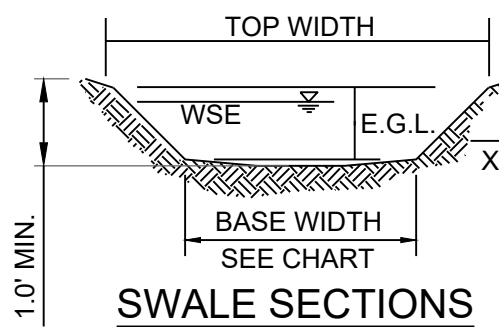
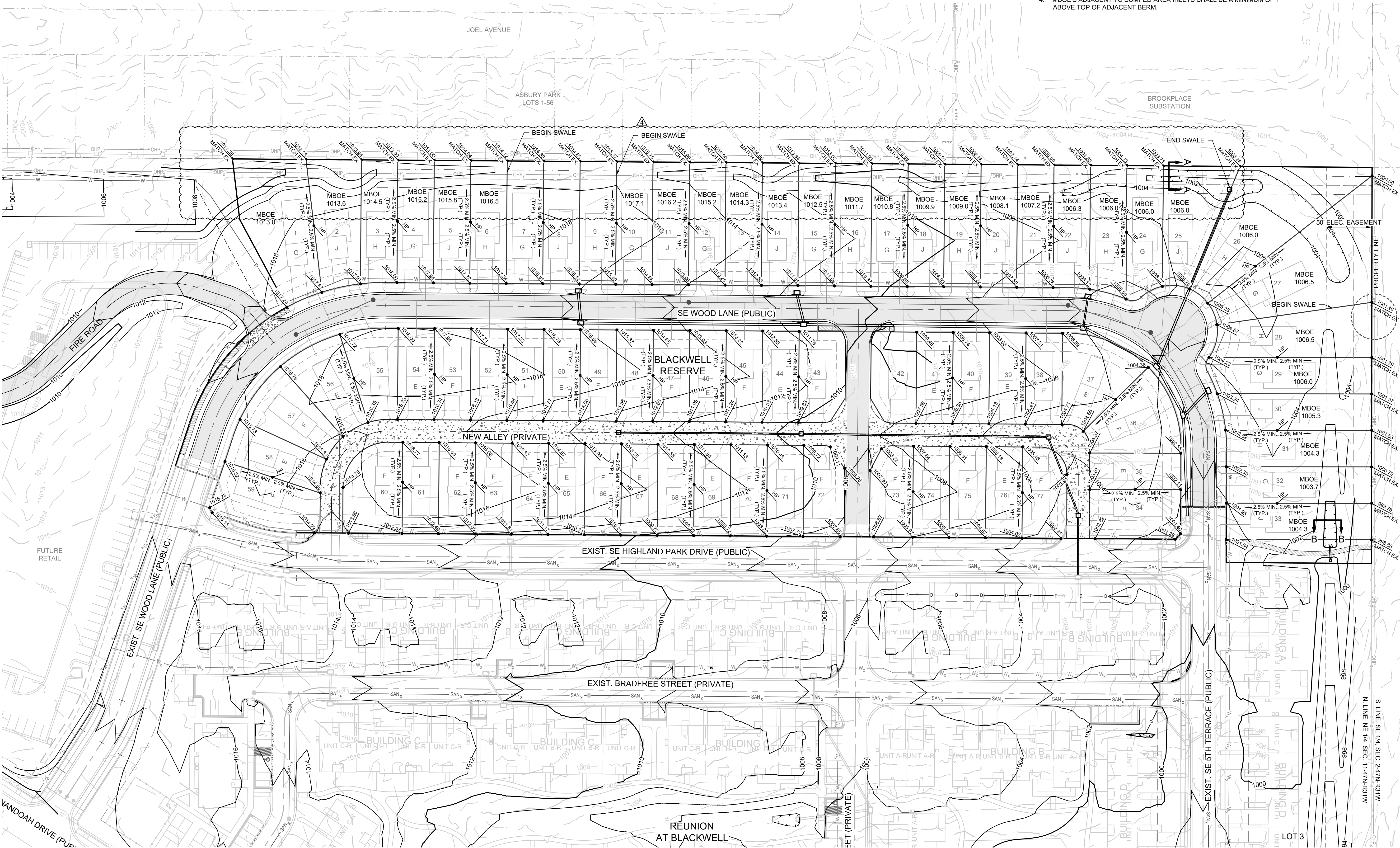




RUNOFF CALCULATIONS:
 $Q = K \cdot C \cdot I \cdot A$
 $K_{100} = 1.25$ $K_{10} = 1.0$ $C = 0.51$
 $I_{10} = 7.35$ $I_{100} = 10.32$
 $VELOCITY HEAD = (VELOCITY)^2 / 64.4$
EGL = DEPTH + VELOCITY HEAD

ENGINEERED CHANNELS													
LOCATION	SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW FORMULA	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	SIDE SLOPE (X:1)	BASE WIDTH (FT)	CROSS SECTION AREA (FT2)	TOP WIDTH (FT)	NOMINAL DEPTH (FT.)	AVERAGE VELOCITY (FPS)
LOT 25	A	1.25	10.64	6.06	Q100(A)	10.64	2.40	5.00	6.00	5.05	11.70	0.38	3.50
LOT 33	B	0.40	3.41	1.94	Q100(B)	3.41	2.00	5.00	6.00	2.16	8.90	0.21	2.27

- NOTES:
- MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE A MINIMUM OF 2 FEET ABOVE THE WATER SURFACE ELEVATION FOR THE 1% CHANCE STORM EVENT APPROVED INDIVIDUAL LOT PLOT PLANS MAY ALTER THE CONSTRUCTED SWALES IN ELEVATION (CONTOUR) FROM THE GRADING PLAN AS LONG AS THE MBOE IS ADJUSTED ACCORDING TO THE ABOVE CRITERIA.
 - EGL = ENERGY GRADE LINE (100 YR)
 - MWSE = MAXIMUM WATER SURFACE ELEVATION (100 YR)
 - MBOE'S ADJACENT TO SUMPED AREA INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.



TURF REINFORCEMENT MAT NOTES:

- REFERENCE "MASS GRADING & EROSION SEDIMENT CONTROL PLANS FOR RESIDENCES, TRADITIONS & RESERVE AT BLACKWELL" FOR TURF REINFORCEMENT MAT INSTALLATION.
- MAINTIAN, REPAIR AND REPLACE TURF REINFORCEMENT MAT AS NECESSARY.

GRADING LEGEND:

- 1000 — EXISTING CONTOUR
— 1000 — PROPOSED CONTOUR (FINISHED GRADE)

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

TRANSMISSION EASEMENT NOTES:

- EXCAVATION NOT PERMITTED WITHIN 25 FEET OF TRANSMISSION POLES.
- SOIL SHALL NOT COME INTO CONTACT WITH TRANSMISSION POLES.
- OPERATION OF EQUIPMENT OVER 14 FEET IN HEIGHT WITHIN TRANSMISSION EASEMENT IS NOT PERMITTED.
- CONSTRUCTION EQUIPMENT SHALL ALWAYS MAINTAIN A MINIMUM DISTANCE OF 20 FEET FROM ENERGIZED TRANSMISSION LINE CONDUCTORS.
- ALL SPOILS ARE TO BE MAINTAINED OUTSIDE THE TRANSMISSION EASEMENT IMMEDIATELY AFTER EXCAVATION TO ASSURE PROPER CLEARANCES.
- FOR ADDITIONAL TRANSMISSION EASEMENT ENCROACHMENT REQUIREMENTS SEE <https://www.evergy.com/partner-with-us/transmission-projects/transmission-line-easements>

MO GRS BENCHMARK:

STATION NAME - JA-90

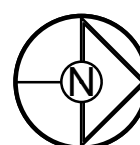
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
N:99874.9690, E:2840937.1365

ELEV. 1005.719



SCALE: 1" = 50'

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

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#E200200360F #LAC20100323 #LS200200859F

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

REVISION DATE	DESCRIPTION
05/05/2023	PER CITY COMMENTS
06/27/2023	PER CITY COMMENTS
09/06/2023	ENGINEERED SWALE REVISIONS
08/14/2024	ENGINEERED SWALE REVISIONS
11/05/2024	BUILDING TYPE AND LOT NUMBER LABELS
03/03/2025	
22-503	

MASTER
DRAINAGE PLAN
- GRADING PLAN

SHEET

4