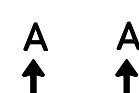

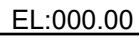
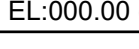
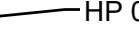
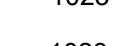
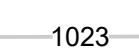
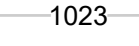
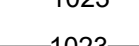
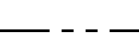




MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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

GRADING LEGEND:

-  DENOTES OVERFLOW SWALE
-  DENOTES FINISHED AS-BUILT GRADE ELEVATION
-  DENOTES FINISHED GRADE ELEVATION
-  DENOTES EXISTING GRADE ELEVATION
-  DENOTES LOT HIGH POINT ELEVATION
-  DENOTES PROPOSED MAJOR CONTOUR
-  DENOTES PROPOSED MINOR CONTOUR
-  DENOTES EXISTING MAJOR CONTOUR
-  DENOTES EXISTING MINOR CONTOUR
-  DENOTES AS-BUILT MAJOR CONTOUR
-  DENOTES AS-BUILT MINOR CONTOUR
-  MWSE

BASIS OF BEARINGS:

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

NOTES:

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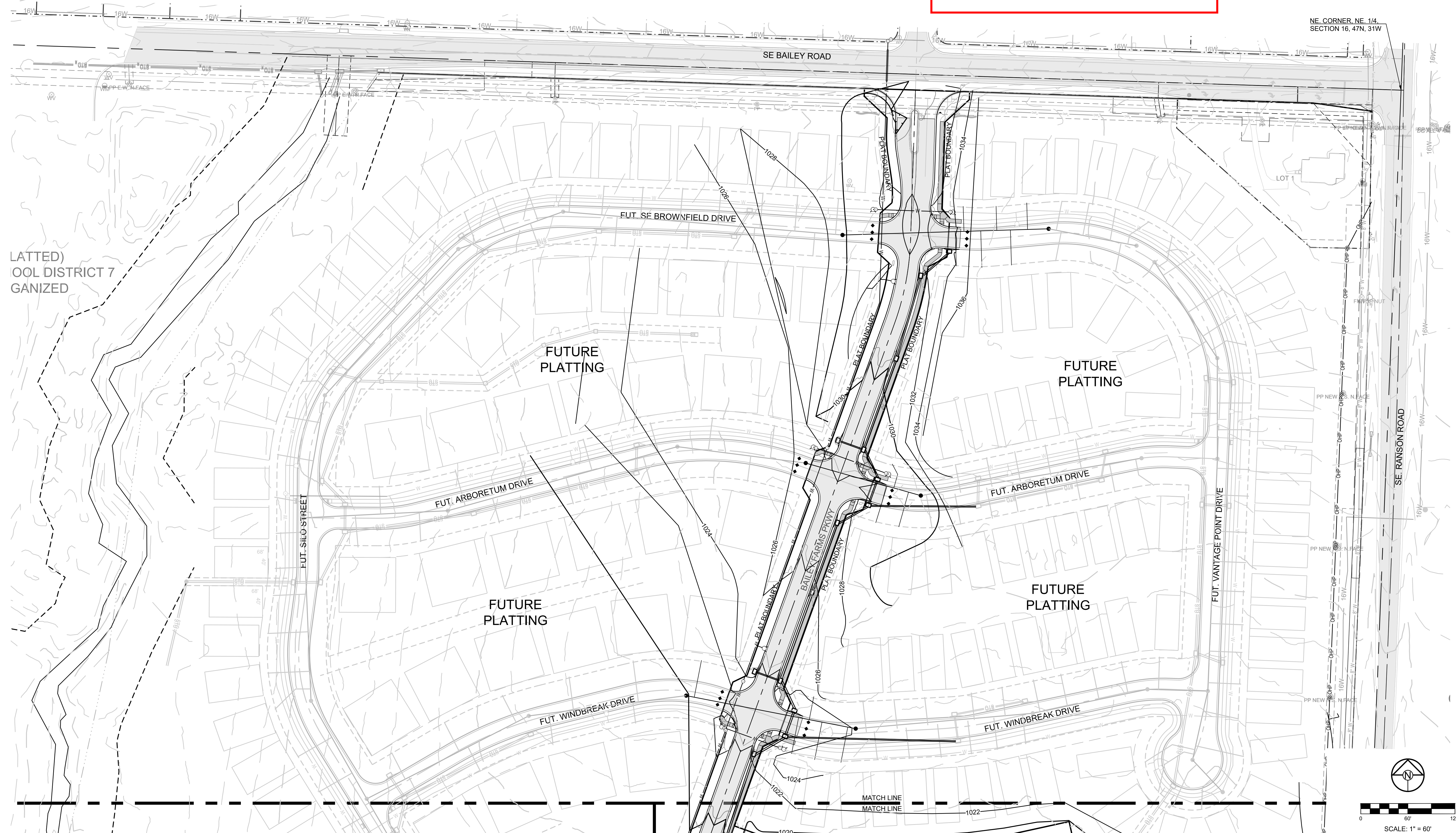
RECORD DRAWING

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"400-00 100.10", "3-00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 3/17/2025
 Certified by: JLL
 Title: Senior Project Engineer
 Firm: Schlager and Associates, P.A.

Record Drawing



LATTED)
 OOL DISTRICT 7
 GANIZED

NE CORNER, NE 1/4,
 SECTION 16, 47N, 31W

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PREPARED BY:



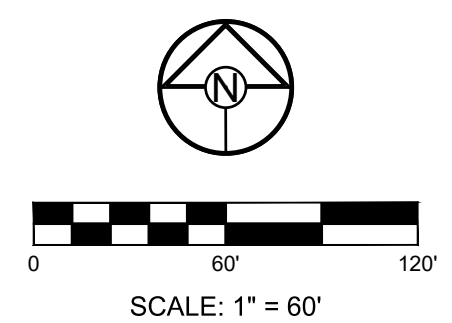
3/17/2025
 SCHLAGEL & ASSOCIATES, P.A.

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
10/27/2023	Revised Details to current 2023 Details
11/30/2023	Added "New City Requirements" note
2/28/2024	Storm 102-105 to HDPE and Inlets 1009 & 1014 - revised to IB's
8/23/2024	Revised Amenity Trail Curb Returns
3/17/2025	AS-BUILTS

MASTER
 DRAINAGE
 PLAN-GRADING
 PLAN (NORTH)

SHEET
5





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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- DENOTES LOT HIGH POINT ELEVATION
- DENOTES PROPOSED MAJOR CONTOUR
- DENOTES EXISTING MAJOR CONTOUR
- DENOTES EXISTING MINOR CONTOUR
- DENOTES AS-BUILT MAJOR CONTOUR
- DENOTES AS-BUILT MINOR CONTOUR
- MWSE

NOTES:

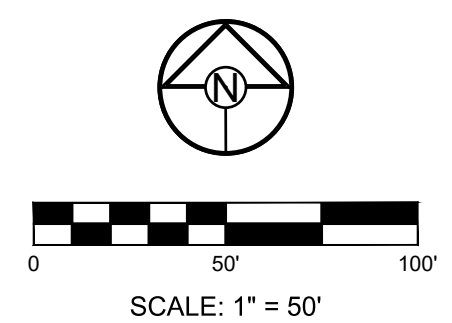
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5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.

LOT TYPE TABLE				LOT TYPE TABLE				
LOT #	BASEMENT TYPE	As Built Revision	MBOE	As Built Revision	LOT #	BASEMENT TYPE	As Built Revision	MBOE
1	STANDARD				34	DAYLIGHT		
2	STANDARD				35	DAYLIGHT		
3	STANDARD				36	WALKOUT		
4	STANDARD				37	WALKOUT		
5	STANDARD				38*	STANDARD		1002
6*	STANDARD	Daylight	1027	1025	39	STANDARD		
7*	STANDARD	Daylight	1025	1023	40	STANDARD		
8*	DAYLIGHT		1022	1021	41	STANDARD		
9*	DAYLIGHT		1022	1021	42	STANDARD		
10*	STANDARD	Daylight	1021	1020	43	STANDARD		
11*	STANDARD	Daylight	1021	1020	44	STANDARD		
12*	STANDARD		1018		45	STANDARD		
13*	STANDARD		1020		46	WALKOUT		
14*	STANDARD		1020		47	WALKOUT		
15*	STANDARD		1020		48	DAYLIGHT		Walkout
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	1007	61*	STANDARD		1017
29*	DAYLIGHT		1008	1006	62*	STANDARD		1017
30*	DAYLIGHT		1007	1005	63	STANDARD		
31*	DAYLIGHT		1007	1004	64	STANDARD		
32*	DAYLIGHT		1005	1002	65	STANDARD		
33*	DAYLIGHT		1005	1002				

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

Record Drawing

RECORD DRAWING
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Date: 3/17/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlager and Associates, P.A.



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PREPARED BY:

3/17/2025
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
10/27/2023	Revised Details to current 2023 Details
11/30/2023	Added "New City Requirements" note
2/28/2024	Storm 102-105 to HDPE and
8/23/2024	Items 1009 & 1014 - revised to IB's
3/17/2025	Revised Amenity Tract Curb Returns

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

MASTER DRAINAGE PLAN-GRADING PLAN (EAST)

SHEET

6

Record Drawing

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:

- DENOTES OVERFLOW SWALE
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- DENOTES FINISHED GRADE ELEVATION
- DENOTES EXISTING GRADE ELEVATION
- DENOTES LOT HIGH POINT ELEVATION
- DENOTES PROPOSED MAJOR CONTOUR
- DENOTES PROPOSED MINOR CONTOUR
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- DENOTES EXISTING MINOR CONTOUR
- DENOTES AS-BUILT MAJOR CONTOUR
- DENOTES AS-BUILT MINOR CONTOUR
- DENOTES AS-BUILT MINOR CONTOUR

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17	STANDARD				50	STANDARD		
18	STANDARD				51	STANDARD		
19	DAYLIGHT				52	STANDARD		
20	DAYLIGHT				53	STANDARD		
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22	STANDARD				55*	STANDARD		1014
23	STANDARD				56	STANDARD		
24	STANDARD				57	STANDARD		
25	DAYLIGHT				58	STANDARD		
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32*	DAYLIGHT		1005	1002	65	STANDARD		
33*	DAYLIGHT		1005	1002				

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

RECORD DRAWING

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*480-00 100.10", "3-00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 3/17/2025
 Certified by: JLL
 Title: Senior Project Engineer
 Firm: Schlager and Associates, P.A.



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 #E2002003690F #LAC201005237 #S200200869F

PREPARED BY:

 JAMES L. LONG
 PROFESSIONAL ENGINEER
 3/17/2025
 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

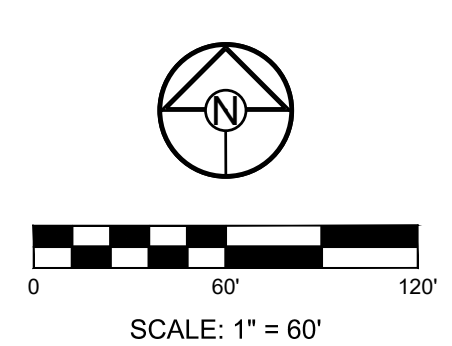
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2/28/2024	Storm 102, 105 to HDPE and Inlets 1009 & 1014 - revised to IB's
8/23/2024	Revised Anomaly Tract Curb Returns
3/17/2025	AS-BUILTS

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

MASTER DRAINAGE PLAN-GRADING PLAN (WEST)

SHEET

7



Record Drawing

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:

- DENOTES OVERFLOW SWALE
- 000.00 DENOTES FINISHED AS-BUILT GRADE ELEVATION
- EL.000.00 DENOTES FINISHED GRADE ELEVATION
- EL.000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
- HP 000.00 DENOTES LOT HIGH POINT ELEVATION
- 1023 DENOTES PROPOSED MAJOR CONTOUR
- 1023 DENOTES PROPOSED MINOR CONTOUR
- 1023 DENOTES EXISTING MAJOR CONTOUR
- 1023 DENOTES EXISTING MINOR CONTOUR
- 1023 DENOTES AS-BUILT MAJOR CONTOUR
- 1023 DENOTES AS-BUILT MINOR CONTOUR
- MWS

NOTES:

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Date: 3/17/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlager and Associates, P.A.

RUNOFF CALCULATIONS:

$$Q = K \cdot C \cdot i \cdot A$$

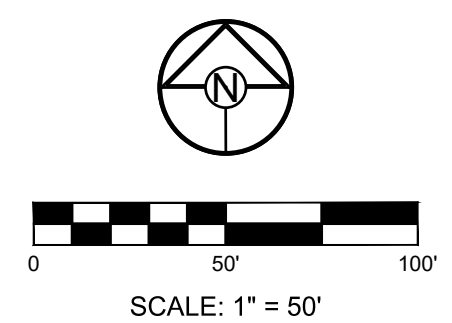
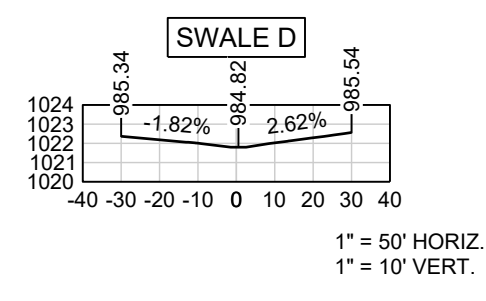
$K_{10} = 1.0$ $K_{100} = 1.25$ $C = 0.51$
 $i = \text{INTENSITY } (i_{10} = 7.35" / i_{100} = 10.32")$
 DESIGN OVERFLOW = $Q_{\text{OVERFLOW}} = Q_{100} \cdot Q_{10}$

MANNINGS "n" = 0.030 FOR SWALES



SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	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

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
 NUMBER PE-2014010495
 3/17/2025
 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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3/17/2025	AS-BUILTS

MASTER DRAINAGE PLAN-SWALE GRADING PLAN SHEET(EAST)

Record Drawing

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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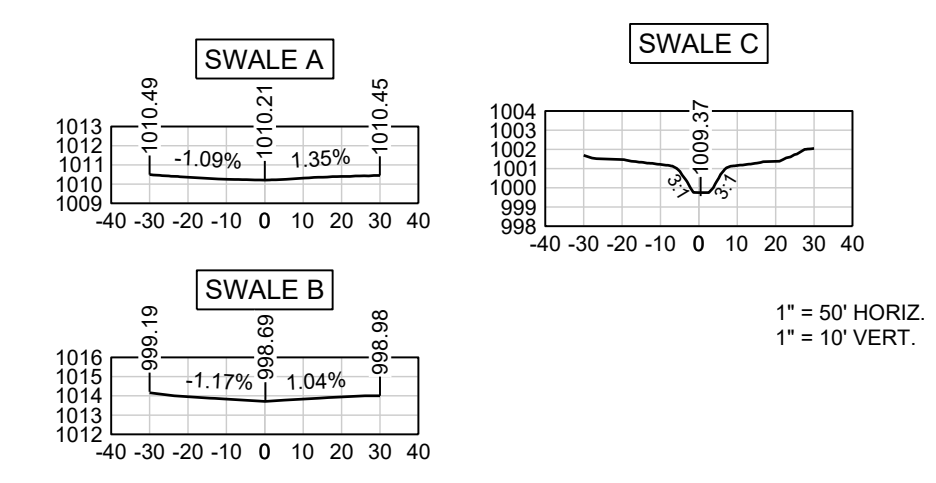
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GRADING LEGEND:

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- DENOTES FINISHED AS-BUILT GRADE ELEVATION
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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



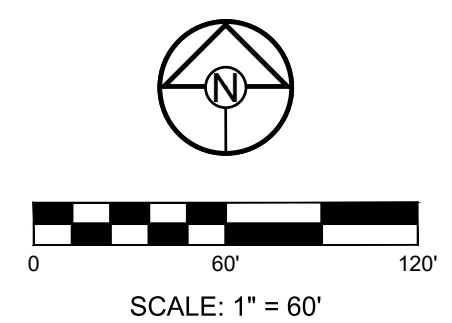
RECORD DRAWING
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"100-00 100.10", "1-00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 3/17/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlager and Associates, P.A.

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



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 Missouri State Certificate of Authority
 #E200200360P-F #LAC2001005237 #S200200869F

PREPARED BY:

 3/17/2025
 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
10/27/2023	Revised Details to current 2023 Details
11/30/2023	Added "New City Requirements" note
2/28/2024	Storm 102-105 to HDPE and
11/05/2021	Inlets 1009 & 1014 - revised to IB's
8/23/2024	Revised Anemity Tract Curb Returns
3/17/2025	AS-BUILTS

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



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

RECORD DRAWING

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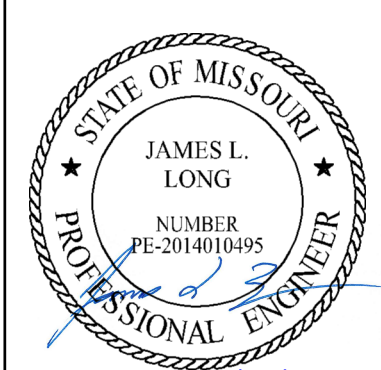
*100-00 100.10", "±.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

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Record Drawing

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PREPARED BY:



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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3/17/2025	AS-BUILTS

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

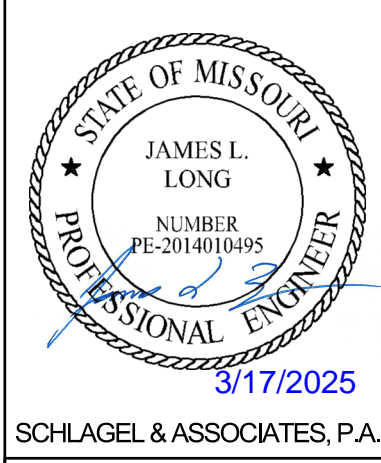
MASTER DRAINAGE PLAN-DRAINAGE MAP

SHEET
26

Record Drawing



PREPARED BY:



3/17/2025

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

10-YEAR RUNOFF CALCULATIONS

Table with columns: Design Storm, K Value, F Factor, Runoff Calculations, Pipe Properties, Inlet #, Area, C, Cumul. Area, Intensity, To Inlet, Cumul. Runoff, Pipe Cap, Pipe Vel, Piped Inlet, Piped Inlet 2, Up Area, Up Cx, Up Inlet, Down Inlet, Pipe Type, n, Pipe Size, Length, Slope, Drop Inlet, FL Up, FL Down, Inlet Top. Includes lines 100, 1000, 1300, 1500, 1600, 1800, 2200, 2400, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700.

100-YEAR RUNOFF CALCULATIONS

Table with columns: Design Storm, K Value, F Factor, Runoff Calculations, Pipe Properties, Inlet #, Area, C, Cumul. Area, Intensity, To Inlet, Cumul. Runoff, Pipe Cap, Pipe Vel, Piped Inlet, Piped Inlet 2, Up Area, Up Cx, Up Inlet, Down Inlet, Pipe Type, n, Pipe Size, Length, Slope, Drop Inlet, FL Up, FL Down, Inlet Top. Includes lines 100, 1000, 1300, 1500, 1600, 1800, 2200, 2400, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700.

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Table with columns: REVISION DATE, DESCRIPTION. Includes entries for 01/21/2022, 04/20/2022, 05/17/2022, 10/27/2023, 11/20/2023, 2/28/2024, 8/23/2024, 3/17/2025.

MASTER DRAINAGE PLAN-DRAINAGE CALCS

