

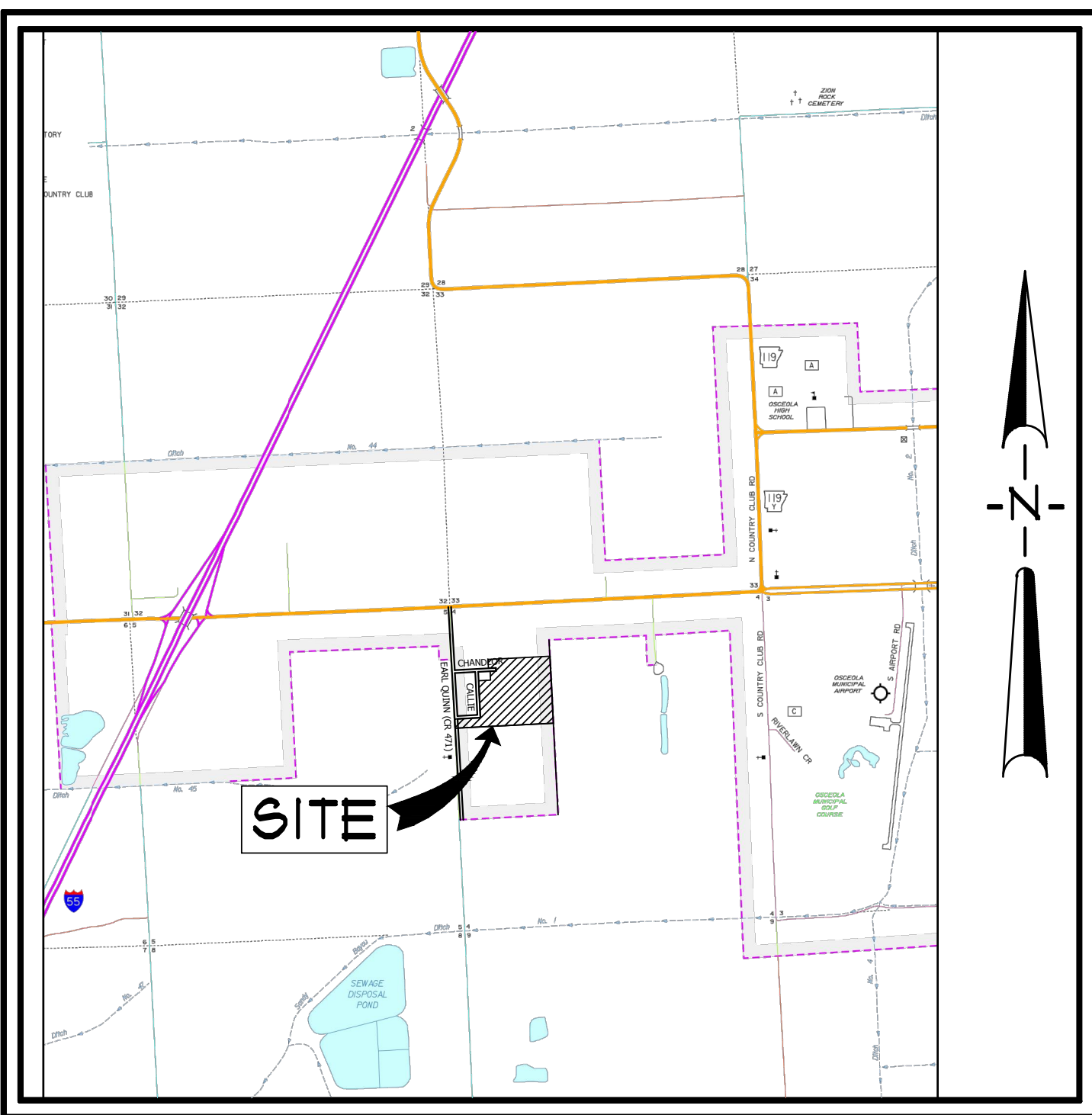
SANITARY SEWER AND WATER DISTRIBUTION PLANS

RIVER BACK ESTATES

EARL QUINN DRIVE & CALLIE DRIVE

PREPARED FOR
MAGAMAN GROUP, LLC

OSCEOLA, ARKANSAS
SEPTEMBER, 2022



VICINITY MAP
NOT TO SCALE

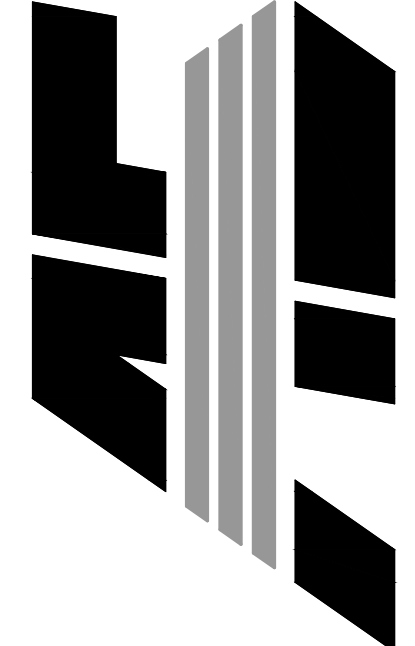
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- CO07 SEWER PROFILE - LINE D
- CO08 SEWER PROFILE - LINE F
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- CO12 SANITARY SEWER DETAILS



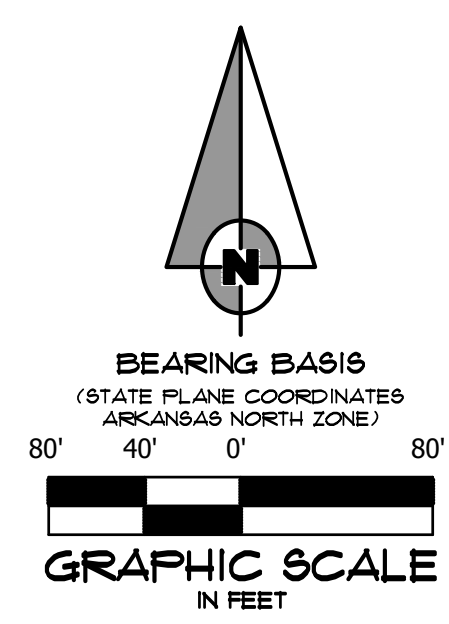
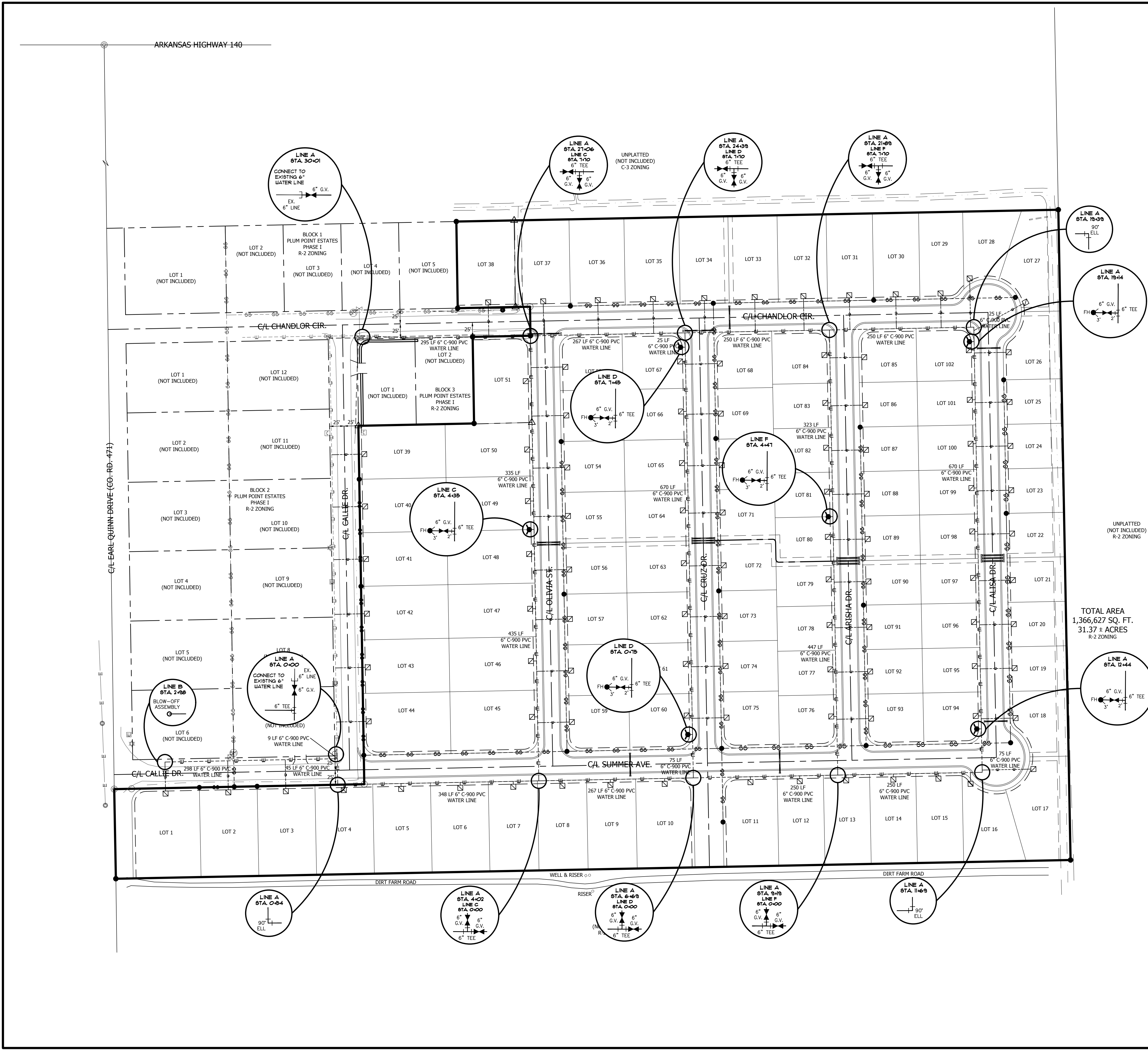
RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

ASSOCIATED
ENGINEERING, LLC
CIVIL ENGINEERING • LAND SURVEYING
LAND PLANNING
103 SOUTH CHURCH STREET • P.O. BOX 1462
JONESBORO, AR 72403
PH: 870-932-3594 • FAX: 870-935-1263



NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

COVER SHEET			
DATE:	09/20/2022	DRAWN:	COH
CADD FILE:	22105-SSWD	CHECKED:	JME
DWG#:	1012044.XXXX	SHEET	
SCALE:	AS SHOWN	C001	

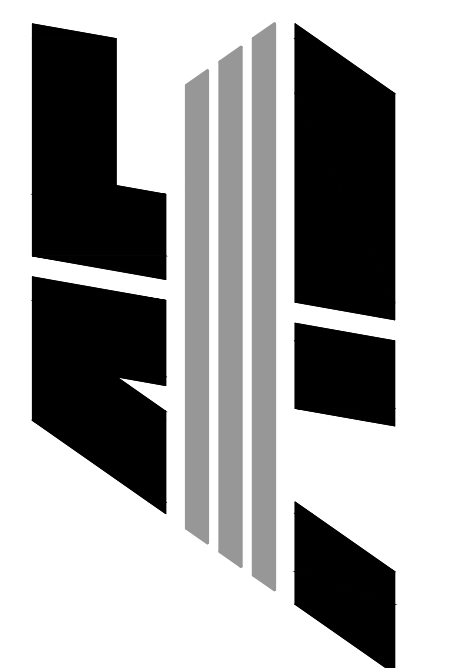


GENERAL UTILITY NOTES

- 1. ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF AND REFER TO MSL DATUM.
- 2. VERTICAL DATUM REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD 88).
- 3. 5,609 L.F. 6" AWWA C-900 PRESSURE CL. 150/DR18 WATER LINE
- 4. 5,135 L.F. 8" ASTM D3034 SDR-26 SEWER LINE
- 5. PIPE DISTANCE SHOWN ARE TO CENTER OF STRUCTURES.
- 6. ALL WATER LINES (SERVICE) SHALL BE PVC SCH. 40 WITH 42" MIN. COVER. VALVES, CONNECTIONS AND RELATED APPURTENANCES SHALL BE IN ACCORDANCE WITH NFPA STANDARDS, OSCEOLA WATER AND WASTEWATER SPECIFICATIONS AS WELL AS THE CITY OF OSCEOLA AND INSTALLED WITH REQUIRED BEDDING AND THRUST BLOCKING.
- 7. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE OWNER'S REPRESENTATIVE.
- 8. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
- 9. EXCAVATE AND VERIFY ALL UTILITY CROSSINGS AND INFORM THE OWNER'S REPRESENTATIVE OF ANY CONFLICT OR REQUIRED DEVIATION FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- 10. WHERE SEWER LINES PASS WITHIN 1.5 FT. VERTICALLY OF WATER LINES, THE SEWER LINE SHALL BE ENCASED IN WATERTIGHT PIPE (SEE PART XIV.A OF ADH RULES AND REGULATIONS PERTAINING TO PWS).
- 11. WATER LINES AND STORM SEWER CROSSINGS SHALL MAINTAIN 36" MIN. SEPARATION IN ALL DIRECTIONS.
- 12. THE INSTALLER OF THE SANITARY SEWER DISPOSAL SYSTEM MUST BE LICENSED IN THE STATE OF ARKANSAS TO INSTALL LOW PRESSURE PIPE SYSTEMS.
- 13. WATER AND SEWER LINES SHALL MAINTAIN 10 FEET HORIZONTAL SEPARATION.
- 14. LOCATION OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- 15. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD UTILITIES AND STRUCTURES FROM DAMAGE DURING CONSTRUCTION. THE COSTS OF SUCH PROTECTION IS INCLUDED IN THE BASE BID.

RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

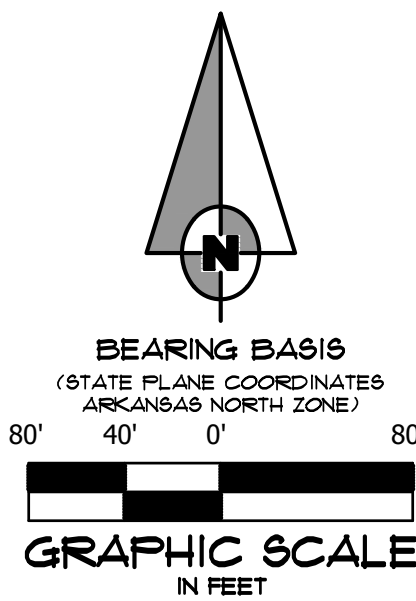
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NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

WATER
PLAN

DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
SCALE: 1" = 80'	C005



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- 8. EXCAVATE AND VERIFY ALL UTILITY CROSSINGS AND INFORM THE OWNER'S REPRESENTATIVE OF ANY CONFLICT OR REQUIRED DEVIATION FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- 8. WHERE SEWER LINES PASS WITHIN 2 FT. VERTICALLY OF WATER LINES, THE SEWER LINE SHALL BE ENCASED IN WATERTIGHT PIPE (SEE PART XIV.A OF ADH RULES AND REGULATIONS PERTAINING TO PWS).
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ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS
APPLICABLE TO SEWER AND WATER SEPARATION

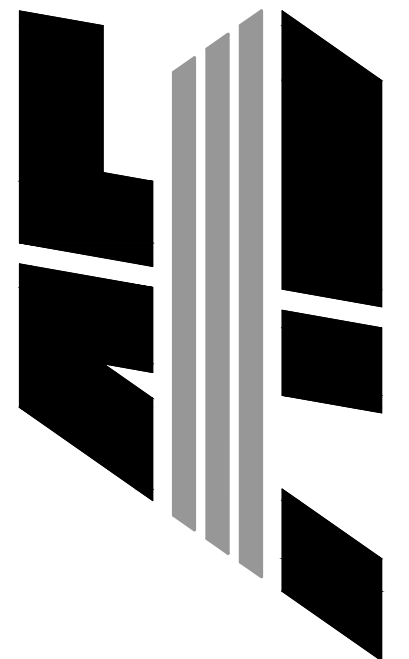
A. SANITARY AND SAFETY HAZARDS

THE OPERATING ROUTINE SHALL INCLUDE NECESSARY PROTECTIVE MEASURES TO DETECT AND REMOVE OR DESTROY ANY CONTAMINANT OF CONCERN OR REGULATION THAT MIGHT ENTER THE DISTRIBUTION SYSTEM. EVERY PRECAUTION MUST BE TAKEN AGAINST THE POSSIBILITY OF SEWAGE CONTAMINATION OF THE WATER IN THE DISTRIBUTION SYSTEM. WATER MAINS AND SANITARY SEWERS SHALL BE CONSTRUCTED AS FAR APART AS PRACTICABLE, AND SHALL BE SEPARATED BY UNDISTURBED AND COMPACTED EARTH. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION.

WATER LINES AND SEWERS SHALL NOT BE LAID IN THE SAME TRENCH EXCEPT ON THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH.

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JONESBORO, AR 72403
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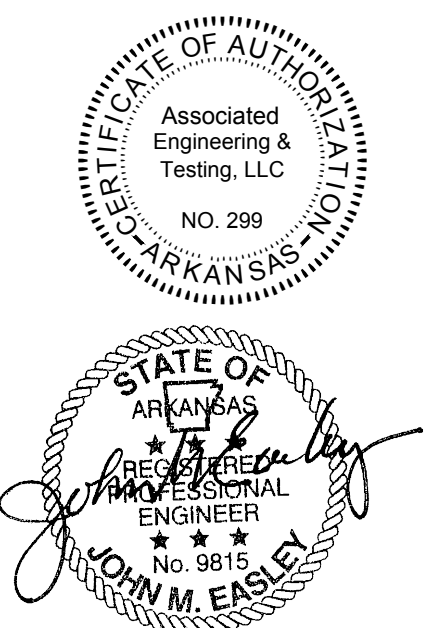
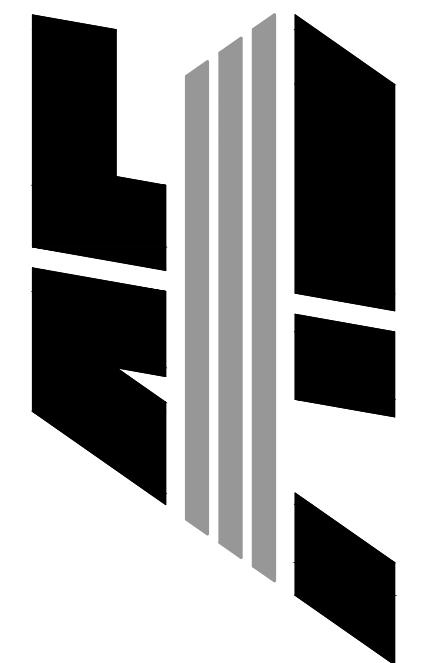
NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

SEWER
PLAN

DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
SCALE: 1" = 80'	C006

RIVER BACK ESTATES
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SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

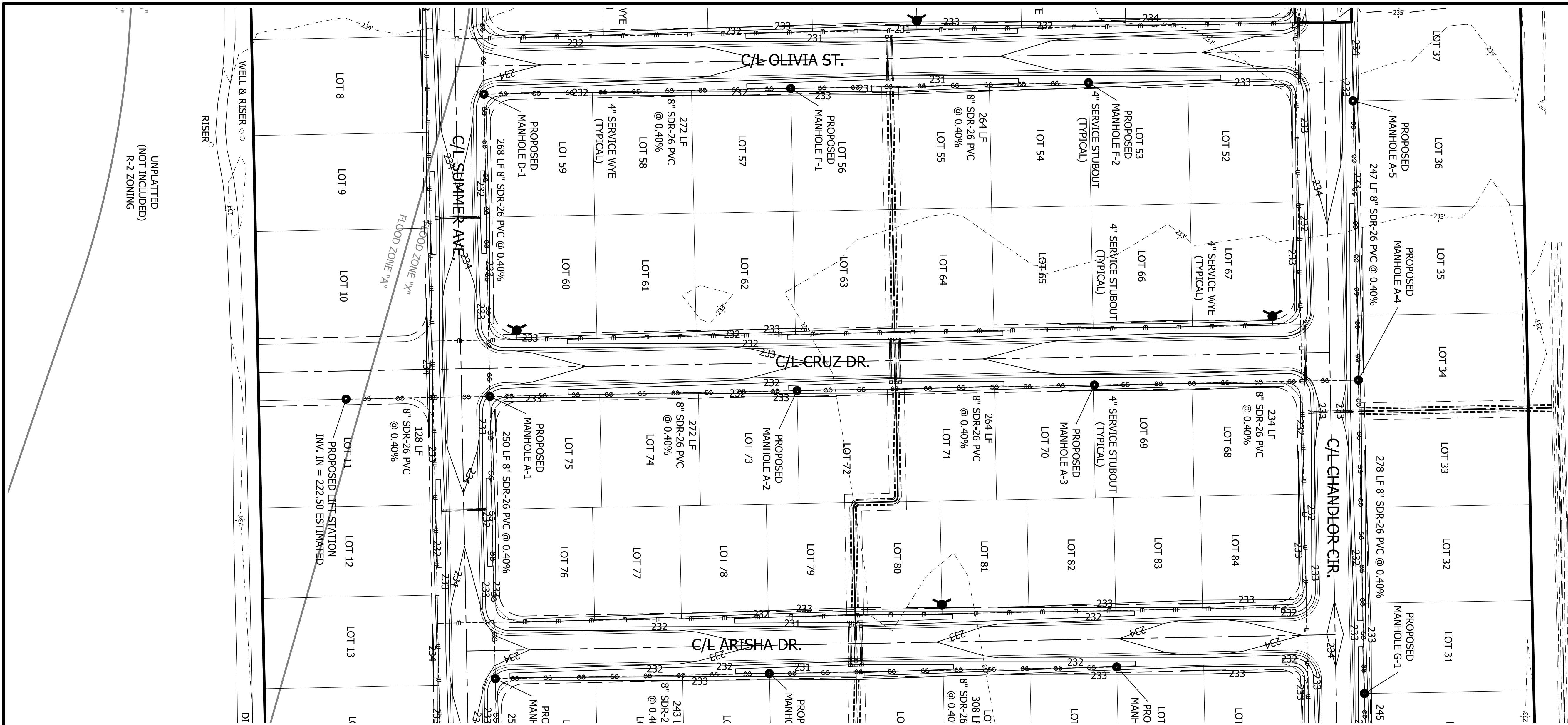
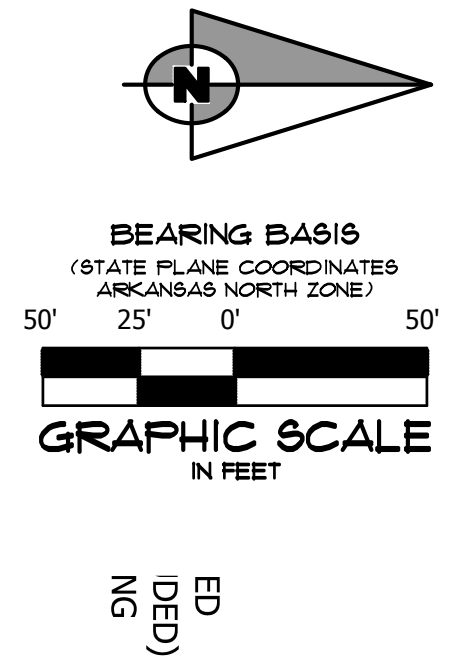
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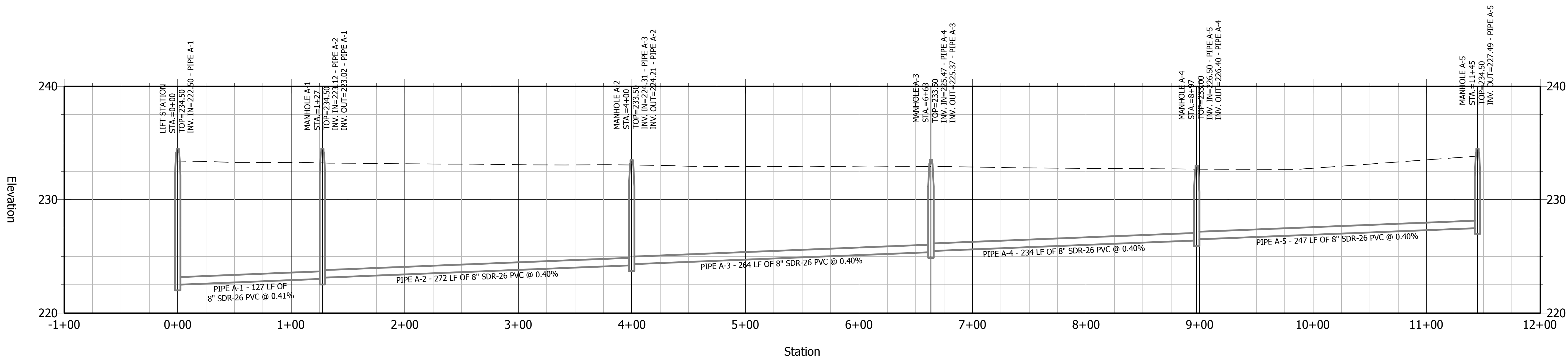
NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

SEWER PLAN &
PROFILE

DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
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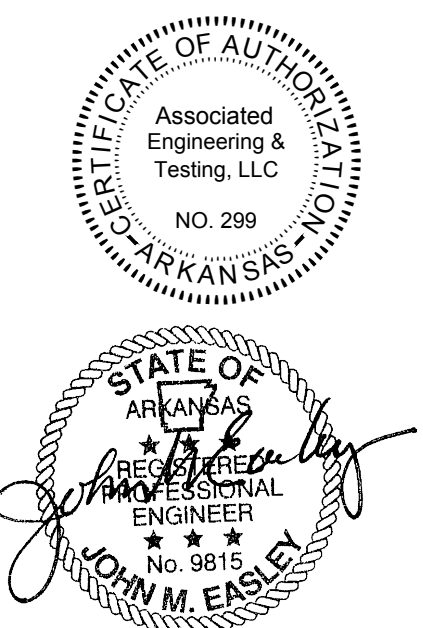
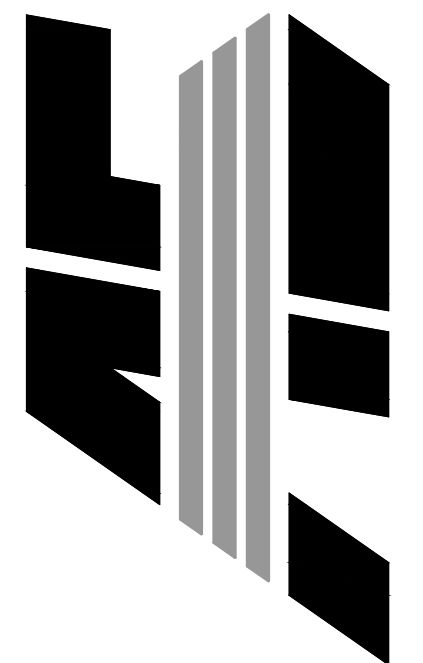


SEWER A PROFILE



RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

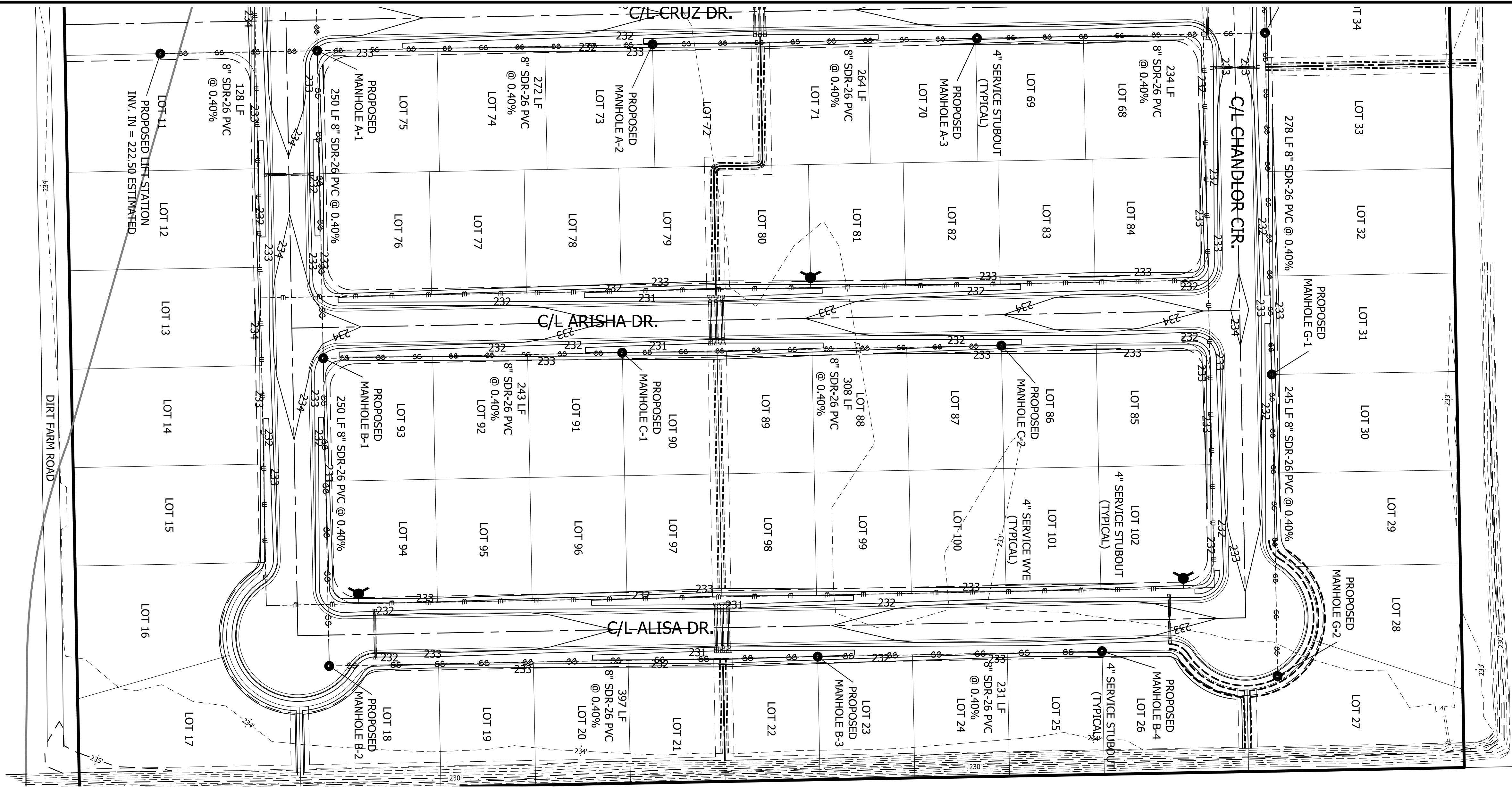
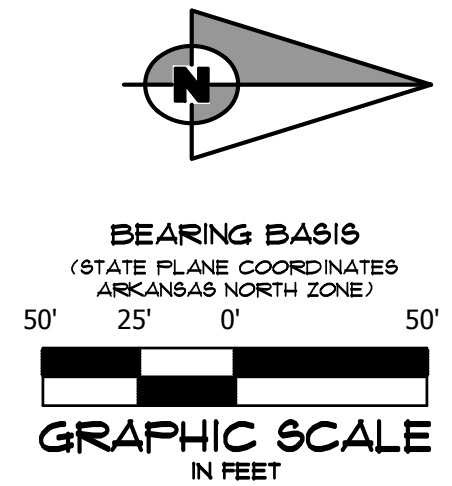
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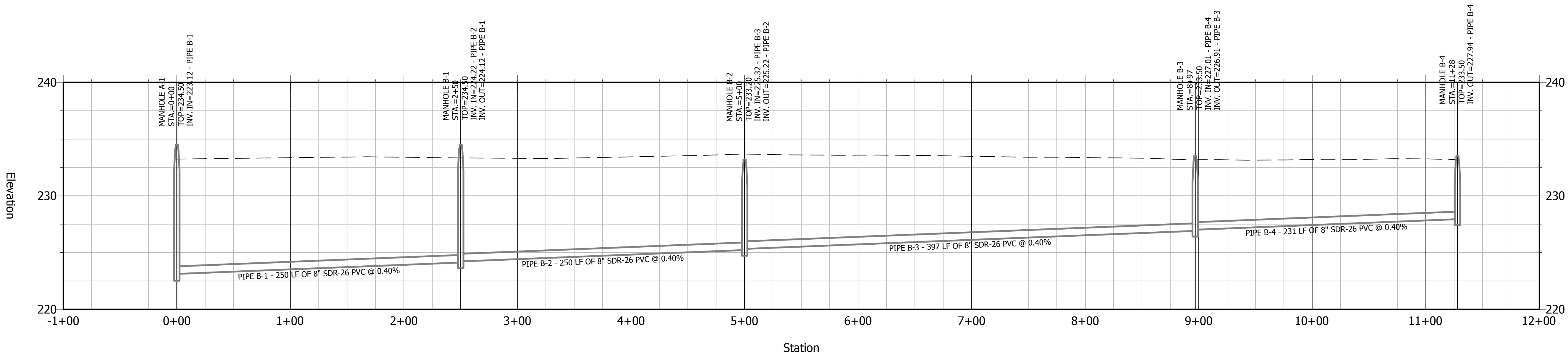
NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

SEWER PLAN &
PROFILE

DATE: 09/02/2022	DRAWN: CCH
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DWG# 1012044.XXXX	SHEET
SCALE: AS SHOWN	C008

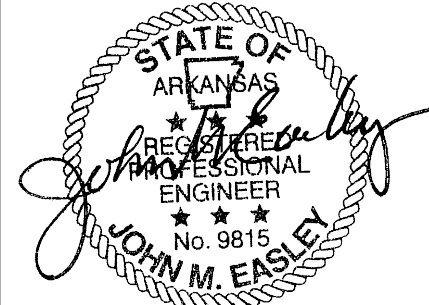
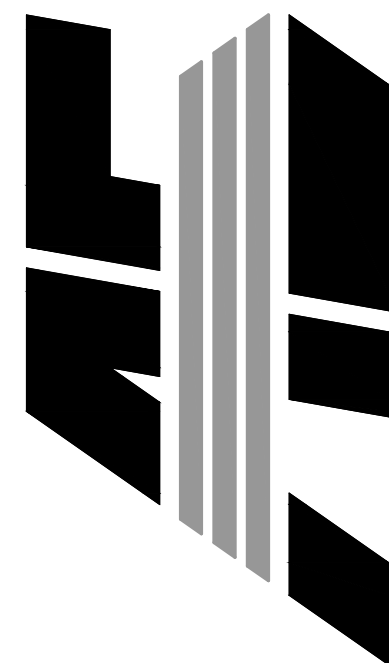


SEWER B PROFILE



RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

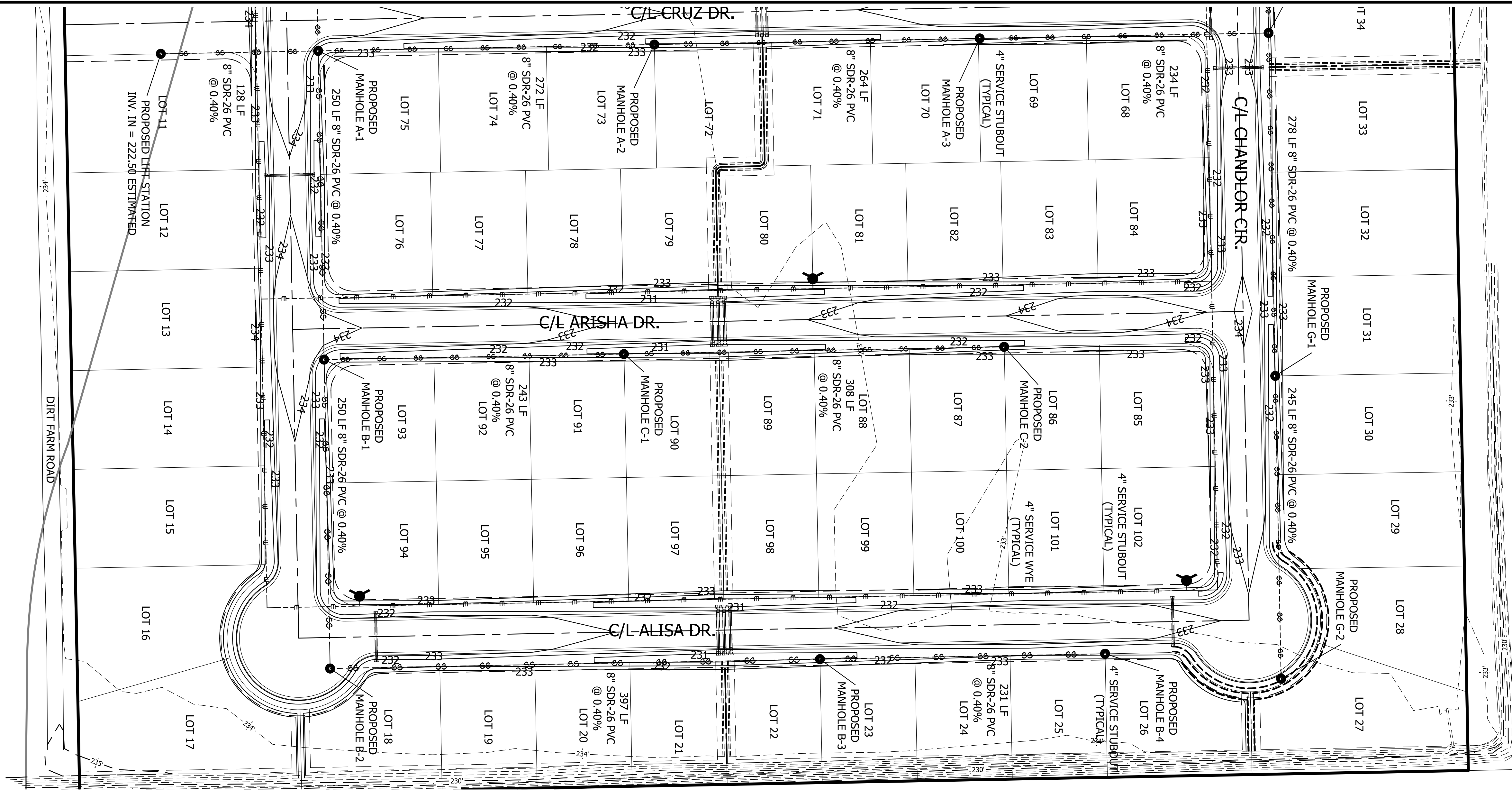
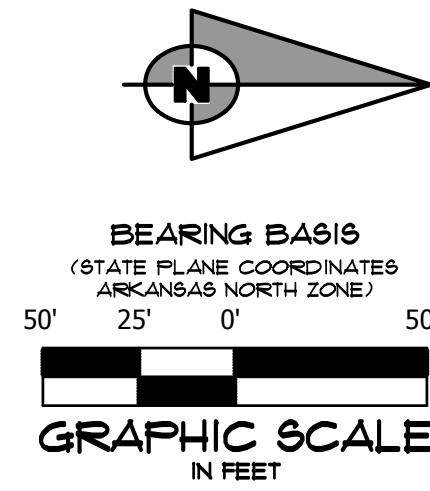
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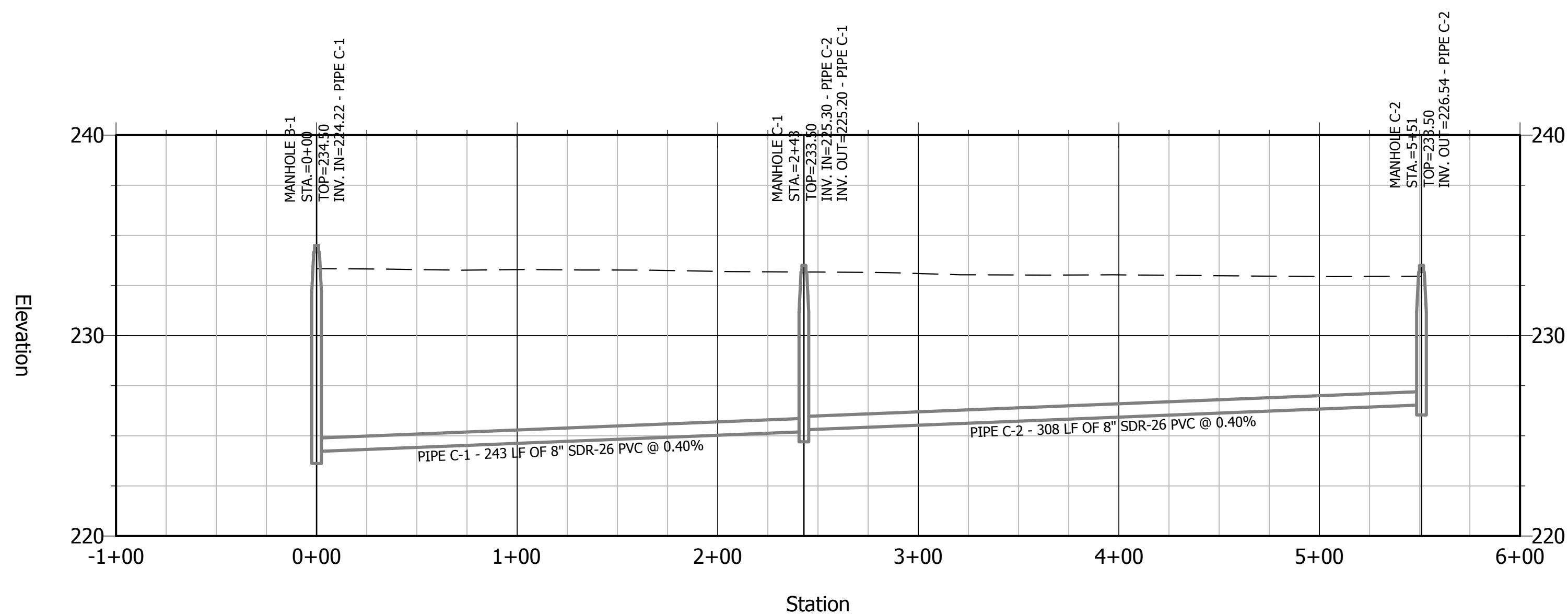
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1	REVISE PER ADH COMMENTS	11/21/22

SEWER PLAN &
PROFILE

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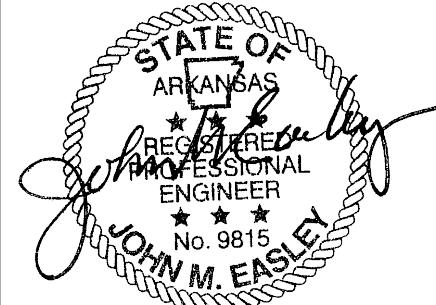
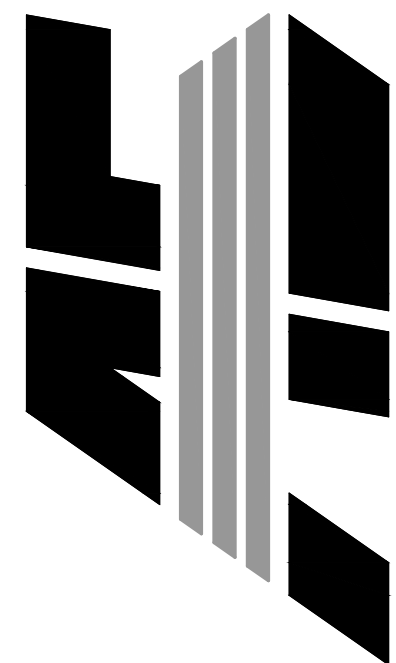


SEWER C PROFILE



RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

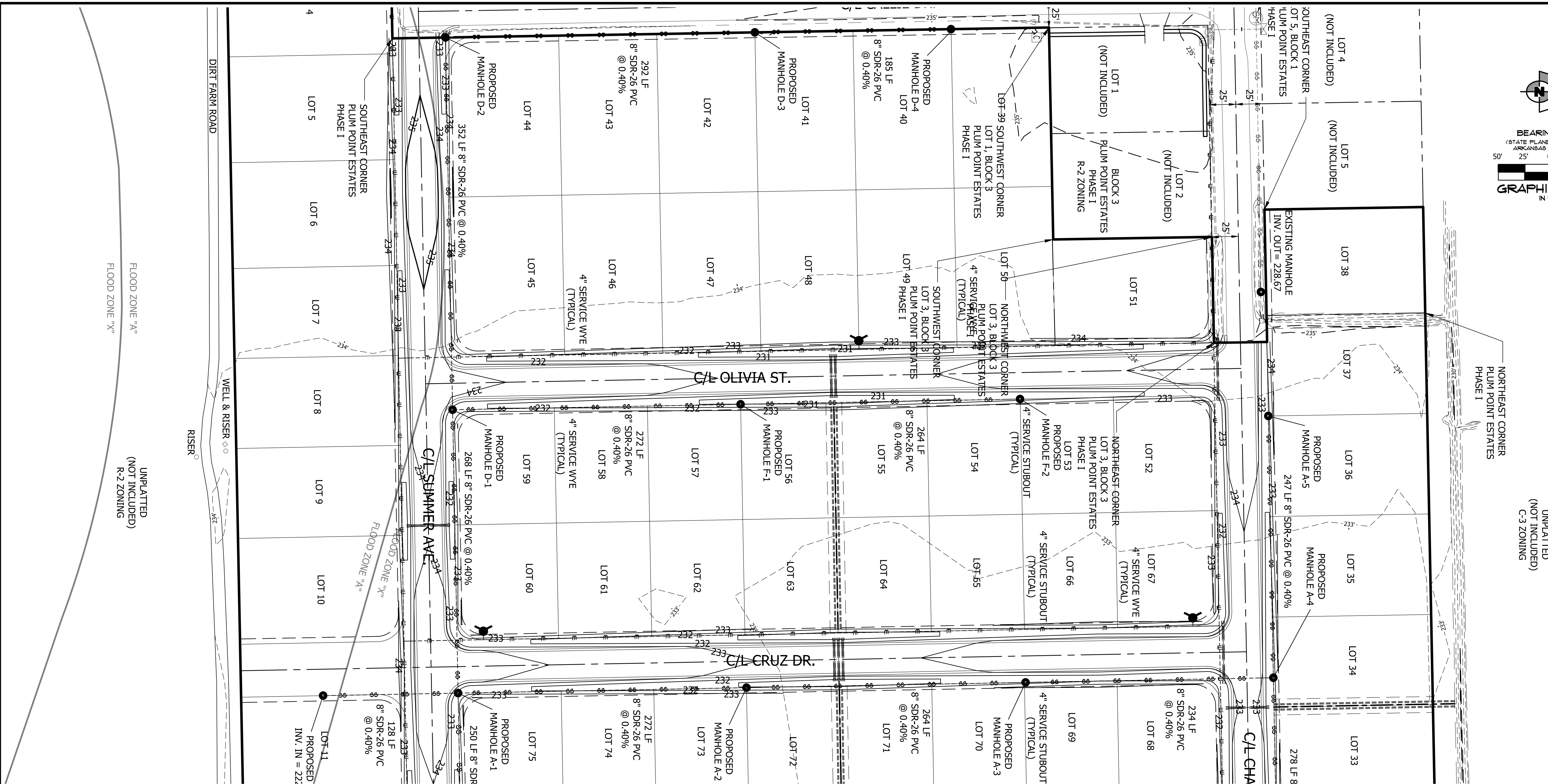
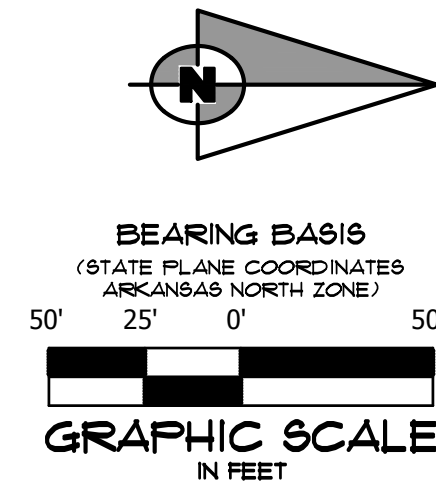
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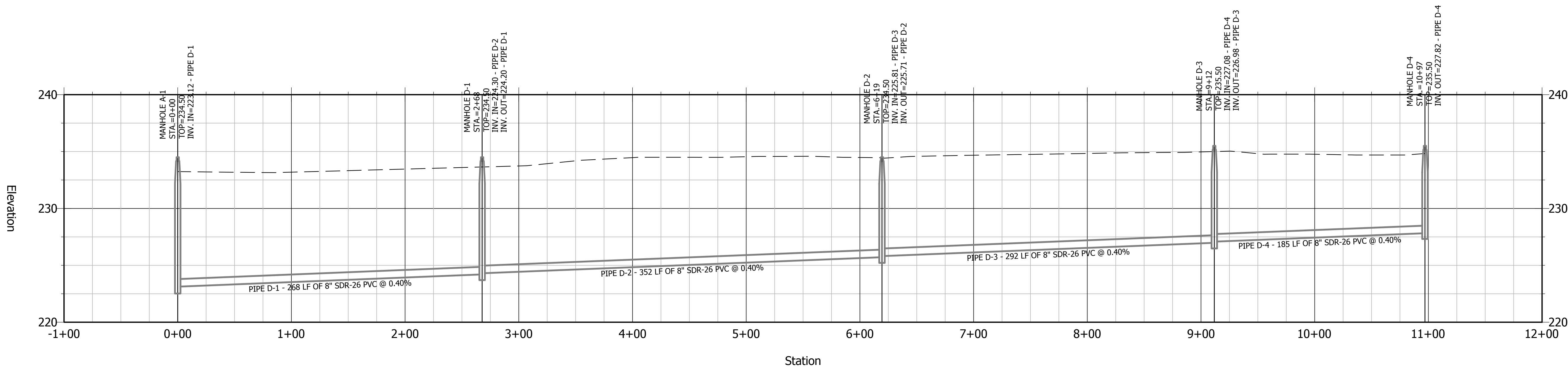
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SEWER PLAN &
PROFILE

DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
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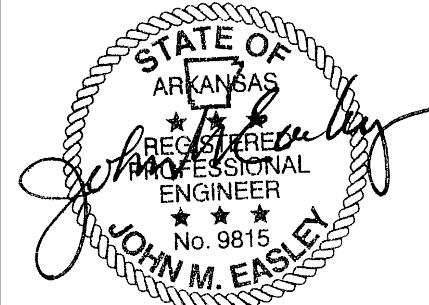
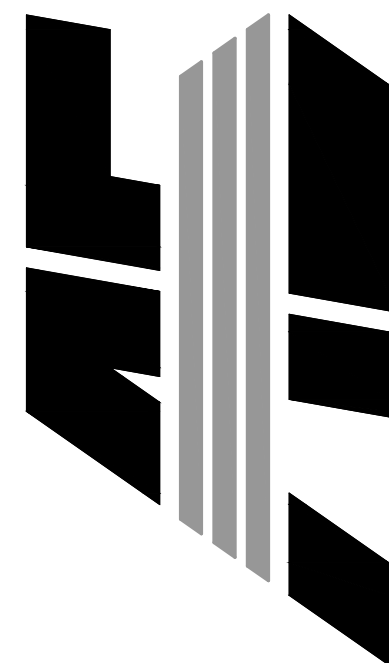


SEWER D PROFILE



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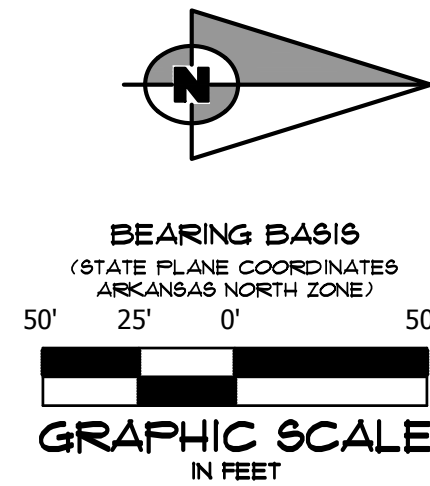
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LAND PLANNING
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NO.	DESCRIPTION	DATE
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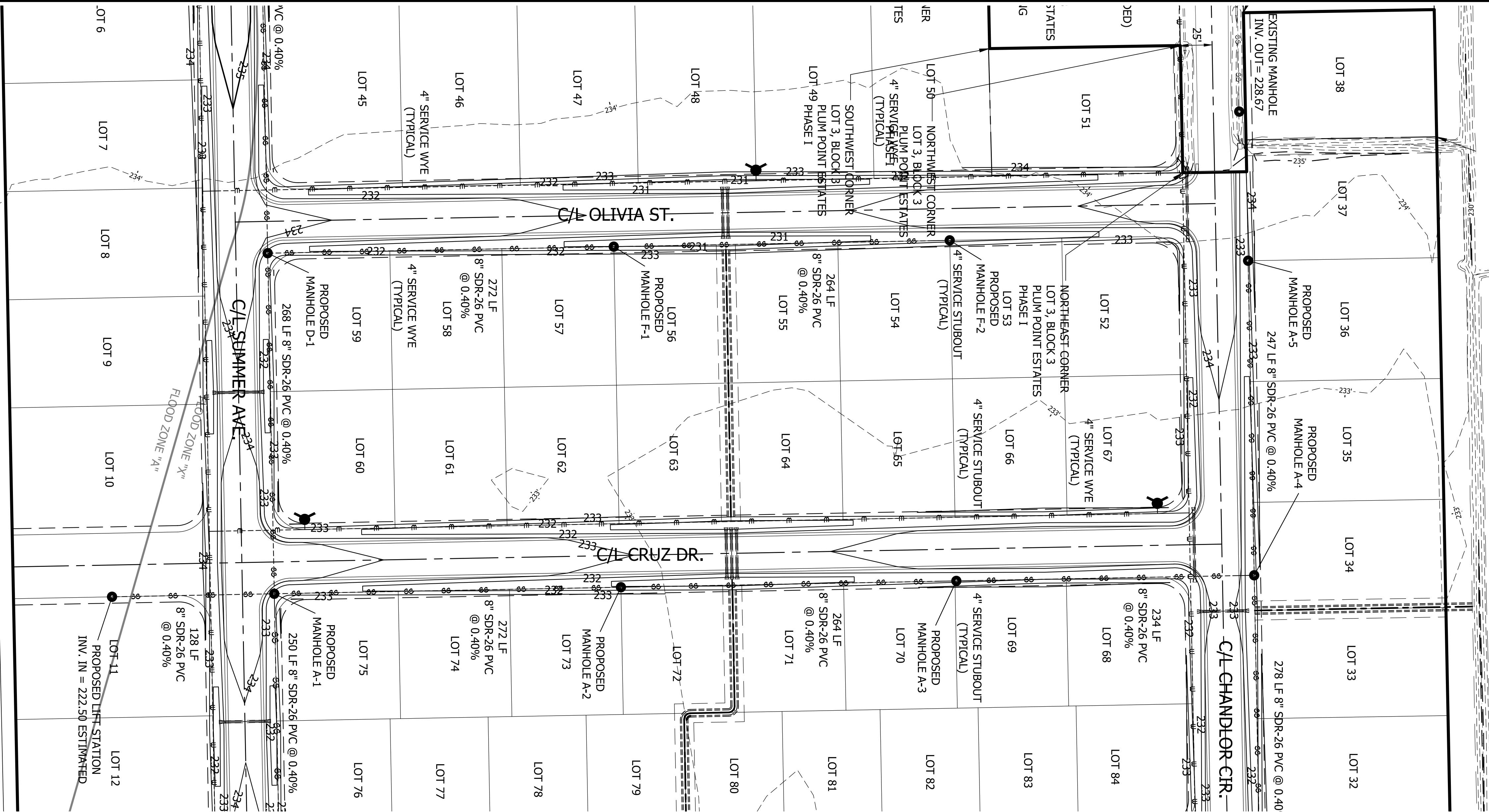
SEWER PLAN &
PROFILE

DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
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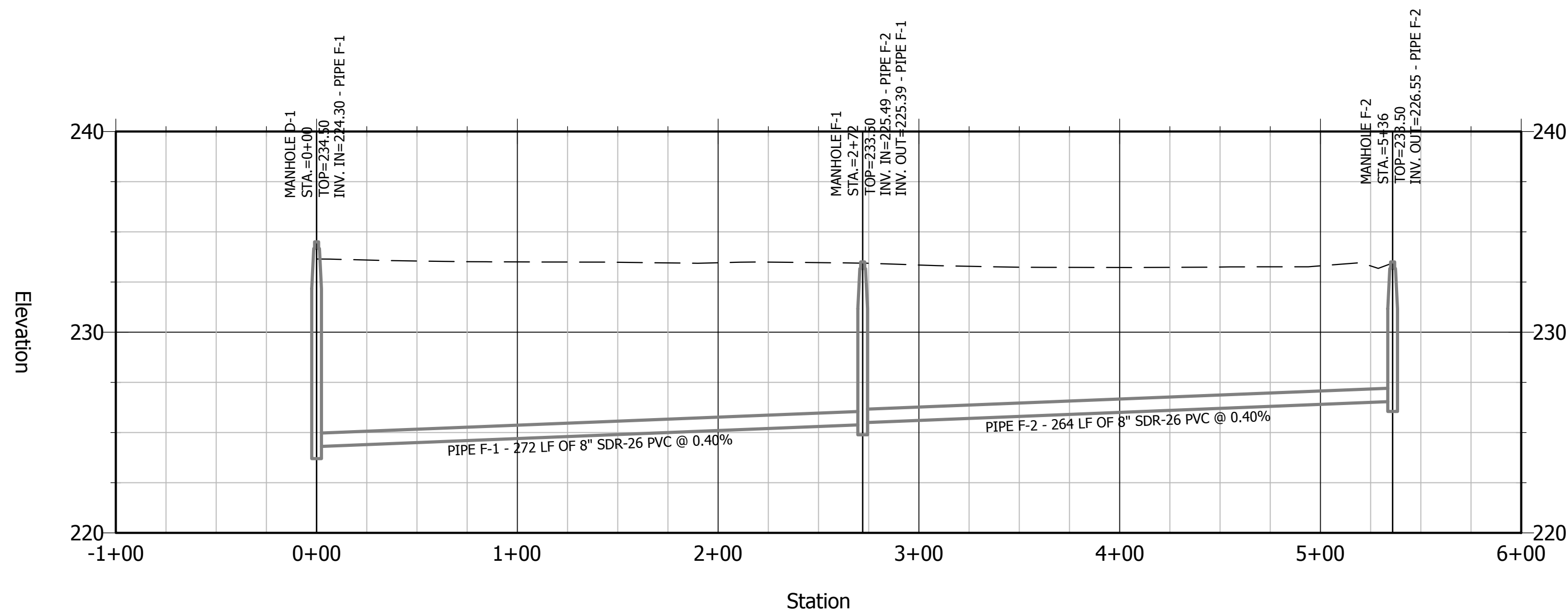


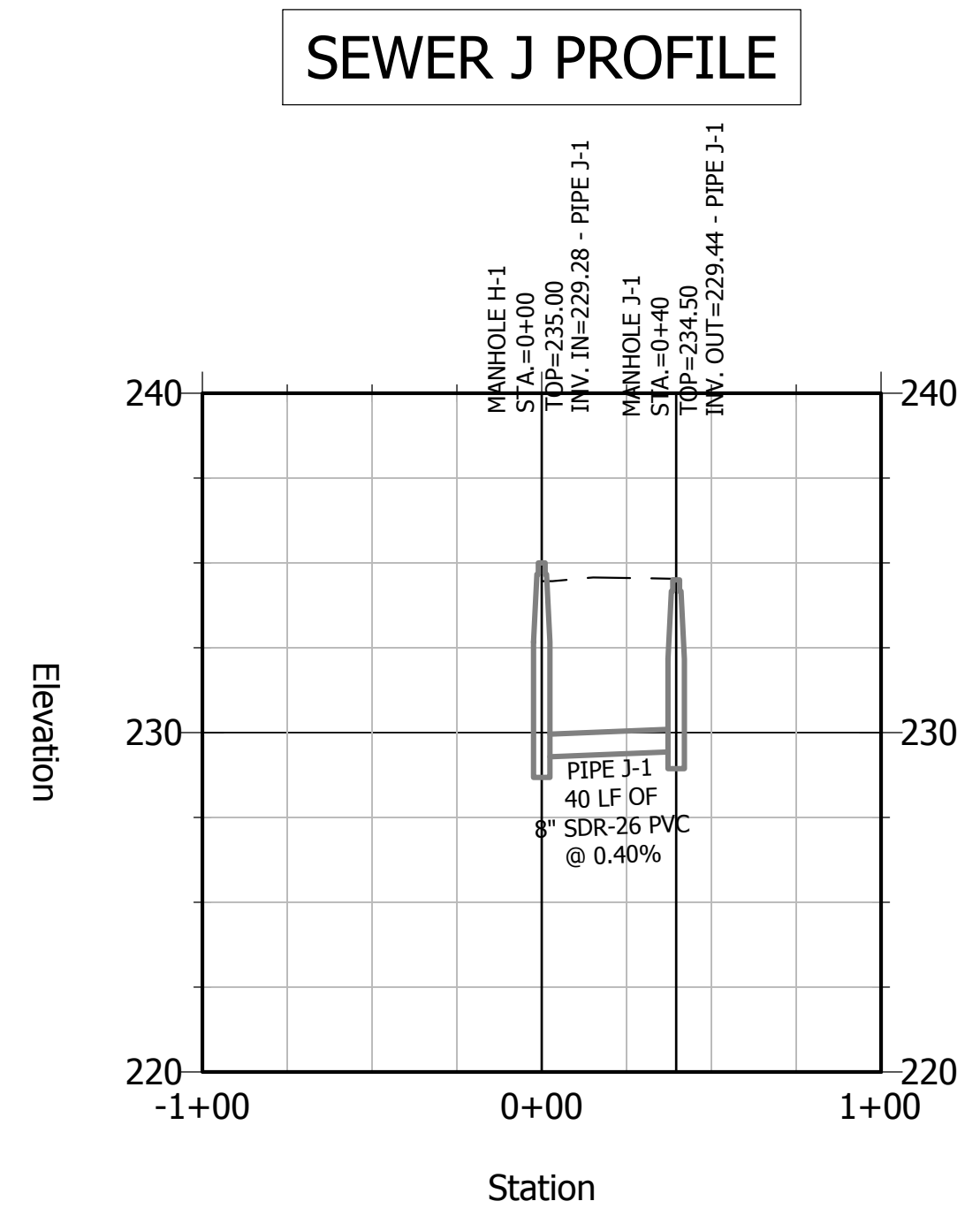
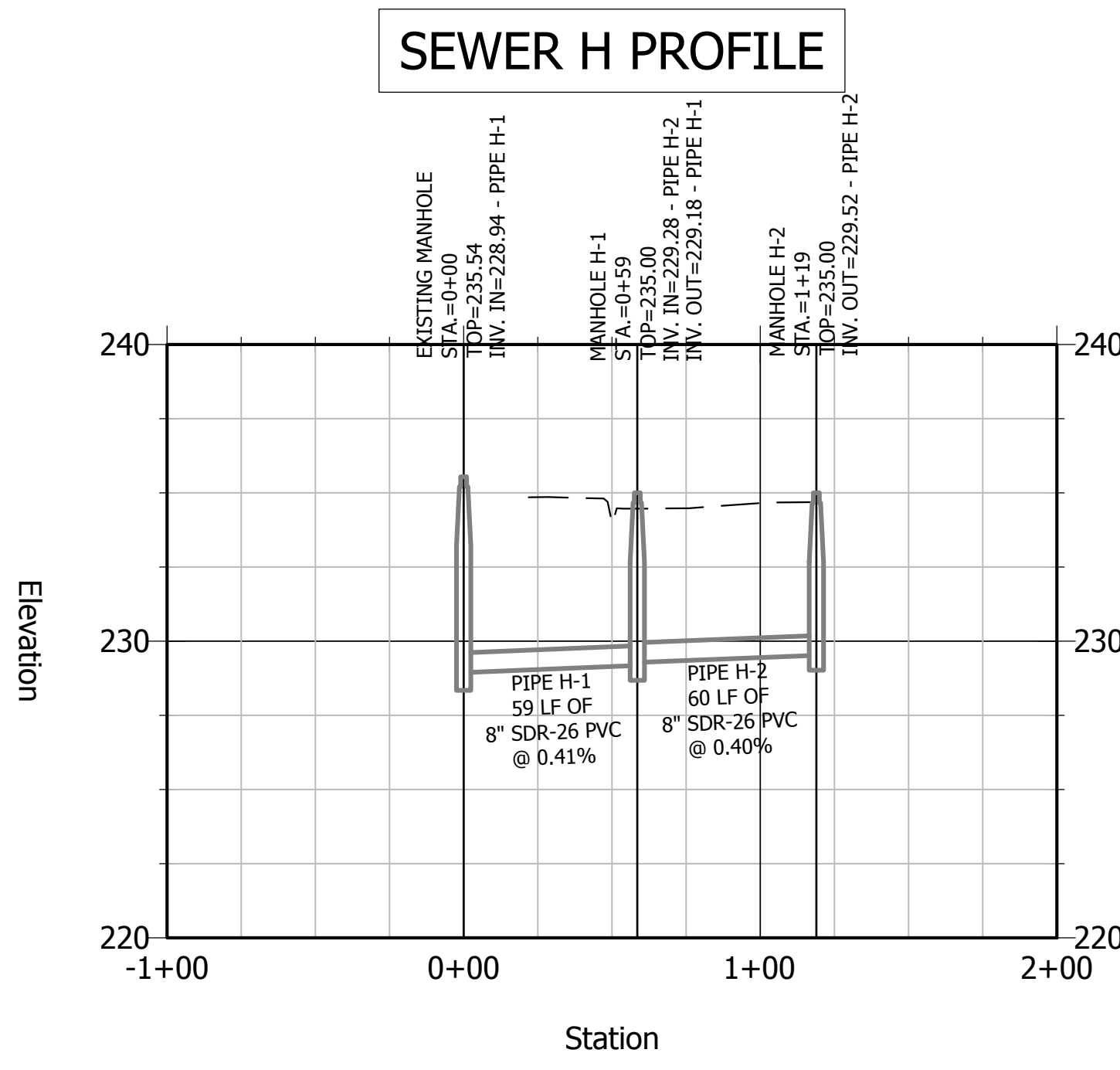
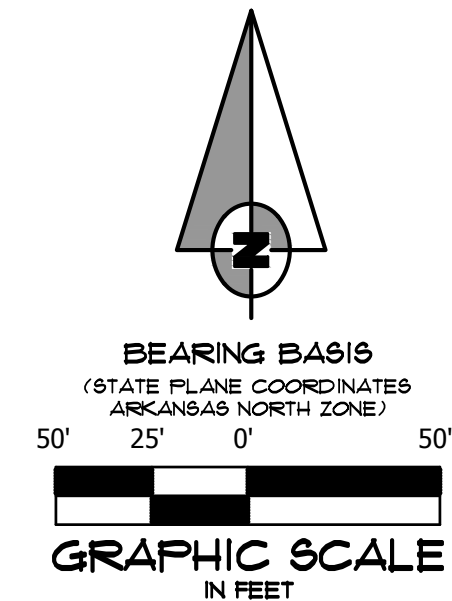
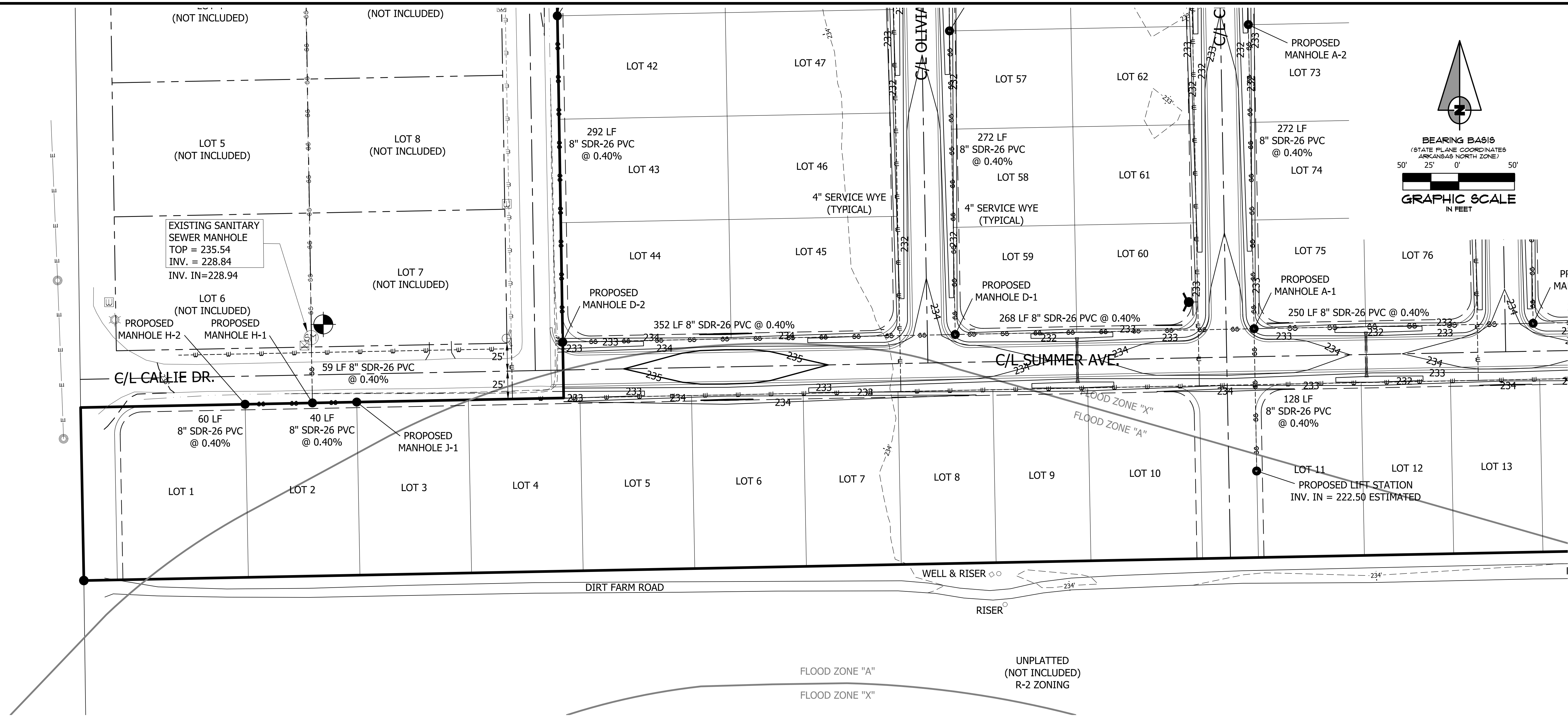
CORNER
ESTATES

UNPLATTED
(NOT INCLUDED)
C-3 ZONING



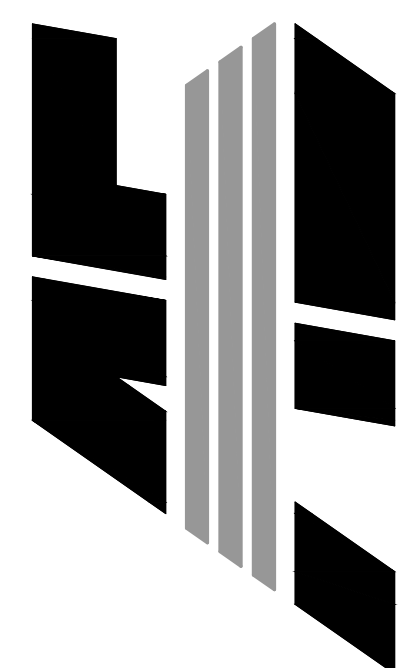
SEWER F PROFILE





RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
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OSCEOLA, ARKANSAS

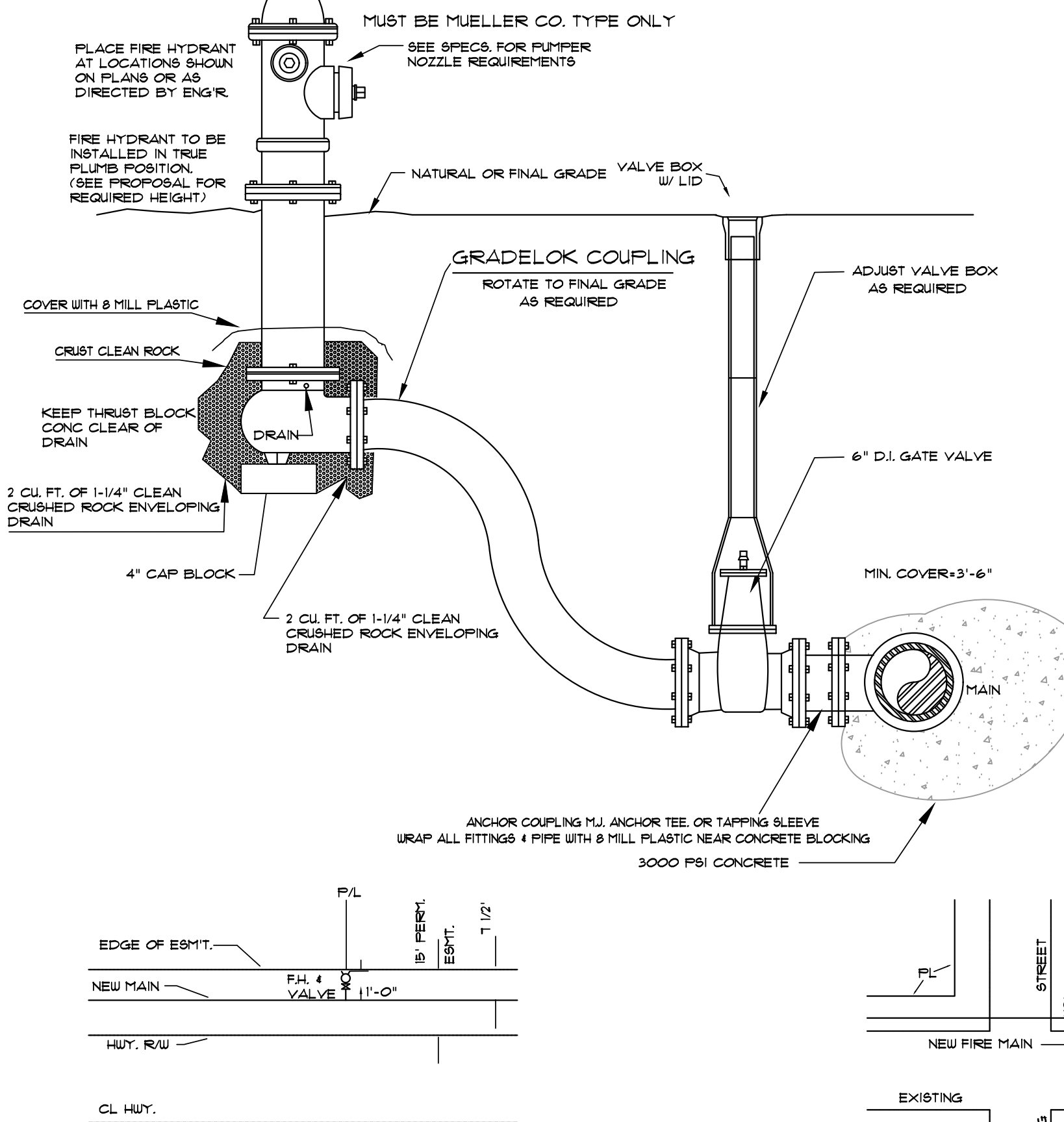
ASSOCIATED ENGINEERING, LLC
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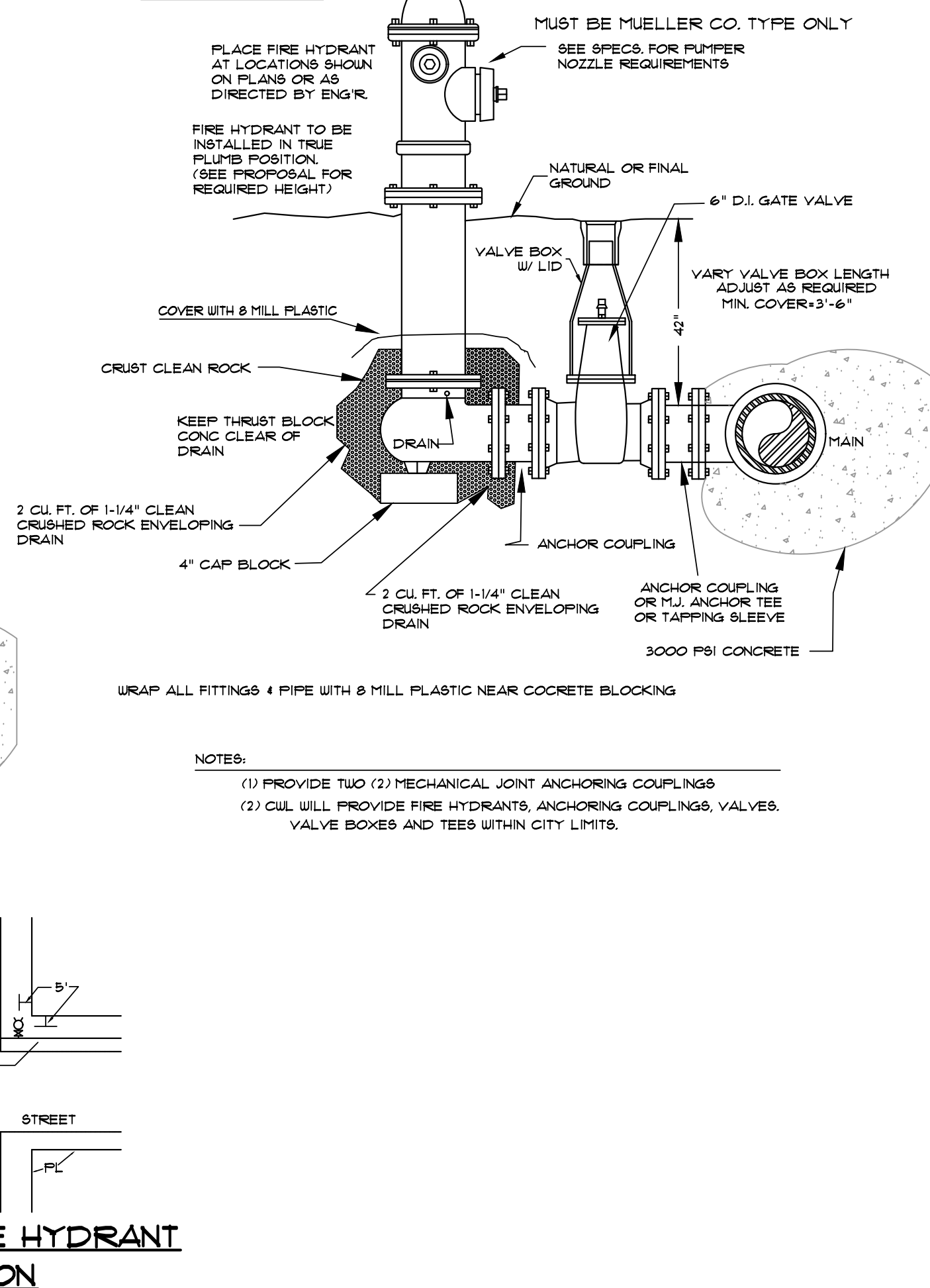
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DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SDP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET C013
SCALE: AS SHOWN	

FIRE HYDRANT DETAIL WITH GRADELOK COUPLING



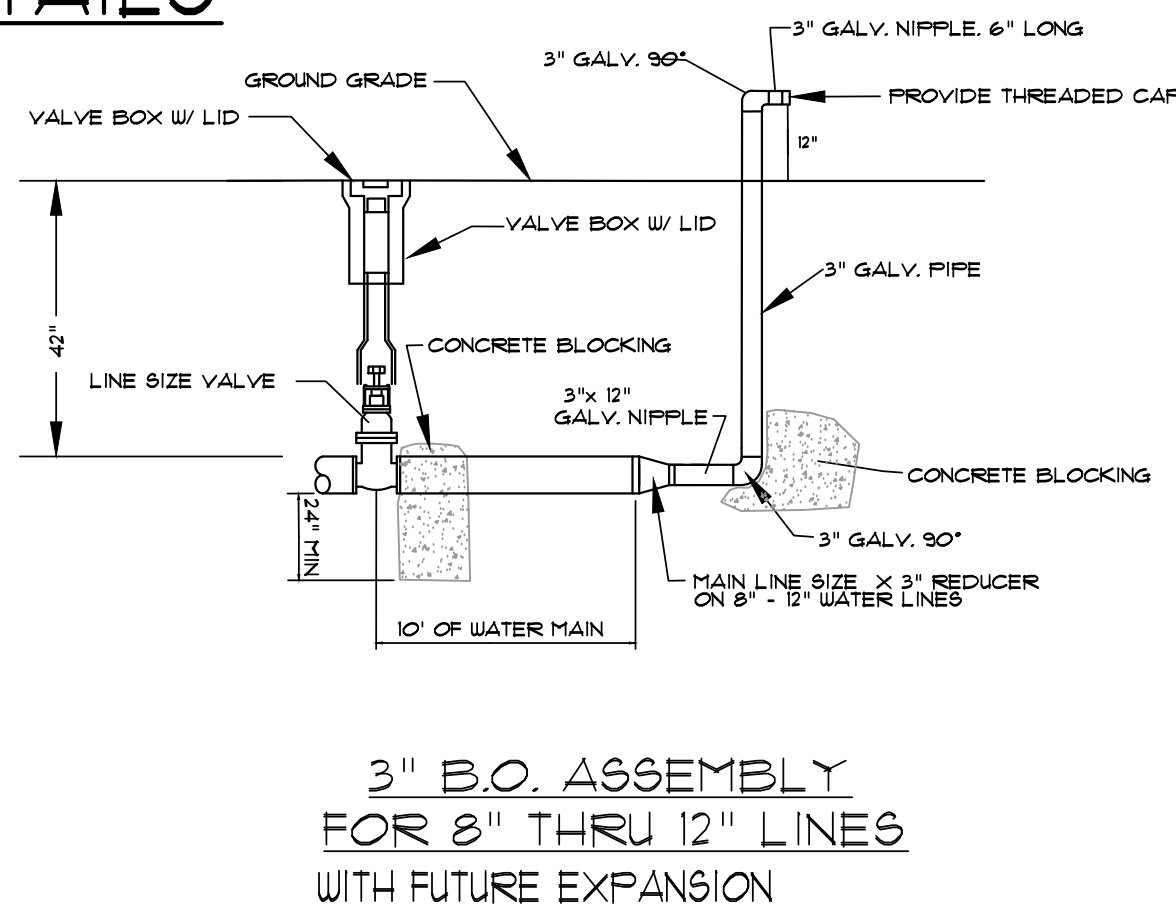
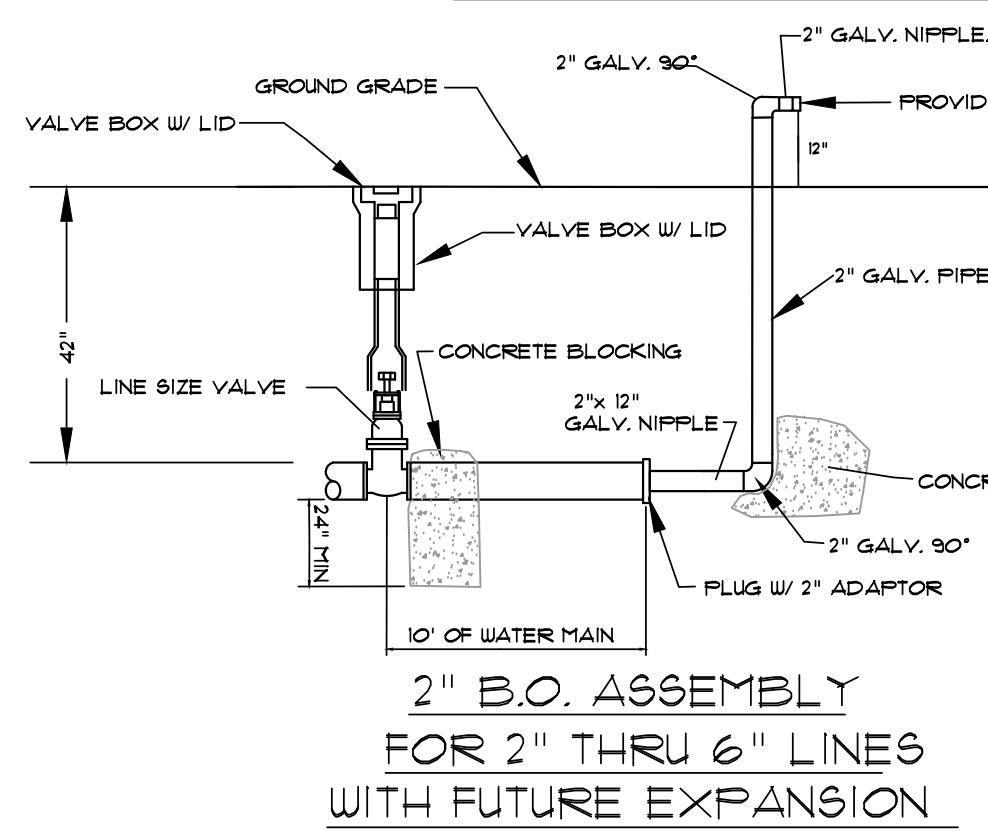
TYPICAL FIRE HYDRANT LOCATION ALONG HWY. RIGHT-OF-WAY

FIRE HYDRANT DETAIL WITH ANCHOR COUPLING

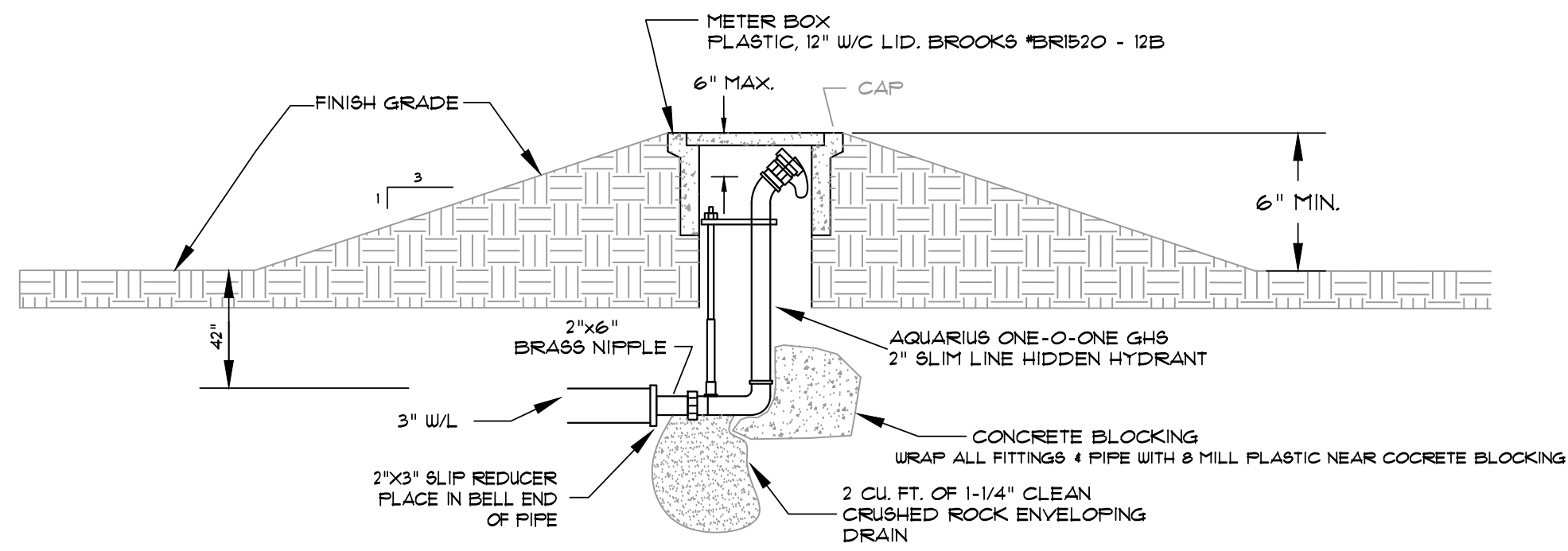


TYPICAL FIRE HYDRANT LOCATION

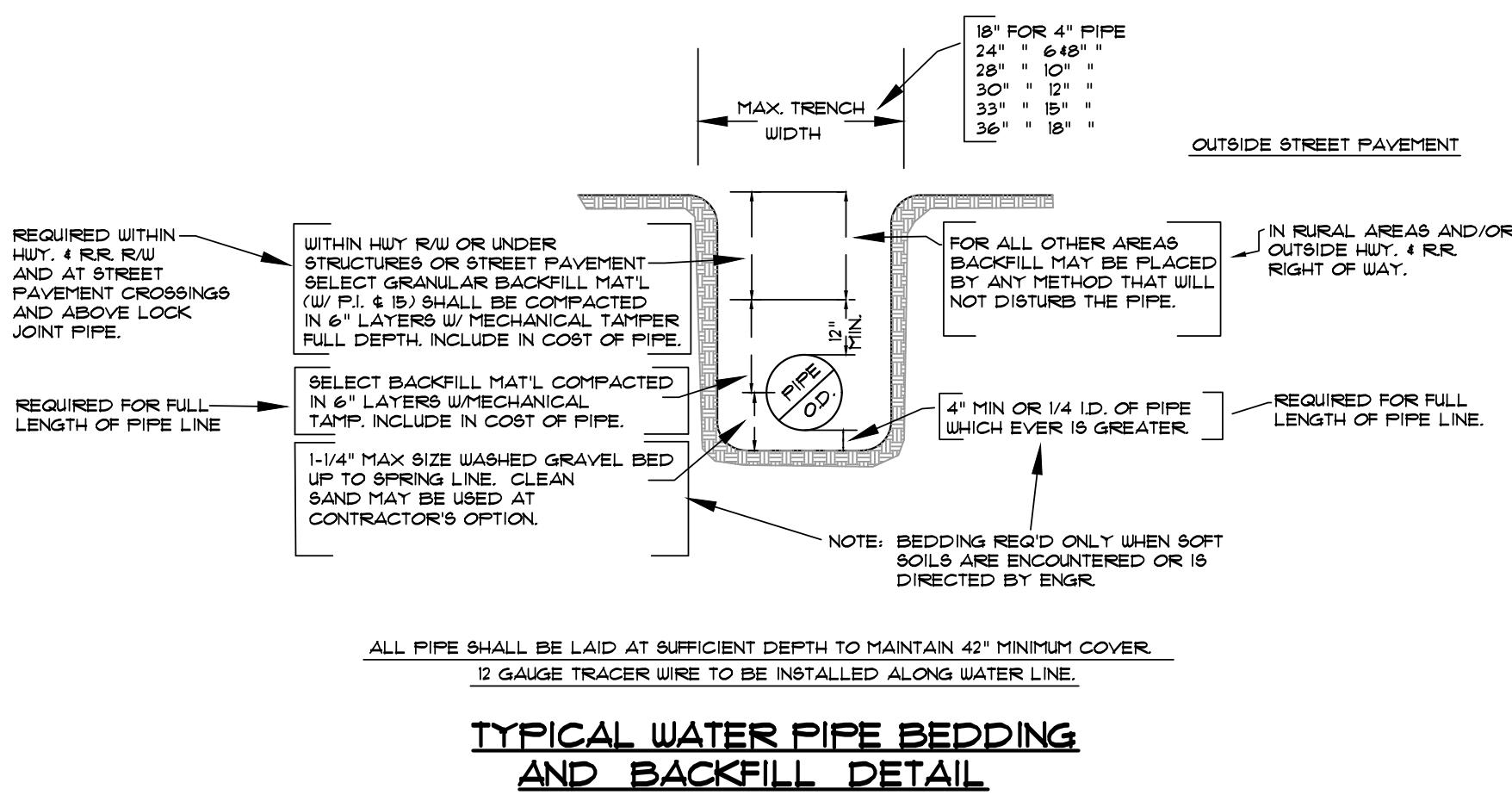
BLOW-OFF ASSEMBLY DETAILS



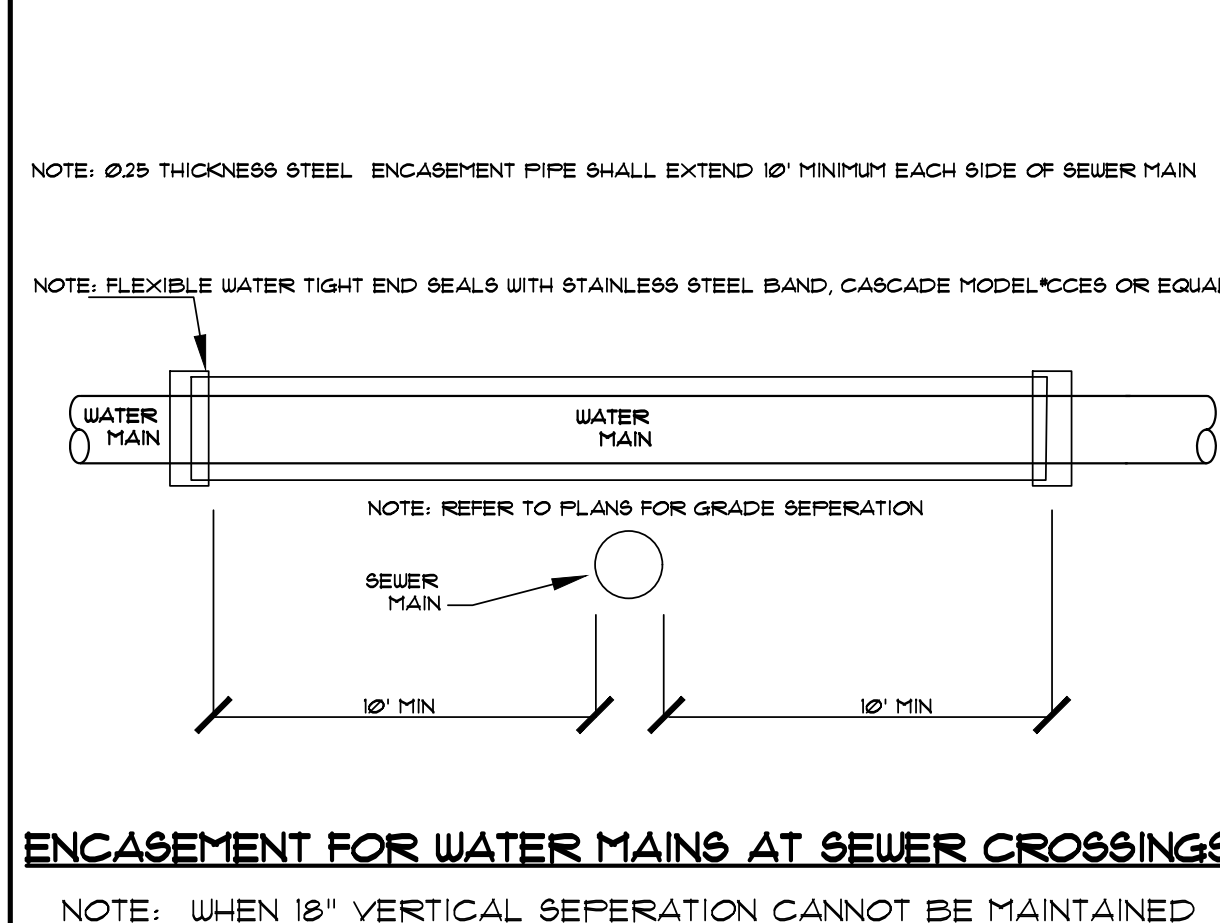
NOTE:
OTHER BLOW-OFF ASSEMBLIES CAN
BE USED AS APPROVED BY
LOCAL UTILITY COMPANY.



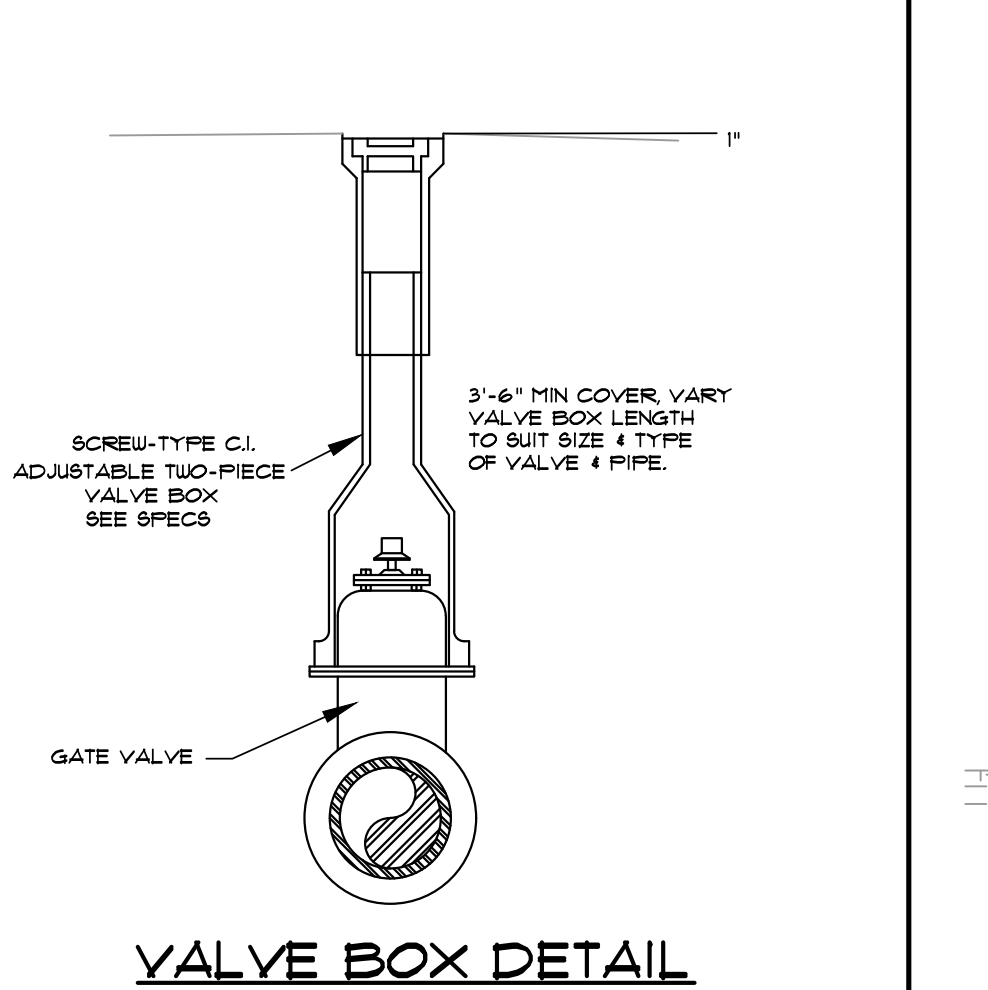
UNDERGROUND WASHOUT ASSEMBLY FOR COVES AND DEAD END LINES WITH NO FUTURE EXTENSION



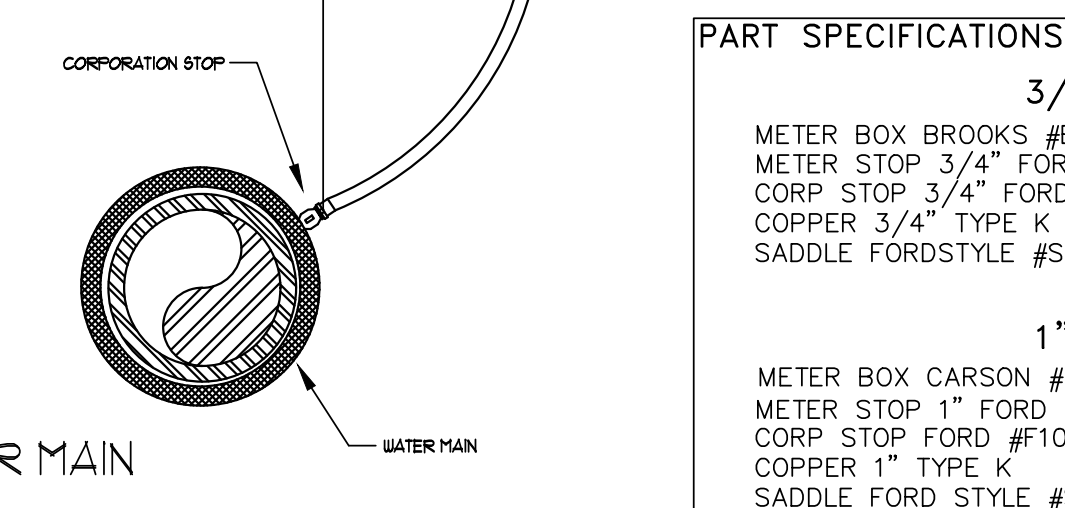
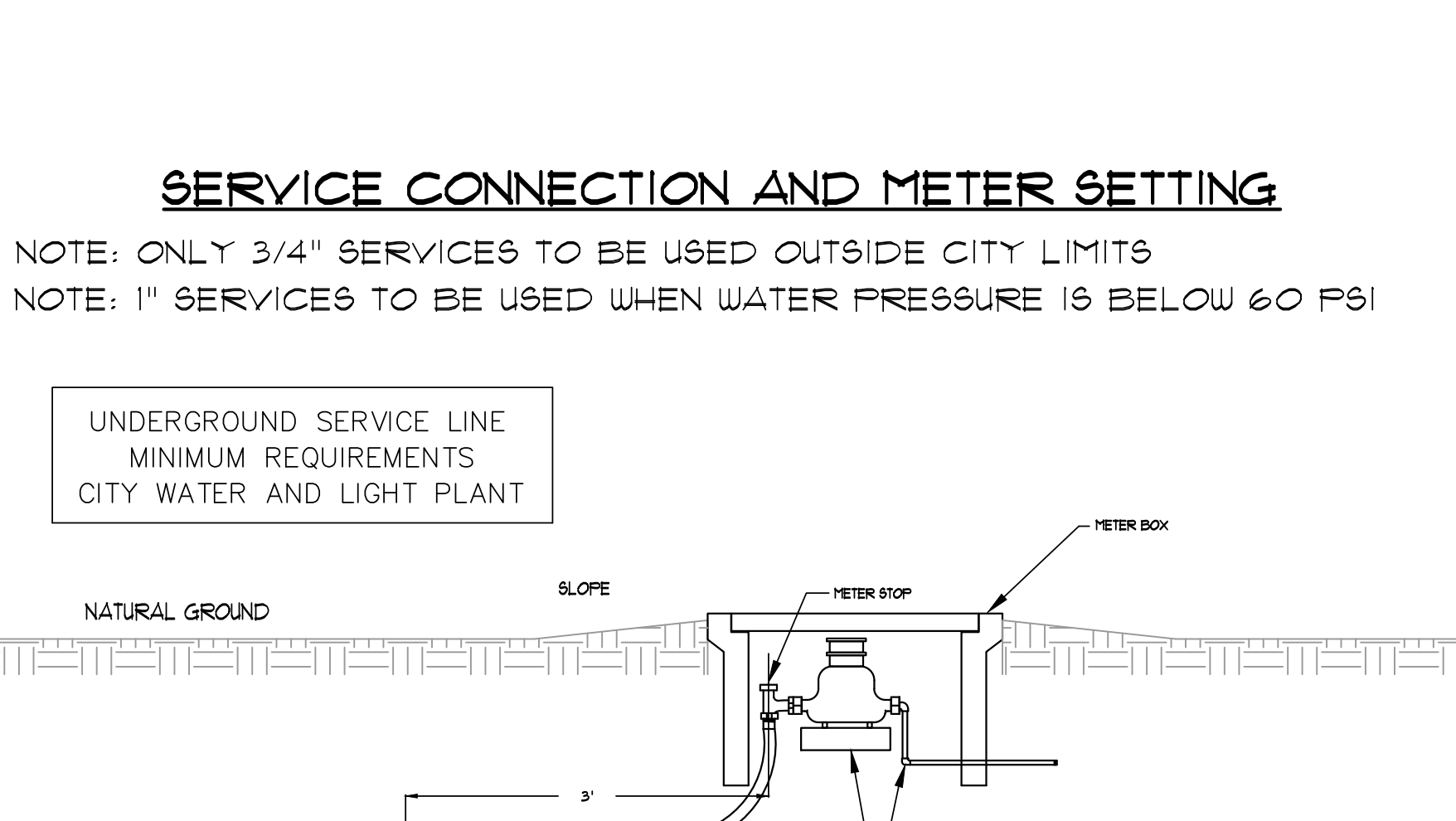
TYPICAL WATER PIPE BEDDING AND BACKFILL DETAIL



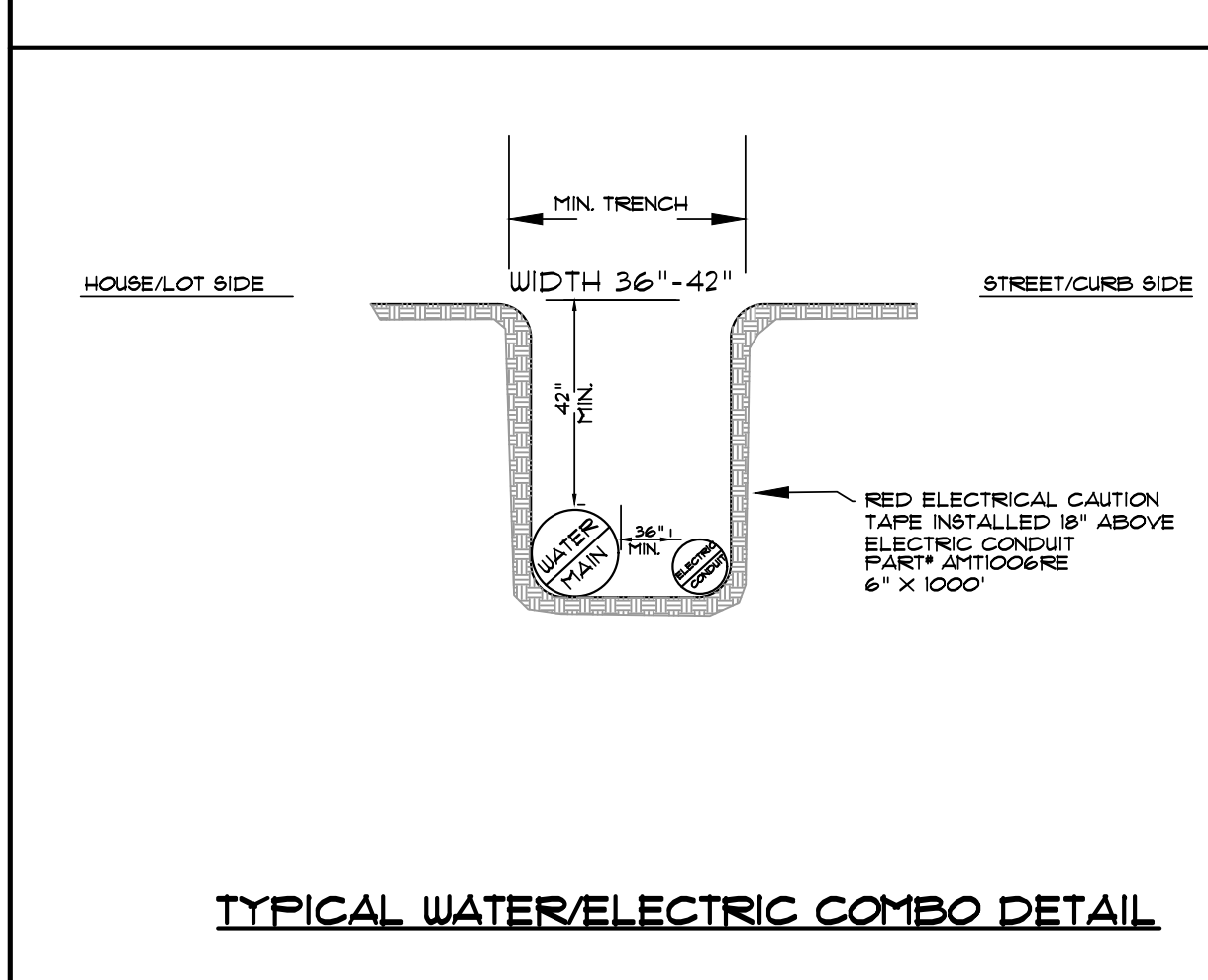
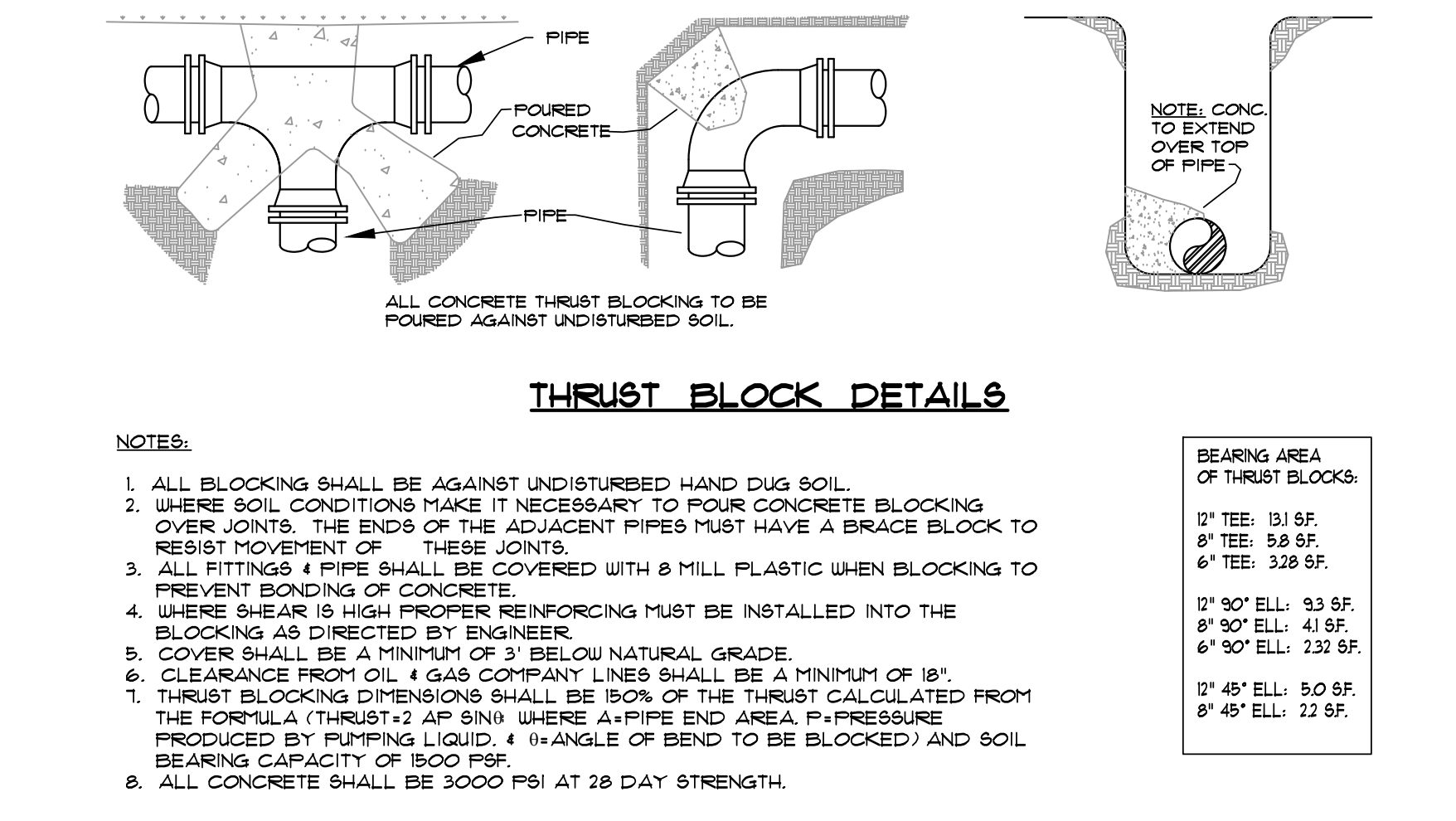
ENCASEMENT FOR WATER MAINS AT SEWER CROSSINGS



VALVE BOX DETAIL



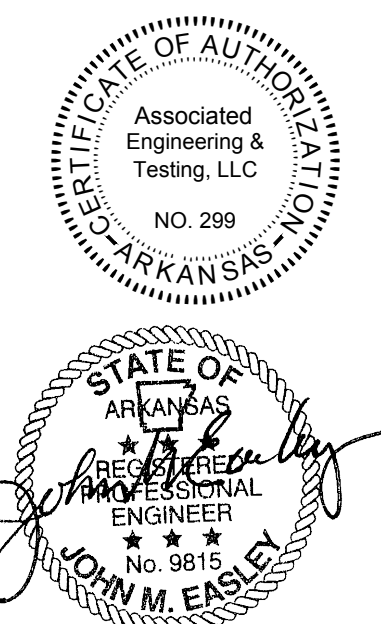
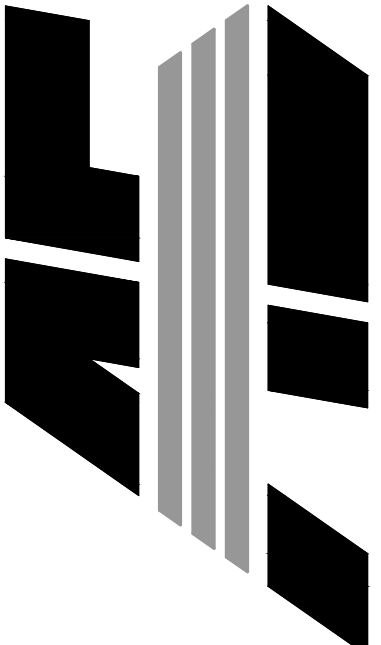
WATER LINE & FORCE MAIN MARKER DETAIL



TYPICAL WATER/ELECTRIC COMBO DETAIL

RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T12N, R10E
OSCEOLA, ARKANSAS

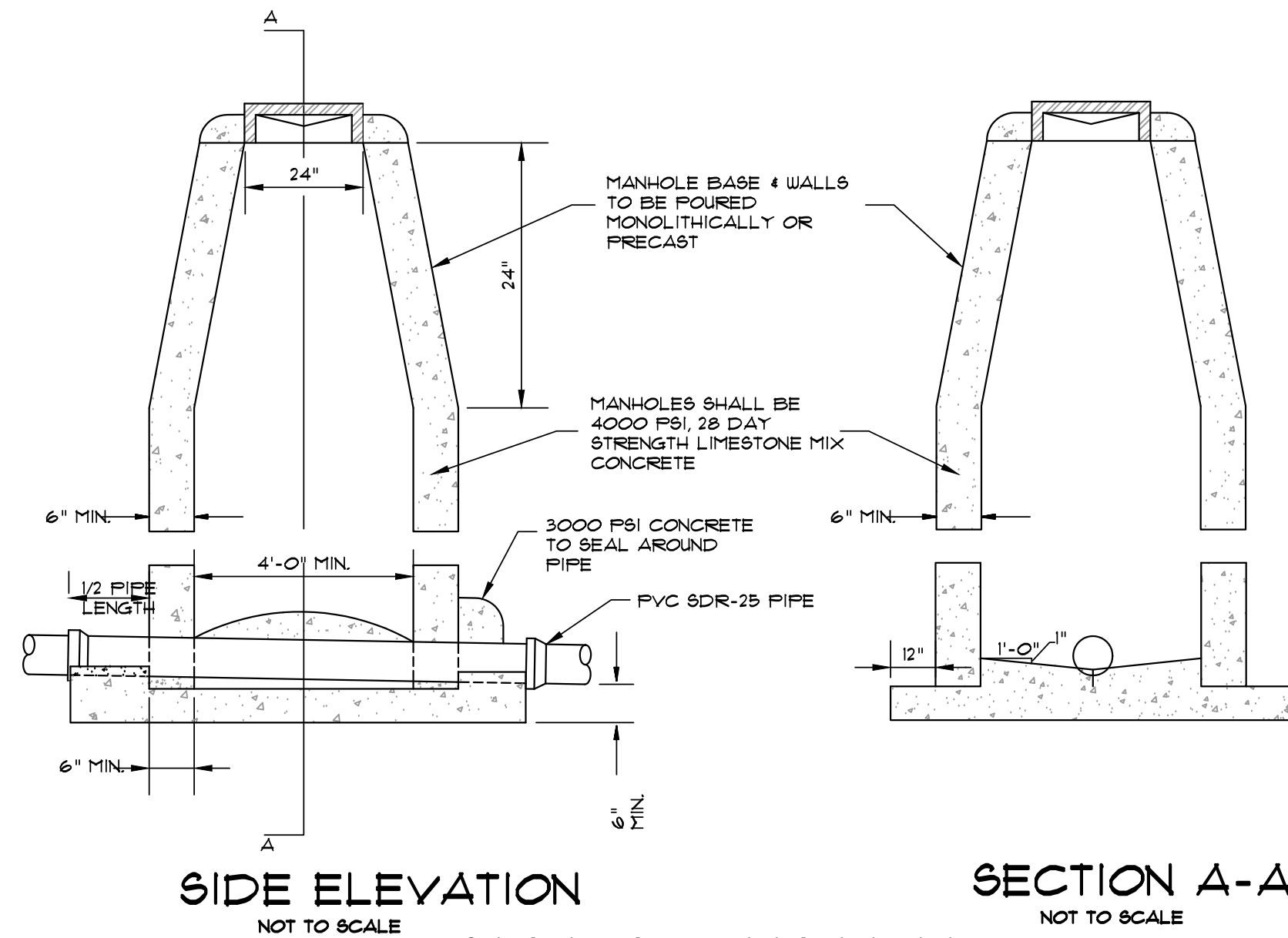
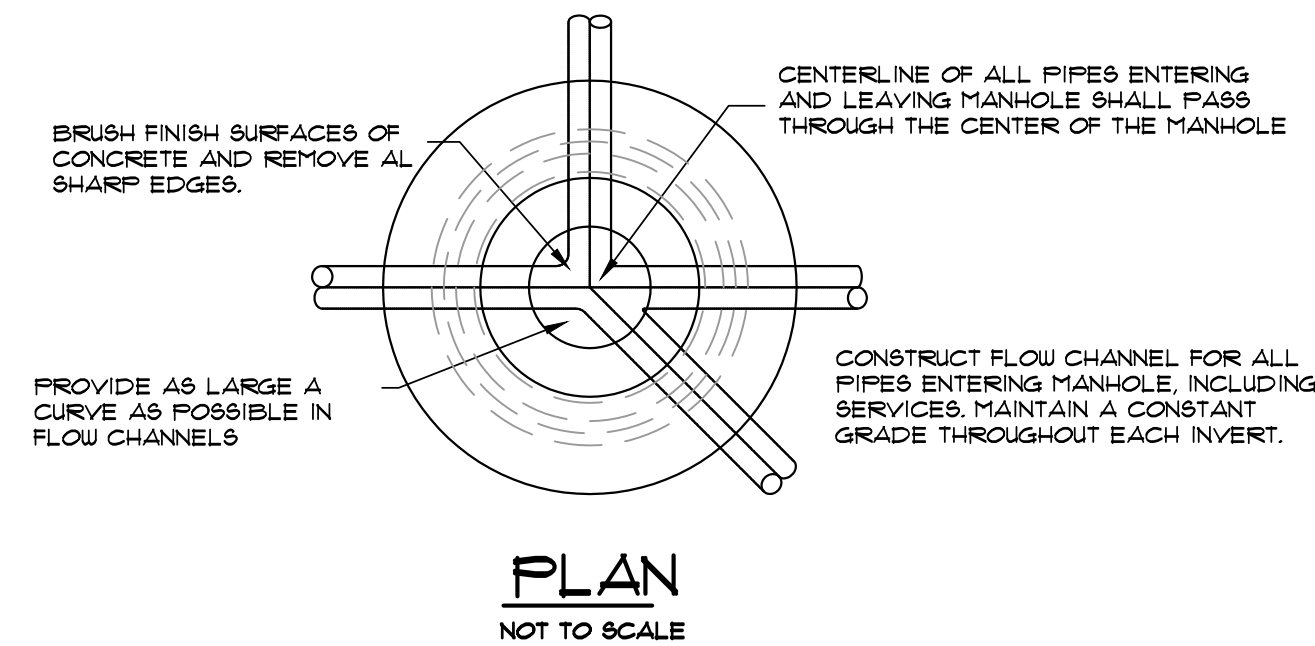
ASSOCIATED
ENGINEERING, LLC
CIVIL ENGINEERING • LAND SURVEYING
LAND PLANNING
103 SOUTH CHURCH STREET • P.O. BOX 1462
JONESBORO, AR 72403
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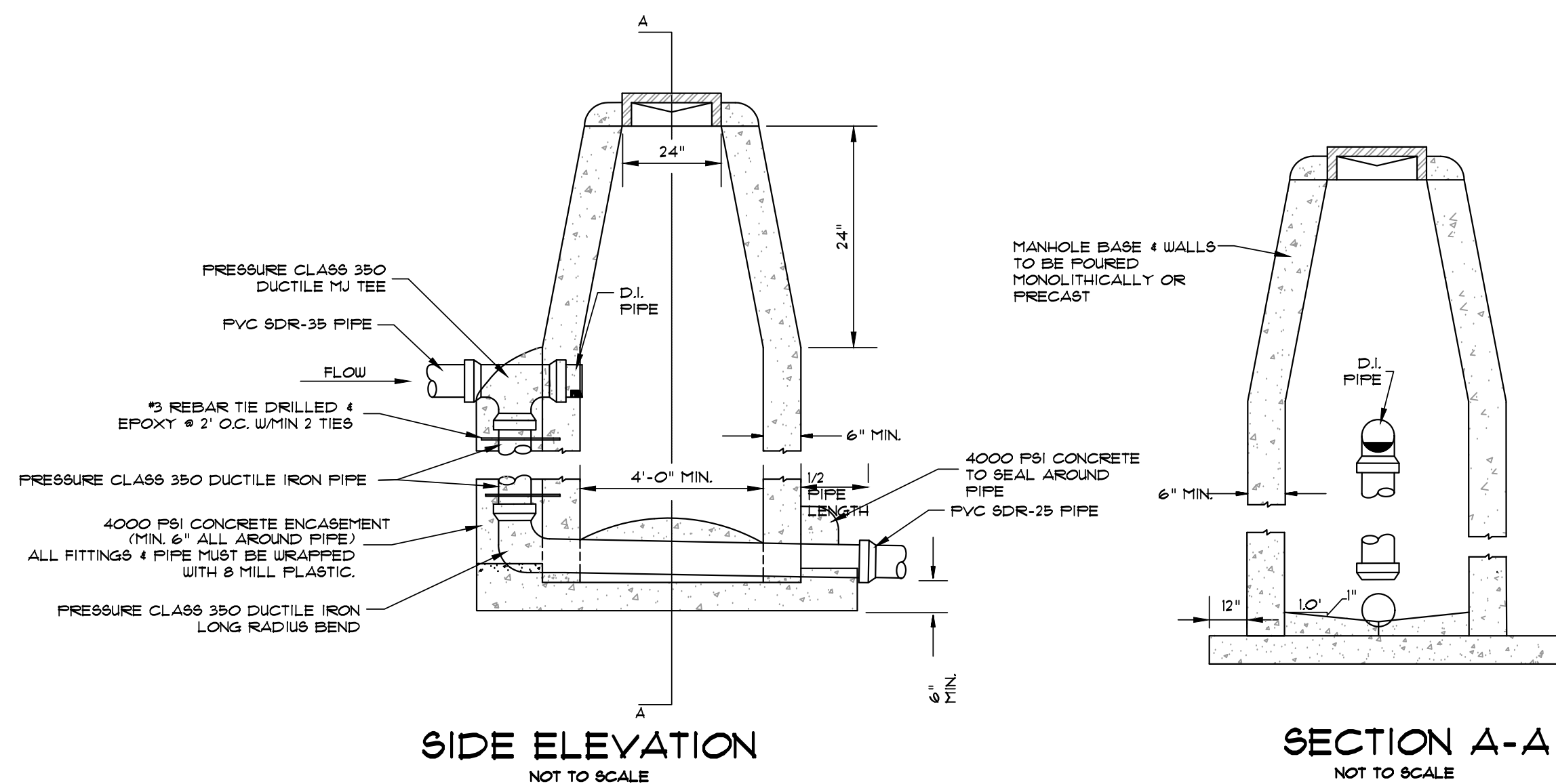
NO.	DESCRIPTION	DATE
1	REVISE PER ADH COMMENTS	11/21/22

WATER DETAILS	
DATE: 09/02/2022	DRAWN: CCH
CADD FILE: 22105-SOP-R1	CHECKED: JME
DWG# 1012044.XXXX	SHEET
SCALE: AS SHOWN	C023

1. MANHOLE BASES TO BE 4000 PSI, 28 DAY STRENGTH, LIMESTONE MIX CONCRETE ON UNDISTURBED SUB-GRADE OR ON COMPACTED SELECT FILL MATERIAL AS AUTHORIZED.
2. MANHOLE SIDEWALL MATERIAL TO BE CONCRETE IN ACCORDANCE WITH PROPOSAL FORM REQUIREMENTS.
 - a. 4" I.D. FOR SEWER SIZES 6" THRU 24"
 - b. 5" I.D. FOR SEWER SIZES 24" THRU 30"
 - c. 6" I.D. FOR SEWER SIZES 36" THRU 42"
3. SET MANHOLE TOPS AS FOLLOWS:
 - a. IN STREETS, ROADS, HIGHWAYS, AND OTHER PAVED AREAS: FLUSH WITH FINISHED PAVING GRADE.
 - b. UNDEVELOPED AREAS, SUCH AS FIELDS, WOODS, ETC.: 6" ABOVE GROUND.
 - c. OTHER AREAS: 6" ABOVE GROUND.
4. MANHOLE FRAMES SHALL HAVE MIN. OPENING OF 22" DIA.



STANDARD MANHOLE DETAILS



DROP MANHOLE DETAILS

CARRIER PIPE	CASING PIPE
4"	8"
6"	12"
8"	16"
10"	20"
12"	24"
16"	32"
18"	36"
20"	40"
24"	48"

VERIFY CASING PIPE SIZE WITH CASING INSULATORS MFG.

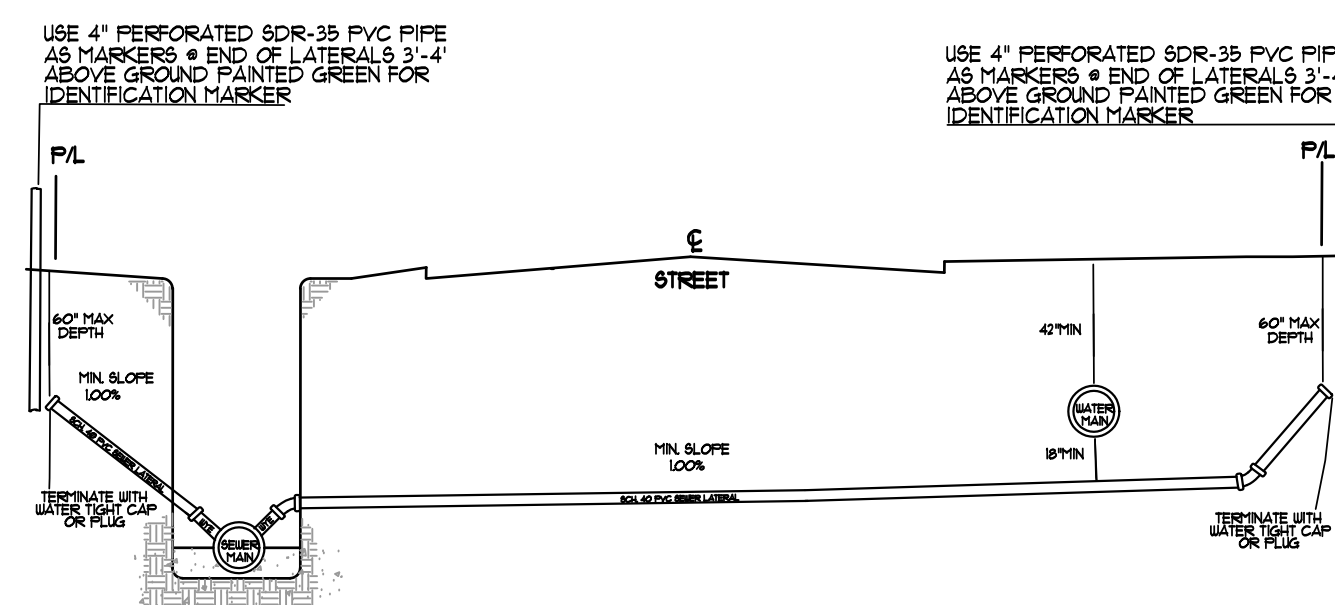
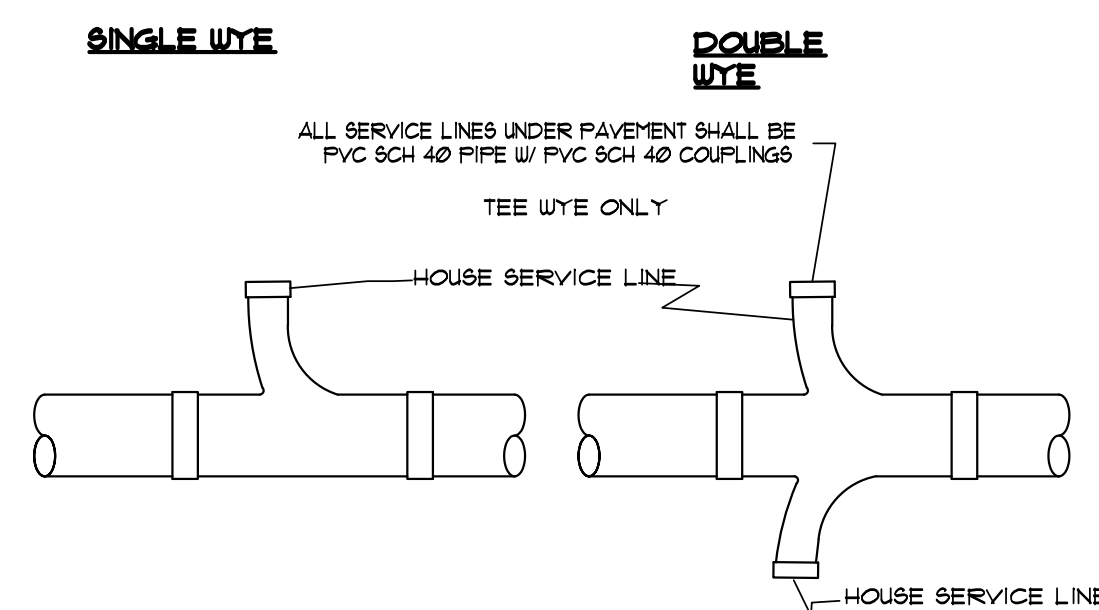
SEWER CROSSING DETAIL
WHERE ENCASEMENT REQUIRED

ARKANSAS DEPARTMENT OF HEALTH RULES AND REGULATIONS
APPLICABLE TO SEWER AND WATER SEPARATION

A. SANITARY AND SAFETY HAZARDS

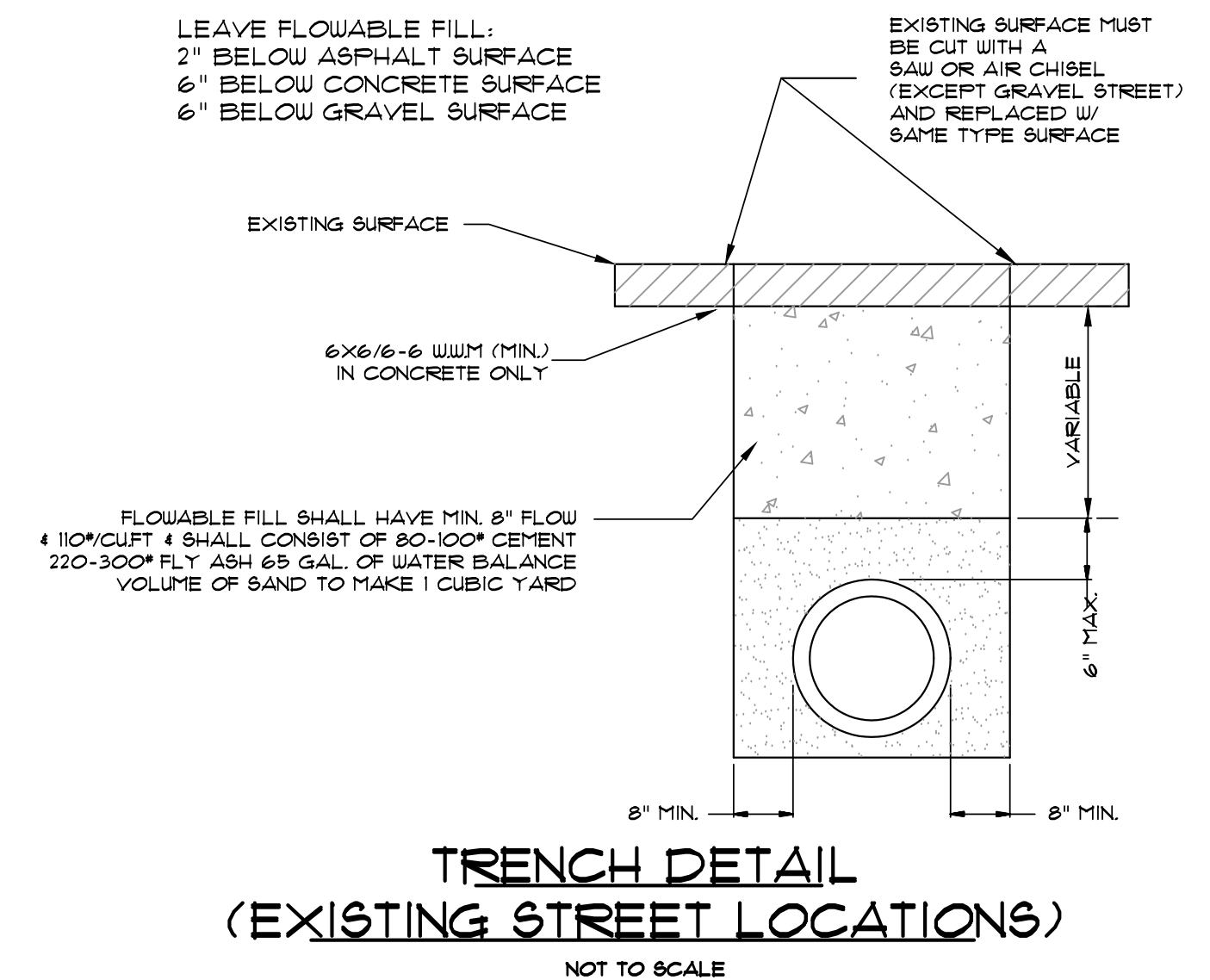
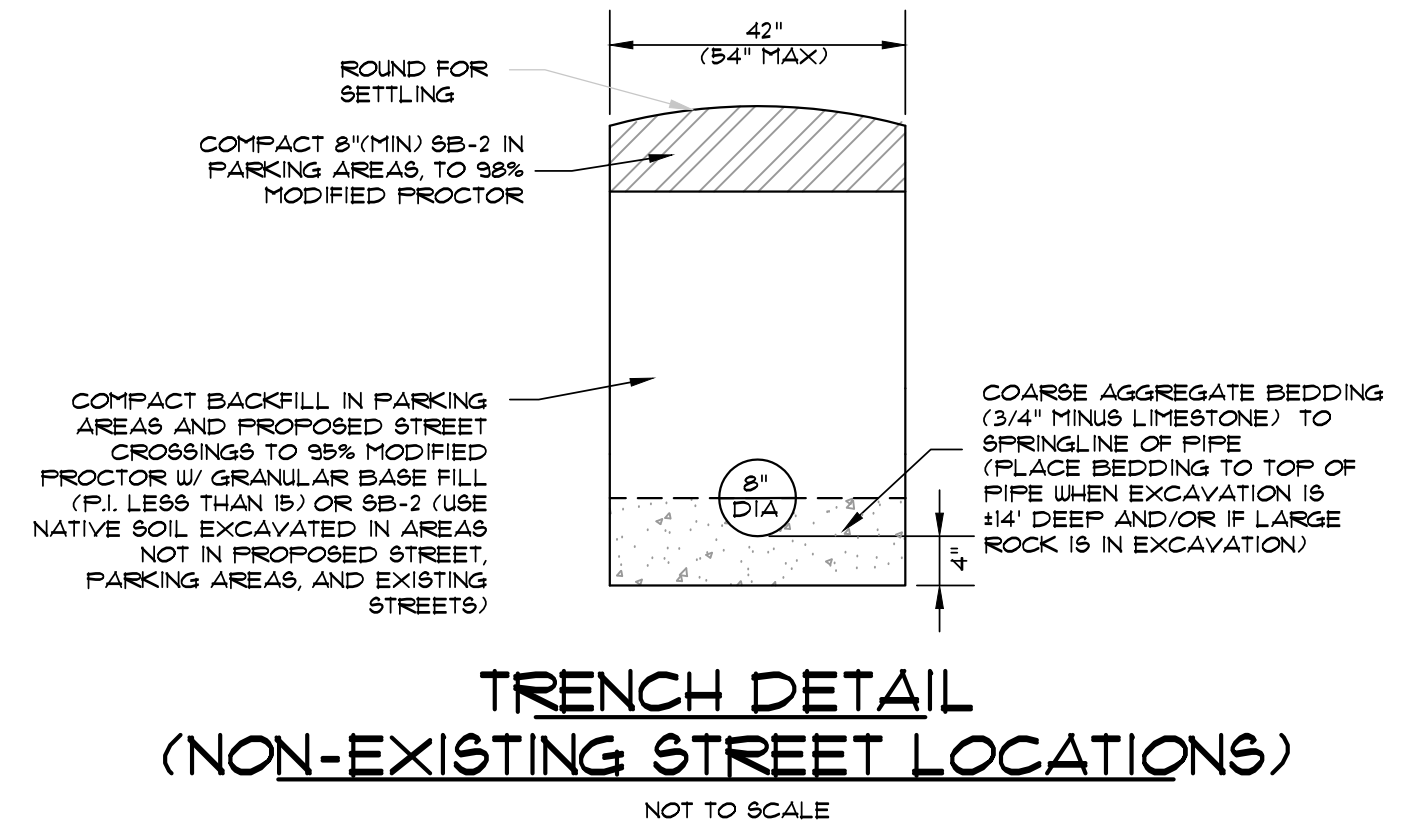
THE OPERATING ROUTINE SHALL INCLUDE NECESSARY PROTECTIVE MEASURES TO DETECT AND REMOVE OR DESTROY ANY CONTAMINANT OF CONCERN OR REGULATION THAT MIGHT ENTER THE DISTRIBUTION SYSTEM. EVERY PRECAUTION MUST BE TAKEN AGAINST THE POSSIBILITY OF SEWAGE CONTAMINATION OF THE WATER IN THE DISTRIBUTION SYSTEM. WATER MAINS AND SANITARY SEWERS SHALL BE CONSTRUCTED AS FAR APART AS PRACTICABLE, AND SHALL BE SEPARATED BY UNDISTURBED AND COMPACTED EARTH. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION.

WATER LINES AND SEWERS SHALL NOT BE LAID IN THE SAME TRENCH EXCEPT ON THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN TIGHTWRIGHT PIPE WITH SEALED TIGHTWRIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING OFF GAS. SEWER LINES SHALL BE ENCASED IN TIGHTWRIGHT PIPE WITH SEALED TIGHTWRIGHT ENDS EXTENDING AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH.

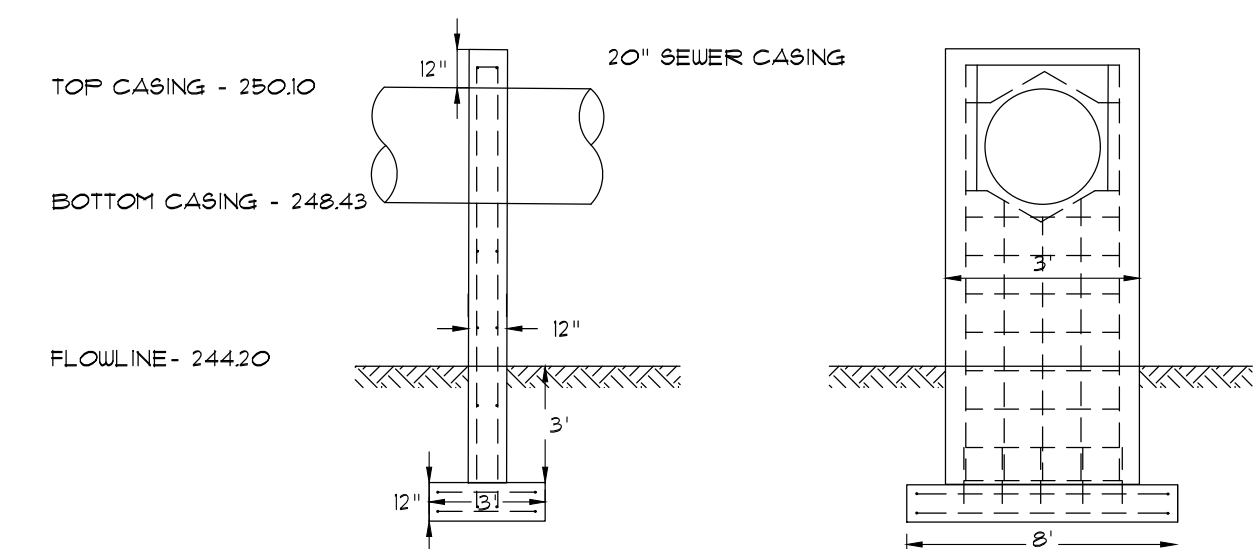


SEWER LATERAL STUBOUT
PERMITS REQUIRED BEFORE INSTALLATION
USE SAME CONFIGURATION FOR MANHOLE STUBOUTS

NOTE: 1. COARSE AGGREGATE SHALL BE MECHANICALLY TAMPED WHEN USED.
2. PIPE IN TRENCH SHALL BE PLACED ON NO LESS THAN 4" OF 3/4" MINUS LimestonE. ALL OvER EXCAVATION SHALL BE COMPACTED BACK TO GRADE w/ BEDDING MATERIAL.
3. PVC PIPE SHALL BE 6DR-25 AND INSTALLED IN ACCORDANCE WITH UNI-BELL PVC PIPE ASSOCIATION'S RECOMMENDATIONS FOR CONSTRUCTION.



NOTE: (1) CONTRACTOR SHALL OBTAIN A STREET CROSSING PERMIT FROM THE CITY OF JONESBORO PRIOR TO CUTTING STREET.
(2) EXCAVATED MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
(3) THIS REPAIR DETAIL IS REQUIRED FOR ALL EXCAVATION WITHIN 5' OF PAVED EDGE AND ALL TRANSVERSE EXCAVATIONS TO EXTEND 3' BEYOND PAVED EDGE.



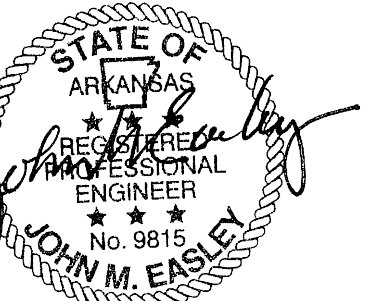
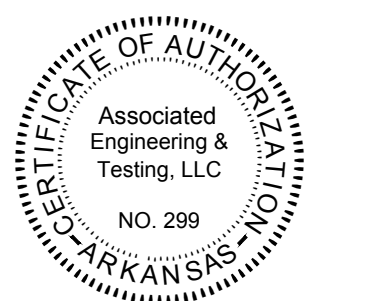
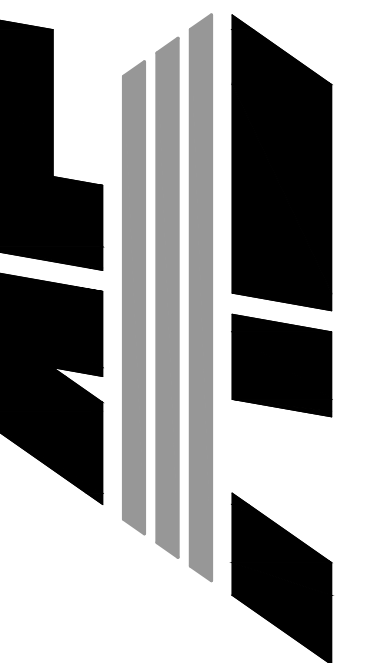
NOTE: 1. CONCRETE PIERS SHALL BE INSTALLED IF CASING LENGTH IS LESS THAN 10 INTO DITCH BANK OR IN ORDER TO STABILIZE CROSSING.
2. USE IF CONCRETE PIERS TO BE DETERMINED BY PROJECT ENGINEER AND CUL.
3. PLACE 5 BARS AT 12" O/C BOTH WAYS ON EACH FACE OF PIER. PLACE 5 BARS AT 12" O/C IN FOOTING.

AERIAL PIPE CROSSING - PIERS

NOT TO SCALE

RIVER BACK ESTATES
EARL QUINN DRIVE & CALLIE DRIVE
SECTION 4, T2N, R10E
OSCEOLA, ARKANSAS

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[illegible]

SEWER DETAILS

DATE: 09/02/2022	DRAWN: CCH
ADD FILE: 22105-SDP-R1	CHECKED: JME
WUG#: 1012044.XXXX	SHEET
SCALE: AS SHOWN	C024