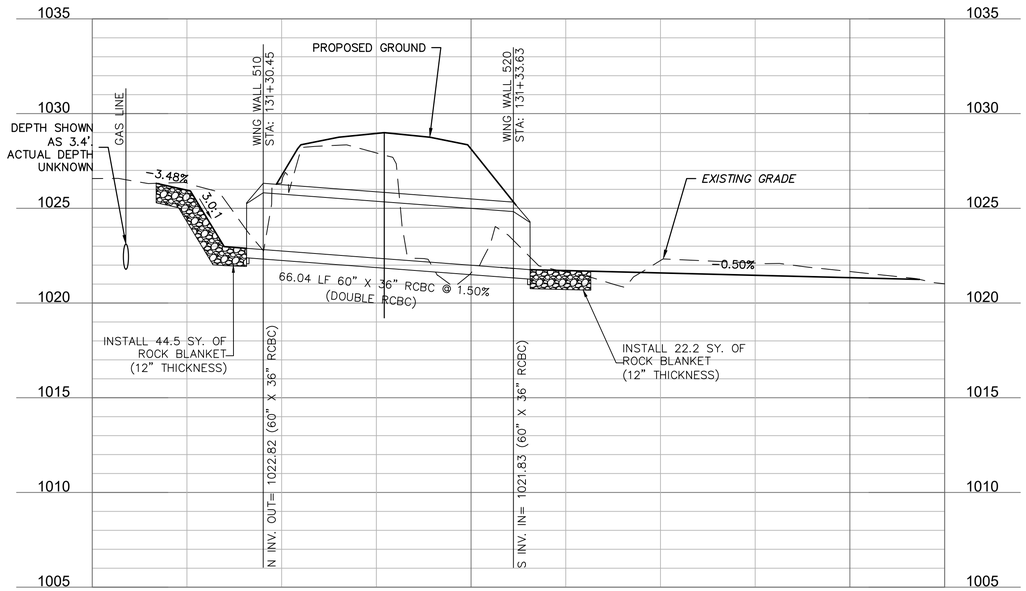
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61 of 120

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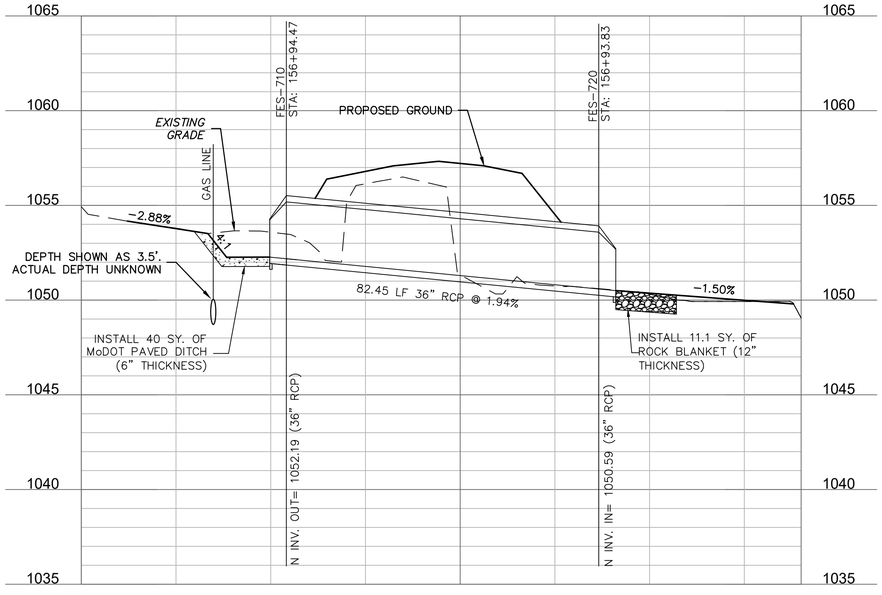
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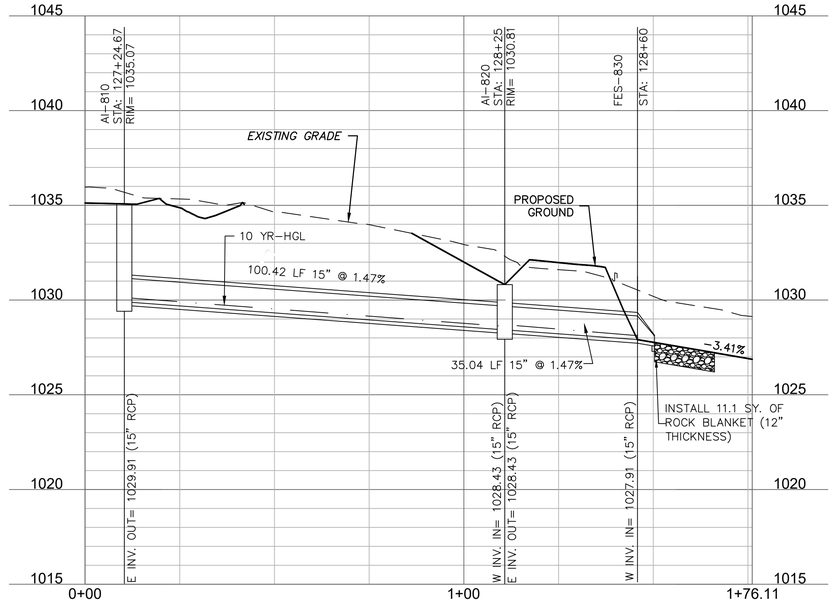
STORM LINE B-500



STORM LINE B-700



STORM LINE B-800



NOTES:

1. UTILITY DEPTHS UNKNOWN. CONTRACTOR TO FIELD VERIFY. APPROXIMATE DEPTH PROVIDED.
2. CAST-IN-PLACE BOX CULVERTS SHALL FOLLOW MODOT STANDARD DETAILS. CONTRACTOR MAY USE PRECAST BOX CULVERTS. FOR PRECAST CONCRETE BOX CULVERT SECTIONS, THE HEADWALL, WINGWALLS, AND 3 FEET OF BOX SHALL BE CAST IN PLACE. REINFORCEMENT AND DIMENSIONS FOR WINGS AND HEADWALL SHALL BE IN ACCORDANCE WITH MISSOURI STANDARD PLANS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, FOR APPROVAL PRIOR TO INSTALLATION, IN ACCORDANCE WITH LRFD HL-93 LOADING.
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SCALE IN FEET

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NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

STORM SEWER PROFILES

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

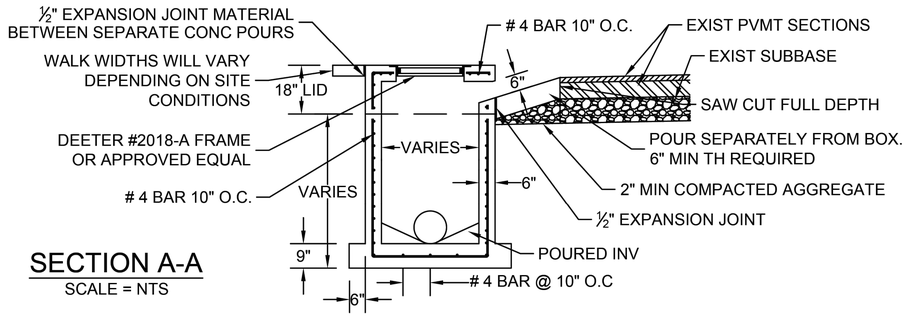
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2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_STM01_R170642
date: 3/28/2025

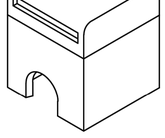
SHEET
62 of 120

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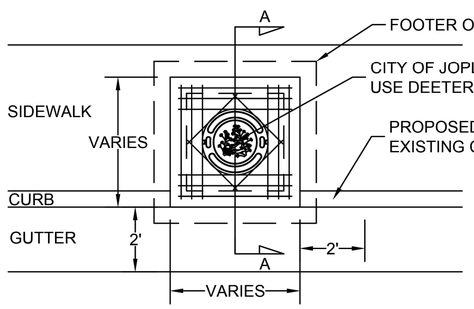


SECTION A-A
SCALE = NTS

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

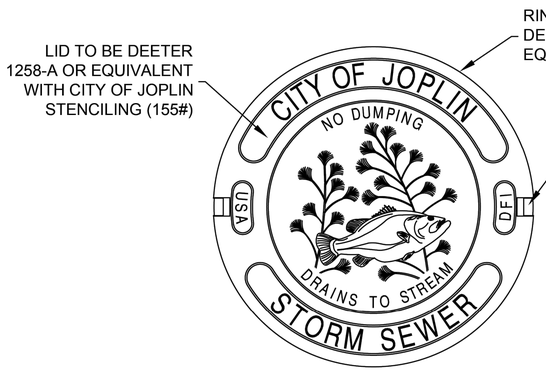


PLAN VIEW
SCALE = NTS

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.

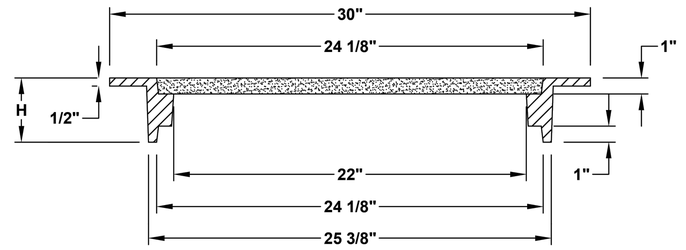
STM-03

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	



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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1027 S. Main Street, Suite 503
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
12/31/2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

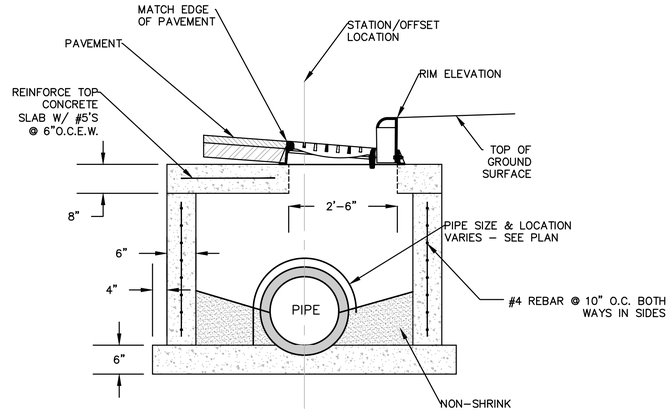
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

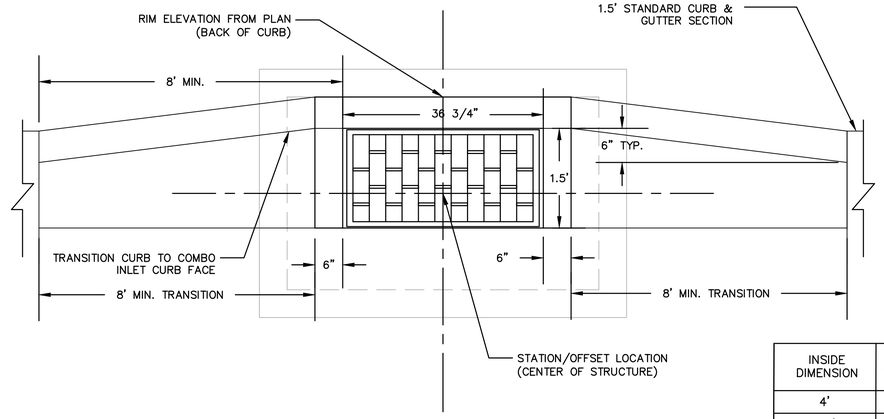
JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: STM-DTL01_R170642
date: 3/28/2025

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COMBINATION INLET DETAIL



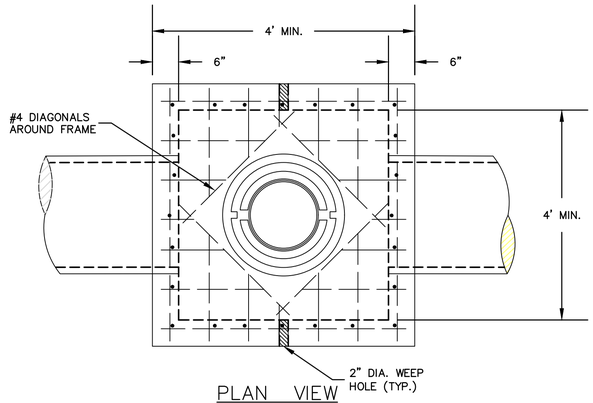
COMBINATION INLET GUTTER TRANSITION DETAIL

PLAN VIEW

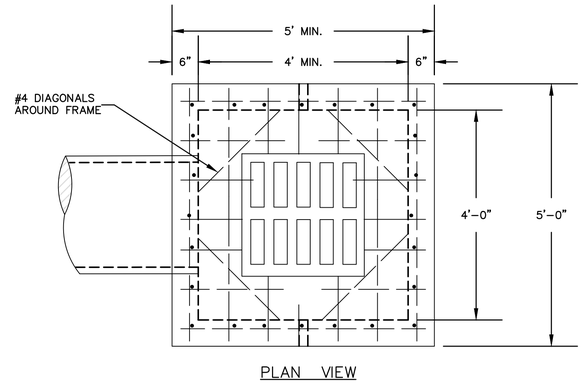
AREA INLET NOTES

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.

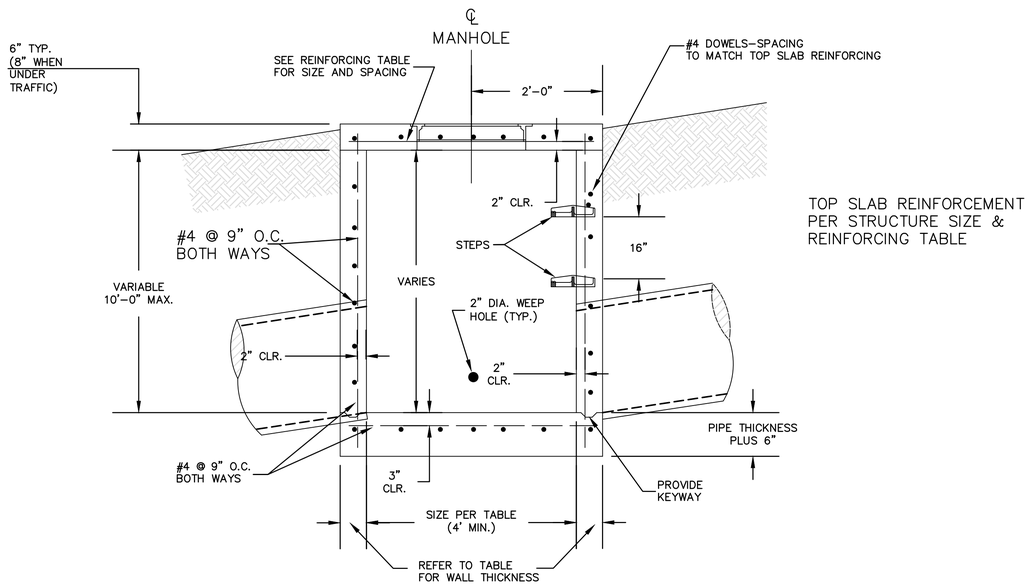
INSIDE DIMENSION	MIN. WALL THICKNESS	*TOP CONCRETE SLAB REINFORCING	MIN. TOP SLAB THICKNESS	SPECIFIED GRATE
4'	6"	# 4'S @ 7" O.C. E.W.	7"	NEENAH R-3437
4.5'	6"	# 5'S @ 9" O.C. E.W.	8"	NEENAH R-3438-A
7'	6"	# 5'S @ 9" O.C. E.W.	8"	NEENAH R-3452-C2 x2



PLAN VIEW



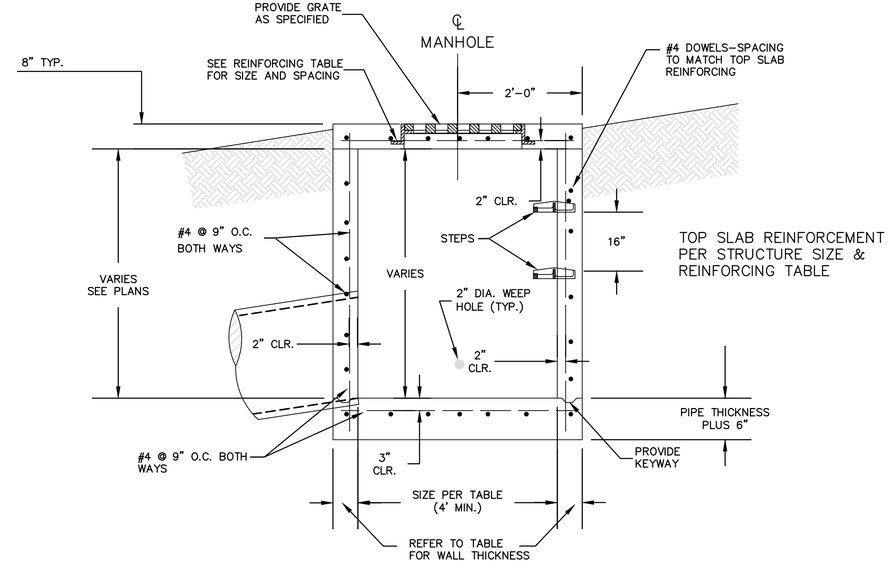
PLAN VIEW



TOP SLAB REINFORCEMENT PER STRUCTURE SIZE & REINFORCING TABLE

ELEVATION

JUNCTION BOX



TOP SLAB REINFORCEMENT PER STRUCTURE SIZE & REINFORCING TABLE

ELEVATION

AREA INLET

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

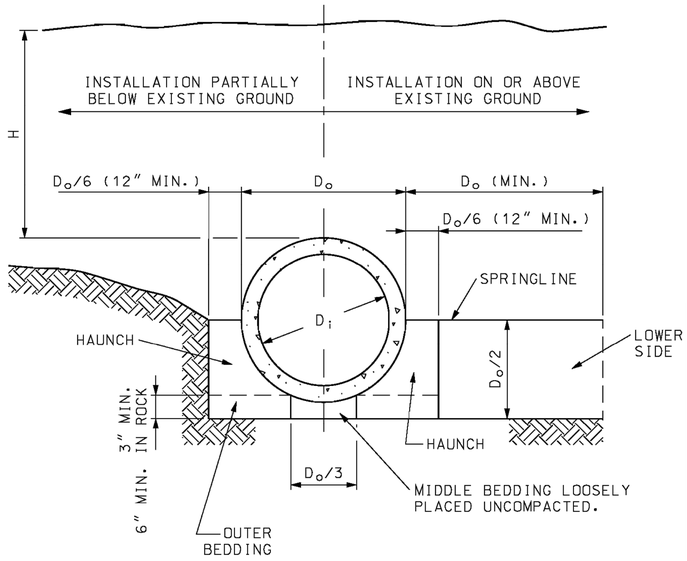
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JOPLIN, MISSOURI

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approved by: JWP
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project no.: 017-0642-R
drawing no.: STM-DTL01_R170642
date: 3/28/2025

SHEET
64 of 120

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USER: skendall



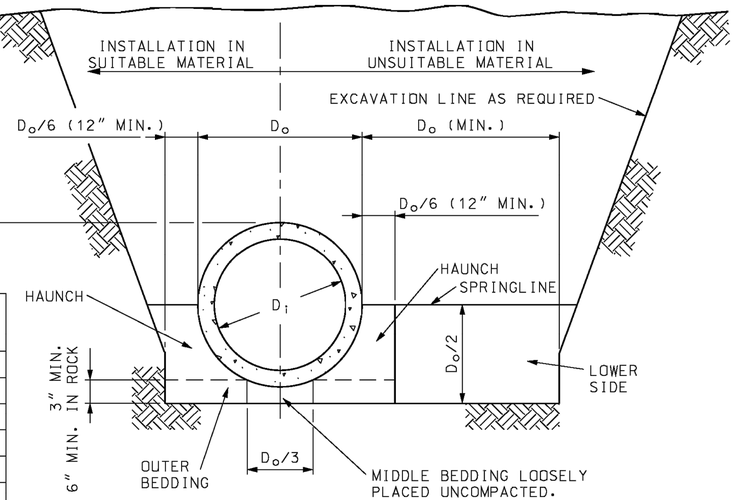
EMBANKMENT INSTALLATIONS

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.

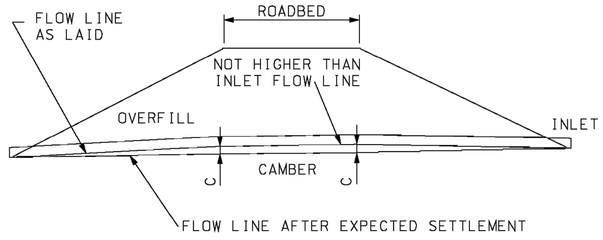


TRENCH INSTALLATION

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)

STATE OF MISSOURI — ERIC E. SCHROETER — NUMBER PE-28411 — 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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1027 S. Main Street, Suite 503
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STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER — 2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

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STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

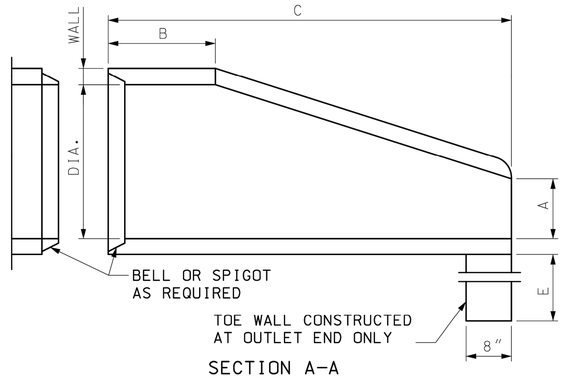
JOPLIN, MISSOURI

2025

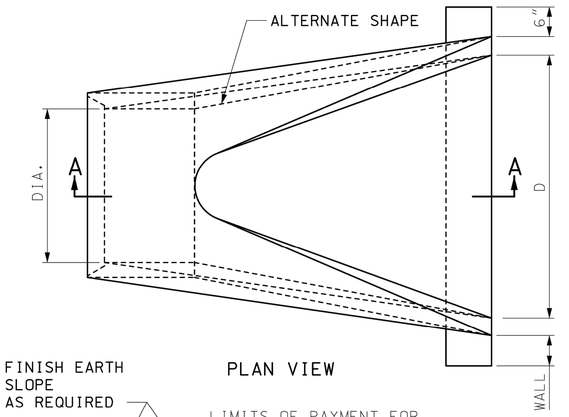
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drawing no.: STM-DTL02_R170642
date: 3/28/2025

SHEET 65 of 120

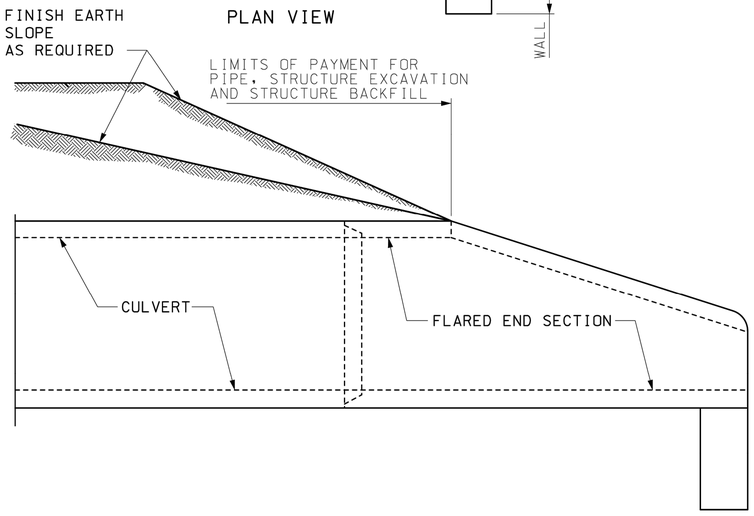
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SECTION A-A



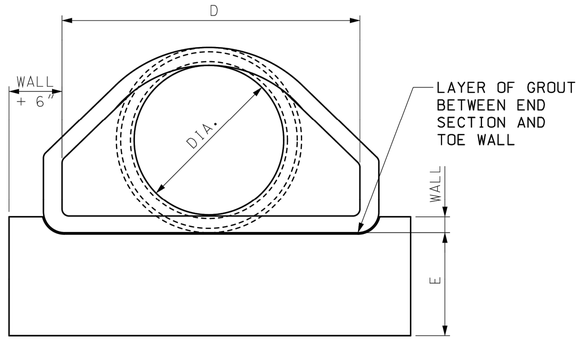
PLAN VIEW



INSTALLATION DETAILS

DIMENSIONS						
DIA.	WALL	A	B MIN.	C MIN.	D	E
12"	2"	4"	4'-0"	6'	2'-0"	18"
15"	2¼"	6"	3'-10"	6'	2'-6"	18"
18"	2½"	9"	3'-10"	6'	3'-0"	18"
21"	2¾"	9"	3'-2"	6'	3'-6"	18"
24"	3"	9½"	2'-6"	6'	4'-0"	24"
27"	3¼"	10½"	2'-1"	6'	4'-6"	24"
30"	3½"	1'-0"	1'-7"	6'	5'-0"	24"
33"	3¾"	1'-2"	1'-7"	6'	5'-6"	24"
36"	4"	1'-3"	2'-10"	8'	6'-0"	24"
42"	4½"	1'-9"	2'-11"	8'	6'-6"	24"
48"	5"	2'-0"	2'-2"	8'	7'-0"	24"
54"	5½"	2'-3"	2'-11"	8'	7'-6"	36"
60"	6"	2'-6"	3'-3"	8'	8'-0"	36"
66"	6½"	2'-0"	1'-9"	8'	8'-6"	36"
72"	7"	2'-0"	2'-9"	10'	9'-0"	36"
78"	7½"	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

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STATE OF MISSOURI
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

2025

JOPLIN, MISSOURI

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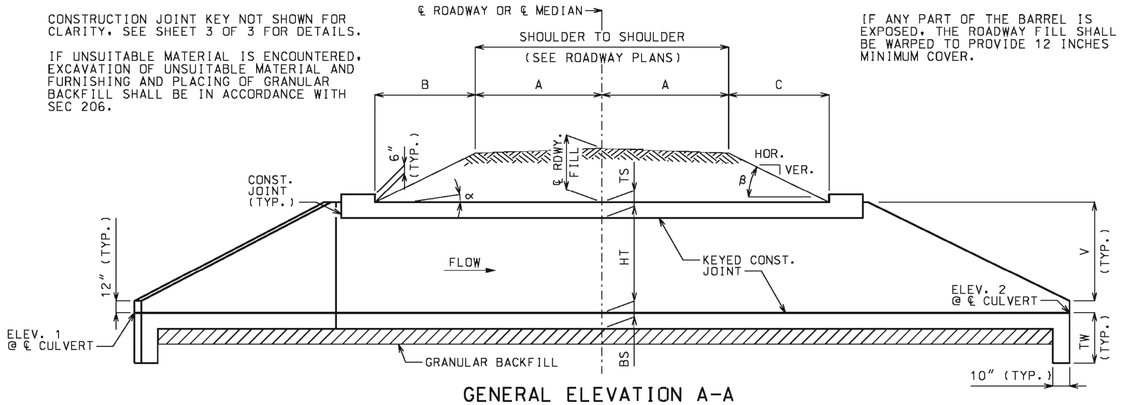
SHEET 66 of 120

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CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY. SEE SHEET 3 OF 3 FOR DETAILS.

IF UNSUITABLE MATERIAL IS ENCOUNTERED, EXCAVATION OF UNSUITABLE MATERIAL AND FURNISHING AND PLACING OF GRANULAR BACKFILL SHALL BE IN ACCORDANCE WITH SEC 206.

IF ANY PART OF THE BARREL IS EXPOSED, THE ROADWAY FILL SHALL BE WARPED TO PROVIDE 12 INCHES MINIMUM COVER.



GENERAL ELEVATION A-A

CHANNEL BOTTOM SHALL BE GRADED WITHIN RIGHT OF WAY FOR TRANSITION OF CHANNEL BED TO CULVERT OPENINGS. CHANNEL BANKS SHALL BE TAPERED TO MATCH CULVERT OPENINGS.

EQUATIONS FOR COMPUTING ∝, β, B AND C

∝ = ANGLE OF BARREL SLOPE WITH HORIZONTAL NORMAL TO ℄ ROADWAY OR ℄ MEDIAN = $\arctan\left(\frac{\text{ELEV. 1} - \text{ELEV. 2}}{W}\right)$

β = ANGLE OF FILL SLOPE WITH HORIZONTAL NORMAL TO ℄ ROADWAY OR ℄ MEDIAN = $\arctan\left(\frac{\text{VER.}}{\text{HOR.}}\right)$

B = HORIZONTAL DISTANCE FROM UPSTREAM EDGE OF SHOULDER TO UPSTREAM HEADWALL NORMAL TO ℄ ROADWAY OR ℄ MEDIAN = $\frac{\text{℄ RDWY. FILL} + A(CS) - A(\tan\alpha)}{\tan\beta + \tan\alpha}$

C = HORIZONTAL DISTANCE FROM DOWNSTREAM EDGE OF SHOULDER TO DOWNSTREAM HEADWALL NORMAL TO ℄ ROADWAY OR ℄ MEDIAN = $\frac{\text{℄ RDWY. FILL} + A(CS) + A(\tan\alpha)}{\tan\beta - \tan\alpha}$

CS = CROSS SLOPE OF EACH PART OF ROADWAY INCLUDING CROWN, LANES AND SHOULDERS. CS IS POSITIVE IF RISING AND NEGATIVE IF FALLING AWAY FROM ℄ ROADWAY OR ℄ MEDIAN.

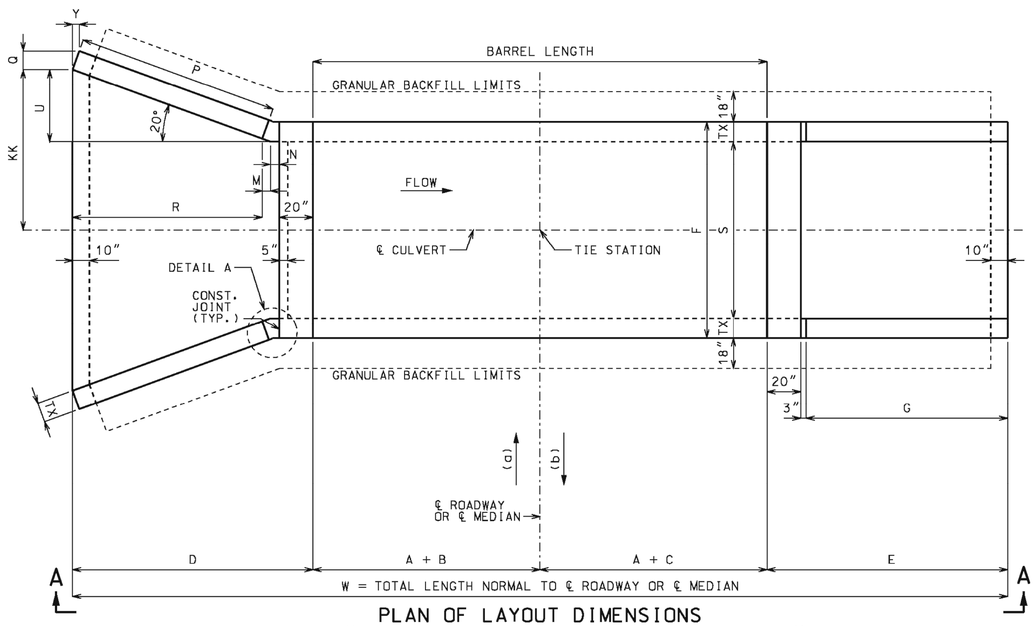
THE TERM "A(CS)" IS THE DIFFERENCE IN ELEVATION BETWEEN ℄ ROADWAY OR ℄ MEDIAN AND THE TOP OF THE FILL SLOPE NORMAL TO ℄ ROADWAY OR ℄ MEDIAN. THIS TERM SHALL BE ADJUSTED FOR UNSYMMETRICAL AND NONSTANDARD ROADWAYS.

TO ACCOUNT FOR A VARYING PROFILE GRADE THE ℄ ROADWAY FILL SHALL BE BASED ON STATIONS THAT CORRESPOND TO THE CORNERS OF THE INSIDE FACE OF THE HEADWALLS THAT PRODUCE MAXIMUM VALUES FOR B AND C.

SEE ROADWAY PLANS FOR SLOPES, ℄ ROADWAY FILL AND ELEVATIONS 1 AND 2. ELEVATIONS 1 AND 2 CORRESPOND TO UPPER AND LOWER FLOW LINE ELEVATIONS AND MAY BE BELOW THE NATURAL STREAM BOTTOM DUE TO ENVIRONMENTAL REQUIREMENTS.

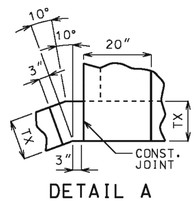
LAYOUT DIMENSIONS

VARIABLE	DIMENSION	VARIABLE	DIMENSION
∝	SEE EQUATIONS	P	2V(SEC 20°)
β	SEE EQUATIONS	Q	TX(COS 20°)
B	SEE EQUATIONS	R	P(COS 20°)
C	SEE EQUATIONS	U	(R + M)(TAN 20°)
D	R + M + N + 20"	V	HT + TS − 12"
E	G + 23"	W	2A + B + C + D + E
F	S + 2TX	Y	TX(SIN 20°)
G	2V	KK	S/2 + U
M	N(COS 20°)	TW	MAX{3'-4" OR (BS + 12")}
N	3" + TX(TAN 10°)		



PLAN OF LAYOUT DIMENSIONS

(a) AHEAD STATION WHERE STREAM FLOWS LEFT TO RIGHT. (b) AHEAD STATION WHERE STREAM FLOWS RIGHT TO LEFT.



DETAIL A

GENERAL NOTES:

DESIGN SPECIFICATIONS:
2010 AASHTO LRFD BRIDGE DESIGN SPECFICATIONS AND 2010 INTERIM REVISIONS

DESIGN LOADING:
VEHICULAR = HL-93 MINUS LANE LOAD, EARTH = 120 LB/CF
EQUIVALENT FLUID PRESSURE = 30 LB/CF (MIN.), 60 LB/CF (MAX.)

DESIGN UNIT STRESSES:
CLASS B-1 CONCRETE (BOX CULVERT) f'c = 4,000 PSI
REINFORCING STEEL (GRADE 60) fy = 60,000 PSI

MISCELLANEOUS:
FOR REINFORCEMENT DETAILS, SEE SHEET 2 OF 3. FOR SECTION DETAILS, SEE SHEET 3 OF 3. FOR MEMBER THICKNESS, SEE 703.17.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

WHEN ALTERNATE PRECAST CONCRETE BOX CULVERT SECTIONS ARE USED, THE MINIMUM DISTANCE FROM INSIDE FACE OF HEADWALLS TO PRECAST SECTIONS MEASURED ALONG THE SHORTEST WALL SHALL BE 3 FEET. REINFORCEMENT AND DIMENSIONS FOR WINGS AND HEADWALLS SHALL BE IN ACCORDANCE WITH MISSOURI STANDARD PLANS.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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STATE OF MISSOURI — DENNIS W. HECKMAN — NUMBER PE-27141 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE SINGLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

LAYOUT

DATE EFFECTIVE: 07/01/2015
DATE PREPARED: 5/13/2015

703.11J

SHEET NO. 1 OF 3

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

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MO# PE-2017019023

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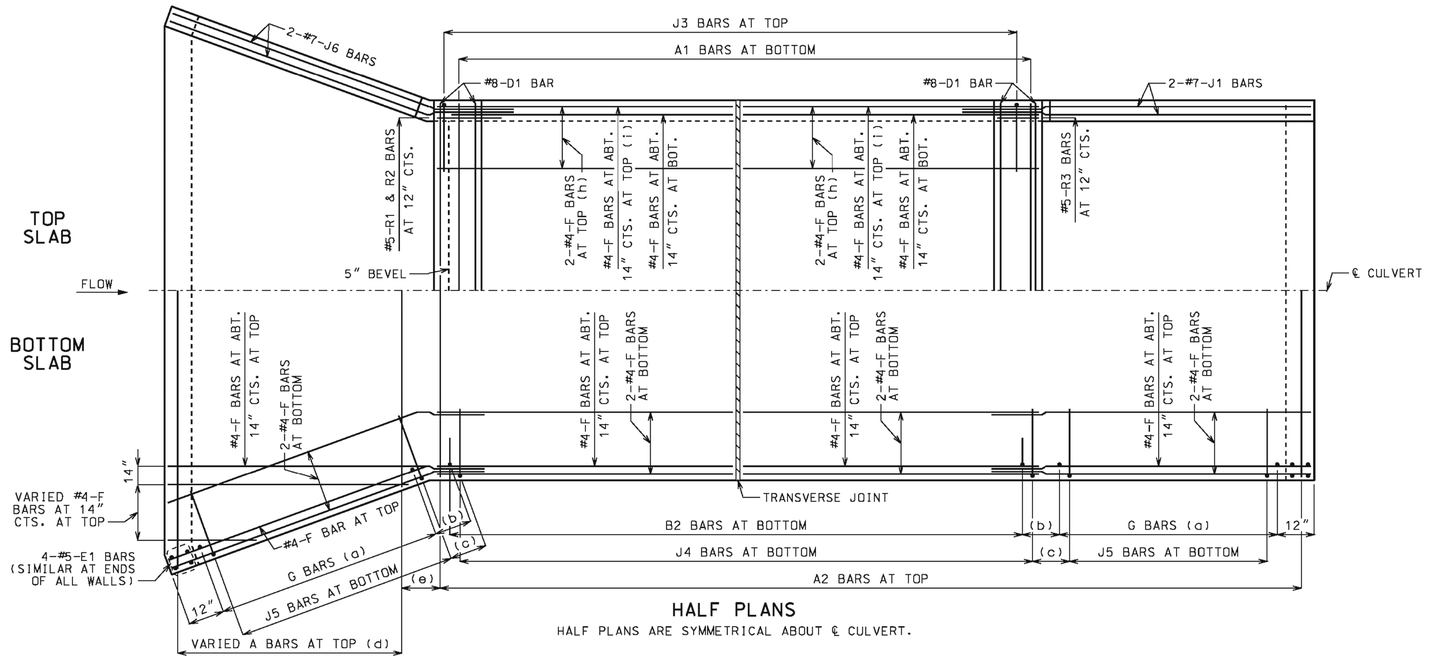
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

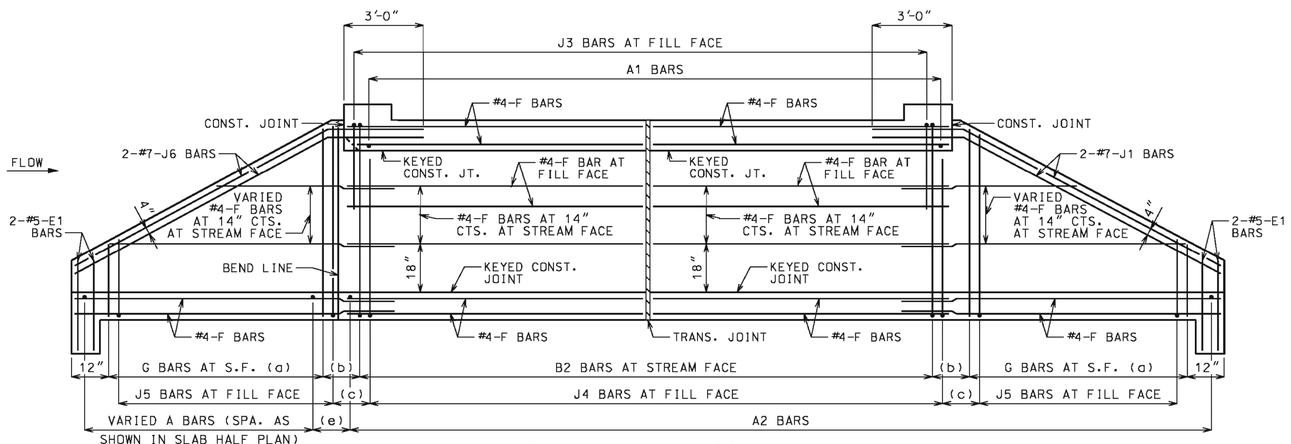
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project no.: 017-0642-R
drawing no.: STM-DTL02 R170642
date: 3/28/2025

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DATE: Mar 26, 2025 6:18pm XREFS: C_PTBLK_R170642



HALF PLANS

HALF PLANS ARE SYMMETRICAL ABOUT ℄ CULVERT.



DEVELOPED ELEVATION

J1 AND J6 BARS MAY BE BENT IN FIELD OR SHOP.

LAYING OUT TRANVERSE JOINTS

UNLESS SHOWN ON ROADWAY OR BRIDGE PLANS

USE A TRANSVERSE JOINT WHEN BARREL LENGTH IS OVER 80 FEET. USE ADDITIONAL JOINTS TO LIMIT CUT SECTION LENGTH AND END SECTION BARREL LENGTH MEASURED ALONG CENTERLINE OF CULVERT TO 50 FEET.

MINIMUM END SECTION LENGTH SHALL BE 3 FEET MEASURED ALONG THE SHORTEST WALL FROM THE INSIDE FACE OF HEADWALL TO THE TRANSVERSE JOINT.

TO AVOID LOCATING TRANSVERSE JOINTS UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS THE FOLLOWING SHALL APPLY:

BARREL LENGTH UP TO 90 FEET WITHOUT A TRANSVERSE JOINT

CUT SECTION LENGTHS UP TO 60 FEET

WHEN BARREL AND CUT SECTION LENGTH RESTRICTIONS REQUIRE TRANSVERSE JOINTS TO BE LOCATED UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS, THE JOINTS SHALL BE LOCATED TO MINIMIZE THE LENGTH OF JOINT UNDER THE TRAVELED WAY.

TRAVELED WAY IS THE ROADWAY WIDTH MINUS SHOULDER WIDTHS.

FOR CUT SECTION DETAILS, SEE 703.16.

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

GENERAL NOTES:

FOR SECTIONS THRU BARREL, WINGS AND HEADWALLS, SEE SHEET 3 OF 3. FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.17. FOR J5 BARS, SEE 703.37.

CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY IN HALF PLANS AND ELEVATION. SEE SHEET 3 OF 3 FOR DETAILS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½".

LAP LONGITUDINAL BARS A MINIMUM OF 23" AT SPLICES.

BEVELED HEADWALL SHALL BE LOCATED AT UPSTREAM END.

(a) SAME SIZE AND SPACING AS B2 BARS

(b) VARIES, 12" MAXIMUM

(c) J4 BAR SPACING

(d) SAME SIZE AND SPACING AS B2 BARS

(e) A2 BAR SPACING

(f) NOT SPECIFIED ON THIS SHEET

(g) NOT SPECIFIED ON THIS SHEET

(h) FOR DESIGN FILLS OVER 2'-0"

(i) FOR DESIGN FILLS 2'-0" OR LESS

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CONCRETE SINGLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

REINFORCEMENT

DATE EFFECTIVE: 07/01/2015
DATE PREPARED: 5/13/2015

703.11J

SHEET NO. 2 OF 3

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CITY OF JOPLIN

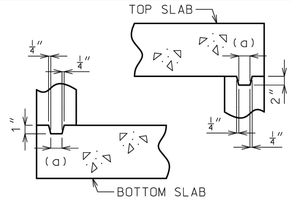
JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no. STM-DTL02_R170642
date: 3/28/2025

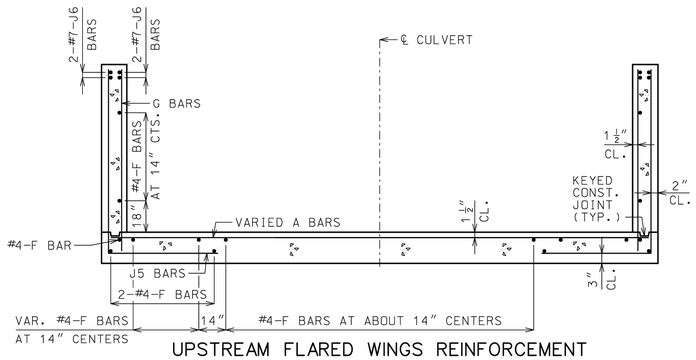
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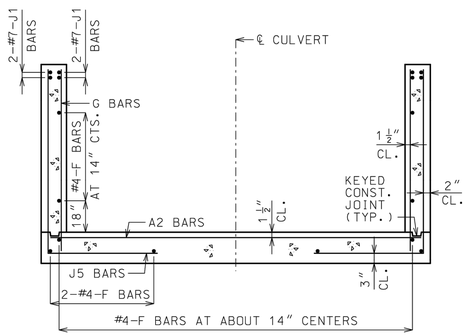


KEYED CONSTRUCTION JOINT

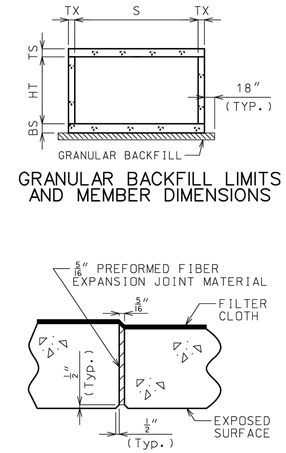
(a) APPROXIMATELY ONE-THIRD OF WALL THICKNESS



UPSTREAM FLARED WINGS REINFORCEMENT



DOWNSTREAM WINGS REINFORCEMENT

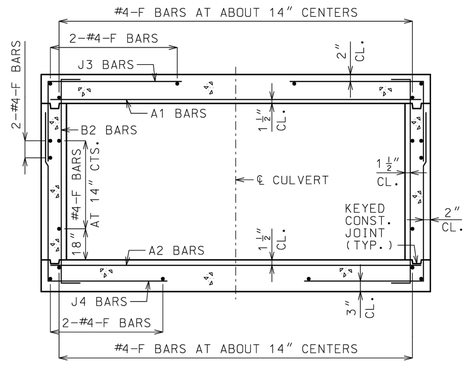


GRANULAR BACKFILL LIMITS AND MEMBER DIMENSIONS

TRANSVERSE JOINT THRU BARREL

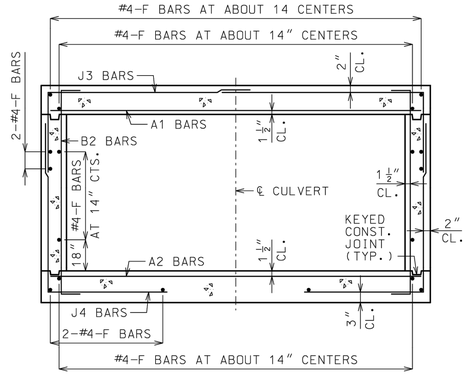
PREFORMED FIBER EXPANSION JOINT MATERIAL IN ACCORDANCE WITH SEC 1057 SHALL BE SECURELY STITCHED TO ONE FACE OF THE CONCRETE WITH 10 GAGE COPPER WIRE OR 12 GAGE SOFT DRAWN GALVANIZED STEEL WIRE.

FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE CENTERED ON TRANSVERSE JOINTS IN TOP SLAB AND SIDEWALLS WITH EDGES SEALED WITH MASTIC OR TWO SIDED TAPE. FILTER CLOTH SHALL BE A SEPARATION GEOTEXTILE IN ACCORDANCE WITH SEC 1011. COST OF FURNISHING AND INSTALLING FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.



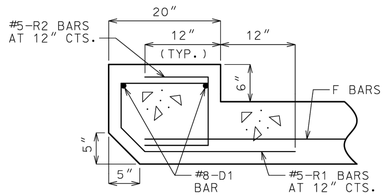
BARREL REINFORCEMENT

FOR DESIGN FILLS OVER 2'-0"

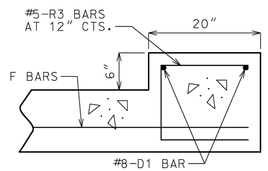


BARREL REINFORCEMENT

FOR DESIGN FILLS 2'-0" OR LESS



UPSTREAM HEADWALL REINFORCEMENT



DOWNSTREAM HEADWALL REINFORCEMENT

GENERAL NOTES:

FOR MEMBER THICKNESS AND FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.17. FOR J5 BARS, SEE 703.37.

BARREL AND WINGS SECTIONS ARE SYMMETRICAL ABOUT AND NORMAL TO ℄ CULVERT. HEADWALL SECTIONS ARE NORMAL TO LONG DIRECTION OF HEADWALL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½".

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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STATE OF MISSOURI — DENNIS W. HECKMAN — NUMBER PE-27141 — PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE SINGLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

SECTIONS

DATE EFFECTIVE: 01/01/2021
DATE PREPARED: 10/14/2020

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SHEET NO. 3 OF 3

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

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

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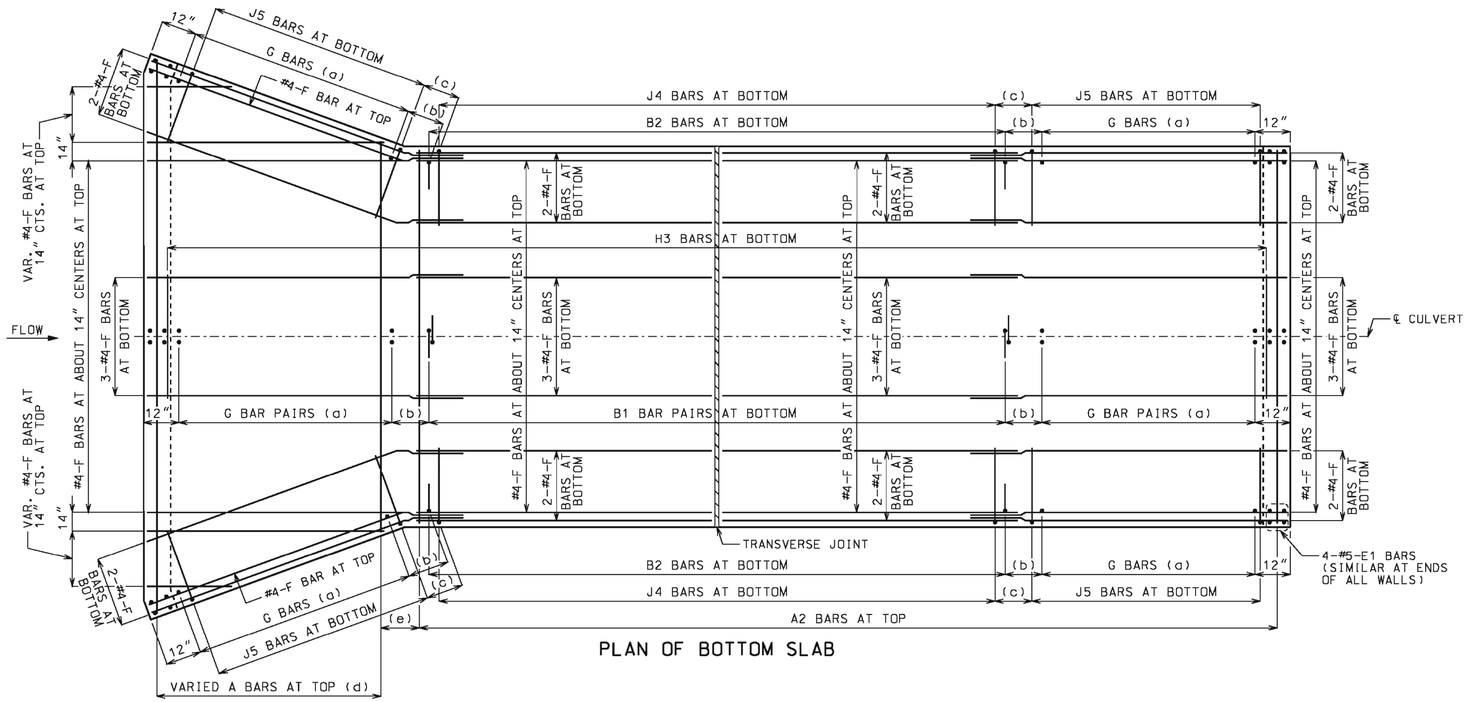
JOPLIN, MISSOURI

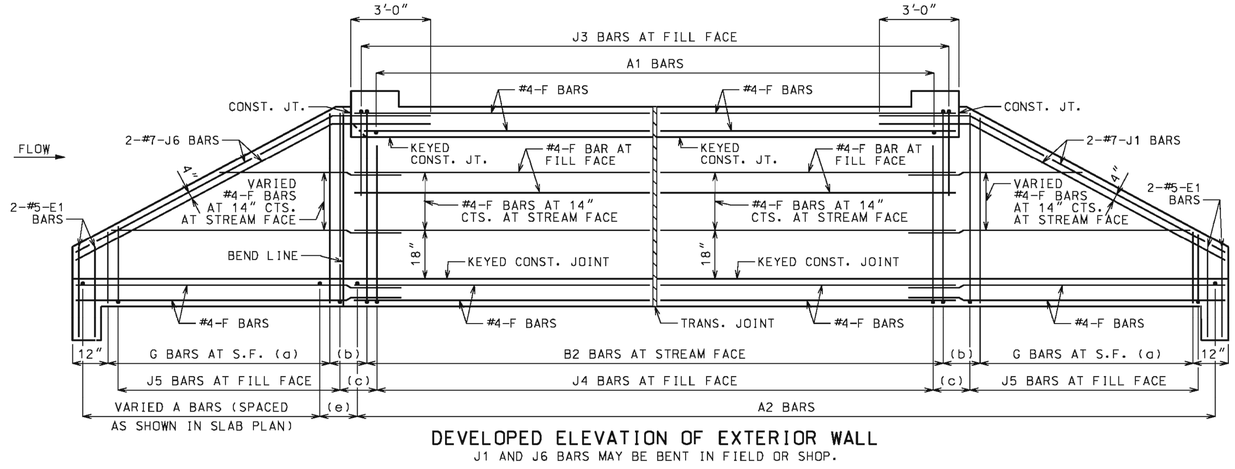
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no: STM-DTL02_R170642
date: 3/28/2025

SHEET 69 of 120

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DEVELOPED ELEVATION OF EXTERIOR WALL

J1 AND J6 BARS MAY BE BENT IN FIELD OR SHOP.

LAYING OUT TRANVERSE JOINTS

UNLESS SHOWN ON BRIDGE PLANS

USE A TRANSVERSE JOINT WHEN BARREL LENGTH IS OVER 80 FEET. USE ADDITIONAL JOINTS TO LIMIT CUT SECTION LENGTH AND END SECTION BARREL LENGTH MEASURED ALONG CENTERLINE OF CULVERT TO 50 FEET.

MINIMUM END SECTION LENGTH SHALL BE 3 FEET MEASURED ALONG THE SHORTEST WALL FROM THE INSIDE FACE OF HEADWALL TO THE TRANSVERSE JOINT.

TO AVOID LOCATING TRANSVERSE JOINTS UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS THE FOLLOWING SHALL APPLY:

BARREL LENGTH UP TO 90 FEET WITHOUT A TRANSVERSE JOINT

CUT SECTION LENGTHS UP TO 60 FEET

WHEN BARREL AND CUT SECTION LENGTH RESTRICTIONS REQUIRE TRANSVERSE JOINTS TO BE LOCATED UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS. THE JOINTS SHALL BE LOCATED TO MINIMIZE THE LENGTH OF JOINT UNDER THE TRAVELED WAY.

TRAVELED WAY IS THE ROADWAY WIDTH MINUS SHOULDER WIDTHS.

FOR CUT SECTION DETAILS, SEE 703.46.

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

GENERAL NOTES:

FOR SECTIONS THRU BARREL, WINGS AND HEADWALLS, SEE SHEET 3 OF 3. FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.47. FOR J5 BARS, SEE 703.37.

CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY IN PLAN AND ELEVATION, SEE SHEET 3 OF 3 FOR DETAILS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2 ".

LAP LONGITUDINAL BARS A MINIMUM OF 23" AT SPLICES.

BEVELED HEADWALL SHALL BE LOCATED AT UPSTREAM END.

(a) SAME SIZE AND SPACING AS ADJACENT B BARS

(b) VARIES, 12" MAXIMUM

(c) J4 BAR SPACING

(d) SAME SIZE AND SPACING AS A2 BARS

(e) A2 BAR SPACING

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DENNIS W. HECKMAN NUMBER PE-27141 STATE OF MISSOURI PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE DOUBLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

REINFORCEMENT

DATE EFFECTIVE: 10/01/2011
DATE PREPARED: 5/13/2015

703.41H

SHEET NO. 1 OF 3

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STATE OF MISSOURI JONATHAN W. PEITZ NUMBER PE-2017019023 PROFESSIONAL ENGINEER 2025

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

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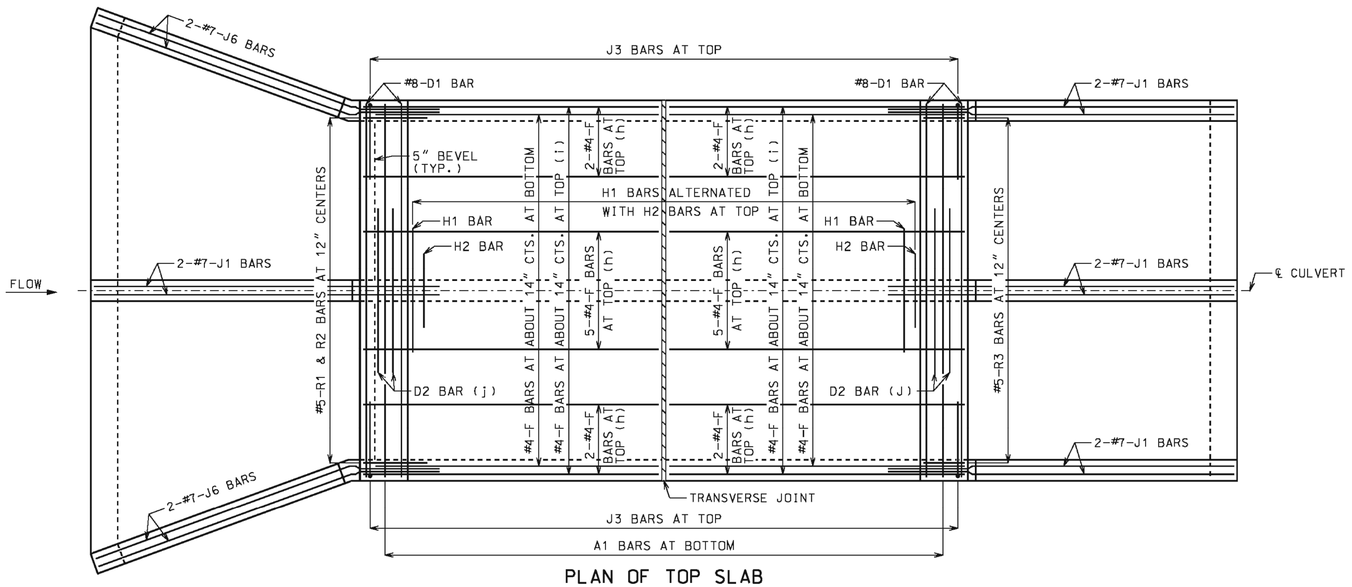
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JOPLIN, MISSOURI

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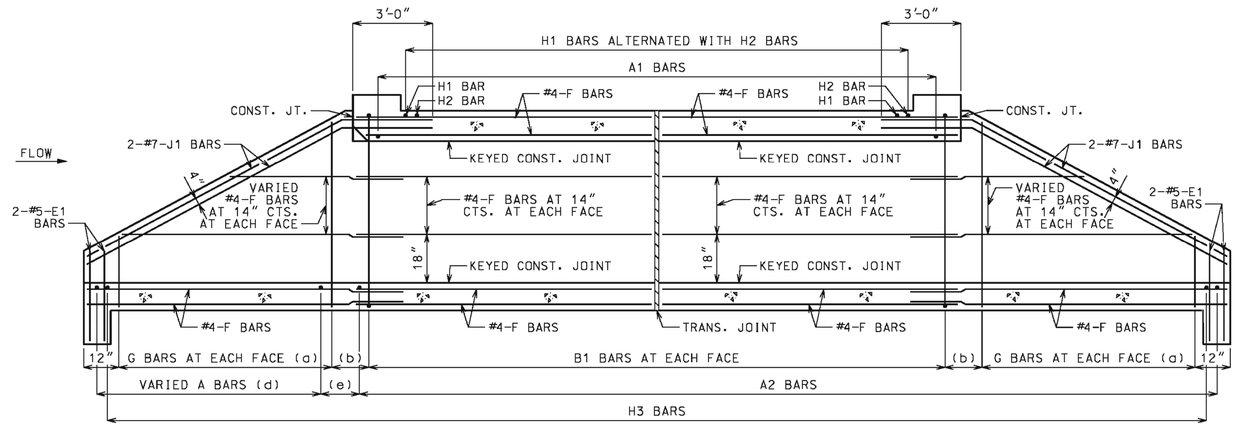
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DATE: Mar 26, 2025 6:19pm XREFS: C_PTBLK_R170642



PLAN OF TOP SLAB

B BARS IN WALLS ARE NOT SHOWN FOR CLARITY.
FOR PLACEMENT, SEE SHEET 1 OF 3.



SECTION NEAR INTERIOR WALL

J1 BARS MAY BE BENT IN FIELD OR SHOP.

GENERAL NOTES:

FOR SECTIONS THRU BARREL, WINGS AND HEADWALLS, SEE SHEET 3 OF 3. FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.47. FOR J5 BARS, SEE 703.37.

CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY IN PLAN AND SECTION, SEE SHEET 3 OF 3 FOR DETAILS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½".

LAP LONGITUDINAL BARS A MINIMUM OF 23" AT SPLICES.

BEVELED HEADWALL SHALL BE LOCATED AT UPSTREAM END.

(a) SAME SIZE AND SPACING AS ADJACENT B BARS

(b) VARIES, 12" MAXIMUM

(c) NOT SPECFIED ON THIS SHEET

(d) SAME SIZE AND SPACING AS A2 BARS

(e) A2 BAR SPACING

(f) NOT SPECFIED ON THIS SHEET

(g) NOT SPECFIED ON THIS SHEET

(h) FOR DESIGN FILLS OVER 2'-0"

(i) FOR DESIGN FILLS 2'-0" OR LESS

(j) NOT REQUIRED FOR CLEAR SPANS ≤ 10'-0"
#8 FOR CLEAR SPAN > 10'-0"
#9 FOR CLEAR SPAN > 13'-0"

IF REQUIRED, THE MINIMUM LENGTH EACH SIDE OF ℄ WALL SHALL BE THE GREATER OF 48 BAR DIAMETERS OR ¼ CLEAR SPAN. THE CLEAR SPAN IS PARALLEL TO LONG DIRECTION OF HEADWALL.

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

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CONCRETE DOUBLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

REINFORCEMENT

DATE EFFECTIVE: 10/01/2011
DATE PREPARED: 5/13/2015

703.41H

SHEET NO. 2 OF 3

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STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER — 2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

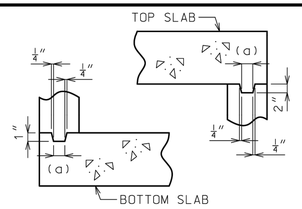
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STORM SEWER DETAILS
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN
JOPLIN, MISSOURI
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no. STM-DTL02_R170642
date: 3/28/2025

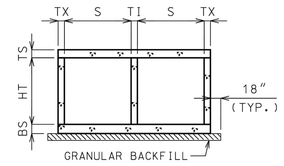
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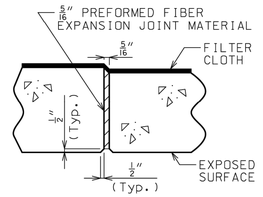


KEYED CONSTRUCTION JOINT

(a) APPROXIMATELY ONE-THIRD OF WALL THICKNESS



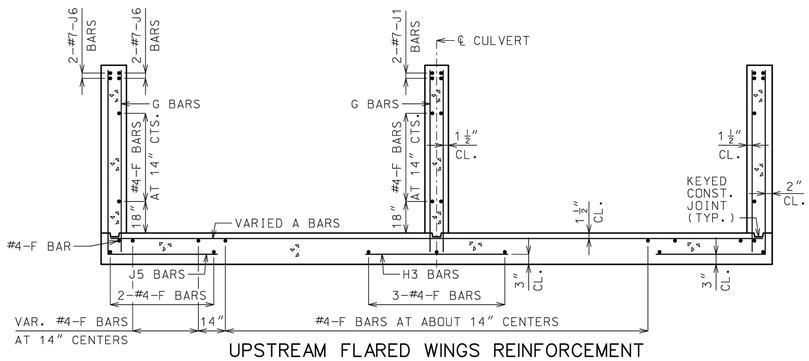
GRANULAR BACKFILL LIMITS AND MEMBER DIMENSIONS



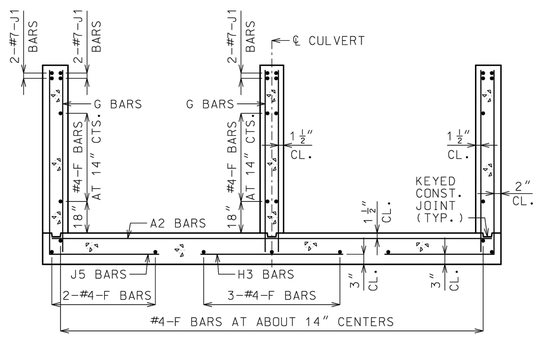
TRANSVERSE JOINT THRU BARREL

PREFORMED FIBER EXPANSION JOINT MATERIAL IN ACCORDANCE WITH SEC 1057 SHALL BE SECURELY STITCHED TO ONE FACE OF THE CONCRETE WITH 10 GAGE COPPER WIRE OR 12 GAGE SOFT DRAWN GALVANIZED STEEL WIRE.

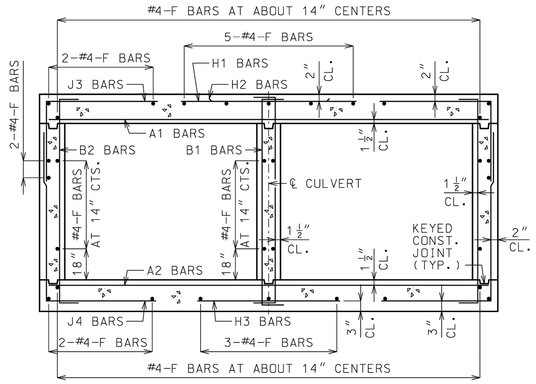
FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE CENTERED ON TRANSVERSE JOINTS IN TOP SLAB AND SIDEWALLS WITH EDGES SEALED WITH MASTIC OR TWO SIDED TAPE. FILTER CLOTH SHALL BE A SEPARATION GEOTEXTILE IN ACCORDANCE WITH SEC 1011. COST OF FURNISHING AND INSTALLING FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.



UPSTREAM FLARED WINGS REINFORCEMENT

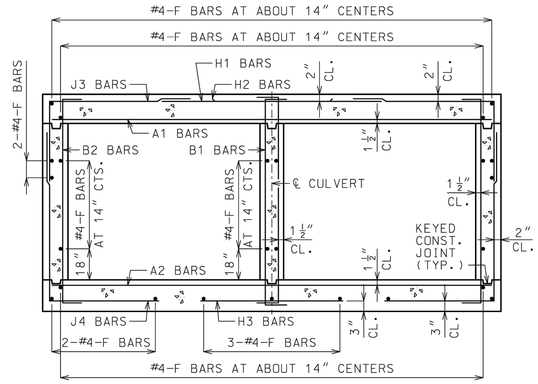


DOWNSTREAM WINGS REINFORCEMENT



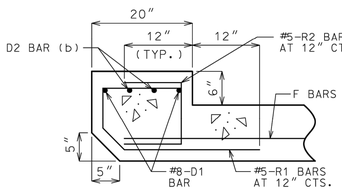
BARREL REINFORCEMENT

FOR DESIGN FILLS OVER 2'-0"



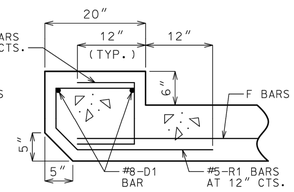
BARREL REINFORCEMENT

FOR DESIGN FILLS 2'-0" OR LESS



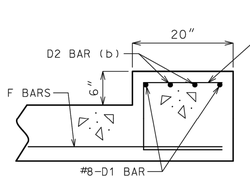
UPSTREAM HEADWALL REINFORCEMENT

NEAR INTERIOR WALL



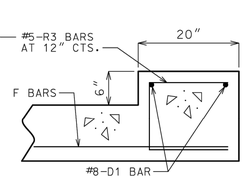
UPSTREAM HEADWALL REINFORCEMENT

NEAR MIDSPAN



DOWNSTREAM HEADWALL REINFORCEMENT

NEAR INTERIOR WALL



DOWNSTREAM HEADWALL REINFORCEMENT

NEAR MIDSPAN

(b) #8 FOR CLEAR SPAN > 10'-0"
#9 FOR CLEAR SPAN > 13'-0"
NOT REQUIRED FOR CLEAR SPANS ≤ 10'-0"

IF D2 BARS ARE REQUIRED, THE MINIMUM LENGTH EACH SIDE OF ℄ WALL SHALL BE THE GREATER OF 48 BAR DIAMETERS OR ¼ CLEAR SPAN. THE CLEAR SPAN IS PARALLEL TO LONG DIRECTION OF HEADWALL.

GENERAL NOTES:

FOR MEMBER THICKNESS AND FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.47. FOR J5 BARS, SEE 703.37.

BARREL AND WINGS SECTIONS ARE SYMMETRICAL ABOUT AND NORMAL TO ℄ CULVERT. HEADWALL SECTIONS ARE NORMAL TO LONG DIRECTION OF HEADWALL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1½".

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

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

STATE OF MISSOURI
DENNIS W. HECKMAN
NUMBER PE-27141
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE DOUBLE BOX CULVERT

SKEW: SQUARED
WINGS: FLARED

SECTIONS

DATE EFFECTIVE: 01/01/2021
DATE PREPARED: 10/14/2020

703.41H

SHEET NO. 3 OF 3

olsson
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
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REVISIONS

STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

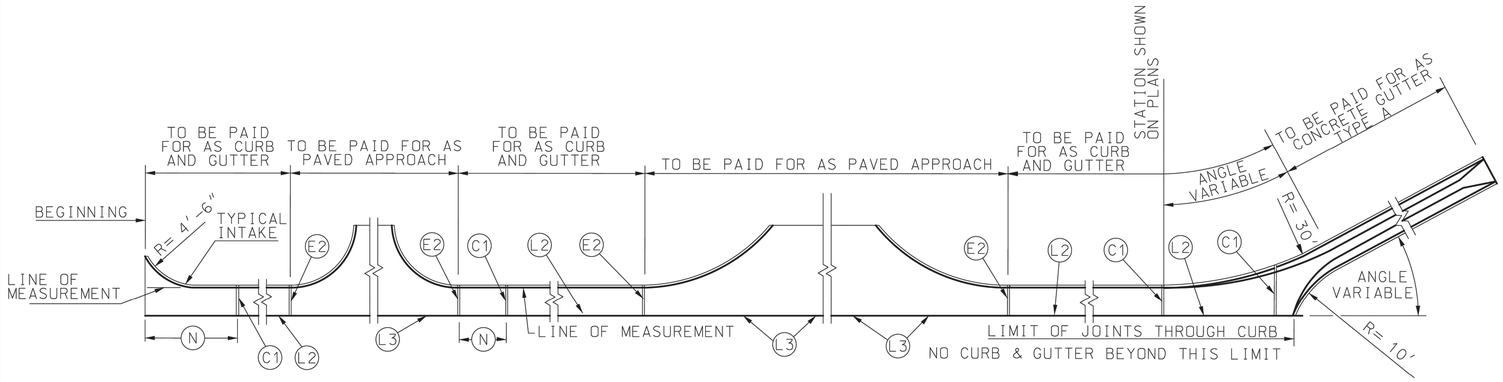
JOPLIN, MISSOURI

2025

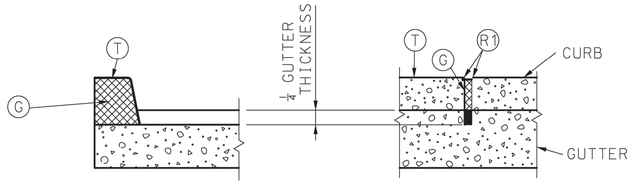
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date: 3/28/2025

SHEET 72 of 120

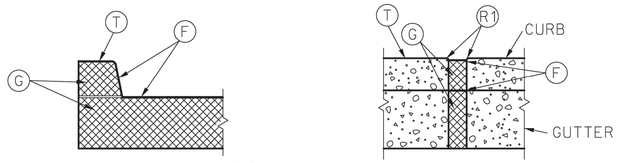
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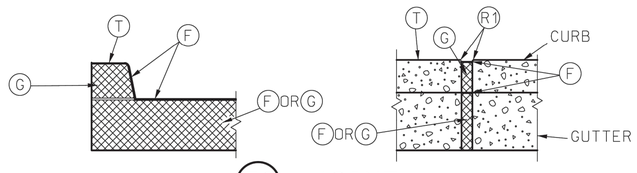
PLAN OF MEASUREMENT OF CURB & GUTTER AND JOINT PLAN



C1 JOINT



E1 JOINT



E2 JOINT

LEGEND

- C1 ⅛" MAXIMUM WIDTH TRANSVERSE CONTRACTION JOINT (PREFORMED OR SAWED).
- E1 2" TRANSVERSE EXPANSION JOINT (PREFORMED OR SAWED).
- E2 ½" TRANSVERSE EXPANSION JOINT (PREFORMED OR SAWED).
- F FILLER FOR JOINTS – HOT POURED.
- G PREFORMED JOINT FILLER MATERIAL.
- L2 LONGITUDINAL JOINT WITH TIE BARS.
- L3 LONGITUDINAL JOINT WITHOUT TIE BARS.
- N NOT LESS THAN 10' OR MORE THAN 30'.
- T TOP OF CURB.
- R1 ROUND TO ¼" RADIUS (EXCEPT FOR SAWED JOINTS).

GENERAL NOTES:

A MINIMUM 4" TYPE 1 OR 5 AGGREGATE BASE SHALL BE PLACED BENEATH ALL CURB AND GUTTER SECTIONS AND INCLUDED WITHIN THE MAINLINE BASE PAY LIMITS.

WHEN CURBS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, CURB HEIGHT SHALL BE 4 INCH BARRIER CURB, AS SHOWN ON STANDARD PLAN 606.00.

CURB, GUTTER AND CURB AND CUTTER CONSTRUCTED ALONG AND ATTACHED TO CONCRETE PAVEMENT OR BASE SHALL HAVE:

1. JOINT (C1) ONE-QUARTER DEPTH OF CURB AND GUTTER THICKNESS AS A CONTINUATION OF EACH CONTRACTION JOINT IN THE BASE OR PAVEMENT.
2. JOINT (E1) AS CONTINUATION OF 2" EXPANSION JOINT (E) IN THE CONCRETE BASE OR PAVEMENT SHALL EXTEND AND CONTINUE THROUGH THE CURB, CUTTER AND CURB AND GUTTER.
3. JOINT (E2) THROUGH CURB AND CURB AND CUTTER AT THE BEGINNING AND END OF EACH PAVED APPROACH.

CURB, CURB AND GUTTER AND GUTTER CONSTRUCTED APART OR SEPARATED FROM CONCRETE BASE OR PAVEMENT OR AS A FORM FOR ASPHALTIC CONCRETE PAVEMENT SHALL HAVE A JOINT (E2) ENTIRELY THROUGH THE CURB, CURB AND GUTTER AND GUTTER, AT THE BEGINNING AND END OF EACH "PAVED APPROACH" AND A JOINT (C1) TO ¼ DEPTH OF CURB AND GUTTER THICKNESS AT INTERVALS OF 30 FEET BETWEEN APPROACHES.

JOINTS (E1) AND (E2) THROUGH CURB SHALL BE FILLED WITH PREFORMED FILLER MATERIAL AND SEALED WITH HOT POURED FILLER FOR JOINTS.

JOINT (E1) IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH HOT FILLER MATERIAL.

JOINT (E2) IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH FILLER OR FILLED WITH HOT POURED FILLER.

PREFORMED FILLER MATERIAL SHALL BE PLACED TO PROVIDE 1" HOT POURED FILLER FOR JOINTS.

THE BARRIER CLASS CURBS MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6 FEET OR LESS. THE (R2) WILL BE REQUIRED.

WHERE A SIDEWALK INTERSECTS A CURB. THE SIDEWALK SHALL BE RAMPED NO STEEPER THAN 12:1 SLOPE TO PROVIDED ACCESS FOR WHEELCHAIR ACROSS APPROACHES.

PRECAST TYPE A AND B GUTTER ARE ONLY ALLOWED WHEN CONSTRUCTABILITY ISSUES MAKE CAST IN PLACE NOT PRACTICAL. PRECAST IS ONLY ALLOWED WITH THE APPROVAL OF THE ENGINEER. WHEN ALLOWED BY THE ENGINEER, TYPES A AND B GUTTER MAY BE PRECAST TO CONFORM TO THE DIMENSIONS SHOWN. THE PRECASTER SHALL SUBMIT SHOP DRAWINGS INDICATING THE SECTION LENGTH, SECTION CONNECTION, AND PROPOSED JOINT SEALING SYSTEM. WHEN PRECAST SECTIONS CANNOT CONFORM TO ANY VERTICAL OR HORIZONTAL CURVE THEN CAST IN PLACE IS THE ONLY OPTION. A COMBINATION OF CAST IN PLACE AND PRECAST GUTTER MAY BE PERMITTED.

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. 1 OF 2

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TEL 417.781.0643
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STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER — 2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STORM SEWER DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no. STM-DTL02 R170642
date: 3/28/2025

SHEET 73 of 120

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LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- CULVERT INLET PROTECTION
- SILT SOCK
- SEEDED AREA
- SPECIAL SEEDING AREA

BEGIN CONSTRUCTION
ZORA STREET
STA 110+82.18

E. ZORA STREET

PARCEL 7
LAWVER INVESTMENTS, LLC

PARCEL 8
SCHLEGEL PROPERTIES

PARCEL 8A
SCHLEGEL PROPERTIES

PARCEL 9
SWMO DEVELOPMENT, INC.

PARCEL 10
CNJ DEVELOPERS, INC.

PARCEL 11
SHAWN E. & MARK L. HARRIS

PARCEL 12
GIL L. SALGADO

PARCEL 13
ROBERT D. & CLARICE A. McLAUGHLIN TRUST

PARCEL 14
ZORA 4551

PARCEL 15
JOPLIN LAND & RENTALS

AMERICAN TELEPHONE EASEMENT

ELECTRICAL EASEMENT

PROPOSED R/W

GRADING LIMITS

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED PERMANENT DRAINAGE EASEMENT

EXISTING R/W

PDE

OUTFALL 1

OUTFALL 2

℄ DRIVEWAY STA 114-00 LT

℄ DRIVEWAY STA 112-25 RT

℄ DRIVEWAY STA 112-80 RT

℄ DRIVEWAY STA 117-25 LT

℄ DRIVEWAY STA 115-75 RT

℄ CENTER LANE

PI: 110+82.18

PT: 110+57.18

PI: 111+99.92

PI: 114+99.92

PI: 49+69.20

PI: 121+16.85

STA 115+50.00

STA 155+50.00

MATCHLINE SEE SHEET

SCALE IN FEET 0' 10' 20' 40'

EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
I – STORM SEWER INSTALLATION & PRIOR TO ROADWAY GRADING	1	STAGING AREA	III	
	2	TEMPORARY CONSTRUCTION ENTRANCE	III	
	3	CONCRETE WASHOUT	III	
	4	SILT SOCK	IV	INSTALL BEFORE STORM SEWER INSTALLATION
	5	CURB INLET/AREA INLET PROTECTION	III	PROTECT ALL OPEN BOXES WITH SILT FENCE PER CURB INLET DETAIL
II – ROADWAY GRADING & STORM SEWER INSTALLATION				
III – PAVING	6	CURB INLET/AREA INLET/CULVERT INLET PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	7	SEEDING	IV	SEE THIS SHEET FOR SODDING PLANS

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EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

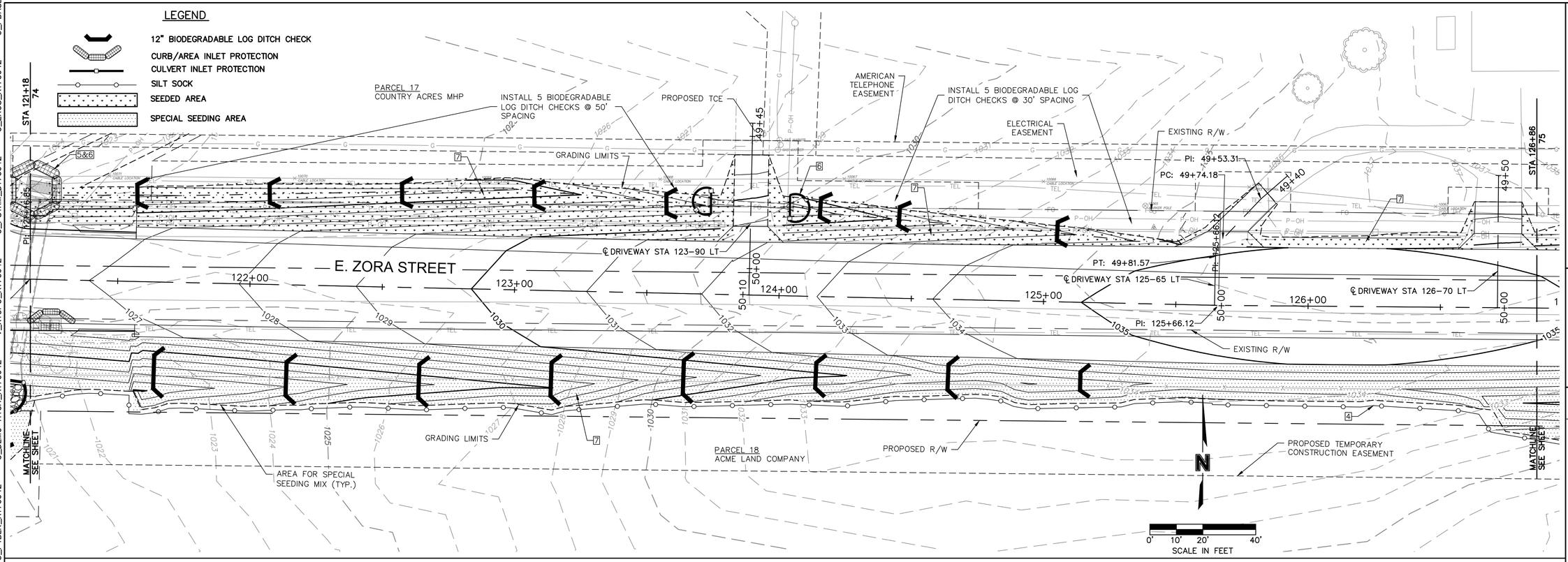
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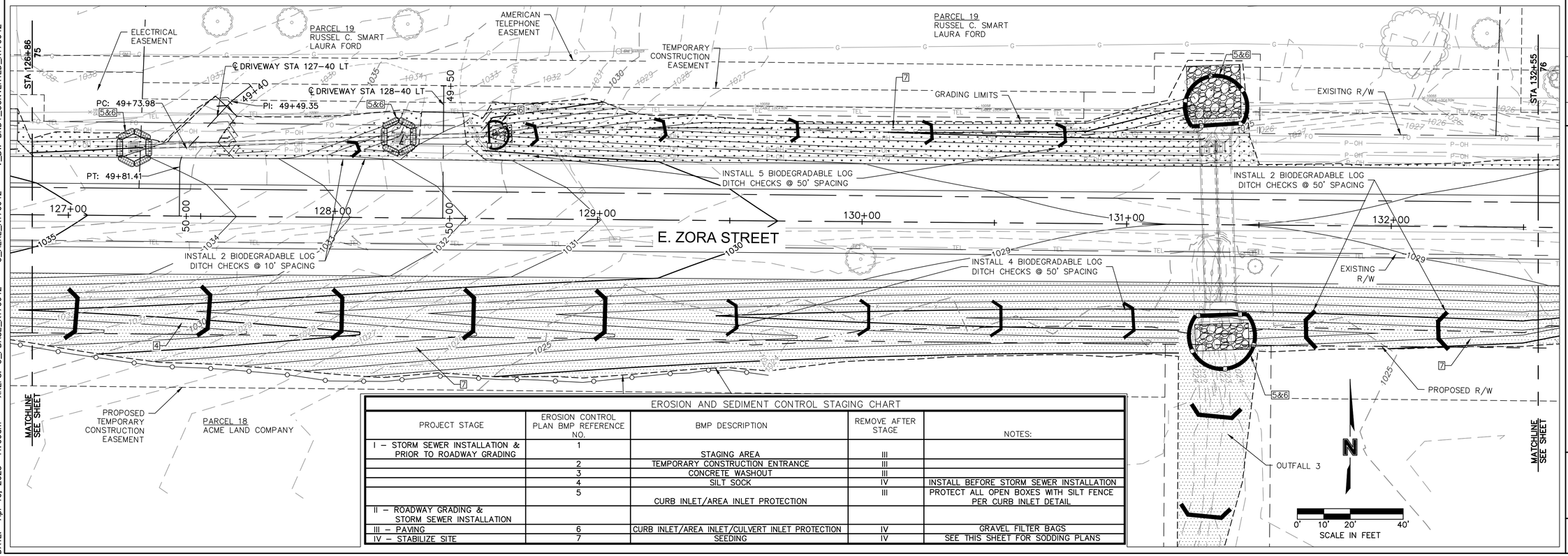
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LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- CULVERT INLET PROTECTION
- SILT SOCK
- SEEDED AREA
- SPECIAL SEEDING AREA





EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
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IV – STABILIZE SITE	7	SEEDING	IV	SEE THIS SHEET FOR SODDING PLANS

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EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

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CITY OF JOPLIN

JOPLIN, MISSOURI

2025

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AMERICAN TELEPHONE EASEMENT

PARCEL 23
CHILDRESS ROYALTY COMPANY

PROPOSED TCE

INSTALL 4 BIODEGRADABLE LOG DITCH CHECKS @ 50' SPACING

EXISTING R/W

GRADING LIMITS

STA 132+55
75

STA 138+24
76

℄ DRIVEWAY STA 133-10 LT

149+50

5&6

PI: 135+86.32

PI: 133+86.32

PI: 136+86.33

E. ZORA STREET

133+00

134+00

135+00

136+00

137+00

138+00

50+00

MATCHLINE
SEE SHEET

PARCEL 18
ACME LAND COMPANY

AREA FOR SPECIAL SEEDING MIX (TYP.)

PROPOSED TCE

PROPOSED R/W

INSTALL 12 BIODEGRADABLE LOG DITCH CHECKS @ 50' SPACING

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 23
CHILDRESS ROYALTY COMPANY

GRADING LIMITS

PROPOSED R/W

PROPOSED EASEMENT

STA 138+24
76

STA 143+94
77

℄ DRIVEWAY STA 143-80 LT

49+50

PI: 138+91.70

E. ZORA STREET

INSTALL 28 BIODEGRADABLE LOG DITCH CHECKS @ 19' SPACING

139+00

140+00

141+00

142+00

143+00

44+

50+00

EXISTING R/W

℄ DRIVEWAY STA 143-90 RT

50+50

PROPOSED TCE

AREA FOR SPECIAL SEEDING MIX (TYP.)

INSTALL 11 BIODEGRADABLE LOG DITCH CHECKS @ 50' SPACING

PARCEL 18
ACME LAND COMPANY

MATCHLINE
SEE SHEET

N

0' 10' 20' 40'
SCALE IN FEET

EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
I – STORM SEWER INSTALLATION & PRIOR TO ROADWAY GRADING	1	STAGING AREA	III	
	2	TEMPORARY CONSTRUCTION ENTRANCE	III	
	3	CONCRETE WASHOUT	III	
	4	SILT SOCK	IV	INSTALL BEFORE STORM SEWER INSTALLATION
	5	CURB INLET/AREA INLET PROTECTION	III	PROTECT ALL OPEN BOXES WITH SILT FENCE PER CURB INLET DETAIL
II – ROADWAY GRADING & STORM SEWER INSTALLATION				
III – PAVING	6	CURB INLET/AREA INLET/CULVERT INLET PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	7	SEEDING	IV	SEE THIS SHEET FOR SODDING PLANS

olsson
Olsson - Civil Engineering
Missouri Certificate of Authority # 001592
1027 S. Main Street, Suite 503
Joplin, MO 64801
TEL 417.781.0643
www.olsson.com

STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
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 2
CITY OF JOPLIN

JOPLIN, MISSOURI

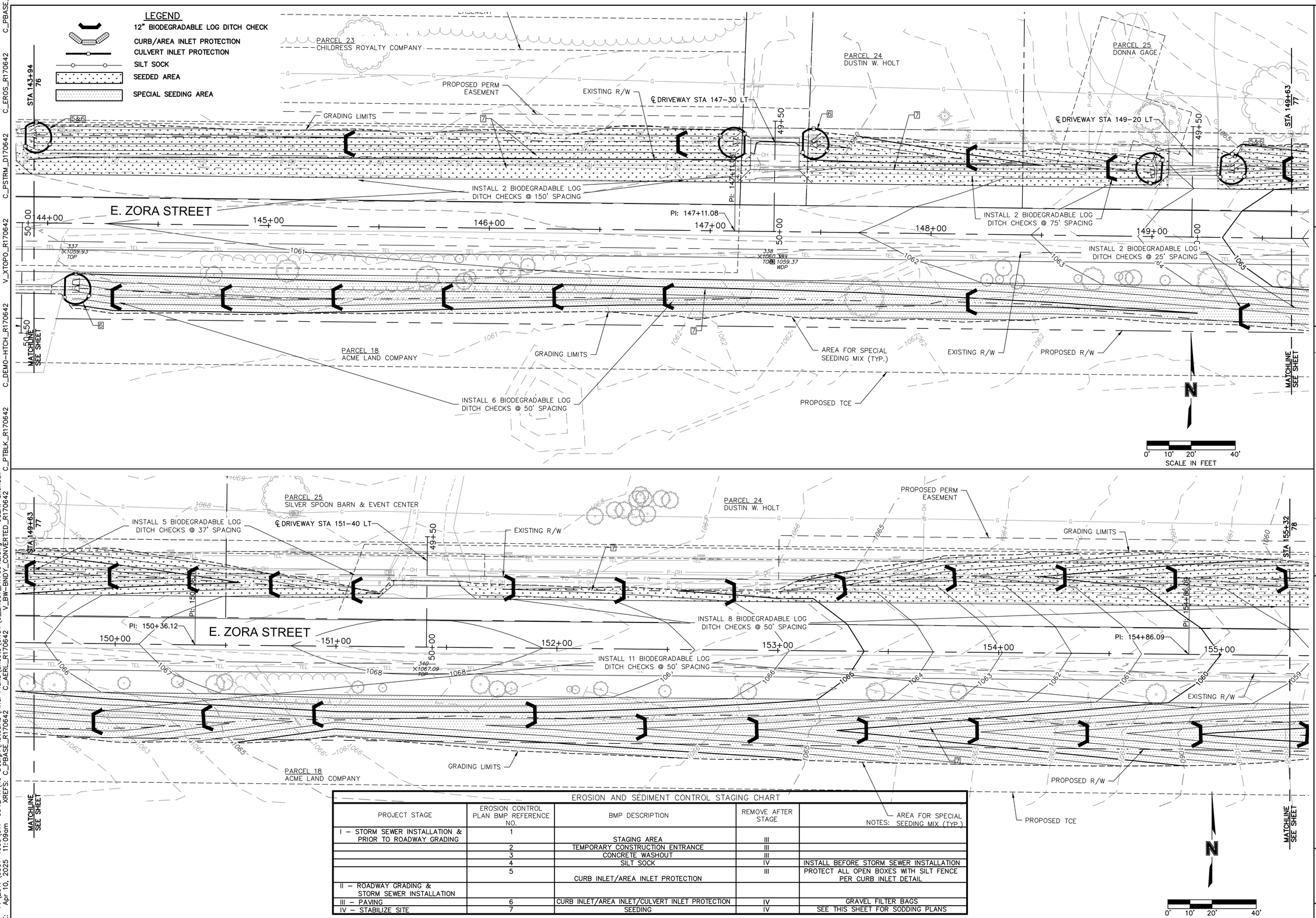
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_ERC01 R170642
date: 4/9/2025

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LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- CULVERT INLET PROTECTION
- SILT SOCK
- SEEDED AREA
- SPECIAL SEEDING AREA



EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
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EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: C_ERC01_R170642
date: 4/9/2025

SHEET
77 of 120

DWG: F:\2017\0501-1000\017-0642-R\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ERC01_R170642.dwg USER: skendall
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LEGEND

- 12" BIODEGRADABLE LOG DITCH CHECK
- CURB/AREA INLET PROTECTION
- CULVERT INLET PROTECTION
- SILT SOCK
- SEEDED AREA
- SPECIAL SEEDING AREA

STA 155+32.77

PARCEL 24
DUSTIN W. HOLT

5&6

PROPOSED PERM EASEMENT

7

EXISTING R/W

PARCEL 24
DUSTIN W. HOLT

GRADING LIMITS

STA 161+00.00
78

INSTALL 4 BIODEGRADABLE LOG DITCH CHECKS @ 30' SPACING

E. ZORA STREET

156+00 157+00 158+00 159+00 160+00 161+00

PC: 157+64.95

PT: 158+14.97

INSTALL 15 BIODEGRADABLE LOG DITCH CHECKS @ 30' SPACING

PARCEL 18
ACME LAND COMPANY

MATCHLINE SEE SHEET

5&6

PROPOSED PERM EASEMENT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

OUTFALL 4

INSTALL 3 BIODEGRADABLE LOG DITCH CHECKS @ 50' SPACING

AREA FOR SPECIAL SEEDING MIX (TYP.)

GRADING LIMITS

PROPOSED R/W

INSTALL 14 BIODEGRADABLE LOG DITCH CHECKS @ 30' SPACING

MATCHLINE SEE SHEET

N

0' 10' 20' 40'
SCALE IN FEET

PARCEL 27
BURDEN FAMILY TRUST

PROPOSED PERM EASEMENT

GRADING LIMITS

℄ DRIVEWAY STA 163-35 LT

49+50

EXISTING R/W

STA 161+00.00
78

163+40.70

PC: 163+40.70

INSTALL 8 BIODEGRADABLE LOG DITCH CHECKS @ 30' SPACING

E. ZORA STREET

161+00 162+00 163+00 164+00 165+00 166+00

50+00

PT: 165+27.35

INSTALL 5 BIODEGRADABLE LOG DITCH CHECKS @ 30' SPACING

AREA FOR SPECIAL SEEDING MIX (TYP.)

END CONSTRUCTION
ZORA STREET
STA 163+88.88

EXISTINR R/W

℄ DRIVEWAY STA 162-55 RT

50+49.86

GRADING LIMITS

℄ DRIVEWAY STA 163-35 RT

50+50

PARCEL 18
ACME LAND COMPANY

PARCEL 18
ACME LAND COMPANY

MATCHLINE SEE SHEET

PROPOSED R/W

PROPOSED TCE

N

0' 10' 20' 40'
SCALE IN FEET

EROSION AND SEDIMENT CONTROL STAGING CHART

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12/31/2025
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MO# PE-2017019023

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REVISIONS

EROSION CONTROL PLAN
SEEDING AND SODDING PLAN

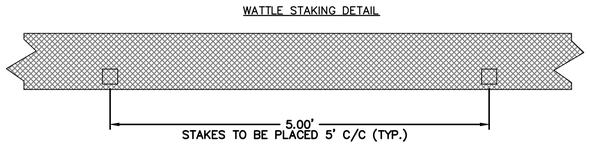
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

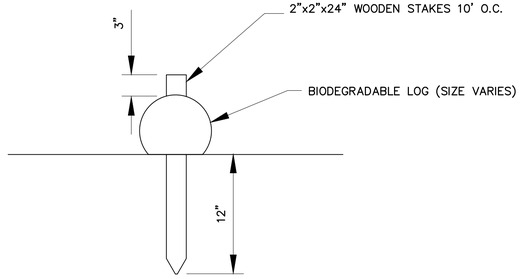
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JOPLIN, MISSOURI

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SHEET
78 of 120



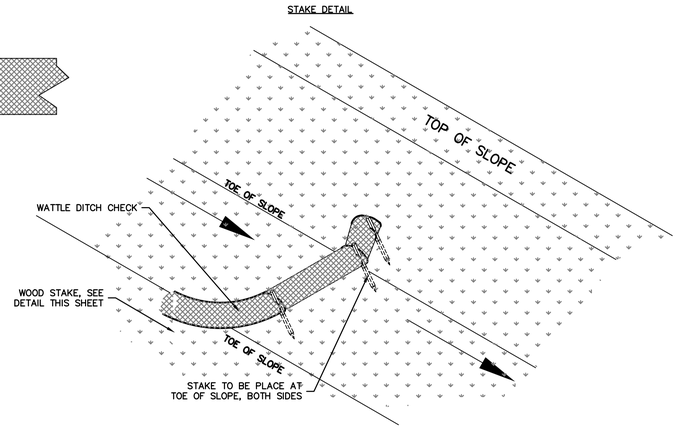


BIODEGRADABLE LOG

N.T.S.

NOTE:

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



INSTALLATION DETAIL

NOTES:

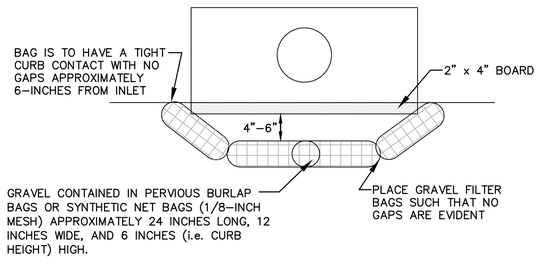
1. WATTLE BARRIER SHALL BE MAINTAINED UNTIL ADJACENT VEGETATION IS ESTABLISHED, OR AS DIRECTED BY ENGINEER.
2. 12" BIODEGRADABLE LOGS WILL BE USED FOR DITCH CHECKS.
3. WATTLE BARRIER SHALL BE INSPECTED AND REPAIRED, WEEKLY, IF NECESSARY, OR AS REQUIRED BY NPDES PERMIT.
4. WATTLE BARRIER REMOVALS WILL 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

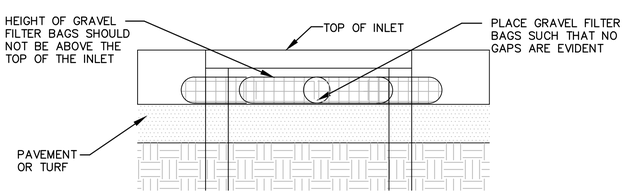
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN 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

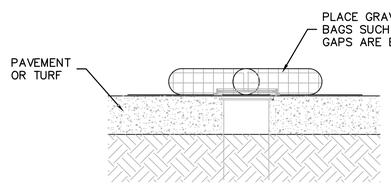
BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.



FRONT VIEW

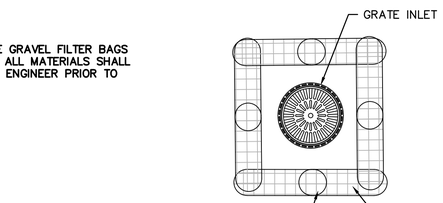
GRAVEL FILTER BAG AT CURB INLET DETAIL

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

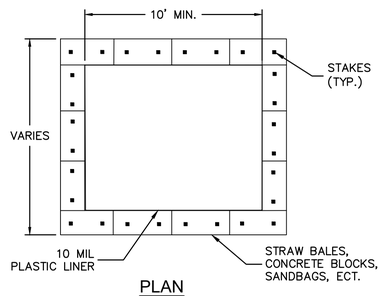
BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.

GRAVEL FILTER BAGS AROUND GRATE DETAIL

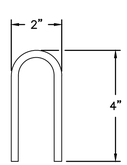
NOT TO SCALE

NOTES:

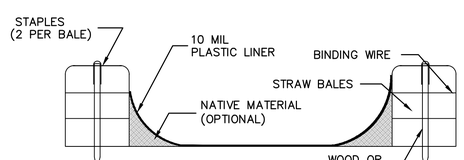
1. ACTUAL LAYOUT LOCATIONS & NUMBER OF WASHOUTS TO BE DETERMINED BY CONTRACTOR IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASHOUTS SHALL BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAINS, OPEN DRAINAGE FACILITIES AND WATER COURSES. 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

olsson
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Missouri Certificate of Authority # 001592
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2025

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

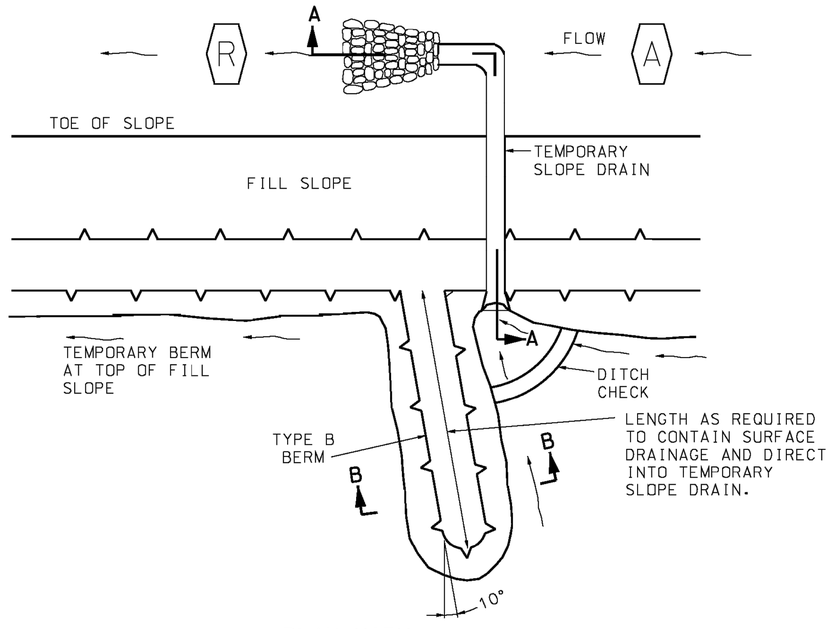
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JOPLIN, MISSOURI

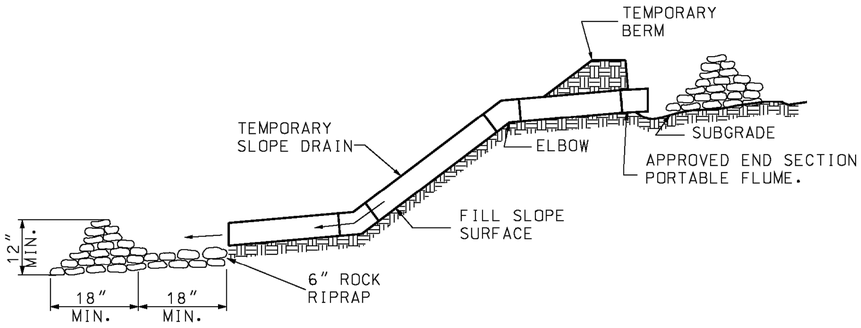
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checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.C_ERC-DTL_R170642
date: 3/28/2025

SHEET
79 of 120

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USER: skendall



PLAN VIEW



NOTE:

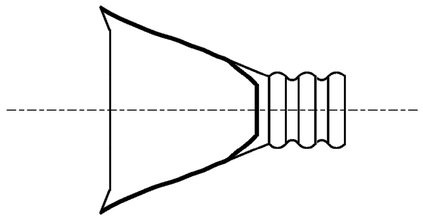
IN SOME CASES IT MAY BE NECESSARY TO EMBED METAL OR PLASTIC PIPE INTO THE FILL SLOPE TO SECURE PROPER ANCHORAGE.

SECTION A-A

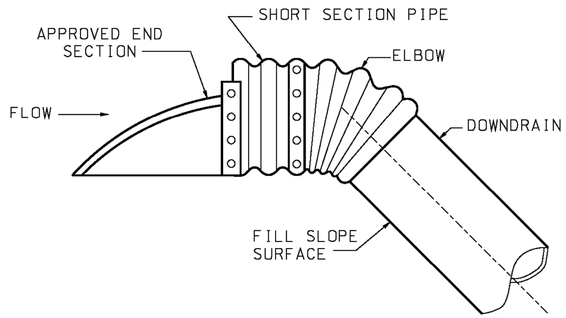
TEMPORARY BERM

(METAL, FLEXIBLE RUBBER OR PLASTIC PIPE)

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

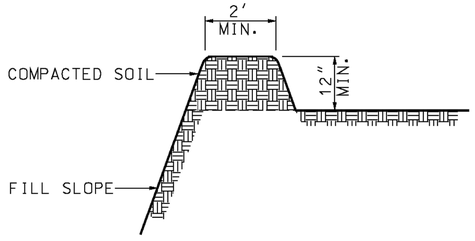


PLAN VIEW



SECTION VIEW

TEMPORARY SLOPE DRAIN INLET TREATMENT



SECTION B-B
TYPE B BERM

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

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Missouri Certificate of Authority # 001592
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JOPLIN, MISSOURI

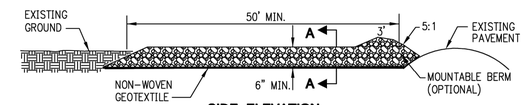
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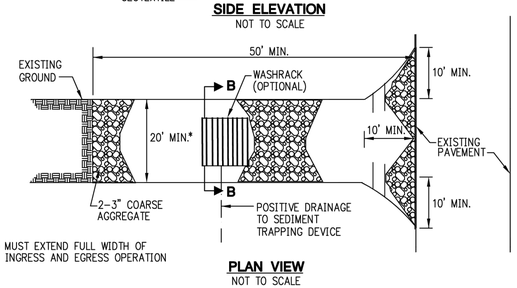
SHEET 80 of 120

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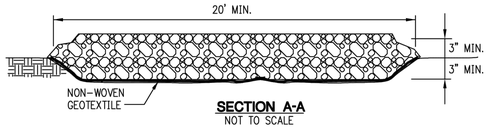
TEMPORARY CONSTRUCTION ENTRANCE



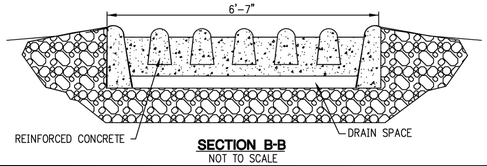
SIDE ELEVATION
NOT TO SCALE



PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

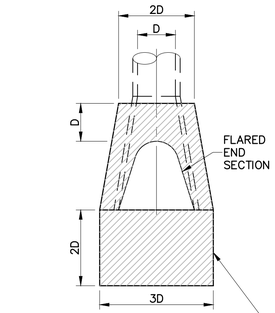
TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

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.

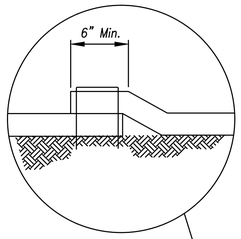
TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE



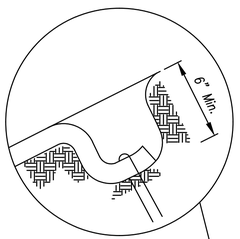
EITHER 12" THICK TYPE 2 ROCK BLANKET (CITY OF JOPLIN SPEC.) OR SCOUR STOP

SLOPE PROTECTION DETAIL
N.T.S.

Longitudinal Seam



Anchor Slot

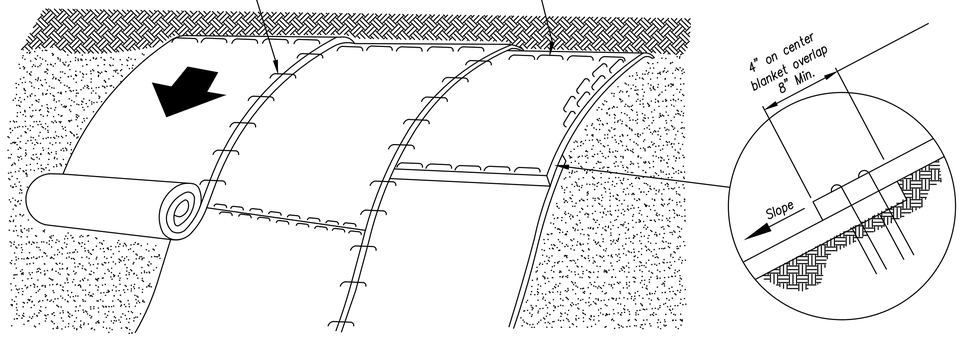


General Notes:

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:

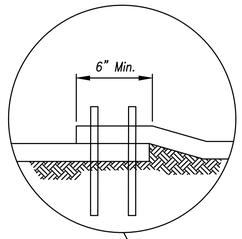
1. *Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.*
2. *Edges or seams that are loose or frayed shall be secured.*



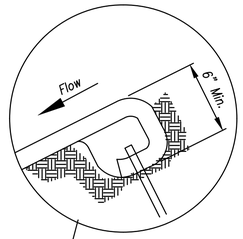
Installation on Slopes

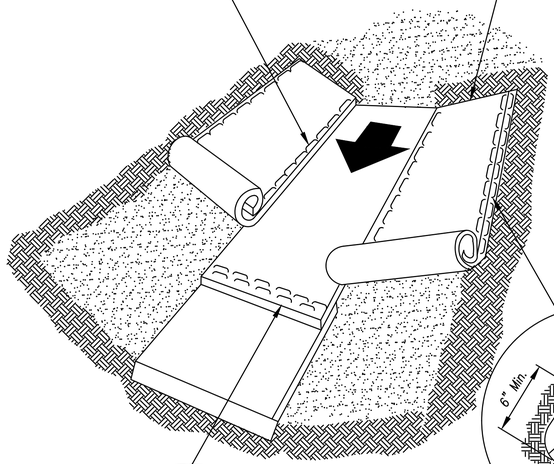
Splice Seam

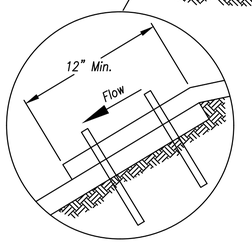
Longitudinal Seam



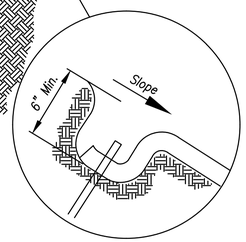
Anchor Fold







Splice Seam



Edge Anchor

EROSION CONTROL BLANKET
NOT TO SCALE

Notes for Installation in Channels:

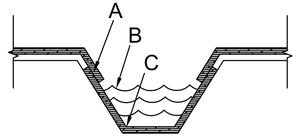
1. *Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.*
2. *ANCHOR FOLD: The top of the mat should be folded 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:

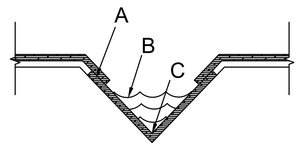
A – *Overlaps and seams;*

B – *Projected water line;*

C – *Channel bottom / side slope vertices;*



Trapezoidal Channel



V Channel

Installation in Channels

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2025

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EROSION CONTROL DETAILS

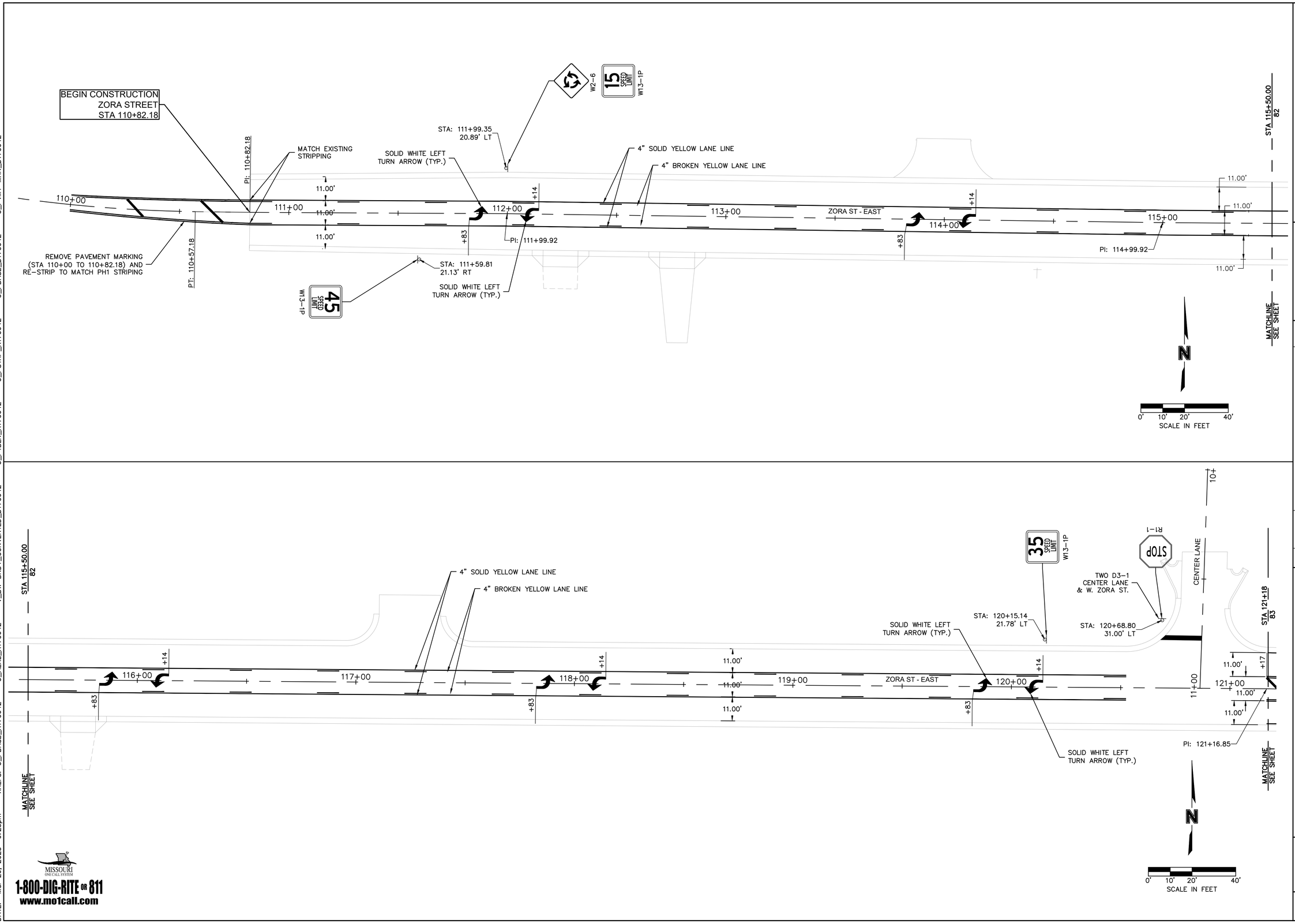
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.C_ERC-DTL_R170642
date: 3/28/2025

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ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

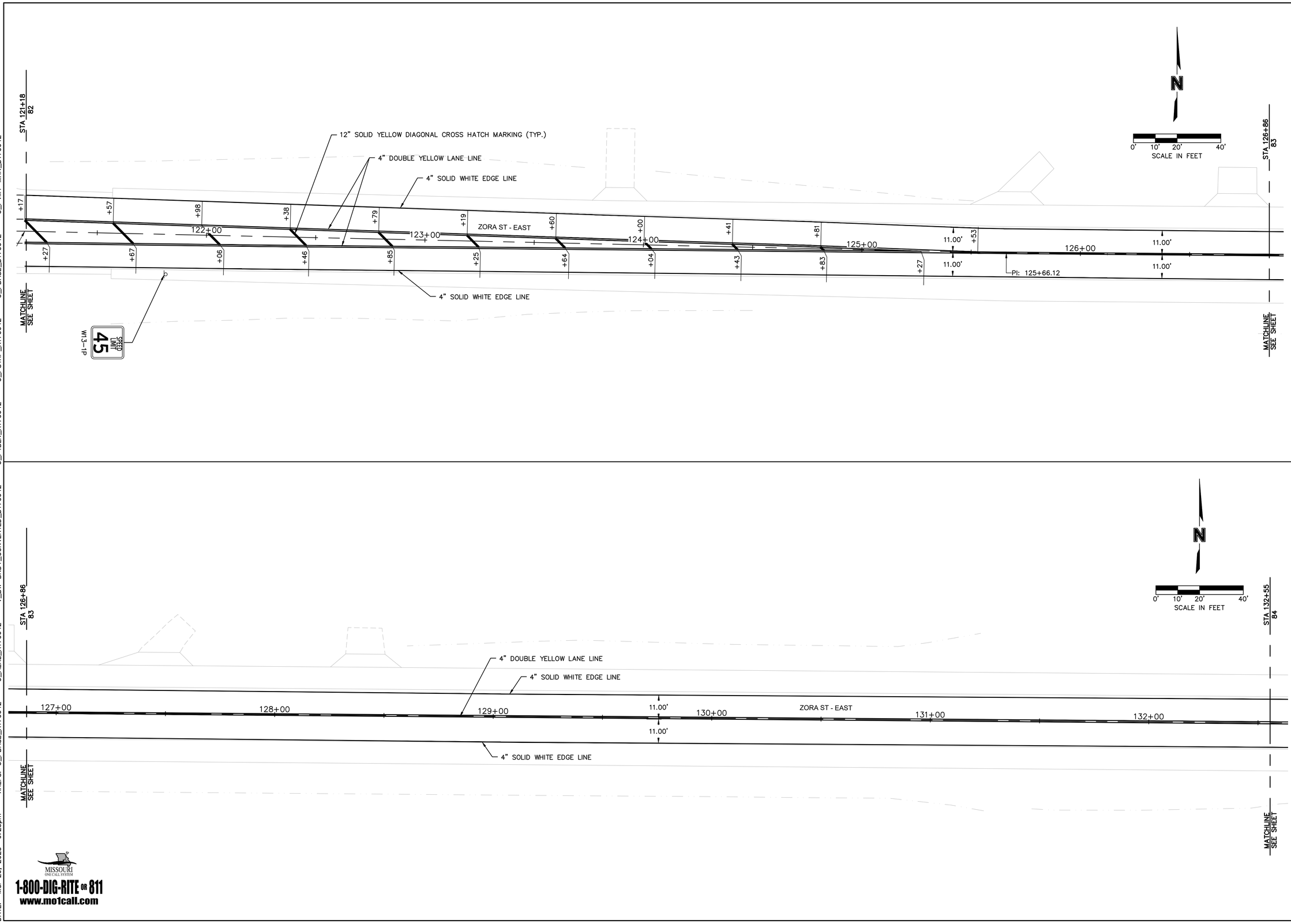
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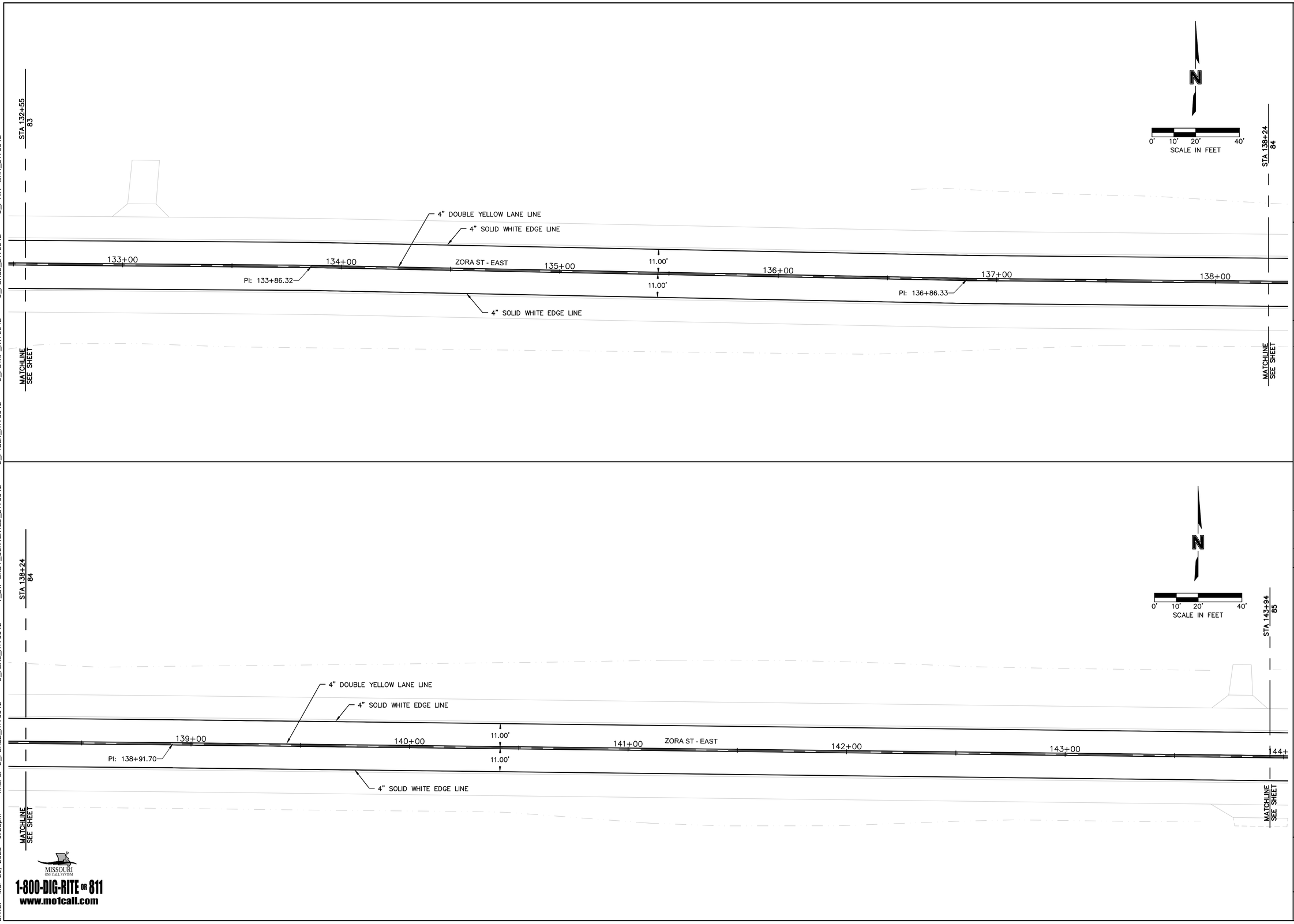
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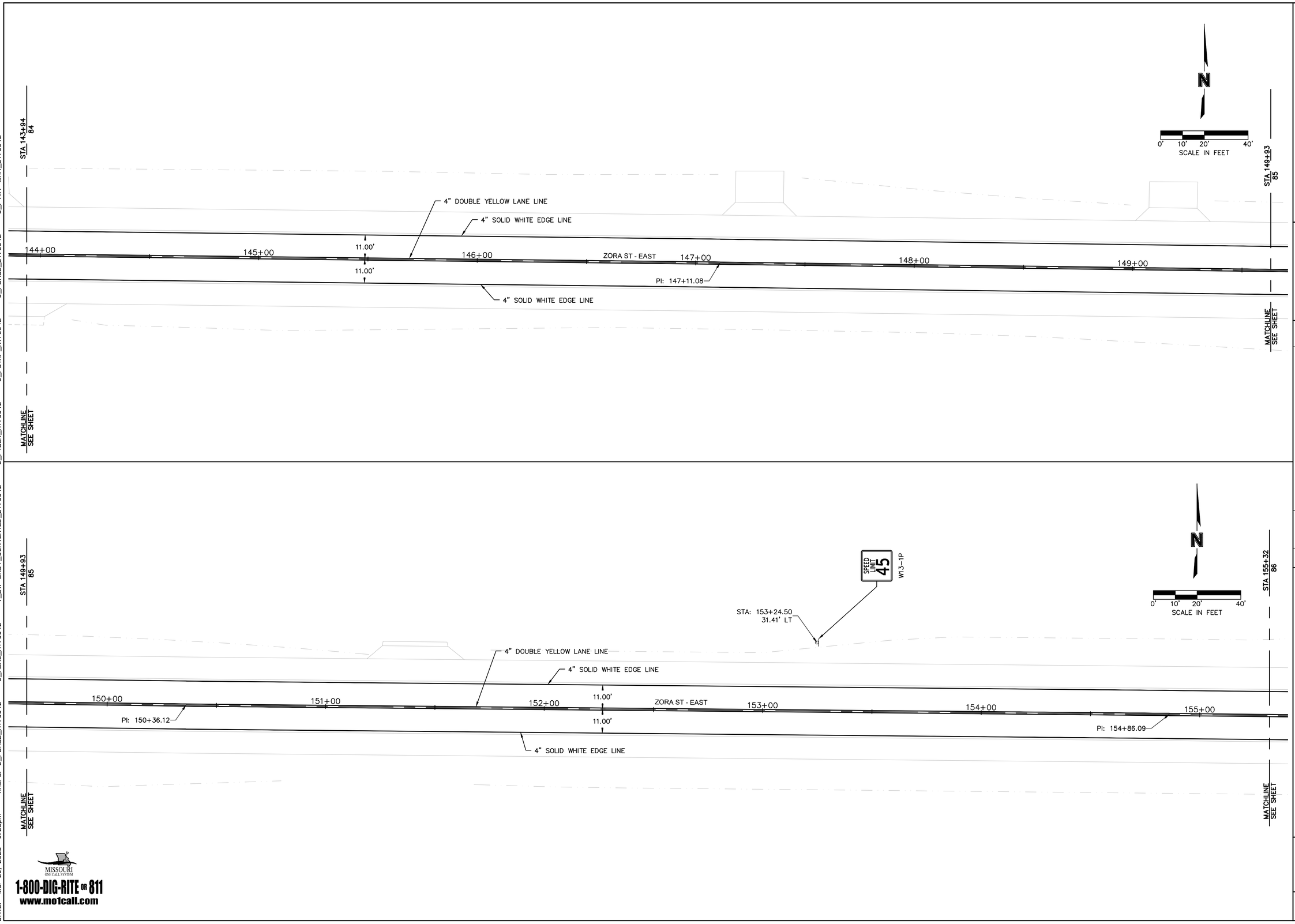
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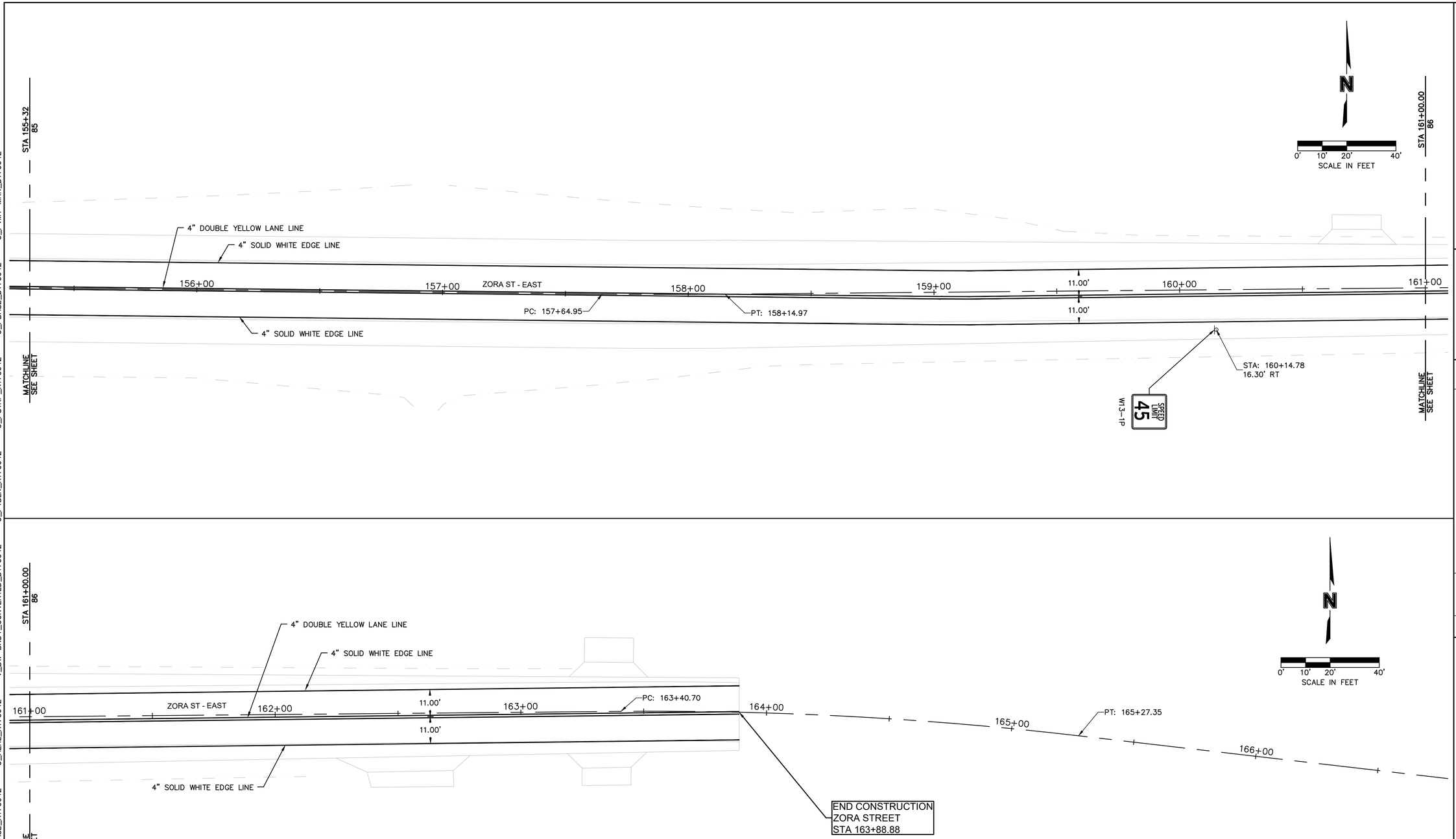
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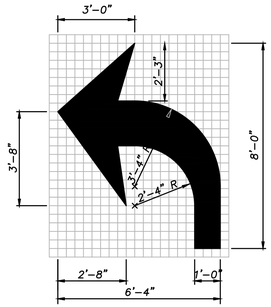
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Permanent Signing General Notes

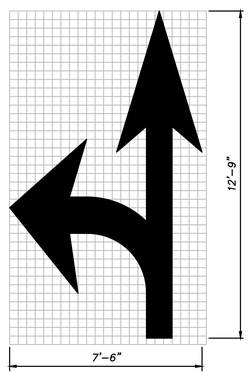
1. All permanent signing shall be provided and installed by the contractor as indicated in the plans and specifications.
2. All letter, number and symbol sizes, spacing and sign colors shall conform to the current Manual on Uniform Traffic Control Devices (MUTCD).
3. The contractor is responsible for 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

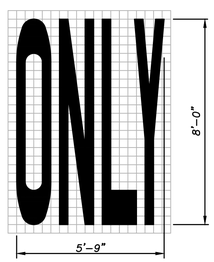
1. All permanent pavement markings shall be provided and installed by the contractor as indicated in the plans or as directed by the City Inspector.
2. Pavement markings on concrete shall be per the Standard Specifications, Section 2306 unless otherwise indicated on the plans or directed by the City 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.

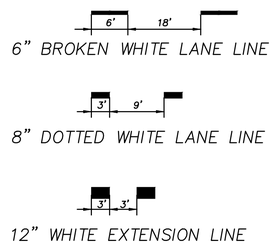


Turn Arrow Marking



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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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

PAVEMENT MARKING & SIGNING DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

JOPLIN, MISSOURI

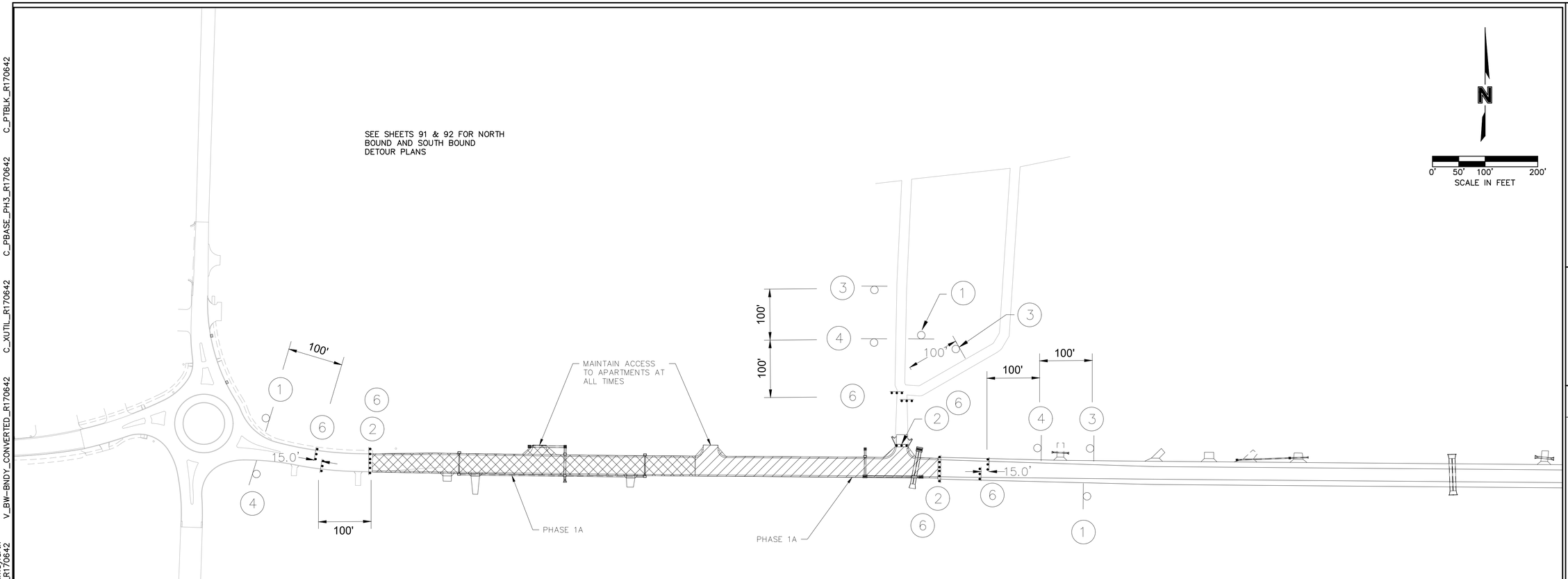
2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no.: STP-DTL01_R170642
date: 3/28/2025

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SEE SHEETS 91 & 92 FOR NORTH BOUND AND SOUTH BOUND DETOUR PLANS

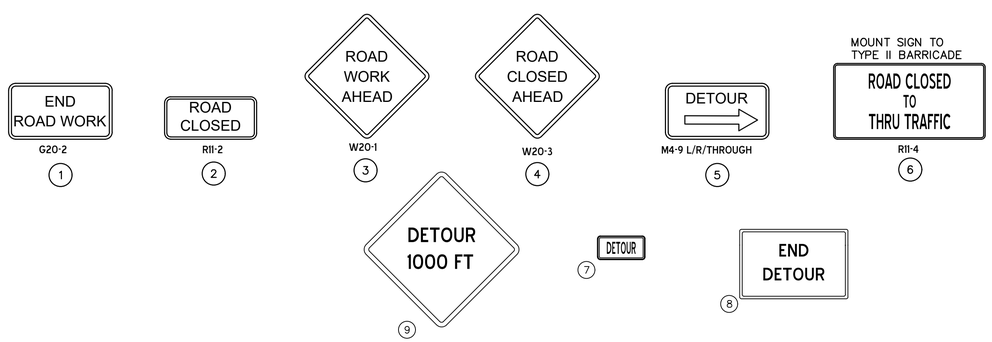


PHASE 1A

1. STAKE PHASE 1A CONSTRUCTION LIMITS/TCE LIMITS. INSTALL PHASE 1A PRE-CONSTRUCTION EROSION CONTROL
2. COMPLETE PHASE 1A DEMOLITION. CONSTRUCT STORM SEWER & STORM LINE CROSSINGS B-100 & B-200.
3. STRIP AND STOCKPILE TOPSOIL AND COMPLETE DIRTWORK. CONSTRUCT AGGREGATE BASE, ASPHALT BASE, AND CURB & GUTTER.

PHASE 1B

1. STAKE PHASE 1B CONSTRUCTION LIMITS/TCE LIMITS. INSTALL PHASE 1A PRE-CONSTRUCTION EROSION CONTROL
2. COMPLETE PHASE 1B DEMOLITION. CONSTRUCT STORM SEWER & STORM LINE CROSSINGS B-300 & B-400.
3. STRIP AND STOCKPILE TOPSOIL AND COMPLETE DIRTWORK. CONSTRUCT AGGREGATE BASE, ASPHALT BASE, AND CURB & GUTTER.



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11. CONTRACTOR SHALL INSTALL AND MAINTAIN NO PARKING SIGNS WITHIN EXISTING PARKING AREAS THAT RESIDE WITHIN STREET CONSTRUCTION AREA LIMITS.

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE
- WORK ZONE (PHASE 1A)
- WORK ZONE (PHASE 1B)

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REVISIONS

TRAFFIC CONTROL PLANS
PHASE 1

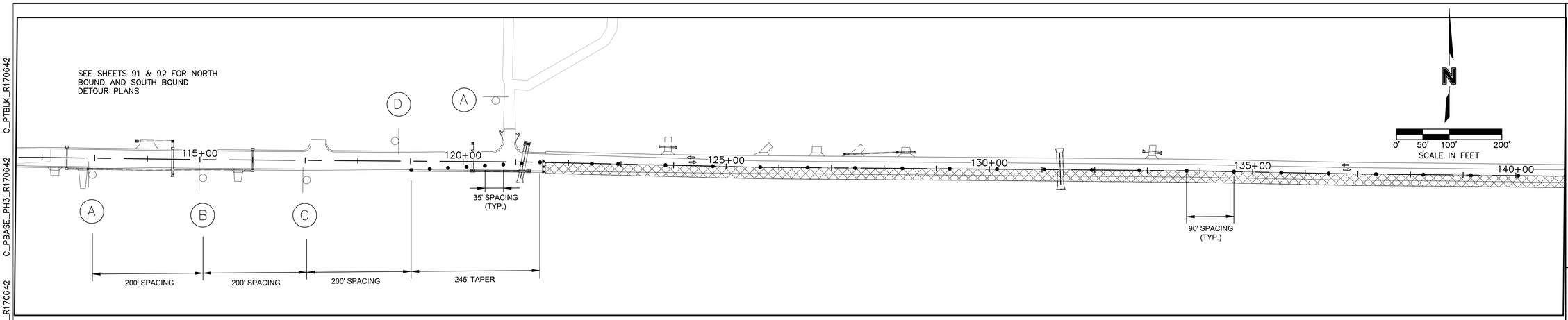
ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

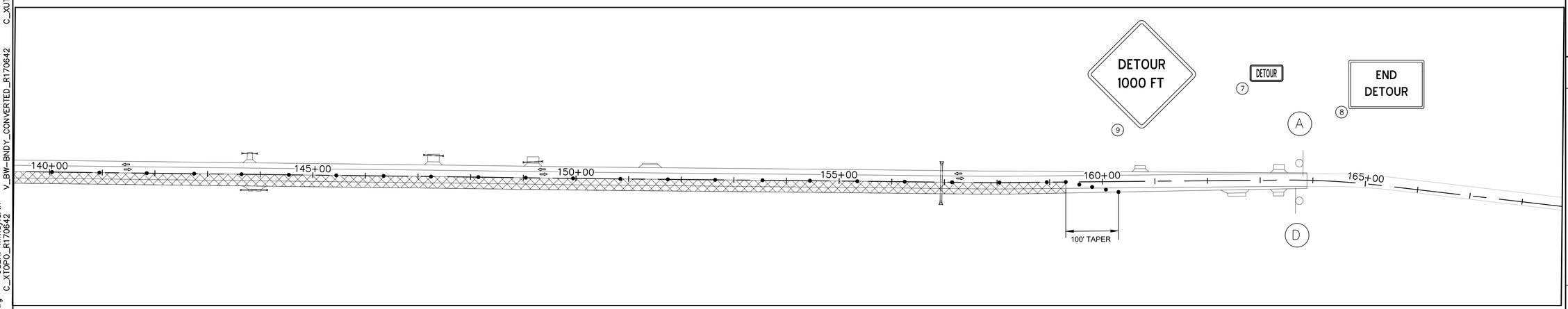
JOPLIN, MISSOURI

2025

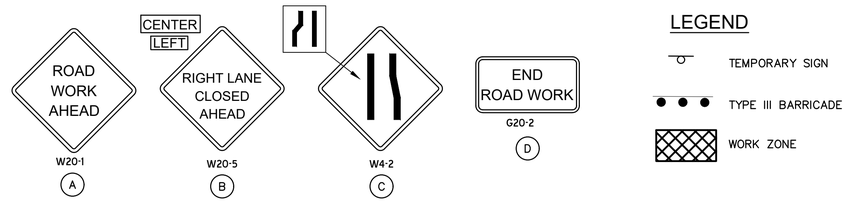
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approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	T_TC-PLN_R170642
date:	4/9/2025

SHEET
88 of 120





PHASE	CONSTRUCTION SEQUENCE	TRAFFIC CONTROL
2	Sta 121+56 to Sta 159+30 (Construct South Half)	Sta 121+56 to Sta 159+30 (Construct South Half)
2.1	Sta 121+56 to Sta 128+65 Zora Street, Center Lane to East most Russel Smart Driveway	Sta 121+56 to 128+65
	1. Stake Phase 2.1 Construction limits/TCE limits. Install Phase 2.1 pre-construction erosion control	1. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	2. Complete Phase 2.1 Demolition.	2. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base, asphalt base, Type A2 Shoulder from Sta 121+56 to 128+65	3. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
2.2	Sta 128+65 to 140+00	Sta 128+65 to 140+00
	1. Stake Phase 2.2 Construction Limits/TCE Limits. Install Phase 2.2 pre-construction erosion control.	1. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	2. Complete Phase 2.2 Demolition. Construct south half of Stormline B-500 at Sta 131+35	2. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base from Sta 128+65+140+00	3. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
2.3	Sta 140+00 to 159+30	Sta 140+00 to 159+30
	1. Stake Phase 2.3 Construction limits/TCE limits. Install Phase 2.3 pre-construction erosion control	1. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	2. Complete Phase 2.3 Demolition. Construct Driveway at Sta 143+90 Construct south half of Stormline B-700 at Sta 156+94	2. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base, asphalt base, Type A2 Shoulder from Sta 140+00 to 159+30	3. Maintain two-way traffic on existing Zora Street from Sta 121+56 to 159+30.



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REVISIONS

TRAFFIC CONTROL PLANS (PHASE 2)

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

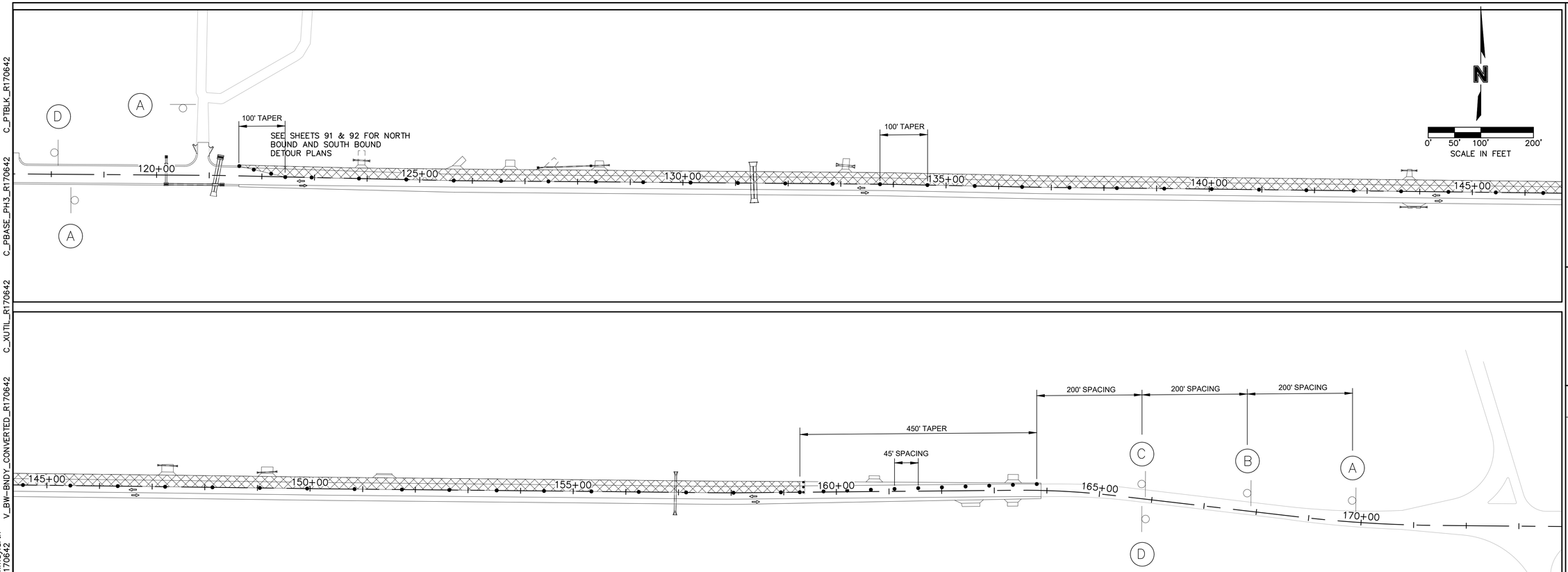
2025

JOPLIN, MISSOURI

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
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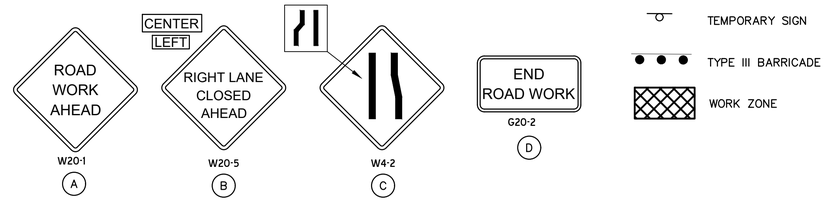
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89 of 120

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USER: mmayfarth
C_PBASE_D170642



PHASE	CONSTRUCTION SEQUENCE	TRAFFIC CONTROL
3	Sta 121+56 to Sta 159+30 (Construct North Half)	Sta 121+56 to Sta 159+30 (Construct North Half)
3.1	Sta 121+56 to Sta 128+65 Zora Street, Center Lane to East most Russel Smart Driveway	Sta 121+56 to Sta 128+65 Zora Street, Center Lane to East most Russel Smart Driveway
	1. Stake Phase 3.1 Construction limits/TCE limits. Install Phase 3.1 pre-construction erosion control	1. Maintain two-way traffic on new Zora Street pavement
	2. Complete Phase 3.1 Demolition. Construct storm sewer line B-800 at Sta 127+16 to 128+62	2. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 17 at Sta 123+90, Sta 125+65, Sta 126+70 and Parcel 19 at Sta 127+40, Sta 128+40 via temporary aggregate surface.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base, asphalt base, Type A2 Shoulder, and driveways and all other incidental work from Sta 121+56 to Sta 128+65.	3. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 17 at Sta 123+90, Sta 125+65, Sta 126+70 and Parcel 19 at Sta 127+40, Sta 128+40 via temporary aggregate surface.
3.2	Sta 128+65 to 140+00	Sta 128+65 to 140+00
	1. Stake Phase 3.2 Construction limits/TCE limits. Install Phase 3.2 pre-construction erosion control	1. Maintain two-way traffic on new Zora Street pavement
	2. Complete Phase 3.2 Demolition. Construct north half of Stormline B-500 at Sta 131+35	2. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 20 at Sta 128+40, Parcel 21 at Sta 133+10 via temporary aggregate surface.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base, asphalt base, Type A2 Shoulder, and driveways and all other incidental work from Sta 128+65 to 140+00	3. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 20 at Sta 128+40, Parcel 21 at Sta 133+10 via temporary aggregate surface.
3.3	Sta 140+00 to 159+30	Sta 140+00 to 159+30
	1. Stake Phase 3.3 Construction limits/TCE limits. Install Phase 3.3 pre-construction erosion control	1. Maintain two-way traffic on new Zora Street pavement.
	2. Complete Phase 3.3 Demolition. Construct Driveway at Sta 143+90, 147+30, 149+20, and 151+40 Construct north half of Stormline B-700 at Sta 156+94	2. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 23 at Sta 143+90, Parcel 24 at Sta 147+30, Parcel 25 at Sta 149+20, and Parcel 24 at Sta 151+40 via temporary aggregate surface.
	3. Strip and stockpile topsoil and complete dirtwork. Construct aggregate base, asphalt base, Type A2 Shoulder, and driveways and all other incidental work from Sta 140+00 to +159+30	3. Maintain two-way traffic on new Zora Street pavement. Maintain access to Parcel 23 at Sta 143+90, Parcel 24 at Sta 147+30, Parcel 25 at Sta 149+20, and Parcel 24 at Sta 151+40 via temporary aggregate surface.
4	1. Construct surface asphalt, permanent striping, and permanent signing on Zora Street from Sta 110+82.18 to 163+88.88	1. Maintain two-way traffic on new Zora Street pavement for final surface asphalt, striping, signing, and any other incidental activities until final completion.

LEGEND



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TRAFFIC CONTROL PLANS
(PHASE 3)

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

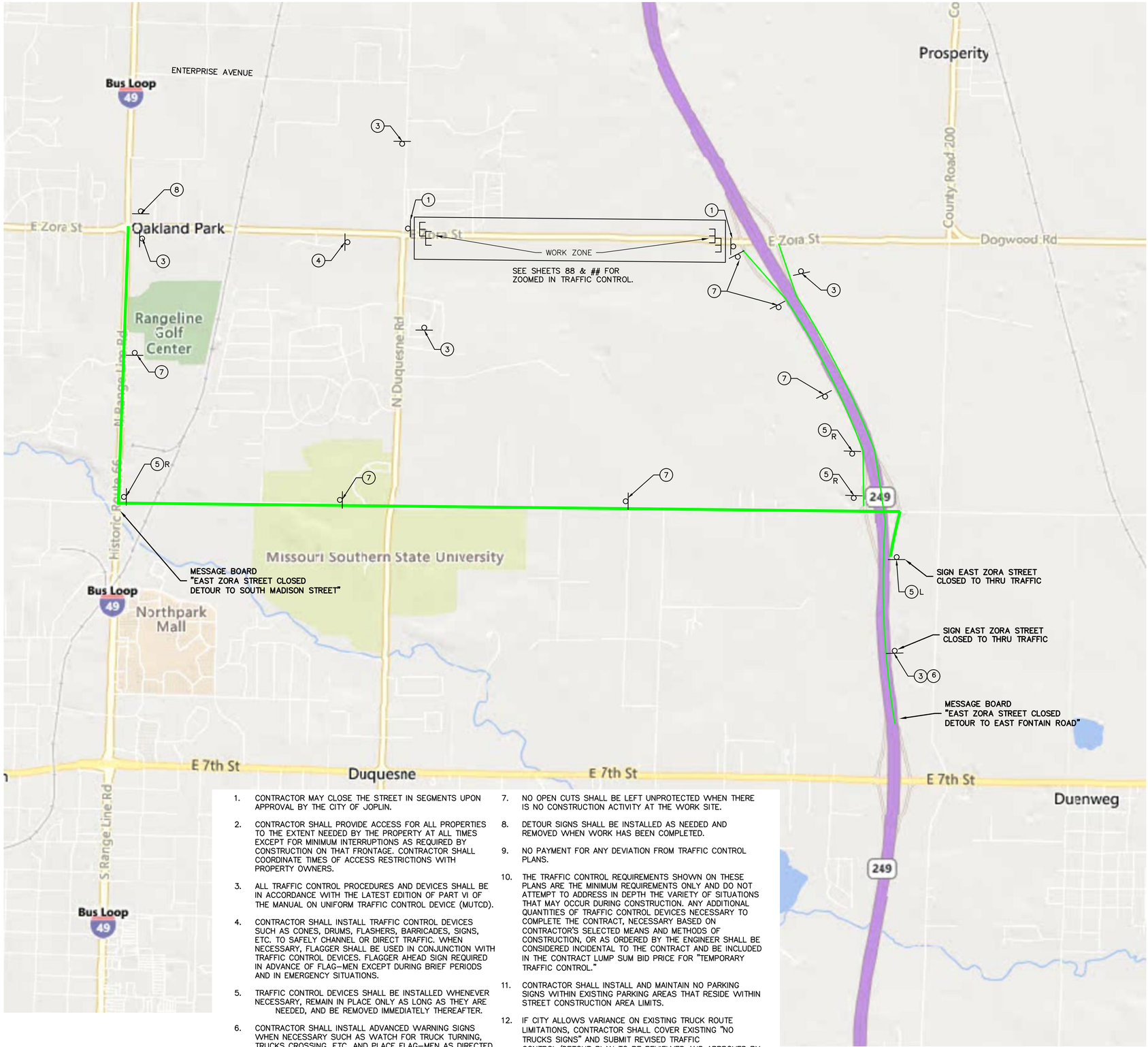
JOPLIN, MISSOURI

2025

drawn by: SMK/CTK
checked by: CAD
approved by: JWP
QA/QC by: ENG
project no.: 017-0642-R
drawing no: T_TC-PLN02_R170642
date: 4/9/2025

SHEET
90 of 120

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12. IF CITY ALLOWS VARIANCE ON EXISTING TRUCK ROUTE LIMITATIONS, CONTRACTOR SHALL COVER EXISTING "NO TRUCKS SIGNS" AND SUBMIT REVISED TRAFFIC CONTROL/DETOUR PLAN TO BE REVIEWED AND APPROVED BY THE CITY. THIS SHALL BE INCIDENTAL TO THE CONTRACT LUMP SUM BID PRICE OF "TEMPORARY TRAFFIC CONTROL".

NOT TO SCALE

Legend

- TEMPORARY SIGN
- TYPE III BARRICADE
- PROPOSED DETOUR

END ROAD WORK (G20-2) 1
ROAD CLOSED (R11-2) 2
ROAD WORK AHEAD (W20-1) 3
ROAD CLOSED AHEAD (W20-3) 4
DETOUR (M4-9 L/R/THROUGH) 5
ROAD CLOSED TO THRU TRAFFIC (R11-4) 6
DETOUR (M4-8) 7
END DETOUR (M4-8a) 8

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TRAFFIC CONTROL PLANS
SOUTH DETOUR ROUTE

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

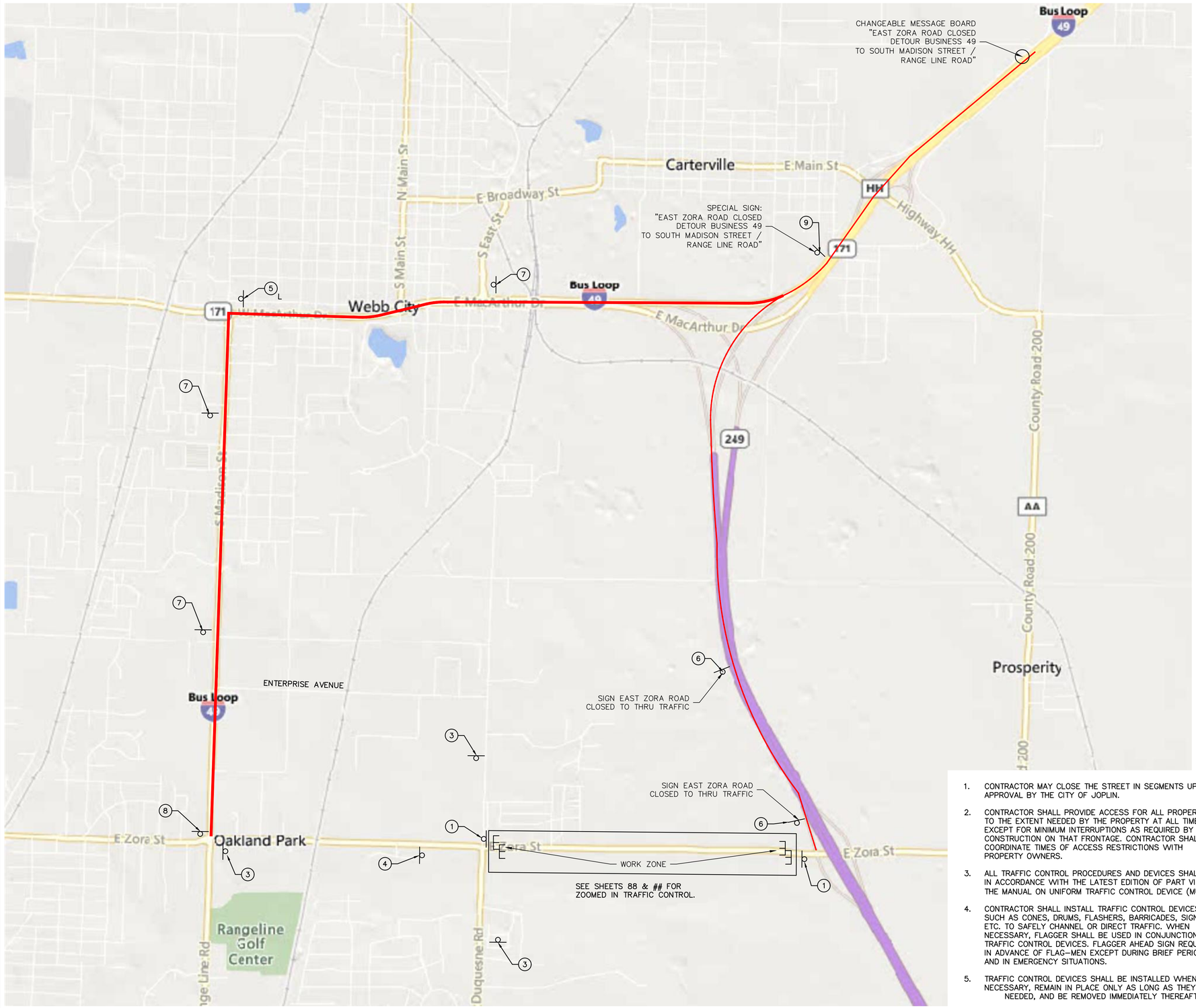
JOPLIN, MISSOURI

2025

drawn by:	SMK/CTK
checked by:	CAD
approved by:	JWP
QA/QC by:	ENG
project no.:	017-0642-R
drawing no.:	C_TRF02_R170642
date:	3/28/2025

SHEET
91 of 120

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Legend

- TEMPORARY SIGN
- TYPE III BARRICADE
- PROPOSED DETOUR

N

NOT TO SCALE

1. END ROAD WORK — G20-2
2. ROAD CLOSED — R11-2
3. ROAD WORK AHEAD — W20-1
4. ROAD CLOSED AHEAD — W20-3
5. DETOUR — M4-9 L/R/THROUGH
6. ROAD CLOSED TO THRU TRAFFIC — R11-4
7. DETOUR — M4-8
8. END DETOUR — M4-8a

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. IF CITY ALLOWS VARIANCE ON EXISTING TRUCK ROUTE LIMITATIONS, CONTRACTOR SHALL COVER EXISTING "NO TRUCKS SIGNS" AND SUBMIT REVISED TRAFFIC CONTROL/DETOUR PLAN TO BE REVIEWED AND APPROVED BY THE CITY. THIS SHALL BE INCIDENTAL TO THE CONTRACT LUMP SUM BID PRICE OF "TEMPORARY TRAFFIC CONTROL".

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NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025
JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE–2017019023

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REVISIONS

TRAFFIC CONTROL PLANS
NORTH DETOUR ROUTE

ZORA STREET IMPROVEMENTS - PHASE 2
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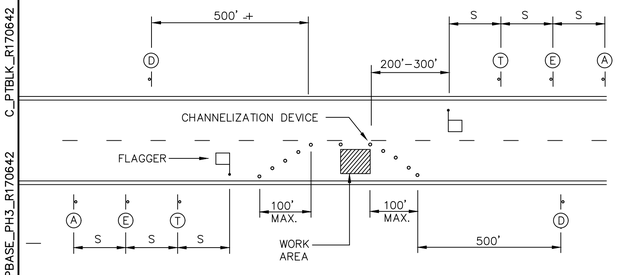
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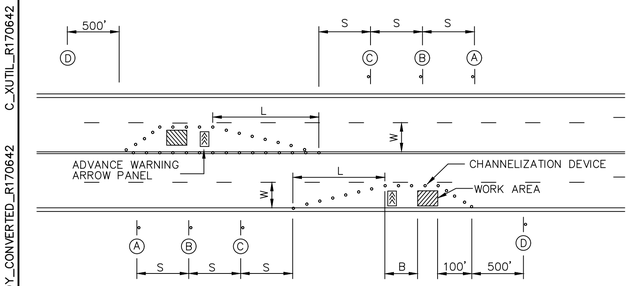
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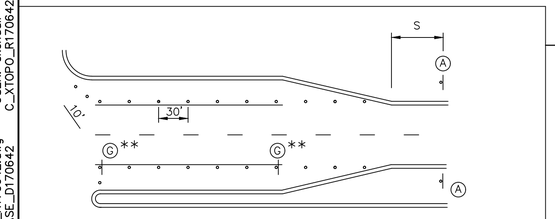
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DETAIL 1: TYPICAL CLOSURE – TWO–LANE STREET

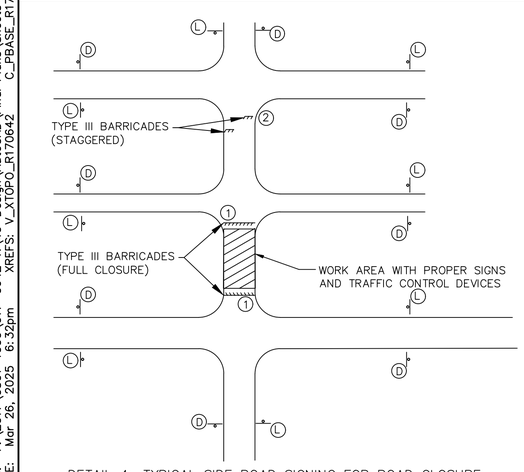


DETAIL 2: TYPICAL LANE CLOSURE – FOUR–LANE STREET



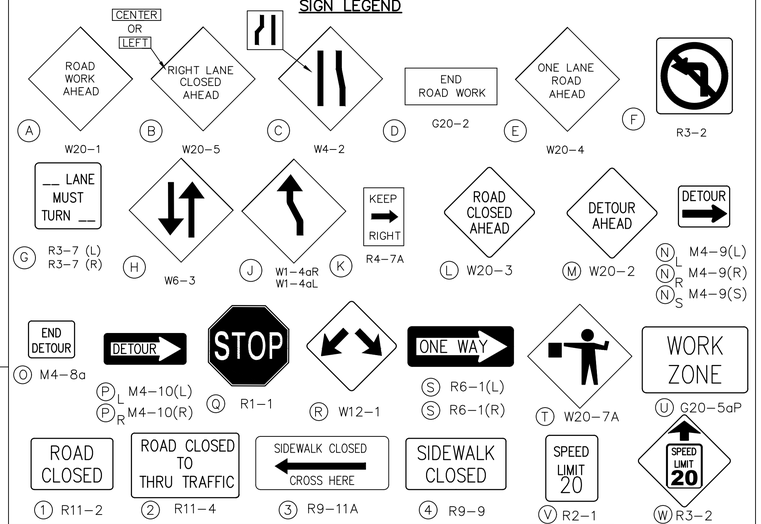
** USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER

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

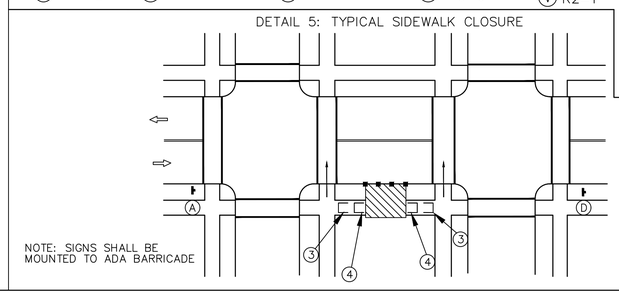


DETAIL 4: TYPICAL SIDE ROAD SIGNING FOR ROAD CLOSURE

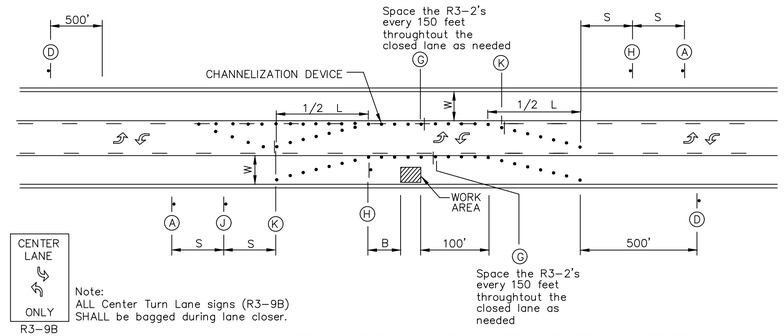
SIGN LEGEND



DETAIL 5: TYPICAL SIDEWALK CLOSURE



NOTE: SIGNS SHALL BE MOUNTED TO ADA BARRICADE



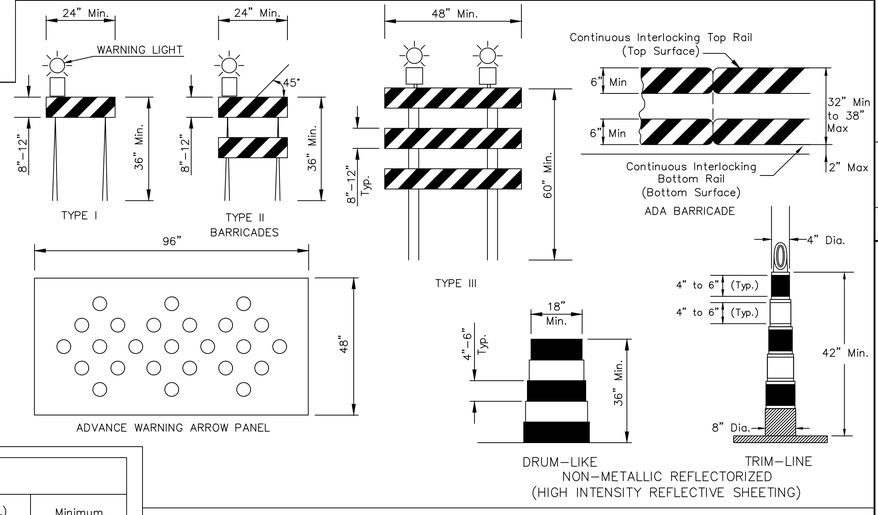
CENTER LANE ONLY R3–9B

Note: ALL Center Turn Lane signs (R3–9B) SHALL be bagged during lane closer.

DETAIL 6: TYPICAL LANE CLOSURE – THREE–LANE STREET

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.



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

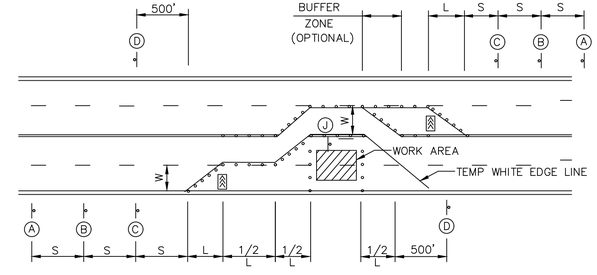
*Posted speed

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.



DETAIL 7: TYPICAL LANE CLOSURE – FOUR–LANE STREET

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TRAFFIC CONTROL DETAILS

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

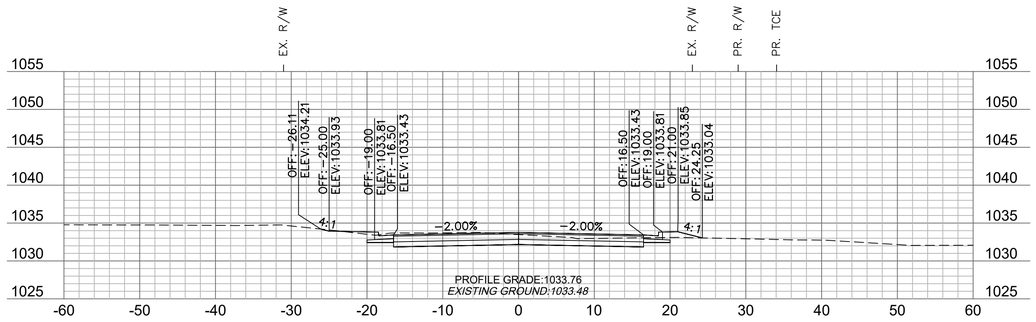
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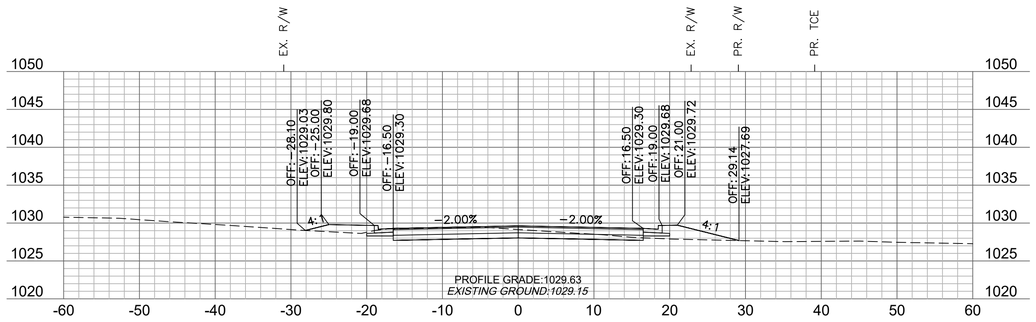
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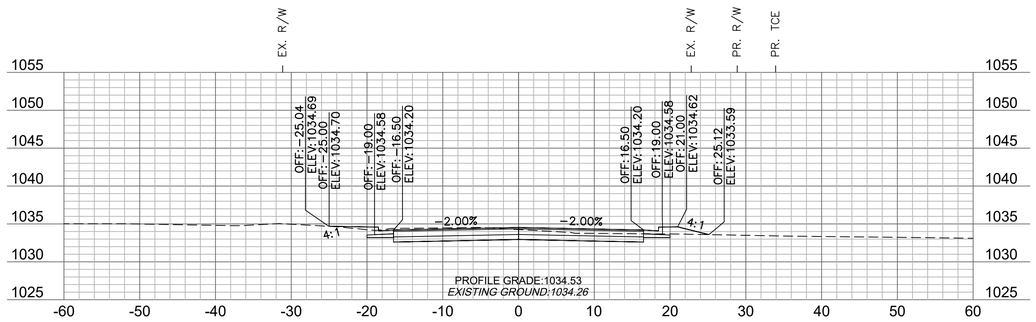
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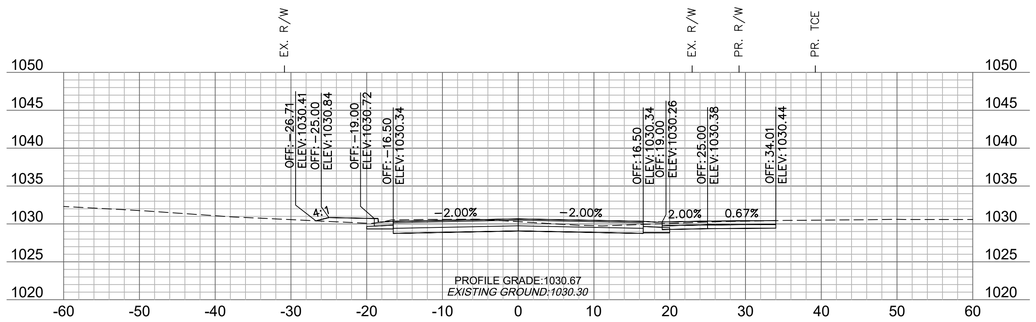
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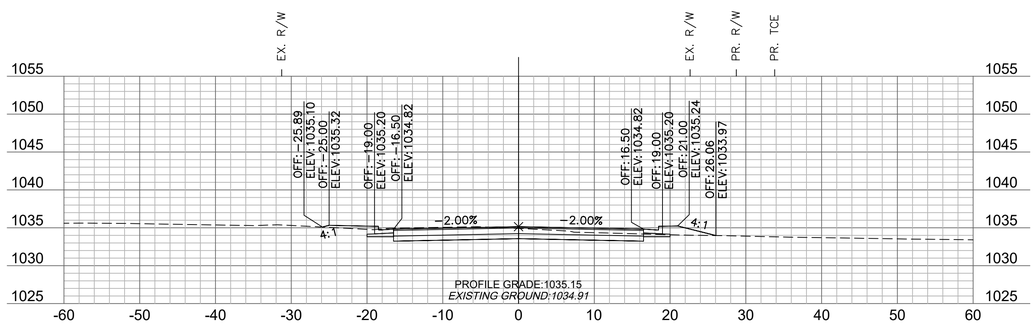
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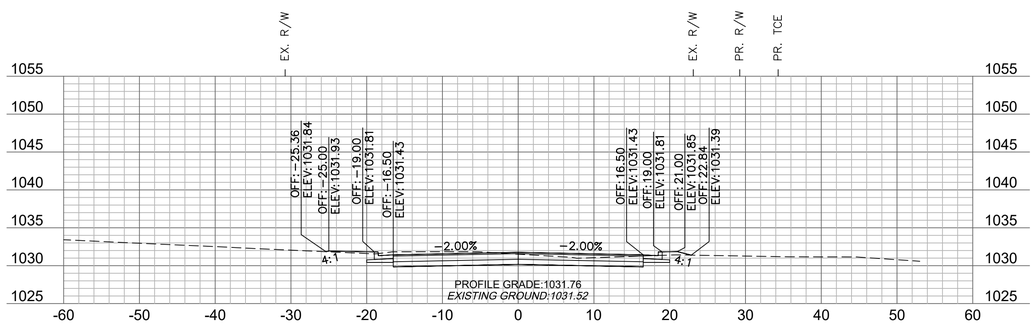
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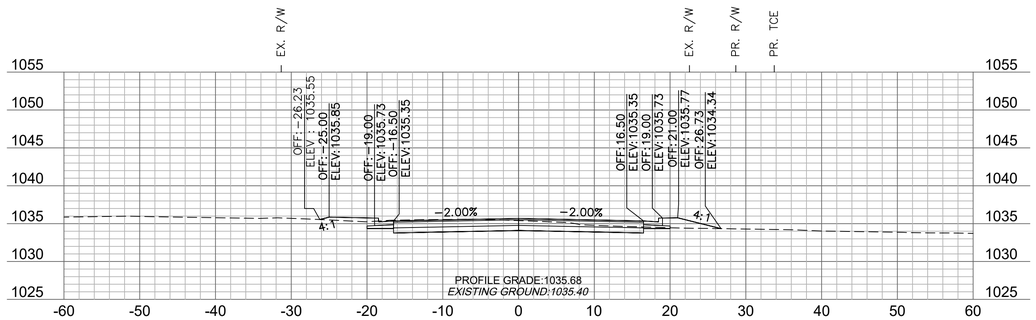
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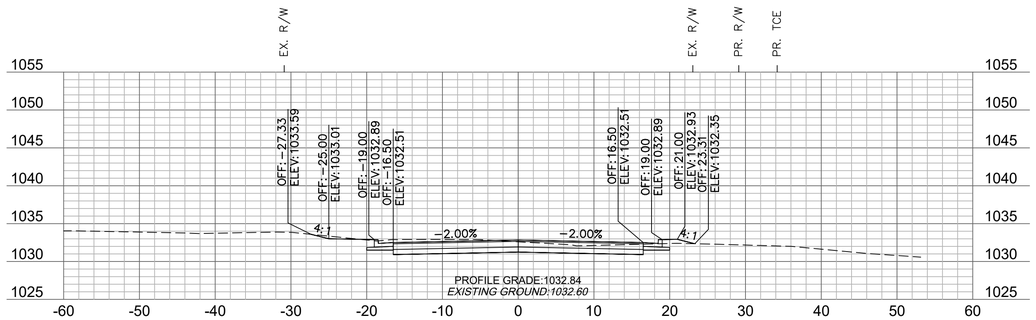
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ZORA STREET

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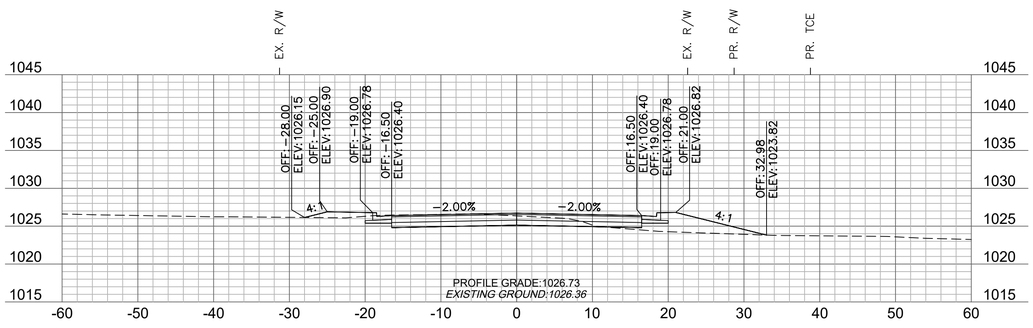
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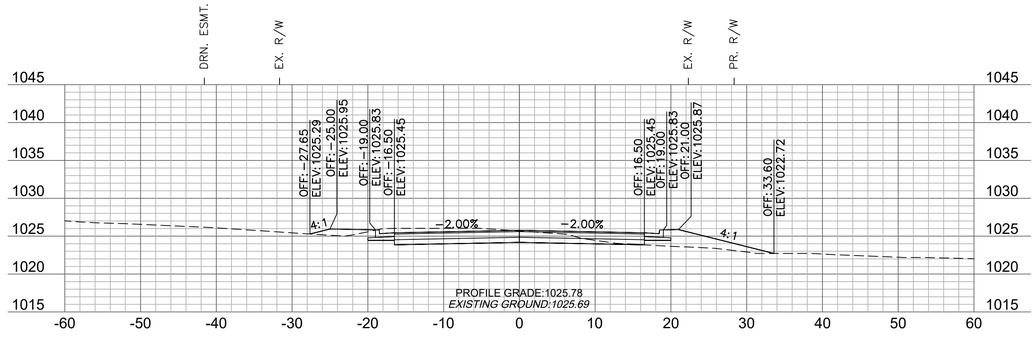
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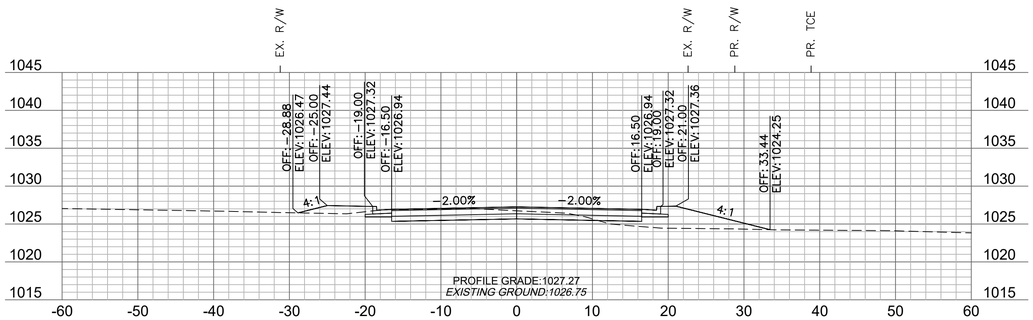
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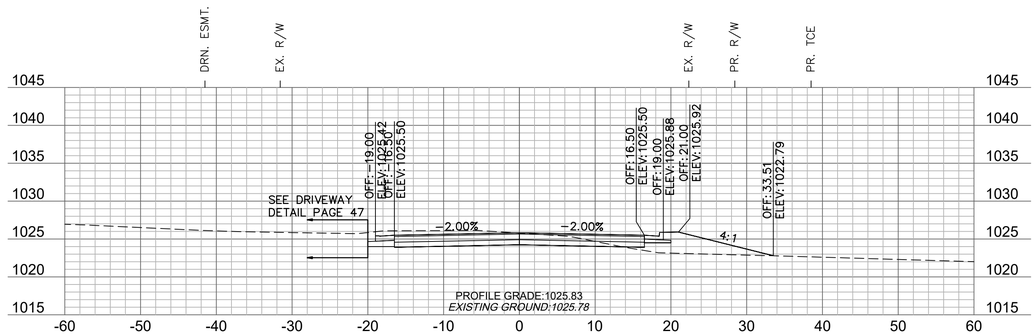
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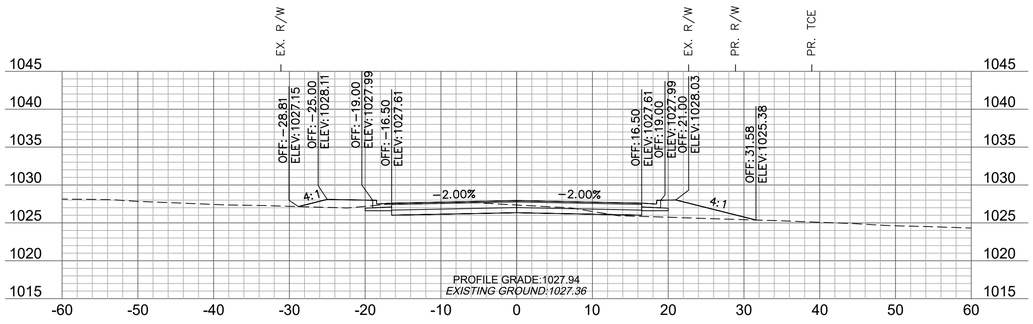
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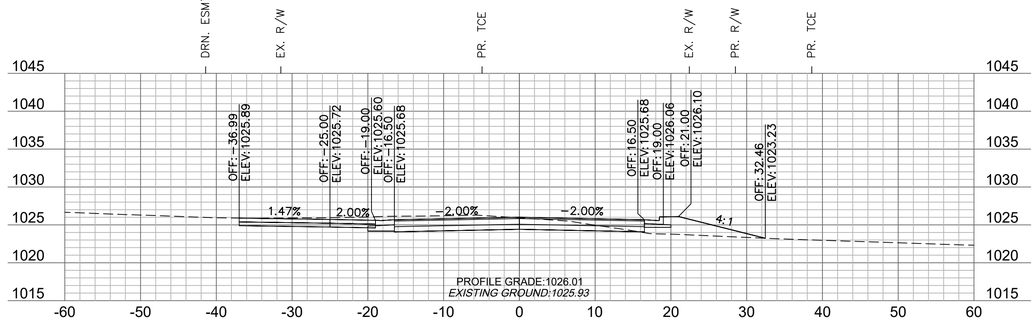
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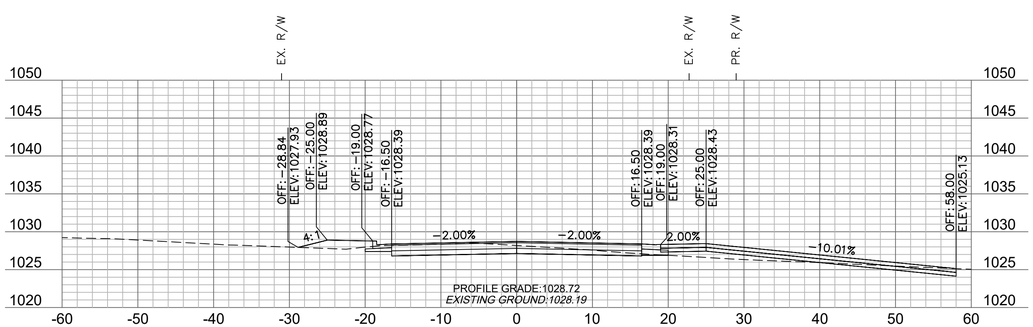
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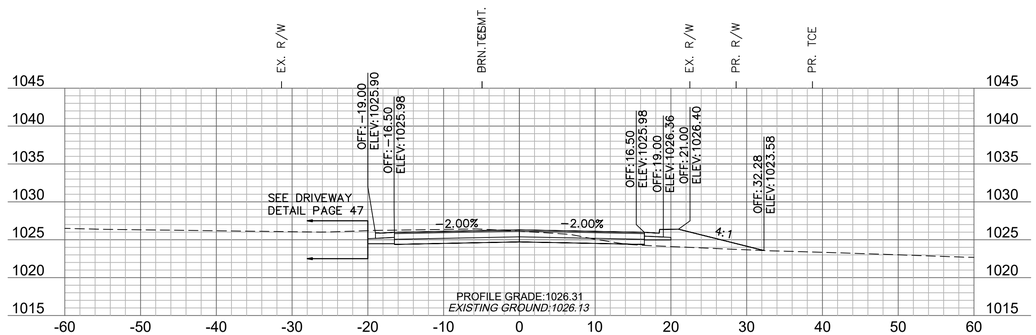
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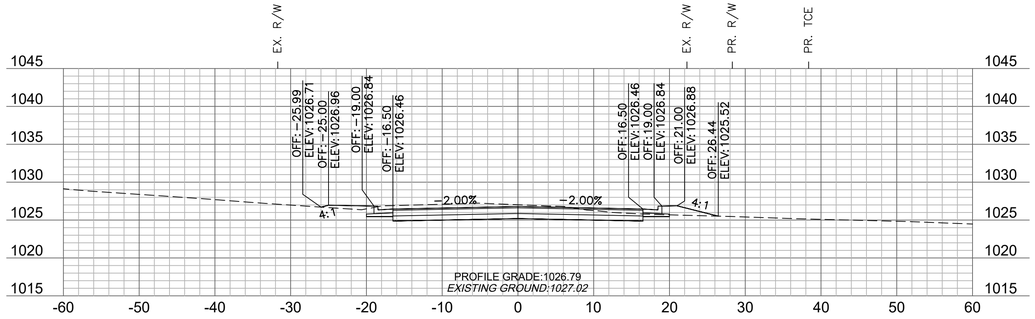
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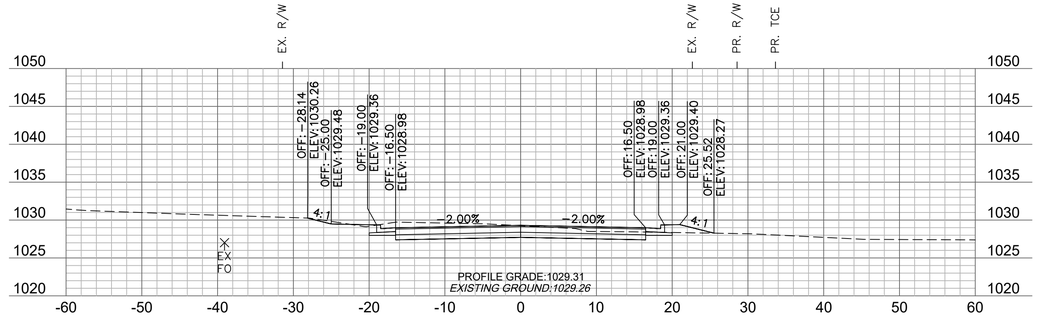
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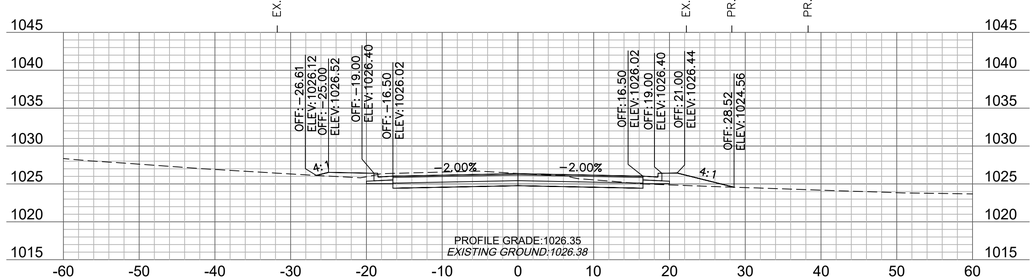
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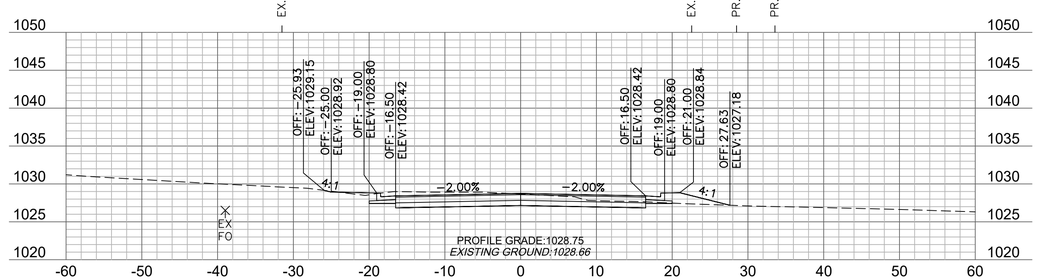
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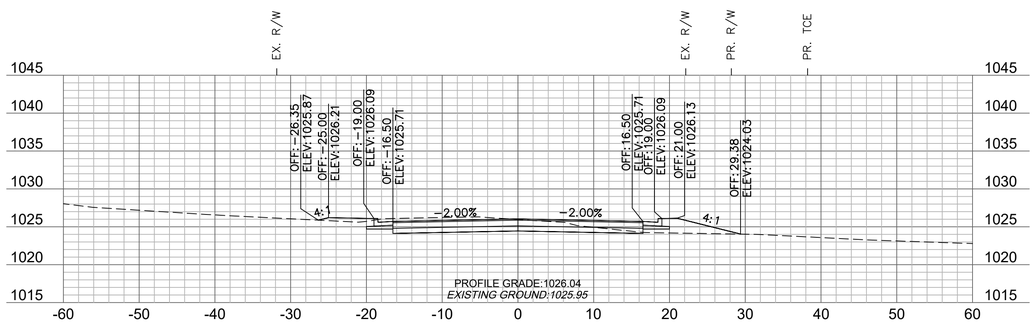
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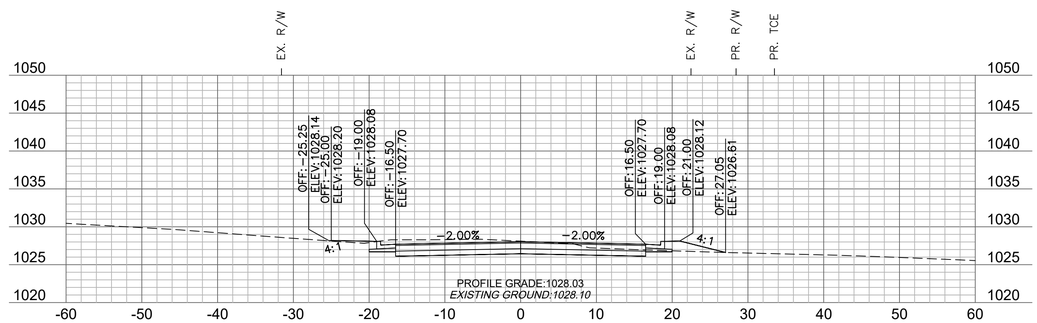
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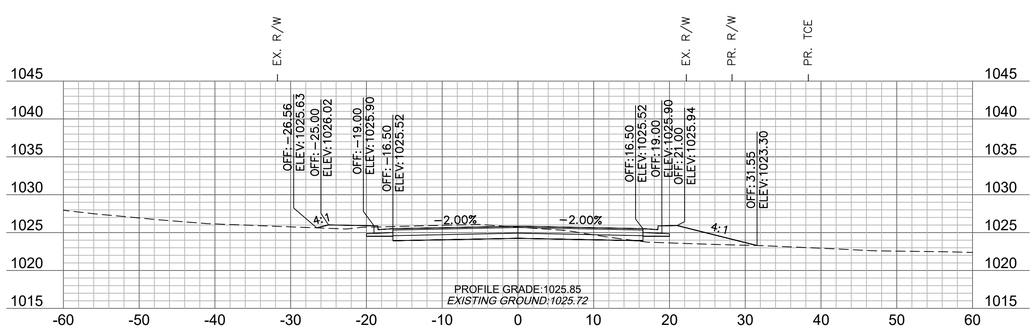
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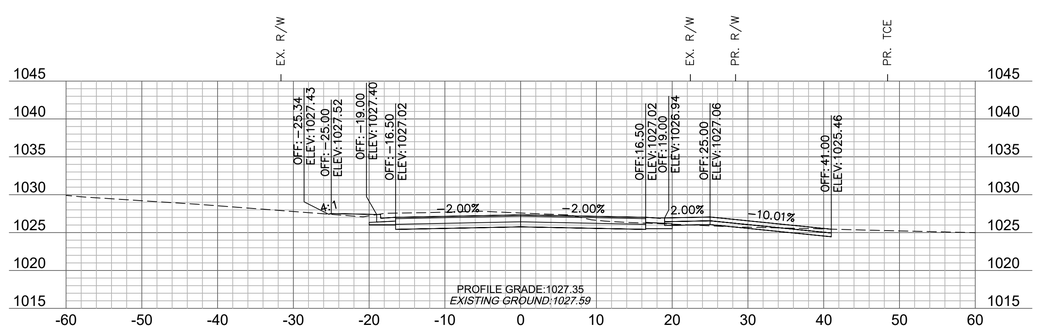
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116+00



114+75



115+75

0' 5' 10' 20'
SCALE IN FEET

0' 10' 5' 20'

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

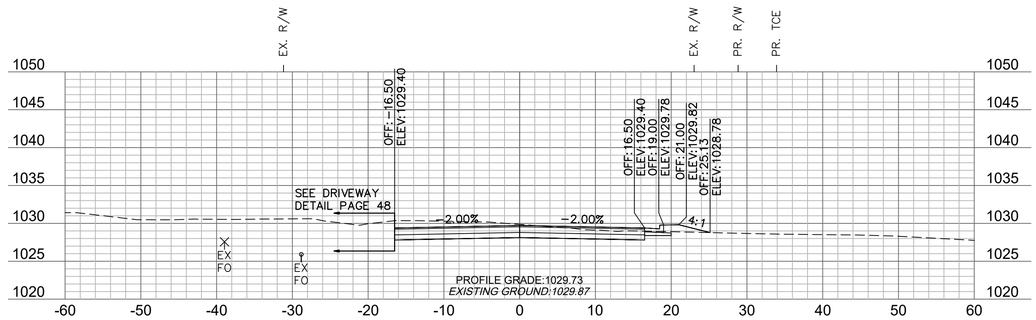
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2025

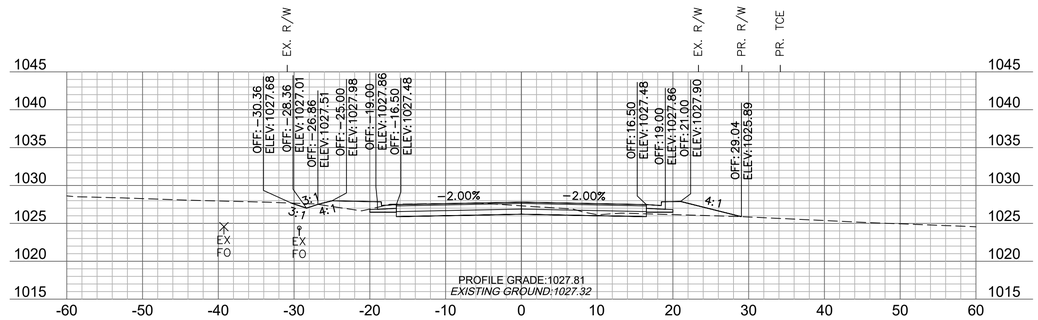
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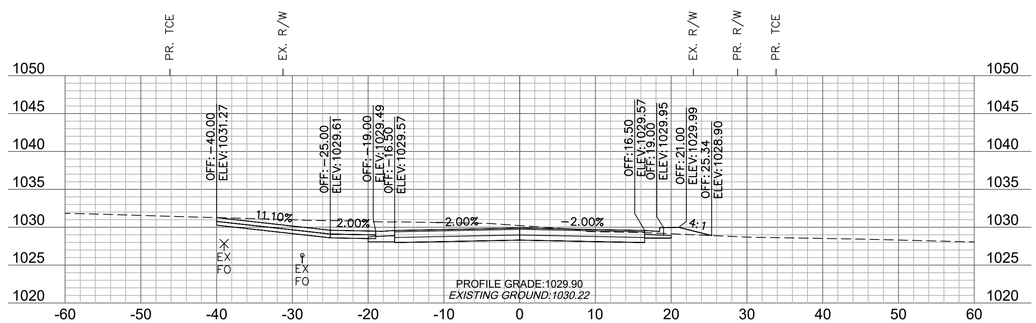
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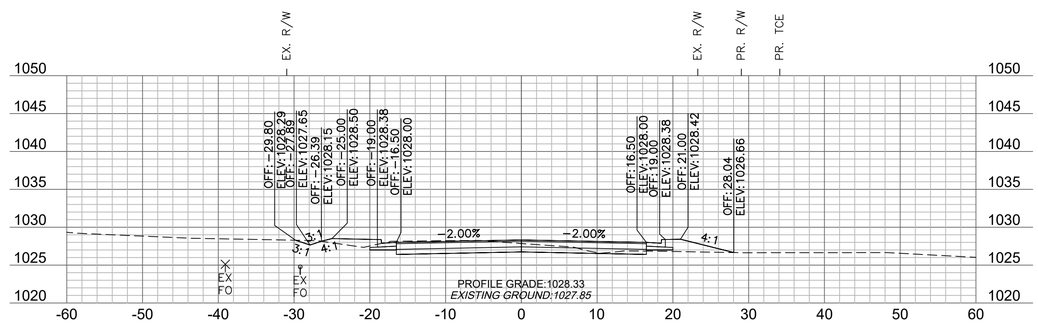
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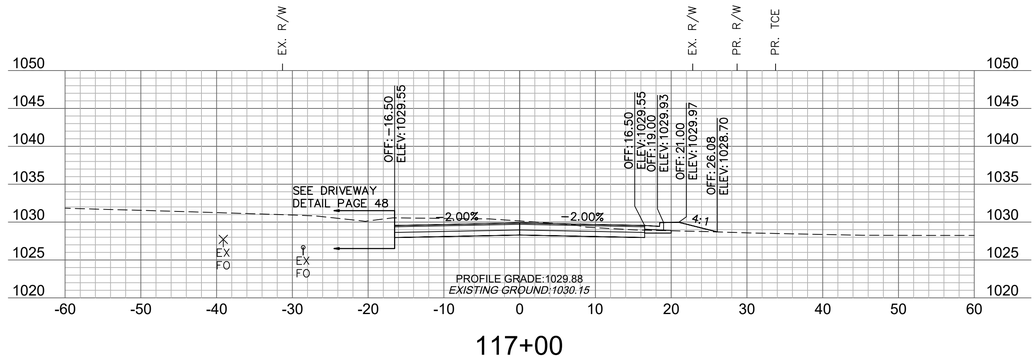
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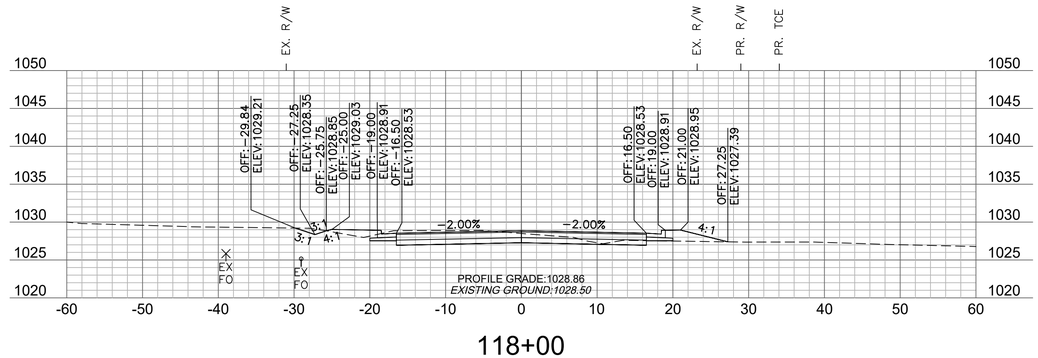
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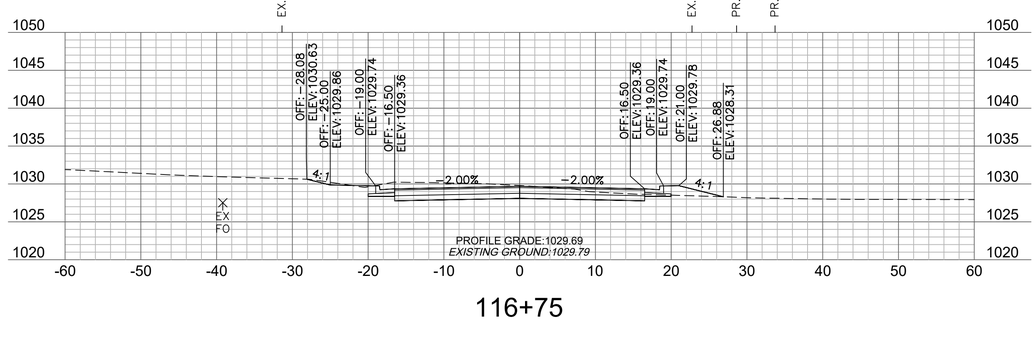
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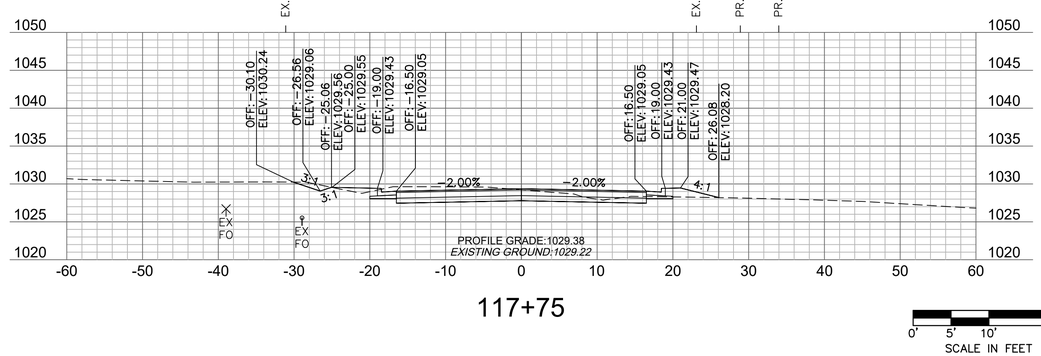
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116+75



117+75

0' 5' 10' 20'
SCALE IN FEET

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CITY OF JOPLIN

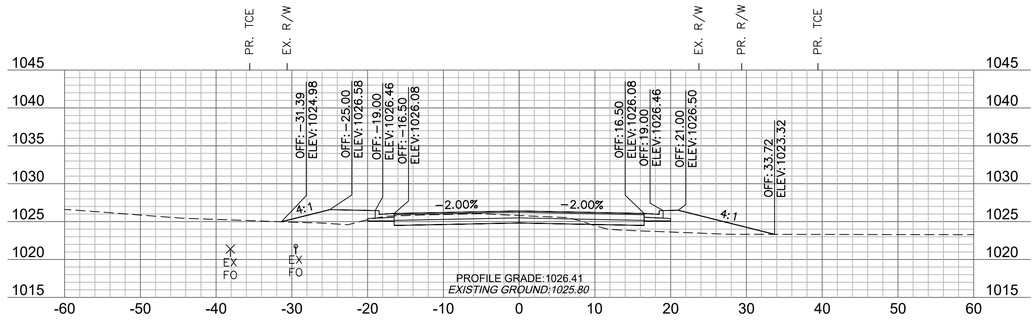
JOPLIN, MISSOURI

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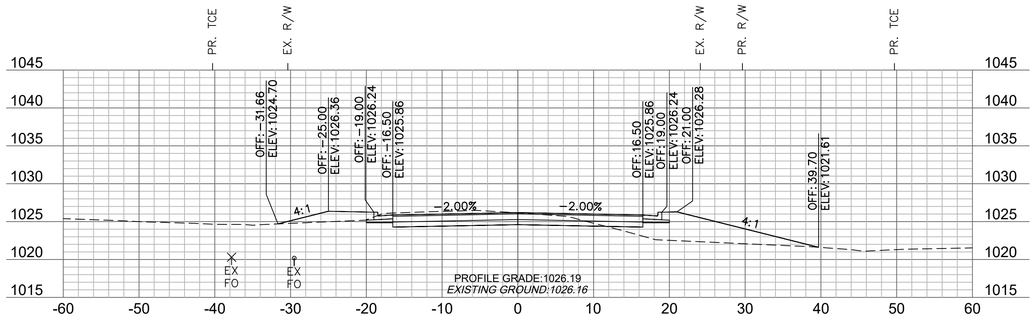
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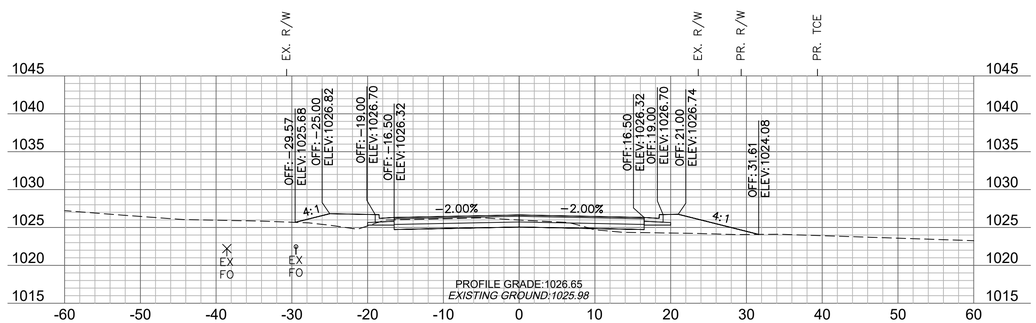
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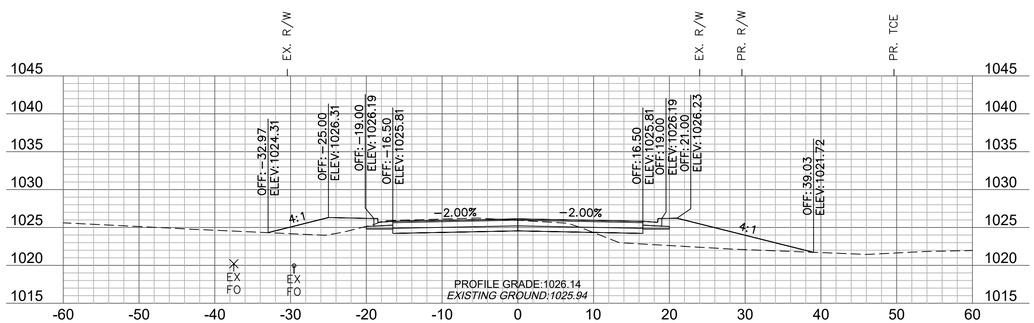
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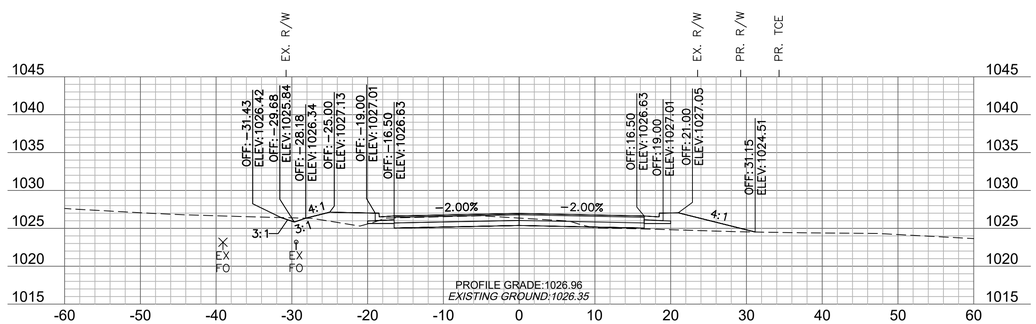
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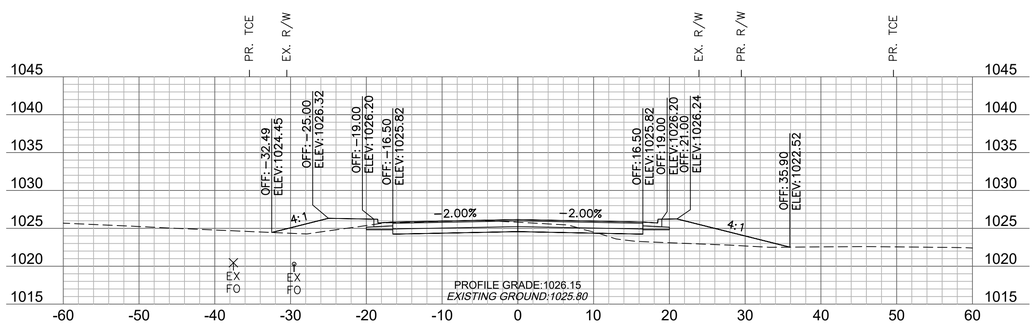
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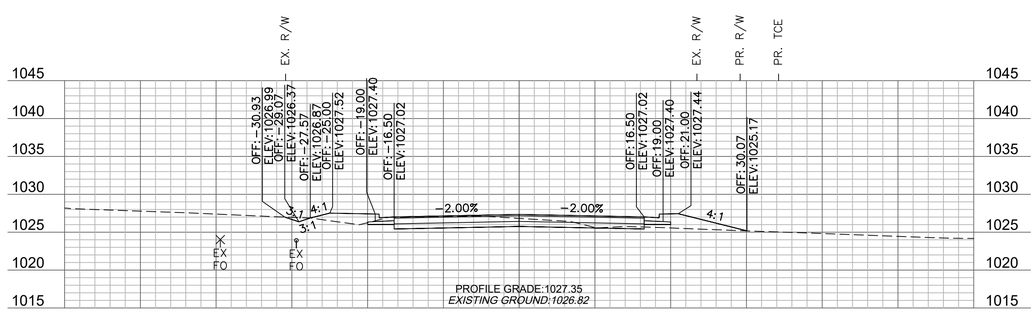
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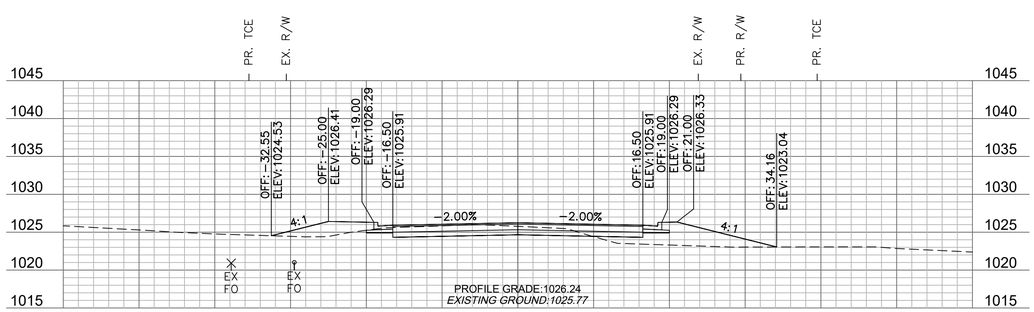
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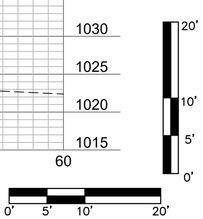
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ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

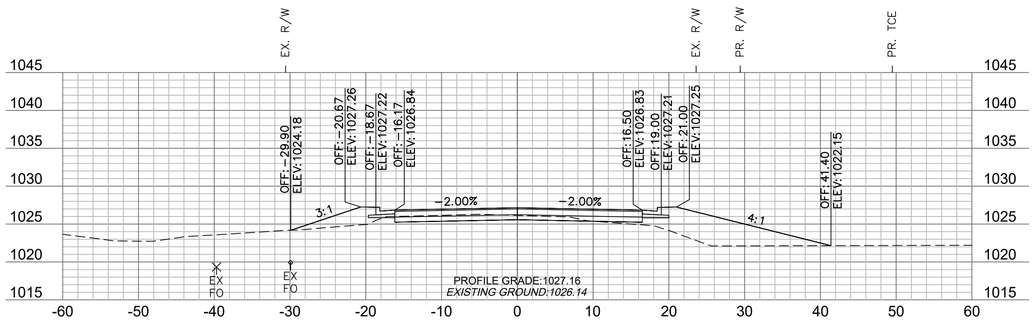
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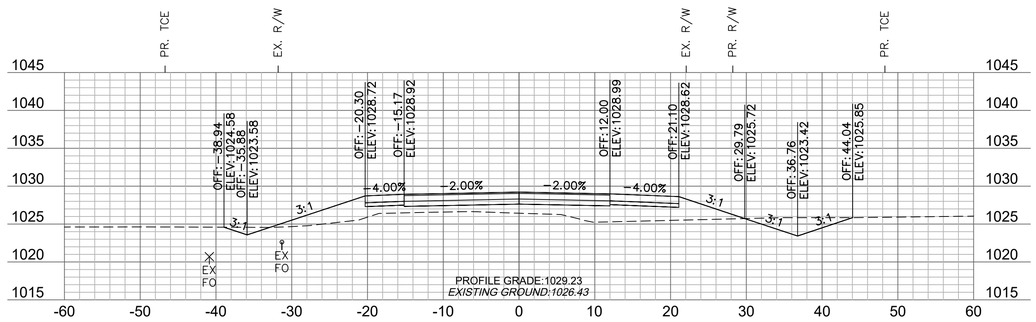
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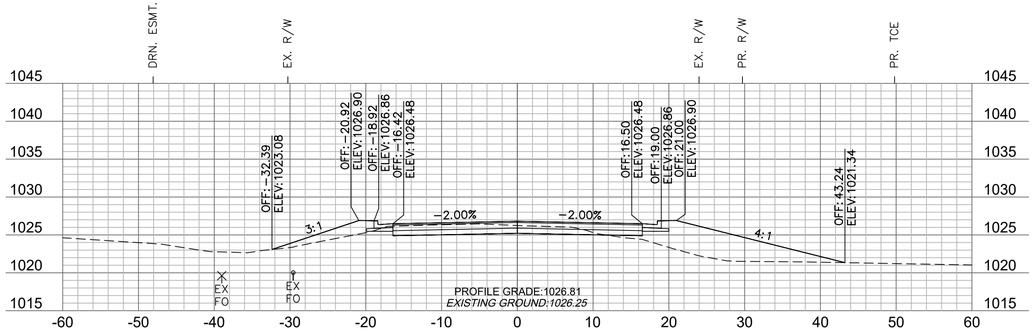
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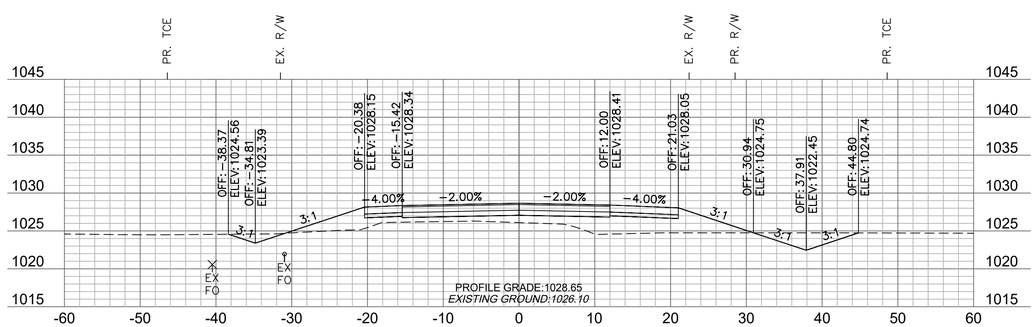
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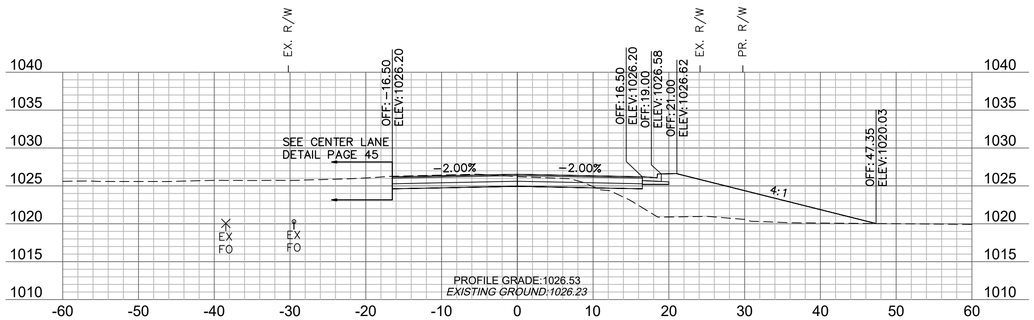
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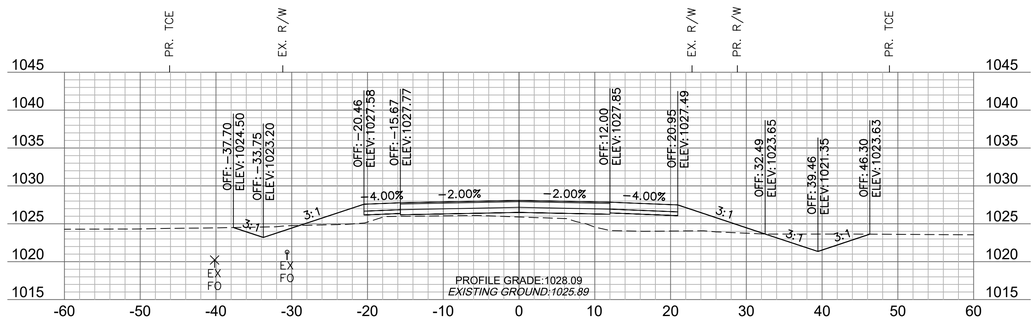
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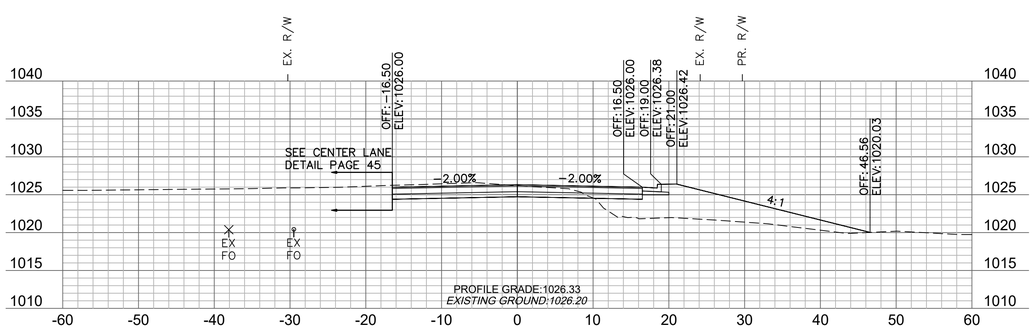
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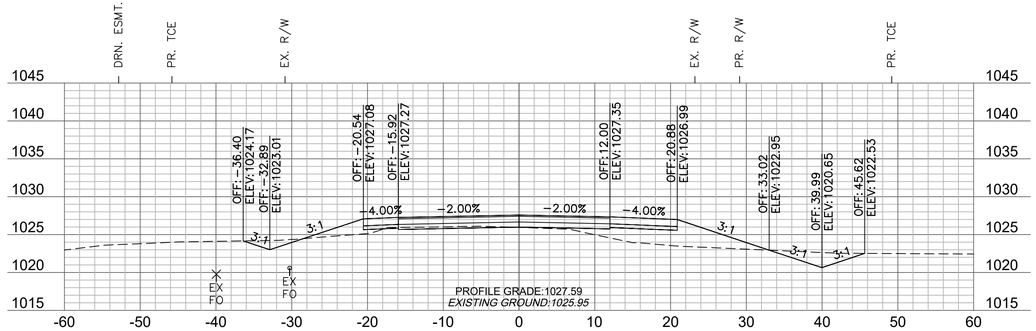
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122+00



120+75



121+75

SCALE IN FEET
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0' 5' 10' 20'

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CITY OF JOPLIN

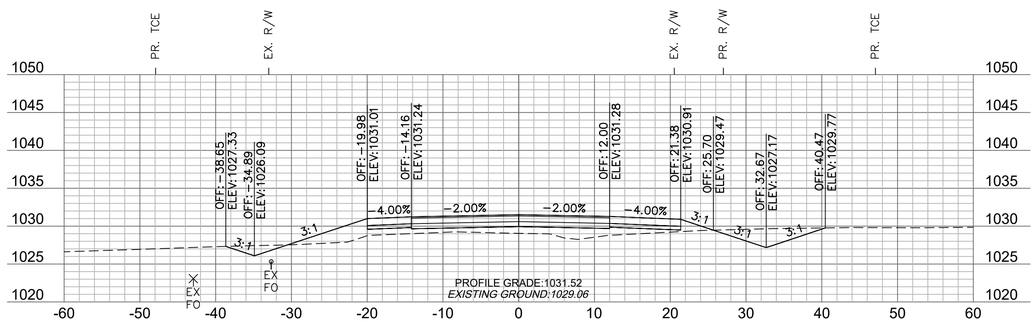
JOPLIN, MISSOURI

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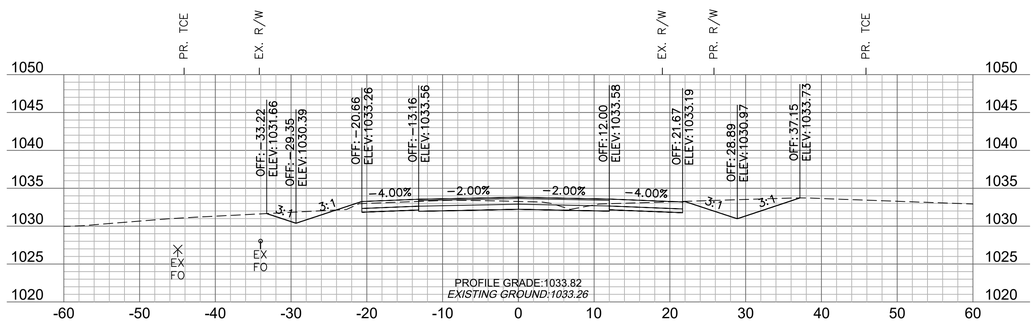
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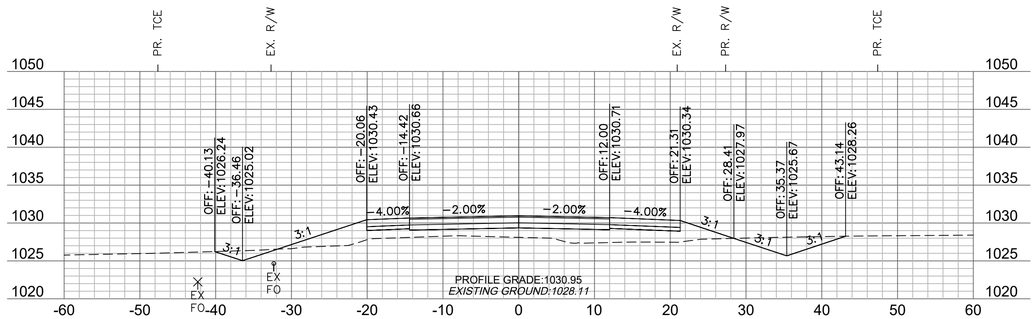
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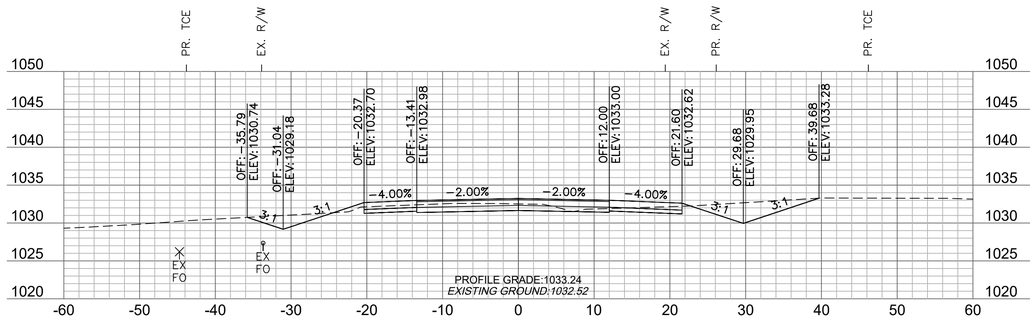
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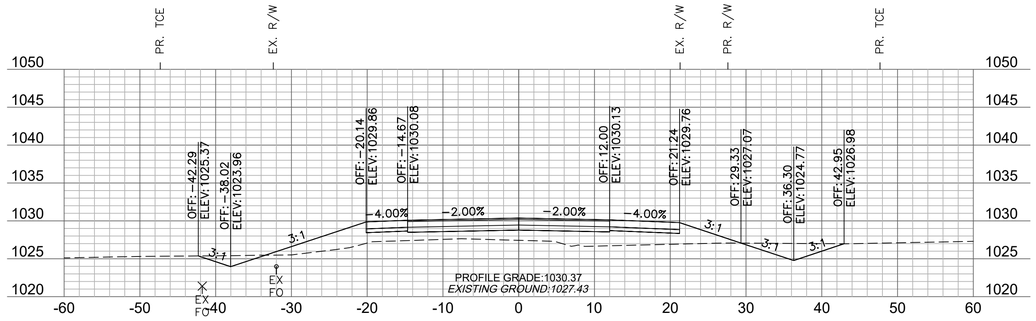
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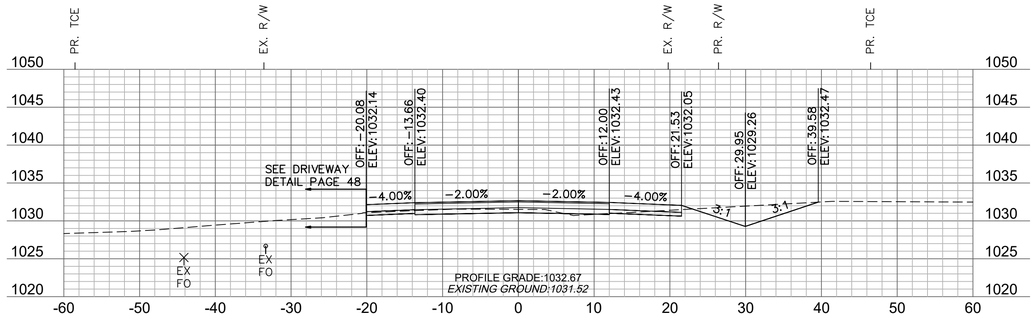
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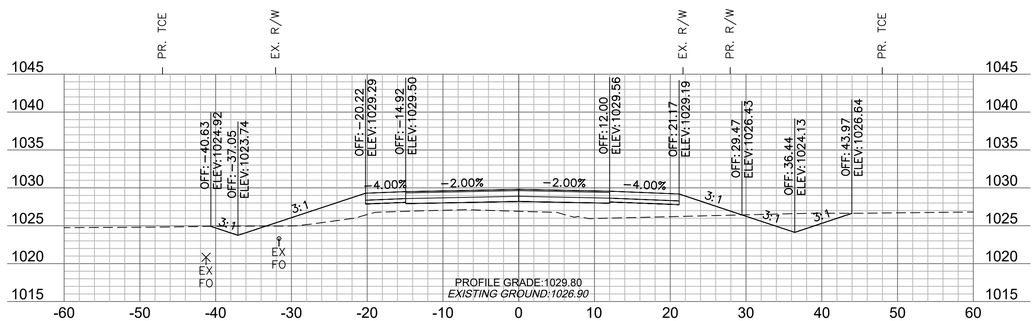
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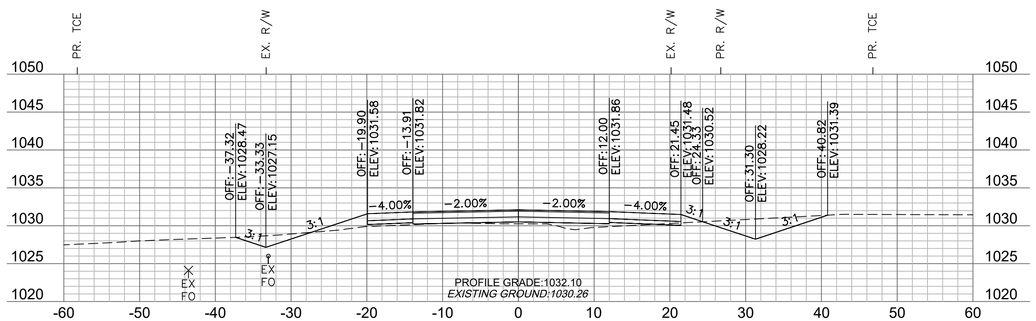
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124+00



122+75



123+75

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SCALE IN FEET

0' 5' 10' 20'

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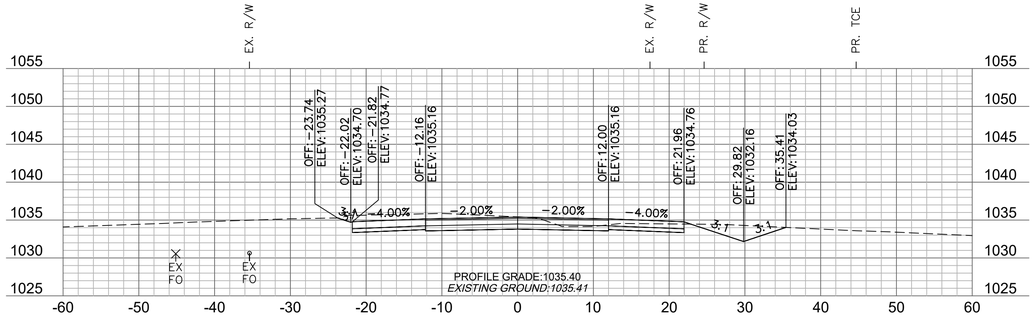
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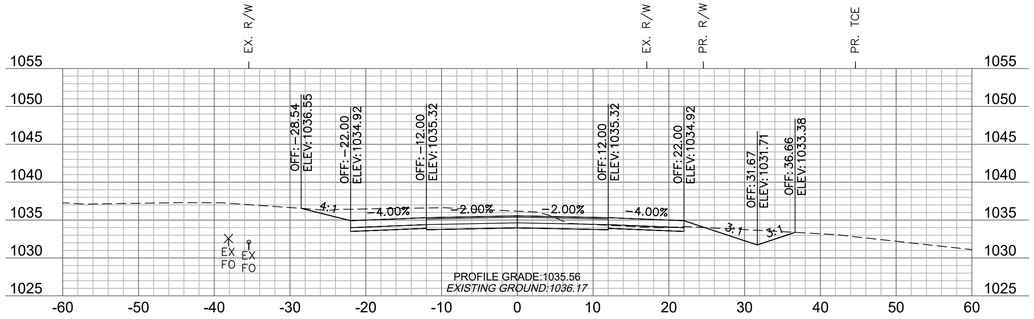
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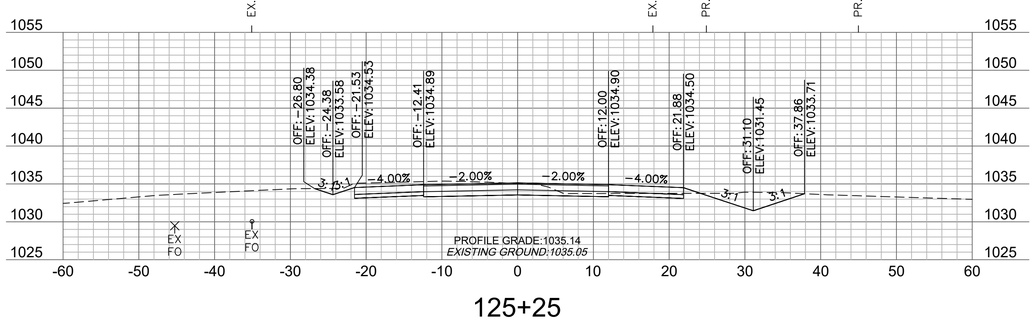
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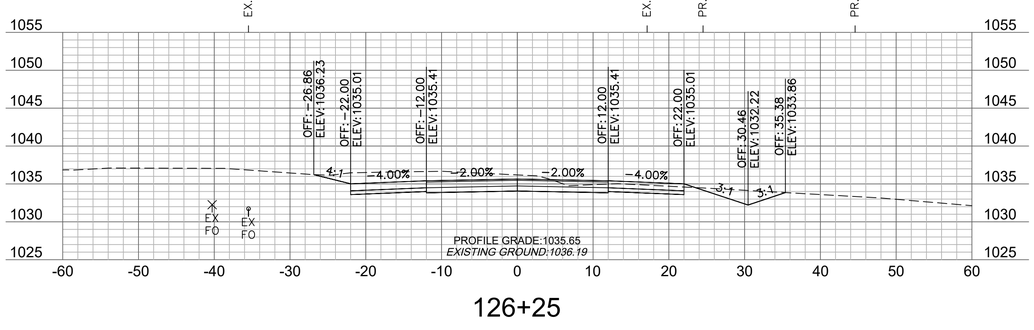
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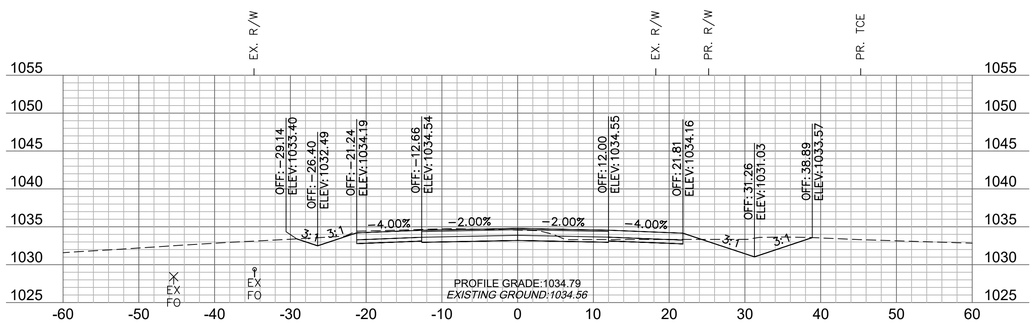
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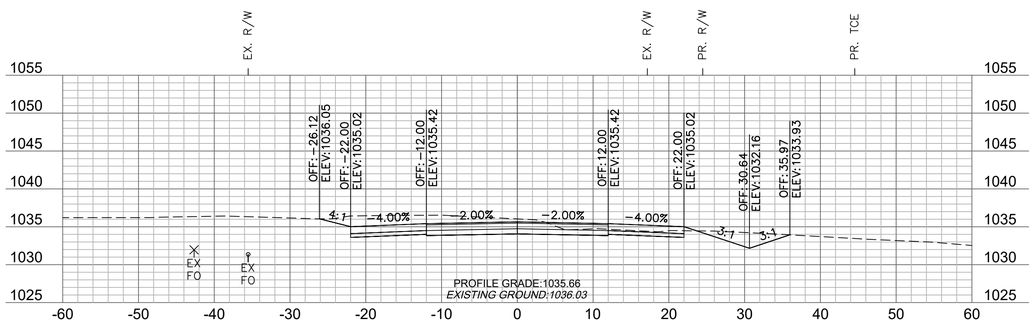
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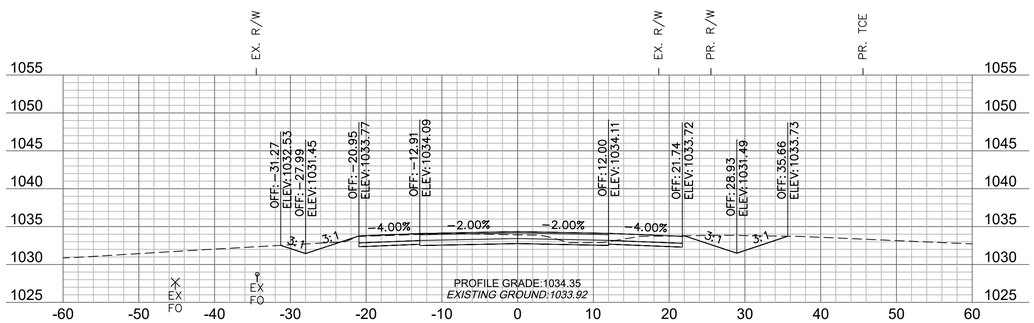
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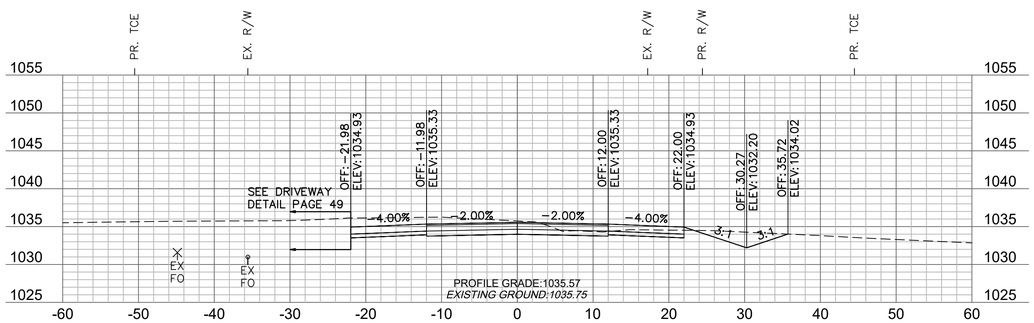
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126+00



124+75



125+75

20'
10'
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0' 5' 10' 20'
SCALE IN FEET

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
1025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

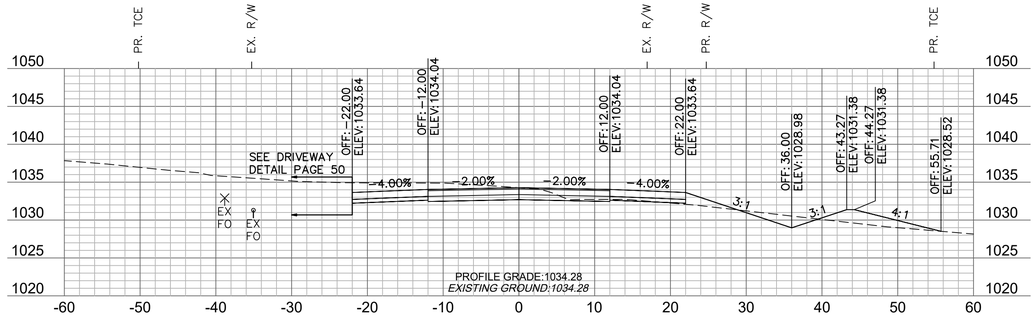
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2025

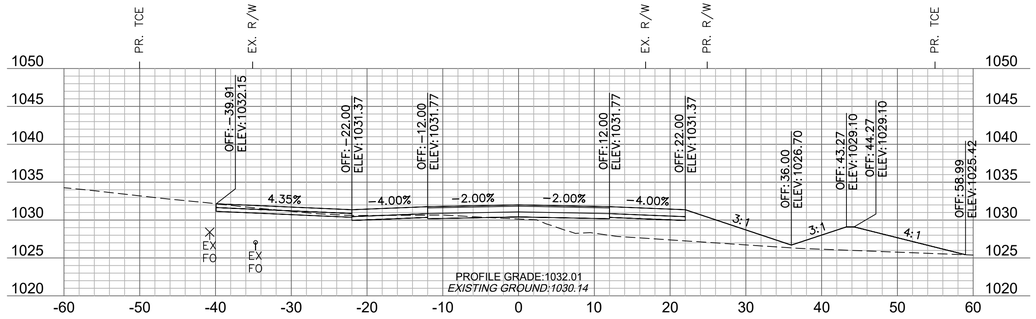
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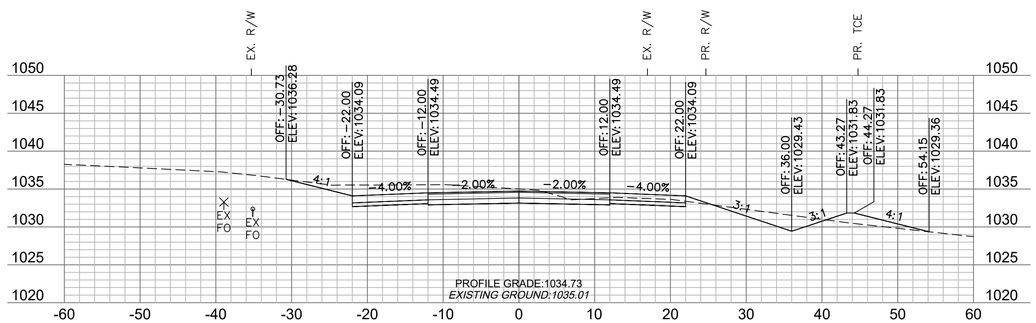
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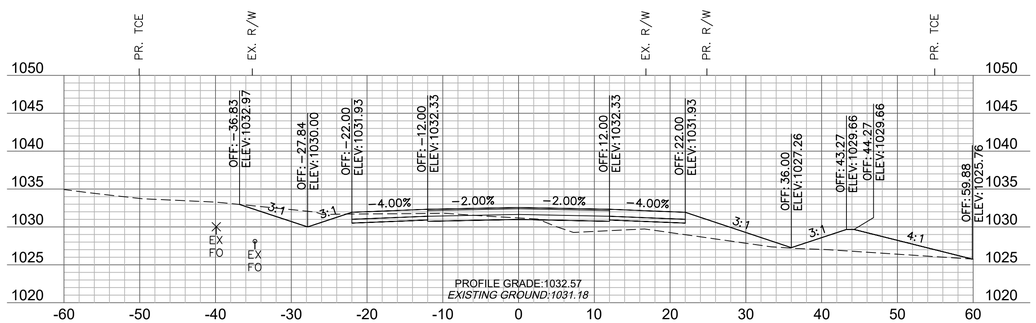
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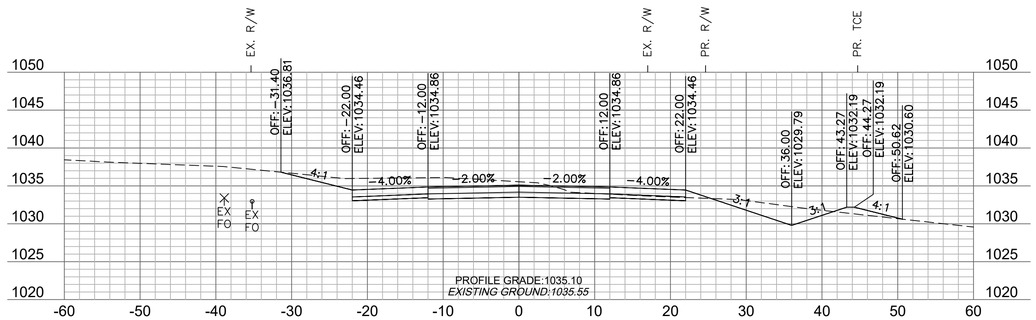
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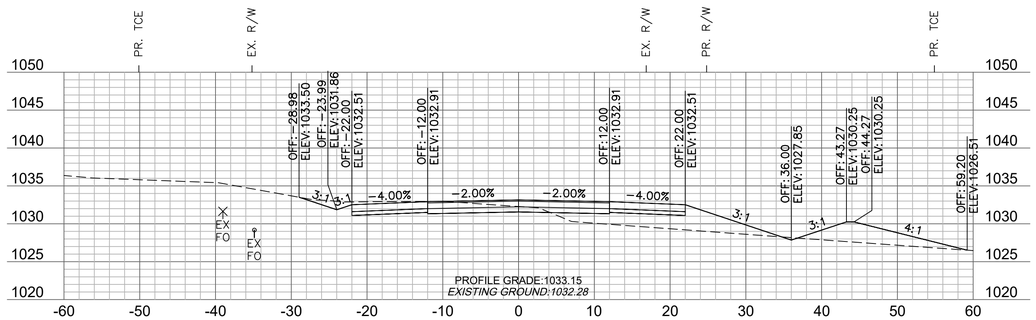
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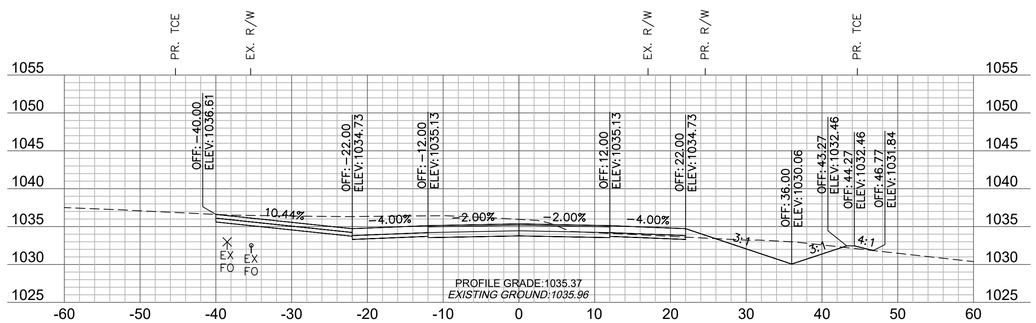
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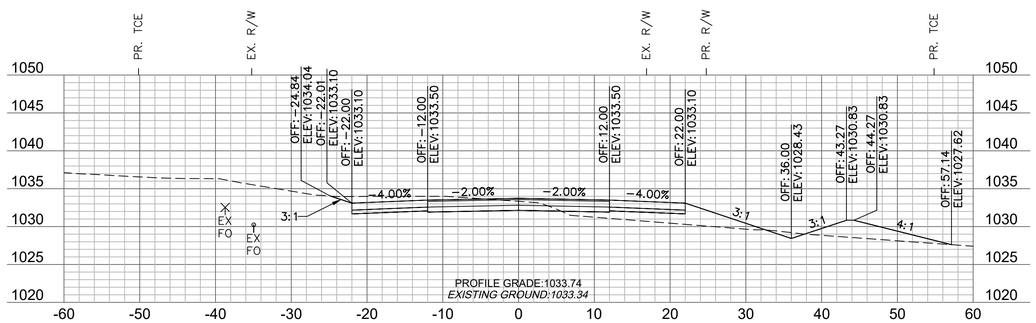
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128+00



126+75



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REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

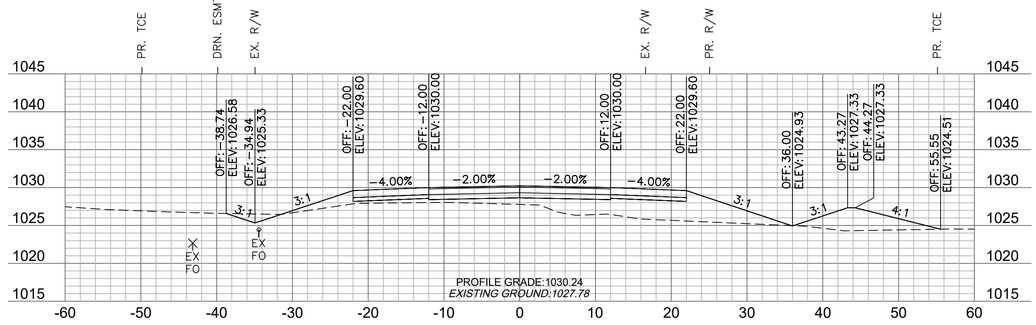
JOPLIN, MISSOURI

2025

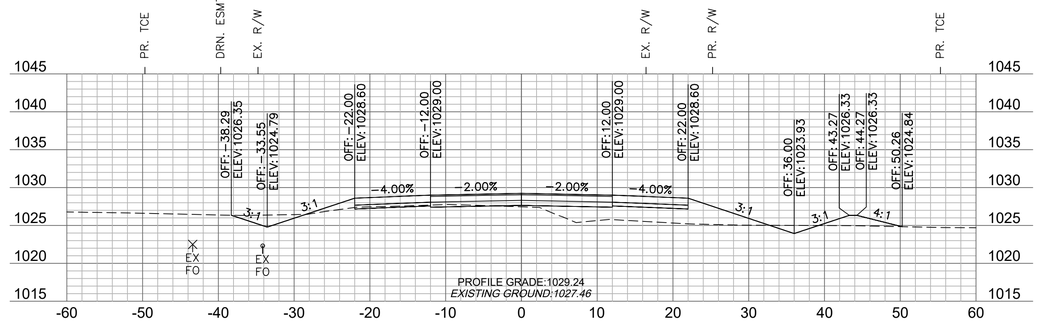
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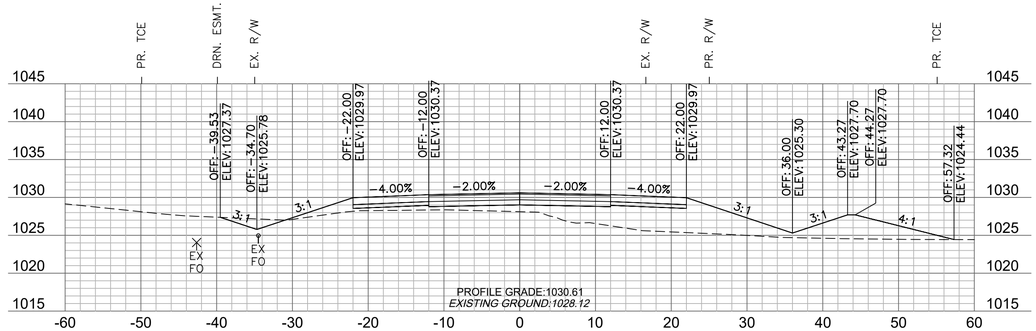
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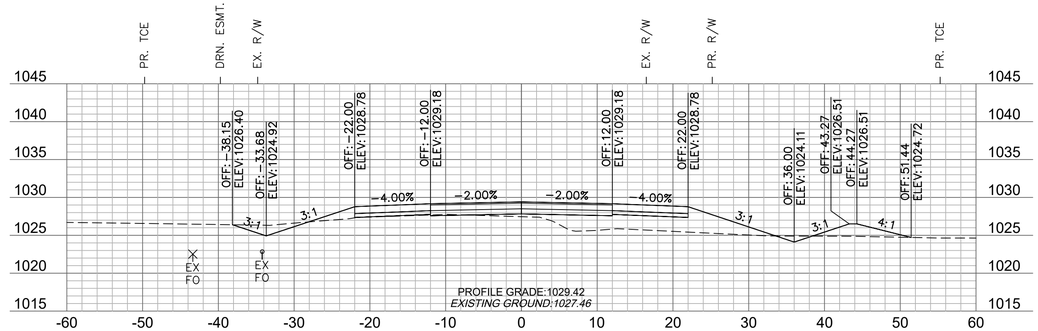
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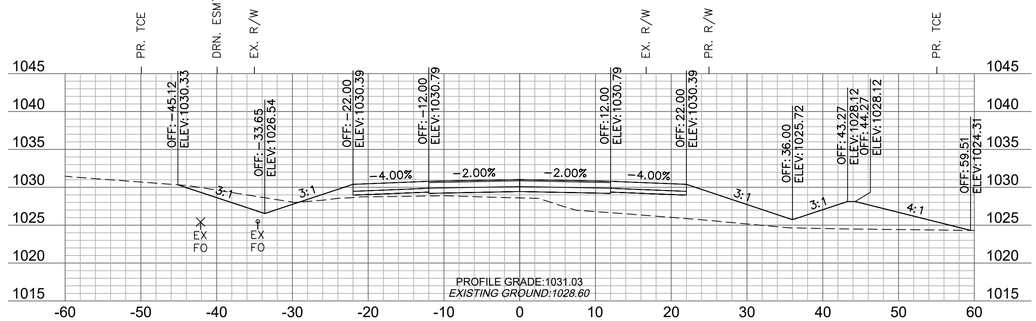
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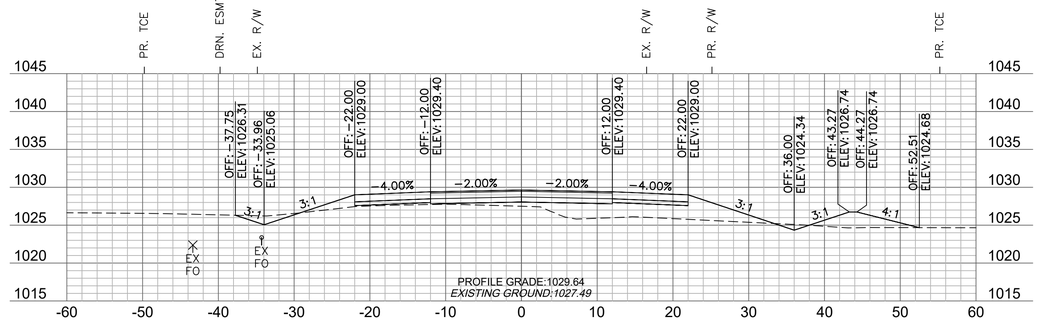
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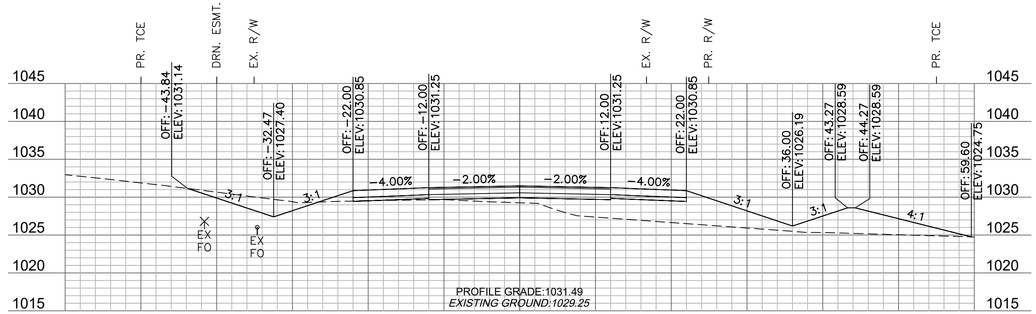
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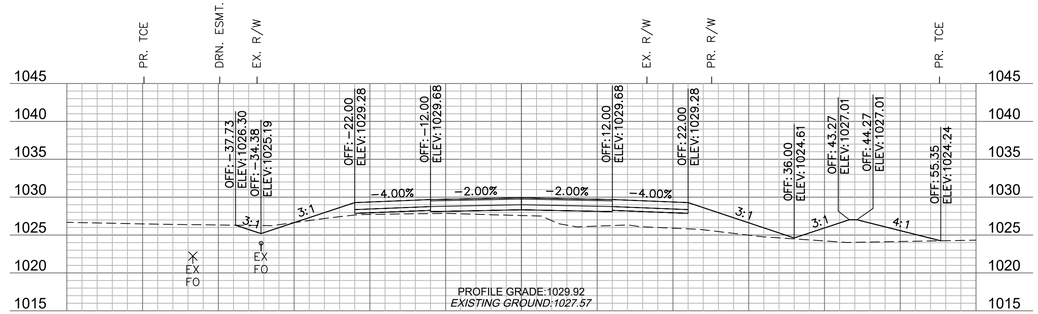
129+00



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0' 5' 10' 20'
SCALE IN FEET

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

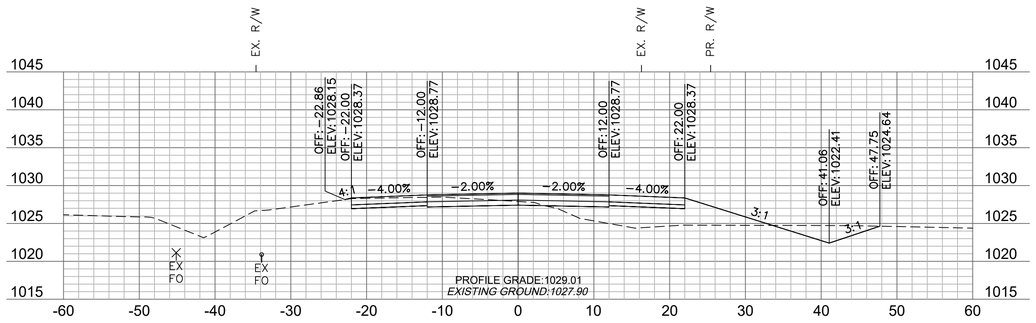
JOPLIN, MISSOURI

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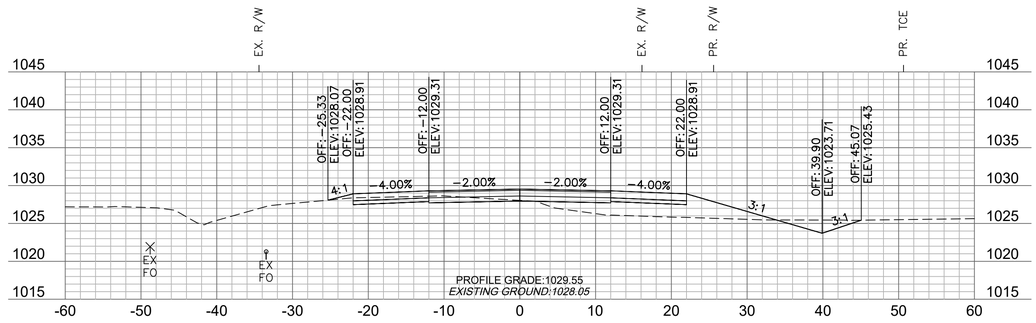
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date:	3/28/2025

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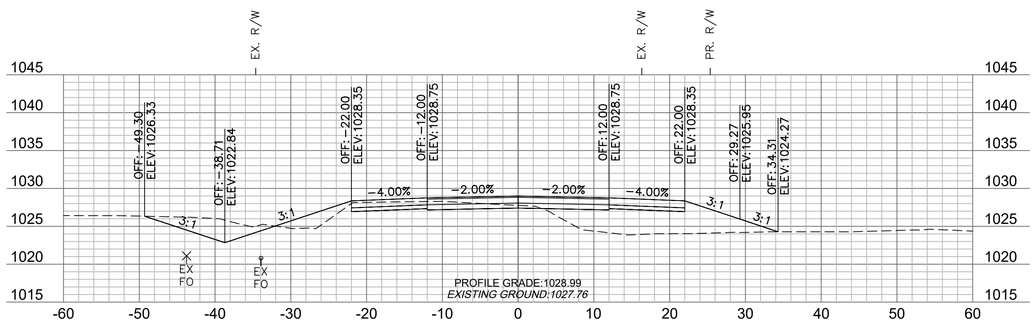
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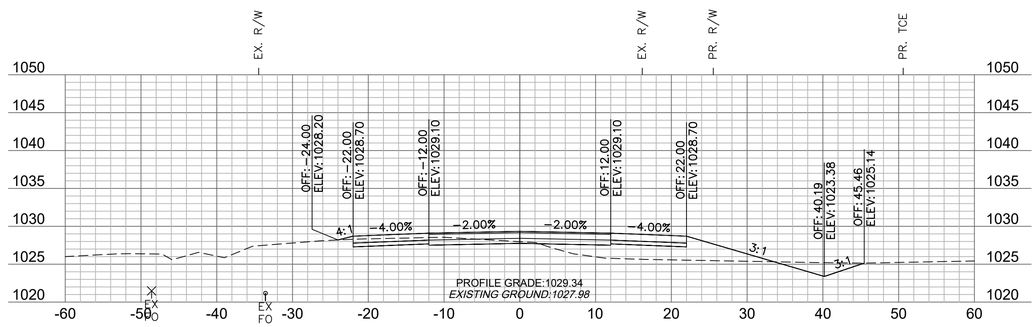
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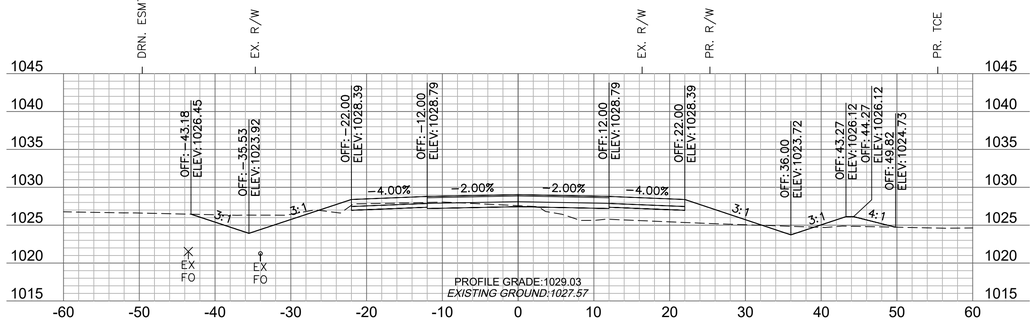
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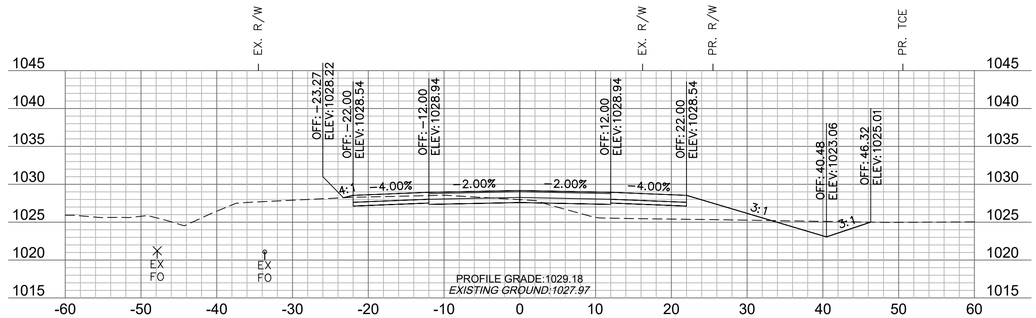
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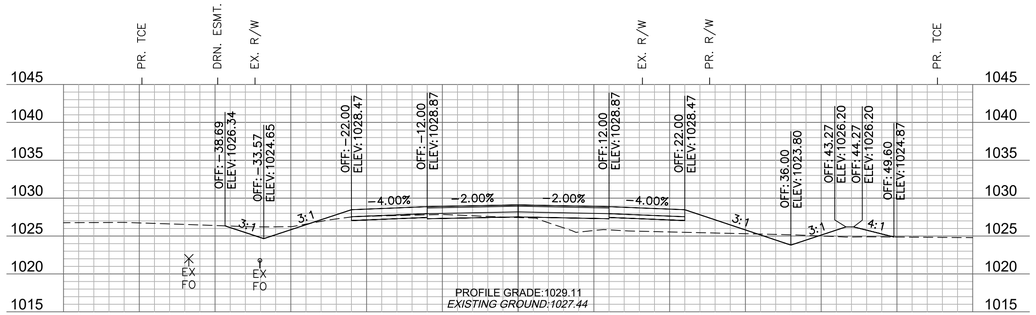
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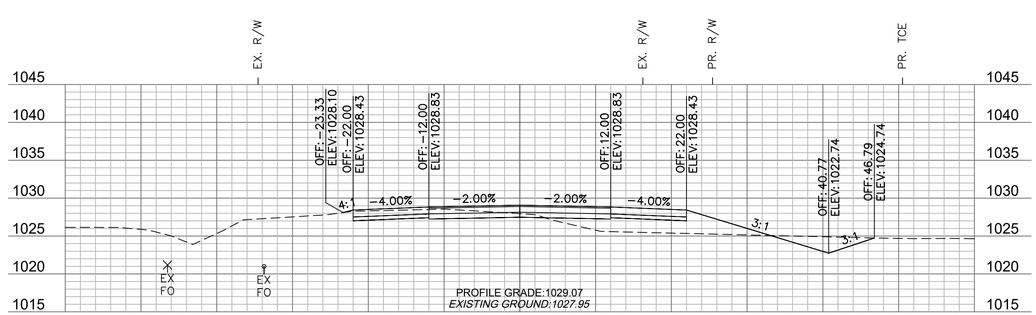
131+00



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SCALE IN FEET

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

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REVISIONS

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ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

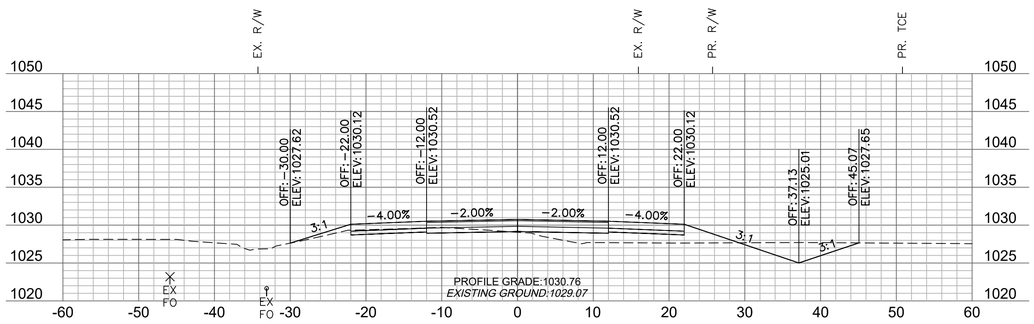
JOPLIN, MISSOURI

2025

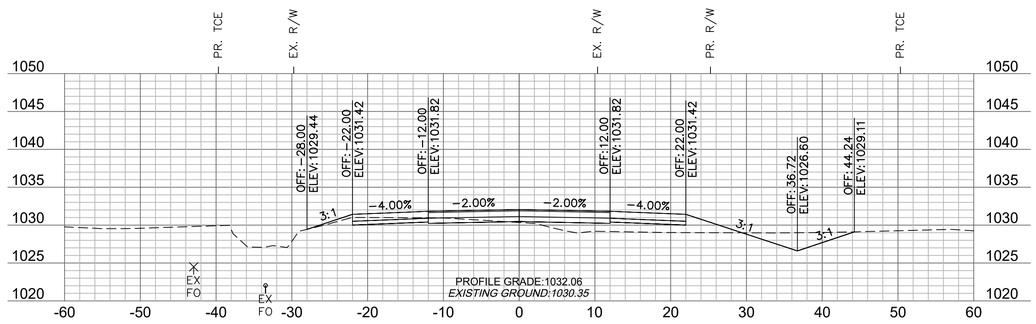
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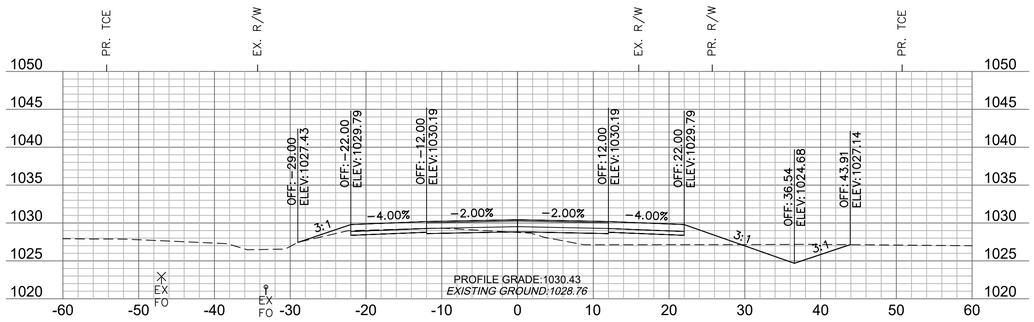
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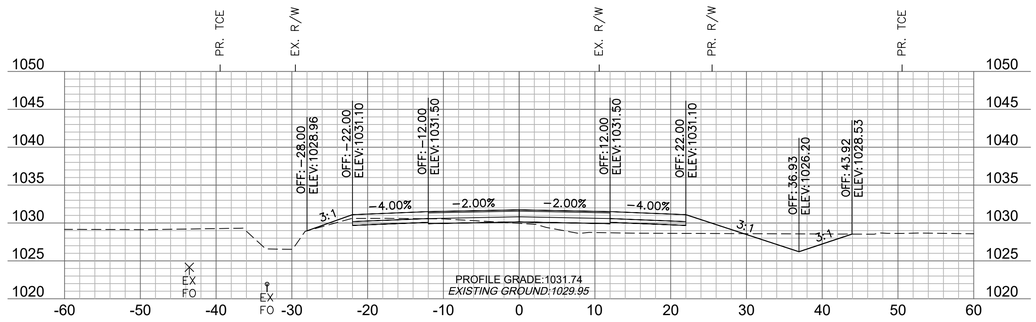
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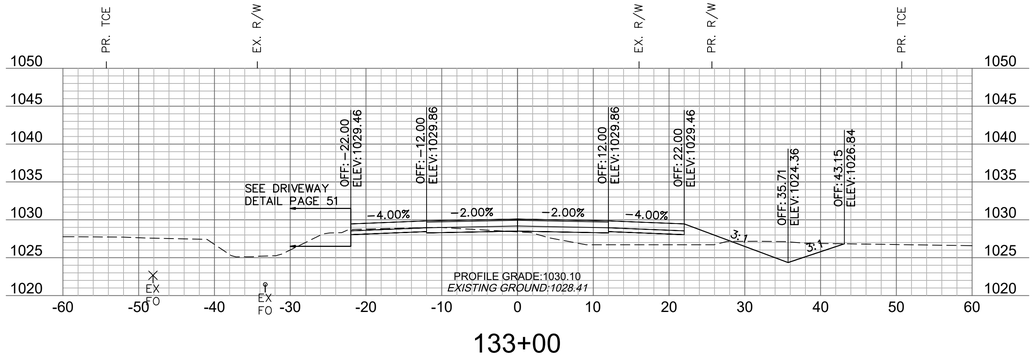
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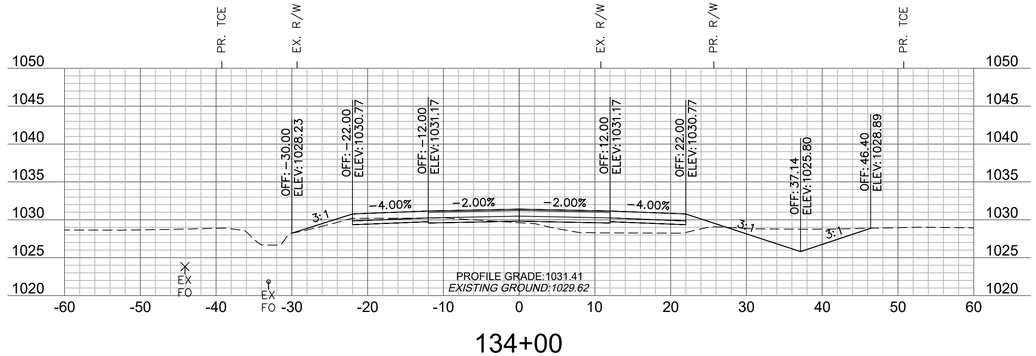
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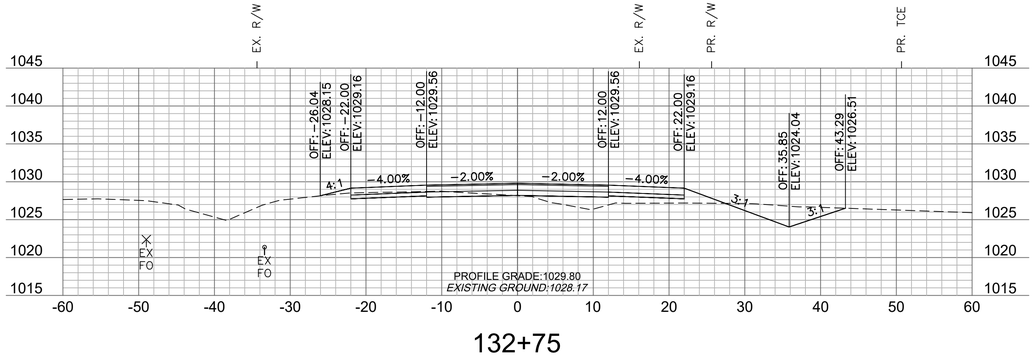
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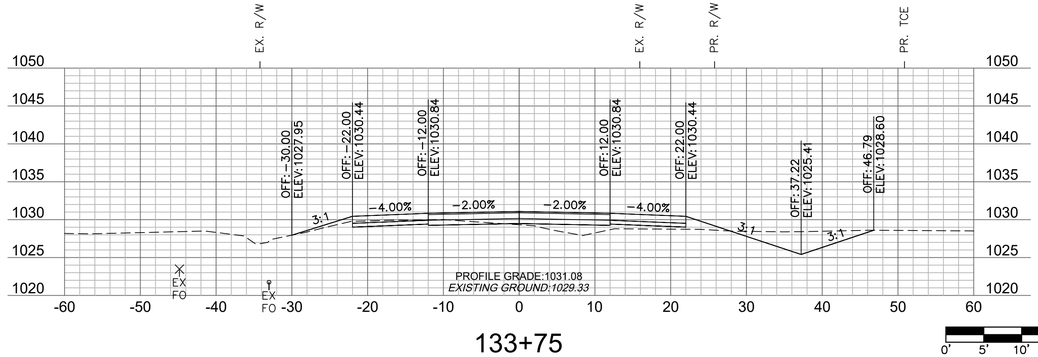
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0' 5' 10' 20'
SCALE IN FEET

0' 5' 10' 20'

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ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

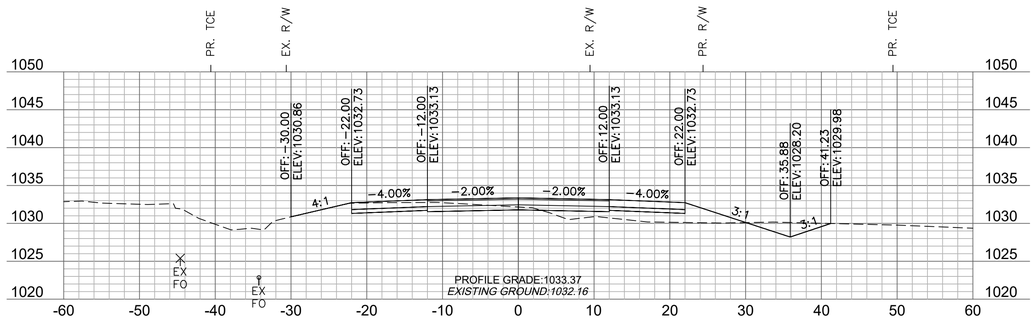
JOPLIN, MISSOURI

2025

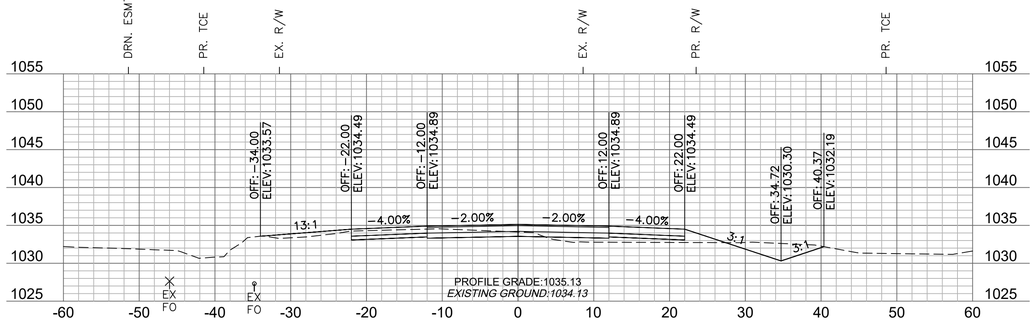
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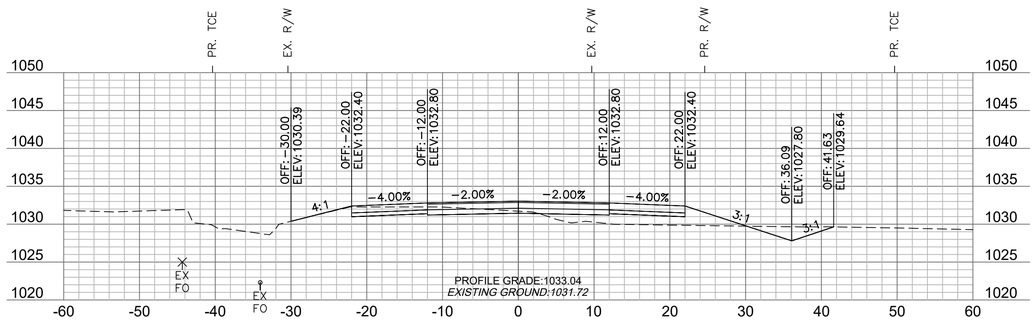
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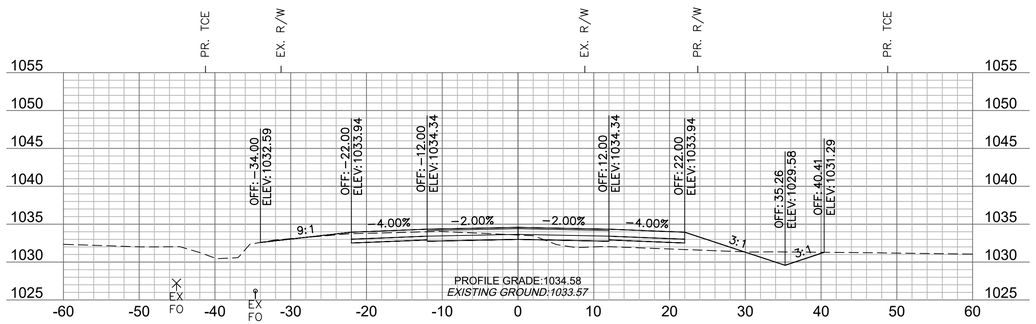
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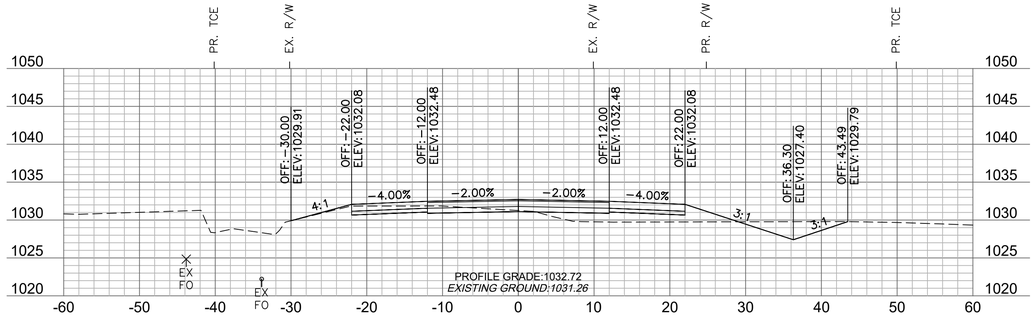
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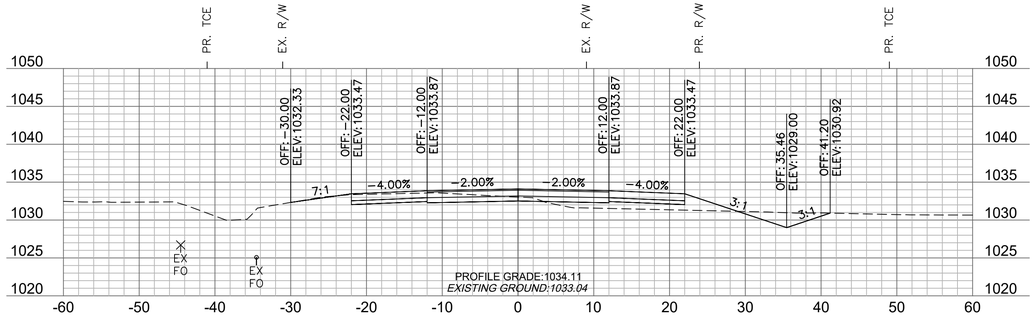
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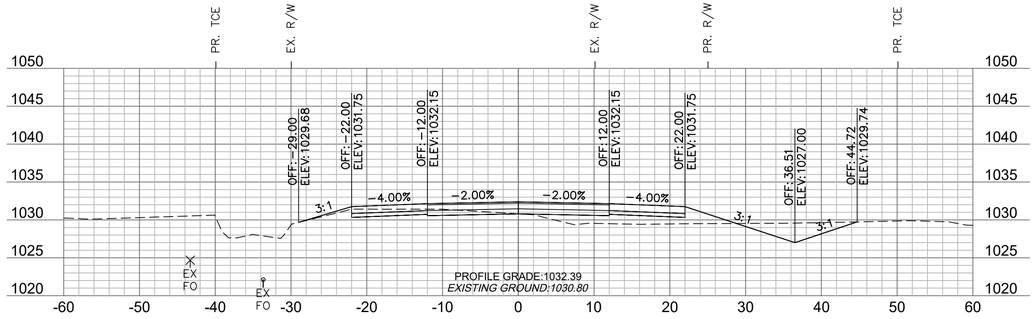
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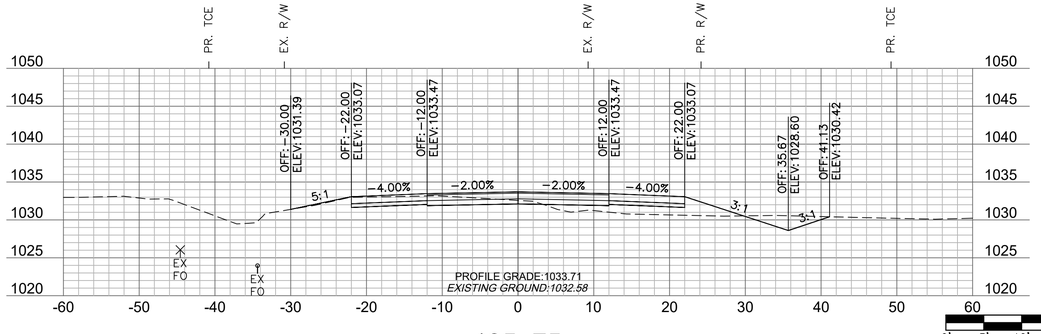
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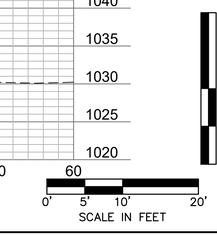
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
2025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

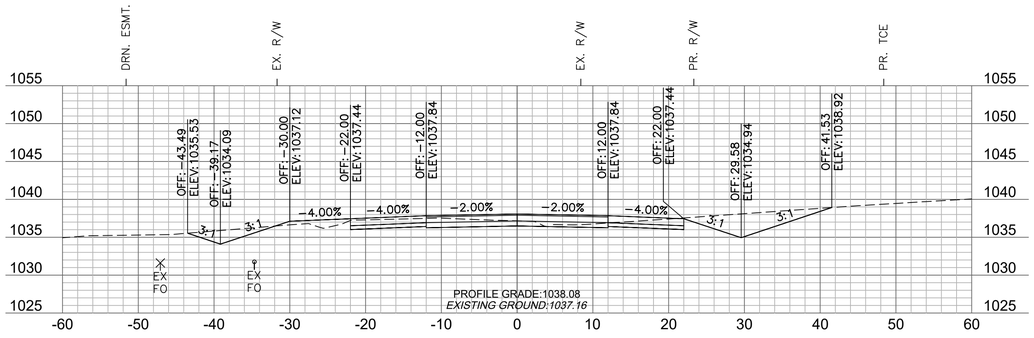
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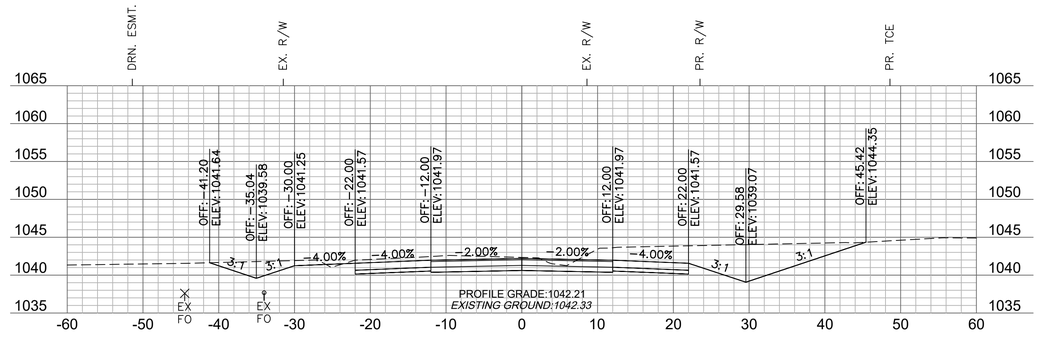
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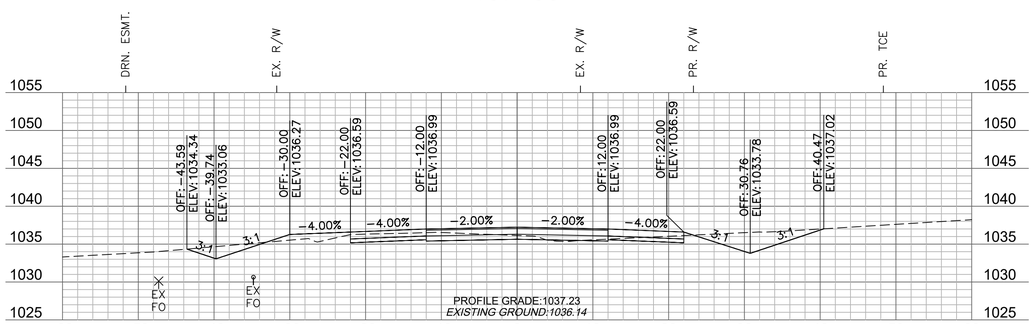
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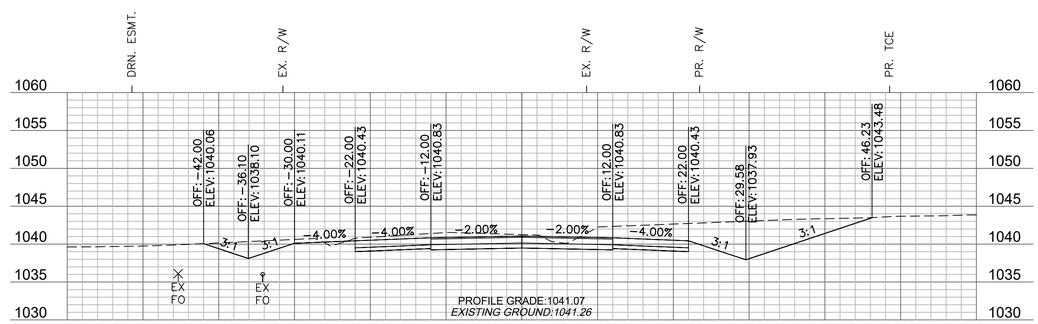
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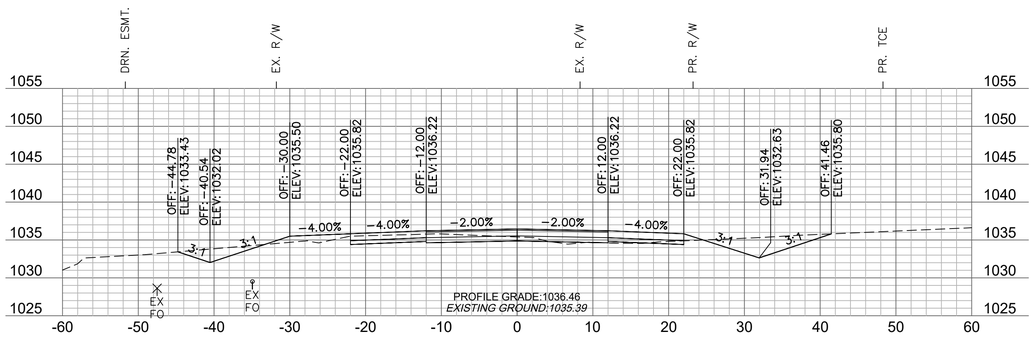
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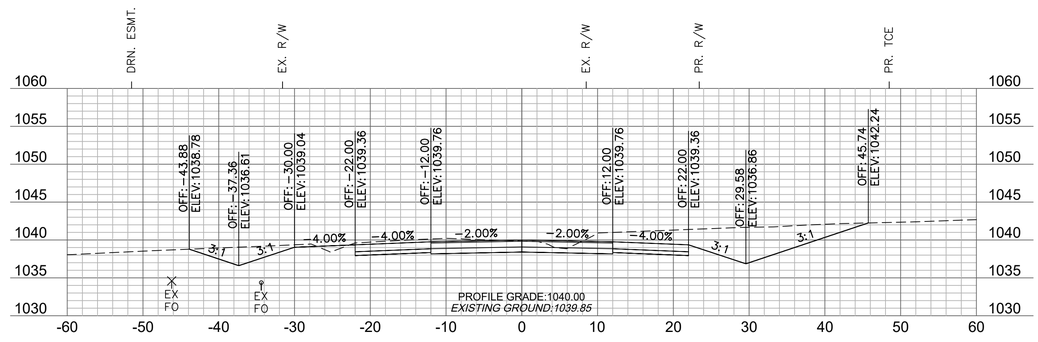


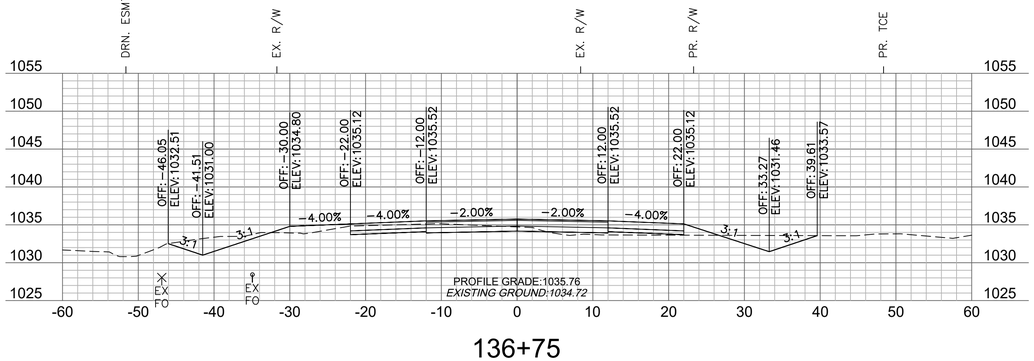


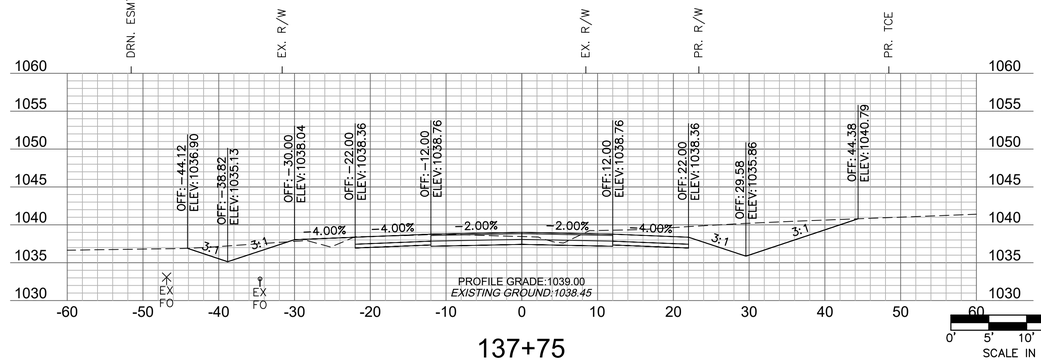












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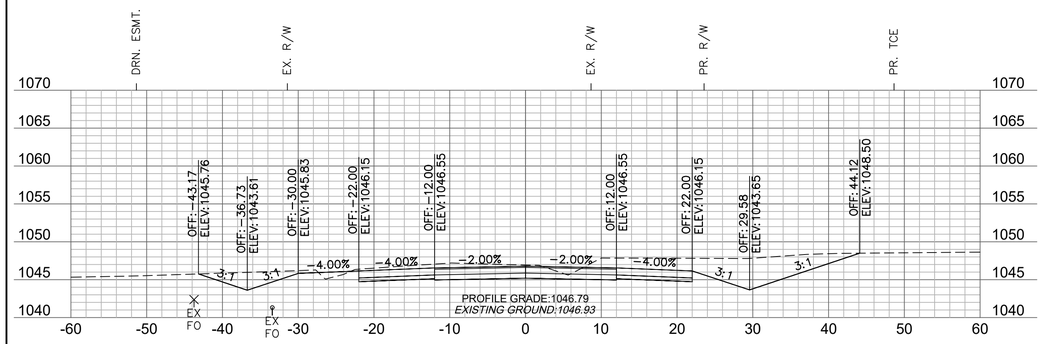
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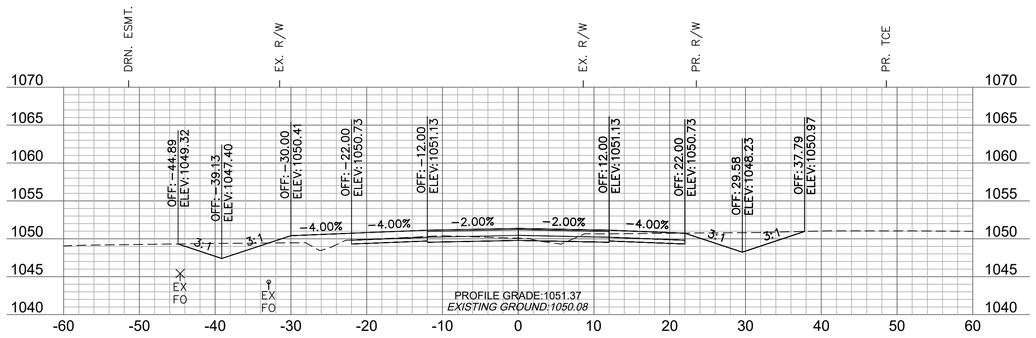
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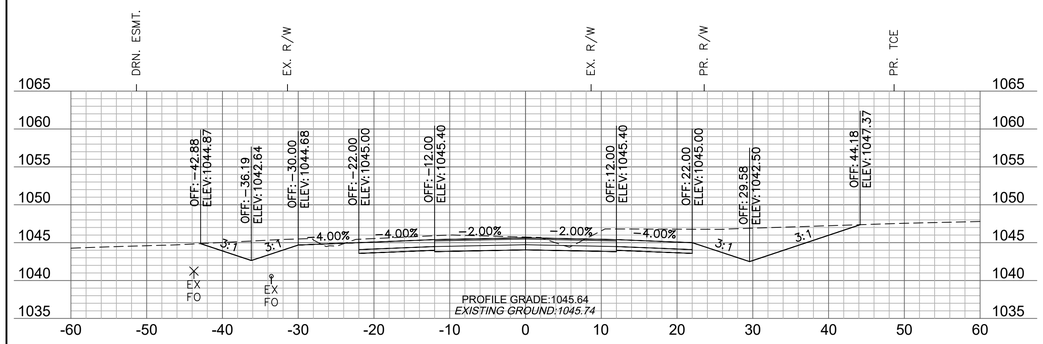
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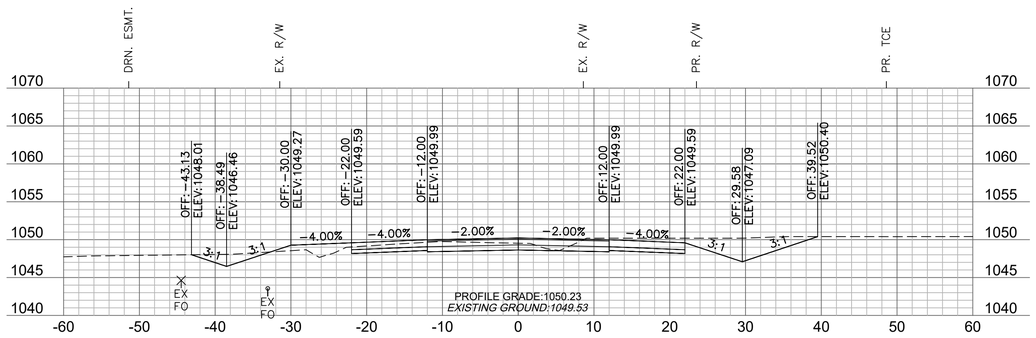
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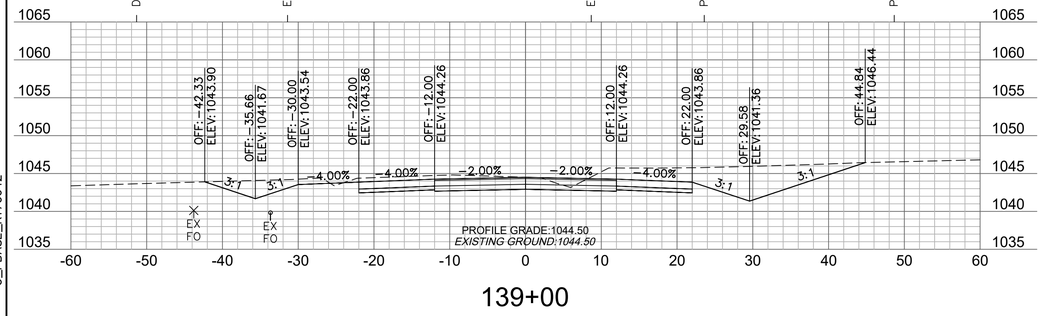
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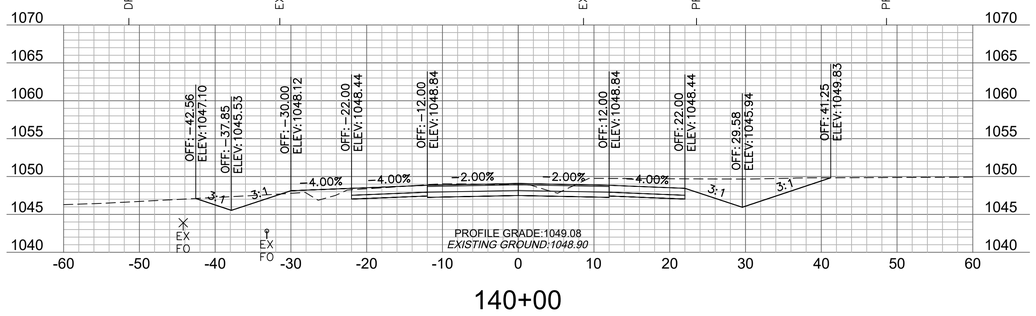
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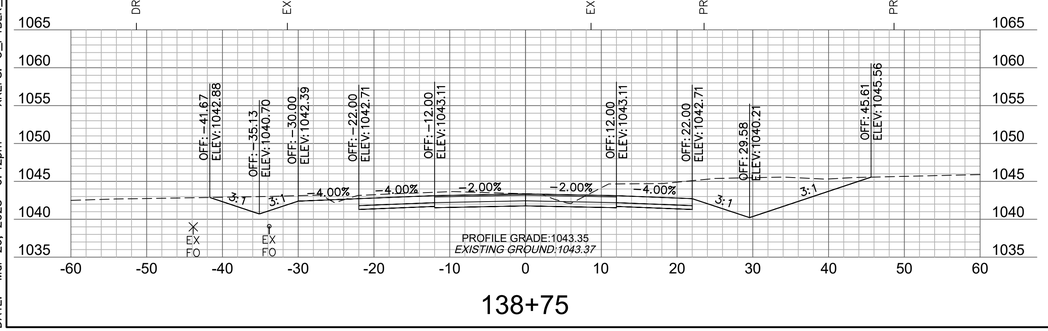
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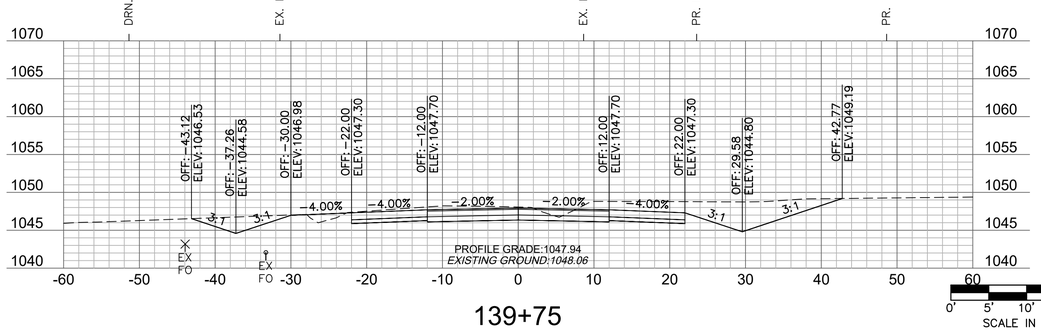
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140+00



138+75



139+75

20' 10' 5' 0'

0' 5' 10' 20'

SCALE IN FEET

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CITY OF JOPLIN

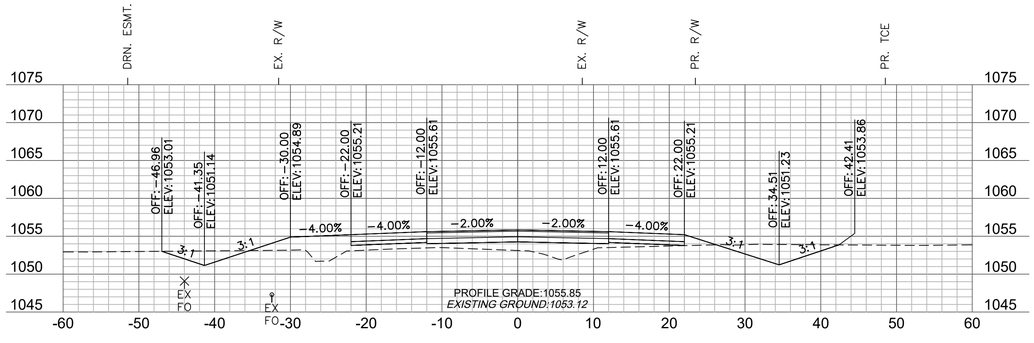
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JOPLIN, MISSOURI

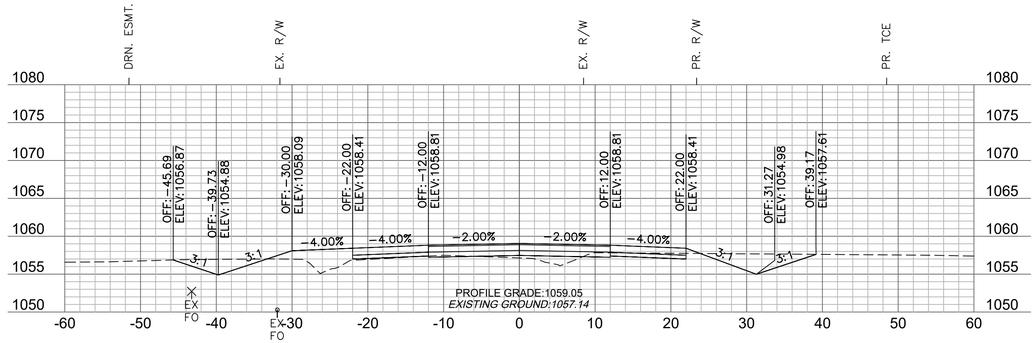
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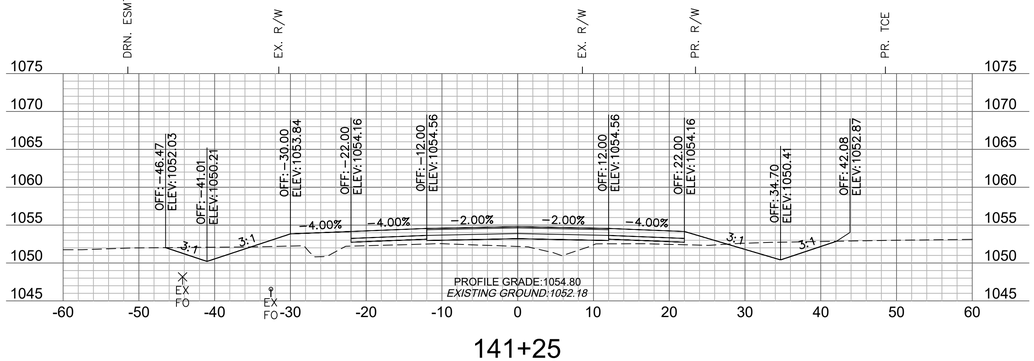
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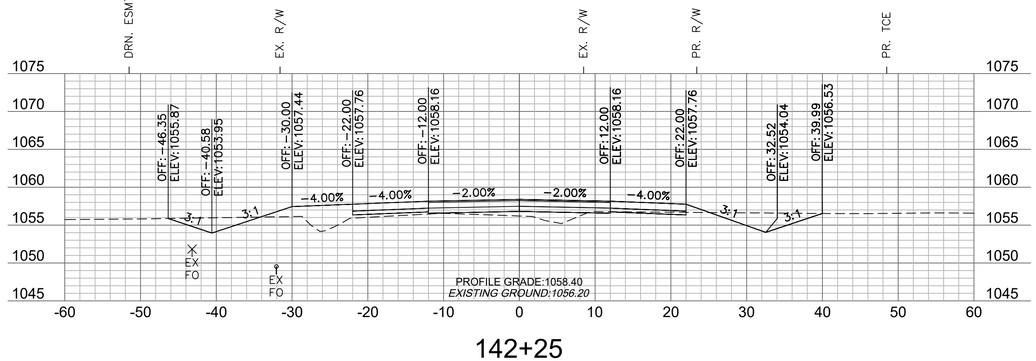
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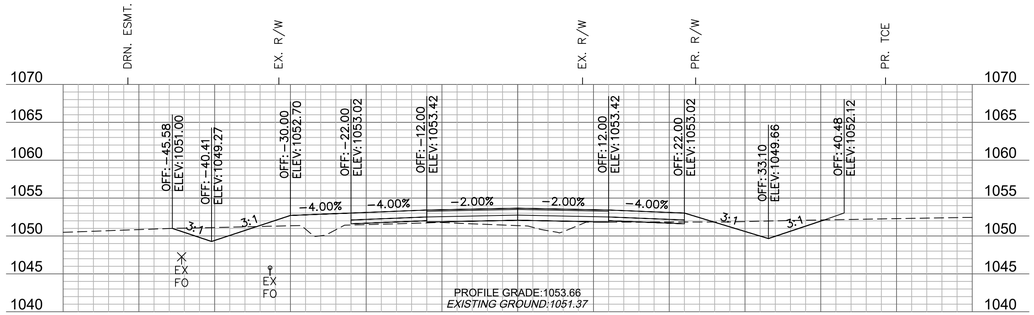
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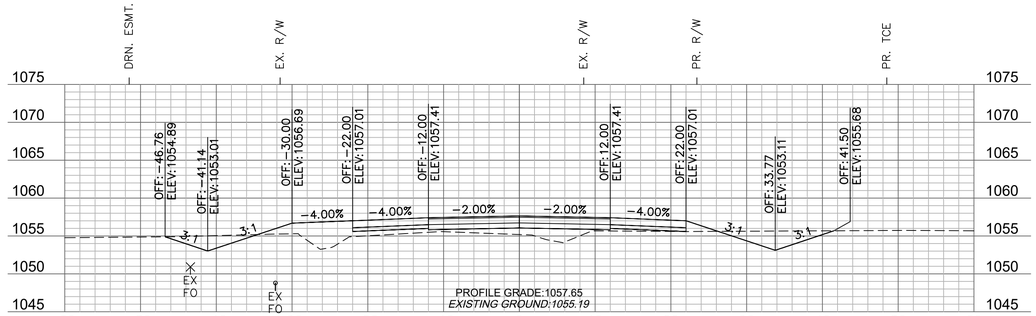
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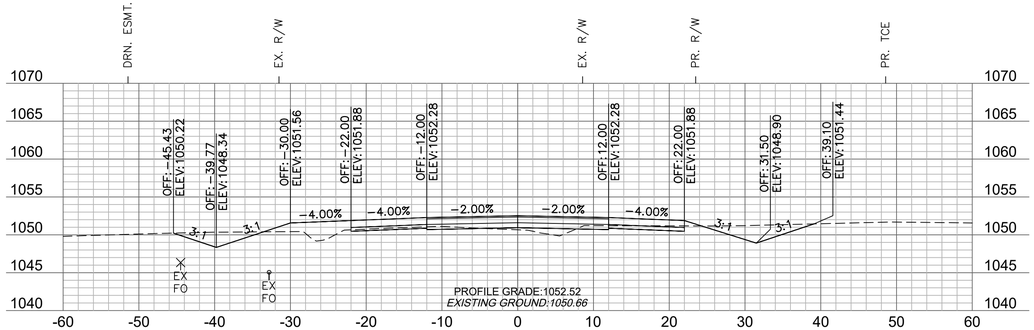
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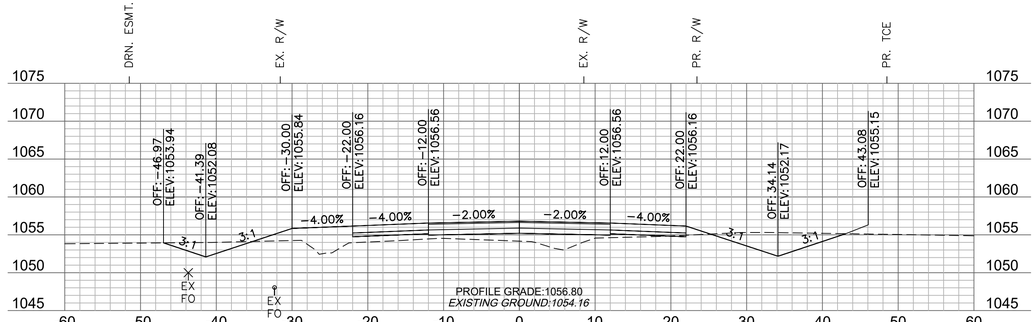
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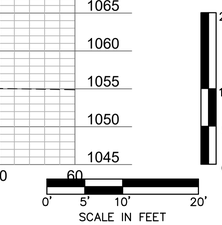
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MO# PE-2017019023

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CITY OF JOPLIN

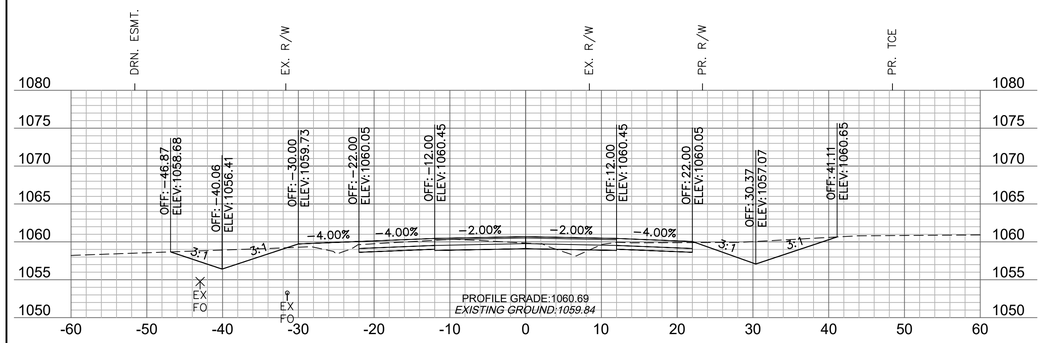
JOPLIN, MISSOURI

2025

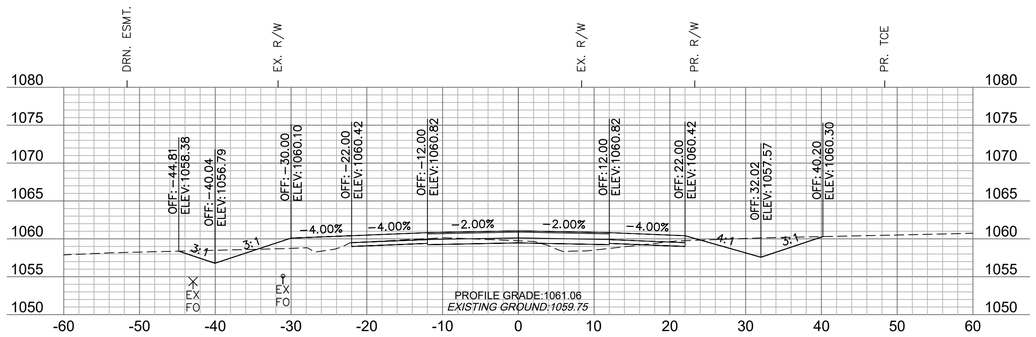
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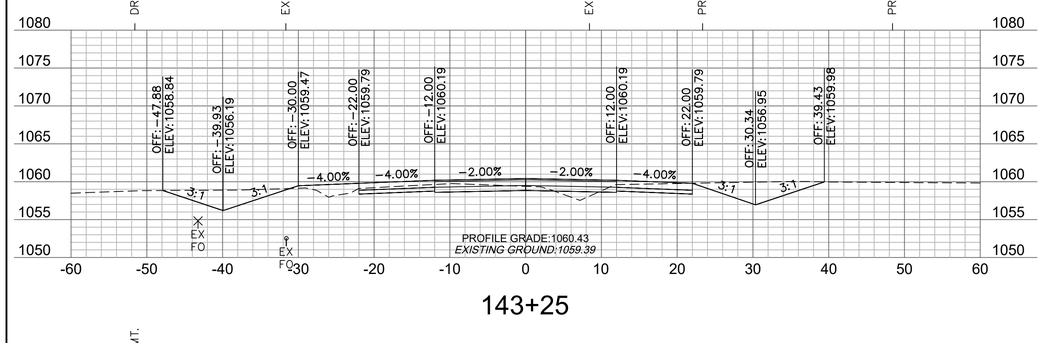
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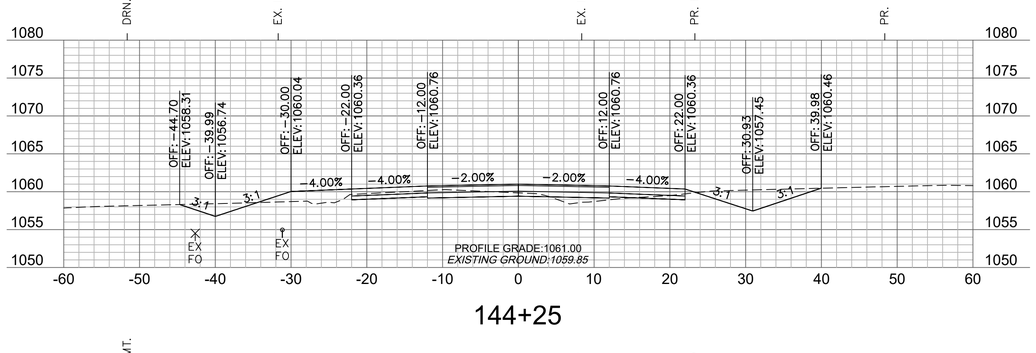
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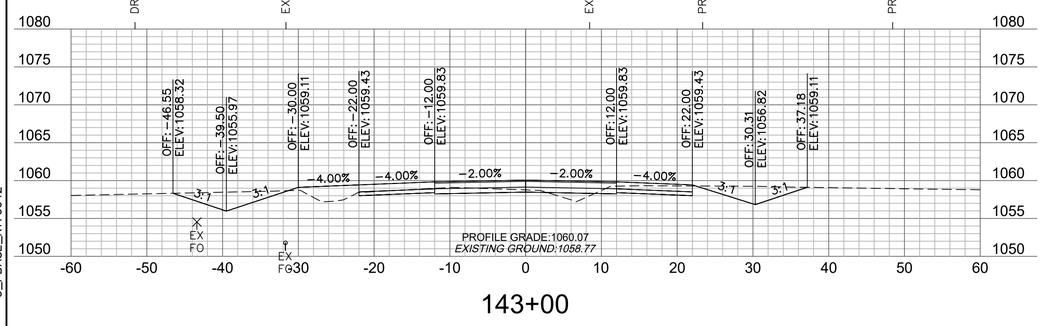
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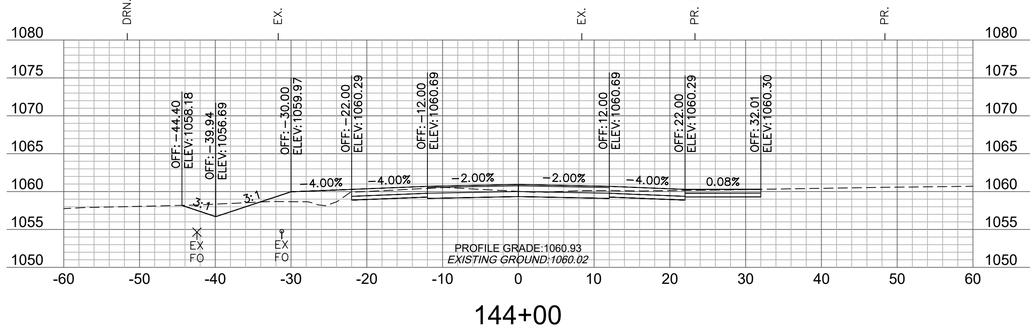
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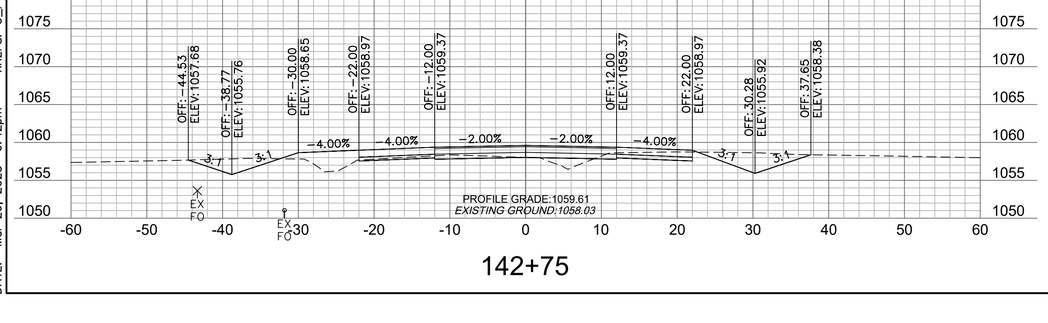
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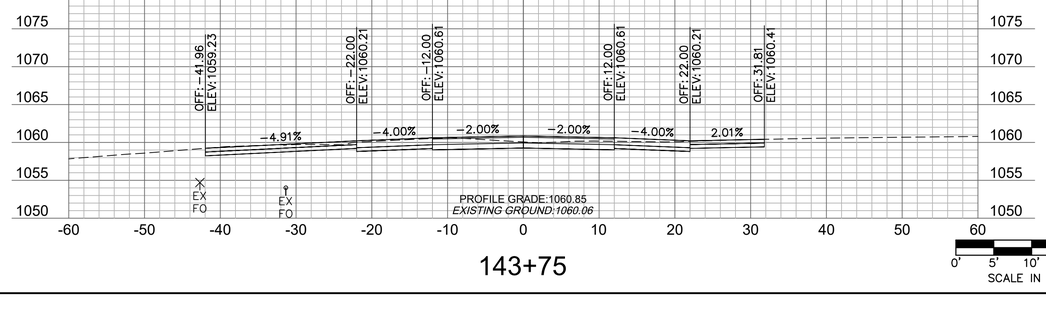
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144+00



142+75



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0' 5' 10' 20'

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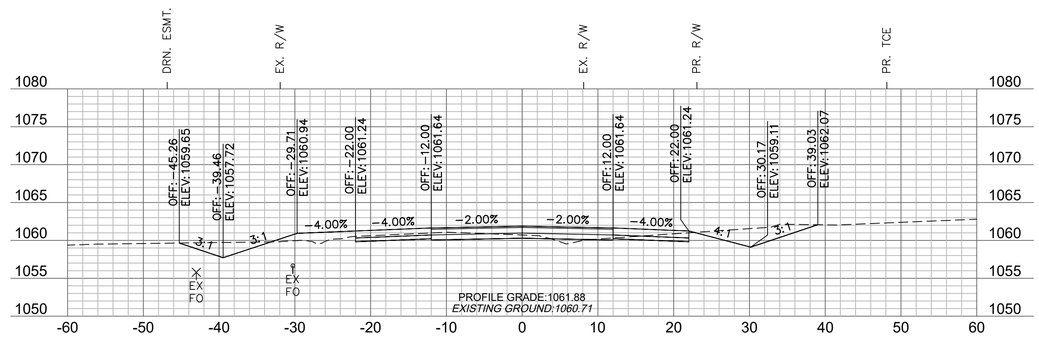
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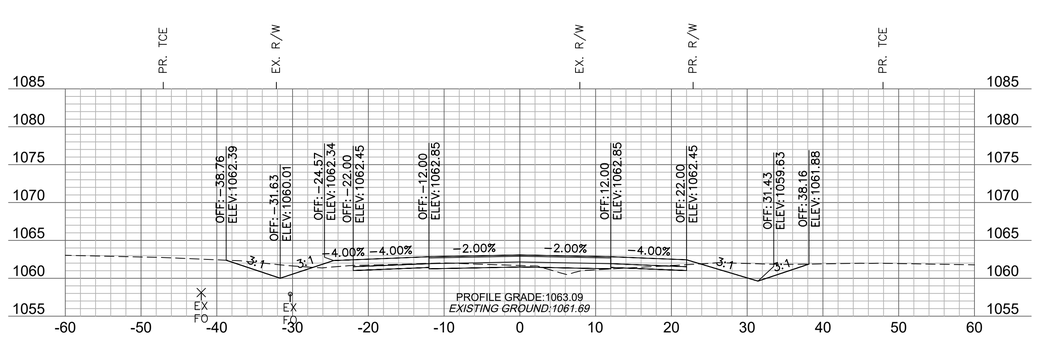
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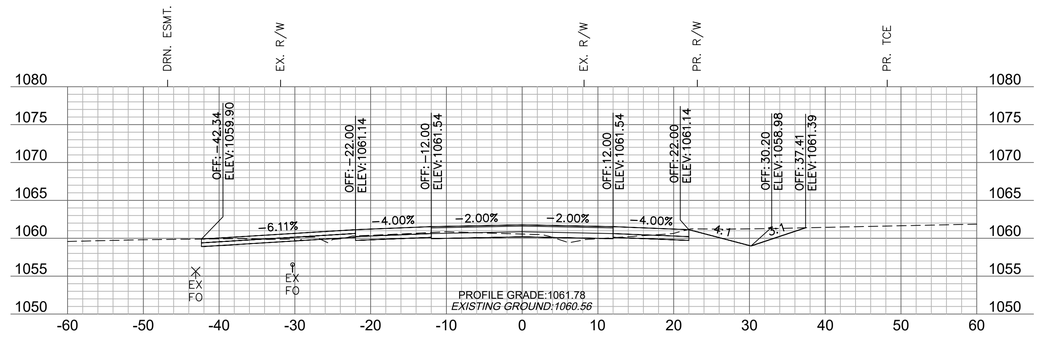
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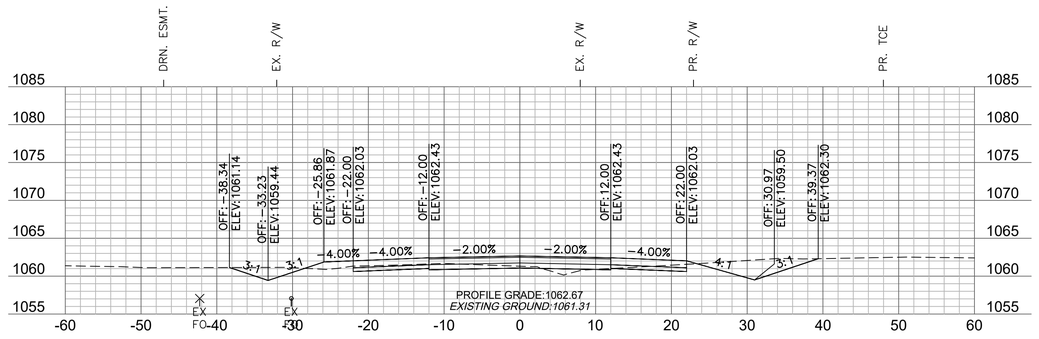
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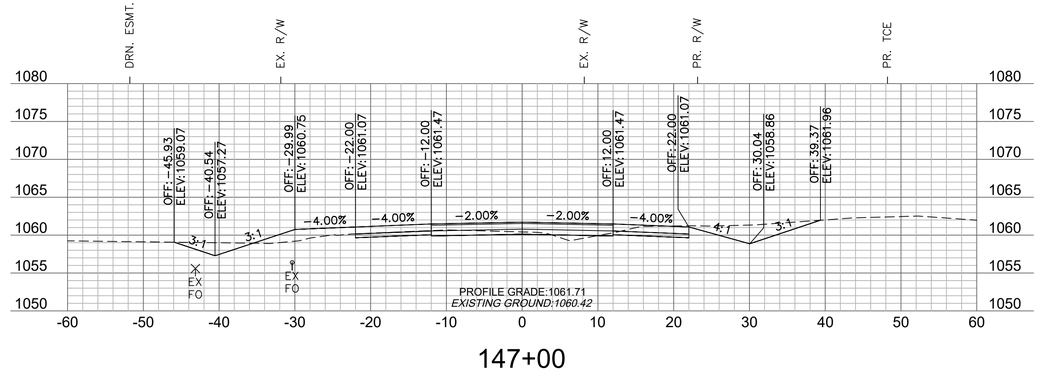
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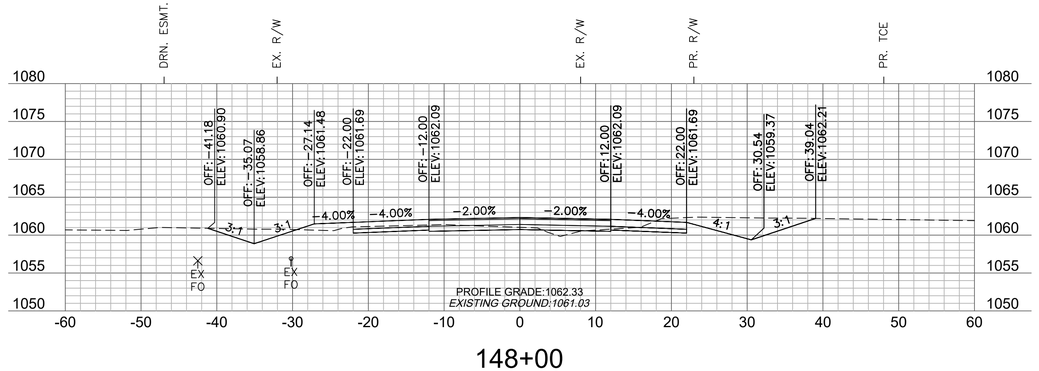
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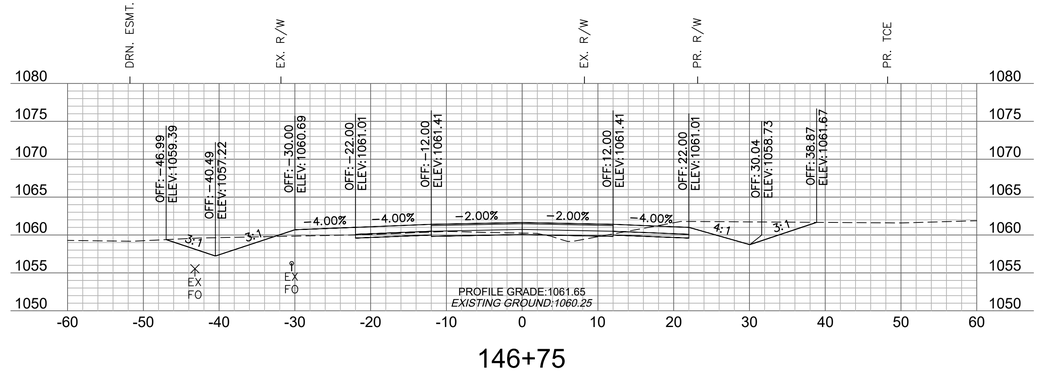
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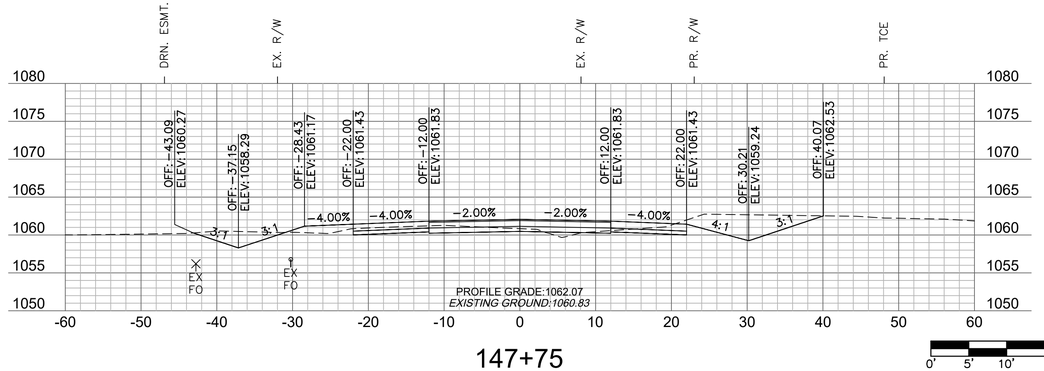
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148+00



146+75



147+75

20' 10' 5' 0'

0' 5' 10' 20'

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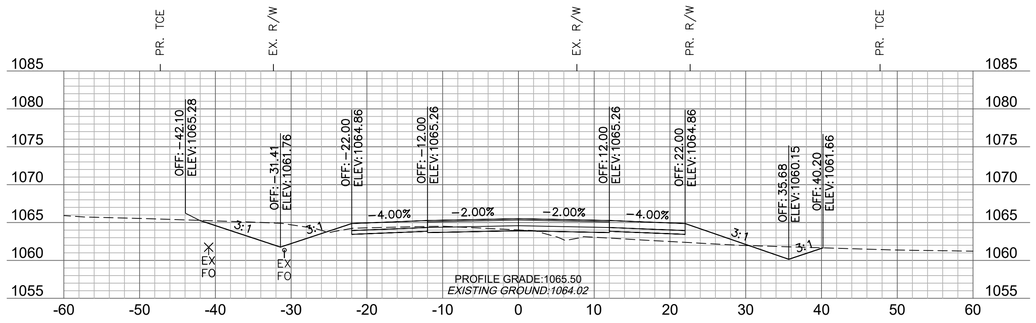
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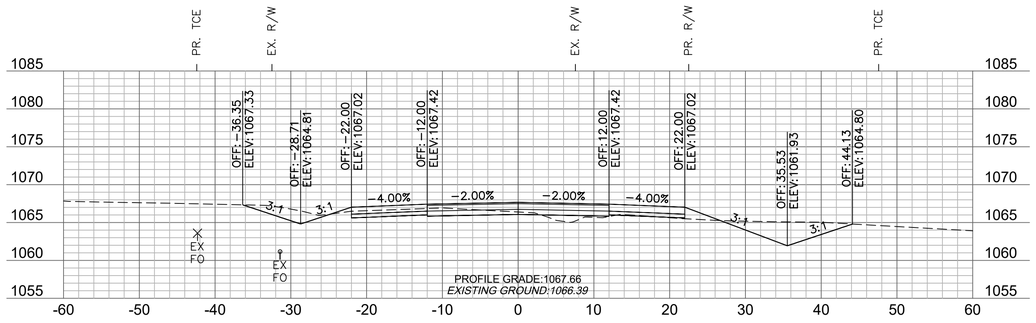
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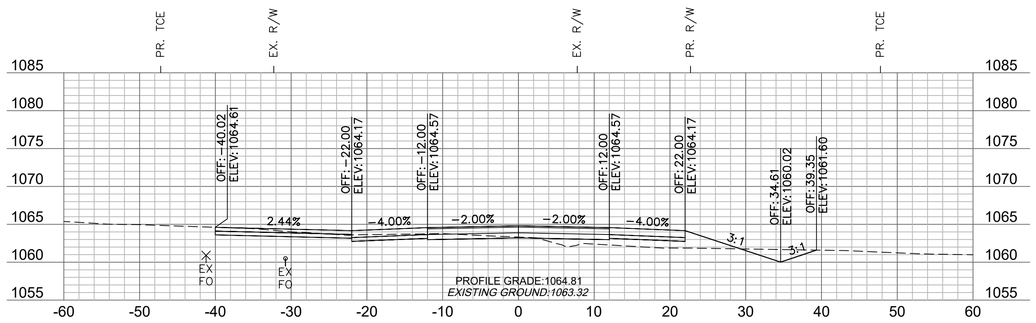
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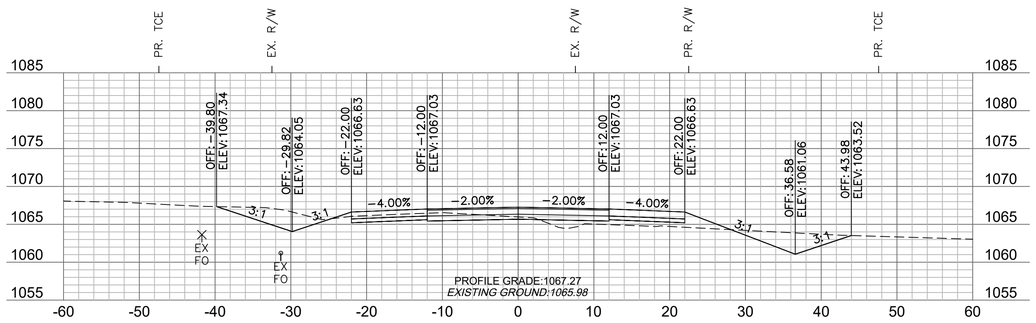
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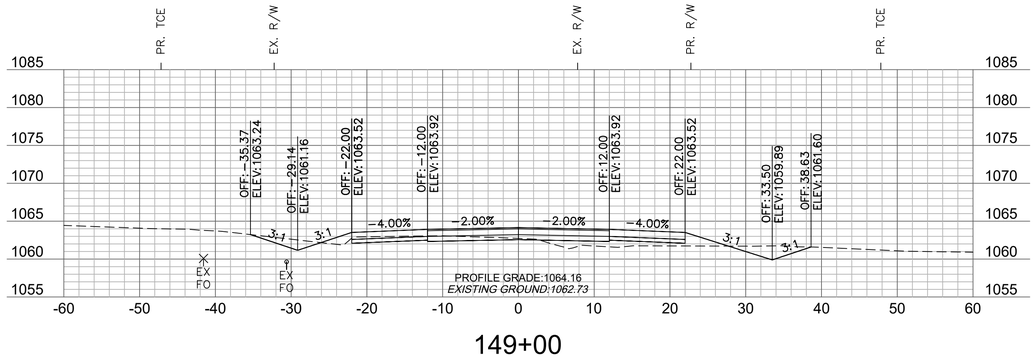
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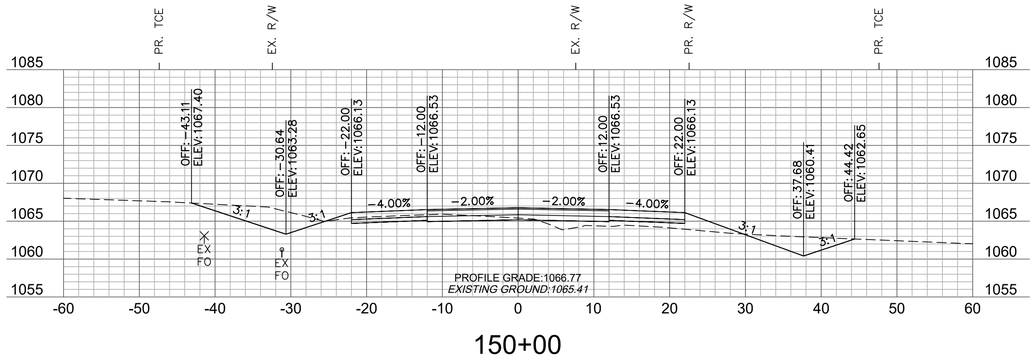


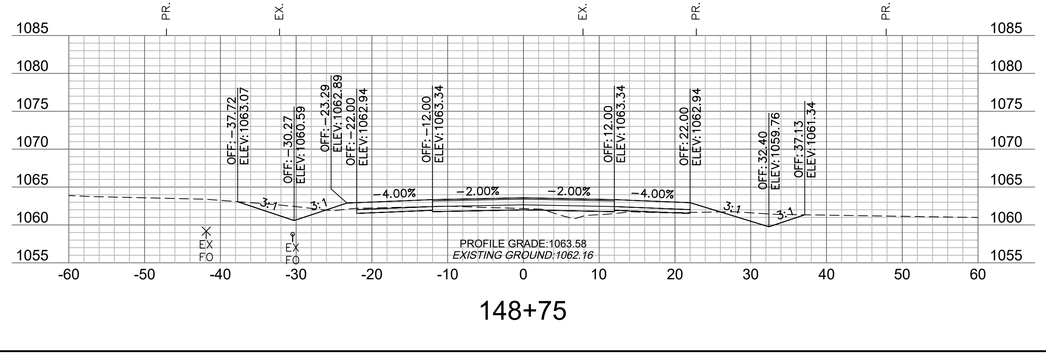


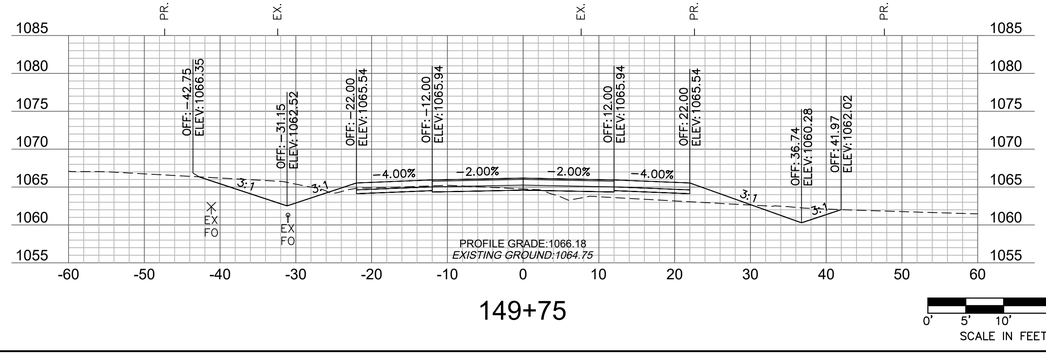












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2025

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

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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

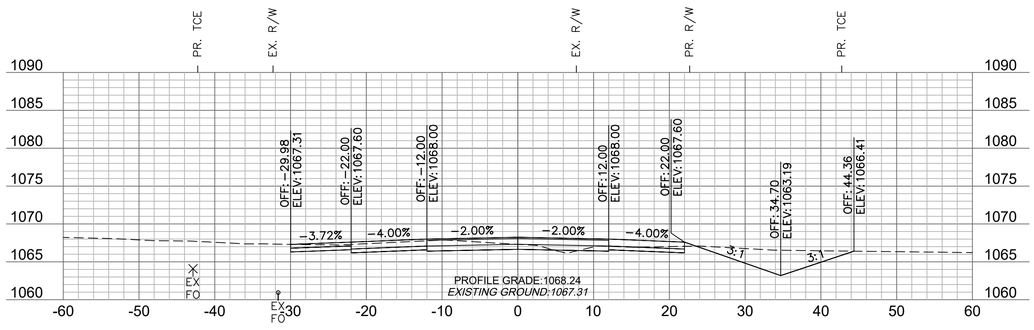
JOPLIN, MISSOURI

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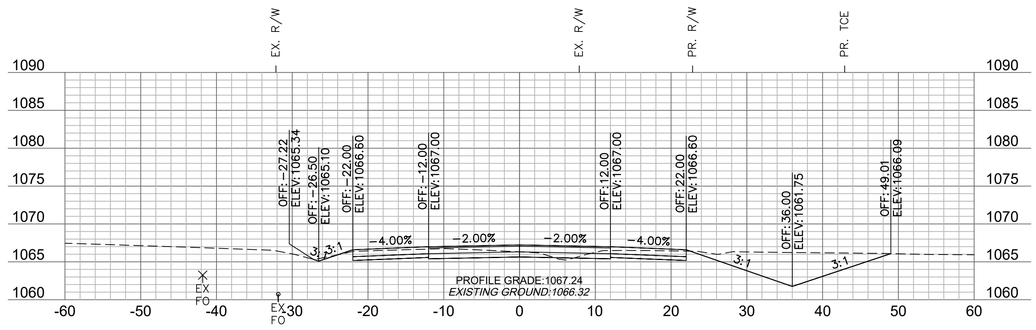
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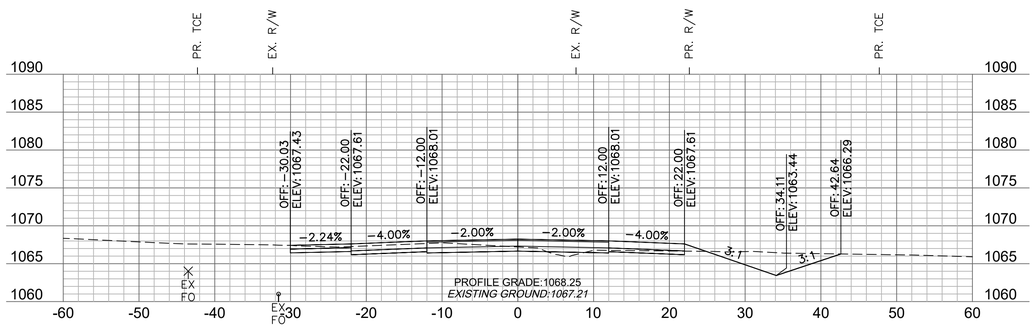
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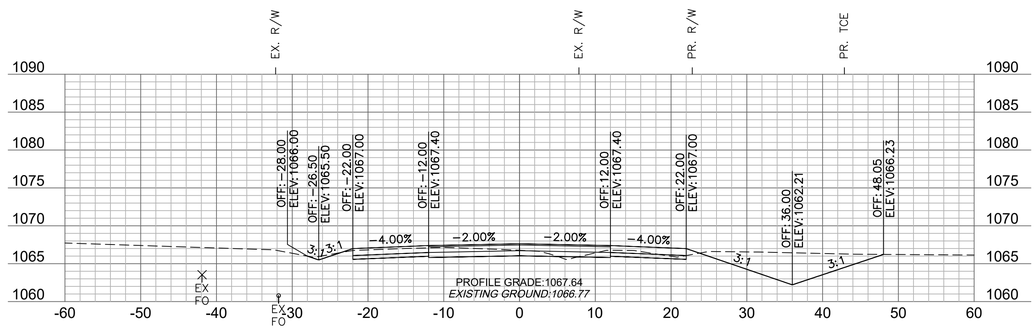
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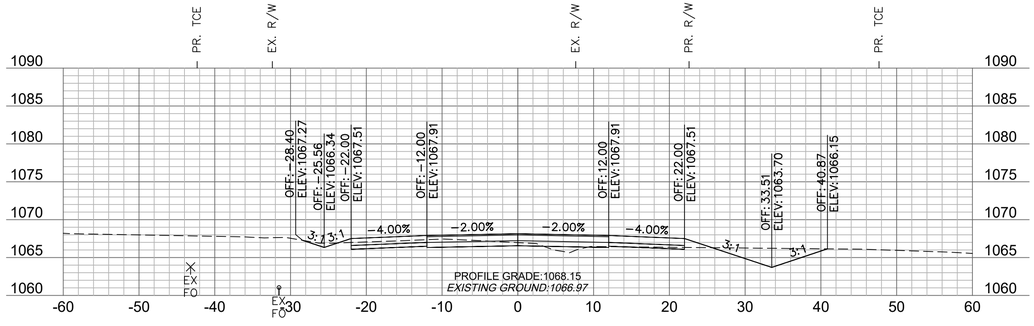
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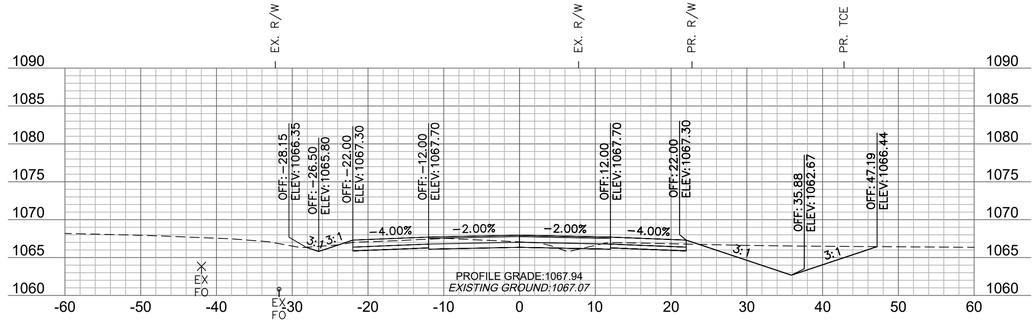
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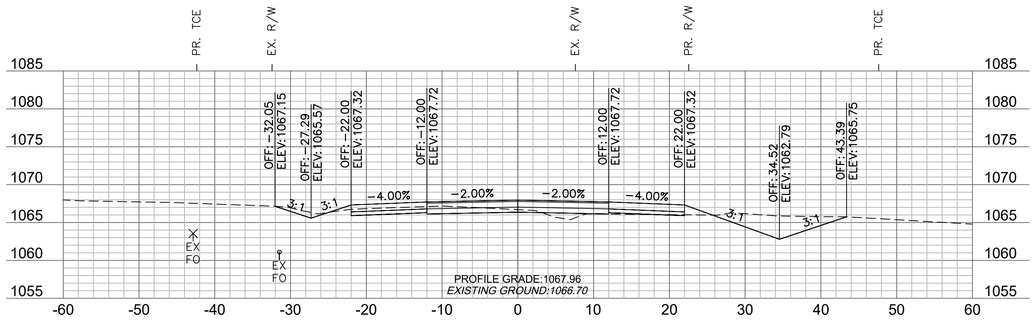
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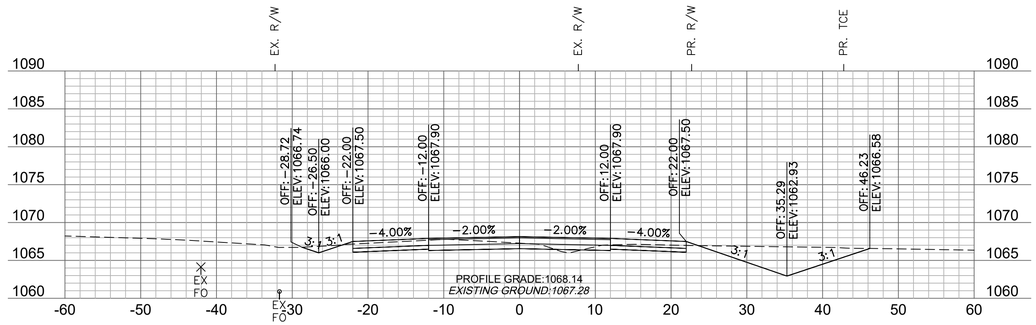
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152+00



150+75



151+75

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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

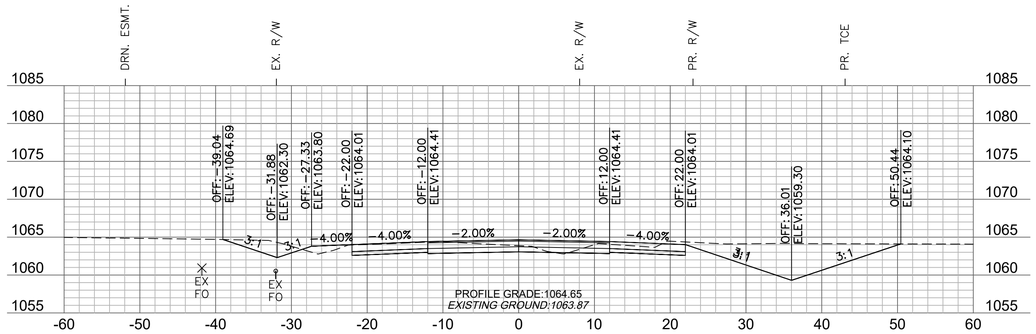
JOPLIN, MISSOURI

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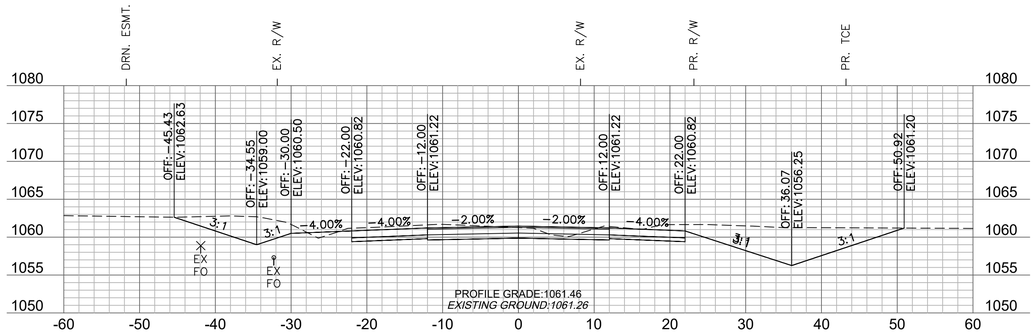
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date:	3/28/2025

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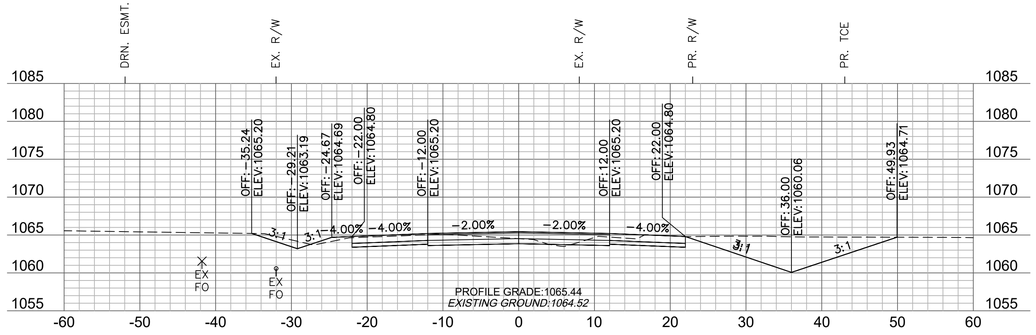
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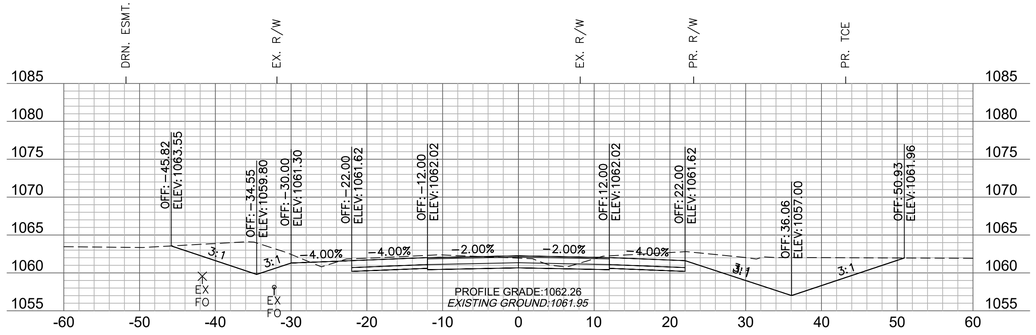
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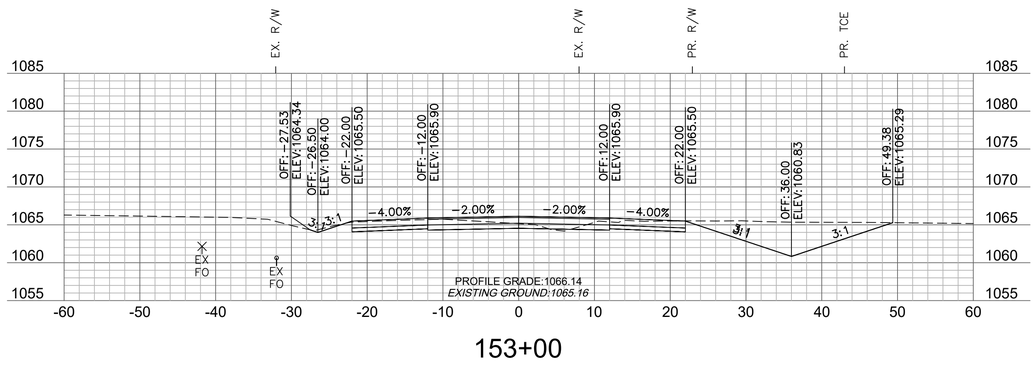
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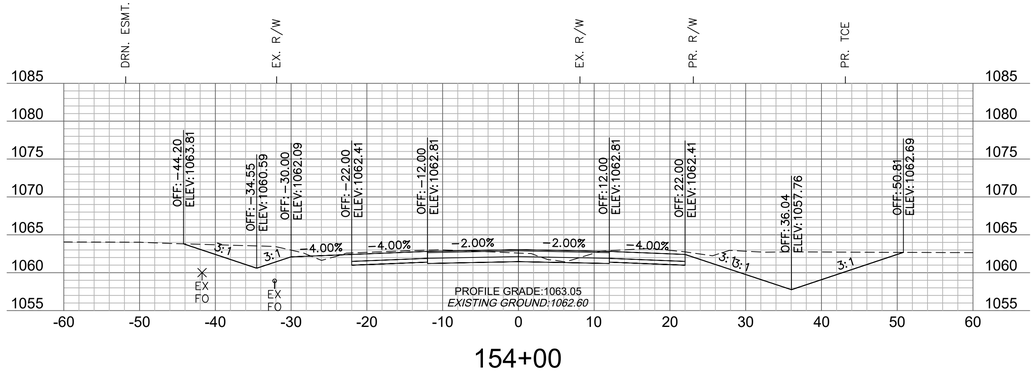
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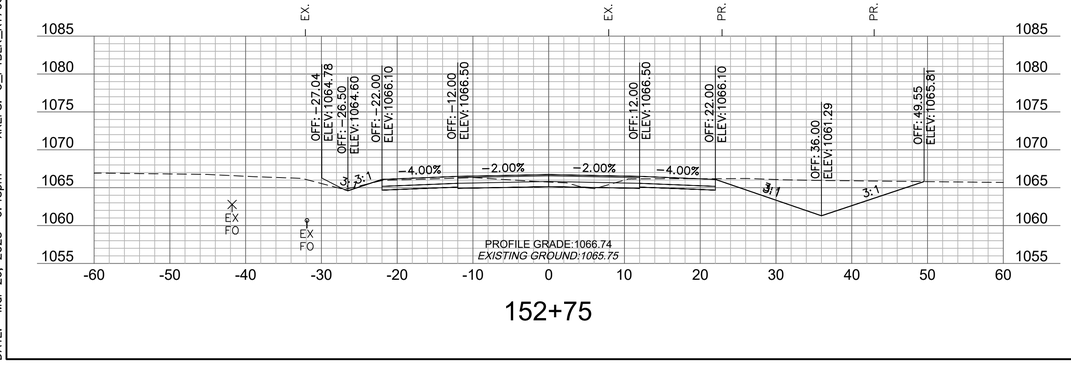
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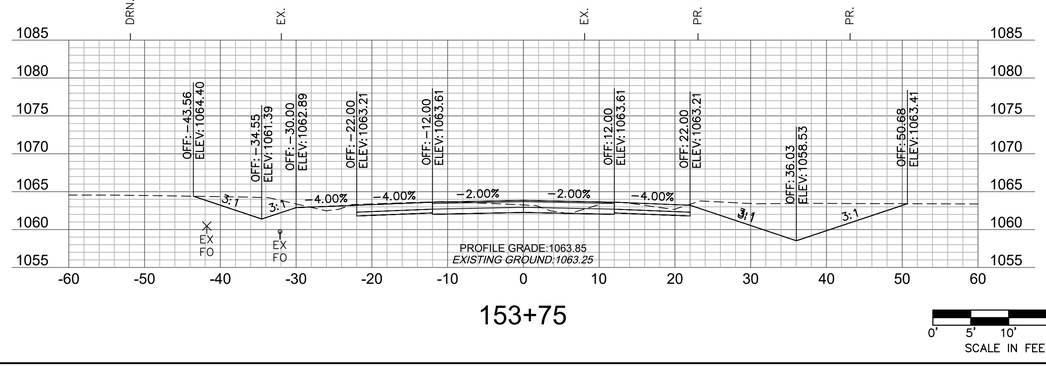
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152+75



153+75

0' 5' 10' 20'
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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

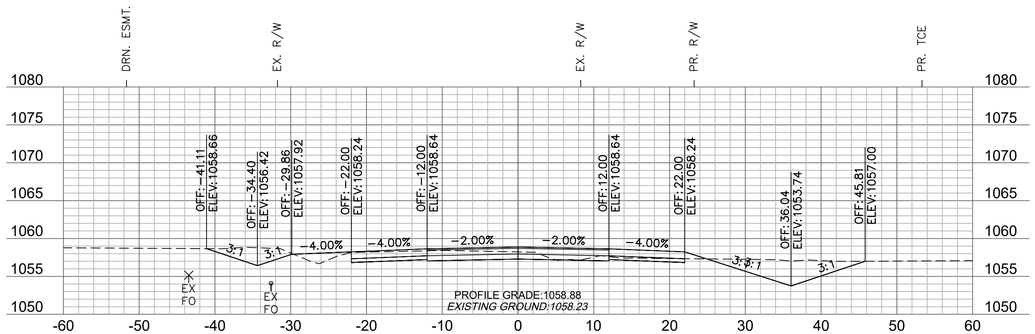
JOPLIN, MISSOURI

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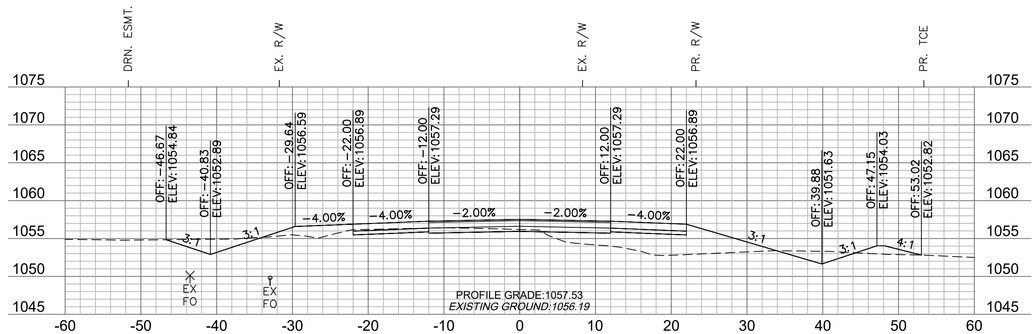
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project no.:	017-0642-R
drawing no.:	C_XSC03_R170642
date:	3/28/2025

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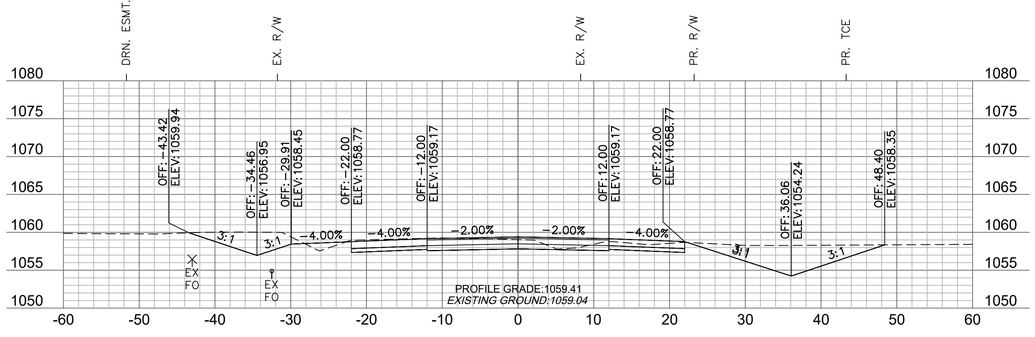
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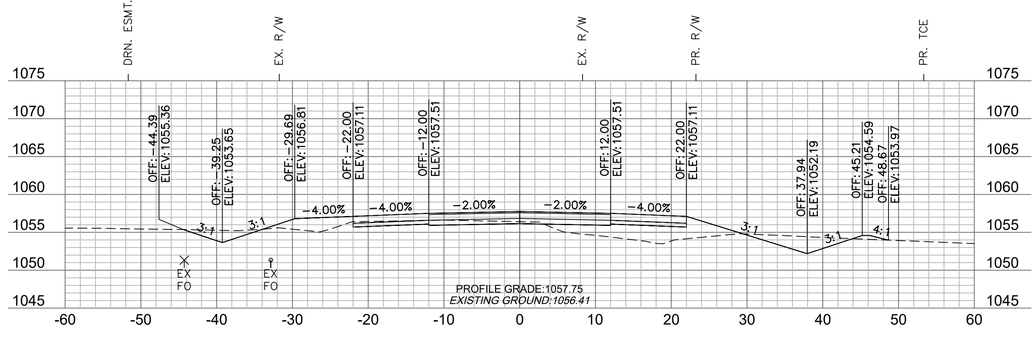
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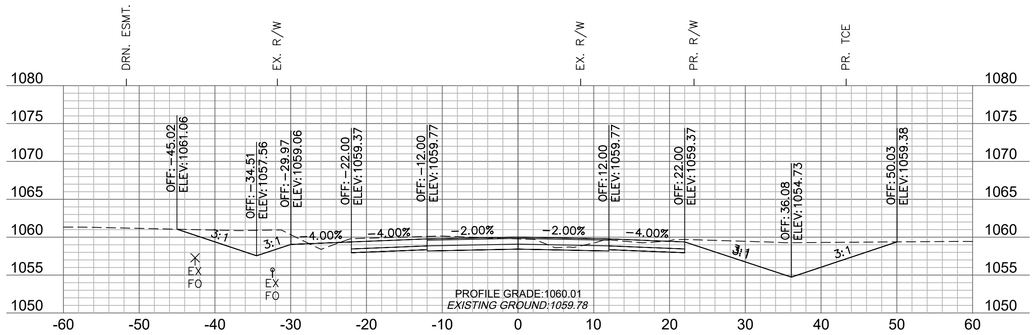
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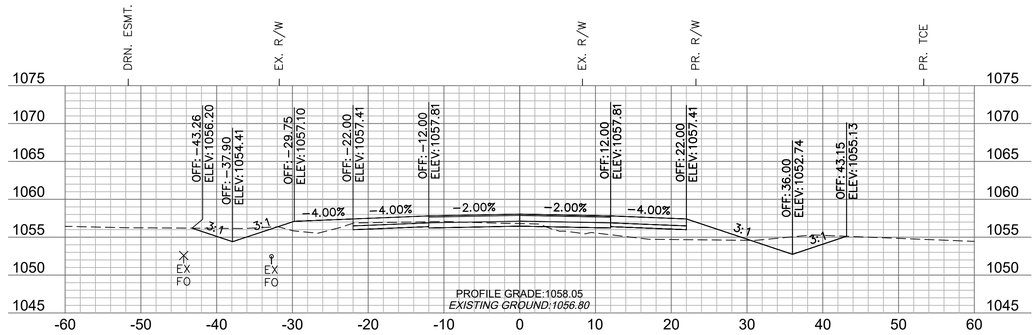
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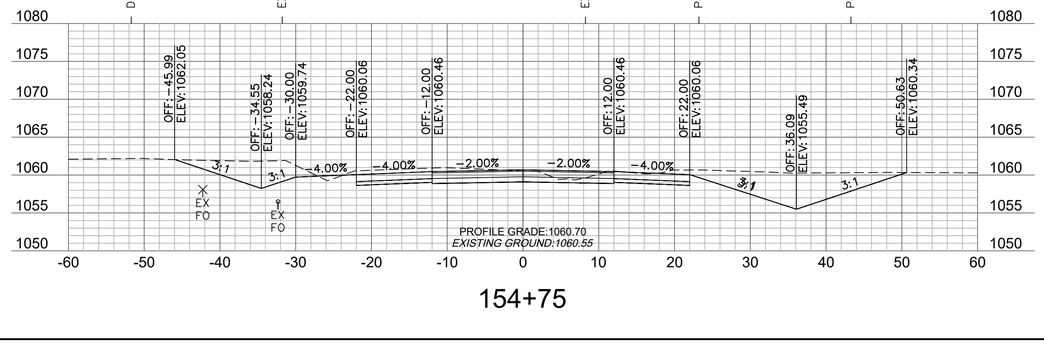
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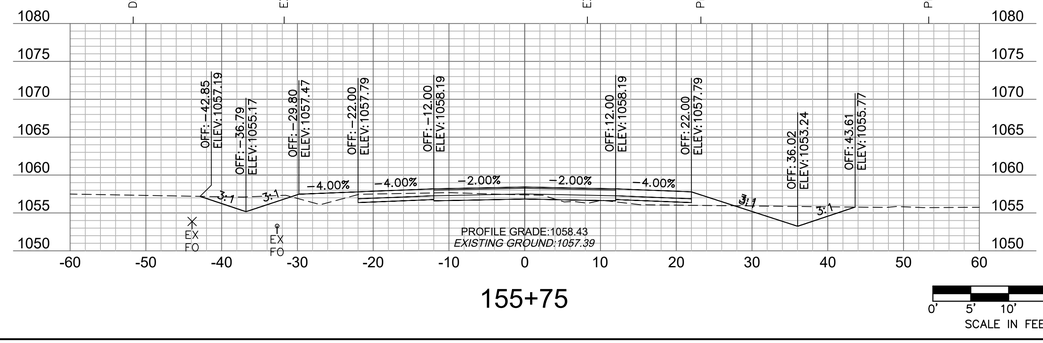
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156+00



154+75



155+75

20' 10' 5' 0'

0' 5' 10' 20'
SCALE IN FEET

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CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

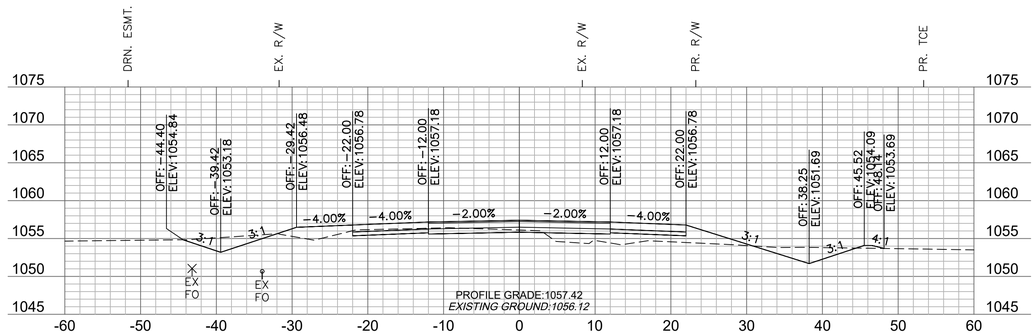
JOPLIN, MISSOURI

2025

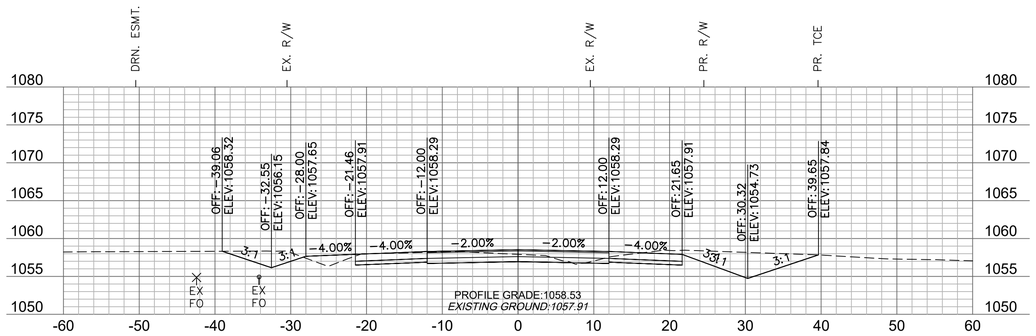
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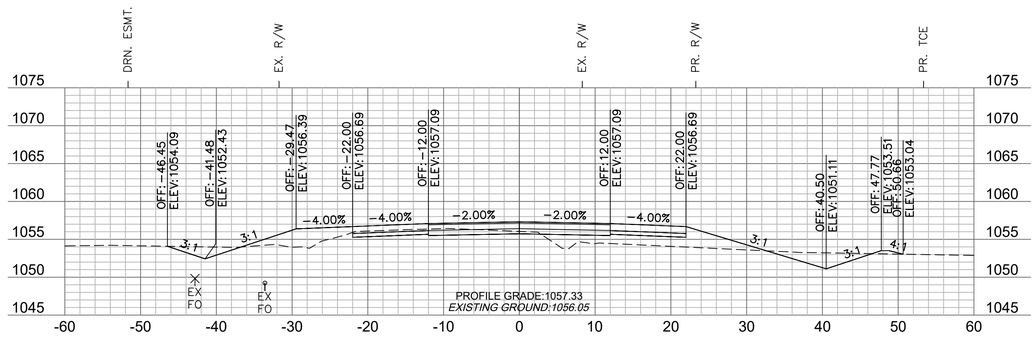
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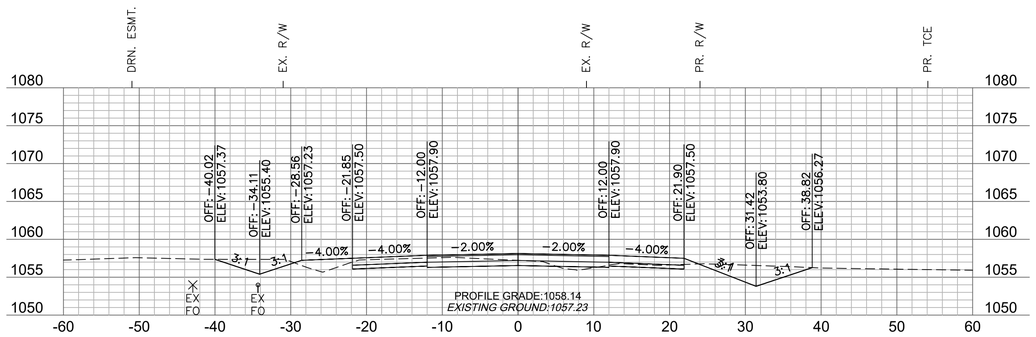
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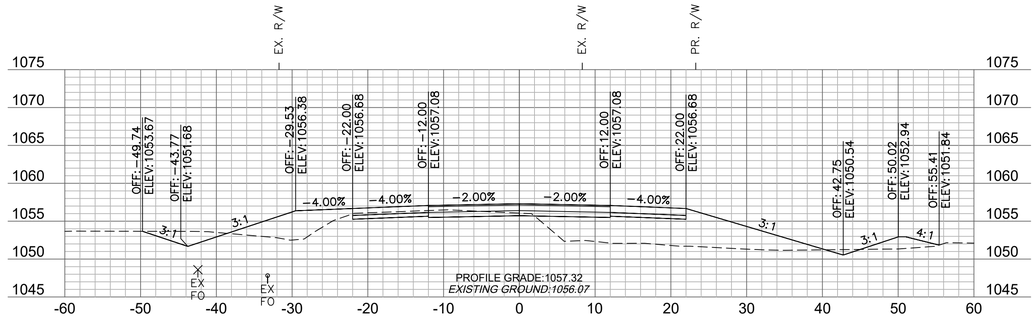
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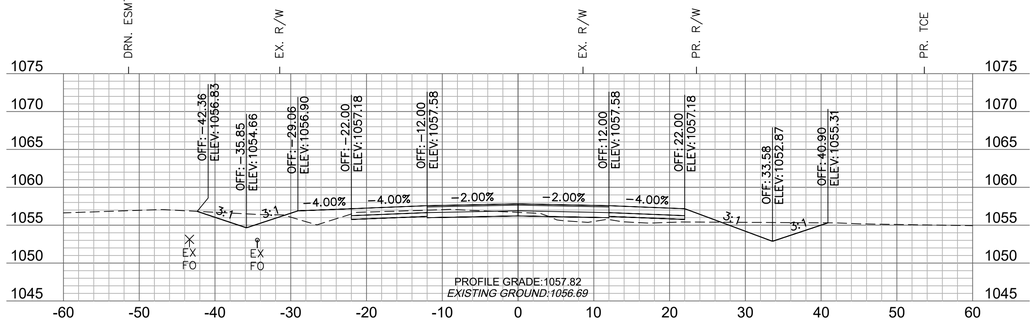
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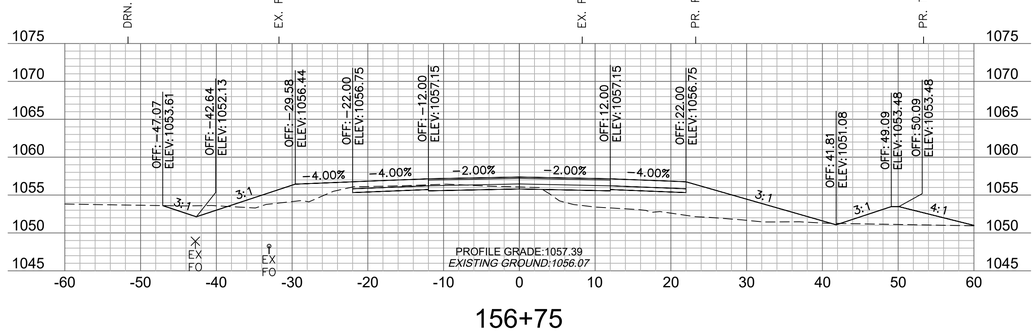
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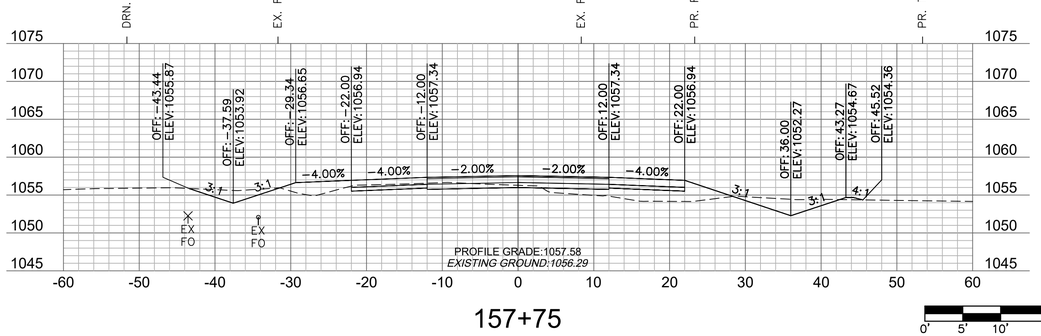
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158+00



156+75



157+75

20' 10' 5' 0'

0' 5' 10' 20'

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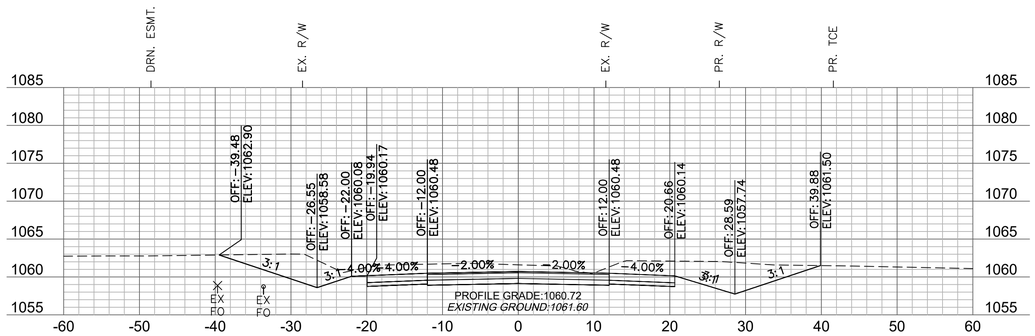
JOPLIN, MISSOURI

2025

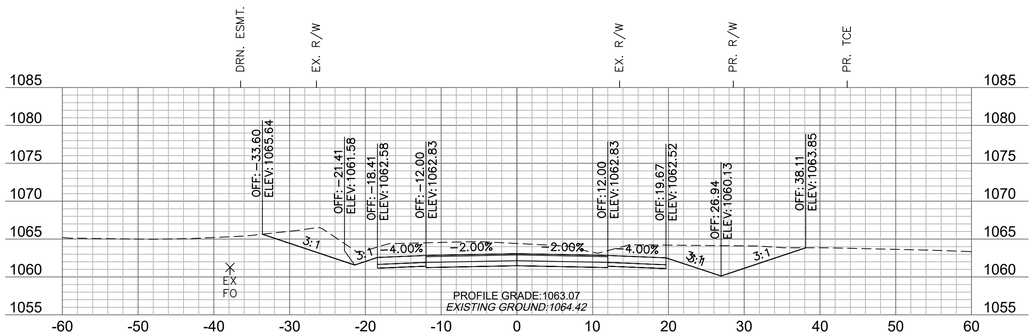
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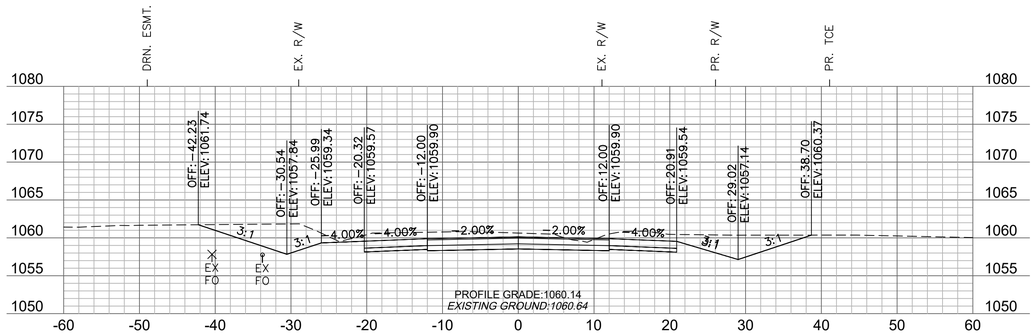
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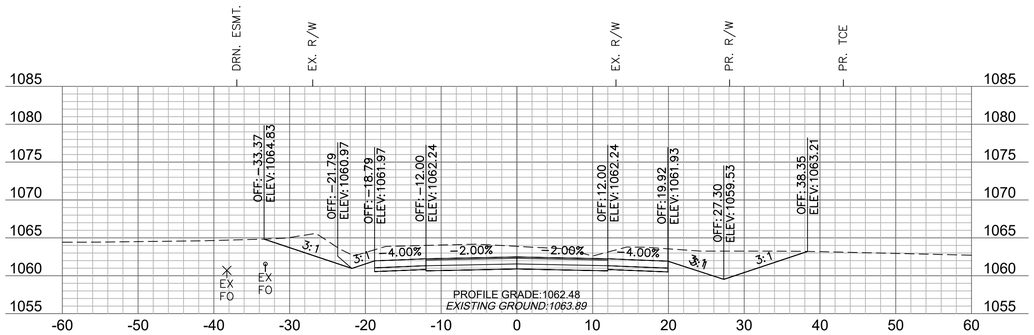
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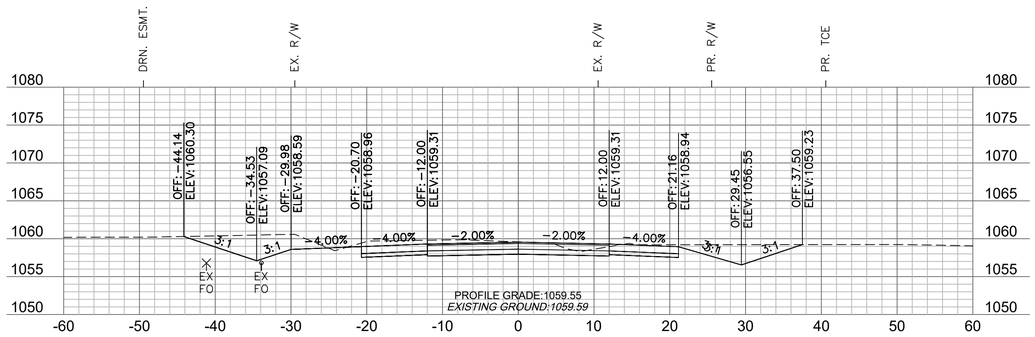
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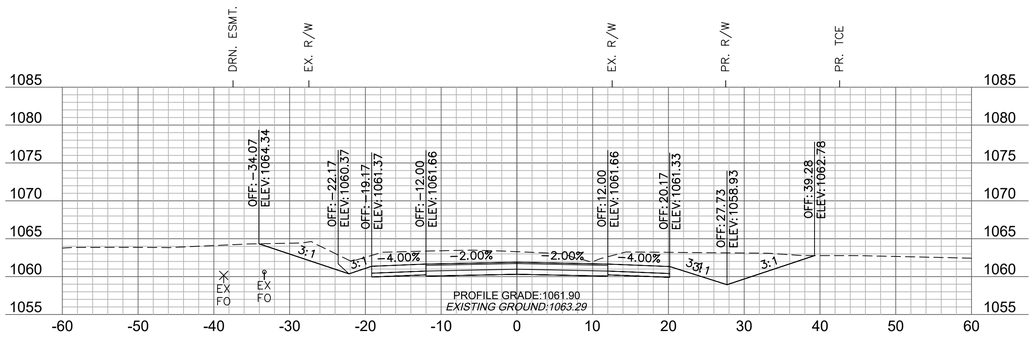
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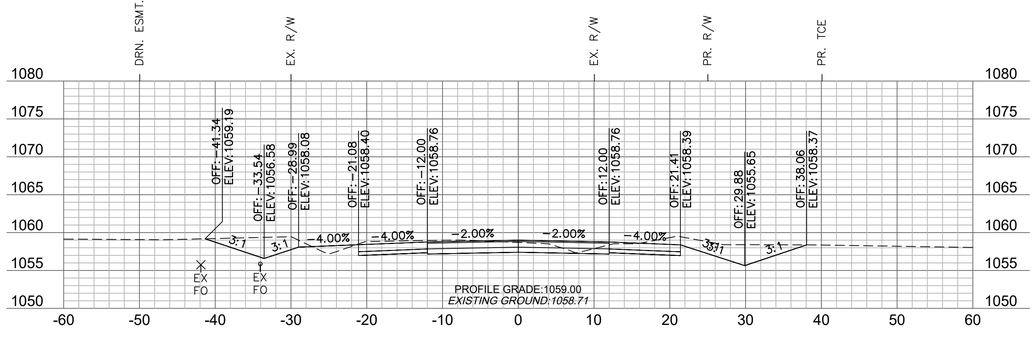
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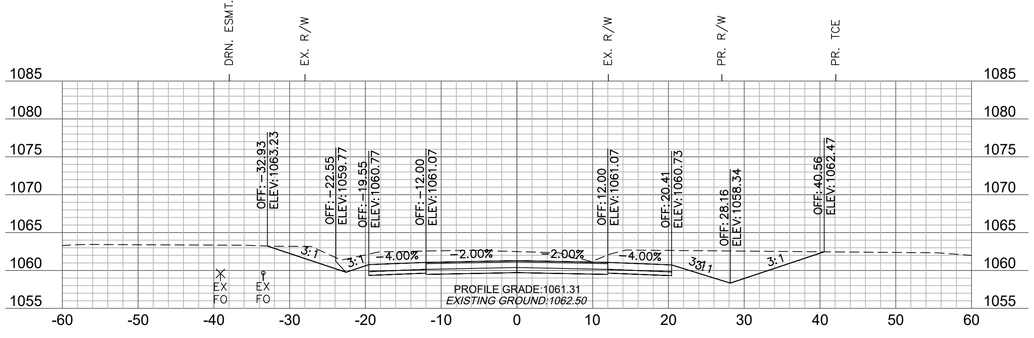
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160+00



158+75



159+75

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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
12/31/2025

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

CROSS SECTIONS
ZORA STREET

ZORA STREET IMPROVEMENTS - PHASE 2
CITY OF JOPLIN

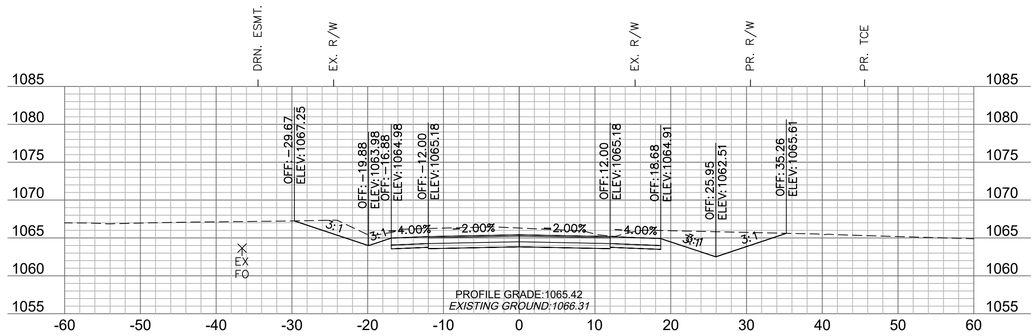
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2025

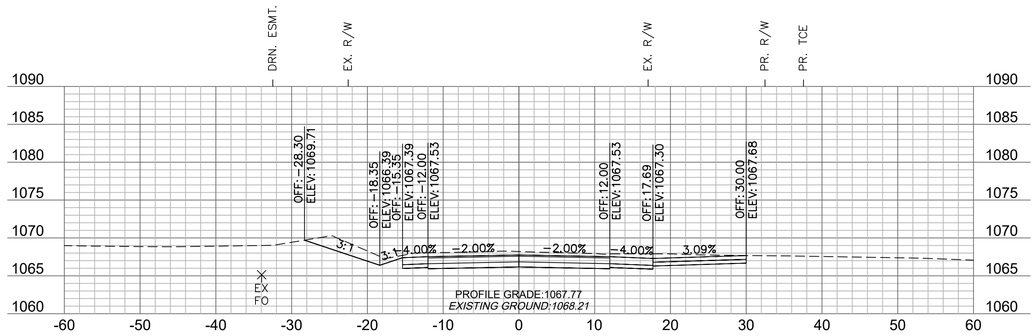
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project no.: 017-0642-R
drawing no.: C_XSC03_R170642
date: 3/28/2025

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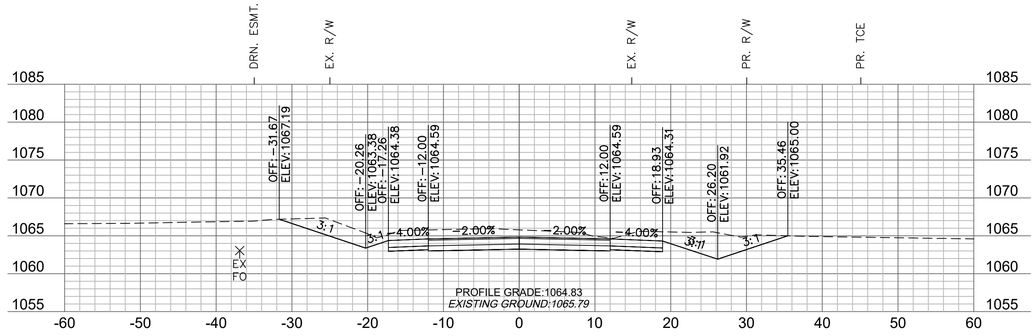
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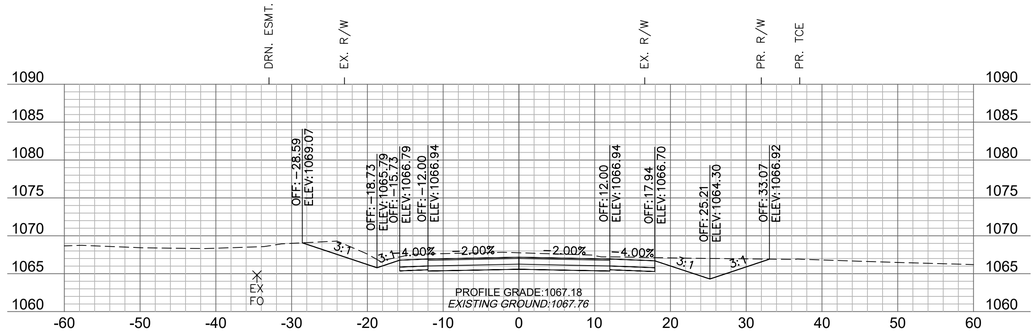
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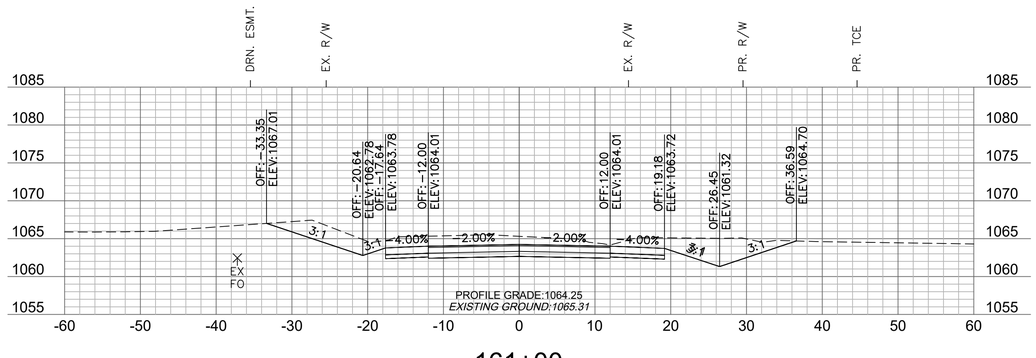
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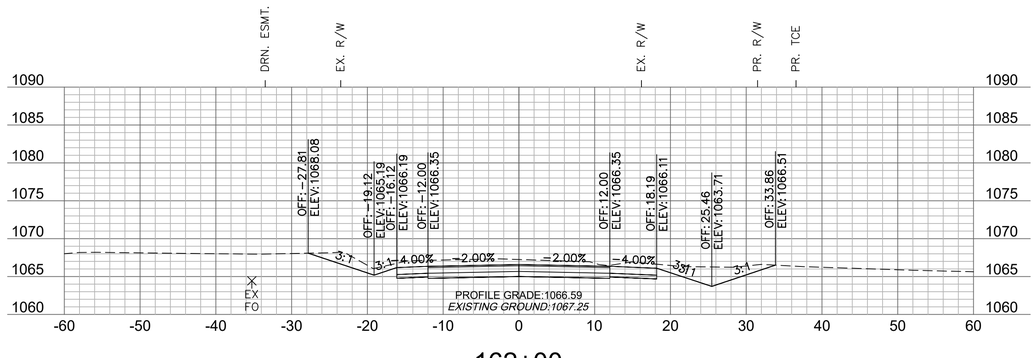
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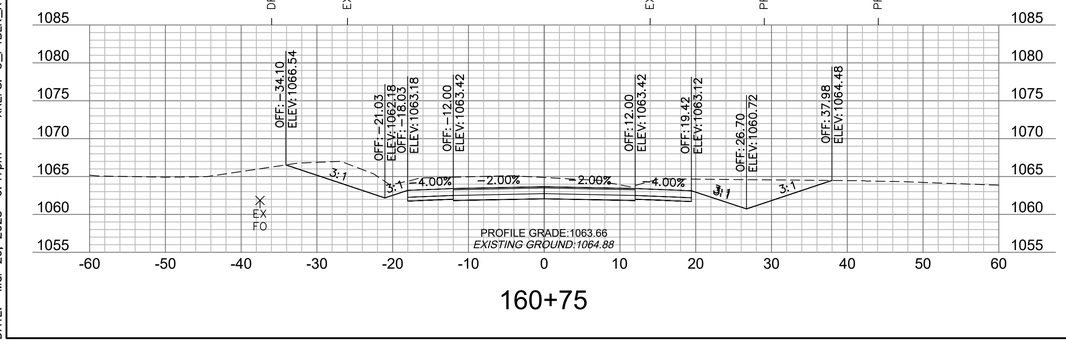
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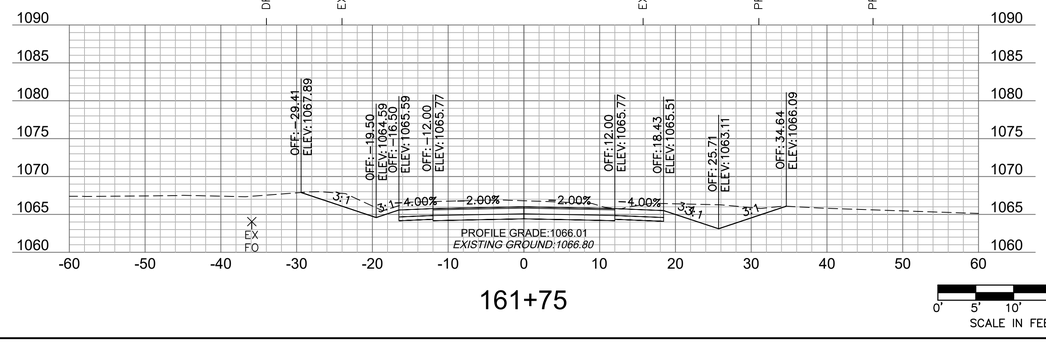
161+00



162+00



160+75



161+75

0' 5' 10' 20'
SCALE IN FEET

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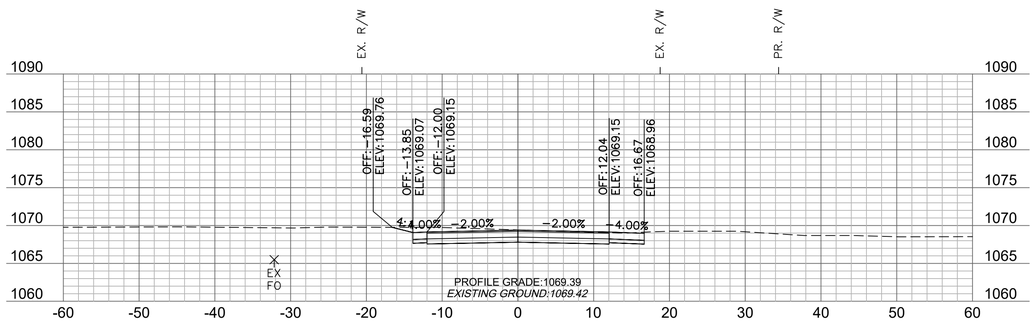
JOPLIN, MISSOURI

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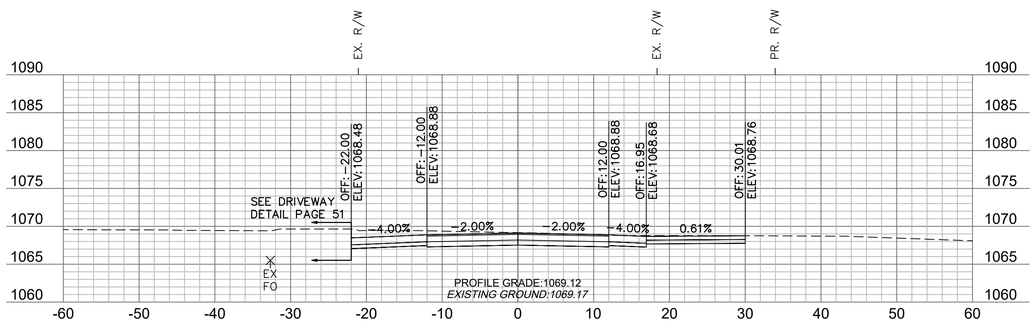
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checked by:	CAD
approved by:	JWP
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project no.:	017-0642-R
drawing no.:	C_XSC03_R170642
date:	3/28/2025

SHEET
119 of 120

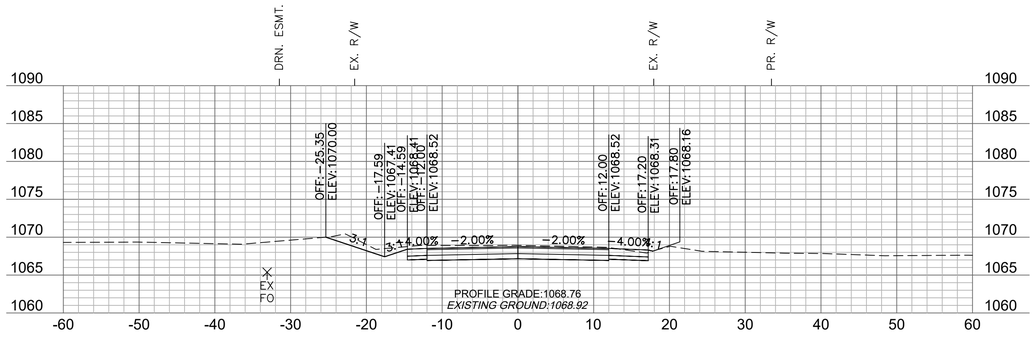
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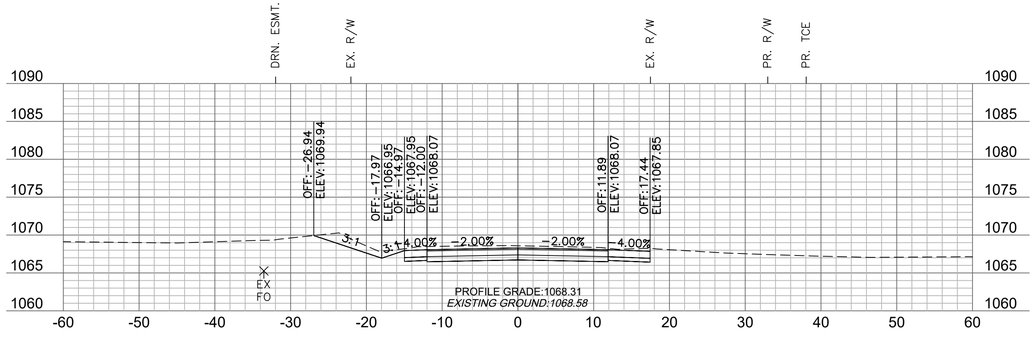
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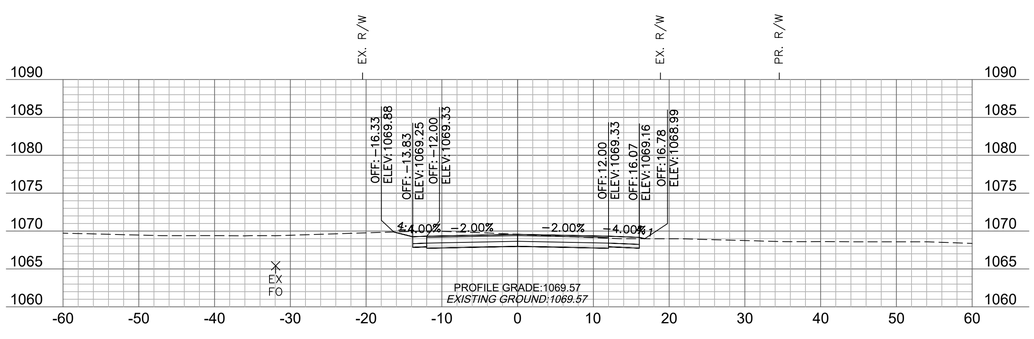
163+25



163+00



162+75



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120 of 120

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