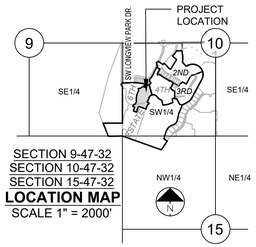
SANITARY SEWER MAIN PLANS
FOR
LUMBERMAN'S ROW

IN THE CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

LEGEND:

A/E	-	ACCESS EASEMENT
BC	-	BACK OF CURB
B/B	-	BACK TO BACK
BM	-	BENCHMARK
BL or B.L.	-	BUILDING LINE
CO	-	CLEANOUT
TJB	-	TELEPHONE JUNCTION BOX
C&G	-	CURB AND GUTTER
D/E	-	DRAINAGE EASEMENT
E/E	-	ELECTRICAL EASEMENT
EL	-	ELEVATION
FL	-	FLOW LINE
G/E	-	GAS LINE EASEMENT
HDPE	-	HIGH-DENSITY POLYETHYLENE
L/E	-	LANDSCAPE EASEMENT
MSFE	-	MINIMUM SERVICEABLE FLOOR ELEVATION
PVC	-	POLYVINYL CHLORIDE
P/L	-	PROPERTY LINE
PUB/E	-	PUBLIC EASEMENT
RCP	-	REINFORCED CONCRETE PIPE
ROW or R/W	-	RIGHT-OF-WAY
S/E	-	SANITARY SEWER EASEMENT
SL	-	SERVICE LINE
S/W	-	SIDEWALK
TE	-	TOP ELEVATION
U/E	-	UTILITY EASEMENT
WSE	-	WATER SURFACE ELEVATION
W/E	-	WATERLINE EASEMENT

ASPHALT PAVEMENT - EXISTING
ASPHALT PAVEMENT - PROPOSED
CONCRETE PAVEMENT - EXISTING
ASPHALT PAVEMENT - EXISTING
CONCRETE SIDEWALK - EXISTING
CONCRETE SIDEWALK - PROPOSED
CURB & GUTTER
CURB & GUTTER - EXISTING
TREELINE
EXISTING LOT AND R/W LINES
EXISTING PLAT LINES
P/L — PROPERTY LINES
ROW — RIGHT-OF-WAY
SANITARY SEWER MAIN
SANITARY SEWER MAIN - EXIST.
STO — STORM SEWER
STORM SEWER - EXISTING
CATV$_X$ — CABLE TV - EXISTING
FOC$_X$ — FIBER OPTIC CABLE - EXISTING
T$_X$ — TELEPHONE LINE - EXIST.
E$_X$ — ELECTRIC LINE - EXISTING
OHP$_X$ — OVERHEAD POWER LINE - EXIST.
UGE$_X$ — UNDERGROUND ELECTRIC - EX.
G$_X$ — GAS LINE - EXISTING
W$_X$ — WATERLINE - EXISTING
LIGHT - EXISTING
EXISTING MANHOLE
CO — CLEANOUT
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
AI — EXISTING AREA INLET
CI — EXISTING CURB INLET
GI — EXISTING GRATE INLET
JB — EXISTING JUNCTION BOX
D — EXISTING STORM MANHOLE



SECTION 9-47-32
SECTION 10-47-32
SECTION 15-47-32
LOCATION MAP
SCALE 1" = 2000'

UTILITY CONTACTS:

MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)
Steve Holloway
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 607-2186

MISSOURI GAS ENERGY (MGE)
Brent Jones
3025 SE Clover Drive
Lee's Summit, MO 64082
(816) 399-9633
brent.jones@spireenergy.com

EVERGY
Ron Dejarnette
1300 SE Hamblin Road
Lee's Summit, MO 64081
Office: (816) 347-4316
Cell: (816) 810-5234
ron.dejarnette@evergy.com

CITY OF LEES SUMMIT PUBLIC WORKS
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1800

AT&T
Mark Manion or Marty Loper
500 E. 8th Street, Room 370
Kansas City, MO 64106
(816) 275-2341 or (816) 275-1550

COMCAST CABLE
John Meadows
4700 Little Blue Parkway
Independence, MO 64057
(816) 795-2257

CITY OF LEE'S SUMMIT WATER UTILITIES
Mark Schaufler
1200 SE Hamblen Road
Lee's Summit, MO 64081
(816) 969-1900

GENERAL NOTES:

1. ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200
15. THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
16. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).

UTILITIES:

1. Existing utilities have been shown to the greatest extent possible based upon information provided to the Engineer. The contractor is responsible for contacting the respective utility companies and field locating utilities prior to construction and identifying any potential conflicts. All conflicts shall immediately be brought to the attention of the Engineer.
2. The contractor shall be responsible for coordinating any required utility relocations. Utilities damaged through the negligence of the contractor shall be repaired at the contractor's expense.
3. Contractor shall verify flow-lines and structure tops prior to construction, and shall notify Engineer of any discrepancies. Provide shop drawings for all precast and manufactured utility structures for review by the Engineer prior to construction of the structures.
4. Utility Separation: Waterlines shall have a minimum of 10 feet horizontal and 2 feet vertical separation from all sanitary sewer lines, manholes, and sanitary sewer service laterals, as measured from edge to edge. If minimum separations can not be obtained, concrete encasement of the sanitary line shall be required 10 feet in each direction of the conflict.
5. Payment for trenching, backfilling, pipe embedment, flowable fill, backfill materials, clean up, seeding, sodding and any other items necessary for the construction of the utility line shall be included in the contract price for the utility installation.
6. The Contractor shall be responsible for contacting respective utility companies 48-hours in advance for the inspection of any proposed utility main extension or service line or service connection to any existing main.
7. Trench spoils shall be neatly placed onsite adjacent to the trench, and compacted to prevent saturation and excess sediment runoff. Unsuitable materials, excess rock and shale, asphalt, concrete, trees, brush etc. shall be properly disposed of offsite. Materials may be wasted onsite at the direction of the Owner or his appointed representative.
8. All excavation is considered unclassified, unless noted otherwise. Unclassified excavation for utility trenching is subsidiary to the unit price provided for the pipe. Any quantity provided for rock excavation is estimated based on the best information provided to the Project Engineer. The Engineer has the authority to identify and define the physical characteristics to determine the classification. Unit price quantities for rock excavation will be paid at a trench width of the nominal pipe diameter of the installed main plus 18 inches. Contractor is required to dispose of excess rock from their trenches by disposing it in areas as specified by the Project Engineer.

SUMMARY OF QUANTITIES

	ITEM	QUANTITY	UNITS
1	8" PVC SDR 26	615	LF
3	6" PVC SDR 26	329	LF
4	8" x 6" WYE	8	EA
6	STANDARD 4' DIAMETER MANHOLE	2	EA
7	SEWER CONNECTION	1	EA
8	POST-CONST. BARREL ADJUSTMENT	1	EA
9	POST-CONST. RING (3"-12") ADJUSTMENT	1	EA
10	EXTRA DEPTH IN MANHOLE	19	VF
11	CLEARING & GRUBBING	1	LS
12	MANHOLE IN PAVED AREA	2	EA
13	MOBILIZATION	1	LS
14	EROSION CONTROL	1	LS
15	BONDS	1	LS

Sheet List Table

Sheet Number	Sheet Title
--	1 COVER
--	2 GENERAL LAYOUT
3	LINE D PLAN AND PROFILE
4	SANITARY DETAILS

MISSOURI ONE CALL SYSTEM, INC.
1-800-344-7483
STOP-CALL BEFORE YOU DIG!

OWNER/DEVELOPER:

NLV DEVELOPMENT COMPANY LLC
RUSSELL PEARSON
3152 SW GRANDSTAND CIRCLE
LEE'S SUMMIT, MO 64081
p 816-589-4415
f -
RPEARSON@BOXDEVCO.COM

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 W. 107th STREET • LENEXA, KANSAS 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000003800-F #LA2001005237 #LS2002000859-F

PREPARED BY:

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER PE-2003007268
PROFESSIONAL ENGINEER
05.13.22

SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
SANITARY SEWER MAIN PLANS
---- LEE'S SUMMIT, MISSOURI

REVISION	DATE	DESCRIPTION
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DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-13-22
PROJ. NUMBER: 22-034

1 COVER

SHEET

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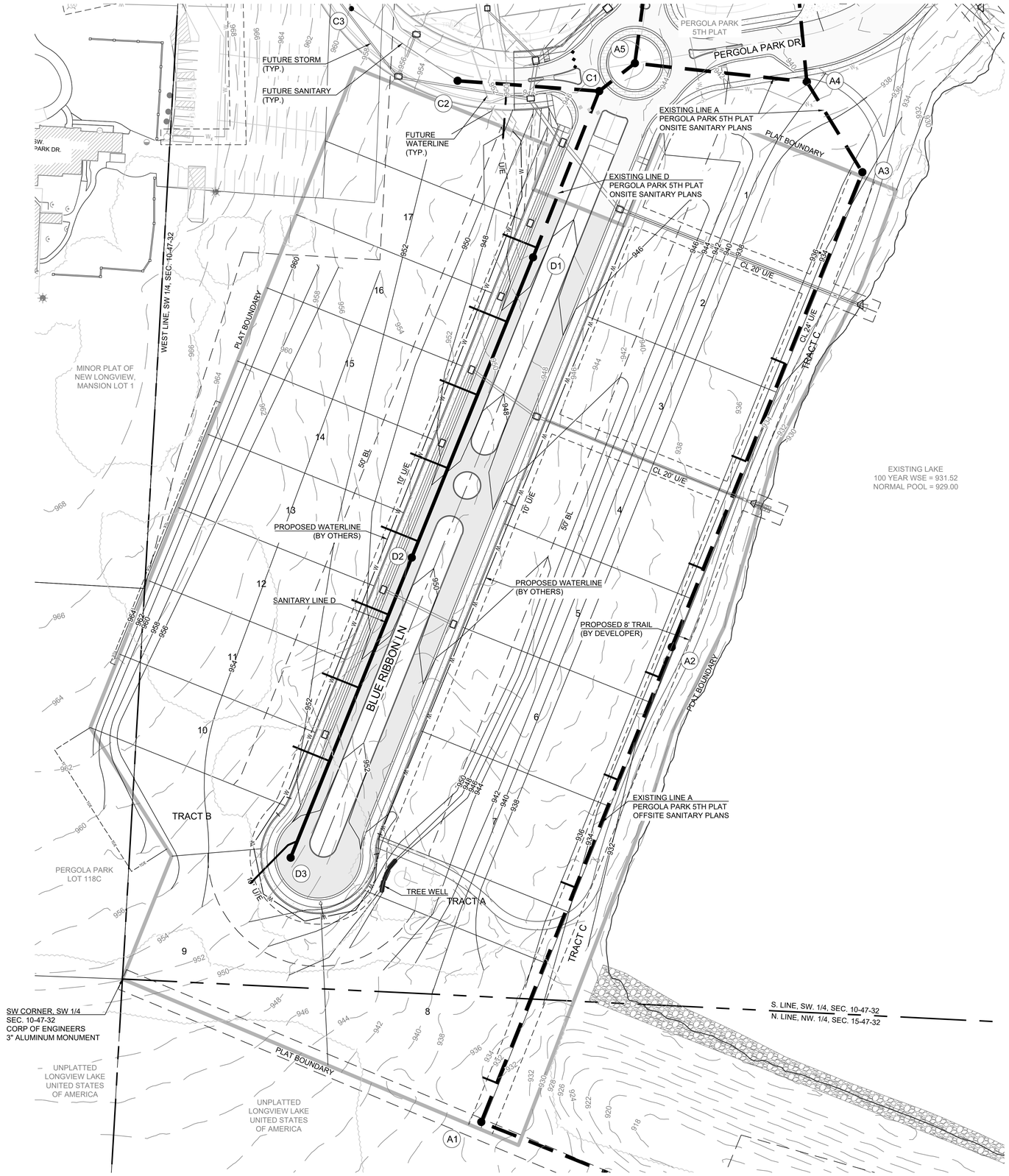
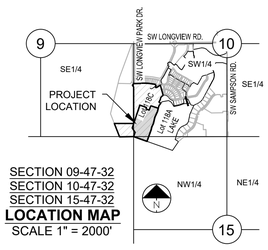


NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
3. ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
4. ALL EXCAVATION IS CONSIDERED UNCLASSIFIED.
5. ALL SERVICE STUB LINES SHALL HAVE A MINIMUM PIPE STIFFNESS OF SDR-26.
6. ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.
7. ALL SERVICE STUBS SHALL BE 90° TO THE MAIN, UNLESS OTHERWISE NOTED.
8. REFERENCE "MANHOLE IN PAVED AREA" DETAIL FOR MANHOLES PROPOSED IN ASPHALT OR CONCRETE PAVEMENT.
9. PROPOSED GRADING IS FOR REFERENCE ONLY. CONTRACTOR IS TO GRADE WITHIN THE LIMITS OF DISTURBANCE AND PROVIDE SANITARY COVER AS REQUIRED BY THE CITY'S TECHNICAL SPECIFICATIONS.



SECTION 09-47-32
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LOCATION MAP
SCALE 1" = 2000'

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SURVEY NOTES

The bases of bearing and coordinates are base on the Missouri Coordinate System of 1983, West Zone (2003 Adjustment) with a Grid Factor of 0.9999020.

0 50' 100'
SCALE: 1" = 50'

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PREPARED BY:

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER PE-2003007268
PROFESSIONAL ENGINEER
05.13.22

SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW SANITARY SEWER MAIN PLANS

---- LEE'S SUMMIT, MISSOURI

REVISION	DATE	DESCRIPTION
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DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	5-13-22
PROJ. NUMBER:	22-034

2 GENERAL LAYOUT

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SANITARY CROSSING TABLE

ID	SAN ELEV.	STORM/WATER ELEV.	SAN SIZE	STORM\WATER SIZE	VERTICAL SEPARATION	RCE/CRCE REQUIRED?
1	934.40	939.47	8" PVC	24" HDPE	5.07	NO
2	935.12	940.33	6" PVC	18" HDPE	5.21	NO
3	936.24	941.60	6" PVC	18" HDPE	5.36	NO
4	937.39	942.43	8" PVC	18" HDPE	5.04	NO
5	937.85	943.67	6" PVC	15" HDPE	5.82	NO
6	938.49	943.73	6" PVC	18" HDPE	5.24	NO
7	939.24	944.48	6" PVC	18" HDPE	5.24	NO

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NOTES:

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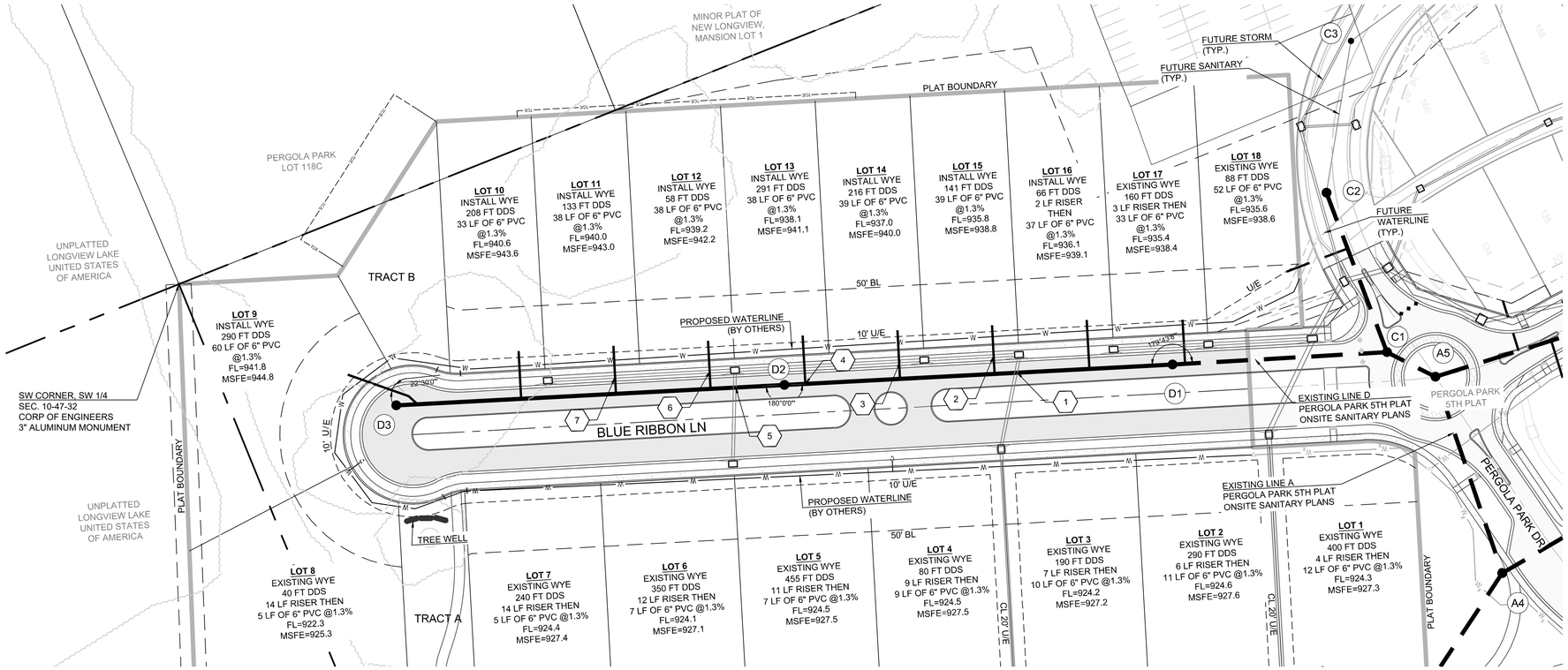
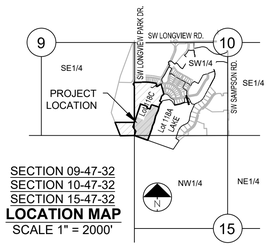
3. ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
4. ALL EXCAVATION IS CONSIDERED UNCLASSIFIED.
5. ALL SERVICE STUB LINES SHALL HAVE A MINIMUM PIPE STIFFNESS OF SDR-26.
6. MSFE = MINIMUM SERVICEABLE FLOOR ELEVATION
7. SSNR = SEWER SERVICE NOT REQUIRED
8. DDS = DISTANCE DOWNSTREAM
9. WSE = WATER SURFACE ELEVATION
10. ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.
11. TRACER WIRE SHALL BE INSTALLED ALONG THE TOP OF SERVICE STUBS. THE WIRE SHALL HAVE HDPE INSULATION, BE NO SMALLER THAN 12 GAUGE, AND INTENDED FOR UNDERGROUND APPLICATIONS. THE TRACER WIRE SHALL BE GREEN IN COLOR. TRACER WIRES SHALL TERMINATE AT THE GROUND SURFACE INSIDE A TRACER BOX. TRACER BOX LIDS SHALL BE GREEN IN COLOR. TRACER WIRE SHALL BE GROUNDED A MINIMUM ONE POUND MAGNESIUM ANODE AT THE SEWER LINE.
12. ALL SERVICE STUBS SHALL BE 90° TO THE MAIN, UNLESS OTHERWISE NOTED.
13. REFERENCE "MANHOLE IN PAVED AREA" DETAIL FOR MANHOLES PROPOSED IN ASPHALT OR CONCRETE PAVEMENT.

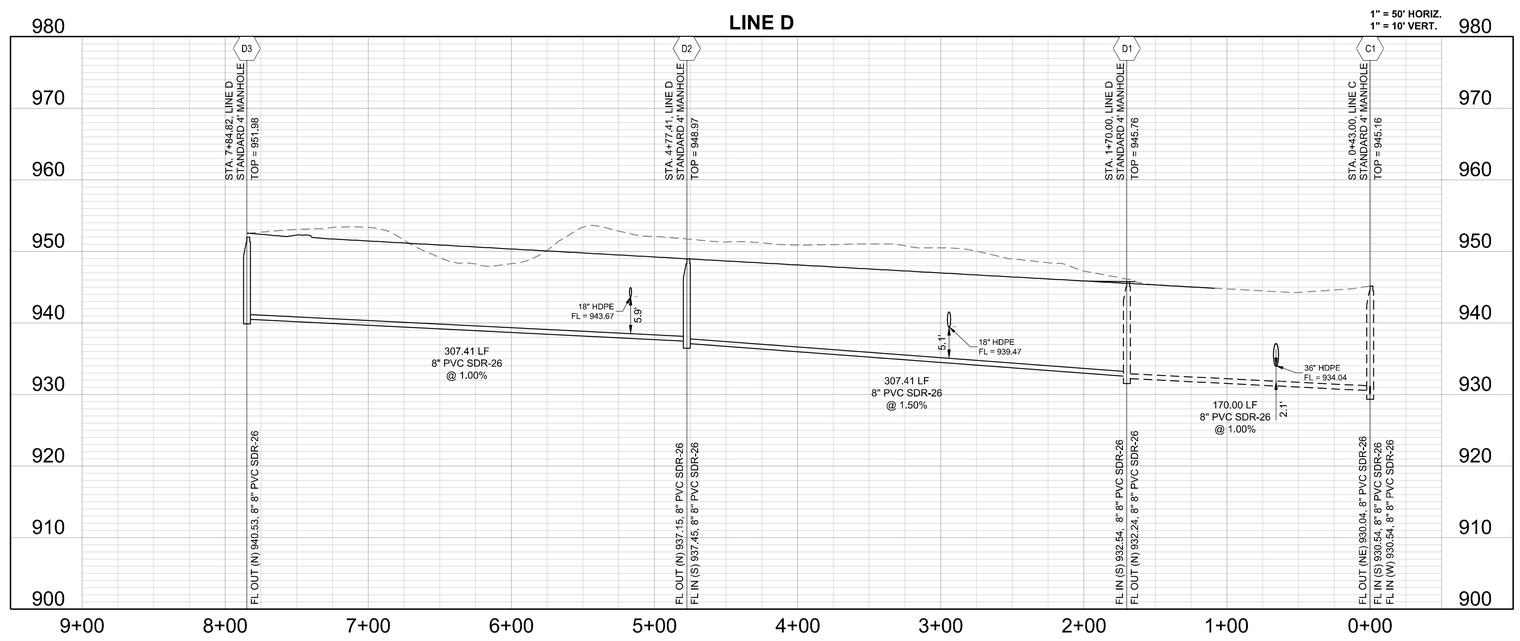




SECTION 09-47-32
SECTION 10-47-32
SECTION 15-47-32
LOCATION MAP
SCALE 1" = 2000'

SCALE: 1" = 50'

Structure Table		
Structure Name	Structure Northing	Structure Easting
C1	995601.3816	2802880.5143
D1	995443.4277	2802817.6607
D2	995158.3607	2802702.6031
D3	994873.2937	2802587.5456



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PREPARED BY:

STATE OF MISSOURI — MARK ALLEN BREUER — NUMBER PE-2003007268 — PROFESSIONAL ENGINEER
05.13.22

SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW SANITARY SEWER MAIN PLANS

---- LEE'S SUMMIT, MISSOURI

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DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-13-22
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LINE D PLAN AND PROFILE

SHEET 3

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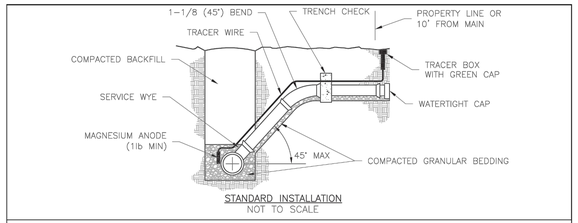
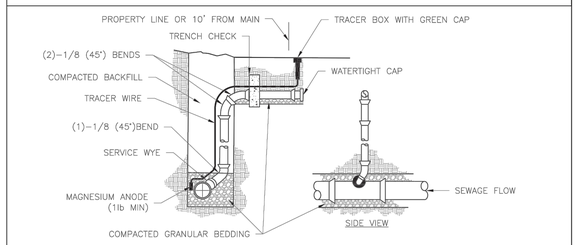


STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

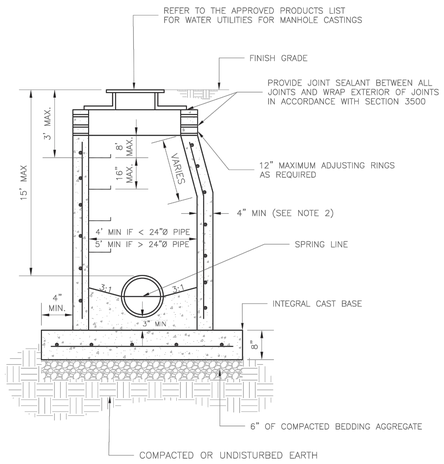
NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Date: 12/2015
Drawn By: MJF
Checked By: DL

SANITARY SEWER STUB DETAIL — SAN-1



NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

LEE'S SUMMIT
MISSOURI
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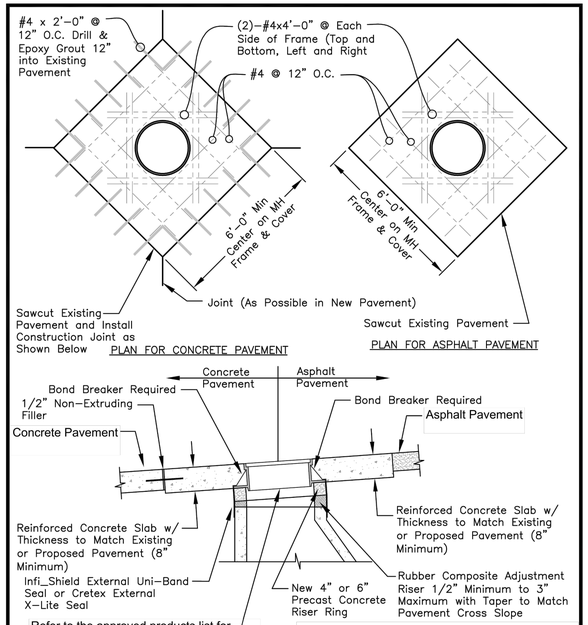
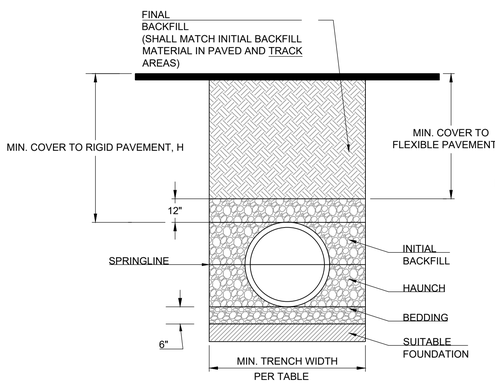
Date: 12/2015
Drawn By: SC
Checked By: DL

STANDARD SANITARY PRECAST MANHOLE — SAN-2



MANHOLE IN PAVED AREA
DETAIL



PIPE EMBEDMENT FOR SANITARY PIPE

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION

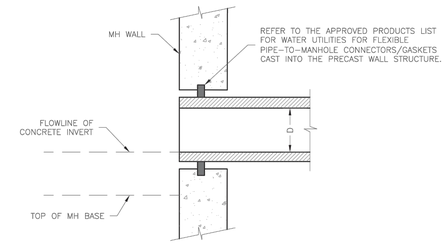
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

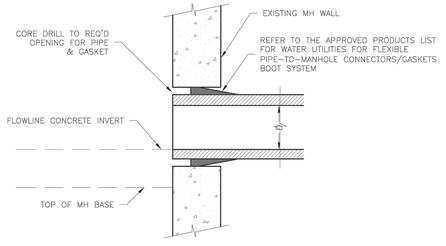
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 6" (100mm) .

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND



NEW MANHOLE



EXISTING MANHOLE

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Date: 02/2013
Drawn By: MJF
Checked By: DL

MANHOLE WALL CONNECTION — SAN-5

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 W. 107th STREET • LENEXA, KANSAS 66215
(913) 492-5158 • Fax: (913) 492-8400
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Missouri State Certificates of Authority
#E2000003800-F #LA2001005237 #LS2000008859-F

PREPARED BY:

STATE OF MISSOURI — MARK ALLEN BREUER — NUMBER PE-2003007268 — PROFESSIONAL ENGINEER
05.13.22

SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW SANITARY SEWER MAIN PLANS

---- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-13-22
PROJ. NUMBER: 22-034

SANITARY DETAILS

SHEET 4

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