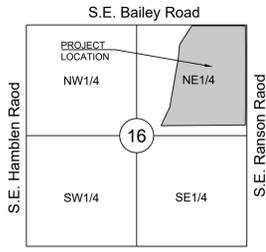


LEGEND:

- 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
SW - 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
TREE LINE
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 - CABLE TV - EXISTING
FOC - FIBER OPTIC CABLE - EXISTING
T - TELEPHONE LINE - EXISTING
E - ELECTRIC LINE - EXISTING
OHP - OVERHEAD POWER LINE - EXIST.
UG - UNDERGROUND ELECTRIC - EX.
G - GAS LINE - EXISTING
W - WATERLINE - EXISTING
L - LIGHT - EXISTING
M - EXISTING MANHOLE
C - CLEANOUT
SM - EXISTING SANITARY MANHOLE
PM - PROPOSED SANITARY MANHOLE
AI - EXISTING AREA INLET
CI - EXISTING CURB INLET
GI - EXISTING GRATE INLET
JB - EXISTING JUNCTION BOX
M - EXISTING STORM MANHOLE



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

KANSAS CITY POWER & LIGHT COMPANY (KCP&L)
Ron Dejamette
1300 SE Hamblen Road
Lee's Summit, MO 64081
Office: (816) 347-4318
Cell: (816) 810-5234
ron.dejamette@kcpcl.com

CITY OF LEE'S SUMMIT PUBLIC WORKS
Dena Mezger
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 Schaufier
1200 SE Hamblen Road
Lee's Summit, MO 64081
(816) 969-1900

STREET, STORMWATER, AND MASTER DRAINAGE PLAN FOR MANOR AT BAILEY FARMS, FIRST PLAT IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MISSOURI

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 THE 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. 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.
7. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
8. 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.
9. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
10. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
11. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
12. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
13. THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES INSPECTIONS AT: 816-969-1200 TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
14. 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. 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.

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 movable 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 than 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.

Table with 2 columns: Sheet Number, Sheet Title. Lists sheets 1 through 49, including COVER SHEET, GENERAL LAYOUT (NORTH, EAST, WEST), MASTER DRAINAGE PLAN-GRADING PLAN (NORTH, EAST, WEST), BAILEY FARMS PKWY NORTH PLAN & PROFILE, BAILEY FARMS PKWY SOUTH PLAN & PROFILE, RANCLAND ST EAST PLAN & PROFILE, RANCLAND ST WEST PLAN & PROFILE, CAPE DR EAST PLAN & PROFILE, CAPE DR WEST PLAN & PROFILE, SWEET ROOT DR & RISING SUN DR PLAN & PROFILE, FALLING STAR DR PLAN & PROFILE, INTERSECTION DETAILS 1 OF 8, INTERSECTION DETAILS 2 OF 8, INTERSECTION DETAILS 3 OF 8, INTERSECTION DETAILS 4 OF 8, INTERSECTION DETAILS 5 OF 8, INTERSECTION DETAILS 6 OF 8, INTERSECTION DETAILS 7 OF 8, INTERSECTION DETAILS 8 OF 8, MASTER DRAINAGE PLAN-DRAINAGE MAP, MASTER DRAINAGE PLAN-DRAINAGE CALCS, MASTER DRAINAGE PLAN-DRAINAGE CALCS CONT'D, STORM LAYOUT SHEET, STORM STRUCTURE LIST, STORM PROFILES 1, STORM PROFILES 2, STORM PROFILES 3, STORM PROFILES 4, STORM PROFILES 5, DETENTION BASIN DESIGN, STREET DETAILS 1, STREET DETAILS 2, STORM DETAILS 1, STORM DETAILS 2, STORM UNDERDRAIN DETAILS, SE BAILEY FARMS PKWY SIGNAGE PLAN, SE RANCLAND ST SIGNAGE PLAN, SE CAPE DR SIGNAGE PLAN, SE SWEET ROOT DR RISING SUN DR FALLING STAR DR SIGNAGE PLAN, SIGN POST DETAILS (SN-2), SIGN MOUNTING DETAILS (SN-1), STREET NAME SIGN DETAILS (SN-3), OM-4 SIGN DETAILS.

SCHLAGEL ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003690F #LAC2001005237 #LSC200200859F

PREPARED BY:
JAMES L. LONG
PROFESSIONAL ENGINEER
NUMBER PE-201401895
5/19/2022
SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

APPROVED BY:

CITY ENGINEER DATE
APPROVED FOR ONE YEAR FROM THIS DATE

OWNER/DEVELOPER:

CLAYTON PROPERTIES GROUP INC., DBA SUMMIT HOMES
BRADLEY KEMPF
120 SE 30TH STREET
LEE'S SUMMIT, MO 64082
p (816) 246-6700
BRADLEY@SUMMITHOMESKC.COM



SUMMARY OF QUANTITIES table with columns: ITEM, QUANTITY, UNITS. Lists items like CLEARING AND GRUBBING, GRADING, ASPHALT PAVEMENT, CONCRETE SIDEWALK, CURB AND GUTTER, etc.

Table with 4 columns: Quantity, Unit, Description, Unit Price. Lists items like 15" HDPE FLARED END SECTION, 30" HDPE FLARED END SECTION, etc.

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

COVER SHEET

SHEET

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PREPARED BY:



5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE
PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY:	NCA
CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

GENERAL LAYOUT (NORTH)

SHEET

2

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

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STREET LEGEND:

- RESIDENTIAL LOCAL
- RESIDENTIAL COLLECTOR

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BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE



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STREET LEGEND:

-  RESIDENTIAL LOCAL
-  RESIDENTIAL COLLECTOR

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PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

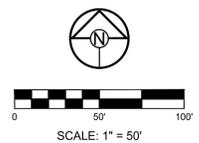
MANOR AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEES SUMMIT, MISSOURI

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05/17/2022	City Comments dated 5/11/2022

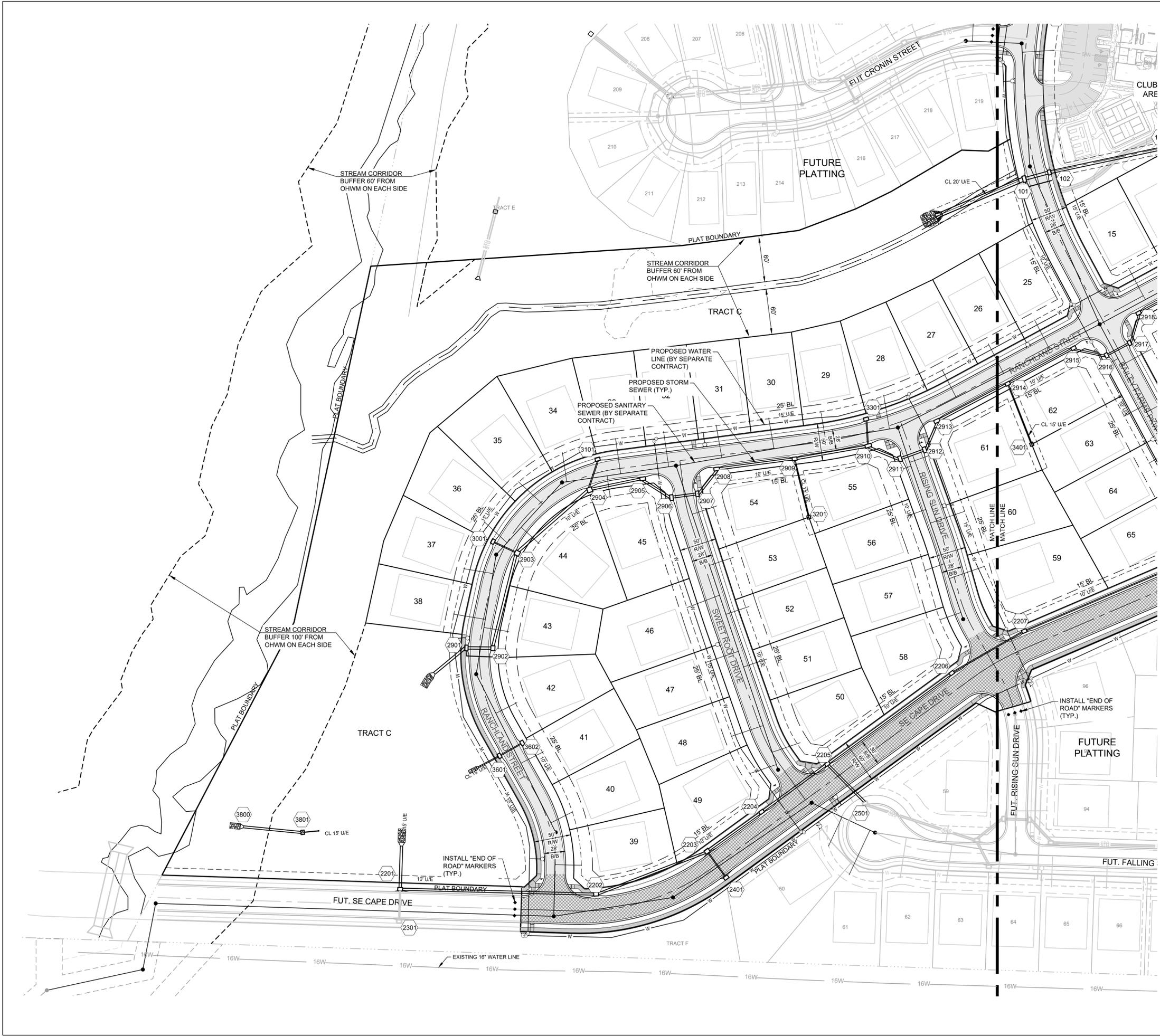
GENERAL LAYOUT (EAST)

SHEET

3



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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

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- RESIDENTIAL LOCAL
- RESIDENTIAL COLLECTOR

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PREPARED BY:

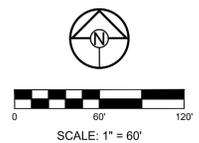


5/19/2022
SCHLAGEL & ASSOCIATES, P.A.

**MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments Dated 5/11/2022

GENERAL LAYOUT (WEST)
SHEET
4



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PREPARED BY:



5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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MASTER
 DRAINAGE
 PLAN-GRADING
 PLAN (NORTH)
 SHEET
5

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

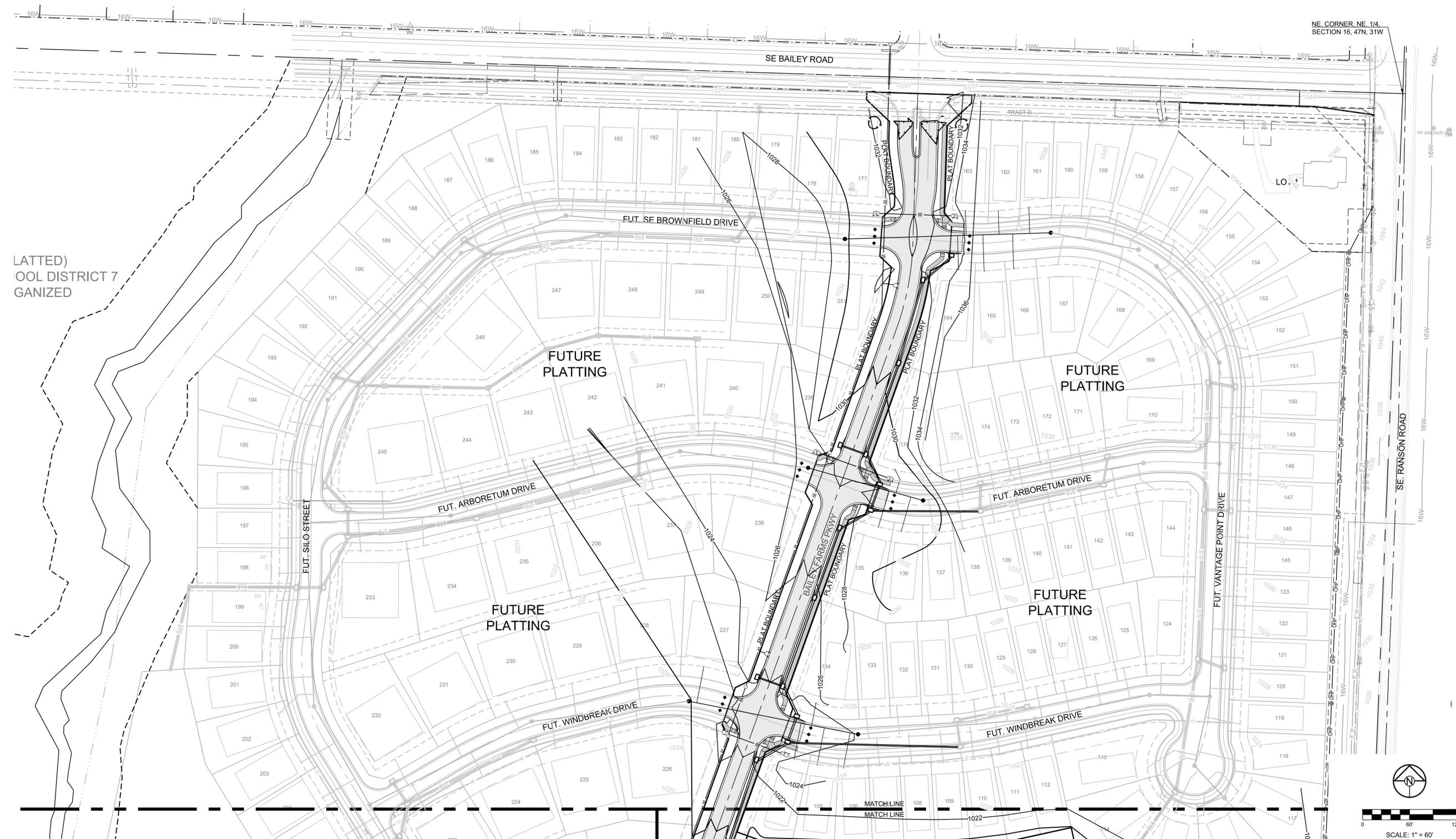
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 ELEV. = 1046.25

BASIS OF BEARINGS:
 MISSOURI STATE PLANE COORDINATE SYSTEM
 (NAD) 1983, MISSOURI, WEST ZONE

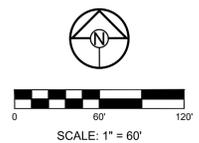
NOTES:
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GRADING LEGEND:
 - - - 1023 - - - EXISTING CONTOUR
 ——— 1023 ——— PROPOSED CONTOUR
 - - - - - MWSE

○ EL.000.00 DENOTES FINISHED GRADE ELEVATION
 ○ EL.000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
 — HP 000.00 DENOTES LOT HIGH POINT ELEVATION



LATTED)
 OOL DISTRICT 7
 GANIZED



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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

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GRADING LEGEND:

- - - 1023 - - - EXISTING CONTOUR
- 1023 — PROPOSED CONTOUR
- - - MWSE

- EL.000.00 DENOTES FINISHED GRADE ELEVATION
- EL.000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
- HP 000.00 DENOTES LOT HIGH POINT ELEVATION

NOTES:

1. MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 2 FEET ABOVE THE 100 YR WATER SURFACE ELEVATION.
2. EGL = ENERGY GRADE LINE (100 YR)
3. WSE = WATER SURFACE ELEVATION (100 YR)
4. ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.

LOT TYPE TABLE			LOT TYPE TABLE		
LOT #	BASEMENT TYPE	MBOE	LOT #	BASEMENT TYPE	MBOE
1	STANDARD		34	DAYLIGHT	
2	STANDARD		35	DAYLIGHT	
3	STANDARD		36	WALKOUT	
4	STANDARD		37	WALKOUT	
5	STANDARD		38*	STANDARD	1002
6*	STANDARD	1027	39	STANDARD	
7*	STANDARD	1025	40	STANDARD	
8*	DAYLIGHT	1022	41	STANDARD	
9*	DAYLIGHT	1022	42	STANDARD	
10*	STANDARD	1021	43	STANDARD	
11*	STANDARD	1021	44	STANDARD	
12*	STANDARD	1018	45	STANDARD	
13*	STANDARD	1020	46	WALKOUT	
14*	STANDARD	1020	47	WALKOUT	
15*	STANDARD	1020	48	DAYLIGHT	
16	STANDARD		49	DAYLIGHT	
17	STANDARD		50	STANDARD	
18	STANDARD		51	STANDARD	
19	DAYLIGHT		52	STANDARD	
20	DAYLIGHT		53	STANDARD	
21	STANDARD		54*	STANDARD	1014
22	STANDARD		55*	STANDARD	1014
23	STANDARD		56	STANDARD	
24	STANDARD		57	STANDARD	
25	DAYLIGHT		58	STANDARD	
26*	DAYLIGHT	1009	59	STANDARD	
27*	DAYLIGHT	1009	60	STANDARD	
28*	DAYLIGHT	1008	61*	STANDARD	1017
29*	DAYLIGHT	1008	62*	STANDARD	1017
30*	DAYLIGHT	1007	63	STANDARD	
31*	DAYLIGHT	1007	64	STANDARD	
32*	DAYLIGHT	1005	65	STANDARD	
33*	DAYLIGHT	1005			

* LOTS WHICH REQUIRE AN "AS-GRADED PLOT PLAN" BEFORE OCCUPANCY.



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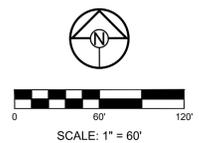
JAMES L. LONG
NUMBER PE-304018095
5/19/2022
SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEES SUMMIT, MISSOURI

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CHECKED BY: JLL
DATE PREPARED: 11/05/2021
PROJ. NUMBER: 21-130

MASTER DRAINAGE PLAN-GRADING PLAN (EAST)
SHEET
6



PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

NOTES:

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GRADING LEGEND:

- 1023 --- EXISTING CONTOUR
- 1023 — PROPOSED CONTOUR
- - - - - MWSE

○ EL.000.00 DENOTES FINISHED GRADE ELEVATION

○ EL.000.00 (EX.) DENOTES EXISTING GRADE ELEVATION

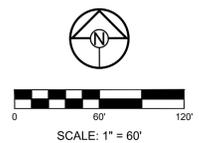
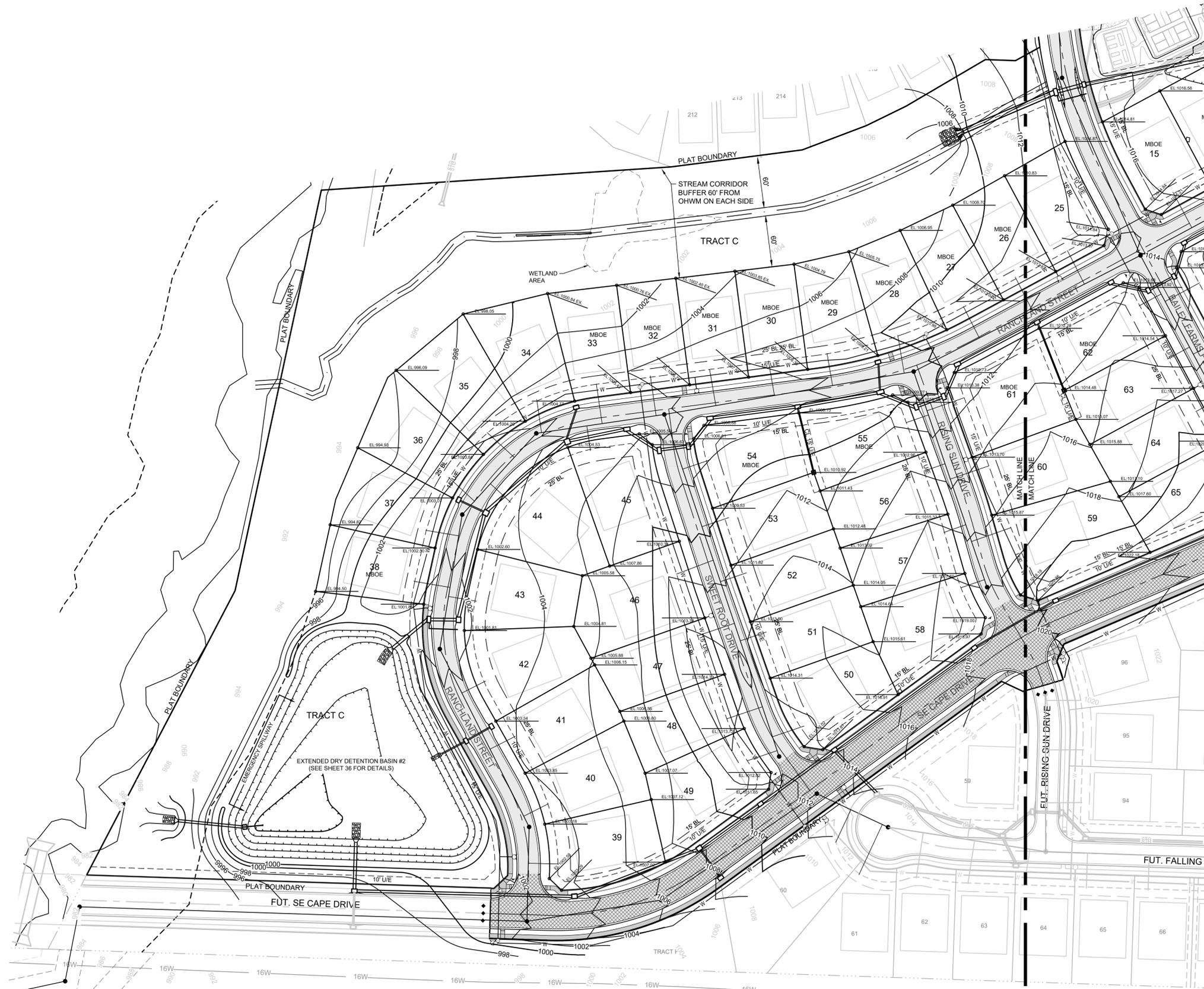
— HP 000.00 DENOTES LOT HIGH POINT ELEVATION

NOTES:

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2. EGL = ENERGY GRADE LINE (100 YR)
3. WSE = WATER SURFACE ELEVATION (100 YR)
4. ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.

LOT TYPE TABLE			LOT TYPE TABLE		
LOT #	BASEMENT TYPE	MBOE	LOT #	BASEMENT TYPE	MBOE
1	STANDARD		34	DAYLIGHT	
2	STANDARD		35	DAYLIGHT	
3	STANDARD		36	WALKOUT	
4	STANDARD		37	WALKOUT	
5	STANDARD		38*	STANDARD	1002
6*	STANDARD	1027	39	STANDARD	
7*	STANDARD	1025	40	STANDARD	
8*	DAYLIGHT	1022	41	STANDARD	
9*	DAYLIGHT	1022	42	STANDARD	
10*	STANDARD	1021	43	STANDARD	
11*	STANDARD	1021	44	STANDARD	
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14*	STANDARD	1020	47	WALKOUT	
15*	STANDARD	1020	48	DAYLIGHT	
16	STANDARD		49	DAYLIGHT	
17	STANDARD		50	STANDARD	
18	STANDARD		51	STANDARD	
19	DAYLIGHT		52	STANDARD	
20	DAYLIGHT		53	STANDARD	
21	STANDARD		54*	STANDARD	1014
22	STANDARD		55*	STANDARD	1014
23	STANDARD		56	STANDARD	
24	STANDARD		57	STANDARD	
25	DAYLIGHT		58	STANDARD	
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27*	DAYLIGHT	1009	60	STANDARD	
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29*	DAYLIGHT	1008	62*	STANDARD	1017
30*	DAYLIGHT	1007	63	STANDARD	
31*	DAYLIGHT	1007	64	STANDARD	
32*	DAYLIGHT	1005	65	STANDARD	
33*	DAYLIGHT	1005	66	STANDARD	

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MANOR AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEES SUMMIT, MISSOURI

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MASTER DRAINAGE PLAN-GRADING PLAN (WEST)
 SHEET **7**

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

NOTES:

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GRADING LEGEND:

- 1023 EXISTING CONTOUR
- 1023 PROPOSED CONTOUR
- MWSE
- DENOTES OVERFLOW SWALE
- EL.000.00 DENOTES FINISHED GRADE ELEVATION
- EL.000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
- HP 000.00 DENOTES LOT HIGH POINT ELEVATION

NOTES:

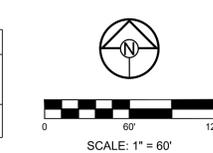
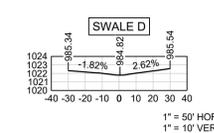
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5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM



SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	DESIGN OVERFLOW (CFS)	WEIR ELEVATION	WEIR COEFFICIENT	LENGTH	HEAD REQ'D	WSE
1	6.45	67.40	67.40	1016.56	3.33	10'-0"	1.60	1018.20
2	5.50	57.47	57.47	1016.63	3.33	10'-0"	1.44	1018.10
3	4.95	51.72	51.72	1017.89	3.33	10'-0"	1.34	1019.30
4	4.30	44.93	44.93	1018.84	3.33	10'-0"	1.22	1020.10

RUNOFF CALCULATIONS:
 $Q = K \cdot C \cdot i \cdot A$
 $K_{10} = 1.0 \quad K_{100} = 1.25 \quad C = 0.51$
 $i = \text{INTENSITY } (i_{10} = 7.35" / i_{100} = 10.32")$
 DESIGN OVERFLOW = $Q_{\text{OVERFLOW}} = Q_{100} \cdot Q_{10}$
 MANNINGS "n" = 0.030 FOR SWALES

SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	BASE WIDTH (FT.)	SIDE SLOPE	TOP WIDTH (FT.)	NORMAL DEPTH (FT.)	VELOCITY (FPS)	VELOCITY HEAD (FT.)	EGL (FT.)
D-D	4.30	28.29	16.12	12.17	2.00	5	50:1	35.00	0.30	2.03	0.06	0.36



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PREPARED BY:

 JAMES L. LONG
 PROFESSIONAL ENGINEER
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
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MASTER DRAINAGE PLAN-SWALE GRADING PLAN SHEET(EAST)
8

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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

NOTES:

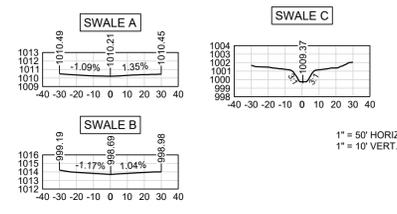
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GRADING LEGEND:

- - - 1023 - - - EXISTING CONTOUR
- 1023 — PROPOSED CONTOUR
- - - MWSE
- ↕ A A DENOTES OVERFLOW SWALE
- EL.000.00 DENOTES FINISHED GRADE ELEVATION
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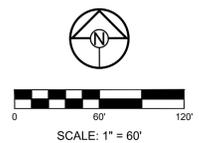
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100 YEAR OVERFLOW SWALES												
SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	BASE WIDTH (FT.)	SIDE SLOPE	TOP WIDTH (FT.)	NORMAL DEPTH (FT.)	VELOCITY (FPS)	VELOCITY HEAD (FT.)	EGL (FT.)
A-A	1.10	7.24	4.12	3.12	2.6	--	100:1	30.00	0.15	1.39	0.03	0.18
B-B	0.90	5.92	3.38	2.54	3.5	--	100:1	28.00	0.14	1.30	0.03	0.17
C-C	14.80	97.37	55.48	41.89	2.4	5	3:1	10.58	0.93	5.78	0.52	1.45

RUNOFF CALCULATIONS:
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 $K_{10} = 1.0 \quad K_{100} = 1.25 \quad C = 0.51$
 $i = \text{INTENSITY } (i_{10} = 7.35" / i_{100} = 10.32")$
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PREPARED BY:

 JAMES L. LONG
 NUMBER PE-2014010495
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

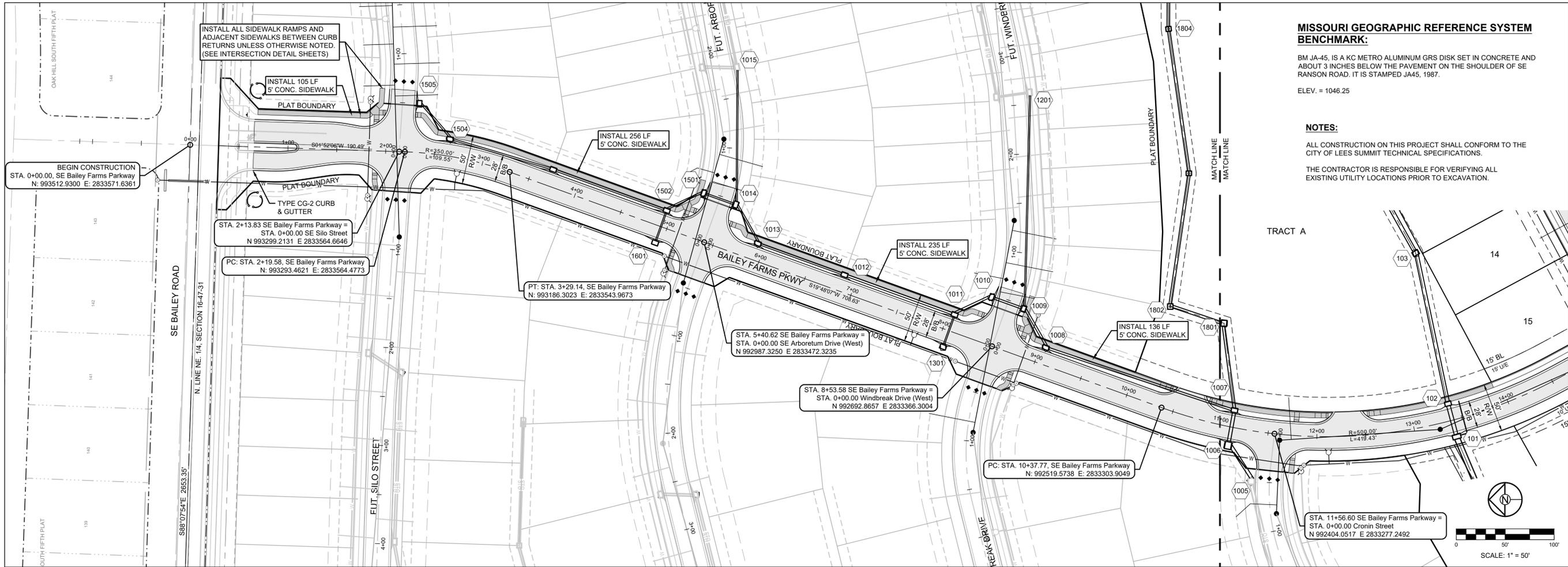
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MASTER DRAINAGE PLAN-SWALE GRADING PLAN SHEET (WEST)
9

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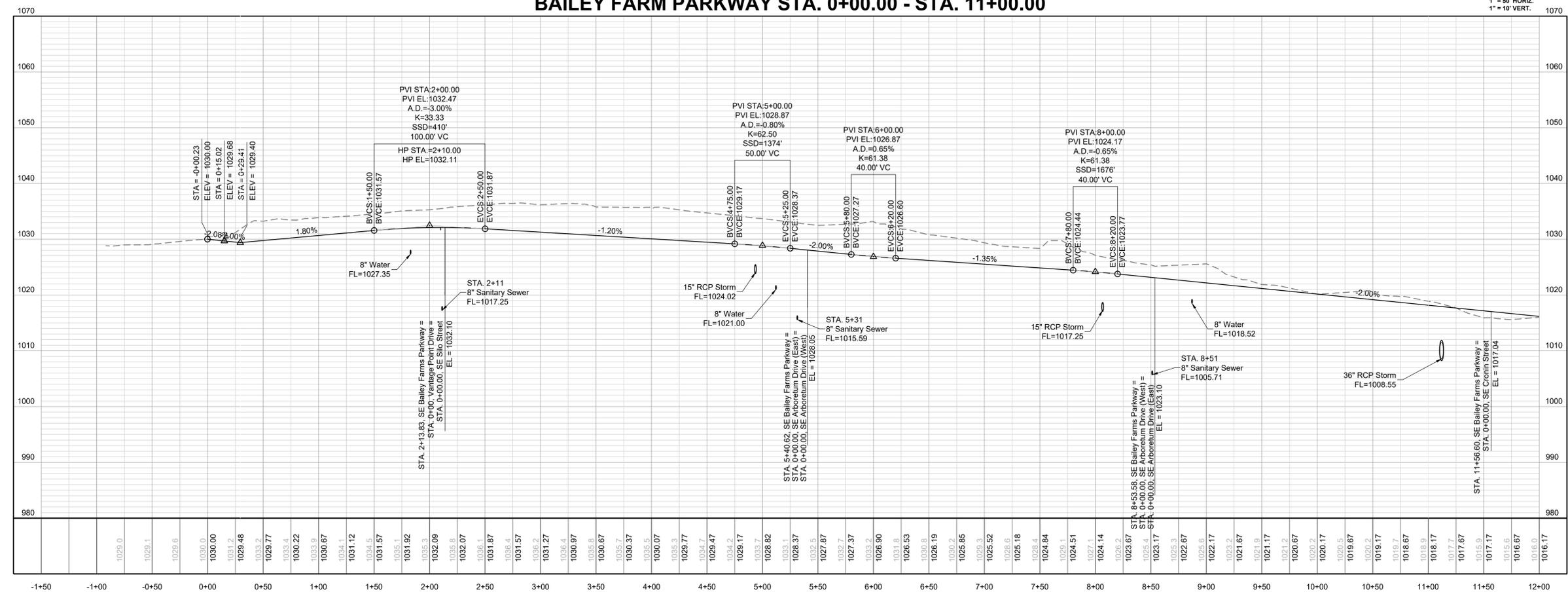
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BAILEY FARM PARKWAY STA. 0+00.00 - STA. 11+00.00



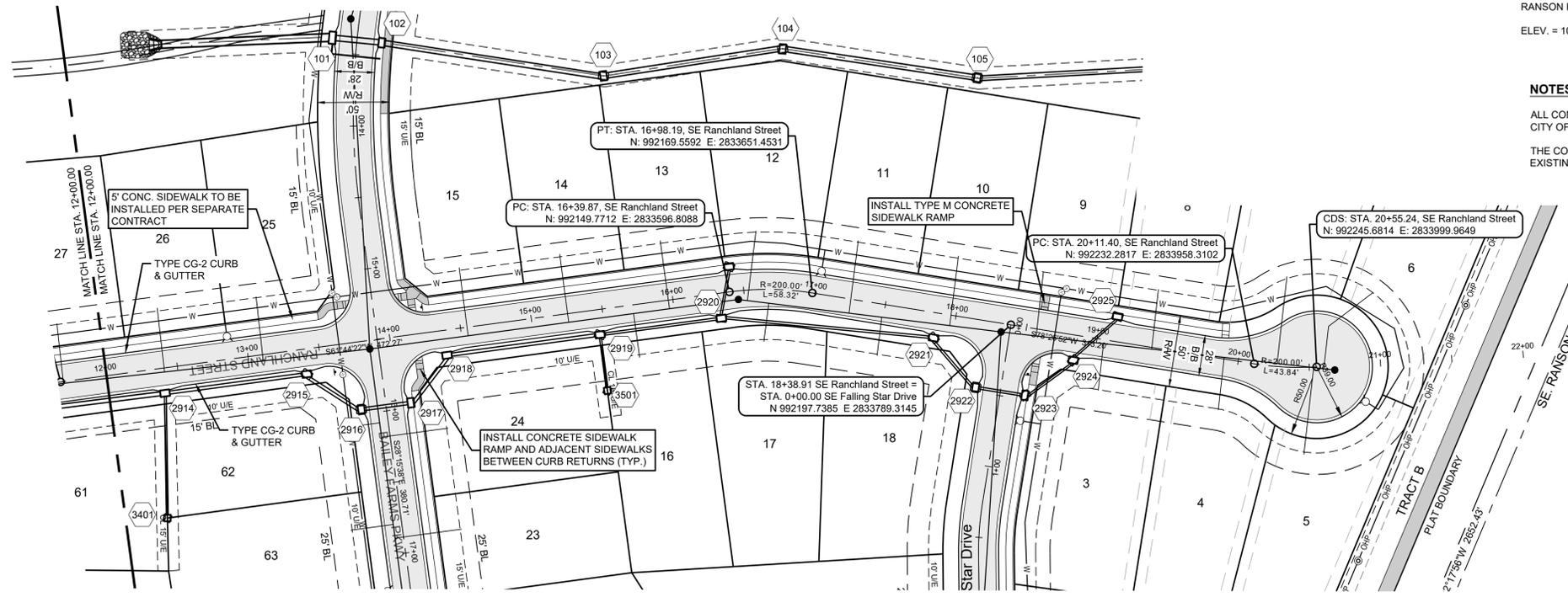
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**BAILEY FARMS
 PKWY NORTH
 PLAN & PROFILE**

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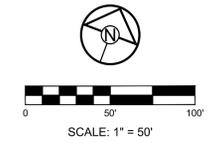
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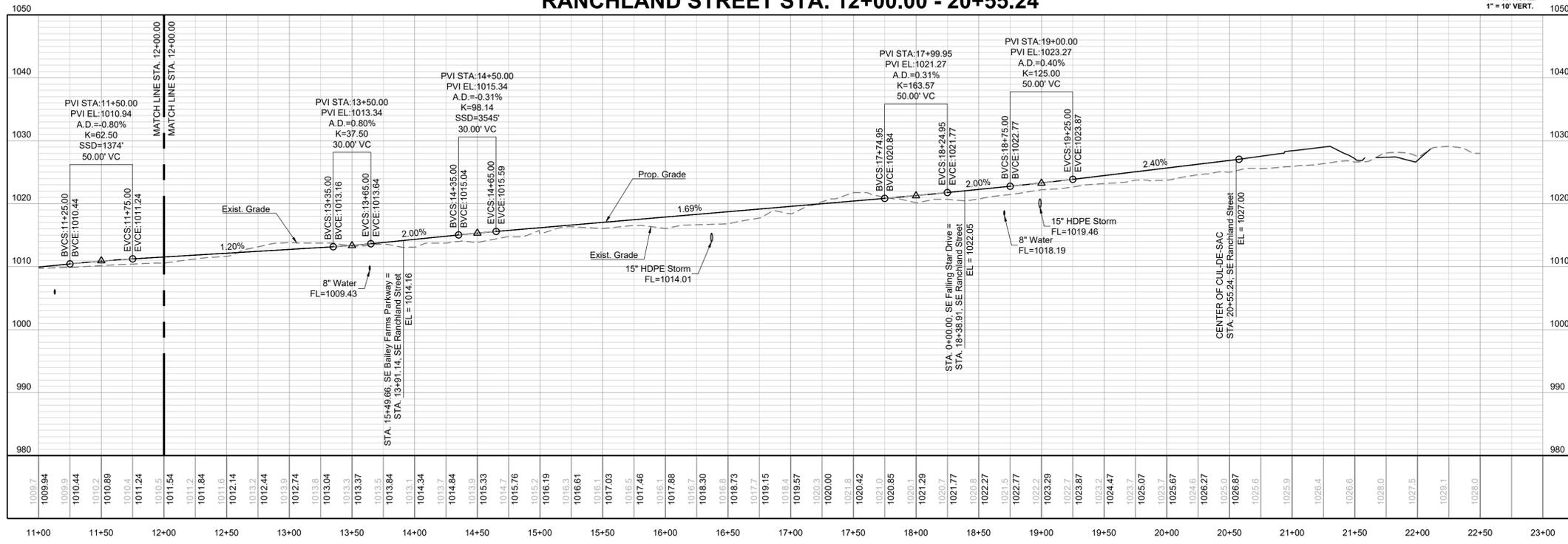
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RANCLAND STREET STA. 12+00.00 - 20+55.24



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PREPARED BY:



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SCHLAGEL & ASSOCIATES, P.A.

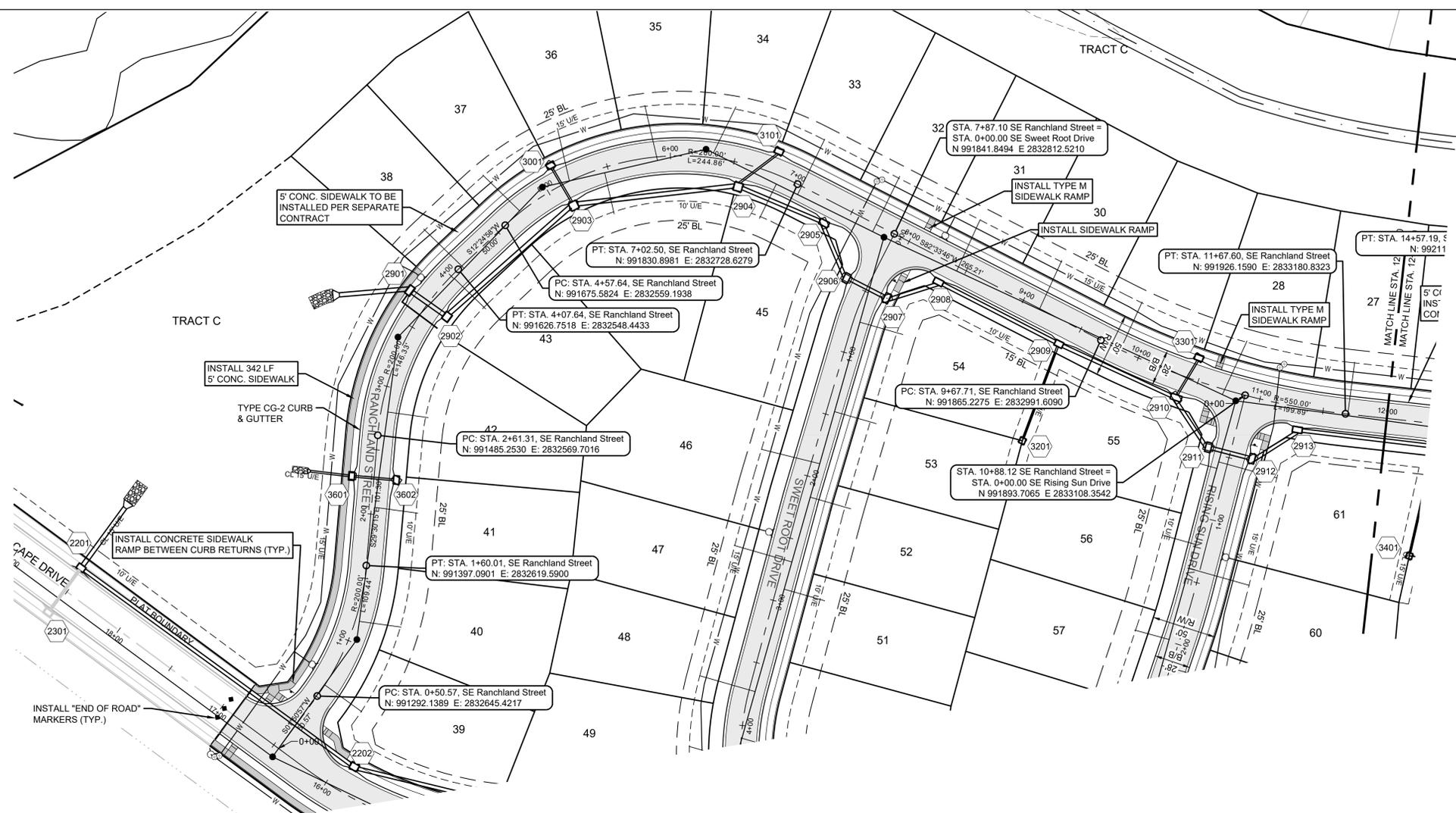
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RANCLAND ST EAST PLAN & PROFILE

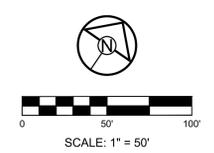
SHEET

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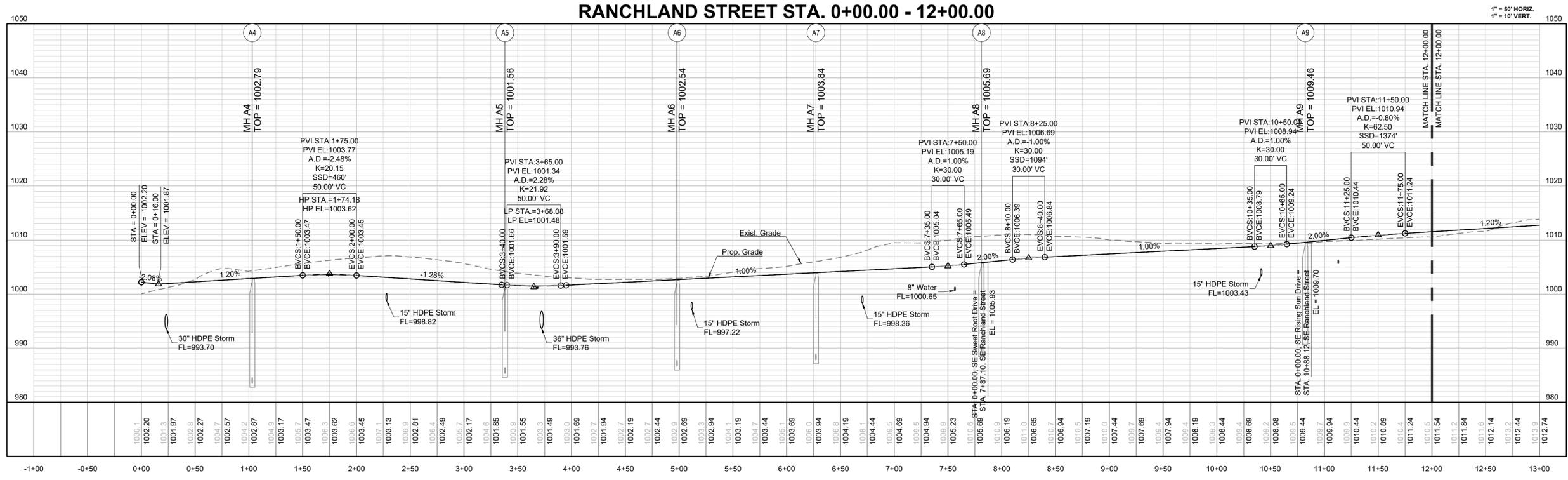
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 NUMBER PE-2014010495
 STATE OF MISSOURI
 PROFESSIONAL ENGINEER
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

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 LEE'S SUMMIT, MISSOURI

RANGLAND STREET STA. 0+00.00 - 12+00.00



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RANGLAND ST WEST PLAN & PROFILE

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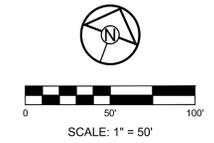
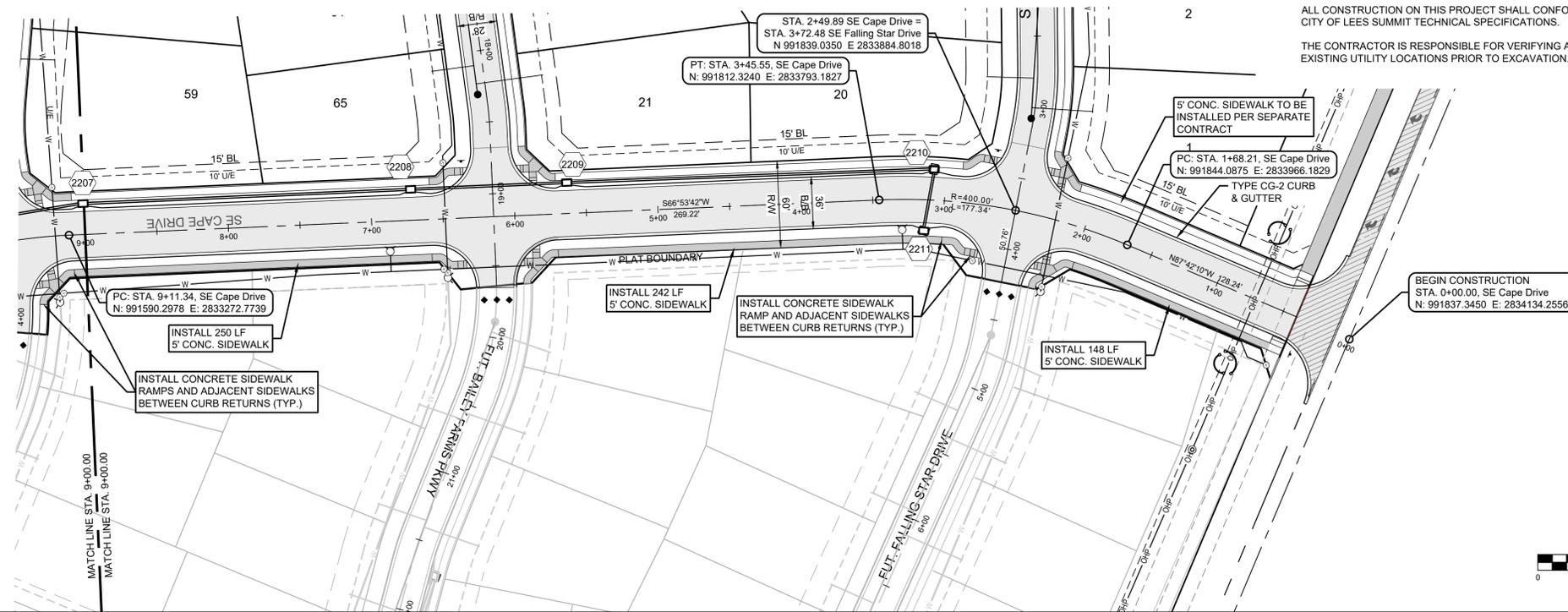
BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

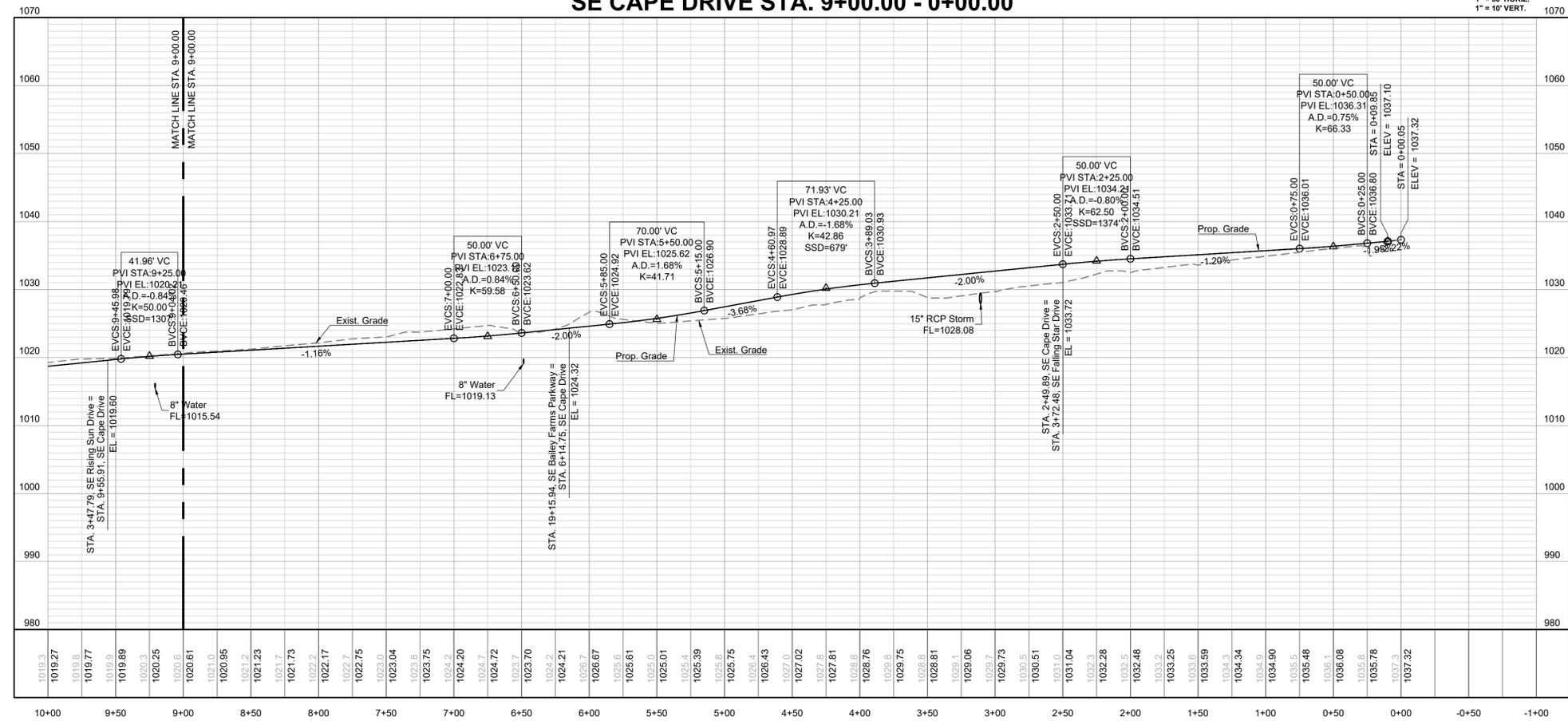
NOTES:

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



SE CAPE DRIVE STA. 9+00.00 - 0+00.00



PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEES SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments Dated 5/11/2022

CAPE DR EAST
PLAN & PROFILE

SHEET

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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

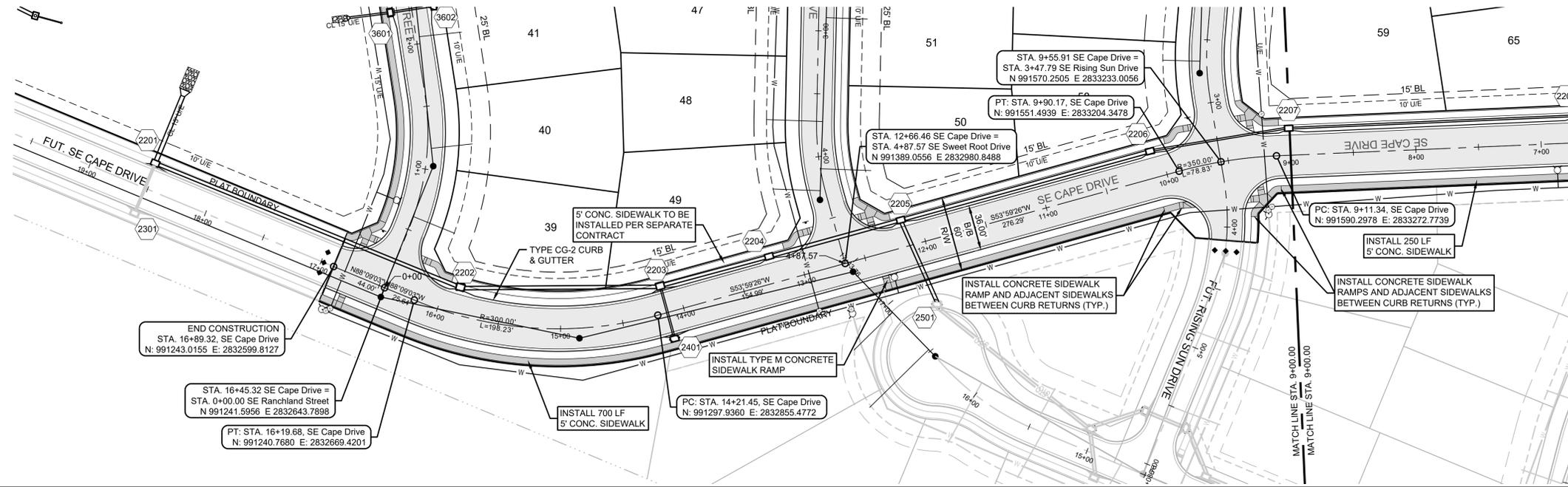
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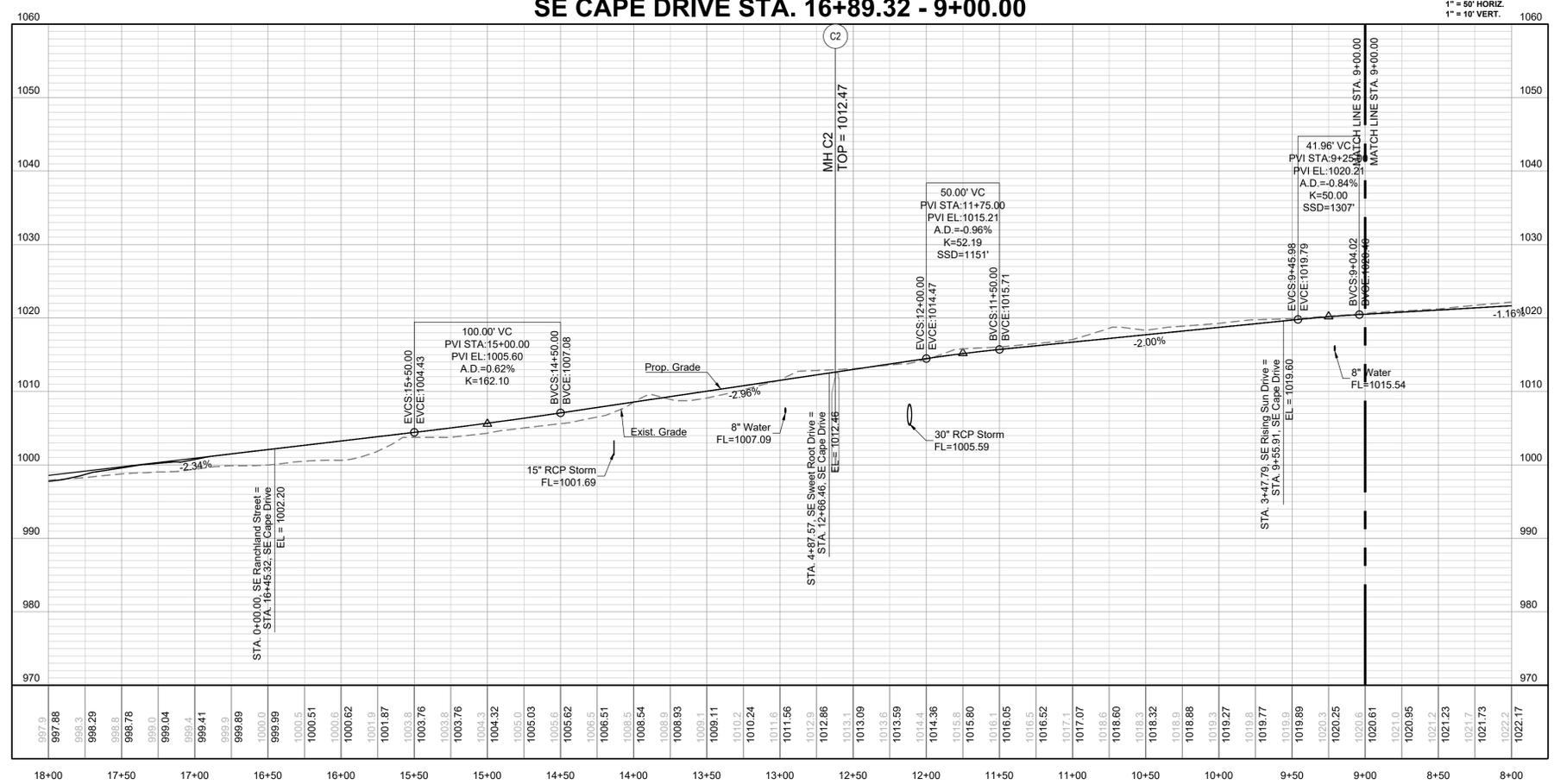
PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

SE CAPE DRIVE STA. 16+89.32 - 9+00.00



MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

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DRAWN BY:	NCA
CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

CAPE DR WEST
PLAN & PROFILE

SHEET

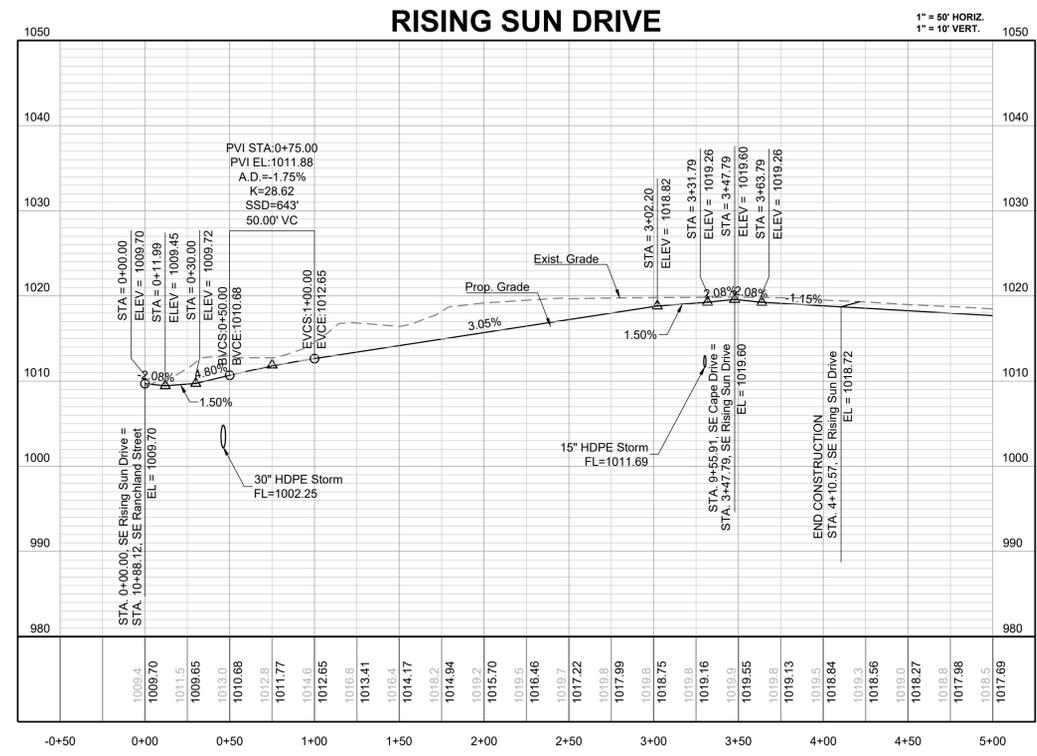
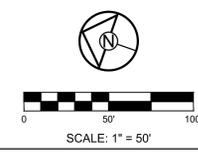
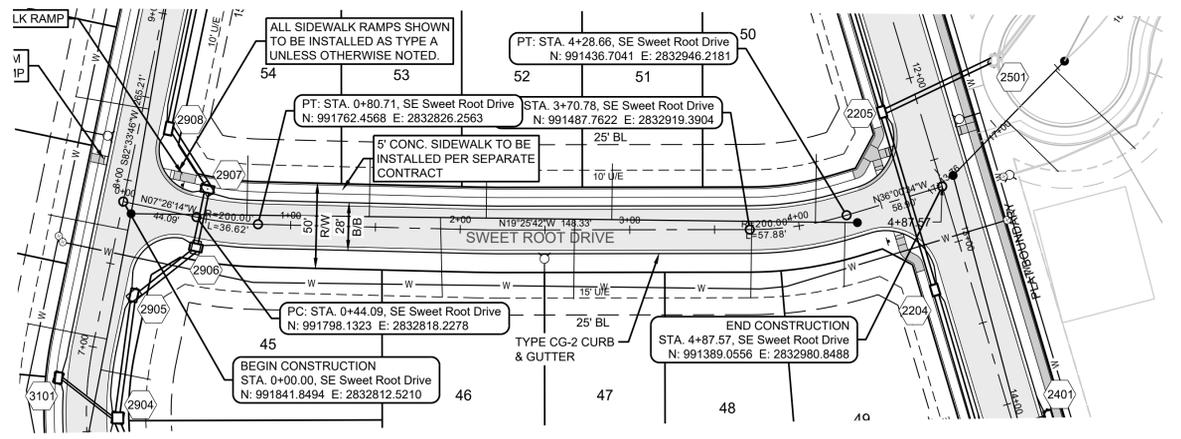
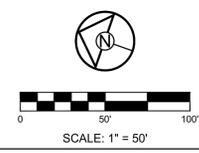
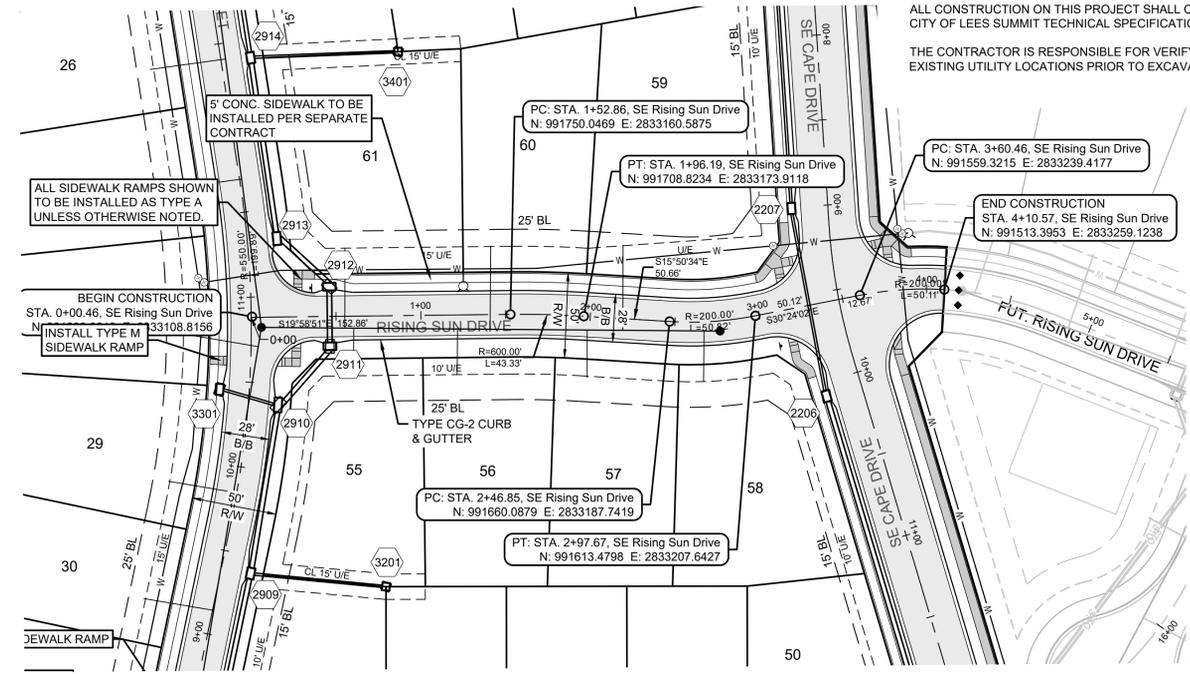
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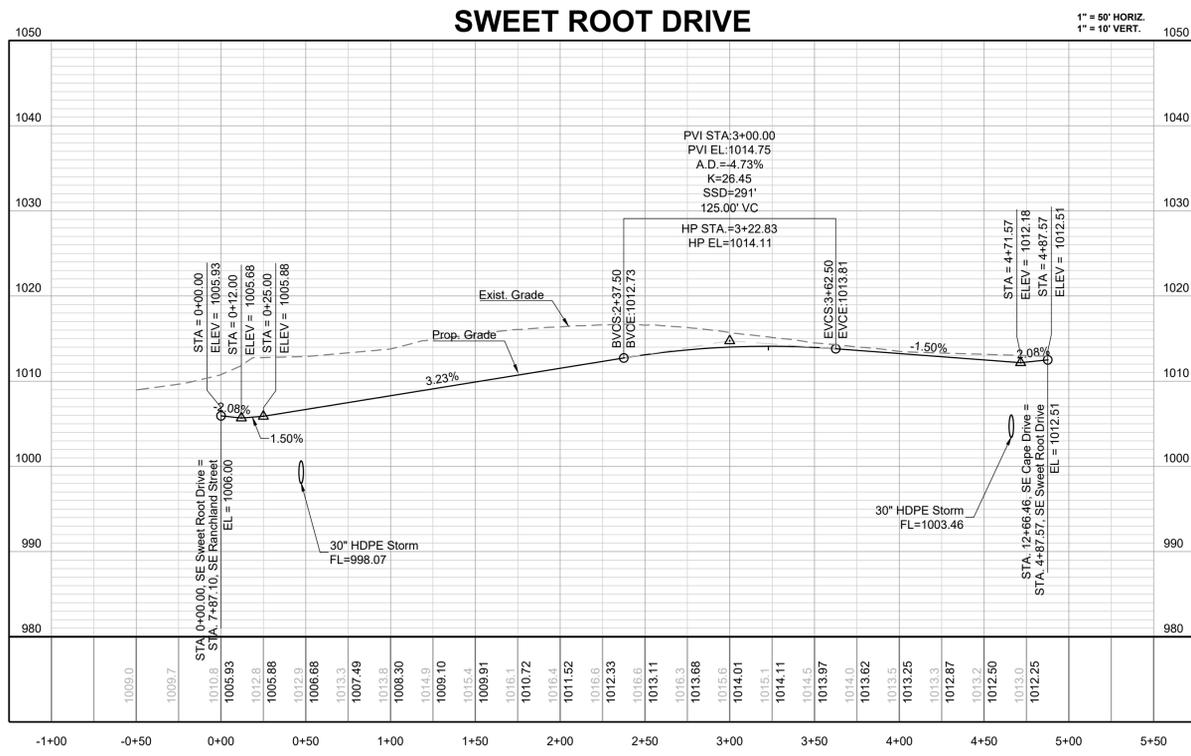
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PROJ. NUMBER:	21-130

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:
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RISING SUN DRIVE
 1" = 50' HORIZ.
 1" = 10' VERT.



SWEET ROOT DRIVE
 1" = 50' HORIZ.
 1" = 10' VERT.

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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

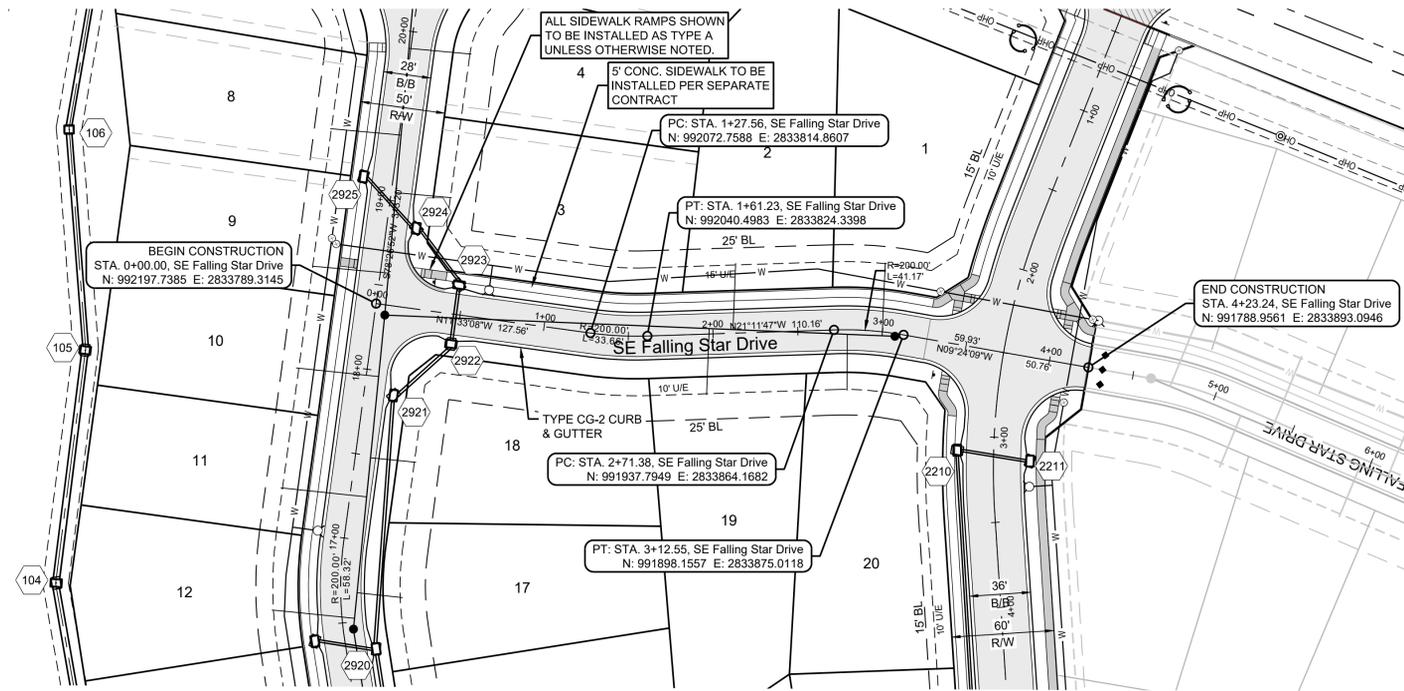
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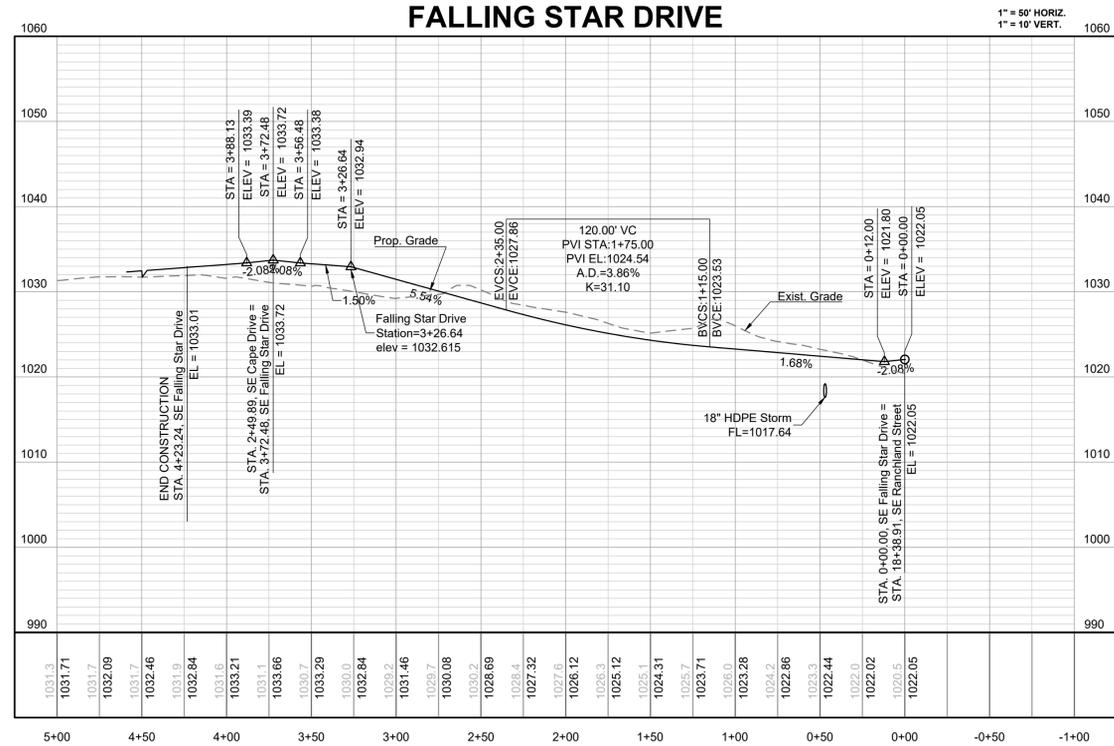
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FALLING STAR DRIVE



SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC2001005237 #LS200200869-F

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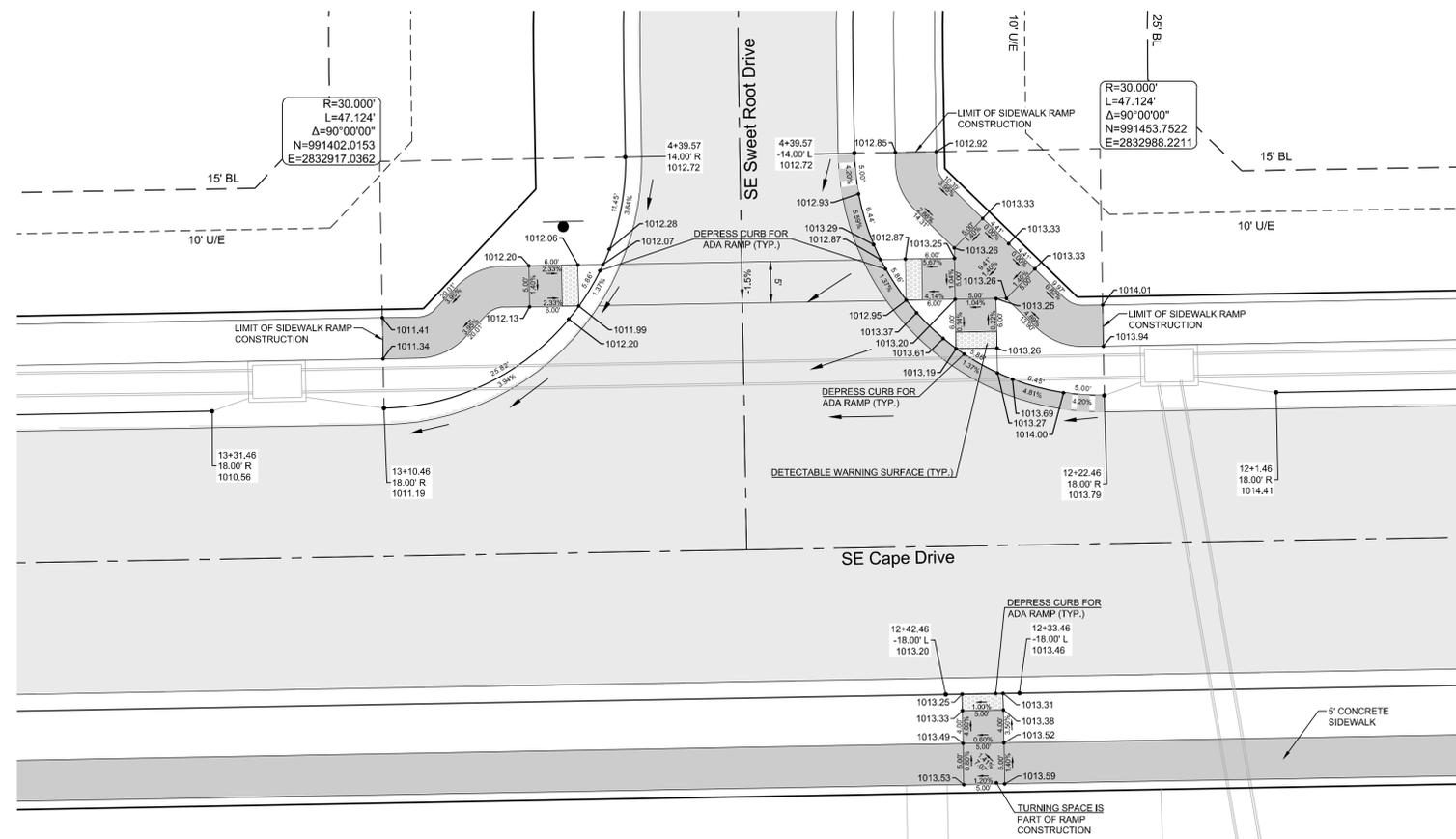
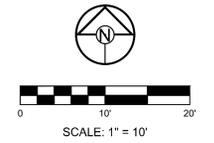
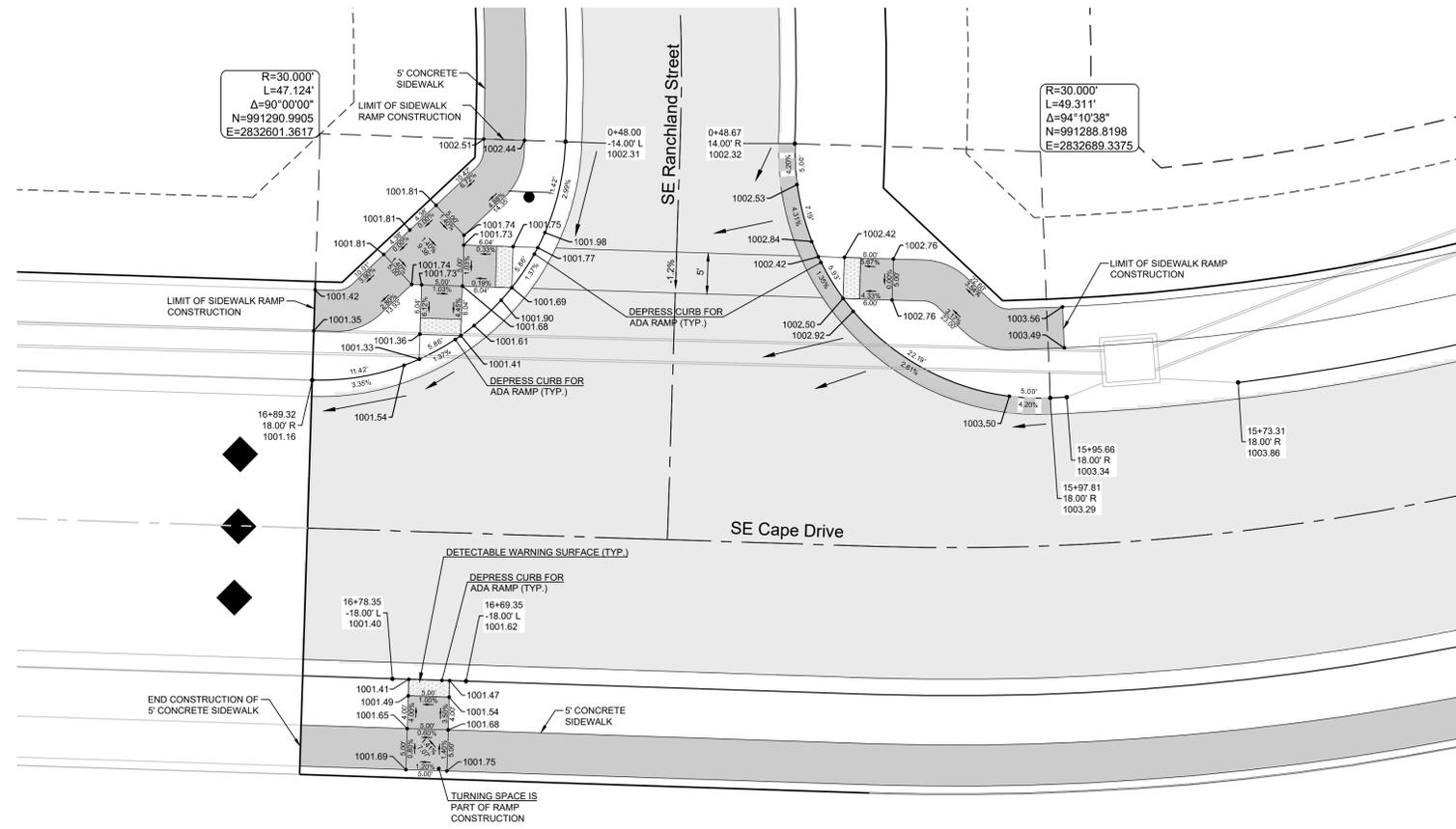
5/19/2022
SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
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DRAINAGE PLAN
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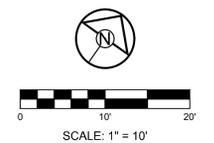
FALLING STAR
DR PLAN &
PROFILE

SHEET
17



CURB LEGEND

	CURB & GUTTER - EXISTING
	TYPE "CG-2" CURB & GUTTER
	TYPE "CG-2" DRY CURB & GUTTER
	TRANSITION "CG-2" TO "CG-2 DRY"



PREPARED BY:



5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

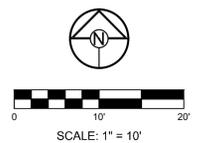
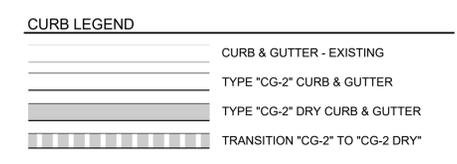
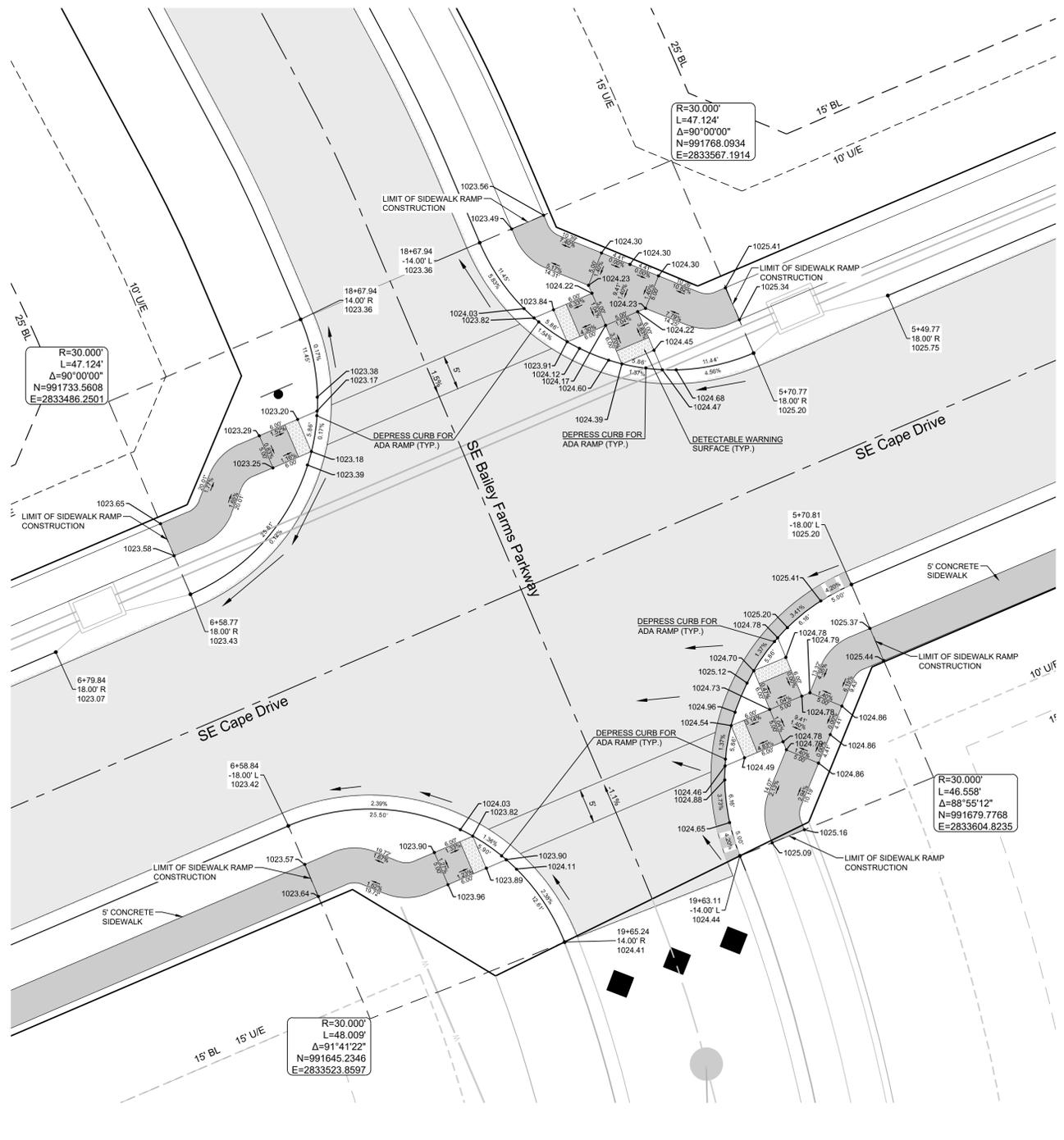
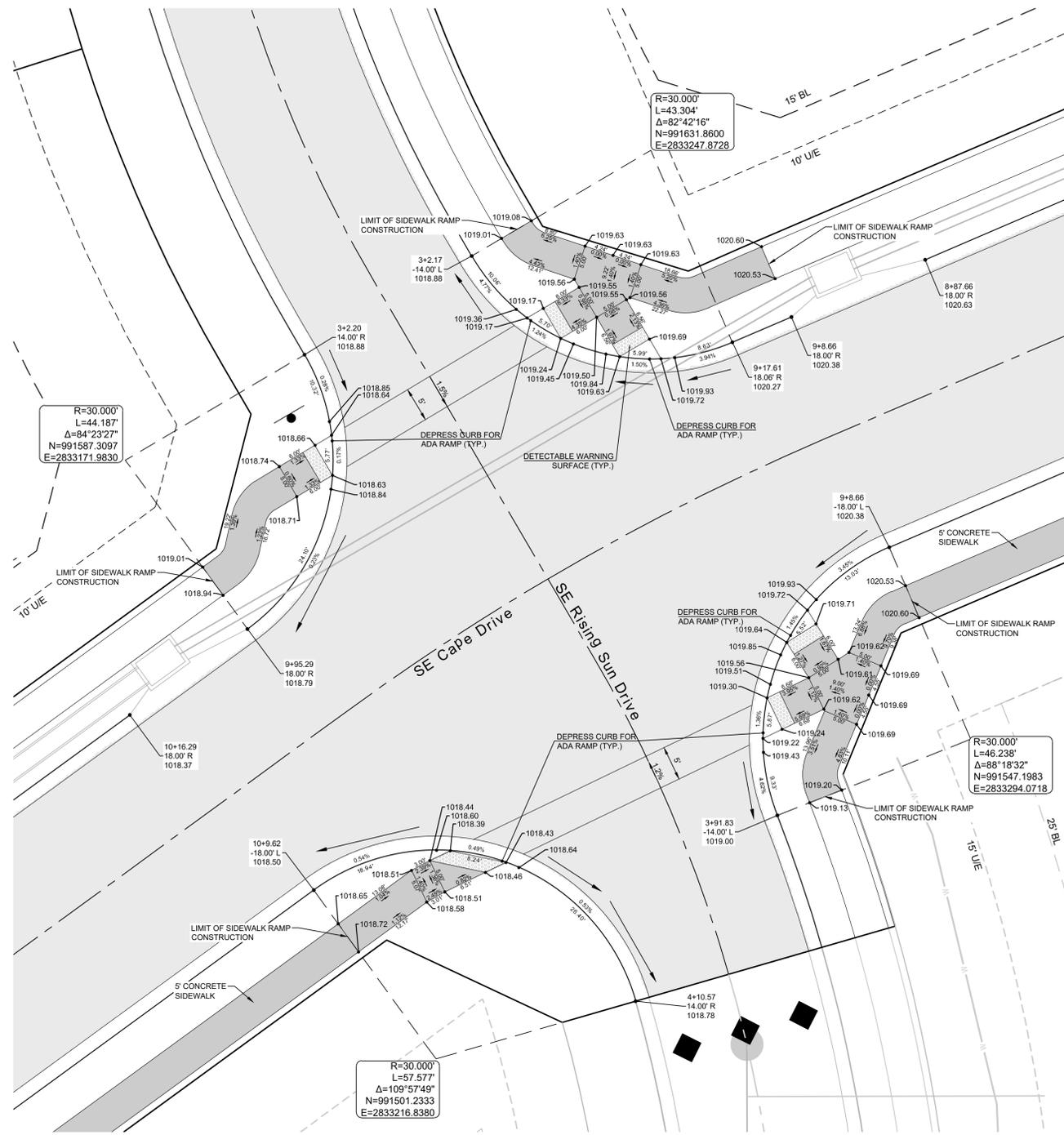
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PROJ. NUMBER:	21-130

INTERSECTION
 DETAILS 1 OF 8

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**MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER DRAINAGE
 PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI**

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INTERSECTION
 DETAILS 2 OF 8

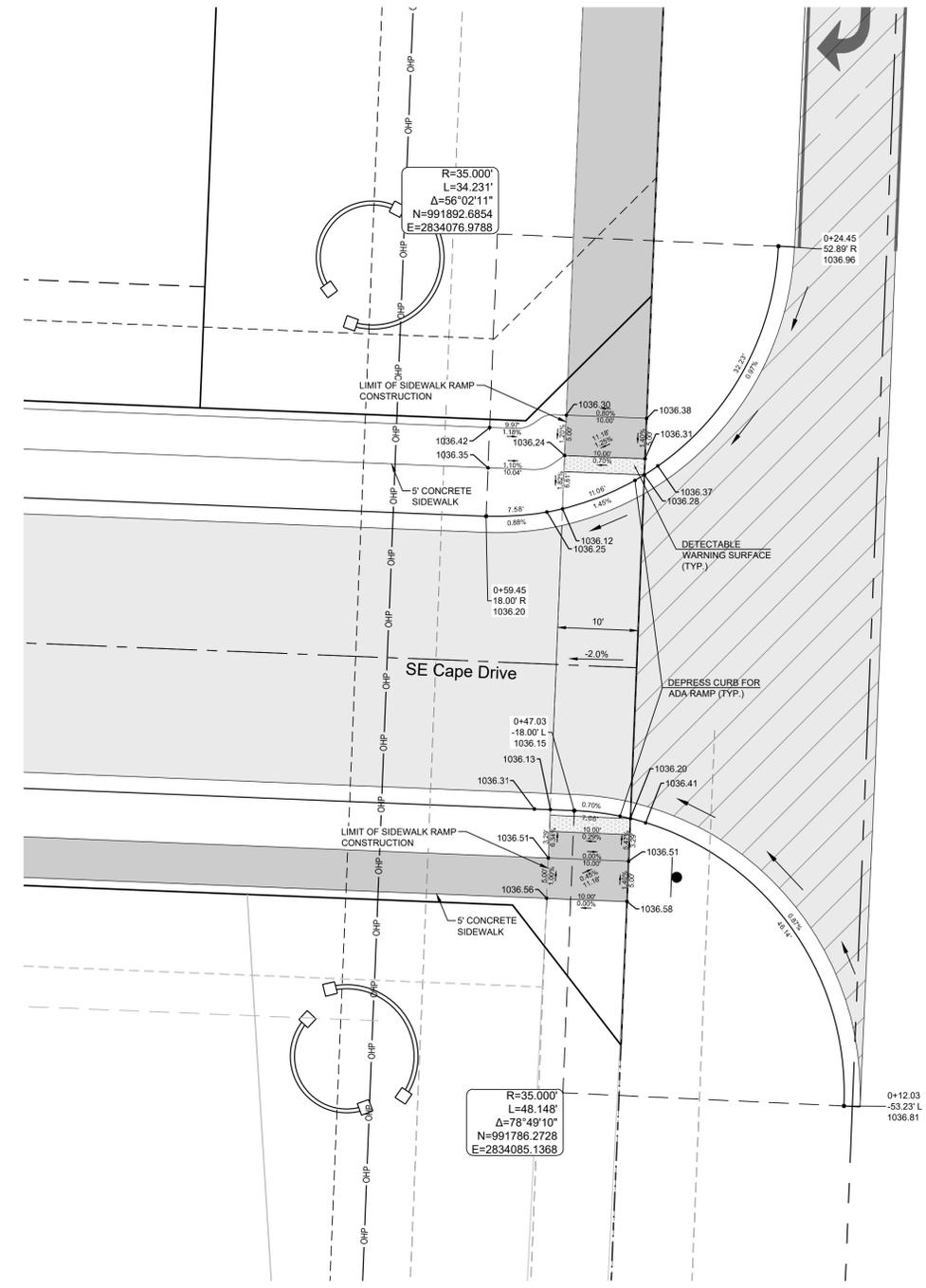
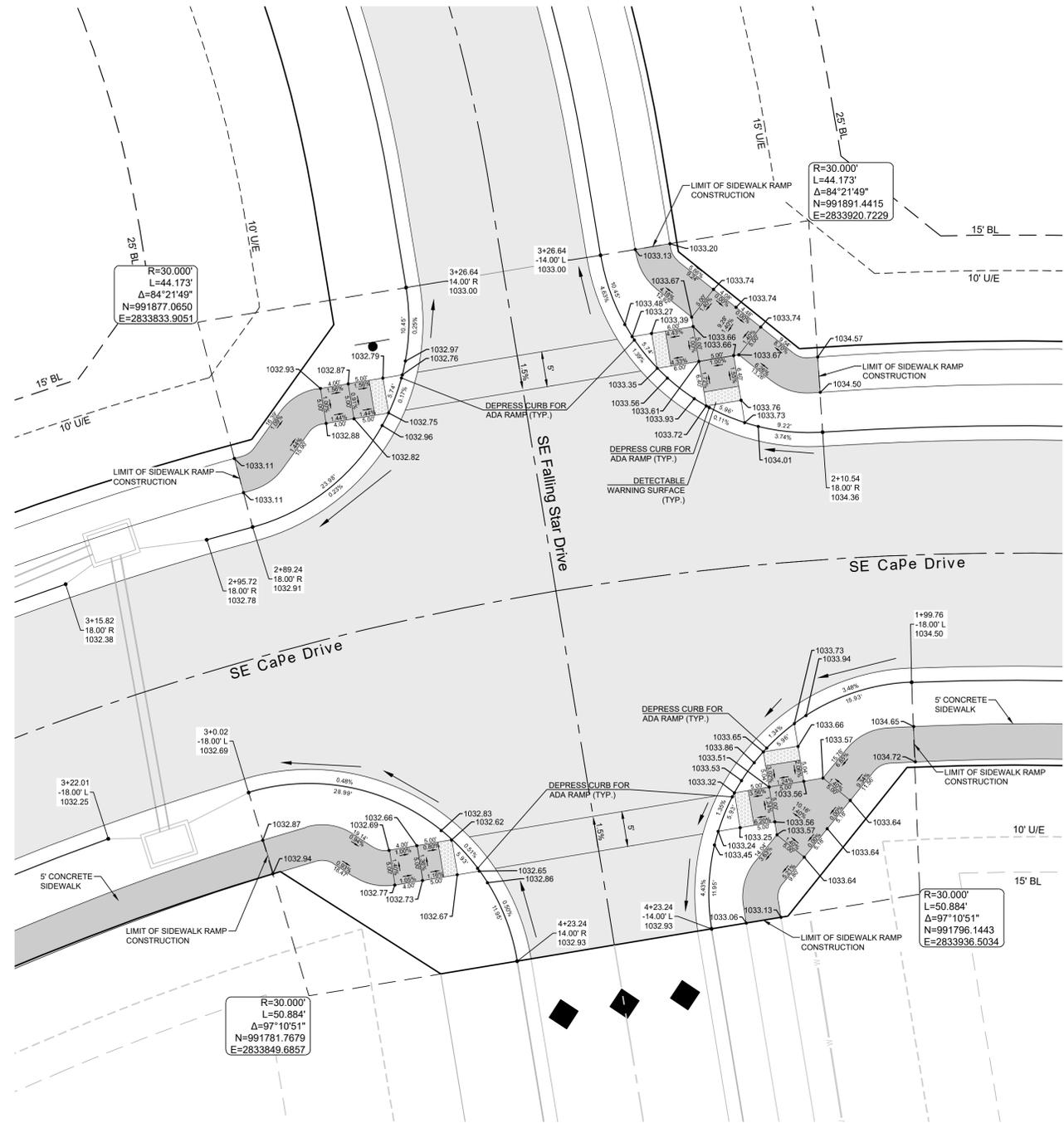
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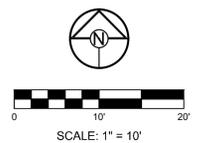
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MANOR AT BAILEY FARMS, FIRST PLAT
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 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI



CURB LEGEND

	CURB & GUTTER - EXISTING
	TYPE "CG-2" CURB & GUTTER
	TYPE "CG-2" DRY CURB & GUTTER
	TRANSITION "CG-2" TO "CG-2 DRY"



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PROJ. NUMBER:	21-130

INTERSECTION
 DETAILS 3 OF 8

SHEET

20

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 STREET, STORMWATER, AND MASTER
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 SE BAILEY ROAD AND SE RANSON ROAD
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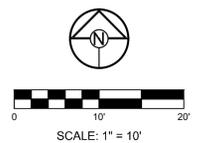
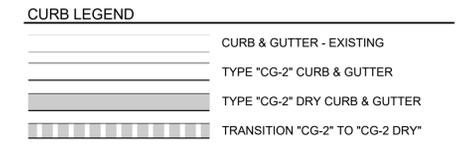
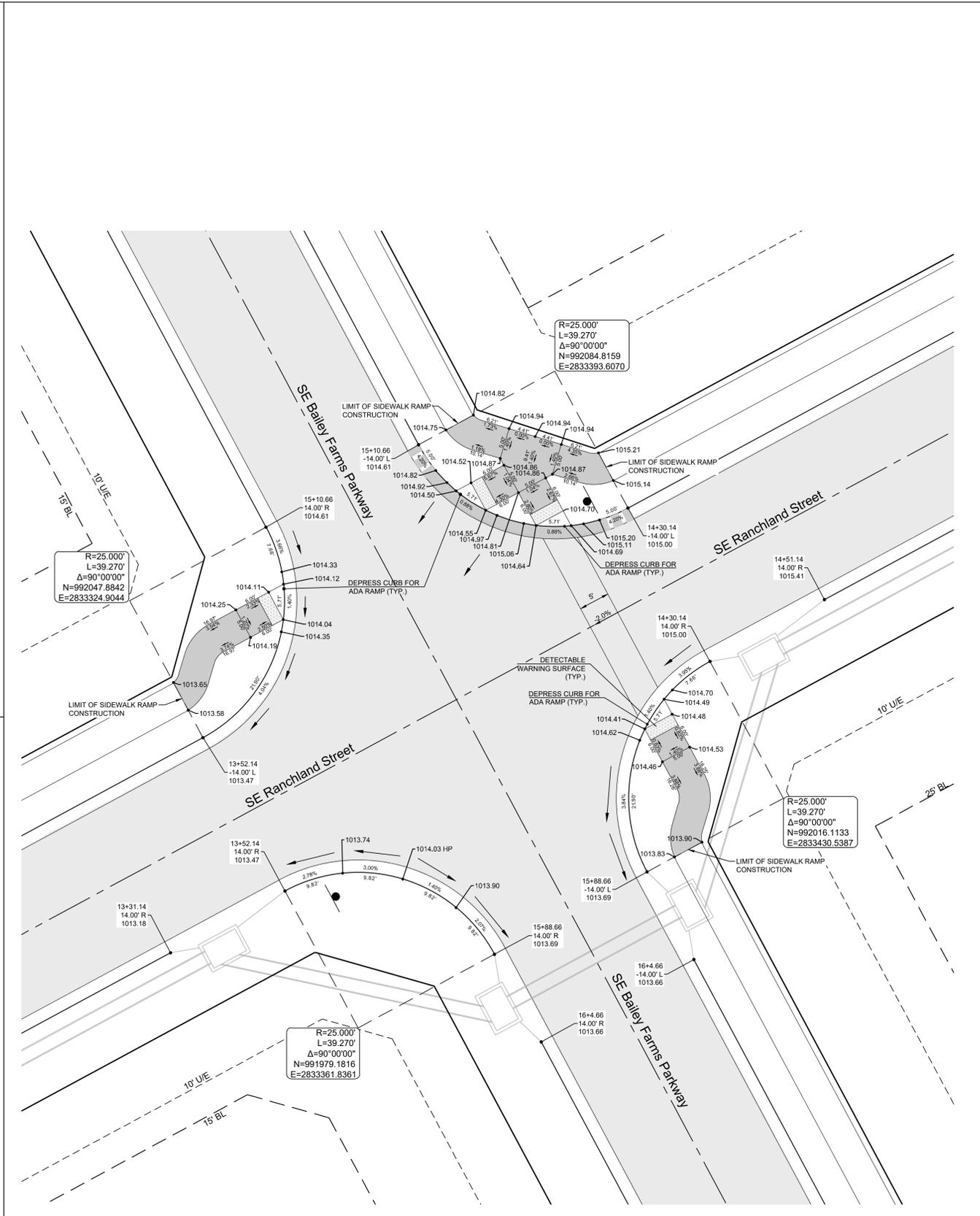
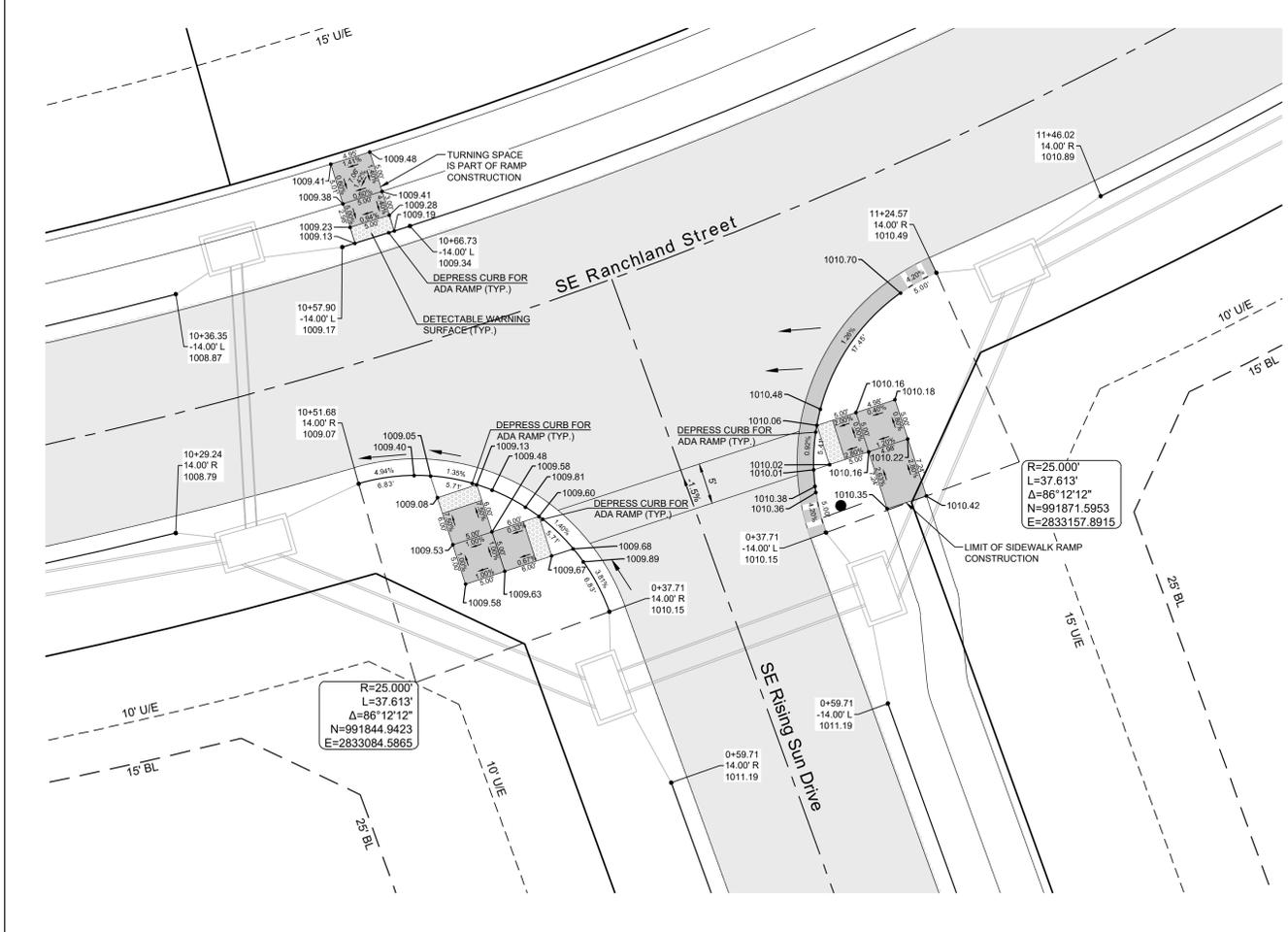
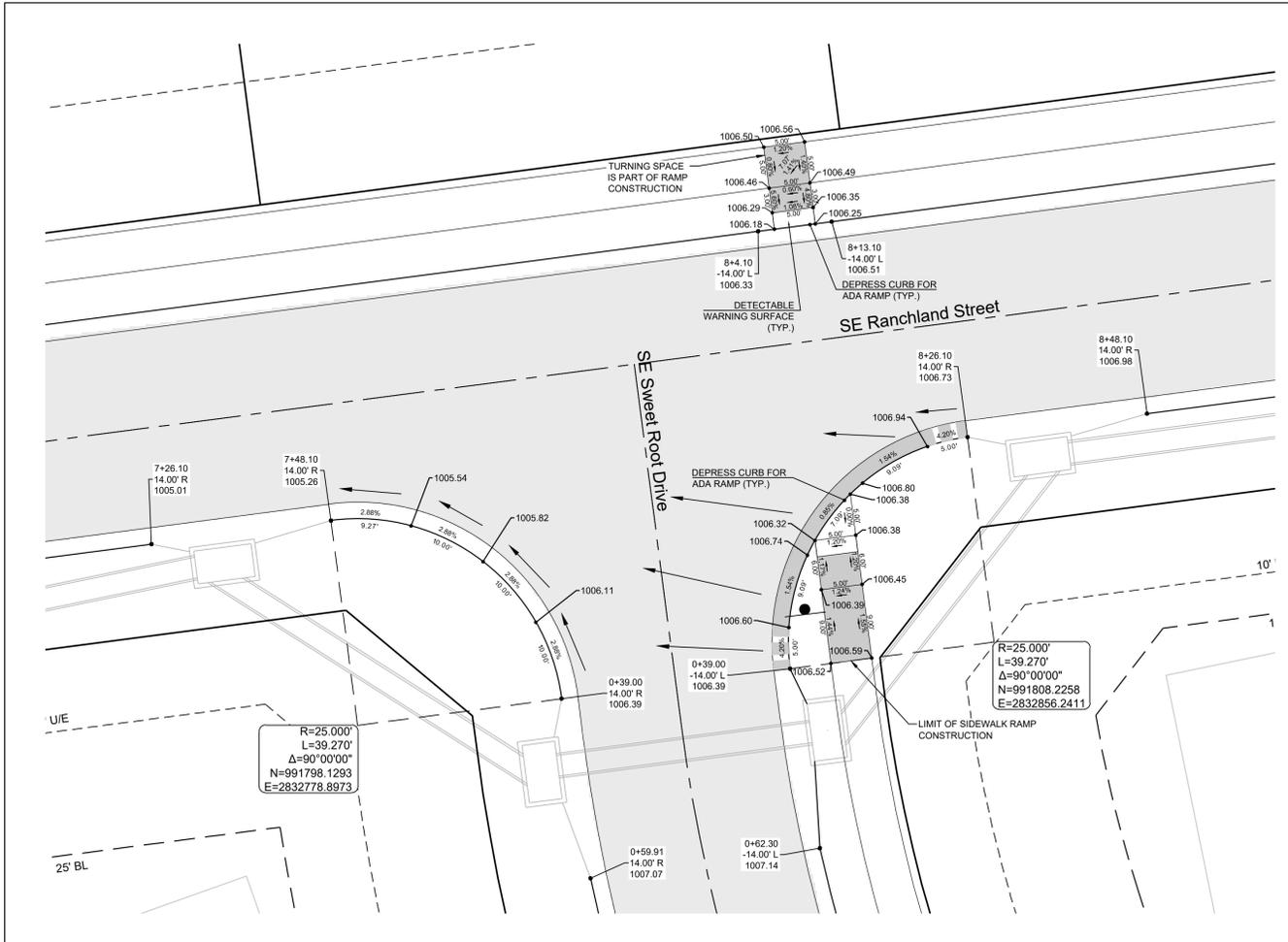
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INTERSECTION
 DETAILS 4 OF 8

SHEET

21



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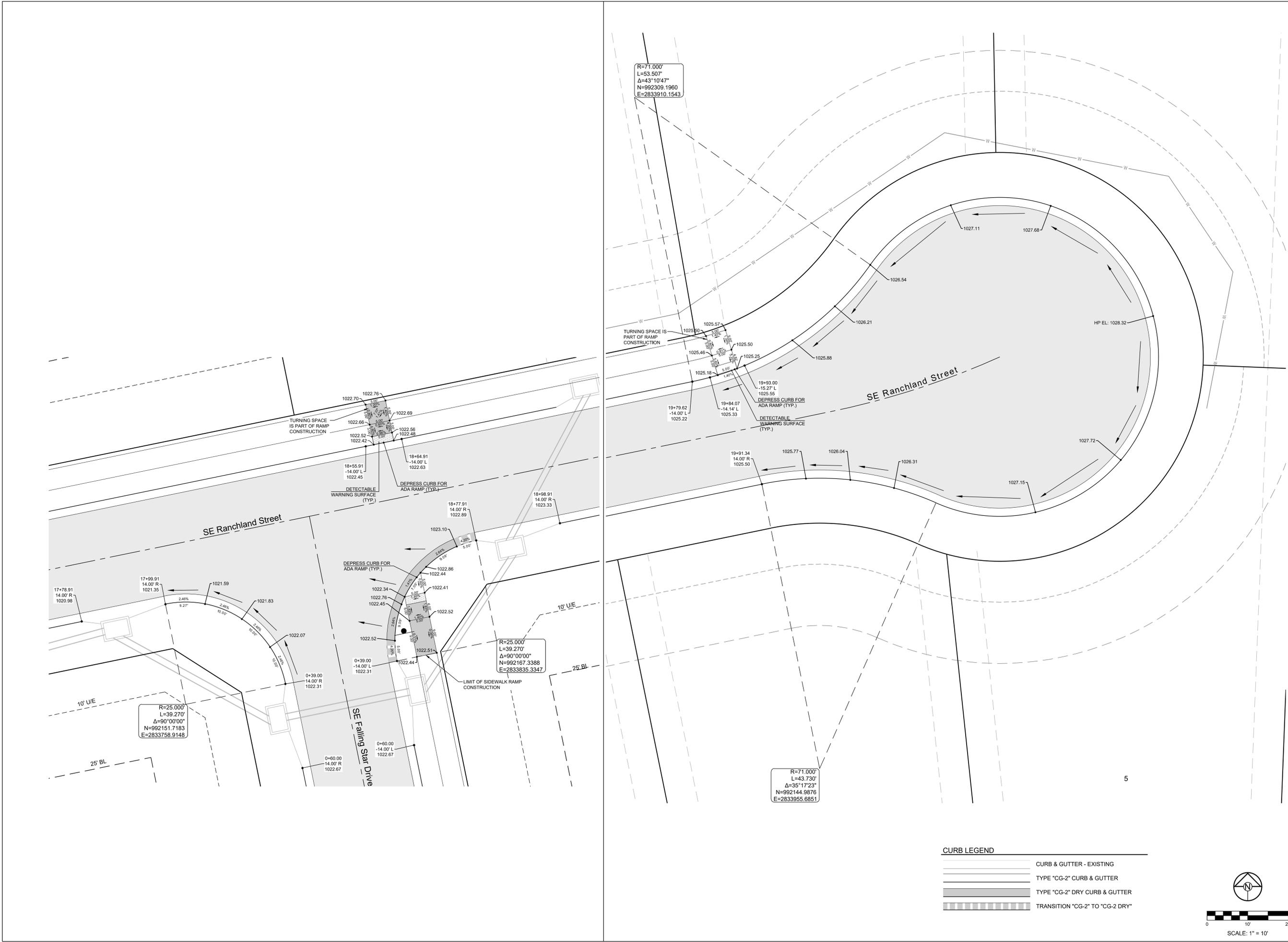
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INTERSECTION
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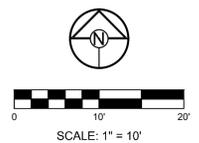
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22



CURB LEGEND

	CURB & GUTTER - EXISTING
	TYPE "CG-2" CURB & GUTTER
	TYPE "CG-2" DRY CURB & GUTTER
	TRANSITION "CG-2" TO "CG-2 DRY"



PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

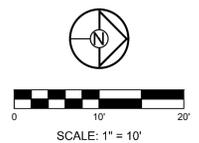
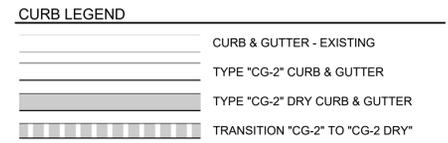
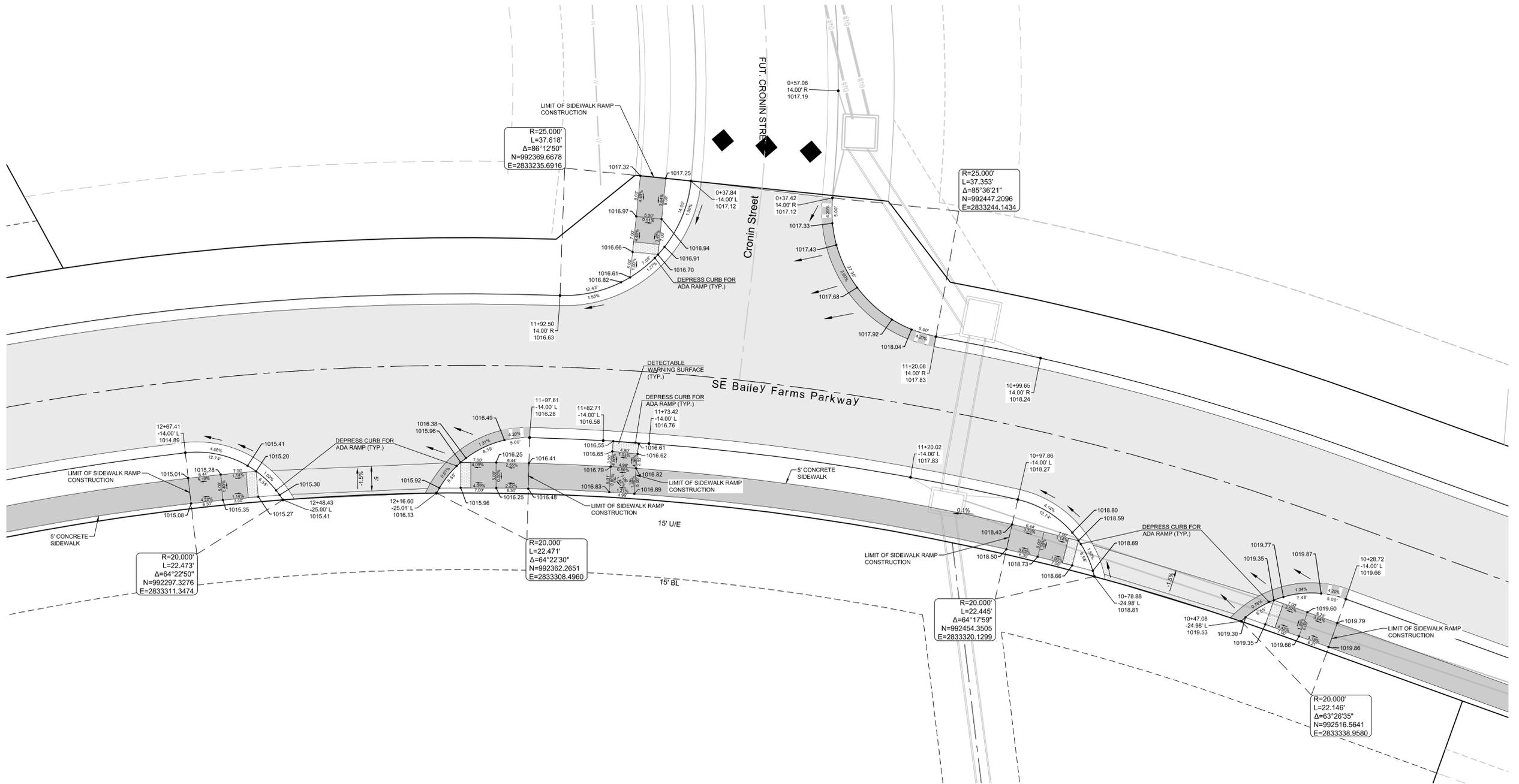
MANOR AT BAILEY FARMS, FIRST PLAT
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INTERSECTION
 DETAILS 6 OF 8

SHEET

23



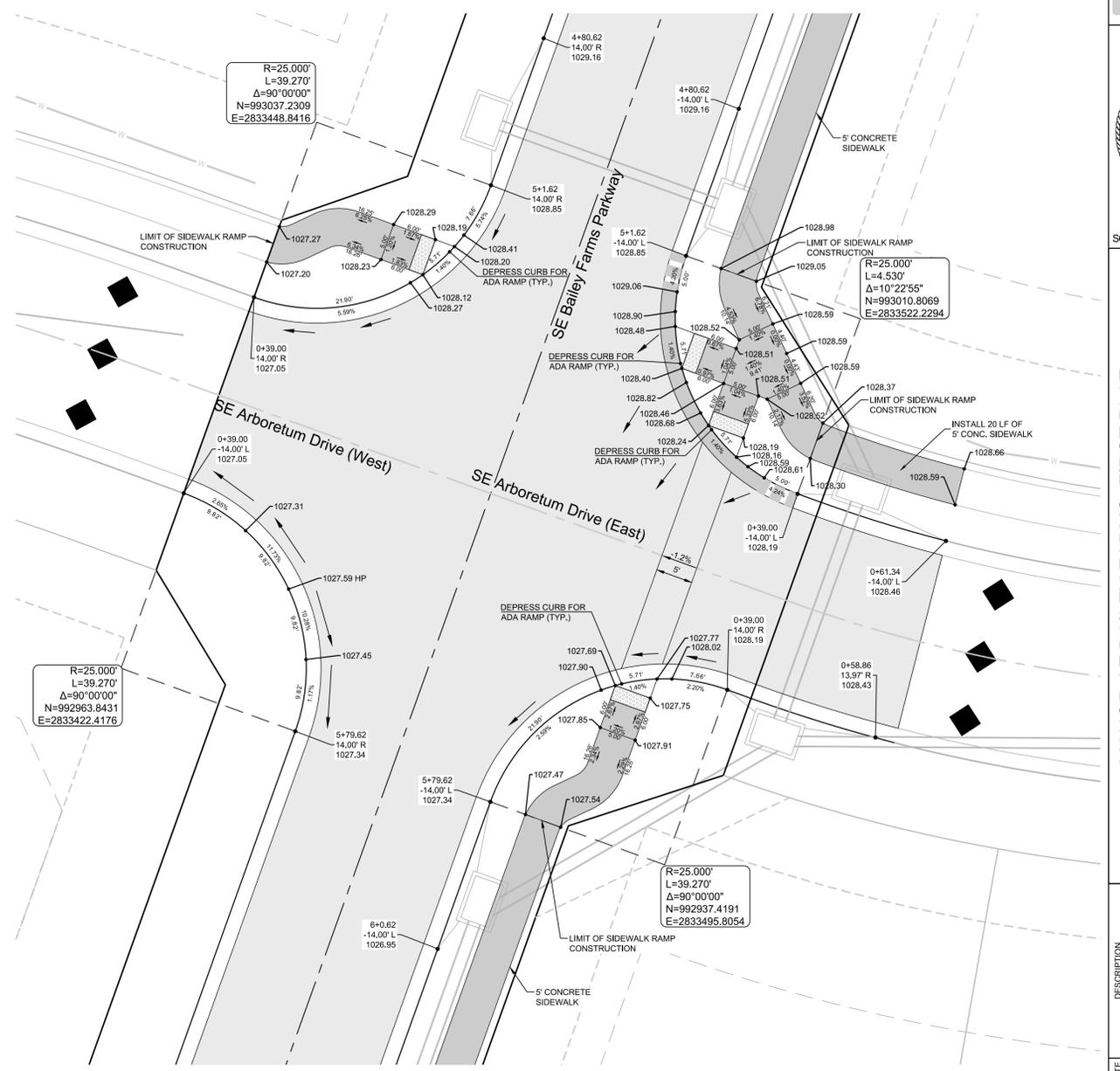
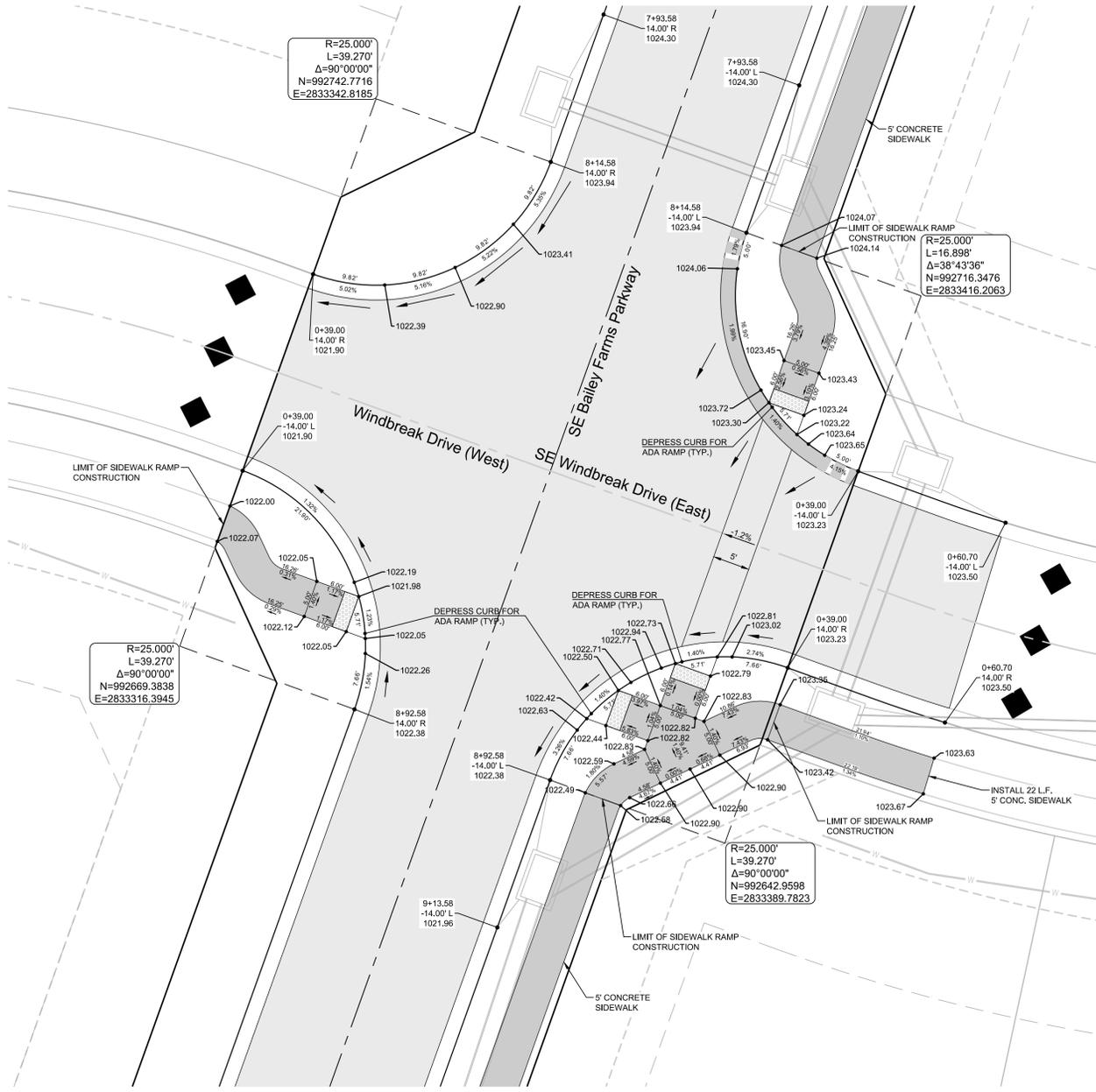
PREPARED BY:



5/19/2022

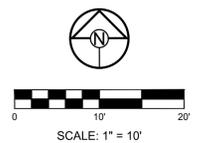
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	CURB & GUTTER - EXISTING
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INTERSECTION
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SHEET
24

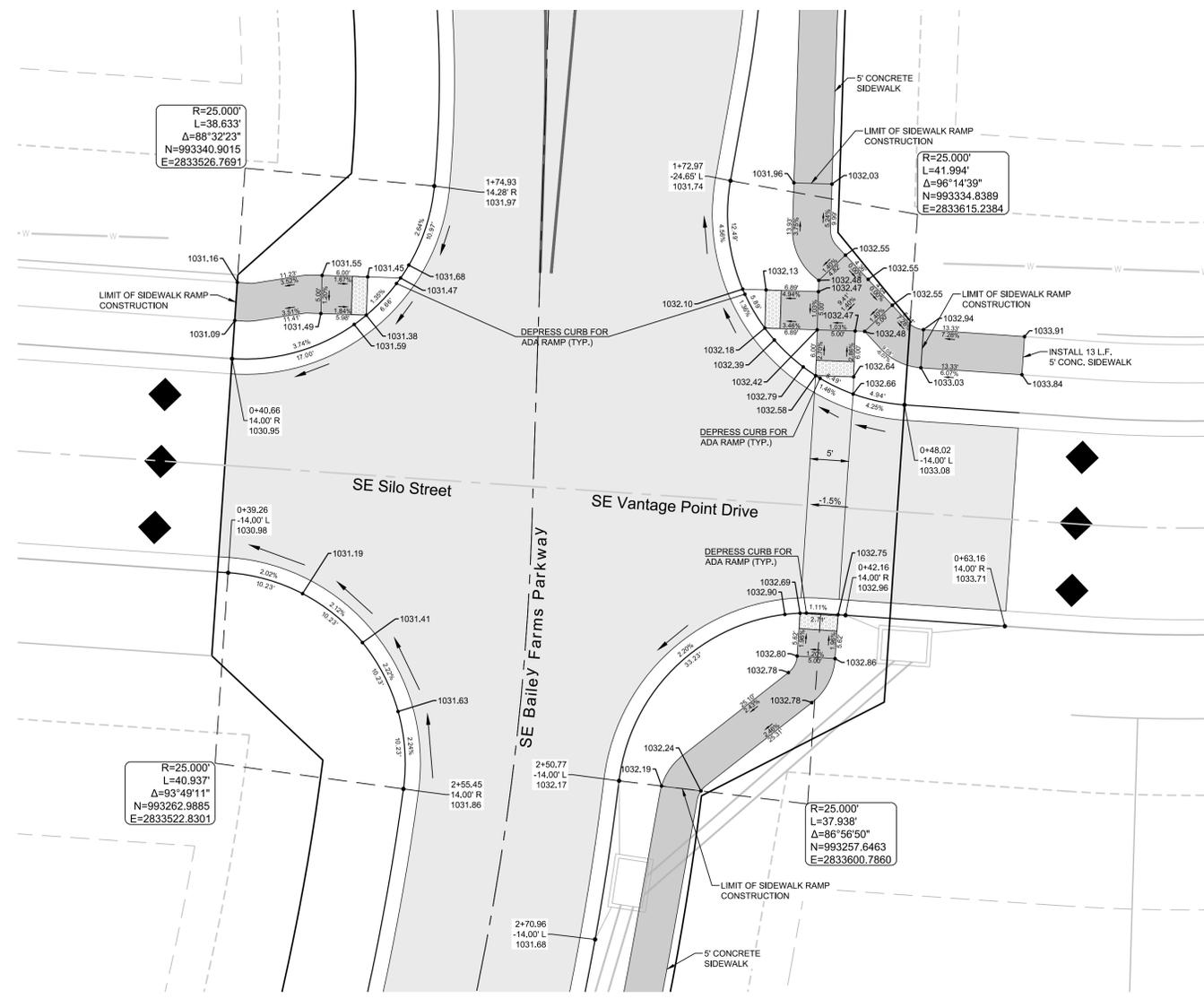
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PREPARED BY:



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MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI



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 L=38.633'
 Δ=88°32'23"
 N=993340.9015
 E=2833526.7691

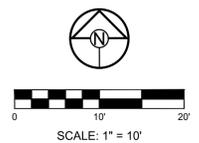
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R=25.000'
 L=37.938'
 Δ=86°56'50"
 N=993257.6463
 E=2833600.7860

CURB LEGEND

	CURB & GUTTER - EXISTING
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	TYPE "CG-2" DRY CURB & GUTTER
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PROJ. NUMBER:	21-130

INTERSECTION
 DETAILS 8 OF 8

SHEET
25

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MASTER
 DRAINAGE
 PLAN-DRAINAGE
 MAP

SHEET

26

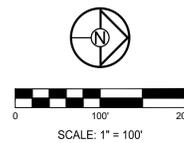
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ELEV. = 1046.25



(LINE ATTN)
 1720 SE RANSON ROAD
 OWNER: WHITNAGE DAVID E &
 NANCY L.



10-YEAR RUNOFF CALCULATIONS

Design Storm:		10																							
"K" Value:		1.00																							
"F" Factor:		1.00																							
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
DS TAILWATER @ STR #100																									
101	0.26	0.66	20.41	12.07	6.5	6.92	1.19	83.50	120.18	9.56															
102	0.70	0.66	20.15	11.90	6.4	6.94	3.20	82.51	120.18	9.56															
103	0.95	0.81	19.45	11.43	6.1	7.02	5.40	80.24	111.27	8.85															
104	0.55	0.81	18.50	10.67	5.9	7.08	3.15	75.46	100.61	10.46															
105	0.65	0.81	17.95	10.22	5.7	7.14	3.76	72.95	100.61	10.46															
106	1.50	0.81	17.30	9.69	5.5	7.21	3.76	69.85	89.99	9.35															
107	2.80	0.66	15.80	8.48	5.1	7.33	13.55	62.85	108.10	10.76															
108	13.00	0.51	13.00	6.63	5.0	7.35	48.75	48.75	61.49	8.70															
DS TAILWATER @ STR #1000																									
1001	0.00	0.66	14.65	10.02	8.3	6.45	0.00	64.59	67.78	9.59															
1002	1.18	0.66	14.65	10.02	8.1	6.50	0.00	65.12	72.26	10.22															
1003	0.11	0.66	14.65	10.02	7.7	6.60	5.14	66.16	64.63	9.14	1101														
1004	0.15	0.66	13.17	9.04	7.5	6.65	0.48	60.10	64.63	9.14															
1005	0.06	0.66	13.06	8.97	7.3	6.70	0.66	60.11	64.63	9.14															
1006	0.22	0.66	12.91	8.87	7.2	6.72	0.27	59.63	64.63	9.14	1301														
1007	0.35	0.66	12.56	8.63	7.2	6.74	0.38	58.18	64.63	9.14	1801														
1008	0.15	0.66	6.55	4.32	6.7	6.86	1.13	29.64	31.00	9.87															
1009	0.25	0.66	6.30	4.16	6.7	6.88	0.68	28.59	34.49	10.98	1201														
1010	0.95	0.66	5.09	3.36	6.6	6.89	1.14	23.15	30.17	9.60	1202														
1011	0.20	0.66	4.08	2.69	6.5	6.92	4.34	18.63	24.01	7.64															
1012	0.55	0.66	3.13	2.07	6.3	6.97	0.92	14.41	30.02	9.55															
1013	0.30	0.66	2.93	1.83	6.1	7.02	2.55	13.58	16.09	9.11	1501														
1014	0.20	0.66	0.90	0.59	5.9	7.08	1.40	4.21	16.09	9.11															
DS TAILWATER @ STR #1300																									
1301	0.30	0.66	0.30	0.20	5.0	7.35	1.46	1.46	12.12	9.88															
Drop in Inlet 1010																									
1301	0.30	0.66	0.30	0.20	5.0	7.35	1.46	1.46	12.12	9.88															
Drop in Inlet 1013																									
1501	0.35	0.66	1.48	0.98	6.1	7.02	1.62	6.86	8.44	4.78															
1502	0.20	0.66	1.13	0.75	6.0	7.06	0.93	5.27	8.81	4.99	1801														
1503	0.20	0.66	0.65	0.43	5.5	7.20	0.95	3.09	5.42	4.42															
1504	0.10	0.66	0.45	0.30	5.1	7.32	0.48	2.17	5.42	4.42															
1505	0.35	0.66	0.35	0.23	5.0	7.35	1.70	1.70	9.90	8.06															
Drop in Inlet 1502																									
1601	0.28	0.66	0.28	0.18	5.0	7.35	1.36	1.36	5.42	4.42															
Drop in Inlet 1606																									
1801	0.21	0.81	5.78	4.17	7.2	6.74	1.15	28.07	40.97	8.35															
1802	0.63	0.81	5.57	4.00	7.1	6.77	3.45	27.05	39.74	8.10															
1803	0.49	0.81	4.94	3.49	6.8	6.84	2.72	23.86	39.74	8.10															
1804	1.01	0.81	4.45	3.09	6.4	6.94	5.68	21.45	32.95	6.71															
1805	0.00	0.66	3.44	2.27	6.2	7.01	0.00	15.91	34.66	11.03															
Drop in Inlet 1806																									
2001	0.21	0.81	5.78	4.17	7.2	6.74	1.15	28.07	40.97	8.35															
2002	0.63	0.81	5.57	4.00	7.1	6.77	3.45	27.05	39.74	8.10															
2003	0.49	0.81	4.94	3.49	6.8	6.84	2.72	23.86	39.74	8.10															
2004	1.01	0.81	4.45	3.09	6.4	6.94	5.68	21.45	32.95	6.71															
2005	0.00	0.66	3.44	2.27	6.2	7.01	0.00	15.91	34.66	11.03															
Drop in Inlet 2006																									
2201	0.21	0.81	5.78	4.17	7.2	6.74	1.15	28.07	40.97	8.35															
2202	0.63	0.81	5.57	4.00	7.1	6.77	3.45	27.05	39.74	8.10															
2203	0.49	0.81	4.94	3.49	6.8	6.84	2.72	23.86	39.74	8.10															
2204	1.01	0.81	4.45	3.09	6.4	6.94	5.68	21.45	32.95	6.71															
2205	0.00	0.66	3.44	2.27	6.2	7.01	0.00	15.91	34.66	11.03															
Drop in Inlet 2203																									
2401	1.05	0.51	1.05	0.54	5.0	7.35	3.94	3.94	7.00	5.70															
Drop in Inlet 2203																									
2401	1.05	0.51	1.05	0.54	5.0	7.35	3.94	3.94	7.00	5.70															
Drop in Inlet 2203																									
2601	0.30	0.51	12.92	6.59	7.9	6.55	1.00	43.14	51.09	7.23	2301														
2602	0.20	0.51	12.27	6.26	7.6	6.63	0.68	41.51	62.84	12.80															
2603	0.15	0.51	12.07	6.16	7.4	6.69	0.51	41.15	62.84	12.80	2401														
2604	0.55	0.51	10.87	5.54	7.3	6.71	1.88	37.21	68.84	10.80															
2605	0.25	0.51	10.32	5.26	7.1	6.75	0.86	35.51	68.84	14.02	2501														
2606	0.10	0.51	1.20	0.61	6.7	6.88	0.35	4.21	9.39	7.65															
2607	0.25	0.51	1.10	0.56	6.4	6.95	0.89	3.90	8.57	6.98															
2608	0.15	0.51	0.85	0.43	5.9	7.08	0.54	3.07	9.90	8.06															
2609	0.25	0.51	0.70	0.36	5.7	7.15	0.91	2.55	9.90	8.06															
2610	0.25	0.51	0.45	0.23	5.1	7.31	0.93	1.68	9.39	7.65															
2611	0.20	0.51	0.20	0.10	5.0	7.35	0.75	0.75	7.00	5.70															
Drop in Inlet 2603																									
2801	0.30	0.51	12.92	6.59	7.9	6.55	1.00	43.14	51.09	7.23	2301														
2802	0.20	0.51	12.27	6.26	7.6	6.63	0.68	41.51	62.84	12.80		</													

GUTTER SPREAD AND INLET CAPACITY CALCULATIONS - MANOR AT BAILEY FARMS, 1ST PLAT

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 To	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	EFFECTIVE LENGTH 80% CAP	INLET INTERCEPTION	BYPASS TO DOWNSTREAM INLET	STREET GRADE	STREET CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW
LINE 1																						
101	0.66	0.26	5	7.35	1.26					0.00	1.26	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
102	0.66	0.70	5	7.35	3.40	3701	1006			0.71	4.11	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
LINE 1000																						
1005	0.66	0.06	5	7.35	0.29					0.00	0.29	2.00	2.08	A	6	6	0.29	0.00	2.00	2.08	0.08	4.20
1006	0.66	0.22	5	7.35	1.07	1007				0.65	1.72	2.00	2.08	A	6	6	1.49	0.23	2.00	2.08	0.15	7.70
1007	0.66	0.25	5	7.35	1.21	1008	1009	1010		1.70	2.91	2.00	2.08	A	6	6	2.26	0.65	2.00	2.08	0.18	9.27
1008	0.66	0.15	5	7.35	0.73					0.00	0.73	1.20	2.08	A	6	6	0.71	0.02	1.20	2.08	0.12	6.24
1009	0.66	0.25	5	7.35	1.21					0.00	1.21	1.20	2.08	A	6	6	1.14	0.07	1.20	2.08	0.14	7.45
1010	0.66	0.95	5	7.35	4.61	1011				0.13	4.74	2.00	2.08	A	6	6	3.13	1.60	2.00	2.08	0.22	11.03
1011	0.66	0.20	5	7.35	0.97	1012				0.53	1.50	1.35	2.08	A	6	6	1.37	0.13	1.35	2.08	0.15	7.85
1012	0.66	0.55	5	7.35	2.67	1013	1501	1502		0.31	2.98	1.35	2.08	A	6	6	2.45	0.53	1.35	2.08	0.20	10.02
1013	0.66	0.30	5	7.35	1.46					0.00	1.46	1.20	2.08	A	6	6	1.35	0.11	1.20	2.08	0.15	7.94
1014	0.66	0.20	5	7.35	0.97					0.00	0.97	1.20	2.08	A	6	6	0.93	0.04	1.20	2.08	0.13	6.89
LINE 1300																						
1301	0.66	0.30	5	7.35	1.46					0.00	1.46	2.00	2.08	A	6	6	1.29	0.16	2.00	2.08	0.14	7.26
LINE 1500																						
1501	0.66	0.35	5	7.35	1.70					0.00	1.70	1.20	2.08	A	6	6	1.55	0.15	1.20	2.08	0.16	8.39
1502	0.66	0.20	5	7.35	0.97	1503				0.05	1.02	1.20	2.08	A	6	6	0.97	0.05	1.20	2.08	0.14	7.00
1503	0.66	0.20	5	7.35	0.97	1504				0.03	1.00	1.20	2.08	A	6	6	0.96	0.05	1.20	2.08	0.13	6.97
1504	0.66	0.10	5	7.35	0.49	1505				0.37	0.86	1.20	2.08	A	6	6	0.83	0.03	1.20	2.08	0.13	6.81
1505	0.66	0.35	5	7.35	1.70					0.00	1.70	4.19	2.08	A	6	6	1.32	0.37	4.19	2.08	0.13	6.74
LINE 1600																						
1601	0.66	0.28	5	7.35	1.36					0.00	1.36	1.20	2.08	A	6	6	1.27	0.09	1.20	2.08	0.15	7.75
LINE 2200																						
2201	0.51	0.30	5	7.35	1.12	2202				0.06	1.18	2.34	2.08	A	6	6	1.06	0.12	2.34	2.08	0.13	6.58
2202	0.51	0.20	5	7.35	0.75	2203				0.11	0.86	2.34	2.08	A	6	6	0.80	0.06	2.34	2.08	0.11	5.88
2203	0.51	0.15	5	7.35	0.56	2204				0.47	1.03	2.96	2.08	A	6	6	0.92	0.11	2.96	2.08	0.11	6.02
2204	0.51	0.55	5	7.35	2.06	2205				0.09	2.15	2.96	2.08	A	6	6	1.68	0.47	2.96	2.08	0.15	7.77
2205	0.51	0.25	5	7.35	0.94	2206				0.01	0.95	2.96	2.08	A	6	6	0.86	0.09	2.96	2.08	0.11	5.85
2206	0.51	0.10	5	7.35	0.37	2207				0.07	0.44	2.00	2.08	A	6	6	0.43	0.01	2.00	2.08	0.09	4.82
2207	0.51	0.25	5	7.35	0.94	2208				0.03	0.96	2.00	2.08	A	6	6	0.90	0.07	2.00	2.08	0.12	6.29
2208	0.51	0.15	5	7.35	0.56	2209				0.07	0.64	2.00	2.08	A	6	6	0.61	0.03	2.00	2.08	0.10	5.46
2209	0.51	0.25	5	7.35	0.94	2210				0.06	1.00	2.00	2.08	A	6	6	0.93	0.07	2.00	2.08	0.12	6.38
2210	0.51	0.25	5	7.35	0.94					0.00	0.94	2.00	2.08	A	6	6	0.87	0.06	2.00	2.08	0.12	6.23
2211	0.51	0.20	5	7.35	0.75					0.00	0.75	2.00	2.08	A	6	6	0.71	0.04	2.00	2.08	0.11	5.77
LINE 2400																						
2401	0.51	1.05	1.05	7.35	3.94	2211				0.04	3.97	2.96	2.08	A	6	6	2.52	1.45	2.96	2.08	0.19	9.66
LINE 2900																						
2901	0.51	0.30	5	7.35	1.12	3001	3601			0.07	1.19	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
2902	0.51	1.55	5	7.35	5.81	3602	2903			0.96	6.77	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
2903	0.51	0.15	5	7.35	0.56	2904				0.00	0.57	1.00	3.08	A	6	6	0.56	0.01	1.00	3.08	0.11	5.91
2904	0.51	0.10	5	7.35	0.37	2905				0.09	0.47	1.00	4.08	A	6	6	0.46	0.00	1.00	4.08	0.10	5.54
2905	0.51	0.15	5	7.35	0.56	2906	2907	2908		0.90	1.47	1.00	5.08	A	6	6	1.37	0.09	1.00	5.08	0.16	8.22
2906	0.51	0.36	5	7.35	1.35					0.00	1.35	3.25	6.08	A	6	6	1.15	0.20	3.25	6.08	0.12	6.50
2907	0.51	0.65	5	7.35	2.44					0.00	2.44	3.25	7.08	A	6	6	1.81	0.63	3.25	7.08	0.16	7.99
2908	0.51	0.35	5	7.35	1.31	2909				0.01	1.32	1.00	8.08	A	6	6	1.24	0.07	1.00	8.08	0.15	7.92
2909	0.51	0.10	5	7.35	0.37	2910				0.12	0.50	1.00	9.08	A	6	6	0.49	0.01	1.00	9.08	0.11	5.65
2910	0.51	0.15	5	7.35	0.56	2911	2912	2913		1.09	1.65	1.00	10.08	A	6	6	1.53	0.12	1.00	10.08	0.17	8.57
2911	0.51	0.35	5	7.35	1.31					0.00	1.31	3.07	11.08	A	6	6	1.13	0.18	3.07	11.08	0.12	6.50
2912	0.51	0.76	5	7.35	2.85					0.00	2.85	3.07	12.08	A	6	6	2.03	0.81	3.07	12.08	0.17	8.53
2913	0.51	0.36	5	7.35	1.35	2914				0.01	1.36	1.20	13.08	A	6	6	1.27	0.09	1.20	13.08	0.15	7.76
2914	0.51	0.15	5	7.35	0.56	2915				0.01	0.57	1.20	14.08	A	6	6	0.56	0.01	1.20	14.08	0.11	5.75
2915	0.51	0.15	5	7.35	0.56					0.00	0.56	1.20	15.08	A	6	6	0.55	0.01	1.20	15.08	0.11	5.71
2916	0.51	0.35	5	7.35	1.31					0.00	1.31	SUMP	16.08	A	6	4.8	16.80	0.00	SUMP	16.08	< 0.21	< 10.50
2917	0.51	0.75	5	7.35	2.81	2918				0.12	2.93	SUMP	17.08	A	6	4.8	16.80	0.00	SUMP	17.08	< 0.21	< 10.50
2918	0.51	0.20	5	7.35	0.75	2919				0.52	1.27	2.00	18.08	A	6	6	1.15	0.12	2.00	18.08	0.13	6.92
2919	0.51	0.70	5	7.35	2.62	2920				0.11	2.74	1.69	19.08	A	6	6	2.22	0.52	1.69	19.08	0.18	9.34
2920	0.51	0.20	5	7.35	0.75	2921				0.55	1.30	1.69	20.08	A	6	6	1.19	0.11	1.69	20.08	0.14	7.20
2921	0.51	0.15	5	7.35	0.56	2922	2923	2924		2.27	2.83	1.69	21.08	A	6	6	2.28	0.55	1.69	21.08	0.19	9.46
2922	0.51	0.35	5	7.35	1.31					0.00	1.31	1.68	22.08	A	6	6	1.20	0.11	1.68	22.08	0.14	7.22
2923	0.51	0.85	5	7.35	3.19					0.00	3.19	1.68	23.08	A	6	6	2.49	0.69	1.68	23.08	0.19	9.87
2924	0.51	1.20	5	7.35	4.50					0.00	4.50	2.00	24.08	A	6	6	3.04	1.46	2.00	24.08	0.21	10.82
2925	0.51	0.60	5	7.35	2.25					0.00	2.25	2.00	25.08	A	6	6	1.85	0.40	2.00	25.08	0.17	8.46

PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY:	NCA
CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

STORM LAYOUT
 SHEET

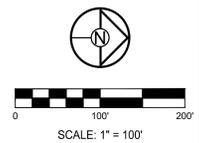
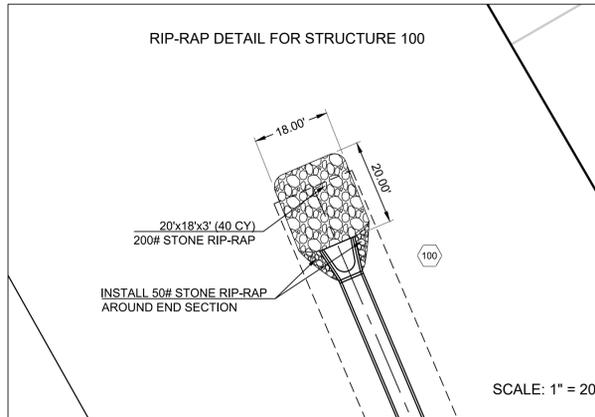
SHEET

29

**MISSOURI GEOGRAPHIC REFERENCE SYSTEM
 BENCHMARK:**

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25



REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY:	CHECKED BY:	DATE PREPARED:	PROJ. NUMBER:
NCA	JLL	1/05/2021	21-130

STORM
STRUCTURE LIST

Storm Sewer Construction Notes	
Structure	Notes
100	STA 0+00.00, LINE 100 INSTALL 60"X38" ELLIPTICAL FLARED END SECTION W/ TOEWALL, STONE RIP-RAP PER CALCULATIONS AND DETAIL ON SHEETS 29 & 30. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP. N 992171.1668 E 2833163.6507
101	STA 1+20.22, LINE 100 INSTALL 8 X 4 CURB INLET N 992217.7689 E 2833274.4662
102	STA 1+54.92, LINE 100 INSTALL 6 X 4 CURB INLET N 992226.6806 E 2833308.0048
103	STA 3+11.70, LINE 100 INSTALL 4 X 6 AREA INLET OPEN TO EAST & WEST N 992259.7048 E 2833461.2715
104	STA 4+38.53, LINE 100 INSTALL 4 X 6 AREA INLET OPEN TO EAST & WEST N 992321.4650 E 2833572.0437
105	STA 5+76.29, LINE 100 INSTALL 4 X 6 AREA INLET OPEN TO EAST & WEST N 992350.5970 E 2833706.6929
106	STA 7+06.18, LINE 100 INSTALL 4 X 5 AREA INLET OPEN TO EAST & WEST N 992402.4544 E 2833825.7762
107	STA 9+80.33, LINE 100 INSTALL 5 X 5 AREA INLET OPEN TO NORTH & SOUTH N 992447.2522 E 2834096.2481
108	STA 10+11.03, LINE 100 INSTALL 5 X 5 AREA INLET OPEN TO SOUTH N 992452.9450 E 2834126.4126
1006	STA 6+59.91, LINE 1000 INSTALL 6 X 7 CURB INLET N 992451.5445 E 2833265.3333
1007	STA 6+96.40, LINE 1000 INSTALL 6 X 4 CURB INLET N 992444.9605 E 2833301.2276
1008	STA 8+99.76, LINE 1000 INSTALL 6 X 4 CURB INLET N 992638.0120 E 2833365.1496
1009	STA 9+45.15, LINE 1000 INSTALL 6 X 4 CURB INLET N 992660.4783 E 2833404.5928
1010	STA 9+80.13, LINE 1000 INSTALL 6 X 4 CURB INLET N 992693.4028 E 2833416.4136
1011	STA 10+21.84, LINE 1000 INSTALL 6 X 4 CURB INLET N 992731.1581 E 2833398.6878
1012	STA 11+41.59, LINE 1000 INSTALL 6 X 4 CURB INLET N 992843.8261 E 2833439.2551
1013	STA 12+35.81, LINE 1000 INSTALL 6 X 4 CURB INLET N 992932.4714 E 2833471.1727
1014	STA 12+81.30, LINE 1000 INSTALL 6 X 4 CURB INLET N 992954.9660 E 2833510.7144
1301	STA 0+35.00, LINE 1300 INSTALL 6 X 4 CURB INLET N 992743.0150 E 2833365.7574
1501	STA 0+34.99, LINE 1500 INSTALL 6 X 4 CURB INLET N 992987.9421 E 2833522.4132

Storm Sewer Construction Notes	
Structure	Notes
1502	STA 0+76.62, LINE 1500 INSTALL 6 X 4 CURB INLET N 993025.6174 E 2833504.7109
1503	STA 1+99.99, LINE 1500 INSTALL 6 X 4 CURB INLET N 993141.6955 E 2833546.5060
1504	STA 3+10.05, LINE 1500 INSTALL 6 X 4 CURB INLET N 993247.3035 E 2833577.4814
1505	STA 3+57.59, LINE 1500 INSTALL 6 X 4 CURB INLET N 993278.3247 E 2833613.5110
1601	STA 0+35.00, LINE 1600 INSTALL 6 X 4 CURB INLET N 993037.4744 E 2833471.7805
1801	STA 0+89.25, LINE 1800 INSTALL 6 X 5 CURB INLET N 992455.7295 E 2833389.8227
1802	STA 1+46.77, LINE 1800 INSTALL 5 X 5 AREA INLET OPEN TO WEST N 992510.6717 E 2833406.8565
1804	STA 4+32.41, LINE 1800 INSTALL 4 X 5 AREA INLET OPEN TO EAST & WEST N 992512.4022 E 2833689.7112
2200	STA 0+00.00, LINE 2200 INSTALL 36" HDPE FLARED END SECTION W/ TOEWALL, RIP-RAP PER CALCULATIONS ON THIS SHEET. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP. N 991327.3945 E 2832439.4592
2201	STA 0+57.66, LINE 2200 INSTALL 6 X 4 CURB INLET N 991269.7620 E 2832437.6651
2202	STA 3+20.33, LINE 2200 INSTALL 6 X 5 CURB INLET N 991263.4178 E 2832700.2555
2203	STA 4+79.63, LINE 2200 INSTALL 6 X 5 CURB INLET N 991320.4319 E 2832849.0093
2204	STA 5+69.63, LINE 2200 INSTALL 6 X 4 CURB INLET N 991372.9359 E 2832922.1001
2205	STA 6+78.63, LINE 2200 INSTALL 6 X 4 CURB INLET N 991437.0192 E 2833010.2723
2206	STA 8+84.80, LINE 2200 INSTALL 6 X 4 CURB INLET N 991558.2303 E 2833177.0469
2207	STA 9+96.91, LINE 2200 INSTALL 6 X 4 CURB INLET N 991614.2629 E 2833274.1572
2208	STA 12+25.74, LINE 2200 INSTALL 6 X 4 CURB INLET N 991704.0584 E 2833484.6295
2209	STA 13+34.81, LINE 2200 INSTALL 6 X 4 CURB INLET N 991746.8584 E 2833584.9487
2210	STA 15+91.33, LINE 2200 INSTALL 6 X 4 CURB INLET N 991845.8318 E 2833821.6124
2211	STA 16+34.73, LINE 2200 INSTALL 6 X 4 CURB INLET N 991803.2166 E 2833829.8138

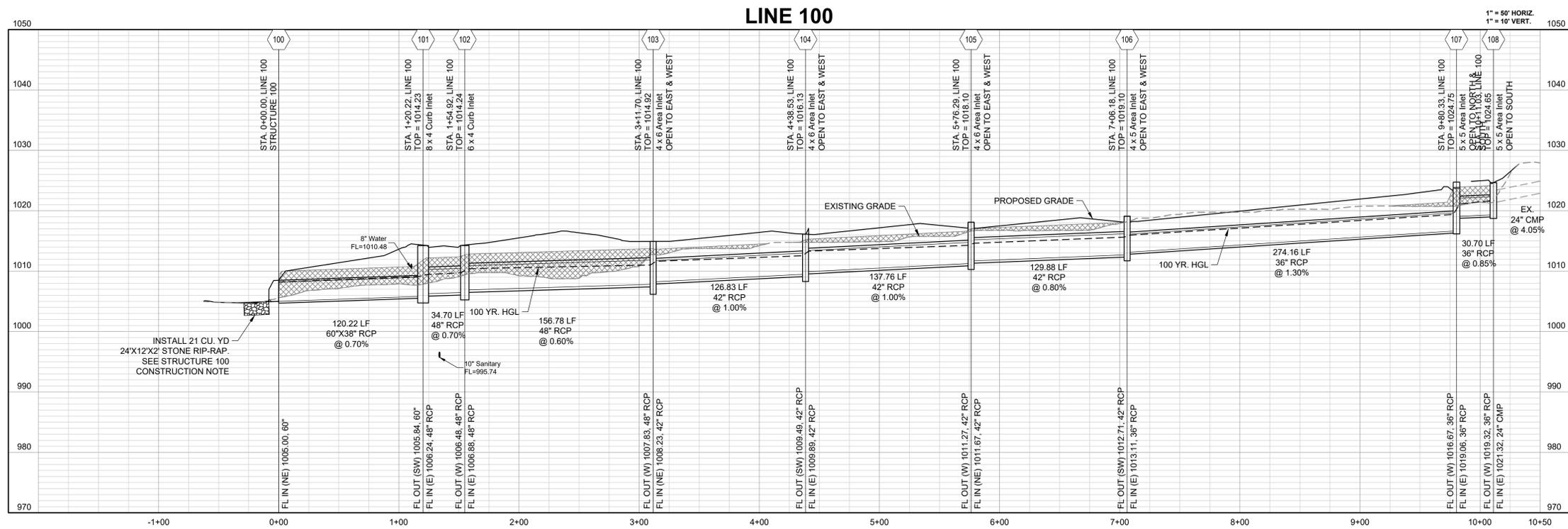
Storm Sewer Construction Notes	
Structure	Notes
2401	STA 0+43.50, LINE 2400 INSTALL 6 X 4 CURB INLET N 991285.2443 E 2832874.5843
2900	STA -0+00.00, LINE 2900 INSTALL 36" HDPE FLARED END SECTION W/ TOEWALL STONE RIP-RAP PER CALCULATIONS ON THIS SHEET. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP. N 991557.9304 E 2832483.4095
2901	STA 0+55.11, LINE 2900 INSTALL 7 X 4 CURB INLET N 991591.8580 E 2832526.8418
2902	STA 0+90.65, LINE 2900 INSTALL 6 X 5 CURB INLET N 991591.3800 E 2832562.3788
2903	STA 2+21.62, LINE 2900 INSTALL 6 X 6 CURB INLET N 991718.3363 E 2832594.5530
2904	STA 3+50.34, LINE 2900 INSTALL 6 X 6 CURB INLET N 991802.8445 E 2832691.6475
2905	STA 4+22.96, LINE 2900 INSTALL 7 X 4 CURB INLET N 991817.7010 E 2832762.7279
2906	STA 4+69.06, LINE 2900 INSTALL 7 X 4 CURB INLET N 991792.4838 E 2832801.3167
2907	STA 5+04.06, LINE 2900 INSTALL 7 X 4 CURB INLET N 991797.5101 E 2832835.9575
2908	STA 5+46.14, LINE 2900 INSTALL 7 X 4 CURB INLET N 991830.6451 E 2832861.8866
2909	STA 6+51.51, LINE 2900 INSTALL 6 X 4 CURB INLET N 991844.2850 E 2832966.3748
2910	STA 7+51.78, LINE 2900 INSTALL 8 X 4 CURB INLET N 991861.7646 E 2833065.1045
2911	STA 7+97.81, LINE 2900 INSTALL 7 X 4 CURB INLET N 991844.3006 E 2833107.6969
2912	STA 8+32.81, LINE 2900 INSTALL 7 X 4 CURB INLET N 991856.2603 E 2833140.5901
2913	STA 8+74.66, LINE 2900 INSTALL 7 X 4 CURB INLET N 991894.7557 E 2833156.9999
2914	STA 9+81.89, LINE 2900 INSTALL 6 X 4 CURB INLET N 991944.5365 E 2833251.9792
2915	STA 10+82.06, LINE 2900 INSTALL 6 X 4 CURB INLET N 991991.9636 E 2833340.2058
2916	STA 11+27.45, LINE 2900 INSTALL 6 X 4 CURB INLET N 991982.3151 E 2833394.5613
2917	STA 11+62.45, LINE 2900 INSTALL 6 X 4 CURB INLET N 991998.8870 E 2833415.3894
2918	STA 12+04.17, LINE 2900 INSTALL 6 X 4 CURB INLET N 992038.8385 E 2833427.4053

Storm Sewer Construction Notes	
Structure	Notes
2919	STA 13+12.17, LINE 2900 INSTALL 6 X 4 CURB INLET N 992089.9747 E 2833522.5319
2920	STA 13+97.90, LINE 2900 INSTALL 6 X 4 CURB INLET N 992130.5693 E 2833598.0484
2921	STA 15+47.08, LINE 2900 INSTALL 6 X 4 CURB INLET N 992170.1793 E 2833741.8725
2922	STA 15+92.48, LINE 2900 INSTALL 6 X 4 CURB INLET N 992148.1860 E 2833781.5813
2923	STA 16+27.48, LINE 2900 INSTALL 6 X 4 CURB INLET N 992155.1952 E 2833815.8723
2924	STA 16+69.20, LINE 2900 INSTALL 6 X 4 CURB INLET N 992190.0053 E 2833838.8670
2925	STA 17+12.69, LINE 2900 INSTALL 6 X 4 CURB INLET N 992229.4680 E 2833857.1594
3001	STA 0+36.04, LINE 3000 INSTALL 6 X 4 CURB INLET N 991733.7839 E 2832561.9957
3101	STA 0+42.21, LINE 3100 INSTALL 6 X 4 CURB INLET N 991843.7051 E 2832702.2407
3201	STA 0+80.24, LINE 3200 INSTALL 4 X 4 AREA INLET OPEN TO SOUTH N 991766.3570 E 2832985.4852
3301	STA 0+35.68, LINE 3300 INSTALL 6 X 4 CURB INLET N 991897.3265 E 2833062.2122
3401	STA 0+97.07, LINE 3400 INSTALL 4 X 4 AREA INLET OPEN TO SOUTH N 991863.6555 E 2833284.2079
3501	STA 0+39.37, LINE 3500 INSTALL 4 X 4 AREA INLET OPEN TO SOUTH N 992055.2979 E 2833541.1728
3600	STA -0+00.00, LINE 3600 INSTALL 15" HDPE FLARED END SECTION W/ TOEWALL, RIP-RAP PER CALCULATIONS ON THIS SHEET. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP. N 991432.6176 E 2832542.3388
3601	STA 0+32.25, LINE 3600 INSTALL 6 X 4 CURB INLET N 991447.7092 E 2832570.8388
3602	STA 0+67.25, LINE 3600 INSTALL 6 X 4 CURB INLET N 991464.9462 E 2832601.3001
3701	STA 0+36.41, LINE 3700 INSTALL 6 X 4 CURB INLET N 992166.1499 E 2833590.3378
3800	STA 0+00.00, LINE 3800 INSTALL 30" HDPE FLARED END SECTION W/ TOEWALL RIP-RAP PER CALCULATIONS ON THIS SHEET. PLACE FABRIC PRIOR TO INSTALLATION OF RIP-RAP. N 991353.2980 E 2832227.5333
3801	STA 0+79.74, LINE 3800 INSTALL DETENTION BASIN STRUCTURE N 991345.6595 E 2832306.9104

Outlet Properties:							Outlet Protection Required?	Downstream Channel/Swale Section	Channel Properties									
Structure	Pipe Size (ft)	Q(25) (cfs)	V (ft/s)	Tw (ft)	Outlet Pipe Froude # (V/gD^0.5)			Slope (%)	Side Slope (H:V)	Bottom Width (ft)	V (ft/s)	A (ft^2)	P (ft)	R (ft)	Normal Depth (ft)	Top Width (ft)	Average Shear Stress (lb/ft^2)	Min. Radius (ft)
100	4.00	106.00	9.56	1.60	1.33	YES	1.00	1.20	4.00	12.00	4.79	17.21	20.74	0.83	1.06	20.48	0.62	55.41
2200	3.00	55.05	7.23	1.20	0.20	YES	N/A										N/A	N/A
2900	3.00	62.61	7.23	1.20	0.20	YES	N/A										N/A	N/A
3600	1.25	5.96	8.06	0.50	0.35	YES	N/A										N/A	N/A
3800	2.50	66.61*	13.57	1.00	0.42	YES	N/A										N/A	N/A

Outlet/Channel Properties				Rip-Rap Dimensions															
Outlet Structure	Pipe Size (ft)	Downstream Channel/Swale Section	V Pipe (ft/s)	V Swale (ft/s)	Average Shear Stress (lb/ft^2)	W Calculated (ft)	W USED (ft)	L Calculated (ft)	L (min.) 3'D (ft)	L (max.) 10'D (ft)	L USED (ft)	D50 Calculated (ft)	Size (W/L) USED (d50/ft)	Critical Shear Stress (lb/ft^2)	T (ft)				
100	4.00	1.00	9.56	4.79	0.62	20.48	20	18.18	12.00	40.00	24	0.60	2.00 (200#)	6.91	3.00				
2200	3.00	N/A	7.23	0.00	N/A	9.00	10	n/a	9.00	30.00	18	0.34	1.00 (50#)	4.00	2.00				
2900	3.00	N/A	7.23	0.00	N/A	9.00	10	n/a	9.00	30.00	18	0.34	1.00 (50#)	4.00	2.00				
3600	1.25	N/A	8.06	0.00	N/A	5.25	6	n/a	3.75	12.50	14	0.42	1.00 (50#)	4.00	2.00				
3800	2.50	N/A	13.57	0.00	N/A	7.50	8	n/a	7.50	25.00	14	1.20	2.00 (200#)	6.91	3.00				

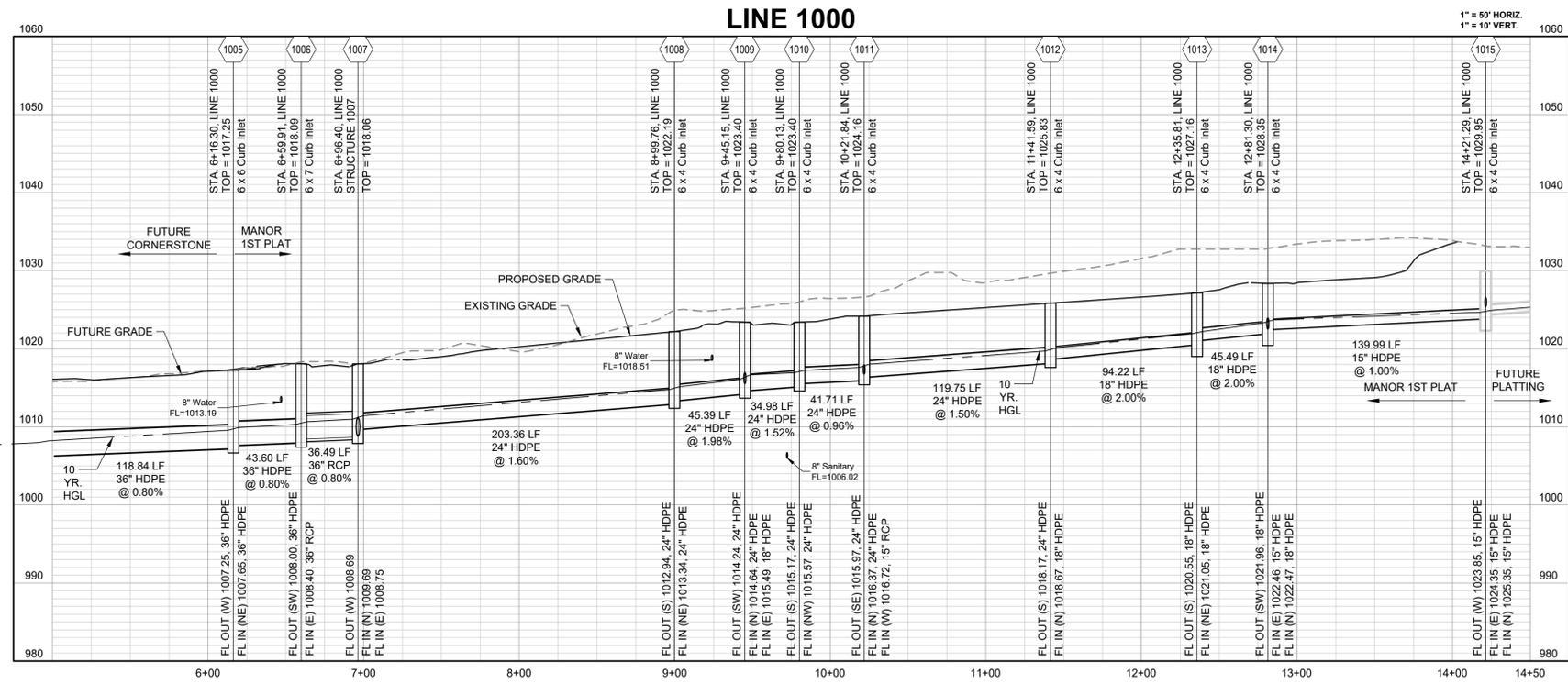
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10-YEAR HGL _____
 100-YEAR HGL _____



COMPACTED FILL TO BE PLACED A MINIMUM OF 18" ABOVE TOP OF PIPE PRIOR TO PIPE EXCAVATION



PREPARED BY:



5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

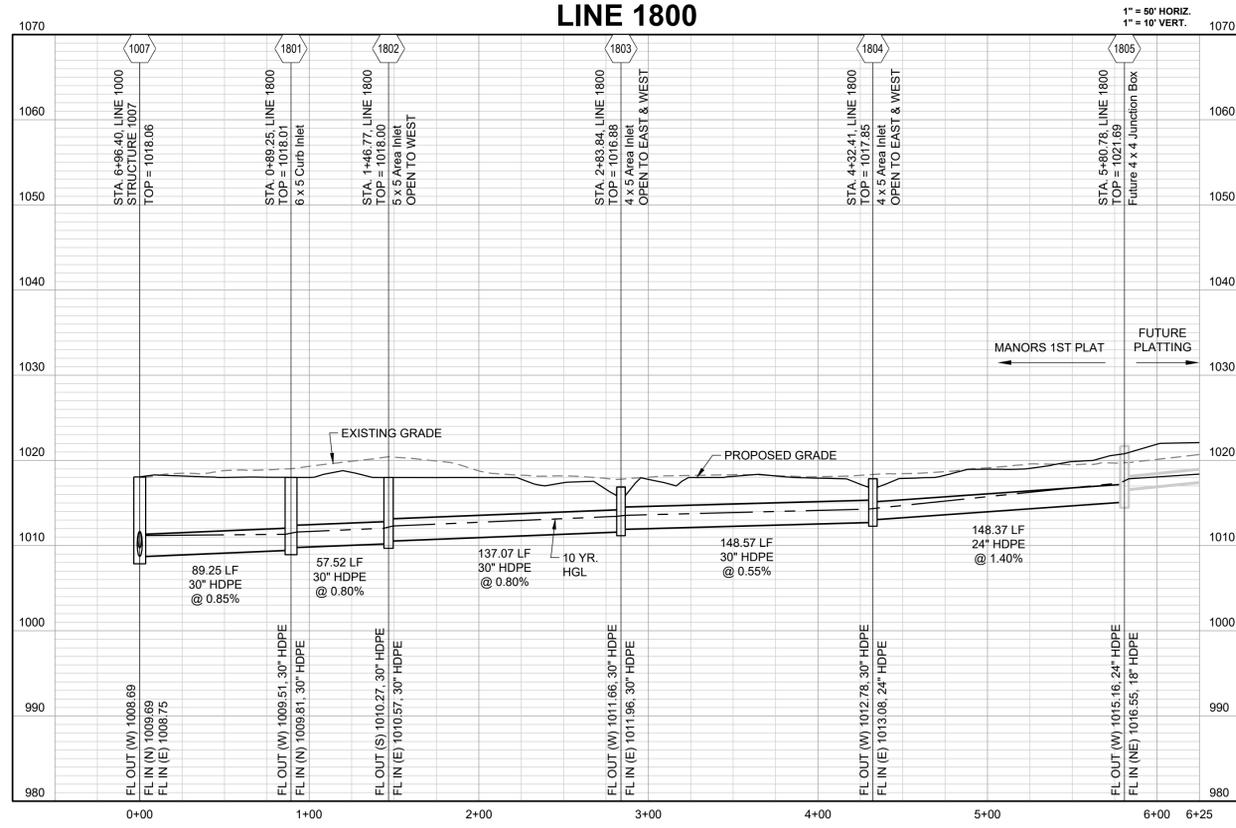
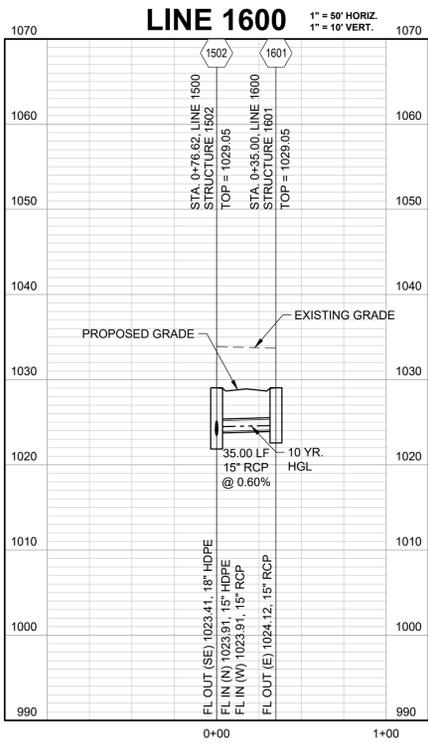
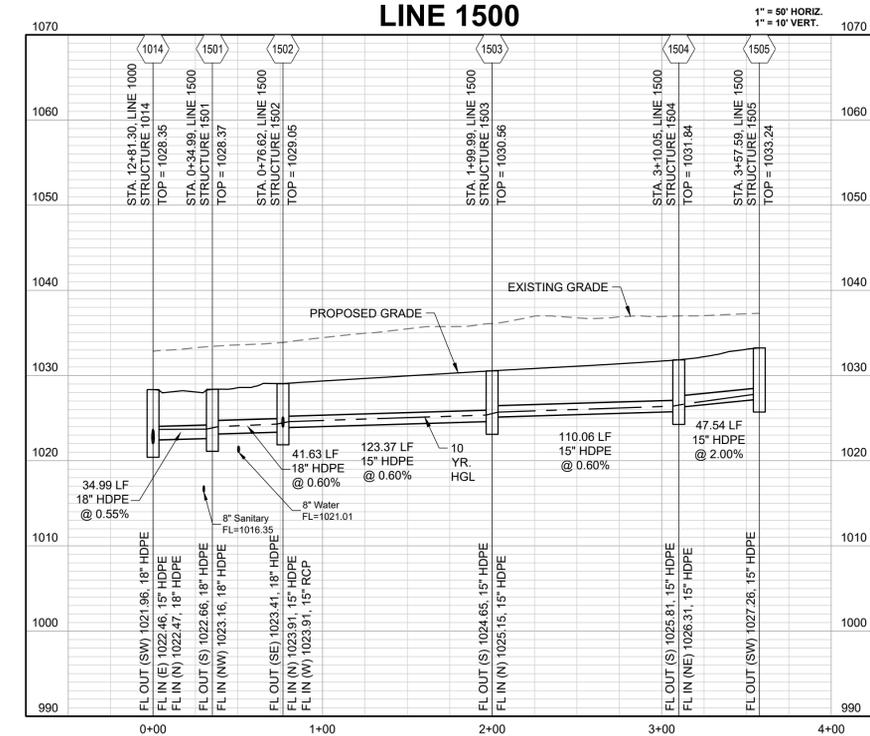
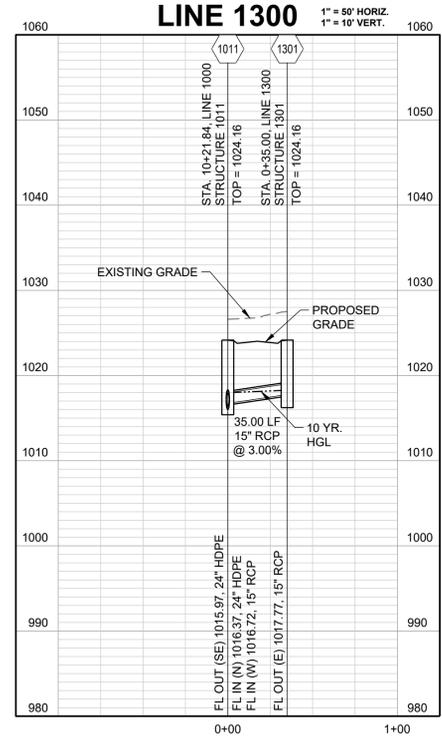
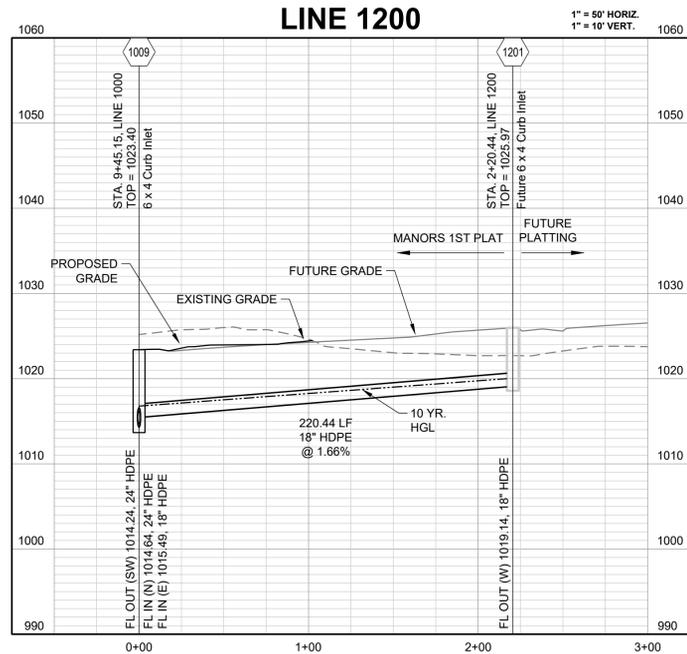
MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

STORM
 PROFILES 1

SHEET
31

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10-YEAR HGL

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

STORM PROFILES 2

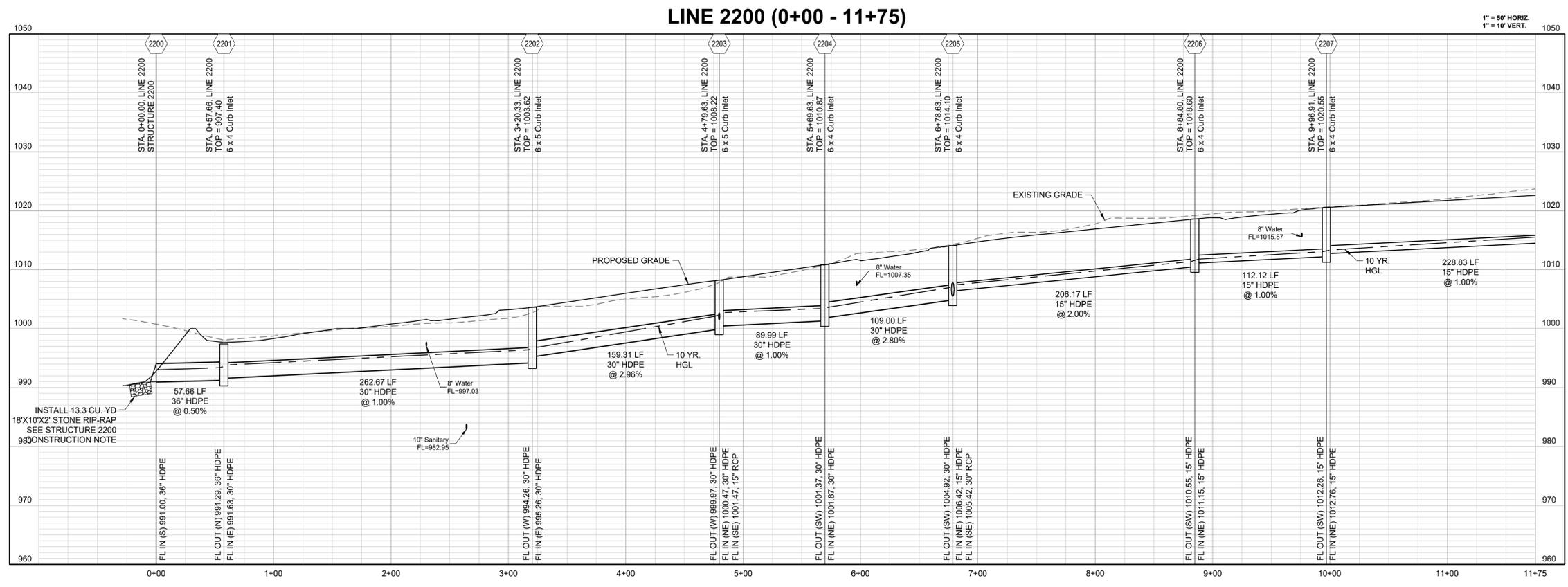
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REVISION DATE	DESCRIPTION
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04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

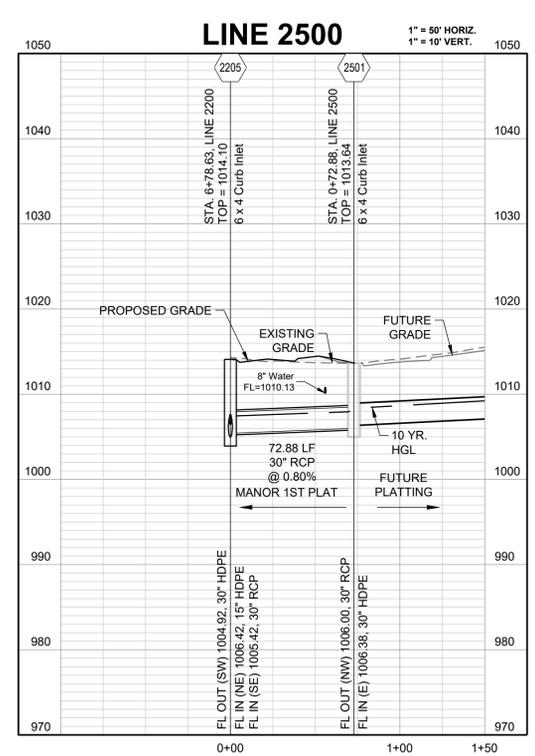
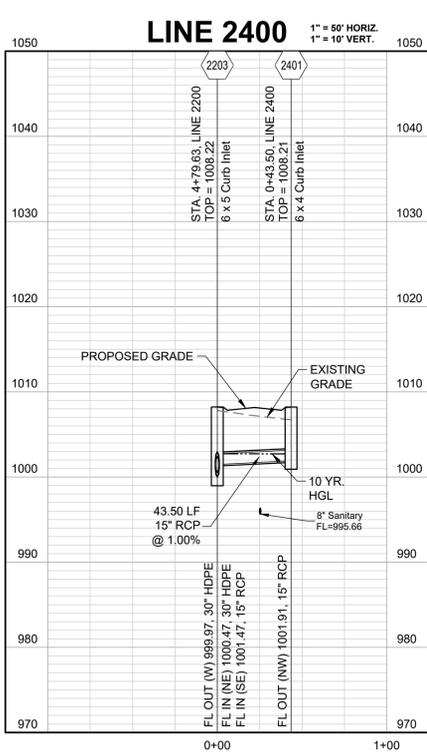
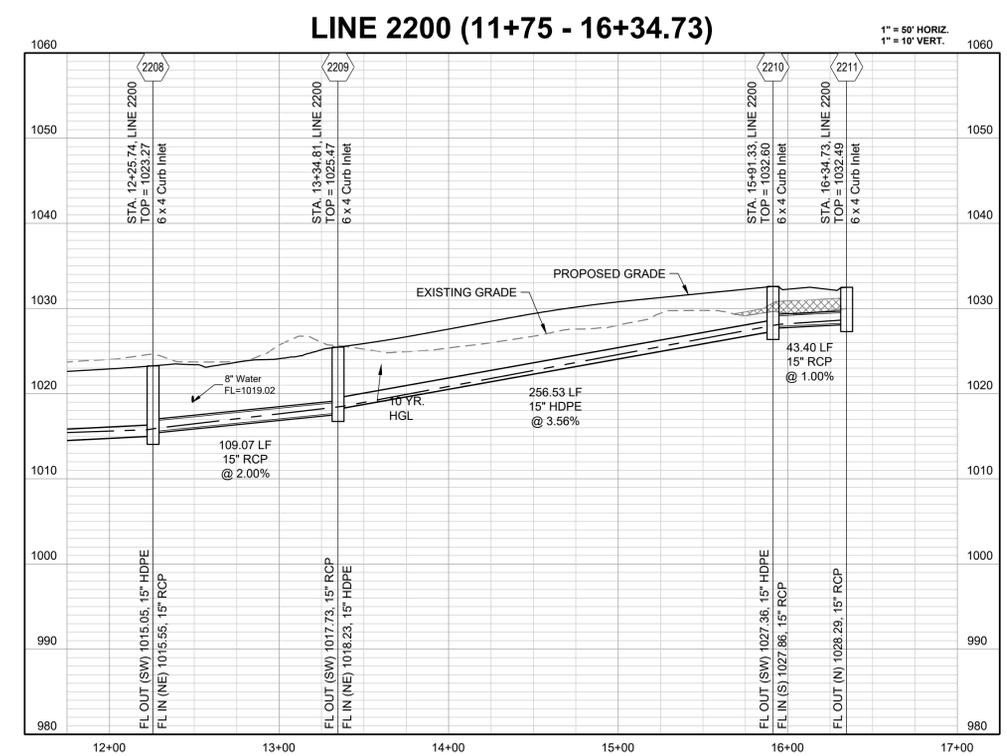
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CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

STORM
 PROFILES 3

SHEET
33



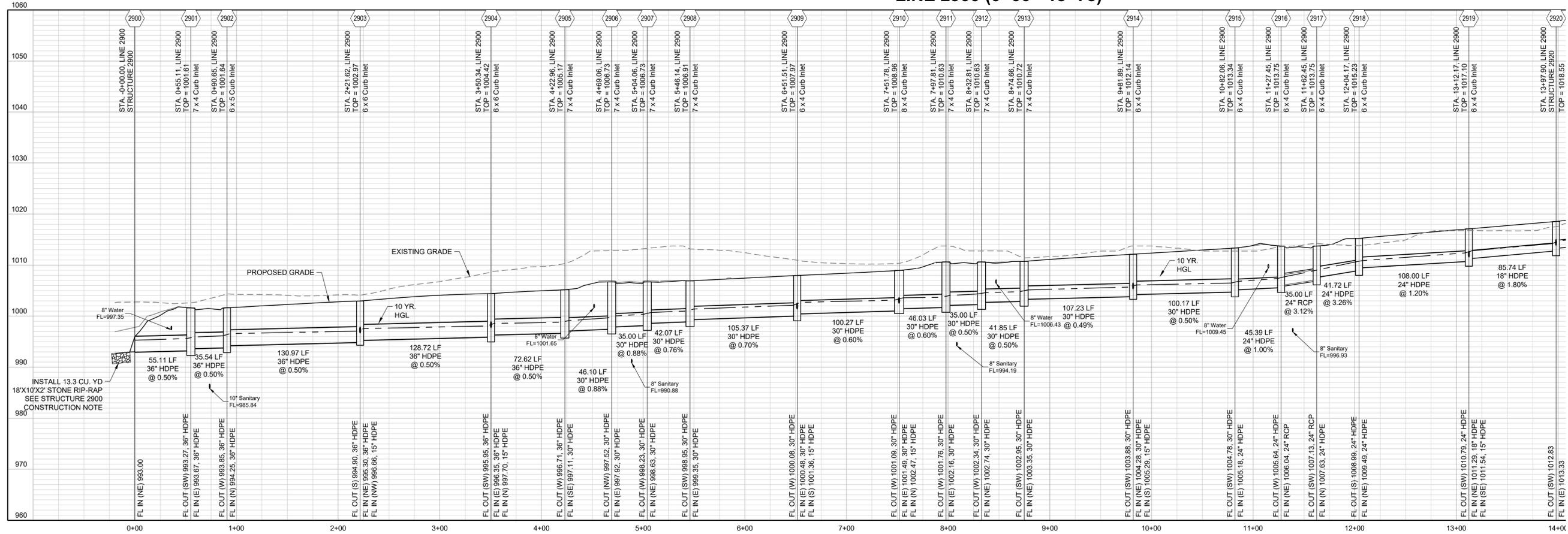
 COMPACTED FILL TO BE PLACED A MINIMUM OF 18\"/>



10-YEAR HGL - - - - -

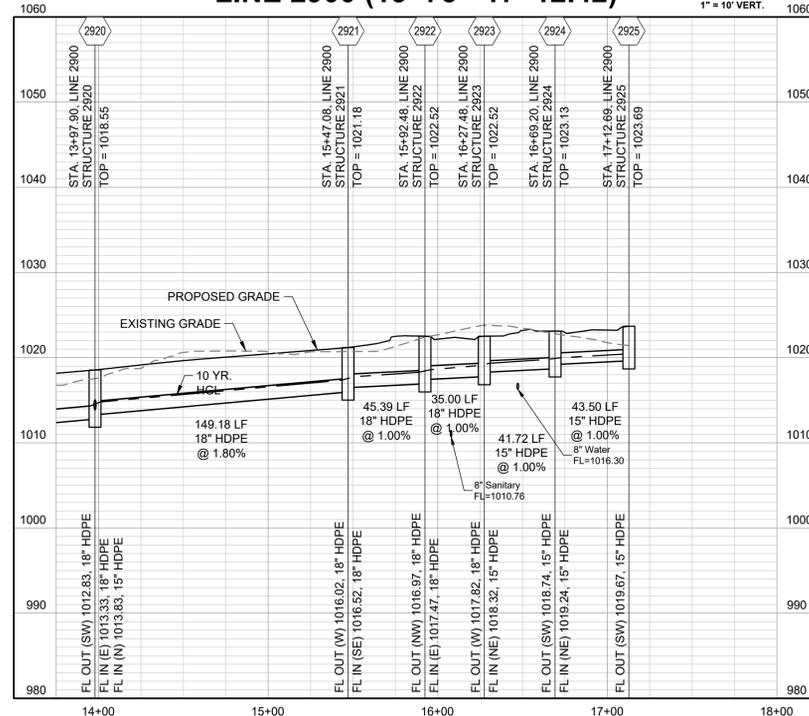
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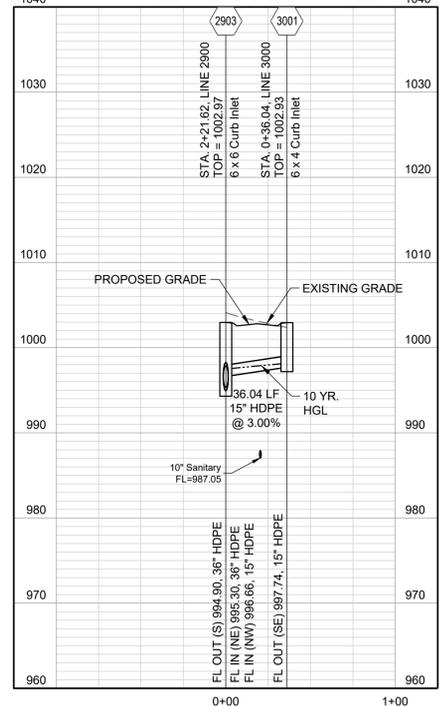


10-YEAR HGL

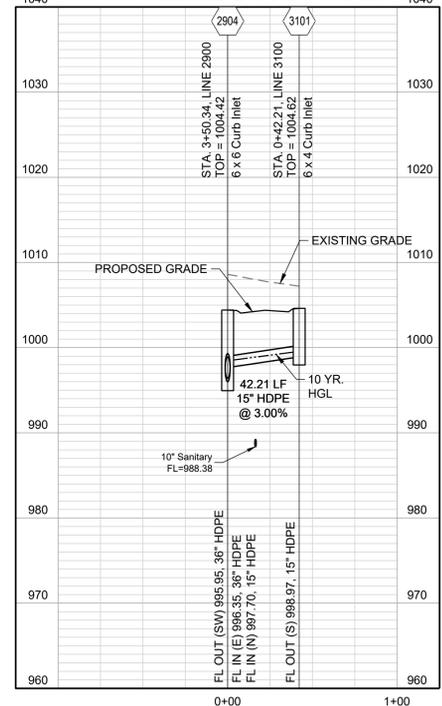
LINE 2900 (13+75 - 17+12.42)



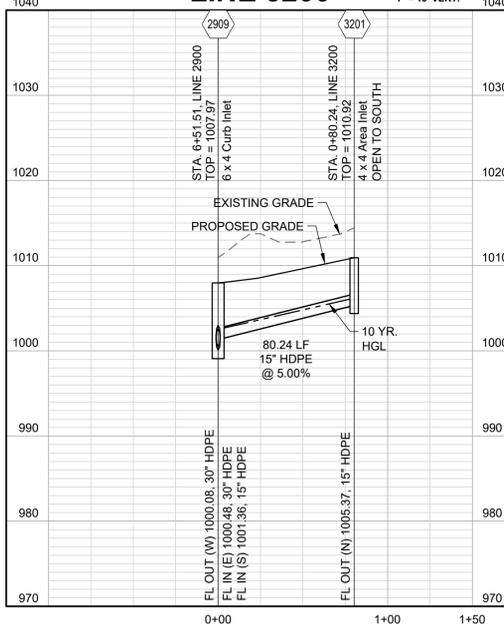
LINE 3000



LINE 3100



LINE 3200



PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

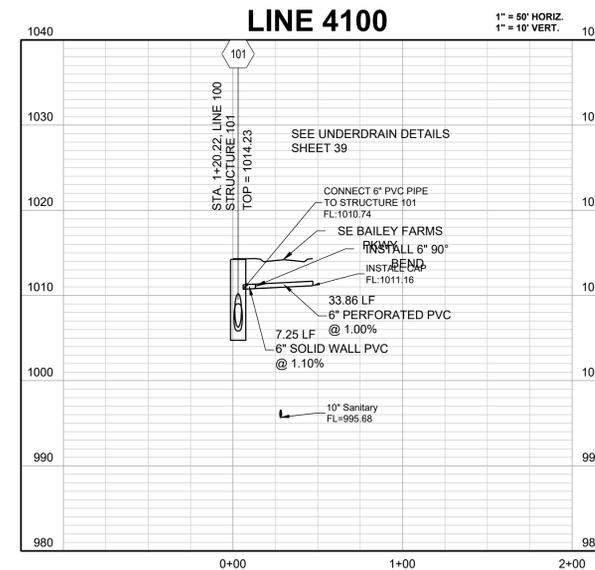
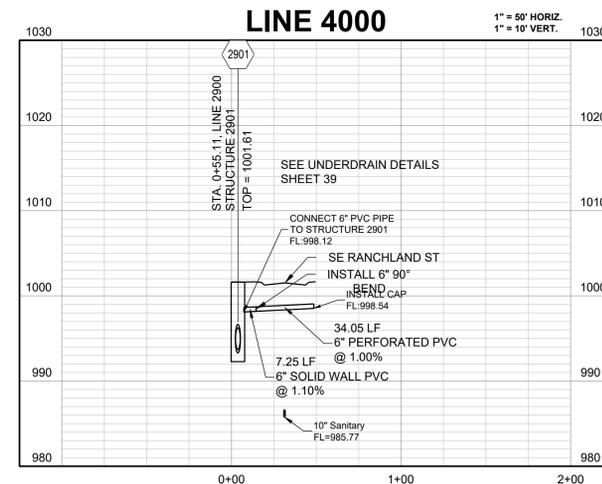
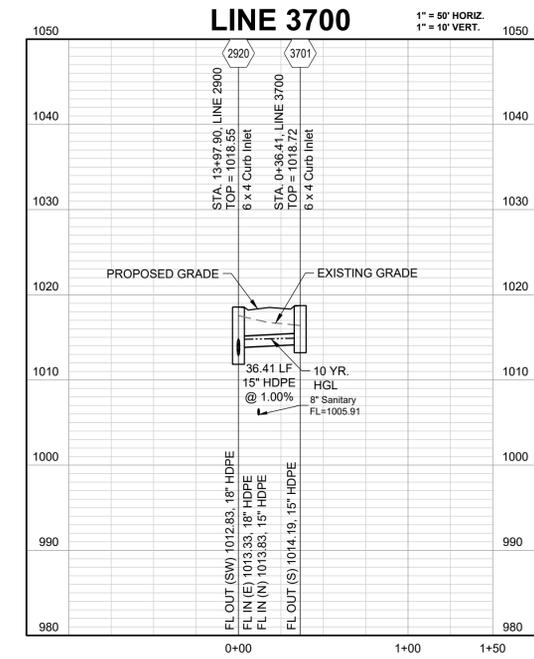
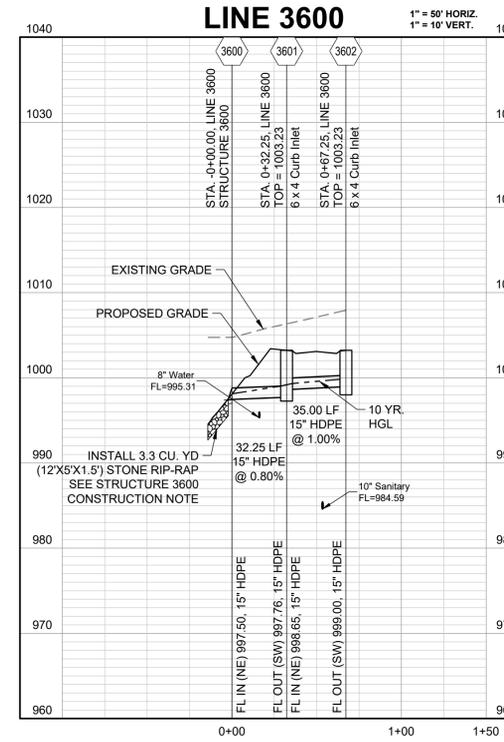
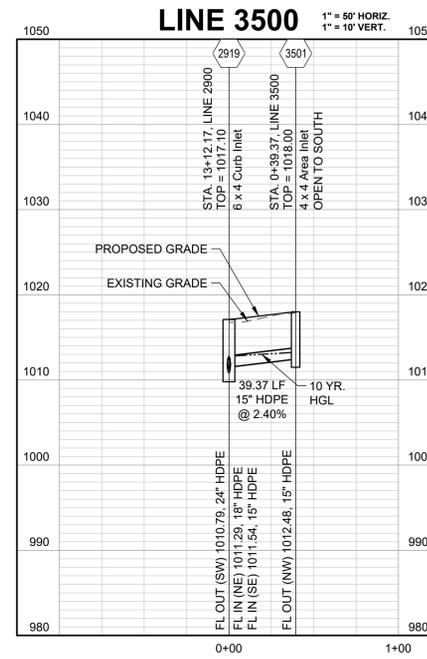
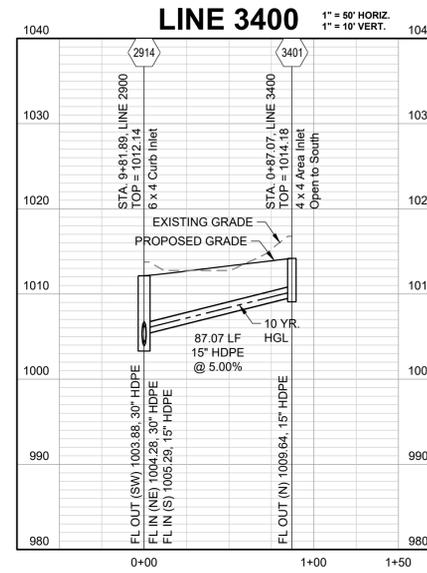
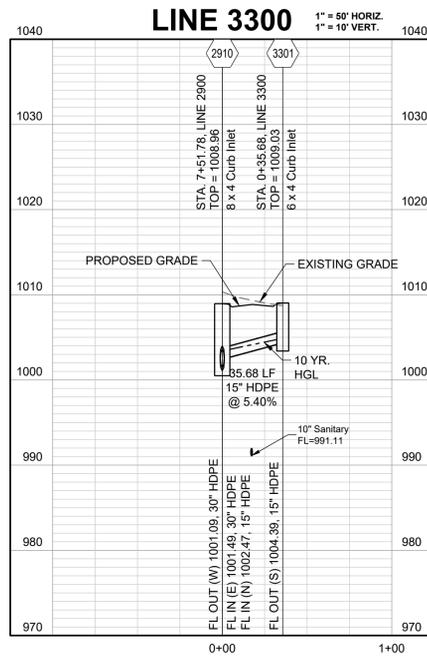
MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
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REVISION DATE	DESCRIPTION
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05/17/2022	City Comments dated 5/11/2022

STORM
PROFILES 4

SHEET

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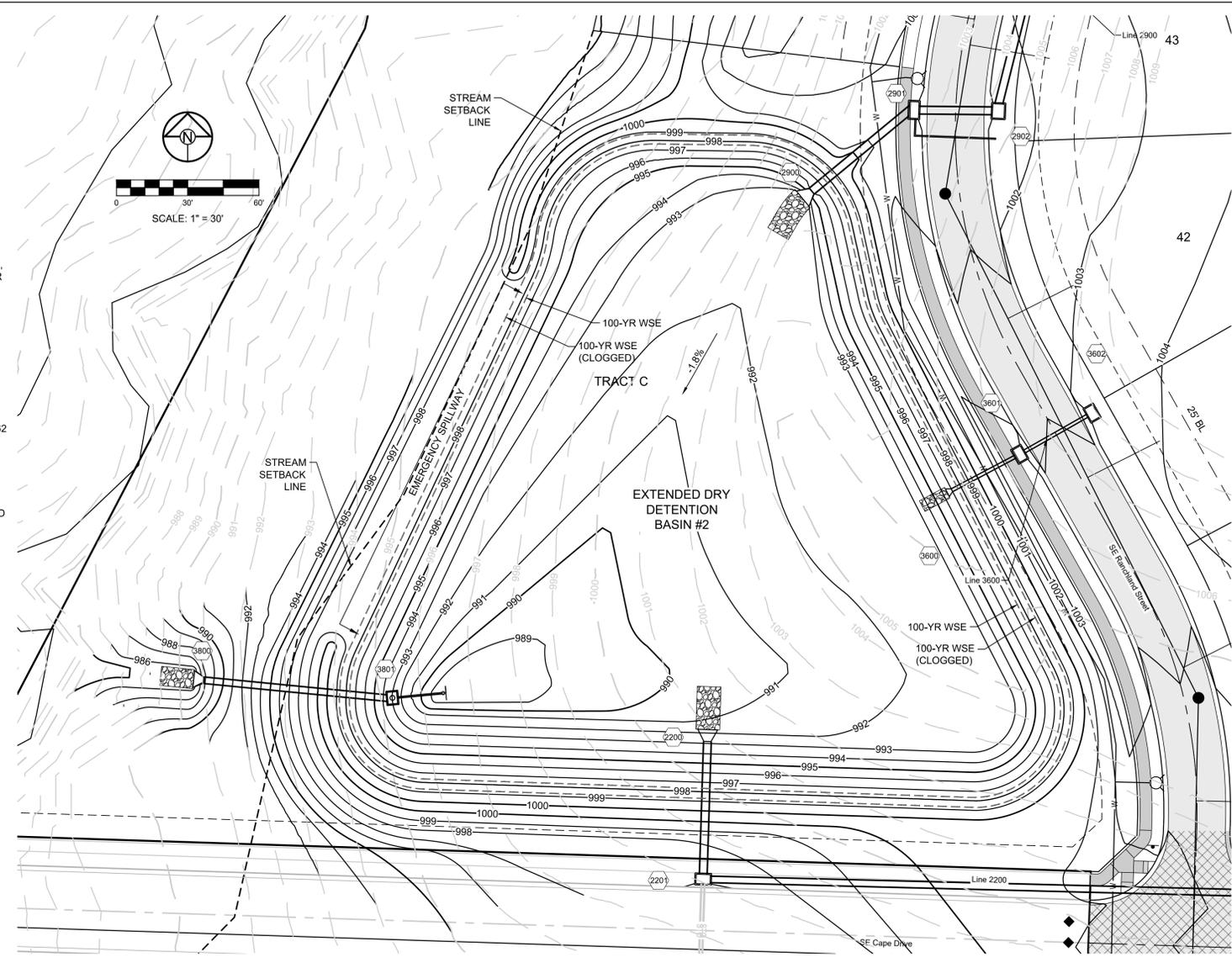
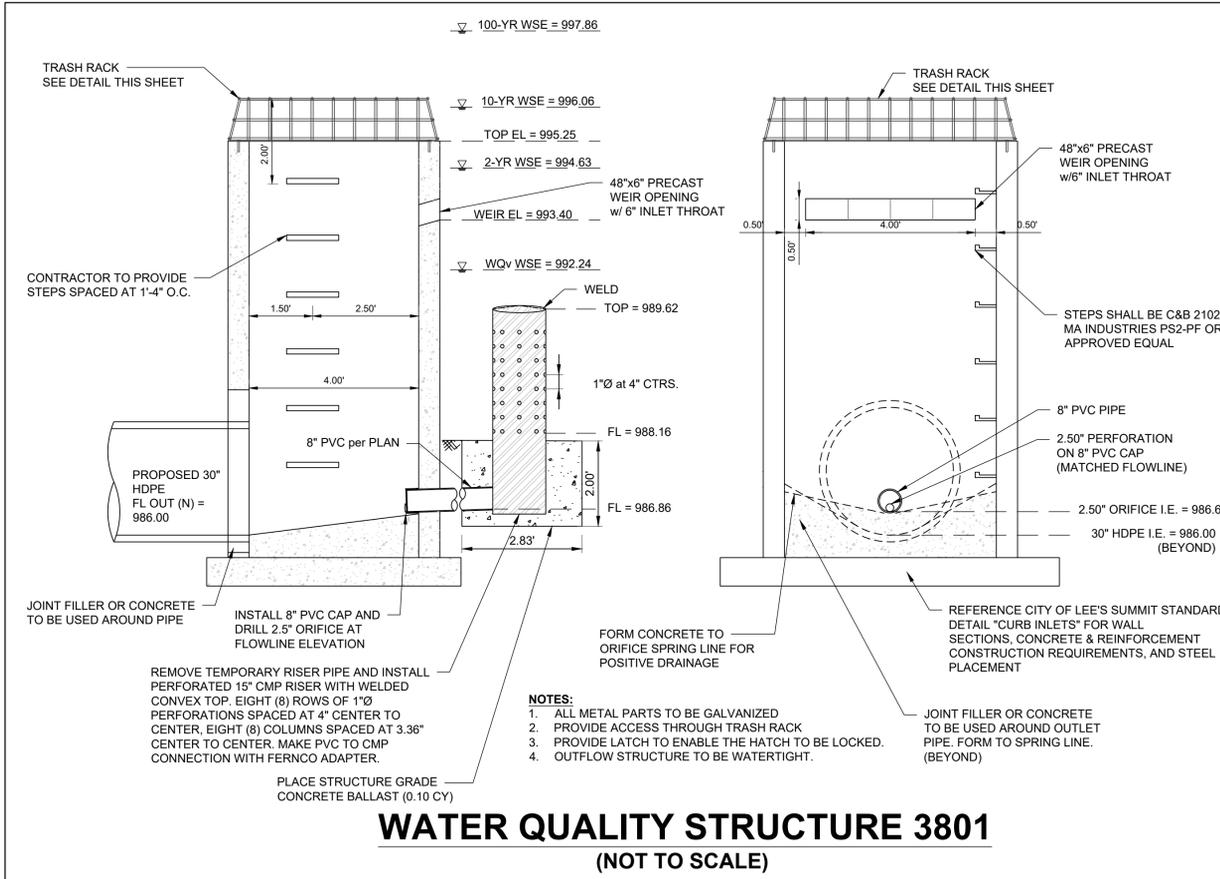


10-YEAR HGL -----

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY:	NCA
CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

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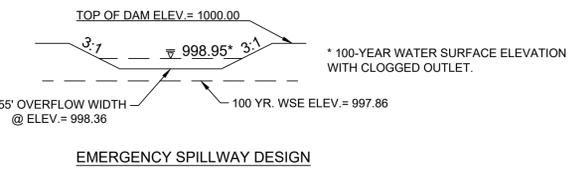


DETENTION STORAGE:
 100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 997.86
 (SEE FINAL STORMWATER MGMT. PLAN)

EMERGENCY SPILLWAY FLOWLINE SET AT
 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 998.36

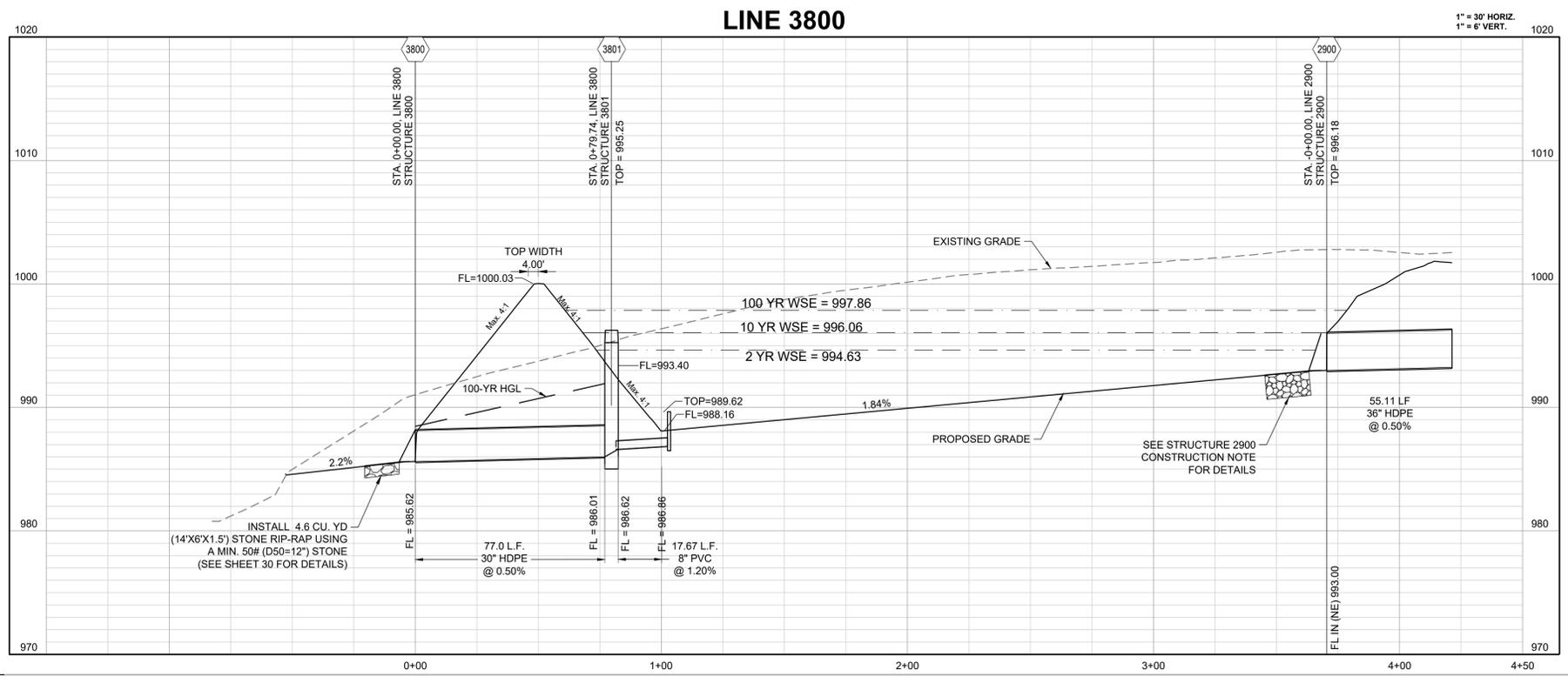
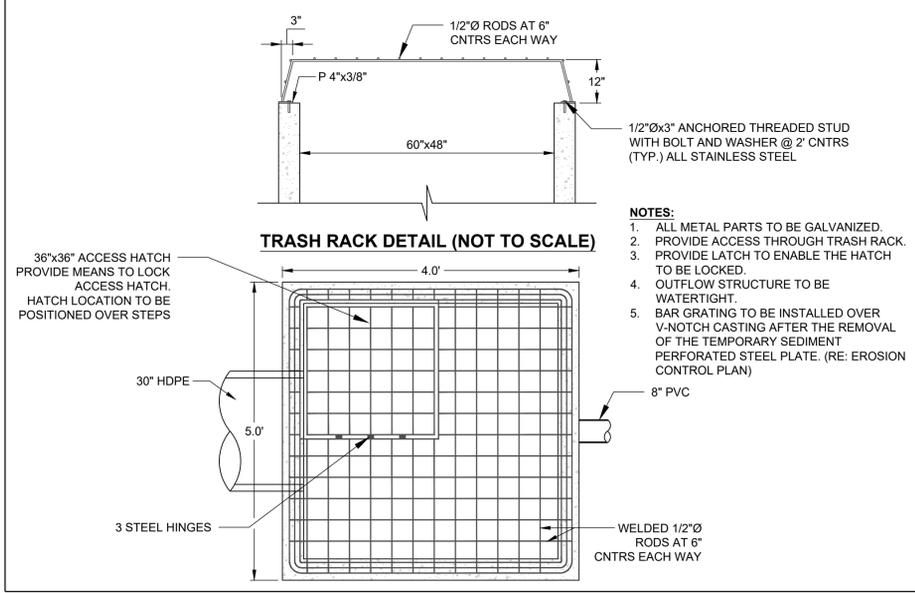
EMERGENCY SPILLWAY DESIGN:
 $Q(100) = 232.03$ CFS, $Q = CLH^{3/2}$, $C = 3.33$,
 $L = 155$ FT., 232.03 CFS = $3.33 * 155$ FT. $^{3/2}$ ($H^{3/2}$), $H = 0.59$ FT

WATER SURFACE ELEVATION THROUGH SPILLWAY =
 + ONE (1) FOOT OF FREEBOARD = 998.95
 SET BASIN TOP AT 1000.00



NOTE:
 DETENTION / SEDIMENT BASIN SHALL BE CONSTRUCTED ALONG WITH ALL OTHER EROSION CONTROL AND SEDIMENT CONTROL DEVICES AND PRIOR TO ANY INFRASTRUCTURE BEING CONSTRUCTED.

DETENTION BASIN STORAGE VOLUME	
DESIGN STORM	VOLUME (CUBIC FEET)
2-YEAR	122,558
10-YEAR	189,935
100-YEAR	285,540



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 PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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 Missouri State Certificates of Authority
 #E200203690F #LAC2001005237 #LS2002008695F

PREPARED BY:
 JAMES L. LONG
 NUMBER PE-2014010495
 PROFESSIONAL ENGINEER
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY: NCA
 CHECKED BY: JLL
 DATE PREPARED: 11/05/2021
 PROJ. NUMBER: 21-130

DETENTION BASIN DESIGN

SHEET
36

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY:	NCA
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DRIVEWAY WITH BUFFER
NOT TO SCALE

DRIVEWAY WITHOUT BUFFER
NOT TO SCALE

DRIVEWAY TYPICAL SECTION (NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE

DRIVEWAY TYPICAL SECTION (SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE

DRIVEWAY TYPICAL SECTION (SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

- SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
- ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
- JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
- KOMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
- COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES IN THE PUBLIC RIGHT OF WAY, SHALL BE KOMMB 4K CONCRETE MIX.
- A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
- WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
- 3/4" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY), MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
- SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
- THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 PUBLIC WORKS ENGINEERING DIVISION / 2205 S. GREEN STREET / LEE'S SUMMIT, MO 64645

Drawn By: MFP
 Checked By: DL
 Date: 05/17/2022
 Project: GEN-1

STRAIGHT CURB (TYPE C-1)

DOWELED CURB (TYPE DC)

STRAIGHT BACK CURB & GUTTER (TYPE CG-1)

ROLL BACK CURB & GUTTER (TYPE CG-2)

STRAIGHT BACK DRY CURB & GUTTER (TYPE CG-1 DRY)

ROLL BACK DRY CURB & GUTTER (TYPE CG-2 DRY)

CURB & GUTTER DETAIL AT RAMP (ADA SLOPE REQUIREMENTS)

CURB REPLACEMENT DETAIL

GENERAL NOTES

- 3/4" 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.
- 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
- CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
- KOMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
- ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
- CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
- WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 PUBLIC WORKS ENGINEERING DIVISION / 2205 S. GREEN STREET / LEE'S SUMMIT, MO 64645

Drawn By: MFP
 Checked By: DL
 Date: 05/17/2022
 Project: GEN-4

3-D VIEW TYPE A SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

3-D VIEW TYPE B SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

TYPE A SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

TYPE B SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES

- CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
- USE 18" LONG #4 EPOXY COATED BARS @ 24" O.C. EMBED THE BARS 9" IN EACH DIRECTION.
- ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
- LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
- ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTER MAX.
- ADA MAXIMUM RAMP SLOPE = 8.33%
 ADA MAXIMUM CROSS SLOPE = 2.0%
***ROADWAY EXCEPTION:** WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
- TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
- FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR.
- RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
- ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

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 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 PUBLIC WORKS ENGINEERING DIVISION / 2205 S. GREEN STREET / LEE'S SUMMIT, MO 64645

Drawn By: MFP
 Checked By: DL
 Date: 05/17/2022
 Project: GEN-3A

3-D VIEW TYPE M SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

3-D VIEW SIDEWALK/SHARED-USE RAMP AT DRIVEWAY
NOT TO SCALE

TYPE M SIDEWALK/SHARED-USE RAMP
NOT TO SCALE

SIDEWALK/SHARED USE RAMP AT DRIVEWAY WITH ADJOINING CURB
NOT TO SCALE

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES

- CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
- USE 18" LONG #4 EPOXY COATED BARS @ 24" O.C. EMBED THE BARS 9" IN EACH DIRECTION.
- ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
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- ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTER MAX.
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 ADA MAXIMUM CROSS SLOPE = 2.0%
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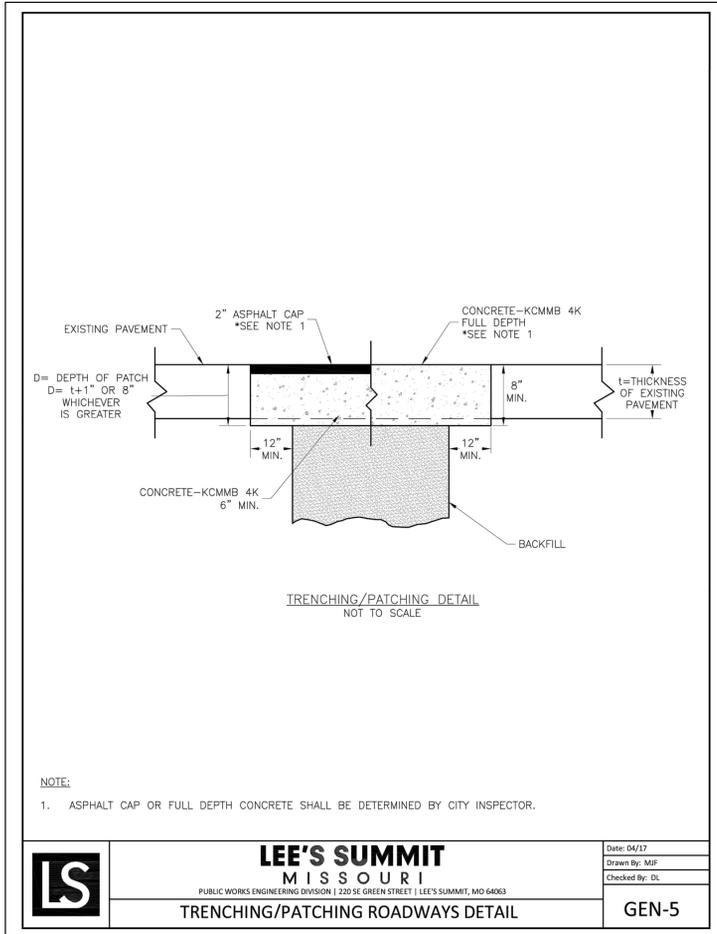
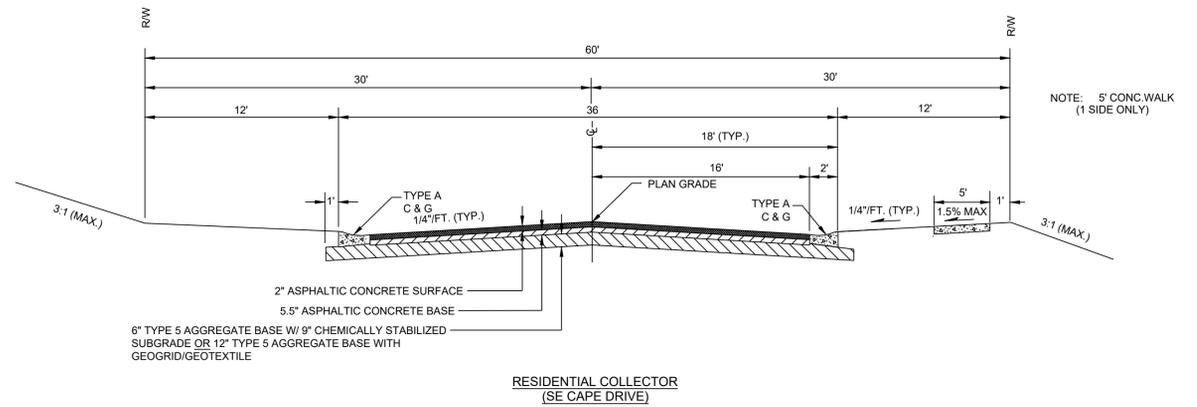
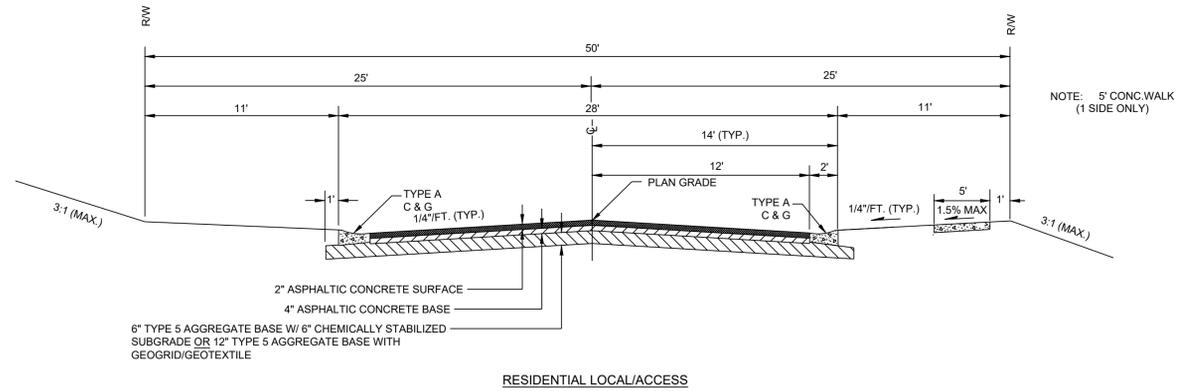
STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 PUBLIC WORKS ENGINEERING DIVISION / 2205 S. GREEN STREET / LEE'S SUMMIT, MO 64645

Drawn By: MFP
 Checked By: DL
 Date: 05/17/2022
 Project: GEN-3B

TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES

Street Classification	Pavement Option	AC Surface (in.)	AC Base (in.)	Aggregate Base (in.)	Chemical Subgrade Stabilization (in.)	Geogrid / Geotextile ⁽¹⁾
Residential Local/Access	A	2	4	6	6	--
	B	2	4	12	--	Geogrid / Geotextile
Residential Collector	A	2	5.5	6	9	--
	B	2	5.5	12	--	Geogrid / Geotextile
Commercial Industrial Local/Collector	A	2	7.5	6	9	--
	B	2	7.5	12	--	Geogrid / Geotextile

Notes:
(1) Geogrid shall be polypropylene material and Geotextile shall be woven, polypropylene as shown in the City's Approved Products List



LS	LEE'S SUMMIT MISSOURI	Date: 04/17
	PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64663	Drawn By: MIF
TRENCHING/PATCHING ROADWAYS DETAIL		Checked By: DL
		GEN-5

PREPARED BY:



5/19/2022

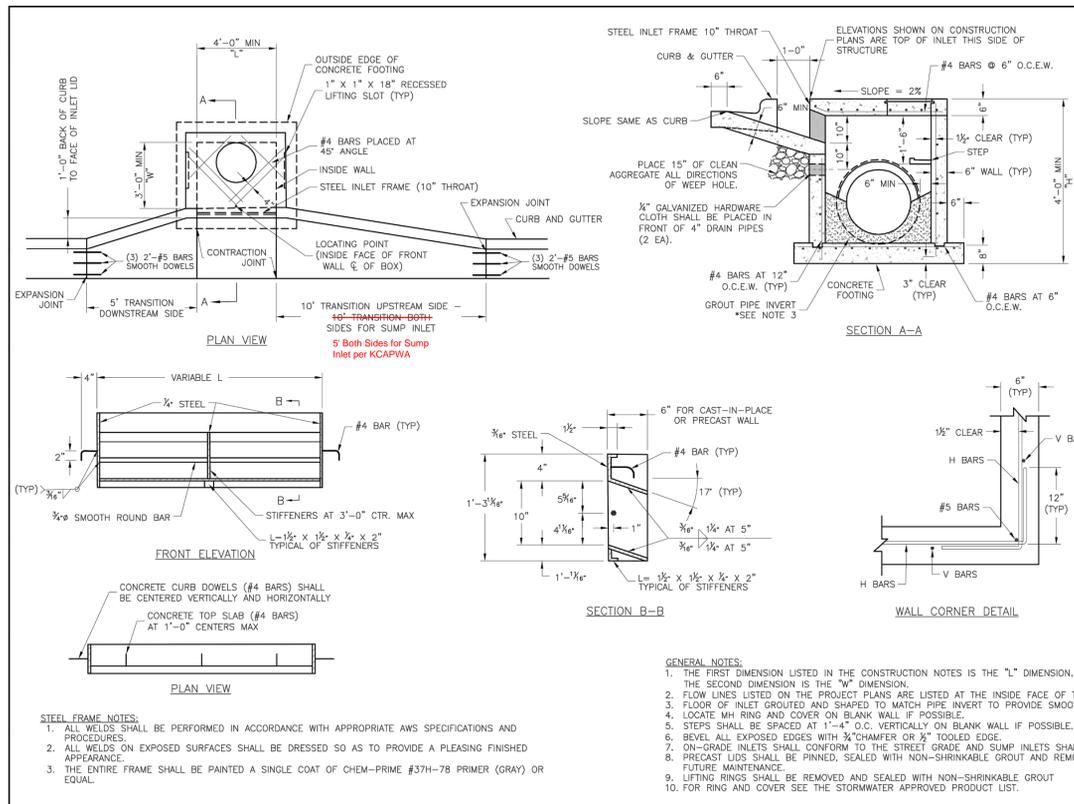
SCHLAGEL & ASSOCIATES, P.A.

**MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
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DRAWN BY:	NCA
CHECKED BY:	JLL
DATE PREPARED:	11/05/2021
PROJ. NUMBER:	21-130

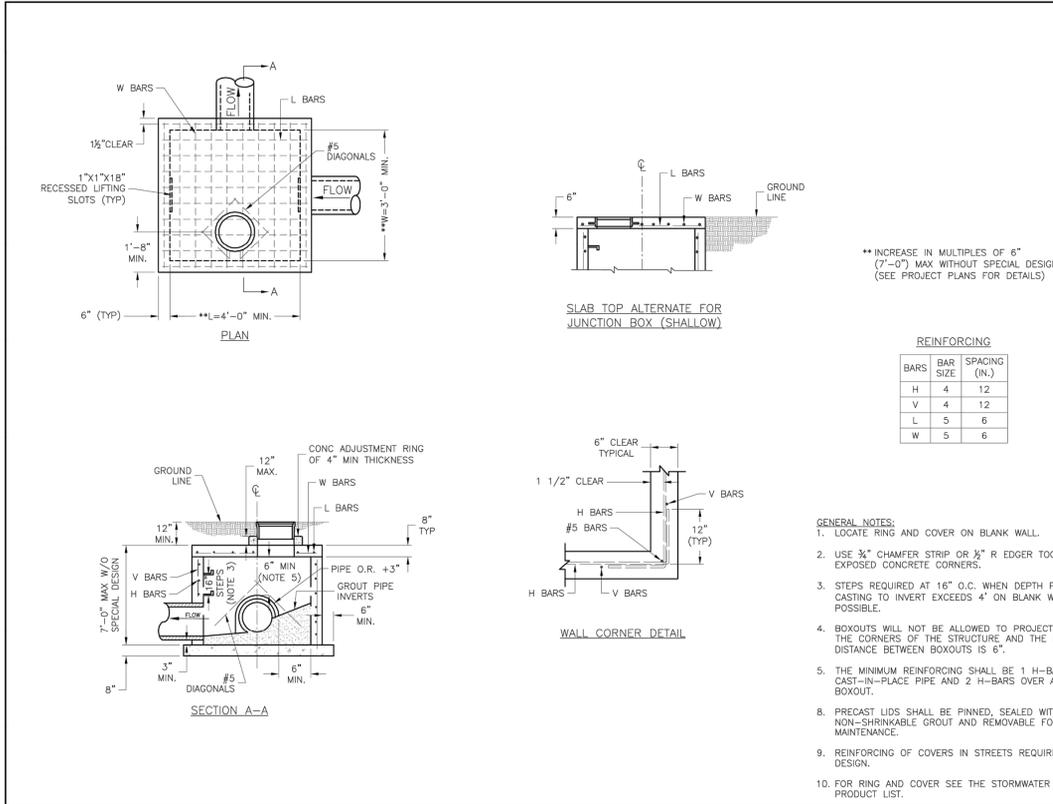
STREET DETAILS
2



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

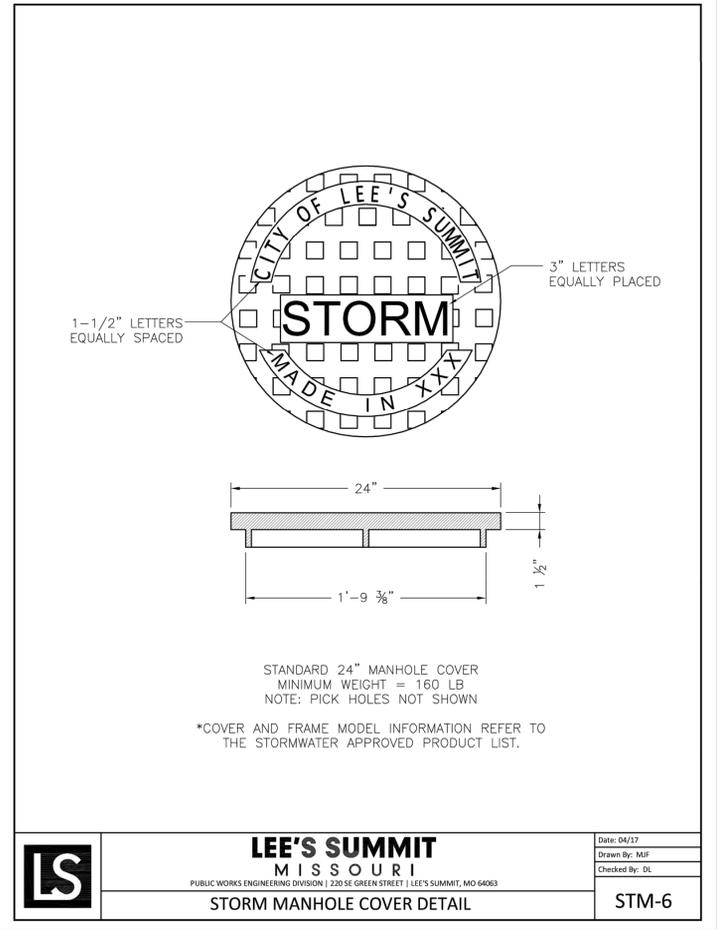
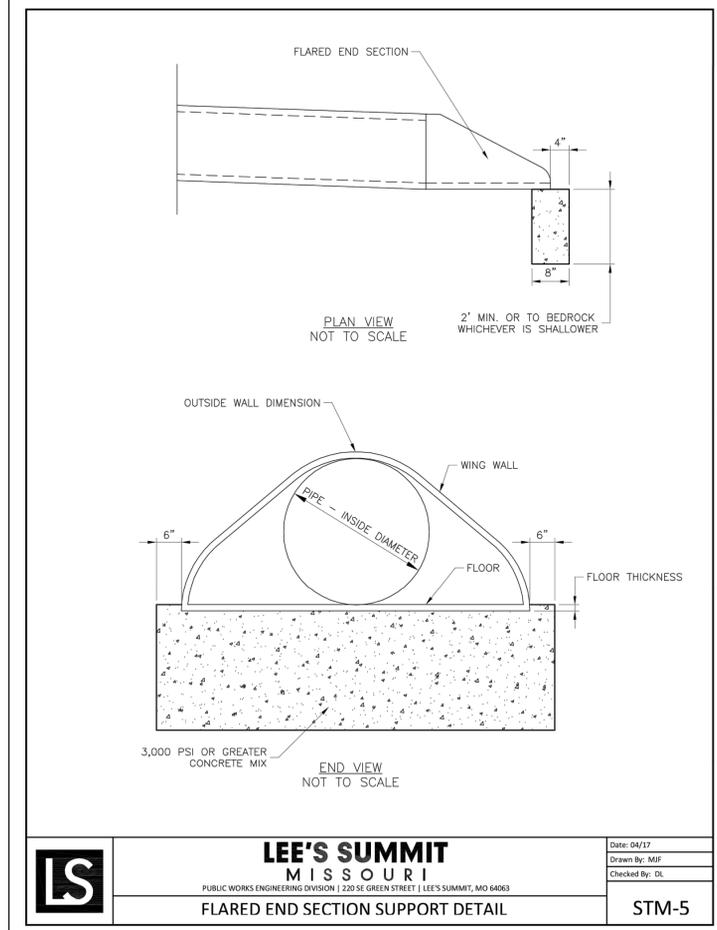
STM-1



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

STM-3



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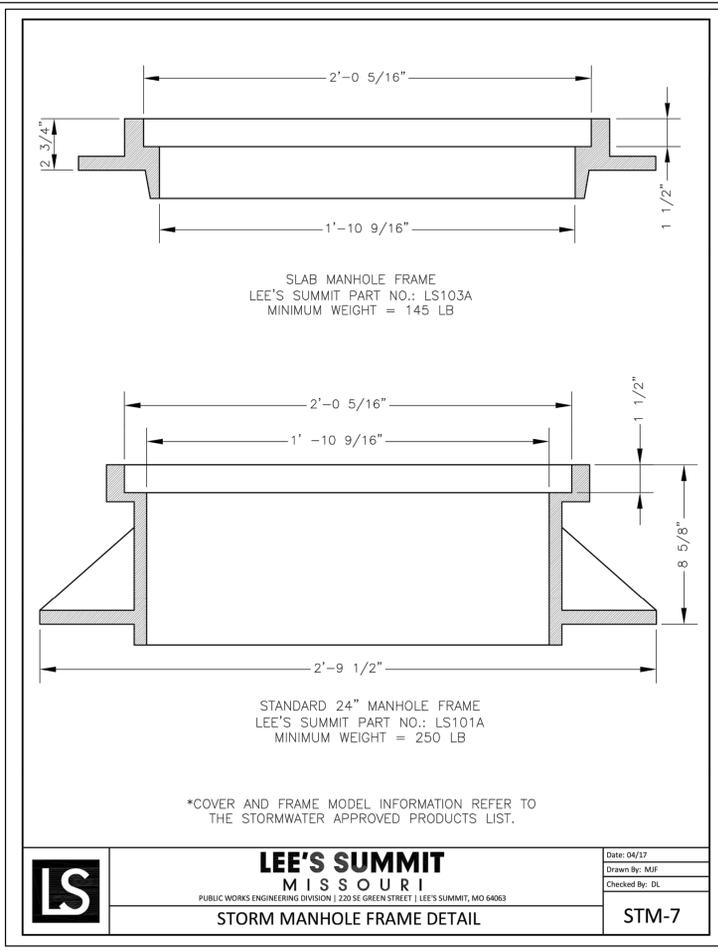
PREPARED BY:
JAMES L. LONG
REGISTERED PROFESSIONAL ENGINEER
NUMBER PE-2014018095
5/19/2022
SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

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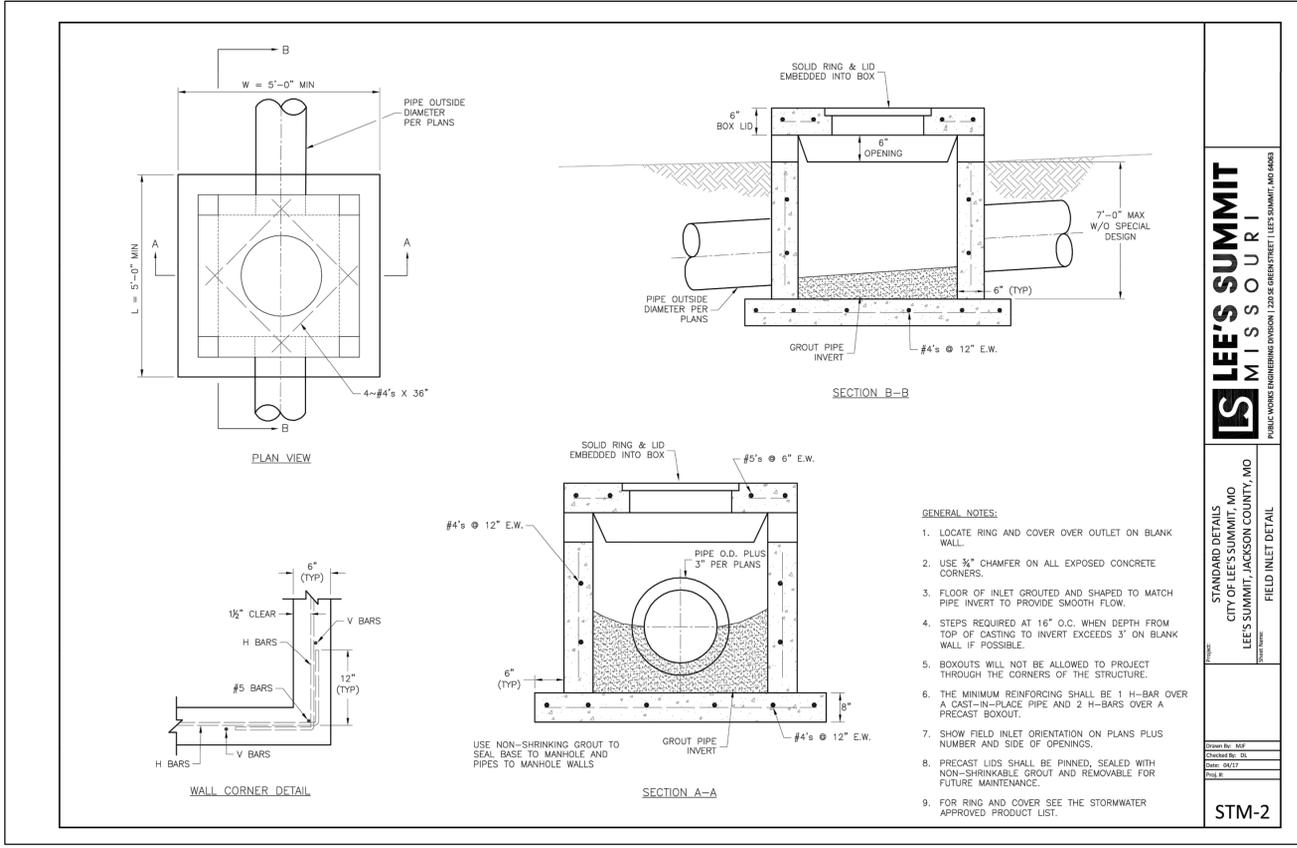
STORM DETAILS
1
SHEET
39



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

DATE: 04/27
DRAWN BY: MJF
CHECKED BY: DL

STM-7



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

FIELD INLET DETAIL

DATE: 04/27
DRAWN BY: MJF
CHECKED BY: DL

STM-2

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PREPARED BY:

JAMES L. LONG
NUMBER FE-2014010095
PROFESSIONAL ENGINEER

5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

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PROJ. NUMBER: 21-130

STORM DETAILS
2

SHEET
40

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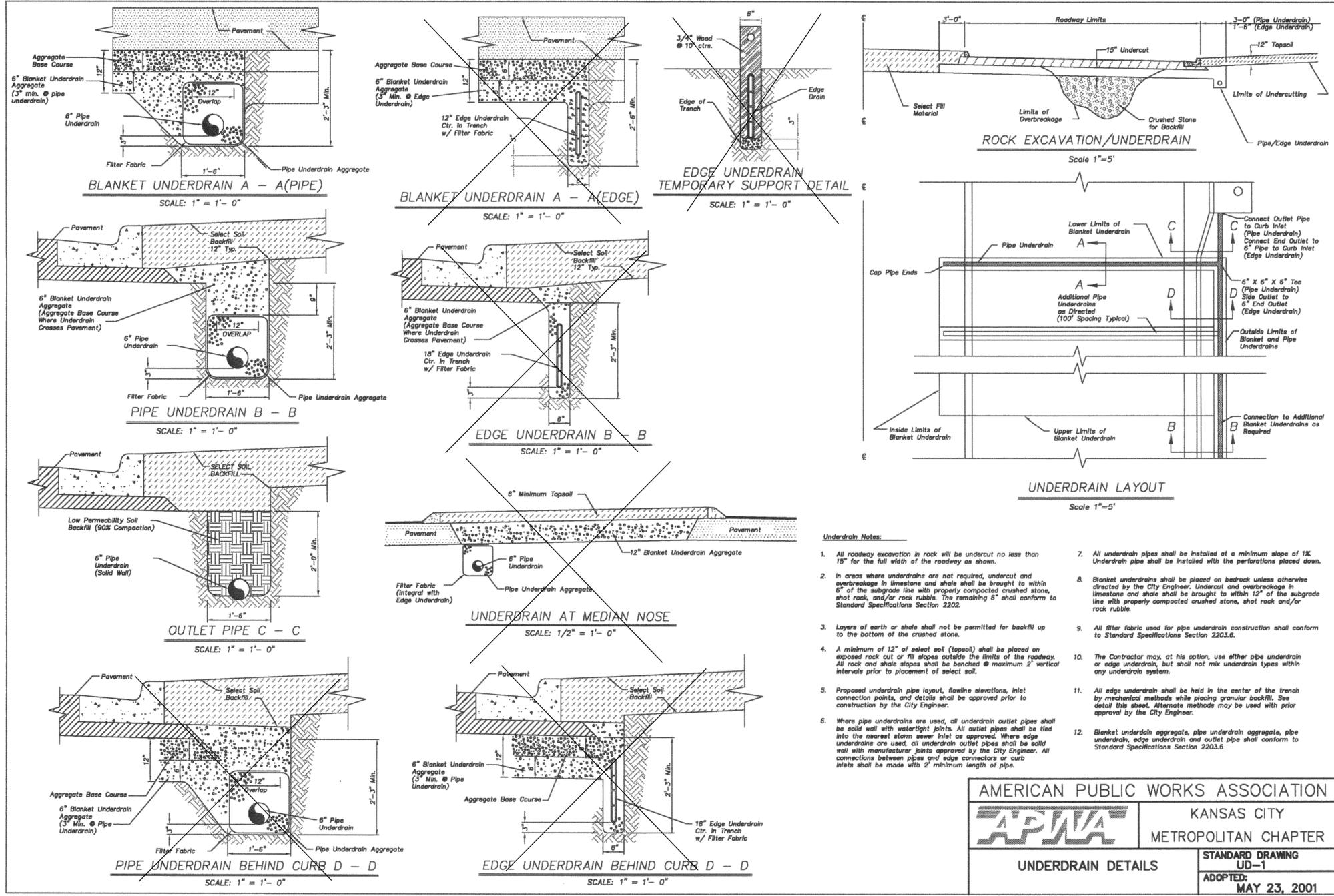
PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI



- Underdrain Notes:**
- All roadway excavation in rock will be undercut no less than 15" for the full width of the roadway as shown.
 - In areas where underdrains are not required, undercut and overbreakage in limestone and shale shall be brought to within 6" of the subgrade line with properly compacted crushed stone, shot rock, and/or rock rubble. The remaining 6" shall conform to Standard Specifications Section 2202.
 - Layers of earth or shale shall not be permitted for backfill up to the bottom of the crushed stone.
 - A minimum of 12" of select soil (topsoil) shall be placed on exposed rock cut or fill slopes outside the limits of the roadway. All rock and shale slopes shall be benched @ maximum 2' vertical intervals prior to placement of select soil.
 - Proposed underdrain pipe layout, flowline elevations, inlet connection points, and details shall be approved prior to construction by the City Engineer.
 - Where pipe underdrains are used, all underdrain outlet pipes shall be solid wall with watertight joints. All outlet pipes shall be tied into the nearest storm sewer inlet as approved. Where edge underdrains are used, all underdrain outlet pipes shall be solid wall with manufacturer joints approved by the City Engineer. All connections between pipes and edge connectors or curb inlets shall be made with 2' minimum length of pipe.
 - All underdrain pipes shall be installed at a minimum slope of 1%. Underdrain pipes shall be installed with the perforations placed down.
 - Blanket underdrains shall be placed on bedrock unless otherwise directed by the City Engineer. Undercut and overbreakage in limestone and shale shall be brought to within 12" of the subgrade line with properly compacted crushed stone, shot rock and/or rock rubble.
 - All filter fabric used for pipe underdrain construction shall conform to Standard Specifications Section 2203.6.
 - The Contractor may, at his option, use either pipe underdrain or edge underdrain, but shall not mix underdrain types within any underdrain system.
 - All edge underdrain shall be held in the center of the trench by mechanical methods while placing granular backfill. See detail this sheet. Alternate methods may be used with prior approval by the City Engineer.
 - Blanket underdrain aggregate, pipe underdrain aggregate, pipe underdrain, edge underdrain and outlet pipe shall conform to Standard Specifications Section 2203.5

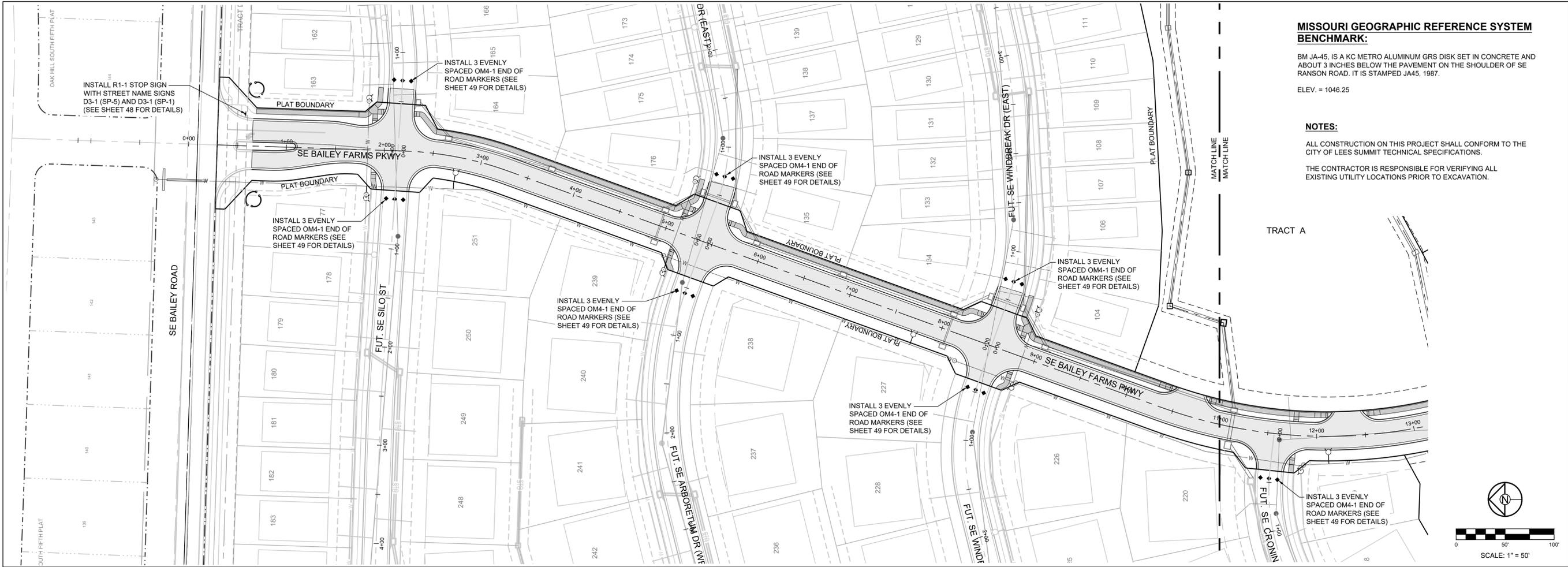
AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
 UNDERDRAIN DETAILS STANDARD DRAWING UD-1
 ADOPTED: MAY 23, 2001

REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY: NCA	CHECKED BY: JLL	DATE PREPARED: 11/05/2021	PROJ. NUMBER: 21-130
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STORM UNDERDRAIN DETAILS

SHEET



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

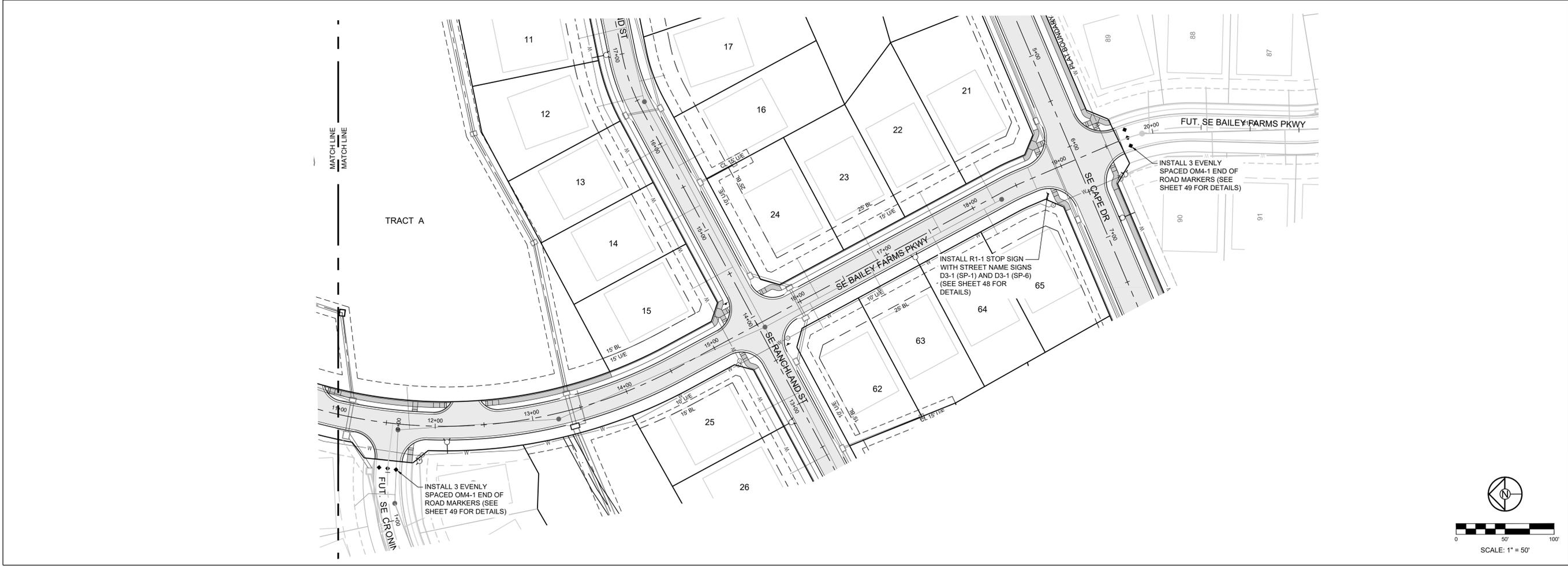
BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

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



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PREPARED BY:

 JAMES L. LONG
 NUMBER PE-201801895
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

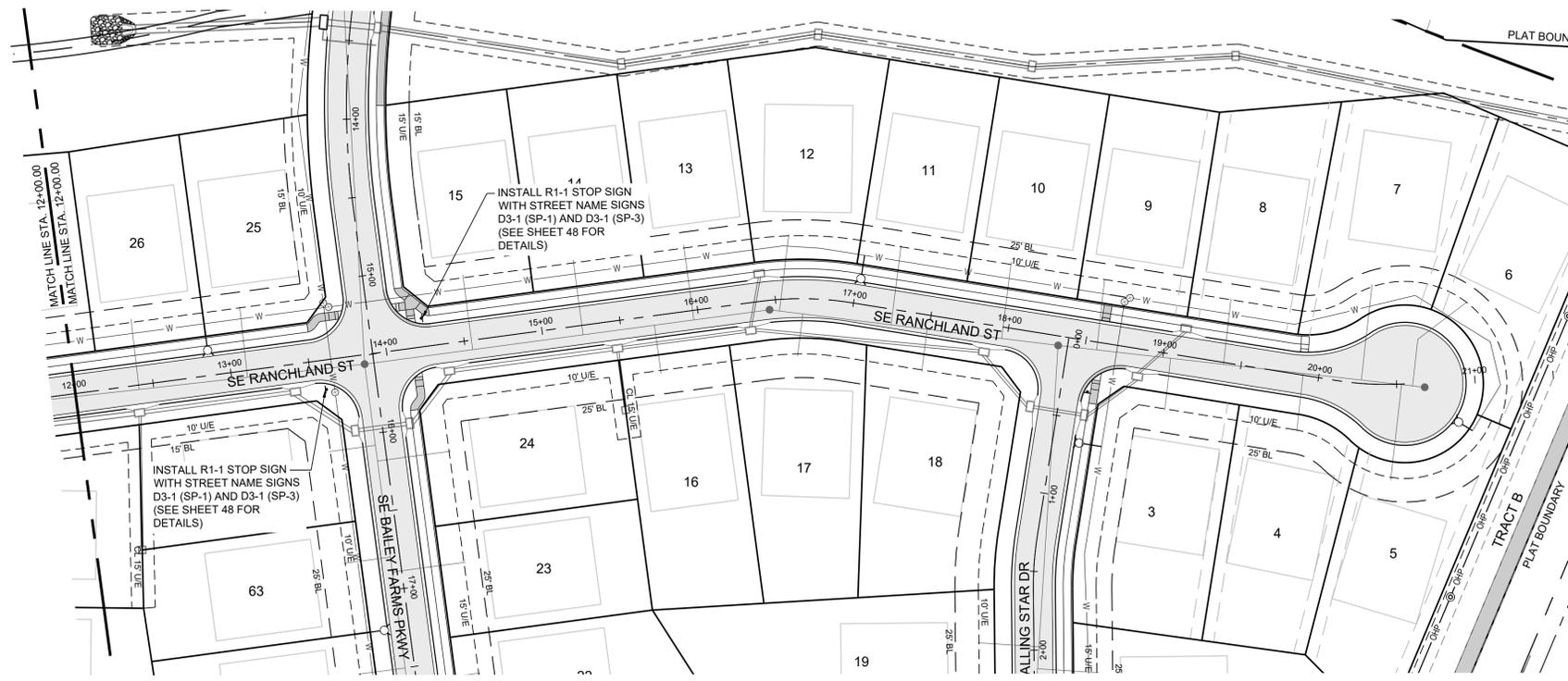
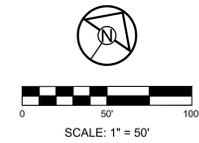
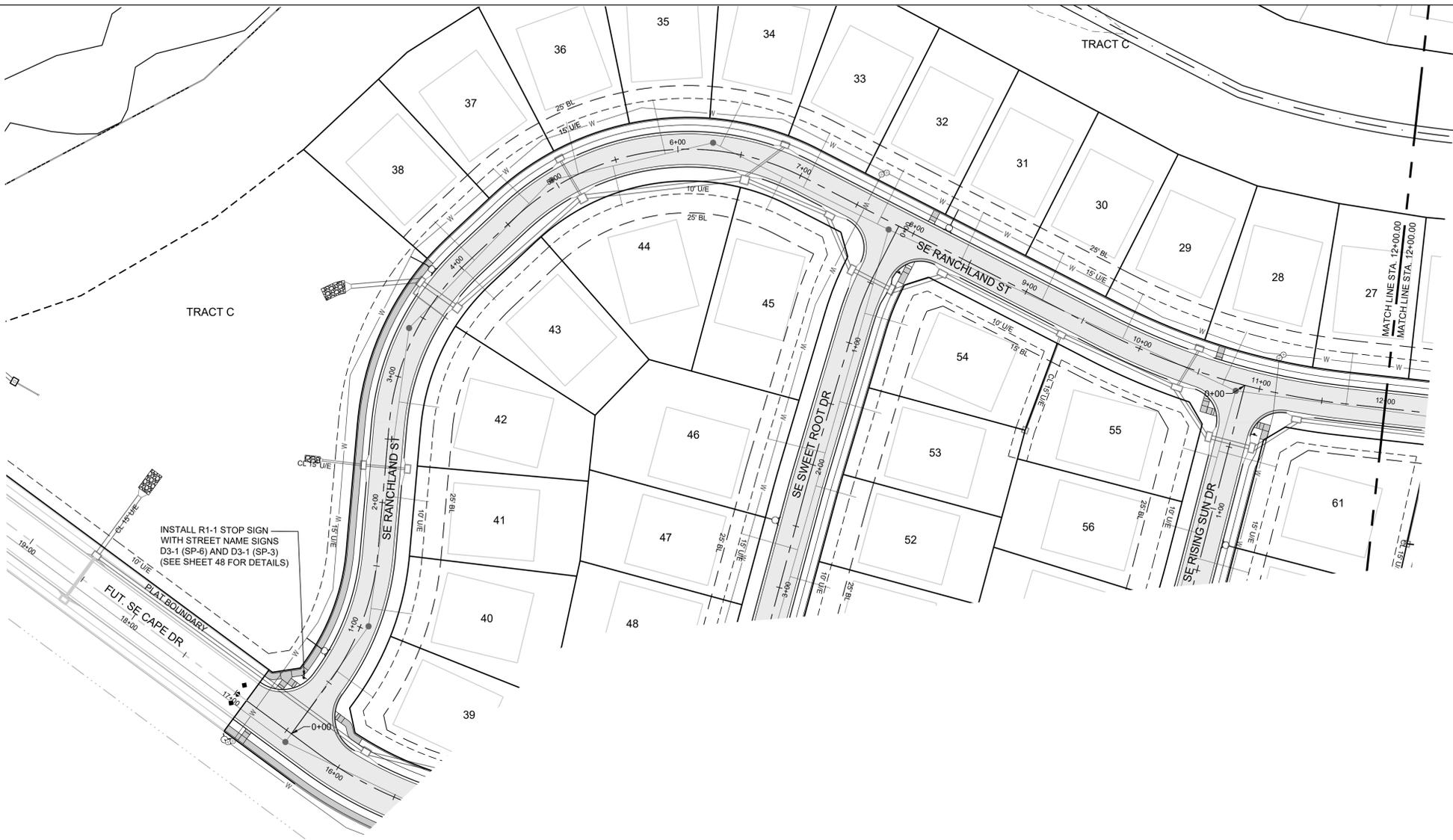
MANOR AT BAILEY FARMS, FIRST PLAT
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SE BAILEY FARMS PKWY SIGNAGE PLAN
 SHEET
42

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MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:
 BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.
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 LEE'S SUMMIT, MISSOURI

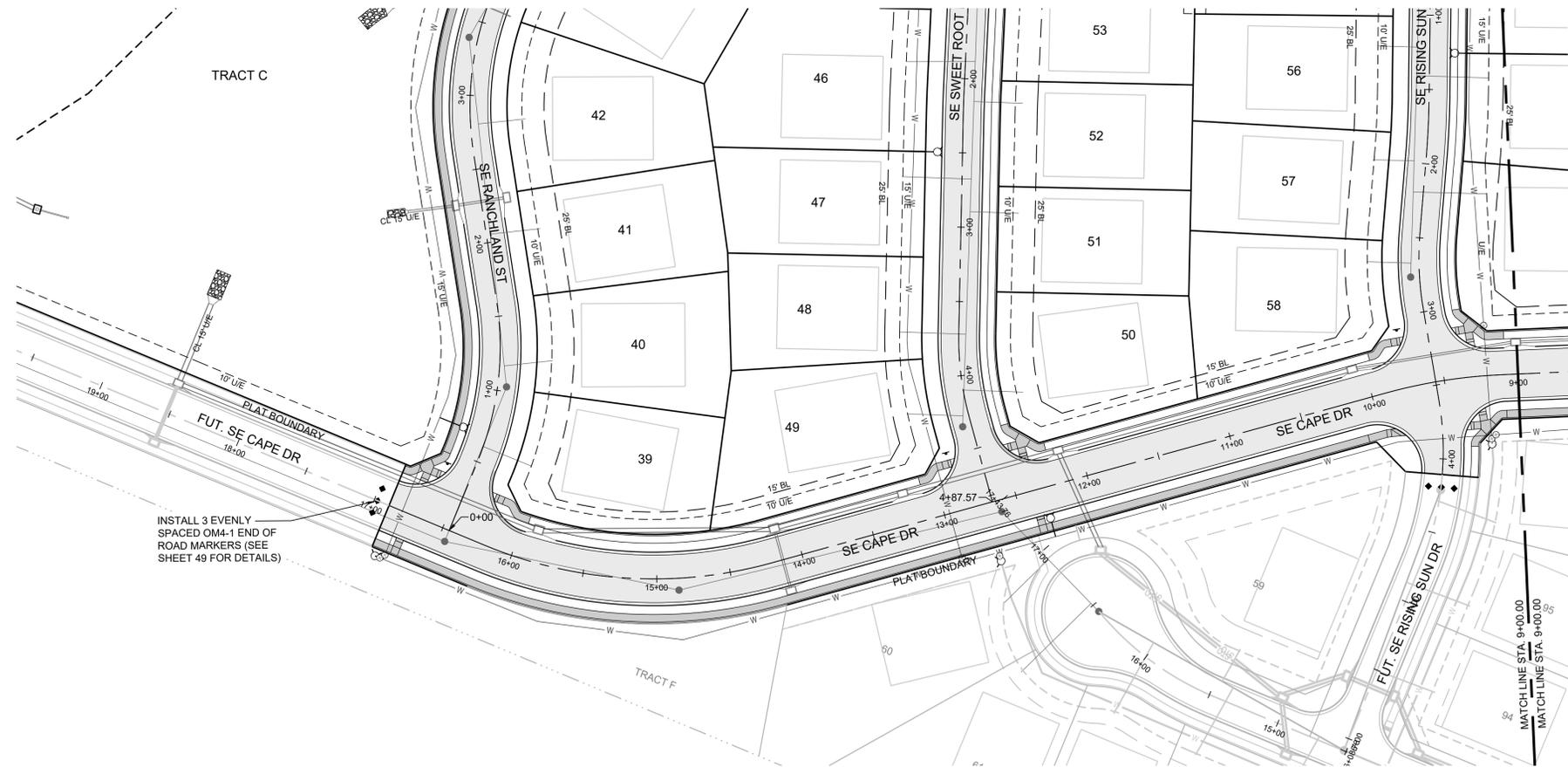
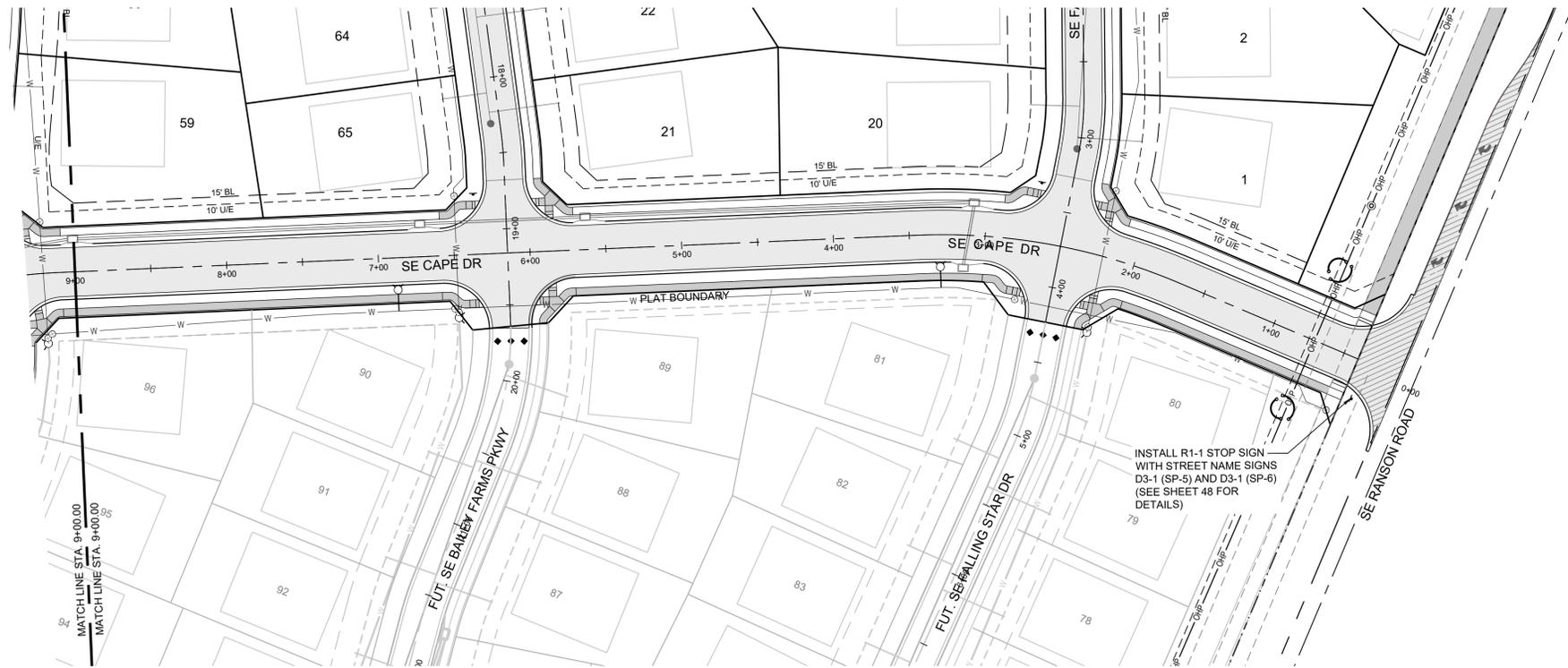
REVISION DATE	DESCRIPTION
01/21/2022	City Comments dated 12/19/2021
04/20/2022	City Comments dated 02/14/2022
05/17/2022	City Comments dated 5/11/2022

DRAWN BY: NCA
 CHECKED BY: JLL
 DATE PREPARED: 11/05/2021
 PROJ. NUMBER: 21-130

SE RANGLAND ST SIGNAGE PLAN

SHEET
43

I:\PROJECTS\2021\21-130\3.0 Design\3.0 DWG Plans\6.0 SS\21-130-SS-SIGN.dwg, 5/19/2022 6:10:06 PM, 1:1



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

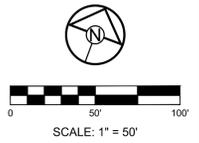
BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

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



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 Missouri State Certificates of Authority
 #E2200203690F #LAC201005237 #LS2002008695F

PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

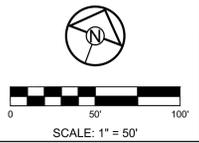
MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI

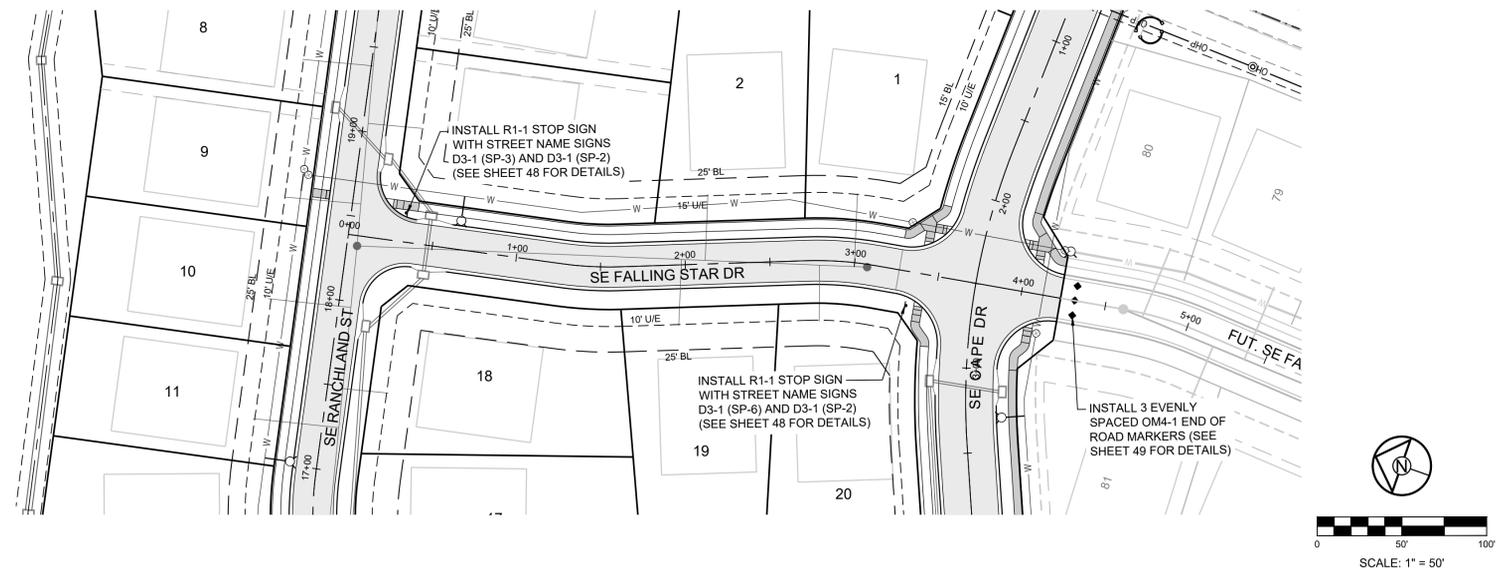
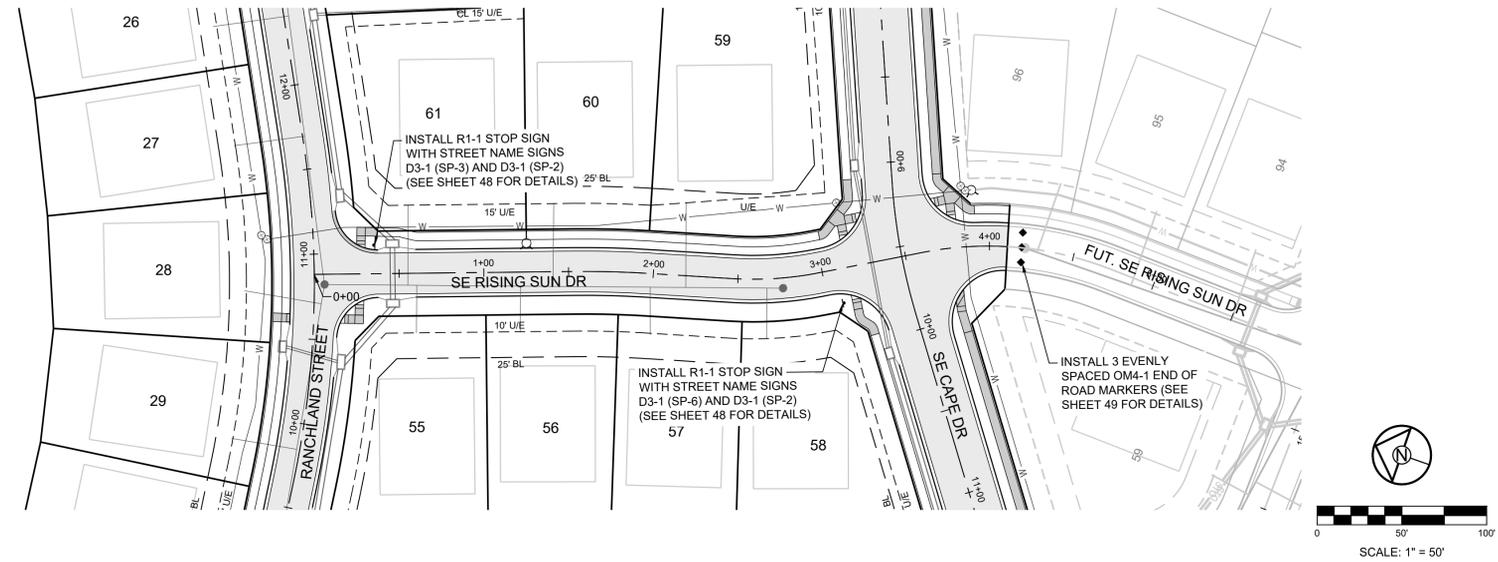
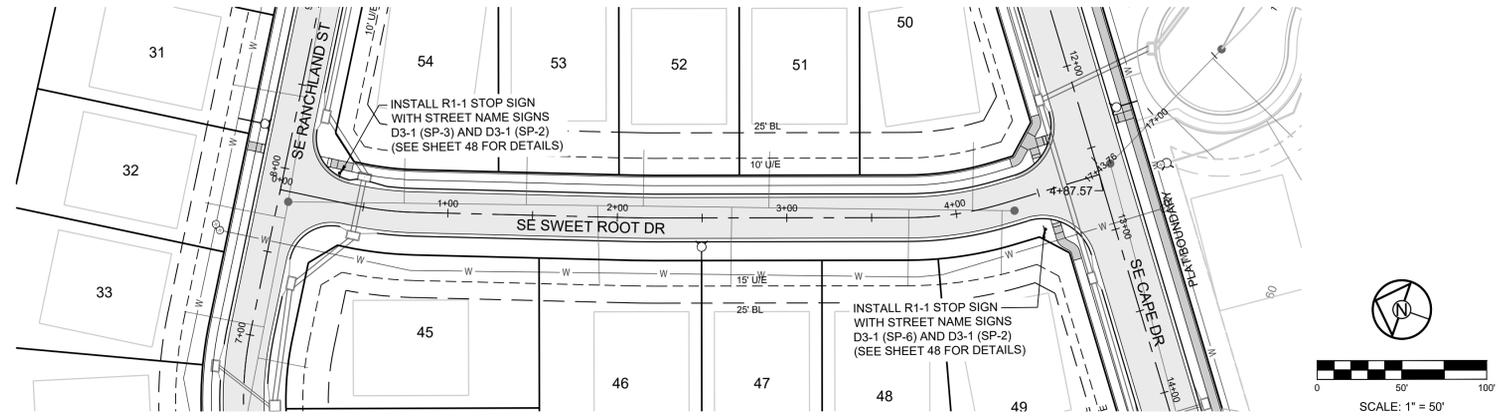
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SE CAPE DR
SIGNAGE PLAN

SHEET

44





MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

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PREPARED BY:



5/19/2022

SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

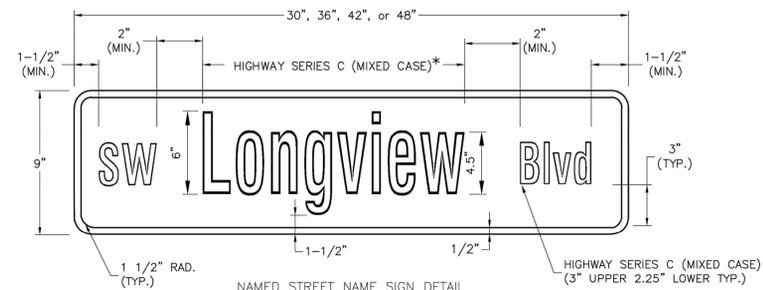
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05/17/2022	City Comments Dated 5/11/2022

SE SWEET ROOT DR
RISING SUN DR
FALLING STAR DR
DRAINAGE PLAN

45

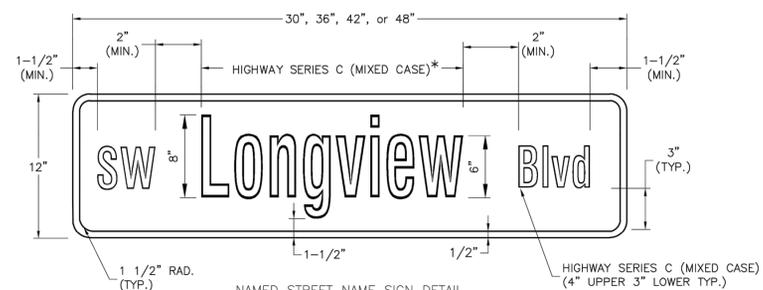
STANDARD ABBREVIATION LISTS

NAMED STREETS		NUMBERED STREETS	
AVENUE	Ave	FIRST	ST
BOULEVARD	Blvd	SECOND	ND
CIRCLE	Cir	THIRD	RD
CREEK	Cr	FOURTH TO TENTH	TH
COURT	Ct		
CROSSING	Xing		
DRIVE	Dr		
HIGHWAY	Hwy		
LANE	Ln		
PARKWAY	Pkwy		
PLACE	Pl		
ROAD	Rd		
STREET	St		
TERRACE	Ter		
TRAIL	Trl		
WAY	Way		



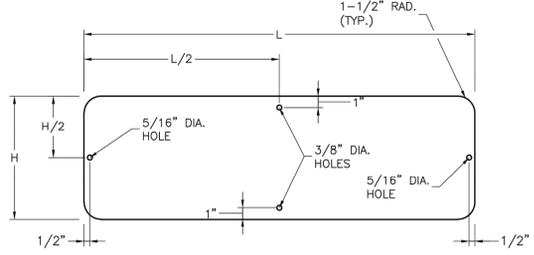
NAMED STREET NAME SIGN DETAIL
 * USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

STREET NAME SIGN FACE DETAILS
 POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH

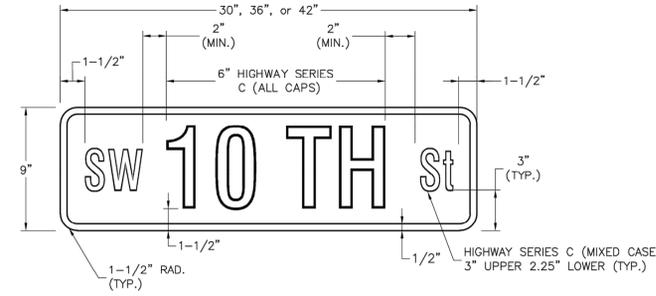


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 * USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

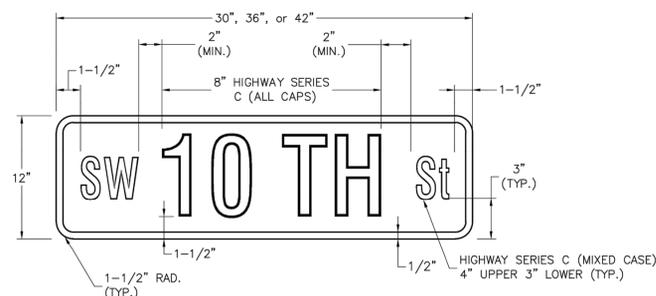
STREET NAME SIGN FACE DETAILS
 POST MOUNTED MULTI-LANE GREATER THAN 40 MPH



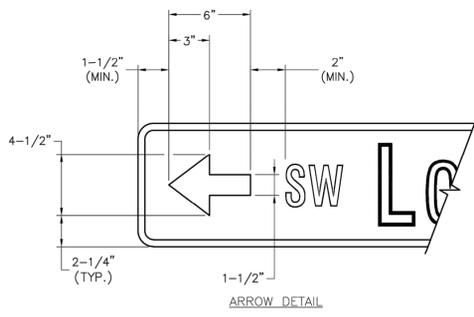
STREET NAME SIGN BLANK DETAILS
 FOR MOUNTING ON SQUARE STEEL POSTS



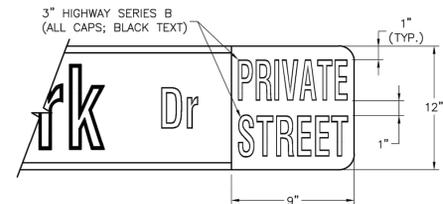
NUMBERED STREET NAME SIGN DETAIL
 STREET NAME SIGN FACE DETAILS
 POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



NUMBERED STREET NAME SIGN DETAIL
 STREET NAME SIGN FACE DETAILS
 POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

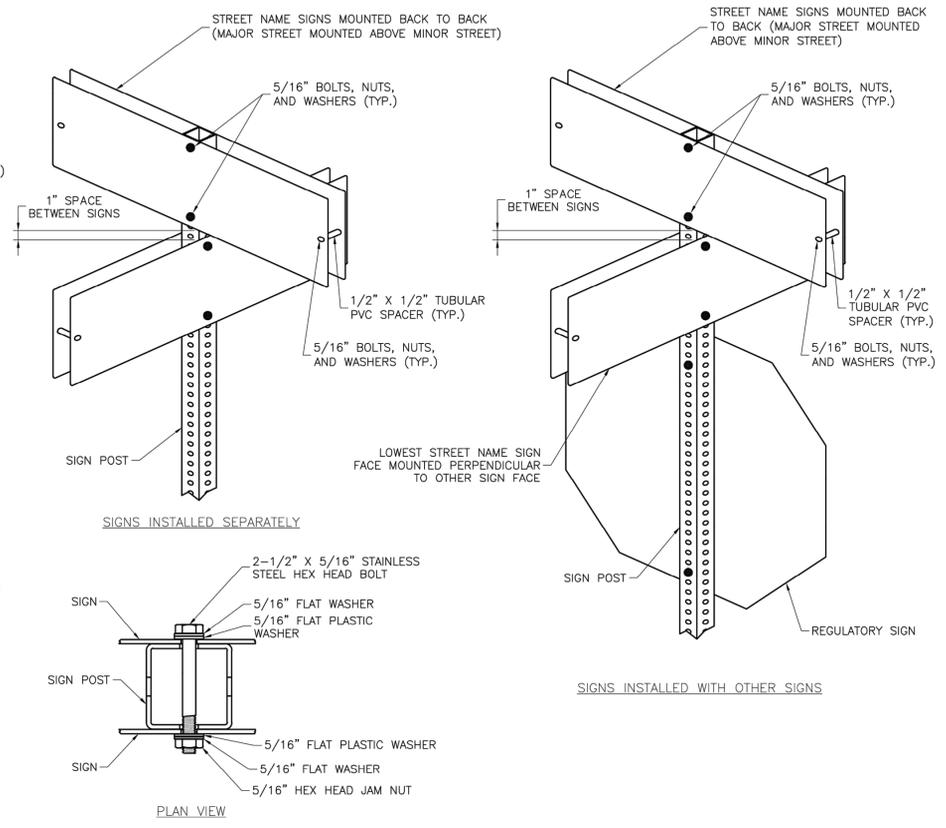


ARROW DETAIL



PRIVATE STREET TAG DETAIL

- NOTES:
- FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
 - ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. ARROWS SHALL BE WHITE.
 - THE "PRIVATE STREET" TAG SHOULD BE ADDED TO THE END OF STREET NAME SIGNS TO INDICATE WHERE A STREET THAT IS OUTSIDE THE RIGHT-OF-WAY INTERSECTS A PUBLIC STREET. THE BACKGROUND FOR THE "PRIVATE STREET" TAG SHALL BE YELLOW.
 - MULTI-LANE IS DEFINED AS HAVING 2 LANES OR MORE IN EACH DIRECTION, EXCLUDING TURN LANES.
 - OVERHEAD SIGN DETAILS MAY BE FOUND ON THE SIGNAL HEAD MOUNTING DETAIL.



SQUARE STEEL POST MOUNTING DETAILS

Street Name	Sign Size	Sign Type	Street Name	Sign Size	Sign Type
SE Bailey Farms Pkwy	66"	D3-1 (SP-1)	SE Ranchland St	48"	D3-1 (SP-3)
SE Falling Star Dr	54"	D3-1 (SP-2)	SE Ranson Rd	36"	D3-1 (SP-5)
SE Sweet Root Dr	54"	D3-1 (SP-2)	SE Bailey Rd	36"	D3-1 (SP-5)
SE Rising Sun Dr	54"	D3-1 (SP-2)	SE Cape Dr	30"	D3-1 (SP-6)

STREET NAME SIGN INVENTORY

NO.	DATE	DESCRIPTION
1		
0		

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
 PROJECT: MANOR AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN
 SHEET: SN-3
 DRAWN BY: BWC
 CHECKED BY: MKP
 DATE: 11/2019
 PROJECT: STD DETAILS
 3 OF 3

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 PREPARED BY:
 JAMES L. LONG
 NUMBER FE-201801895
 PROFESSIONAL ENGINEER
 5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN
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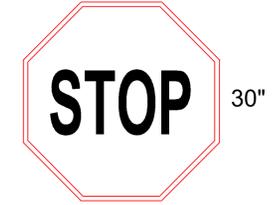
STREET NAME SIGN DETAILS (SN-3)

PREPARED BY:

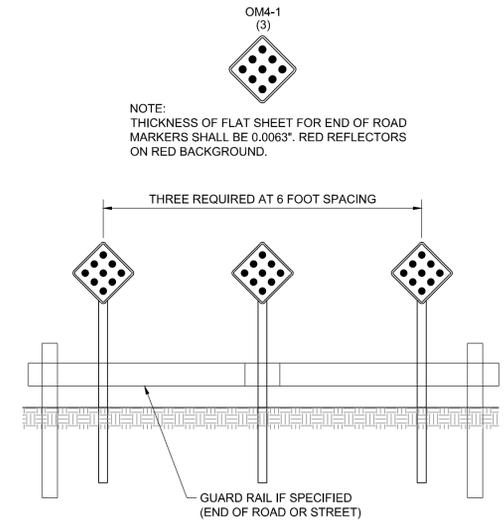
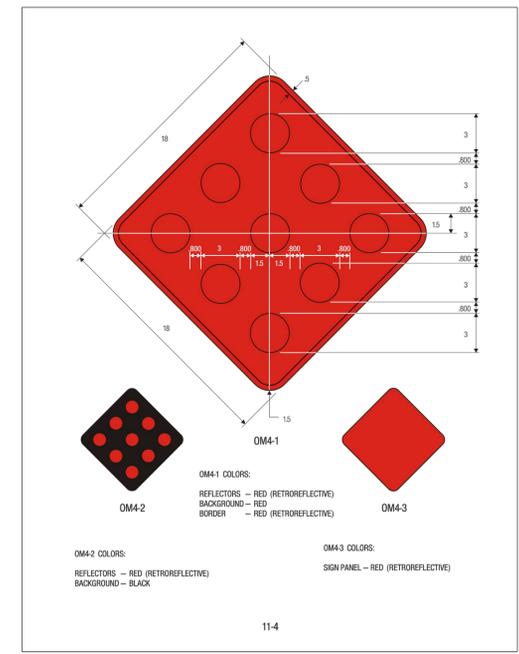


5/19/2022
 SCHLAGEL & ASSOCIATES, P.A.

MANOR AT BAILEY FARMS, FIRST PLAT
 STREET, STORMWATER, AND MASTER
 DRAINAGE PLAN
 SE BAILEY ROAD AND SE RANSON ROAD
 LEE'S SUMMIT, MISSOURI



30"
 R1-1
 STOP SIGN



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OM-4 SIGN
 DETAILS