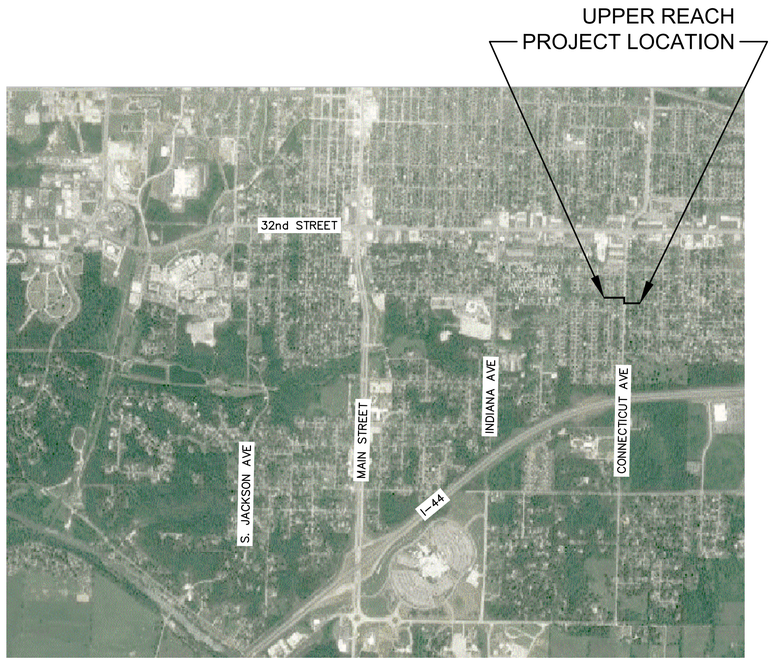
PUBLIC SANITARY SEWER PLANS FOR
GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

SECTIONS 21, 22 & 23, TOWNSHIP 27N, RANGE 33W
CITY OF JOPLIN, MISSOURI
NEWTON COUNTY, MISSOURI



LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET NO.	TITLE
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4	GENERAL NOTES
5	SUMMARY OF QUANTITIES
6–7	DEMOLITION & REMOVALS
8–10	SANITARY SEWER PLAN & PROFILE
17–11	STANDARD DETAILS
18–19	TRAFFIC CONTROL PLANS & DETAILS

LEGEND

CTL	SURVEY CONTROL POINT	TS	TRAFFIC SIGNAL BOX
	SURVEY BENCHMARK		TRAFFIC SIGNAL MANHOLE
TBM	SURVEY TEMPORARY BENCHMARK		TRAFFIC SIGNAL POLE W/ ARM
GM	GAS METER		TRAFFIC SIGNAL POLE
GAR	GAS RISER	TS	TRAFFIC SIGNAL CONTROL BOX
	GAS MANHOLE	TS	TRAFFIC SIGNAL PEDESTAL
GR	GAS REGULATOR	E	ELECTRIC MANHOLE
TVP	TELEVISION PEDESTAL	EV	ELECTRIC VAULT
F	FIBER BOX	EM	ELECTRIC METER
	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
- 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
- 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

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!!



SECTION 21, 22 & 23, T–27–N, R–33–W
NEWTON COUNTY, MISSOURI

VICINITY MAP
NOT TO SCALE

ELECTRIC
LIBERTY UTILITIES
602 JOPLIN ST., JOPLIN, MO 64801
BOB BARCHAK
(417) 625–6160

NATURAL GAS
SPIRE ENERGY
520 E. 5TH ST., JOPLIN, MO 64801
KEN STEGALL
(417) 626–4831

TELEPHONE
A.T.&T.
321 W. 8TH ST., JOPLIN, MO 64801
KENNETH KENWORTHY
(417) 625–8090

WATER
MISSOURI–AMERICAN WATER CO.
2650 E. 32ND ST. – SUITE 121
JOPLIN, MO 64804
DAVID GUINN
(417) 623–0676 EXT. 1004

CABLE TELEVISION
CABLE ONE DIGITAL
112 E. 32ND ST., JOPLIN, MO 64804
RANDY KENNEDY
(417) 206–5399

PREPARED & SUBMITTED BY:

OLSSON
702 S. MAIN STREET
JOPLIN, MISSOURI 64801

SHAUN W. McCONNAUGHEY — DATE

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

APPROVED BY:

CITY OF JOPLIN, MISSOURI

CITY ENGINEER — DATE

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306 N Broadway St.
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Pittsburg, KS 66762
TEL 620.670.5100
www.olsson.com

STATE OF MISSOURI
SHAUN W. MCCONNAUGHEY
NUMBER PE-2013019078
PROFESSIONAL ENGINEER
7/19/2021
SHAUN W. MCCONNAUGHEY
PROFESSIONAL ENGINEER
MO# PE-2013019078

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

TITLE SHEET

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

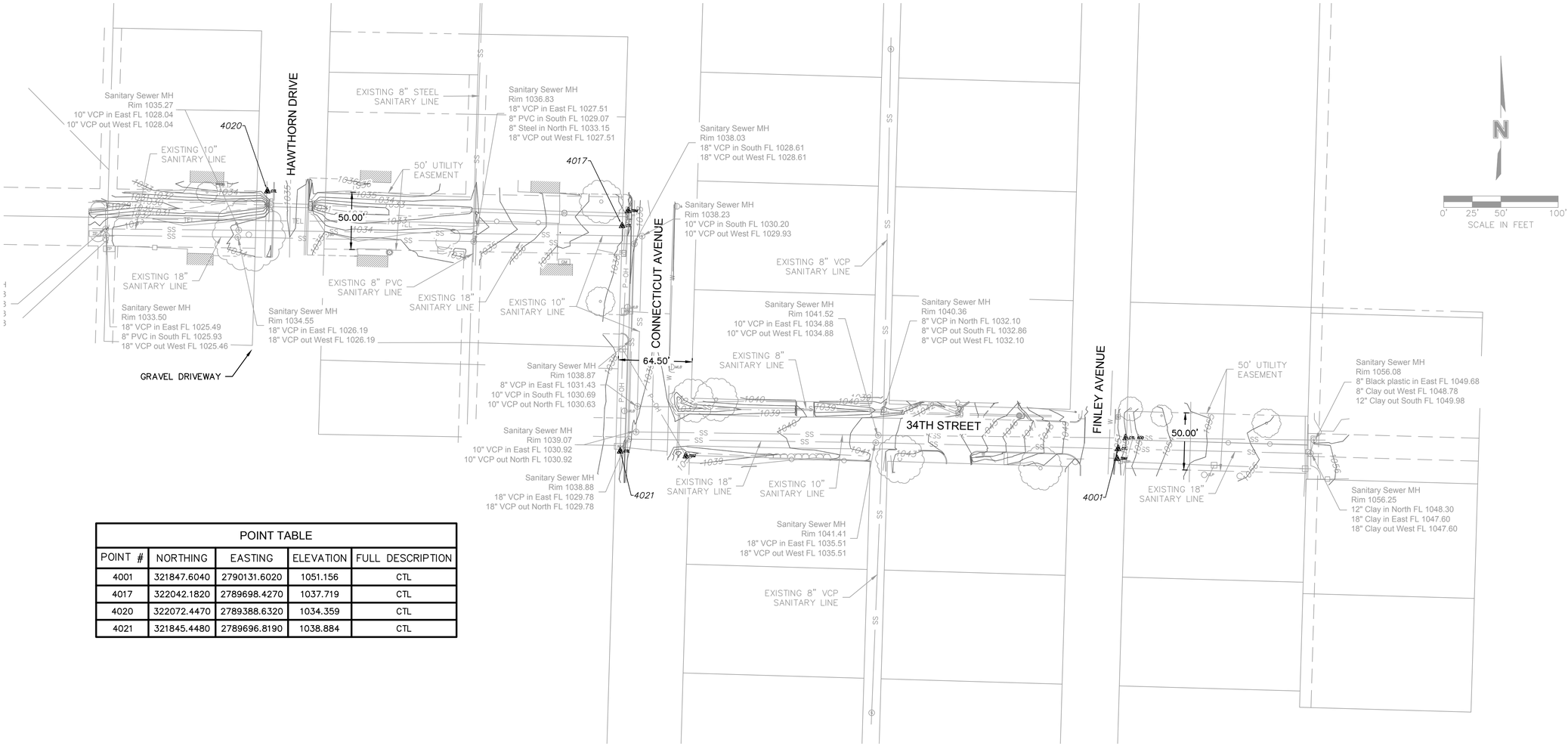
JOPLIN, MISSOURI

2021

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17-0642
drawing no.:	C_TTL02_C170642
date:	7/15/2021

SHEET
1 of 19

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DATE: Jul 15, 2021 9:52am XREFS: V_XTOPO_C170642 C_PTBLK_C170642_EAST



POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
4001	321847.6040	2790131.6020	1051.156	CTL
4017	322042.1820	2789698.4270	1037.719	CTL
4020	322072.4470	2789388.6320	1034.359	CTL
4021	321845.4480	2789696.8190	1038.884	CTL

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EXISTING CONDITIONS & SURVEY CONTROL POINTS

GLENDALE PARALLEL INTERCEPTOR
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JOPLIN, MISSOURI

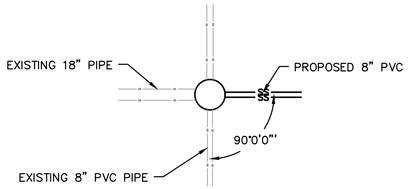
2021

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_EXC02_C170642
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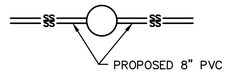
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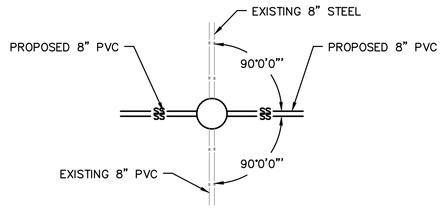
MANHOLE 50 STA: 250+51.61
48" DIA. RIM 1032.86
LINE IN EAST: 8" PVC F.L. 1025.49
LINE IN SOUTH: 8" PVC F.L. 1027.68
LINE IN SOUTH" 8" PVC F.L. 1025.93
LINE OUT WEST: 16" VCP F.L. 1025.46



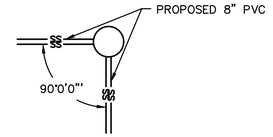
MANHOLE 51 STA: 251.49
48" DIA. RIM 1034.16
LINE IN NORTH: 10" PVC F.L. 1027.74
LINE IN EAST: 8" PVC F.L. 1026.39
LINE OUT WEST: 8" PVC F.L. 1026.19

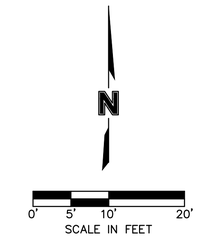


MANHOLE 52 STA: 253+36.69
48" DIA. RIM 1034.35
LINE IN EAST: 8" PVC F.L. 1027.45
LINE IN SOUTH: 8" PVC F.L. 1029.07
LINE IN NORTH: 8" STEEL F.L. 1033.15
LINE OUT WEST: 8" PVC F.L. 1027.25

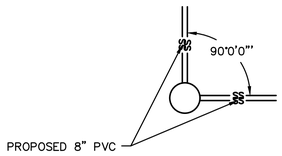


MANHOLE 53 STA: 254+76.85
FUTURE 48" DIA. RIM 1036.99
CURRENT RIM 1038.03
LINE IN SOUTH: 8" PVC F.L. 1029.00
LINE OUT WEST: 8" PVC F.L. 1028.88

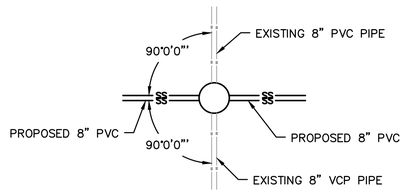




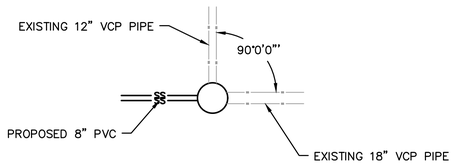
MANHOLE 54 STA: 256+47.45
FUTURE 48" DIA. RIM 1038.27
CURRENT RIM 1038.88
LINE IN EAST: 8" PVC F.L. 1031.00
LINE OUT NORTH: 8" PVC F.L. 1030.88

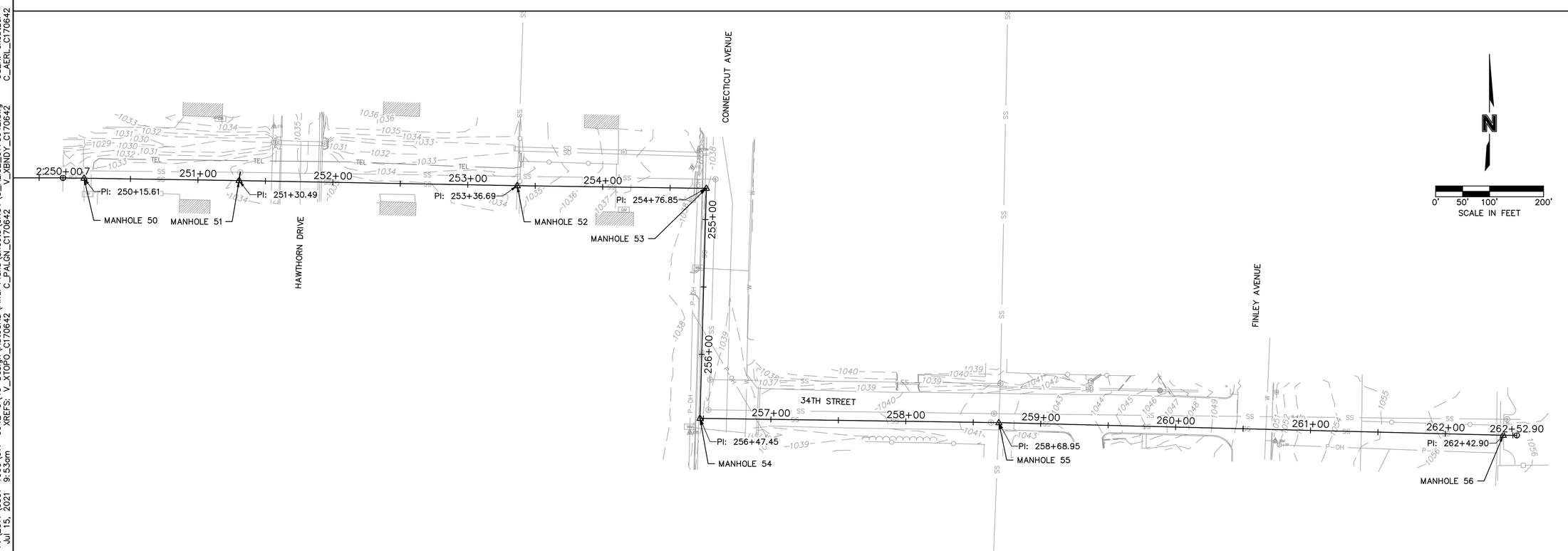


MANHOLE 55 STA: 258+63.06
48" DIA. RIM 1041.53
LINE IN NORTH: 8" PVC F.L. 1033.31
LINE IN SOUTH: 8" VCP F.L. 1033.31
LINE IN EAST: 8" PVC F.L. 1033.00
LINE OUT WEST: 8" PVC F.L. 1032.80



MANHOLE 56 STA: 262+42.90
48" DIA. RIM 1056.22
LINE IN EAST: 16" VCP F.L. 1047.60
LINE IN NORTH: 12" VCP F.L 1048.30
LINE OUT WEST: 8" PVC F.L. 1047.60





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MO# PE-2013019078

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REVISIONS

MANHOLE ALIGNMENT DATA
SURVEY CONTROL POINTS

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

JOPLIN, MISSOURI

2021

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
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SHEET
3 of 19

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XREFS: V_XTOPO_C170642 C_PALGN_C170642 V_XBNDY_C170642 C_AERL_C170642
USER: ckeuizer
C_PTBLK_C170642_EAST

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 OF 7:00 AM TO 7:00 PM UNLESS APPROVED OR DIRECTED BY THE ENGINEER.
12. THE CITY OF JOPLIN SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL DEMOLITION AND REMOVAL ITEMS SUCH AS SIGNAGE, POLES, SIGNAL EQUIPMENT, ETC. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS FOR A TIME AND LOCATION TO DELIVER THOSE ITEMS TO THE CITY. CONSTRUCTION DEBRIS SUCH AS BROKEN CONCRETE, EXCESS FILL, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR. MATERIAL SHALL BE COMPLETELY REMOVED FROM THE SITE PRIOR TO ACCEPTANCE OF THE PROJECT. ALL MATERIAL SHALL BE DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
13. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER CITY OF JOPLIN REQUIREMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL STORM AND SANITARY MANHOLE RIMS TO MATCH THE PROPOSED FINISHED GRADE. THIS ITEM 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 APPROVED SEDIMENT AND EROSION CONTROL PLAN (SECP). 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. THE UNSUITABLE CONDITIONS MUST BE CORRECTED PER THE GEOTECHNICAL ENGINEER'S REPORT, WHERE REQUIRED, TO MEET PROJECT NEEDS.
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 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.
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 STORM SYSTEM THAT ARE NOT EXPLICITLY SHOWN AND IDENTIFIED ON THE BID FORM WILL BE CONSIDERED SUBSIDIARY TO THE PROPOSED STORM 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.
48. BEFORE SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED:
    A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
    B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
    C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
    D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

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

49. THE CONTRACTOR SHALL MAINTAIN AND COORDINATE OWNER, TENANT, DELIVERY AND EMERGENCY VEHICULAR AND/OR PEDESTRIAN ACCESS TO ALL RESIDENCES AT ALL TIMES IN ACCORDANCE WITH THE CITY OF JOPLIN, ADA, PROWAG, AND MUTCD REQUIREMENTS, INCLUDING TEMPORARY ACCESS AND SAFETY REQUIREMENTS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
50. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF CONTAMINATED MATERIAL IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS AND AS DETAILED IN JSP 1200-01.
51. ALL UTILITIES REMOVED FROM SERVICE AS PART OF THE PROPOSED SEWER MYSTERY SHALL BE ABANDONED IN ACCORDANCE WITH CITY OF JOPLIN SPECIFICATIONS.
52. 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 APPROVED LICENSED ARBORIST SHOULD REVIEW ANY ROOTS OVER 2 INCHES IN DIAMETER ENCOUNTERED DURING EXCAVATION AND/OR CONSTRUCTION ACTIVITIES TO DETERMINE STRUCTURAL STABILITY OF THE TREE. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

JOPLIN, MISSOURI

2021

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_GEN02_C170642
date: 7/15/2021

SHEET
4 of 19

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RECAPITULATION OF QUANTITIES				
ITEM NO.		ITEM DESCRIPTION	UNIT	QUANTITY
		UPPER REACH		
		SCHEDULE A - GENERAL (BASE BID)		
A	1	MOBILIZATION	LS	1
A	2	CONTRACTOR CONSTRUCTION STAKING	LS	1
		SCHEDULE B - DEMOLITION (BASE BID)		
B	1	CLEARING AND GRUBBING	LS	1
B	2	REMOVAL OF IMPROVEMENTS	LS	1
B	3	TREE REMOVAL	EA	1
B	4	PAVEMENT REMOVAL	SY	453
B	5	SAW CUT	LF	1,180
		SCHEDULE C - EROSION CONTROL (BASE BID)		
C	1	EROSION AND SEDIMENT CONTROL	LS	1
C	2	SEEDING, FERTILIZING AND MULCHING	LS	1
		SCHEDULE D - SANITARY SEWER		
D	1	6'-8' DEEP TRENCH & BACKFILL 8" DIA GRAVITY SEWER PIPE	LF	370
D	2	8'-10' DEEP TRENCH & BACKFILL 8" DIA GRAVITY SEWER PIPE	LF	910
D	3	8" DIA. SDR 26 PVC GRAVITY SEWER PIPE AND BEDDING	LF	1,280
D	4	TYPE 1, 48" DIA. MANHOLE	EA	6
D	5	TYPE 1, 48" DIA. OUTSIDE DROP MANHOLE		1
D	6	TYPE 1, 48" DIA. MANHOLE EXTRA DEPTH	VF	14
D	7	HYDROSTATIC TESTING OF TYPE 1, 48" DIA. MANHOLES	EA	7
D	8	ABANDONMENT OF 48" MANHOLES UNDER TURF	EA	6
D	9	ABANDONMENT OF 48" MANHOLES UNDER PAVEMENT	EA	3
D	10	4" SCHEDULE 40 PVC SEWER LATERAL LINE	LF	20
D	11	RECONNECTION OF EXISTING SEWER SERVICE LAT. LINE	EA	1
D	12	RECONNECTION OF EXISTING 8" DIA. SEWER LINE	EA	4
D	13	TEMPORARY CURB & GUTTER	LF	158
D	14	CONCRETE CURB & GUTTER	LF	18
D	15	ASPHALT PAVEMENT REPAIR & REPLACEMENT	SY	430
D	16	CONCRETE PAVEMENT REPAIR & REPLACEMENT	SY	23
D	17	DISPOSAL OF LEAD CONTAMINATED SOIL	CY	1,926
		SCHEDULE H - TRAFFIC CONTROL (BASE BID)		
H	1	TRAFFIC CONTROL	LS	1
H	2	CHANGEABLE MESSAGE BOARD	EA	2

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SUMMARY OF QUANTITIES

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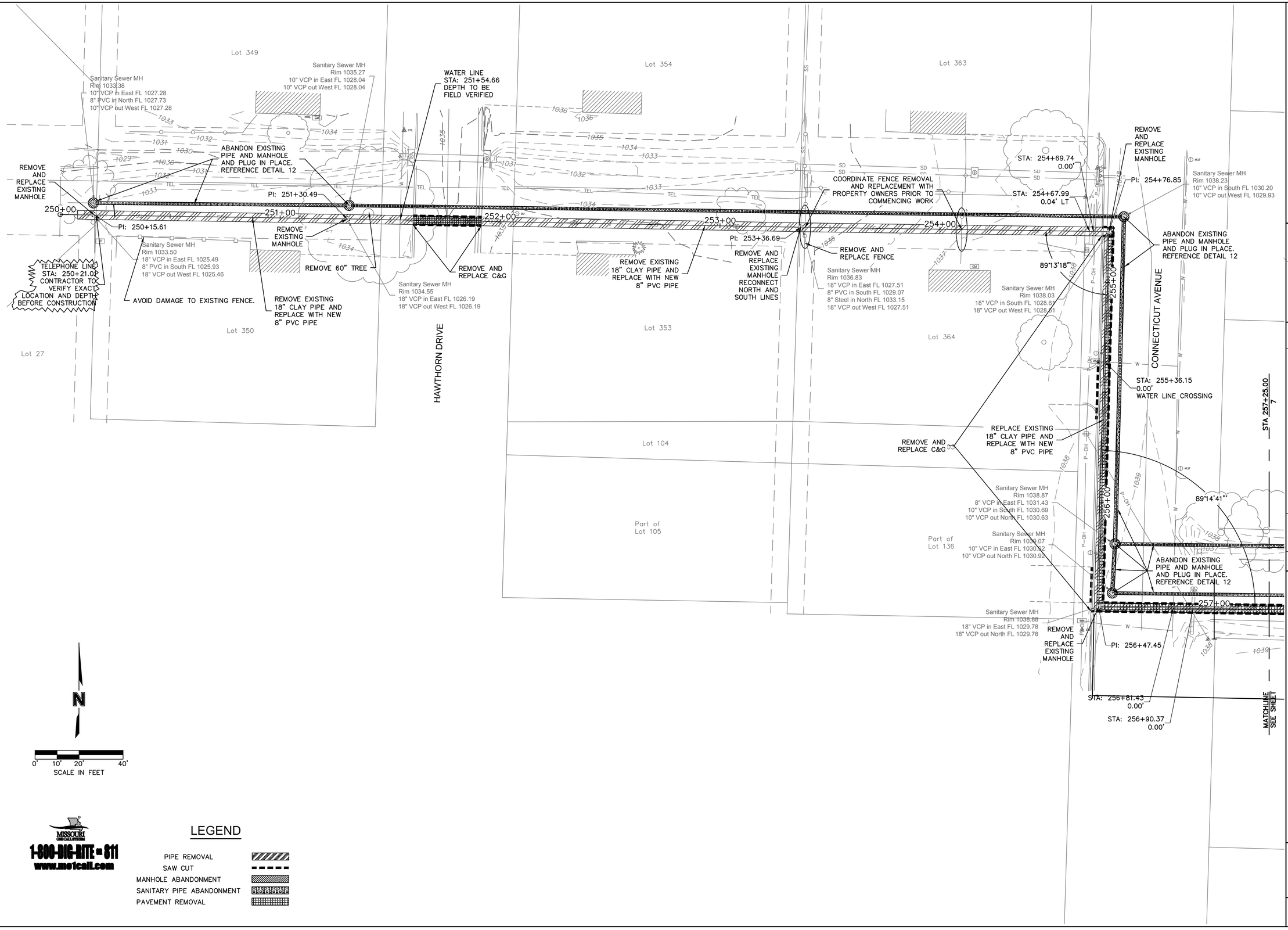
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5 of 19

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N

0' 10' 20' 40'
SCALE IN FEET

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LEGEND

- PIPE REMOVAL
- SAW CUT
- MANHOLE ABANDONMENT
- SANITARY PIPE ABANDONMENT
- PAVEMENT REMOVAL

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STA: 250+15.61 TO STA: 257+00.00

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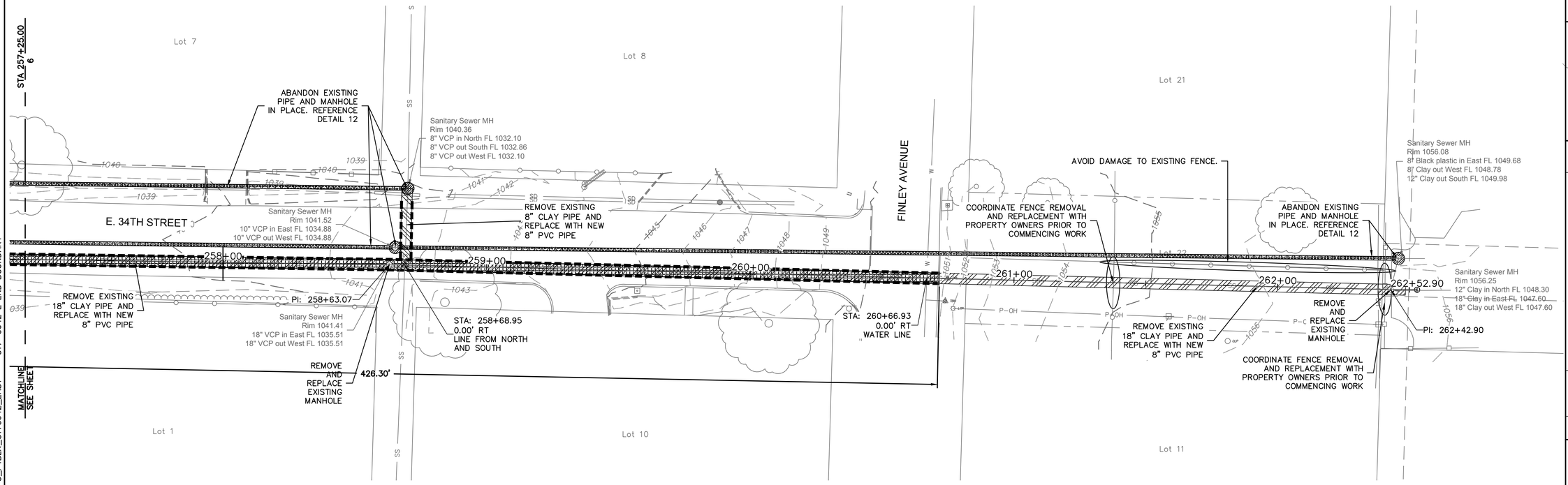
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SHEET
6 of 19

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N

0' 10' 20' 40'
SCALE IN FEET

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DEMOLITION & REMOVAL
STA: 257+00.00 TO STA: 262+42.90

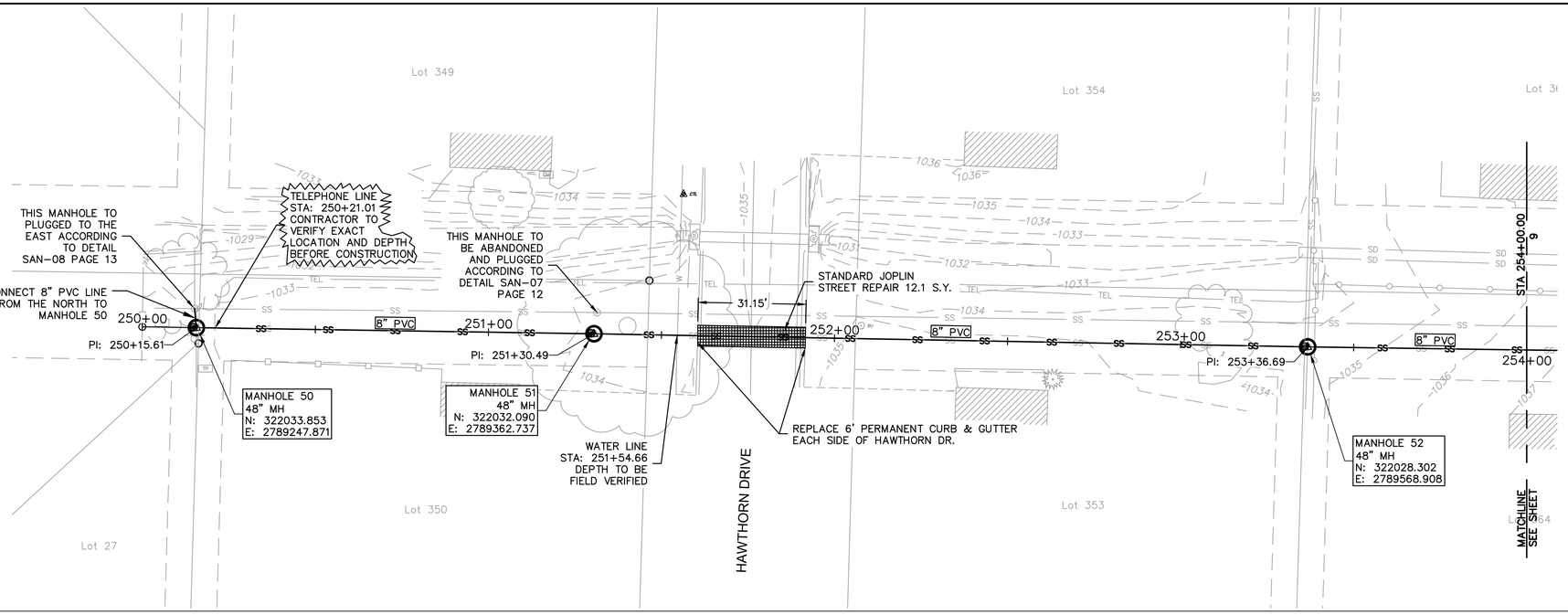
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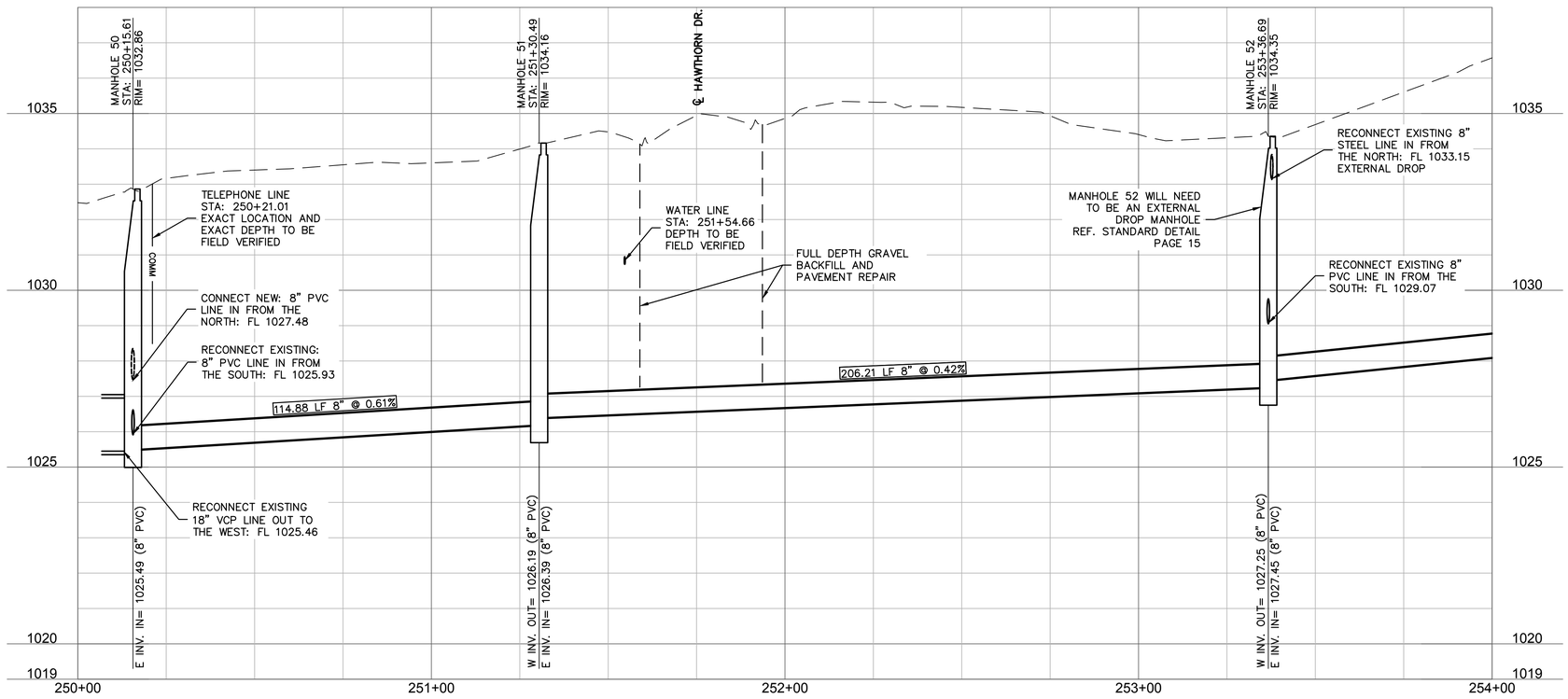
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SANITARY SEWER PLAN & PROFILE
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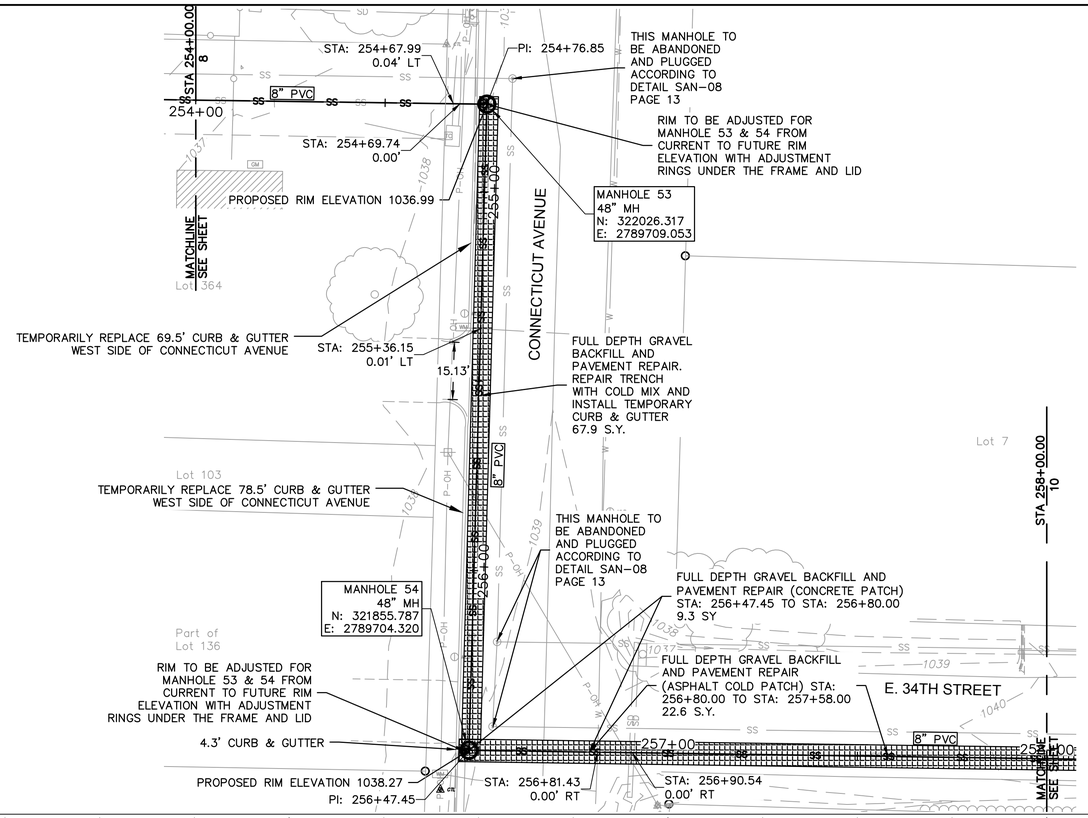
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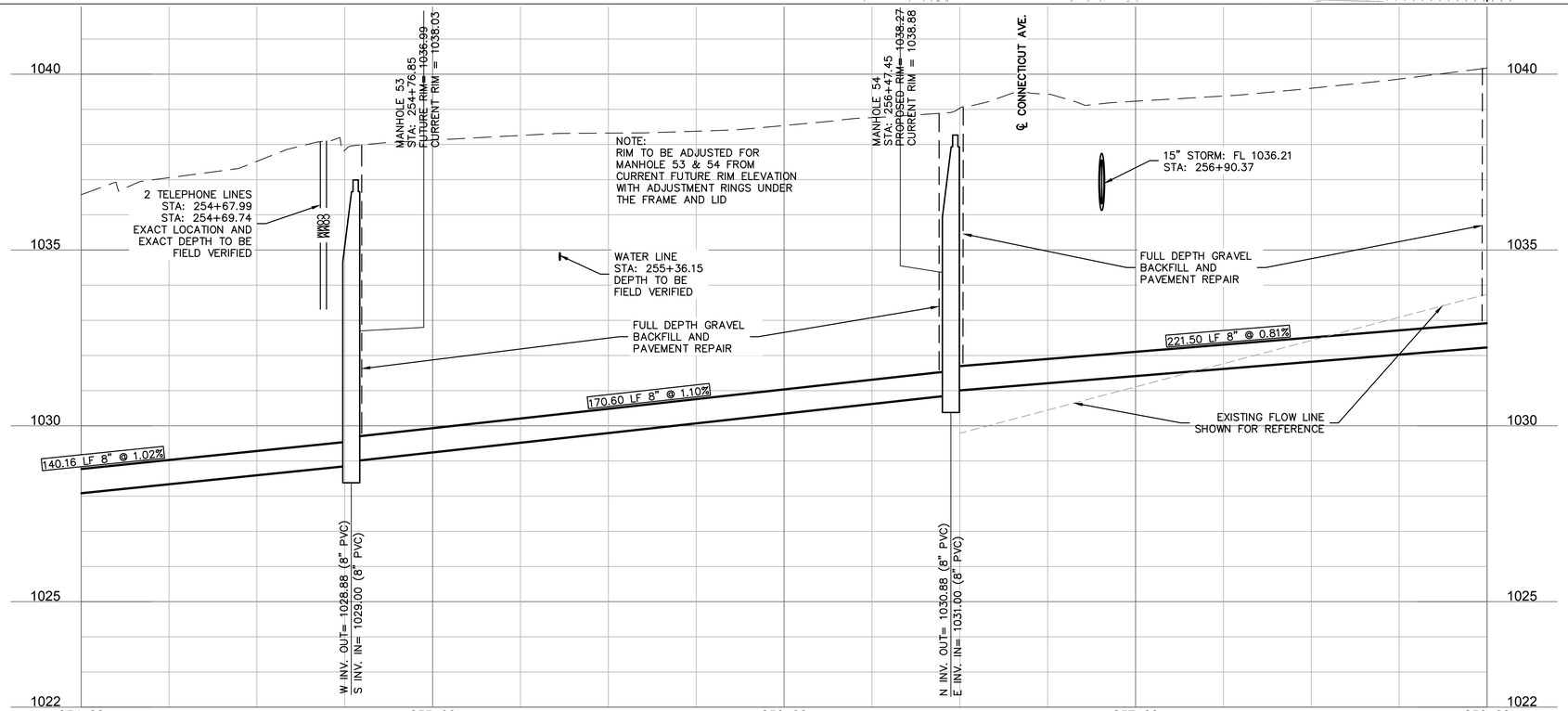
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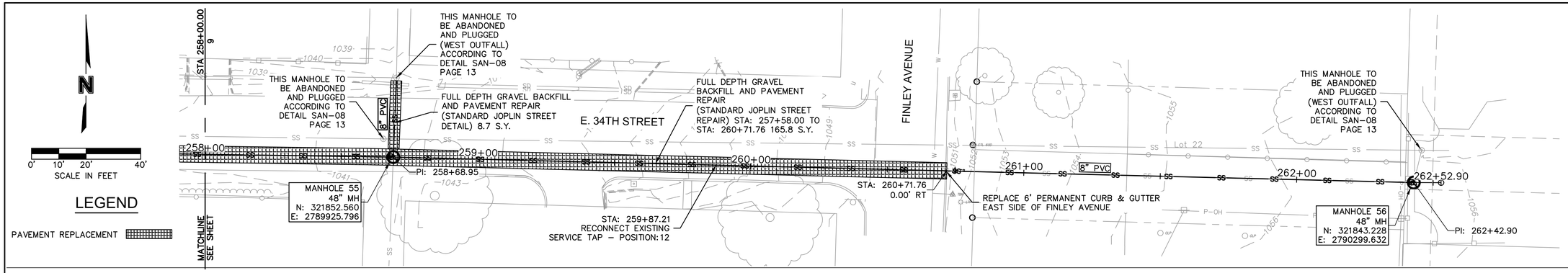
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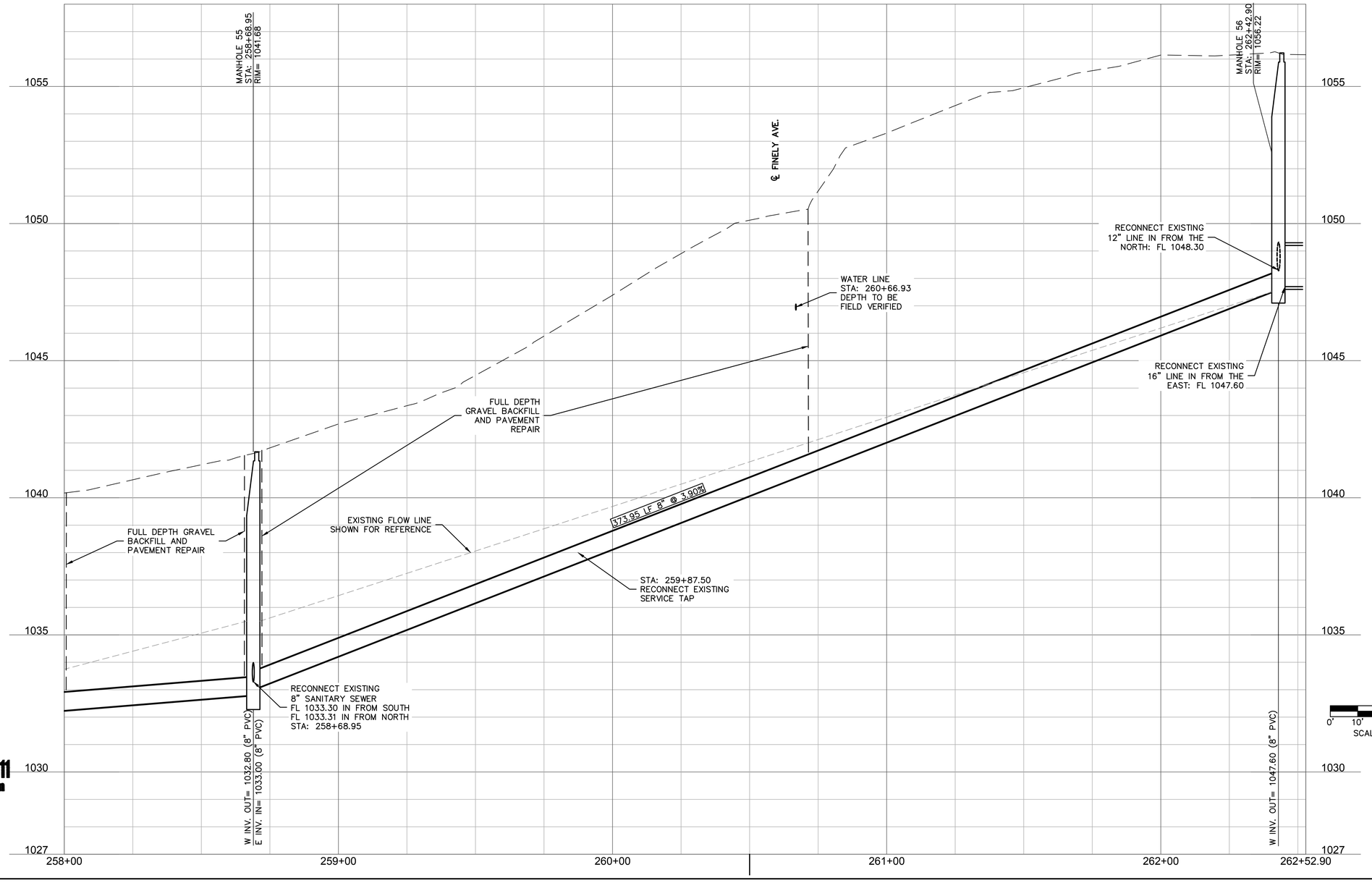
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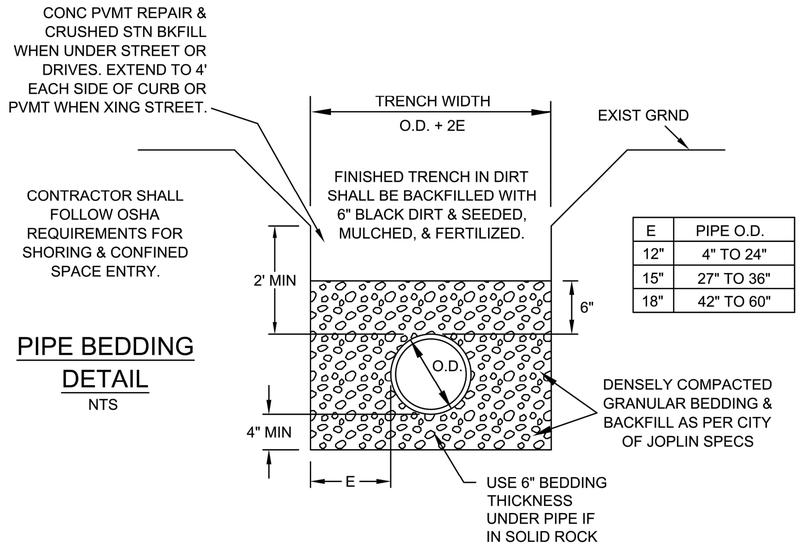
GLENDALE PARALLEL INTERCEPTOR
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JOPLIN, MISSOURI

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10 of 19



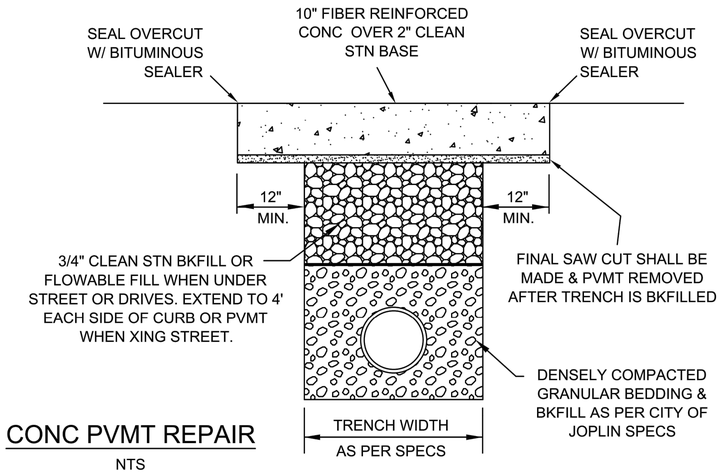
E	PIPE O.D.
12"	4" TO 24"
15"	27" TO 36"
18"	42" TO 60"

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

NOTES:
1. BLACK DYE PER CITY OF JOPLIN SPECIFICATIONS 1700.3.12

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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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
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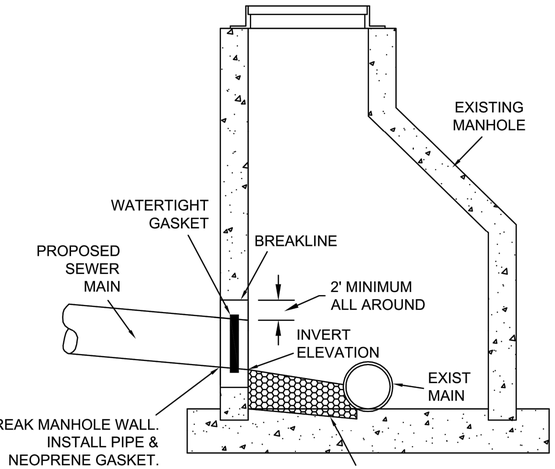
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drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_DTL02_C170642
date: 7/15/2021

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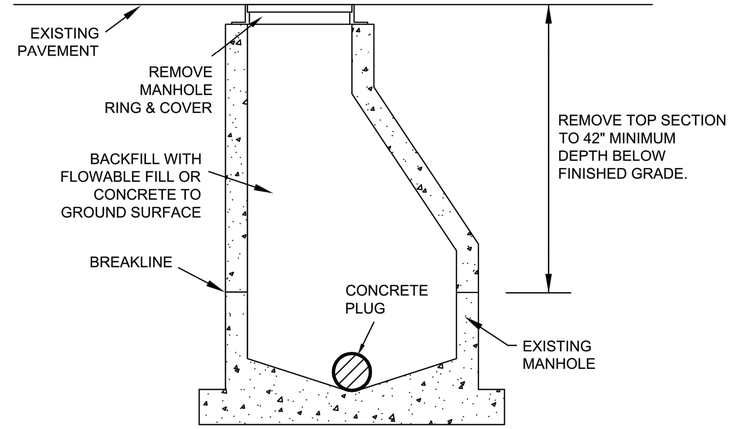


EXISTING MANHOLE TAP

NTS

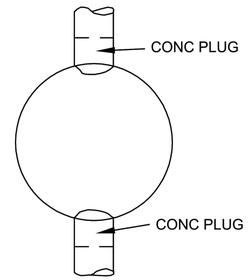
SAN-06

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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PROFESSIONAL ENGINEER
7/19/2021
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MO# PE-2013019078

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STANDARD DETAILS

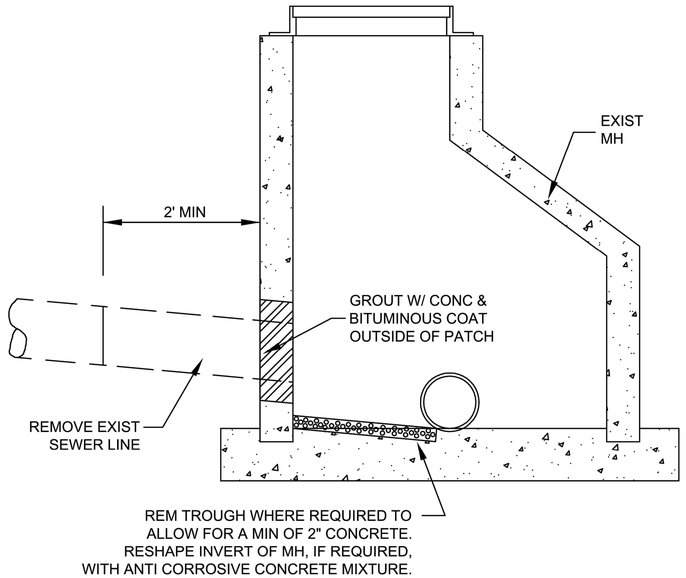
GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

JOPLIN, MISSOURI

2021

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_DTL02_C170642
date: 7/15/2021

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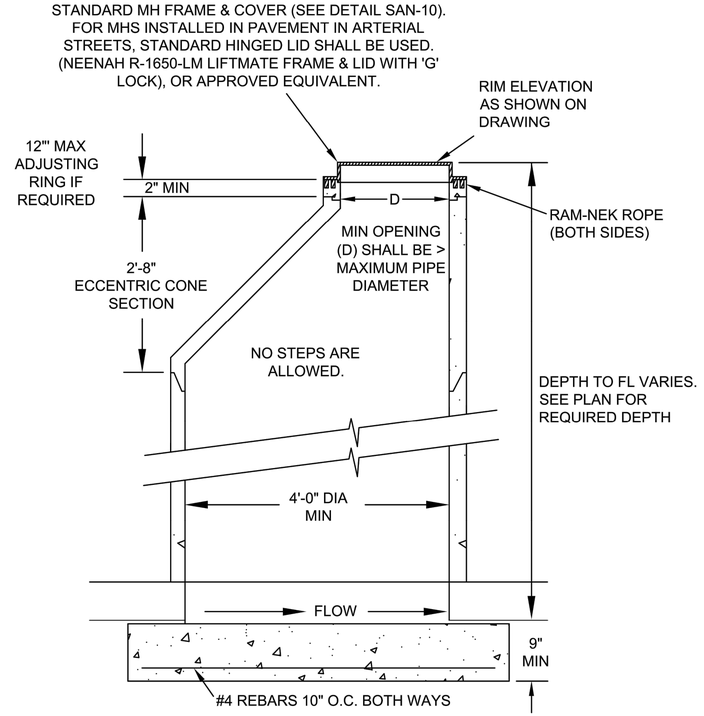


MH PLUG DETAIL

N.T.S.

SAN-08

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, MO	CKD BY: JOHNSON	PROJECT
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ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MHPRECAST	

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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
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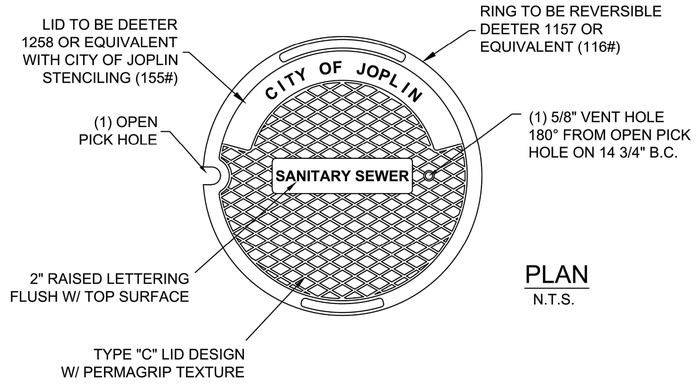
JOPLIN, MISSOURI

2021

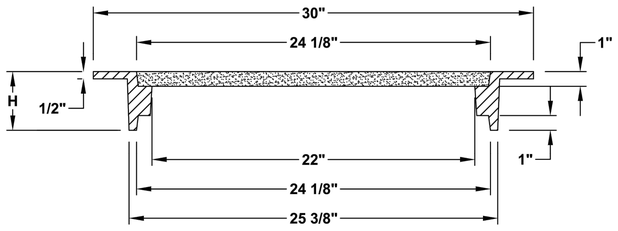
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approved by: SWM
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project no.: C17-0642
drawing no.: C_DTL02_C170642
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PLAN
N.T.S.



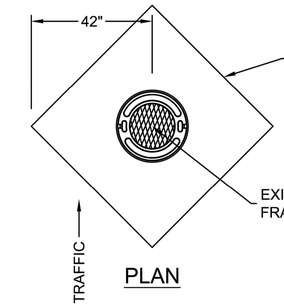
NOTES:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. RING IS REVERSIBLE AND CAN BE INSTALLED WITH FLANGE UP OR DOWN.
3. AVAILABLE HEIGHTS (H) ARE 4", 7.5", & 8".

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

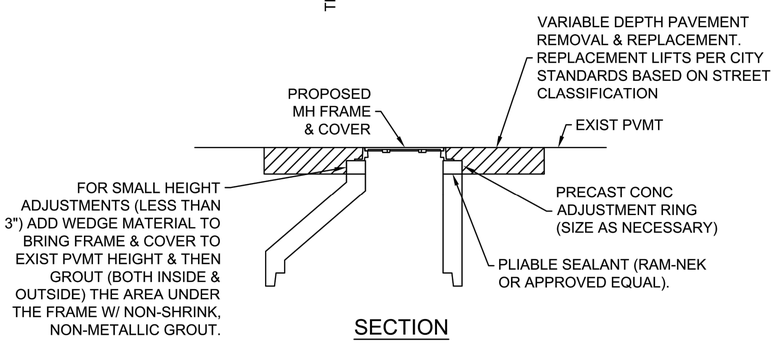
SECTION
N.T.S.

SAN-10

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



PLAN



SECTION

MANHOLE FRAME & COVER REMOVAL & REPLACEMENT USING ASPHALT PAVEMENT
NTS

GENERAL NOTES:
1. CONTRACTOR TO REMOVE THE PAVEMENT WITHIN A MINIMUM 12" OF THE MANHOLE FRAME & LID FULL DEPTH OF THE MANHOLE FRAME. THE INTENT IS TO EXPOSE THE ENTIRE FRAME TO REMOVE IT & ANY ADJUSTMENT RINGS THAT ARE DAMAGED.
2. EXISTING MANHOLES VARY IN DEPTH BASED ON THE STYLE OF LID & FRAME THAT WAS USED PRIOR TO EXISTING CITY STANDARD. SO IF AN ADJUSTING RING IS ALSO NEEDING REPLACED THEN THE PAVEMENT DEPTH REMOVAL WILL BE DEEPER THAN JUST THE MANHOLE FRAME.

METHOD #1

SAN-12

CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	MH COVER REMOVAL & REPLACEMENT #1
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MH RIM REPAIR 2.1	

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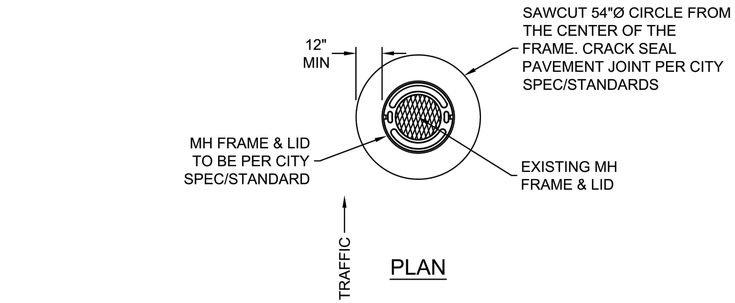
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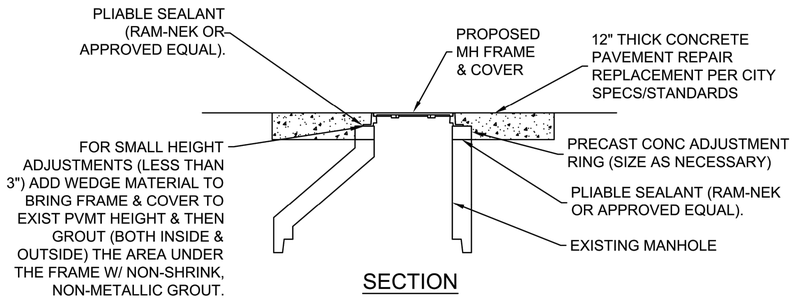
STANDARD DETAILS
GLENDALE PARALLEL INTERCEPTOR
UPPER REACH
JOPLIN, MISSOURI
2021

drawn by: CTK
checked by: ENG
approved by: SWM
QA/QC by: ENG
project no.: C17-0642
drawing no.: C_DTL02_C170642
date: 7/15/2021

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PLAN



SECTION

MANHOLE FRAME & COVER REMOVAL & REPLACEMENT USING CONCRETE PAVEMENT

NTS

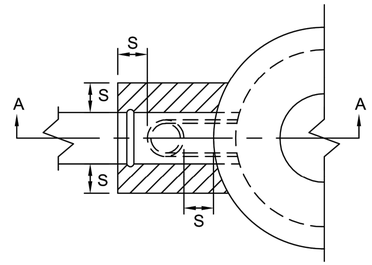
GENERAL NOTES:

1. CONTRACTOR SHALL SAWCUT & REMOVE EXISTING PAVEMENT, FRAME & COVER, & MANHOLE MATERIAL (BRICK, CONCRETE, ADJUSTMENT RINGS, CONCRETE BLOCK, ETC.) AS NECESSARY TO ESTABLISH A FIRM FOUNDATION FOR INSTALLING NEW PRECAST CONCRETE ADJUSTMENT RING & FRAME & COVER.
2. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO AVOID DROPPING MATERIAL INTO THE EXISTING MANHOLE. ANY MATERIAL THAT FALLS INTO THE MANHOLE SHALL BE REMOVED BY THE CONTRACTOR.
3. ADJUSTMENT RINGS SMALLER THAN 3" SHALL NOT BE ALLOWED.
4. CONCRETE, MANHOLE FRAME, & LID MUST BE FLUSH WITH EXISTING PAVEMENT (WITHIN 1/4" OF FINISH PAVEMENT GRADE).

METHOD #2

SAN-13

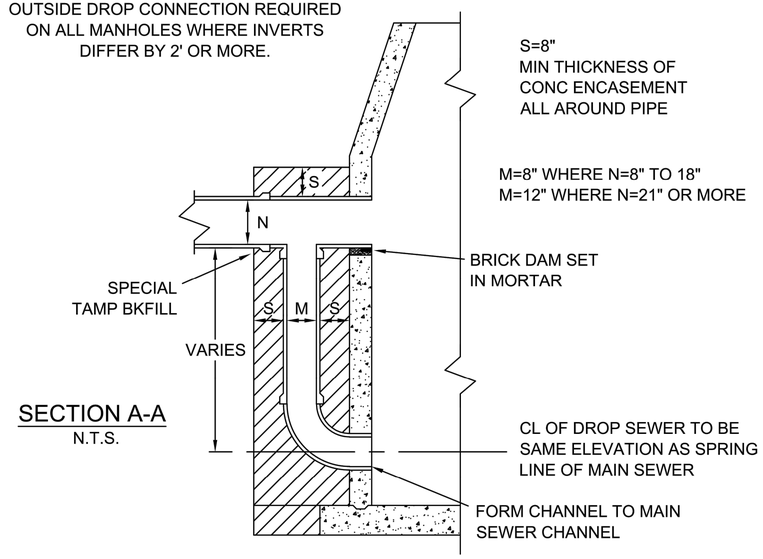
CITY OF JOPLIN, MO	CKD BY: JOHNSON	PROJECT
PUBLIC WORKS DEPT	DATE: 2/2019	MH COVER REMOVAL & REPLACEMENT #2
ENGINEERING DIVISION	ENGINEER: HERTZBERG	
602 S MAIN ST 64801	FILE: MH RIM REPAIR 3.1	



TOP VIEW

N.T.S.

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



SECTION A-A

N.T.S.

OUTSIDE DROP MH CONNECTION

N.T.S.

SAN-14

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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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

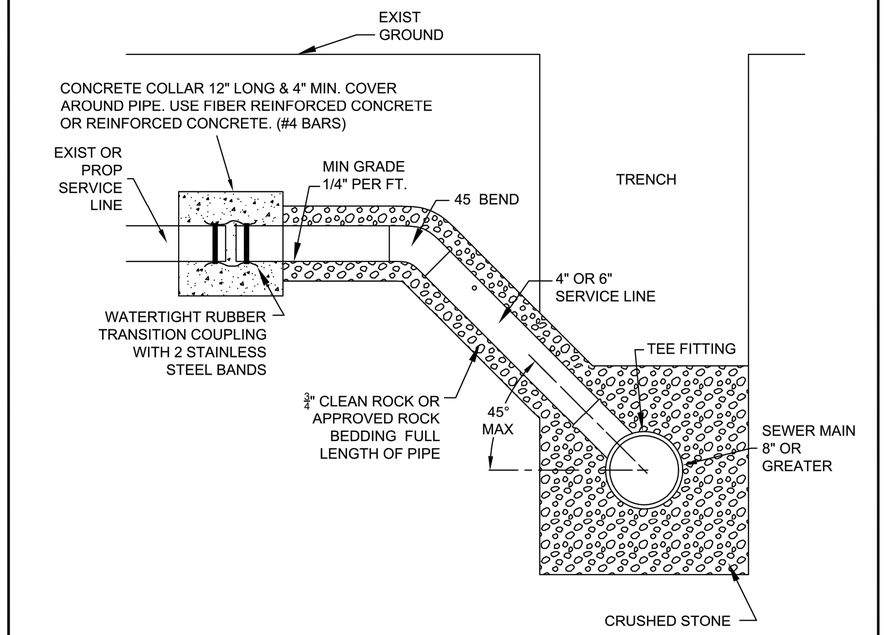
JOPLIN, MISSOURI

2021

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project no.: C17-0642
drawing no.: C_DTL02_C170642
date: 7/15/2021

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15 of 19

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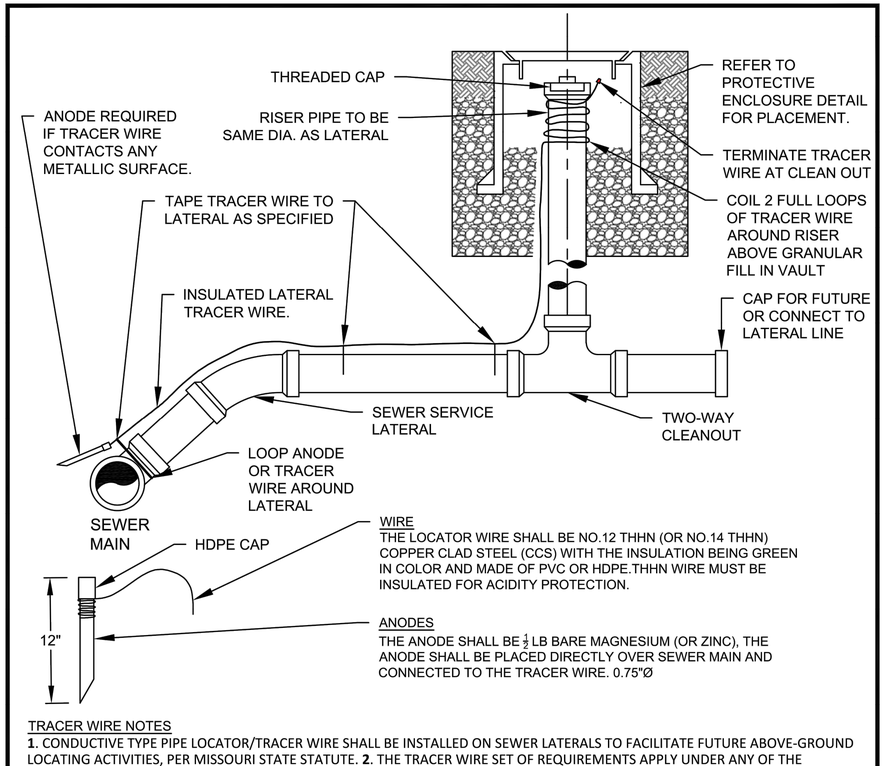
- TRACER WIRE (NOT SHOWN) MAY BE REQUIRED. SEE STANDARD DETAILS.
- RUBBER SADDLES ARE NOT ALLOWED.
- NO HOLES FOR NEW CONNECTIONS SHALL BE MADE BY HAMMERING, REGARDLESS OF THE EXISTING SEWER MAIN PIPE MATERIAL.
- ALL HOLES FOR NEW CONNECTIONS TO EXISTING PIPE SHALL BE MADE BY CORING IN THE PRESENCE OF 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 $\frac{1}{2}$ 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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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

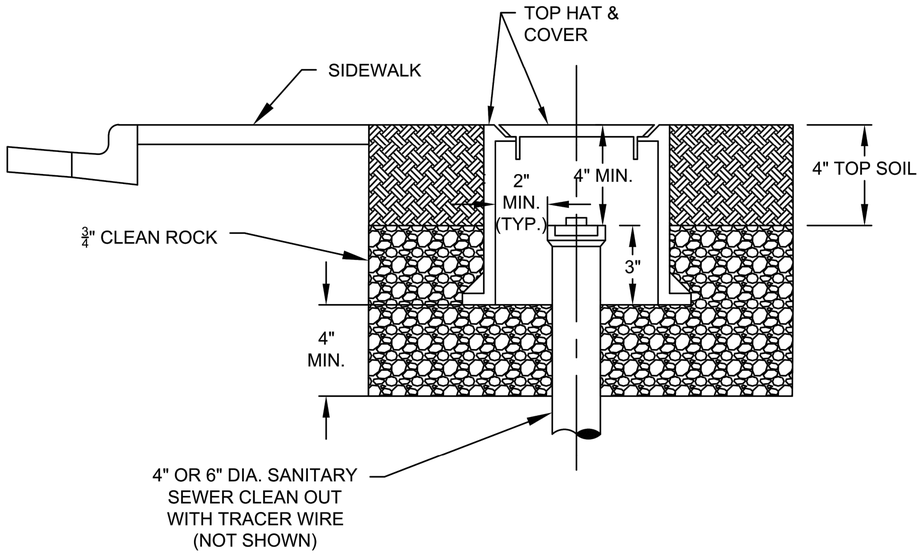
JOPLIN, MISSOURI

2021

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approved by: SWM
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NOTES

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	

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STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
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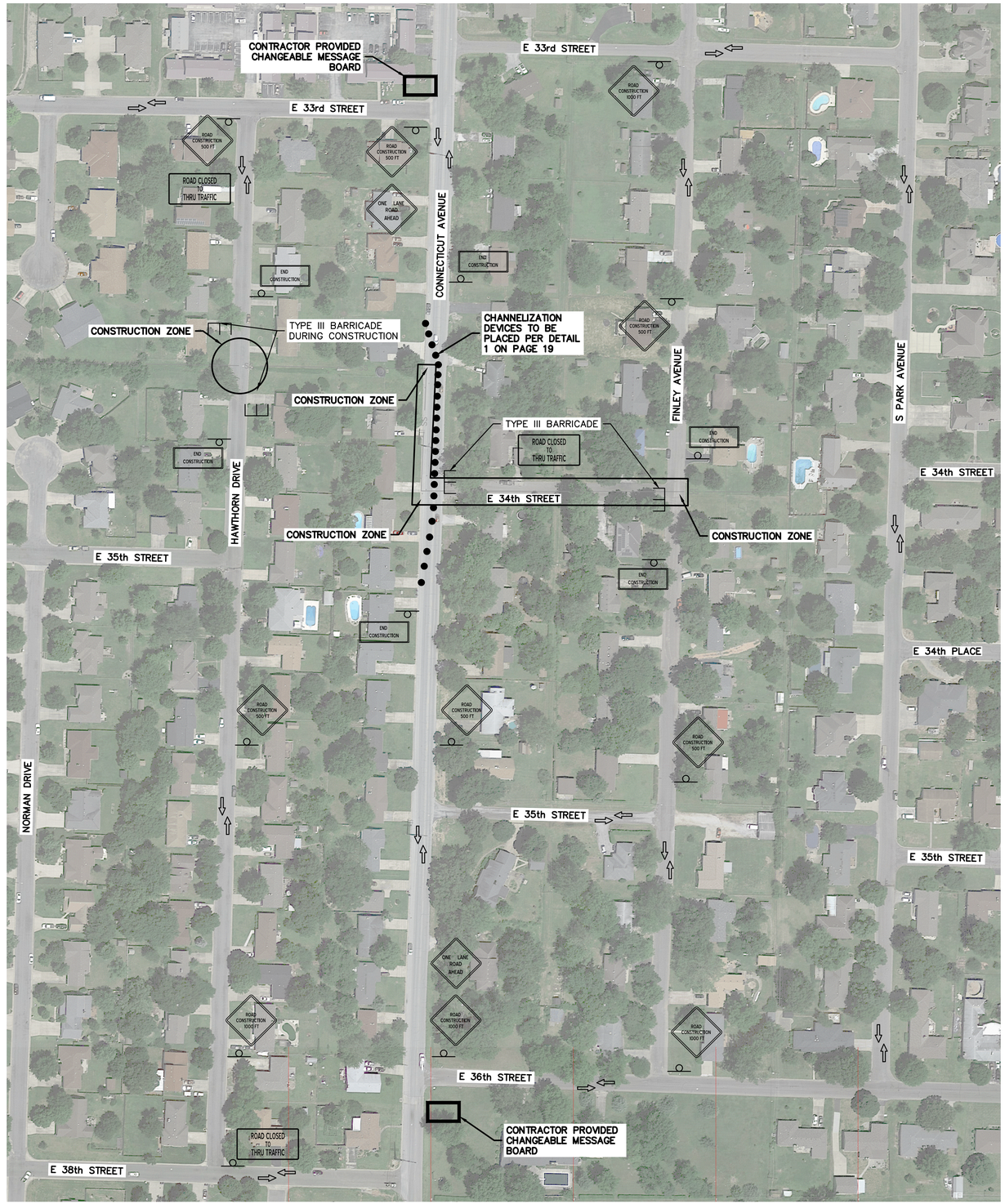
JOPLIN, MISSOURI

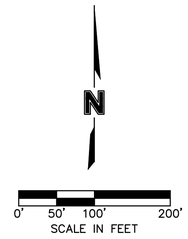
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CONNECTICUT AVE. MUST MAINTAIN ONE LANE OF TRAFFIC THROUGHOUT SANITARY SEWER CONSTRUCTION

LEGEND

- *Type III Barricade*
- *Sign Symbol*
- *Channelizing Device*
- *Direction of Traffic*
- *Changeable Message Board*

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SHAUN W. MCCONNAUGHEY
PROFESSIONAL ENGINEER
MO# PE-2013019078

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TRAFFIC CONTROL PLAN

GLENDALE PARALLEL INTERCEPTOR
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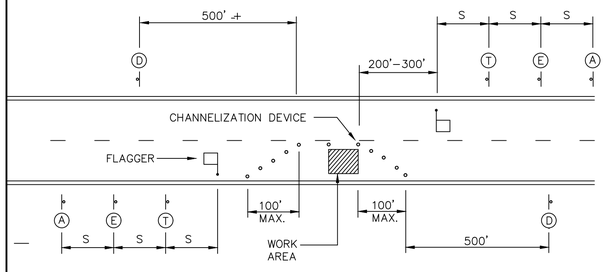
JOPLIN, MISSOURI

2021

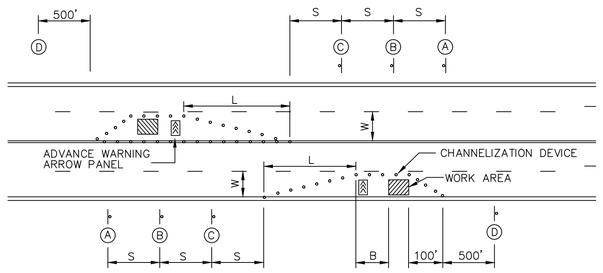
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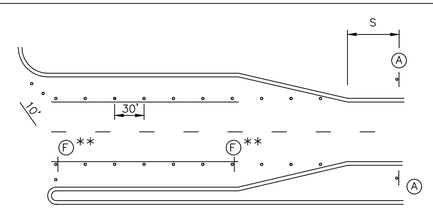
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DETAIL 1: TYPICAL CLOSURE – TWO–LANE STREET

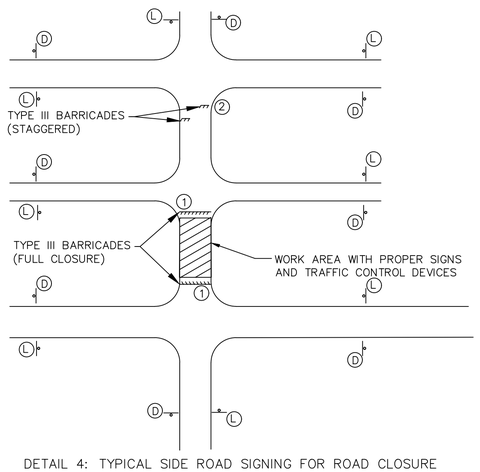


DETAIL 2: TYPICAL LANE CLOSURE – FOUR–LANE STREET



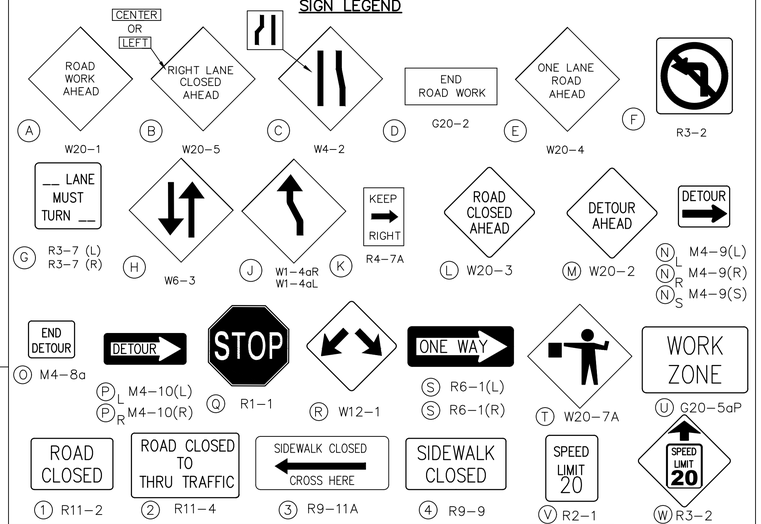
** USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER

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

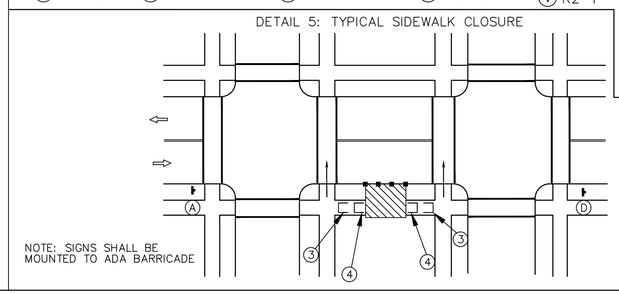


DETAIL 4: TYPICAL SIDE ROAD SIGNING FOR ROAD CLOSURE

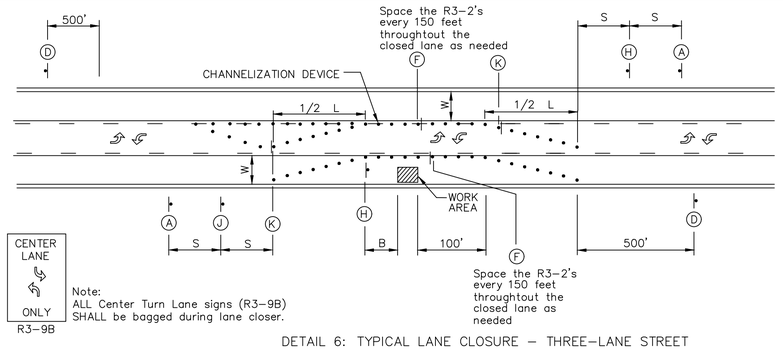
SIGN LEGEND



DETAIL 5: TYPICAL SIDEWALK CLOSURE



NOTE: SIGNS SHALL BE MOUNTED TO ADA BARRICADE



DETAIL 6: TYPICAL LANE CLOSURE – THREE–LANE STREET

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

*Posted speed

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

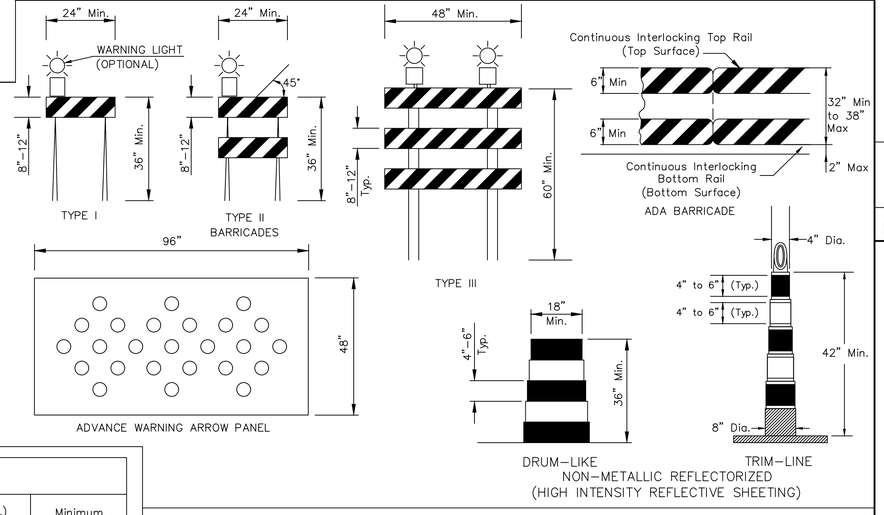
MAXIMUM CHANNELIZATION SPACING IN FEET *		
Speed Limit M.P.H.	Along Taper	After Taper
20	20	40
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90
50	50	100
55	55	100

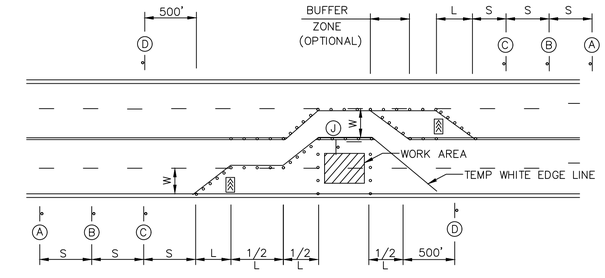
* The maximum distance in feet between devices in a taper should not exceed 1.0 times the speed limit in MPH.

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

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 resistion 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.





DETAIL 7: TYPICAL LANE CLOSURE – FOUR–LANE STREET

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STATE OF MISSOURI
SHAUN W. MCCONNAUGHEY
NUMBER PE–2013019078
PROFESSIONAL ENGINEER
7/19/2021
SHAUN W. MCCONNAUGHEY
PROFESSIONAL ENGINEER
MO# PE–2013019078

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL
STANDARD DETAILS

GLENDALE PARALLEL INTERCEPTOR
UPPER REACH

JOPLIN, MISSOURI

2021

drawn by:	CTK
checked by:	ENG
approved by:	SWM
QA/QC by:	ENG
project no.:	C17-0642
drawing no.:	C_TRF-DTL_C170642
date:	7/15/2021

SHEET
19 of 19

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