SN **- SIGN**

O - BUSH

□ POLE

✓ – GATE■ – POST / BOLLARD

□ - FLAG POLE

- EDGE OF TREES

TR — TELEPHONE RISER

™ - CABLE TV RISER

_FO - FIBER OPTICS INDICATOR SIGN

PP - POWER POLE AND DEADMAN

_____ LIGHT POLE

/ – ELECTRIC TRANSFORMER

TC - TRAFFIC CONTROL BOX

🅦 – TRAFFIC SIGNAL LIGHT POLE

- OHE------ - OVERHEAD ELECTRIC LINE

⊸^{GV} – GAS VALVE —— – GAS LINE

SS - SANITARY SEWER MANHOLE

© - CLEANOUT

☐ − INLET

(S) - STORM WATER MANHOLE

O - ROOF DRAIN

■ - GRATE INLET

___ _ _ _ _ _ _ _ _ EXISTING STORM SEWER PIPE

— PROPOSED STORM SEWER PIPE

• – FIRE HYDRANT

₩V – WATER VALVE

M - MONITORING WELL

WATER METER VALL

WATER METER VAULT

→ - WATER SPIGOT→ - WATER LINE

♠ − IRRIGATION CONTROL VALVE

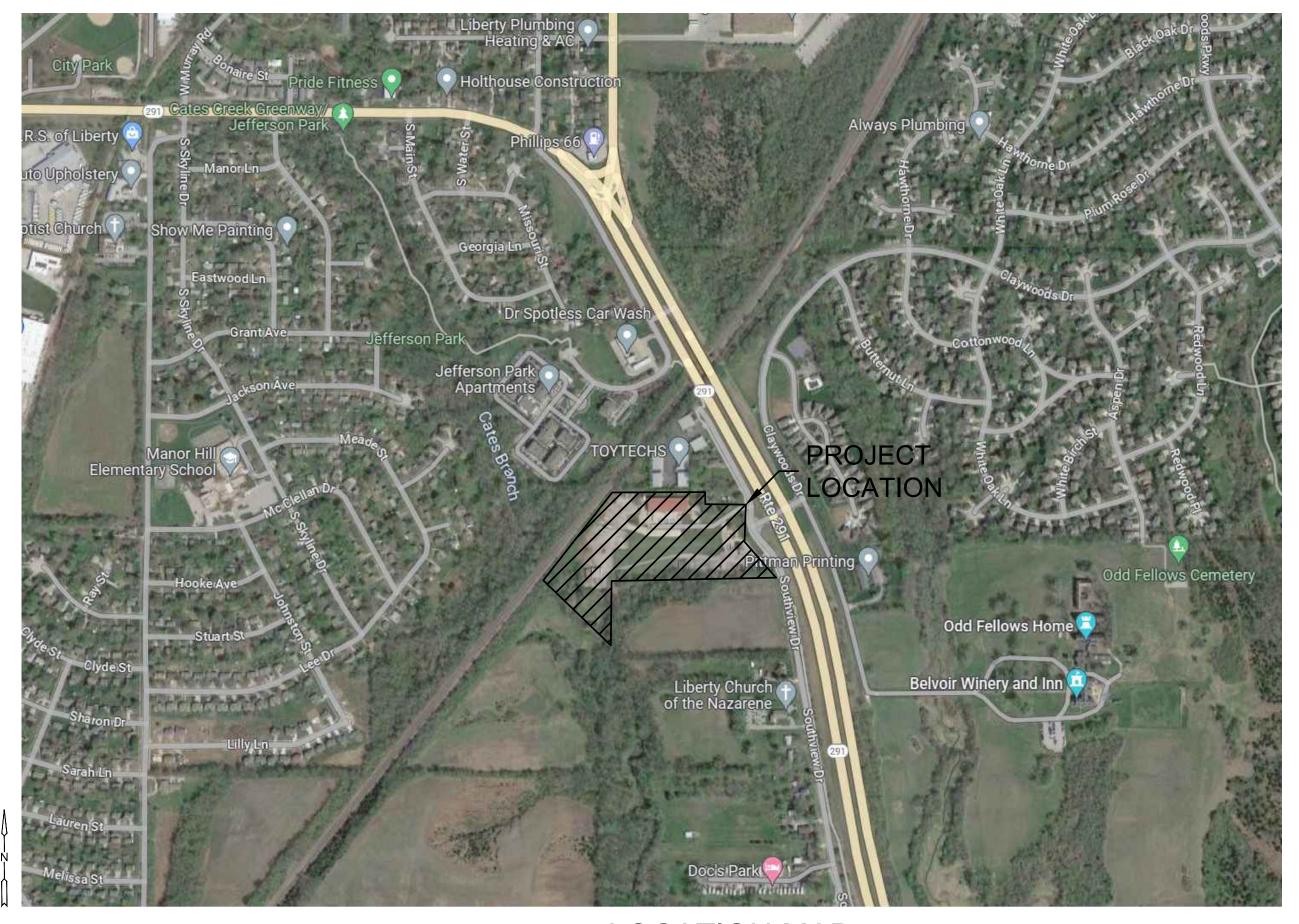
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Sheet List Table						
Sheet Number	Sheet Title					
1	COVER SHEET					
2	EXISTING & DEMOLITION PLAN					
3	UTILITY PLAN					
4	SWS LINE 1 PLAN & PROFILE					
5	SWS CALCULATIONS					
6	EROSION CONTROL PLAN					
7	DETAILS					

PUBLIC STORM SEWER PLANS FOR

LIBERTY DISTRIBUTION CENTER

LIBERTY, MO 64068 CITY PROJECT NO. 23-2015



LOCATION MAP

NTS

UTILITY CONTACTS

WATER/SEWER
CITY OF LIBERTY, MO
UTILITIES DEPARTMENT
101 E. KANSAS STREET
LIBERTY, MO 64068
1-816-4394760
UTILITIES@LIBERTYMO.GOV

<u>TELEPHONE</u>

500 E 8TH STREET KANSAS CITY, MO 64106 1-816-275-3850

ELECTRIC EVERGY

8325 N. PLATTE PURCHASE DR. KANSAS CITY, MO 64118 1-816-420-4817

SPIRE ENERGY
7500 E. 35TH TERRACE
KANSAS CITY, MO 64129
1-816-472-3434
BEVERLY PASSANTINO
BEVERLY.PASSANTINO@SPIREENERGY.COM

ONE-CALL 1-800-DIG-RITE

SUMMARY OF QUANTITIES						
ITEM	UNIT	PLAN	AS-BUI			
24" HDPE	LF	527				
5' STORM MANHOLE	EA	4				
EROSION CONTROL	LS	1				

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CURRENT KC METRO APWA SPECIFICATIONS UNLESS OTHERWISE INDICATED.

PREPARED & SUBMITTED BY:

MKEC ENGINEERING, INC. 11827 W. 112TH STREET, SUITE 200 OVERLAND PARK, KS 66210

BRADEN L. TAYLOR, P.E.

I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION.

APPROVED BY:

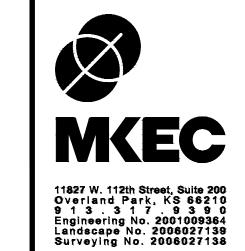
THE CITY OF LIBERTY

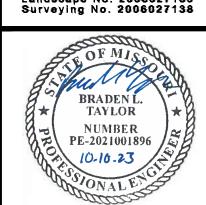
CITY ENGINEER

(APPROVED FOR ONE YEAR FROM THIS DATE)

GENERAL NOTES:

- 1. THE CONTRACTOR, **PRIOR TO** ANY EXCAVATION OR NEW CONSTRUCTION, SHALL HAVE UTILITIES FIELD LOCATED BY THE APPROPRIATE UTILITY COMPANY AND/OR CITY/COUNTY DEPARTMENT.
- 2. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THESE PLANS, REPRESENTS THE BEST INFORMATION AVAILABLE TO THE ENGINEER. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES WHETHER THESE UTILITIES ARE SHOWN ON THE PLANS, NOT SHOWN ON THE PLANS, OR SHOWN INCORRECTLY. UTILITIES DAMAGED THROUGH THE FAILURE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF THOSE UTILITIES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. THE CONTRACTOR SHALL, PRIOR TO ANY EXCAVATION OR NEW CONSTRUCTION, HAVE ALL UTILITIES FIELD LOCATED BY THE APPROPRIATE UTILITY COMPANY, CITY OR COUNTY DEPARTMENT, OR ONE—CALL SERVICE.
- 5. THE SITE PLAN IS BASED ON A SURVEY OF THE SITE. CONDITIONS OF THE SITE AT THE TIME OF CONSTRUCTION MAY VARY FROM THE SURVEYED CONDITIONS. CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
- 4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS SHALL BE ADJUSTED OR REBUILT TO GRADE AS
- 5. NO CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER.
- 6. IF BLASTING IS REQUIRED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCIES
 TO OBTAIN THE REQUIRED PERMITS. IF BLASTING IS ALLOWED, THE CONTRACTOR SHALL PERFORM BLASTING
 OPERATIONS ACCORDING TO STATE REGULATIONS AND LOCAL ORDINANCES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY PINS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY PINS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH PINS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH
- 8. CONTRACTOR TO HAVE REGISTERED LAND SURVEYOR RESET SECTION CORNER MONUMENT IF DISTURBED DURING CONSTRUCTION
- 9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES, DIMENSIONS, AND PLAN SCALES AND SHALL IMMEDIATELY NOTIFY THE OWNER/ENGINEER/ARCHITECT OF ANY SUCH DISCREPANCIES. ALL QUANTITIES, DIMENSIONS, AND PLAN SCALES PROVIDED ARE FOR GENERAL INFORMATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL QUANTITIES NECESSARY FOR THE COMPLETION OF THE WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS IRRESPECTIVE OF THE QUANTITIES, DIMENSIONS, AND PLAN SCALES NOTED, NOT NOTED, OR NOTED INCORRECTLY.
- 10. ANY CURB, GUTTER, SIDEWALKS, AND PAVING THAT IS DAMAGED IN EXCESS OF THE CONSTRUCTION SHOWN IN THIS PLAN SET SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
- 11. ALL REMOVALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER APPLICABLE STANDARDS (UNLESS OTHERWISE NOTED).
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL WHEN WORKING WITHIN THE PUBLIC RIGHT—OF—WAY. ALL SUCH TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL" AND/OR LOCAL JURISDICTION SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL ENSURE ALL TRAFFIC CONTROL DEVICES ARE CLEAN, PROPERLY VISIBLE, OPERATING CORRECTLY, AND LOCATED PROPERLY. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY DAMAGED, DEFACED, OR INOPERABLE, OR MISSING TRAFFIC CONTROL DEVICES.
- 13. THE CONTRACTOR IS TO PROVIDE PERMANENT SEEDING, FERTILIZING, MULCHING OR SODDING OF ALL DISTURBED AREAS. THIS WORK TO BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS.
- 14. ALL SITE WORK FOR THIS PROJECT IS CONSIDERED "UNCLASSIFIED." THE TERM "UNCLASSIFIED" EXCAVATION SHALL BE DEFINED AS MEANING THE SITE CONTRACTOR BEARS THE ENTIRE RISK OF THE SOIL QUANTITIES AND/OR TYPES (E.G. ROCK, CLAY, PEAT, SILT, SHALE, ETC.) ENCOUNTERED ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS AND OVER—EXCAVATED / TREATED SOILS AREAS. ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS, THE SITE CONTRACTOR SHALL BEAR THE ENTIRE COST OF SUCH ADDITIONAL WORK IN THE EVENT IT BECOMES NECESSARY FOR UNSUITABLE SOILS TO BE HANDLED, REMOVED FROM THE SITE, OR FOR SUITABLE FILL MATERIAL TO BE IMPORTED TO THE SITE. THIS DEFINITION OF "UNCLASSIFIED" SUPERSEDES ANY CONTRARY DEFINITIONS OR STATEMENTS WHICH MAY BE CONTAINED IN THE SPECIFICATIONS, PLANS, OR OTHER CONTRACT DOCUMENTS. THE UNCLASSIFIED SITE SHALL INCLUDE ALL WORK ABOVE THE BOTTOM OF REQUIRED EXCAVATIONS AND/OR REQUIRED SOIL REMEDIATION/REPLACEMENT.
- 15. PROPOSED CONTOURS SHOWN ON THESE PLANS ARE FINAL SURFACE CONTOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS FOR PAVEMENT THICKNESS, SUBGRADE THICKNESS, TOPSOIL, REMOVALS, ETC.
- 16. DEVELOPMENT PLANS ARE APPROVED INITIALLY FOR ONE (1) YEAR AFTER WHICH THEY AUTOMATICALLY BECOME VOID MUST BE UPDATED AND RE-APPROVED BY THE CITY ENGINEER BEFORE ANY CONSTRUCTION WILL BE PERMITTED.
- 17. THE CITY OF LIBERTY PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF LIBERTY DESIGN CRITERIA, TECHNICAL SPECIFICATIONS AND CODE OF ORDINANCES. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OR DIMENSION AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF LIBERTY THROUGH APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY OTHER THAN THAT AS STATED ABOVE FRO THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.
- 18. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF LIBERTY) AND (1) COPY OF THE APPROPRIATE CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.
- 19. CONSTRUCTION OF THE IMPROVEMENTS SHOWN OR IMPLIED BY THIS SET OF DRAWINGS SHALL NOT BE INITIATED OR ANY PART THEREOF UNDERTAKEN UNTIL THE CITY ENGINEER IS NOTIFIED OF SUCH INTENT, AND ALL REQUIRED AND PROPERLY EXECUTED BONDS AND PERMIT FEES ARE RECEIVED AND APPROVED BY THE CITY ENGINEER.
- 20. THE CITY OF LIBERTY TECHNICAL SPECIFICATIONS, LATEST EDITION, SHALL GOVERN CONSTRUCTION OF THIS PROJECT.
- 21. ALL EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- 22. ALL BACKFILL SHALL BE TAMPED AND AT THE OPTION OF THE ENGINEER TESTED BY A CERTIFIED LABORATORY. WHERE FOOTINGS WILL BEAR ON COMPACTED FILL MATERIAL, THE PLACEMENT AND TESTING OF COMPACTED FILL SHALL COMPLY WITH THE APPROPRIATE COMPACTED FILL SECTION OF THE SOILS AND FOUNDATION CHAPTER OF THE INTERNATIONAL BUILDING CODE VERSION MOST RECENTLY ADOPTED BY CITY OF LIBERTY.
- 23. CONTRACTOR SHALL NOT BE ALLOWED TO WORK SUNDAY. HOLIDAY OR SATURDAY WORK SHALL BE AS APPROVED IN ADVANCE BY THE CITY ENGINEER.
- 24. ALL MATERIALS AND WORKMANSHIP ASSOCIATED WITH THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF LIBERTY. THE CITY OF LIBERTY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE CITY OF LIBERTY STANDARDS AND TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF LIBERTY ENGINEERING SERVICES DEPARTMENT TWENTY—FOUR (24) HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION
- 25. RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE HEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE.
- 26. CONSTRUCTION PERMITS WILL NOT BE ISSUED UNTIL THE CITY HAS RECEIVED A COPY OF MDNR LAND DISTURBANCE PERMIT APPLICATION AND MHTD APPROVAL FOR WORK WITHIN THEIR RIGHT OF WAY. ALSO, SHOP DRAWINGS SUBMITTAL AND CITY APPROVAL REQUIRED PRIOR TO PERMITS BEING ISSUED.
- 27. ALL PAVEMENT THAT IS DISTURBED/REMOVED AS PART OF THIS PROJECT SHALL BE REPLACED IN-KIND PER CITY OF LIBERTY TECHNICAL SPECIFICATIONS.





BRADEN L. TAYLOR, P.E. LISC. #2021001896

THOSE PROPERTY, MO

LIBERTY DI

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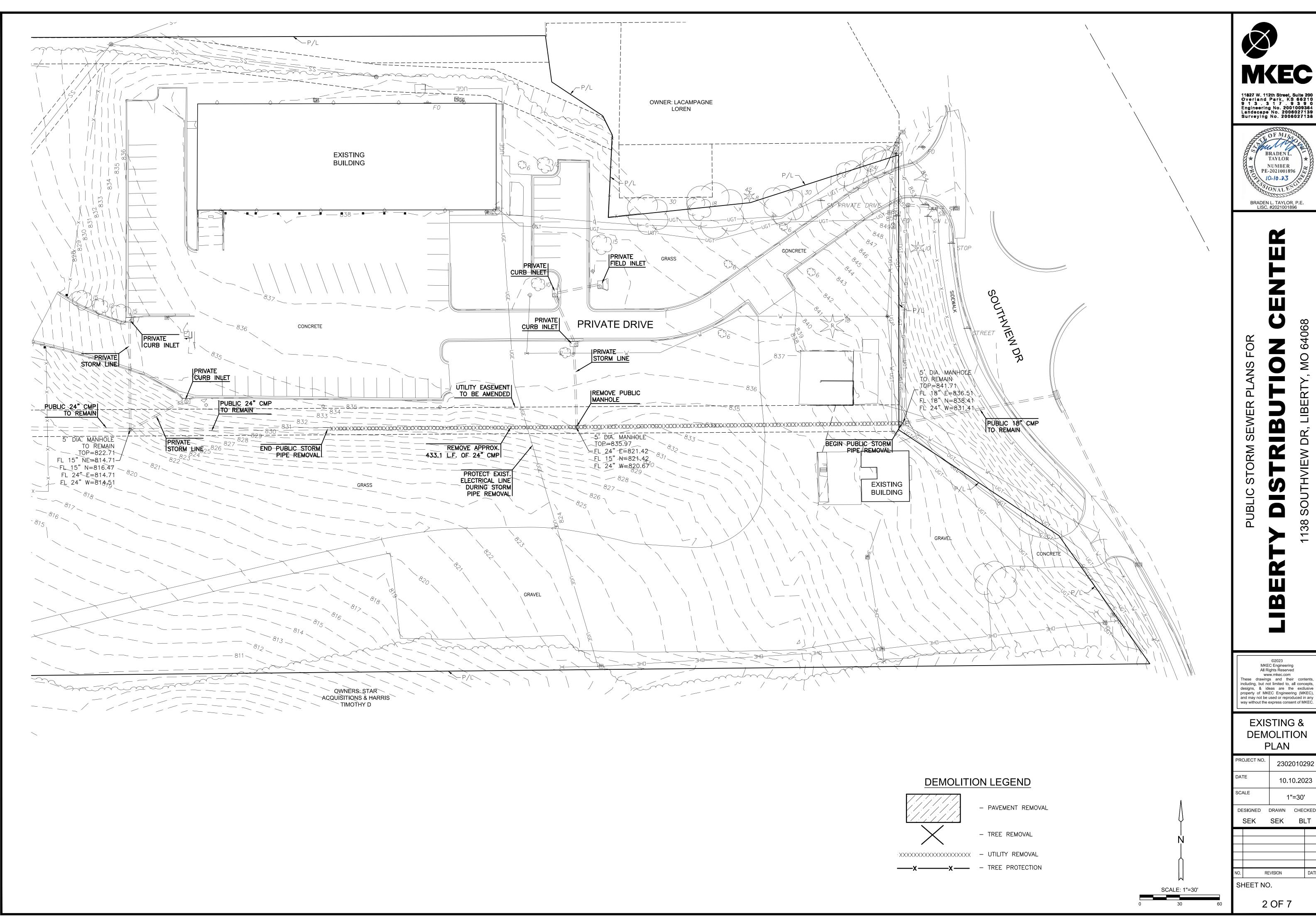
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COVER SHEET

PR	OJECT NO.	2302	20102	292	
DA	ГЕ	10.10.2023			
SC	ALE	N/A			
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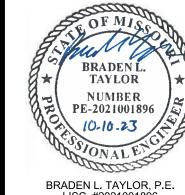
1 OF 7

SHEET NO.





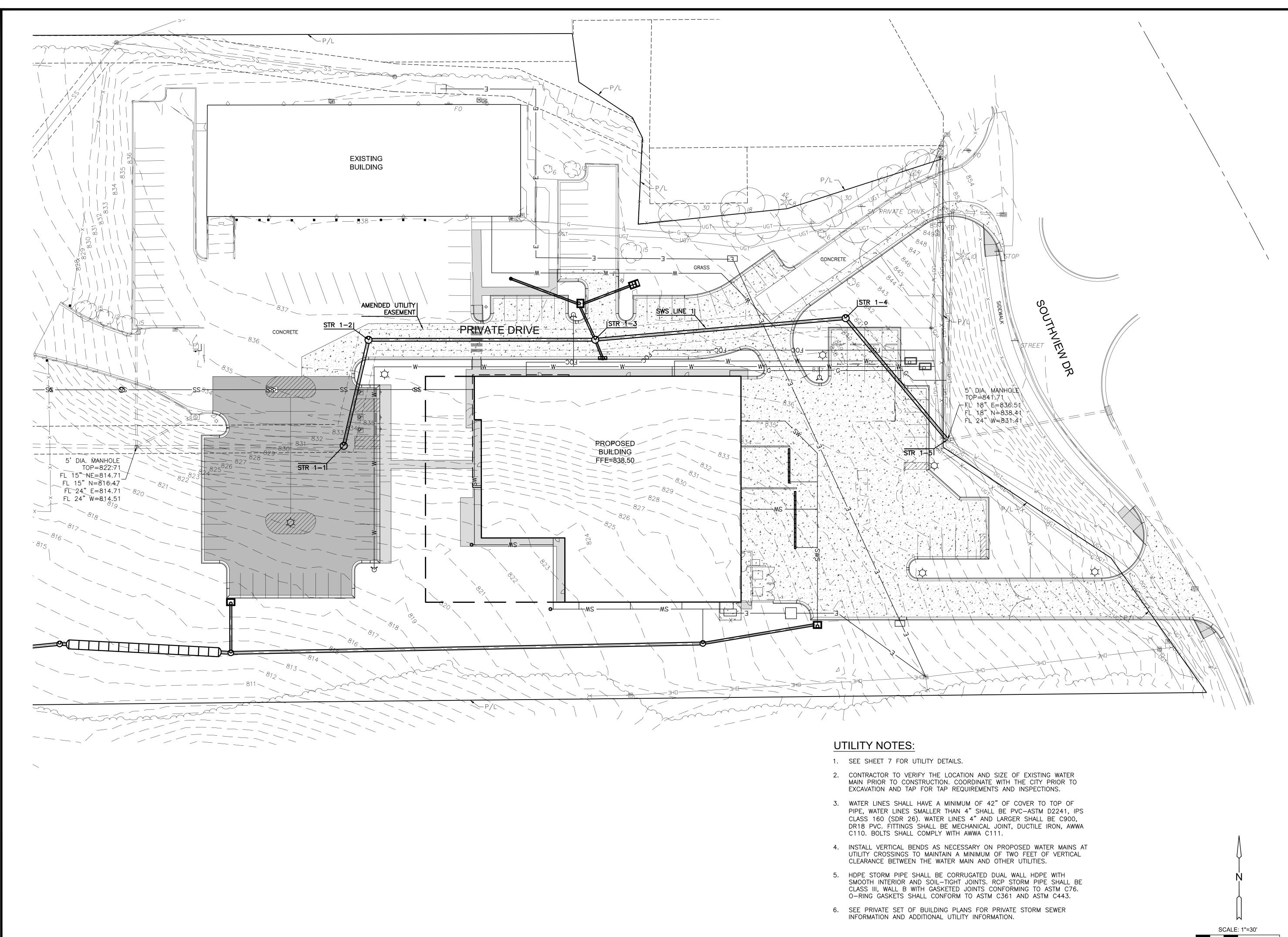
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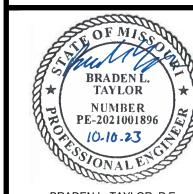
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EXISTING & DEMOLITION

	F	PLAN		
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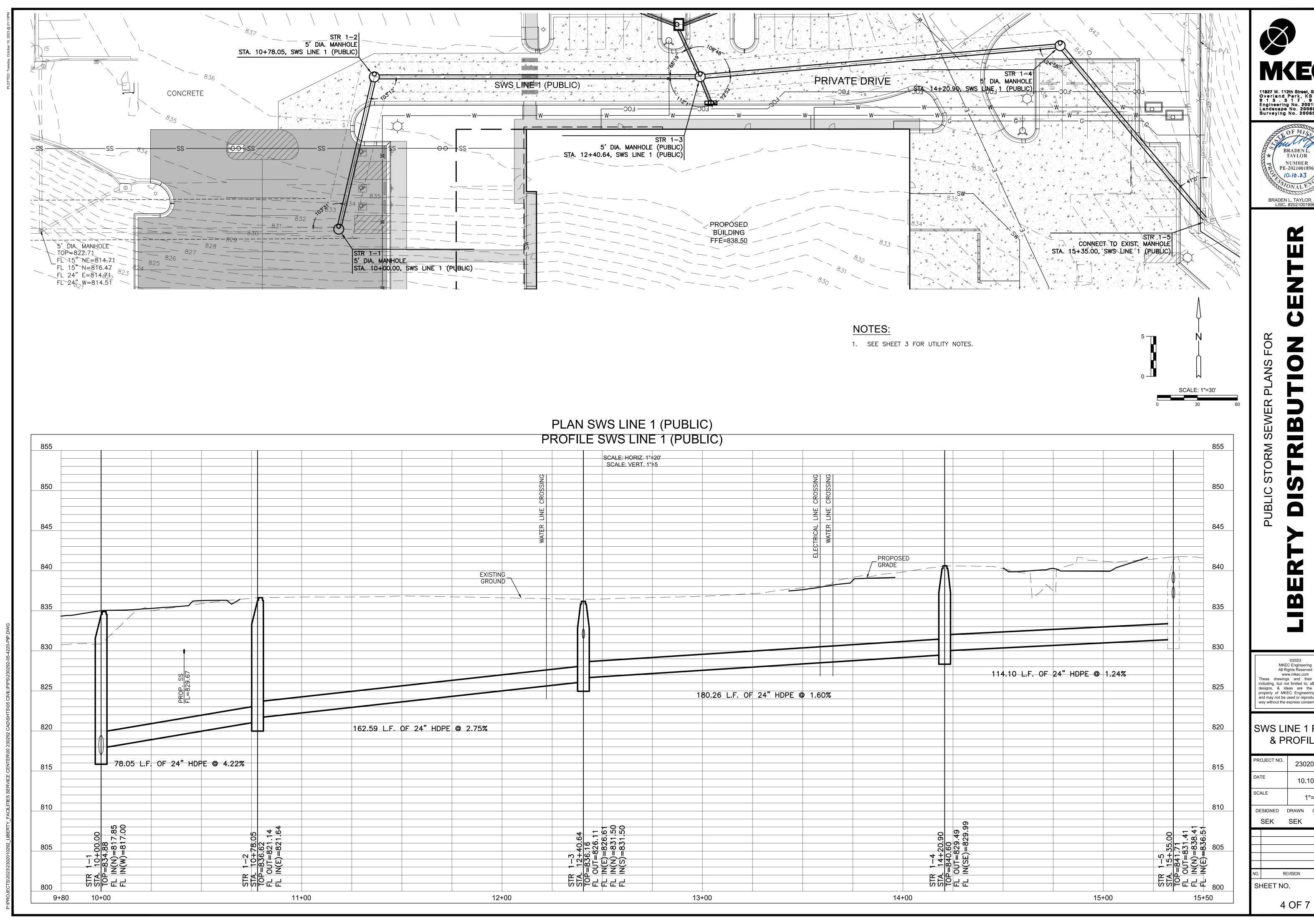
UTILITY PLAN

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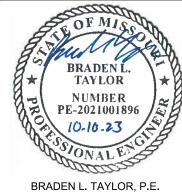
3 OF 7

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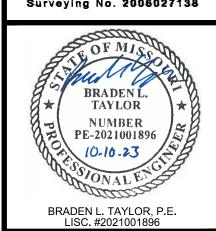


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SWS LINE 1 PLAN & PROFILE

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STORM SEWER PLANS FOR

PUBLIC

DISTRIB SOUTHVIEW [1138

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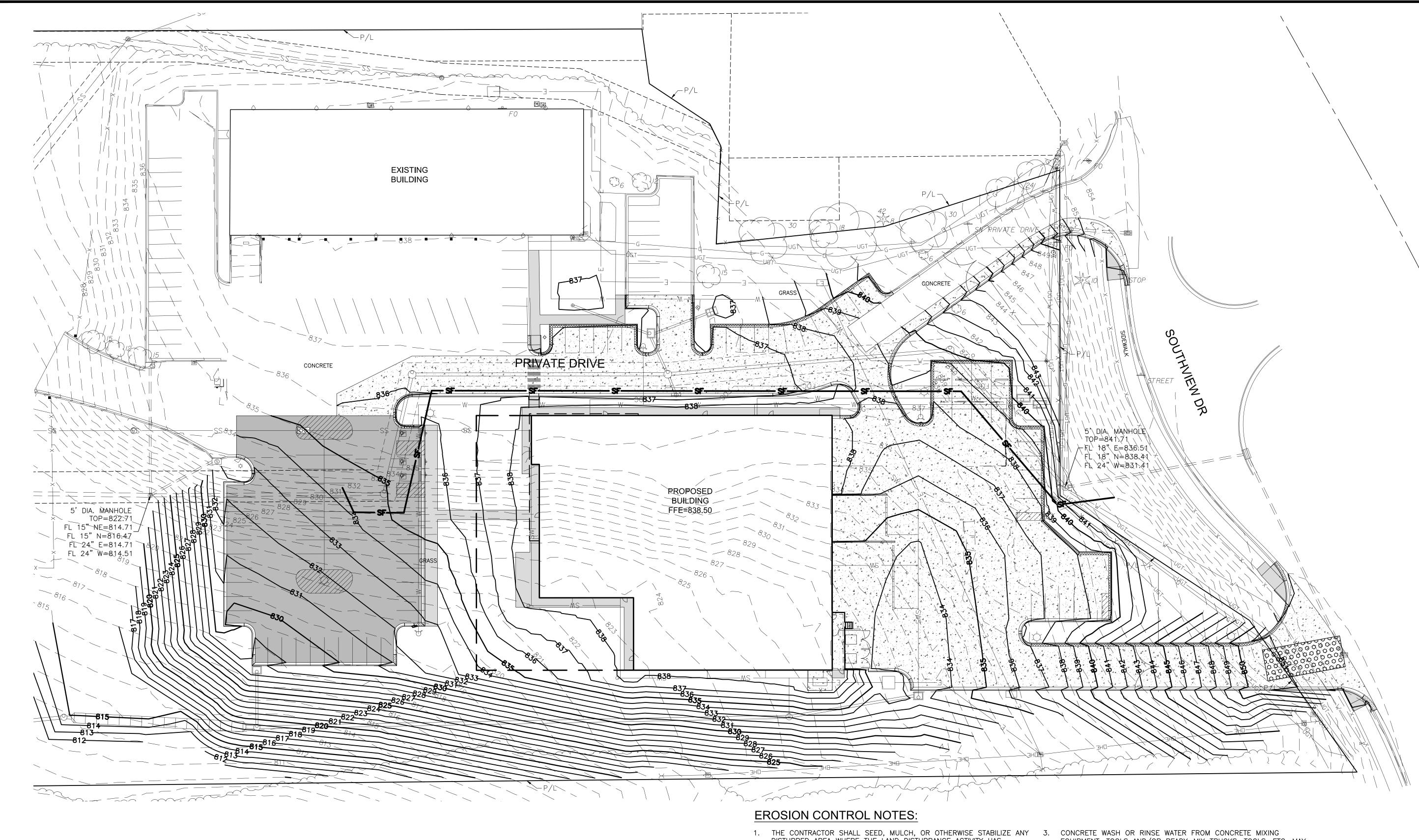
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SWS CALCULATIONS

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SHEET NO.						

5 OF 7

	STI	RID								ELEV <i>A</i>	ATION					VELOCITY	1
LINE NO.	TYPE	FROM	то	RUNOFF "Q" (CFS)	RUNOFF "Q ₁₀₀ " (CFS)	PIPE DIA. (IN)	PIPE TYPE	LENGTH (FT)	TOP ELEV. (FEET)	U/S (FEET)	D/S (FEET)	SLOPE (FT/FT)	Q _{FULL} (CFS)	Q _{INLT} (CFS)	FULL (FPS)	d _n (IN)	DESIGN (FPS)
1	МН	1-5	1-4	6.0	10.6	24	HDPE	94.10	841.71	831.41	829.99	0.0151	30.1	46.9	9.6	7.3	7.5
	МН	1-4	1-3	12.0	21.1	24	HDPE	192.42	840.53	829.49	826.61	0.0150	30.0	48.8	9.6	10.5	9.0
	МН	1-3	1-2	20.5	36.1	24	HDPE	162.59	836.42	826.11	821.64	0.0275	40.6	46.9	12.9	12.1	13.0
	МН	1-2	1-1	25.4	44.7	24	HDPE	78.05	836.62	821.14	817.85	0.0422	50.3	58.9	16.0	12.1	16.1
			1-1						835.01	817.35							



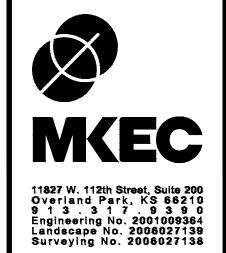
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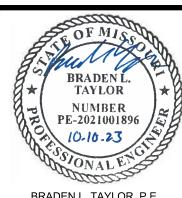
SILT FENCE

- CONSTRUCTION ENTRANCE

EROSION CONTROL LEGEND

- DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS. INITIAL STABILIZATION ACTIVITIES SHALL BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES HAVE CEASED. ALL SEEDING ACTIVITY SHALL INCLUDE MULCHING OR EQUIVALENT SOIL STABILIZING BMP MEASURE OF THE DISTURBED AREA. THE CONTRACTOR SHALL PERFORM INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE PER WEEK AND WHENEVER A RAINFALL TOTAL OF 0.5 INCHES OR GREATER IS OBSERVED BASED ON A SINGLE MONITORING EVENT; OR BASED ON THE CUMULATIVE TOTAL OF TWO CONSECUTIVE MONITORING EVENTS WHEN THE RAINFALL TOTAL OF THE FIRST MONITORING EVENT IS LESS THAN 0.5 INCHES. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG INCLUDING THE INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS AS TO THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL MEASURES, ACTIONS NECESSARY TO CORRECT DEFICIENCIES, WHEN DEFICIENCIES ARE CORRECTED, AND THE SIGNATURE OF THE PERSON PERFORMING THE INSPECTION. CONTRACTOR SHALL ADD EROSION CONTROL MEASURES AS NECESSARY 5. SEE SHEET 7 FOR EROSION CONTROL DETAILS. TO CONTROL SEDIMENT RUNOFF FROM THE SITE, ADDITIONAL MEASURES SHALL BE AT THE CONTRACTORS EXPENSE.
- 2. CONTRACTOR TO HAVE A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE AT ALL TIMES. INSPECTION LOGS 7. AND ANY CHANGES TO EROSION CONTROL MEASURES SHALL BE ADDED TO THE SWPPP.
- EQUIPMENT, TOOLS AND/OR READY-MIX TRUCKS, TOOLS, ETC. MAY NOT BE DISCHARGED INTO OR BE ALLOWED TO RUN DIRECTLY INTO ANY EXISTING WATER BODY OR STORM INLET. ONE OR MORE LOCATIONS FOR CONCRETE WASH OUT WILL BE DESIGNATED ON SITE, SUCH THAT DISCHARGES DURING CONCRETE WASHOUT WILL BE CONTAINED IN A SMALL AREA WHERE WASTE CONCRETE CAN SOLIDIFY IN PLACE AND EXCESS WATER EVAPORATED OR INFILTRATED INTO THE
- CHEMICALS OR MATERIALS CAPABLE OF CAUSING POLLUTION MAY ONLY BE STORED ONSITE IN THEIR ORIGINAL CONTAINER. MATERIALS STORED OUTSIDE MUST BE IN CLOSED AND SEALED WATER-PROOF CONTAINERS AND LOCATED OUTSIDE OF DRAINAGE WAYS OR AREAS SUBJECT TO FLOODING. LOCKS AND OTHER MEANS TO PREVENT OR REDUCE VANDALISM SHALL BE USED. SPILLS WILL BE REPORTED AS REQUIRED BY LAW AND IMMEDIATE ACTIONS TAKEN TO CONTAIN THEM.
- 6. CONTRACTOR TO KEEP ALL SEDIMENT FROM EXISTING OR PROPOSED
 - CONTRACTOR TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CITY, STATE, AND FEDERAL REGULATIONS FOR EROSION CONTROL.
 - 8. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED UPON COMPLETION OF PROJECT. REFER TO FESCUE TURF NOTES FOR INSTALLATION INSTRUCTIONS.





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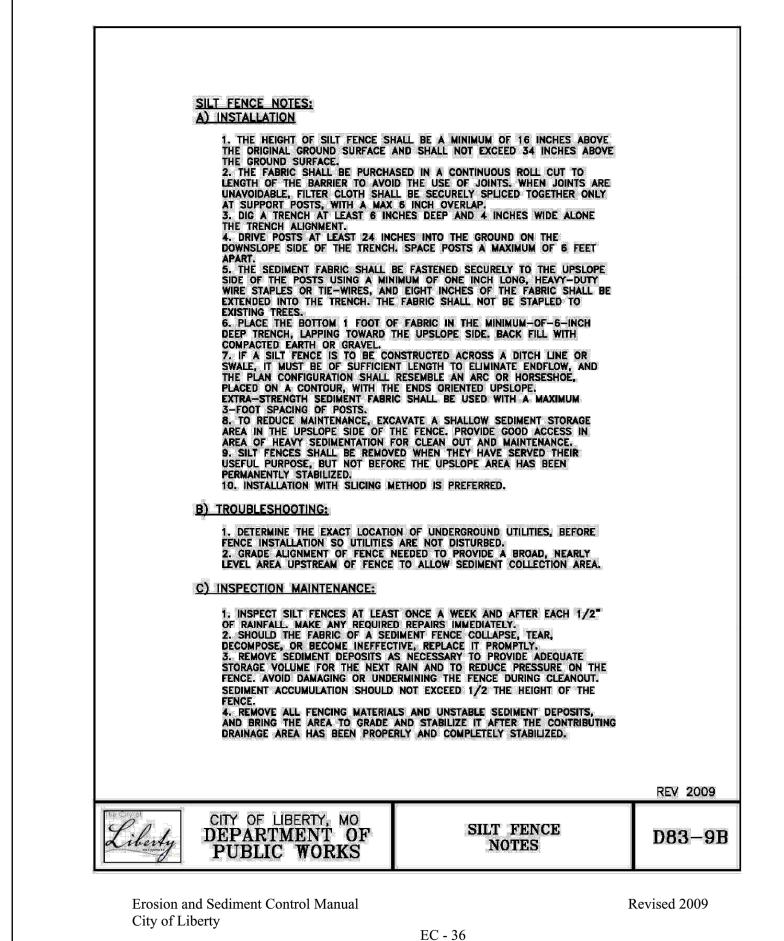
EROSION CONTROL DI ANI

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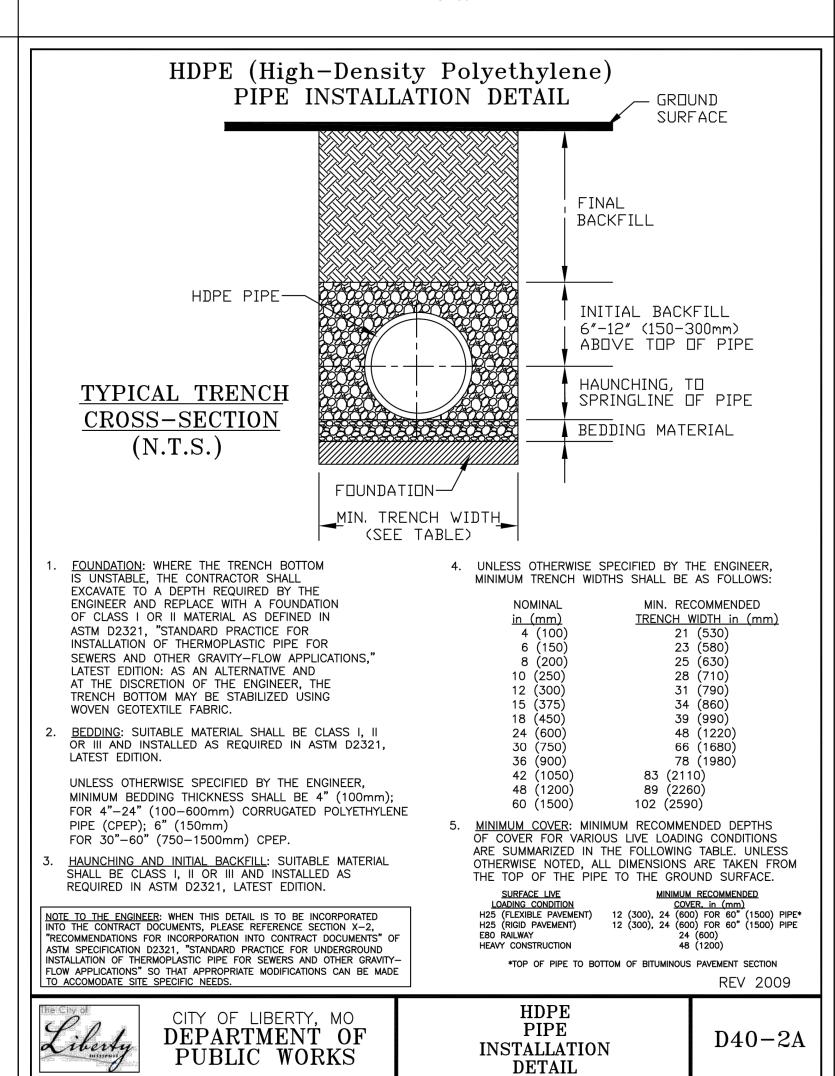
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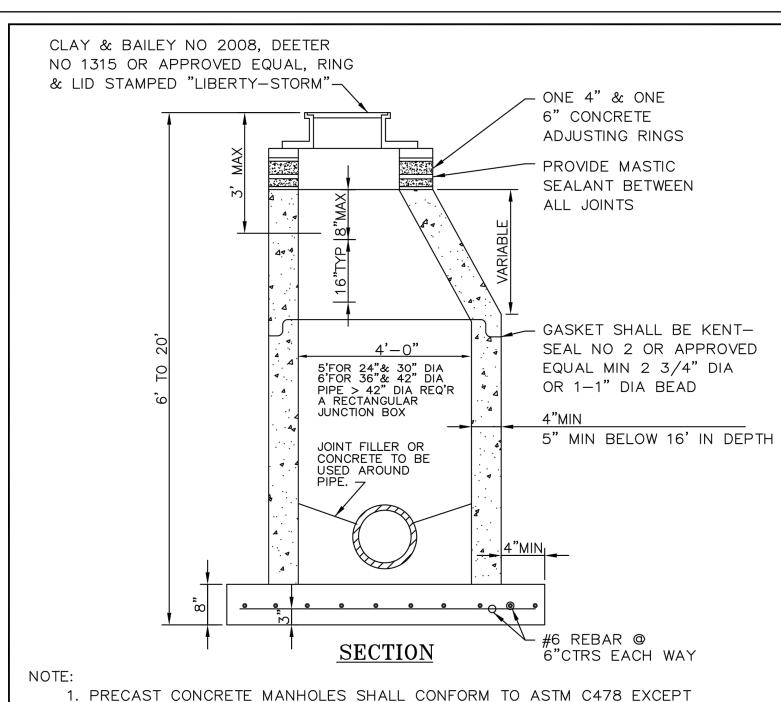
6 OF 7

SCALE: 1"=30'



PLAN VIEW FILTER CLOTH -PROFILE CONSTRUCTION SPECIFICATIONS l. STONE SIZE — USE 2" STONE. 2. LENGTH — AS REQUIRED, BUT NOT LESS THAN 50 FEET. 3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS—OF—WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS—OF—WAY MUST BE REMOVED IMMEDIATELY.
8. PERIODIC INSPECTION AS NEEDED MAINTENANCE SHALL BE PROVIDED WEEKLY AND AFTER EACH RAIN EVENT GREATER THAN 1/2". 3. THICKNESS - NOT LESS THAN SIX (6) INCHES. RAIN EVENT GREATER THAN 1/2". **REV 2009** CONSTRUCTION DEPARTMENT OF PUBLIC WORKS D83-15 ENTRANCE / EXIT ETOSTOTI ATIU SCUTITICITI COTIUOT IVIAITUAT NC 118CU 2007 City of Liberty EC - 53





1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS. 2. BASES NOT BUILT MONOLITHIC WITH BOTTOM SECTION; THE BOTTOM SEE

SHALL BE POURED OF CLASS I 3000 PSI CONCRETE. 3. MANHOLE MAY BE TRANSITIONED TO 4' DIA., 8' ABOVE F.L. OF

OUTFALL FOR 5' AND 6' MANHOLES. 4. THE BOTTOM SECTION OF ALL PRECAST MANHOLES NOT BUILT MONOLITHIC WITH THE BASE SHALL BE SET INTO A STEEL

REINFORCED POURED CONCRETE BASE A MIN OF 4" (#4 @ 6" E.W.) 5. THE COMPRESSIVE STRENGTH OF CONCRETE USED IN THE CONSTRUCTION OR PRECAST REINFORCED CONCRETE MANHOLES SHALL NOT BE LESS THAN 4000 PSI.

6. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHER WISE APPROVED BY THE CITY ENGINEER.

Liberty

REV 2009 STANDARD STORM CITY OF LIBERTY, MO DEPARTMENT OF SEWER MANHOLE D41-4PUBLIC WORKS

11827 W. 112th Street, Suite 200 Overland Park, KS 66210 9 1 3 . 3 1 7 . 9 3 9 0 Engineering No. 2001009364 Landscape No. 2006027139 Surveying No. 2006027138

BRADEN L TAYLOR NUMBER PE-2021001896 10-10-23 BRADEN L. TAYLOR, P.E.

LISC. #2021001896

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