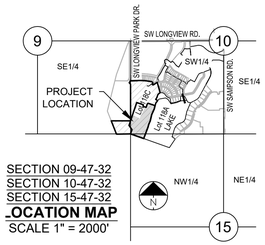
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL
FOR
LUMBERMAN'S ROW
IN THE CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

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
- 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 09-47-32
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

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

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 DEVELOPMENT SERVICES 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).

STREET NOTES:

1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
2. ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
3. CURB RETURN RADII SHALL BE 25' AT BACK OF CURB UNLESS OTHERWISE NOTED.
4. SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. ASSUMED DESIGN SPEED = 25 MPH (COLLECTOR).
6. MINIMUM STOPPING SIGHT DISTANCE = 155 FEET.
7. MINIMUM K, SAG CURVE = 26 (14 WITH LIGHTING), CREST CURVE = 12.
8. GRADE INTERSECTIONS TO DRAIN AS SHOWN.
9. SSD = STOPPING SIGHT DISTANCE.
10. ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

SUMMARY OF QUANTITIES

	ITEM	QUANTITY	UNITS
1	CLEANING, GRUBBING, AND DISPOSAL	1	L.S.
2	GRADING	1	L.S.
3	SUBGRADE STABILIZATION (PUBLIC STREETS)	3896	S.Y.
4	6" ASPHALT	3165	S.Y.
5	TYPE CG-2 CURB	1461	L.F.
6	TYPE C1 CURB	1239	L.F.
7	5' SIDEWALK	1498	L.F.
8	15" HDPE	149	L.F.
9	18" HDPE	501	L.F.
10	24" HDPE	143	L.F.
11	24" RCP	219	L.F.
12	6' x 4" CURB INLET	9	EA.
13	24" RCP END SECTION	1	EA.
14	EROSION CONTROL	1	L.S.
15	SEEDING/MULCHING	1	L.S.
16	BONDS	1	L.S.

RECORD DRAWING

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Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

EARTHWORK:

1. It is recommended that a Geotechnical Engineer observe and document all earthwork activities.
2. Contours have been shown at 1-foot or 2-foot intervals, as indicated. Grading shall consist of completing the earthwork required to bring the physical ground elevations of the existing site to the finished grade (or sub-grade) elevations provided on the plans as spot grades, contours or others means as indicated on the plans.
3. The existing site topography depicted on the plans by contouring has been established by aerial photography and field verified by g.p.s. observation near 2-20-19.The contour elevations provided may not be exact ground elevations, but rather interpretations of such. Accuracy shall be considered to be such that not more than 10 percent of spot elevation checks shall be in error by more than one-half the contour interval provided, as defined by the National Map Accuracy Standards. Any quantities provided for earthwork volumes are established using this topography contour accuracy, and therefore the inherent accuracy of any earthwork quantity is assumed from the topography accuracy.
4. Proposed contours are to approximate finished grade.
5. Unless otherwise noted, payment for earthwork shall include backfilling of the curb and gutter, sidewalk and further manipulation of utility trench spoils. The site shall be left in a mowable condition and positive drainage maintained throughout.
6. Unless otherwise noted, all earthwork is considered Unclassified. No additional compensation will be provided for rock or shale excavation, unless specifically stated otherwise.
7. Prior to earthwork activities, pre-disturbance erosion and sediment control devices shall be in place per the Storm Water Pollution Prevention plan and/or the Erosion and Sediment Control Plan prepared for this site.
8. All topsoil shall be stripped from all areas to be graded and stockpiled adjacent to the site at an area specified by the project owner or his appointed representative. Vegetation, trash, trees, brush, tree roots and limbs, rock fragments greater then 6-inches and other deleterious materials shall be removed and properly disposed of offsite or as directed by the owner or his appointed representative.
9. Unless otherwise specified in the Geotechnical Report, all fills shall be placed in maximum 6-inch lifts and compacted to 95-percent of maximum density as defined using a standard proctor test (AASHTO T99/ASTM 698).
10. Fill materials shall be per Geotechnical Report and shall not include organic matter, debris or topsoil. All fills placed on slopes greater than 6:1 shall be benched.
11. The Contractor shall be responsible for redistributing the topsoil over proposed turf and landscaped areas to a minimum depth of 6-inches below final grade.
12. All areas shall be graded for positive drainage. Unless noted otherwise the following grades shall apply:
    a. Turf Areas – 2.5% Minimum, 4H:1V Maximum
    b. Paved Areas – 1.2% Minimum, 5% Maximum
13. All disturbed areas shall be fertilized, seeded and mulched immediately after earthwork activities have ceased. Seeding shall be per the Erosion and Sediment Control Plan and/or Landscape Plan. If not specified seeding shall be per APWA Section 2400, latest edition. Unless otherwise noted, seeding shall be subsidiary to the contract price for earthwork and grading activities.
14. All disturbed areas in the right-of-way shall be sodded.
15. Underdrains are recommended for all paved areas adjacent to irrigated turf and landscaped beds.
16. Contractor shall adhere to the reporting requirements outlined in the Storm Water Pollution Prevention Plan (SWPPP) prepared for this project. Erosion and Sediment control devices shall be properly maintained and kept clean of silt and debris and in good working order. Additional erosion and sediment control measures shall be installed as required.

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.

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL LAYOUT
3	MASTER DRAINAGE PLAN - GRADING PLAN
4	MASTER DRAINAGE PLAN - LOT INFO
5	MASTER DRAINAGE PLAN - DRAINAGE MAP
6	MASTER DRAINAGE PLAN - DRAINAGE CALCS
7	MASTER DRAINAGE PLAN - DRAINAGE CALCS CONT
8	CORINTHIAN LANE PLAN & PROFILE
9	INTERSECTION DETAILS
10	STORM PLAN
11	STORM PROFILES
12	STREET DETAILS
13	STORM DETAILS

APPROVED BY:

CITY ENGINEER — DATE
APPROVED FOR ONE YEAR FROM THIS DATE

OWNER/DEVELOPER:

NLV PERGOLA PARK LLC
RUSSELL PEARSON
3152 SW GRANDSTAND CIRCLE
LEE'S SUMMIT, MO 64081
p 816-589-4415
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) 492-6161 • Fax (913) 492-0400
WWW.SCHLAGELASSOCIATES.COM
Kansas State Certificates of Authority
#E-296 #LA-29 #LS-54

PREPARED BY:

MARK ALLEN BREUER — NUMBER PE-2009007268 — STATE OF MISSOURI — PROFESSIONAL ENGINEER

08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

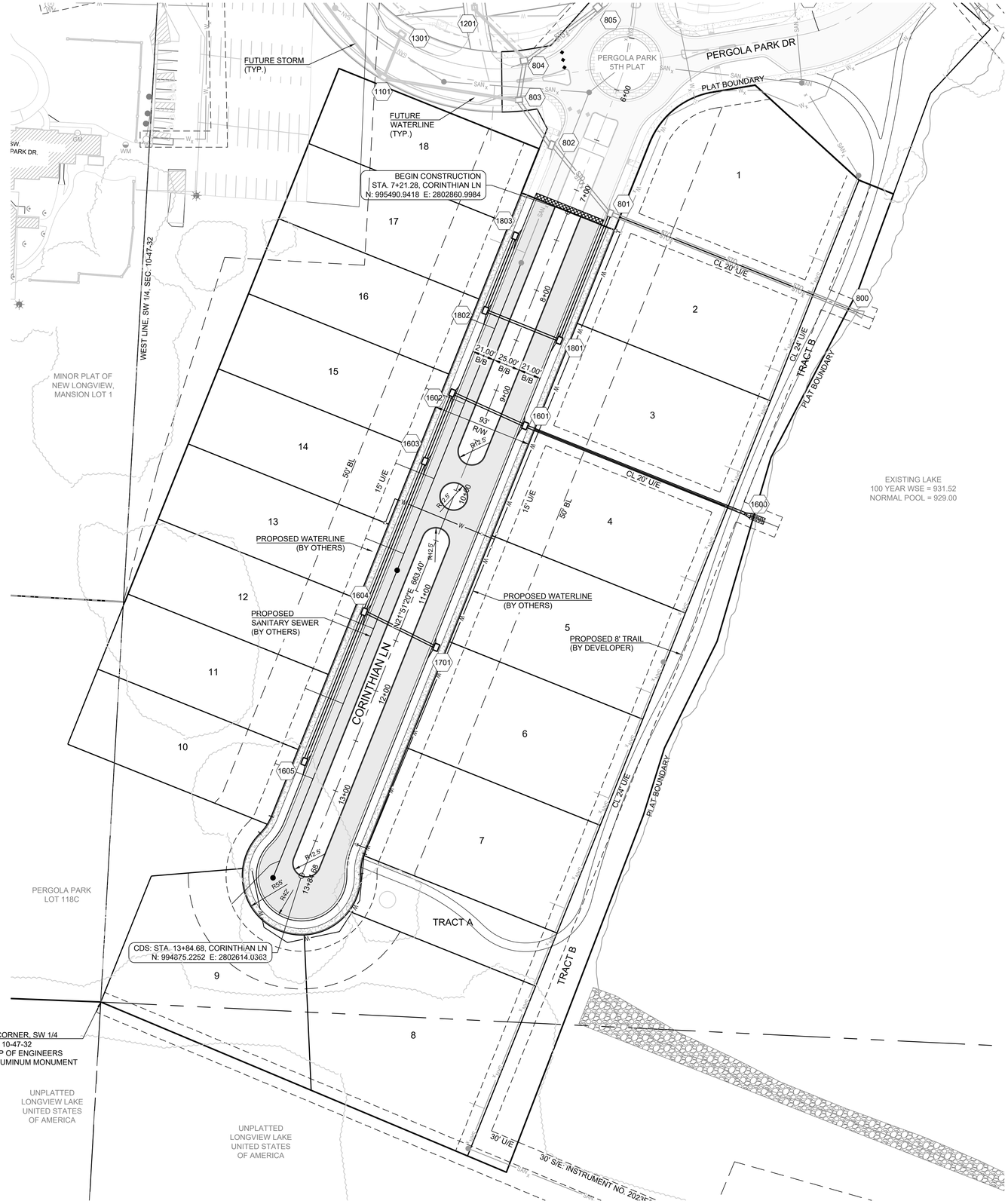
LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-8-23	AS-BUILTS
3	
4	
5	
6	
7	
8	

DRAWN BY: ####
CHECKED BY: ####
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

COVER SHEET

SHEET 1



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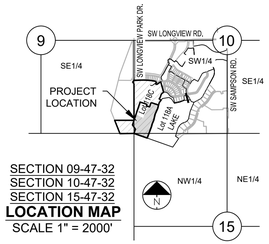
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.



SECTION 09-47-32
SECTION 10-47-32
SECTION 15-47-32
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.

SCALE: 1" = 50'

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PREPARED BY:

MARK ALLEN BREUER
NUMBER PE-2009007268
STATE OF MISSOURI
PROFESSIONAL ENGINEER
08.08.2023
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STREET, STORMWATER, MASTER DRAINAGE
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REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
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3	
4	
5	
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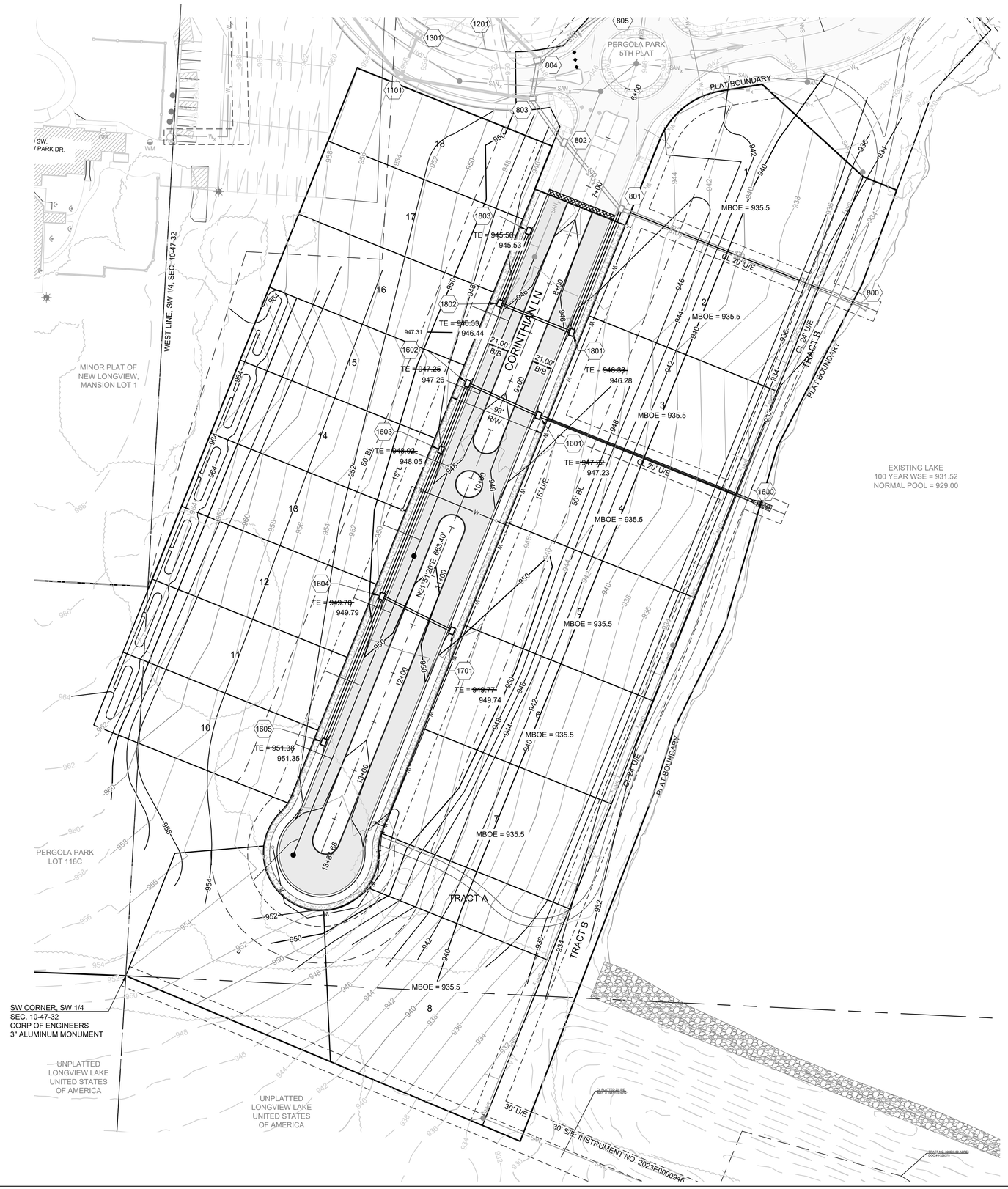
7	
8	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

GENERAL LAYOUT

SHEET 2



EARTHWORK SUMMARY	
CUT	24,183 CY
FILL	20,290 CY
NET	3,893 CY CUT

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Title: Design Engineer
Firm: Schlagel and Associates, P.A.

NOTE:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

950 DENOTES PROPOSED MAJOR CONTOUR

950 DENOTES PROPOSED MINOR CONTOUR

950 DENOTES EXISTING MAJOR CONTOUR

950 DENOTES EXISTING MINOR CONTOUR

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LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

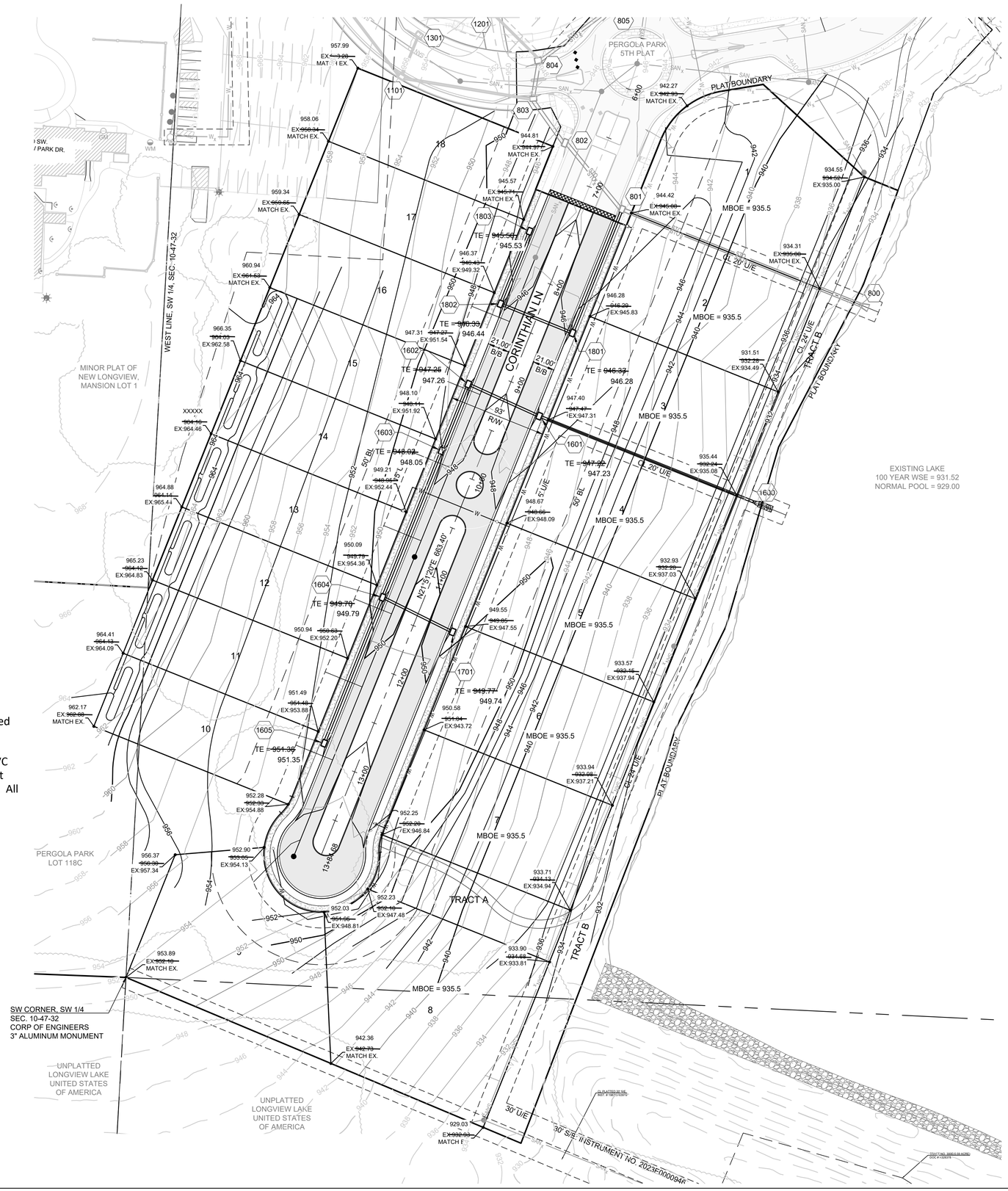
DESCRIPTION	REVISION DATE
CITY COMMENTS	8-12-22
AS-BUILTS	8-8-23

DRAWN BY:	CHECKED BY:	DATE PREPARED:	PROJ. NUMBER:
BAL	MAB	5-6-22	22-034

MASTER DRAINAGE PLAN - GRADING PLAN

SHEET 3

I:\PROJECTS\2022\22-034\3.0 Design\3.0 DWG Panel\6.0 SS\22-034-SS-GRAD.dwg, 3 MASTER DRAINAGE PLAN - GRADING PLAN, 8/8/2023 2:08:10 PM, 1:1



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Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

LOT TYPE TABLE

LOT #	BASEMENT TYPE	FRONT MBOE	REAR MBOE	AS-BUILT FRONT MBOE	AS-BUILT REAR MBOE
1	WALKOUT	945.60	935.50	944.90	935.50
2	WALKOUT	946.40	935.50	946.80	935.50
3	WALKOUT	948.00	935.50	947.90	935.50
4	WALKOUT	948.60	935.50	949.20	935.50
5	WALKOUT	950.40	935.50	950.05	935.50
6	WALKOUT	951.60	935.50	951.10	935.50
7	WALKOUT	947.40	935.50	952.75	935.50
8	WALKOUT	952.00	935.50	952.75	935.50
9	STANDARD	953.60	952.60	953.40	954.40
10	STANDARD	952.90	952.90	952.80	952.80
11	STANDARD	952.00	952.00	952.00	952.00
12	STANDARD	951.20	951.20	951.50	951.50
13	STANDARD	950.30	950.30	950.60	950.60
14	STANDARD	949.50	949.50	949.70	949.70
15	STANDARD	948.70	948.70	948.60	948.60
16	STANDARD	947.80	947.80	947.80	947.80
17	STANDARD	947.00	947.00	946.90	946.90
18	STANDARD	946.30	946.30	946.10	946.10

ALL LOTS TO REQUIRE AS-GRADED PLOT PLANS

NOTE:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

950 DENOTES PROPOSED MAJOR CONTOUR
950 DENOTES PROPOSED MINOR CONTOUR
950 DENOTES EXISTING MAJOR CONTOUR
950 DENOTES EXISTING MINOR CONTOUR
950 DENOTES AS-BUILT MAJOR CONTOUR
950 DENOTES AS-BUILT MINOR CONTOUR

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

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'

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2002008859-F

PREPARED BY:

MARK ALLEN BREUER
NUMBER PE-2009007268
STATE OF MISSOURI
PROFESSIONAL ENGINEER
08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

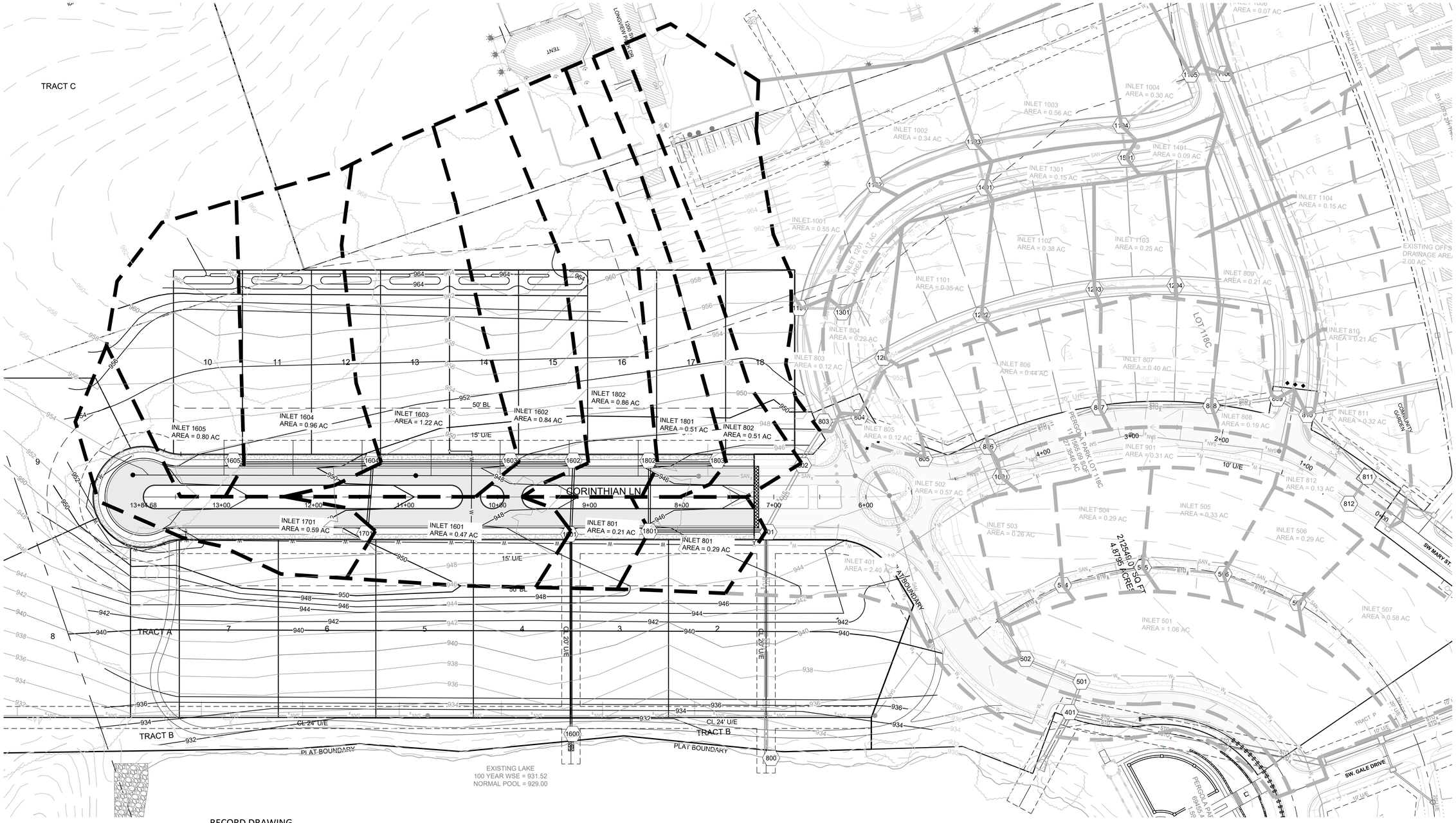
LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-8-23	AS-BUILTS
3	
4	
5	
6	
7	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

MASTER DRAINAGE PLAN - LOT INFO

SHEET 4



RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by Schlagel and Associates.

"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

PROPOSED DRAINAGE
EXISTING DRAINAGE
FUTURE DRAINAGE

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

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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

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

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PREPARED BY:

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER PE-2009007268
PROFESSIONAL ENGINEER

08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
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- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
8-12-22	CITY COMMENTS
8-8-23	AS-BUILTS

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-8-22
PROJ. NUMBER: 22-034

MASTER DRAINAGE PLAN - DRAINAGE MAP

SHEET 5

10-YEAR RUNOFF CALCULATIONS

Design Storm: 10
"K" Value: 1.00
"F" Factor: 1.00

EXISTING 5TH PLAT
FUTURE 6TH PLAT

Runoff Calculations															Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
EXISTING LINE 400																									DS TAILWATER @ STR #400	929.00
401	2.40	0.66	46.76	30.86	5.7	7.13	11.29	220.00	220.20	9.27	501		3.38	2.23	401	400	RCP	0.013	66	53.87	0.43	0.50	927.98	927.75	936.98	933.27
402	0.04	0.66	40.98	27.05	5.4	7.24	0.19	195.88	286.92	12.08			0.00	0.00	402	401	RCP	0.013	66	279.37	0.73	0.50	930.42	928.38	941.97	935.25
403	0.07	0.66	40.94	27.02	5.3	7.27	0.34	196.43	300.36	12.64	601		0.90	0.59	403	402	RCP	0.013	66	68.66	0.80	0.50	931.17	930.62	944.37	936.00
404	0.06	0.66	39.97	26.38	5.1	7.32	0.29	193.18	270.74	11.40	701		1.41	0.93	404	403	RCP	0.013	66	119.40	0.65	1.00	932.35	931.57	948.40	937.14
405	38.50	0.66	38.50	25.41	5.0	7.35	186.84	186.84	251.06	15.79			0.00	0.00	405	404	RCP	0.013	54	92.89	1.63	N/A	934.86	933.35	947.96	940.04
EXISTING LINE 600																				Drop in Inlet 403		4.00				
601	0.36	0.66	0.90	0.59	5.1	7.33	1.74	4.35	19.45	11.00			0.00	0.00	601	403	HDPE	0.012	18	36.00	2.92	0.50	936.02	934.97	944.39	937.04
602	0.54	0.66	0.54	0.36	5.0	7.35	2.62	2.62	13.70	11.16			0.00	0.00	602	601	HDPE	0.012	15	55.86	3.83	N/A	938.53	936.39	946.23	939.31
EXISTING LINE 700																				Drop in Inlet 404		4.25				
701	1.14	0.66	1.41	0.93	5.1	7.32	5.51	6.82	9.26	7.54			0.00	0.00	701	404	PEP	0.012	15	102.48	1.75	0.50	941.69	939.90	949.19	943.04
702	0.27	0.66	0.27	0.18	5.0	7.35	1.31	1.31	7.10	5.79			0.00	0.00	702	701	PEP	0.012	15	33.00	1.03	N/A	942.48	942.14	949.13	943.04
EXISTING LINE 500																				Drop in Inlet 401		3.00				
501	1.06	0.66	3.38	2.23	6.2	7.01	4.90	15.64	28.10	5.73			0.00	0.00	501	401	PEP	0.012	30	35.50	0.40	0.45	931.12	930.98	936.98	933.39
502	0.57	0.66	2.32	1.53	6.0	7.05	2.65	10.79	24.51	7.80			0.00	0.00	502	501	PEP	0.012	24	65.53	1.00	0.50	932.23	931.57	937.83	933.65
503	0.26	0.66	1.75	1.16	5.9	7.08	1.22	8.18	24.51	7.80			0.00	0.00	503	502	PEP	0.012	24	51.05	1.00	0.50	933.24	932.73	939.40	934.46
504	0.29	0.66	1.49	0.98	5.7	7.13	1.37	7.02	12.47	7.05			0.00	0.00	504	503	PEP	0.012	18	78.60	1.20	0.50	934.68	933.74	940.30	935.94
505	0.33	0.66	1.20	0.79	5.5	7.20	1.57	5.70	11.38	6.44			0.00	0.00	505	504	PEP	0.012	18	88.86	1.00	0.50	936.07	935.18	941.62	937.19
506	0.29	0.66	0.87	0.57	5.3	7.28	1.39	4.18	7.34	5.98			0.00	0.00	506	505	PEP	0.012	15	87.96	1.10	0.50	937.54	936.57	942.92	938.55
507	0.58	0.66	0.58	0.38	5.0	7.35	2.81	2.81	7.00	5.70			0.00	0.00	507	506	PEP	0.012	15	86.70	1.00	N/A	938.90	938.04	943.98	939.71
EXISTING LINE 800																									DS TAILWATER @ STR #800	929.00
801	0.29	0.51	8.77	5.30	6.6	6.89	1.02	36.54	66.70	9.44	1801		1.57	0.80	801	800	RCP	0.013	36	243.24	1.00	2.50	930.93	928.50	944.84	933.33
802	1.38	0.51	6.91	4.35	6.5	6.93	4.88	30.17	68.55	9.70			0.00	0.00	802	801	PEP	0.012	36	83.38	0.90	0.50	934.18	933.43	944.41	936.33
803	0.12	0.66	5.53	3.65	6.3	6.96	0.55	25.41	51.09	7.23	1101		2.32	1.53	803	802	PEP	0.012	36	51.75	0.50	0.50	934.94	934.68	948.20	936.90
804	0.22	0.66	3.09	2.04	6.2	6.99	1.01	14.25	31.42	6.40	1201		1.13	0.75	804	803	PEP	0.012	30	36.23	0.50	0.50	935.62	935.44	948.20	937.14
805	0.12	0.66	1.74	1.15	6.0	7.05	0.56	8.10	31.42	6.40			0.00	0.00	805	804	PEP	0.012	30	84.51	0.50	0.50	936.55	936.12	946.57	937.67
806	0.40	0.66	1.62	1.07	5.8	7.10	1.88	7.59	31.42	6.40	1001		0.31	0.20	806	805	PEP	0.012	30	69.15	0.50	0.50	937.39	937.05	945.85	938.48
807	0.40	0.66	0.91	0.60	5.5	7.20	1.90	4.32	31.42	6.40			0.00	0.00	807	806	PEP	0.012	30	127.94	0.50	0.50	938.53	937.89	947.25	939.34
808	0.19	0.66	0.51	0.34	5.2	7.30	0.91	2.46	31.42	6.40			0.00	0.00	808	807	PEP	0.012	30	121.88	0.50	0.50	939.64	939.03	948.73	940.24
809	0.32	0.66	0.32	0.21	5.0	7.35	1.55	1.55	31.42	6.40			0.00	0.00	809	808	PEP	0.012	30	72.14	0.50	0.50	940.50	940.14	950.54	940.98
810	0.21	0.66	0.21	0.14	5.0	7.35	1.02	1.02	31.42	6.40			0.00	0.00	810	809	PEP	0.012	30	37.09	0.50	0.50	941.19	941.00	950.13	941.57
811	2.32	0.66	2.63	1.74	5.1	7.31	11.19	12.69	31.42	6.40			0.00	0.00	811	810	PEP	0.012	30	93.67	0.50	1.25	942.15	941.69	948.43	943.58
812	0.13	0.66	0.13	0.09	5.0	7.35	0.63	0.63	4.95	4.03			0.00	0.00	812	811	PEP	0.012	15	35.50	0.50	N/A	943.58	943.40	948.43	943.94
EXISTING LINE 1000																				Drop in Inlet 806		1.25				
1001	0.31	0.66	0.31	0.20	5.0	7.35	1.50	1.50	4.95	4.03			0.00	0.00	1001	806	PEP	0.012	15	35.00	0.50	N/A	938.82	938.64	945.85	939.39
FUTURE LINE 1100																				Drop in Inlet 803		1.50				
1101	0.55	0.66	2.32	1.53	6.0	7.05	2.56	10.79	30.32	17.16	1301		0.17	0.11	1101	803	PEP	0.012	18	127.32	7.10	0.50	945.48	936.44	954.50	947.10
1102	0.34	0.66	1.60	1.06	5.8	7.11	1.60	7.51	13.28	10.82			0.00	0.00	1102	1101	PEP	0.012	15	155.72	3.60	0.50	951.59	945.98	961.72	953.01
1103	0.56	0.66	1.26	0.83	5.6	7.17	2.65	5.96	12.12	9.88	1401		0.15	0.10	1103	1102	PEP	0.012	15	117.18	3.00	0.50	955.60	952.09	964.38	956.85
1104	0.30	0.66	0.55	0.36	5.3	7.26	1.44	2.63	11.61	9.46	1501		0.09	0.06	1104	1103	PEP	0.012	15	161.35	2.75	0.50	960.54	956.10	966.89	961.31
1105	0.09	0.66	0.16	0.11	5.1	7.32	0.43	0.77	9.26	7.54			0.00	0.00	1105	1104	PEP	0.012	15	93.36	1.75	0.50	962.67	961.04	969.80	963.07
1106	0.07	0.66	0.07	0.05	5.0	7.35	0.34	0.34	7.00	5.70			0.00	0.00	1106	1105	PEP	0.012	15	37.07	1.00	N/A	963.54	963.17	969.53	963.81
FUTURE LINE 1200																				Drop in Inlet 804		1.25				
1201	0.35	0.66	1.13	0.75	5.6	7.18	1.66	5.35	18.52	15.09			0.00	0.00	1201	804	PEP	0.012	15	67.70	7.00	0.50	941.61	936.87	950.33	942.78
1202	0.38	0.66	0.78	0.51	5.4	7.23	1.81	3.72	13.09	10.67			0.00	0.00	1202	1201	PEP	0.012	15	113.91	3.50	0.50	946.10	942.11	952.68	947.04
1203	0.25	0.66	0.40	0.26	5.2	7.30	1.20	1.93	11.06	9.02			0.00	0.00	1203	1202	PEP	0.012	15	125.72	2.50	0.50	949.74	946.60	955.28	950.40
1204	0.15	0.66	0.15	0.10	5.0	7.35	0.73	0.73	11.06	9.02			0.00	0.00	1204	1203	PEP	0.012	15	88.30	2.50	N/A	952.45	950.24	957.10	952.84
FUTURE LINE 1300																				Drop in Inlet 1101		0.50				
1301	0.17	0.66	0.17	0.11	5.0	7.35	0.83	0.83	15.65	12.75			0.00	0.00	1301	1101	PEP	0.012	15	43.48	5.00	N/A	948.16	945.98	954.89	948.57
FUTURE LINE 1400																				Drop in Inlet 1103		0.50				
1401	0.15	0.66	0.15	0.10	5.0	7.35	0.73	0.73	14.00	11.41			0.00	0.00	1401	1103	PEP	0.012	15	51.01	4.00	N/A	958.14	956.10	964.36	958.53
FUTURE LINE 1500																				Drop in Inlet 1104		0.50				
1501	0.09	0.66	0.09	0.06	5.0	7.35	0.44	0.44	4.95	4.03			0.00	0.00	1501	1104	PEP	0.012	15	35.13	0.50	N/A	961.22	961.04	966.94	#VALUE!
LINE 1600																									DS TAILWATER @ STR #1600	929.00
1601	0.47	0.51	4.29	2.19	6.1	7.04	1.69	15.40	31.99	10.18			0.00	0.00	1601	1600	RCP	0.013	24	219.15	2.00	3.00	935.29	930.91	947.22	937.03
1602	0.84	0.51	3.82	1.95	5.9	7.08	3.03	13.80	25.70	8.18			0.00	0.00	1602	1601	PEP	0.012	24	74.06	1.10	0.50	939.11	938.29	947.25	940.74
1603	1.22	0.51	2.98	1.52	5.8	7.13	4.43	10.83	24.51	7.80			0.00	0.00	1603	1602	PEP	0.012	24	68.27	1.00	0.50	940.29	939.61	948.02	941.71
1604	0.96	0.51	1.76	0.90	5.4	7.24	3.54	6.49	11.94	6.75			0.00	0.00	1604	1603	PEP	0.012	18	150.42	1.10	0.50	942.44	940.79	949.70	943.65
1605	0.80	0.51	0.80	0.41	5.0	7.35	3.00	3.00	11.38	6.44			0.00	0.00	1605	1604	PEP	0.012	18	149.50	1.00	N/A	944.44	942.94	951.38	945.22
LINE 1700																				Drop in Inlet 1604		0.50				
1701	0.59	0.51	0.59	0.30	5.0	7.35	2.21	2.21	7.00	5.70			0.00	0.00	1701	1604	PEP	0.012	15	74.21	1.00	N/A	943.69	942.94	949.77	944.40
LINE 1800																				Drop in Inlet 801		6.50				
1801	0.20	0.51	1.57	0.80	5.4	7.23	0.74	5.79	11.38	6.44			0.00	0.00	1801	801	PEP	0.012	18	126.83	1.00	0.50	938.70	937.43	946.33	939.83
1802	0.86	0.51	1.37	0.70	5.2	7.29	3.20	5.09	11.38	6.44			0.00	0.00	1802	1801	PEP	0.012	18	74.00	1.00	0.50	939.94	939.20	946.33	940.99
1803	0.51	0.51	0.51	0.26	5.0	7.35	1.91	1.91	7.00	5.70			0.00	0.00	1803	1802	PEP	0.012	15	74.45	1.00	N/A	941.19	940.44	945.56	941.84

100-YEAR RUNOFF CALCULATIONS

Design Storm: 100
"K" Value: 1.25
"F" Factor: 1.00

EXISTING 5TH PLAT
FUTURE 6TH PLAT

Runoff Calculations															Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
EXISTING LINE 400																									DS TAILWATER @ STR #400	931.52
401	2.40	0.66	46.76	30.86	5.7	10.02	19.84	386.54	220.20	9.27	501		3.38	2.23	401	400	RCP	0.013	66	53.87	0.43	0.50	927.98	927.75	936.98	935.88
402	0.04	0.66	40.98	27.05	5.4	10.17	0.34	343.95	286.92	12.08			0.00	0.00	402	401	RCP	0.013	66	279.37	0.73	0.50	930.42	928.38	941.97	940.44
403	0.07	0.66	40.94	27.02	5.3	10.21	0.59	344.86	300.36	12.64	601		0.90	0.59	403	402	RCP	0.013	66	68.66	0.80	0.50	931.17	930.62	944.37	942.80
404	0.06	0.66	39.97	26.38	5.1	10.28	0.51	339.05	270.74	11.40	701		1.41	0.93	404	403	RCP	0.013	66	119.40	0.65	1.00	932.35	931.57	948.40	945.61
405	38.50	0.66	38.50	25.41	5.0	10.32	327.87	327.87	251.06	15.79			0.00	0.00	405	404	RCP	0.013	54	92.89	1.63	N/A	934.86	933.35	947.96	#VALUE!
EXISTING LINE 600																				Drop in Inlet 403		4.00				
601	0.36	0.66	0.90	0.59	5.1	10.29	3.06	7.64	19.45	11.00			0.00	0.00	601	403	HDPE	0.012	18	36.00	2.92	0.50	936.02	934.97	944.39	943.11
602	0.54	0.66	0.54	0.36	5.0	10.32	4.60	4.60	13.70	11.16			0.00	0.00	602	601	HDPE	0.012	15	55.86	3.83	N/A	938.53	936.39	946.23	943.46
EXISTING LINE 700																				Drop in Inlet 404		4.25				
701	1.14	0.66	1.41	0.93	5.1	10.28	9.67	11.96	9.26	7.54			0.00	0.00	701	404	PEP	0.012	15	102.48	1.75	0.50	941.69	939.90	949.19	949.33
702	0.27	0.66	0.27	0.18	5.0	10.32	2.30	2.30	7.10	5.79			0.00	0.00	702	701	PEP	0.012	15	33.00	1.03	N/A	942.48	942.14	949.13	949.26
EXISTING LINE 500																				Drop in Inlet 401		3.00				
501	1.06	0.66	3.38	2.23	6.2	9.86	8.62	27.49	28.10	5.73			0.00	0.00	501	401	PEP	0.012	30	35.50	0.40	0.45	931.12	930.98	936.98	936.26
502	0.57	0.66	2.32	1.53	6.0	9.91	4.66	18.97	24.51	7.80			0.00	0.00	502	501	PEP	0.012	24	65.53	1.00	0.50	932.23	931.57	937.83	936.94
503	0.26	0.66	1.75	1.16	5.9	9.96	2.14	14.37	24.51	7.80			0.00	0.00	503	502	PEP	0.012	24	51.05	1.00	0.50	933.24	932.73	939.40	937.28
504	0.29	0.66	1.49	0.98	5.7	10.03	2.40	12.33	12.47	7.05			0.00	0.00	504	503	PEP	0.012	18	78.60	1.20	0.50	934.68	933.74	940.30	938.58
505	0.33	0.66	1.20	0.79	5.5	10.12	2.75	10.02	11.38	6.44			0.00	0.00	505	504	PEP	0.012	18	88.86	1.00	0.50	936.07	935.18	941.62	939.52
506	0.29	0.66	0.87	0.57	5.3	10.22	2.44	7.33	7.34	5.98			0.00	0.00	506	505	PEP	0.012	15	87.96	1.10	0.50	937.54	936.57	942.92	940.76
507	0.58	0.66	0.58	0.38	5.0	10.32	4.94	4.94	7.00	5.70			0.00	0.00	507	506	PEP	0.012	15	86.70	1.00	N/A	938.90	938.04	943.98	941.32
EXISTING LINE 800																									DS TAILWATER @ STR #800	931.52
801	0.29	0.51	8.77	5.30	6.6	9.70	1.79	64.28	66.70	9.44	1801		1.57	0.80	801	800	RCP	0.013	36	243.24	1.00	2.50	930.93	928.50	944.84	934.28
802	1.38	0.51	6.91	4.35	6.5	9.75	8.58	53.07	68.55	9.70			0.00	0.00	802	801	PEP	0.012	36	83.38	0.90	0.50	934.18	933.43	944.41	937.16
803	0.12	0.66	5.53	3.65	6.3	9.80	0.97	44.69	51.09	7.23	1101		2.32	1.53	803	802	PEP	0.012	36	51.75	0.50	0.50	934.94	934.68	948.20	937.72
804	0.22	0.66	3.09	2.04	6.2	9.83	1.78	25.06	31.42	6.40	1201		1.13	0.75	804	803	PEP	0.012	30	36.23	0.50	0.50	935.62	935.44	948.20	938.03
805	0.12	0.66	1.74	1.15	6.0	9.92	0.98	14.23	31.42	6.40			0.00	0.00	805	804	PEP	0.012	30	84.51	0.50	0.50	936.55	936.12	946.57	938.19
806	0.40	0.66	1.62	1.07	5.8	9.99	3.30	13.35	31.42	6.40	1001		0.31	0.20	806	805	PEP	0.012	30	69.15	0.50	0.50	937.39	937.05	945.85	938.86
807	0.40	0.66	0.91	0.60	5.5	10.12	3.34	7.59	31.42	6.40			0.00	0.00	807	806	PEP	0.012	30	127.94	0.50	0.50	938.53	937.89	947.25	939.62
808	0.19	0.66	0.51	0.34	5.2	10.24	1.61	4.31	31.42	6.40			0.00	0.00	808	807	PEP	0.012	30	121.88	0.50	0.50	939.64	939.03	948.73	940.45
809	0.32	0.66	0.32	0.21	5.0	10.32	2.73	2.73	31.42	6.40			0.00	0.00	809	808	PEP	0.012	30	72.14	0.50	0.50	940.50	940.14	950.54	941.13
810	0.21	0.66	0.21	0.14	5.0	10.32	1.79	1.79	31.42	6.40			0.00	0.00	810	809	PEP	0.012	30	37.09	0.50	0.50	941.19	941.00	950.13	941.70
811	2.32	0.66	2.63	1.74	5.1	10.26	19.64	22.27	31.42	6.40			0.00	0.00	811	810	PEP	0.012	30	93.67	0.50	1.25	942.15	941.69	948.43	944.11
812	0.13	0.66	0.13	0.09	5.0	10.32	1.11	1.11	4.95	4.03			0.00	0.00	812	811	PEP	0.012	15	35.50	0.50	N/A	943.58	943.40	948.43	944.15
EXISTING LINE 1000																				Drop in Inlet 806		1.25				
1001	0.31	0.66	0.31	0.20	5.0	10.32	2.64	2.64	4.95	4.03			0.00	0.00	1001	806	PEP	0.012	15	35.00	0.50	N/A	938.82	938.64	945.85	939.60
FUTURE LINE 1100																				Drop in Inlet 803		1.50				
1101	0.55	0.66	2.32	1.53	6.0	9.91	4.50	18.96	30.32	17.16	1301		0.17	0.11	1101	803	PEP	0.012	18	127.32	7.10	0.50	945.48	936.44	954.50	947.88
1102	0.34	0.66	1.60	1.06	5.8	10.00	2.81	13.20	13.28	10.82			0.00	0.00	1102	1101	PEP	0.012	15	155.72	3.60	0.50	951.59	945.98	961.72	954.32
1103	0.56	0.66	1.26	0.83	5.6	10.08	4.66	10.48	12.12	9.88	1401		0.15	0.10	1103	1102	PEP	0.012	15	117.18	3.00	0.50	955.60	952.09	964.38	957.52
1104	0.30	0.66	0.55	0.36	5.3	10.19	2.52	4.63	11.61	9.46	1501		0.09	0.06	1104	1103	PEP	0.012	15	161.35	2.75	0.50	960.54	956.10	966.89	961.61
1105	0.09	0.66	0.16	0.11	5.1	10.28	0.76	1.36	9.26	7.54			0.00	0.00	1105	1104	PEP	0.012	15	93.36	1.75	0.50	962.67	961.04	969.80	963.21
1106	0.07	0.66	0.07	0.05	5.0	10.32	0.60	0.60	7.00	5.70			0.00	0.00	1106	1105	PEP	0.012	15	37.07	1.00	N/A	963.54	963.17	969.53	963.97
FUTURE LINE 1200																				Drop in Inlet 804		1.25				
1201	0.35	0.66	1.13	0.75	5.6	10.09	2.91	9.41	18.52	15.09			0.00	0.00	1201	804	PEP	0.012	15	67.70	7.00	0.50	941.61	936.87	950.33	943.26
1202	0.38	0.66	0.78	0.51	5.4	10.16	3.19	6.54	13.09	10.67			0.00	0.00	1202	1201	PEP	0.012	15	113.91	3.50	0.50	946.10	942.11	952.68	947.41
1203	0.25	0.66	0.40	0.26	5.2	10.26	2.12	3.38	11.06	9.02			0.00	0.00	1203	1202	PEP	0.012	15	125.72	2.50	0.50	949.74	946.60	955.28	950.64
1204	0.15	0.66	0.15	0.10	5.0	10.32	1.28	1.28	11.06	9.02			0.00	0.00	1204	1203	PEP	0.012	15	88.30	2.50	N/A	952.45	950.24	957.10	952.98
FUTURE LINE 1300																				Drop in Inlet 1101		0.50				
1301	0.17	0.66	0.17	0.11	5.0	10.32	1.45	1.45	15.65	12.75			0.00	0.00	1301	1101	PEP	0.012	15	43.48	5.00	N/A	948.16	945.98	954.89	948.72
FUTURE LINE 1400																				Drop in Inlet 1103		0.50				
1401	0.15	0.66	0.15	0.10	5.0	10.32	1.28	1.28	14.00	11.41			0.00	0.00	1401	1103	PEP	0.012	15	51.01	4.00	N/A	958.14	956.10	964.36	958.67
FUTURE LINE 1500																				Drop in Inlet 1104		0.50				
1501	0.09	0.66	0.09	0.06	5.0	10.32	0.77	0.77	4.95	4.03			0.00	0.00	1501	1104	PEP	0.012	15	35.13	0.50	N/A	961.22	961.04	966.94	961.65
LINE 1600																									DS TAILWATER @ STR #1600	931.52
1601	0.47	0.51	4.29	2.19	6.1	9.90	2.97	27.08	31.99	10.18			0.00	0.00	1601	1600	RCP	0.013	24	219.15	2.00	3.00	935.29	930.91	947.22	937.74
1602	0.84	0.51	3.82	1.95	5.9	9.96	5.33	24.25	25.70	8.18			0.00	0.00	1602	1601	PEP	0.012	24	74.06	1.10	0.50	939.11	938.29	947.25	941.39
1603	1.22	0.51	2.98	1.52	5.8	10.02	7.79	19.03	24.51	7.80			0.00	0.00	1603	1602	PEP	0.012	24	68.27	1.00	0.50	940.29	939.61	948.02	942.26
1604	0.96	0.51	1.76	0.90	5.4	10.16	6.22	11.40	11.94	6.75			0.00	0.00	1604	1603	PEP	0.012	18	150.42	1.10	0.50	942.44	940.79	949.70	944.12
1605	0.80	0.51	0.80	0.41	5.0	10.32	5.26	5.26	11.38	6.44			0.00	0.00	1605	1604	PEP	0.012	18	149.50	1.00	N/A	944.44	942.94	951.38	945.51
LINE 1700																				Drop in Inlet 1604		0.50				
1701	0.59	0.51	0.59	0.30	5.0	10.32	3.88	3.88	7.00	5.70			0.00	0.00	1701	1604	PEP	0.012	15	74.21	1.00	N/A	943.69	942.94	949.77	944.66
LINE 1800																				Drop in Inlet 801		6.50				
1801	0.20	0.51	1.57	0.80	5.4	10.16	1.29	10.16	11.38	6.44			0.00	0.00	1801	801	PEP	0.012	18	126.83	1.00	0.50	938.70	937.43	946.33	940.26
1802	0.86	0.51	1.37	0.70	5.2	10.23	5.61	8.94	11.38	6.44			0.00	0.00	1802	1801	PEP	0.012	18	74.00	1.00	0.50	939.94	939.20	946.33	941.39
1803	0.51	0.51	0.51	0.26	5.0	10.32	3.36	3.36	7.00	5.70			0.00	0.00	1803	1802	PEP	0.012	15	74.45	1.00	N/A	941.19	940.44	945.56	942.08

RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by Schlagel and Associates.

"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

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PREPARED BY:

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NUMBER PE-2005007268
08.08.2023

SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-8-23	AS-BUILTS
3	
4	
5	
6	
7	
8	
9	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

MASTER DRAINAGE PLAN - DRAINAGE CALCS

SHEET
6

I:\PROJECTS\2022\22-034\3.0 Design\3.0 DWG Plans\6.0 SS\22-034-SS-DRAINAGE.dwg, 6 DRAINAGE CALCS, 8/8/2023 2:09:16 PM, 1:1

GUTTER SPREAD AND INLET CAPACITY CALCULATIONS - LUMBERMAN'S ROW

DESIGN STORM 10 — CURB TYPE "A" = LAZY BACK
"K" FACTOR 1.00 — CURB TYPE "B" = HIGH BACK

		RUNOFF CALCULATIONS											INLET DESIGN							GUTTER DESIGN			
	INLET #	COMPOSITE "C"	AREA	INLET Tc	INTENSITY	RUNOFF	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	BYPASS FROM UPSTREAM INLET	TOTAL RUNOFF	STREET GRADE	STREET CROSS SLOPE	CURB TYPE	INLET LENGTH	EFFICTIVE LENGTH	INLET INTERCEPTION	BYPASS TO DOWNSTREAM INLET	STREET GRADE	STREET CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW
	EXISTING LINE 400																						
EXISTING 5TH PLAT	401	0.66	2.40	5	7.35	11.64	801	802	803		0.79	12.43	SUMP	2.08	A	8	6.4	17.92	0.00	SUMP	2.08	< 0.21	**< 10.50**
	402	0.66	0.04	5	7.35	0.19	403				0.02	0.21	3.24	2.08	A	6	4.8	0.20	0.00	3.24	2.08	0.06	**3.48**
	403	0.66	0.07	5	7.35	0.34	404				0.01	0.35	3.24	2.08	A	6	4.8	0.33	0.02	3.24	2.08	0.08	**4.12**
	404	0.66	0.06	5	7.35	0.29					0.00	0.29	3.24	2.08	A	6	4.8	0.28	0.01	3.24	2.08	0.07	**3.88**
	EXISTING LINE 500																						
	501	0.66	1.06	5	7.35	5.14	402	502			1.09	6.24	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	**< 10.50**
	502	0.66	0.57	5	7.35	2.77	804	503	806	901	0.84	3.61	1.95	2.08	A	6	4.8	2.52	1.09	1.95	2.08	0.20	**10.05**
	503	0.66	0.26	5	7.35	1.26	504				0.33	1.59	1.49	2.08	A	4	3.2	1.33	0.26	1.49	2.08	0.15	**7.89**
	504	0.66	0.29	5	7.35	1.41	505				0.40	1.81	1.49	2.08	A	4	3.2	1.48	0.33	1.49	2.08	0.16	**8.25**
	505	0.66	0.33	5	7.35	1.60	506				0.41	2.01	1.49	2.08	A	4	3.2	1.61	0.40	1.49	2.08	0.17	**8.57**
	506	0.66	0.29	5	7.35	1.41	507				0.63	2.03	1.49	2.08	A	4	3.2	1.63	0.41	1.49	2.08	0.17	**8.60**
	507	0.66	0.58	5	7.35	2.81					0.00	2.81	1.13	2.08	A	4	3.2	2.19	0.63	1.13	2.08	0.20	**10.14**
	EXISTING LINE 800																						
	801	0.51	0.29	5	7.35	1.09	1601	1801			0.25	1.34	1.12	2.08	A	6	4.8	1.25	0.08	1.12	2.08	0.15	**7.80**
	802	0.51	0.51	5	7.35	1.91	1701				0.12	2.04	1.12	2.08	A	6	4.8	1.82	0.21	1.12	2.08	0.18	**9.05**
	803	0.66	0.12	5	7.35	0.58	1101				1.61	2.19	3.00	2.08	A	6	4.8	1.70	0.49	3.00	2.08	0.15	**7.81**
	804	0.66	0.22	5	7.35	1.07	1301	1201			0.67	1.74	3.00	2.08	A	6	4.8	1.43	0.31	3.00	2.08	0.14	**7.20**
	805	0.66	0.12	5	7.35	0.58					0.00	0.58	3.00	2.08	A	6	4.8	0.55	0.03	3.00	2.08	0.09	**4.94**
	806	0.66	0.40	5	7.35	1.94	807				0.23	2.17	1.28	2.08	A	6	4.8	1.90	0.27	1.28	2.08	0.18	**9.04**
	807	0.66	0.40	5	7.35	1.94	808				0.07	2.01	1.28	2.08	A	6	4.8	1.78	0.23	1.28	2.08	0.17	**8.80**
	808	0.66	0.19	5	7.35	0.92	809				0.24	1.16	1.28	2.08	A	6	4.8	1.09	0.07	1.28	2.08	0.14	**7.25**
	809	0.66	0.32	5	7.35	1.55					0.00	1.55	2.75	2.08	A	6	4.8	1.32	0.24	2.75	2.08	0.14	**7.03**
	810	0.66	0.21	5	7.35	1.02	1106				0.00	1.02	2.75	2.08	A	6	4.8	0.92	0.10	2.75	2.08	0.12	**6.08**
	811	0.66	2.32	5	7.35	11.25	810				0.10	11.35	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	**< 10.50**
	812	0.66	0.13	5	7.35	0.63					0.00	0.63	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	**< 10.50**
	EXISTING LINE 1000																						
	1001	0.66	0.31	5	7.35	1.50					0.00	1.50	1.28	2.08	A	6	4.8	1.38	0.12	1.28	2.08	0.15	**7.94**
	FUTURE LINE 1100																						
FUTURE 6TH PLAT	1101	0.66	0.55	5	7.35	2.67	1102				0.77	3.44	6.02	2.08	A	6	4.8	1.83	1.61	6.02	2.08	0.16	**8.09**
	1102	0.66	0.34	5	7.35	1.65	1103				0.59	2.24	6.02	2.08	A	6	4.8	1.47	0.77	6.02	2.08	0.13	**6.97**
	1103	0.66	0.56	5	7.35	2.72	1104				0.15	2.87	1.80	2.08	A	6	4.8	2.28	0.59	1.80	2.08	0.19	**9.40**
	1104	0.66	0.30	5	7.35	1.46	1105				0.01	1.46	1.80	2.08	A	6	4.8	1.31	0.15	1.80	2.08	0.14	**7.41**
	1105	0.66	0.09	5	7.35	0.44					0.00	0.44	1.50	2.08	A	6	4.8	0.43	0.01	1.50	2.08	0.09	**5.04**
	1106	0.66	0.07	5	7.35	0.34					0.00	0.34	1.50	2.08	A	6	4.8	0.34	0.00	1.50	2.08	0.09	**4.64**
	FUTURE LINE 1200																						
	1201	0.66	0.35	5	7.35	1.70	1202				0.49	2.19	2.45	2.08	A	4	3.2	1.64	0.55	2.45	2.08	0.16	**8.08**
	1202	0.66	0.38	5	7.35	1.84	1203				0.20	2.05	2.45	2.08	A	4	3.2	1.56	0.49	2.45	2.08	0.15	**7.90**
	1203	0.66	0.25	5	7.35	1.21	1204				0.07	1.28	2.45	2.08	A	4	3.2	1.08	0.20	2.45	2.08	0.13	**6.71**
	1204	0.66	0.15	5	7.35	0.73					0.00	0.73	2.45	2.08	A	4	3.2	0.66	0.07	2.45	2.08	0.10	**5.52**
	FUTURE LINE 1300																						
	1301	0.66	0.17	5	7.35	0.82	1401				0.03	0.86	6.02	2.08	A	6	4.8	0.73	0.12	6.02	2.08	0.09	**5.01**
	FUTURE LINE 1400																						
	1401	0.66	0.15	5	7.35	0.73	1501				0.01	0.74	1.80	2.08	A	6	4.8	0.70	0.03	1.80	2.08	0.11	**5.84**
	FUTURE LINE 1500																						
	1501	0.66	0.09	5	7.35	0.44					0.00	0.44	1.80	2.08	A	6	4.8	0.43	0.01	1.80	2.08	0.09	**4.89**
	LINE 1600																						
	1601	0.51	0.47	5	7.35	1.76	1701				0.25	2.01	1.12	2.08	A	6	6	1.81	0.21	1.12	2.08	0.18	**9.01**
	1602	0.51	0.84	5	7.35	3.15	1603				1.47	4.62	1.12	2.08	A	6	6	3.53	1.09	1.12	2.08	0.24	**12.13**
	1603	0.51	1.22	5	7.35	4.57	1604				0.85	5.43	1.12	2.08	A	6	6	3.95	1.47	1.12	2.08	0.26	**12.85**
	1604	0.51	0.96	5	7.35	3.60	1605				0.47	4.07	1.12	2.08	A	6	6	3.21	0.85	1.12	2.08	0.23	**11.58**
	1605	0.51	0.80	5	7.35	3.00					0.00	3.00	1.12	2.08	A	6	6	2.53	0.47	1.12	2.08	0.21	**10.39**
	LINE 1700																						
	1701	0.51	0.59	5	7.35	2.21					0.00	2.21	1.12	2.08	A	6	6	1.96	0.25	1.12	2.08	0.18	**9.32**
	LINE 1800																						
	1801	0.51	0.20	5	7.35	0.75	1601				0.21	0.96	1.12	2.08	A	6	6	0.92	0.04	1.12	2.08	0.13	**6.94**
	1802	0.51	0.86	5	7.35	3.22	1602				1.09	4.31	1.12	2.08	A	6	6	3.36	0.96	1.12	2.08	0.24	**11.83**
	1803	0.51	0.51	5	7.35	1.91	1802				0.96	2.87	1.12	2.08	A	6	6	2.44	0.43	1.12	2.08	0.20	**10.22**

NOTES:
1. CAPACITY OF INLETS ON GRADE DETERMINED USING ROUTINE OUTLINED ON PGS 56-95 TO 56-97, SECTION 5600 APWA
2. CAPACITY OF SUMP INLETS CALCULATED USING FIGURE 5604-21, SECTION 5600 APWA
3. MANNINGS "n" VALUE FOR COMBINED ASPHALT PAVEMENT AND CONCRETE CURB - 0.014

RECORD DRAWING

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Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

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Missouri State Certificate of Authority
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PREPARED BY:

MARK ALLEN BREUER
NUMBER PE-2009007268
PROFESSIONAL ENGINEER
STATE OF MISSOURI

08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-8-23	AS-BUILTS
3	
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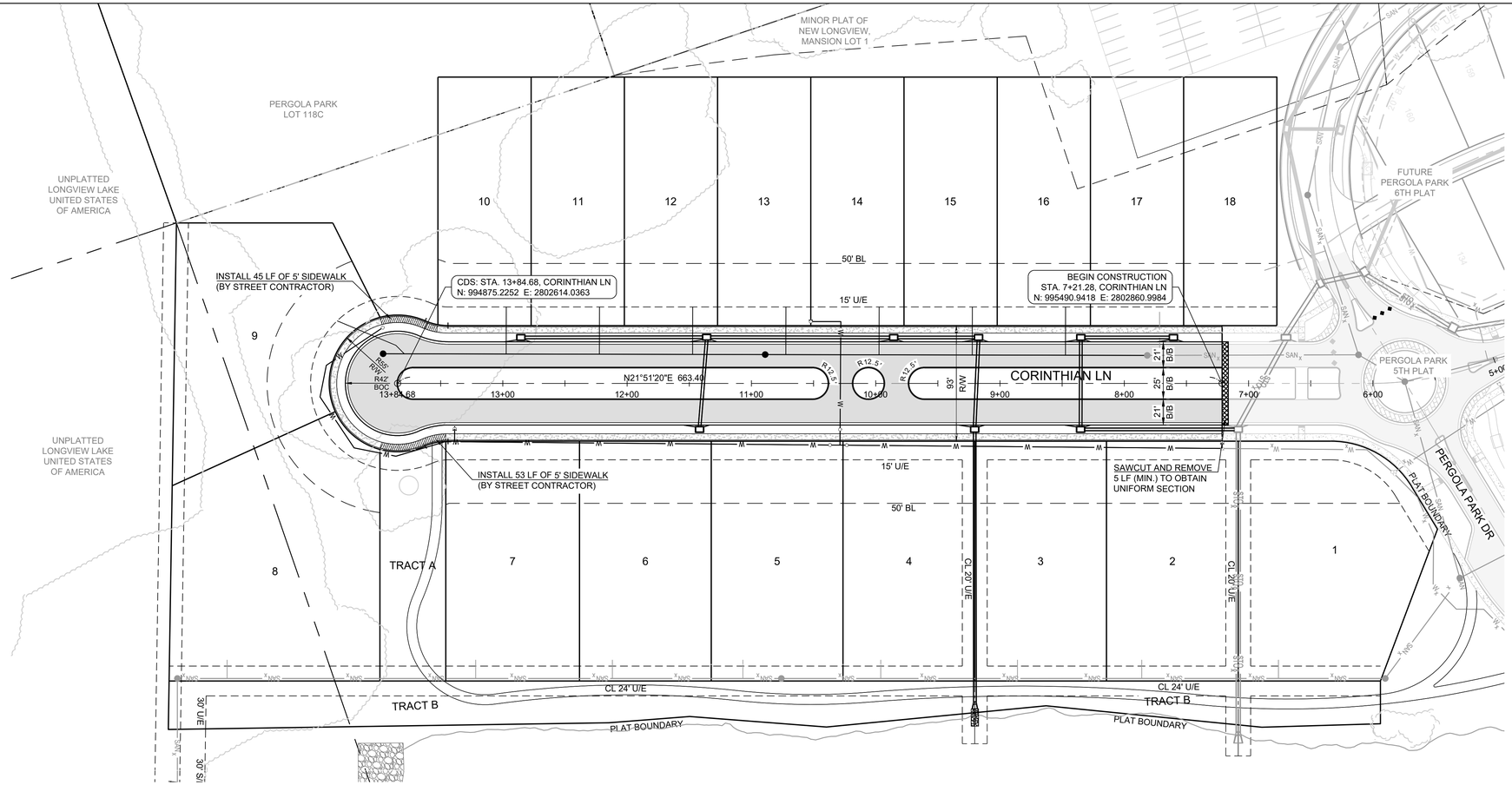
7	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

MASTER DRAINAGE PLAN - DRAINAGE CALCS CONT

SHEET 7



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NOTE:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION

SCALE: 1" = 50'

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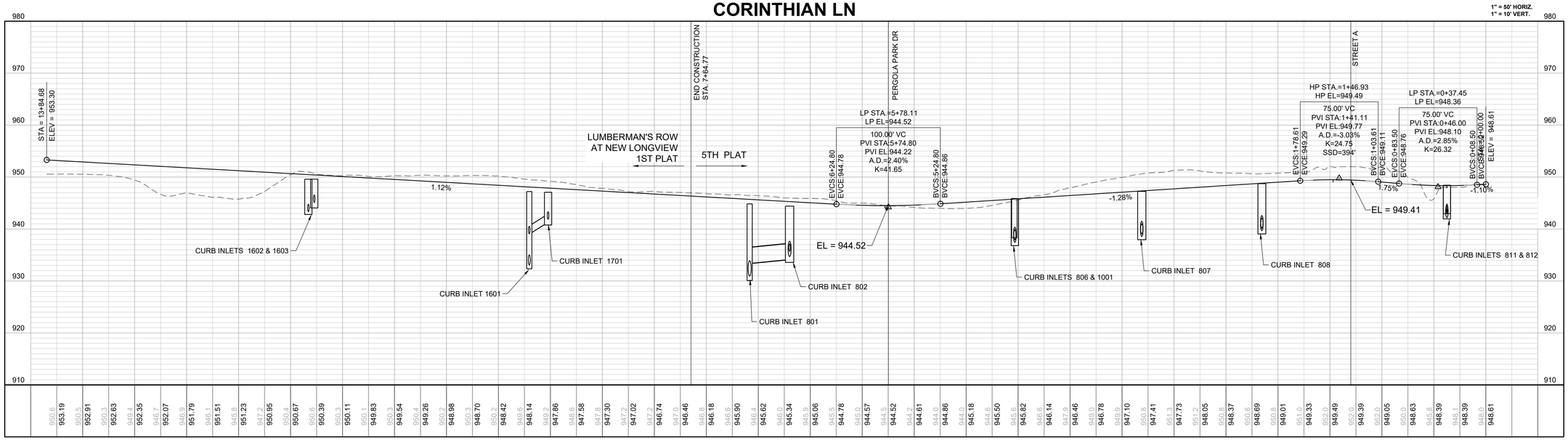
STATE OF MISSOURI
PROFESSIONAL ENGINEER
08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

CORINTHIAN LN

1" = 50' HORIZ.
1" = 10' VERT.



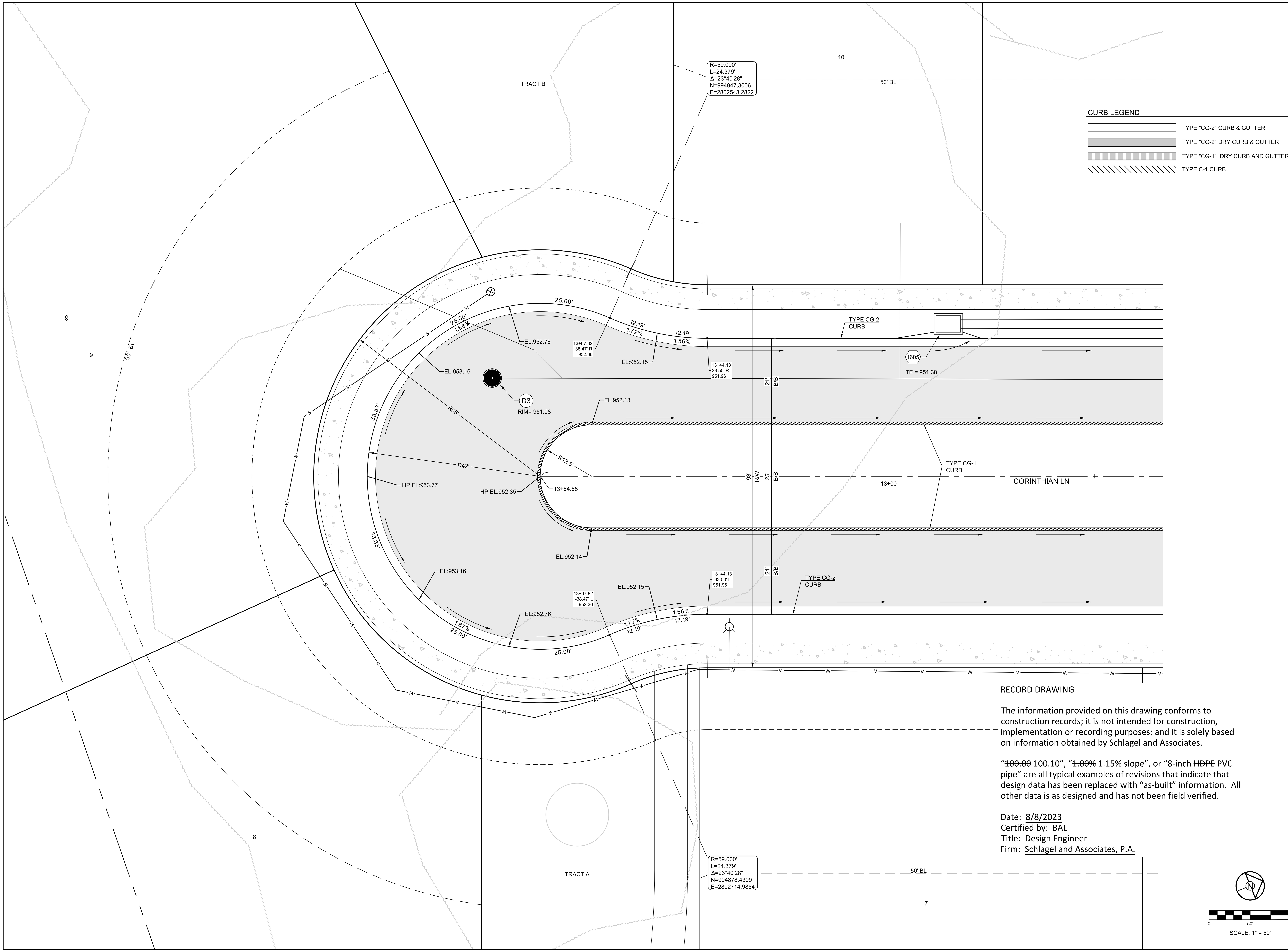
REVISION DATE	DESCRIPTION
8-12-22	CITY COMMENTS
8-8-23	AS-BUILTS

DRAWN BY:	CHECKED BY:	DATE PREPARED:	PROJ. NUMBER:
BAL	MAB	5-6-22	22-034

LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

CORINTHIAN
LANE PLAN &
PROFILE

SHEET
8



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08.08.2023
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LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL - LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
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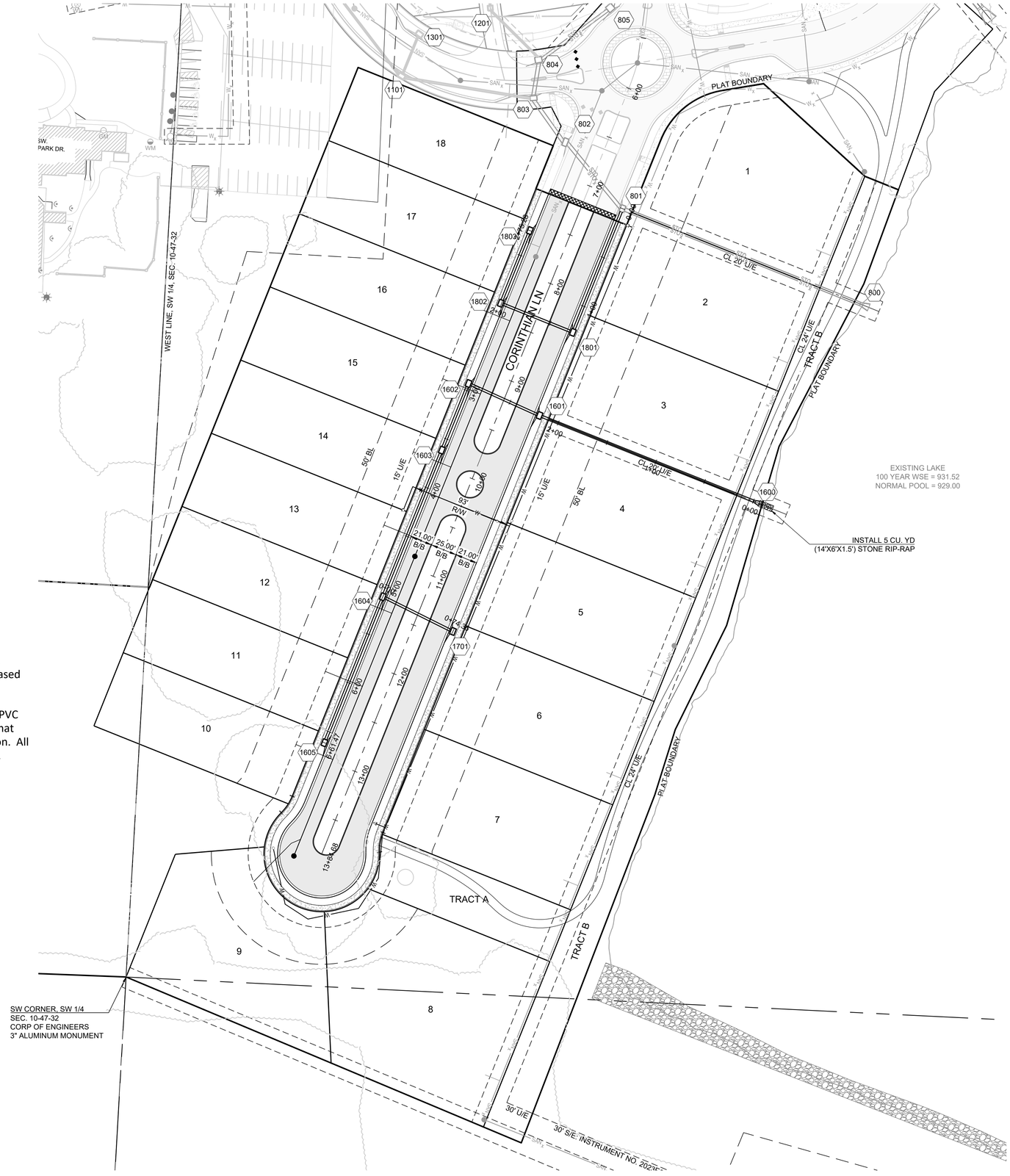
DRAWN BY:	CHECKED BY:	DATE PREPARED:	PROJ. NUMBER:
BAL	MAB	5-6-22	22-034

INTERSECTION DETAILS

SHEET
9

I:\PROJECTS\2022\22-034\3.0 Design\3.0 DWG Plans\6.0 SS\22-034-SS-INT.dwg, 13 INTERSECTION DETAILS, 8/8/2023 2:10:20 PM, 1:1



Storm Sewer Construction Notes	
Structure	Notes
1600	STA 0+00.00, LINE 1600 INSTALL 24" END SECTION N 995210.9684 E 2803024.6861
1601	STA 2+19.15, LINE 1600 INSTALL 6 X 4 CURB INLET N 995292.4188 E 2802821.2367
1602	STA 2+93.21, LINE 1600 INSTALL 6 X 4 CURB INLET N 995322.8093 E 2802753.6956
1603	STA 3+61.48, LINE 1600 INSTALL 6 X 4 CURB INLET N 995259.4452 E 2802728.2804
1604	STA 5+11.90, LINE 1600 INSTALL 6 X 4 CURB INLET N 995119.8888 E 2802672.1517
1605	STA 6+61.47, LINE 1600 INSTALL 6 X 4 CURB INLET N 994981.0210 E 2802616.6054
1701	STA 0+74.36, LINE 1700 INSTALL 6 X 4 CURB INLET N 995086.9954 E 2802738.8420
1801	STA 1+26.83, LINE 1800 INSTALL 6 X 4 CURB INLET N 995371.5190 E 2802852.9636
1802	STA 2+00.83, LINE 1800 INSTALL 6 X 4 CURB INLET N 995399.2288 E 2802784.3473
1803	STA 2+75.28, LINE 1800 INSTALL 6 X 4 CURB INLET N 995468.3281 E 2802812.0628

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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

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:

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MARK ALLEN BREUER
NUMBER PE-2009007268
PROFESSIONAL ENGINEER

08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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6	
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8	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

STORM PLAN

SHEET 10

RECORD DRAWING

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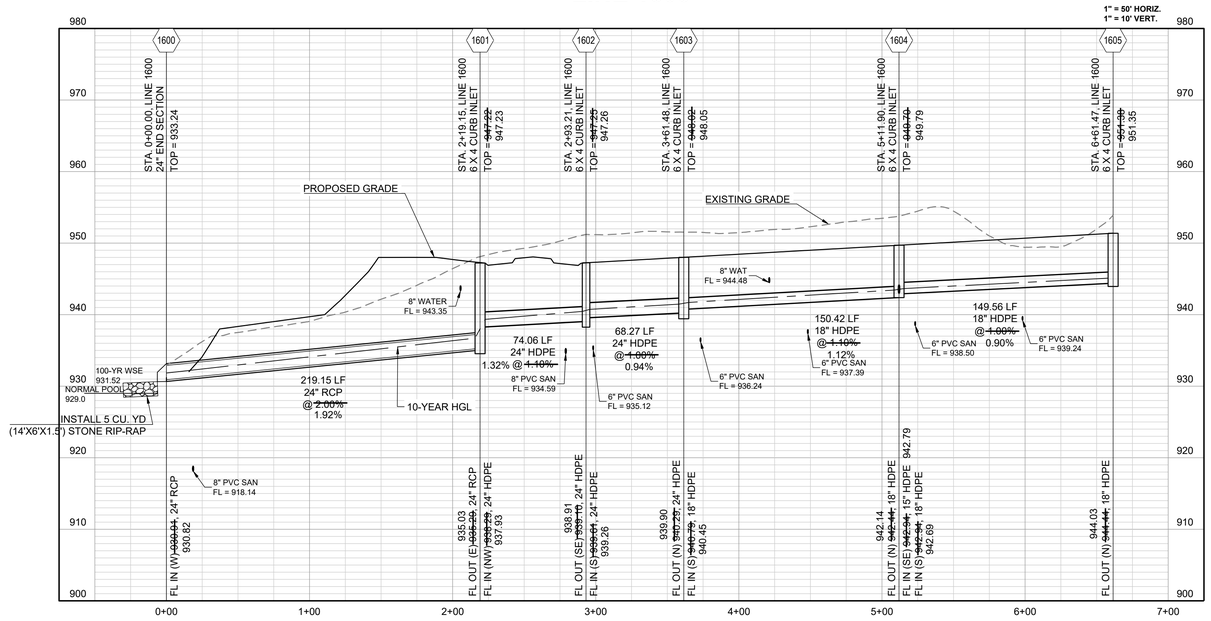
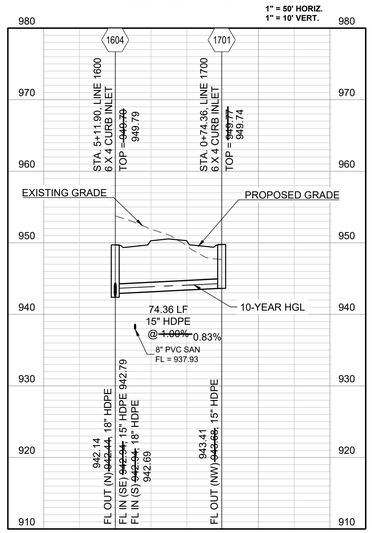
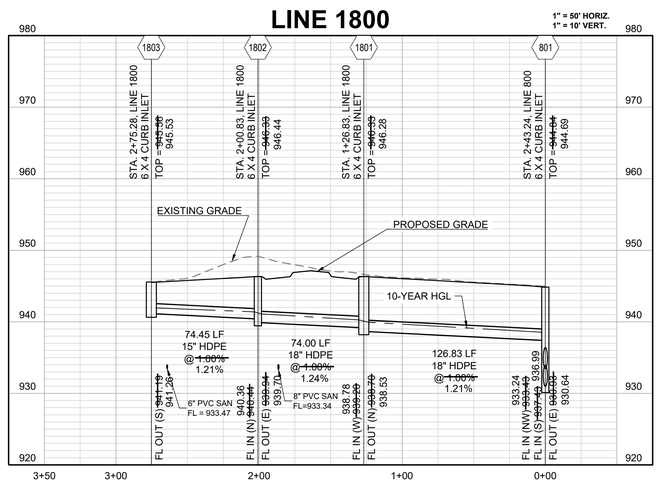
LINE 1600



LINE 1700



LINE 1800



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08.08.2023
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LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSIOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
8-12-22	CITY COMMENTS
8-8-23	AS-BUILTS

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PROJ. NUMBER: 22-034

STORM PROFILES

SHEET 11

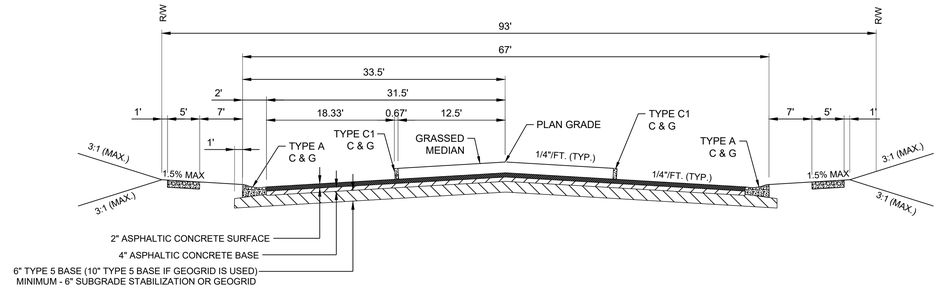
TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES

Street Classification	Pavement Option	AC Surface (in.)	AC Base (in.)	MoDOT Type 5 Base (in.)	Geogrid(1)	Chemical Subgrade Stabilization(2) (in.)
Residential Local/Access	A	2	4	6	--	6
USE FOR RESIDENTIAL STREETS →	B	2	4	10	Geogrid	--
Residential Collector	A	2	5.5	6	--	9
	B	2	5.5	12	Geogrid	--
Commercial Industrial Local/Collector	A	2	7.5	6	--	9
	B	2	7.5	12	Geogrid	--

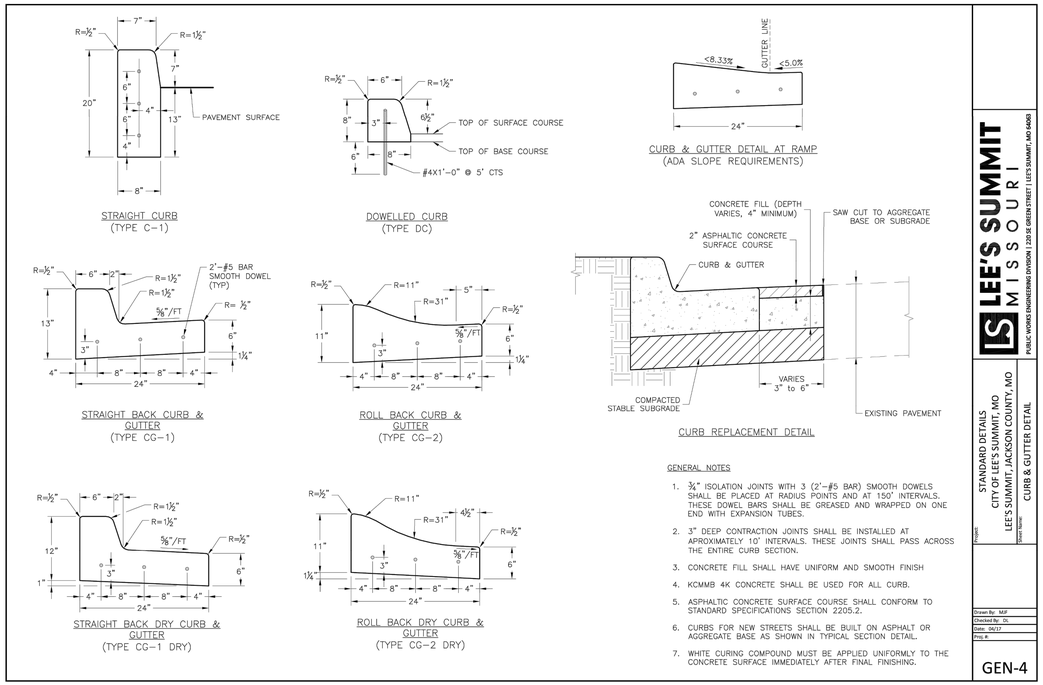
TABLE LS-3: MINIMUM PCC PAVEMENT THICKNESSES

Street Classification	PCC (in.)	Aggregate Base (in.)	Subgrade Stabilization[(1)] (in.)
USE FOR PRIVATE ALLEYS →			
Residential Local/Access	6	4	--
Residential Collector	6	4	6
Commercial Industrial Local/Collector	8	4	9

(1) Subgrade Stabilization and 4" aggregate base may be replaced by approved geogrid and 6" of aggregate base



BLUE RIBBON DIVIDED STREET STA. 7+21.28 TO 13+84.68
NTS



GENERAL NOTES

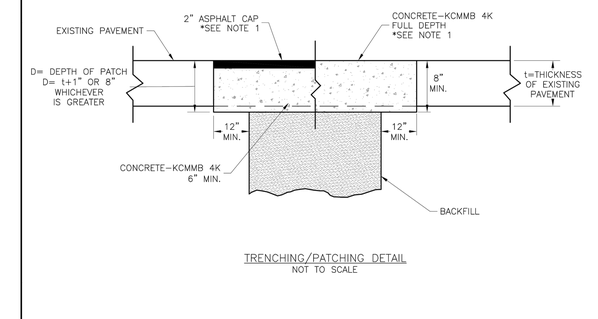
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 06/17
Proj.#:

GEN-4



TRENCHING/PATCHING DETAIL
NOT TO SCALE

NOTE:

1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

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

TRENCHING/PATCHING ROADWAYS DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-5

RECORD DRAWING

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08.08.2023
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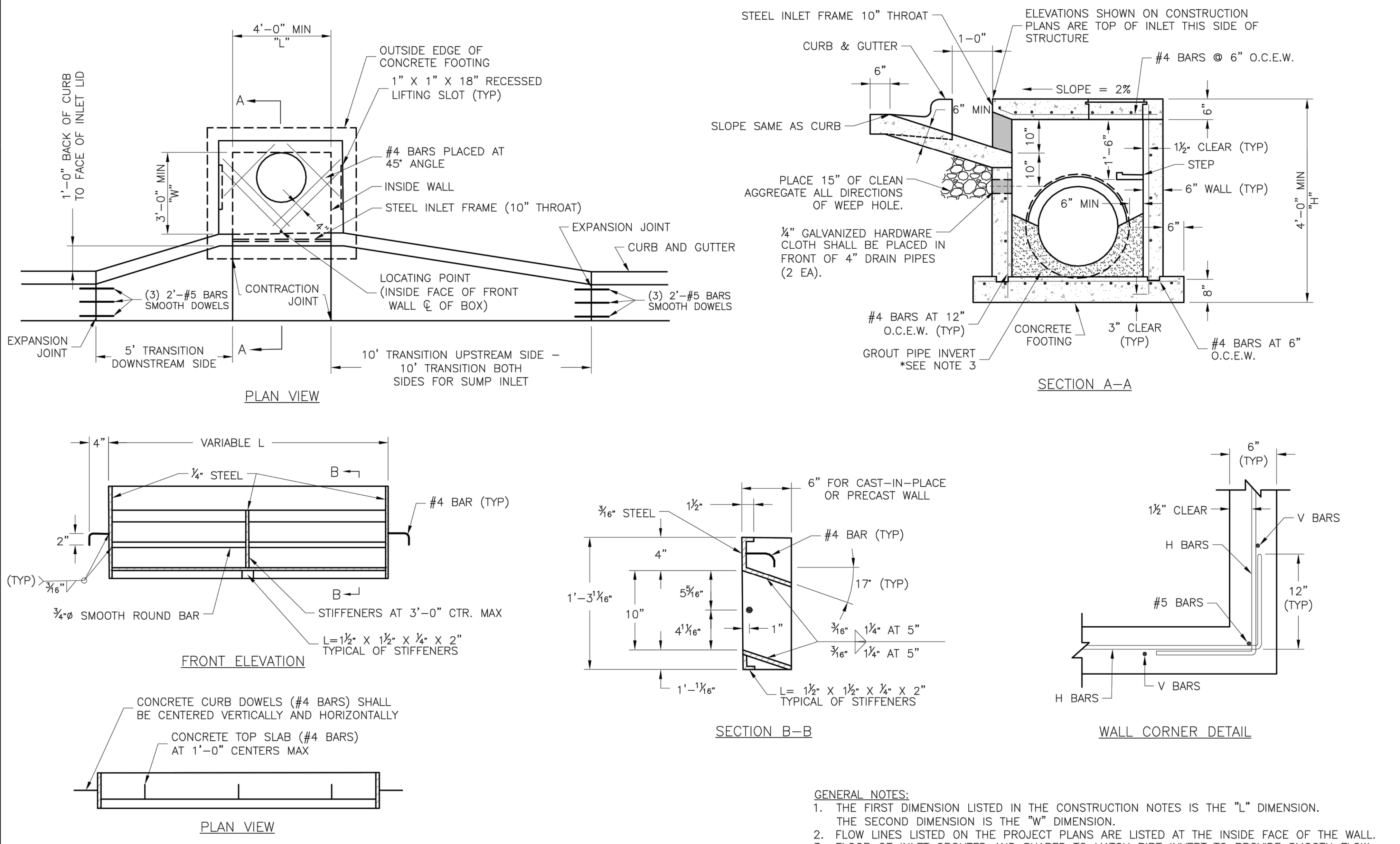
STREET, STORMWATER, MASTER DRAINAGE
PLAN & EROSOIN AND SEDIMENT CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-4-23	AS-BUILTS

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

STREET DETAILS

SHEET 12



GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

LEE'S SUMMIT MISSOURI
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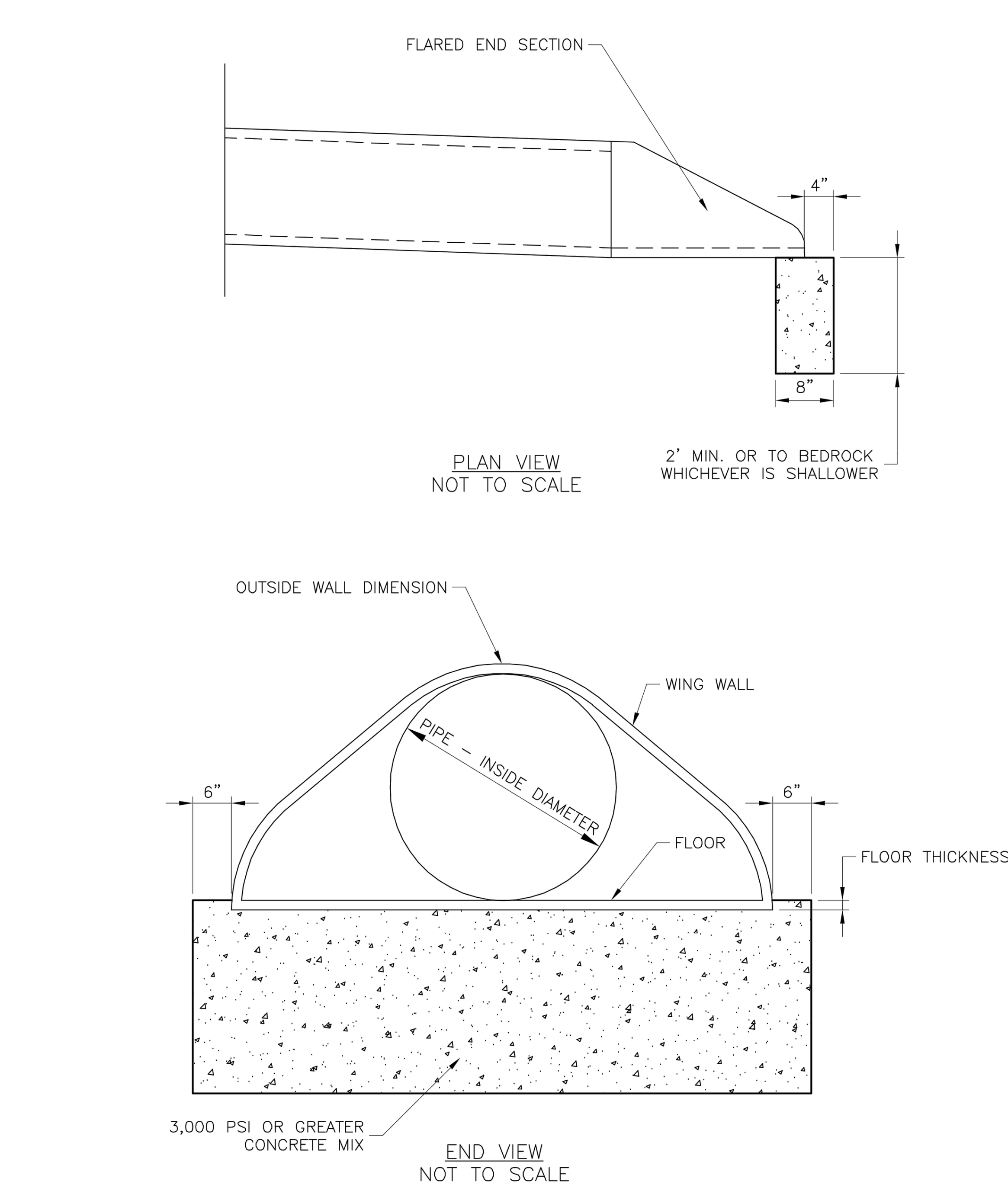
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL
Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:
STM-1



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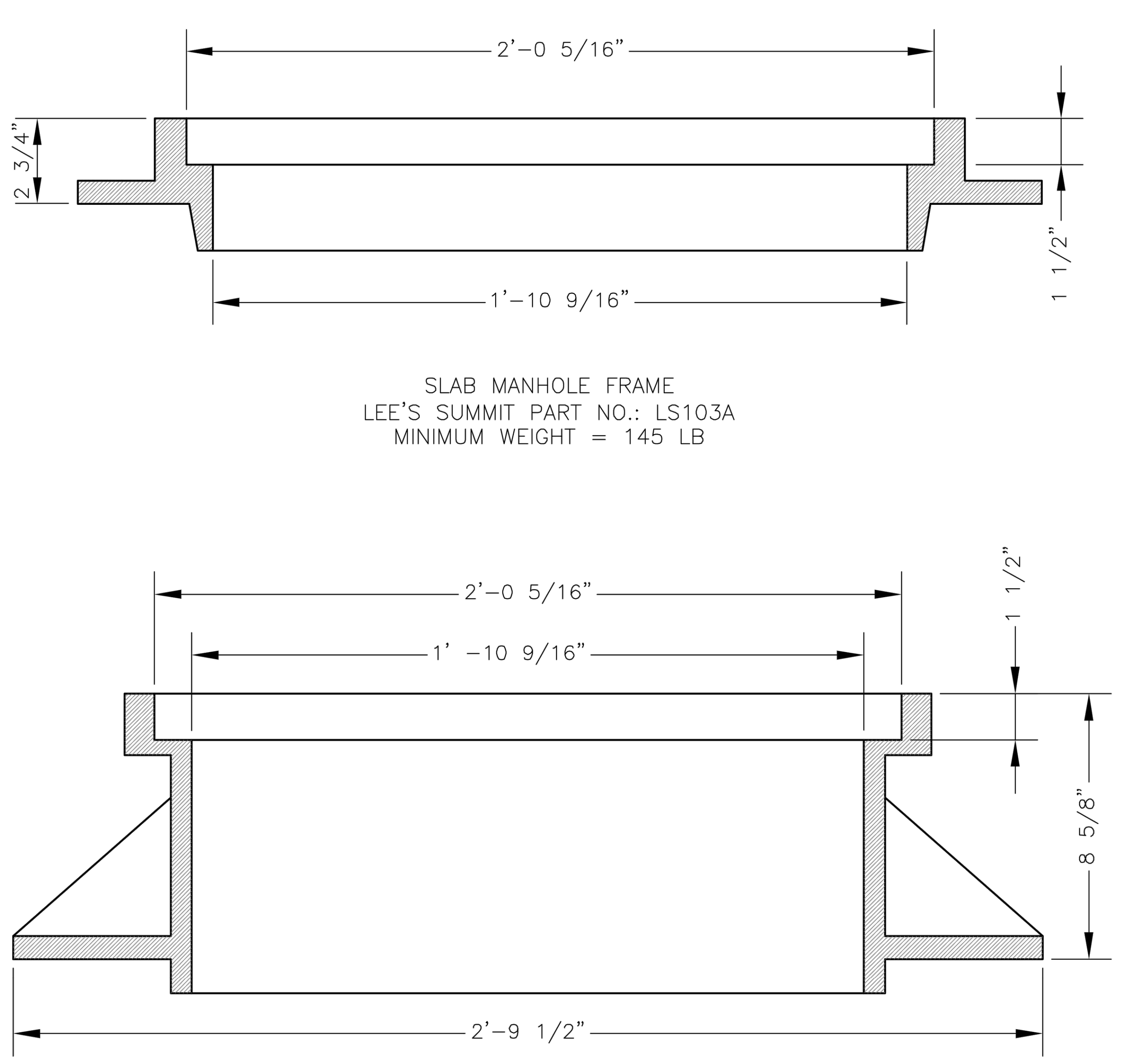
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 04/17
Drawn By: MJF
Checked By: DL
FLARED END SECTION SUPPORT DETAIL
STM-5

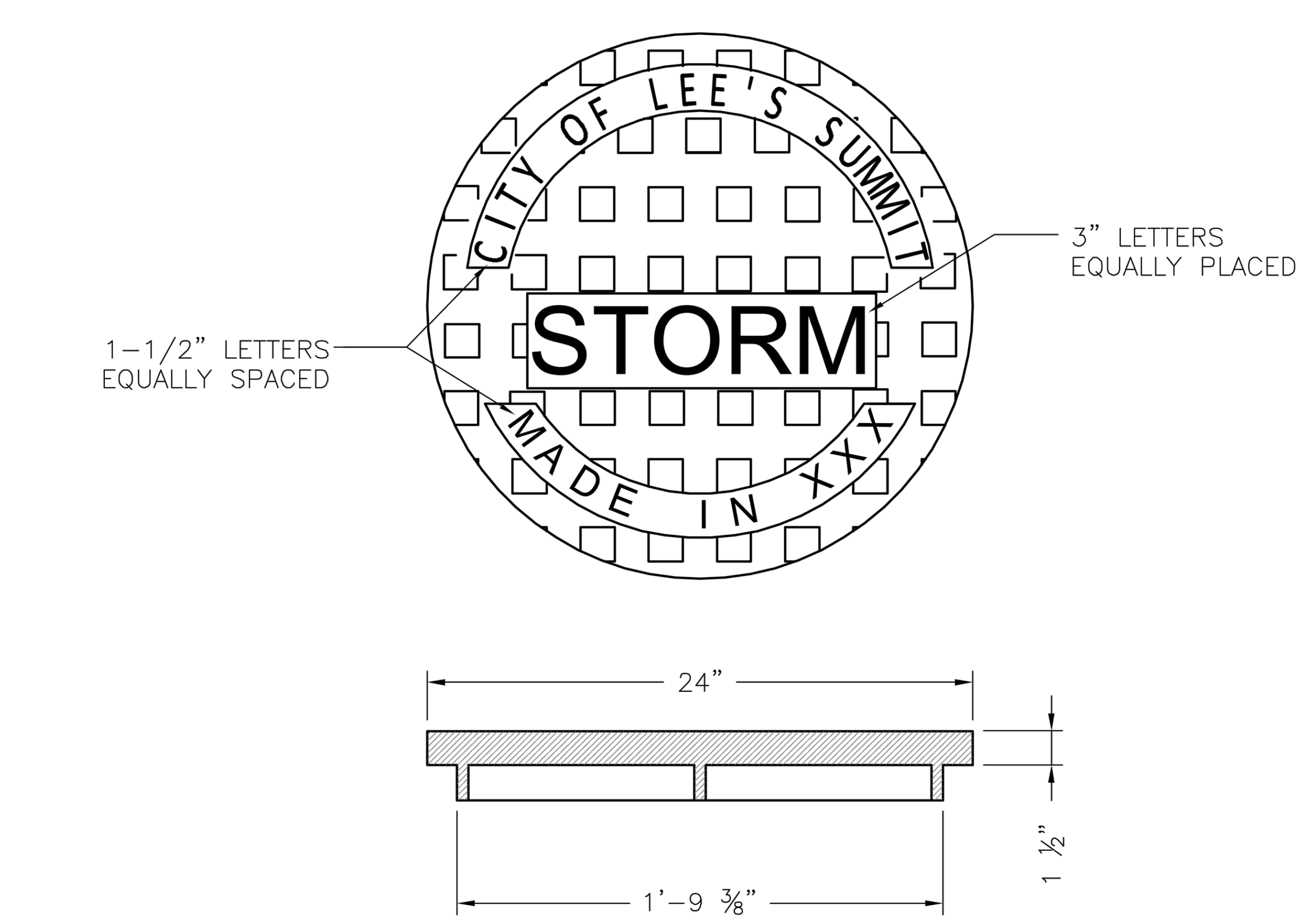


SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB

STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 04/17
Drawn By: MJF
Checked By: DL
STORM MANHOLE FRAME DETAIL
STM-7



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 04/17
Drawn By: MJF
Checked By: DL
STORM MANHOLE COVER DETAIL
STM-6

RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by Schlagel and Associates.

"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch H~~D~~PE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 8/8/2023
Certified by: BAL
Title: Design Engineer
Firm: Schlagel and Associates, P.A.

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Kansas State Certificates of Authority
#E-296 #LA-29 #LS-54

PREPARED BY:

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER PE-2009007268
PROFESSIONAL ENGINEER
08.08.2023
SCHLAGEL & ASSOCIATES, P.A.

LUMBERMAN'S ROW
STREET, STORMWATER, MASTER DRAINAGE PLAN & EROSIOIN AND SEDIMENT CONTROL - LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1 8-12-22	CITY COMMENTS
2 8-8-23	AS-BUILTS
3	
4	
5	
6	
7	
8	
9	

DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 5-6-22
PROJ. NUMBER: 22-034

STORM DETAILS

SHEET
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