PUBLIC STREET PLANS FOR

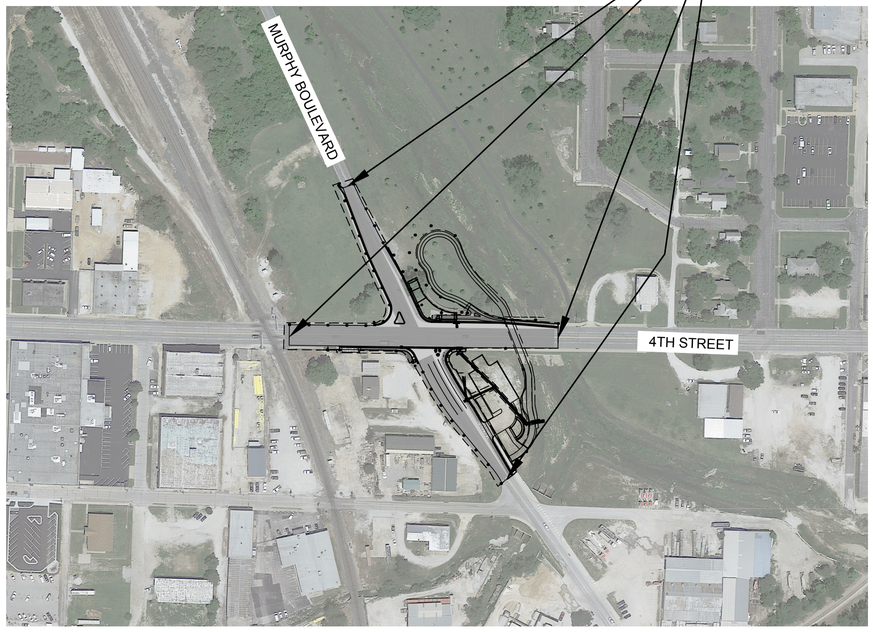
4th STREET & MURPHY BLVD.
GEOMETRIC IMPROVEMENTS

SECTIONS 2, 3, 10 & 11, TOWNSHIP 27N, RANGE 33W
CITY OF JOPLIN, MISSOURI
JASPER COUNTY, MISSOURI

LEGEND

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

- SECTION LINE
- PROPERTY LINE
- 1370 CENTER LINE
- 1371 PROPOSED ROW LINE
- 1370 EXISTING ROW LINE
- 1371 UTILITY EASEMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- TEL EXISTING TELEPHONE LINE
- SS EXISTING SANITARY LINE
- SD EXISTING STORM LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- EXISTING CHAIN LINK FENCE
- P-OH EXISTING OVERHEAD ELECTRIC
- FO EXISTING FIBER OPTIC CABLE
- P EXISTING PIPE LINE
- GRADING LIMITS
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED CHAIN LINK FENCE
- PROPOSED WOOD PRIVACY FENCE
- EXISTING TREELINE
- CONSTRUCTION LIMITS
- UNDERDRAIN



LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

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3	ALIGNMENT DATA
4	GENERAL NOTES & SUMMARY OF QUANTITIES
6	RIGHT OF WAY PLANS
7	DEMOLITION & REMOVALS
8-9	TYPICAL SECTIONS
10-13	ROADWAY PLAN & PROFILE
15	INTERSECTION LAYOUTS
16	DRIVEWAY LAYOUTS
17	SIDEWALK RAMP LAYOUT
18-27	STANDARD DETAILS
28	STORM DRAINAGE MAP & CACULATIONS
29	STORM DRAIN LAYOUT
30-31	STORM DRAIN PROFILES
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37-38	EROSION CONTROL
41-45	PAVEMENT MARKING & SIGNING
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80	TRAIL ALIGNMENT DATA
81	TRAIL DEMOLITION PLAN
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79	PAVEMENT MARKING AND SIGNING
91-92	TRAIL STANDARD DETAILS
93-95	TRAIL CROSS SECTIONS

- BASE BID
- BID ALTERNATIVE 1
- BID ALTERNATIVE 2
- BID ALTERNATIVE 3

ABBREVIATION TABLE

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

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

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

DESIGN DESIGNATION

MAJOR ARTERIAL
DESIGN SPEED: 35 MPH
POSTED SPEED: 35 MPH MURPHY BOULEVARD
POSTED SPEED: 35 TO 25 MPH 4TH STREET GOING WEST

TRAIL
DESIGN SPEED: 25 MPH



SECTION 02, 03, 10 & 11
T-27-N, R-33-W
JASPER COUNTY, MISSOURI

VICINITY MAP
SCALE: 1" = 2000'

UTILITIES INFORMATION

ELECTRIC - LIBERTY UTILITIES
ATTN: BRYAN HARP
3400 S. KODIAK ROAD
JOPLIN, MO 64804
(417) 630-8170

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

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

TELEPHONE - AT&T
ATTN: JOHN FISK
321 W. 8TH STREET
JOPLIN, MO 64801
(417) 529-0840

CABLE TELEVISION - CABLE ONE DIGITAL
ATTN: RANDY KENNEDY
112 E 32ND STREET
JOPLIN, MO 64804
(417) 206-5399

FIBER OPTIC - LIBERTY CONNECT
ATTN: BRAD MYERS
720 SCHIFFERDECKER AVE
JOPLIN, MO 64801
(417) 625-5179

PREPARED & SUBMITTED BY:

OLSSON
702 S. MAIN STREET
JOPLIN, MISSOURI 64801

JONATHAN PEITZ, P.E. — DATE

APPROVED BY:

CITY OF JOPLIN, MISSOURI

CITY ENGINEER — DATE

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

Jonathan Peitz
2024.03.06 17:17:00 -06'00'
STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TITLE SHEET

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

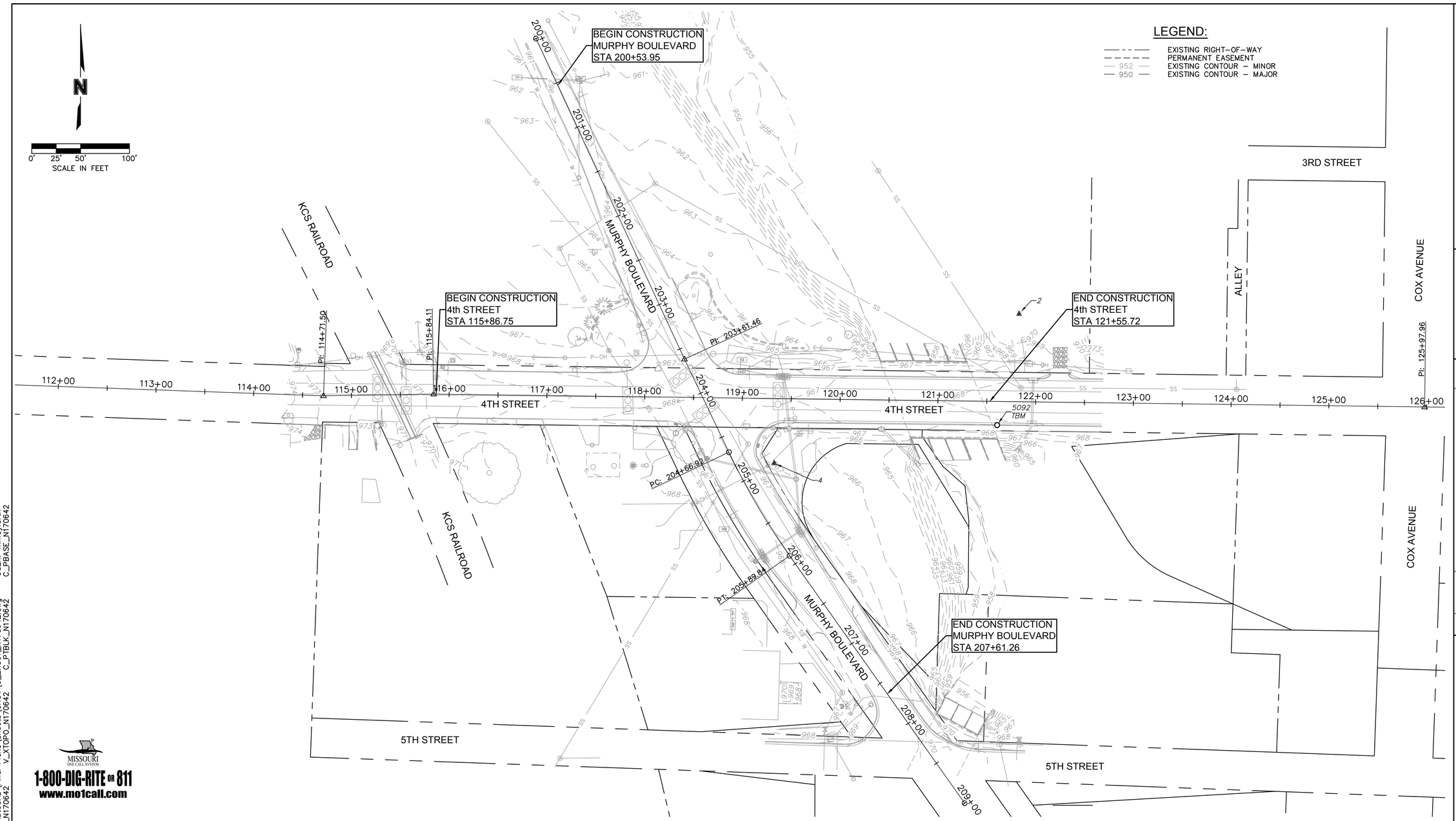
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TTL01_N170642
date: 3/6/24

SHEET
1 of 95

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_TTL01_N170642.dwg
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USER: mmayfarth



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Jonathan Peitz
2024.03.06 11:07:00 -06'00'

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EXISTING CONDITIONS & SURVEY CONTROL

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_EXC01_N170642
date: 3/6/24

SHEET
2 of 95

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

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 TEMPORARY BENCHMARK INFORMATION:

BENCHMARK (PT 5092)(NAVD'88)
ELEV. = 968.28
FOUND CROSS IN CURB ON THE SOUTH SIDE OF 4th STREET, 13'± NORTH OF THE NORTHEAST CORNER OF THE HEADWALL, 300'± EAST OF MURPHY BLVD.

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
2	335323.8510	2786993.5360	971.089	CTL
4	335171.0900	2786742.9760	966.740	CTL
5092	335209.9536	2786971.0388	968.284	FOUND MONUMENT CROSS

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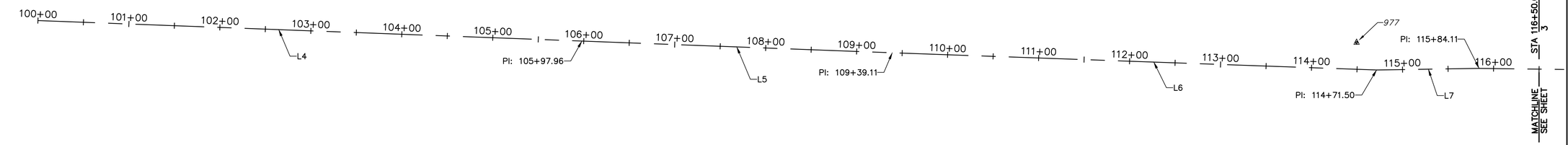
UTILITIES NOTE:

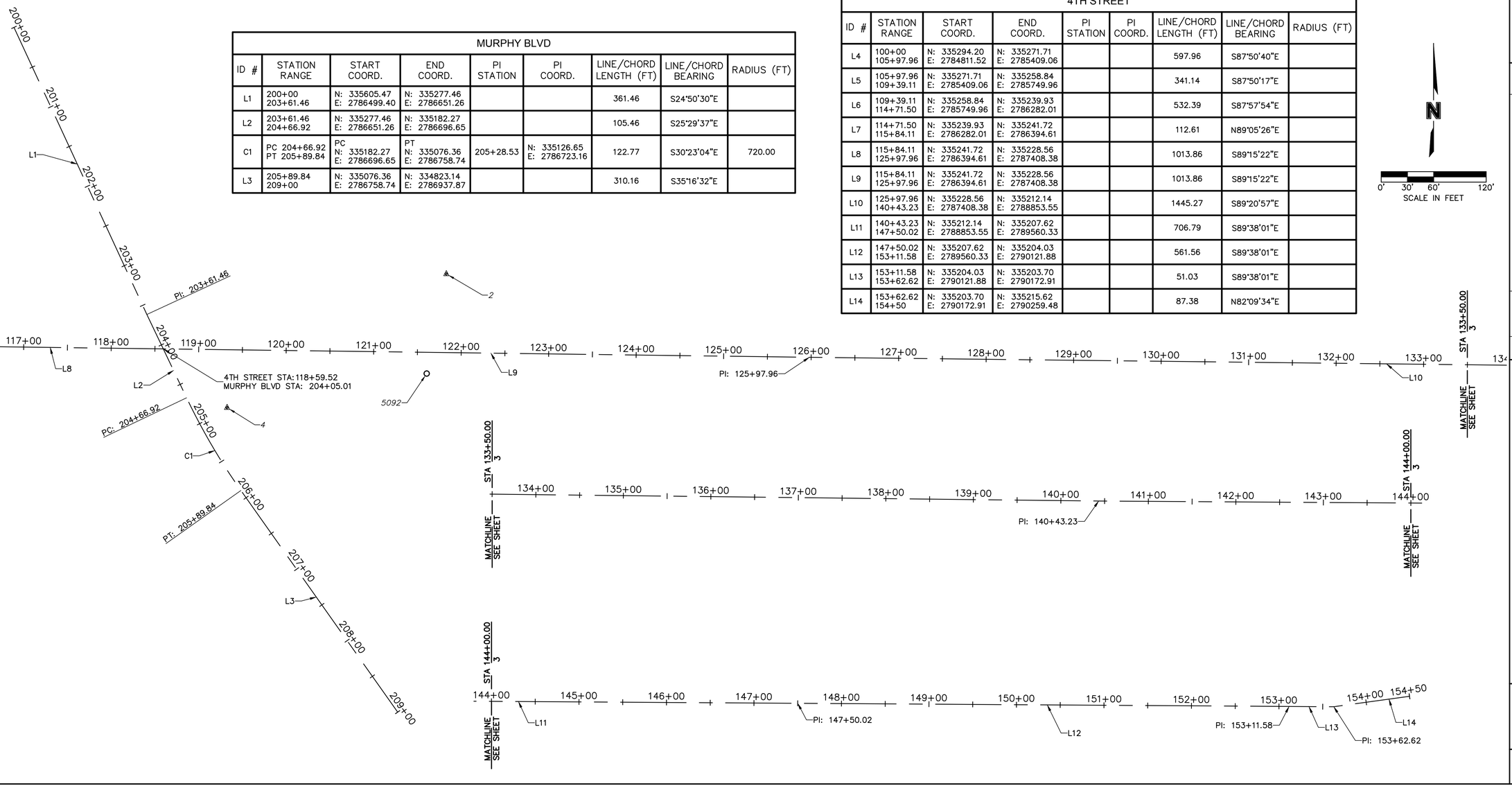
UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. NO PRIVATE UTILITIES WERE LOCATED. LOCATES WILL BE THROUGH THE KANSAS ONE CALL SYSTEM AND WILL BE IN COMPLIANCE WITH SUBSURFACE UTILITY ENGINEERING QUALITY LEVEL "B".

UTILITIES WERE ORDERED AT ONE (1) DATES TO BE LOCATED THROUGH MISSOURI ONE CALL:
DATE 11/25/20 - ONE-CALL TICKET NUMBERS 203302007 & 203302028

THE COMPANIES LISTED ON THE TICKET ARE:
ATT DISTRIBUTION; CABLE ONE; EMPIRE DISTRICT ELECTRIC; CITY OF JOPLIN; SPIRE MO WEST; LEVEL 3 NOW CENTURY LINK; MISSOURI AMERICAN WATER CO; MCI

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_EXC01_N170642.dwg USER: mmayfarth
DATE: Mar 06, 2024 7:01am XREFS: V_XBNDY_N170642 V_XTOPO_N170642 C_PTBLK_N170642 C_PBASE_N170642





MURPHY BLVD

ID #	STATION RANGE	START COORD.	END COORD.	PI STATION	PI COORD.	LINE/CHORD LENGTH (FT)	LINE/CHORD BEARING	RADIUS (FT)
L1	200+00 203+61.46	N: 335605.47 E: 2786499.40	N: 335277.46 E: 2786651.26			361.46	S24°50'30"E	
L2	203+61.46 204+66.92	N: 335277.46 E: 2786651.26	N: 335182.27 E: 2786696.65			105.46	S25°29'37"E	
C1	PC 204+66.92 PT 205+89.84	PC N: 335182.27 E: 2786696.65	PT N: 335076.36 E: 2786758.74	205+28.53	N: 335126.65 E: 2786723.16	122.77	S30°23'04"E	720.00
L3	205+89.84 209+00	N: 335076.36 E: 2786758.74	N: 334823.14 E: 2786937.87			310.16	S35°16'32"E	

4TH STREET

ID #	STATION RANGE	START COORD.	END COORD.	PI STATION	PI COORD.	LINE/CHORD LENGTH (FT)	LINE/CHORD BEARING	RADIUS (FT)
L4	100+00 105+97.96	N: 335294.20 E: 2784811.52	N: 335271.71 E: 2785409.06			597.96	S87°50'40"E	
L5	105+97.96 109+39.11	N: 335271.71 E: 2785409.06	N: 335258.84 E: 2785749.96			341.14	S87°50'17"E	
L6	109+39.11 114+71.50	N: 335258.84 E: 2785749.96	N: 335239.93 E: 2786282.01			532.39	S87°57'54"E	
L7	114+71.50 115+84.11	N: 335239.93 E: 2786282.01	N: 335241.72 E: 2786394.61			112.61	N89°05'26"E	
L8	115+84.11 125+97.96	N: 335241.72 E: 2786394.61	N: 335228.56 E: 2787408.38			1013.86	S89°15'22"E	
L9	115+84.11 125+97.96	N: 335241.72 E: 2786394.61	N: 335228.56 E: 2787408.38			1013.86	S89°15'22"E	
L10	125+97.96 140+43.23	N: 335228.56 E: 2787408.38	N: 335212.14 E: 2788853.55			1445.27	S89°20'57"E	
L11	140+43.23 147+50.02	N: 335212.14 E: 2788853.55	N: 335207.62 E: 2789560.33			706.79	S89°38'01"E	
L12	147+50.02 153+11.58	N: 335207.62 E: 2789560.33	N: 335204.03 E: 2790121.88			561.56	S89°38'01"E	
L13	153+11.58 153+62.62	N: 335204.03 E: 2790121.88	N: 335203.70 E: 2790172.91			51.03	S89°38'01"E	
L14	153+62.62 154+50	N: 335203.70 E: 2790172.91	N: 335215.62 E: 2790259.48			87.38	N82°09'34"E	

N

0' 30' 60' 120'
SCALE IN FEET

olsson
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
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TEL 417.781.0643
www.olsson.com

Jonathan Peitz
2024.03.06 07:02:18 -06'00'

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ALIGNMENT DATA

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_ALI01_N170642
date: 3/6/24

SHEET
3 of 95

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ALI01_N170642.dwg USER: mmayfarth
DATE: Mar 06, 2024 7:02am XREFS: C_PTBLK_N170642 V_XTOPO_N170642

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. ALL SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE 2011 PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY.
6. 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.
7. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
8. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
9. 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.
10. 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.
11. 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.
12. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM TO 7:00 PM UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
13. 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.
14. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
15. 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.
16. MISSOURI AMERICAN WATER SHALL BE RESPONSIBLE FOR ADJUSTING ALL WATER METERS, VALVE BOXES, HYDRANTS, ETC. TO MATCH PROPOSED FINISHED GRADE. THE CONTRACTOR SHALL CONTACT MISSOURI AMERICAN WATER TO COORDINATE THE ADJUSTMENT OF EXISTING WATER FACILITIES.
17. UNLESS SPECIFICALLY STATED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING METERS, VALVES, VALVE BOXES, BUILDING DRAIN LINES, ETC. TO MATCH FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
18. 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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.
25. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
26. CONTRACTOR TO PROTECT ANY STORM INLETS FROM SEDIMENT THAT TAKE STORM WATER FROM THE AREA OF CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
27. THE DETENTION BASINS, WATER QUALITY BASIN AND STORM WATER CHANNELS (PIPES), IF SHOWN, SHALL BE FUNCTIONING BEFORE ANY OTHER WORK MAY BEGIN. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
28. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN (SECP). THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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.
34. THE SUBGRADE SOILS BENEATH THE PAVEMENT SECTION SHALL BE OVER EXCAVATED SUFFICIENTLY TO INSTALL THE NEW PAVEMENT SECTION.
35. IF THE CONTRACTOR'S OPERATIONS CAUSE AN UNSATISFACTORY SUBGRADE, THE CONTRACTOR SHALL RESTORE THE SUBGRADE TO A SATISFACTORY CONDITION AT THE CONTRACTOR'S EXPENSE.
36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. 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.

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Jonathan Peitz
2024.03.06 09:08:10 -06'00'

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_GEN01_N170642
date: 3/6/24

SHEET
4 of 95

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DATE: Mar 06, 2024 7:02am XREFS: C_PTBLK_N170642

RECAPITULATION OF QUANTITIES - BASE BID

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	GOVERNING TECHNICAL SPECIFICATION
1	Mobilization	LS	1	JSP-0400-02
2	Contractor Furnished Construction Staking and Surveying	LS	1	JSP-0400-03
3	Clearing & Grubbing / Tree & Brush Removal	LS	1	JSP-1100-01
4	Demolition & Removal (Including Pavement & Roadbed)	LS	1	JSP-1100-02
5	Erosion Control	LS	1	JSP-1000-01
6	Kentucky Bluegrass Sodding	SY	790	City 5200
7	Embankment Grading	CY	316	City 1200
8	Removal of Unsuitable Material*	CY	100	City 1200
9	Backfill of Unsuitable Material*	CY	100	City 1200
10	8" Limestone Base (Roadway)	SY	1595	JSP-1400-01
11	2" Limestone Base (Sidewalk)	SY	552	JSP-1400-02
12	2" Asphalt Milling	SY	5051	JSP-2300-01
13	Asphaltic Concrete Surface (2") (MoDOT BP-1)	TONS	699	City 2200
14	Asphaltic Concrete Base (8") (MoDOT Bituminous Base)	TONS	524	City 2200
15	Class B Concrete Sidewalk (4")	SY	518	City 3100
16	Sidewalk Ramp (inc. Truncated Domes)	SY	34	City 3100
17	6" Concrete Splitter Island	SY	30	City 3100
18	Standard Upright Curb & Gutter	LF	1295	JSP-3200-01
19	Concrete Flume (Type A)(MoDOT 609.00P)	LF	30	JSP-3100-01
20	Commercial Driveway Construction (8" Concrete) (Incl. 4" MoDOT Type 5 Agg. Base)	SY	120	JSP-3400-01
21	Type A Catch Basin	EA	1	City 4400
22	Type 3 Combination Inlet - Double	EA	1	City 4400
23	Type 3 Combination Inlet - Triple	EA	2	City 4400
24	4x4 Concrete Area Inlet	EA	1	City 4400
25	4x8 Concrete Junction Box w/ MH Ring & Cover	EA	1	City 4400
26	4x4 Concrete Junction Box w/ MH Ring & Cover	EA	1	City 4400
27	15" Class III RCP (including trenching, bedding, backfill, gaskets)	LF	167	City 4200
28	18" Class III RCP (including trenching, bedding, backfill, gaskets)	LF	111	City 4200
29	24" Class III RCP (including trenching, bedding, backfill, gaskets)	LF	126	City 4200
30	Pipe Collar	EA	2	JSP-4200-01
31	24" RCP FES (including trenching, bedding, backfill, gaskets, and concrete collars)	EA	1	City 4200
32	Rock Lining for Culvert Outlet	CY	2	City 2303.5
33	Remove and Replace Existing Signage	LS	1	JSP-2300-02
34	Pavement Marking Removal	LF	10703	City 2306
35	Pavement Marking Removal (Symbols)	EA	5	City 2306
36	4" White Pavement Marking	LF	8591	City 2306
37	4" Yellow Pavement Marking	LF	11119	City 2306
38	12" White Pavement Marking	LF	419	City 2306
39	24" White Pavement Marking	LF	145	City 2306
40	Left/Right/Through Turn Arrow White Pavement Marking Symbol	EA	43	City 2306
41	4" Broken Yellow Pavement Marking	LF	1331	City 2306
42	Preformed Railroad Crossing Symbol	EA	4	City 2306
43	24" Yellow Pavement Marking	LF	111	City 2306
44	6" Dotted White Pavement Marking (2' long, 6' gap)	LF	30	City 2306
45	4" Broken White Pavement Marking	LF	191	City 2306
46	Traffic Control	LS	1	JSP-6700-01
47	Adjust Manhole Rims	EA	2	JSP-2300-03
48	Traffic Signal	LS	1	JSP-9000-01
49	Sidewalk Hand-Railing	LF	92	MoDOT-608.40.24
50	Decorative Cobble	SF	49	JSP-321400-01

RECAPITULATION OF QUANTITIES - BID ALTERNATIVE 1

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	GOVERNING TECHNICAL SPECIFICATION
101	Scored or Stamped Class B Concrete (4")	SY	334	City 3100
102	Decorative Cobble	SF	240	JSP-321400-01
103	Brick Hardscape	SF	500	JSP-321400-01
104	Deciduous Trees	EA	3	JSP-329300-01
105	Ornamental Trees	EA	3	JSP-329300-01
106	Planting Bed	SF	700	JSP-329300-01
107	Steel Bed Edge	LF	170	JSP-329300-01
108	Sod	SY	1750	City 5200
109	Bike Racks	EA	5	JSP-323300-01
110	Litter Receptacles	EA	2	JSP-323300-01
111	20in x 20in x 20in Limestone Seating Blocks	EA	12	JSP-323300-01
112	Joplin "J" Logo	EA	2	
113	"Landreth Park" Sign	EA	1	
114	6ft-6in x 12ft-2in Limestone Inlay	EA	1	

RECAPITULATION OF QUANTITIES - BID ALTERNATIVE 2

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	GOVERNING TECHNICAL SPECIFICATION
201	Asphaltic Concrete Surface (2") (MoDOT BP-1) (Parking Lot)	TONS	110	City 2200
202	Asphaltic Concrete Base (4") (MoDOT Bituminous Base) (Parking Lot)	TONS	220	City 2200
203	Class B Fiber Reinforced Concrete Sidewalk (4")	SY	200	City 3100
204	4" Limestone Base (Parking Lot)	SY	975	JSP-1400-01
205	4" Limestone Base (Trail)	SY	200	JSP-1400-01
206	Kentucky Bluegrass Sodding	SY	1100	City 5200
207	Embankment Grading	CY	300	City 1200
208	Scored or Stamped Class B Concrete (4")	SY	65	City 3100
209	Brick Hardscape	SF	400	JSP-321400-01
210	Deciduous Trees	EA	1	JSP-329300-01
211	Planting Bed	SF	1450	JSP-329300-01
212	Steel Bed Edge	LF	15	JSP-329300-01
213	Prairie Seed	SF	7400	City 5100
214	Bike Racks	EA	5	JSP-323300-01
215	Bike Repair Station	EA	1	JSP-323300-01
216	Litter Receptacles	EA	1	JSP-323300-01
217	20in x 20in x 20in Limestone Seating Blocks	EA	8	JSP-323300-01
218	Wheel Stops	EA	18	JSP-6700-02

RECAPITULATION OF QUANTITIES - BID ALTERNATIVE 3

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	GOVERNING TECHNICAL SPECIFICATION
301	Class B Fiber Reinforced Concrete Sidewalk (4")	SY	1050	City 3100
302	4" Limestone Base (Trail)	SY	1050	JSP-1400-01
303	Embankment Grading	CY	200	City 1200
304	RCB Underpass Lighting	LS	1	JSP-7000-01
305	Cast-In-Place Concrete Wall (Sidewalk)	SY	60	City 3100
306	Litter Receptacles	EA	1	JSP-323300-01
307	20in x 20in x 20in Limestone Seating Blocks	EA	8	JSP-323300-01
308	Trailhead Kiosk	EA	1	JSP-6700-03
309	Signing	LS	1	JSP-2300-02

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2024.03.06 12:24:00

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SUMMARY OF QUANTITIES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_GEN01_N170642
date: 3/6/24

SHEET
5 of 95

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DATE: Mar 06, 2024 12:24pm XREFS: C_PTBLK_N170642

LEGEND

TEMPORARY CONSTRUCTION EASEMENT LINE

GRADING LIMITS

TEMPORARY CONSTRUCTION EASEMENT

BASE BID

BID ALTERNATIVE 1

BID ALTERNATIVE 2

BID ALTERNATIVE 3

N

0' 25' 50' 100'
SCALE IN FEET

CITY OF JOPLIN
–NO TAKING–

CITY OF JOPLIN

200+00

201+00

202+00

203+00

MURPHY BLVD.

204+00

205+00

206+00

207+00

208+00

209+00

GRADING LIMITS

113+00

114+00

115+00

116+00

117+00

118+00

119+00

120+00

121+00

122+00

123+00

124+00

125+00

126+00

4th STREET

60'
EXISTING
ROW

75'
EXISTING
ROW

85'
EXISTING
ROW

EXISTING ROW

EXISTING ROW

+95.88
36.43' RT

+15.80
36.57' RT

PROPOSED TCE

25'
CITY PARK
STRIP

PARCEL 2
KANSAS CITY SOUTHERN RAILWAY CO
–NO TAKING–

PARCEL 1
MOLANDCO, INC
BOOK 2132 , PAGE 1425
EXISTING = .57 ACRES (24829.2 sq. ft.)
R/W ACQUISITION = 0 SQ. FT.
TEMP. CONST. ESMT. = 598 SQ. FT.

MOLANDCO, INC
BOOK 1581 , PAGE 0387
–NO TAKING–

MISSOURI GAS ENERGY % SPIRE MISSOURI INC
BOOK 1449, PAGE 2269
–NO TAKING–

BLACKSHIRT INVESTMENTS
BOOK 2604 , PAGE 0014
–NO TAKING–

AHMED, SAYED F & NURJAHEN BEGUM
BOOK 2669 , PAGE 0104
–NO TAKING–

S. COX AVE

CITY OF JOPLIN
BOOK 1964 , PAGE 0432

LESLEY BUSINESS CENTERS
BOOK 2040 , PAGE 1765
–NO TAKING–

CITY OF JOPLIN
BOOK 1968 , PAGE 2159

CITY OF JOPLIN
BOOK 2217 , PAGE 0811

EXISTING ROW

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2024.03.06 07:02:00

STATE OF MISSOURI
JONATHAN W. PEITZ
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PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

RIGHT-OF-WAY PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_ROW01_N170642
date: 3/6/24

SHEET
6 of 95

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ROW01_N170642.dwg
DATE: Mar 06, 2024 7:02am
XREFS: C_PTBLK_N170642 V_XBNDY_N170642 V_XTOPO_N170642
USER: mmoyforth
C_PBASE_N170642 C_PPATT_N170642_TRAIL

NOTE:
1. 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".
2. ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.
3. SAWCUT SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING IMPROVEMENTS. THERE SHALL BE NO DIRECT PAY FOR SAWCUT.
4. ALL WORK SHALL BE COMPLETED WITHIN RIGHT-OF-WAY UNLESS NOTED.
5. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.

LEGEND
- FULL DEPTH REMOVAL
- MILL & OVERLAY
- CURB REMOVAL
- SIDEWALK REMOVAL
- STORM REMOVAL
- SAWCUT
- TREE REMOVAL

- BASE BID
- BID ALTERNATIVE 1
- BID ALTERNATIVE 2
- BID ALTERNATIVE 3

RAILROAD RIGHT-OF-WAY

BEGIN CONSTRUCTION
MURPHY BOULEVARD
STA 200+53.95

BEGIN CONSTRUCTION
4th STREET
STA 115+86.75

END CONSTRUCTION
MURPHY BOULEVARD
STA 207+61.30

END CONSTRUCTION
4th STREET
STA 121+55.72

SEE PAGE 81 FOR BID ALTERNATIVE 1
PLAZA DEMOLITION PLAN

SEE PAGE 81 FOR BID ALTERNATIVE 3
TRAIL DEMOLITION PLAN

SEE PAGE 81 FOR BID ALTERNATIVE 2
TRAIL HEAD AND PARKING LOT DEMOLITION PLAN

STA: 200+52.96 9.50' RT
STA: 200+90.79 11.39' RT
STA: 202+03.24 13.50' LT
STA: 202+02.93 18.94' LT
STA: 201+79.97 15.85' RT
STA: 118+68.77 18.66' LT
STA: 118+30.78 19.50' LT
STA: 117+65.74 24.56' LT
STA: 117+65.73 19.50' LT
PI: 114+71.50
PI: 115+84.11
PI: 203+61.46
STA: 119+43.16 19.50' RT
STA: 119+43.19 24.72' RT
STA: 121+55.58 29.99' LT
STA: 121+55.57 19.43' LT
STA: 115+86.83 21.86' RT
STA: 115+86.76 24.50' RT
STA: 116+68.84 23.87' RT
STA: 116+68.98 30.82' RT
STA: 118+26.78 19.51' RT
STA: 118+26.78 24.08' RT
STA: 204+56.40 24.84' RT
PC: 204+66.92
STA: 204+56.36 17.10' LT
PT: 205+89.84
STA: 207+60.79 25.39' LT
STA: 207+60.79 10.99' LT

RELOCATE POWER POLE (BY OTHERS)
RELOCATE POWER POLE (BY UTILITY COMPANY)
REMOVE AND REPLACE STOP SIGN
REMOVE TRAFFIC SIGNAL POLE
REMOVE AND REPLACE SIGN
REMOVE TRAFFIC SIGNAL PEDESTAL
REMOVE AND REPLACE STOP SIGN
POWER POLE & GUY WIRE WILL NEED TO BE RELOCATED BY UTILITY COMPANY
REMOVE EXISTING STORM DRAIN INLET
REMOVE TREE
REMOVE EXISTING STORM PIPE AND STRUCTURES
VERIFY WHAT IS UNDER THIS PLATE BEFORE REMOVAL POSSIBLE TRAFFIC SIGNAL LID. REMOVE AND REPLACE WITH TRAFFIC SIGNAL
REMOVE AND REPLACE EXISTING STORM DRAIN INLET
EXISTING GUTTER IS OVERLAID. TEST TO FIND EDGE OF GUTTER FOR SAWCUT.
EXISTING RIGHT-OF-WAY
25.00' CITY PARK STRIP

MURPHY BLVD
4TH STREET

N
0' 20' 40' 80'
SCALE IN FEET

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2024.03.[illegible]:00:00

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DEMOLITION & REMOVALS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

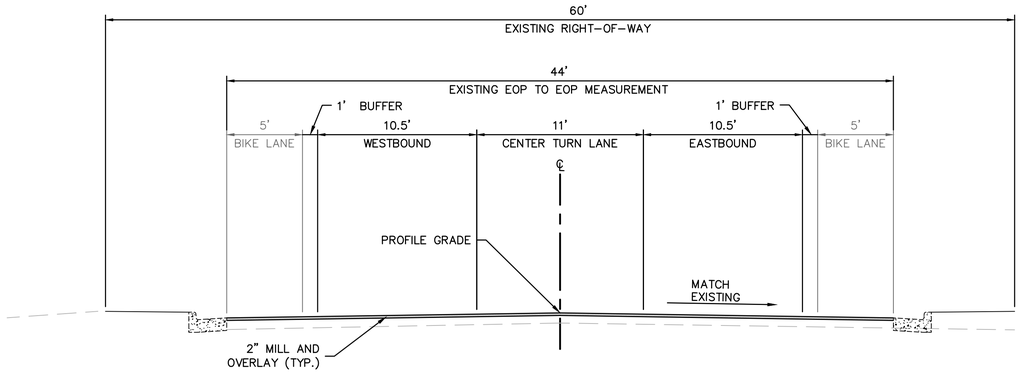
JOPLIN, MISSOURI

2023

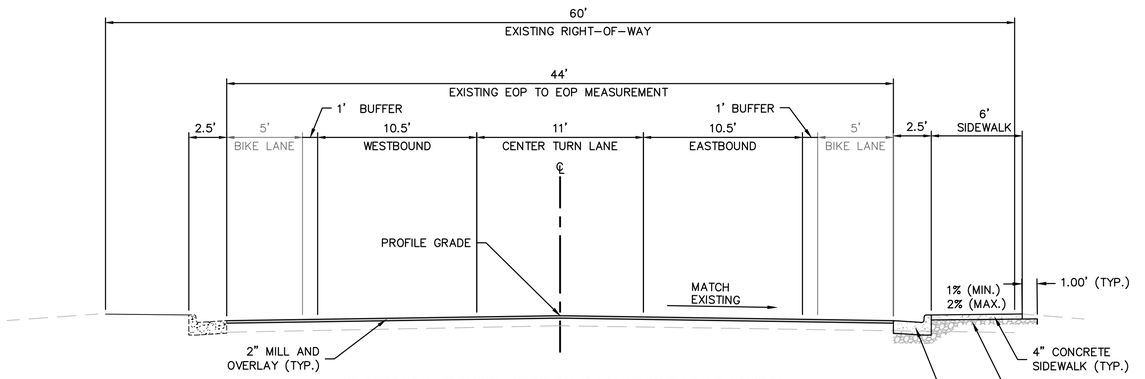
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checked by: JWP
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project no.: N17-06420
drawing no.: C_DEM01_N170642
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SHEET
7 of 95

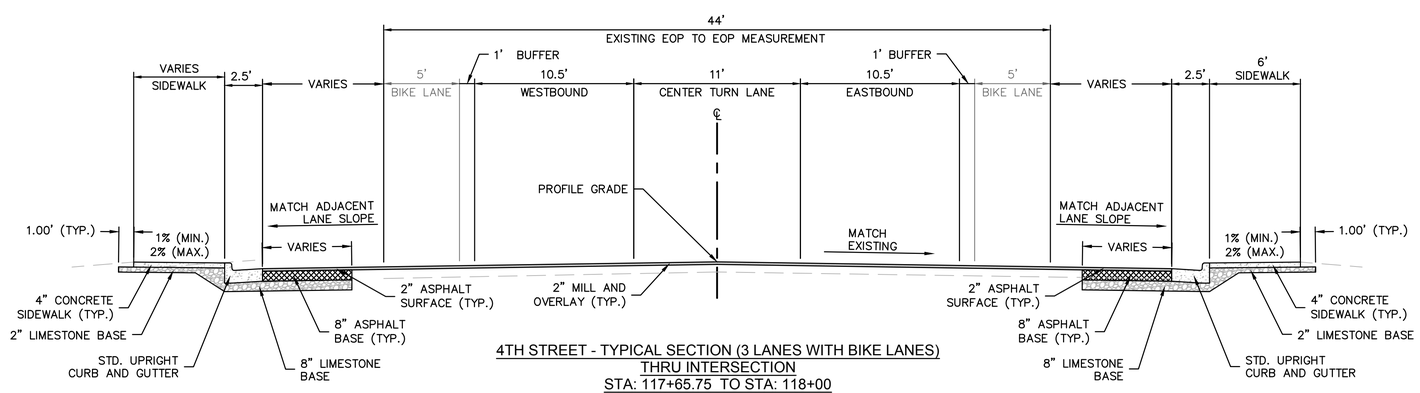
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4TH STREET - TYPICAL SECTION (3 LANES WITH BIKE LANES)
STA: 115+69.54 TO STA: 116+95.60
N.T.S.



4TH STREET - TYPICAL SECTION (3 LANES WITH BIKE LANES)
STA: 116+95.60 TO STA: 117+65.75
N.T.S.



4TH STREET - TYPICAL SECTION (3 LANES WITH BIKE LANES)
THRU INTERSECTION
STA: 117+65.75 TO STA: 118+00
STA: 119+20.00 TO 119+42.07
N.T.S.

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TYPICAL SECTIONS

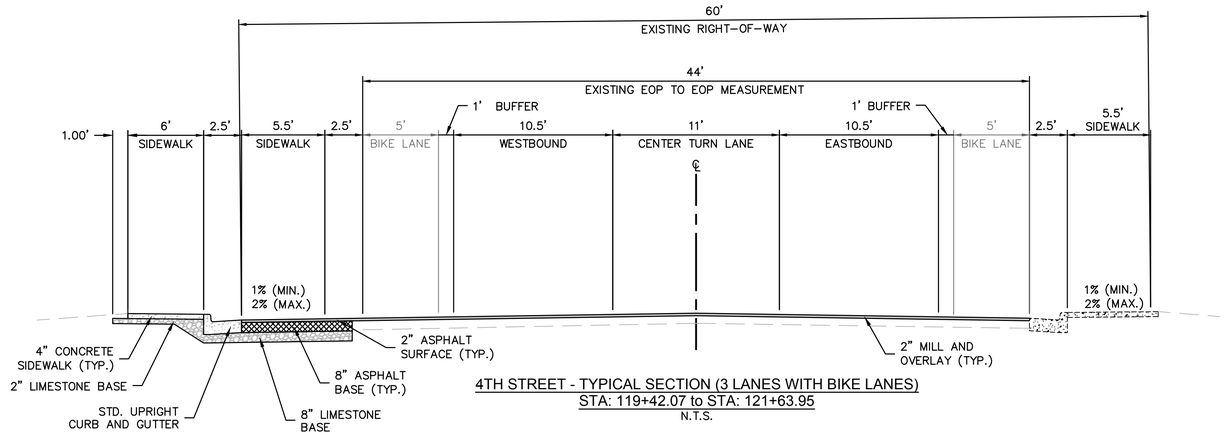
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

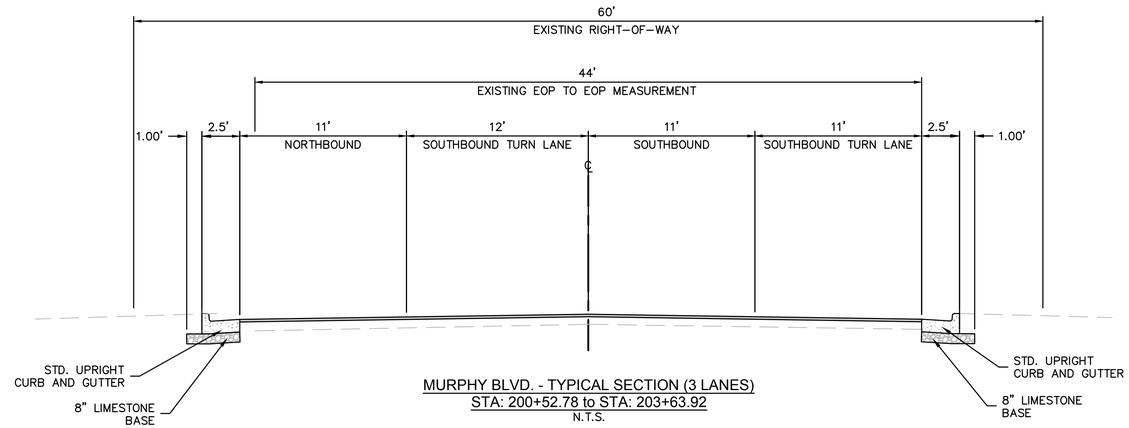
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checked by:	JWP
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drawing no.:	C_TYP01_N170642
date:	3/6/24

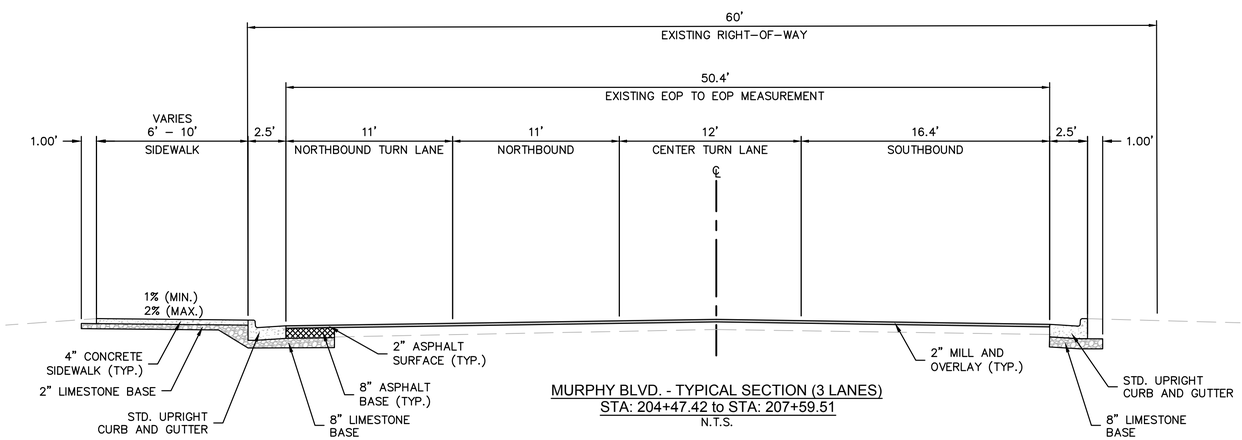
SHEET
8 of 95



4TH STREET - TYPICAL SECTION (3 LANES WITH BIKE LANES)
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N.T.S.



MURPHY BLVD. - TYPICAL SECTION (3 LANES)
STA: 200+52.78 to STA: 203+63.92
N.T.S.



MURPHY BLVD. - TYPICAL SECTION (3 LANES)
STA: 204+47.42 to STA: 207+59.51
N.T.S.

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TYPICAL SECTIONS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

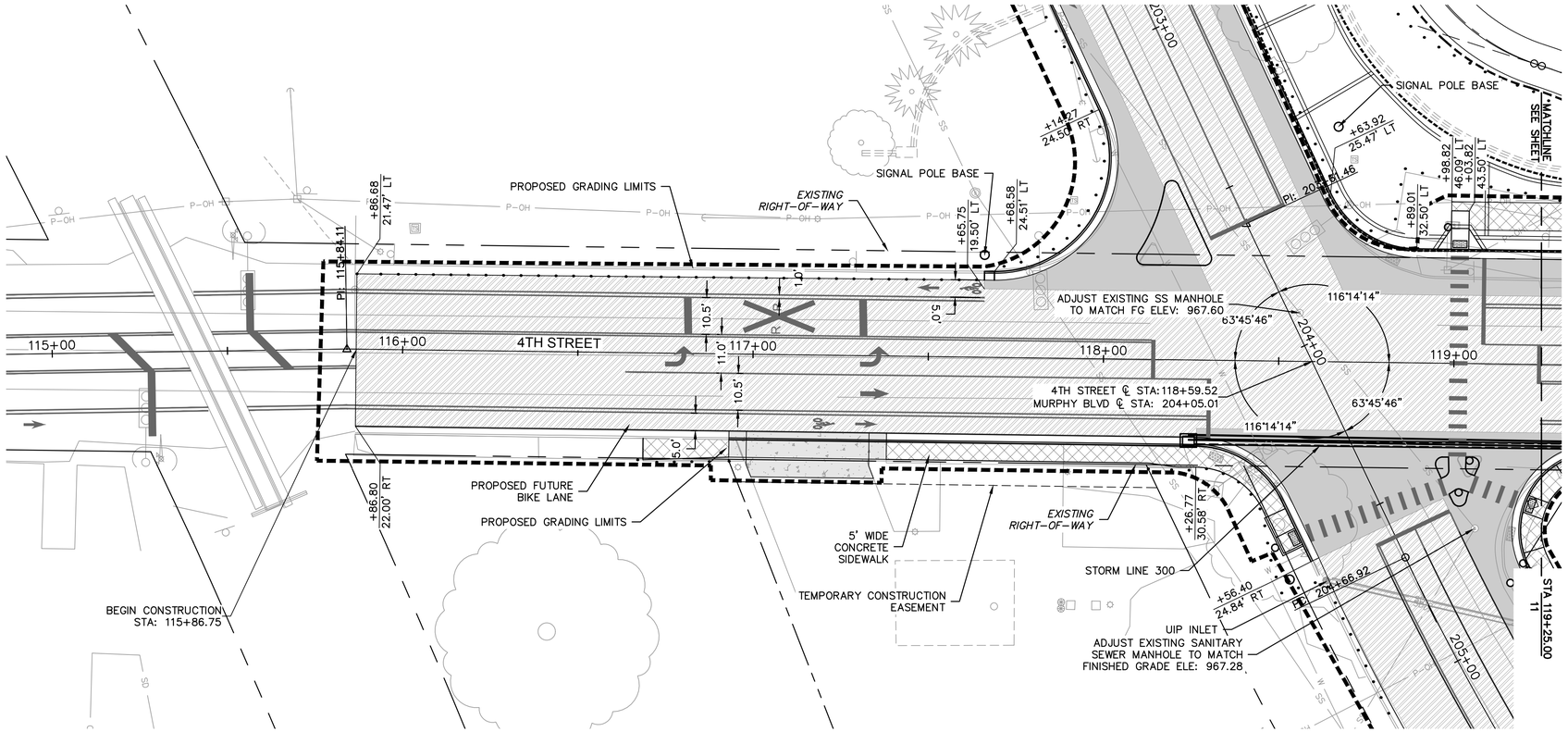
JOPLIN, MISSOURI

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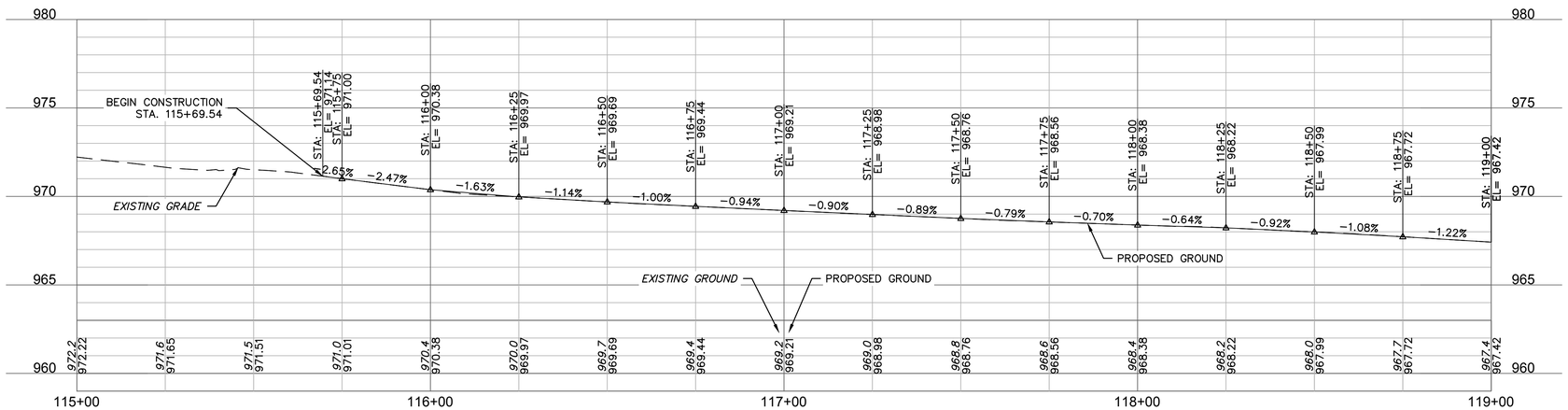
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SHEET
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4TH STREET (115+00 - 119+00)



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN AND PROFILE
4th STREET STA: 115+69.54 to STA: 190+00.00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

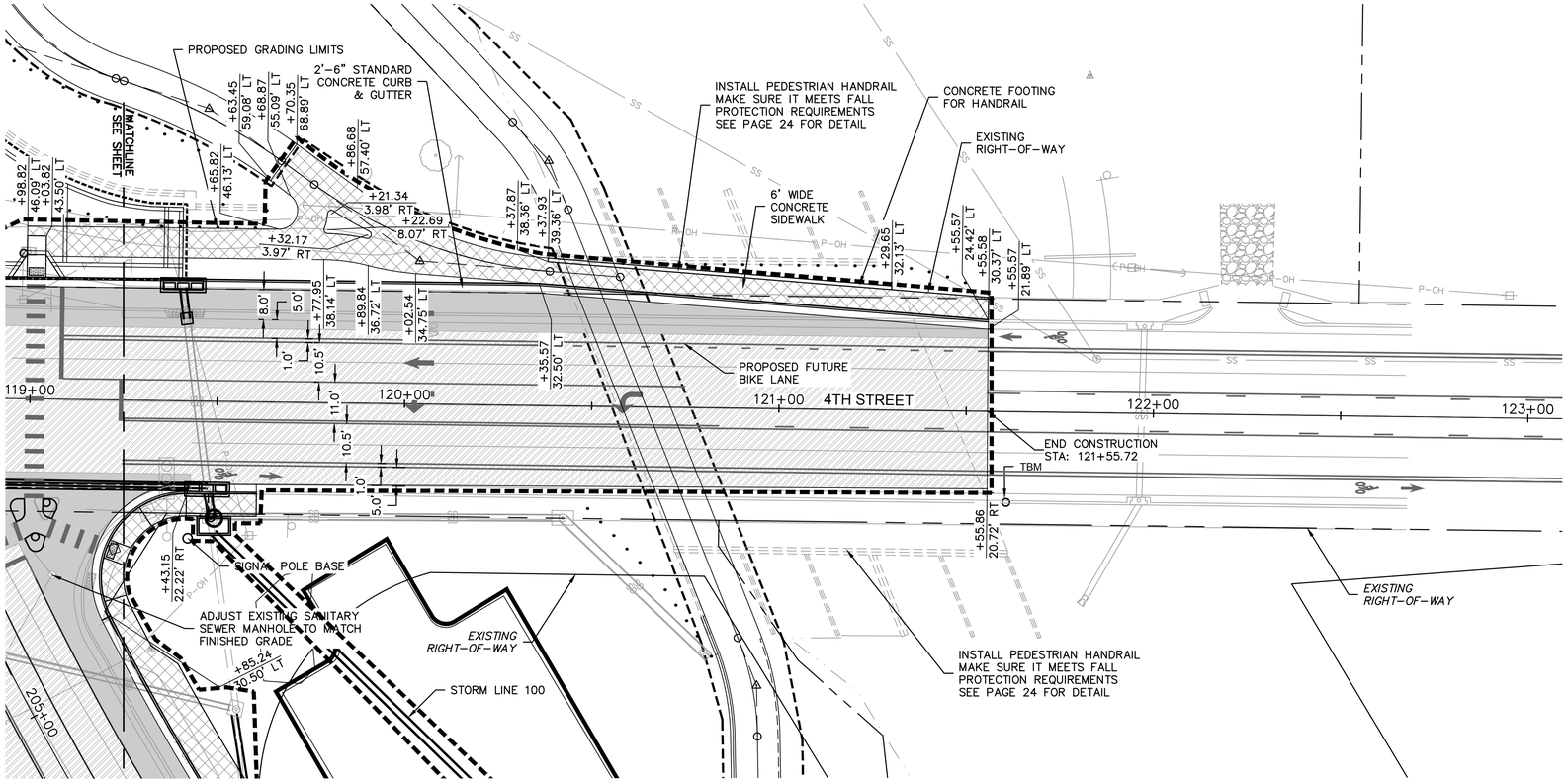
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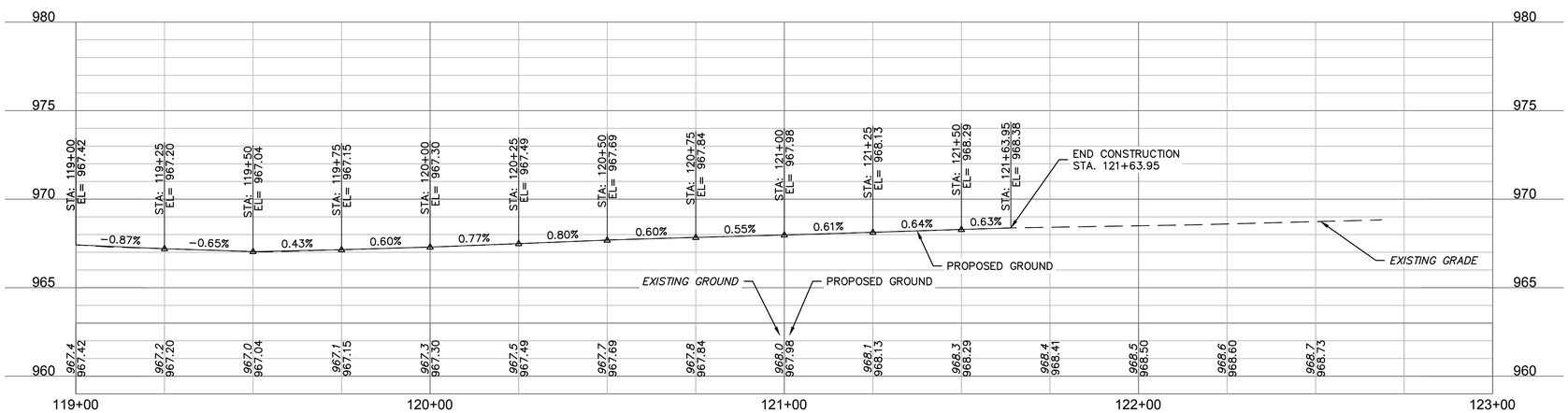
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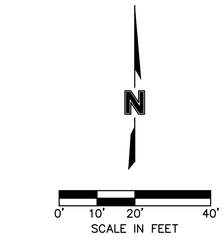
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SHEET
10 of 95

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LEGEND

- CONCRETE DRIVEWAY
- CONCRETE SIDEWALK
- ASPHALT MILL & OVERLAY
- FULL DEPTH ASPHALT PAVEMENT REPLACEMENT
- GRADING LIMITS
- BASE BID
- BID ALTERNATIVE 1
- BID ALTERNATIVE 2
- BID ALTERNATIVE 3

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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ROADWAY PLAN AND PROFILE
4th STREET STA: 190+00.00 to STA: 121+63.95

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

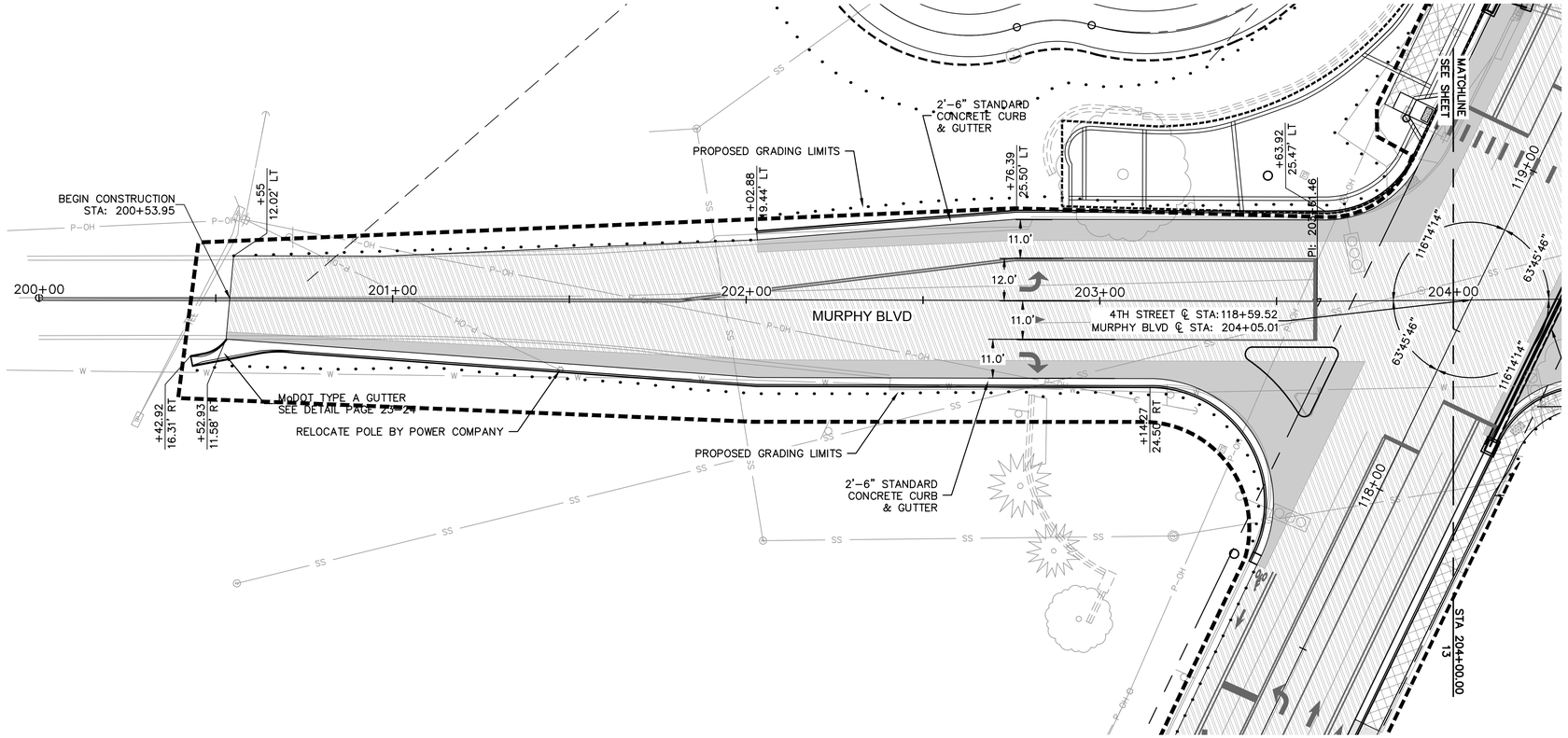
JOPLIN, MISSOURI

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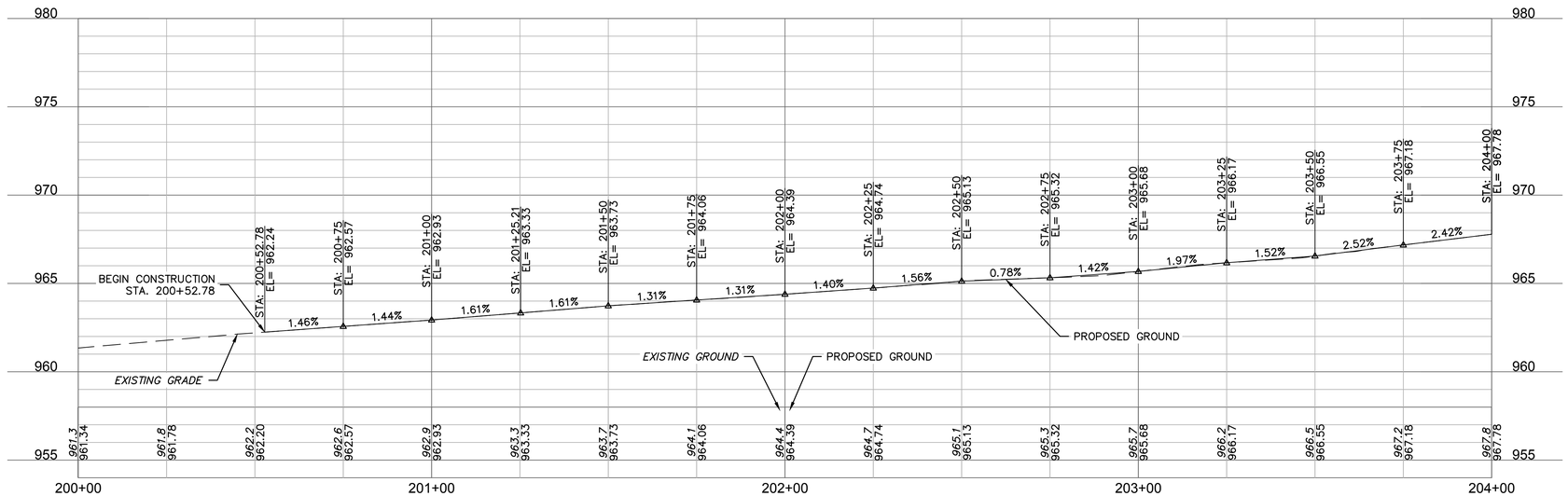
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MURPHY BLVD (200+00 - 204+00)



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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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ROADWAY PLAN AND PROFILE
MURPHY BLVD STA: 200+52.78 to STA: 204+00.00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

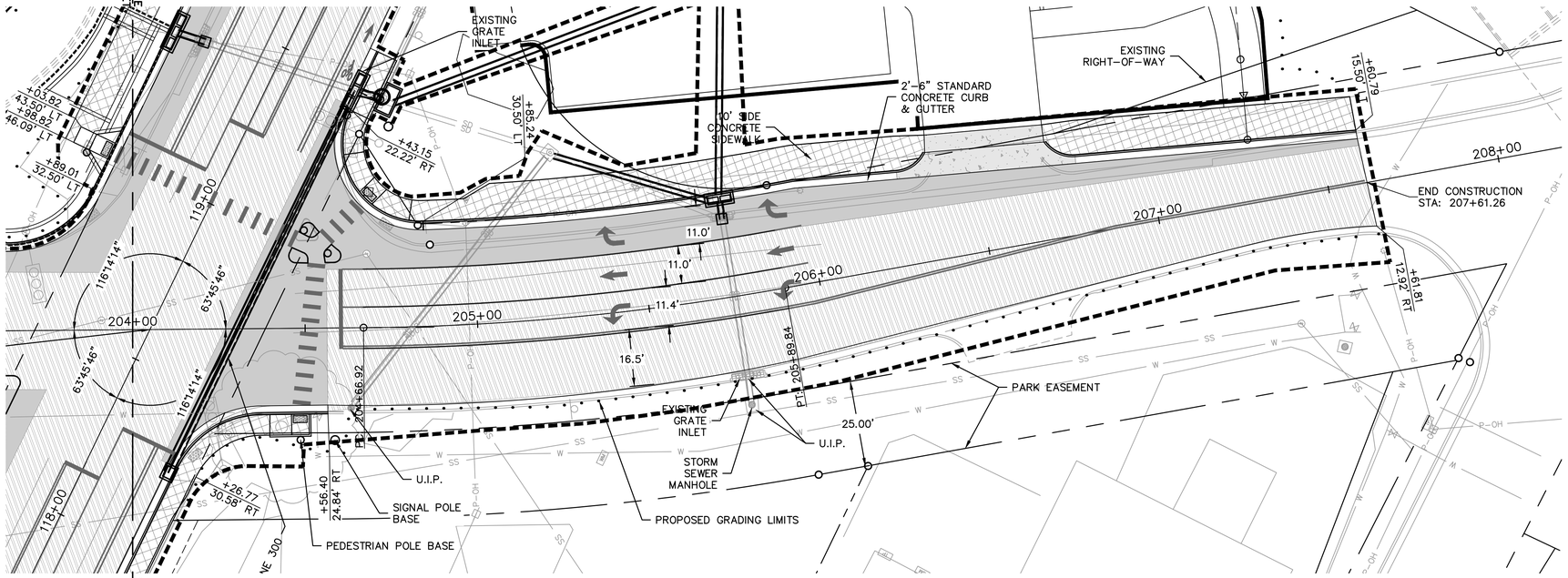
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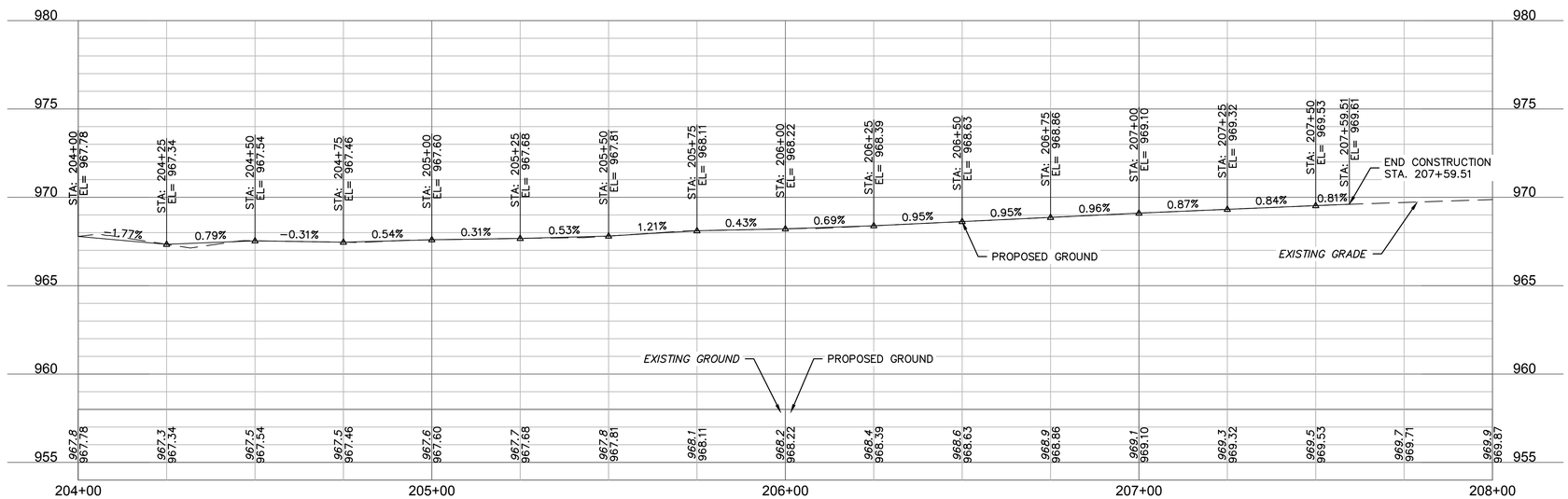
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MURPHY BLVD (204+00 - 208+00)



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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN AND PROFILE
MURPHY BLVD. STA: 204+00.00 to STA: 207+59.51

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

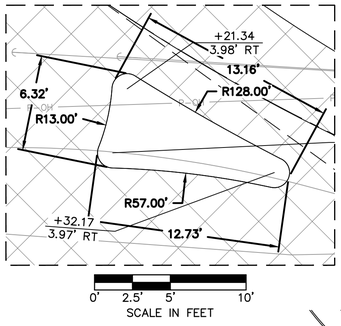
JOPLIN, MISSOURI

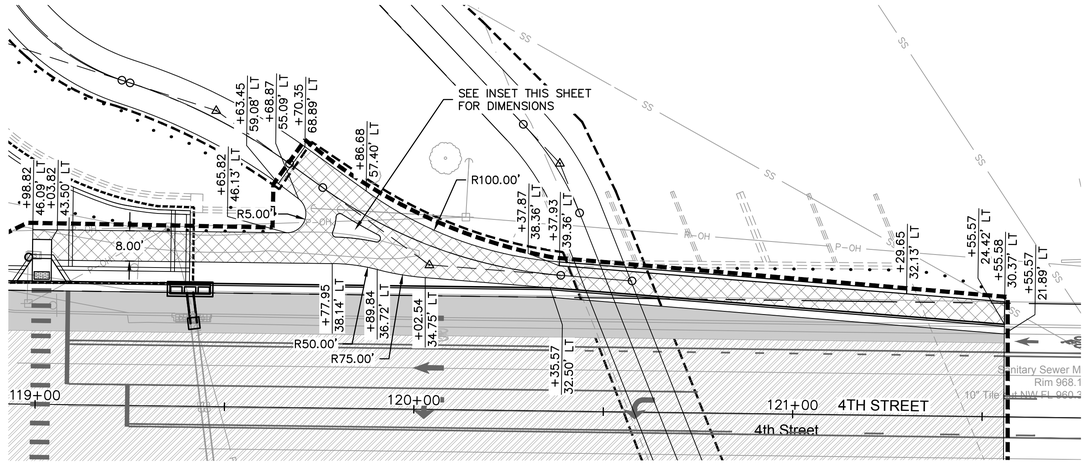
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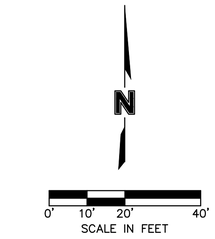
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SHEET
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LEGEND

- CONCRETE DRIVEWAY
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- ASPHALT MILL & OVERLAY
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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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ROADWAY PLAN AND PROFILE
4th STREET STA: 190+00.00 to STA: 121+63.95

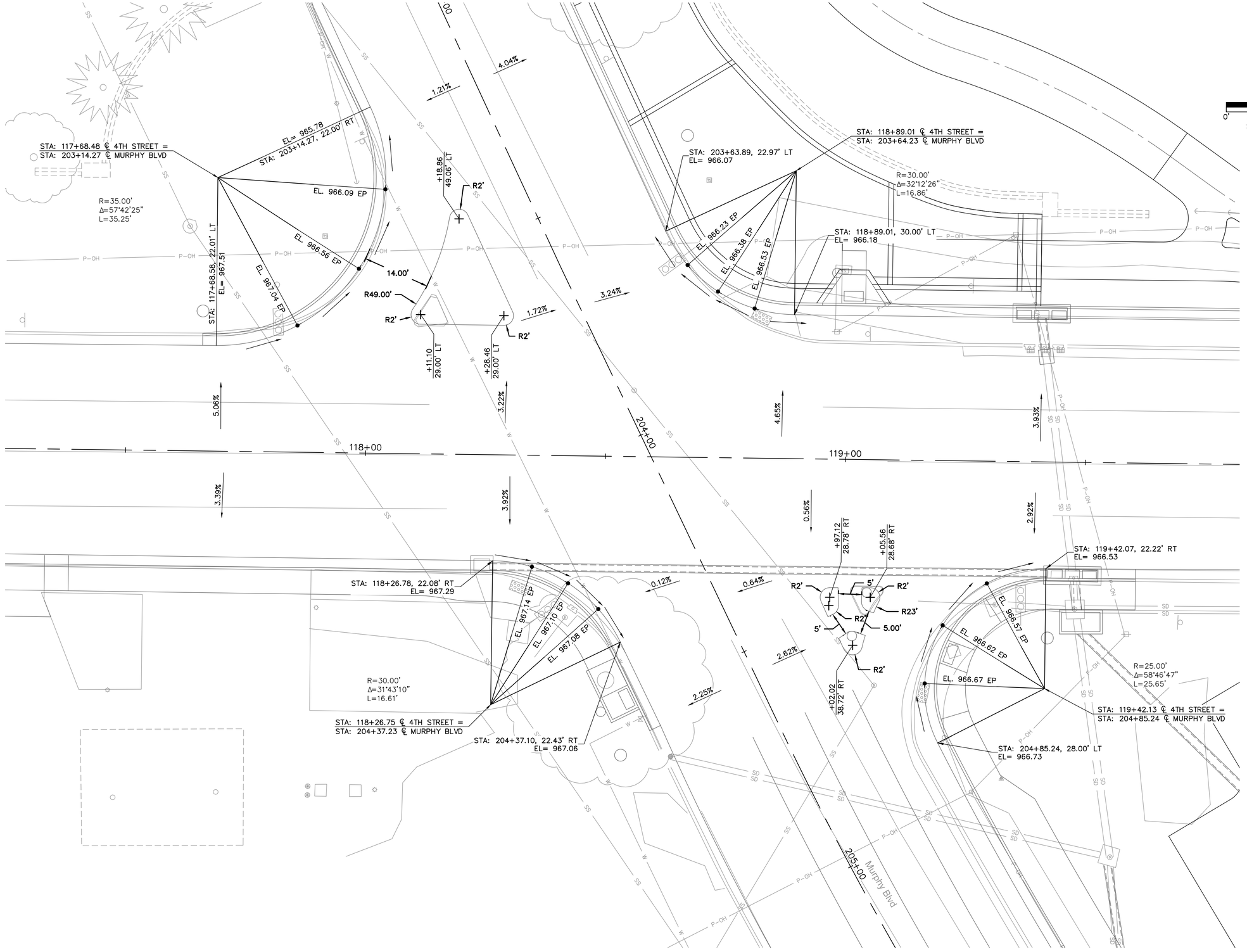
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
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INTERSECTION LAYOUT

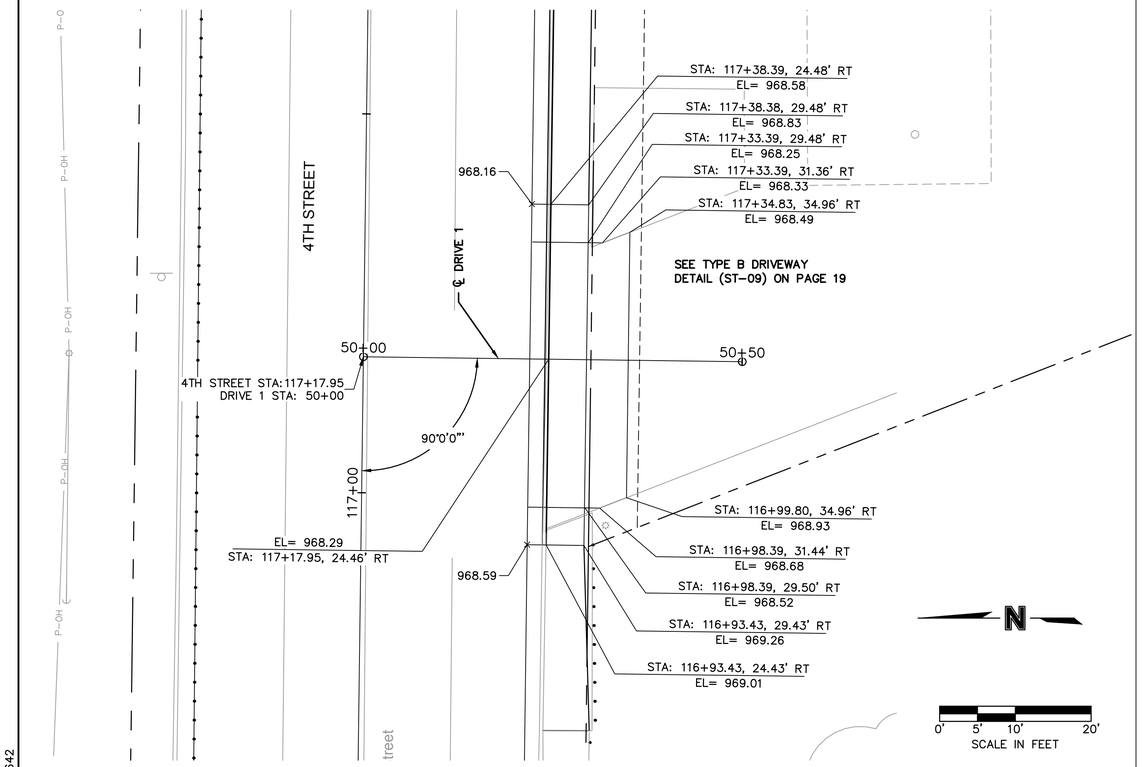
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CITY OF JOPLIN

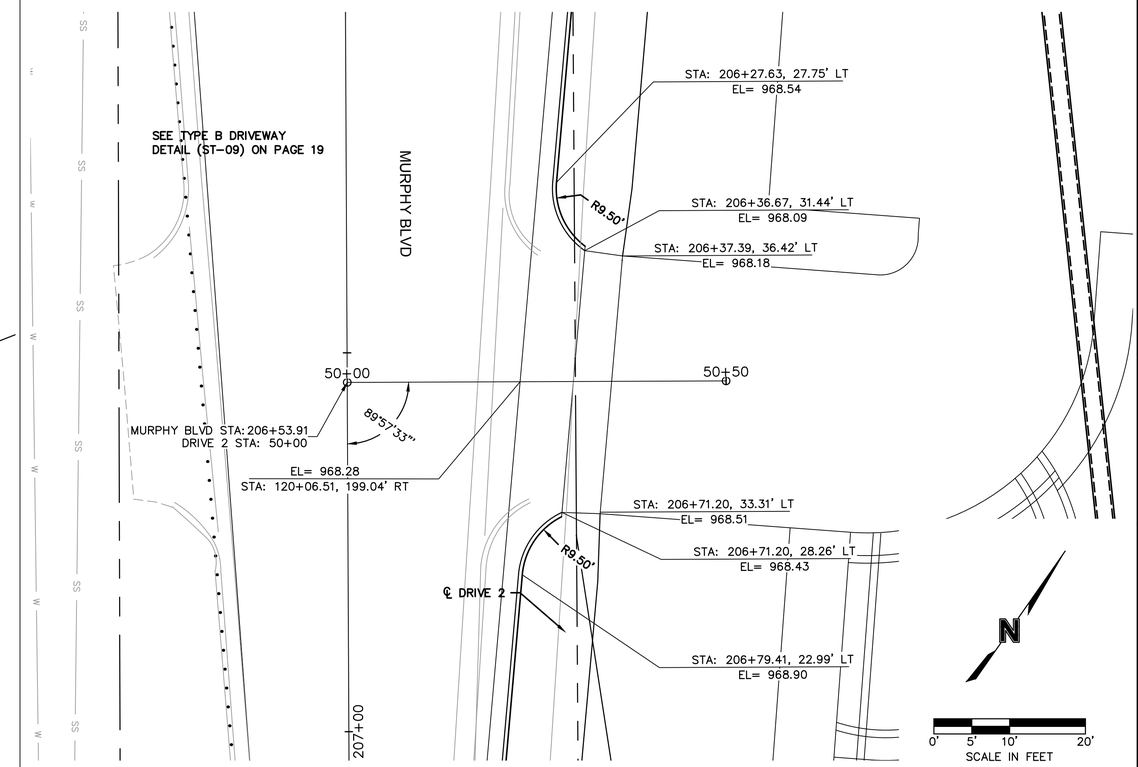
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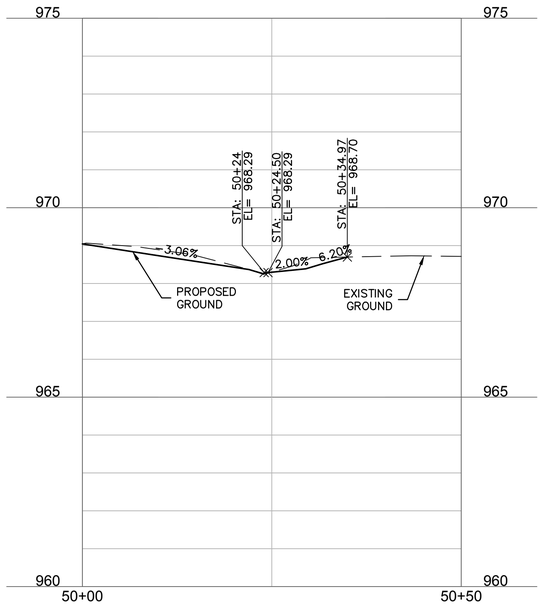
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SHEET
15 of 95

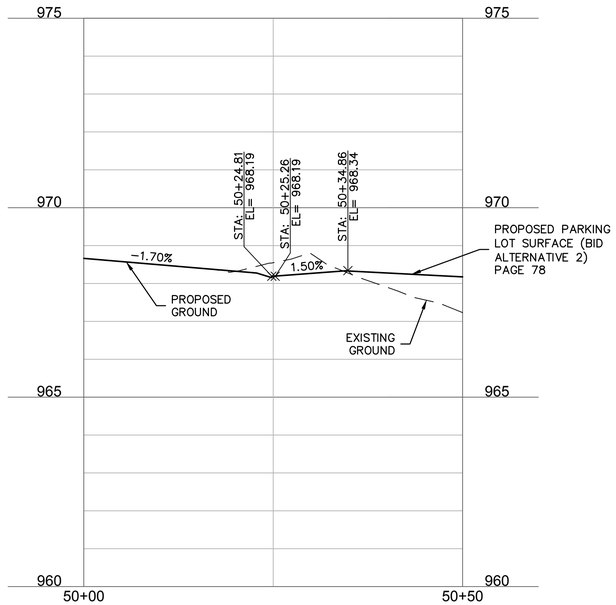




DRIVE 1



DRIVE 2



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DRIVEWAY LAYOUT

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

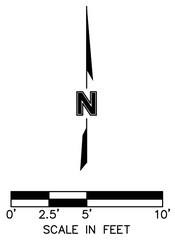
JOPLIN, MISSOURI

2023

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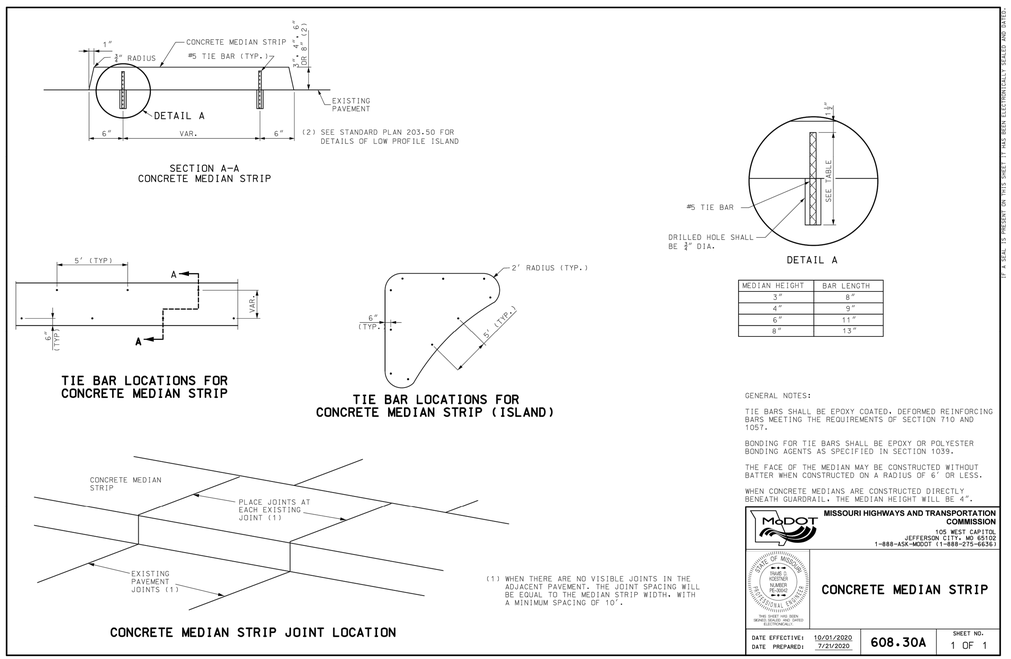
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USER: mmayfarth



LEGEND

- SIDEWALK RAMP CURB & GUTTER
- SIDEWALK RAMP CURB & GUTTER TRANSITION (0.5% MIN.)
- TRUNCATED DOMES
- R — RAMP
- L — LANDING



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

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

GENERAL NOTES:

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

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

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

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

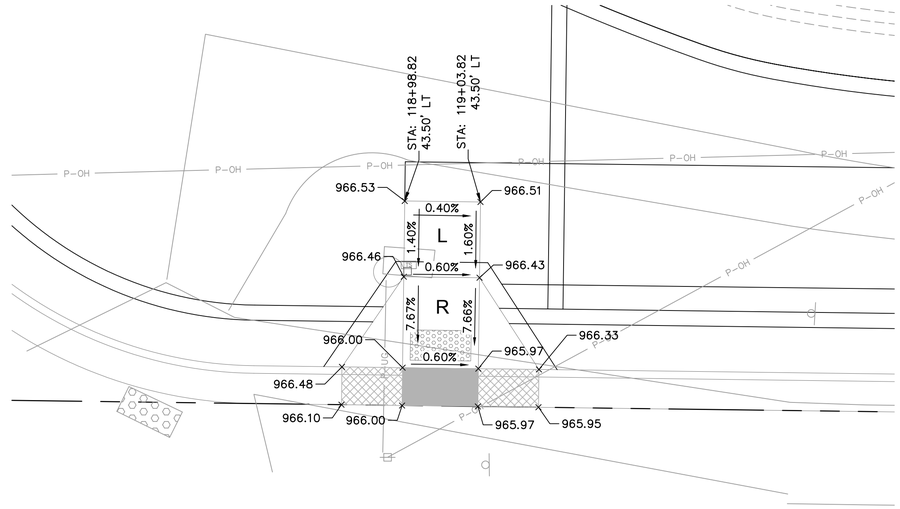
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MoDOT — MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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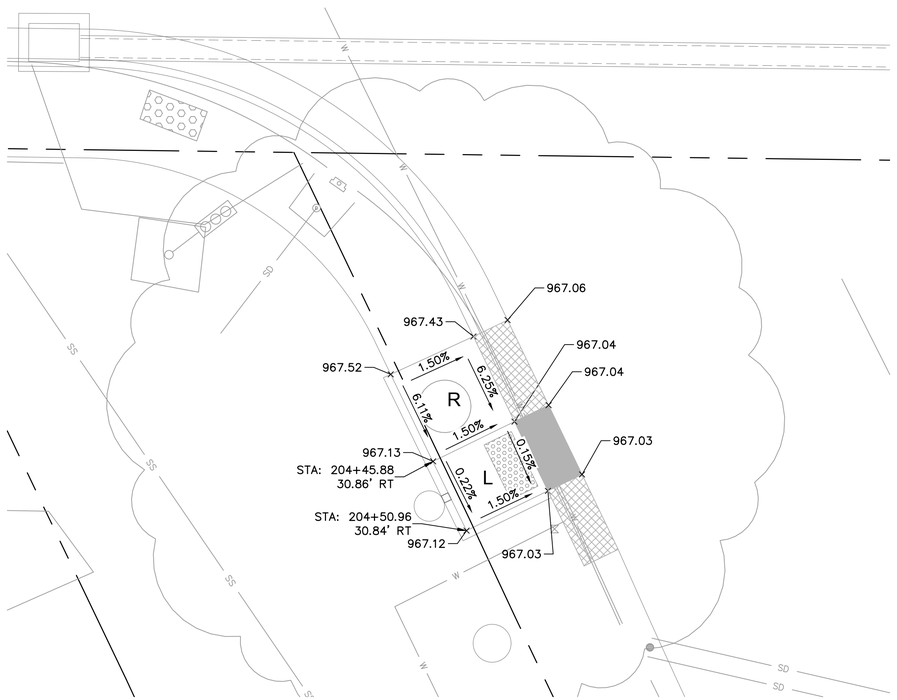
STATE OF MISSOURI — SHANE D. KOESTER — NUMBER PE-2009020911 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SEALED ELECTRONICALLY AND DIGITAL SIGNATURE MAY BE VERIFIED

CONCRETE MEDIAN STRIP

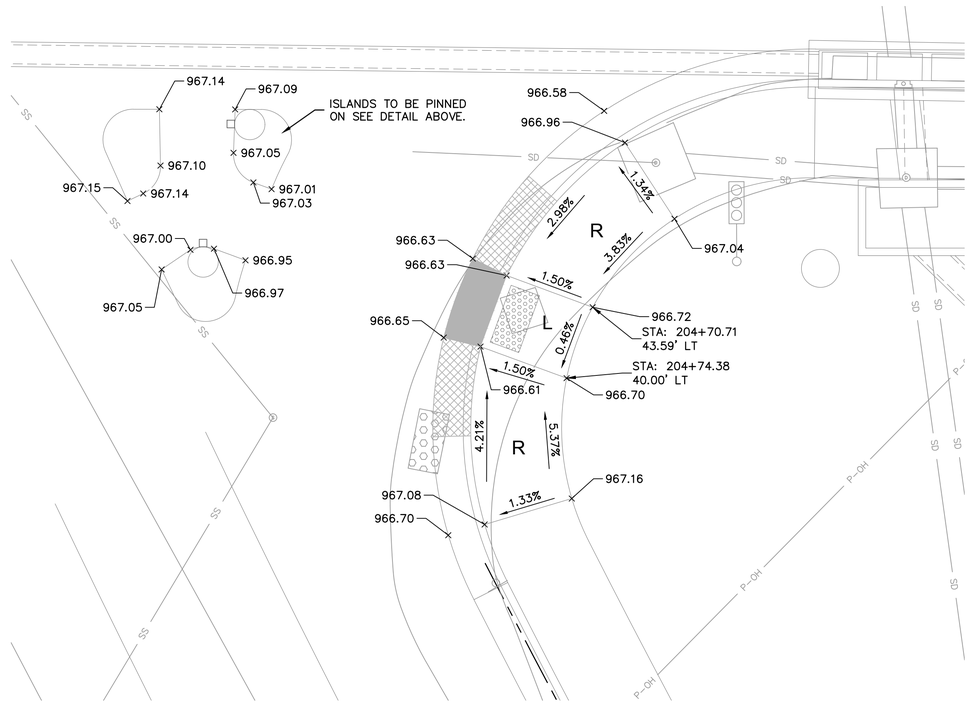
DATE EFFECTIVE:	10/01/2020	608.30A	SHEET NO.
DATE PREPARED:	7/21/2020		1 OF 1



CURB RAMP - 4TH STREET AND MURPHY BOULEVARD - NORTHEAST
SCALE: 1" = 5'



CURB RAMP - 4TH STREET AND MURPHY BOULEVARD - SOUTHWEST
SCALE: 1" = 5'



CURB RAMP - 4TH STREET AND MURPHY BOULEVARD - SOUTHEAST
SCALE: 1" = 5'

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2024.03.06 — STATE OF MISSOURI — JONATHAN W. PEITZ — NUMBER PE-2017019023 — PROFESSIONAL ENGINEER
JONATHAN W. PEITZ–CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SIDEWALK RAMP LAYOUT

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

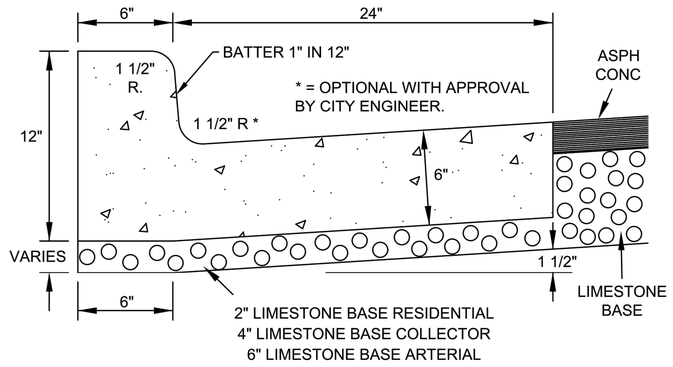
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_SWK01_N170642
date: 3/6/24

SHEET
17 of 95

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NOTES:
1. CONSTRUCT EXPANSION JOINTS AT THE START & END OF EVERY DRIVEWAY & CURB INLET.
2. CONSTRUCT CONTRACTION JOINTS EVERY 10' 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'.

STD UPRIGHT C & G

N.T.S.

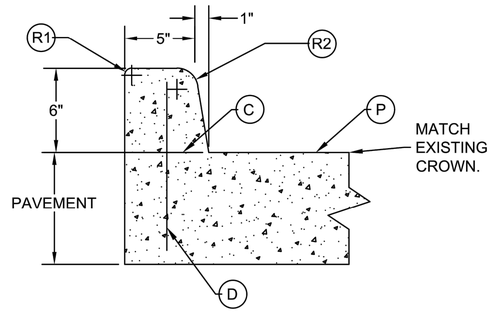
ST-04

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	STD UPRIGHT CURB & GUTTER
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: CURBDET	

LEGEND:
- Ⓒ PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.
- Ⓓ #4 TIE BAR AT 24" CENTERS. LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3".
- Ⓟ TOP OF PAVEMENT OR CONCRETE BASE.
- Ⓡ1 ROUND TO 1/2" RADIUS. (EXCEPT FOR SAWED JOINTS)
- Ⓡ2 ROUND TO 1 1/2" RADIUS.

TYPE A INTEGRAL CURB

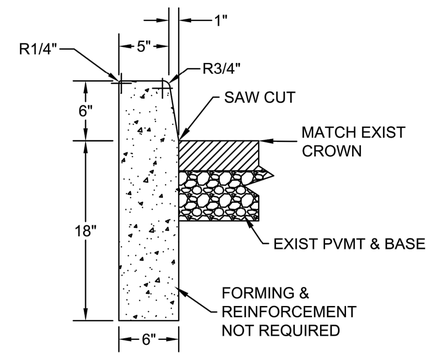
NOT TO SCALE



NOTES:
1. ALL POURED CONCRETE SHALL BE REINFORCED CLASS "B".
2. STEEL REINFORCEMENT IN PAVEMENT SLAB IS OPTIONAL.
3. BID PRICE FOR ALL CURB & PAVEMENT SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONSTRUCT CURB & PAVEMENT.

TYPE S CONCRETE CURB

NOT TO SCALE



ST-05

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	TYPE "A" & TYPE "S" CURB
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: TYPEA&SCURB	

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

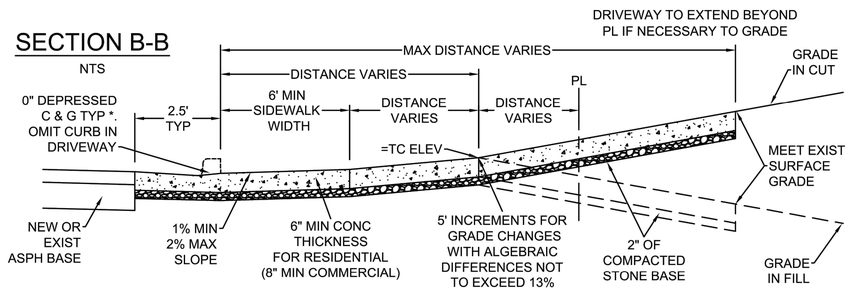
drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
18 of 95

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SECTION B-B

NTS

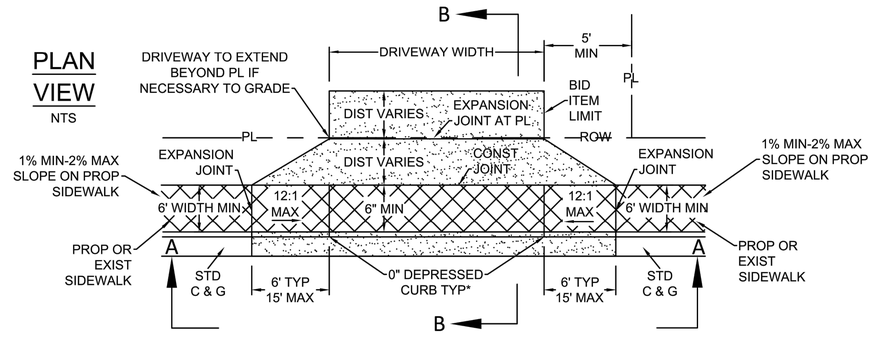


NOTES:

1. STEEL REINFORCEMENT IS NOT ALLOWED.
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.

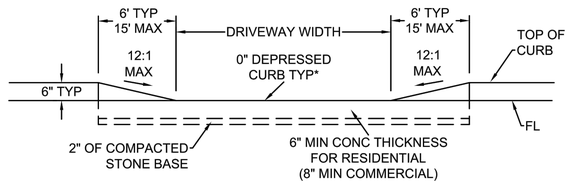
PLAN VIEW

NTS



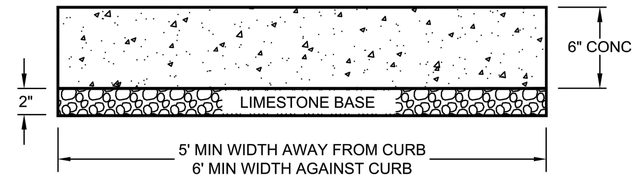
SECTION A-A

NTS



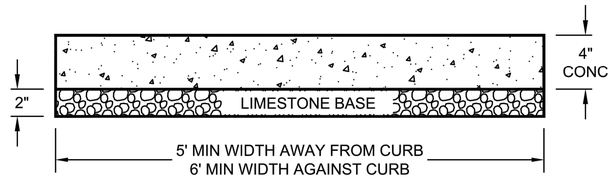
ST-09

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	TYPE B DRIVEWAY WITH SIDEWALK AGAINST CURB
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: TYPEBDRIVE	



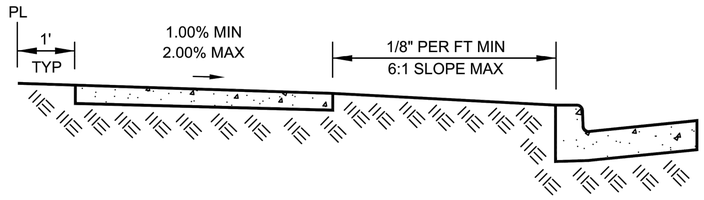
CLASS 'A' CONC SIDEWALK

NTS



CLASS 'B' CONC SIDEWALK

NTS



NOTES:

1. CONSTRUCT EXPANSION JOINTS AT THE START & END OF EVERY DRIVEWAY & CURB INLET.
2. CONSTRUCT CONTRACTION JOINTS EVERY 10' MAXIMUM.
3. USE CLASS 'B' CONCRETE.
4. REINFORCEMENT IS OPTIONAL.
5. CROSS SLOPE OF WALK & DIRT BACKSLOPE CAN SLOPE AWAY FROM CURB IN FILL.

ST-11

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

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

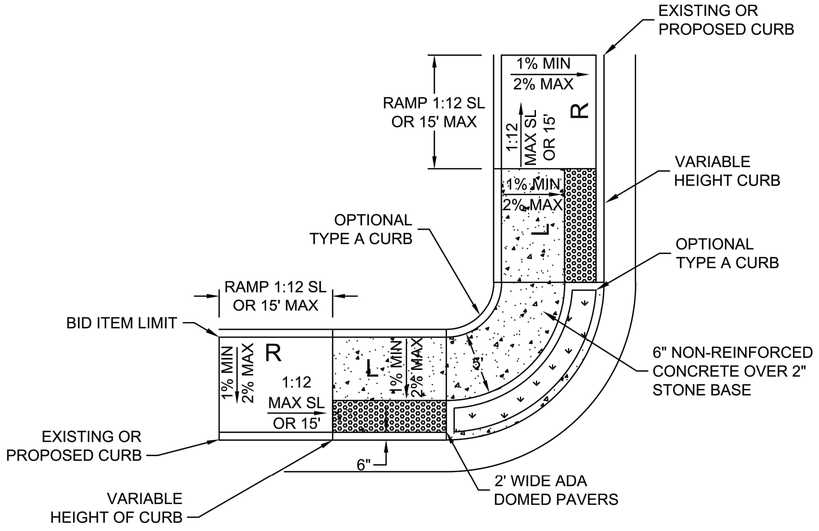
2023

JOPLIN, MISSOURI

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

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DATE: Mar 06, 2024 7:07am XREFS: C_PTBLK_N170642



NOTES:

1. ALL GUTTER CONSTRUCTED IN FRONT OF RAMP & ALL CURB & GUTTER IN RAMP TRANSITIONS SHALL BE INCLUDED IN THE BID PRICE OF THE CURB & GUTTER.
2. BID PRICE (PAID BY SY) FOR ALL RAMPS SHALL INCLUDE ALL EXCAVATION, LABOR & MATERIALS REQUIRED TO CONSTRUCT RAMP.
3. ALL POURED CONCRETE SHALL BE FIBER REINFORCED CLASS "B".
4. RAMP WIDTH MAY BE REDUCED TO 4' WITH APPROVAL OF THE ENGINEER.
5. TYPE A CURB & ADA DOMED PAVERS SHALL BE INCLUDED IN PRICE OF RAMP.
6. CROSS SLOPE OF LANDING AREAS DO NOT EXCEED 2% IN ANY DIRECTION.
7. RAMP SHALL NOT EXCEED 30" VERTICALLY WITHOUT 5' X 5' LANDING.

TYPE "A" ADA RAMP

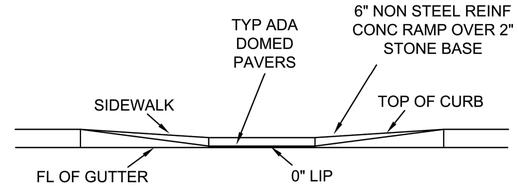
NOT TO SCALE

ST-14

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	TYPE "A" ADA RAMP
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: TYPE A ADA RAMP	

NOTES:

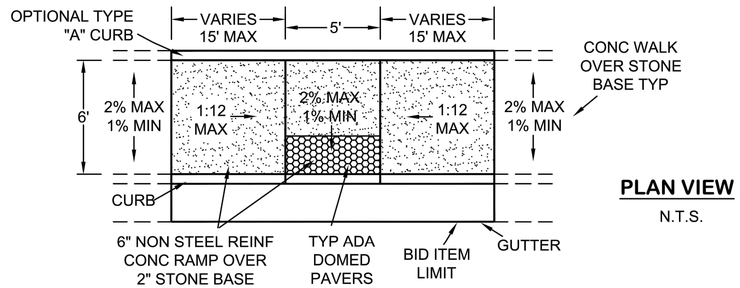
1. ALL GUTTER CONST IN FRONT OF RAMP & ALL C&G IN RAMP TRANSITIONS SHALL BE INCLUDED IN THE BID PRICE OF THE C&G.
2. BID PRICE (PAID BY SY) FOR ALL RAMPS SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONST RAMP.
3. ALL POURED CONCRETE SHALL BE CLASS 'B' FIBER REINFORCED.
4. RAMPS NOT TO EXCEED 30" VERTICALLY WITHOUT 5' X 5' LANDING.



SECTION
N.T.S.

TYPE 'B' ADA RAMP

N.T.S.



PLAN VIEW
N.T.S.

ST-15

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	TYPE 'B' ADA RAMP
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: TYPEBADARAMP	

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

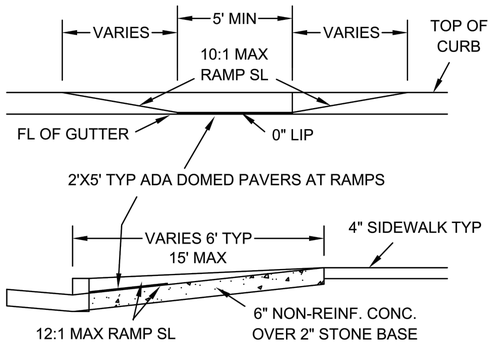
2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

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20 of 95

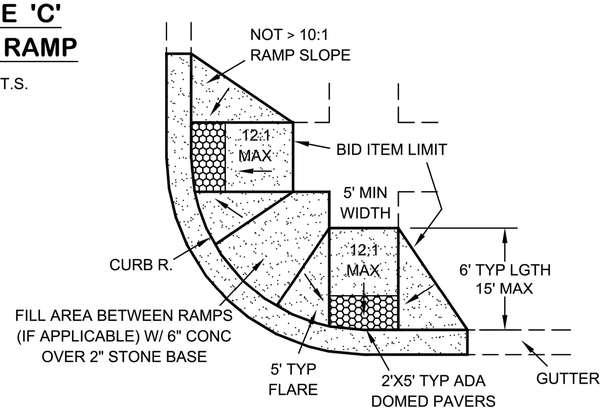
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NOTES:
1. ALL GUTTER CONST IN FRONT OF RAMP & ALL C&G IN RAMP TRANSITIONS SHALL BE INCLUDE IN THE BID PRICE OF THE C&G.
2. BID PRICE (PAID BY SY) FOR ALL RAMPS SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONST RAMP.
3. ALL POURED CONC SHALL BE CLASS 'B' FIBER REINFORCED.
4. RAMPS SHALL NOT EXCEED 30" VERTICALLY WITHOUT 5' X 5' LANDING.



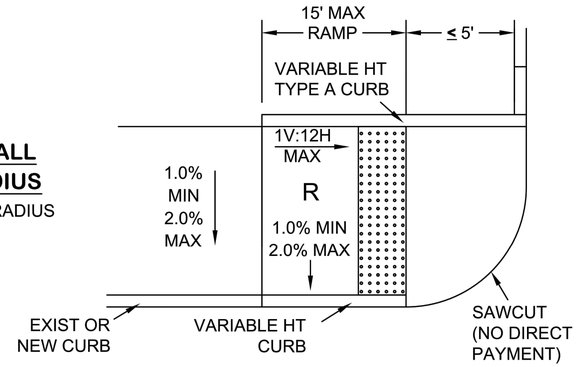
TYPE 'C' ADA RAMP

N.T.S.



ST-16

CITY OF Joplin	CITY OF JOPLIN, MO PUBLIC WORKS DEPT ENGINEERING DIVISION 602 S MAIN ST 64801	CKD BY: JOHNSON DATE: 2/2019 ENGINEER: HERTZBERG FILE: TYPECADARAMP	PROJECT **TYPE 'C' ADA RAMP**

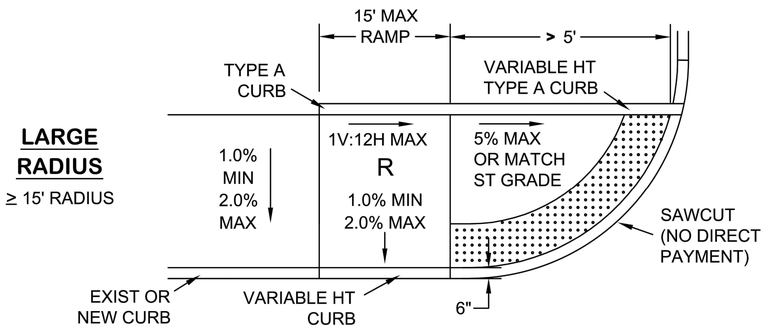


SMALL RADIUS
< 15' RADIUS

TYPE 'D' ADA RAMP

N.T.S.

NOTES:
1. BID PRICE (PAID BY SY) FOR ALL RAMPS SHALL INCLUDE ALL EXCAVATION, LABOR, & MATERIALS REQUIRED TO CONSTRUCT RAMP.
2. ALL POURED CONCRETE SHALL BE CLASS 'B', 6" THICK, FIBER REINFORCED WITH 2" COMPACTED STONE.
3. DETECTABLE WARNING DEVICES REQUIRED AT PUBLIC STREET & SIGNALIZED ENTRANCES.
4. RAMP WIDTH MAY BE REDUCED TO 4' WITH APPROVAL OF THE ENGINEER.
5. TYPE A CURB & ADA DOMED PAVERS SHALL BE INCLUDED IN PRICE OF RAMP.
5. RAMPS SHALL NOT EXCEED 30" VERTICALLY WITHOUT 5' X 5' LANDING.



LARGE RADIUS
≥ 15' RADIUS

ST-17

CITY OF Joplin	CITY OF JOPLIN, MO PUBLIC WORKS DEPT ENGINEERING DIVISION 602 S MAIN ST 64801	CKD BY: JOHNSON DATE: 2/2019 ENGINEER: HERTZBERG FILE: TYPEDADARAMP	PROJECT **TYPE 'D' ADA RAMP**

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

REVISIONS

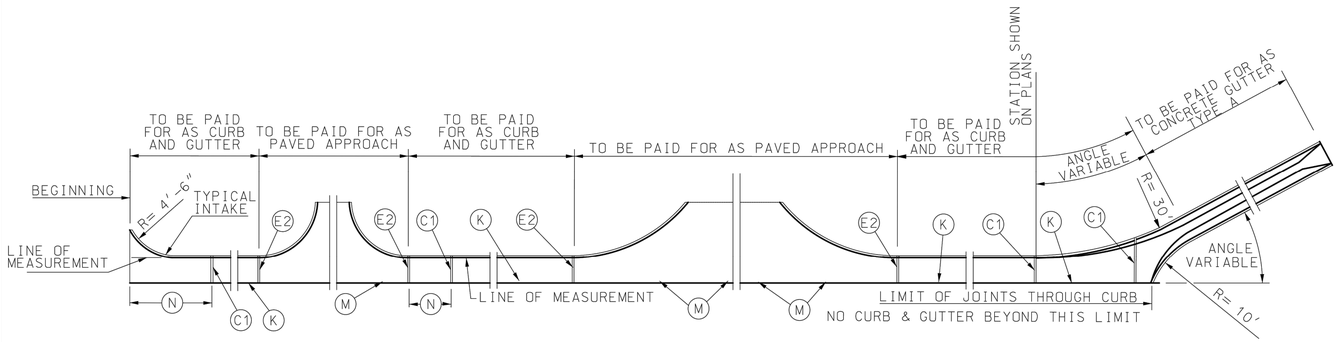
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STANDARD DETAILS
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN
JOPLIN, MISSOURI
2023

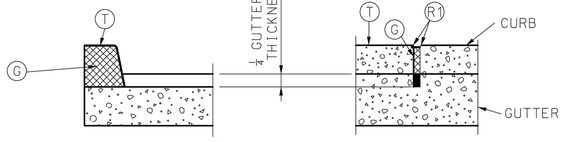
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21 of 95

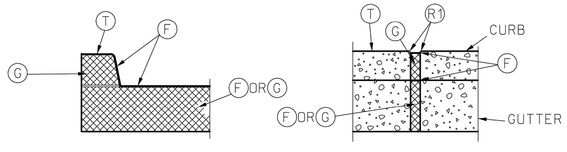
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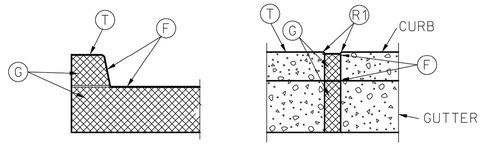
PLAN OF MEASUREMENT OF CURB & GUTTER AND JOINT PLAN



C1 JOINT



E2 JOINT



E1 JOINT

LEGEND

- C1 1/8" MAXIMUM WIDTH TRANSVERSE CONTRACTION JOINT (PREFORMED OR SAWED).
- E1 2" TRANSVERSE EXPANSION JOINT. (PREFORMED OR SAWED)
- E2 1/2" TRANSVERSE EXPANSION JOINT. (PREFORMED OR SAWED)
- F FILLER FOR JOINTS - HOT POURED.
- G PREFORMED JOINT FILLER MATERIAL.
- K TONGUE & GROOVE JOINT WITH TIE BAR - SEE DETAIL.
- M TONGUE & GROOVE JOINT WITHOUT TIE BARS - SEE DETAIL.
- N NOT LESS THAN 10' OR MORE THAN 30'.
- T TOP OF CURB.
- R1 ROUND TO 1/4" 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 1/4 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.

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105 WEST CAPITOL
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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: 04/01/2021
DATE PREPARED: 1/27/2021

609.00P

SHEET NO. 1 OF 2

olsson
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Jonathan Peitz
2024.03.06 11:00:00 -06'00'
STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER
JONATHAN W. PEITZ-CIVIL ENGINEER
MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

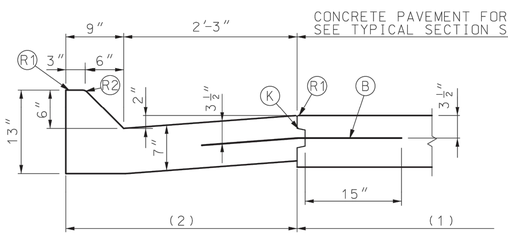
JOPLIN, MISSOURI

2023

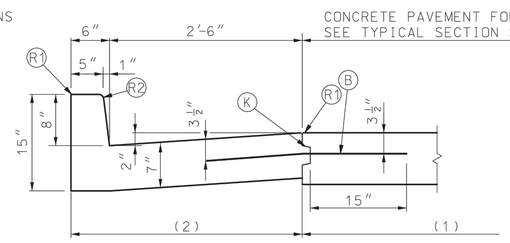
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checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01 N170629
date: 3/6/24

SHEET 22 of 95

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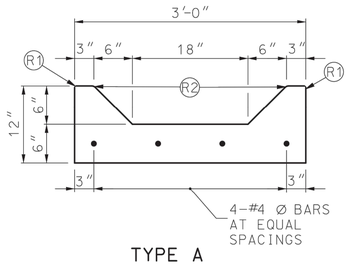


TYPE A
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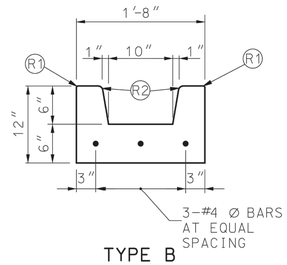


TYPE B
(BARRIER)

CURB & GUTTER

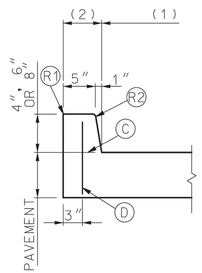


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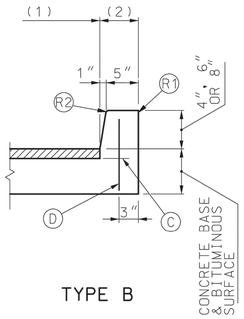


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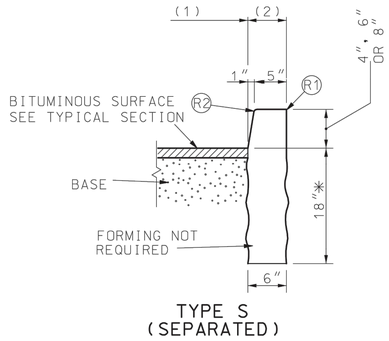
GUTTERS



TYPE A
(INTEGRAL)



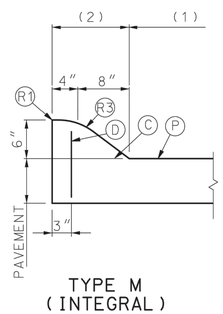
TYPE B



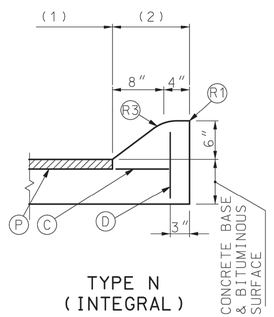
TYPE S
(SEPARATED)

✳ DEPTH MAY BE REDUCED IF KEYED 6″ IN ROCK

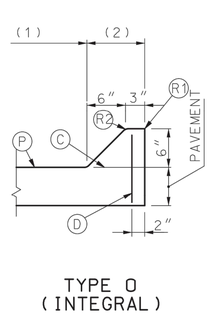
BARRIER CURBS



TYPE M
(INTEGRAL)

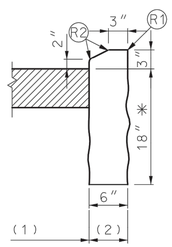


TYPE N
(INTEGRAL)

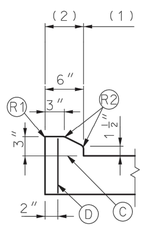


TYPE O
(INTEGRAL)

MOUNTABLE CURBS



TYPE F
(SEPARATED)

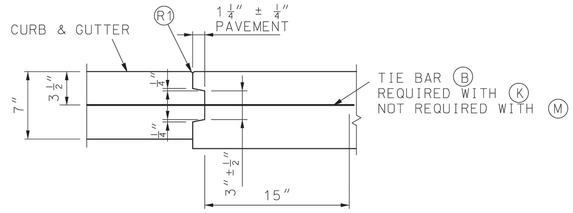


TYPE E
(INTEGRAL)

BEGINNING AND ENDINGS OF INTROCUCED LOW PROFILE CURBS SHALL UTILIZE CURB HEIGHT RUNOUT FORM 0 INCH TO 3 INCHES IN 5 FEET PAYMENT. LENGTH SHALL INCLUDE TAPERS.

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

LOW PROFILE CURB



THRU TONGUE & GROOVE JOINT

LEGEND

(B) TIE BARS – 30″ X #5 Ø AT 30″ CTRS.

(C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.

(D) #4 Ø TIE BAR AT 24″ CENTERS LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3 INCHES.

(K) TONGUE & GROOVE JOINT WITH TIE BAR – SEE DETAIL.

(P) TOP OF PAVEMENT OR CONCRETE BASE.

(R1) ROUND TO ¼″ RADIUS. (EXCEPT FOR SAWED JOINTS)

(R2) ROUND TO ¾″ RADIUS.

(R3) CONSTRUCT TO 9″ RADIUS

(1) PAY LIMIT FOR PAVEMENT

(2) PAY LIMIT FOR CURB, OR CURB & GUTTER.

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STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-2841
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE CURB, CURB AND GUTTER AND GUTTER

DATE EFFECTIVE: 07/01/2018
DATE PREPARED: 5/3/2018

609.00P

SHEET NO. 2 OF 2

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Jonathan Peitz
2024.03.06 07:08:00 -06'00'

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

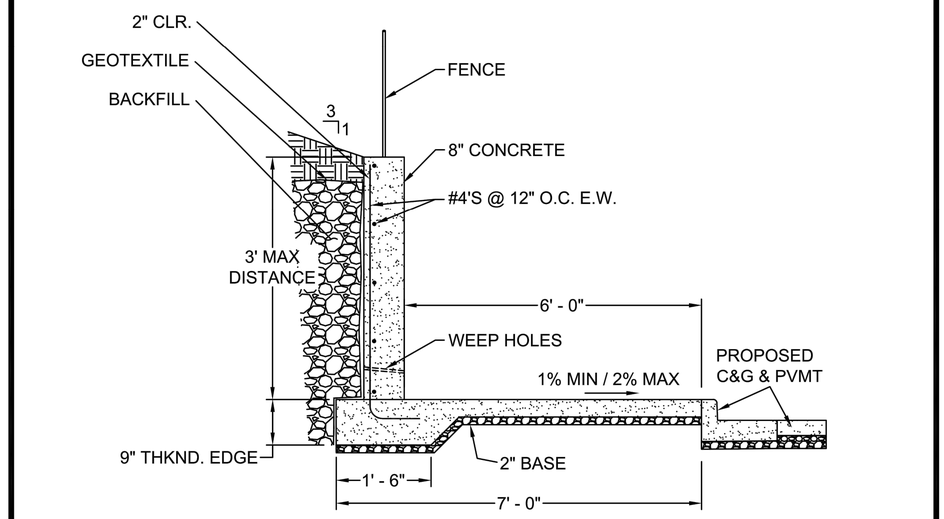
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01 N170629
date: 3/6/24

SHEET 23 of 95

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POURED CONCRETE SIDEWALK WALL

NTS

NOTES

- CONST 1/2" EXPANSION JOINTS IN WALL & SIDEWALK EVERY 50'. JOINTS TO MATCH.
- BACKFILL TO BE PER MISSOURI STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION SECTION 1010.
- ANY WALL GREATER THAN 3' MUST BE DESIGNED AND SEALED BY A LICENSED ENGINEER.
- INSTALL 4' TALL FENCE ON TOP FOR WALL GREATER THAN 2'-6" TALL. TYPE TO BE DETERMINED IN THE FIELD.
- CONSTRUCT ½" EXPANSION JOINTS IN WALL & SIDEWALK EVERY 50'. JOINTS TO MATCH.
- WEEP HOLES @ 10' O.C. 1" DIA. MIN. 6" FROM BASE OF WALL.
- 4" SIDEWALK FOR RESIDENTIAL - 6" FOR COMMERCIAL.
- MIN. 2" CLR. FOR ALL REINFORCING

ST-13

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 10/2020	**POURED CONCRETE SIDEWALK WALL**
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: SIDEWALKWALL	

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Jonathan Peitz
2024.03.06 [illegible]

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

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

REVISIONS

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STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

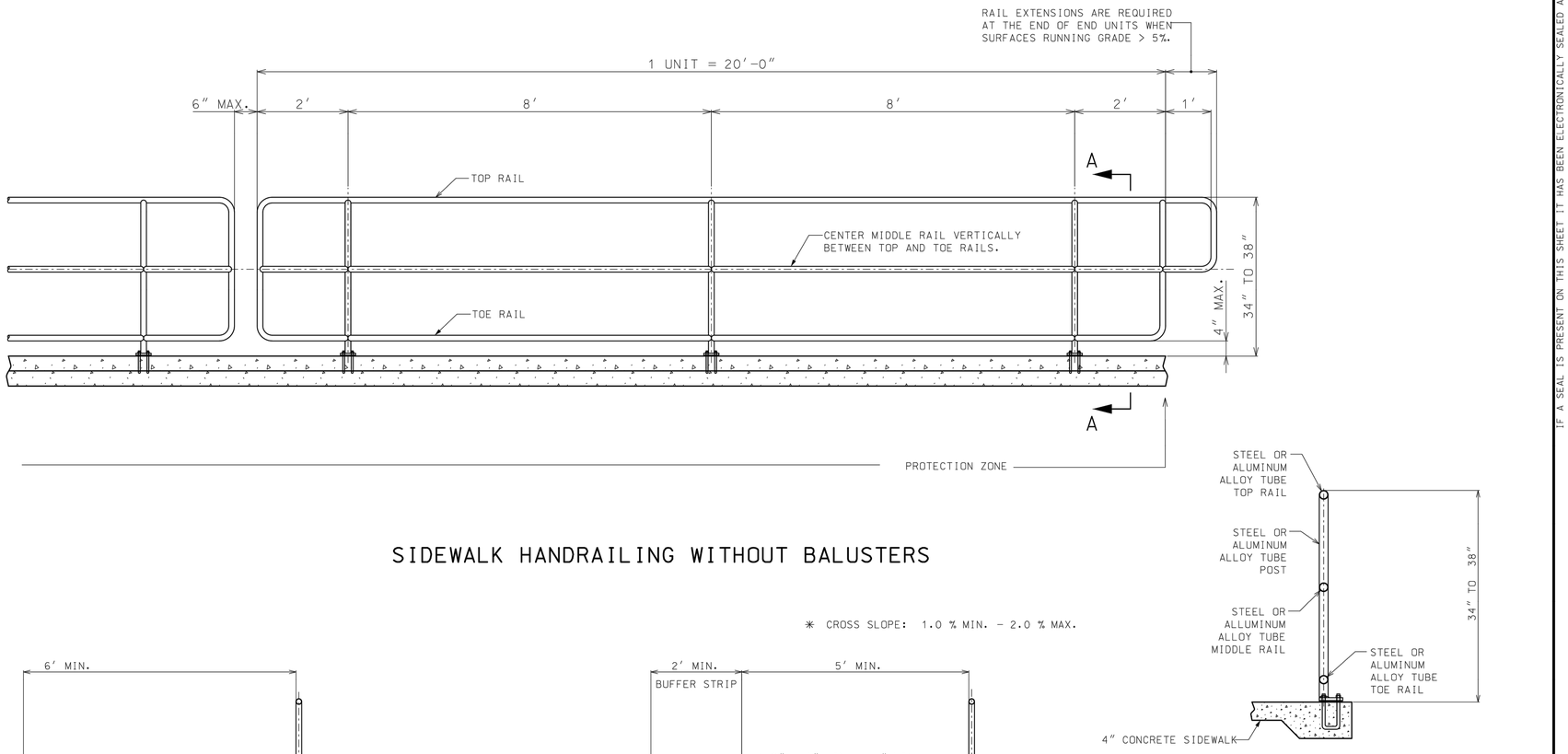
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
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project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

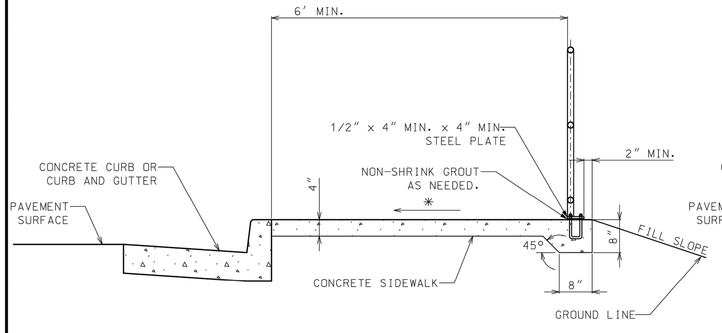
SHEET
24 of 95

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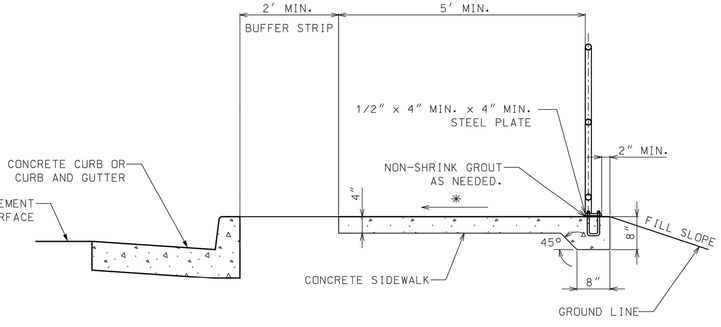


SIDEWALK HANDRAILING WITHOUT BALUSTERS

* CROSS SLOPE: 1.0 % MIN. – 2.0 % MAX.



SIDEWALK WITHOUT BUFFER STRIP (SECTION A–A)



SIDEWALK WITH BUFFER STRIP (SECTION A–A)

HANDRAILING

FOR GENERAL NOTES AND HANDRAILING REQUIREMENTS ON FILL SLOPES SEE SHEET 3 OF 4

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI — TRAVIS D. KOESTNER — NUMBER PE-30042 — PROFESSIONAL ENGINEER
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HANDRAILING

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

608.40A

SHEET NO. 1 OF 4

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Jonathan Peitz 2024.03.07 08:41:00 -06'00'

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

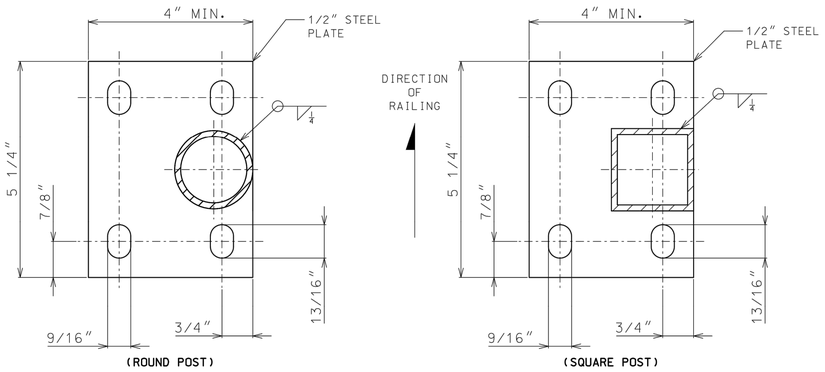
JOPLIN, MISSOURI

2023

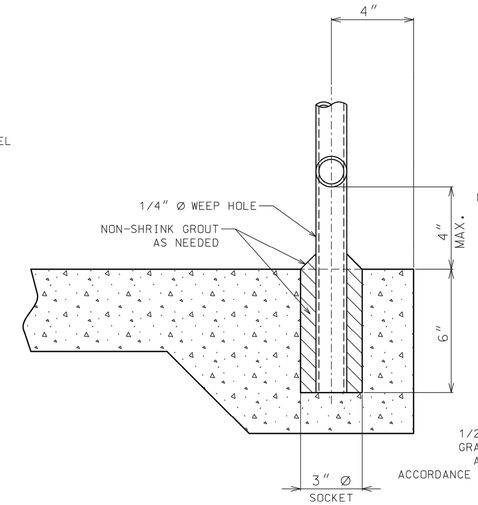
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checked by: JWP
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project no.: N17-06420
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date: 3/6/24

SHEET 25 of 95

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DTL01_N170642.dwg USER: mmayfarth
DATE: Mar 06, 2024 7:07am XREFS: C_PTBLK_N170642



MOUNTING PLATE DETAIL
(PLAN VIEW)



SOCKET MOUNTING DETAIL

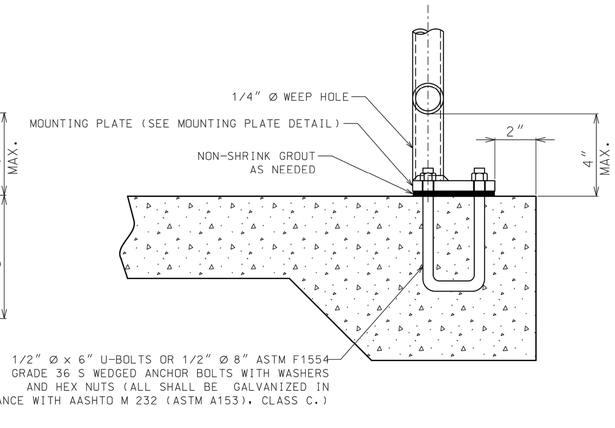


PLATE MOUNTING DETAIL

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

GENERAL NOTES:

RAILINGS AND POSTS MAY BE EITHER ROUND OR SQUARE STEEL OF GOOD COMMERCIAL WELDABLE QUALITY OR ALUMINUM ALLOY 6061-T6 OR 6063-T6.

STEEL RAILINGS AND POSTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111.

ALL JOINTS SHALL BE CONTINUOUS WELDED AND GROUND SMOOTH.

METAL SAFETY RAIL MUST BE COMPLIANT WITH THE "AMERICAN'S WITH DISABLILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)". EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF NON-COMPLIANCE SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

ALL POSTS SHALL HAVE A 1/4" WEEP HOLE IMMEDIATELY ABOVE THE MOUNTING PLATE.

WHEN INSTALLED THE POSTS SHALL BE PLUMB AND RAILINGS SHALL MATCH THE SLOPE OF THE SIDEWALK.

HANDRAIL REQUIREMENTS		
FILL SLOPE	FILL HEIGHT	HANDRAIL
(1V:3H) OR FLATTER	———	NOT REQUIRED
(1V:3H) OR STEEPER	≥ 6 FT.	REQUIRED
(1V:2H) OR STEEPER	≥ 4 FT.	REQUIRED
(1V:1H) OR STEEPER	≥ 1 FT.	REQUIRED

RAILING AND POST SPECIFICATION				
DESCRIPTION	TYPE	SIZE (DIA.)	WEIGHT (LBS. / FT.) ALUM.	WEIGHT (LBS. / FT.) STEEL
RAILING & POST	ROUND	1 1/2"	0.940	2.720
	SQUARE	2" X 2"	1.3094	4.310
BALUSTER	ROUND	1/2"	0.2312	0.668
	RECT.	3/8" X 1/2" STL.	———	0.6375
	SQUARE	1/2" X 1/2" ALUM.	0.2944	———

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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STATE OF MISSOURI
TRAVIS D. KOESTNER
NUMBER PE-30042
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HANDRAILING

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

608.40A

SHEET NO. 3 OF 4

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2024.03.07 07:08:00 -06'00'

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

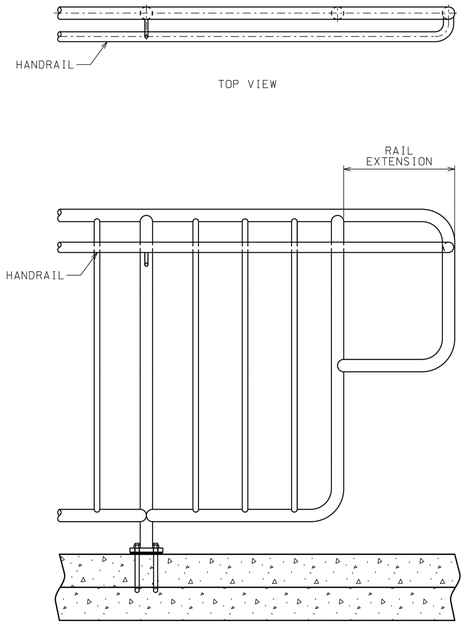
JOPLIN, MISSOURI

2023

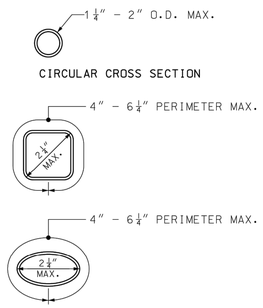
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QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET 26 of 95

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HANDRAIL AND EXTENSION CONNECTION



HANDRAIL GRIPPING SURFACES

HANDRAIL NOTES:

HANDRAILS SHALL BE STEEL OF GOOD COMMERCIAL WELDABLE QUALITY OR ALUMINUM ALLOY 6061-T6 OR 6063-T6.

HANDRAILS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111.

HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE WALKING SURFACES.

HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES.

THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20 PERCENT OF THEIR LENGTH.

WHERE HANDRAILS ARE PROVIDED ALONG WALKING SURFACES WITH SLOPES NOT STEEPER THAN 1:20. THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL BE PERMITTED TO BE OBSTRUCTED ALONG THEIR ENTIRE LENGTH WHERE THEY ARE INTEGRAL TO CRASH RAILS OR BUMPER GUARDS.

THE DISTANCE BETWEEN HORIZONTAL PROJECTIONS AND THE BOTTOM OF THE GRIPPING SURFACE SHALL BE PERMITTED TO BE REDUCED BY ⅛" FOR EACH ½" OF ADDITIONAL HANDRAIL PERIMETER DIMENSION THAT EXCEEDS 4".

HANDRAIL SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.

HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

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

DETAIL A – HANDRAIL

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.

HANDRAILING

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

608.40A

SHEET NO. 4 OF 4

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2024.03.07 [illegible]

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

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

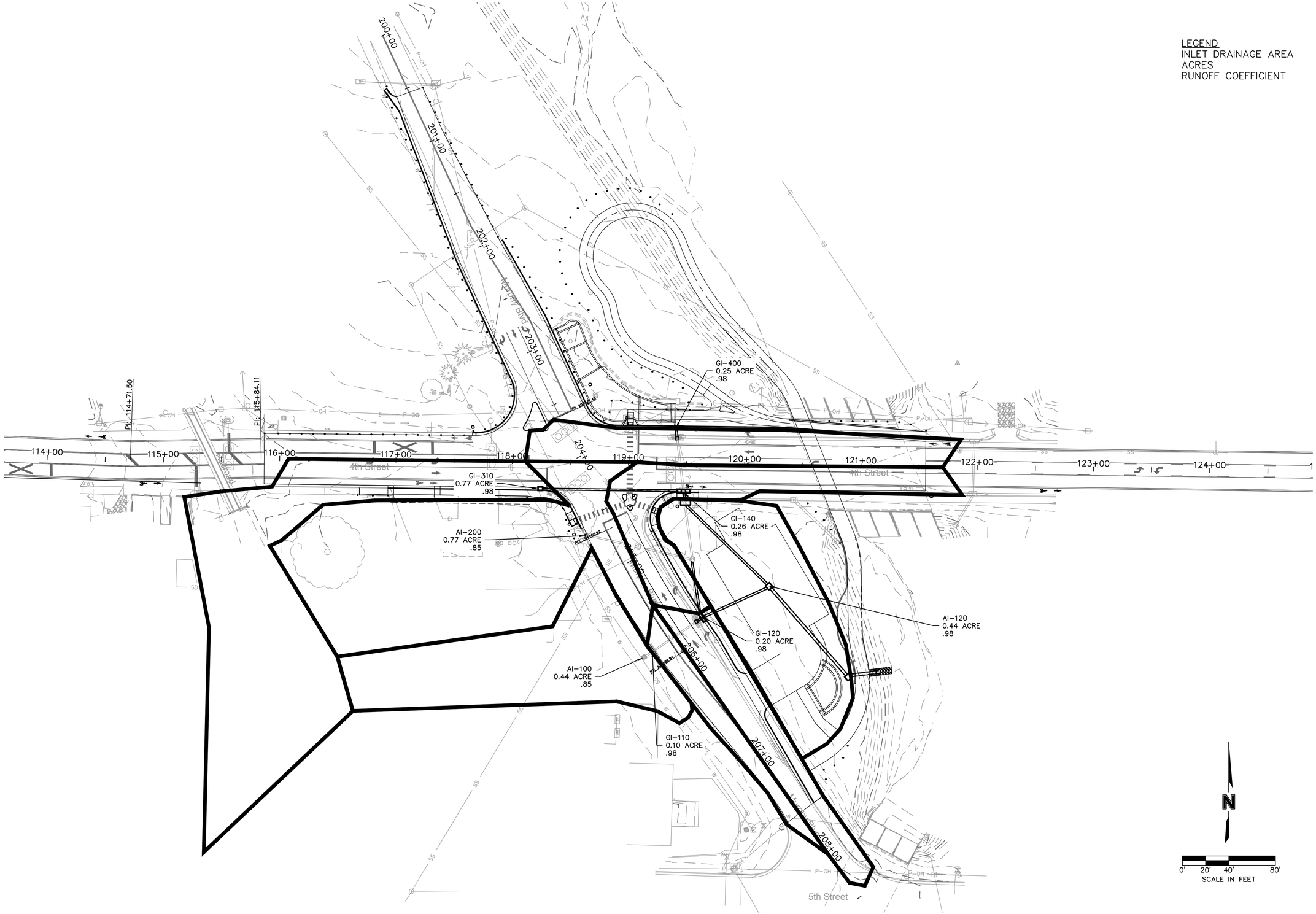
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET 27 of 95

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DATE: Mar 06, 2024 7:07am XREFS: C_PTBLK_N170642



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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

DRAINAGE AREA MAP

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

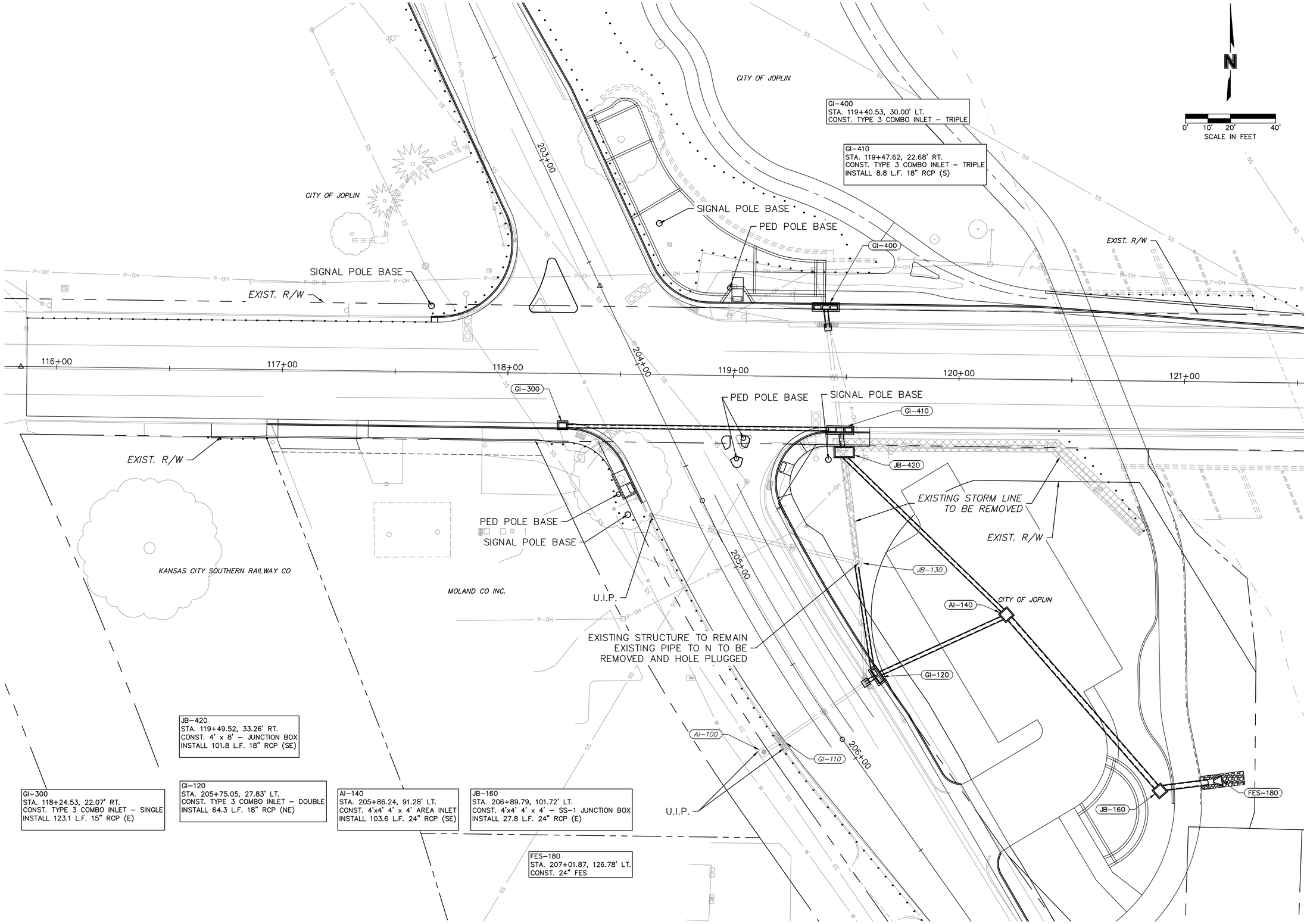
JOPLIN, MISSOURI

2023

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checked by:	JWP
approved by:	JWP
QA/QC by:	ENG
project no.:	N17-06420
drawing no.:	C_DRN01_N170642
date:	3/6/24

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STORM DRAINAGE LAYOUT PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

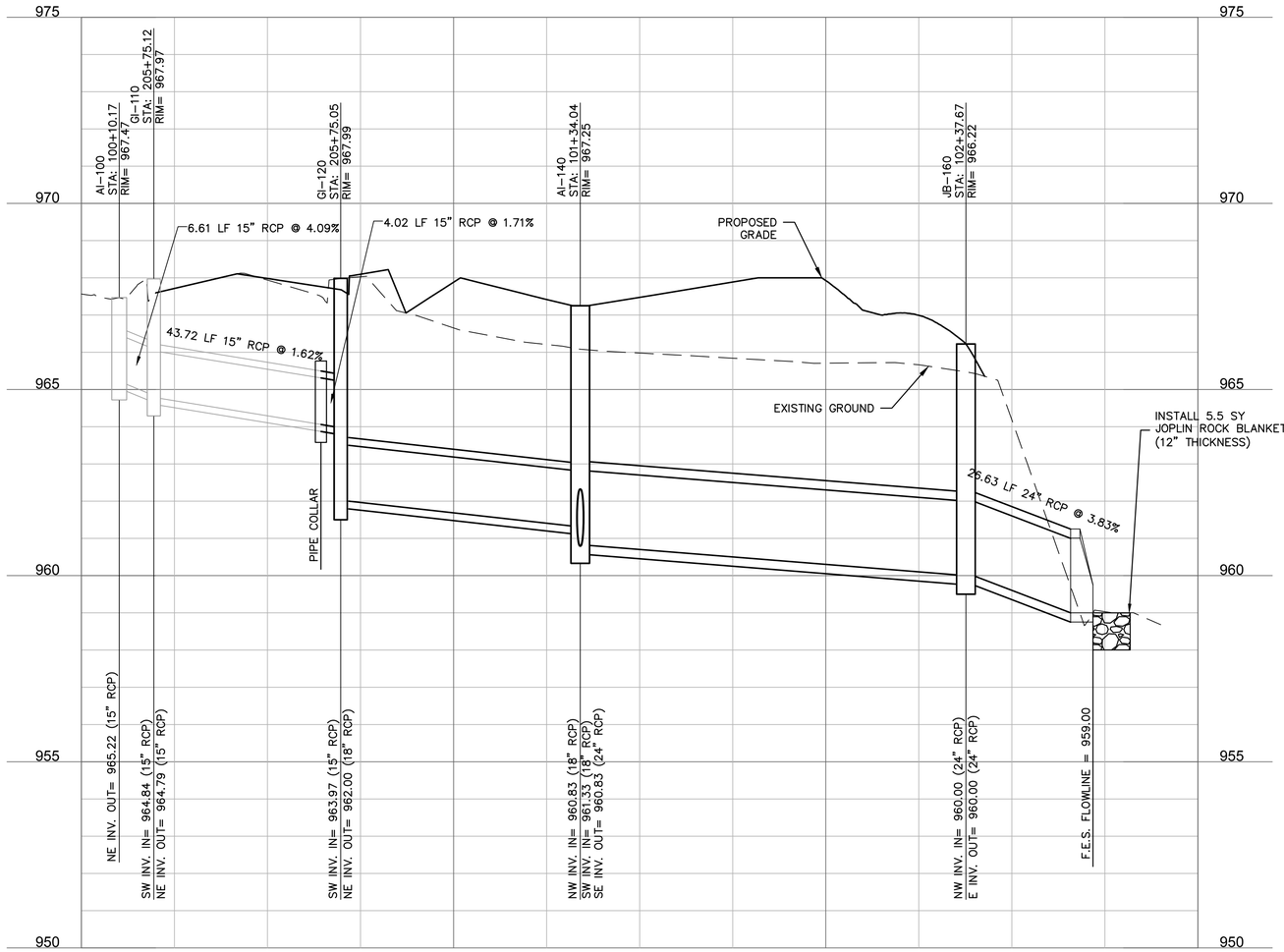
JOPLIN, MISSOURI

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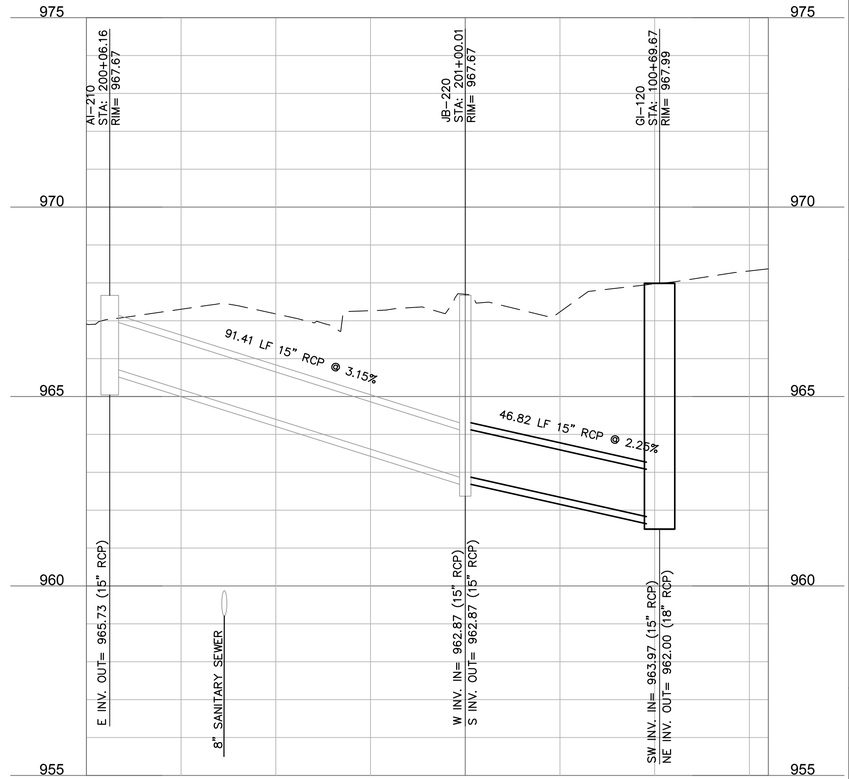
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checked by:	JWP
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drawing no.:	C_RPP01_N170642
date:	3/6/24

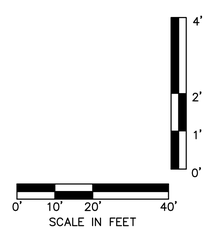
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V_XTOPO_N170642 C_PBASE_N170642 C_PPATT_N170642

STORM LINE 100



STORM LINE 200





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STORM DRAIN PROFILES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

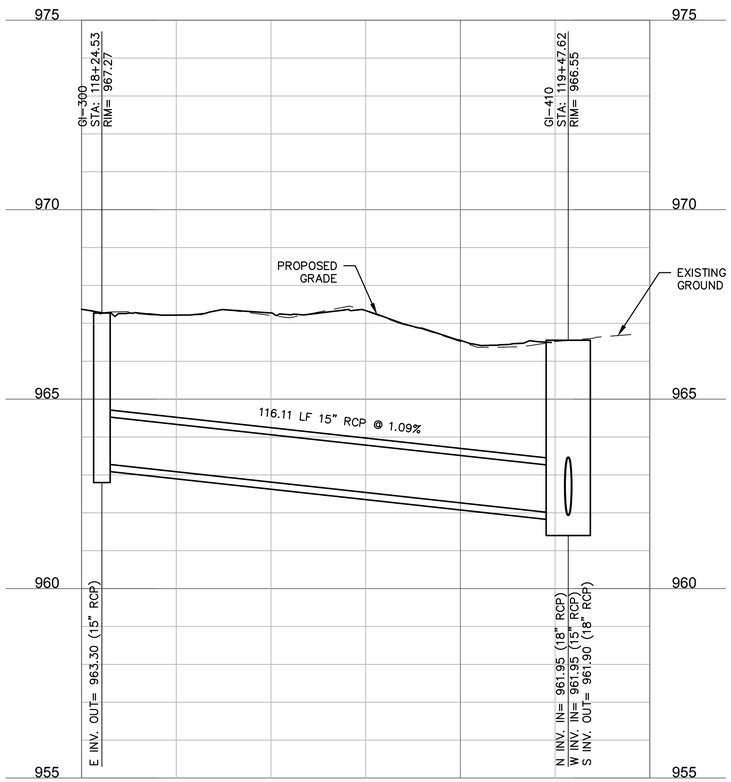
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checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

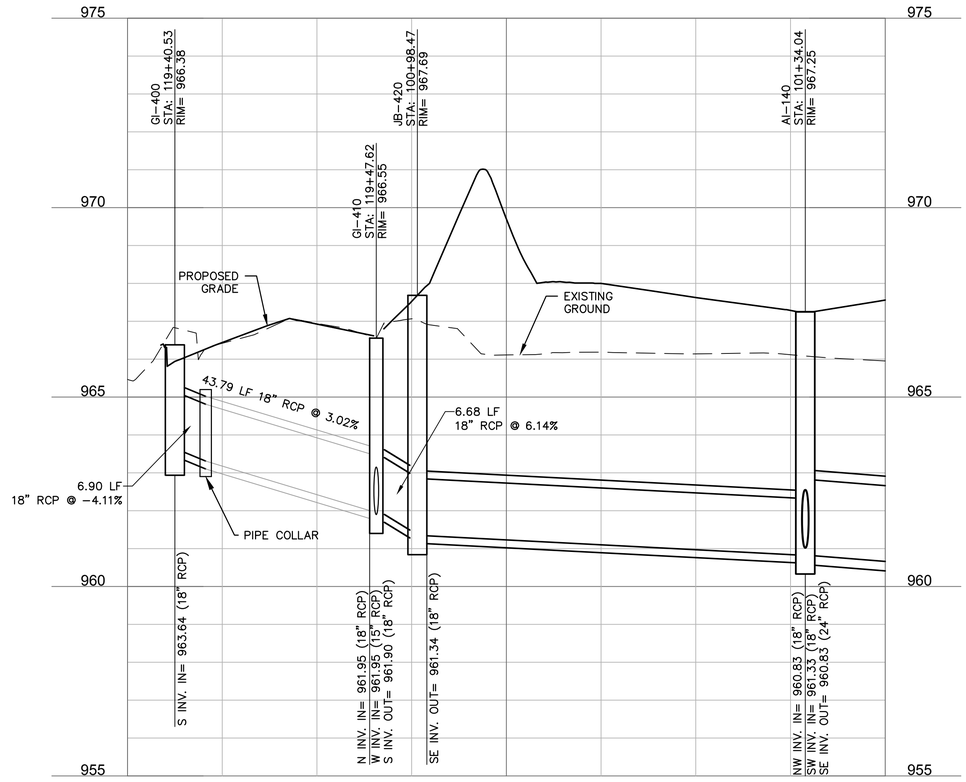
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30 of 95

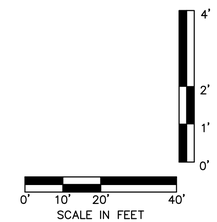
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USER: mmayforth V_XBNDY_N170642 T_PSAS_N170642 T_PSTRM_N170642

STORM LINE 300



STORM LINE 400





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MO# PE-2017019023

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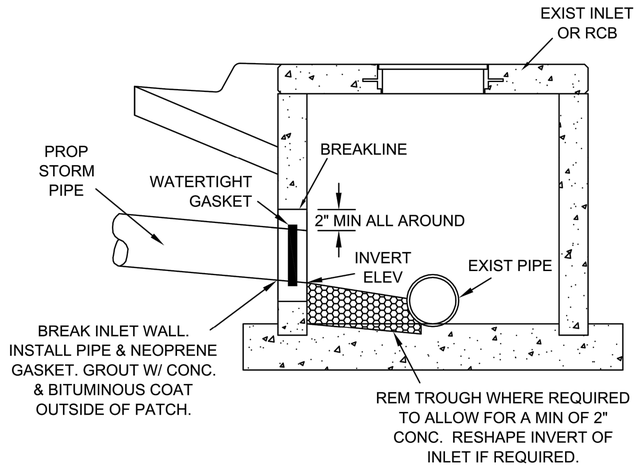
STORM DRAIN PROFILES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

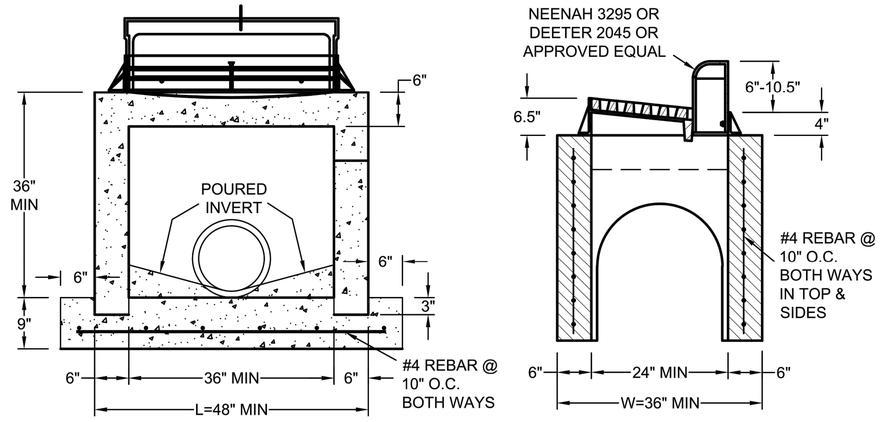


EXIST INLET OR RCB CONNECTION

N.T.S.

STM-01

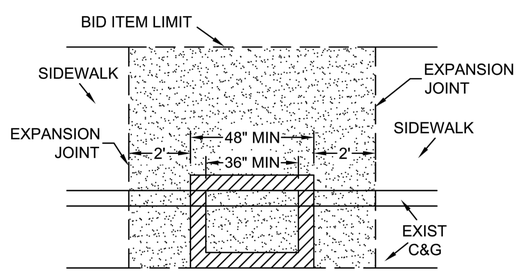
CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	EXIST INLET OR RCB CONNECTION
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: INLETTAP	

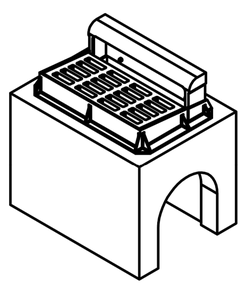


SINGLE PRE-CAST TYPE 'A' CATCH BASIN

N.T.S.
FINISH: BLACK EPOXY

NOTES:
1. BOTTOM OF INLET SHALL BE 9" TH W/ #4 REBAR SPACED 10" OC BOTH WAYS.
2. FLOOR OF INLET SHALL BE SHAPED W/ INV TO PROVIDE SMOOTH FLOW.
3. STEPS ARE NOT ALLOWED.
4. BEVEL ALL EXPOSED EDGES W/ 3/4" CHAMFER OR 1/2" TOOLED EDGE.
5. THE SUM OF "L" & "W" SHALL NOT EXCEED 14' WITHOUT SPECIAL DESIGN.
6. ALL GUTTER CONST 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.





STM-02

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	TYPE 'A' CATCH BASIN
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: TYPEACATCHBASIN	

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

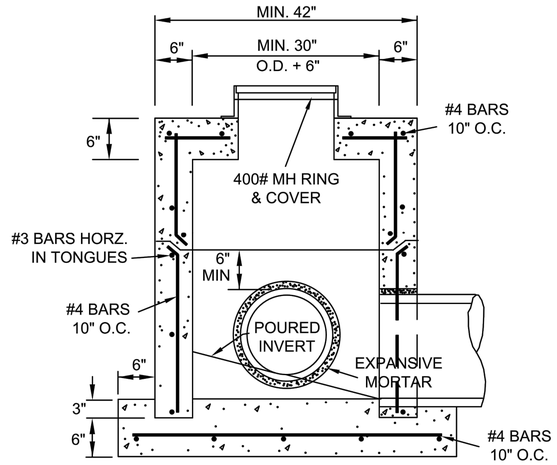
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
32 of 95

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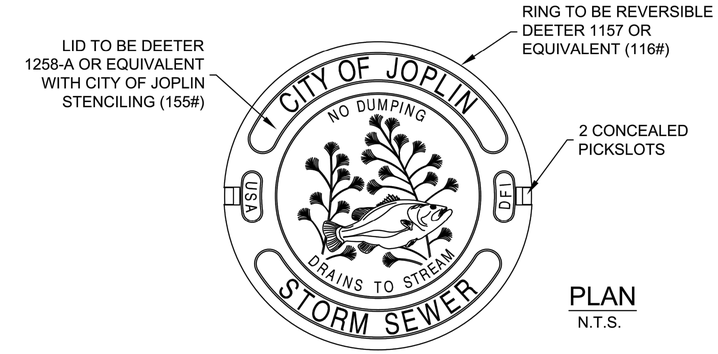


CONC JNCT BOX W/ MH RING & COVER

N.T.S.

STM-05

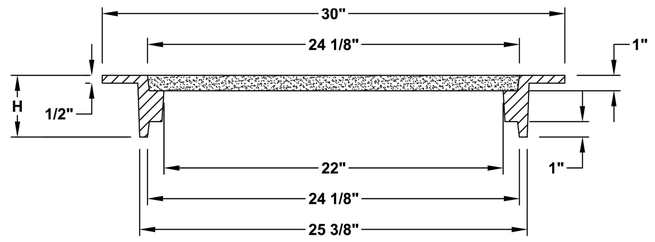
CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	CONC JUNCTION BOX W/ MH RING & COVER
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: MHBOX	



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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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

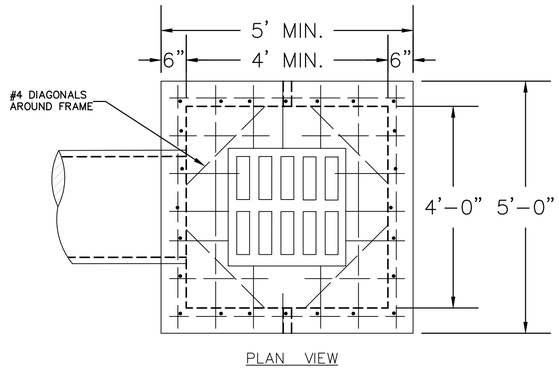
JOPLIN, MISSOURI

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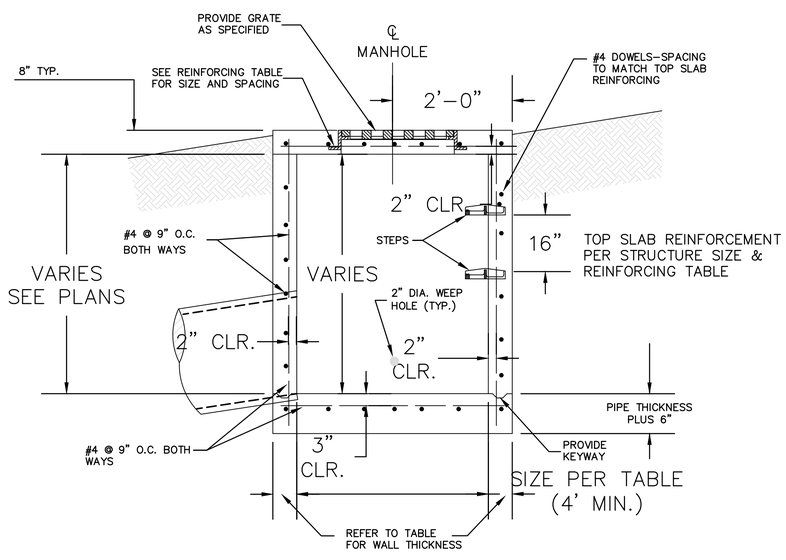
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project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

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33 of 95

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PLAN VIEW



ELEVATION

AREA INLET

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JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

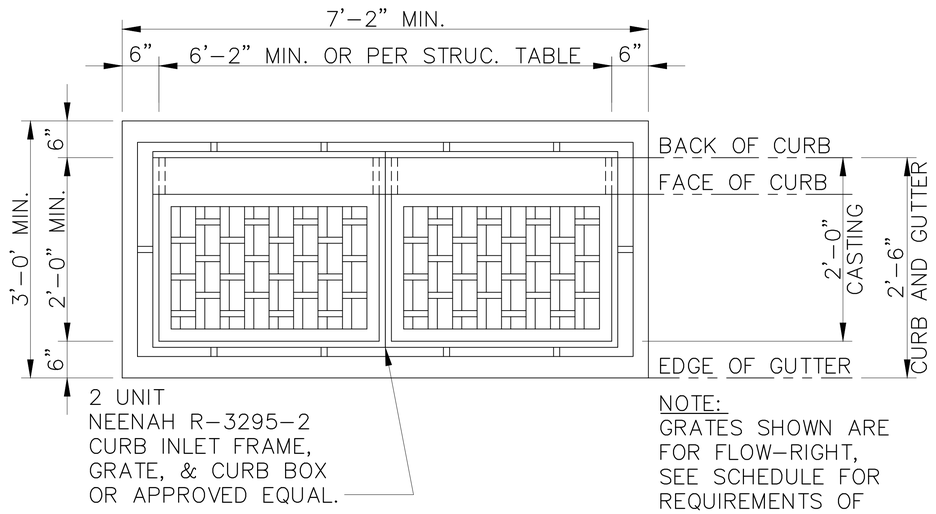
JOPLIN, MISSOURI

2023

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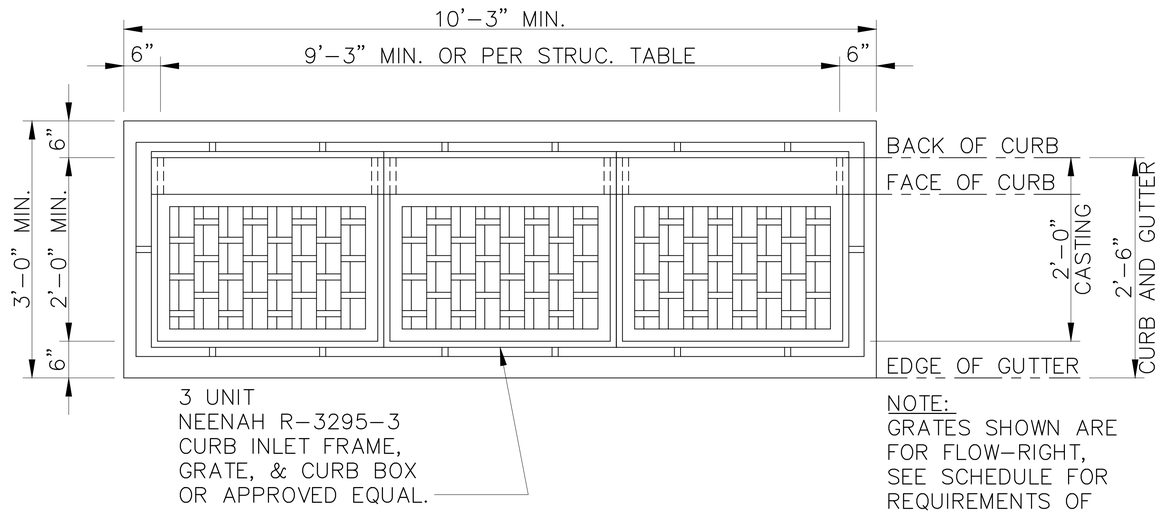
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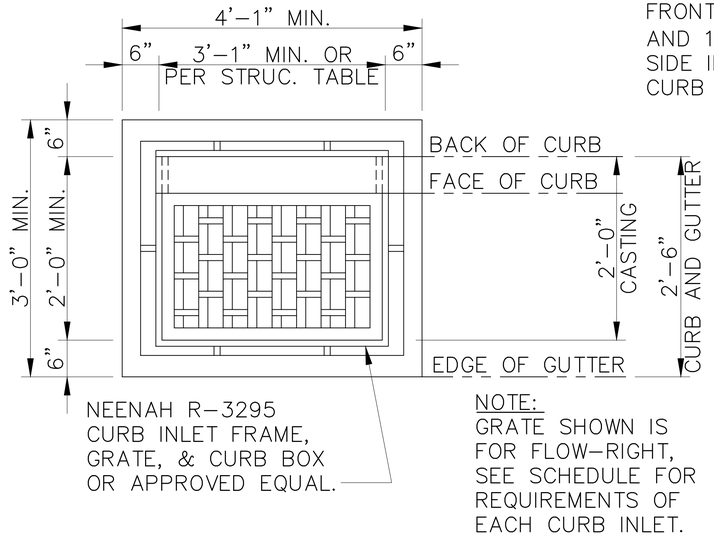
DOUBLE CURB INLET PLAN

N.T.S.



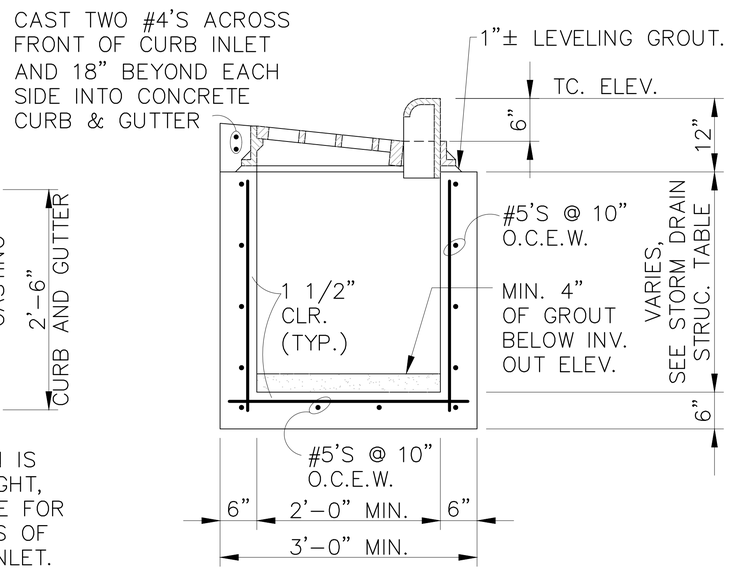
TRIPLE CURB INLET PLAN

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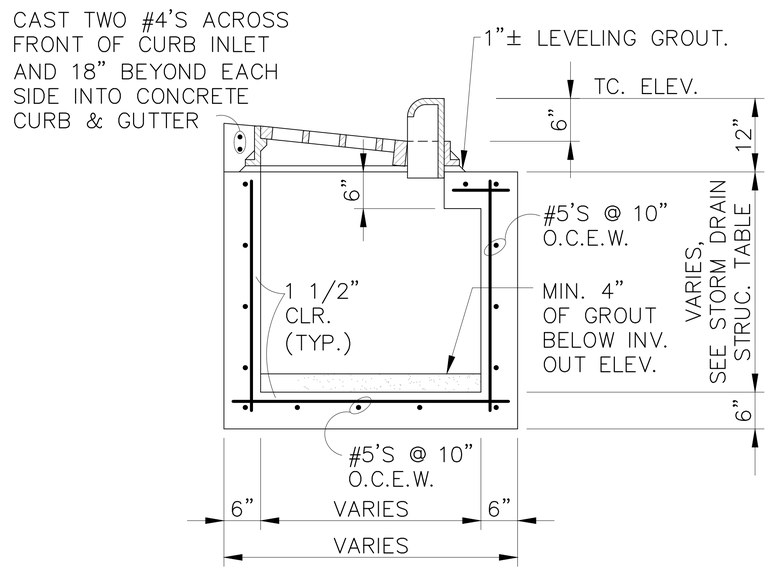
SINGLE CURB INLET PLAN

N.T.S.



CURB INLET - TYPICAL SECTION

N.T.S.



CURB INLET - MODIFIED SECTION

N.T.S.

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

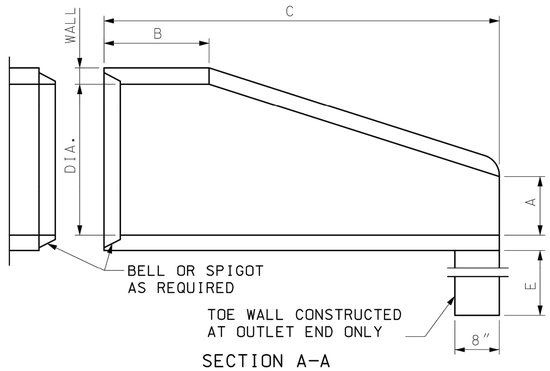
JOPLIN, MISSOURI

2023

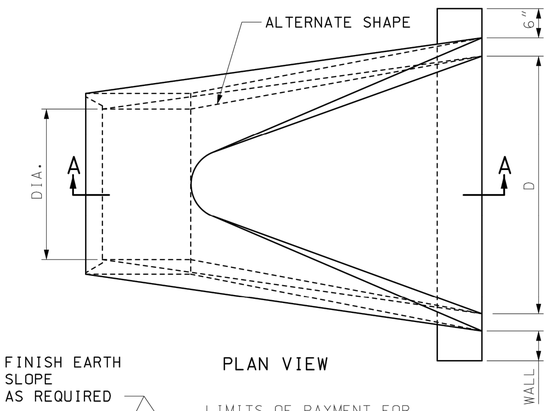
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SHEET
35 of 95

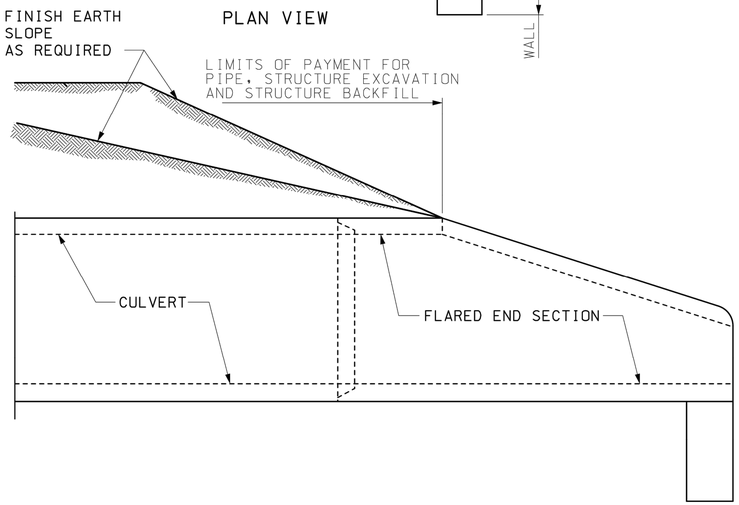
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SECTION A-A



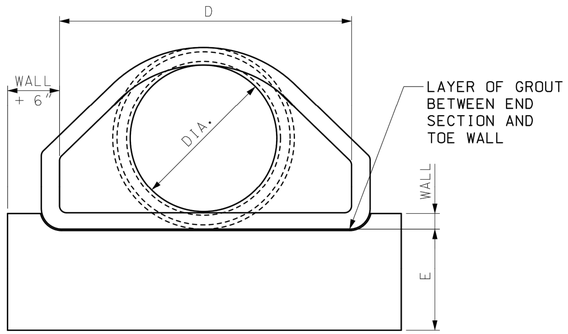
PLAN VIEW



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

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

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Olsson - Civil Engineering
Missouri Certificate of Authority #001592
702 S. Main Street
Joplin, MO 64801
TEL 417.781.0643
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Jonathan Peitz
2024.03.06 07:10:00

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

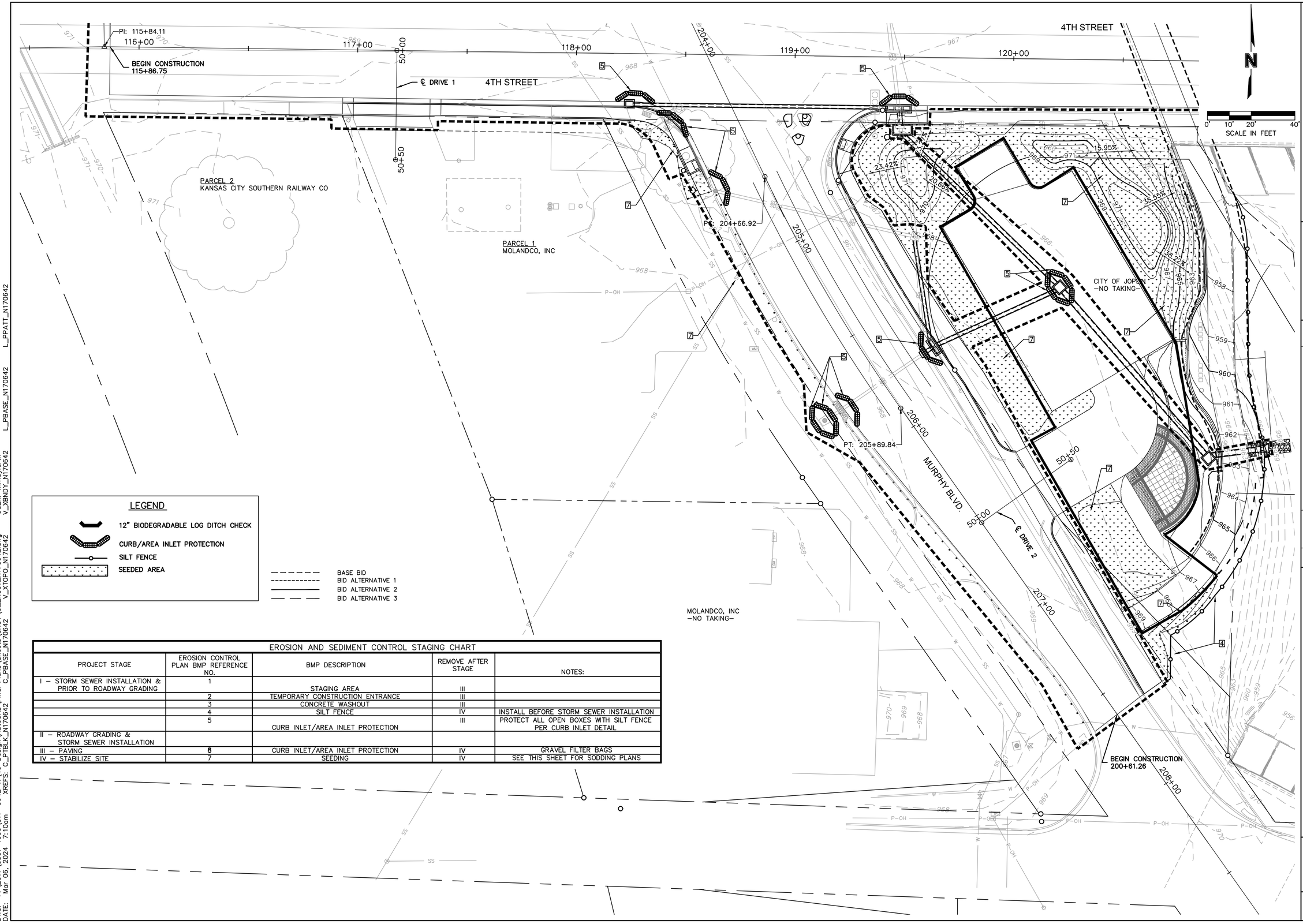
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET 36 of 95

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LEGEND

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

- BASE BID
- BID ALTERNATIVE 1
- BID ALTERNATIVE 2
- BID ALTERNATIVE 3

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 FENCE	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 PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	7	SEEDING	IV	SEE THIS SHEET FOR SODDING PLANS

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

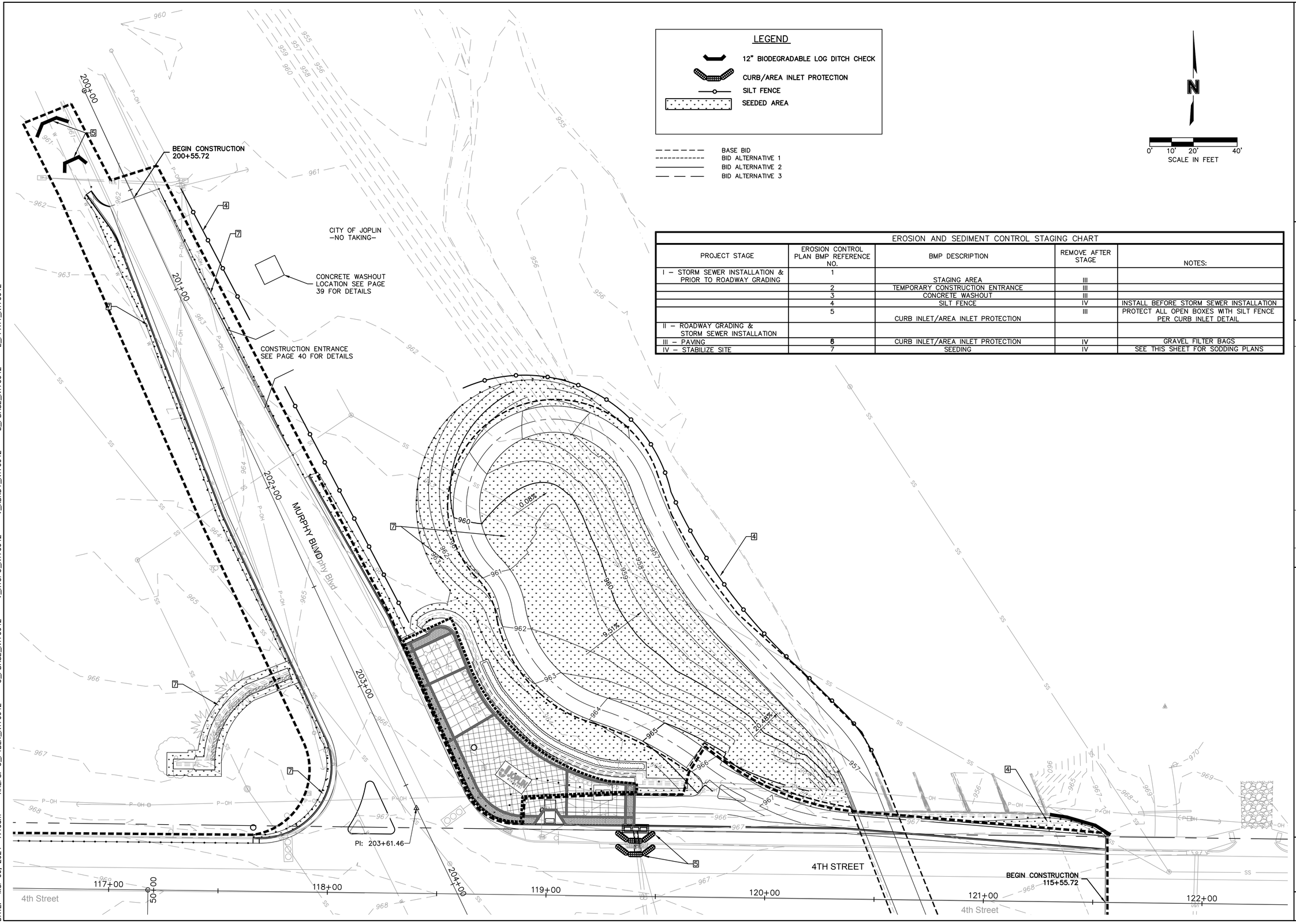
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_ERC01_170642
date: 3/6/24

SHEET
37 of 95

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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 FENCE	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 PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	7	SEEDING	IV	SEE THIS SHEET FOR SODDING PLANS

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REVISIONS

EROSION CONTROL PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

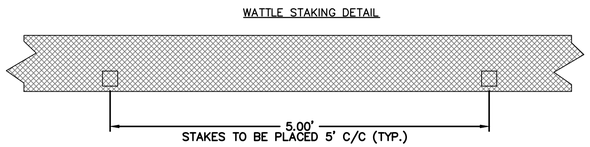
JOPLIN, MISSOURI

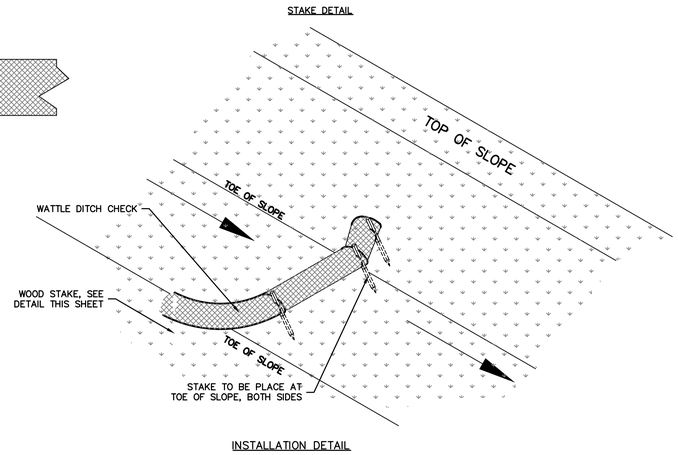
2023

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checked by:	JWP
approved by:	JWP
QA/QC by:	ENG
project no.:	N17-06420
drawing no.:	C_ERC01_170642
date:	3/6/24

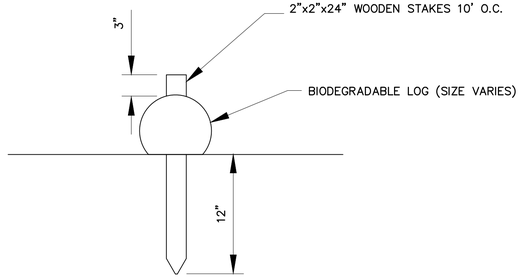
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38 of 95

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L_PBASE_N170642 L_PPATT_N170642





INSTALLATION DETAIL



BIODEGRADABLE LOG

N.T.S.

NOTE:

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

NOTES:

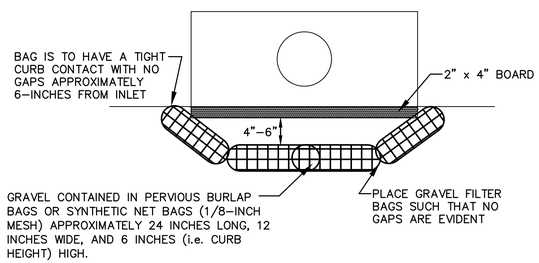
1. WATTLE BARRIER SHALL BE MAINTAINED UNTIL ADJACENT VEGETATION IS ESTABLISHED, OR AS DIRECTED BY ENGINEER.
2. 12" BIODEGRADABLE LOGS WILL BE USED FOR DITCH CHECKS.
3. WATTLE BARRIER SHALL BE INSPECTED AND REPAIRED, WEEKLY, IF NECESSARY, OR AS REQUIRED BY NPDES PERMIT.
4. WATTLE BARRIER REMOVALS WILL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

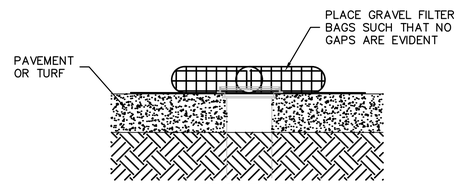
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN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

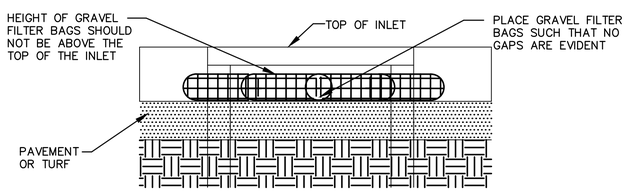
* 5/8" CRUSHED LIMESTONE

BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.



FRONT VIEW

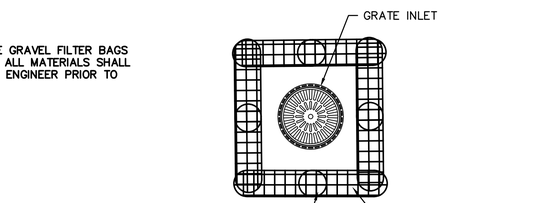
NOTE:
CONTRACTOR MAY USE GRAVEL FILTER BAGS OR APPROVED EQUAL. ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK BEGINNING.



FRONT VIEW

GRAVEL FILTER BAG AT CURB INLET DETAIL

NOT TO SCALE



TOP VIEW

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

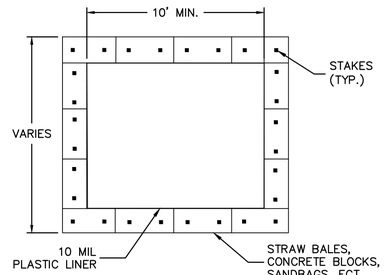
BAGS SHALL BE INSPECTED AND REPLACED AS NEEDED.

GRAVEL FILTER BAGS AROUND GRATE DETAIL

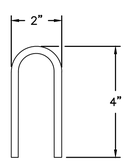
NOT TO SCALE

NOTES:

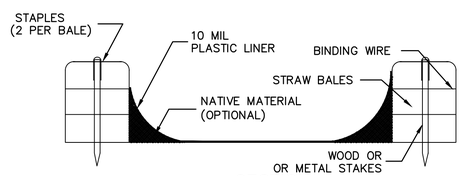
1. ACTUAL LAYOUT LOCATIONS & NUMBER OF WASHOUTS TO BE DETERMINED BY CONTRACTOR IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASHOUTS SHALL BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAINS, OPEN DRAINAGE FACILITIES AND WATER COURSES.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



PLAN



STAPLE



SECTION

CONCRETE WASHOUT DETAIL

NOT TO SCALE

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Missouri Certificate of Authority #001592
702 S. Main Street
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Jonathan Peitz
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

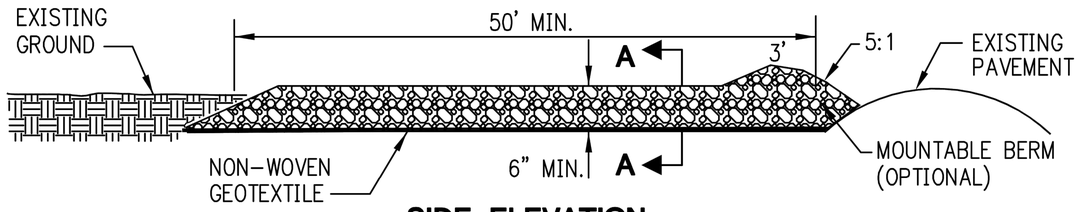
2023

drawn by: SMK/MJM/CTK
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approved by: JWP
QA/QC by: ENG
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date: 3/6/24

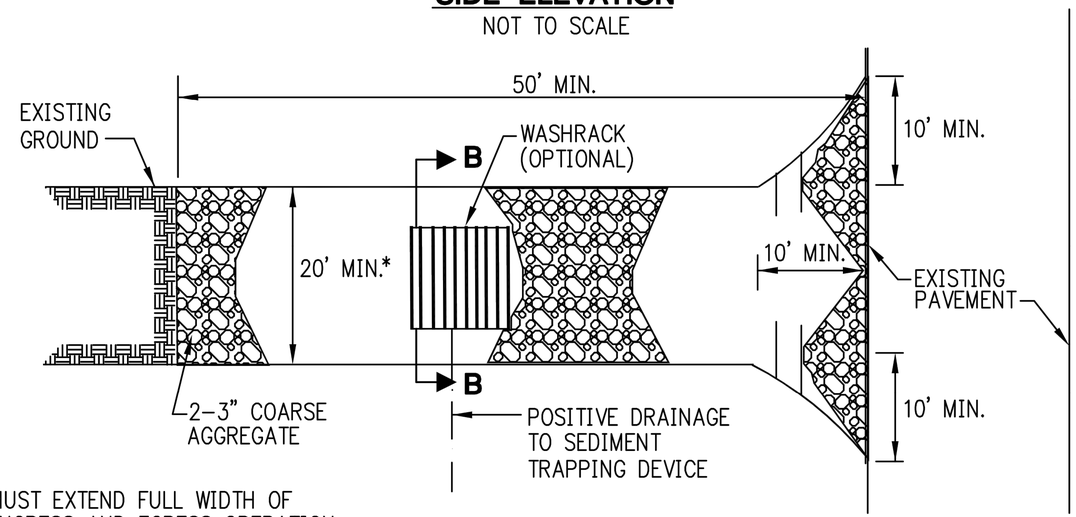
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39 of 95

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USER: rmmoyfarth

TEMPORARY CONSTRUCTION ENTRANCE

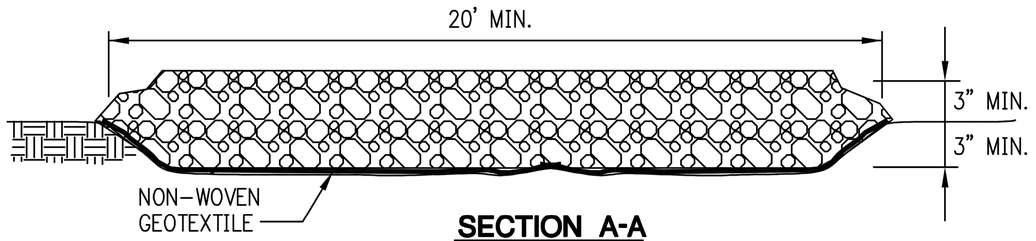


SIDE ELEVATION
NOT TO SCALE

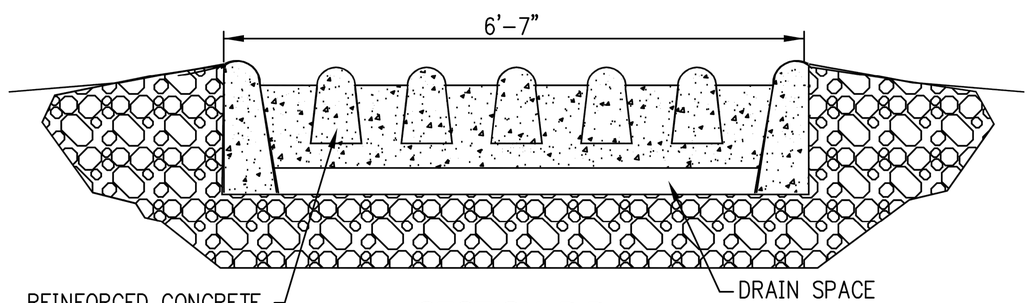


* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

TEMPORARY CONSTRUCTION ENTRANCE 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.

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

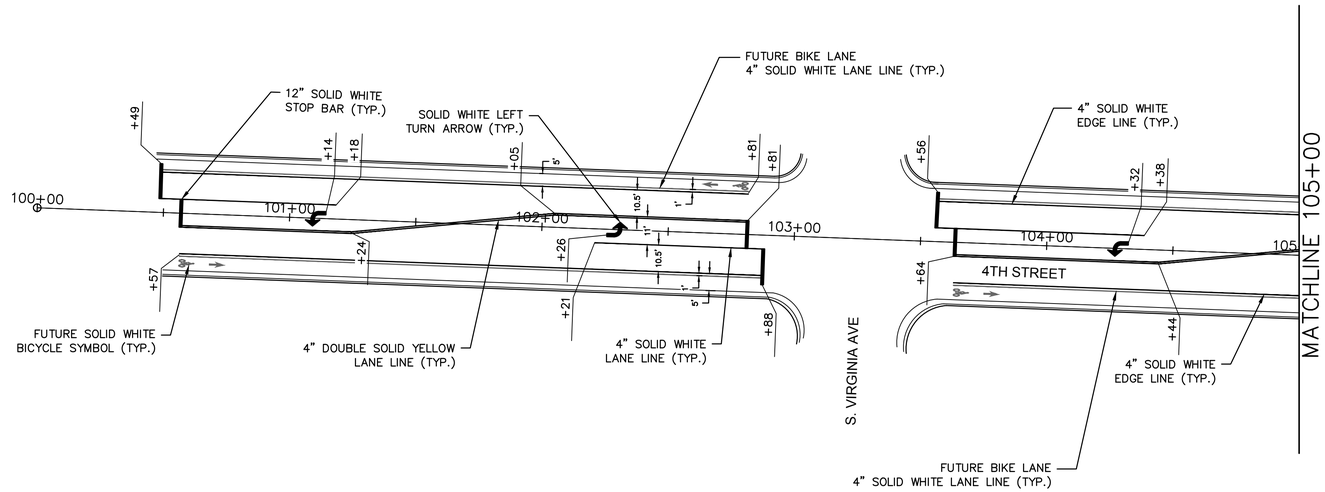
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

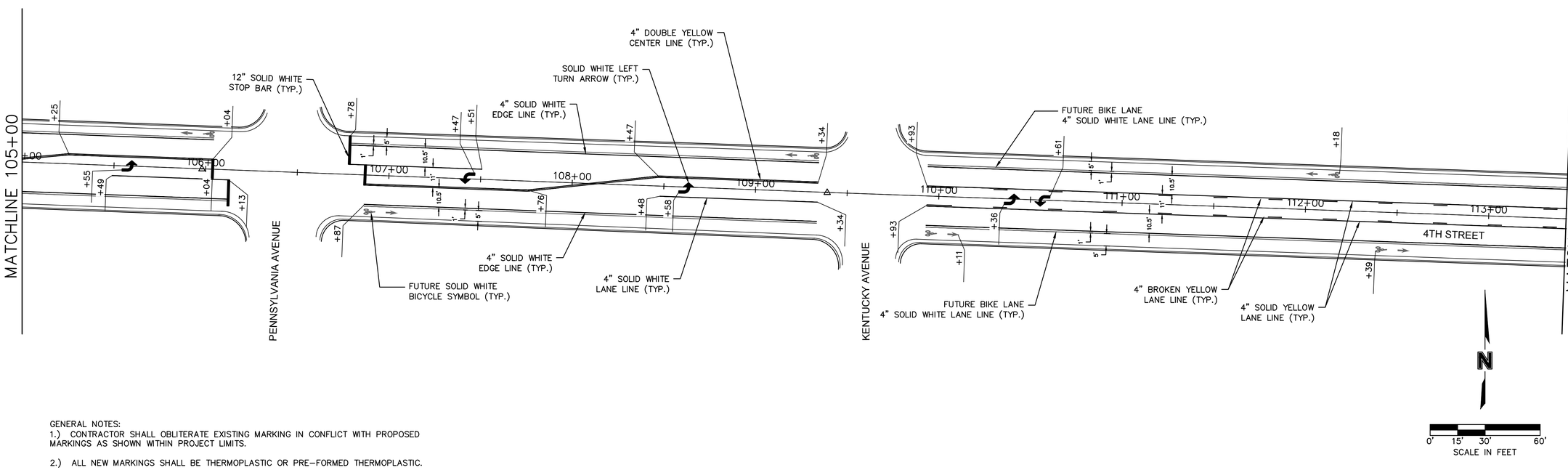
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_ERC01 170642
date: 3/6/24

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L_PBASE_N170642 L_PPATT_N170642





GENERAL NOTES:
1.) CONTRACTOR SHALL OBLITERATE EXISTING MARKING IN CONFLICT WITH PROPOSED MARKINGS AS SHOWN WITHIN PROJECT LIMITS.

2.) ALL NEW MARKINGS SHALL BE THERMOPLASTIC OR PRE-FORMED THERMOPLASTIC.

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JONATHAN W. PEITZ-CIVIL ENGINEER
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PAVEMENT MARKING

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

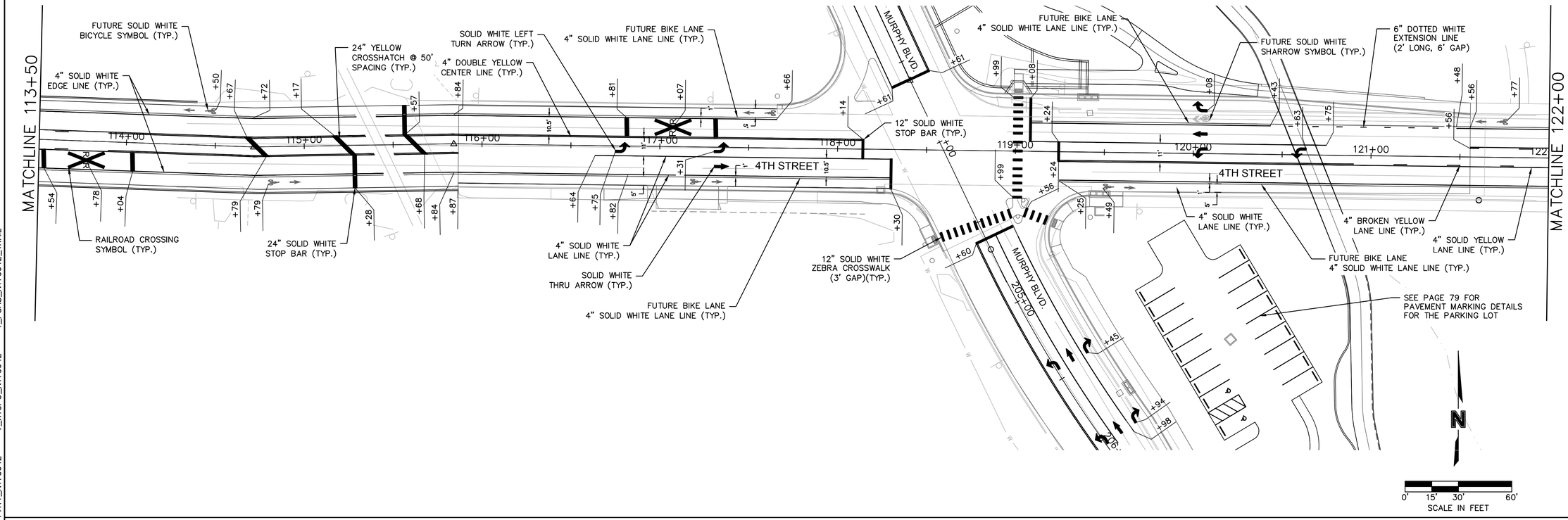
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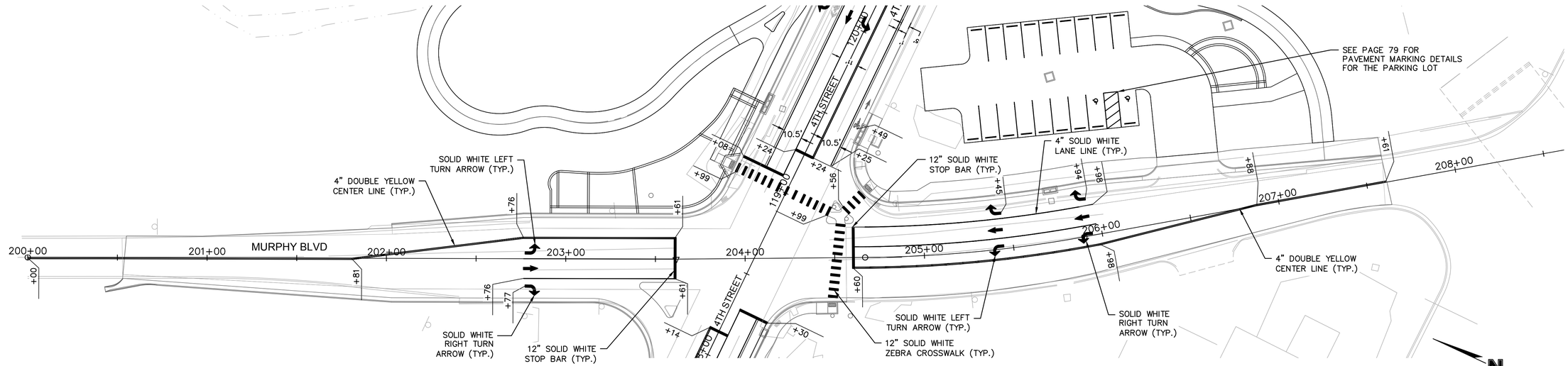
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drawing noC_PAV-MKG_N170642
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41 of 95

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STATE OF MISSOURI
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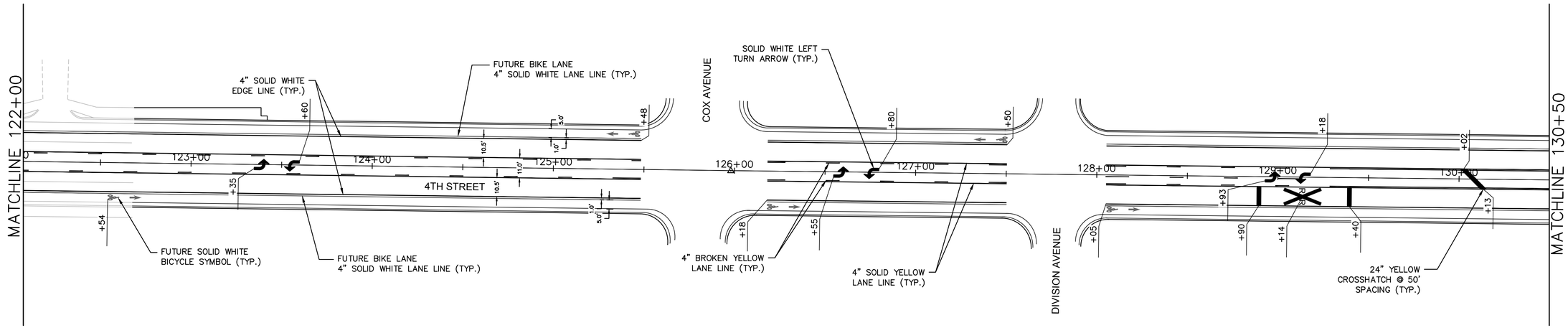
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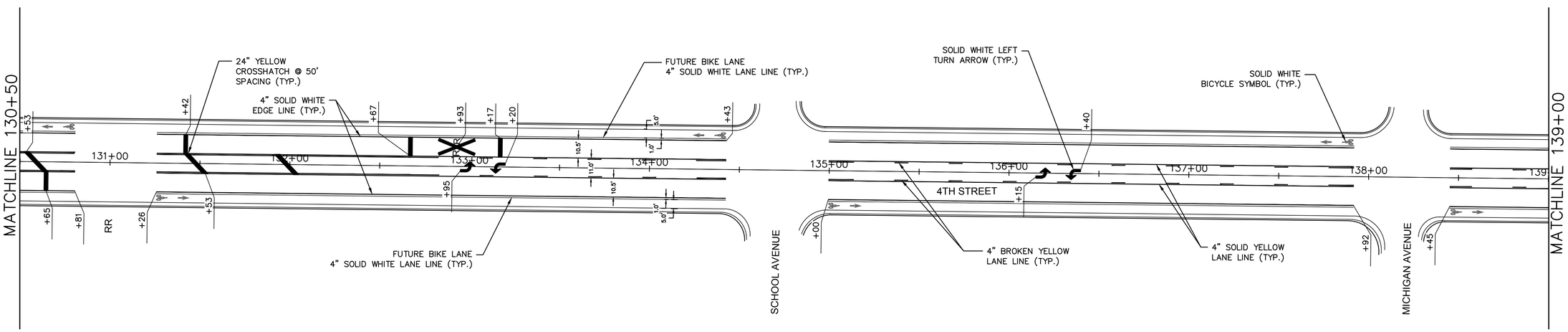
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QA/QC by: ENG
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drawing no: C_PAV-MKG_N170642
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N

0' 15' 30' 60'
SCALE IN FEET

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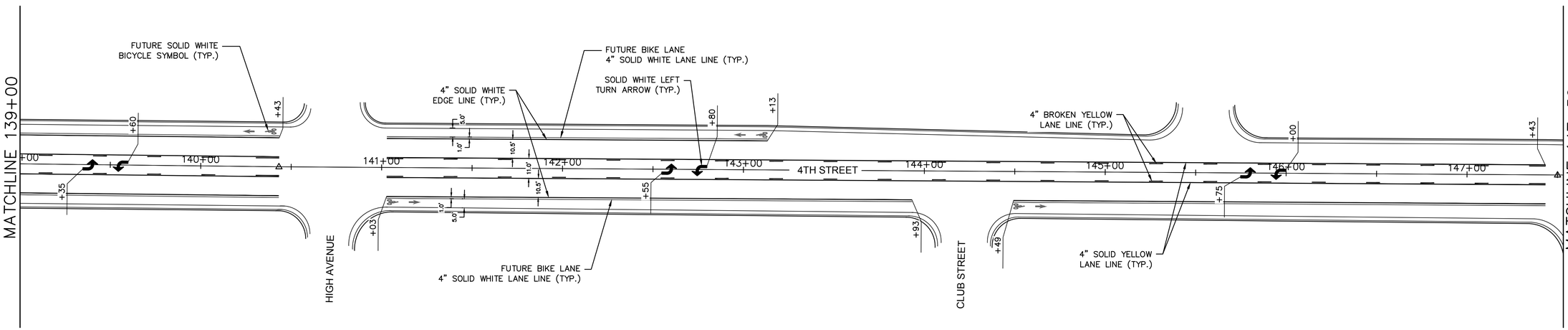
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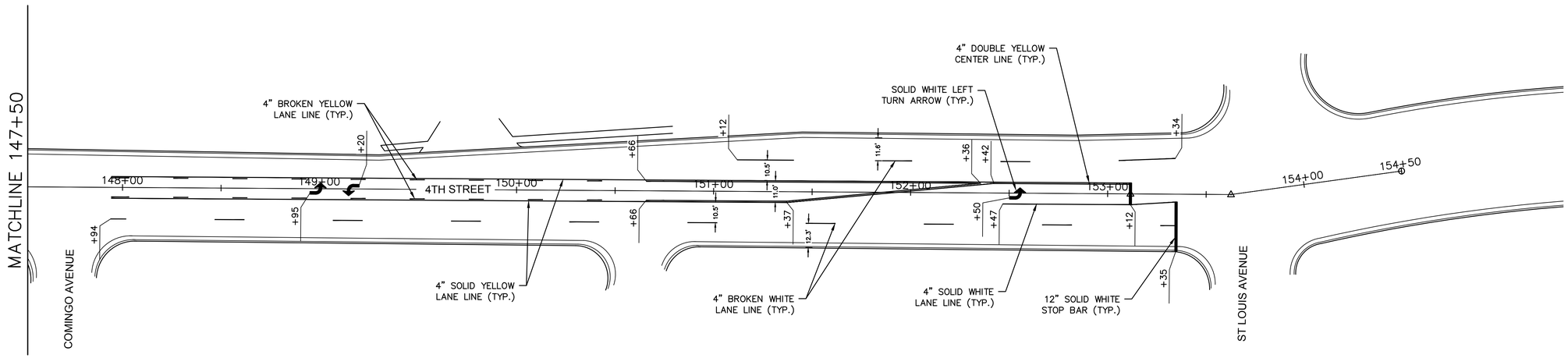
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43 of 95

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SCALE IN FEET

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PAVEMENT MARKING

4TH & MURPHY GEOMETRIC IMPROVEMENT
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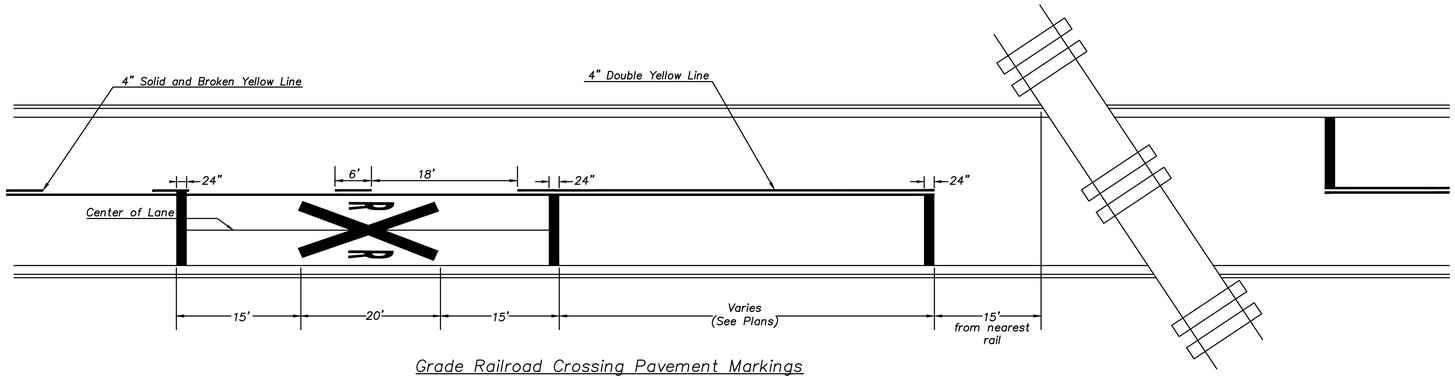
JOPLIN, MISSOURI

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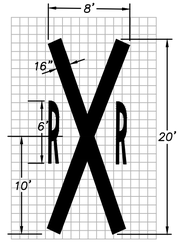
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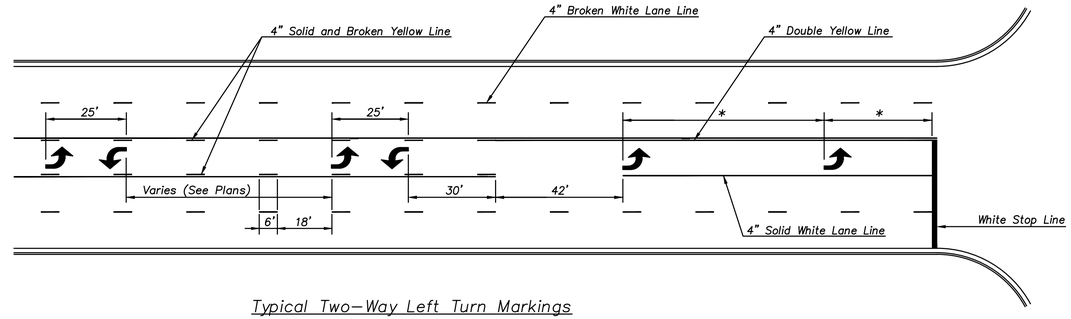
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Grade Railroad Crossing Pavement Markings



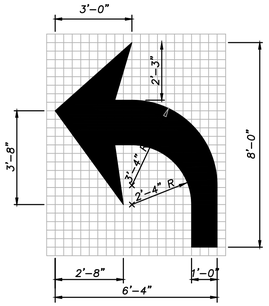


Typical Two-Way Left Turn Markings

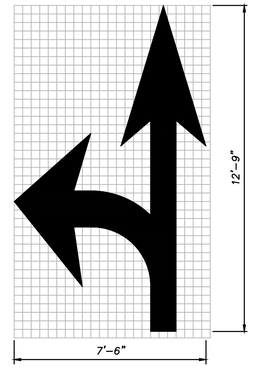
Pavement Marking General Notes

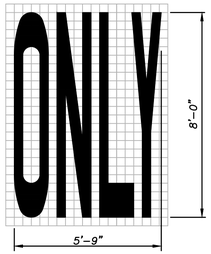
1. All permanent pavement markings shall be provided and installed by the contractor as indicated in the plans or as directed by the City Inspector.
2. Pavement markings on concrete shall be per the Standard Specifications, Section 2306 unless otherwise indicated on the plans or directed by the City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

SUMMARY OF PAVEMENT MARKING QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	Pavement Marking Removal	LF	10703
2	Pavement Marking Removal (Symbols)	EA	5
3	4" White Pavement Marking	LF	8591
4	4" Yellow Pavement Marking	LF	11119
5	12" White Pavement Marking	LF	419
6	24" White Pavement Marking	LF	145
7	Left/Right/Through Turn Arrow White Pavement Marking Symbol	EA	43
8	4" Broken Yellow Pavement Marking	LF	1331
9	Railroad Crossing Symbol	EA	4
10	24" Yellow Pavement Marking	LF	111
11	6" Dotted White Pavement Marking (2' long, 6' gap)	LF	30
12	4" Broken White Pavement Marking	LF	191

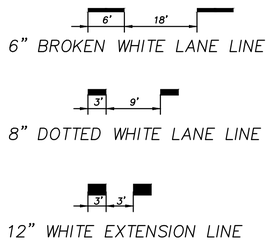


Turn Arrow Marking





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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REVISIONS

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PAVEMENT MARKING DETAILS & QUANTITIES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

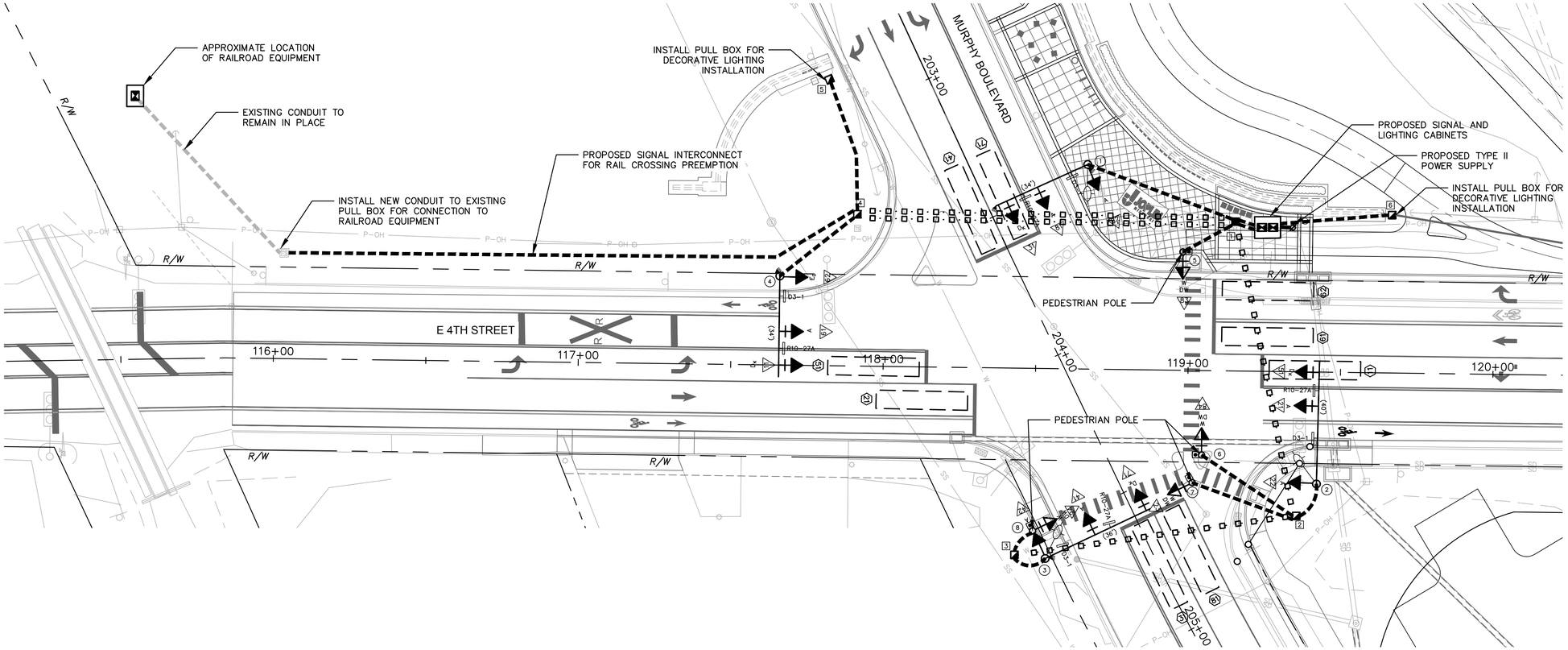
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45 of 95

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(1.04 MI. TO SIGNAL AT N MAIN STREET)



(0.35 MI. TO SIGNAL AT S MAIN STREET)

(0.67 MI. TO SIGNAL AT ST. LOUIS AVENUE)

(0.37 MI. TO SIGNAL AT US ROUTE 66)

4TH STREET & MURPHY BLVD.

NOTE:

1.) ALL TRAFFIC SIGNAL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE MISSOURI STANDARDS SPECIFICATION FOR HIGHWAY CONSTRUCTION, SECTION 902 (TRAFFIC SIGNALS), UNLESS OTHERWISE NOTED.

2.) CONTROLLER CABINET DOOR MUST OPEN AWAY FROM INTERSECTION.

3.) ALL SIGNAL WORK LISTED HEREIN IS TO BE BID UNDER THE LUMP SUM TRAFFIC SIGNAL PAY ITEM.

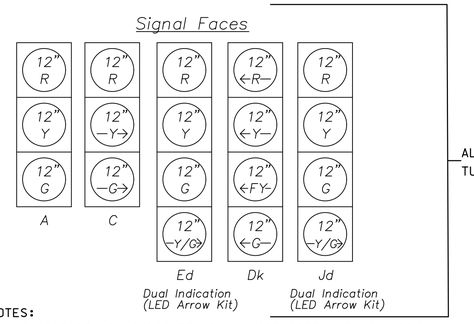
4.) THE CONTRACTOR SHALL STAKE LOCATIONS WHERE POLES, BOXES, AND CONTROLLER ARE TO BE INSTALLED. STAKED LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF EQUIPMENT. SERVICE BOXES AND CONDUIT RUNS ARE APPROXIMATE AND MAY BE FIELD-ADJUSTED TO CLEAR OBSTRUCTIONS AND FACILITATE WIRING, AS APPROVED BY THE ENGINEER.

5.) ALL CONDUITS SHALL BE SDR-9. CONDUITS UNDER ANY NEW PAVEMENT SHALL EITHER BE TRENCHED PRIOR TO PAVEMENT CONSTRUCTION OR BORED FOLLOWING PAVEMENT CONSTRUCTION. CONDUITS UNDER ANY EXISTING PAVEMENT, INCLUDING SIDEWALKS AND DRIVEWAYS, SHALL BE BORED WITHOUT DISTURBANCE TO THE EXISTING PAVEMENT.

6.) CONTRACTOR SHALL COORDINATE WITH EMPIRE ELECTRIC FOR POWER SOURCE CONNECTION.

TRAFFIC SIGNALS LEGEND

- CONTROLLER
- JUNCTION BOX
- POWER SOURCE
- POWER SUPPLY
- WOOD POST
- SIGNAL HEAD (OPT LIM CONV)
- SIGNAL HEAD (OPT LIM)
- SIGNAL HEAD (PEDESTRIAN)
- SIGNAL HEAD (STANDARD)
- PUSH BUTTON DETECTOR
- PREFORMED PULL BOX TYPE 1
- PREFORMED PULL BOX TYPE 2
- CONCRETE PULL BOX TYPE 1
- CONCRETE PULL BOX TYPE 2
- ITS PULL BOX TYPE 2
- ITS PULL BOX TYPE 5
- SIGNS
- WIRELESS ACCESS UNIT OR SUBSCRIBER UNIT
- RADAR DETECTOR
- RADAR DETECTION ZONE
- CONDUIT MEDIAN
- CONDUIT PUSHED
- CONDUIT BRIDGE
- CONDUIT EXISTING
- CONDUIT TRENCHED
- SPAN WIRE
- MAST ARM - TYPE A BASE
- MAST ARM - TYPE C BASE
- MAST ARM - TYPE F BASE
- TYPE C BASE
- MAST ARM WITH LUMINAIRE



NOTES:
(1) SUBSCRIPT "D" INDICATES DUAL-MODE GREEN/YELLOW ARROW SECTION

ALL TRAFFIC SIGNAL HEADS (EXCLUDING PEDESTRIAN INDICATIONS AND SCHOOL BEACONS) SHALL BE FURNISHED WITH TWO TERMINAL BLOCKS
W PEDESTRIAN INDICATIONS SHALL BE
DW LED COUNTDOWN TYPE.

TRAFFIC SIGNAL SHEET
SHEET 1 OF 6

0' 10' 20' 40'
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STATE OF MISSOURI
JEREMY SCOTT STRETZ
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
3/7/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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TRAFFIC SIGNAL

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

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USER: mmayforth
T_PSAS_N170642 F_PBASE_N170642 L_PBASE_N170642 V_XBNDY_N170642

| POST NUMBER | PULL BOX NUMBER | LOCATION | | | BASE | | | | | | | | | | | | | PULL BOX | | | | | | | | | POST (SEE GENERAL NOTE 2) | | | | | | | | | | | | |

CONDUIT (WITH #14 TRACER WIRE)

FROM	TO	CENTER TO CENTER DISTANCE	LOOP DET.	TRENCH			PUSHED			MEDIAN			ON STRUCTURE		REMARKS
			1"	2"	3"	4"	2"	3"	4"	2"	3"	4"	2"	3"	
Ø*	CONT	4		12											
CONT	BOX 1	5		10	56										4-3" CONDUITS
BOX 1	BOX 2	99						97							
BOX 1	BOX 4	122					120	120							1-2" AND 1-3"
BOX 2	BOX 3	91						89							
BOX 1	POLE 1	51			54										
BOX 1	POLE 5	18		19											
BOX 2	POLE 2	11			14										
BOX 2	POLE 6	36		37											
BOX 2	POLE 7	35		38											
BOX 3	POLE 3	7			8										
BOX 3	POLE 8	9		12											
BOX 4	POLE 4	31			32										
BOX 4	BOX 5	44		47											
CONT	BOX 6	62		65											
BOX 4	EX BOX	189		192											
EX BOX	RR EQ	75		-											USE EX. CONDUIT

POWER SUPPLY

LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING				LIGHTING CONTROL (SEE DETAIL BELOW))		SERVICE POLE		
					CONTROLLER		POWER SUPPLY DISCONNECT						
APPROACH	STATION	OFFSET	(SEE DETAIL BELOW)	DRAWING	AUXILIARY BREAKER	CONT & SIGNAL LAMPS	MAIN BREAKER		240 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH		UTILITY COMPANY
							SIGNALS	LIGHTING					
E 4TH St	119+02.33	51.1' LT	Type 1		15 Amps	15 Amps	20 Amps	40 Amps	1	200 Amps	Cl.	Ft.	EMPIRE
			Type		Amps	Amps	Amps	Amps		Amps	Cl.	Ft.	

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT*

LOCATION			SYSTEM MASTER (CLOSER LOOP)		ACTUATED		ON-OFF SWITCH TYPE		COORDINATION INTERFACE						TIME CLOCK	NEMA CABINET TYPE			2070 CABINET TYPE		170 SOFTWARE	
									12C/7C HARDWIRE		TIME BASE	CLOSED LOOP		Fiber								
APPROACH	STATION	OFFSET	NEMA	170	McCain eX2	170	I	II	MASTER	LOCAL		NEMA	170			E	EV	DOUBLE	332D	336S	BITRAN	WAPITI
E 4TH STREET	119+26.21	48.0' LT			1														1			

SIGNS

QUANTITY	MUTCD SIGN NUMBER	SIZE (INCHES)	AREA (SQ. FT.)	TOTAL AREA EACH SIGN (SQ. FT.)	SIGNAL SIGN MOUNTING HARDWARE (EA.)
	R10-10L	24 X 30	5.0		
	R10-10R	24 X 30	5.0		
	R3-5L	30 X 36	7.5		
	R3-5R	30 X 36	7.5		
	R3-5A	30 X 36	7.5		
	R3-6L	30 X 36	7.5		
	R3-6R	30 X 36	7.5		
	R3-2	24 X 24	4.0		
	R3-1	24 X 24	4.0		
	R3-3	24 X 24	4.0		
	R3-4	36 X 36	9.0		
	R10-5	24 X 30	5.0		
	R10-12	24 X 30	5.0		
2	D3-1 (MURPHY BOULEVARD)	120 X 18	15.0	30.0	2
2	D3-1 (E 4TH STREET)	84 X 18	10.5	21.0	2
2	R10-3E(L)	9 X 15	0.9	1.8	2
2	R10-3E(R)	9 X 15	0.9	1.8	2
	R10-11A	24 X 30	5.0		
	R10-13	36 X 24	6.0		
4	R10-27A	30 X 36	7.5	30.0	4
	R10-15R	30 X 36	7.5		
SUBTOTAL AREA				84.6	12
TOTAL AREA				84.6	12

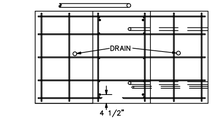
DETECTOR SCHEDULE

DETECTOR NUMBER	APPROACH	TYPE			
		ADA ACCESSIBLE PUSH BUTTON	RADAR*		
			NO. DEVICES	DELAY/ EXTEND	CALL UNIT
84,85	4th Street	2			
23,24	Murphy Boulevard	2			
61, 62, 11	4th Street		1		
51, 21	4th Street		1		
71, 41	Murphy Boulevard		1		
81, 31	Murphy Boulevard		1		
TOTAL		4	4		

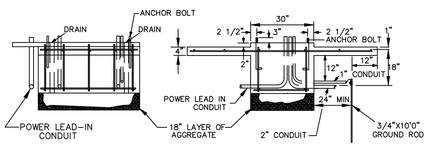
NOTE: ALL SIGNAL WORK LISTED HEREIN IS TO BE BID UNDER THE LUMP SUM TRAFFIC SIGNAL PAY ITEM FOR EACH INTERSECTION.

*CABINET SHALL BE SUPPLIED BY CITY OF JOPLIN AND INCLUDE BATTERY BACKUP, CABINET AND EQUIPMENT.

RADAR DETECTION SYSTEM WILL BE SUPPLIED BY THE CITY FOR CONTRACTOR INSTALLATION. CABLING FOR RADAR SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AND BE COMPATIBLE WITH WAVETRONIX DEVICES. CONTRACTOR SHALL PICK UP AND INSTALL ALL COMPONENTS AS REQUIRED FOR A WORKING/COMPLETE SYSTEM AS DEPICTED.

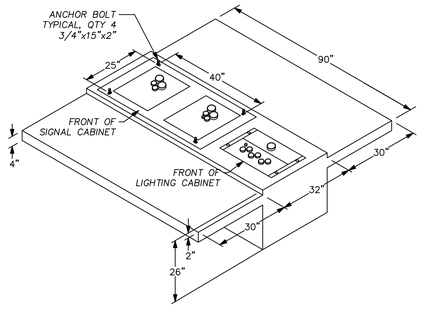


NOTES:
REBAR SHALL BE GRADE 40 MEETING THE REQUIREMENTS OF SUBSECTION 1601 IN THE STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTIO, KANSAS DEPT. OF TRANSPORTATION.

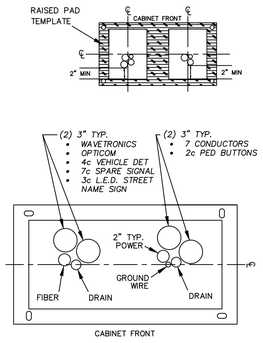


NOTES:
1. STREETLIGHT CABINET SHALL BE ORIENTED SO THAT PHOTOCELL WINDOW FACES AWAY FROM TRAFFIC SIGNAL CABINET AND METER FACES TOWARD THE STREET.
2. FOUNDATION FOR CABINETS MUST BE ACCEPTED BY STREETLIGHT INSPECTOR AND TRAFFIC SIGNAL INSPECTOR PRIOR TO POURING CONCRETE.
3. CABINET SHALL BE GROUNDED USING (2) GROUND RODS AS REQUIRED BY N.E.C.

332 DUAL CABINET PAD DETAILS

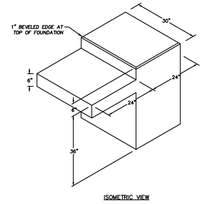


332 DUAL CABINET PAD DETAILS
ISOMETRIC VIEW (NOT TO SCALE)

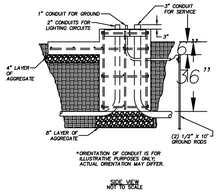


NOTES:
1. A MINIMUM OF 15' OF ADDITIONAL SLACK SHALL BE PULLED FOR EACH CABLE RUN INTO CABINET BASE.
2. ALL CONDUITS SHALL BE CUT FLUSH WITH CONCRETE.

CONDUIT ENTRY DETAILS



ISOMETRIC VIEW



*ORIENTATION OF CONDUIT IS FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL ORIENTATION MAY DIFFER.

SIDE VIEW
NOT TO SCALE

NOTES:
1. REBAR SHALL BE GRADE 40, MEETING THE REQUIREMENTS OF SUBSECTION 1601 IN THE STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION, KANSAS DEPARTMENT OF TRANSPORTATION.
2. PROVIDE (2) GROUND RODS AS REQUIRED BY N.E.C. TO GROUND.
3. FOUNDATION FOR CONTROL CABINET MUST BE ACCEPTED BY STREETLIGHT INSPECTOR PRIOR TO POURING CONCRETE.
4. CONCRETE SLAB TO PROVIDE SEMI-DRY WORKING AREA IN FRONT OF CABINET.

CONCRETE FOUNDATION FOR CONTROL CABINET

CABINET – REAR VIEW

MOUNTING BASE DETAIL

CONTROL WIRING

CABINET – SIDE VIEW

NOTES:
1. 200 AMPS CONTINUOUS
2. HORN BY-PASS STYLE USED FOR ALL SERVICES

METER SOCKET

SERVICE TERMINATION

CIRCUIT DIRECTORY			
NO.	DESCRIPTION	AMP	POLE
1,3	SPACE NOT AVAILABLE		
2,4	MAIN	200	2
5,7	CONTACTOR 1	40	2
6	CONTROL	20	1
8	OPEN	20	1
9,11	CONTACTOR 2	40	2
10,12	CONTACTOR 4	40	2
13,15	CONTACTOR 3	40	2
14	SPACE AVAILABLE		1
16	SPACE AVAILABLE		1

TERMINAL BLOCKS

NOTES:
1. FOR INSTALLATIONS WHERE A METER PEDESTAL IS REQUIRED, STREETLIGHT CONTROL CABINET WILL NOT HAVE A METER SOCKET.
2. CONTRACTOR TO INSTALL ASTRONOMICAL TIME CLOCK IN STREET LIGHT CONTROL CABINET.
3. MATERIAL SUBMITTALS MUST BE APPROVED BY CITY OF JOPLIN ENGINEER PRIOR TO CONTROL CABINET INSTALLATION.
4. FOUNDATION FOR CONTROL CABINET MUST BE ACCEPTED BY CITY OF JOPLIN

PAD MOUNTED STREETLIGHT CONTROL CABINET

NOTES:
1. 120/240 VAC, 1-PHASE, 60 Hz, 3-WIRE
2. C1-C4 – ELECTRICALLY HELD, 60 AMP, 2 POLE CONTACTORS W/120V COIL.
3. LIGHTING CONTROL PHOTOCELL PROVIDED BY OTHERS; 10A MAX. LOAD.
4. NO PHOTOCELL LIGHT SHIELD.
5. TERMINAL BLOCKS ARE 2 POSITION, AND ABLE TO ACCEPT #14-#2 AWG
6. CONNECTIONS MAY BECOME LOOSE DURING SHIPPING, TIGHTEN ALL CONNECTIONS PRIOR TO ENERGIZING.

CONTROL CABINET WIRING DETAILS

4TH STREET & MURPHY BLVD.
INTERSECTION

TRAFFIC SIGNAL SHEETS
SHEET 4 OF 6

D-37C

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STATE OF MISSOURI
JEREMY SCOTT STRETZ
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
3/7/2024

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		REVISIONS	

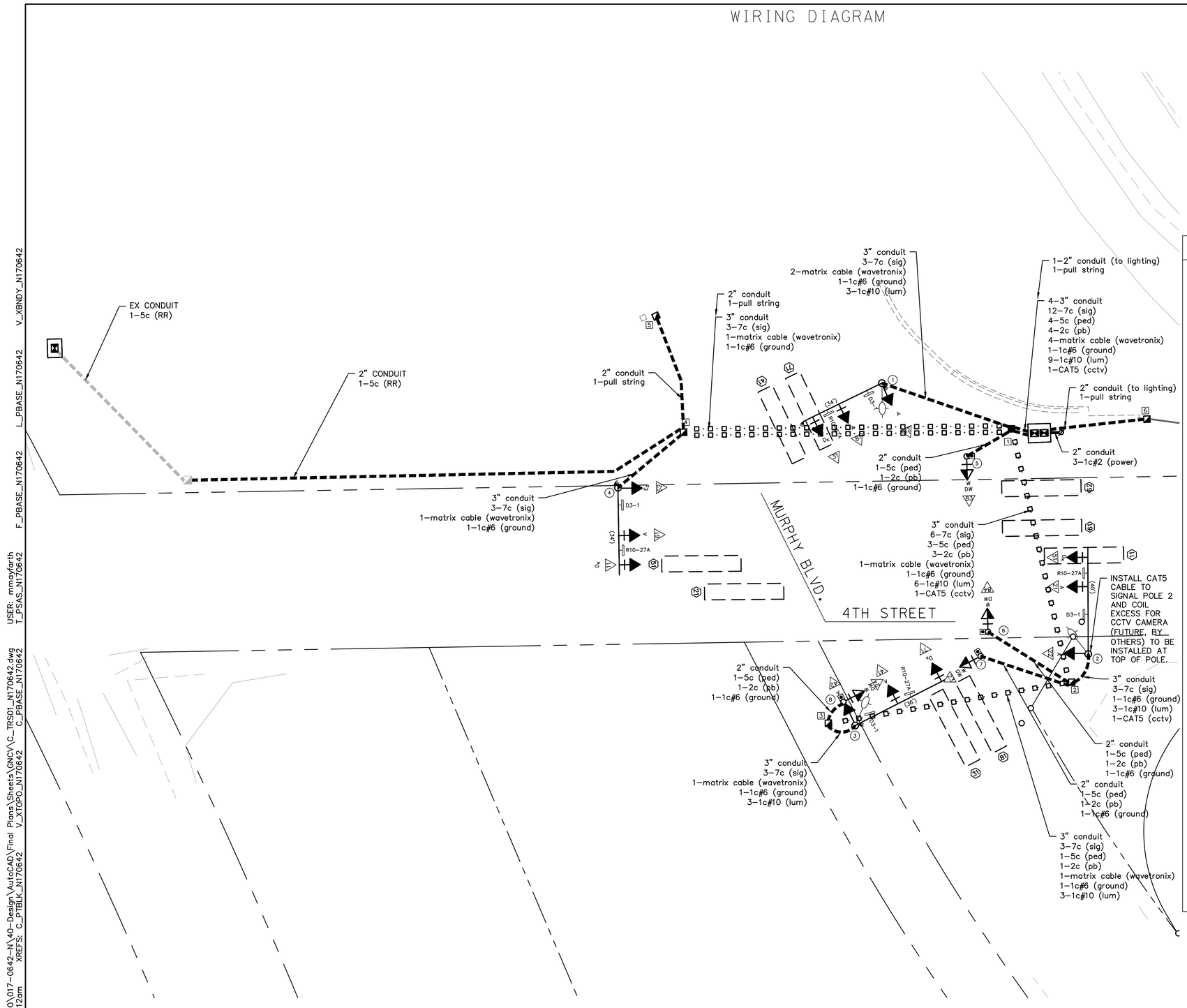
TRAFFIC SIGNAL
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN
JOPLIN, MISSOURI
2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_INT01_N170642
date: 3/6/24

SHEET
49 of 95

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WIRING DIAGRAM



LEGEND

- CONDUIT PUSHED
- CONDUIT TRENCHED
- X–Xc MULTI-CONDUCTOR CABLE #12 AWG (UNLESS OTHERWISE INDICATED)
- LIC #14 AWG DETECTOR LEAD-IN CABLE (2C TWISTED SHIELDED)
- PULL BOX WITH NUMBER
- POST WITH NUMBER
- POST WITH MAST ARM
- POST WITH MAST ARM AND LUMINAIRE
- DETECTOR WITH NUMBER
- SIGNAL HEAD WITH NUMBER
- SIGNAL CONTROLLER
- POWER SOURCE
- LIGHTING CONTROLLER
- P.S. POWER SUPPLY
- U.P.S. UNINTERRUPTIBLE POWER SUPPLY
- WIRELESS ACCESS UNIT OR SUBSCRIBER UNIT
- RADAR DETECTOR

4TH STREET & MURPHY BLVD.
INTERSECTION

TRAFFIC SIGNAL SHEETS
SHEET 5 OF 6

D–37D

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JEREMY SCOTT STRETZ
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REVISIONS

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TRAFFIC SIGNAL

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

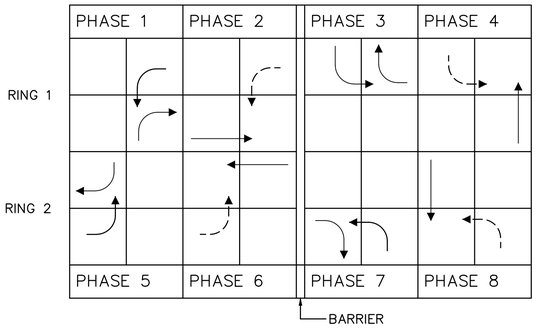
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50 of 95

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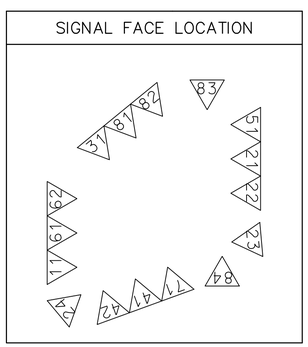
TRAFFIC PHASING AND COLOR SEQUENCE – ACTUATED CONTROLLERS

		PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	2ø	4ø	6ø	8ø	OVERLAP*	OVERLAP*	OVERLAP*	OVERLAP*	
FACE NUMBERS		11	21 11	31	41 31	51	61 51	71 62	81 71	23			83	11	31	51	71	FACE NUMBERS
			22		42		62		82	24			84					
SIGNAL INDICATIONS	R	RL	R RL	RL	R RL	RL	R RL	RL	R RL	DW			DW					R
	Y	YL	Y YL	YL	Y YL	YL	Y YL	YL YRt	Y YL	FDW			FDW					Y
	G		FYL		FYL		FYL		FYL					FYL	FYL	FYL	FYL	G
		GL	G YL		G GL		G GL		G	W			W					SIGNAL INDICATIONS
DETECTOR ASSIGNMENTS		11	21 22 11	31	41 42 31	51	61 62 51	71 62	81 82 71									DETECTOR ASSIGNMENTS
DETECTOR ASSIGNMENTS (PEDS. ONLY)										23 24			83 84					
OVERLAP PARENT PHASES														2*	4*	6*	8*	



RING STRUCTURE

SIGNAL FACE LOCATION



*CONTRACTOR SHALL HARDWIRE YELLOW AND GREEN RIGHT–TURN ARROWS OF 5–SECTION RIGHT–TURN SIGNAL HEADS TO THE YELLOW AND GREEN LEFT–TURN ARROWS OF THE ASSOCIATED LEFT–TURN PHASE.

PAY ITEM NOTES:

1. ALL SIGNAL WORK LISTED HEREIN IS TO BE BID UNDER THE LUMP SUM TRAFFIC SIGNAL PAY ITEM. WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND PLACING INTO OPERATION A FULLY FUNCTIONING TRAFFIC SIGNAL AS INTENDED IN THE PLANS.
2. THE CITY IS TO FURNISH CONTROLLER CABINET (AND INTERNALS), RADAR DETECTION EQUIPMENT (EXCLUDING CABLING), AND CABINET INTERFACE DEVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY AND BE RESPONSIBLE FOR PICK UP, STORAGE, DELIVERY, AND INSTALLATION OF THESE AND OTHER REMAINING SIGNAL ITEMS FOR A COMPLETE SYSTEM.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL REMAINING NECESSARY ITEMS (INCLUDING SIGNAL POLE) TO ENSURE A COMPLETE AND FULLY FUNCTIONAL TRAFFIC SIGNAL AS INTENDED IN THE PLANS.
4. THE POLES AND CABINET SHALL BE BACK IN COLOR. REMAINING SIGNAL EQUIPMENT FURNISHED BY THE CONTRACTOR INCLUDING SIGNAL HEADS AND MOUNTING BRACKETS SHALL BE BLACK IN COLOR TO MATCH.
5. COORDINATE WITH KURTIS STEELE FOR ALL MATERIAL DELIVERY AND SHOP DRAWING REVIEW, KSTEELE@JOPLINMO.ORG, 417–624–0820, 1578

GENERAL NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH EVERGY FOR POWER SOURCE CONNECTION.
2. THE CONTRACTOR SHALL COORDINATE WITH EVERGY FOR EXISTING STREET LIGHT RELOCATION.
3. THE CONTRACTOR SHALL CONTACT CITY OF JOPLIN TRAFFIC SIGNAL TECHNICIAN, KURTIS STEELE (913) 624–4902, BEFORE ORDERING SIGNAL EQUIPMENT AND FOR SIGNAL EQUIPMENT DELIVERY COORDINATION.
4. THE CITY RETAINS FIRST RIGHT OF REFUSAL FOR ANY EXISTING TRAFFIC EQUIPMENT TO BE REMOVED. IF DIRECTED BY THE CITY ENGINEER. THE CONTRACTOR SHALL DELIVER ANY EXISTING TRAFFIC EQUIPMENT NOT TO BE REFUSED TO THE CITY OF RIVERSIDE PUBLIC WORKS IN GOOD CONDITION. ANY EQUIPMENT NOT CLAIMED BY THE CITY SHALL BE DISPOSED OF BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL STAKE LOCATIONS WHERE POLES, BOXES, AND THE CONTROLLER ARE TO BE INSTALLED. STAKED LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF EQUIPMENT. SERVICE BOXES AND CONDUIT RUNS ARE APPROXIMATE AND MAY BE FIELD–ADJUSTED TO CLEAR OBSTRUCTIONS AND FACILITATE WIRING, AS APPROVED BY THE ENGINEER.
6. CONDUITS UNDER ANY NEW PAVEMENT SHALL EITHER BE TRENCHED PRIOR TO PAVEMENT CONSTRUCTION. CONDUITS UNDER ANY EXISTING PAVEMENT, INCLUDING SIDEWALKS AND DRIVEWAYS, SHALL BE BORED WITHOUT DISTURBANCE TO THE EXISTING PAVEMENT.
7. CALCULATED QUANTITIES ARE COMPLETE TO THE KNOWLEDGE OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL NECESSARY TO COMPLETE THE DESIGNATED WORK.
8. PULL BOX COVERS TO BE USED FOR TRAFFIC SIGNALS SHALL BE EMBOSSED WITH "TRAFFIC SIGNALS." PULL BOX COVERS TO BE USED FOR FIBER OPTICS SHALL BE EMBOSSED WITH TRAFFIC SIGNAL FIBER OPTICS.
9. PUSH BUTTONS THAT DO NOT MAINTAIN AT LEAST 10' SEPARATION SHALL BE CONFIGURED WITH AUDIBLE VOICE MESSAGE. PUSH BUTTONS SHALL BE INSTALLED WITHIN 10' OF LEVEL LANDING.

IF CALLED, ALL NON–CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIME TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR.

LEGEND

- → — ACTUATED VEHICULAR MOVEMENT
- → — PARTIALLY RESTRICTED ACTUATED VEHICULAR MOVEMENT
- ▷ — NON–ACTUATED VEHICULAR MOVEMENT
- ▷ — PARTIALLY RESTRICTED NON–ACTUATED VEHICULAR MOVEMENT
- → — ACTUATED PEDESTRIAN MOVEMENT
- ▷ — NON–ACTUATED PEDESTRIAN MOVEMENT
- ⊣ — VEHICLE STOPPED

FDW — FLASHING DON'T WALK
R/W — RIGHT OF WAY INTERVAL
DW — DON'T WALK
YRt — YELLOW RIGHT ARROW
RT. — GREEN RIGHT ARROW
W — WALK
LY — YL — YELLOW LEFT ARROW
L — GREEN LEFT ARROW
S — GREEN STRAIGHT AHEAD ARROW
G — CIRCULAR GREEN
Y — CIRCULAR YELLOW
R — CIRCULAR RED
Ø — TRAFFIC PHASE
AO — ALL OTHERS
FR — FLASHING RED
FY — FLASHING YELLOW

TRAFFIC SIGNAL CONTROL OPERATION

4TH STREET & MURPHY BLVD.

FLASHING OPERATION	
4TH STREET	FR
MURPHY BLVD.	FR

CONTROLLER TYPE	2070

TRAFFIC SIGNAL SHEETS
SHEET 6 OF 6

D–38A

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STATE OF MISSOURI
JEREMY SCOTT STRETZ
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
3/7/2024

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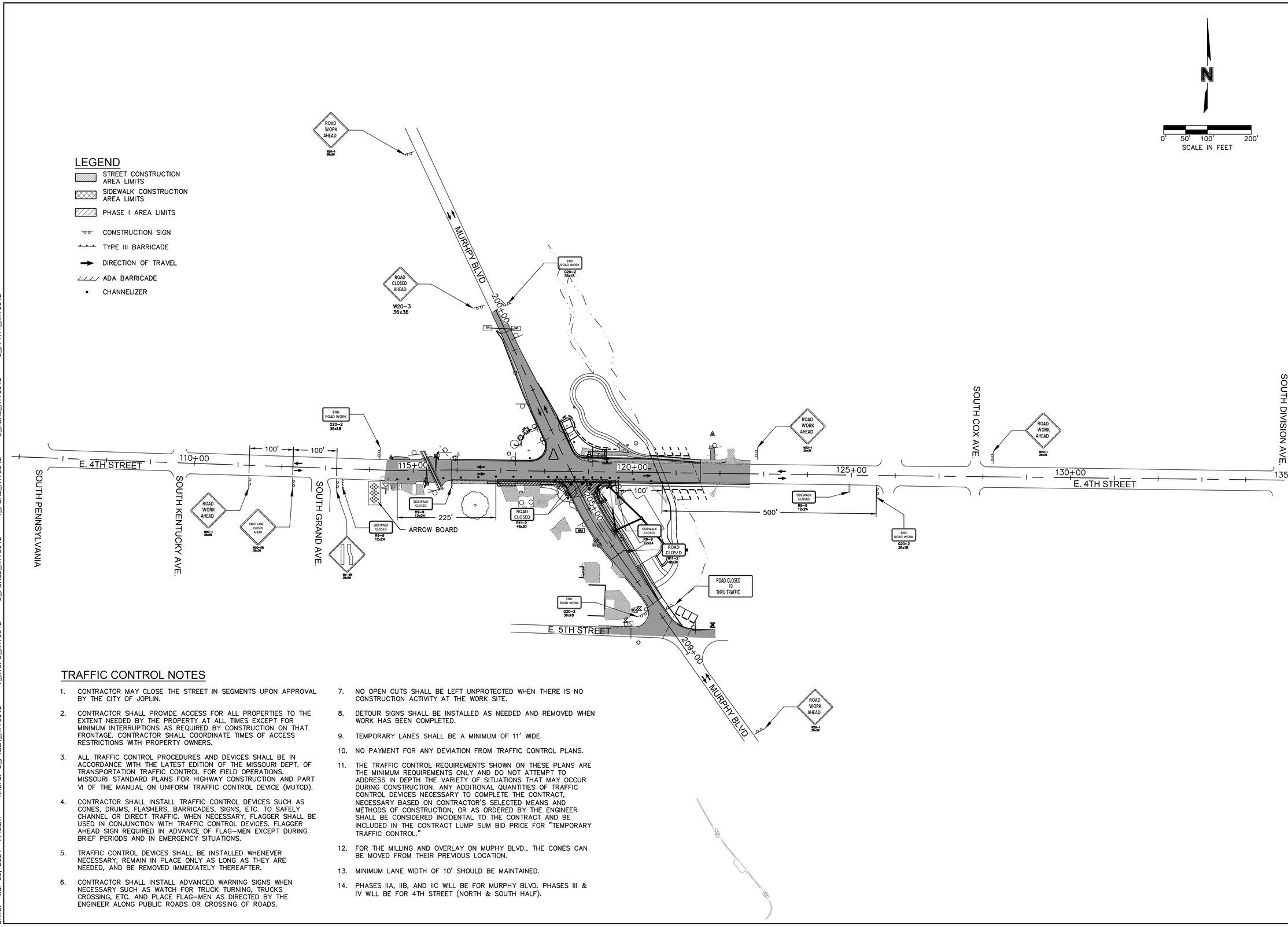
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TRAFFIC SIGNAL
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN
JOPLIN, MISSOURI
2023

drawn by: SMK/MJM/CTK
checked by: JWP
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project no.: N17-06420
drawing no.: C_INT01_N170642
date: 3/6/24

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USER: mmayfarth
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TRAFFIC CONTROL NOTES

1. CONTRACTOR MAY CLOSE THE STREET IN SEGMENTS UPON APPROVAL BY THE CITY OF JOPLIN.
2. CONTRACTOR SHALL PROVIDE ACCESS FOR ALL PROPERTIES TO THE EXTENT NEEDED BY THE PROPERTY AT ALL TIMES EXCEPT FOR MINIMUM INTERRUPTIONS AS REQUIRED BY CONSTRUCTION ON THAT FRONTAGE. CONTRACTOR SHALL COORDINATE TIMES OF ACCESS RESTRICTIONS WITH PROPERTY OWNERS.
3. ALL TRAFFIC CONTROL PROCEDURES AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MISSOURI DEPT. OF TRANSPORTATION TRAFFIC CONTROL FOR FIELD OPERATIONS. MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION AND 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. TEMPORARY LANES SHALL BE A MINIMUM OF 11' WIDE.
10. NO PAYMENT FOR ANY DEVIATION FROM TRAFFIC CONTROL PLANS.
11. 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."
12. FOR THE MILLING AND OVERLAY ON MUPHY BLVD., THE CONES CAN BE MOVED FROM THEIR PREVIOUS LOCATION.
13. MINIMUM LANE WIDTH OF 10' SHOULD BE MAINTAINED.
14. PHASES IIA, IIB, AND IIC WILL BE FOR MURPHY BLVD. PHASES III & IV WILL BE FOR 4TH STREET (NORTH & SOUTH HALF).

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Jonathan Peitz
2024.03.06 09:11:00 -06'00'

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

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

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		REVISIONS	

TRAFFIC CONTROL PLAN
PHASE I

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

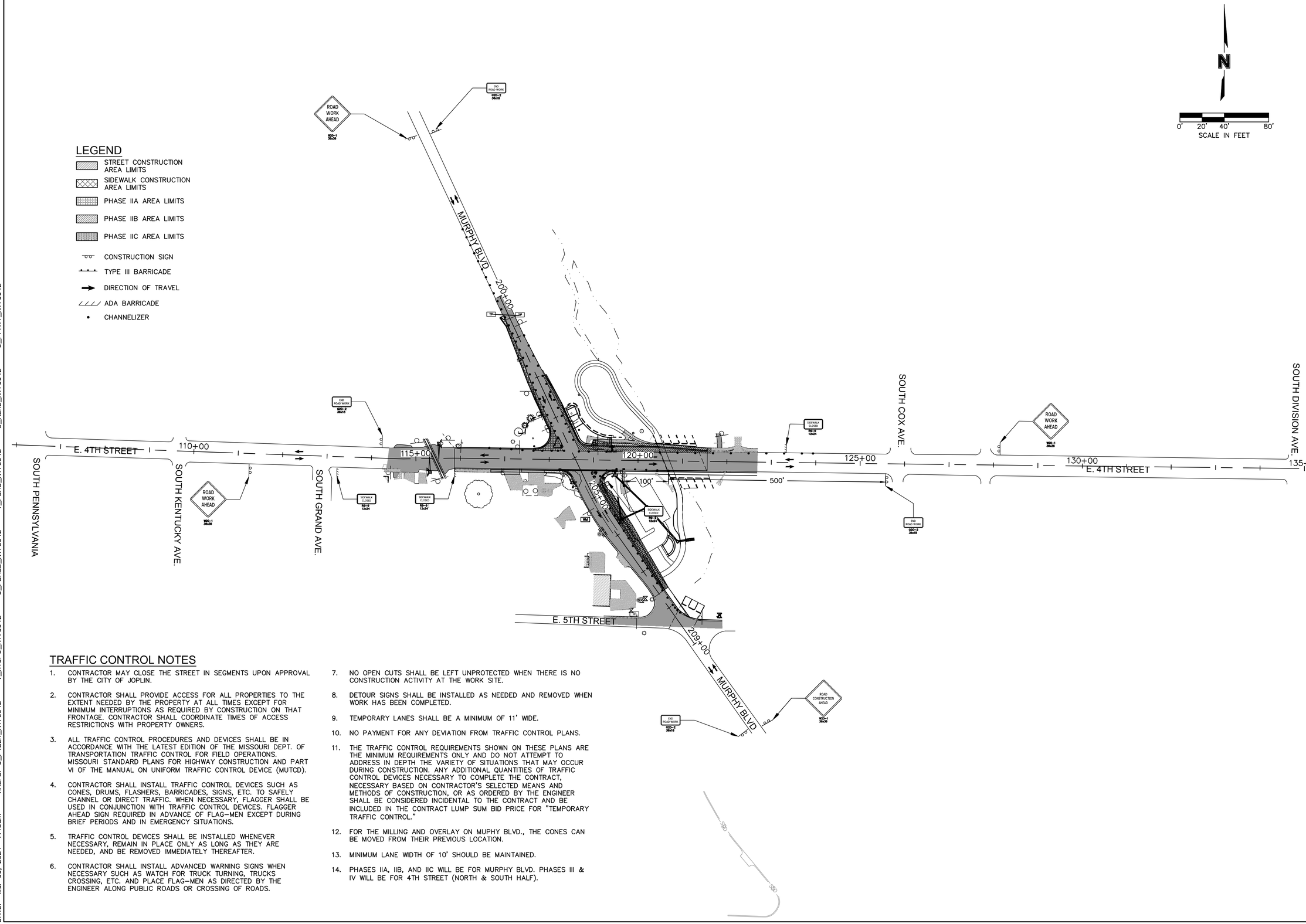
JOPLIN, MISSOURI

2023

drawn by:	SMK/MJM/CTK
checked by:	JWP
approved by:	JWP
QA/QC by:	ENG
project no.:	N17-06420
drawing no.:	C_TRF01_N170642
date:	3/6/24

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C_AERL_N170642 C_PPATT_N170642



TRAFFIC CONTROL NOTES

1. CONTRACTOR MAY CLOSE THE STREET IN SEGMENTS UPON APPROVAL BY THE CITY OF JOPLIN.
2. CONTRACTOR SHALL PROVIDE ACCESS FOR ALL PROPERTIES TO THE EXTENT NEEDED BY THE PROPERTY AT ALL TIMES EXCEPT FOR MINIMUM INTERRUPTIONS AS REQUIRED BY CONSTRUCTION ON THAT FRONTAGE. CONTRACTOR SHALL COORDINATE TIMES OF ACCESS RESTRICTIONS WITH PROPERTY OWNERS.
3. ALL TRAFFIC CONTROL PROCEDURES AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MISSOURI DEPT. OF TRANSPORTATION TRAFFIC CONTROL FOR FIELD OPERATIONS. MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION AND 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.
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13. MINIMUM LANE WIDTH OF 10' SHOULD BE MAINTAINED.
14. PHASES IIA, IIB, AND IIC WILL BE FOR MURPHY BLVD. PHASES III & IV WILL BE FOR 4TH STREET (NORTH & SOUTH HALF).

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Jonathan Peitz
2024.03.07 [illegible]

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

TRAFFIC CONTROL PLAN
PHASE II

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

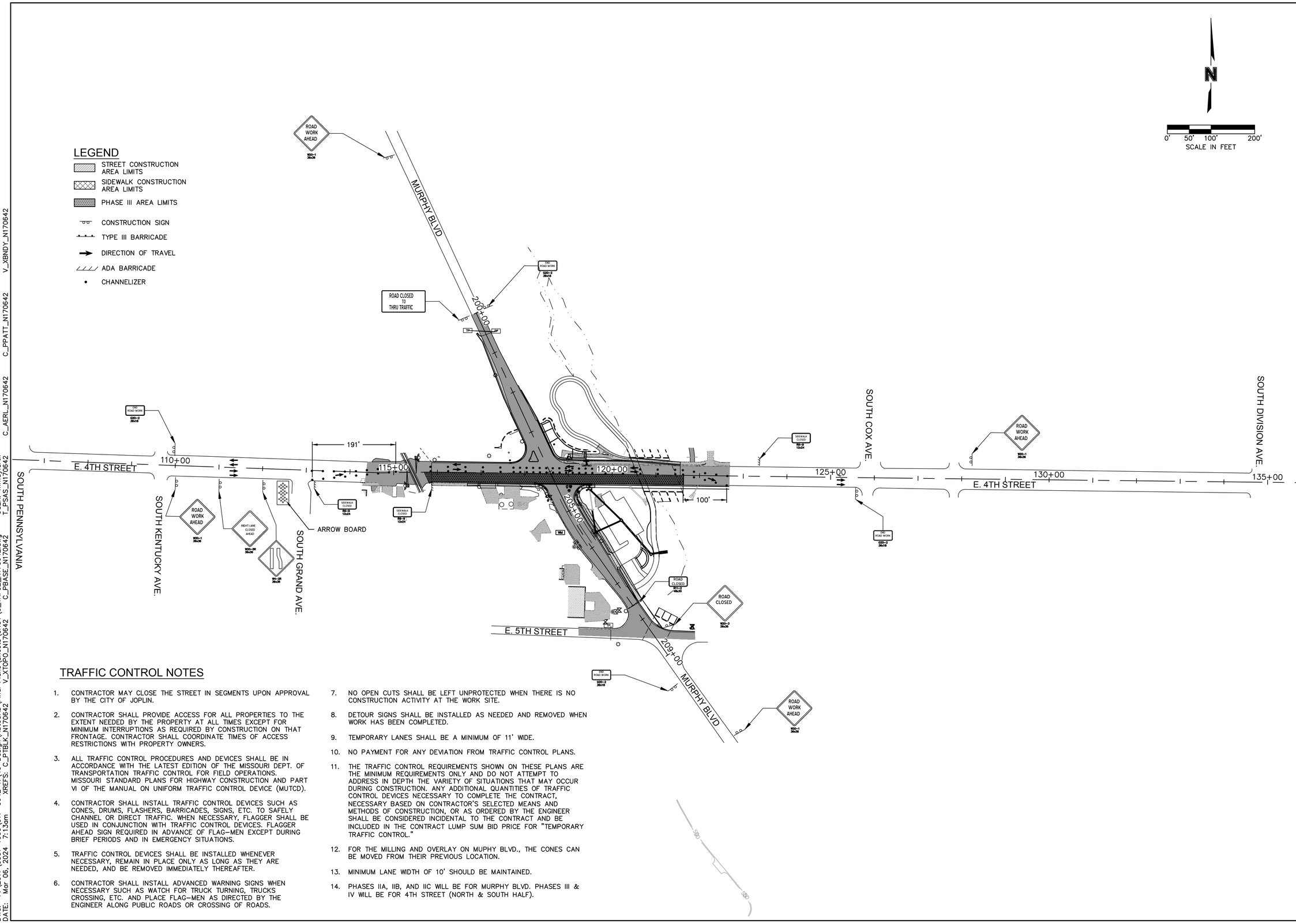
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TRF01_N170642
date: 3/6/24

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53 of 95

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C_AERL_N170642 C_PPATT_N170642



TRAFFIC CONTROL NOTES

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL PLAN
PHASE III

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

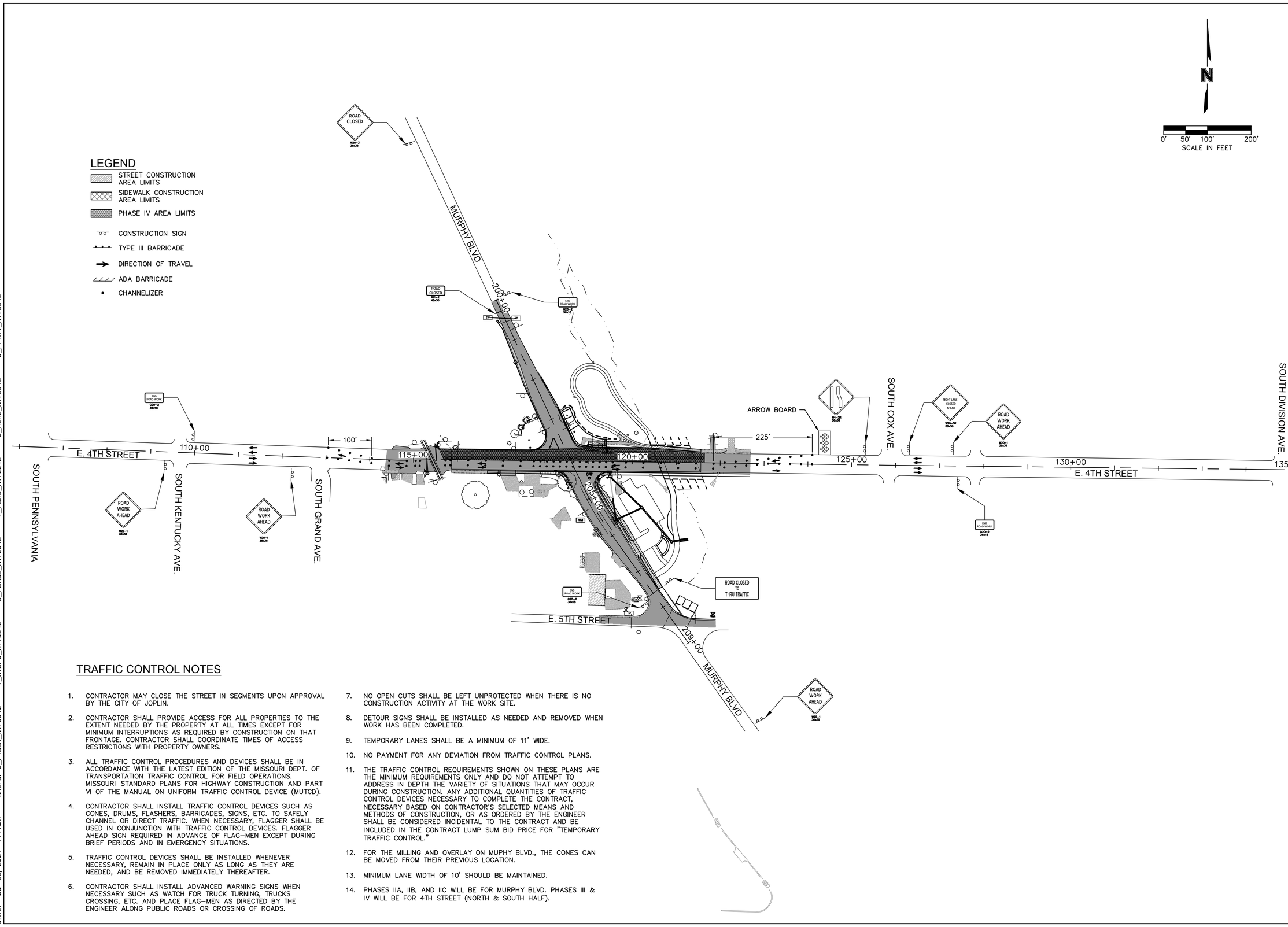
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TRF01_N170642
date: 3/6/24

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54 of 95

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C_AERL_N170642 C_PPATT_N170642 V_XBNDY_N170642



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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL PLAN
PHASE IV

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TRF01_N170642
date: 3/6/24

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55 of 95

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616.8.6 (TA-6) SHOULDER WORK WITH MINOR ENCROACHMENT ON DIVIDED AND UNDIVIDED HIGHWAYS - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Normal Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOTES:

PROVIDE SIGNS ON LEFT AND RIGHT SIDES OF DIVIDED HIGHWAYS

ROAD WORK AHEAD SIGN NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITIY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

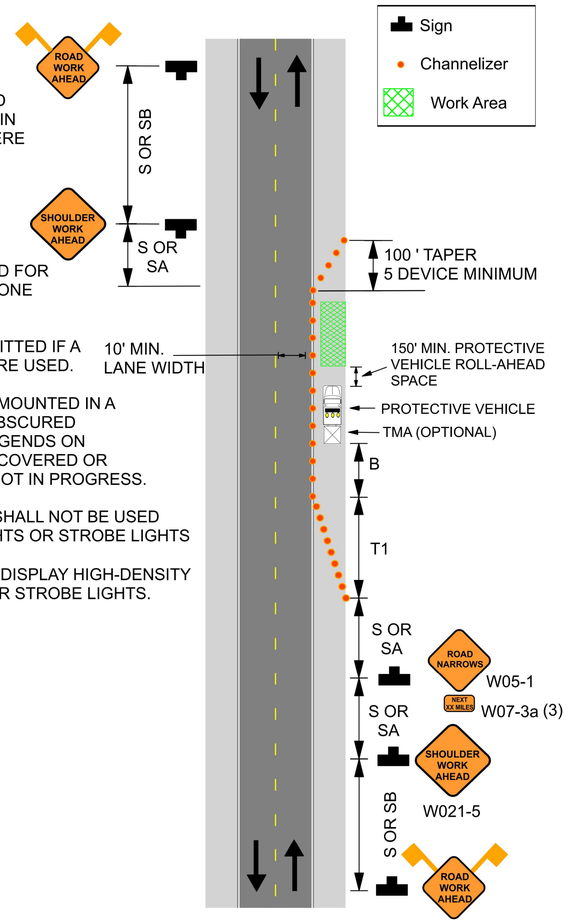
(3) NEXT XX MILES SIGN NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.

THE PROTECTIVE VEHICLE MAY BE OMITTED IF A TAPER AND CHANNELIZING DEVICES ARE USED.

VEHICLE - MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE - MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF VEHICLE'S ROTATING LIGHTS OR STROBE LIGHTS

SHADOW AND WORK VEHICLES SHALL DISPLAY HIGH-DENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.



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616.8.13 (TA-13) Temporary Road Closure - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	-	-	-	280	-	40
40-45	350	-	-	-	400	-	80
50-55	500	-	-	-	560	-	80
60-70	1000	-	-	-	840	-	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOTES:

CONDITIONS REPRESENTED ARE A PLANNED CLOSURE NOT EXCEEDING 20 MINUTES DURING THE DAYTIME.

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

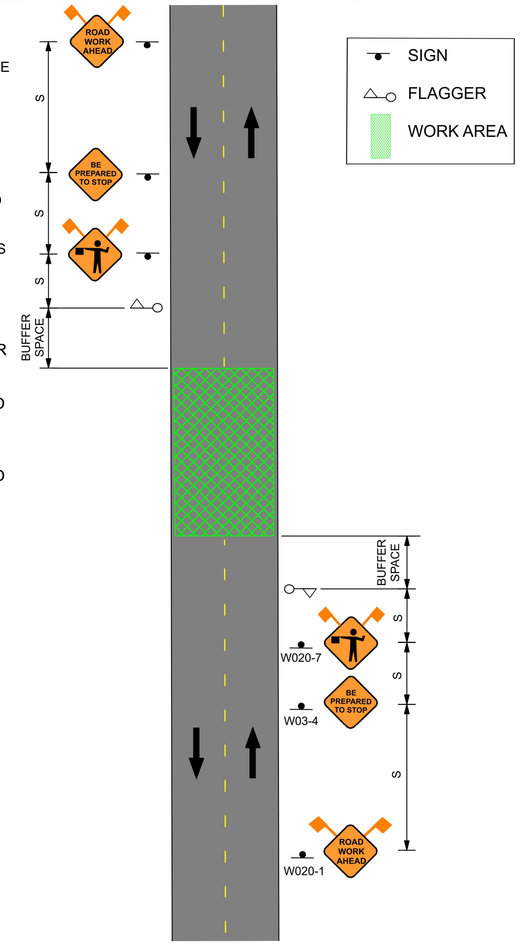
A CMS MAY BE USED IN ADDITION TO THIS SIGNING.

PROVIDE SIGNS ON LEFT AND RIGHT SIDE OF DIVIDED HIGHWAYS.

ROAD WORK AHEAD SIGN NOT NEEDED IF CLOSURE IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.

A FLAGGER OR UNIFORMED LAW ENFORCEMENT OFFICER SHALL BE USED FOR THIS APPLICATION. THE FLAGGER, IF USED FOR THIS APPLICATION, SHALL FOLLOW THE PROCEDURES PROVIDED IN EPG 616.5.07 AND 616.5.08. THE UNIFORMED LAW ENFORCEMENT OFFICER, IF USED FOR THIS APPLICATION, SHOULD FOLLOW THE PROCEDURES PROVIDED IN EPG 616.5.07 AND 616.5.08.

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.



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

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TRAFFIC CONTROL DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

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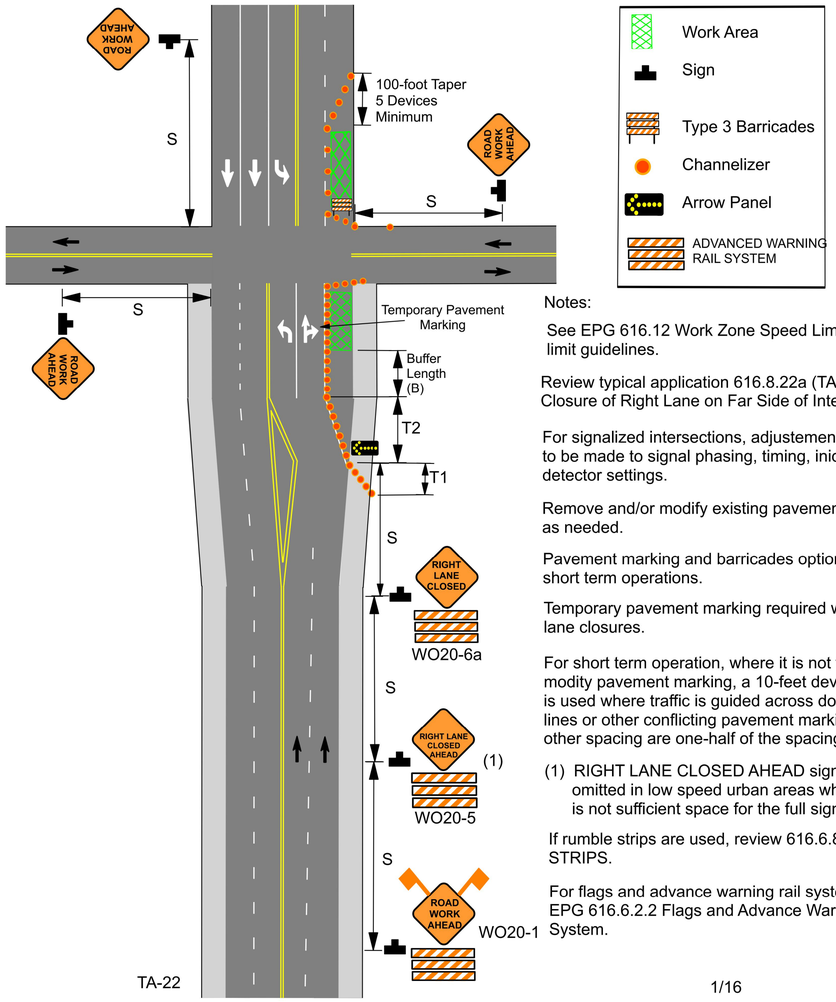
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DATE: Mar 06, 2024 7:14am XREFS: C_PTBLK_N170642

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616.8.22 (TA-22) Right Lane Closure at Intersection Work on Near or Far Side - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.



Notes:

See EPG 616.12 Work Zone Speed Limits for speed limit guidelines.

Review typical application 616.8.22a (TA-22a) Lane Closure of Right Lane on Far Side of Intersection.

For signalized intersections, adjustements may need to be made to signal phasing, timing, inidcations or detector settings.

Remove and/or modify existing pavement marking as needed.

Pavement marking and barricades optional for short term operations.

Temporary pavement marking required with long term lane closures.

For short term operation, where it is not feasible to modity pavement marking, a 10-feet device spacing is used where traffic is guided across double yellow lines or other conflicting pavement marking. All other spacing are one-half of the spacing.

(1) RIGHT LANE CLOSED AHEAD sign may be omitted in low speed urban areas where there is not sufficient space for the full sign series.

If rumble strips are used, review 616.6.87 RUMBLE STRIPS.

For flags and advance warning rail system, refer to EPG 616.6.2.2 Flags and Advance Warning Rail System.

TA-22

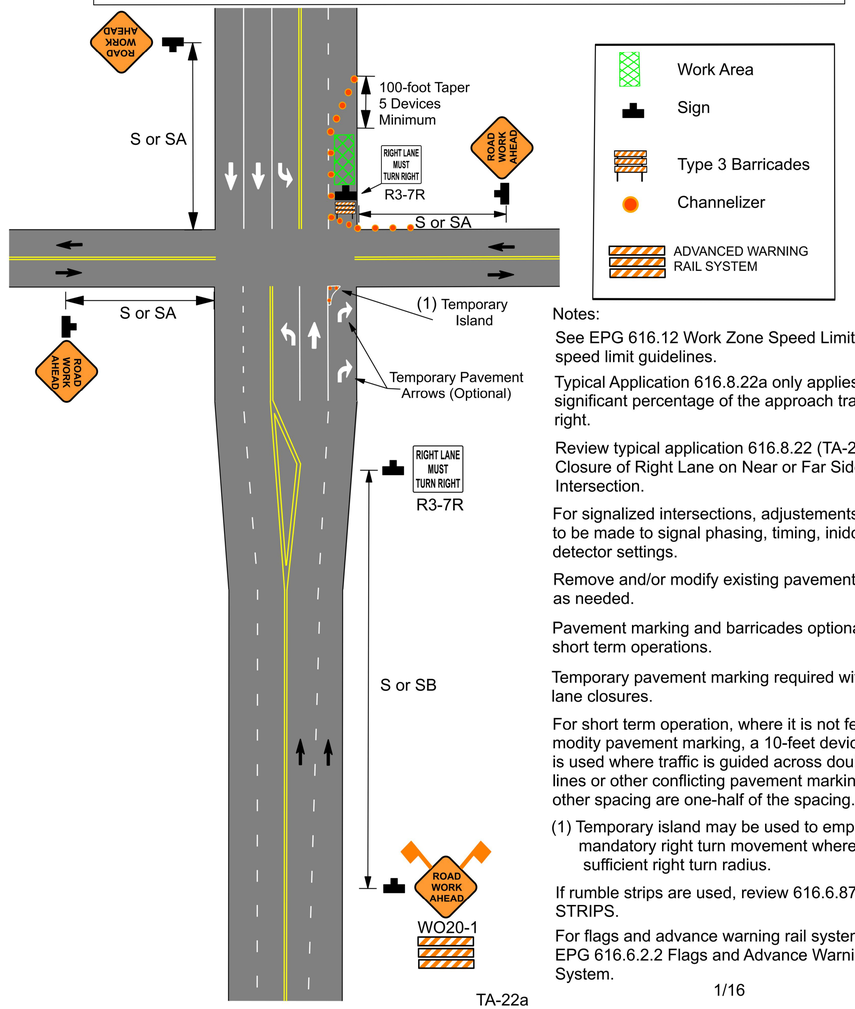
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616.8.22a (TA-22a) Right Lane Closure at Intersection Work on Far Side - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.



Notes:

See EPG 616.12 Work Zone Speed Limits for speed limit guidelines.

Typical Application 616.8.22a only applies where a significant percentage of the approach traffic turns right.

Review typical application 616.8.22 (TA-22) Lane Closure of Right Lane on Near or Far Side of Intersection.

For signalized intersections, adjustements may need to be made to signal phasing, timing, inidcations or detector settings.

Remove and/or modify existing pavement marking as needed.

Pavement marking and barricades optional for short term operations.

Temporary pavement marking required with long term lane closures.

For short term operation, where it is not feasible to modity pavement marking, a 10-feet device spacing is used where traffic is guided across double yellow lines or other conflicting pavement marking. All other spacing are one-half of the spacing.

(1) Temporary island may be used to emphasize the mandatory right turn movement where there is a sufficient right turn radius.

If rumble strips are used, review 616.6.87 RUMBLE STRIPS.

For flags and advance warning rail system, refer to EPG 616.6.2.2 Flags and Advance Warning Rail System.

TA-22a

1/16

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MO# PE-2017019023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
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project no.: N17-06420
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DATE: Mar 06, 2024 7:14am XREFS: C_PTBLK_N170642

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616.8.22b (TA-22b) Through Lane at Intersection - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOTES:

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

REMOVE AND/OR MODIFY EXISTING OR CONFLICTING PAVEMENT MARKING AS NEEDED.

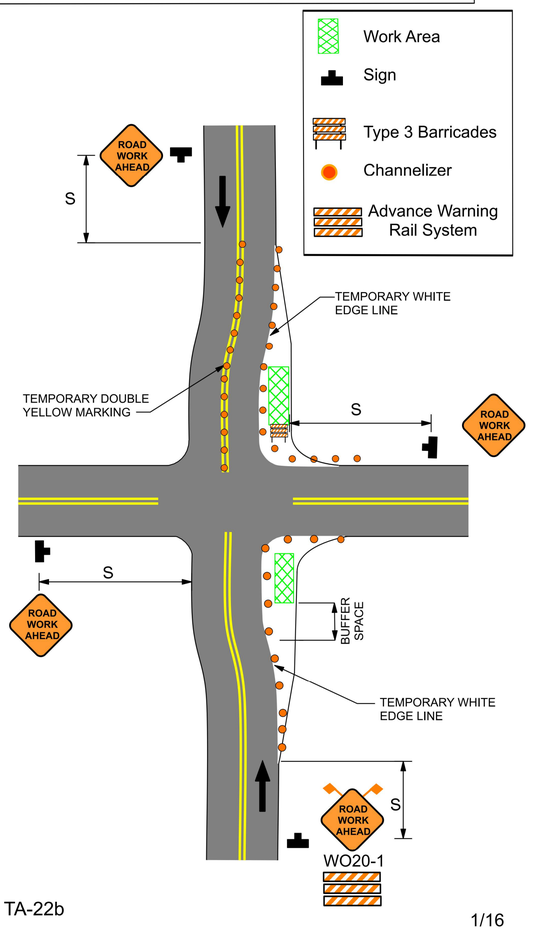
TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

FOR SHORT TERM OPERATIONS, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10' DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF MARKING.

PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.



TA-22b

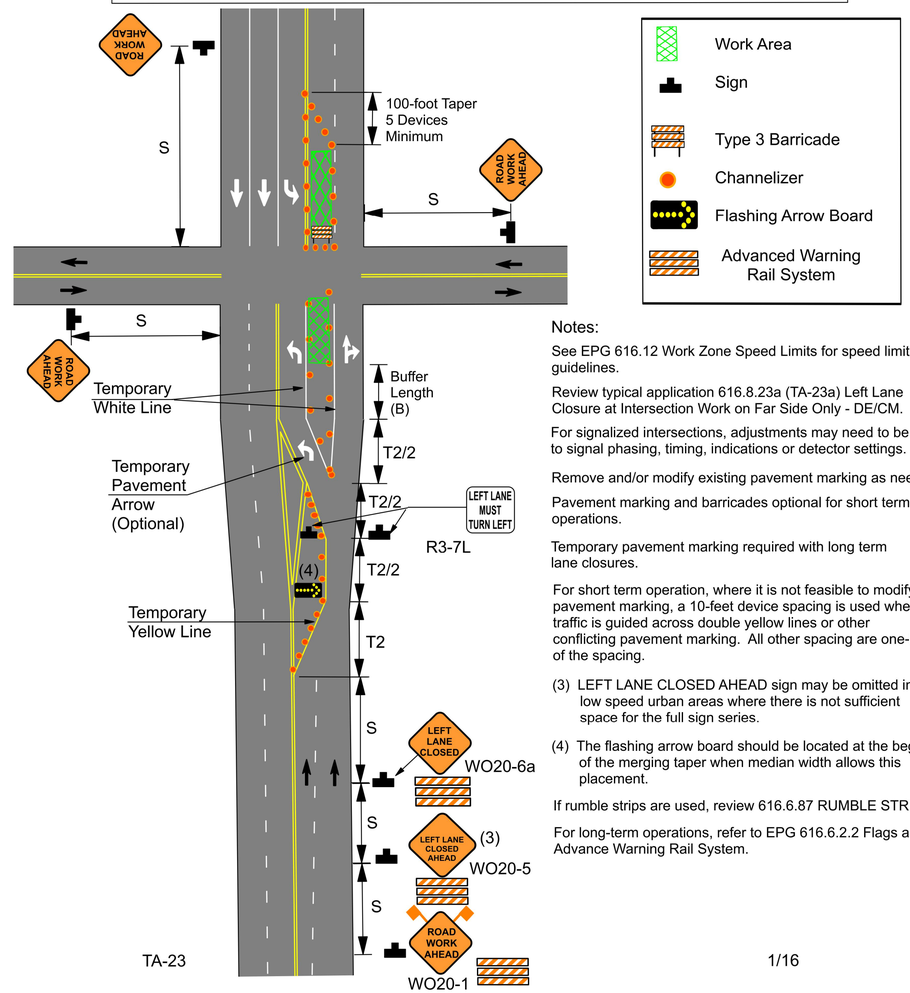
1/16

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616.8.23 (TA-23) Lane Closure of Left Lane on Far Side of Intersection Work on Near or Far Side - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.



TA-23

Notes:

See EPG 616.12 Work Zone Speed Limits for speed limit guidelines.

Review typical application 616.8.23a (TA-23a) Left Lane Closure at Intersection Work on Far Side Only - DE/CM.

For signalized intersections, adjustments may need to be made to signal phasing, timing, indications or detector settings.

Remove and/or modify existing pavement marking as needed.

Pavement marking and barricades optional for short term operations.

Temporary pavement marking required with long term lane closures.

For short term operation, where it is not feasible to modify pavement marking, a 10-feet device spacing is used where traffic is guided across double yellow lines or other conflicting pavement marking. All other spacing are one-half of the spacing.

(3) LEFT LANE CLOSED AHEAD sign may be omitted in low speed urban areas where there is not sufficient space for the full sign series.

(4) The flashing arrow board should be located at the beginning of the merging taper when median width allows this placement.

If rumble strips are used, review 616.6.87 RUMBLE STRIPS.

For long-term operations, refer to EPG 616.6.2.2 Flags and Advance Warning Rail System.

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STATE OF MISSOURI
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
58 of 95

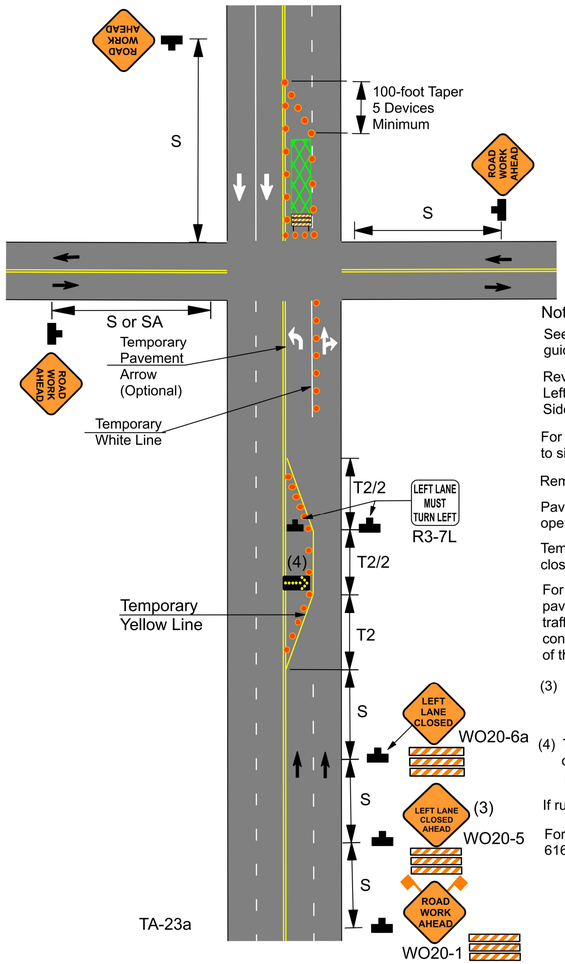
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616.8.23a (TA-23a) Left Lane Closure at Intersection - Work on Far Side Only - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.



TA-23a

Notes:

See EPG 616.12 Work Zone Speed Limits for speed limit guidelines.

Review typical application 616.8.23 (TA-23) Lane Closure of Left Lane on Far Side of Intersection - Work on Near or Far Side - DE/CM.

For signalized intersections, adjustments may need to be made to signal phasing, timing, indications or detector settings.

Remove and/or modify existing pavement marking as needed.

Pavement marking and barricades optional for short term operations.

Temporary pavement marking required with long term lane closures.

For short term operation, where it is not feasible to modify pavement marking, a 10-feet device spacing is used where traffic is guided across double yellow lines or other conflicting pavement marking. All other spacing are one-half of the spacing.

(3) LEFT LANE CLOSED AHEAD sign may be omitted in low speed urban areas where there is not sufficient space for the full sign series.

(4) The flashing arrow board should be located at the beginning of the merging taper when median width allows this placement.

If rumble strips are used, review 616.6.87 RUMBLE STRIPS.

For flags and advance warning rail system, refer to EPG 616.6.2.2 Flags and Advance Warning Rail System.

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616.8.30a (TA-30a) Operations in Two-Way Left Turn Lane on Multi-Lane Undivided Highways - DE/CM

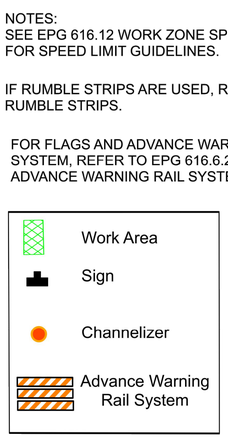
SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	-	70	245	280	35	40
40-45	350	-	150	540	400	40	80
50-55	500	-	185	660	560	50	80
60-70	1000	-	235	840	840	60	120

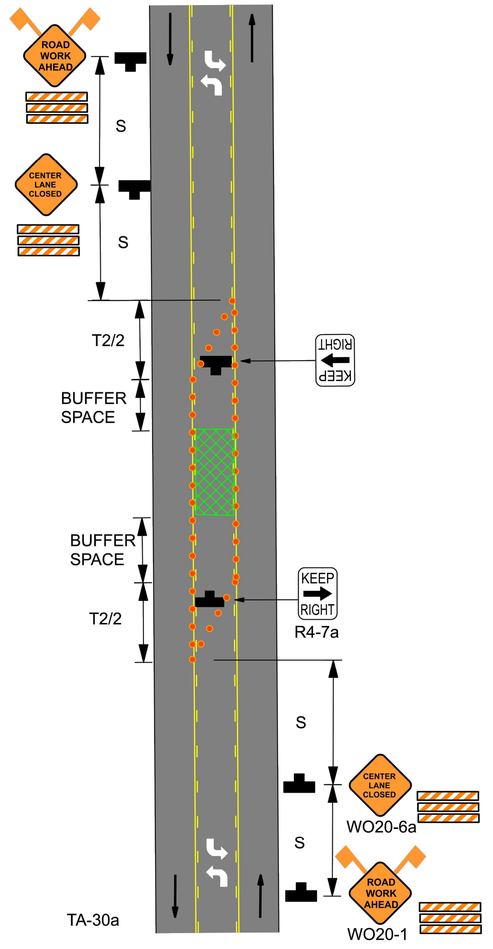
1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOTES:
SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

IF RUMBLE STRIPS ARE USED, REVIEW 616.6.87 RUMBLE STRIPS.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.





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TA-30a

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MO# PE-2017019023

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4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
59 of 95

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DATE: Mar 06, 2024 7:15am XREFS: C_PTBLK_N170642

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616.8.31 (TA-31) LANE CLOSURE USING CENTER TURN LANE - LANE SHIFT - DE/CM

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Divided (S)	Shoulder (1) (T1)	Lane (2) (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	-	70	245	280	35	40
40-45	350	-	150	540	400	40	80
50-55	500	-	185	660	560	50	80
60-70	1000	-	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOTES:

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

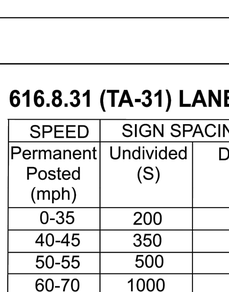
REMOVE AND/OR MODIFY EXISTING PAVEMENT AS NEEDED.

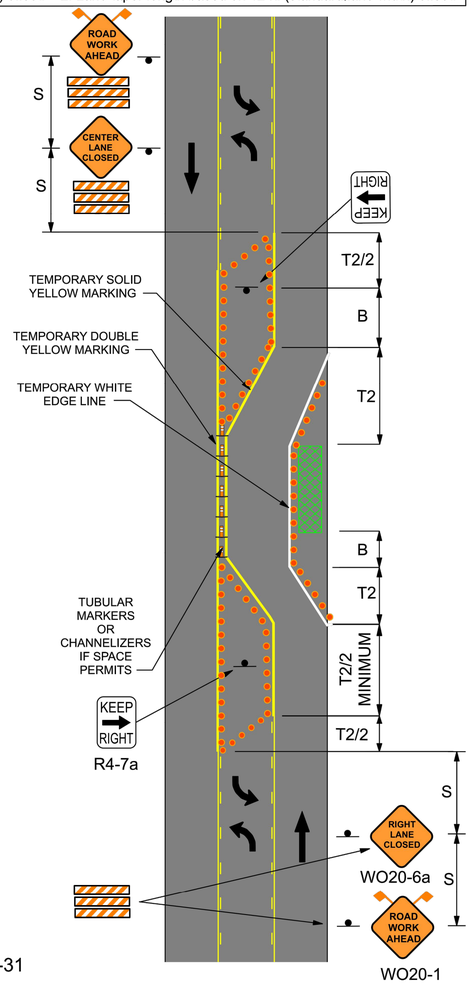
TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

FOR SHORT TERM OPERATIONS WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING. DEVICE SPACINGS ARE ONE-HALF OF THE SPACING.

IF RUMBLE STRIPS ARE USED, REVIEW 616.6.87 RUMBLE STRIPS.

FOR FLAG AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.





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TA-31

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

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CITY OF JOPLIN

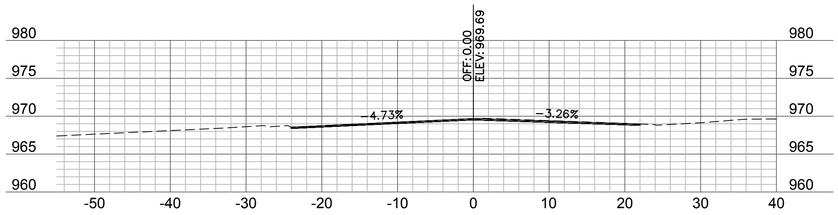
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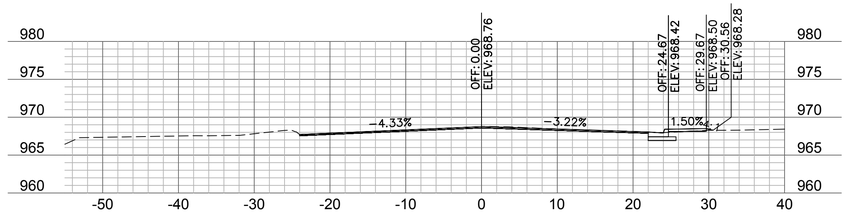
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drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
60 of 95

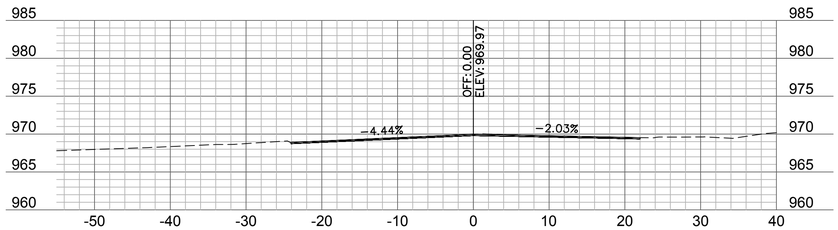
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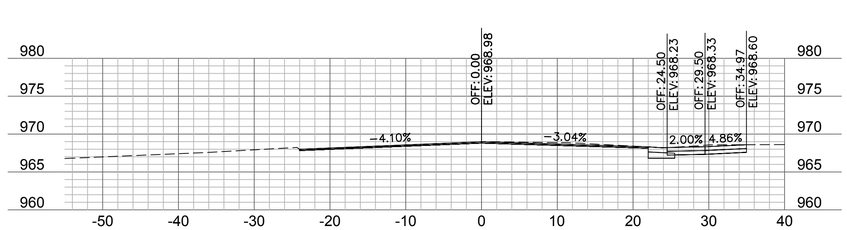
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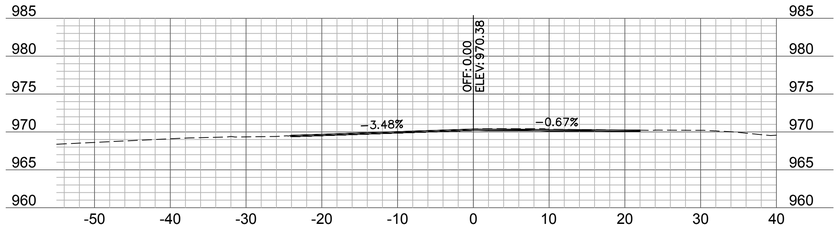
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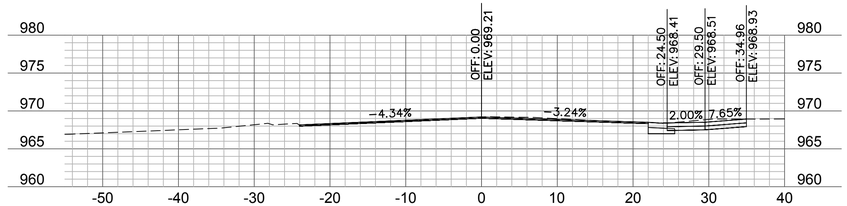
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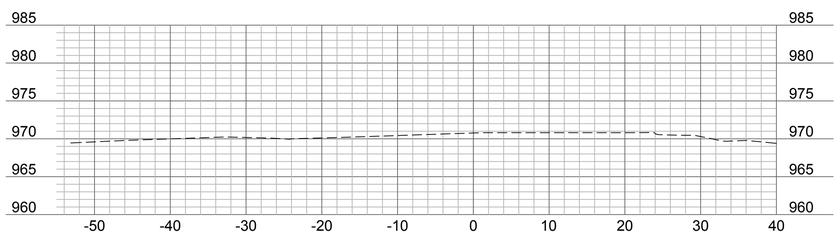
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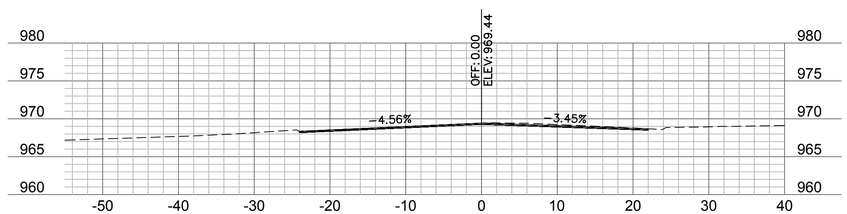
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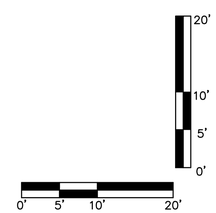
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115+84.11



116+75



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STATE OF MISSOURI
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PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

CROSS SECTIONS
4TH STREET

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

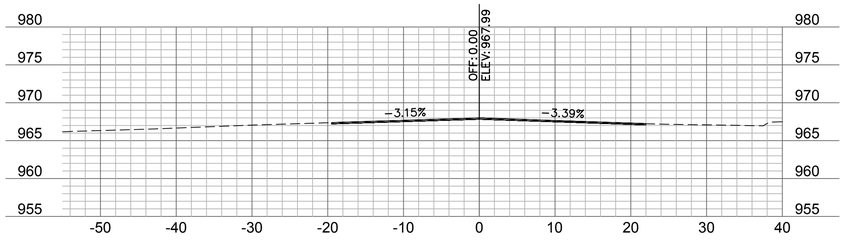
JOPLIN, MISSOURI

2023

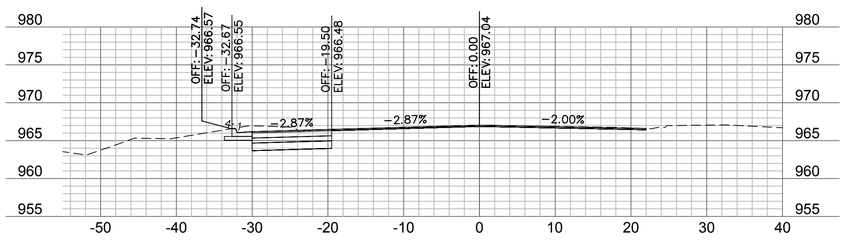
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checked by: JWP
approved by: JWP
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project no.: N17-06420
drawing no.: C_XSC01_N170642
date: 3/6/24

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61 of 95

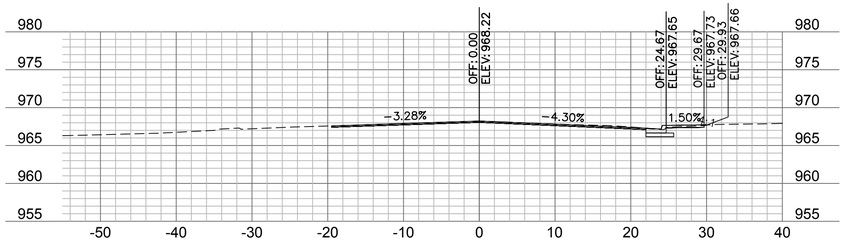
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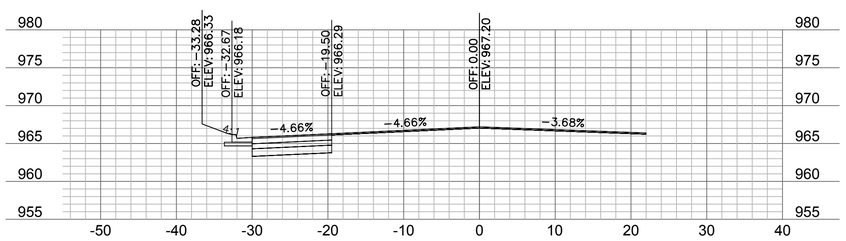
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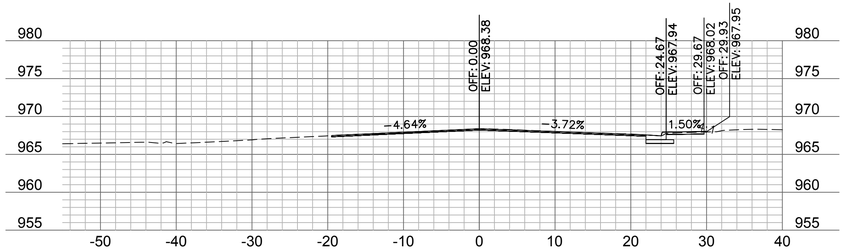
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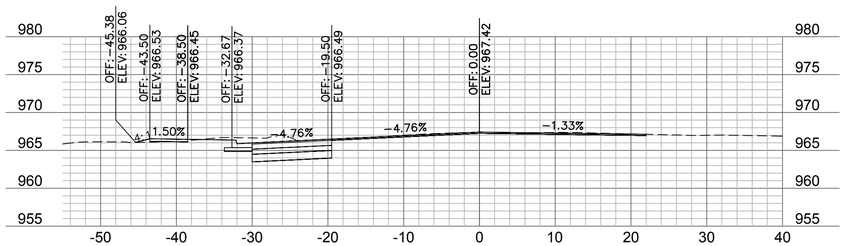
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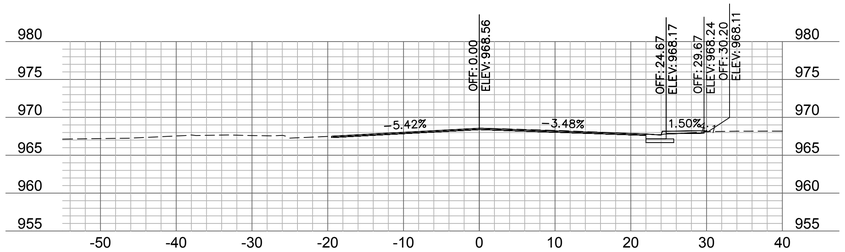
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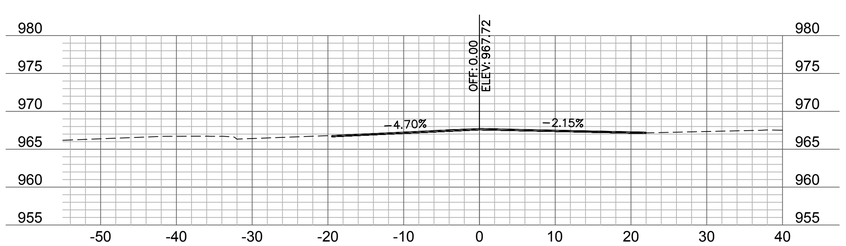
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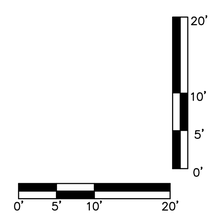
119+00



117+75



118+75



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2024.03.06 07:15:00

STATE OF MISSOURI
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NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

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REVISIONS

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4TH STREET

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

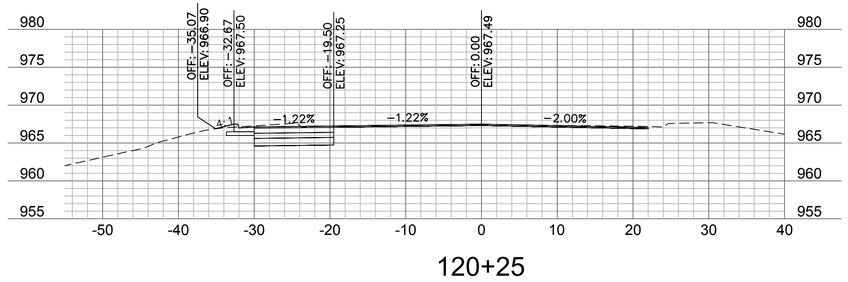
JOPLIN, MISSOURI

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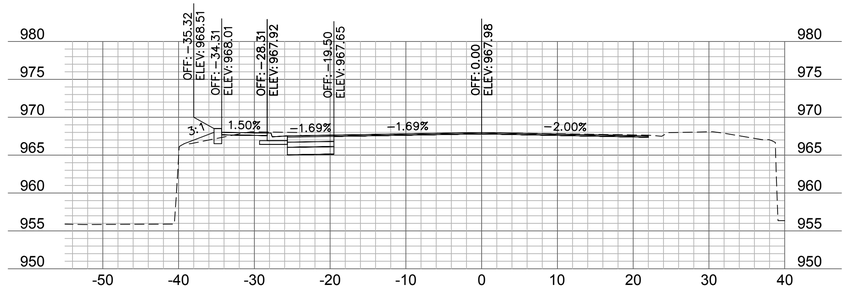
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checked by: JWP
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SHEET
62 of 95

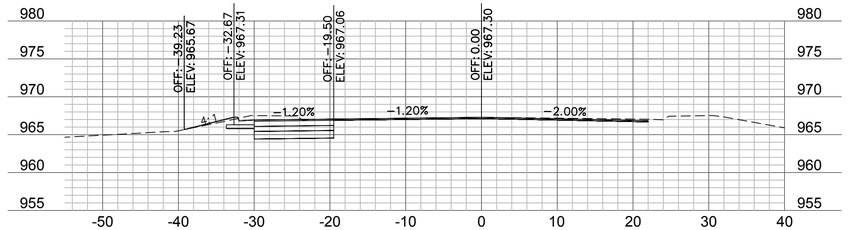
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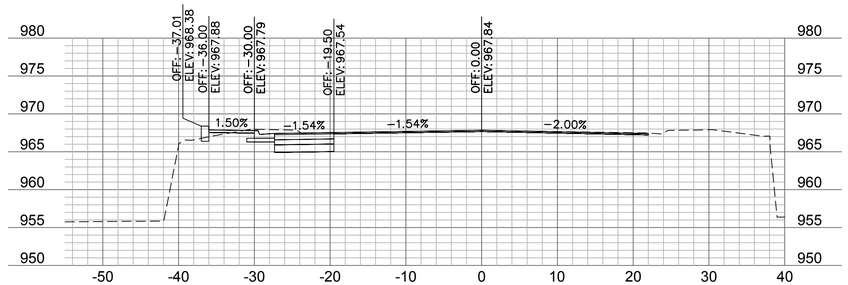
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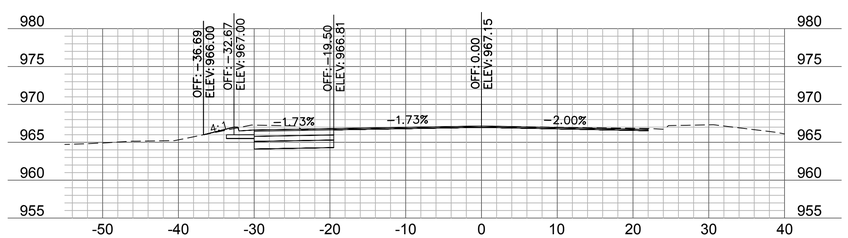
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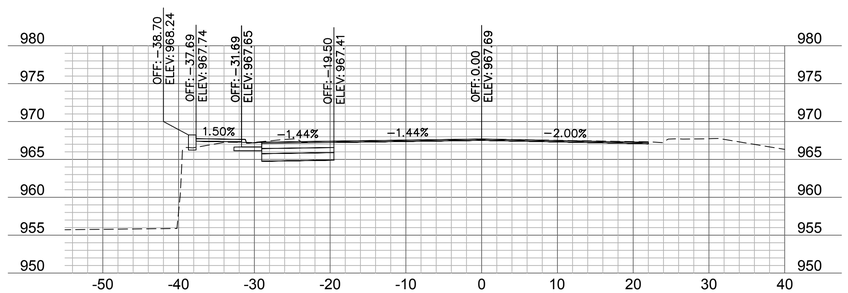
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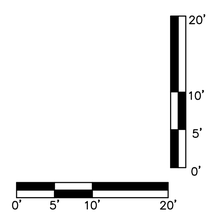
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

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		REVISIONS	

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4TH STREET

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

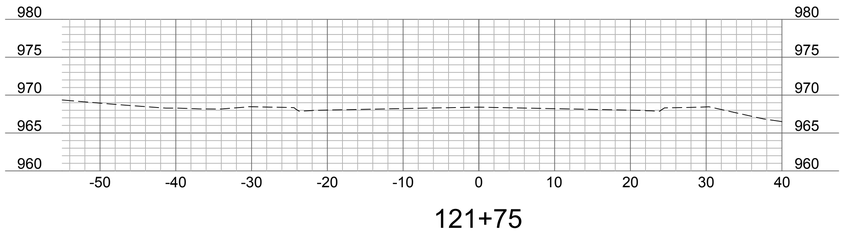
JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
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project no.: N17-06420
drawing no.: C_XSC01_N170642
date: 3/6/24

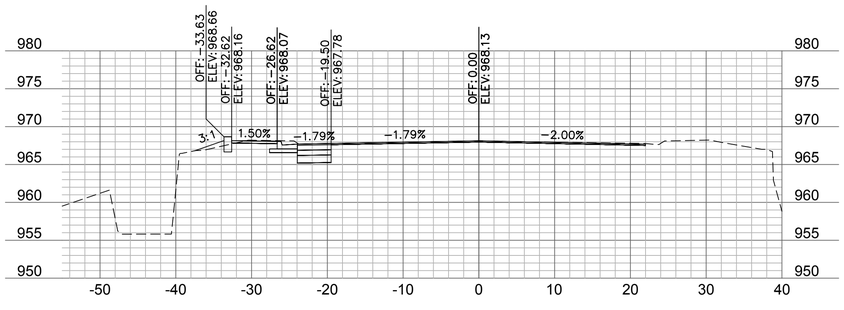
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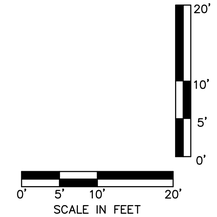


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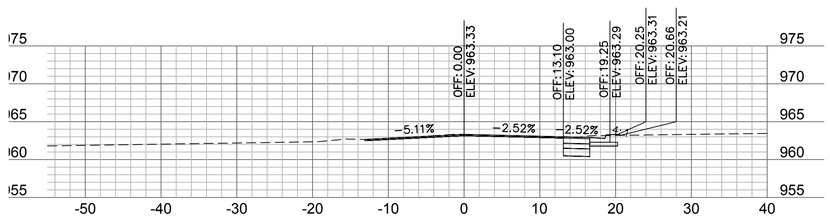
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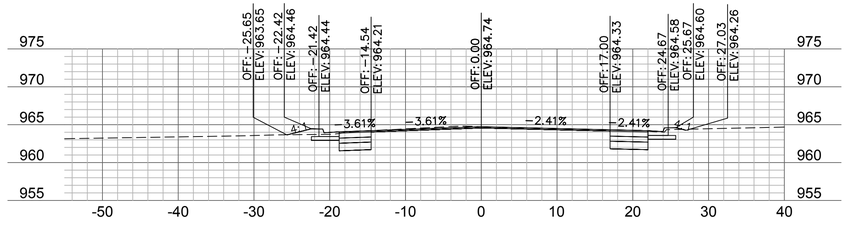
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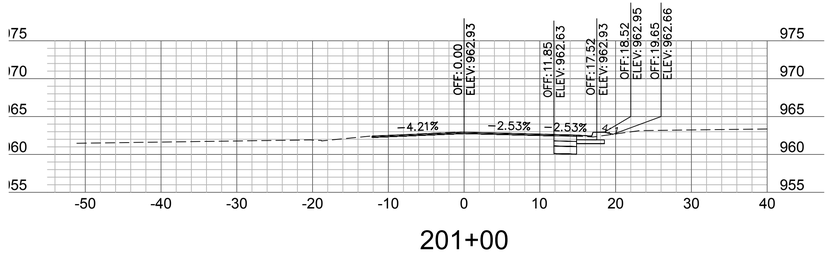
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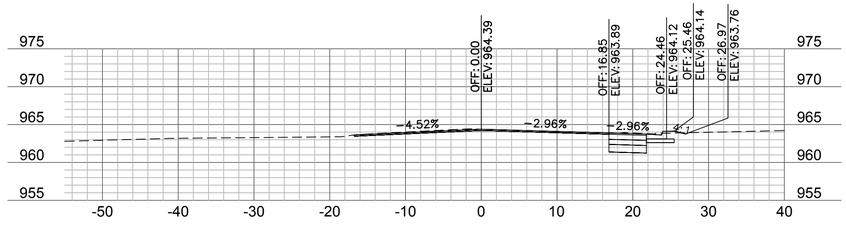
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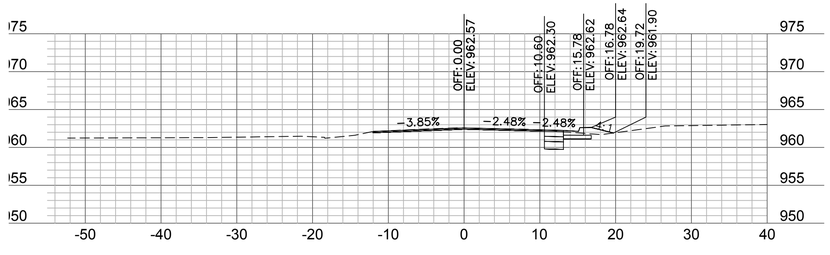
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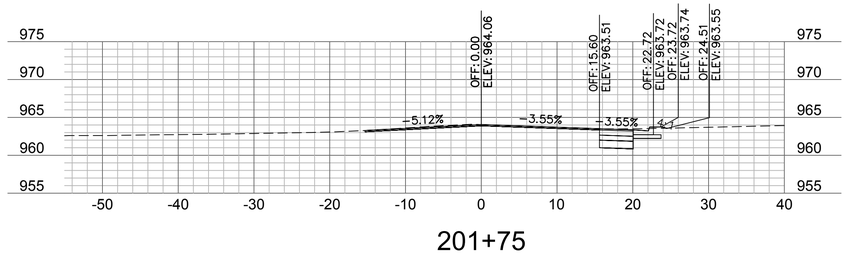
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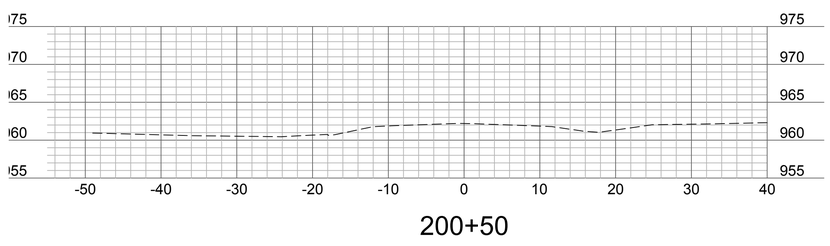
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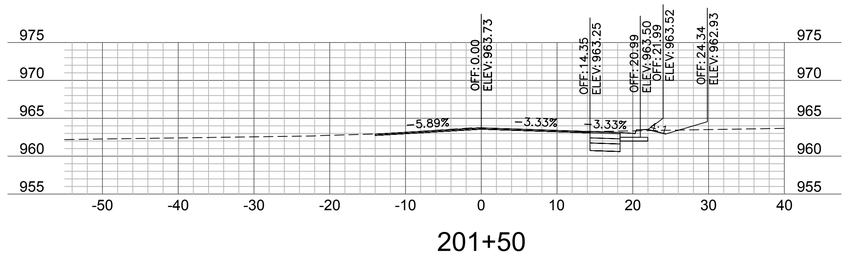
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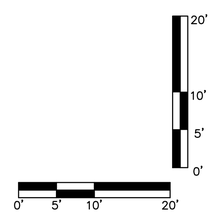
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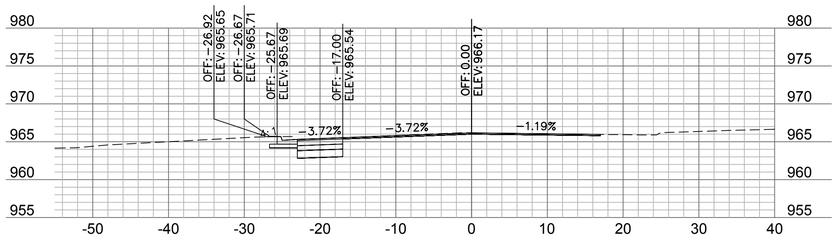
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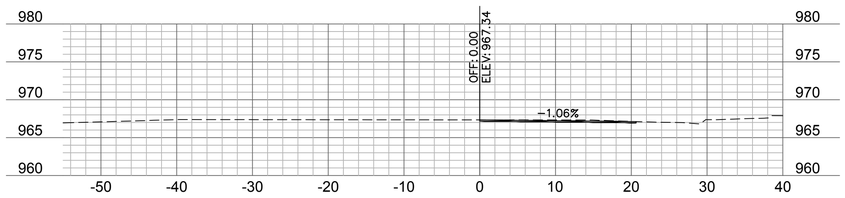
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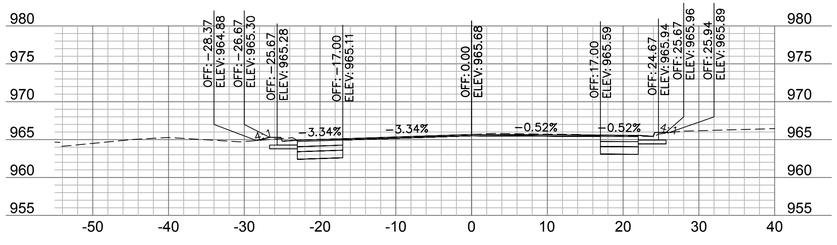
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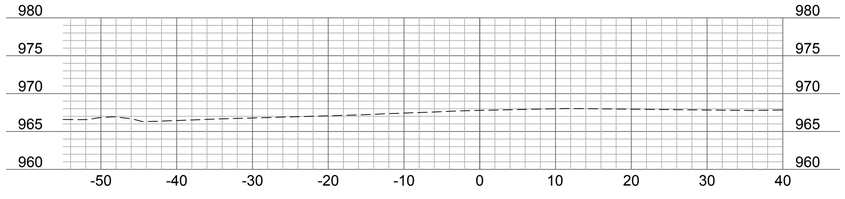
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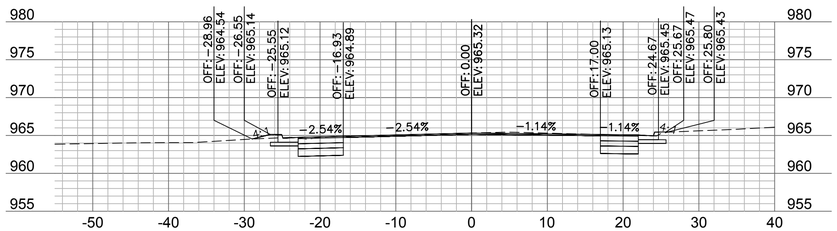
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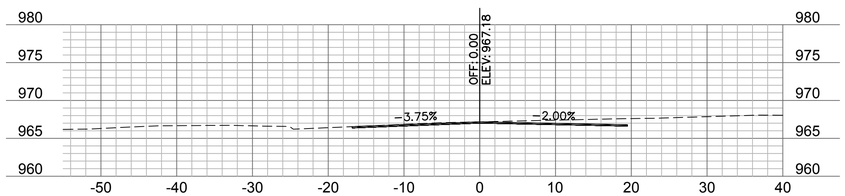
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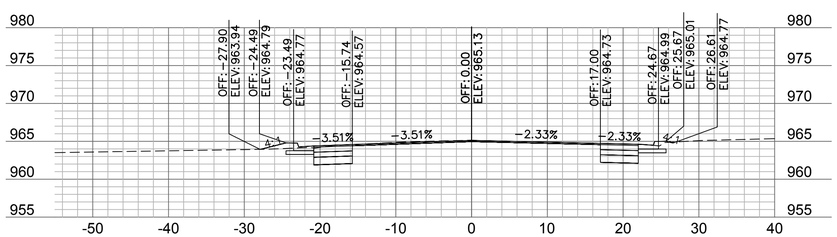
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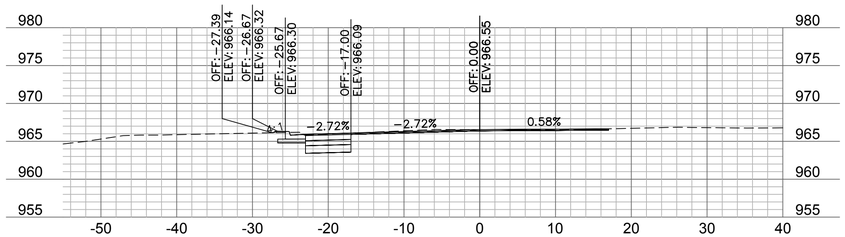
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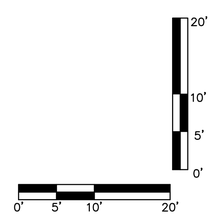
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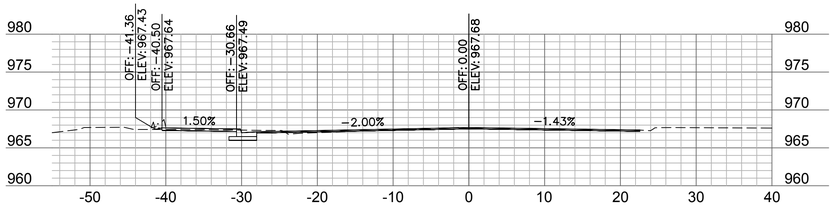
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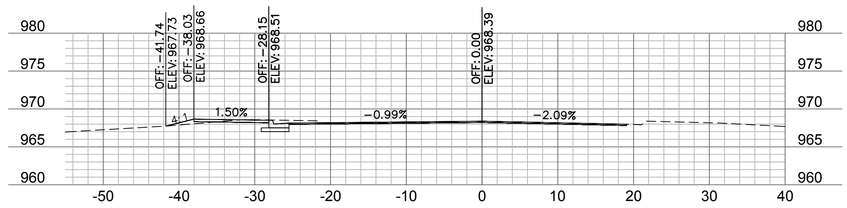
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date: 3/6/24

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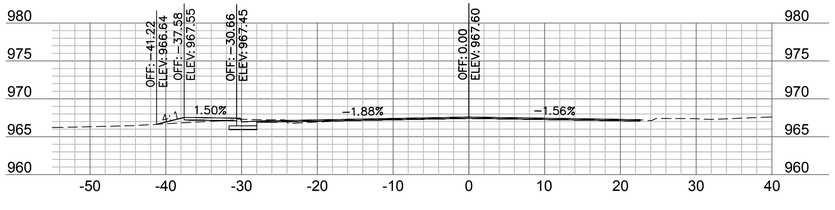
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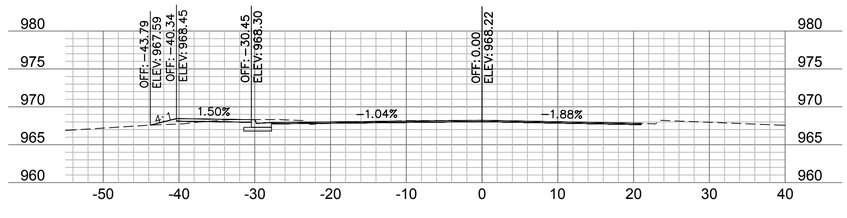
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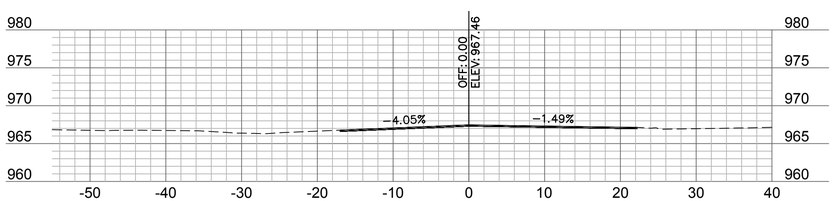
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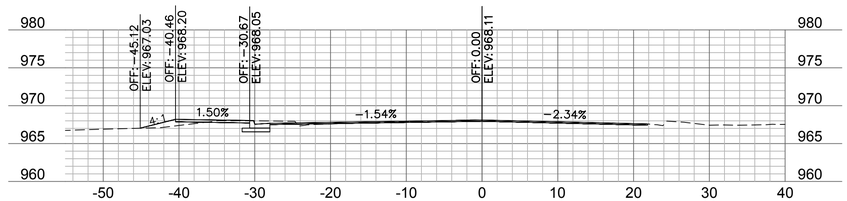
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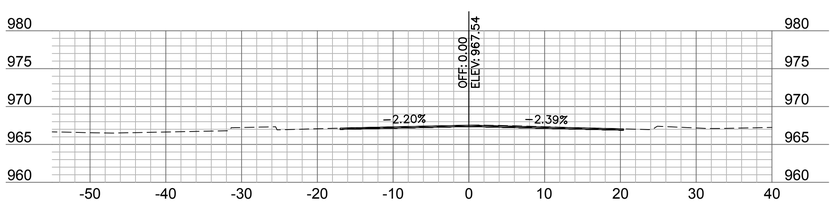
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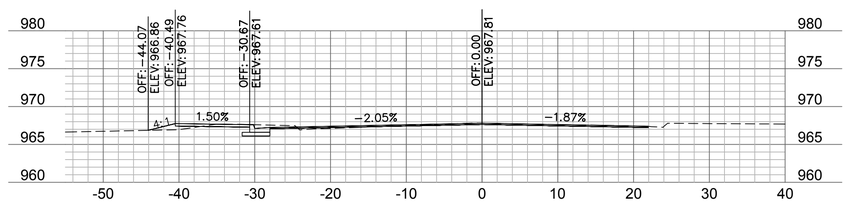
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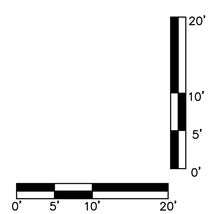
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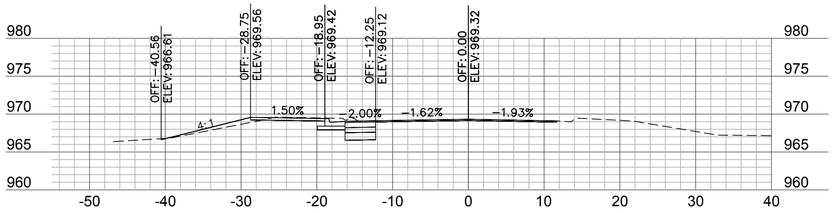
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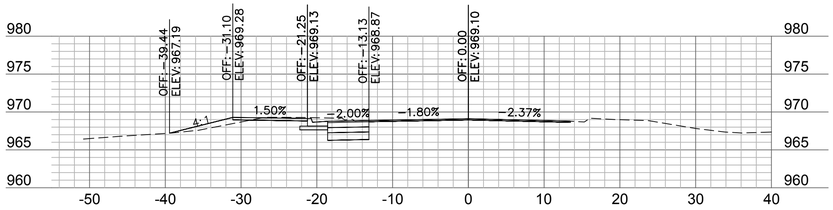
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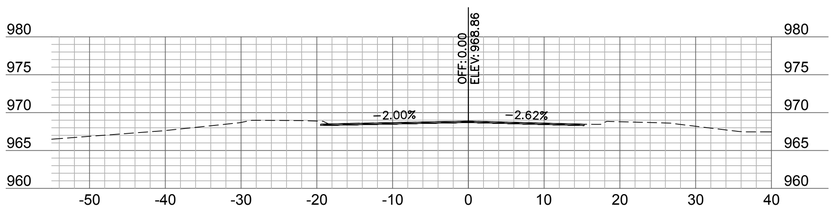
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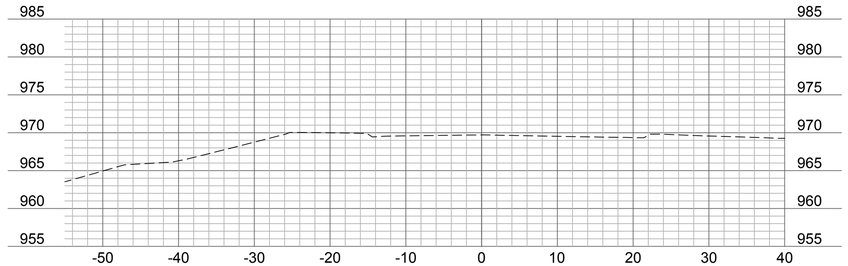
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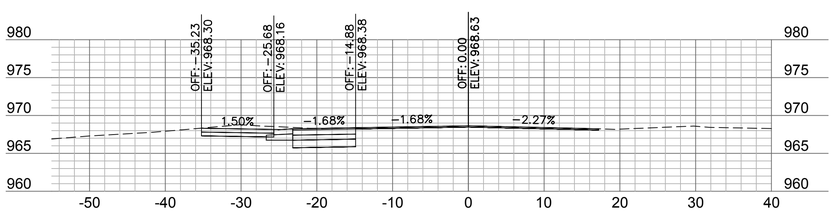
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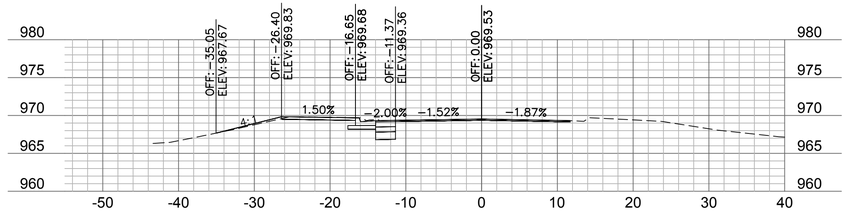
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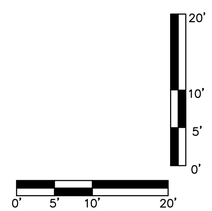
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66		HARDSCAPE PLAN (BID ALT 1)		X			
67		HARDSCAPE DETAILS		X			
68		HARDSCAPE DETAILS		X			
69		HARDSCAPE DETAILS		X			
70		LANDSCAPE PLAN (BID ALT 1)		X			
71		LANDSCAPE DETAILS		X			
72		HARDSCAPE PLAN (BID ALT 2 & 3)		X			
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321373		PAVEMENT JOINT SEALANT		X			
3214400		UNIT PAVING		X			
323300		SITE FURNISHINGS		X			
329200		TURF AND GRASSES		X			
329300		PLANTS		X			
329310		NATIVE GRASS SEEDING		X			

HARDSCAPE MATERIALS

KEY	MATERIAL NAME	MANUFACTURER/SUPPLIER	COLLECTION	COMMENTS	CONTACT
	PAVING				
	CONCRETE				
P-100.0	LIGHT DUTY CONCRETE PAVERS	BELGARD	MODULINE SERIES	RED BRICK, HERRINGBONE PATTERN, 80MM, POLYMERIC SAND JOINTING	CRAIG FOLKERS, PH: 913.667.1792
P-100.1	LIMESTONE INLAY BLOCK	U.S. STONE		DOLOMITIC LIMESTONE TYPE 3 INLAY, ENGRAVED & FILLED BLACK	HANNAH LEIS, PH: 913.529.4154
	CAST IN PLACE				
P-200.0	GRAY CONCRETE	N/A	N/A	MEDIUM BROOM FINISH	
	EDGING				
	NATURAL				
E-100.0	DECORATIVE COBBLE	LOCAL SUPPLIER		BUFFALO RIVER ROCK, 2"-3" MAX SIZE	
	METAL				
E-100.1	STEEL BED EDGE	BORCON	N/A	1/8TH THICK BY 6" HEIGHT BY 10' LENGTH	
	WALLS				
	NATURAL				
S-100.0	LIMESTONE SEATING BLOCK	ROCKLAND STONE LLC		DOLOMITIC LIMESTONE TYPE 3 BLOCK, 18" X 18" X 18", SAWN TOP & BOT, ROUGH CUT (4) VERTICAL FACES	HANNAH LEIS, PH: 913.529.4154

SITE FURNISHINGS

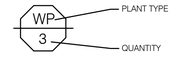
KEY	MATERIAL NAME	MANUFACTURER/SUPPLIER	COLLECTION	COMMENTS	CONTACT
	SITE FURNISHINGS				
	MANUFACTURED				
SF-100.0	LITTER RECEPTACLE	FORMS & SURFACES	UNIVERSAL	SLUNN-30SSS, FADE PERFORATION. SURFACE MOUNT.	JACKIE DIETZ. PH: 630.207.9908
SF-100.1	BIKE RACK	FORMS & SURFACES	GARDEN	CONFIGURATION C-CIP, POWDERCOAT SILVER TEXTURE	JACKIE DIETZ. PH: 630.207.9908
SF-100.2	BIKE REPAIR STATION	DERO	FIXIT PLUS	COLOR BLACK	PH: 888.337.6729

HARDSCAPE GENERAL NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF JOPLIN, MISSOURI IN CURRENT USAGE. ALL STANDARDS NOT COVERED BY THE CITY SHALL BE APWA STANDARDS IN CURRENT USAGE UNLESS OTHERWISE NOTED.
2. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE UTILITY INFORMATION IS NOT MEANT TO BE ALL INCLUSIVE. THE CONTRACTOR SHALL NOTIFY MISSOURI ONE CALL (811) BEFORE THE START OF ANY EXCAVATION WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION TO PROVIDE NON-INTERRUPTION OF SERVICE, TO ENSURE PROPER CLEARANCES, AND TO AVOID DAMAGE THERETO.
3. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO COMMENCING WORK, SATISFY HIMSELF AS TO, AND ACCEPT THE SITE CONDITIONS TO BE ENCOUNTERED.
5. WHERE THE NEW IMPROVEMENTS ABUT EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATCHING THE ELEVATION OF THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL PROVIDE A SECURE SITE TO PROTECT VEHICLES AND PEDESTRIANS FROM ACCIDENTAL FALLS AND HARM FROM THE CONSTRUCTION PROCESS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DE-WATERING CONSTRUCTION AREAS IN ORDER TO PERMIT CONTINUATION OF THE WORK. ANY WATER ACCUMULATION SHALL BE REMOVED BY PUMPING.
8. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES OR MATERIALS AS SHOWN IN THESE PLANS. CONTRACTOR SHALL ACCOMMODATE ALL SLOPE AND GRADE CONDITIONS IN THEIR CALCULATION OF MATERIAL QUANTITIES FOR ALL WORK SHOWN ON THESE PLANS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PEDESTRIAN AND VEHICULAR TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS. OWNER SHALL APPROVE MEASURES USED TO ALLOW TENANTS AND SHOPPERS PROPER ACCESS DURING CONSTRUCTION.
10. CONTRACTOR SHALL TAKE CARE TO CREATE SMOOTH UNIFORM FINISH GRADES IN ALL AREAS.
11. SLOPES SHALL BE MADE WITH A 4 TO 1 MAXIMUM GRADE FOR MAINTENANCE PURPOSES, UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL MATCH GRADES AT EXISTING IMPROVEMENTS.
13. ALL SPOT ELEVATIONS SHOWN ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL ADJUST ALL VALVE BOXES, MANHOLE RING COVERS, AND OTHER UTILITY APPURTENANCES TO MATCH FINISH GRADE ELEVATIONS.
15. TURF & SHRUB BED AREAS SHALL BE GRADED AS NECESSARY TO ALLOW A 2% SLOPE TO INLET LOCATIONS AND SWALES.
16. ALL WORK CONSTRUCTED UNDER THESE PLANS SHALL MEET SLOPE REQUIREMENTS PER THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, THE 2012 TAS STANDARDS FOR ACCESSIBLE DESIGN, AND INTERNATIONAL BUILDING CODE IN CURRENT USAGE. MAXIMUM 5% RUNNING SLOPE AND MAXIMUM 2% CROSS SLOPE FOR SIDEWALKS.
17. ALL WORK CONSTRUCTED UNDER THESE PLANS SHALL HAVE A MINIMUM OF A 1% SLOPE. LANDSCAPE BEDS AND TURF AREAS SHALL HAVE A MINIMUM OF A 2% SLOPE.
18. CHANGES IN LEVEL SHALL NOT BE GREATER THAN 1/4" AND A MAXIMUM OF 1/2" ARE ALLOWED WITH A BEVELED SLOPE NOT STEEPER THAN 1:2.

LANDSCAPE GENERAL NOTES:

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF JOPLIN, MISSOURI IN CURRENT USAGE. ALL STANDARDS NOT COVERED BY THE CITY SHALL BE APWA STANDARDS IN CURRENT USAGE UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, DRAIN LINES AND IRRIGATION PIPING PRIOR TO COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, DRAIN LINES AND IRRIGATION PIPING.
3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL FINAL GRADES WITH LANDSCAPE ARCHITECT PRIOR TO COMPLETION.
4. DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE AND SHALL BE REMOVED AT FREQUENT INTERVALS. AT COMPLETION OF WORK IN EACH AREA, THE CONTRACTOR SHALL GATHER AND REMOVE ALL DEBRIS, EQUIPMENT, AND EXCESS MATERIAL FROM THAT AREA. AT FINAL COMPLETION OF ALL WORK HE SHALL REMOVE ALL SUCH ITEMS FROM THE PREMISES.
5. LOCATION AND PLACEMENT OF ALL PLANT MATERIAL SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. THE LANDSCAPE PLANTING PLAN GRAPHICALLY ILLUSTRATES OVERALL PLANT MASSINGS. EACH PLANT SPECIES SHALL BE PLACED IN THE FIELD TO UTILIZE THE GREATEST COVERAGE OF THE GROUND PLANE. THE FOLLOWING APPLIES FOR INDIVIDUAL PLANTINGS:
   -ALL EVERGREEN SHRUBS AND CREEPING GROUNDCOVERS SHALL BE MINIMUM OF 2' FROM ANY PAVING EDGE.
   -ALL PLANTS OF THE SAME SPECIES SHALL BE EQUALLY SPACED AND SITED FOR THE BEST AESTHETIC VIEWING.
   -ALL TREES, EVERGREEN OR DECIDUOUS, SHALL BE A MINIMUM OF 4' FROM ANY PAVING EDGE.
7. ANY SUBSTITUTION OF SPECIFIED PLANT MATERIAL WILL NOT BE ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
8. MULCH ALL PLANTING AREAS TO A DEPTH OF 3" DEPTH ACCORDING TO PLANS AND SPECIFICATIONS. SAMPLES SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
9. ALL PLANT MATERIAL WILL BE HEALTHY, VIGOROUS AND FREE OF DISEASE AND INSECTS PER AAN STANDARDS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY INFERIOR OR OTHERWISE UNSUITABLE PLANT MATERIAL PROPOSED FOR USE ON THE PROJECT.
10. ALL PLANTING BEDS NOT FULLY CONTAINED BY CONCRETE CURBS OR WALKS SHALL BE EDGED ACCORDING TO PLANS AND SPECIFICATIONS.
11. PLANTS AND LANDSCAPE MATERIALS SHALL BE INSTALLED AS DETAILED ON PLANS.
12. PLANT BACKFILL FOR TREES AND SHRUBS SHALL BE PER SPECIFICATIONS.
13. ALL PLANTING BEDS SHALL BE TREATED WITH DACTHAL PRE-EMERGENT HERBICIDE AT MANUFACTURER RECOMMENDED RATES AND SHALL BE COVERED WITH SPECIFIED MULCH APPLICATION. APPLY LIGHTER APPLICATION OF DACTHAL HERBICIDE TO TOP OF MULCH LAYER.
14. ALL AREAS DISTURBED DURING CONSTRUCTION THAT ARE NOT DESIGNATED AS PLANTING BEDS OR PAVEMENT AREAS SHALL BE SEEDED WITH A TURF TYPE TALL FESCUE PER SPECIFICATIONS.
15. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER OWNER'S FINAL ACCEPTANCE OF FINISHED JOB. ALL DEAD AND DAMAGED PLANT MATERIAL SHALL BE REPLACED BY LANDSCAPE CONTRACTOR AT THEIR EXPENSE. LANDSCAPE CONTRACTOR SHALL MAINTAIN PLANT MATERIAL UNTIL FINAL ACCEPTANCE.
16. ALL LANDSCAPE BEDS SHALL BE MOUNDED AS SHOWN ON PLANS AND DETAILS.
17. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTUAL PLANT QUANTITIES REQUIRED TO COMPLETE THE PROJECT AS SHOWN ON THE PLANS, AND BASE THEIR BID ACCORDINGLY.
18. PLANT KEY DESCRIPTION.



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STATE OF MISSOURI
CODY PRATT
NUMBER LA-2043033117
LANDSCAPE ARCHITECT

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REVISIONS

SHEET INDEX & GENERAL NOTES

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

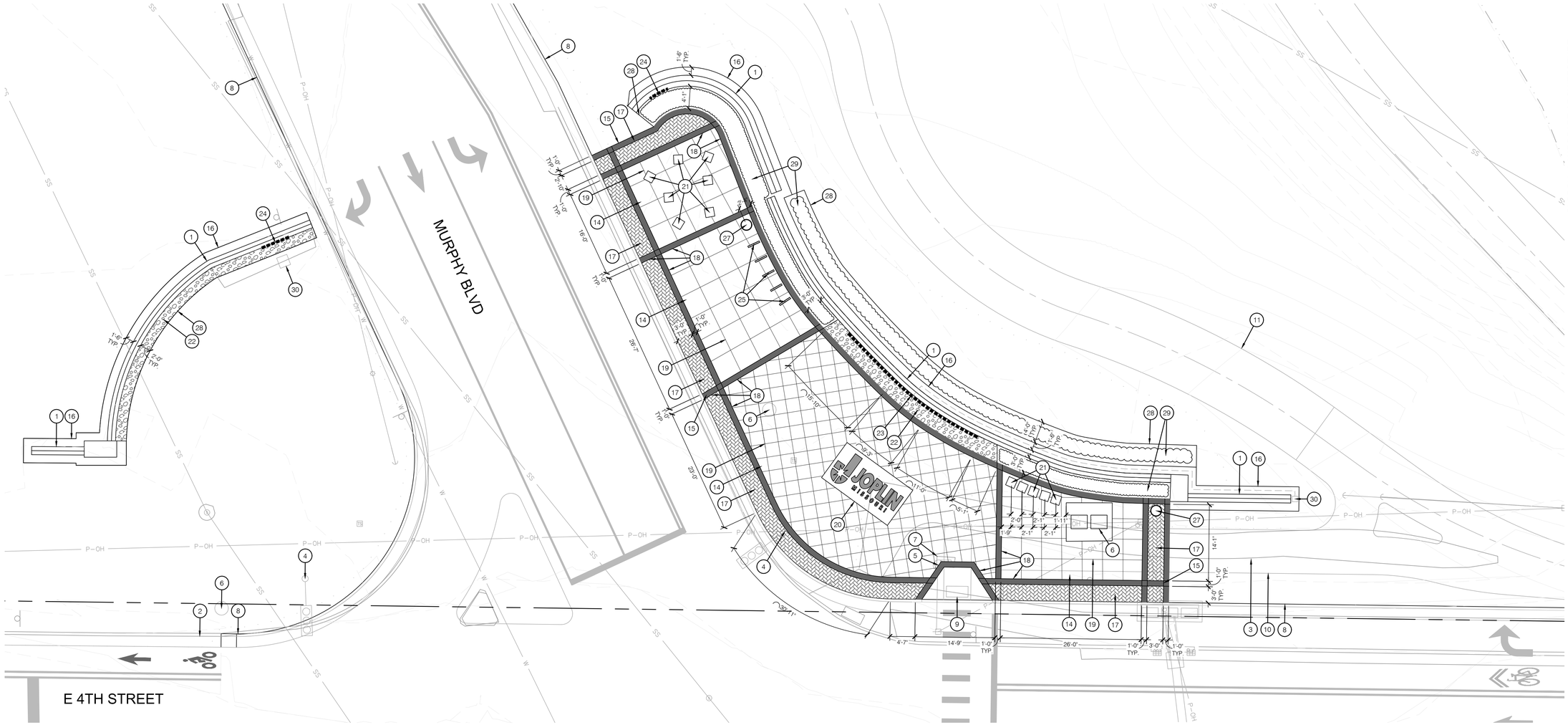
JOPLIN, MISSOURI

2023

drawn by: TS
checked by: CP
approved by: CP
QA/QC by: CC
project no.: N17-06420
drawing no.: L_CVR01_N170642
date: 3/6/24

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1 HARDSCAPE PLAN

HARDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- GRAY CONCRETE (2.5' X 2.5')
- GRAY CONCRETE (4' X 4')
- DARK GRAY CONCRETE BAND
- RED BRICK HERRINGBONE PATTERN
- DECORATIVE COBBLE

HARDSCAPE PLAN NOTES:

1. EXISTING WALL TO REMAIN
2. EXISTING CURB TO REMAIN
3. EXISTING CONCRETE WALK TO BE REMOVED
4. EXISTING TRAFFIC SIGNAL TO BE REMOVED; REF: CIVIL PLANS
5. EXISTING SIGNAL CABINET TO BE RELOCATED; REF: CIVIL PLANS
6. NEW TRAFFIC SIGNAL CABINET; REF: CIVIL PLANS
7. NEW TRAFFIC SIGNAL; REF: CIVIL PLANS
8. CONCRETE CURB; REF: CIVIL PLANS
9. ADA RAMP; REF: CIVIL PLANS
10. CONCRETE SIDEWALK; REF: CIVIL PLANS
11. CONCRETE TRAIL; REF: CIVIL PLANS
12. PARKING LOT; REF: CIVIL PLANS
13. RETAINING WALL; REF: CIVIL PLANS
14. CONSTRUCT GRAY CONCRETE; REF: 1/71
15. CONSTRUCT GRAY CONCRETE BANDING; REF: 1/71
16. CONSTRUCT CONCRETE MOW STRIP; REF: 1/71
17. INSTALL RED BRICK PAVER; REF: 3/71
18. INSTALL EXPANSION JOINT; REF: 4/71
19. INSTALL CONTROL JOINT; REF: 4/71
20. INSTALL LIMESTONE INLAY; REF: 1/72
21. INSTALL LIMESTONE SEATING BLOCK; REF: 5/71
22. INSTALL DECORATIVE COBBLE; REF: 4/75
23. INSTALL LANDRETH PARK SIGNAGE; REF: 1/73
24. INSTALL JOPLIN LOGO SIGNAGE; REF: 2/73
25. INSTALL BIKE RACK; REF: 4/72
26. INSTALL BIKE REPAIR STATION; REF: 3/72
27. INSTALL LITTER RECEPTACLE; REF: 2/72
28. INSTALL STEEL EDGING; REF: 5/75
29. PLANTING BED. CONTRACTOR SHALL LEAVE PLANTING BEDS CLEAN OF GRAVEL AND DEBRIS; REF: LANDSCAPE PLANS
30. ELECTRICAL JUNCTION BOX; REF: CIVIL PLANS

0 5 10 20

NORTH

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HARDSCAPE PLAN
BID ALTERNATIVE 1

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

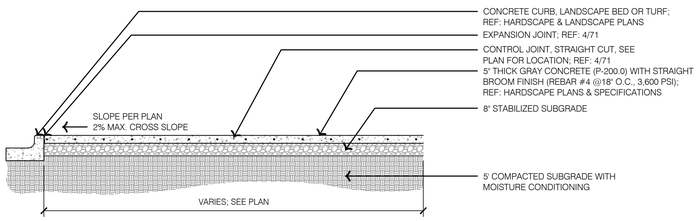
JOPLIN, MISSOURI

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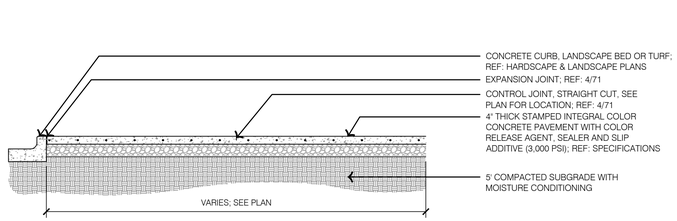
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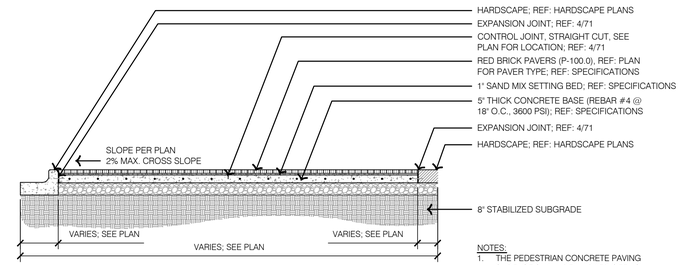
NOTES:
1. EXPANSION JOINTS SHALL BE PLACED AT RADIAL POINTS AND WHERE SIDEWALKS & PEDESTRIAN CONCRETE PAVING ABUTS CONCRETE CURB, DRIVEWAYS AND SIMILAR STRUCTURES. JOINTS TO BE PLACED AT INTERVALS WITH NOT MORE THAN 100' CENTERS.
2. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
3. BROOM FINISH SHALL BE PERPENDICULAR TO BUILDING FACADE.
4. GRAY CONCRETE SHALL BE PER SPECIFICATIONS

1 TYPICAL GRAY CONCRETE DETAIL



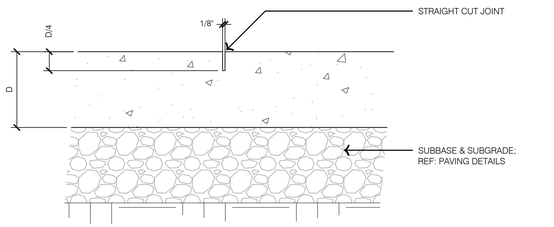
NOTES:
1. EXPANSION JOINTS SHALL BE PLACED AT RADIAL POINTS AND WHERE SIDEWALKS & PEDESTRIAN CONCRETE PAVING ABUTS CONCRETE CURB, DRIVEWAYS AND SIMILAR STRUCTURES. JOINTS TO BE PLACED AT INTERVALS WITH NOT MORE THAN 100' CENTERS.
2. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
3. PROPOSED JOINTS SHALL BE "V" CUT JOINTS IN PAVEMENT AS SHOWN ON PLANS.
4. STAMP PATTERN; REF: SPECIFICATIONS

2 TYPICAL STAMPED CONCRETE DETAIL

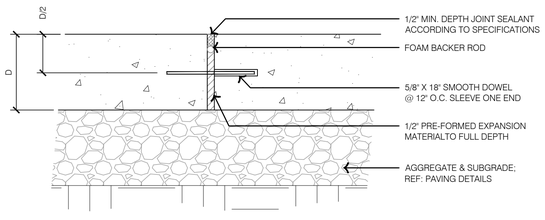


NOTES:
1. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
2. BROOM FINISH SHALL BE PERPENDICULAR TO BUILDING FACADE.

3 TYPICAL PAVER ON CONCRETE DETAIL

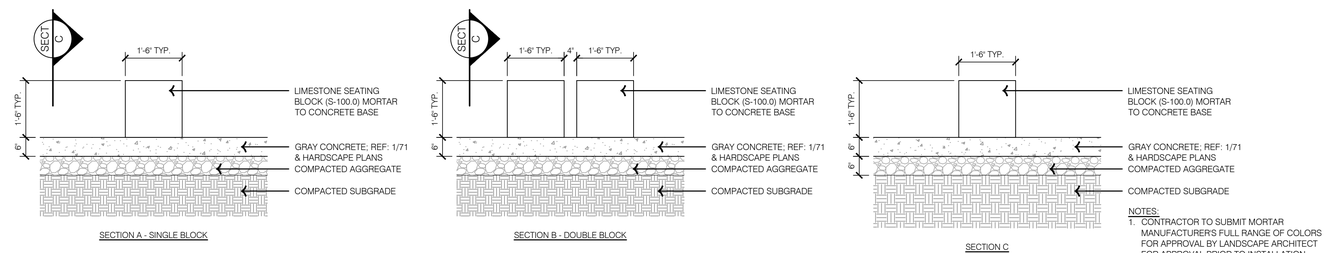


CONTROL JOINT DETAIL - STRAIGHT CUT



EXPANSION JOINT DETAIL

4 TYPICAL CONCRETE JOINTING DETAIL



5 LIMESTONE SEATING BLOCK DETAILS

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HARDSCAPE DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
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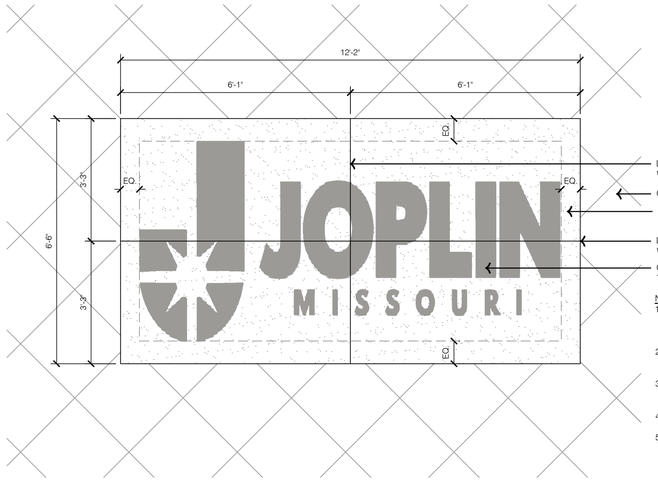
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LIMESTONE INLAY JOINT, TO BE FILLED WITH POLYMERIC SAND (TYP.)

GRAY CONCRETE; REF: 1/71

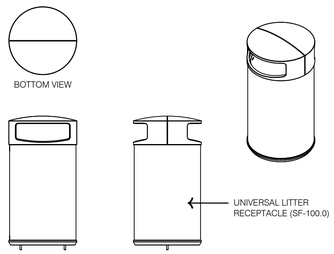
4 PIECE LIMESTONE INLAY BLOCK (P-100.1); REF: SPECIFICATIONS & PLAN FOR LOCATION

LIMESTONE INLAY JOINT, TO BE FILLED WITH POLYMERIC SAND (TYP.)

OFFICIAL CITY OF JOPLIN, MO ENGRAVED TEXT AND LOGO, DARK BEIGE COLOR.

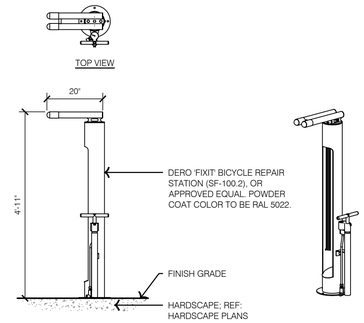
NOTES:
1. CONTRACTOR TO REQUEST VECTOR FILE OF LOGO FROM LANDSCAPE ARCHITECT AND CONFIRM APPROVAL BY CITY PRIOR TO DEVELOPMENT OF SHOP DRAWINGS.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
3. DAMP PROOF ALL UNEXPOSED SIDES OF LIMESTONE PLAQUES PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
5. TEXT AND LOGO INFILL COLOR TO BE SELECTED FROM CONTRACTORS FULL RANGE OF COLORS. CONTRACTOR SHALL SUBMIT COLOR SAMPLES TO LANDSCAPE ARCHITECT FOR APPROVAL.

1 TYPICAL LIMESTONE INLAY



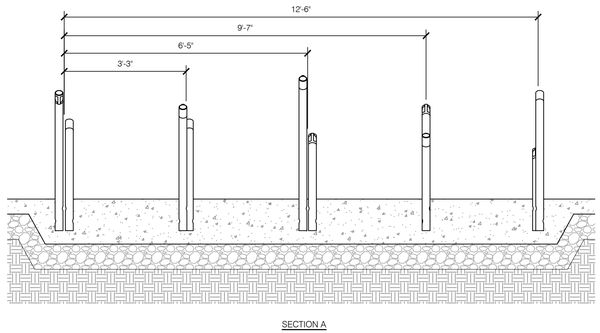
NOTES:
1. FURNISH & INSTALL WASTE RECEPTACLE (SF-100.0), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

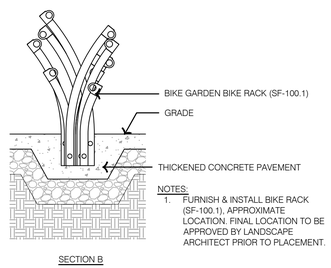
2 TYPICAL LITTER RECEPTACLE DETAIL



NOTES:
1. FURNISH & INSTALL BIKE REPAIR STATION (SF-100.2). FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
2. SURFACE MOUNT INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

3 TYPICAL BICYCLE REPAIR STATION DETAIL





NOTES:
1. FURNISH & INSTALL BIKE RACK (SF-100.1), APPROXIMATE LOCATION. FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.

4 TYPICAL BIKE RACK DETAIL

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LANDSCAPE ARCHITECT

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		REVISIONS	

HARDSCAPE DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

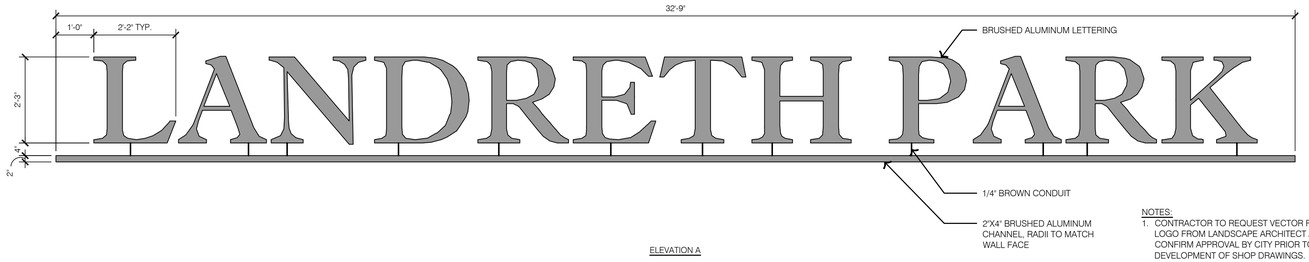
JOPLIN, MISSOURI

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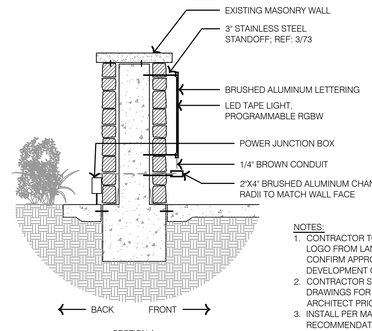
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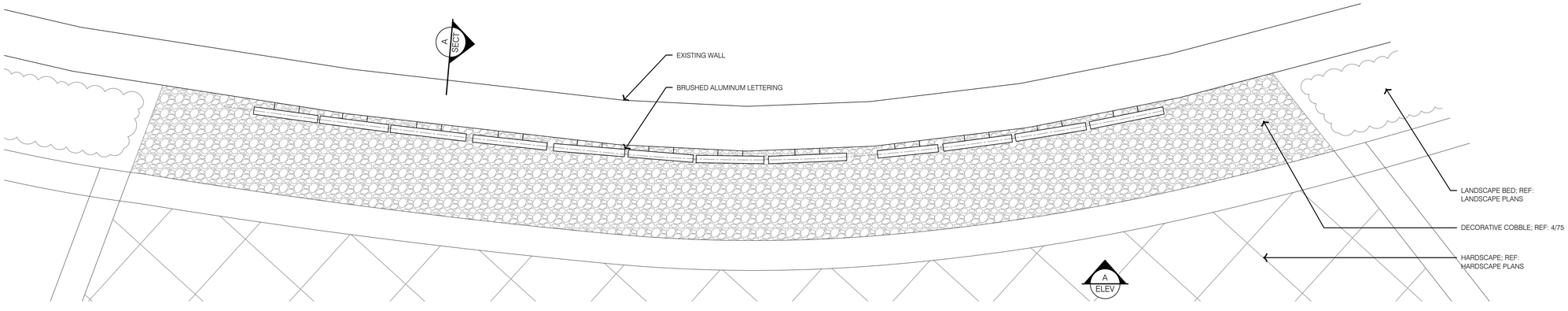
ELEVATION A

NOTES:
1. CONTRACTOR TO REQUEST VECTOR FILE OF LOGO FROM LANDSCAPE ARCHITECT AND CONFIRM APPROVAL BY CITY PRIOR TO DEVELOPMENT OF SHOP DRAWINGS.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
3. INSTALL PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.



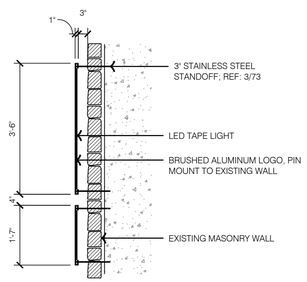
SECTION A

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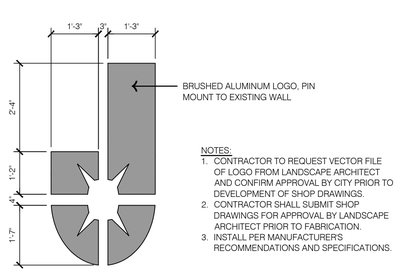


PLAN A

1 LANDRETH PARK SIGNAGE DETAILS



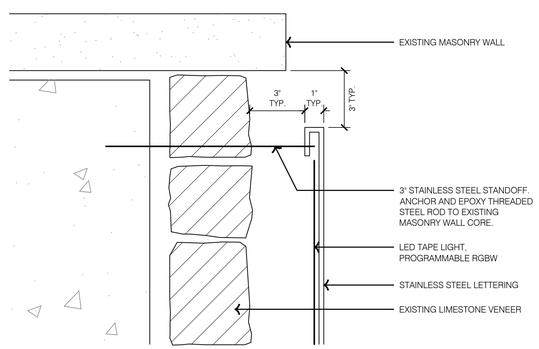
SECTION A



ELEVATION A

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3. INSTALL PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.

2 TYPICAL JOPLIN LOGO SIGNAGE DETAIL



3 TYPICAL PIN MOUNTING DETAIL

OLSSON - LANDSCAPE ARCHITECTURE
MO CERTIFICATE OF AUTHORITY #2005000285

olsson studio

1814 Main St.
Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PRATT
NUMBER LA2043933117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

HARDSCAPE DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: TS
checked by: CP
approved by: CP
QA/QC by: CC
project no.: N17-06420
drawing no.: L_HSC_DTL01_N170642.dwg
date: 3/6/24

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1 LANDSCAPE PLAN

LANDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- EXISTING TREE
- DECIDUOUS TREE
- ORNAMENTAL TREE
- PERENNIALS & GRASSES
- TURF TYPE BERMUDA SOD
- NATIVE GRASS SEED MIX

LANDSCAPE PLAN NOTES:

1. PLANTING BED; REF: LANDSCAPE GENERAL NOTES, LANDSCAPE DETAILS
2. HARDWOOD MULCH; REF: LANDSCAPE GENERAL NOTES & SPECIFICATIONS
3. TURF TYPE BERMUDA SOD; REF: SPECIFICATIONS
4. NATIVE GRASS SEED MIX; REF: SPECIFICATIONS

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OLSSON - LANDSCAPE ARCHITECTURE
MO CERTIFICATE OF AUTHORITY #2005000285

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STATE OF MISSOURI
CODY PRATT
NUMBER LA-2013033117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

LANDSCAPE PLAN
BID ALTERNATIVE 1

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

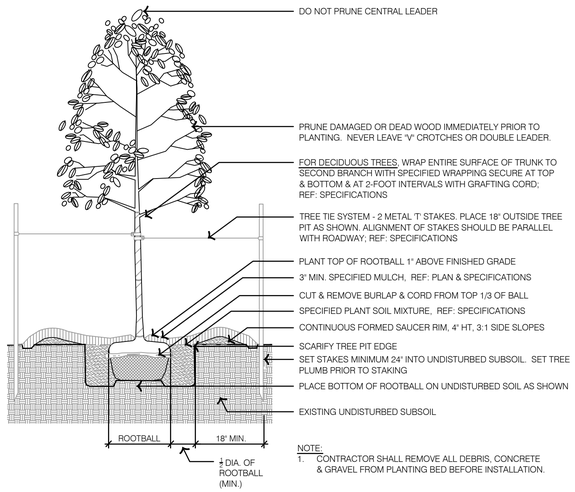
2023

JOPLIN, MISSOURI

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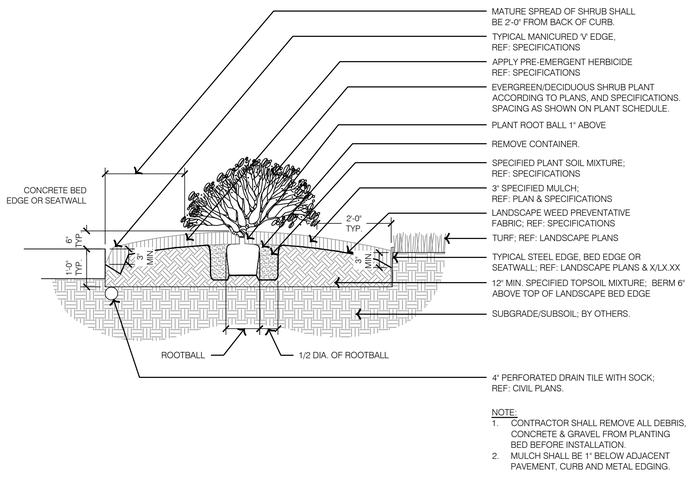
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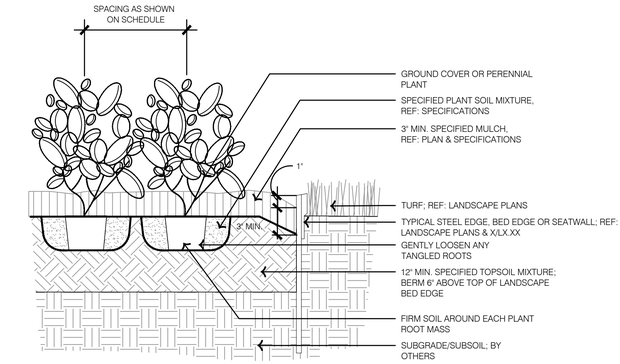
NOTE:
1. CONTRACTOR SHALL REMOVE ALL DEBRIS, CONCRETE & GRAVEL FROM PLANTING BED BEFORE INSTALLATION.

1 TYPICAL DECIDUOUS TREE PLANTING DETAIL



NOTE:
1. CONTRACTOR SHALL REMOVE ALL DEBRIS, CONCRETE & GRAVEL FROM PLANTING BED BEFORE INSTALLATION.
2. MULCH SHALL BE 1" BELOW ADJACENT PAVEMENT, CURB AND METAL EDGING.

2 TYPICAL SHRUB PLANTING DETAIL



NOTE:

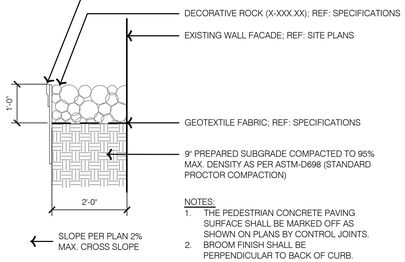
1. CONTRACTOR SHALL REMOVE ALL DEBRIS, CONCRETE & GRAVEL FROM PLANTING BED BEFORE INSTALLATION.

2. MULCH SHALL BE 1" BELOW ADJACENT PAVEMENT, CURB AND METAL EDGING.

3 TYPICAL GROUNDCOVER AND PERENNIAL PLANTING DETAIL

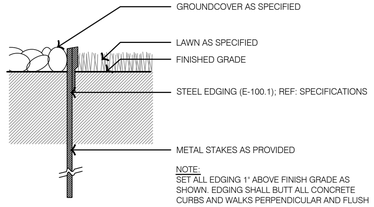
PLANT SCHEDULE

DECIDUOUS TREES	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		QTY
PA	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	2" CAL	B&B		2
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL	B&B		1
TD	TAXODIUM DISTICHUM	BALD CYPRESS	2" CAL	B&B		1
ORNAMENTAL TREES	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER		QTY
MP	MALUS X 'PRAIRIFIRE'	PRAIRIFIRE CRABAPPLE	2" CAL	B&B		3
DECIDUOUS SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
BH	BERBERIS THUNBERGII 'HELMOND PILLAR'	HELMOND PILLAR JAPANESE BARBERRY	18"-24"	CONT.	24" o.c.	26
HS	HYLOTELEPHIUM SPECTABILE 'AUTUMN JOY'	SHOWY STONECROP	18"-24"		24" o.c.	35
RM	ROSA X 'MEIBENBINO'	PETITE KNOCK OUT® ROSE	18"-24"	CONT.	24" o.c.	56
EVERGREEN SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
CG	CHAMAECYPARIS PISIFERA 'GOLDEN MOP'	GOLDEN MOP THREADLEAF SAWARA CYPRESS	18"-24"	CONT.	48" o.c.	17
JS	JUNIPERUS X PFITZERIANA 'SEA GREEN'	SEA GREEN PFITZER JUNIPER	18"-24"	CONT.	48" o.c.	10
ORNAMENTAL GRASSES	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	18"-24"	CONT.	24" o.c.	29
MG	MISCANTHUS SINENSIS 'GRACILLIMUS'	EULALIA GRASS	18"-24"	CONT.	36" o.c.	72
SL	SCHIZACHYRIUM SCOPARIUM 'THE BLUES'	LITTLE BLUESTEM	18"-24"	CONT.	24" o.c.	30
PERENNIALS	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
CV	COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM TICKSEED	PLUG	CONT.	24" o.c.	21
RH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	PLUG	CONT.	18" o.c.	105



NOTES:
1. THE PEDESTRIAN CONCRETE PAVING SURFACE SHALL BE MARKED OFF AS SHOWN ON PLANS BY CONTROL JOINTS.
2. BROOM FINISH SHALL BE PERPENDICULAR TO BACK OF CURB.

4 TYPICAL DECORATIVE COBBLE DETAIL



NOTE:
SET ALL EDGING 1" ABOVE FINISH GRADE AS SHOWN. EDGING SHALL BUTT ALL CONCRETE CURBS AND WALKS PERPENDICULAR AND FLUSH WITH GRADES OF CONCRETE. ALL JOINTS TO BE WELDED OR SECURELY STAKED.

5 TYPICAL STEEL BED EDGE DETAIL

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MO CERTIFICATE OF AUTHORITY #2005000285
olsson studio
1814 Main St.
Kansas City, MO 64108 TEL 816.842.8844 olsson-studio.com

STATE OF MISSOURI
CODY PRATER
NUMBER LA-2043033117
LANDSCAPE ARCHITECT

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

LANDSCAPE DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

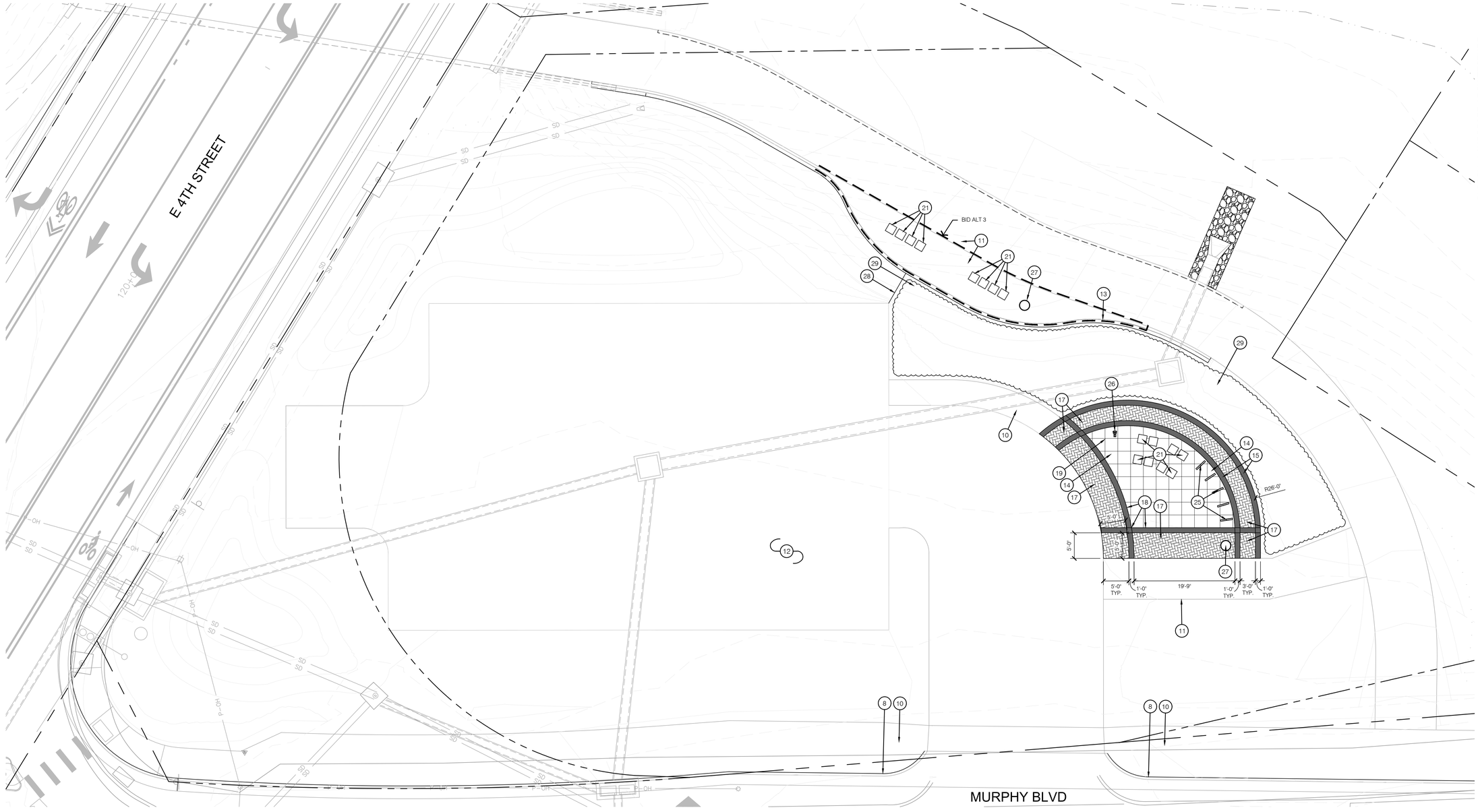
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date: 3/6/24

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1 HARDSCAPE PLAN

HARDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- GRAY CONCRETE (2.5' X 2.5')
- GRAY CONCRETE (4' X 4')
- DARK GRAY CONCRETE BAND
- RED BRICK HERRINGBONE PATTERN
- DECORATIVE COBBLE

HARDSCAPE PLAN NOTES:

1. EXISTING WALL TO REMAIN
2. EXISTING CURB TO REMAIN
3. EXISTING CONCRETE WALK TO BE REMOVED
4. EXISTING TRAFFIC SIGNAL TO BE REMOVED; REF: CIVIL PLANS
5. EXISTING SIGNAL CABINET TO BE RELOCATED; REF: CIVIL PLANS
6. NEW TRAFFIC SIGNAL CABINET; REF: CIVIL PLANS
7. NEW TRAFFIC SIGNAL; REF: CIVIL PLANS
8. CONCRETE CURB; REF: CIVIL PLANS
9. ADA RAMP; REF: CIVIL PLANS
10. CONCRETE SIDEWALK; REF: CIVIL PLANS
11. CONCRETE TRAIL; REF: CIVIL PLANS
12. PARKING LOT; REF: CIVIL PLANS
13. RETAINING WALL; REF: CIVIL PLANS
14. CONSTRUCT GRAY CONCRETE; REF: 1/71
15. CONSTRUCT GRAY CONCRETE BANDING; REF: 1/71
16. CONSTRUCT CONCRETE MOW STRIP; REF: 1/71
17. INSTALL RED BRICK PAVER; REF: 3/71
18. INSTALL EXPANSION JOINT; REF: 4/71
19. INSTALL CONTROL JOINT; REF: 4/71
20. INSTALL LIMESTONE INLAY; REF: 1/72
21. INSTALL LIMESTONE SEATING BLOCK; REF: 5/71
22. INSTALL DECORATIVE COBBLE; REF: 4/75
23. INSTALL LANDRETH PARK SIGNAGE; REF: 1/73
24. INSTALL JOPLIN LOGO SIGNAGE; REF: 2/73
25. INSTALL BIKE RACK; REF: 4/72
26. INSTALL BIKE REPAIR STATION; REF: 3/72
27. INSTALL LITTER RECEPTACLE; REF: 2/72
28. INSTALL STEEL EDGING; REF: 5/75
29. PLANTING BED. CONTRACTOR SHALL LEAVE PLANTING BEDS CLEAN OF GRAVEL AND DEBRIS; REF: LANDSCAPE PLANS
30. ELECTRICAL JUNCTION BOX; REF: CIVIL PLANS

OLSSON - LANDSCAPE ARCHITECTURE
MO CERTIFICATE OF AUTHORITY #2005000285

olsson studio

1814 Main St.
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STATE OF MISSOURI
CODY PRATER
NUMBER LA-2043933117
LANDSCAPE ARCHITECT

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HARDSCAPE PLAN
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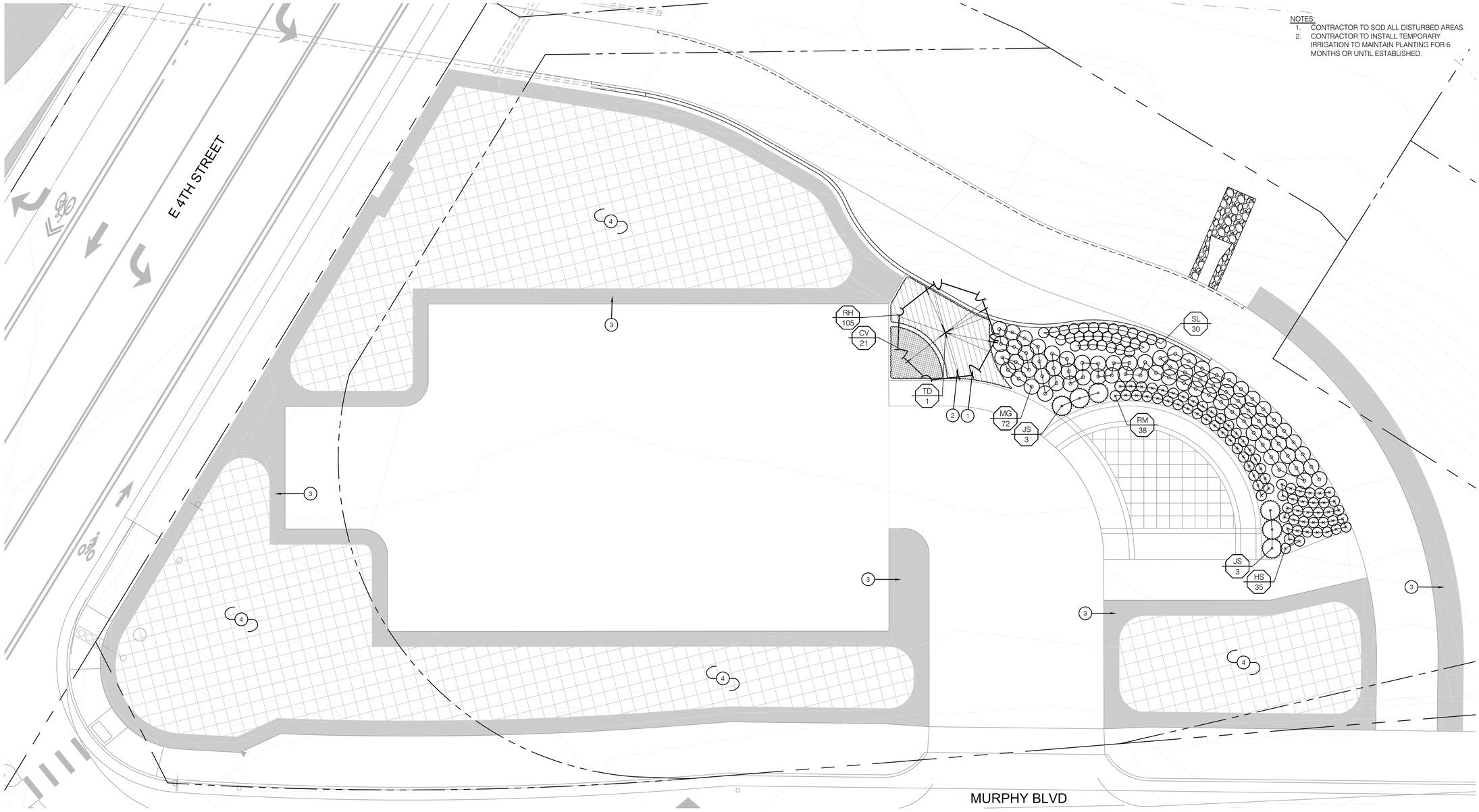
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: TS
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approved by: CP
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NOTES:
1. CONTRACTOR TO SOD ALL DISTURBED AREAS.
2. CONTRACTOR TO INSTALL TEMPORARY IRRIGATION TO MAINTAIN PLANTING FOR 6 MONTHS OR UNTIL ESTABLISHED.

1 LANDSCAPE PLAN

LANDSCAPE LEGEND:

- RIGHT OF WAY / PROPERTY LINE
- EXISTING TREE
- DECIDUOUS TREE
- ORNAMENTAL TREE
- PERENNIALS & GRASSES
- TURF TYPE BERMUDA SOD
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LANDSCAPE PLAN NOTES:

1. PLANTING BED; REF: LANDSCAPE GENERAL NOTES, LANDSCAPE DETAILS
2. HARDWOOD MULCH; REF: LANDSCAPE GENERAL NOTES & SPECIFICATIONS
3. TURF TYPE BERMUDA SOD; REF: SPECIFICATIONS
4. NATIVE GRASS SEED MIX; REF: SPECIFICATIONS

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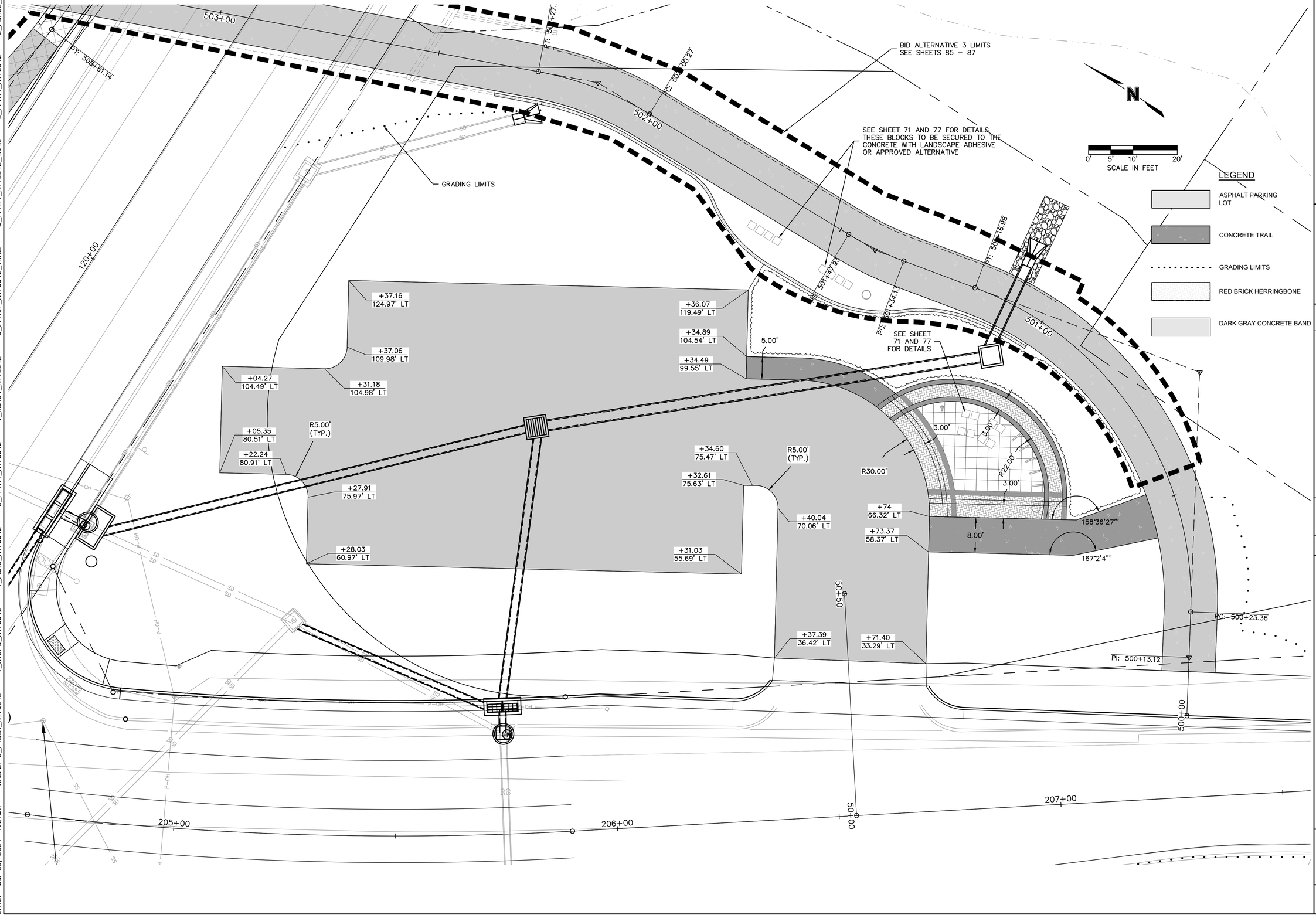
LANDSCAPE PLAN
BID ALTERNATIVE 2

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

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Jonathan Peitz
2024.03.06 11:00:00

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

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

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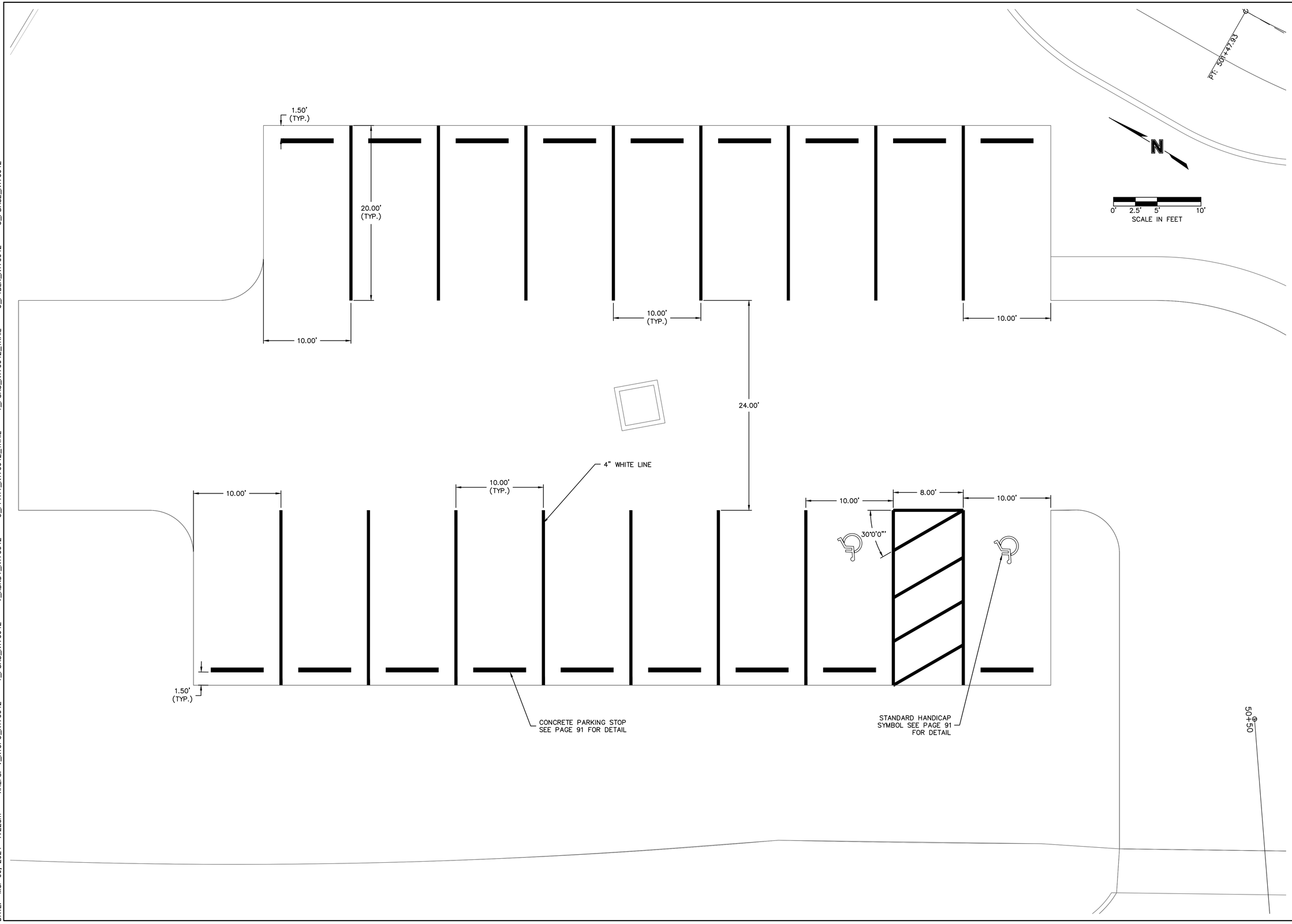
PARKING LOT AND TRAILHEAD
TRAIL PARKING LOT

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

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checked by:	JWP
approved by:	JWP
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Jonathan Peitz
2024.03.[illegible]

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PAVEMENT MARKING AND SIGNING
PARKING LOT

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

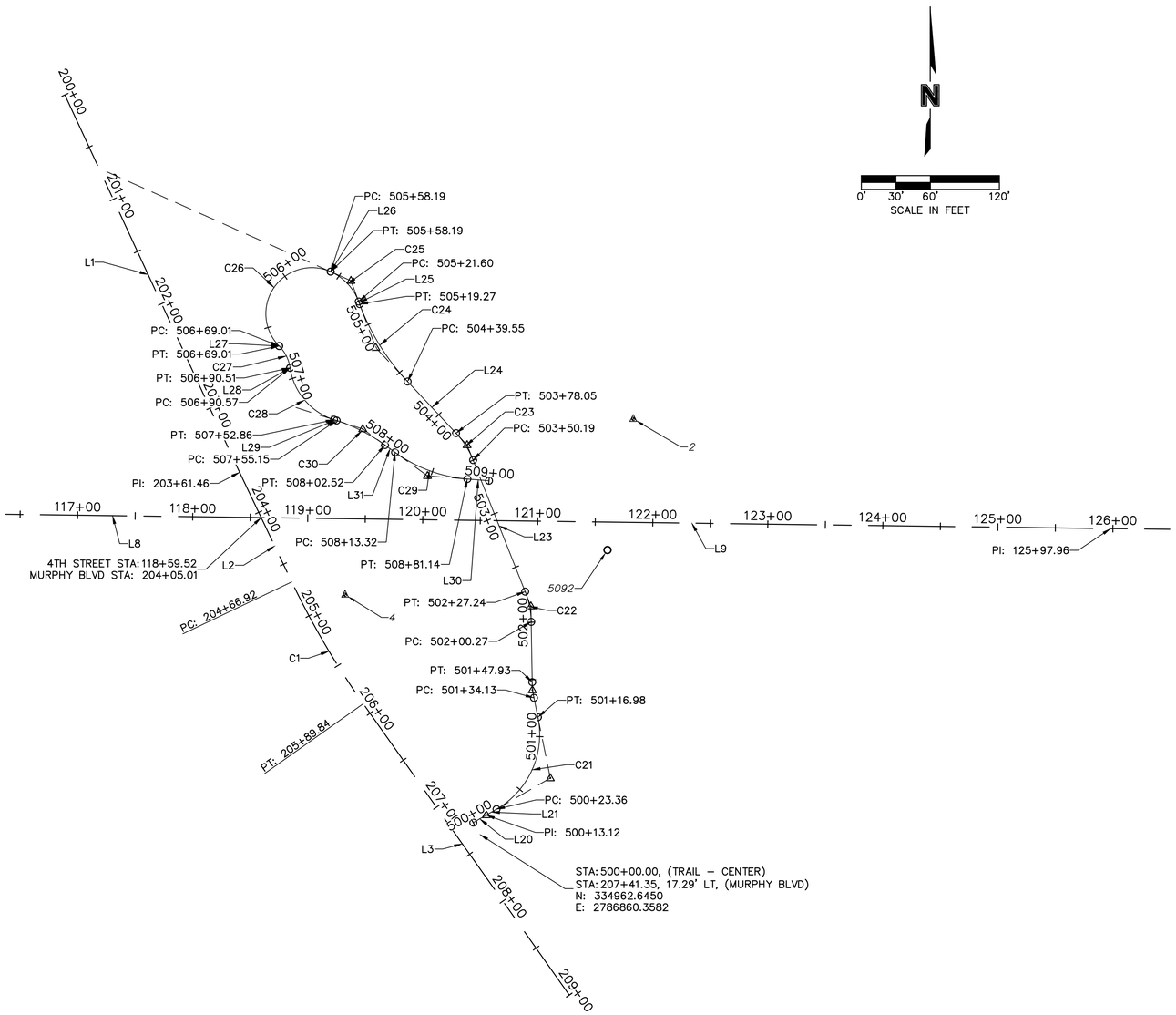
JOPLIN, MISSOURI

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TRAIL - CENTER

ID #	STATION RANGE	START COORD.	END COORD.	PI STATION	PI COORD.	LINE/CHORD LENGTH (FT)	LINE/CHORD BEARING	RADIUS (FT)
L20	500+00 500+13.12	N: 334973.03 E: 2786854.36	N: 334979.60 E: 2786865.72			13.12	N59°59'01"E	
L21	500+13.12 500+23.36	N: 334979.60 E: 2786865.72	N: 334984.72 E: 2786874.59			10.24	N59°59'01"E	
C21	PC 500+23.36 PT 501+16.98	PC N: 334984.72 E: 2786874.59	PT N: 335064.66 E: 2786910.55	500+77.37	N: 335011.74 E: 2786921.35	87.66	N24°13'31"E	75.00
C22	PC 502+00.27 PT 502+27.24	PC N: 335147.49 E: 2786904.71	PT N: 335173.80 E: 2786899.46	502+13.90	N: 335161.12 E: 2786904.48	26.83	N11°17'53"W	75.00
L23	502+27.24 503+50.19	N: 335173.80 E: 2786899.46	N: 335288.12 E: 2786854.19			122.95	N21°36'09"W	
C23	PC 503+50.19 PT 503+78.05	PC N: 335288.12 E: 2786854.19	PT N: 335311.50 E: 2786839.35	503+64.29	N: 335301.22 E: 2786849.00	27.69	N32°23'51"W	73.93
L24	503+78.05 504+39.55	N: 335311.50 E: 2786839.35	N: 335356.33 E: 2786797.26			61.50	N43°11'32"W	
C24	PC 504+39.55 PT 505+19.27	PC N: 335356.33 E: 2786797.26	PT N: 335423.66 E: 2786755.56	504+79.95	N: 335385.79 E: 2786769.61	79.19	N31°46'24"W	200.00
L25	505+19.27 505+21.60	N: 335423.66 E: 2786755.56	N: 335425.84 E: 2786754.75			2.33	N20°21'15"W	
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L26	505+58.19 505+58.19	N: 335451.84 E: 2786730.38	N: 335451.84 E: 2786730.38			0.00	N65°57'01"W	
C26	PC 505+58.19 PT 506+69.01	PC N: 335451.84 E: 2786730.38	PT N: 335387.18 E: 2786685.64	507+71.28	N: 335538.68 E: 2786535.79	78.63	S34°40'54"W	40.00
L27	506+69.01 506+69.01	N: 335387.18 E: 2786685.64	N: 335387.18 E: 2786685.64			0.00	S44°41'11"E	
C27	PC 506+69.01 PT 506+90.51	PC N: 335387.18 E: 2786685.64	PT N: 335368.27 E: 2786695.10	506+80.13	N: 335379.27 E: 2786693.46	21.14	S26°34'24"E	34.00
L28	506+90.51 506+90.57	N: 335368.27 E: 2786695.10	N: 335368.22 E: 2786695.11			0.06	S8°27'37"E	
C28	PC 506+90.57 PT 507+52.86	PC N: 335368.22 E: 2786695.11	PT N: 335323.14 E: 2786733.38	507+25.38	N: 335333.78 E: 2786700.23	59.13	S40°19'47"E	56.00
L29	507+52.86 507+55.15	N: 335323.14 E: 2786733.38	N: 335322.44 E: 2786735.56			2.29	S72°11'58"E	
C30	PC 507+55.15 PT 508+02.52	PC N: 335322.44 E: 2786735.56	PT N: 335301.13 E: 2786777.64	507+79.03	N: 335315.14 E: 2786758.29	47.17	S63°09'10"E	150.00
L31	508+02.52 508+13.32	N: 335301.13 E: 2786777.64	N: 335294.80 E: 2786786.39			10.80	S54°06'21"E	
C29	PC 508+13.32 PT 508+81.14	PC N: 335294.80 E: 2786786.39	PT N: 335271.65 E: 2786849.24	508+48.10	N: 335274.41 E: 2786814.57	66.98	S69°46'27"E	124.00
L30	508+81.14 509+00	N: 335271.65 E: 2786849.24	N: 335270.15 E: 2786868.04			18.86	S85°26'33"E	

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL ALIGNMENT DATA
TRAIL

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_ALI01_N170642
date: 3/6/24

SHEET
80 of 95

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_ALI02_N170642.dwg USER: mmayfarth
DATE: Mar 06, 2024 7:22am XREFS: c_PTBLK_N170642 V_XTOPO_N170642

NOTE:
1. 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".
2. ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE AT CONTRACTORS EXPENSE UNLESS OTHERWISE NOTED.
3. SAWCUT SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING IMPROVEMENTS. THERE SHALL BE NO DIRECT PAY FOR SAWCUT.
4. ALL WORK SHALL BE COMPLETED WITHIN RIGHT-OF-WAY UNLESS NOTED.
5. CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, AND/OR PROTECTION OF EXISTING SIGNAGE WITH CITY.

LEGEND

CLEARING AND GRUBBING

TREE REMOVAL

BASE BID
BID ALTERNATIVE 1
BID ALTERNATIVE 2
BID ALTERNATIVE 3

PT: 505+19.27
PT: 506+69.01
PC: 506+90.57
PT: 506+90.51
PC: 504+39
PT: 507+52.86
PC: 507+55.15
PI: 203+61.46
PT: 508+02.52
PC: 508+13.32
PT: 508+81.1

ALL TREES IN THIS AREA WILL BE REMOVED

203+00
204+00
505+00
504+00
507+00
508+00
118+00
119+00
120+00

0' 5' 10' 20'
SCALE IN FEET

DWG: F:\2017\0501-1000\017-0642-N\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DEM02_N170642.dwg USER: rmayfarth
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STATE OF MISSOURI
JONATHAN W. PEITZ
NUMBER PE-2017019023
PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

TRAIL DEMOLITION PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DEM01_N170642
date: 3/6/24

SHEET
81 of 95

NOTE:

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LEGEND

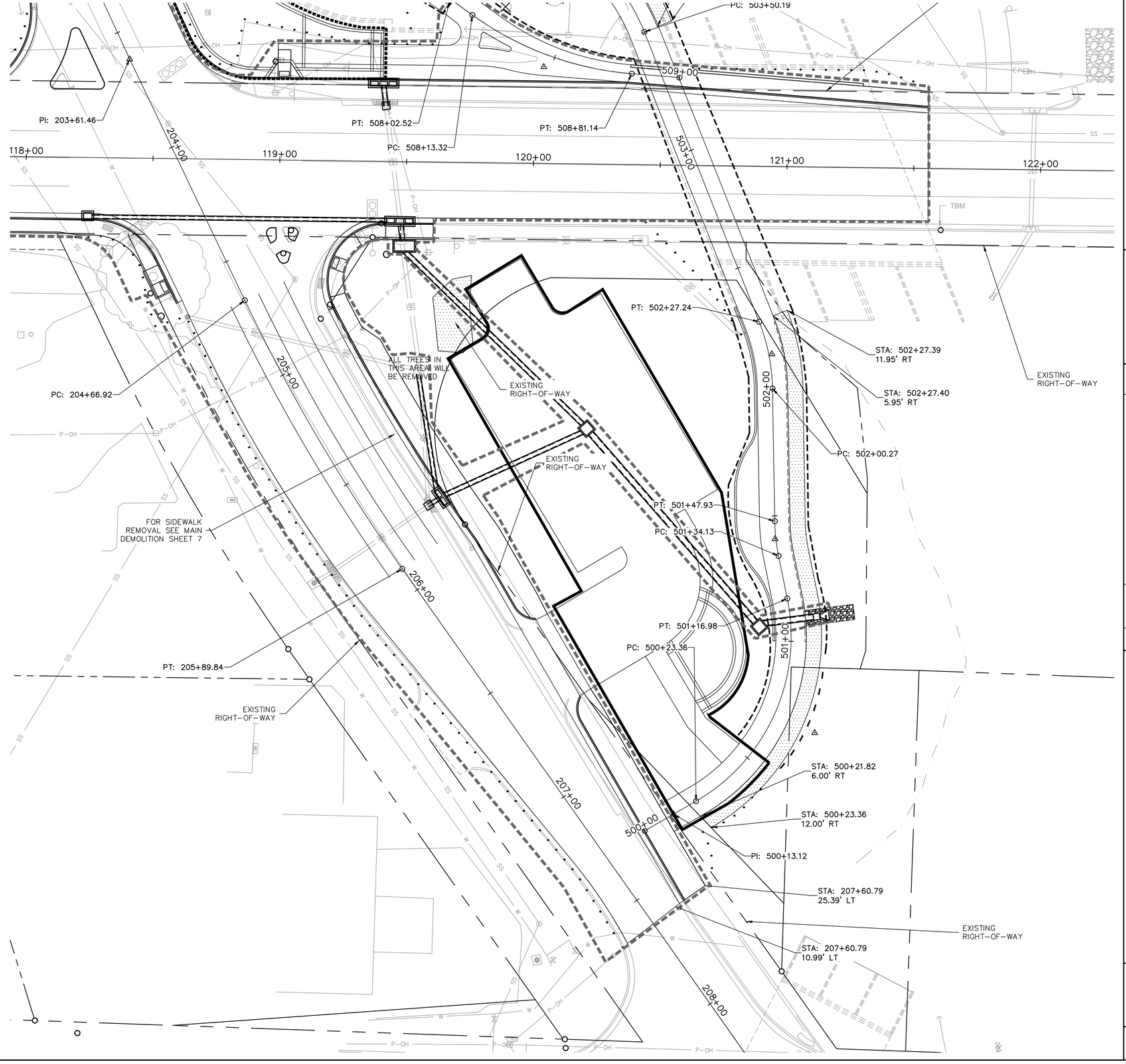
CLEARING AND GRUBBING

TREE REMOVAL

BASE BID
BID ALTERNATIVE 1
BID ALTERNATIVE 2
BID ALTERNATIVE 3

N

0' 10' 20' 40'
SCALE IN FEET



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STATE OF MISSOURI
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PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL DEMOLITION PLAN

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

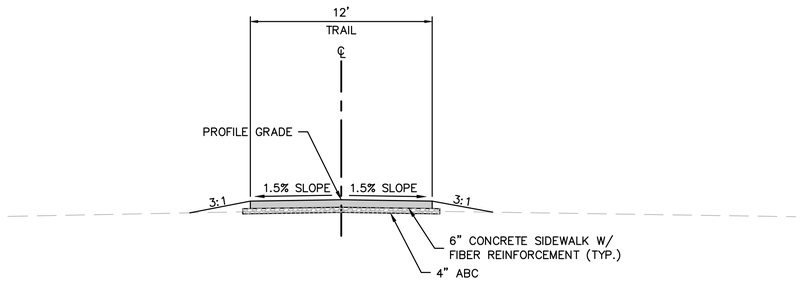
JOPLIN, MISSOURI

2023

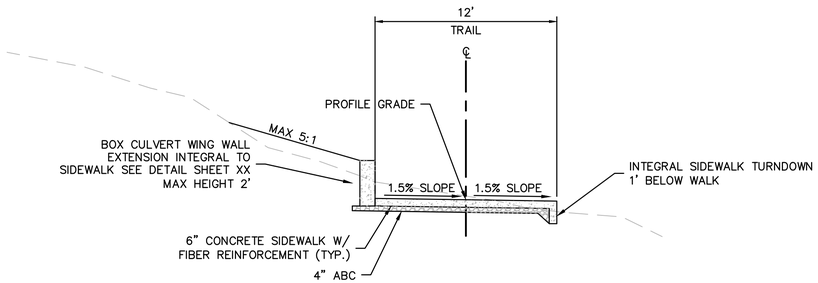
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checked by:	JWP
approved by:	JWP
QA/QC by:	ENG
project no.:	N17-06420
drawing no.:	C_DEM01_N170642
date:	3/6/24

SHEET
82 of 95

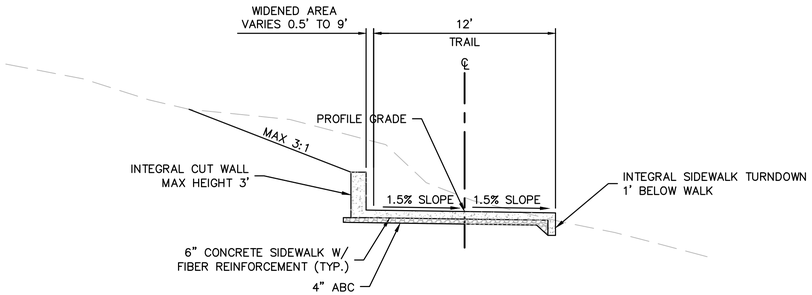
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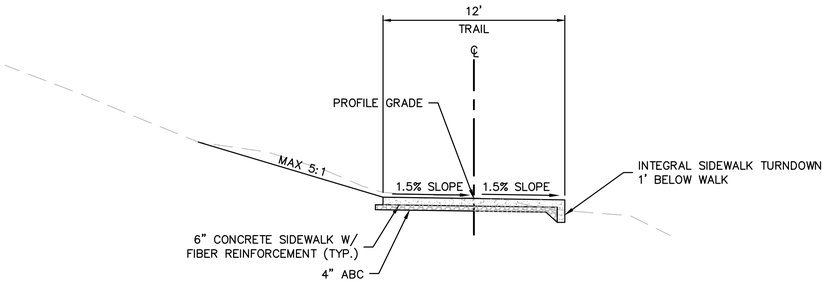
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STA 500+10 TO STA 501+00
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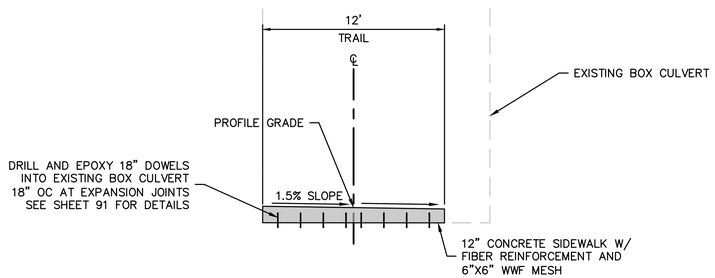
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N.T.S.



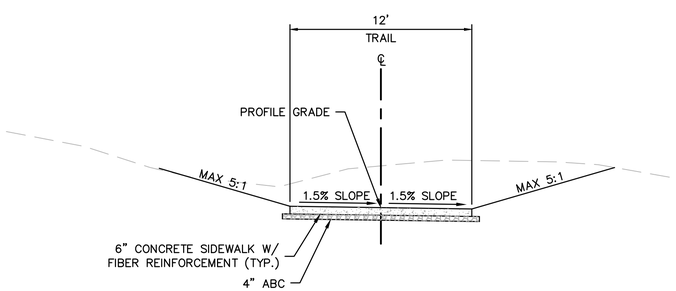
TRAIL - TYPICAL SECTION
STA 501+00 TO STA 502+25
N.T.S.



TRAIL - TYPICAL SECTION
STA 503+55 TO STA 503+95
N.T.S.



TRAIL - TYPICAL SECTION
STA 502+25 TO STA 503+50
N.T.S.



TRAIL - TYPICAL SECTION
STA 503+95 TO STA 505+45
N.T.S.

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL TYPICAL SECTIONS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

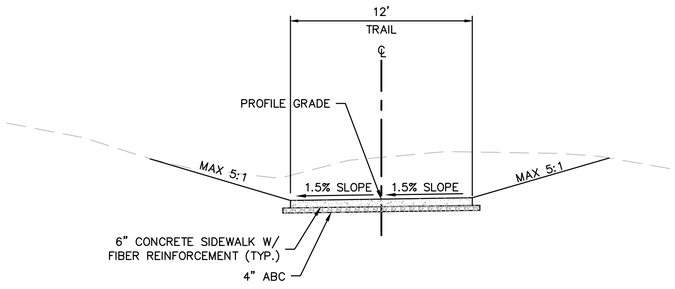
JOPLIN, MISSOURI

2023

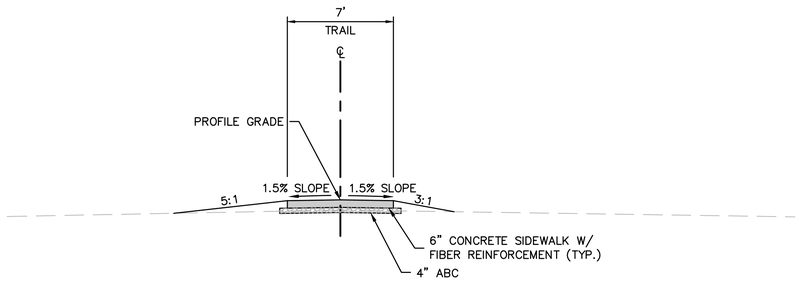
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checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TYP01_N170642
date: 3/6/24

SHEET
83 of 95

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USER: mmayfarth



TRAIL - TYPICAL SECTION
STA 505+45 TO STA 508+15
N.T.S.



TRAIL - TYPICAL SECTION
STA 508+-15 TO STA 508+78
N.T.S.

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STATE OF MISSOURI
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PROFESSIONAL ENGINEER

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL TYPICAL SECTIONS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

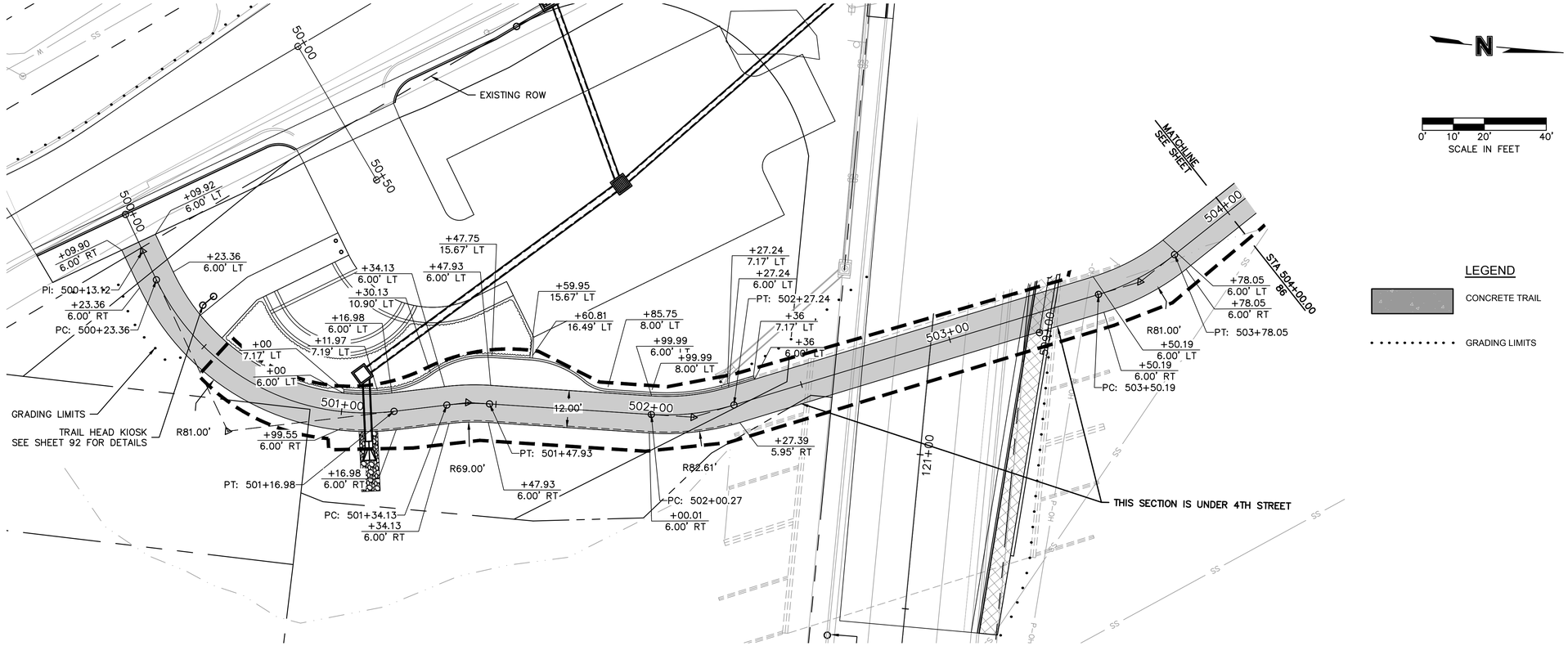
JOPLIN, MISSOURI

2023

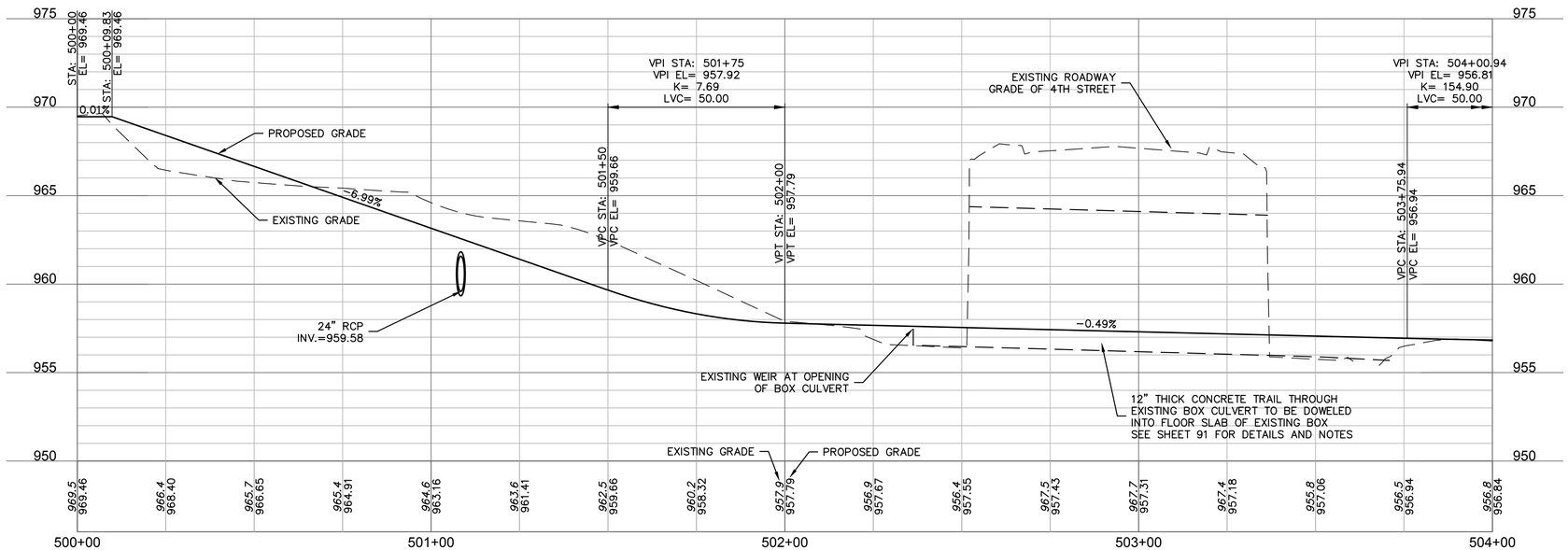
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approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_TYP01_N170642
date: 3/6/24

SHEET
84 of 95

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DATE: Mar 06, 2024 7:23am XREFS: C_PTBLK_N170642



TRAIL - CENTER (500+00 - 504+00)



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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL PLAN & PROFILE
TRAIL STA 500+00 TO STA 504+00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

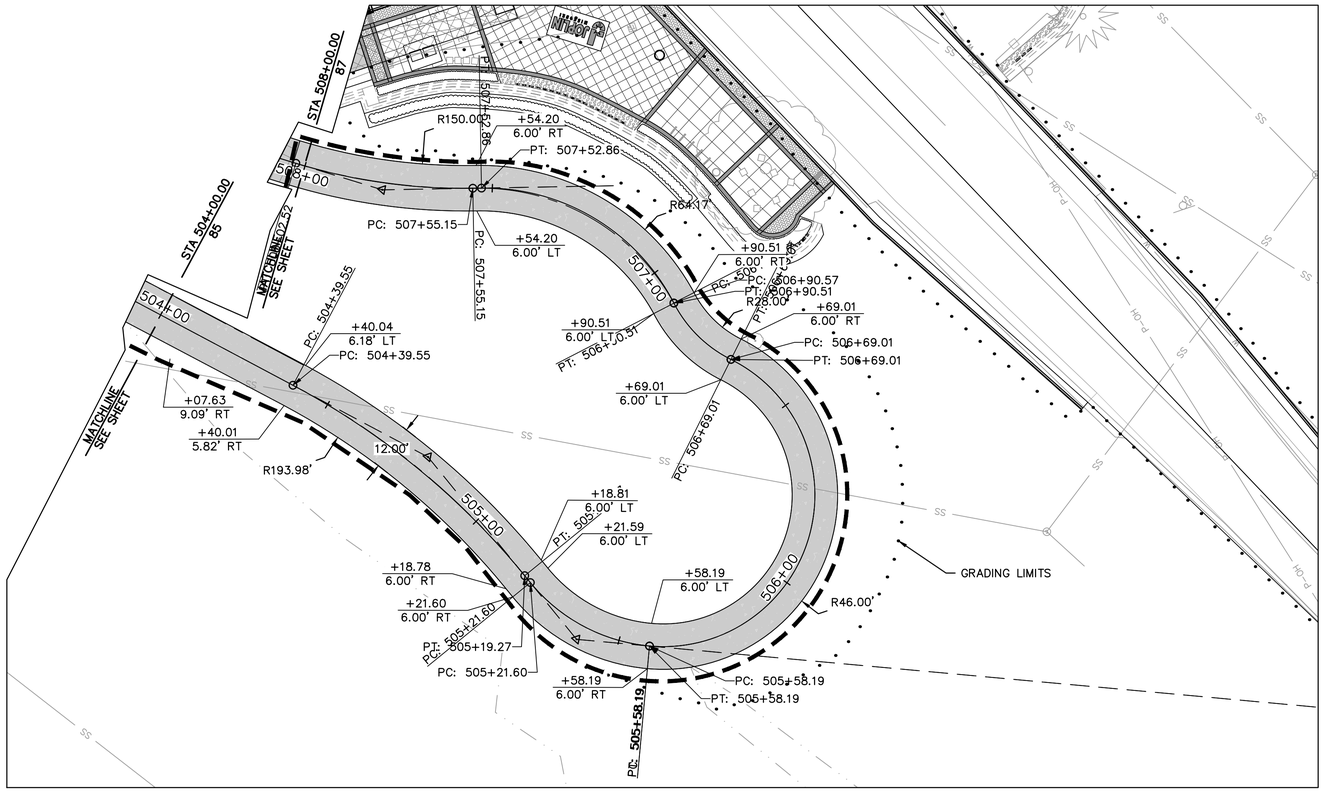
JOPLIN, MISSOURI

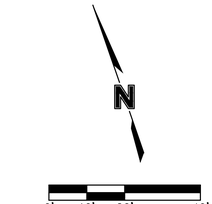
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drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

SHEET
85 of 95

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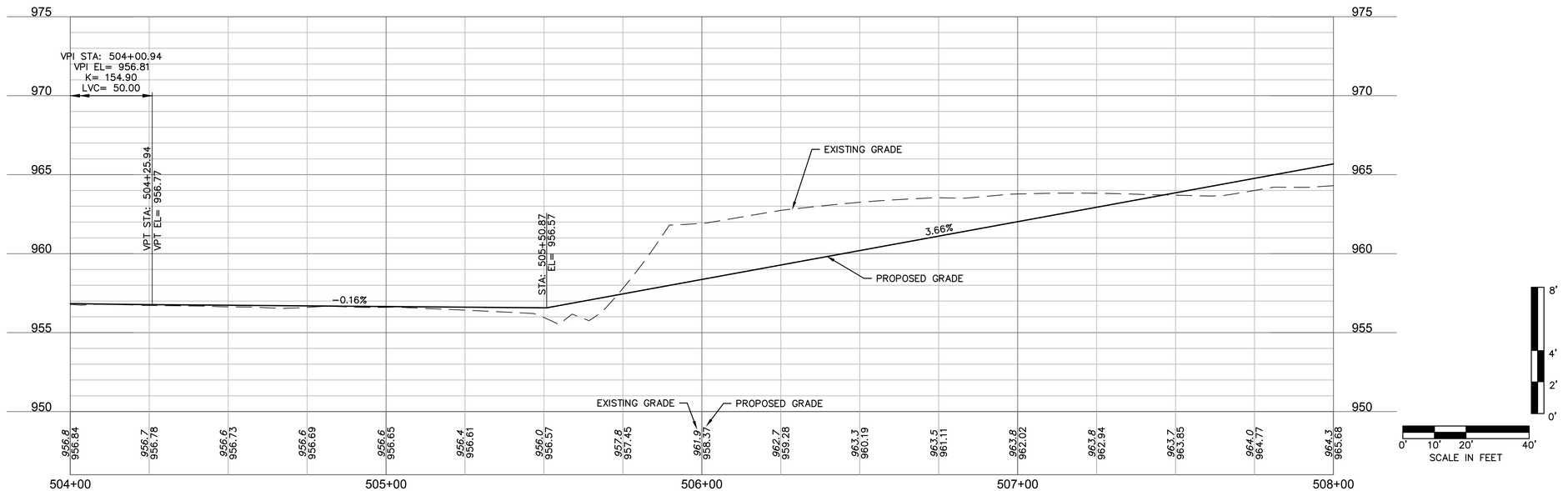


LEGEND

CONCRETE TRAIL

GRADING LIMITS

TRAIL - CENTER (504+00 - 508+00)



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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL PLAN & PROFILE
TRAIL STA 504+00 TO STA 508+00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

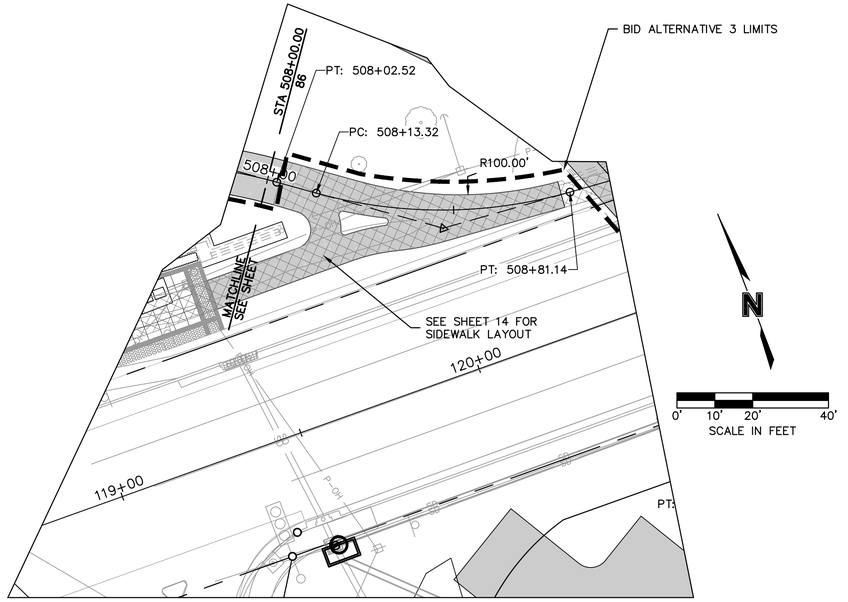
2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

SHEET
86 of 95

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USER: mmayfarth
C_PPATT_N170642

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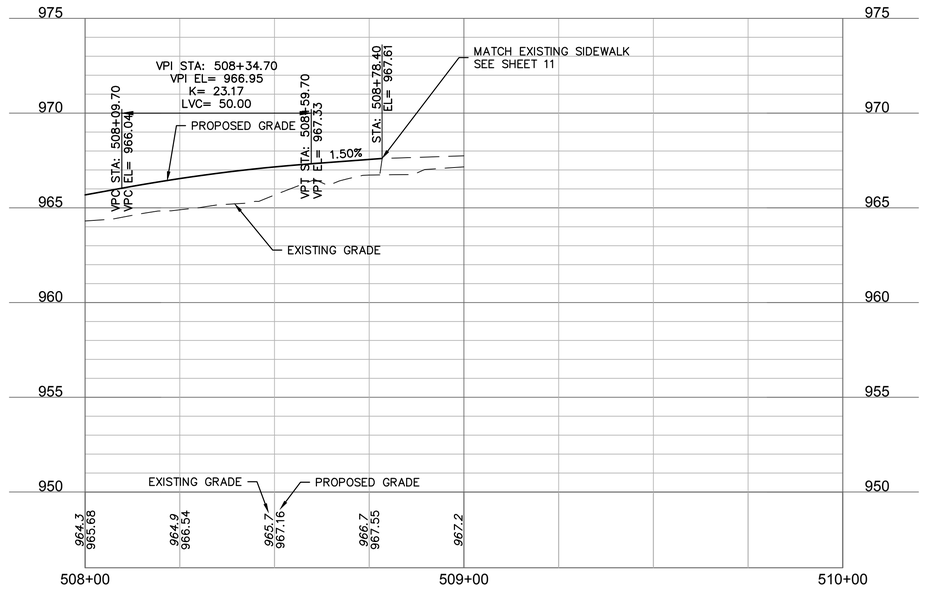


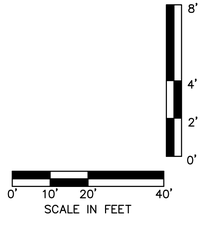
LEGEND

CONCRETE TRAIL

GRADING LIMITS

TRAIL - CENTER (508+00 - 510+00)





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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL PLAN & PROFILE
TRAIL STA 508+00 TO STA 510+00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

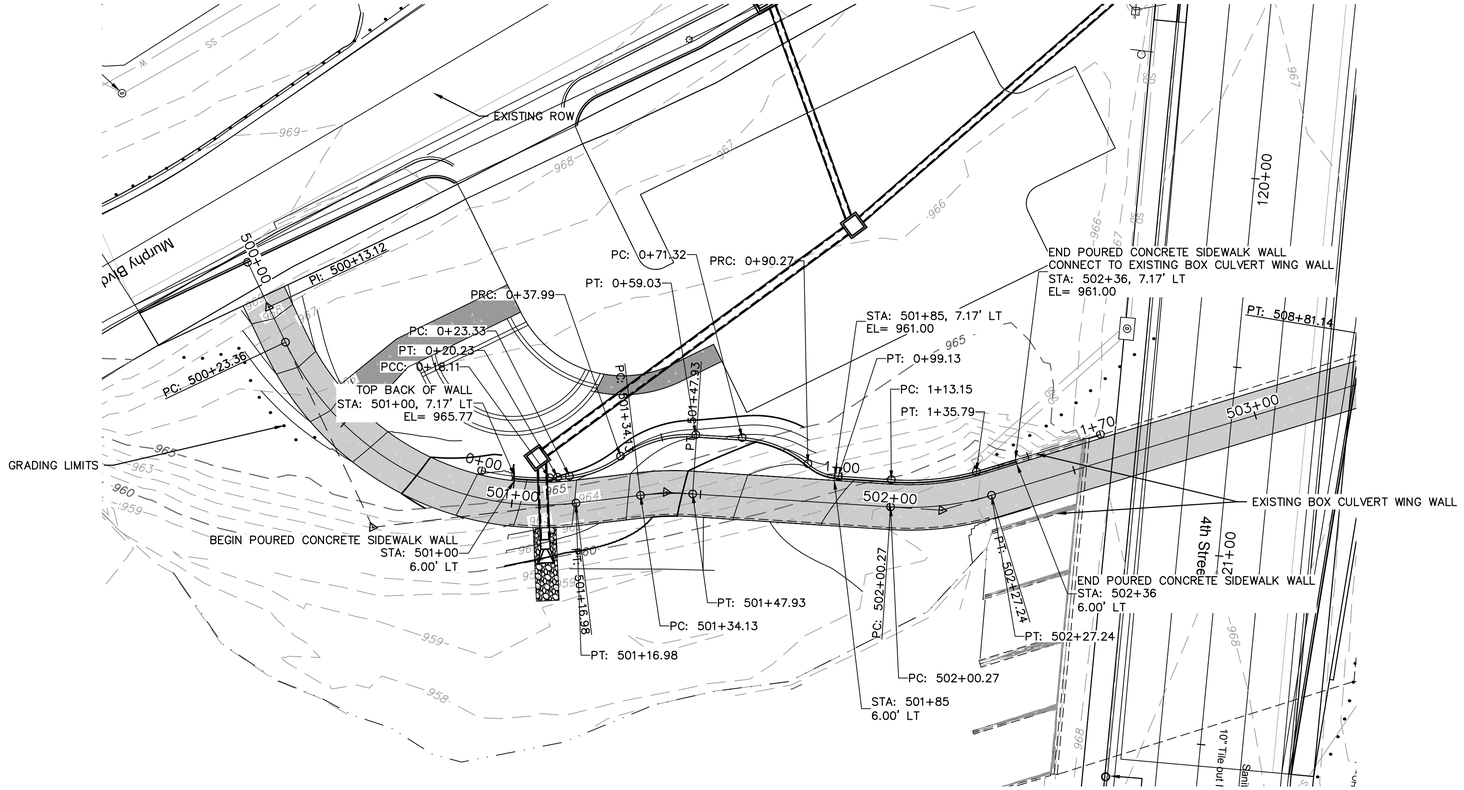
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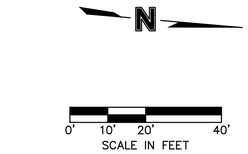
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checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

SHEET
87 of 95

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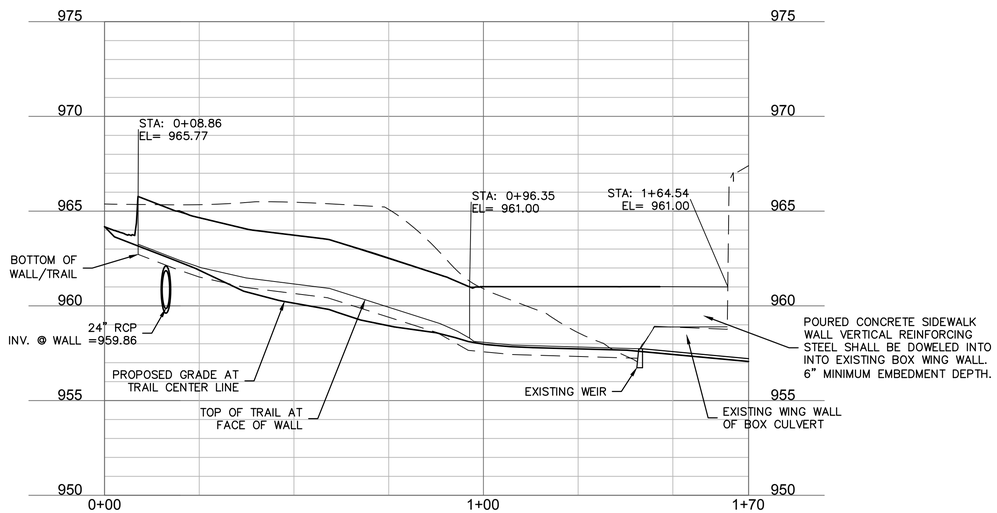


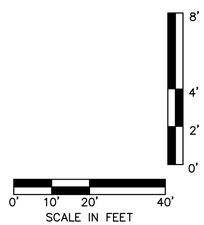
LEGEND

CONCRETE TRAIL

CITY OF JOPLIN POURED CONCRETE SIDEWALK WALL, ST-13 SEE SHEET 91 FOR DETAIL

WALL-1 (0+00 - 1+70)





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STATE OF MISSOURI
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL WALL 1 PLAN & PROFILE
TRAIL STA 500+00 TO STA 504+00

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

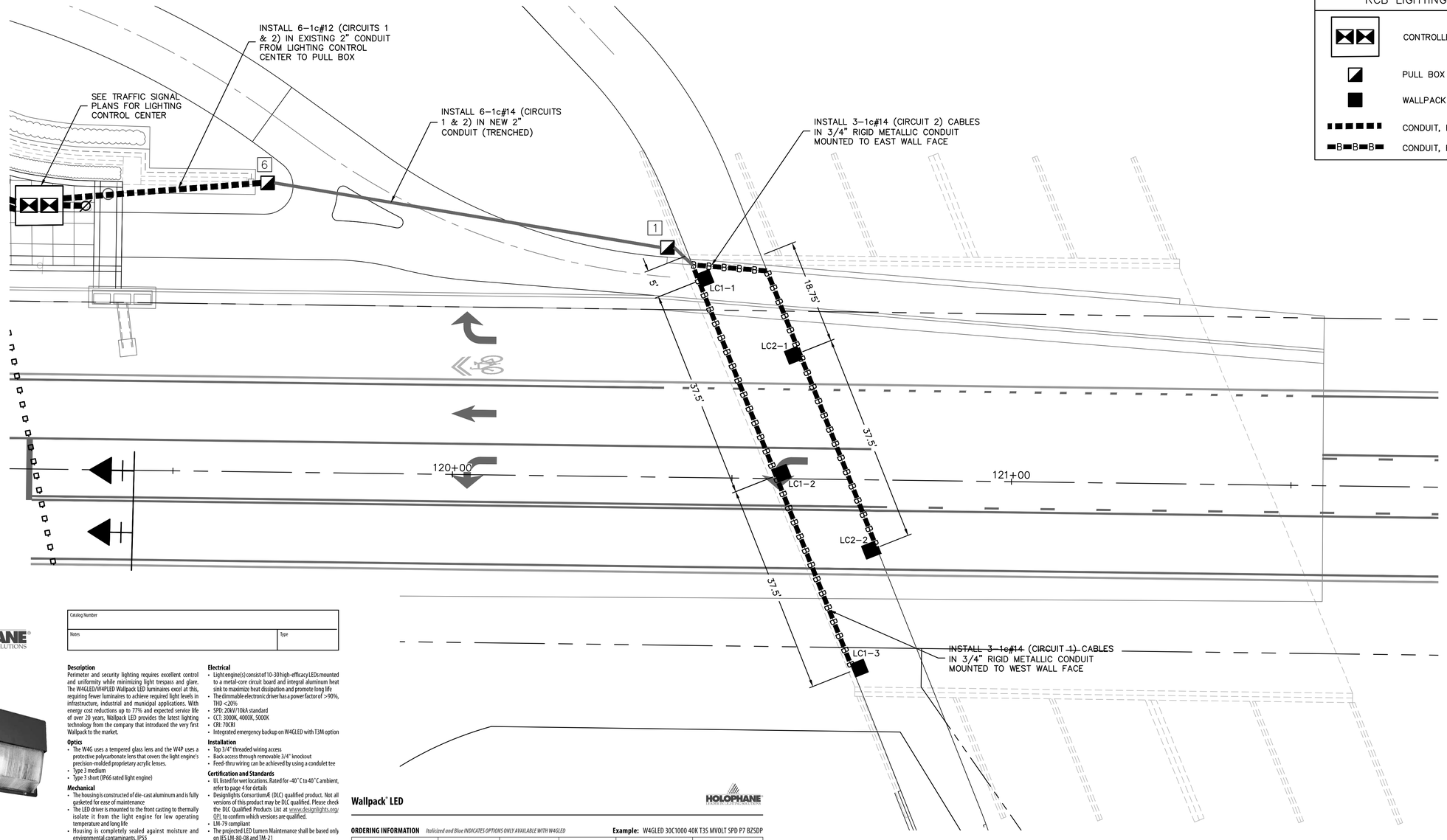
2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

SHEET
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RCB LIGHTING LEGEND

- CONTROLLER, LIGHTING
- PULL BOX PREFORMED TYPE 1
- WALLPACK LED LIGHT
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (BRIDGE)

HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

Wallpack® LED



Catalog Number	
Notes	Type

Description
Perimeter and security lighting requires excellent control and uniformity while minimizing light trespass and glare. The W4GLED/W4PLED Wallpack LED luminaires excel at this, requiring fewer luminaires to achieve required light levels in infrastructure, industrial and municipal applications. With energy cost reductions up to 77% and expected service life of over 20 years, Wallpack LED provides the latest lighting technology from the company that introduced the very first Wallpack to the market.

Optics
- The W4G uses a tempered glass lens and the W4P uses a protective polycarbonate lens that covers the light engine's precision-molded proprietary acrylic lenses.
- Type 3 medium
- Type 3 short (IP66 rated light engine)

Mechanical
- The housing is constructed of die-cast aluminum and is fully gasketed for ease of maintenance
- The LED driver is mounted to the front casting to thermally isolate it from the light engine for low operating temperature and long life
- Housing is completely sealed against moisture and environmental contaminants, IP55
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering.
- A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

Electrical
- Light engine(s) consist of 10-30 high-efficacy LEDs mounted to a metal-core circuit board and integral aluminum heat sink to maximize heat dissipation and promote long life
- The dimmable electronic driver has a power factor of >90%, THD <20%
- SPD: 20kV/10kA standard
- CCT: 3000K, 4000K, 5000K
- CRI: 70CRI
- Integrated emergency backup on W4GLED with T3M option

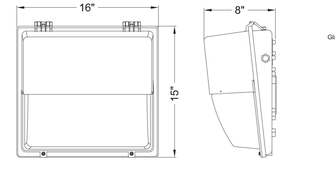
Installation
- Top 3/4" threaded wiring access
- Back access through removable 3/4" knockout
- Feed-thru wiring can be achieved by using a conduit tee

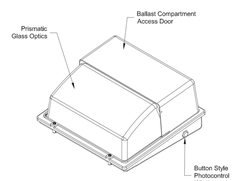
Certification and Standards
- UL listed for wet locations. Rated for -40˚C to 40˚C ambient, refer to page 4 for details
- Designlights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

Warranty
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_Conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25°C.

DIMENSIONAL DATA





Wallpack® LED

ORDERING INFORMATION *Italicized and Blue INDICATES OPTIONS ONLY AVAILABLE WITH W4GLED*

Example: W4GLED 30C1000 40K T3S MVOLT SPD P7 BZSDP

Series	Performance Package	Color Temperature	Distribution	Voltage	Surge Protection
W4GLED Wallpack IV Glass LED	*10C1000 10 LED*	30K 3000 series CCT	T3M Type III Medium	MVOLT Multi-volt: 120-277 volt	SPD 20kV/10kA (Standard)
W4PLED Wallpack IV Plastic LED	*20C1000 20 LED*	40K 4000 series CCT	T3S Type III Short	120 120 Volt	
	30C1000 30 LED	50K 5000 series CCT		208 208 Volt	
	10C700 10 LED			240 240 Volt	
	20C700 20 LED			277 277 Volt	
	30C700 30 LED			347 347 Volt	
				480 480 Volt	

Control Options	Options	Super Durable Paint
PE Button Style Photoelectric Cell	*AD Field Adjustable Output*	BKSDP Black Super Durable Paint
P3 N.E.M.A. Twistlock 3-pin Receptacle - Control not included	SF Single Fusing	BZSDP Bronze Super Durable Paint
P7 N.E.M.A. Twistlock 7-pin Receptacle - Control not included	DF Double Fusing	GYSDP Grey Super Durable Paint
	TP Tamper resistant screws	WHSDP White Super Durable Paint
	NOM NOM Certified	
	ELSW Emergency Battery Backup (Standard 0˚C)	
	ELCW Emergency Battery Backup (Cold Weather -20˚C)	
	LWG Wire Guard	
	LVG Vandal Guard	

Accessories: *Order as separate catalog number.*	
DLL127F 1.5 JU	*Photocell - SSL Twist-Lock (120-277V)*
DLL347 1.5 CUL JU	*Photocell - SSL Twist-Lock (347V)*
DLL480 1.5 CUL JU	*Photocell - SSL Twist-Lock (480V)*
SC U	*Shorting Cap*
W4GVGU	*Vandal Guard*
W4GWGU	*Wire Guard*

LIGHTING QUANTITIES (1)

TO	FROM	C2C	CONDUIT		CABLE
			3/4" RIGID METALLIC	2" CONDUIT (TRENCHED)	LIGHTING 3-1c#14
CONTROL	TS BOX 6	40		48	105
BOX 6	BOX 1	72	71		155
BOX 1	LC1-1	25	27		33
LC1-1	LC1-2	38	40		46
LC1-2	LC1-3	38	40		46
BOX 1	LC2-1	64	66		74
LC2-1	LC2-2	38	40		46
	TOTALS		**284**	**48**	**505**

STATION	FIXTURE REFERENCE	FIXTURE TYPE	QUANTITY	MODEL
	LC1-1	WALL PACK	1	W4GLED 20C1000 40K T3M MVOLT SPD P7 BZSPD
	LC1-2	WALL PACK	1	W4GLED 20C1000 40K T3M MVOLT SPD P7 BZSPD
	LC1-3	WALL PACK	1	W4GLED 20C1000 40K T3M MVOLT SPD P7 BZSPD
	LC2-1	WALL PACK	1	W4GLED 20C1000 40K T3M MVOLT SPD P7 BZSPD
	LC2-2	WALL PACK	1	W4GLED 20C1000 40K T3M MVOLT SPD P7 BZSPD
		TOTAL	**5**	

(1) QUANTITIES SHOWN WERE PREPARED FOR THE CONTRACTOR'S CONVENIENCE. IT IS NOT GUARANTEED THAT THIS LIST OF MATERIALS CONSTITUTES ALL ITEMS REQUIRED FOR THE COMPLETION OF WORK. ALL EQUIPMENT SHALL BE BID UNDER THE LUMP SUM BID ITEM FOR "RCB UNDERPASS LIGHTING", SEE JSP FOR ADDITIONAL DETAILS.

LIGHTING SHEET
SHEET 1 OF 1

N

0' 5' 10' 20'
SCALE IN FEET

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STATE OF MISSOURI
JEREMY SCOTT STRETZ
NUMBER PE-2017023856
PROFESSIONAL ENGINEER
3/7/2024

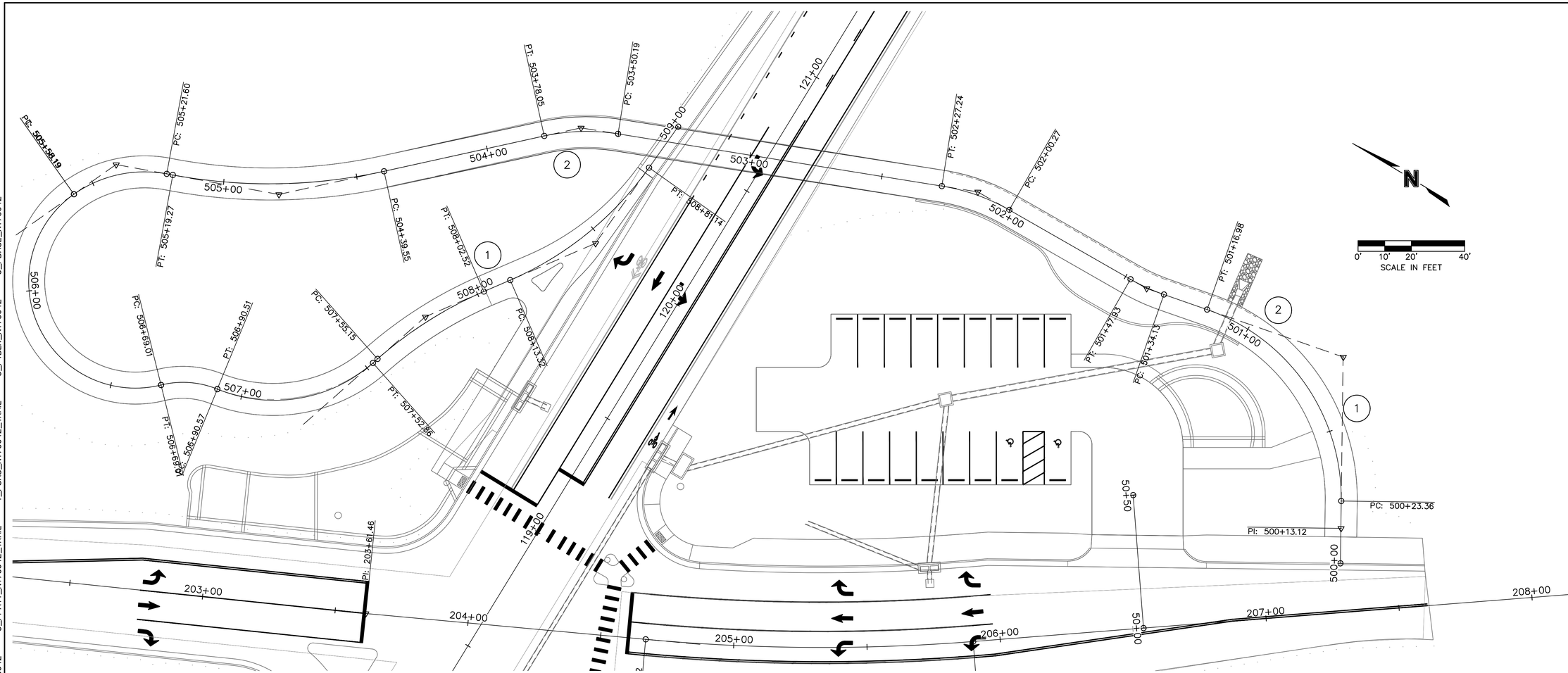
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

BOX CULVERT LIGHTING
4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN
JOPLIN, MISSOURI
2023

drawn by: SMK/MJM/CTK
checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_INT01_N170642
date: 3/7/24

SHEET
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SIGNING NOTES:

1. ALL SIGNS TO BE INSTALLED PER CITY OF JOPLIN STANDARD DETAIL ST-18 UNLESS OTHERWISE NOTED.
2. SIGN LOCATIONS TO BE CONFIRMED BY ENGINEER PRIOR TO INSTALLATION.



1 2

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Jonathan Peitz
2024.03.06 11:10:00 -06'00'

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL SIGNING PLAN
BID ALTERNATIVE 3

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

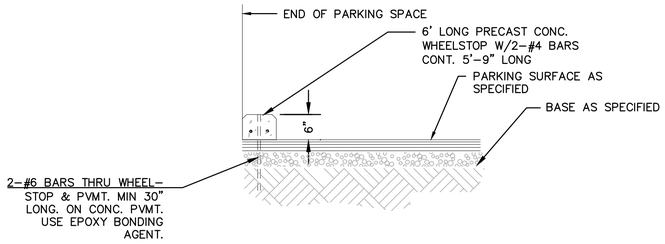
JOPLIN, MISSOURI

2023

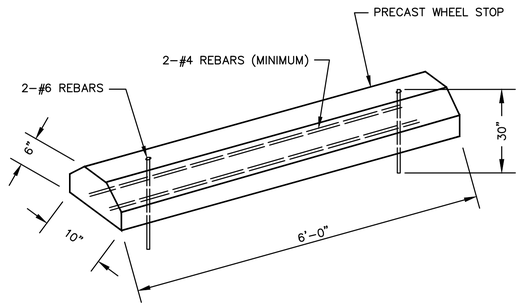
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checked by: JWP
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QA/QC by: ENG
project no.: N17-06420
drawing no.: C_RPP01_N170642
date: 3/6/24

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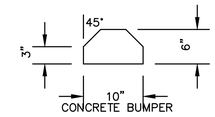
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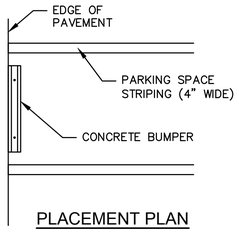
NOTE: WHEEL STOPS TO BE USED ONLY WHERE SHOWN ON PLANS



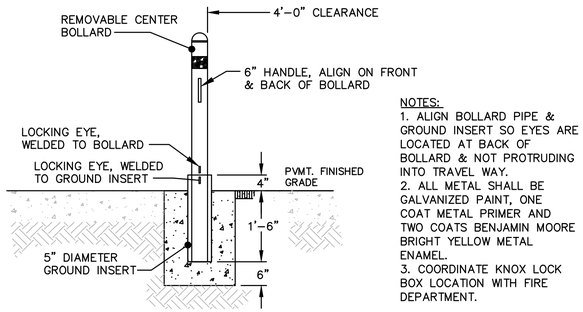
PRECAST WHEEL STOP DETAIL
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X-SECTION

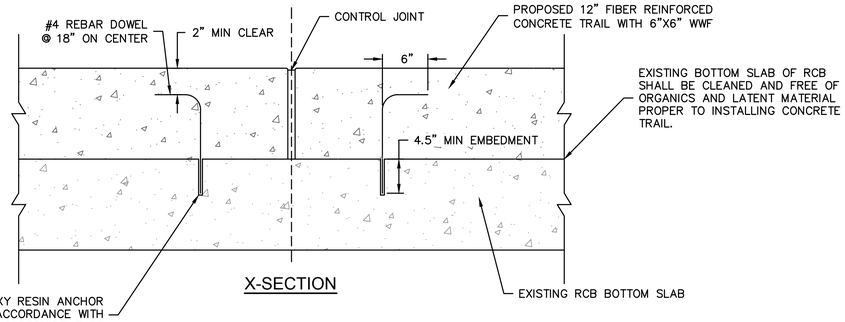


PLACEMENT PLAN

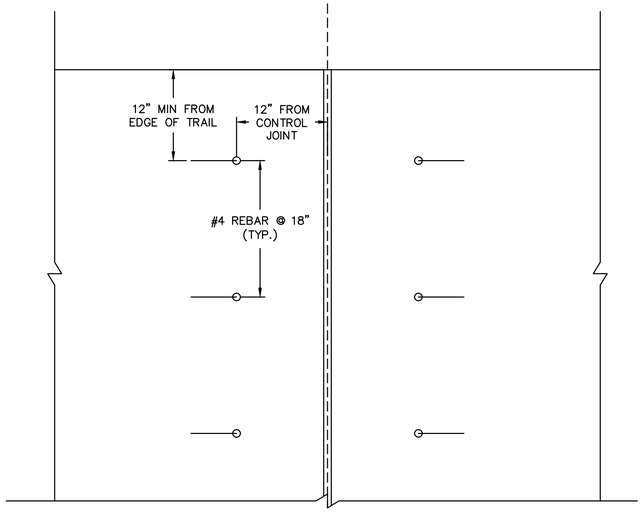


NOTES:
1. ALIGN BOLLARD PIPE & GROUND INSERT SO EYES ARE LOCATED AT BACK OF BOLLARD & NOT PROTRUDING INTO TRAVEL WAY.
2. ALL METAL SHALL BE GALVANIZED PAINT, ONE COAT METAL PRIMER AND TWO COATS BENJAMIN MOORE BRIGHT YELLOW METAL ENAMEL.
3. COORDINATE KNOX LOCK BOX LOCATION WITH FIRE DEPARTMENT.

REMOVAL BOLLARD DETAIL

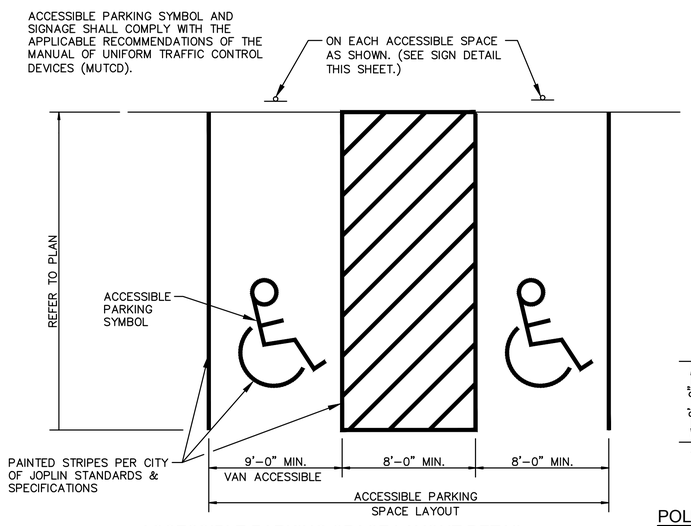


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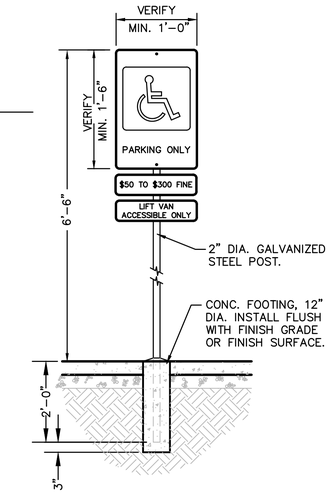


PLAN VIEW

CONCRETE TRAIL SLAB DOWELING THROUGH EXISTING BOX CULVERT
N.T.S.



ACCESSIBLE PARKING SPACE LAYOUT DETAIL
N.T.S.



POLE MOUNTED ACCESSIBLE SIGN
N.T.S.

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Jonathan Peitz
2024.03.06 07:27:00 -06'00'

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAIL STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

JOPLIN, MISSOURI

2023

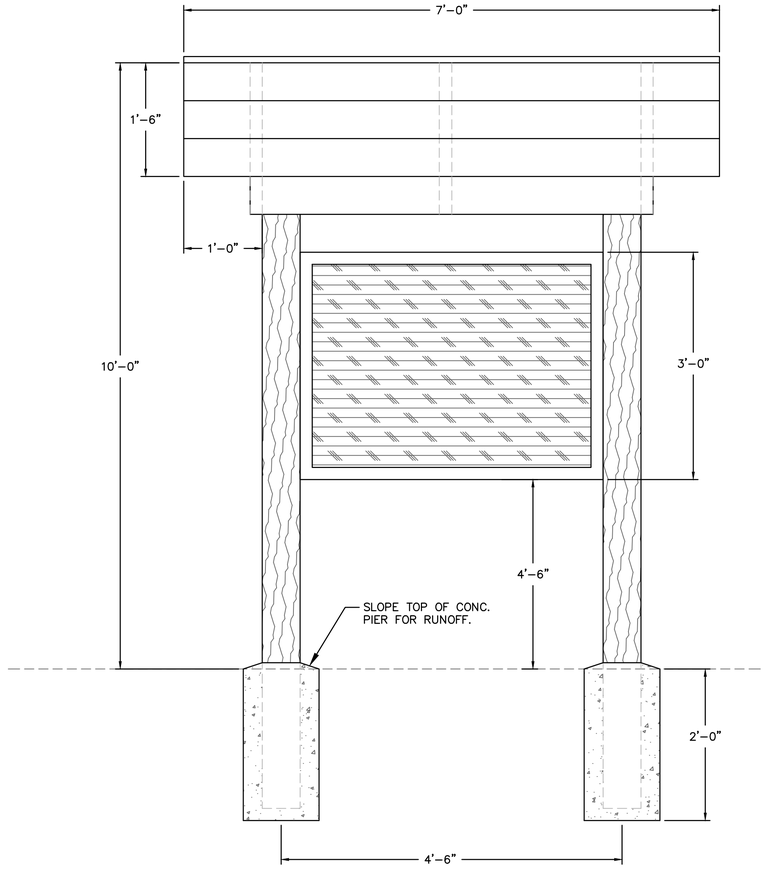
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checked by: JWP
approved by: JWP
QA/QC by: ENG
project no.: N17-06420
drawing no.: C_DTL01_N170629
date: 3/6/24

SHEET
91 of 95

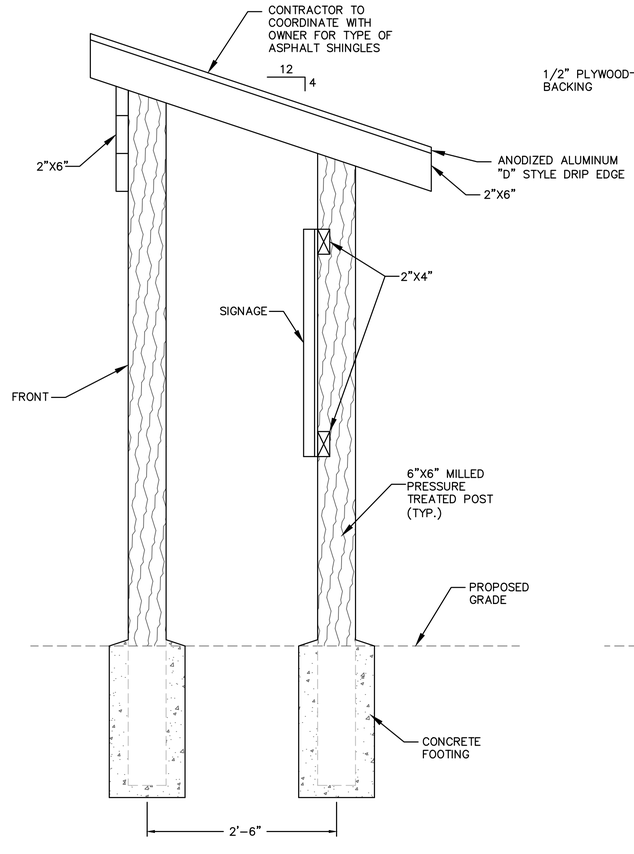
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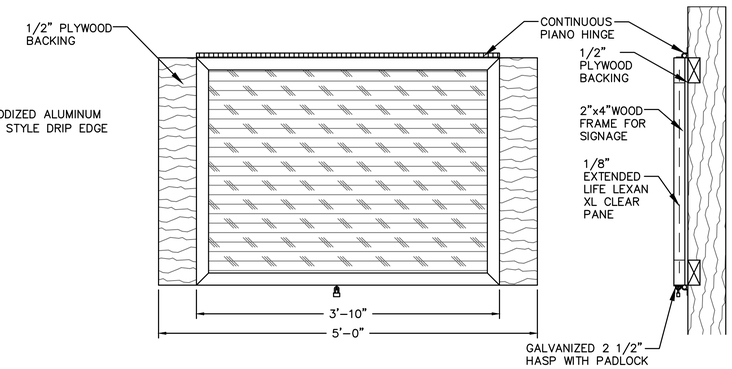
1. SIGNAGE TO BE BACKED WITH WEATHER TREATED PLYWOOD.
2. SIGNAGE BOARD TO BE CORK FACED.
3. A 1/8" EXTENDED LIFE LEXAN XL CLEAR PANE SHALL BE INSTALLED IN A GROOVE CUT IN THE WOOD FRAME FOR THE SIGN.
4. A 3/4" WIDE X 3/16" THICK FOAM WEATHER STRIP SHALL BE INSTALLED BETWEEN THE SIGNS WOOD FRAME AND THE PLYWOOD BACKING.
5. SIGNS WOOD FRAME SHALL HAVE MITERED CORNERS WITH BISCUIT INSERTS.
6. WOOD DECKING FOR ROOF TO BE WEATHER TREATED PLYWOOD.
7. ALL WOOD FRAMING MATERIALS TO BE WEATHER TREATED.



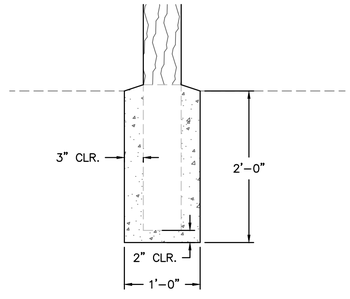
KIOSK DETAIL
NTS



KIOSK SECTION
NTS



KIOSK SIGNAGE ENCLOSURE DETAIL
NTS



KIOSK FOOTING DETAIL
NTS

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Jonathan Peitz
2024.03.06 [illegible]

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TRAIL STANDARD DETAILS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

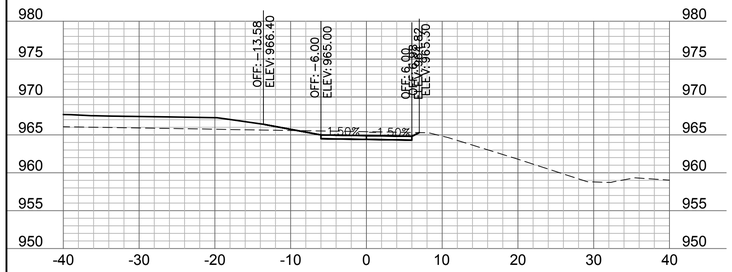
JOPLIN, MISSOURI

2023

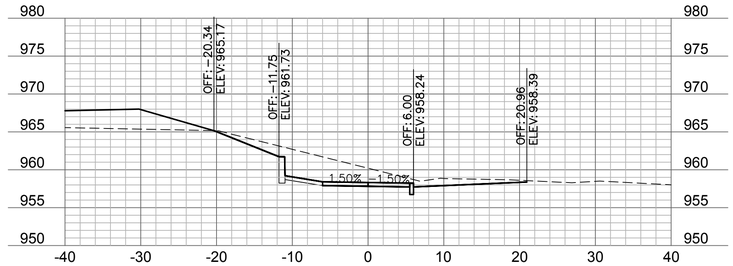
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date: 3/6/24

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92 of 95

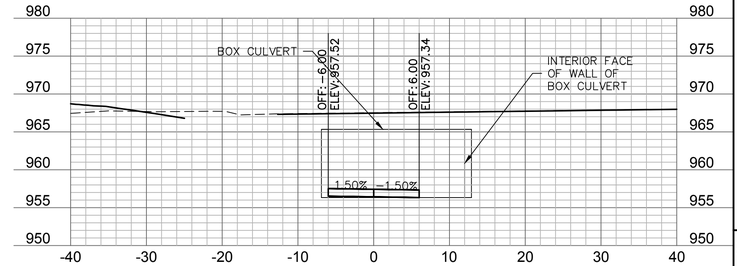
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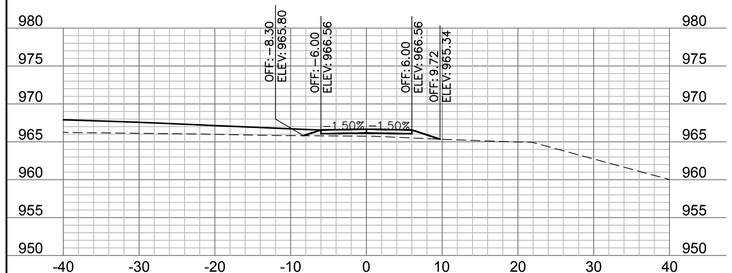
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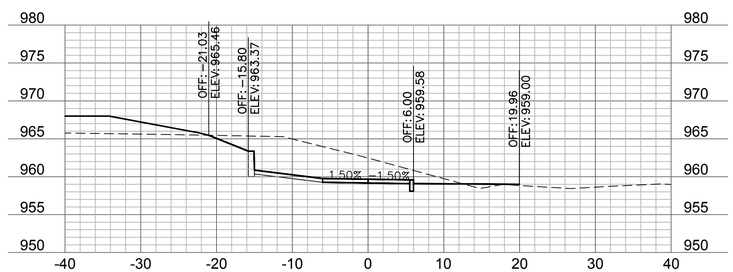
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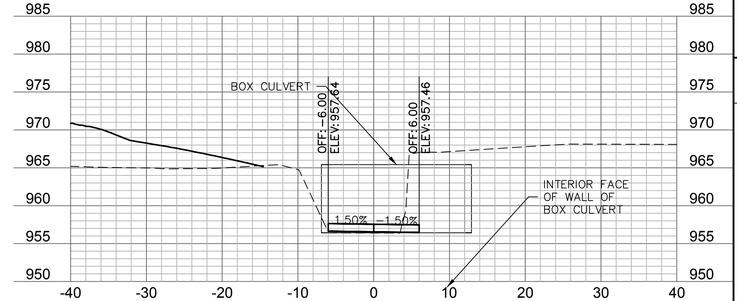
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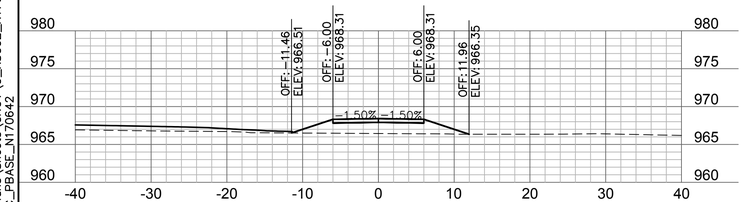
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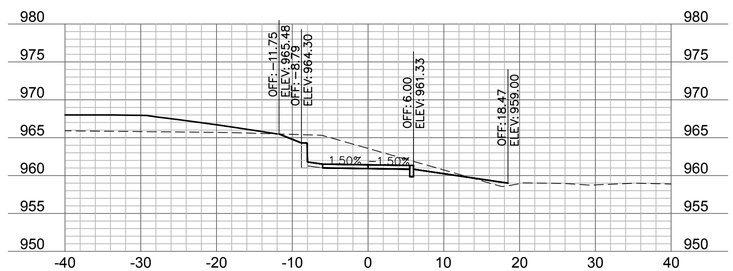
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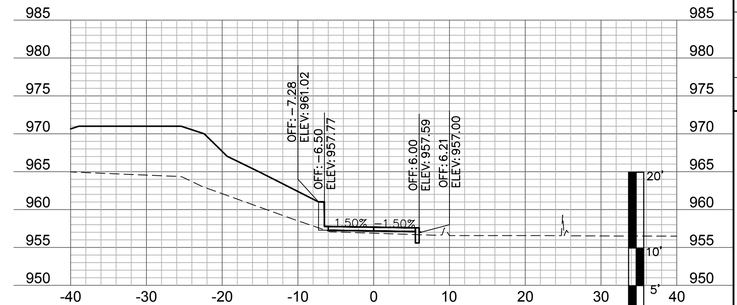
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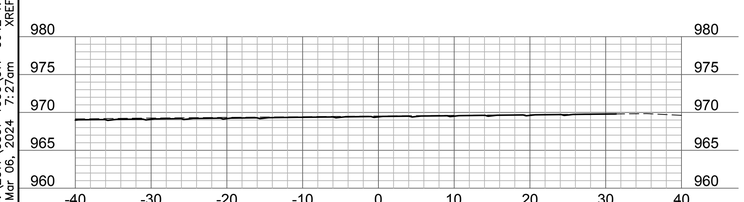
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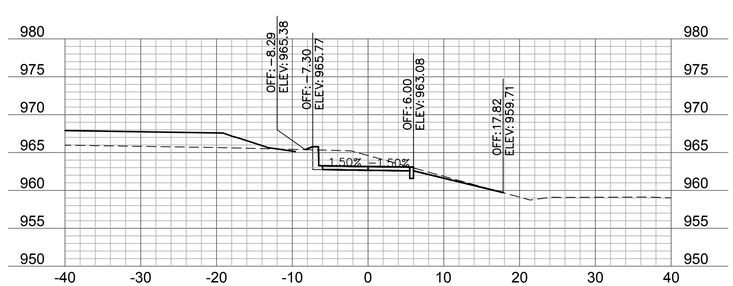
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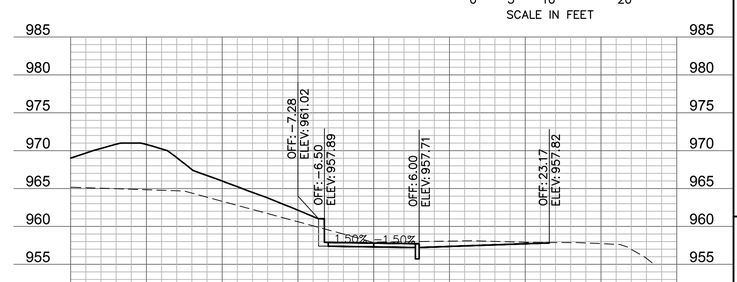
502+25



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Jonathan Peitz
2024.03.06 07:27:00

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

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

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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CROSS SECTIONS
TRAIL CROSS SECTIONS

4TH & MURPHY GEOMETRIC IMPROVEMENT
CITY OF JOPLIN

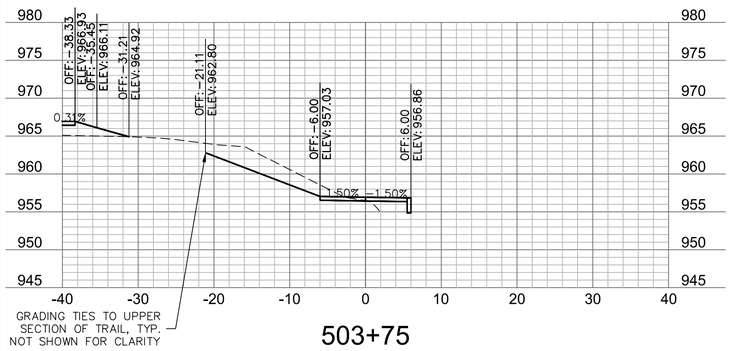
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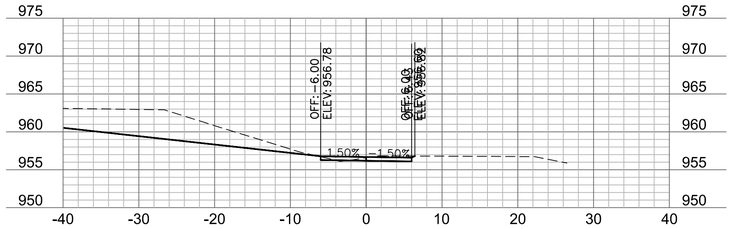
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drawing no.:	C_XSC01_N170642
date:	3/6/24

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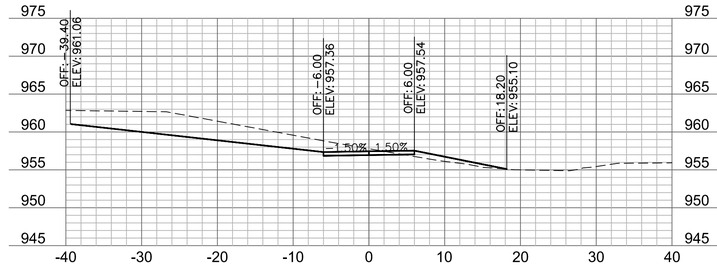
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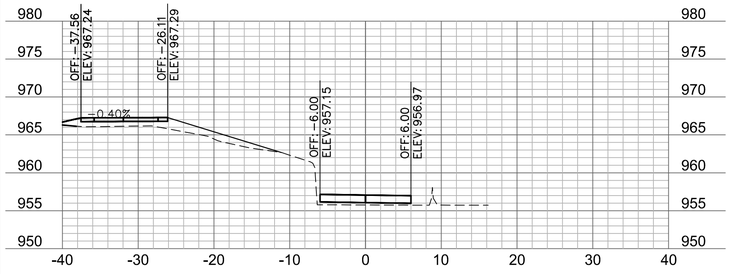
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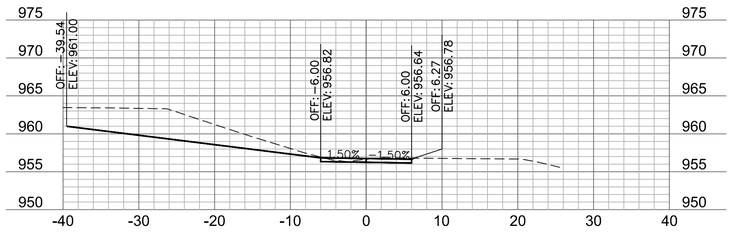
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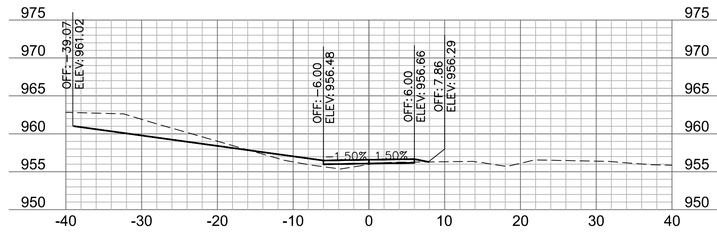
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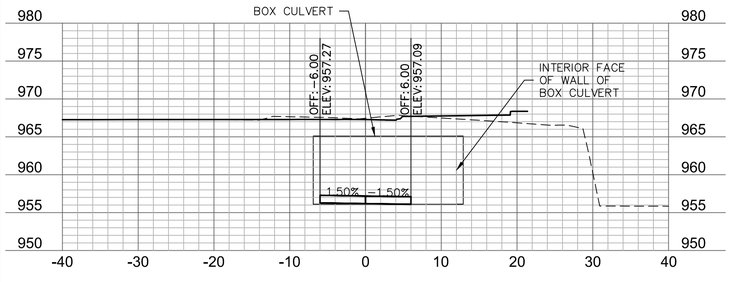
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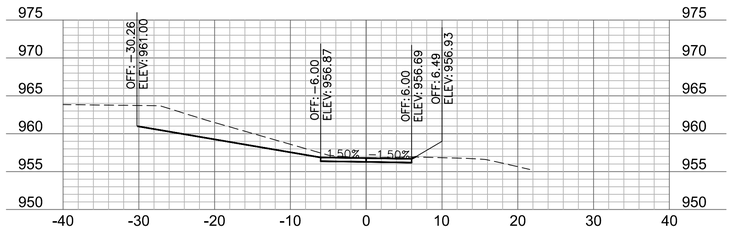
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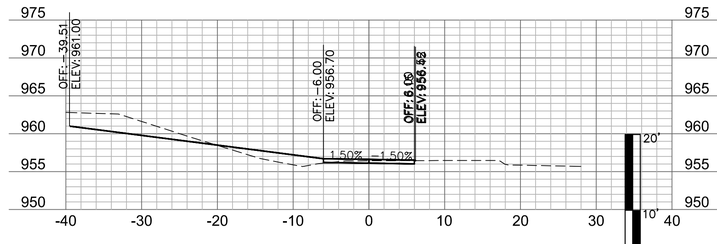
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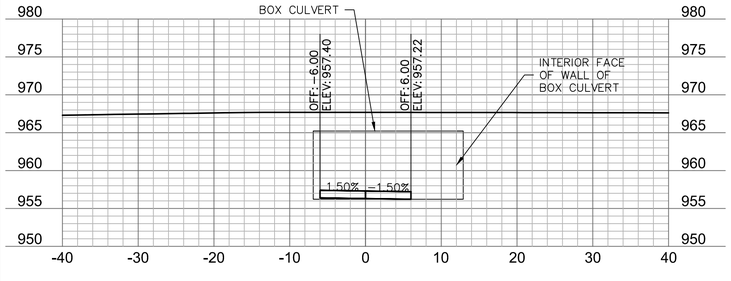
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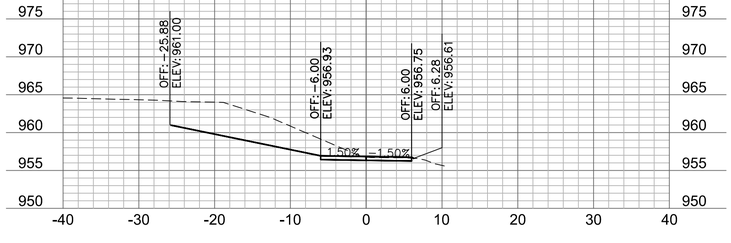
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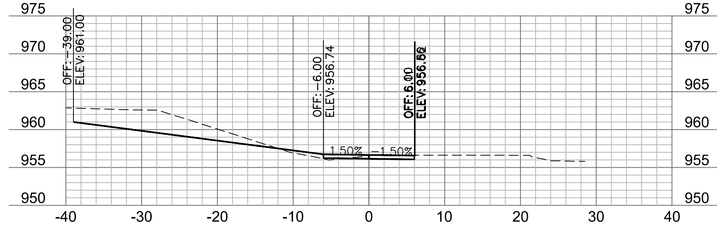
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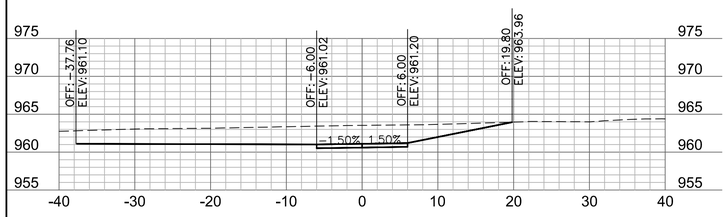
JOPLIN, MISSOURI

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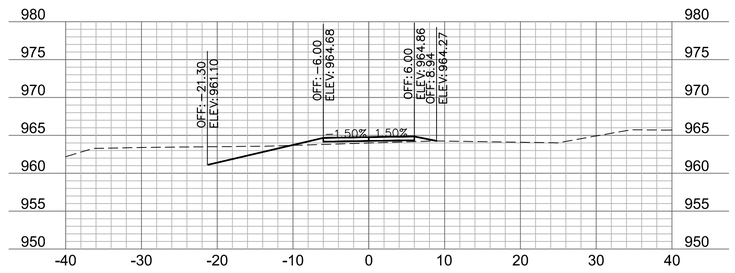
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checked by: JWP
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QA/QC by: ENG
project no.: N17-06420
drawing no.: C_XSC01_N170642
date: 3/7/24

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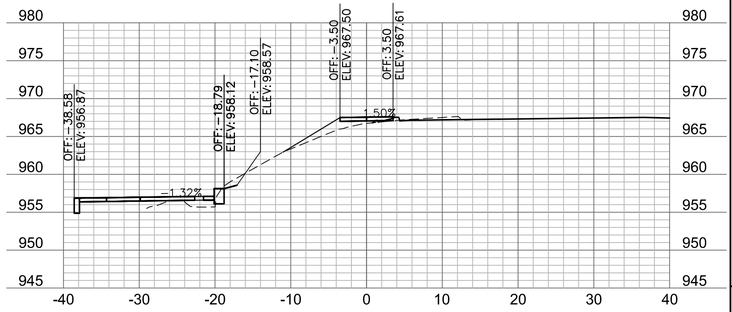
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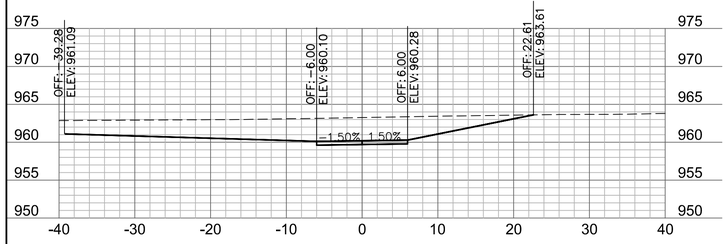
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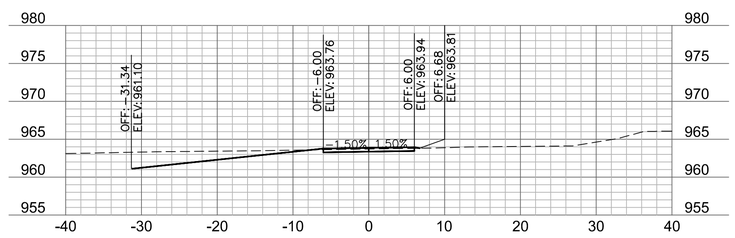
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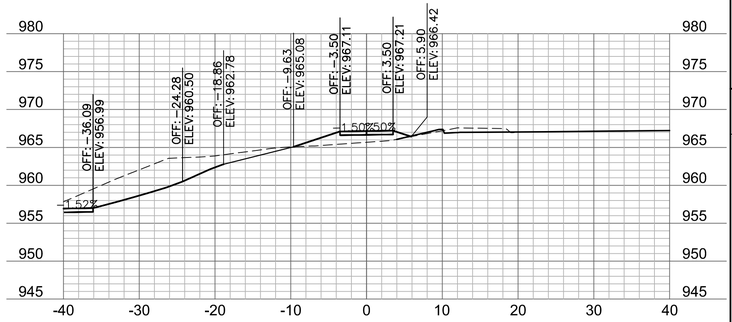
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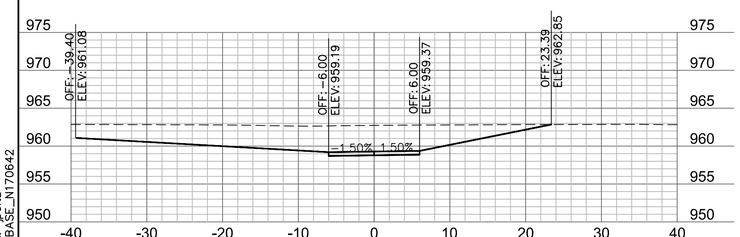
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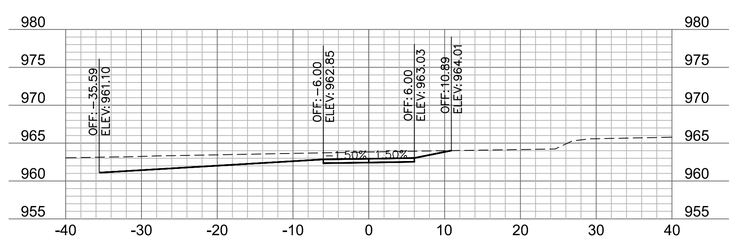
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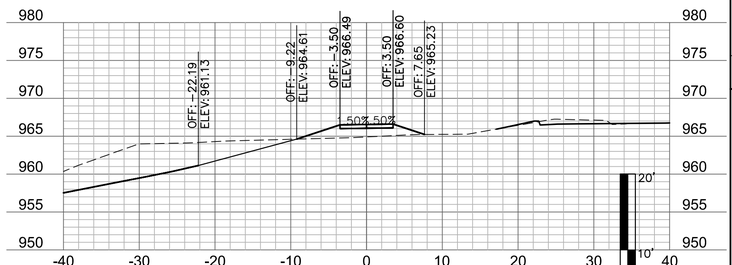
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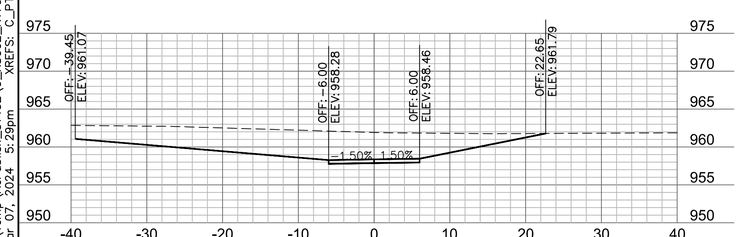
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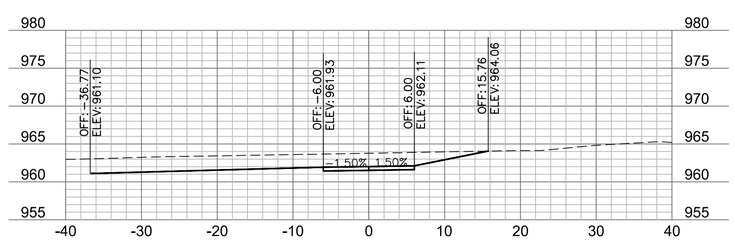
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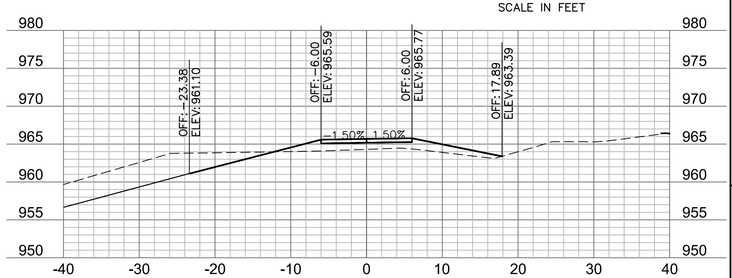
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