PUBLIC SANITARY SEWER PLANS FOR
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
SECTIONS 21, 22 & 23, TOWNSHIP 27N, RANGE 33W
CITY OF JOPLIN, MISSOURI
NEWTON COUNTY, MISSOURI

LEGEND

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

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

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 BENCHMARK
C.P.	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
ADJ.	ADJUST
EL.	ELEVATION
ESMT.	EASEMENT
B-B	BACK OF CURB TO BACK OF CURB DIMENSION
℄	CENTERLINE

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!!

LOWER REACH
PROJECT LOCATION



LOCATION MAP
NOT TO SCALE



SECTION 21, 22 & 23, T-27-N, R-33-W
NEWTON COUNTY, MISSOURI
VICINITY MAP
NOT TO SCALE

ELECTRIC
LIBERTY UTILITIES
3400 S. KODIAK RD, JOPLIN, MO 64801
ROBIN CHILDS
ROBIN.CHILDS@LIBERTYUTILITIES.COM

NATURAL GAS
SPIRE ENERGY
520 E. 5TH ST., JOPLIN, MO 64801
KEN STEGALL
KEN.STEGALL@SPIREENERGY.COM

TELEPHONE
A.T.&T.
727 S. PEARL AVE., JOPLIN, MO 64801
GENE LOLLIS
IL0967@ATT.COM

WATER
MISSOURI-AMERICAN WATER CO.
2323 DAVIS BLVD
JOPLIN, MO 64804
GRANT ALUMBAUGH
GRANT.ALUMBAUGH@AMWATER.COM

CABLE TELEVISION
SPARKLIGHT
2600 DAVIS BLVD., JOPLIN, MO 64804
RANDY KENNEDY
RANDY.KENNEDY@SPARKLIGHT.BIZ

INDEX OF SHEETS

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PREPARED & SUBMITTED BY:

OLSSON
702 S. MAIN STREET
JOPLIN, MISSOURI 64801

SHAUN W. McCONNAUGHEY — DATE: January 24, 2024

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

APPROVED BY:

CITY OF JOPLIN, MISSOURI

CITY ENGINEER — DATE

olsson
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MISSOURI CERTIFICATE OF AUTHORITY # 001582
1027 S. Main Street, Suite 503 TEL 417.781.0643 www.olsson.com
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STATE OF MISSOURI — SHAUN W. McCONNAUGHEY — NUMBER PE-2010019078 — PROFESSIONAL ENGINEER — 1/24/2024

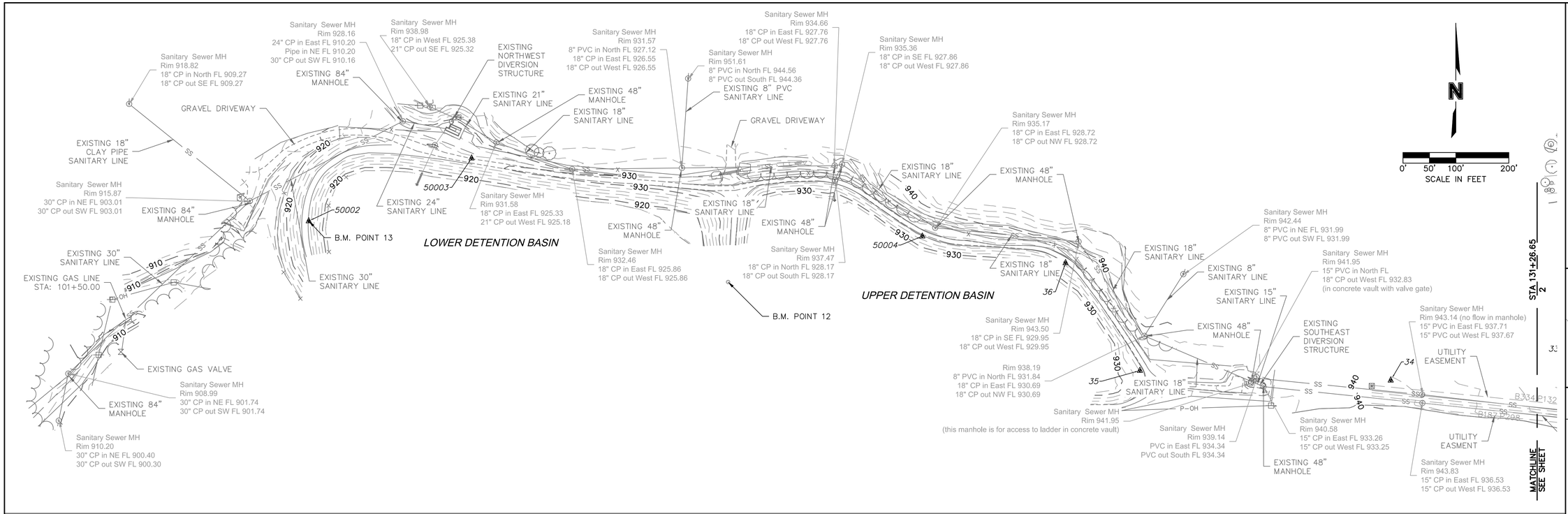
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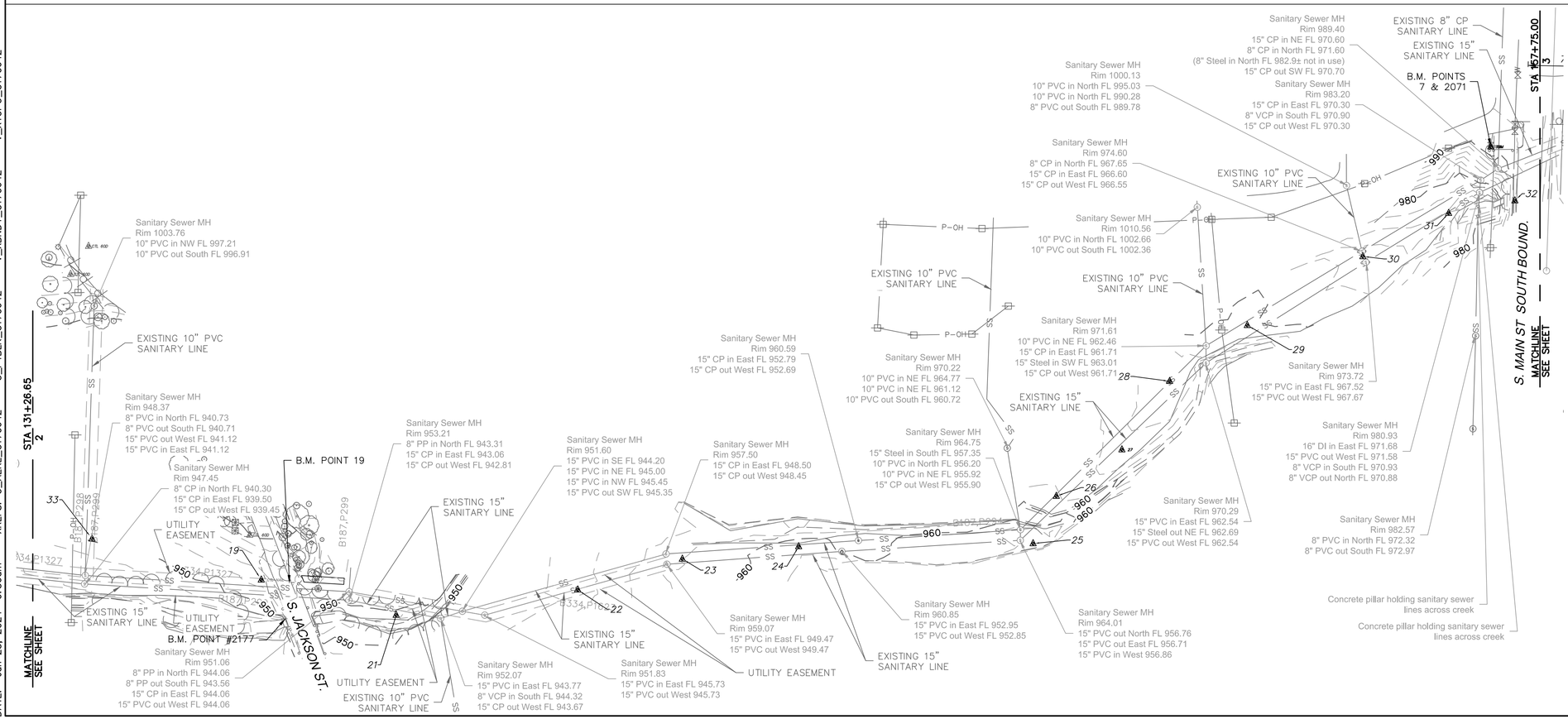
TITLE SHEET
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_TTL01_C170642
date: 1/19/2024

SHEET 1 of 31

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STATE OF MISSOURI
MICHAEL J. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EXISTING CONDITIONS
SURVEY CONTROL POINTS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

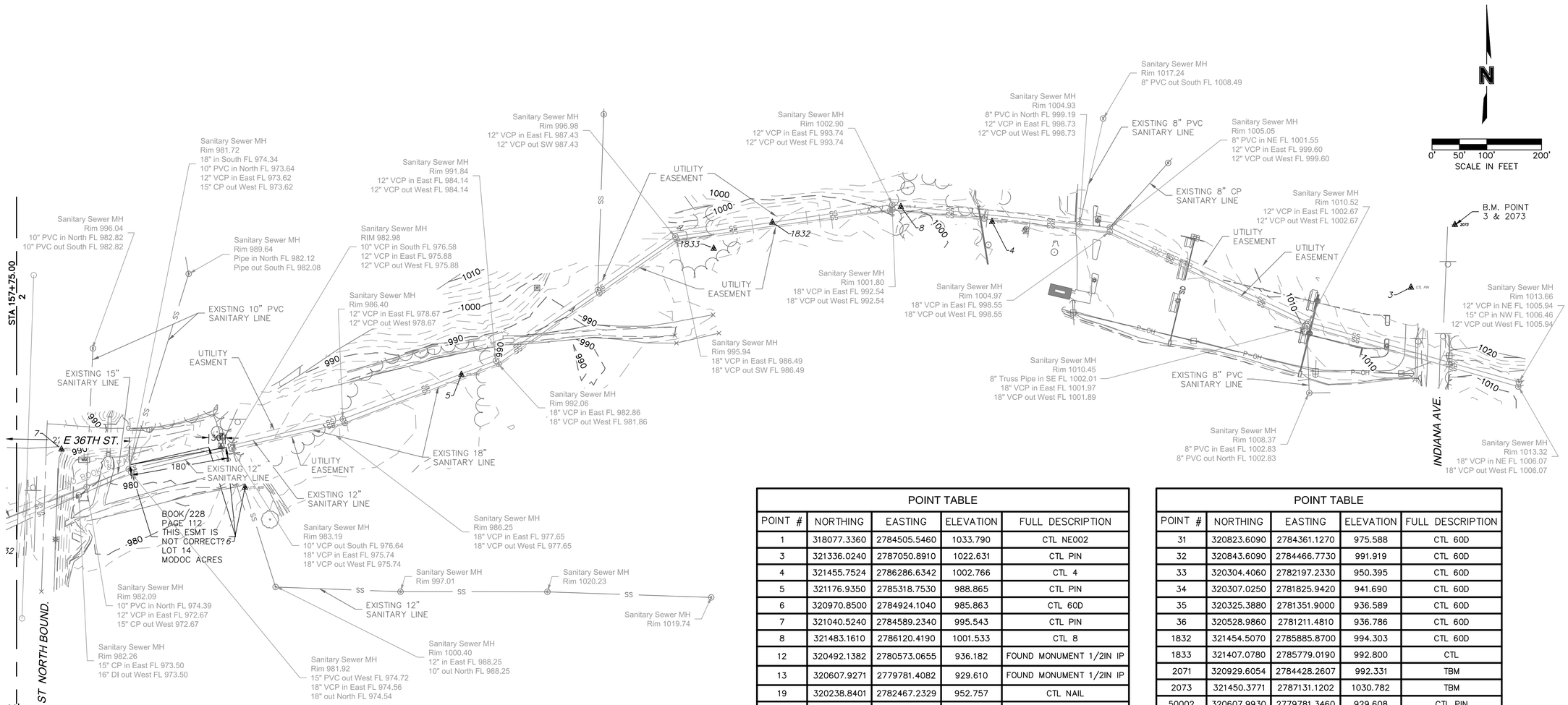
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SHEET
2 of 31

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POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
1	318077.3360	2784505.5460	1033.790	CTL NE002
3	321336.0240	2787050.8910	1022.631	CTL PIN
4	321455.7524	2786286.6342	1002.766	CTL 4
5	321176.9350	2785318.7530	988.865	CTL PIN
6	320970.8500	2784924.1040	985.863	CTL 60D
7	321040.5240	2784589.2340	995.543	CTL PIN
8	321483.1610	2786120.4190	1001.533	CTL 8
12	320492.1382	2780573.0655	936.182	FOUND MONUMENT 1/2IN IP
13	320607.9271	2779781.4082	929.610	FOUND MONUMENT 1/2IN IP
19	320238.8401	2782467.2329	952.757	CTL NAIL
21	320182.6790	2782682.4010	950.110	CTL 60D
22	320222.9602	2782972.0459	953.210	CTL
23	320272.2528	2783138.9073	957.873	CTL 23
24	320291.9660	2783324.3078	961.797	CTL 24 60D
25	320296.8444	2783698.4042	962.630	CTL 25
26	320372.3475	2783735.2614	961.422	CTL 26 60D
27	320446.4650	2783839.9140	964.679	CTL 60D
28	320555.6180	2783916.0690	967.559	CTL 60D
29	320644.8780	2784039.9930	969.524	CTL 60D
30	320754.6950	2784224.2640	973.066	CTL 60D

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
31	320823.6090	2784361.1270	975.588	CTL 60D
32	320843.6090	2784466.7730	991.919	CTL 60D
33	320304.4060	2782197.2330	950.395	CTL 60D
34	320307.0250	2781825.9420	941.690	CTL 60D
35	320325.3880	2781351.9000	936.589	CTL 60D
36	320528.9860	2781211.4810	936.786	CTL 60D
1832	321454.5070	2785885.8700	994.303	CTL 60D
1833	321407.0780	2785779.0190	992.800	CTL
2071	320929.6054	2784428.2607	992.331	TBM
2073	321450.3771	2787131.1202	1030.782	TBM
50002	320607.9930	2779781.3460	929.608	CTL PIN
50003	320726.6510	2780088.9970	929.302	CTL 60D
50004	320579.2300	2780940.7650	936.321	CTL 60D

BENCH MARK INFORMATION

B.M. Point #1 = 1033.79
Monument NE002 at the southeast corner of 44th Street and Main Street

B.M. Point #3 = 1022.63
Bolt on top flange of fire hydrant in "Muller" at the northeast corner 36th Street and Indiana Avenue.

B.M. Point #7 = 995.54
Bolt on top flange of fire hydrant in "Muller" at the southwest corner of Old Main Street and 36th Street.

B.M. Point #12 = 936.18
Set iron pin in the west side of the berm between cells 35'± south of the south side of the concrete spillway.

B.M. Point #13 = 929.61
Set iron pin on the east side of the west berm west cell midway north and south of berm.

B.M. Point #19 = 952.76
60d Nail 35'± west of centerline of Jackson and 12'± north of guard rail at creek crossing.

B.M. Point #2071 = 992.33
Bolt on top flange of fire hydrant in "Muller" at the southwest corner of old Main Street and 36th Street.

B.M. Point #2073 = 1030.78
Bolt on top of flange of fire hydrant in "Muller" at the northeast corner of 36th Street and Indiana Avenue.

B.M. Point #2177= 953.31
Cut square in north end of west headwall at creek crossing and Jackson Avenue

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Joplin, MO 64801

STATE OF MISSOURI
SHANE W. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EXISTING CONDITIONS SURVEY CONTROL POINTS
GLENDALE PARALLEL INTERCEPTOR LOWER REACH
JOPLIN, MISSOURI
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SHEET 3 of 31

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GENERAL NOTES:

1. ALL WORK PRESENTED, IMPLIED, AND/OR COMPLETED AS A PART OF THIS PLAN SET SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE CITY OF JOPLIN UNLESS SPECIFICALLY STATED OTHERWISE. ALL ITEMS AND WORK REFERENCING MODOT STANDARD DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS (APPROVED BY CITY OF JOPLIN) AND ONE (1) COPY OF ALL APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE SITE AT ALL TIMES.
2. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
4. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
5. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST VERSION) THROUGHOUT THE PROJECT IN HIGHWAYS, SIDEWALKS, STREETS AND INTERSECTIONS. ALLEY ENTRANCES SHALL BE BLOCKED WITH BARRICADES WHILE THE ALLEY IS UNDER CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
6. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
7. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
8. THE CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER WITHIN 5 DAYS OF THE NOTICE TO PROCEED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND THE GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
10. NO EQUIPMENT OR MATERIAL SHALL BE DEPOSITED ON PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH ACTS AND SHALL REMOVE THE MATERIAL AND RESTORE THE PROPERTY AT THE EXPENSE OF THE CONTRACTOR.
11. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS STATED IN THE CITY NOISE ORDINANCE UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
12. THE CITY OF JOPLIN SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL DEMOLITION AND REMOVAL ITEMS SUCH AS SIGNAGE, POLES, SIGNAL EQUIPMENT, ETC. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS FOR A TIME AND LOCATION TO DELIVER THOSE ITEMS TO THE CITY. CONSTRUCTION DEBRIS SUCH AS BROKEN CONCRETE, EXCESS FILL, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR. MATERIAL SHALL BE COMPLETELY REMOVED FROM THE SITE PRIOR TO ACCEPTANCE OF THE PROJECT. ALL MATERIAL SHALL BE DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
13. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL STORM AND SANITARY MANHOLE RIMS TO MATCH THE PROPOSED FINISHED GRADE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE EROSION DURING CONSTRUCTION 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.
22. 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.
23. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
24. CONTRACTOR TO PROTECT ANY STORM INLETS FROM SEDIMENT THAT TAKE STORM WATER FROM THE AREA OF CONSTRUCTION. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
25. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE LOCAL, STATE & FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO EROSION CONTROL.
26. 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.
27. 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.
28. 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.
29. 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.
30. THE CONTRACTOR IS RESPONSIBLE FOR ATTENDING TO AND CORRECTING UNSUITABLE SOIL CONDITIONS RELATED TO PLOW ZONES, WET SOILS, AND OTHER CONDITIONS.
31. IF THE CONTRACTOR'S OPERATIONS CAUSE AN UNSATISFACTORY SUBGRADE, THE CONTRACTOR SHALL RESTORE THE SUBGRADE TO A SATISFACTORY CONDITION AT THE CONTRACTOR'S EXPENSE.
32. 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.
33. 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.
34. 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.
35. 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.
36. 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.
37. 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.
38. 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.
39. ALL TRENCHING SHALL BE IN ACCORDANCE WITH THE JOPLIN STANDARD SPECIFICATIONS. NO SEPARATE MEASUREMENTS AND PAYMENT WILL BE MADE FOR TRENCH EXCAVATION AND BACKFILL REQUIRED FOR 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.
40. 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.
41. ALL ACTIVE SERVICE LINES (PUBLIC OR PRIVATE) THAT ARE CONNECTED TO THE SEWER SYSTEM TO BE REMOVED SHALL BE EXTENDED AND CONNECTED TO THE PROPOSED SEWER SYSTEM. ALL CONNECTIONS TO PROPOSED SYSTEM THAT ARE NOT EXPLICITLY SHOWN AND IDENTIFIED ON THE BID FORM WILL BE CONSIDERED SUBSIDIARY TO THE PROPOSED SEWER PIPE.
42. 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.
43. 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.
44. 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.
45. 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.
46. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF CONTAMINATED MATERIAL IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS.
47. ALL UTILITIES REMOVED FROM SERVICE AS PART OF THE PROPOSED SEWER SYSTEM SHALL BE ABANDONED IN ACCORDANCE WITH CITY OF JOPLIN SPECIFICATIONS.
48. ANY MANHOLES NOT SHOWN ON THESE PLANS BUT DISCOVERED DURING THE COURSE OF THE PROJECT ARE TO BE DELT WITH IN THE MANOR PRESCRIBED BY THE ENGINEER.

TREE PRESERVATION NOTES:

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

ROOT PRUNING NOTES:

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

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STATE OF MISSOURI
SHAWN MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/19/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_GEN01_C170642
date: 1/19/2024

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_GEN01_C170642.dwg USER: thill
DATE: Jan 23, 2024 9:36am XREFS: C_PTBLK_C170642

RECAPITULATION OF QUANTITIES				
ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY
LOWER REACH				
		SCHEDULE A - GENERAL (BASE BID)		
A	1	MOBILIZATION	LS	1
A	2	CONTRACTOR CONSTRUCTION STAKING	LS	1
A	3	ALL OTHER ITEMS NECESSARY FOR THE PERFECTION OF THE WORK	LS	1
		SCHEDULE B - DEMOLITION (BASE BID)		
B	1	CLEARING AND GRUBBING	LS	1
B	2	REMOVAL OF IMPROVEMENTS	LS	1
B	3	PAVEMENT REMOVAL	SY	1,608
B	4	SAW CUT	LF	1,400
		SCHEDULE C - EROSION CONTROL (BASE BID)		
C	1	EROSION & SEDIMENT CONTROL	LS	1
C	2	SEEDING, FERTALIZING & MULCHING	LS	1
		SCHEDULE D - SANITARY SEWER (BASE BID)		
D	1	JACK AND BORE UNDER STREETS (28" DIA.)	LF	246
D	2	JACK AND BORE UNDER STREETS (30" DIA.)	LF	60
		36" DIA. DEEP PIPE		
D	3	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	36
D	4	6'-8' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	151
D	5	8'-10' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	148
D	6	10'-12 DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	96
D	7	12'-14' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	30
		30" DIA. DEEP PIPE		
D	8	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	300
D	9	6'-8' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	138
D	10	10'-12 DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	91
D	11	12'-14' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	194
D	12	14' PLUS DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	136
		21" DIA. DEEP PIPE		
D	13	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	2,299
D	14	6'-8' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	1,284
D	15	8'-10' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	286
D	16	10'-12 DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	31
D	17	12'-14' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	36
		18" DIA. DEEP PIPE		
D	18	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	890
D	19	6'-8' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	1,568
D	20	8'-10' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	574
D	21	10'-12 DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	79
D	22	12'-14' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	23
D	23	14' PLUS DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	193
		10" DIA. DEEP PIPE		
D	24	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	4
		8" DIA. DEEP PIPE		
D	25	0'-6' DEEP TRENCH & BACKFILL GRAVITY SEWER PIPE	LF	6
D	26	TYPE 1, 60" DIA. MANHOLE EXTRA DEPTH	VF	54
D	27	TYPE 1, 60" EXTERNAL DROP MANHOLE	EA	1
D	28	TYPE 1, 48" DIA. MANHOLE	EA	12
D	29	TYPE 1, 48" DIA. MANHOLE EXTRA DEPTH	VF	40
D	30	28" DR 11 HDPE CASING PIPE	LF	246
D	31	30" DR 11 HDPE CASING PIPE	LF	60
D	32	CONCRETE ENCASEMENT	LF	275
D	33	36" DIA. PS46 PVC GRAVITY SEWER PIPE AND BEDDING	LF	461
D	34	30" DIA. PS46 PVC GRAVITY SEWER PIPE AND BEDDING	LF	859
D	35	21" DIA. PS46 PVC GRAVITY SEWER PIPE AND BEDDING	LF	3,936
D	36	18" DIA. PS46 PVC GRAVITY SEWER PIPE AND BEDDING	LF	3,327
D	37	10" DIA. SDR 26 PVC GRAVITY SEWER PIPE AND BEDDING	LF	4
D	38	8" DIA. SDR 26 PVC GRAVITY SEWER PIPE AND BEDDING	LF	6
D	39	HYDROSTATIC TESTING OF TYPE 1, 48" DIA. MANHOLES	EA	12
D	40	HYDROSTATIC TESTING OF TYPE 1, 60" DIA. MANHOLES	EA	29
D	41	ABANDONMENT OF 48" MANHOLES UNDER TURF	EA	7
D	42	ABANDONMENT OF 48" MANHOLES UNDER PAVEMENT	EA	3
D	43	RECONNECTION OF EXISTING 4" DIA. SEWER SERVICE LAT. LINE	EA	2
D	44	RECONNECTION OF EXISTING 8" DIA. SEWER LINE	EA	12
D	45	RECONNECTION OF EXISTING 10" DIA. SEWER LINE	EA	5
D	46	RECONNECTION OF EXISTING 15" DIA. SEWER LINE	EA	3
D	47	RECONNECTION OF EXISTING 18" DIA. SEWER LINE	EA	4
D	48	RECONNECTION OF EXISTING 21" DIA. SEWER LINE	EA	1
D	33	RECONNECTION TO EXISTING STRUCTURE	EA	6
		SCHEDULE E - PAVEMENT (BASE BID)		
E	1	ASPHALT PAVEMENT REPAIR & REPLACEMENT	SY	1,700
E	2	ASPHALT PAVEMENT OVERLAY	SY	2,950
		SCHEDULE F - TRAFFIC CONTROL (BASE BID)		
F	1	LOCAL TRAFFIC CONTROL	LS	1
F	2	MODOT TRAFFIC CONTROL	DAYS	15

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STATE OF MISSOURI
SHANNON MICHAEL MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SUMMARY OF QUANTITIES

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

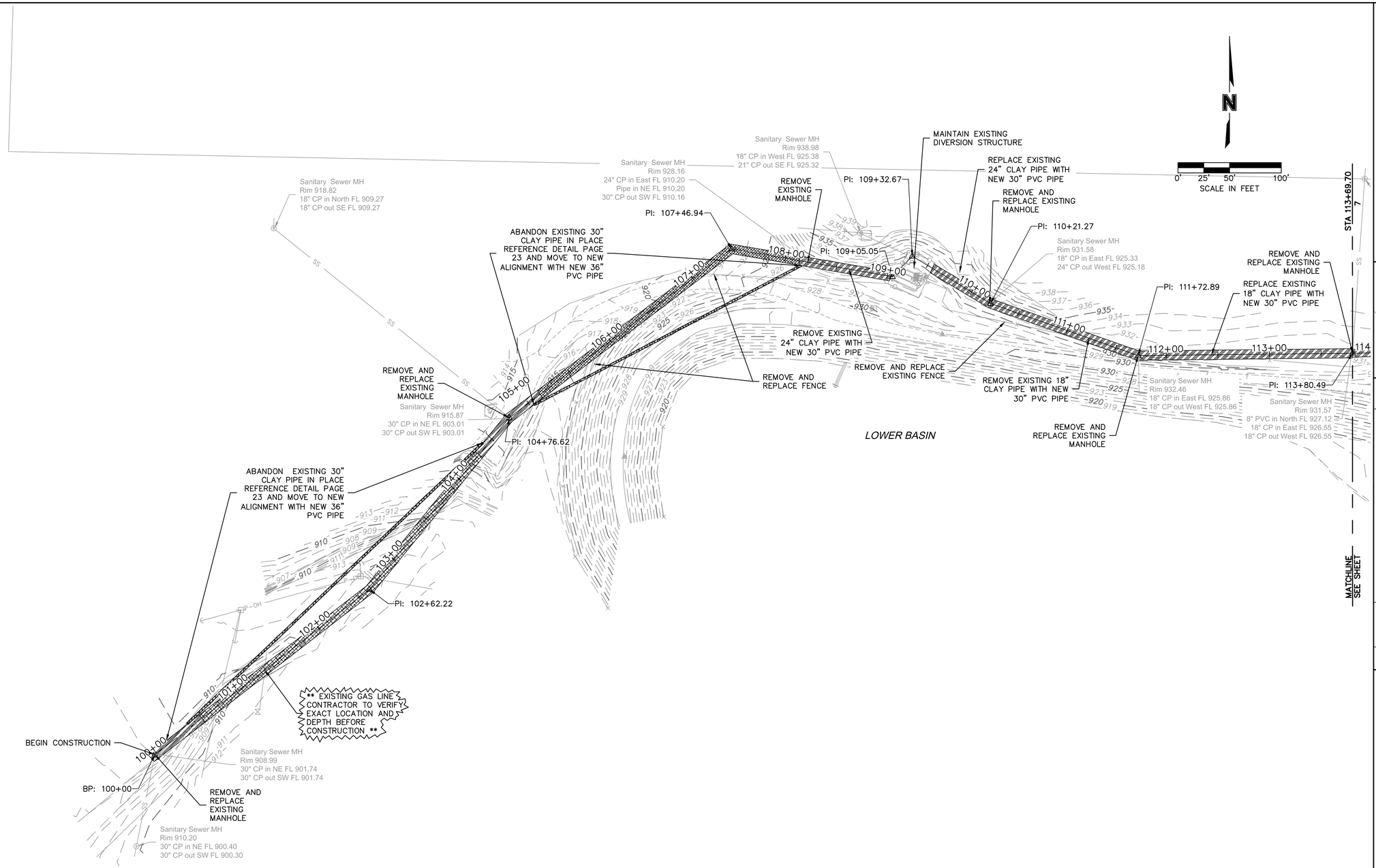
JOPLIN, MISSOURI

2023

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approved by: SWM
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project no.: C17-0642
drawing no.: C_QTY01_C170642
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LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL
- TEMPORARY EASEMENT
- PERMANENT EASEMENT
- EXISTING EASEMENT

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STATE OF MISSOURI — CHAD W. MCCONNAUGHEY — NUMBER PE-2010019078 — PROFESSIONAL — 1/24/2024

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DEMOLITION AND REMOVAL
STA 100+00 - 113+69.70

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

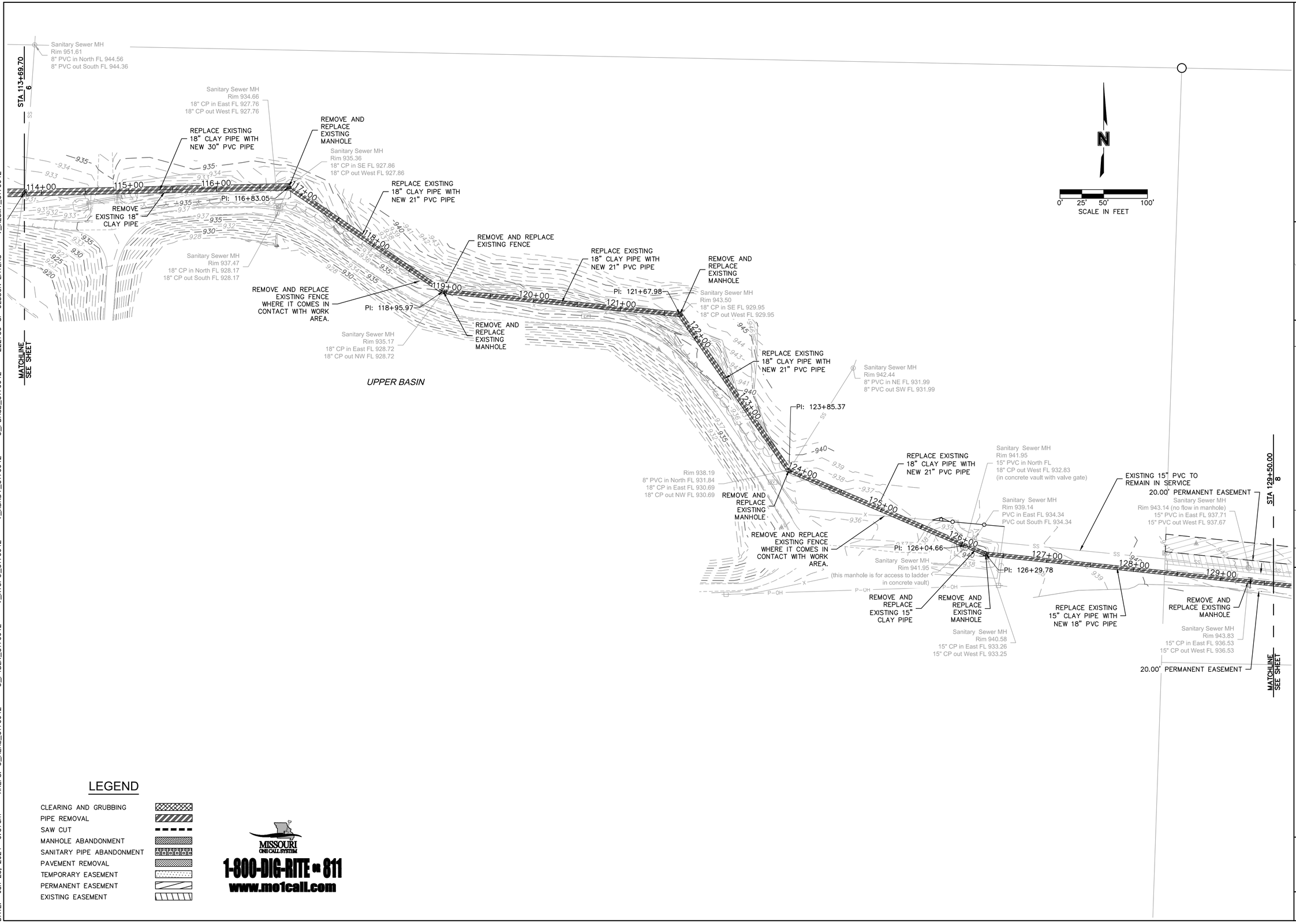
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drawing no.: C_DEMO01_C170642
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SHEET
6 of 31

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LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
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STATE OF MISSOURI
SHAWN MCCONNAUGHEY
NUMBER PE-2010019078
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1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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DEMOLITION AND REMOVALS
STA 113+69.70 - 129+50.00
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

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SHEET
7 of 31

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N

0' 25' 50' 100'
SCALE IN FEET

STA 129+50.00
7

STA 144+00.00
9

MATCHLINE SEE SHEET

MATCHLINE SEE SHEET

20.00' PERMANENT EASEMENT

EXISTING 15" PVC TO REMAIN IN SERVICE

VARIABLE WIDTH PERMANENT EASEMENT (NOT RECORDED)

JACK & BORE UNDER HIGHWAY. APPROX 60' REF. STANDARD DETAIL PAGE 29 CASING: 28" DR 11 HDPE

EXISTING 20.00' EASEMENT CLEAR AND GRUB APPROX. 500' TO SECOND MANHOLE 10' ON EACH SIDE OF EXISTING SEWER LINE

20.00' PROPOSED SEWER EASEMENT (NOT RECORDED)

20.00' TEMPORARY CONSTRUCTION EASEMENT (NOT RECORDED)

20.00' PERMANENT EASEMENT

20.00' PERMANENT EASEMENT

20.00' PERMANENT EASEMENT

Sanitary Sewer MH
Rim 1003.76
10" PVC in NW FL 997.21
10" PVC out South FL 996.91

Sanitary Sewer MH
Rim 948.37
8" PVC in North FL 940.73
8" PVC out South FL 940.71
15" PVC out West FL 941.12
15" PVC in East FL 941.12

Sanitary Sewer MH
Rim 947.45
8" CP in North FL 940.30
15" CP in East FL 939.50
15" CP out West FL 939.45

Sanitary Sewer MH
Rim 951.06
8" PP in North FL 944.06
8" PP out South FL 943.56
15" CP in East FL 944.06
15" PVC out West FL 944.06

Sanitary Sewer MH
Rim 953.21
8" PP in North FL 943.31
15" CP in East FL 943.06
15" CP out West FL 942.81

Sanitary Sewer MH
Rim 951.60
15" PVC in SE FL 944.20
15" PVC in NE FL 945.00
15" PVC in NW FL 945.45
15" PVC out SW FL 945.35

Sanitary Sewer MH
Rim 957.50
15" CP in East FL 948.50
15" CP out West 948.45

Sanitary Sewer MH
Rim 959.07
15" PVC in East FL 949.47
15" PVC out West 949.47

Sanitary Sewer MH
Rim 951.83
15" PVC in East FL 945.73
15" PVC out West 945.73

Sanitary Sewer MH
Rim 952.07
15" PVC in East FL 943.77
8" VCP in South FL 944.32
15" CP out West FL 943.67

Sanitary Sewer MH
Rim 961.12
8" PVC in North FL 953.72
10" PVC out South FL 953.67

PI: 132+32.87

PI: 136+55.31

PI: 138+04.50

PI: 138+40.88

PI: 141+78.74

PI:

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

EXISTING 15" PVC TO REMAIN IN SERVICE

S. JACKSON ST.

LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL
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DEMOLITION AND REMOVAL
STA 129+50.00 - 144+00.00

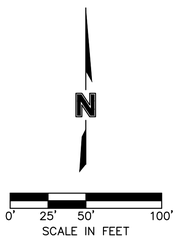
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

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SHEET
8 of 31



JACK & BORE UNDER HIGHWAY. APPROX 131' REF. STANDARD DETAIL PAGE 29 PROFILE PAGE21 CASING: 28" DR 11 HDPE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18"" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

Sanitary Sewer MH
Rim 982.09
10" PVC in North FL 974.39
12" VCP in East FL 972.67
15" CP out West 972.67

Sanitary Sewer MH
Rim 981.72
18" in South FL 974.34
10" PVC in North FL 973.64
12" VCP in East FL 973.62
15" CP out West FL 973.62

E 36TH ST.

PI: 159+21.54

PI: 160+05.15

REMOVE AND REPLACE EXISTING MANHOLE

Sanitary Sewer MH
Rim 989.40
15" CP in NE FL 970.60
8" CP in North FL 971.60
(8" Steel in North FL 982.9± not in use)
15" CP out SW FL 970.70

PI: 157+17.72

Sanitary Sewer MH
Rim 983.20
15" CP in East FL 970.30
8" VCP in South FL 970.90
15" CP out West FL 970.30

REMOVE AND REPLACE EXISTING MANHOLE

EXISTING 20.00' EASEMENT CLEAR AND GRUB TO W. 36TH STREET 10' ON EACH SIDE OF EXISTING SEWER LINE

Sanitary Sewer MH
Rim 1000.13
10" PVC in North FL 995.03
10" PVC in North FL 990.28
8" PVC out South FL 989.78

PI: 156+73.47

W. 36th STREET

REMOVE EXISTING MANHOLE

ABANDON EXISTING 15" CLAY PIPE IN PLACE REFERENCE DEATIL PAGE 23 AND MOVE TO NEW ALIGNMENT WITH NEW 18" PVC PIPE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

REMOVE AND REPLACE EXISTING MANHOLE

Sanitary Sewer MH
Rim 1010.56
10" PVC in North FL 1002.66
10" PVC out South FL 1002.36

Sanitary Sewer MH
Rim 974.60
8" CP in North FL 967.65
15" CP in East FL 966.60
15" CP out West FL 966.55

Sanitary Sewer MH
Rim 980.94
15" DI in East FL 971.68
15" PVC out West FL 971.58
8" VCP in South FL 970.93
8" VCP out North FL 970.88

PI: 154+52.96

Concrete pillar holding sanitary sewer lines across creek

Concrete pillar holding sanitary sewer lines across creek

Sanitary Sewer MH
Rim 973.72
15" PVC in East FL 967.52
15" PVC out West FL 967.67

EXISTING 20.00' EASEMENT CLEAR AND GRUB TO W. 36TH STREET 10' ON EACH SIDE OF EXISTING SEWER LINE

REMOVE AND REPLACE EXISTING MANHOLE

PI: 151+62.05

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

Sanitary Sewer MH
Rim 971.61
10" PVC in NE FL 962.46
15" CP in East FL 961.71
15" Steel in SW FL 963.01
15" CP out West 961.71

Sanitary Sewer MH
Rim 982.57
8" PVC in North FL 972.32
8" PVC out South FL 972.97

S. MAIN STREET

EXISTING 20.00' EASEMENT CLEAR AND GRUB APPROX. 340' TO W. 36TH STREET 10' ON EACH SIDE OF EXISTING SEWER LINE

Sanitary Sewer MH
Rim 970.22
10" PVC in NE FL 964.77
10" PVC in NE FL 961.12
10" PVC out South FL 960.72

Sanitary Sewer MH
Rim 970.29
15" PVC in East FL 962.54
15" Steel out NE FL 962.69
15" PVC out West FL 962.54

20.00' PERMANENT EASEMENT

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

Sanitary Sewer MH
Rim 964.75
15" Steel in South FL 957.35
10" PVC in North FL 956.20
10" PVC in NE FL 955.92
15" CP out West FL 955.90

20.00' PERMANENT EASEMENT

REPLACE AND REPLACE EXISTING MANHOLE

PI: 147+45.34

REMOVE AND REPLACE EXISTING MANHOLE

Sanitary Sewer MH
Rim 960.59
15" CP in East FL 952.79
15" CP out West FL 952.69

PI: 144+86.21

Sanitary Sewer MH
Rim 964.01
15" PVC out North FL 956.76
15" PVC out East FL 956.71
15" PVC in West 956.86

Sanitary Sewer MH
Rim 960.85
15" PVC in East FL 952.95
15" PVC out West FL 952.85

EXISTING 15" PVC TO REMAIN IN SERVICE

REPLACE EXISTING 15" CLAY PIPE WITH NEW 18" PVC PIPE

EXISTING 15" PVC TO REMAIN IN SERVICE

Sanitary Sewer MH
Rim 981.92
15" PVC out West FL 974.72
18" VCP in East FL 974.56
18" out North FL 974.54

Sanitary Sewer MH
Rim 982.26
15" CP in East FL 973.50
16" DI out West FL 973.50

AT MANHOLE 29: EAST AND NORTH LINE TO BE ABANDONED IN PLACE. REFERENCE DETAIL PAGE 24

STA 160+67.81

MATCHLINE SEE SHEET 10

MATCHLINE SEE SHEET 8

STA 144+00.00

LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL
- TEMPORARY EASEMENT
- PERMANENT EASEMENT
- EXISTING EASEMENT

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SHAWN M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DEMOLITION AND REMOVAL
STA 144+00.00 - 160+67.81

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_DEM01_140642
date: 1/19/2024

SHEET
9 of 31

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DATE: Jan 23, 2024 9:37am XREFS: C_AERL_C170642 C_PTBLK_C170642 V_XTOPO_C170642 V_XBNDY_C170642
C_PBASE_C170642 222733-SP OLSSON LAYERS V_XESMT_C170642

N

0' 25' 50' 100'
SCALE IN FEET

STA 160+67.81
9

STA 175+66.74
11

MATCHLINE SEE SHEET

Sanitary Sewer MH
Rim 989.64
Pipe in North FL 982.12
Pipe out South FL 982.08

PI: 161+96.46

REMOVE AND REPLACE EXISTING MANHOLE

20.00' PERMANENT EASEMENT

Sanitary Sewer MH
RIM 982.98
10" VCP in South FL 976.58
12" VCP in East FL 975.88
12" VCP out West FL 975.88

40.00' TEMPORARY CONSTRUCTION EASEMENT

REPLACE EXISTING 12" CLAY PIPE WITH NEW 21" PVC PIPE

ABANDON EXISTING PIPE FROM THE EAST AND WEST, PLUG WATER TIGHT. EXISTING MANHOLE AND CONNECT EXISTING 10" VCP FROM THE SOUTH TO NEW 10" PVC INTO NEW MANHOLE. REFERENCE DETAIL PAGE 24

Sanitary Sewer MH
Rim 983.19
10" VCP out South FL 976.64
18" VCP in East FL 975.74
18" VCP out West FL 975.74

PI: 164+06.13

REMOVE AND REPLACE EXISTING MANHOLE

Sanitary Sewer MH
Rim 986.40
12" VCP in East FL 978.67
12" VCP out West 978.67

Sanitary Sewer MH
Rim 986.25
18" VCP in East FL 977.65
18" VCP out West FL 977.65

REPLACE EXISTING 12" CLAY PIPE WITH NEW 21" PVC PIPE

20.00' TEMPORARY CONSTRUCTION EASEMENT

PI: 167+05.15

REMOVE AND REPLACE EXISTING MANHOLE

20.00' PERMANENT EASEMENT

Sanitary Sewer MH
Rim 991.84
12" VCP in East FL 984.14
12" VCP out West FL 984.14

Sanitary Sewer MH
Rim 992.06
18" VCP in East FL 982.86
18" VCP out West FL 981.86

REPLACE EXISTING 12" CLAY PIPE WITH NEW 21" PVC PIPE

Sanitary Sewer MH
Rim 992.52
18" VCP in East FL 985.22
18" VCP out West FL 985.22

20.00' TEMPORARY CONSTRUCTION EASEMENT

PI: 171+03.20

REMOVE AND REPLACE EXISTING MANHOLE

20.00' PERMANENT EASEMENT

Sanitary Sewer MH
Rim 996.98
12" VCP in East FL 987.43
12" VCP out SW 987.43

Sanitary Sewer MH
Rim 995.94
18" VCP in East FL 986.49
18" VCP out SW FL 986.49

REPLACE EXISTING 12" CLAY PIPE WITH NEW 21" PVC PIPE

ABANDON EXISTING PIPE AND MANHOLE IN PLACE. REFERENCE DETAIL PAGE 24

PI: 175+03.27

REMOVE AND REPLACE EXISTING MANHOLE

20' TEMPORARY CONSTRCUTION EASEMENT

20.00' PERMANENT EASEMENT

Sanitary Sewer MH
Rim 1002.90
12" VCP in East FL 993.74
12" VCP out West FL 993.74

Sanitary Sewer MH
Rim 1001.80
18" VCP in East FL 992.54
18" VCP out West FL 992.54

MATCHLINE SEE SHEET

Sanitary Sewer MH
Rim 1000.40
12" in East FL 988.25
10" out North FL 988.25

Sanitary Sewer MH
Rim 997.01

Sanitary Sewer MH
Rim 1020.23

Sanitary Sewer MH
Rim 1019.74

LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL
- TEMPORARY EASEMENT
- PERMANENT EASEMENT
- EXISTING EASEMENT

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STATE OF MISSOURI
SEAN M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DEMOLITION AND REMOVAL
STA 160+67.81 - 175+66.74

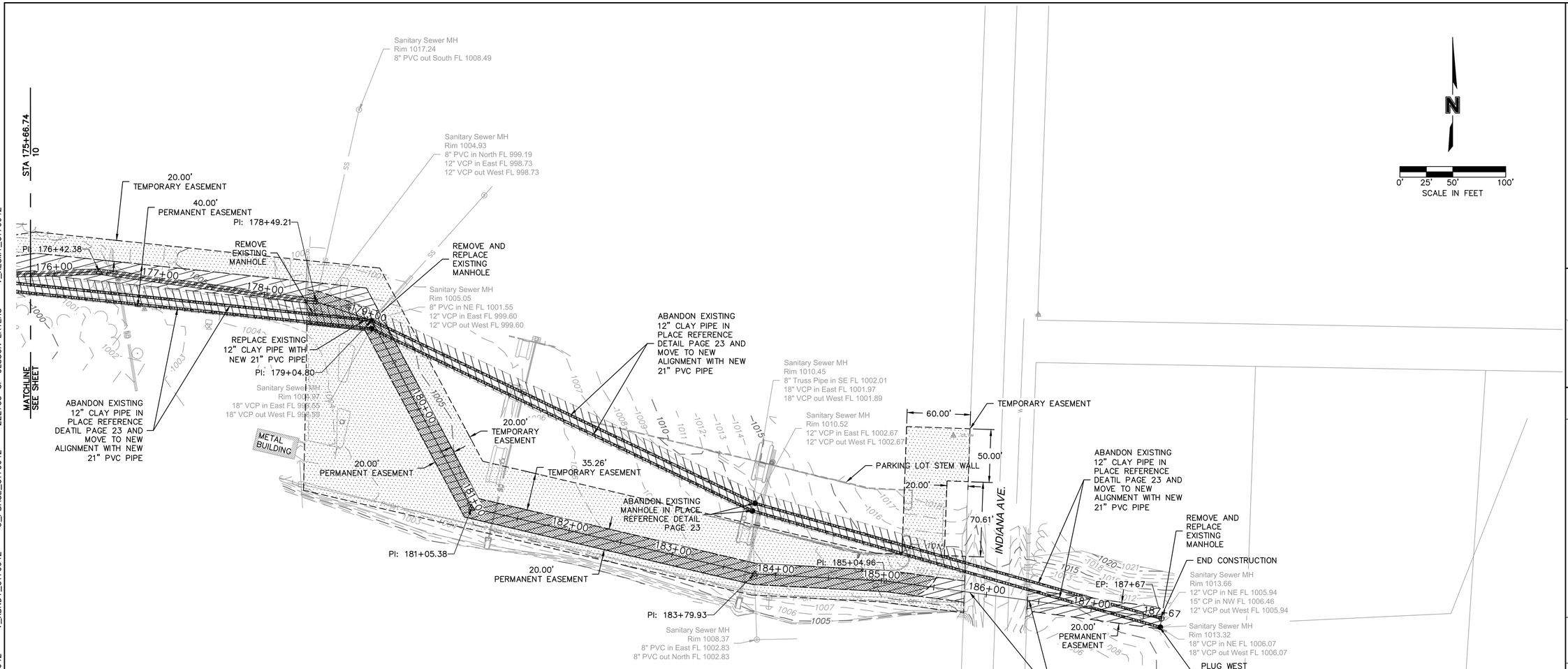
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_DEM01_C170642
date: 1/19/2024

SHEET
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LEGEND

- CLEARING AND GRUBBING
- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL
- TEMPORARY EASEMENT
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NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DEMOLITION AND REMOVAL

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

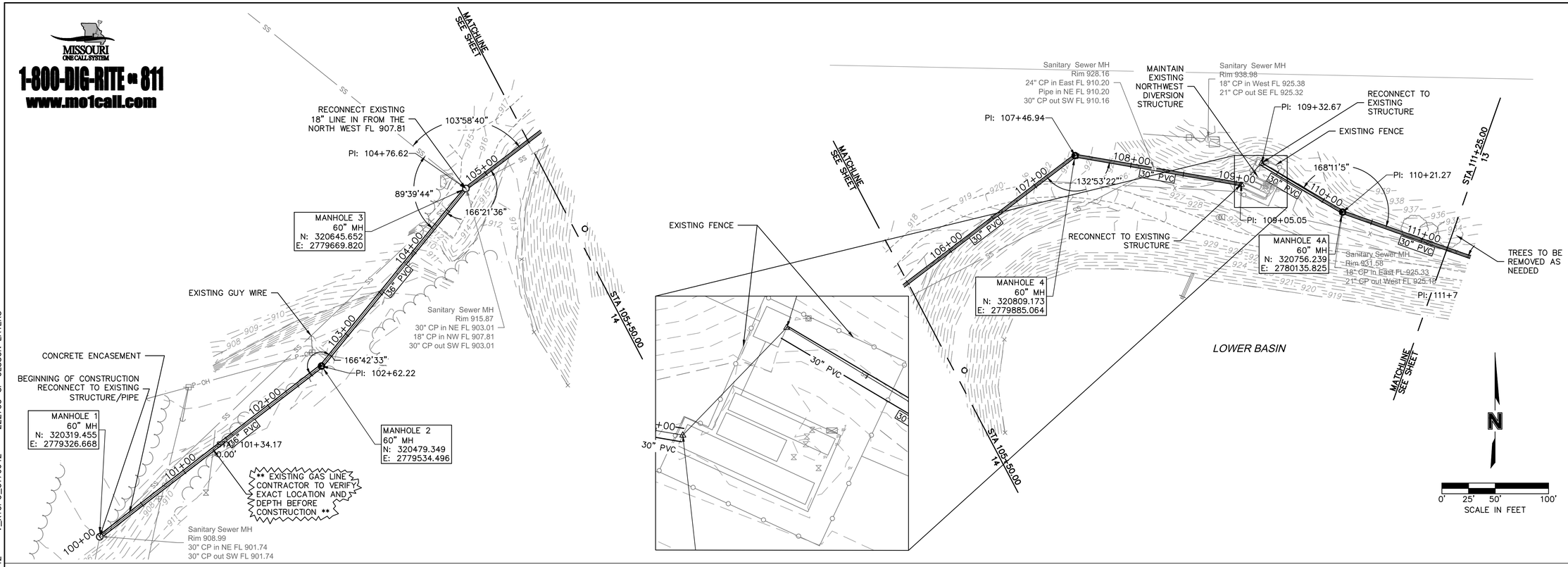
2023

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QA/QC by: ENG
project no.: C17-0642
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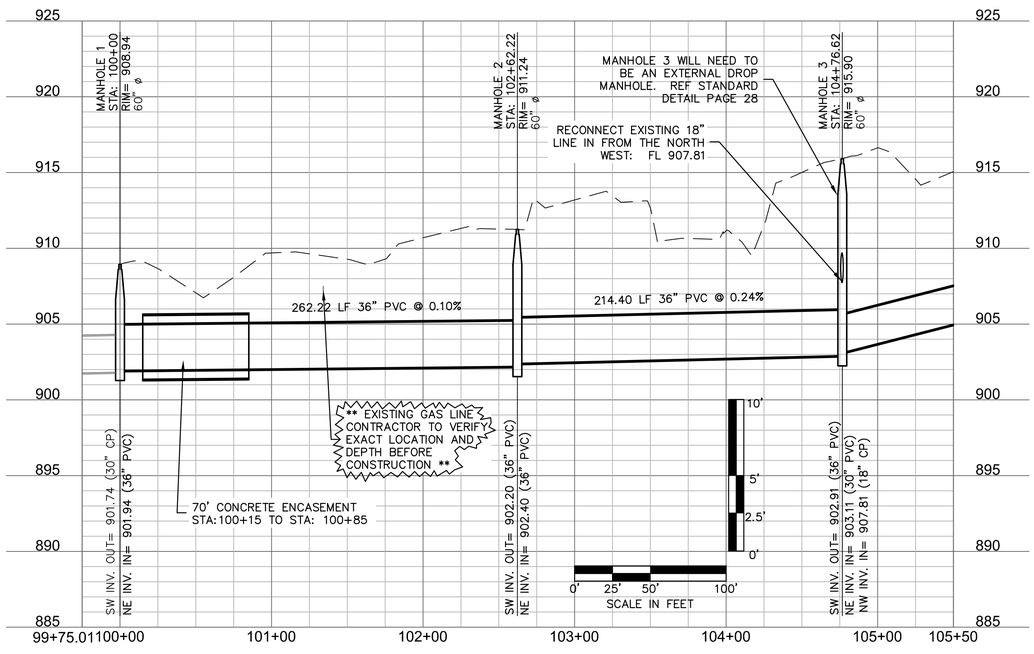
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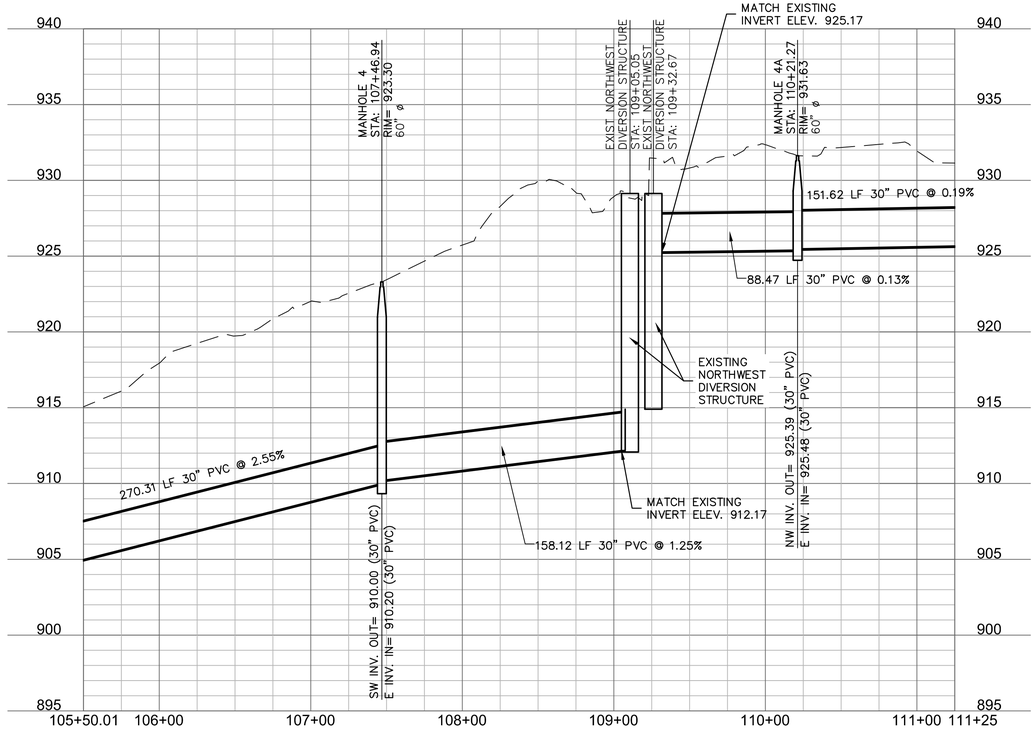
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ALIGN - 1 (99+75.01 - 105+50)



ALIGN - 1 (105+50.01 - 111+25)



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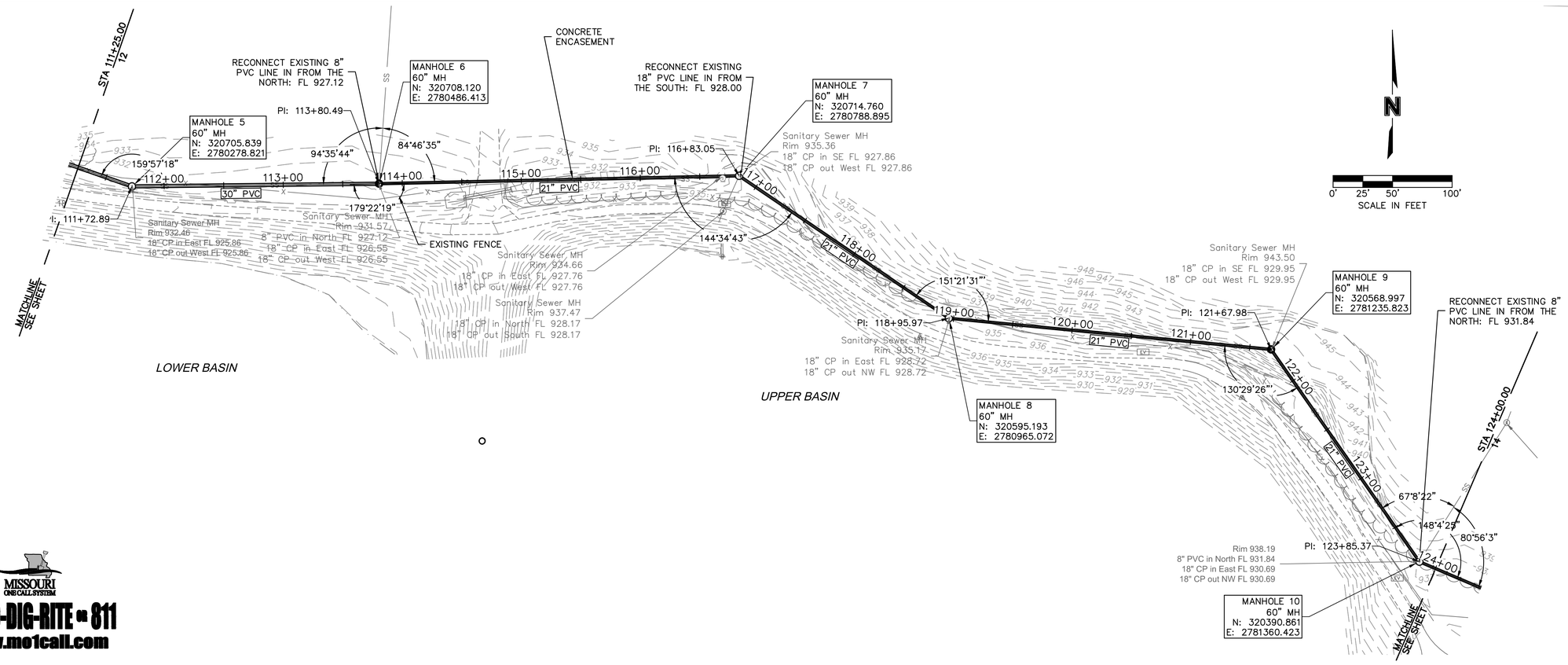
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SANITARY SEWER PLAN AND PROFILE
99+75 TO 111+25
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

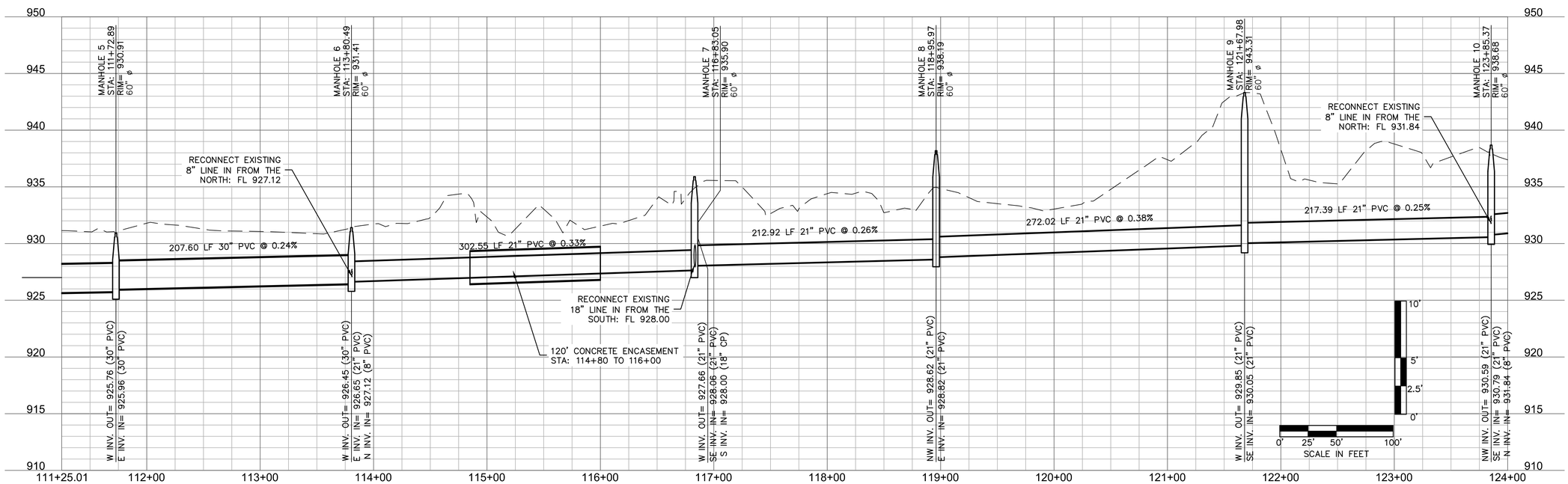
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V_XTOPO_C170642 222733-SP OLSSON LAYERS



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ALIGN - 1 (111+25.01 - 124+00)



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SANITARY SEWER PLAN AND PROFILE
111+25 TO 124+00

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

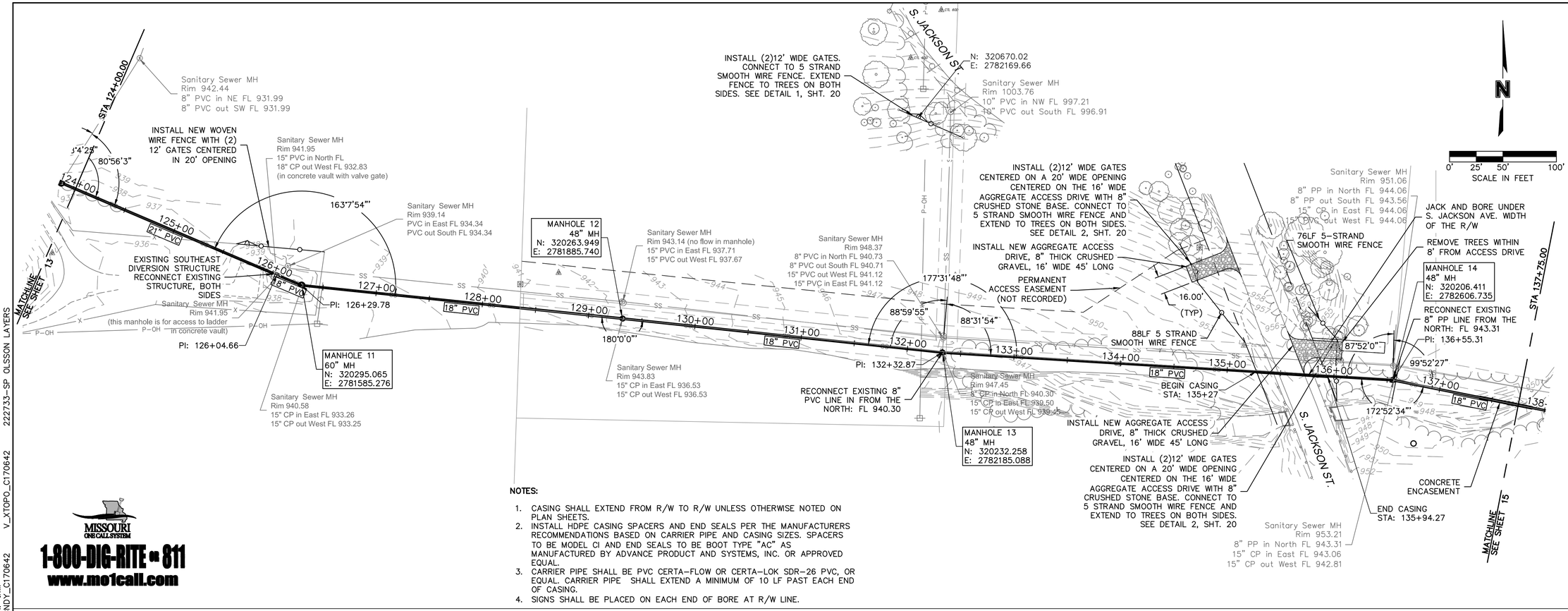
JOPLIN, MISSOURI

2023

drawn by: CTK
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project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

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13 of 31

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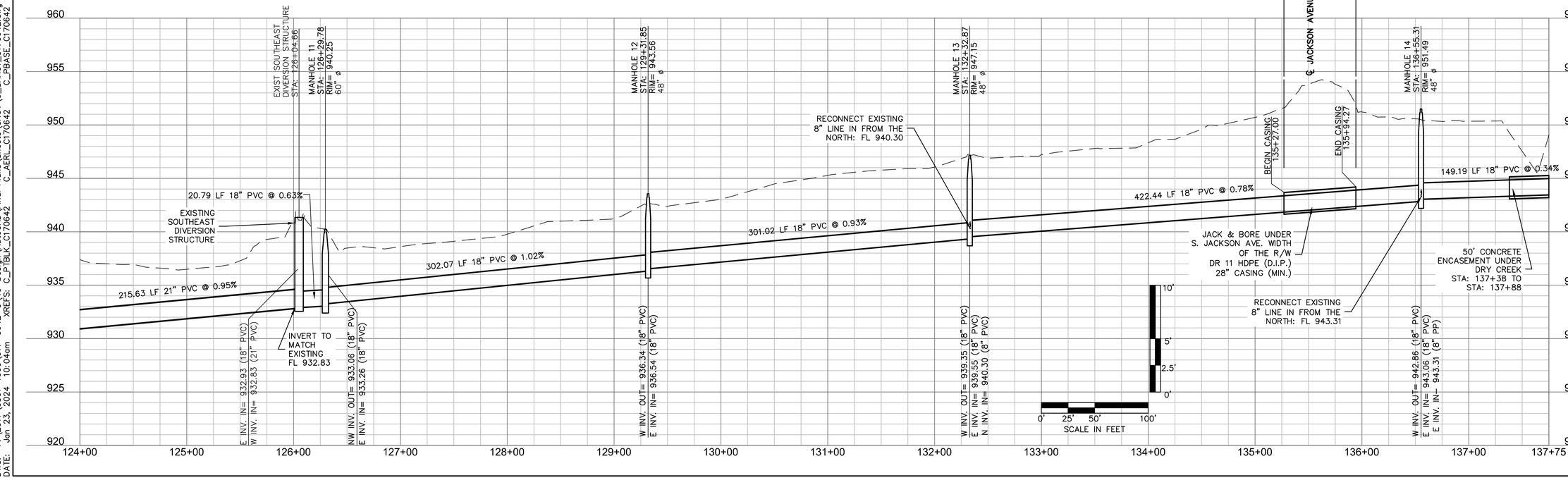


NOTES:

1. CASING SHALL EXTEND FROM R/W TO R/W UNLESS OTHERWISE NOTED ON PLAN SHEETS.
2. INSTALL HDPE CASING SPACERS AND END SEALS PER THE MANUFACTURERS RECOMMENDATIONS BASED ON CARRIER PIPE AND CASING SIZES. SPACERS TO BE MODEL CI AND END SEALS TO BE BOOT TYPE "AC" AS MANUFACTURED BY ADVANCE PRODUCT AND SYSTEMS, INC. OR APPROVED EQUAL.
3. CARRIER PIPE SHALL BE PVC CERTA-FLOW OR CERTA-LOK SDR-26 PVC, OR EQUAL. CARRIER PIPE SHALL EXTEND A MINIMUM OF 10 LF PAST EACH END OF CASING.
4. SIGNS SHALL BE PLACED ON EACH END OF BORE AT R/W LINE.

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ALIGN - 1 (124+00 - 137+75)



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SHANE W. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

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SANITARY SEWER PLAN AND PROFILE
124+00 TO 137+75

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17.0642
drawing no.:	C_SAN01_C170642
date:	1/19/2024

SHEET
14 of 31

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N

0' 10' 20'
SCALE IN FEET

Sanitary Sewer MH
Rim 951.60
15" PVC in SE FL 944.20
15" PVC in NE FL 945.00
15" PVC in NW FL 945.45
15" PVC out SW FL 945.35

Sanitary Sewer MH
Rim 952.07
15" PVC in East FL 943.77
8" VCP in South FL 944.32
15" CP out West FL 943.67

Sanitary Sewer MH
Rim 951.83
15" PVC in East FL 94
15" PVC out West 945

154°29'40"
28°4'4"
150°28'40"
110°55'23"
25°25'10"
139+00
138+00
18" PVC

STA 137+50.00

RECONNECT EXISTING 15" PVC LINE IN FROM THE SOUTH EAST: FL 944.32, 15" PVC LINE OUT TO THE NORTH WEST: FL 945.45

MANHOLE 16
60" MH
N: 320188.716
E: 2782787.604
PI: 138+40.88

Sanitary Sewer MH
Rim 957.50
15" CP in East FL 948.50
15" CP out West 948.45

PI: 141+78.74

MANHOLE 17
48" MH
N: 320280.207
E: 2783112.839

MANHOLE 18
48" MH
N: 320301.518
E: 2783419.575

Sanitary Sewer MH
Rim 960.59
15" CP in East FL 952.79
15" CP out West FL 952.69

180°0'0"
45+00
146+00
147+00
139°9'35"
54°29'20"
84°40'16"
84°53'55"
142+00
143+00
144+00
140+00
141+00
168°11'51"

PI: 144+86.21
PI: 147+45.34

Sanitary Sewer MH
Rim 960.85
15" PVC in East FL 952.95
15" PVC out West FL 952.85

Sanitary Sewer MH
Rim 964.01
15" PVC out North FL 956.76
15" PVC out East FL 956.71
15" PVC in West 956.86

CASING UNDER DRY CREEK

RECONNECT EXISTING 10" PVC LINE IN FROM THE NORTH: FL 956.20, 15" STEEL LINE IN FROM THE SOUTH: FL 957.35

MANHOLE 19
60" MH
N: 320318.825
E: 2783678.121

Sanitary Sewer MH
Rim 970.22
10" PVC in NE FL 964.77
10" PVC in NE FL 961.12
10" PVC out South FL 960.72

Sanitary Sewer MH
Rim 964.75
15" Steel in South FL 957.35
10" PVC in North FL 956.20
10" PVC in NE FL 955.92
15" CP out West FL 955.90

MATCHLINE SEE SHEET 16

STA 150+75.00

149+00
150+00
18" PVC

N

0' 25' 50' 100'
SCALE IN FEET

Sanitary Sewer MH
Rim 951.83
15" PVC in East FL 945.73
15" PVC out West 945.73

RECONNECT EXISTING 8" PP LINE IN FROM THE SOUTH: FL 944.32

MANHOLE 15
48" MH
N: 320177.309
E: 2782753.059

PI: 138+04.50

MATCHLINE SEE SHEET 14

ALIGN - 1 (137+75 - 143+00)

MANHOLE 15
STA: 138+04.50
RIM= 952.18
48" ø

MANHOLE 16
STA: 138+40.88
RIM= 950.62
60" ø

MANHOLE 17
STA: 141+78.74
RIM= 956.78
48" ø

36.38 LF 18" PVC @ 4.07%

RECONNECT EXISTING 15" PVC LINE IN FROM THE SOUTHEAST: FL 944.32, 15" PVC LINE OUT TO THE NORTHWEST: FL 945.45

337.86 LF 18" PVC @ 0.86%

RECONNECT EXISTING 8" LINE IN FROM THE SOUTH: FL 944.32

W INV. OUT= 943.57 (18" PVC)
E INV. IN= 943.77 (18" PVC)
S INV. IN=944.32 (8" VCP)

NW INV. OUT= 945.45 (15" PVC)
W INV. OUT= 945.25 (18" PVC)
E INV. IN= 945.45 (18" PVC)
SE INV. IN= 944.32 (15" PVC)

W INV. OUT= 948.35 (18" PVC)
E INV. IN= 948.55 (18" PVC)

965 960 955 950 945 940 935 930

137+75 138+00 139+00 140+00 141+00 142+00 143+00

ALIGN - 1 (143+00 - 150+75)

MANHOLE 18
STA: 144+86.21
RIM= 960.73
48" ø

MANHOLE 19
STA: 147+45.34
RIM= 964.51
60" ø

RECONNECT EXISTING 10" PVC LINE IN FROM THE NORTH: FL 956.20, 15" STEEL LINE IN FROM THE SOUTH: FL 957.35

416.71 LF 18" PVC @ 1.35%

259.12 LF 18" PVC @ 1.18%

307.48 LF 18" PVC @ 1.31%

45' CONCRETE ENCASEMENT UNDER DRY CREEK
STA: 147+48 TO STA: 147+93

W INV. OUT= 952.59 (18" PVC)
E INV. IN= 952.79 (18" PVC)

W INV. OUT= 955.85 (18" PVC)
NE INV. IN= 956.00 (18" PVC)
N INV. IN=956.20 (10" PVC)
S INV. IN= 957.35 (15" STEEL)

10' 5' 2.5' 0'
0' 25' 50' 100'
SCALE IN FEET

970 965 960 955 950 945 940 935

143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 150+75

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STATE OF MISSOURI
SHAWN M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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SANITARY SEWER PLAN AND PROFILE
137+75 TO 150+75
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

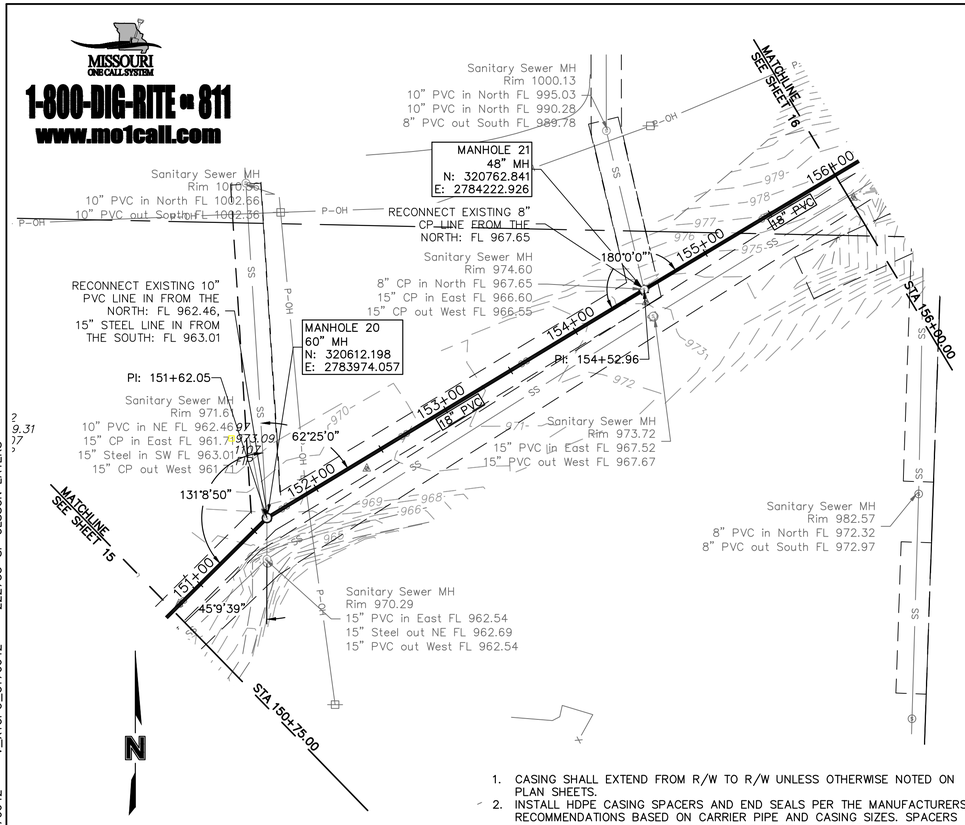
SHEET
15 of 31

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USER: thill

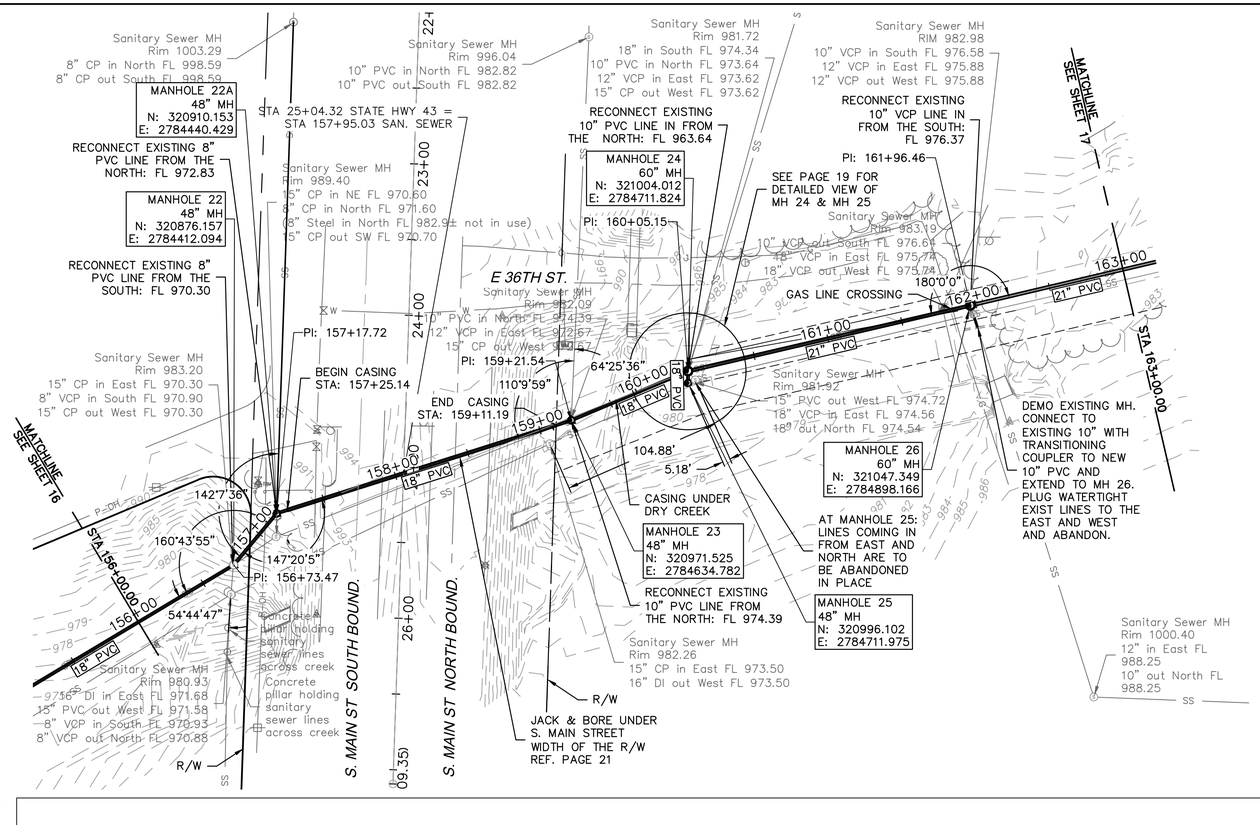
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1-800-DIG-RITE ≈ 811

www.mo1call.com

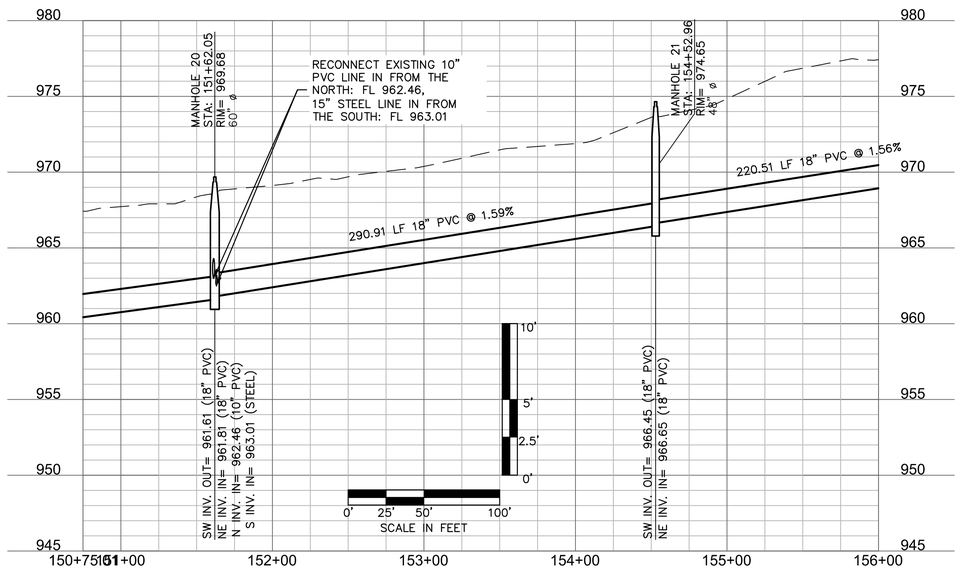


0' 25' 50' 100'
SCALE IN FEET

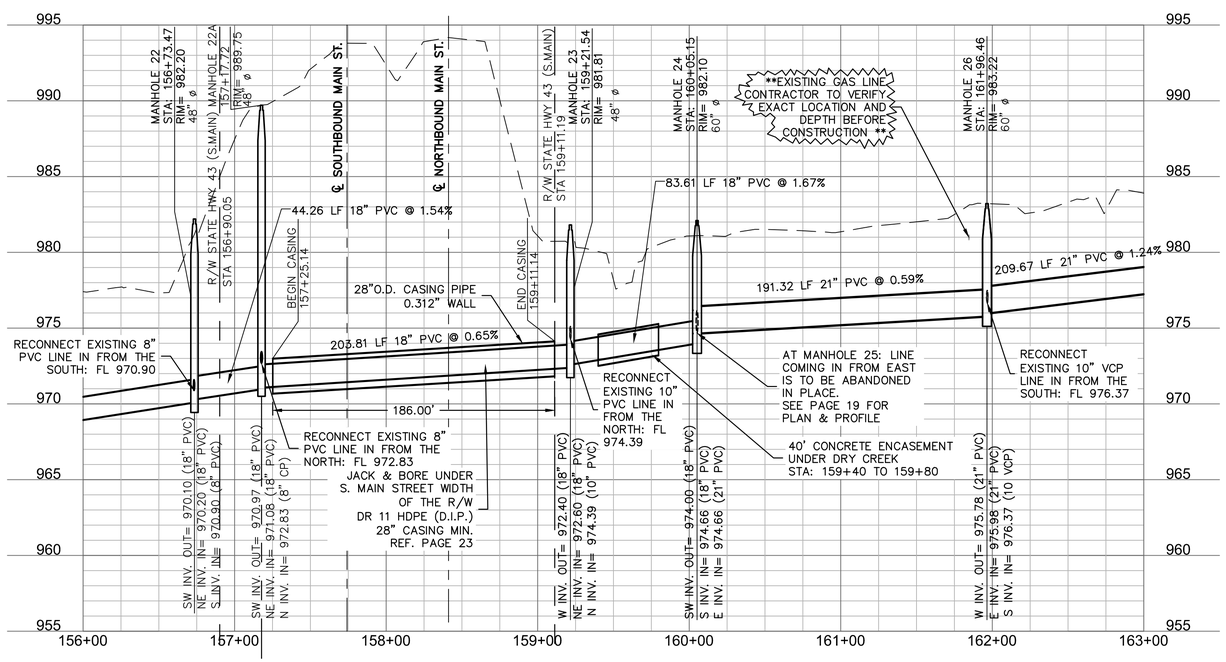


1. CASING SHALL EXTEND FROM R/W TO R/W UNLESS OTHERWISE NOTED ON PLAN SHEETS.
2. INSTALL HDPE CASING SPACERS AND END SEALS PER THE MANUFACTURERS RECOMMENDATIONS BASED ON CARRIER PIPE AND CASING SIZES. SPACERS TO BE MODEL CI AND END SEALS TO BE BOOT TYPE "AC" AS MANUFACTURED BY ADVANCE PRODUCT AND SYSTEMS, INC. OR APPROVED EQUAL.
3. CARRIER PIPE SHALL BE PVC CERTA-FLOW OR CERTA-LOK SDR-26 PVC, OR EQUAL. CARRIER PIPE SHALL EXTEND A MINIMUM OF 10 LF PAST EACH END OF CASING.
4. SIGNS SHALL BE PLACED ON EACH END OF BORE AT R/W LINE.

ALIGN - 1 (150+75.01 - 156+00)



ALIGN - 1 (156+00 - 163+00)



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STATE OF MISSOURI
SHAWN MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SANITARY SEWER PLAN AND PROFILE
150+75 TO 163+00

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17-0642
drawing no.:	C_SAN01_C170642
date:	1/19/2024

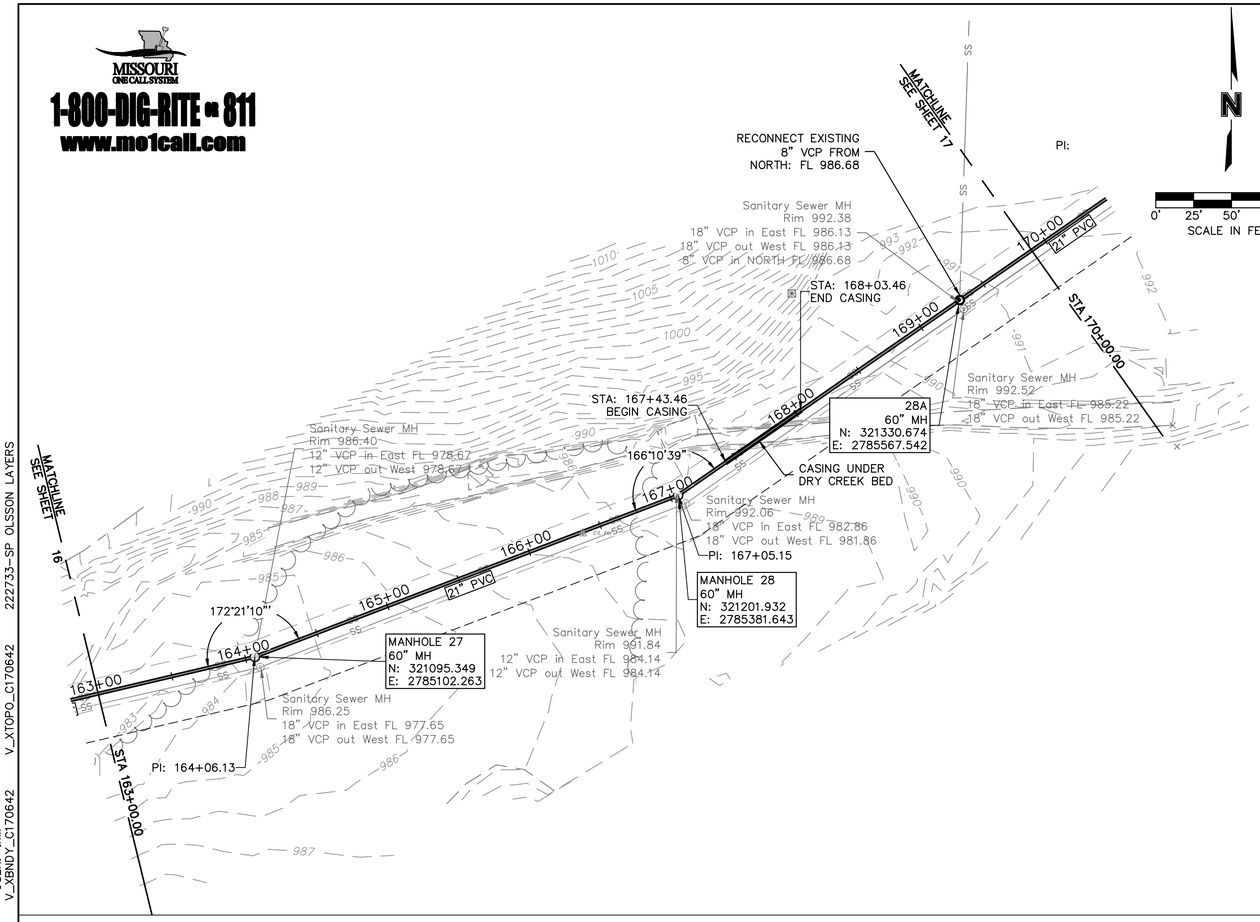
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16 of 31

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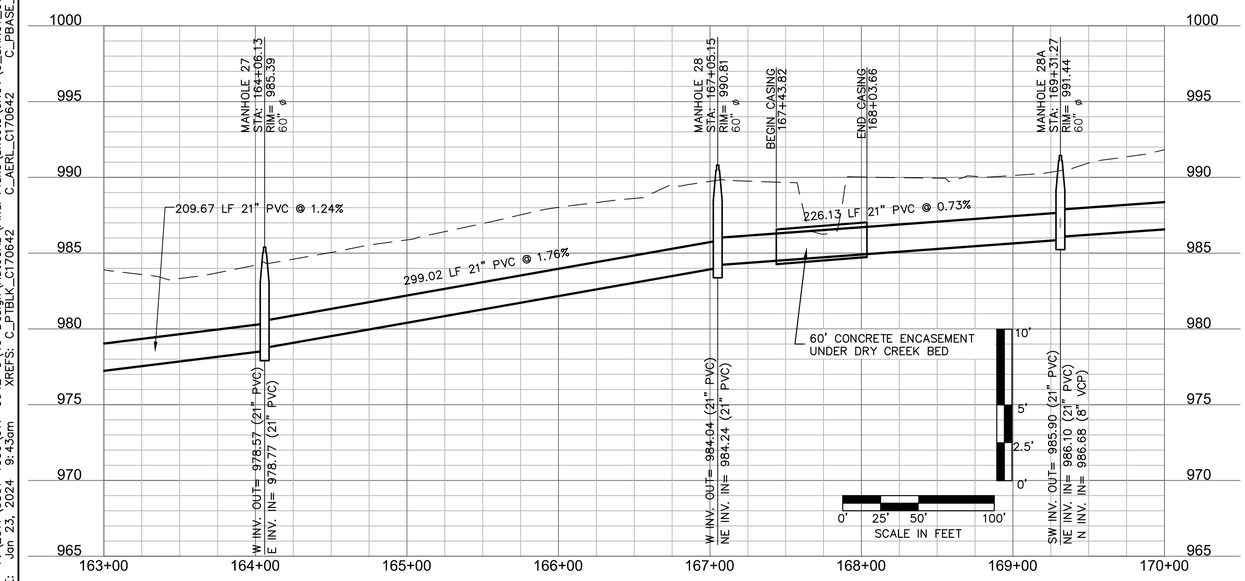
MISSOURI ONE CALL SYSTEM

1-800-DIG-RITE or 811

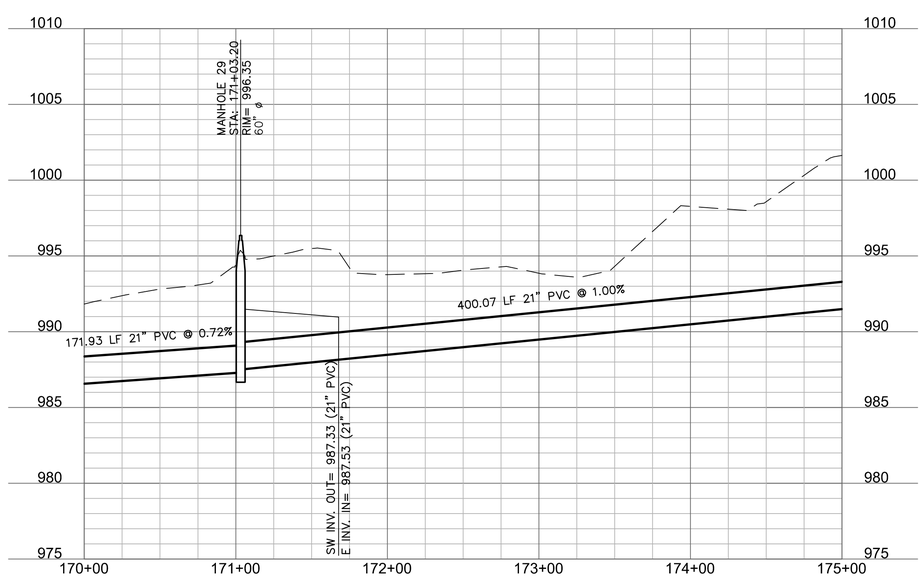
www.mo1call.com



ALIGN - 1 (163+00 - 170+00)



ALIGN - 1 (170+00 - 175+00)



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STATE OF MISSOURI
SHANE M. MCCONNAUGHEY
NUMBER PE-2013019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

SANITARY SEWER PLAN AND PROFILE
163+00 TO 175+00

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

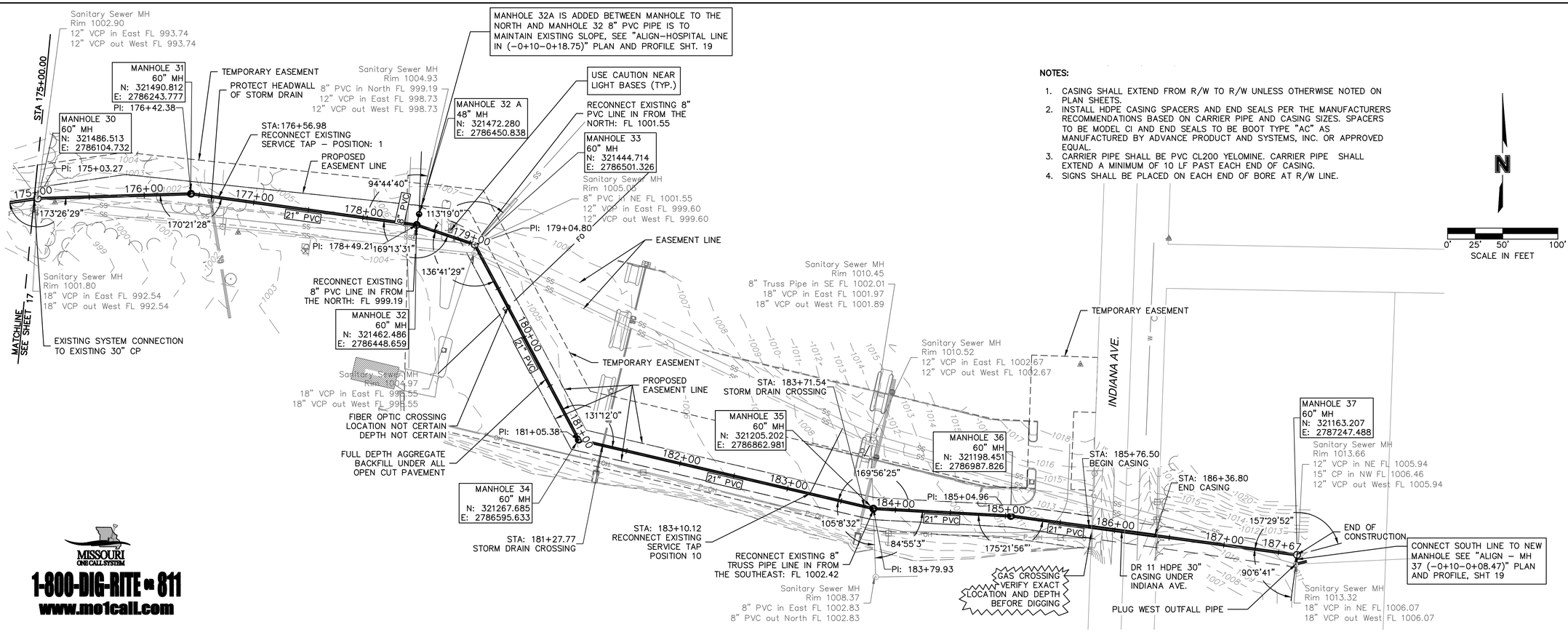
JOPLIN, MISSOURI

2023

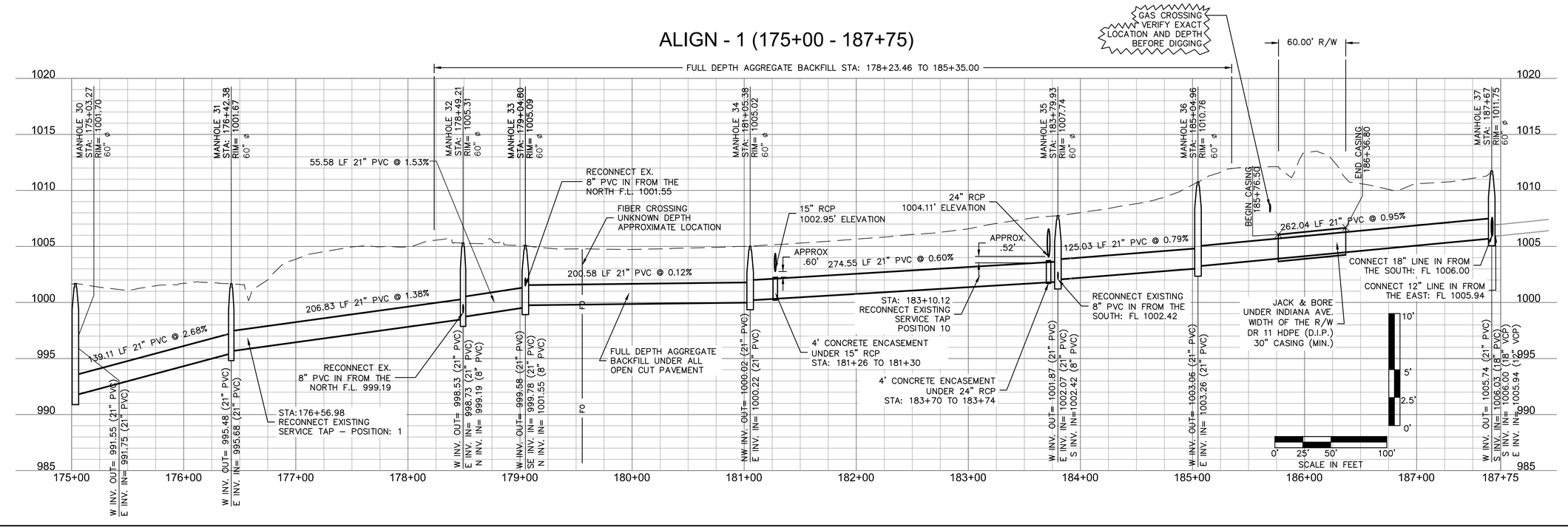
drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

SHEET
17 of 31

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_SAN01_C170642.dwg
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USER: thill



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



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STATE OF MISSOURI
SHAWN W. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SANITARY SEWER PLAN AND PROFILE
175+00 TO 187+00

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

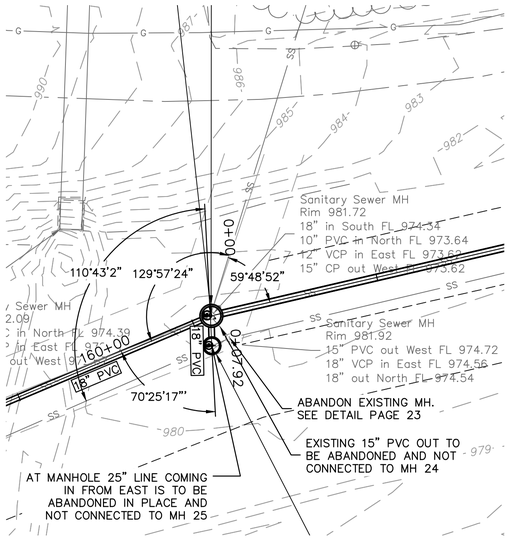
2023

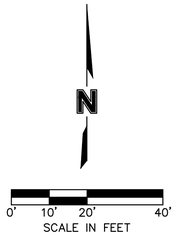
JOPLIN, MISSOURI

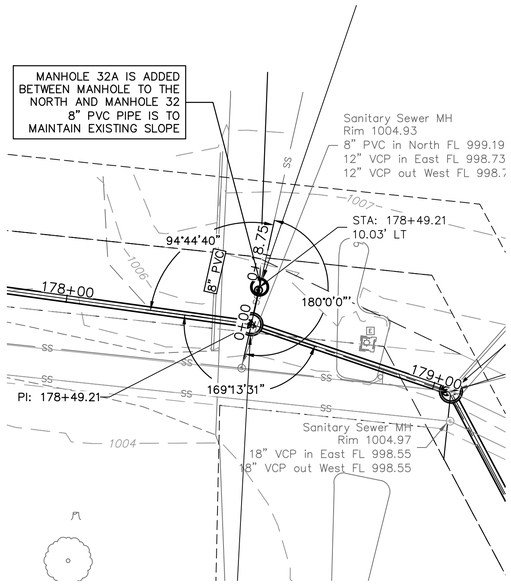
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checked by: ENG
approved by: SWM
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project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

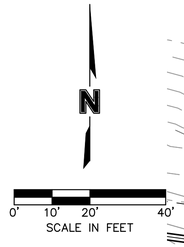
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18 of 31

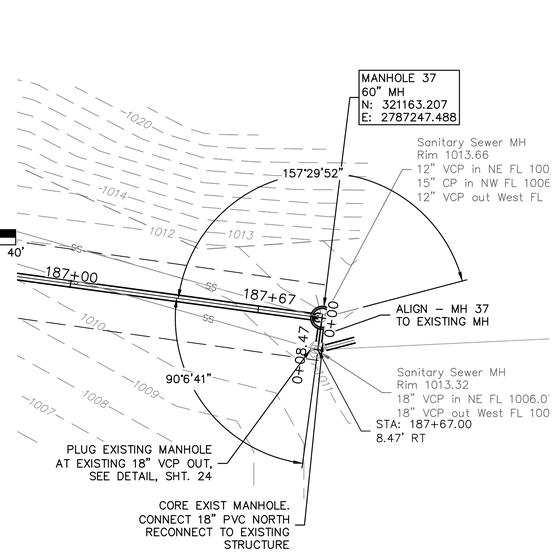
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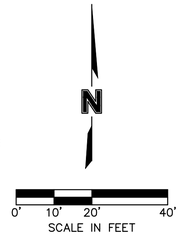




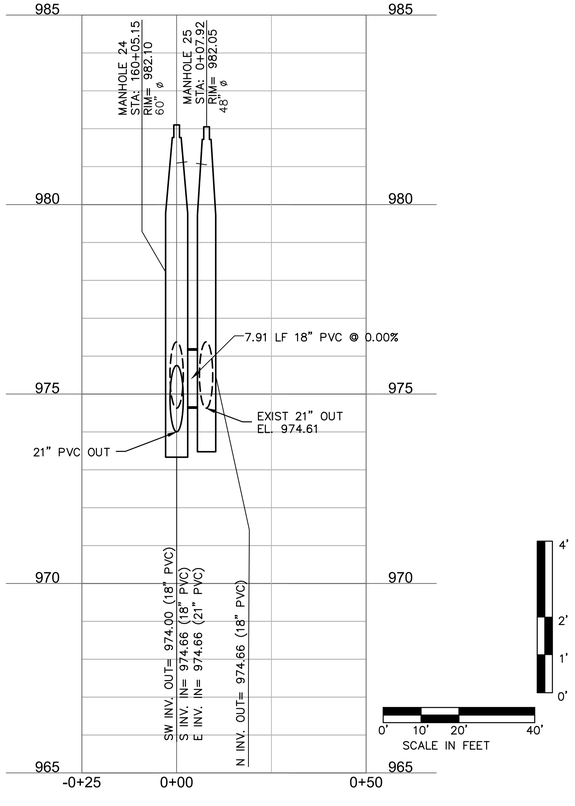




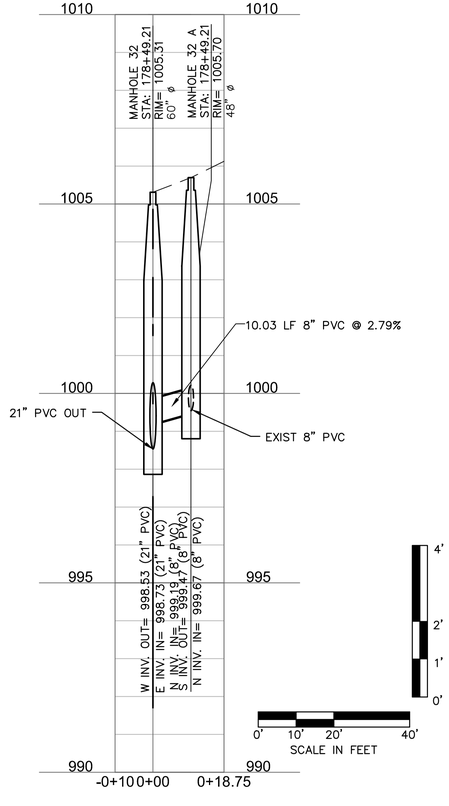




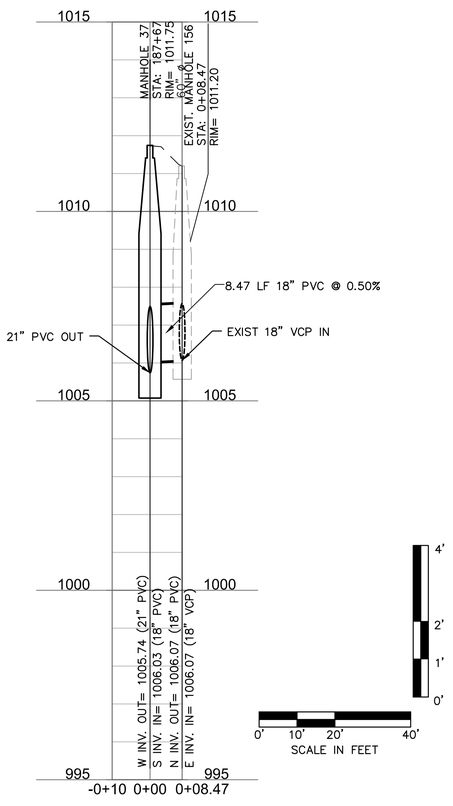
ALIGN - 4 (-0+25 - 0+50)



ALIGN - HOSPITAL LINE IN (-0+10 - 0+18.75)



ALIGN - MH 37 (-0+10 - 0+08.47)



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STATE OF MISSOURI
MICHAEL W. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SANITARY SEWER PLAN AND PROFILE
4+75 to 5+25

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

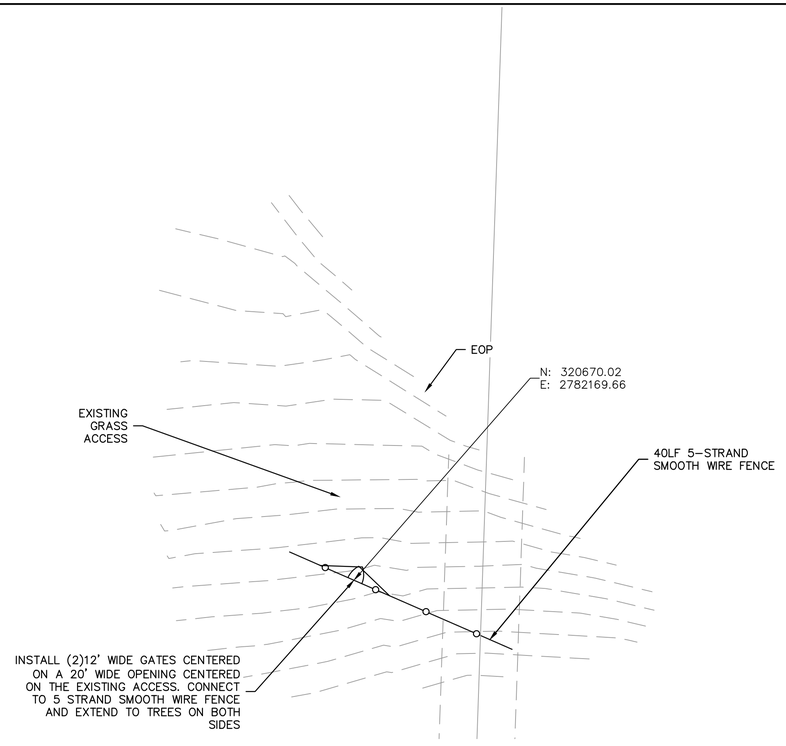
JOPLIN, MISSOURI

2023

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17-0642
drawing no.:	C_SAN01_C170642
date:	1/19/2024

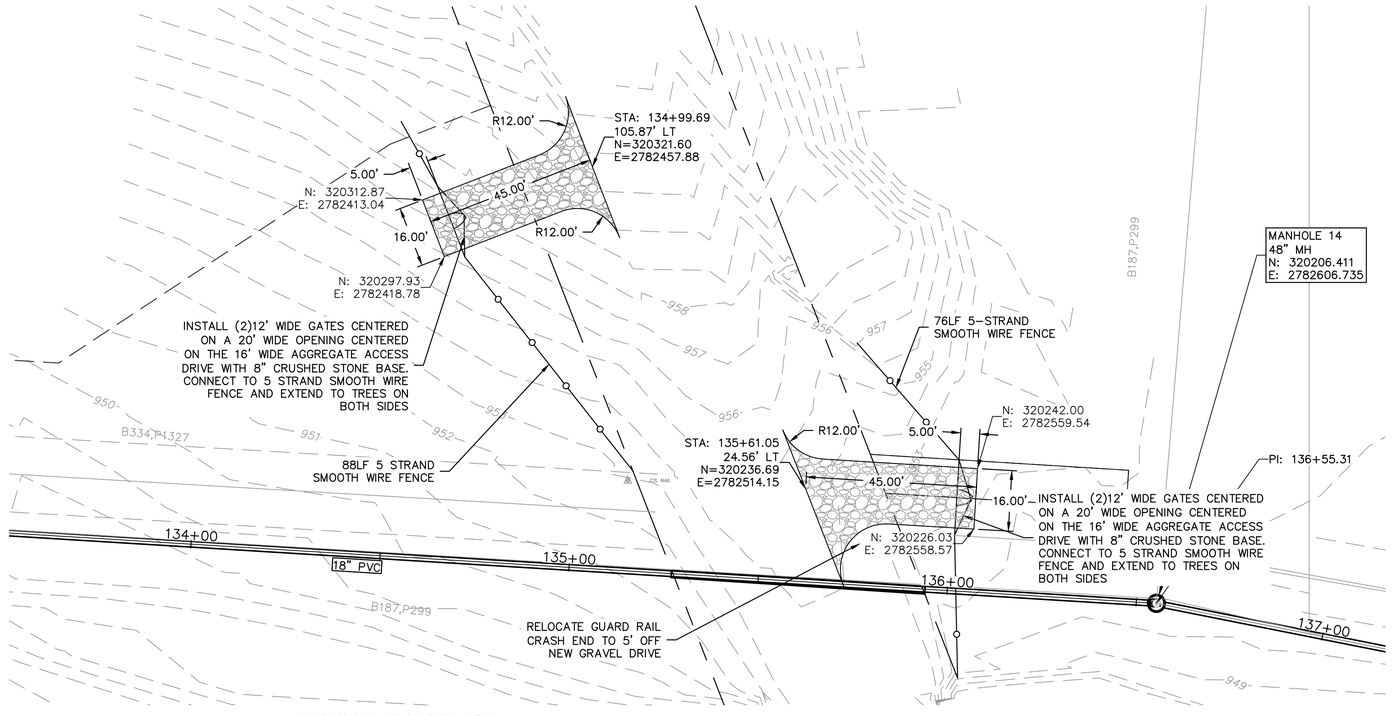
SHEET
19 of 31

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1 NORTH JACKSON ACCESS DRIVE DETAIL

SCALE: 1"=20'–0"



2 JACKSON ACCESS DRIVE DETAIL

SCALE: 1"=20'–0"

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STATE OF MISSOURI
MCCONNAUGHEY
NUMBER
PE–2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SANITARY SEWER PLAN AND PROFILE
4+75 to 5+25

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

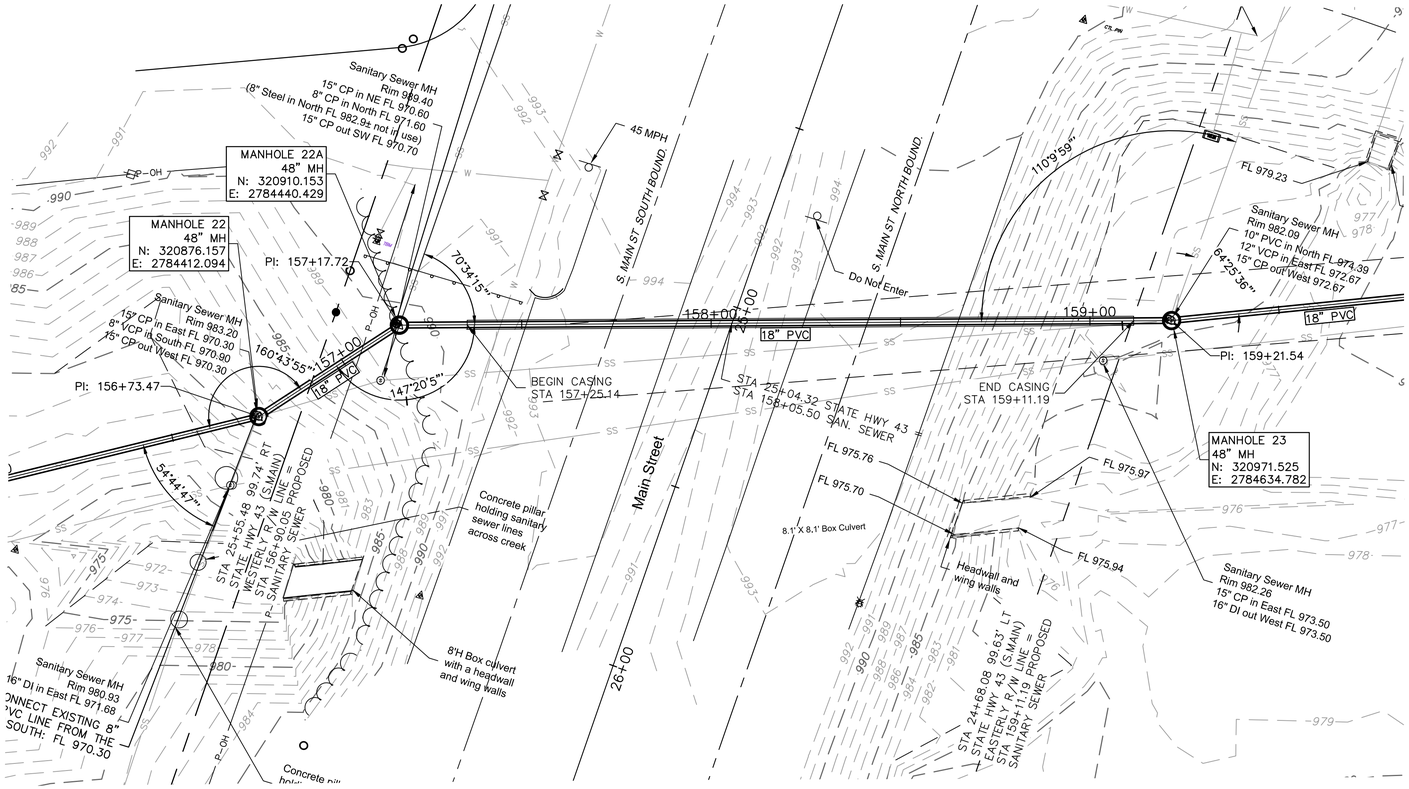
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JOPLIN, MISSOURI

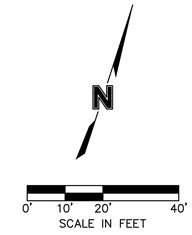
drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_SAN01_C170642
date: 1/19/2024

SHEET
20 of 31

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_SAN01_C170642.dwg USER: thill
DATE: Jan 23, 2024 9:44am XREFS: C_PTBLK_C170642 C_AERL_C170642 C_PBASE_C170642 V_XBNDY_C170642
V_XTOPO_C170642 222733-SP OLSSON LAYERS

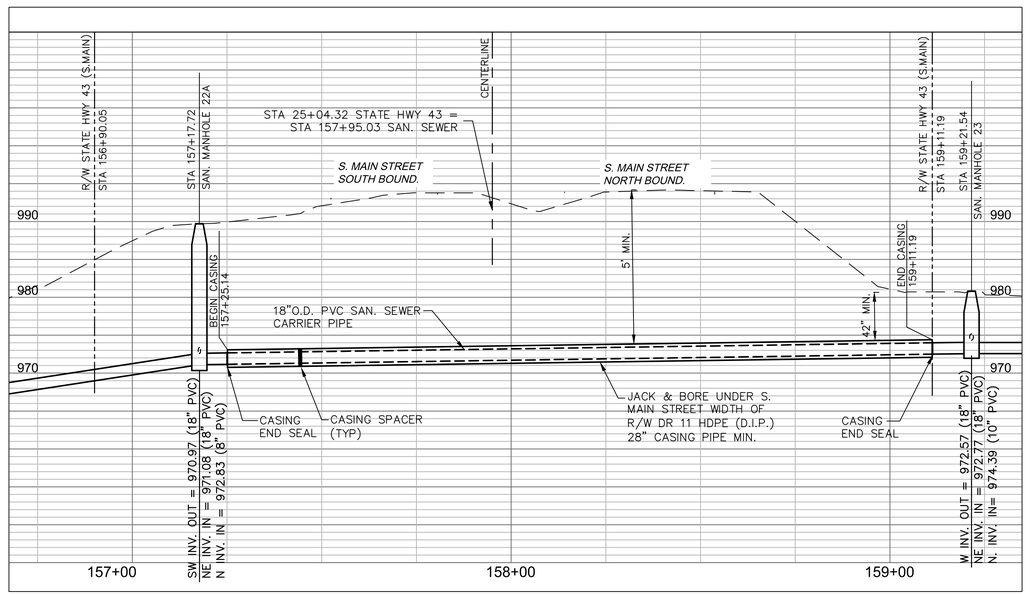


PLAN VIEW - STATE HIGHWAY CROSSING

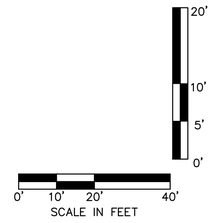


NOTES:

1. CASING SHALL EXTEND FROM R/W TO R/W UNLESS OTHERWISE NOTED ON PLAN SHEETS.
2. INSTALL HDPE CASING SPACES AND END SEALS PER THE MANUFACTURERS RECOMMENDATIONS BASED ON CARRIER PIPE AND CASING SIZES.SPACERS TO BE MODEL CI AND END SEALS TO BE BOOT TYPE "AC" AS MANUFACTURED BY ADVANCE PRODUCT AND SYSTEMS, INC. OR APPROVED EQUAL.
3. CARRIER PIPE SHALL BE PVC CL200 YELOMINE. CARRIER PIPE SHALL EXTEND A MINIMUM OF 10 LF PAST EACH END OF CASING.
4. SIGNS SHALL BE PLACED ON EACH END OF BORE AT R/W LINE.



PROFILE VIEW - STATE HIGHWAY CROSSING



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STATE OF MISSOURI
SHAWN W. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REVISIONS

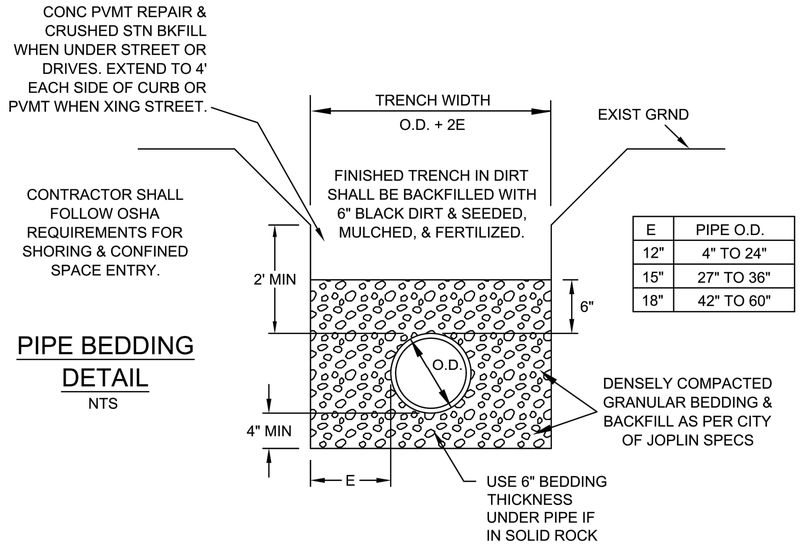
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SANITARY SEWER PLAN AND PROFILE
STATE HIGHWAY 43
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17-0642
drawing no.:	123456
date:	1/19/2024

SHEET
21 of 31

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_HWYX_C170642.dwg USER: thill
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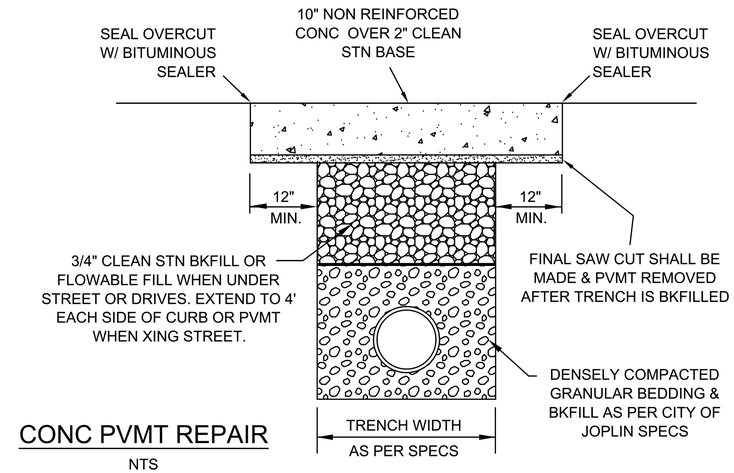
E	PIPE O.D.
12"	4" TO 24"
15"	27" TO 36"
18"	42" TO 60"

PIPE BEDDING DETAIL

NTS

SAN-01

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 12/2020	PIPE BEDDING DETAIL
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: BEDDET	



CONC PVMT REPAIR

NTS

SAN-05

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

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STATE OF MISSOURI
SHAWN MCCONNAUGHEY
NUMBER PE-2013019078
PROFESSIONAL
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

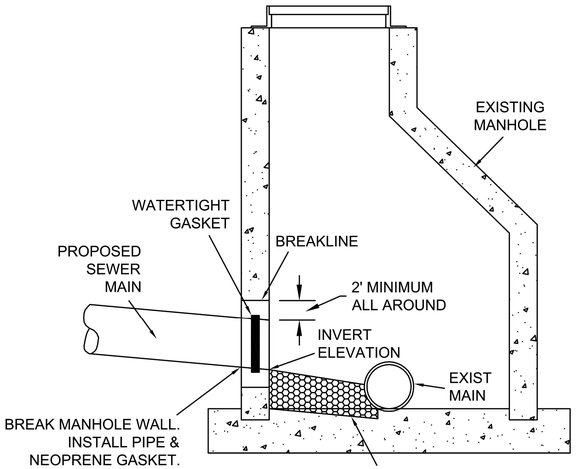
JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: 123456
date: 1/19/2024

SHEET
22 of 31

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_DTL01_C170642.dwg USER: thill
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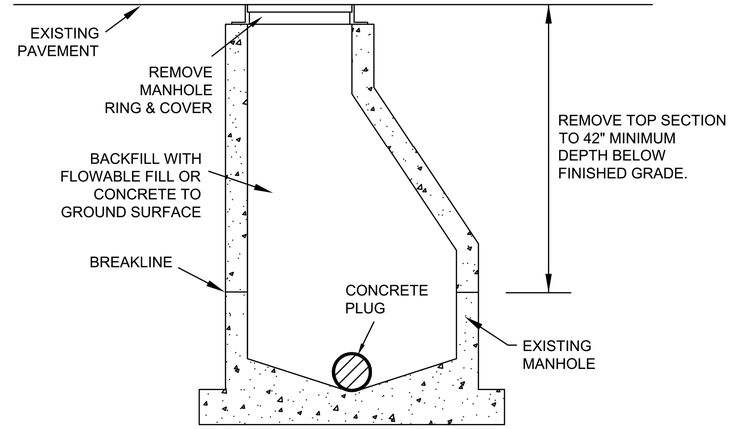


EXISTING MANHOLE TAP

NTS

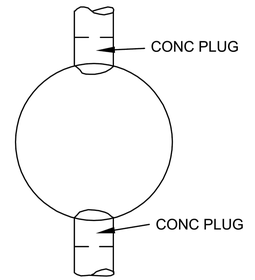
SAN-06

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	EXISTING MANHOLE TAP
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MHTAP	



BACKFILL UNDER STREET PAVEMENT OR PARKING AREAS WITH FLOWABLE FILL TO SUBGRADE.

BACKFILL UNDER GRASS AREAS WITH SOIL COMPACTED TO 85% MAXIMUM DRY DENSITY & COVER WITH 4" TOP SOIL.



MANHOLE ABANDONMENT

N.T.S.

SAN-07

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

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Joplin, MO 64801

STATE OF MISSOURI SHAWN MCCONNAUGHEY NUMBER PE-2010019078 PROFESSIONAL 1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

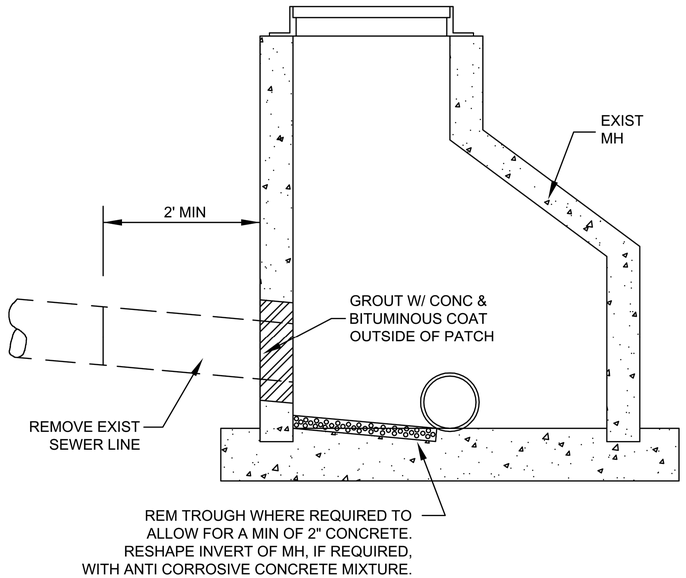
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: 123456
date: 1/19/2024

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DATE: Jan 23, 2024 9:45am XREFS: C_PTBLK_C170642

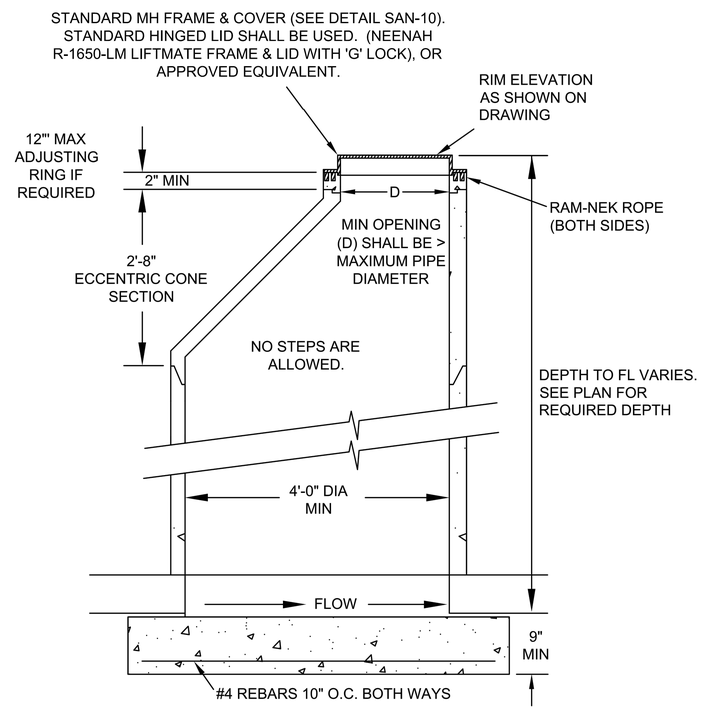


MH PLUG DETAIL

N.T.S.

SAN-08

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



PRECAST MANHOLE DETAIL

N.T.S.

SAN-09

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	PRECAST MH DETAIL
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: MHPRECAST	

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STATE OF MISSOURI
SHAWN MCCONNAUGHEY
NUMBER PE-2013019078
PROFESSIONAL ENGINEER
1/24/2024

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REVISIONS

STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

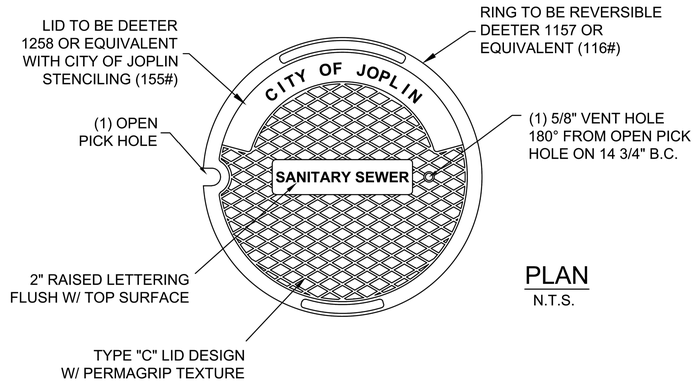
JOPLIN, MISSOURI

2023

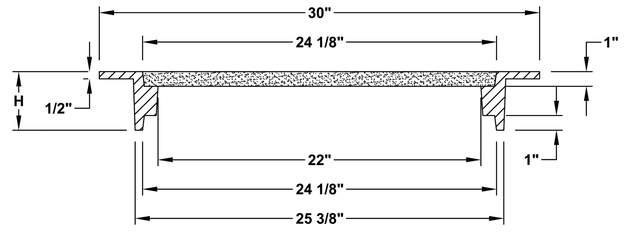
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drawing no.: 123456
date: 1/19/2024

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24 of 31

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PLAN
N.T.S.



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

SAN-10

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

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STATE OF MISSOURI
SHANE M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

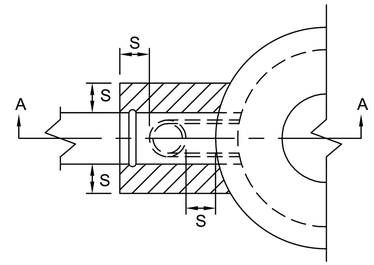
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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STANDARD DETAILS
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

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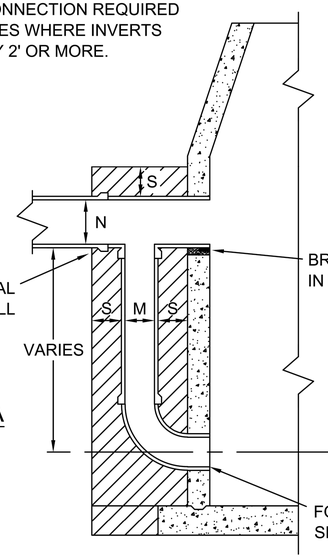
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TOP VIEW
N.T.S.

OUTSIDE DROP CONNECTION REQUIRED
ON ALL MANHOLES WHERE INVERTS
DIFFER BY 2' OR MORE.



S=8"
MIN THICKNESS OF
CONC ENCASEMENT
ALL AROUND PIPE

M=8" WHERE N=8" TO 18"
M=12" WHERE N=21" OR MORE

BRICK DAM SET
IN MORTAR

CL OF DROP SEWER TO BE
SAME ELEVATION AS SPRING
LINE OF MAIN SEWER

FORM CHANNEL TO MAIN
SEWER CHANNEL

SECTION A-A
N.T.S.

OUTSIDE DROP MH CONNECTION
N.T.S.

SAN-14

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

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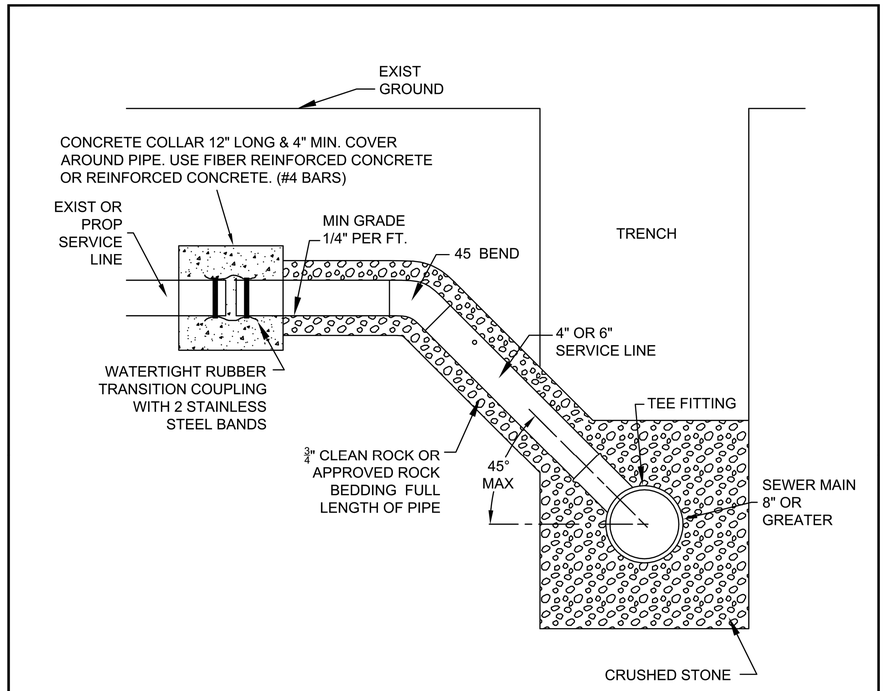
STATE OF MISSOURI
SHAWN M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

STANDARD DETAILS
GLENDALE PARALLEL INTERCEPTOR
LOWER REACH
JOPLIN, MISSOURI
2023

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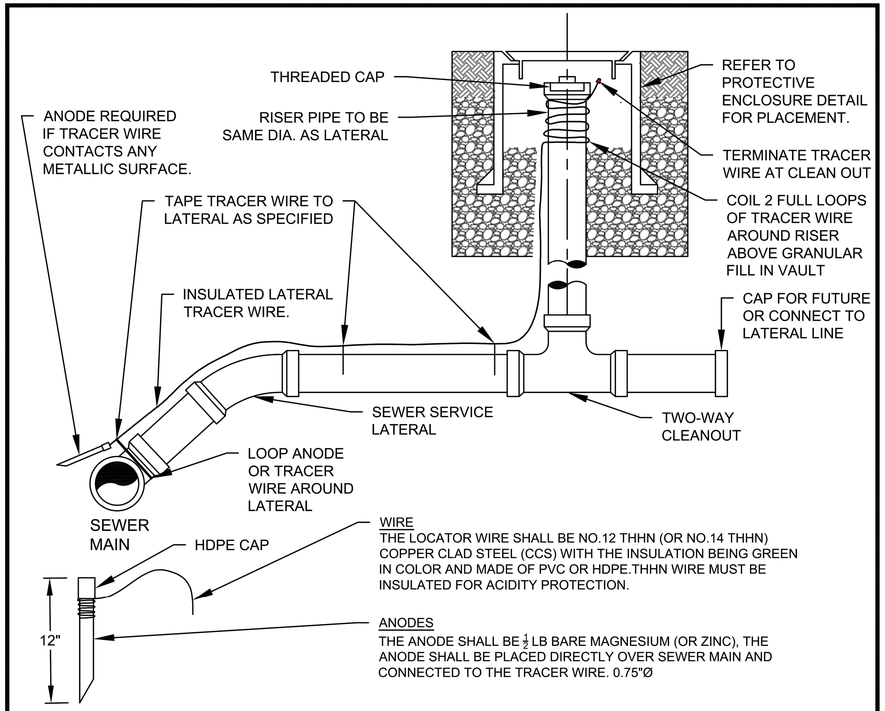
- TRACER WIRE (NOT SHOWN) MAY BE REQUIRED. SEE STANDARD DETAILS.
- RUBBER SADDLES ARE NOT ALLOWED.
- NO HOLES FOR NEW CONNECTIONS SHALL BE MADE BY HAMMERING, REGARDLESS OF THE EXISTING SEWER MAIN PIPE MATERIAL.
- ALL HOLES FOR NEW CONNECTIONS TO EXISTING PIPE SHALL BE MADE BY CORING IN THE PRESENCE OF THE CITY'S INSPECTOR. ALTERNATIVELY, A PREFABRICATED PVC WYE OR TEE CAN BE INSTALLED, IN WHICH CASE, THE NEW FITTING SHALL BE AFFIXED TO THE EXISTING SEWER MAIN BY MEANS OF A WATERTIGHT RUBBER COUPLING WITH 2 STAINLESS STEEL BANDS, ALL OF WHICH SHALL BE CONCRETE ENCASED PER THE REQUIREMENTS SHOWN ON THE DETAIL ABOVE.

SERVICE CONNECTION

N.T.S.

SAN-15

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 4/2019	SEWER SERVICE CONNECTION
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: SERVCONN	



WIRE

THE LOCATOR WIRE SHALL BE NO.12 THHN (OR NO.14 THHN) COPPER CLAD STEEL (CCS) WITH THE INSULATION BEING GREEN IN COLOR AND MADE OF PVC OR HDPE.THHN WIRE MUST BE INSULATED FOR ACIDITY PROTECTION.

ANODES

THE ANODE SHALL BE ½ LB BARE MAGNESIUM (OR ZINC), THE ANODE SHALL BE PLACED DIRECTLY OVER SEWER MAIN AND CONNECTED TO THE TRACER WIRE. 0.75"Ø

TRACER WIRE NOTES

1. CONDUCTIVE TYPE PIPE LOCATOR/TRACER WIRE SHALL BE INSTALLED ON SEWER LATERALS TO FACILITATE FUTURE ABOVE-GROUND LOCATING ACTIVITIES, PER MISSOURI STATE STATUTE. **2**. THE TRACER WIRE SET OF REQUIREMENTS APPLY UNDER ANY OF THE FOLLOWING CONDITIONS: A) ONLY ON LATERAL PIPES INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY OR A DEDICATED UTILITY EASEMENT; B) ON LATERALS CONNECTING TO SEWER MAINS INSTALLED PRIOR TO 2016, ONLY IF THE EXCAVATION TO REPAIR AN EXISTING LATERAL EXTENDS TO WITHIN 5 FT (HORIZONTALLY) OF THE SEWER MAIN, AS DETERMINED BY SIGHTING BETWEEN MH COVERS; OR, C) ON LATERAL PIPES INSTALLED AS PART OF A SEWER MAIN EXTENSION. **3**. THE WIRE SHALL BE INSTALLED DIRECTLY ON TOP OF THE PIPE AND SECURED TO THE LATERAL BY TAPE AT BASE OF RISER, SEWER MAIN AND EVERY 10'. A STRIP OF DUCT TAPE IS ACCEPTABLE FOR ATTACHMENT. **4**. CAP THE END OF THE WIRE INSIDE THE PROTECTIVE ENCLOSURE WITH A THERMOPLASTIC SHELL CONNECTOR RATED FOR DAMP, UNDERGROUND APPLICATIONS (THE MUDBUG BY IDEAL, OR EQUIVALENT). 5. CONDUCTIVITY TO BE TESTED BEFORE ACCEPTANCE.

ADJUSTMENTS TO EXISTING

CORROSION PROOF WIRE CONNECTORS SHALL BE USED AT SPLICE LOCATIONS. ELECTRICAL TAPE SHALL BE USED AND NO BARE WIRE SHALL BE EXPOSED. CONDUCTIVITY TO BE TESTED BEFORE ACCEPTANCE.

TRACER WIRE DETAIL

NTS

SAN-16

CITY OF JOPLIN	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 4/2019	TRACER WIRE FOR SERVICE LINES
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: TRACER WIRE	

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STATE OF MISSOURI SHAWN MCCONNAUGHEY NUMBER PE-2010019078 PROFESSIONAL 1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

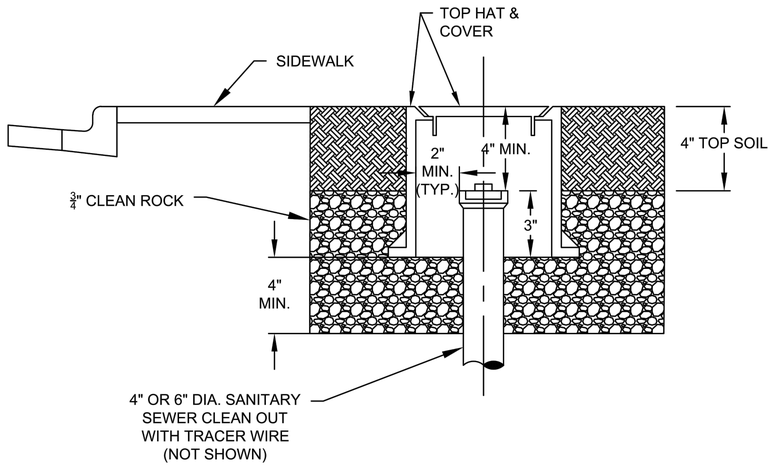
JOPLIN, MISSOURI

2023

drawn by: CTK
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QA/QC by: ENG
project no.: C17-0642
drawing no.: 123456
date: 1/19/2024

SHEET
27 of 31

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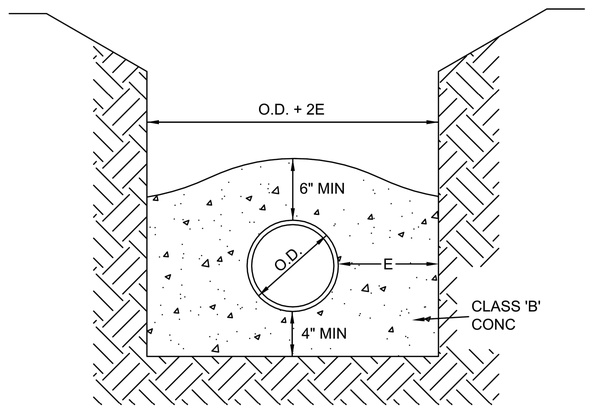
1. A SEALED CLEAN OUT WITH REMOVABLE CAP SHALL BE INSTALLED WITHIN 3' OF THE PUBLIC EASEMENT, OR PROPERTY LINE UNLESS OTHERWISE APPROVED BY THE ENGINEER, AND SHALL BE HOUSED IN A PROTECTIVE ENCLOSURE, AS PART OF THE REQUIREMENTS OF STATE STATUTE NO.319.033. THIS PROTECTIVE ENCLOSURE SHALL BE THE ACCESS POINT FOR THE SERVICE LINE CLEAN OUT AS WELL AS THE ACCESS POINT FOR CONNECTION TO THE TRACER WIRE. THE TOP OF THE PROTECTIVE ENCLOSURE SHALL BE INSTALLED TO FINISH GRADE, AND SHALL BE ACCESSIBLE FROM THE R/W OR EASEMENT.
2. AVOID LOCATING THE CLEAN OUT AND PROTECTIVE ENCLOSURE IN SIDEWALKS. IF UNAVOIDABLE, REPLACE, PER CITY STANDARDS, THE ENTIRE SIDEWALK PANEL, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. THE TOP HAT & COVER ("PROTECTIVE ENCLOSURE") SHALL BE LOCALLY AVAILABLE. LID SHALL HAVE THE WORD "SEWER" IN THE CASTING. EQUIVALENT FRAME AND LID MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
4. THE PROTECTIVE ENCLOSURE IS NOT REQUIRED AT THE CLEAN OUT NEXT TO A BUILDING, BUT IT IS STRONGLY RECOMMENDED.
5. ALL CONNECTORS USED SHALL BE DIRECT BURIAL RATED AND SHALL BE DIELECTRIC SILICON FILLED TO SEAL OUT MOISTURE AND CORROSION.

PROTECTIVE ENCLOSURE DETAIL

NTS

SAN-17

CITY OF Joplin	CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
	PUBLIC WORKS DEPT	DATE: 2/2019	PROTECTIVE ENCLOSURE FOR CLEAN OUTS
	ENGINEERING DIVISION	ENGINEER: HERTZBERG	
	602 S MAIN ST 64801	FILE: PROTECT ENCL	



E	PIPE O.D.
12"	4" TO 24"
15"	27" TO 36"
18"	42" TO 60"

CONC ENCASEMENT

N.T.S.

SAN-24

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

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STATE OF MISSOURI — SHAWN MCCONNAUGHEY — NUMBER PE-2010019078 — PROFESSIONAL — 1/24/2024

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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

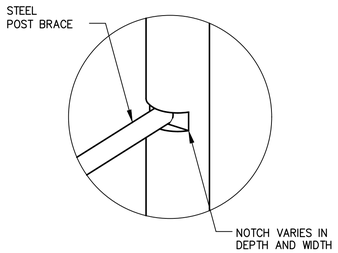
JOPLIN, MISSOURI

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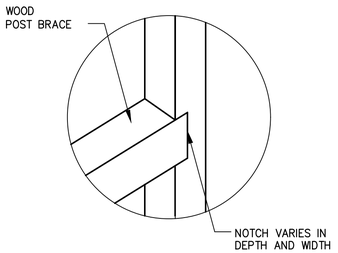
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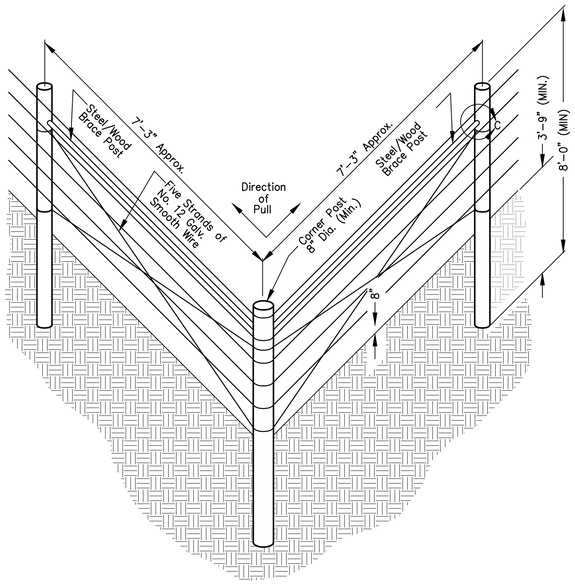
DETAIL C

TYP. ALL STEEL
BRACE POST

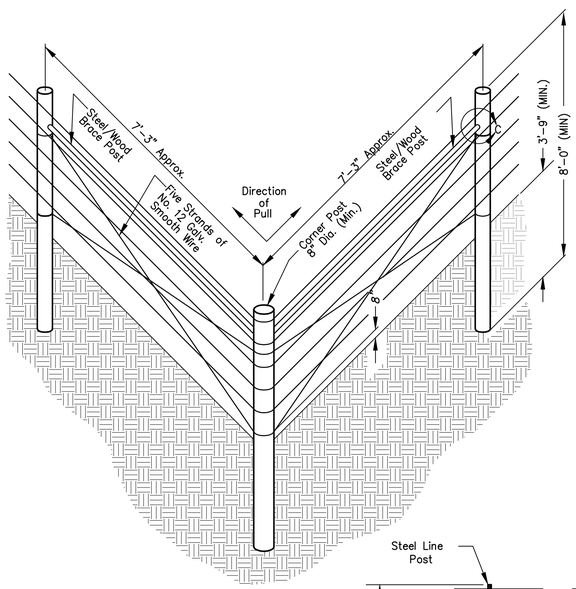


DETAIL C

TYP. ALL WOOD
BRACE POST

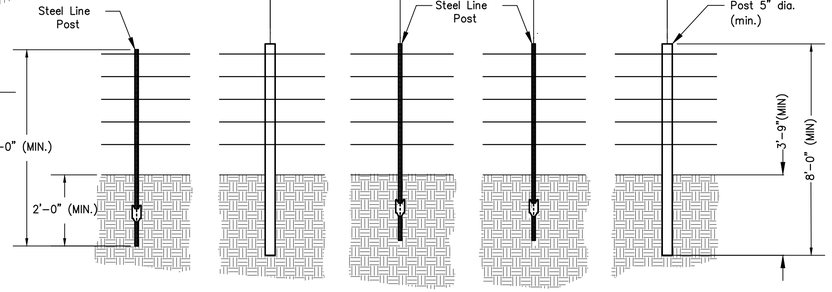


CORNER ASSEMBLY

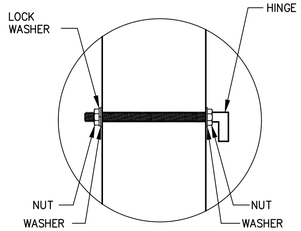


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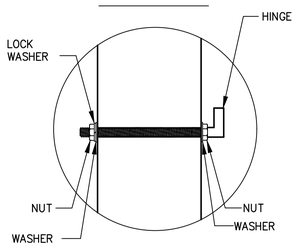
IF DOUBLE GATE
HINGE AT BOTH SIDES



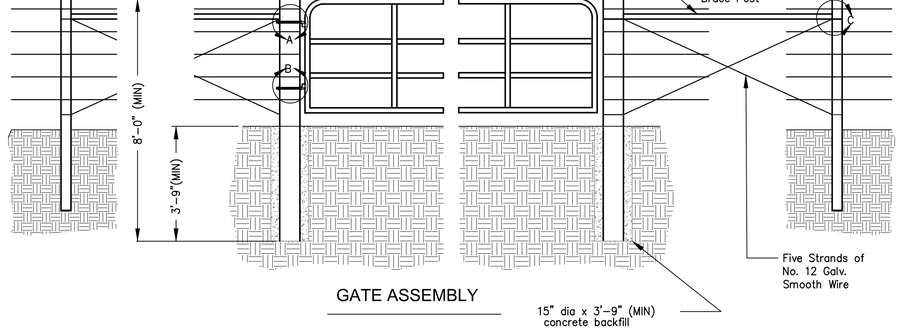
LINE FENCE SECTION



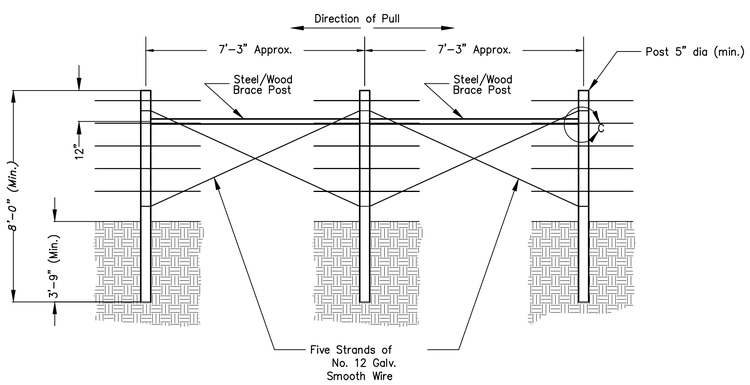
DETAIL A



DETAIL B

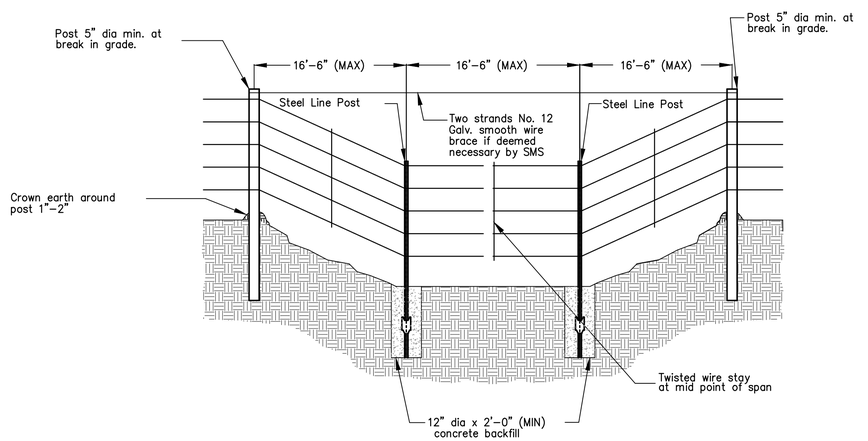


GATE ASSEMBLY



PULL POST ASSEMBLY

PLACEMENT OF FENCE TO BE
FIELD DETERMINED BY OWNER



CROSSING AT SMALL DEPRESSIONS
AND WATERWAYS

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STATE OF MISSOURI
SHANE M. MCCONNAUGHEY
NUMBER
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REVISIONS

STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

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LEGEND

Sign Symbol

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STATE OF MISSOURI
SHANE M. MCCONNAUGHEY
NUMBER PE-2010019078
PROFESSIONAL ENGINEER
1/24/2024

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REVISIONS

TRAFFIC CONTROL PLAN

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

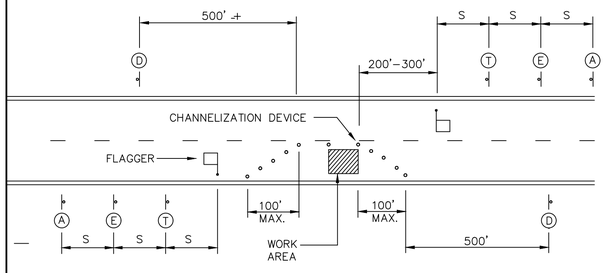
JOPLIN, MISSOURI

2023

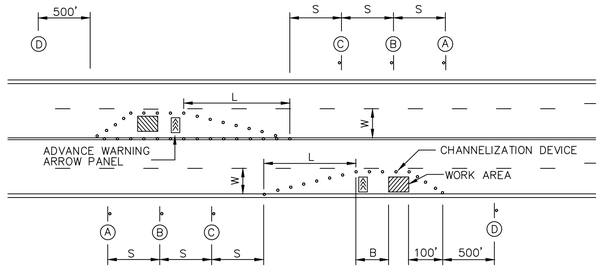
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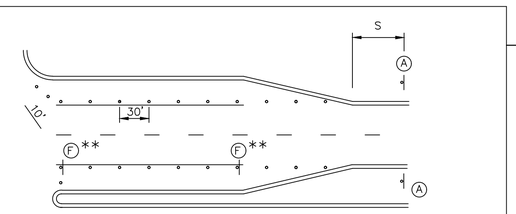
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DATE: Jan 23, 2024 9:49am XREFS: C_PTBLK_C170642 V_XBND1_C170642 V_XTOPO_C170642 C_AERL_C170642



DETAIL 1: TYPICAL CLOSURE – TWO–LANE STREET

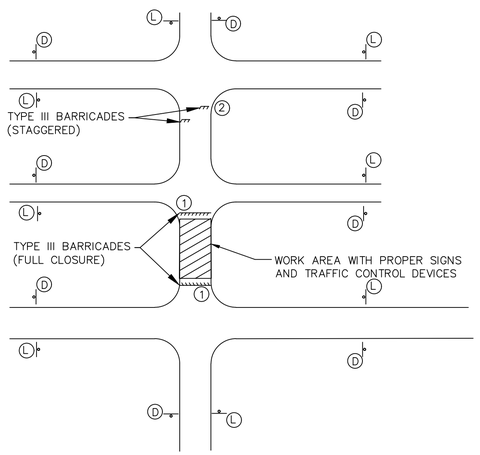


DETAIL 2: TYPICAL LANE CLOSURE – FOUR–LANE STREET



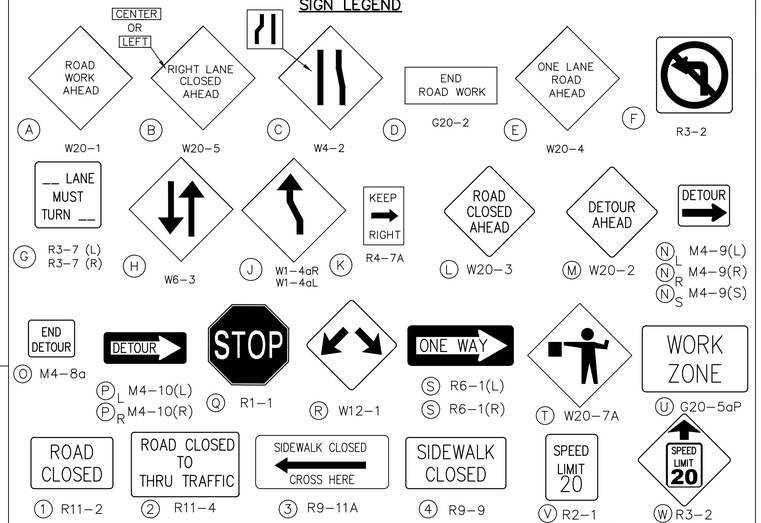
** USE ONLY AS APPROVED BY
CITY TRAFFIC ENGINEER

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

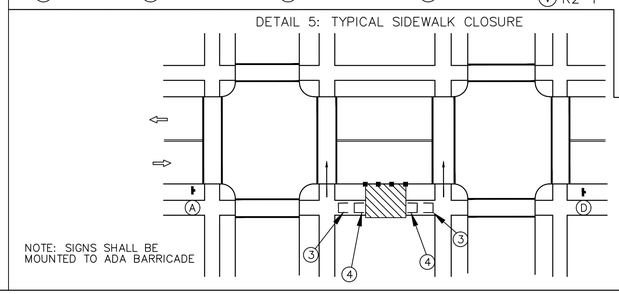


DETAIL 4: TYPICAL SIDE ROAD SIGNING FOR ROAD CLOSURE

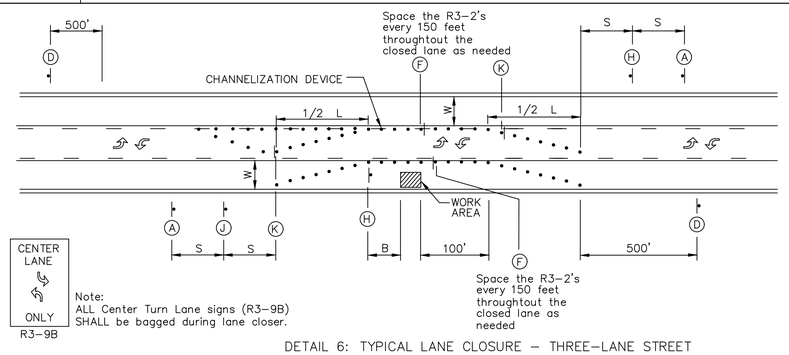
SIGN LEGEND



DETAIL 5: TYPICAL SIDEWALK CLOSURE



NOTE: SIGNS SHALL BE
MOUNTED TO ADA BARRICADE



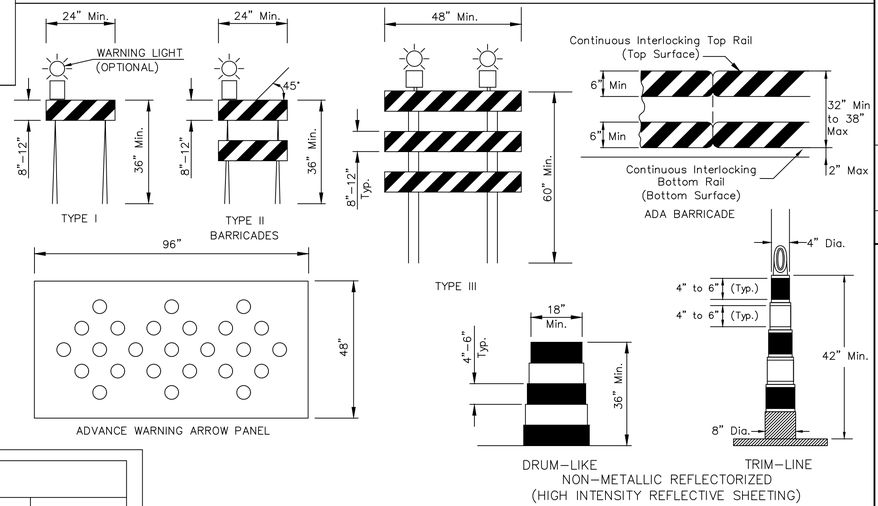
CENTER
LANE
ONLY
R3–9B

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

DETAIL 6: TYPICAL LANE CLOSURE – THREE–LANE STREET

GENERAL NOTES:

1. All signs, barricades, drums, markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (M.U.T.C.D.), most current edition.
2. All traffic control devices shall be standard in size, shape, color and message, in good condition, and reflectorized. All signs and barricades in place at night shall be reflectorized with high intensity sheeting. All signs shall be securely mounted with height and lateral location as described in the M.U.T.C.D.
3. Warning lights should be used on all channelization devices and warning signs per M.U.T.C.D. Type A Low–Intensity Flashing Warning lights should be mounted on warning signs as well as barricades where used singley to warn users of potentially hazardous areas during nighttime hours. Type B High–Intensity Flashing warning lights should be used during day and nighttime operations to increase awareness of potentially hazardous areas. Type C Steady–Burn lights should be mounted on barricades where used in series to delineate the edge of the travel way.
4. Advance Warning Arrow Panels shall be used for all lane closures on multi–lane streets but should not be used in lieu of proper traffic control signs, barricades and channelization devices.
5. Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic or where construction activities impose a restriction on traffic, as directed by the Engineer in charge of construction. Where flaggers are used, advance signing shall be erected as shown above or as specified in the M.U.T.C.D. Flaggers shall meet the requirements in the M.U.T.C.D. in regard to character, training, attire and behavior.
6. Channelization devices used in the street shall be either drums, cones or Trimline channelizers.
7. Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
8. The Contractor shall place as many barricades as needed to effectively shield pedestrians and traffic from exposed objects, excavations and construction activities. ADA Pedestrian Barricades shall be installed around all excavations left open during non–construction times or as directed by the Engineer in charge of construction.
9. Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
10. Construction materials shall be kept off of sidewalks, consolidated in one location within City Right–Of–Way, and removed daily unless otherwise approved by the Engineer in charge of construction.
11. Dirt, mud and other construction debris on streets and sidewalks shall be removed immediately.
12. The Contractor shall not perform any work that will restrict traffic in any way between the hours of 7:00 a.m. and 8:30 a.m. or 4:30 p.m. and 6:00 p.m. unless prior approval has been given.
13. The Contractor shall be responsible for maintaining all traffic control devices on an around–the–clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
14. The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of motorist, pedestrians, and workers at all times. Any additional quantities of traffic control devices necessary to complete the contract or as ordered by the Engineer shall be considered subsidiary to the contract bid price.
15. Construction vehicles parked along streets and construction signs shall not restrict sight distance for vehicles exiting at streets or any drives.
16. Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the Engineer or representative, the City/Controlling Jurisdiction may take one or more of the following actions:
    - A) Employ another agency to correct deficiencies in signing or warning devices and deduct the cost from the contractor's pay estimate
    - B) Suspend all pay Estimates until deficiencies are corrected.
    - C) Stop the work until deficiencies are corrected.
    - D) Place the contractor in default.
17. The Contractor shall keep roadway closures due to construction activities to a minimum and provide advanced notice to affected users.
18. The Contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.
19. The Contractor may, if need arises or at the request of the Engineer, place reduced speed limit signing and work zone speed limit signing in advance of all active work zone areas. Work zone speed limit reduction shall not be greater than 10 mph throughout construction areas without advanced signing in place. Contractor shall cover or replace all speed limit signs in conflict with the work zone speed limit throughout the construction area.



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

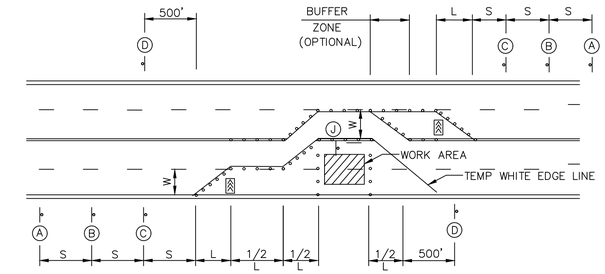
*Posted speed

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

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

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

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



DETAIL 7: TYPICAL LANE CLOSURE – FOUR–LANE STREET

olsson
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Joplin, MO 64801

STATE OF MISSOURI
SHANE W. MCCONNAUGHEY
NUMBER PE–2010019078
PROFESSIONAL ENGINEER
1/24/2024

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL
STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
LOWER REACH

JOPLIN, MISSOURI

2023

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_TRF-DTL_C170642
date: 1/19/2024

SHEET
31 of 31

DWG: F:\2017\0501-1000\017-0642-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_TRF-DTL_C170642.dwg USER: thill
DATE: Jan 23, 2024 9:49am XREFS: C_PTBLK_C170642