

CURB INLET DESIGN TABLE																												
Return Frequency 10 yr															Gutter Capacity							Inlet Capacity						
Inlet Struct. #	Overland Flow (Ti)			Gutter Flow (Ti)			Inlet Time			K	I	Area		O	Back of Curb to Back of Curb (ft)	Gutter Type (1 = CG1 or 2 = CG2)	Adjustable Gutter Spread (ft)	Street Cross Slope (ft/ft)	Max. Gutter Depth (ft)	Max. Gutter Area (sq ft)	Gutter Cap. (cfs)	Gutter Bypass (positive # = bypass) (cfs)	Slope (%)	Inlet Size (in)	100% Cap(cfs)	80% Cap(cfs)	Inlet Bypass (positive # = bypass) (cfs)	
	L	S	C	L	S	Mannings n	Ti	Tt	Tc			Inlet	Label															Inlet
	(ft)	(%)		(ft)	(%)		(min)	(min)	(min)			(in/hr)																(ac)
10	10	1.3	0.9	88	1.3	0.014	1.04	0.33	5.00	1.00	7.35	D	0.06	0.4	28	1	10.5	2.08	0.24	1.04	3.3	-2.9	sag	3	5.00	4.00	-3.62	
11	60	1.3	0.9	20	1.2	0.014	2.56	0.08	5.00	1.00	7.35	C	0.11	0.8	28	1	10.5	2.08	0.24	1.04	3.2	-2.4	sag	3	5.00	4.00	-3.24	
12	85	3	0.9	15	3.5	0.014	2.31	0.03	5.00	1.00	7.35	B	0.14	1.0	28	1	10.5	2.08	0.24	1.04	5.4	-4.5	sag	3	5.00	4.00	-3.05	
20	90	1.5	0.9	10	1.3	0.014	2.99	0.04	5.00	1.00	7.35	E	0.29	1.9	28	1	10.5	2.08	0.24	1.04	3.3	-1.4	sag	3	5.00	4.00	-2.09	

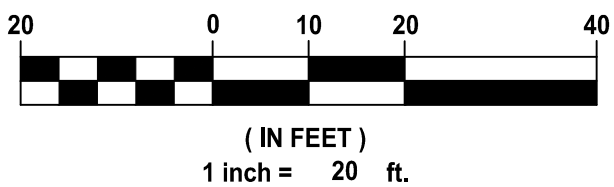
Return Frequency 100 yr															Gutter Capacity					Inlet Capacity							
Inlet Struct. #	Overland Flow (Ti)			Gutter Flow (Ti)			Inlet Time			K			Area			Back of Curb to Back of Curb			Gutter Type (1 = CG1 or 2 = CG2)			Inlet Bypass (positive # = bypass)					
	L	S	C	L	S	Mannings	Ti	Tt	Tc	Ti	Tt	Tc	I	A	Q	I	Label	Inlet	I	Label	Inlet	I	Label	Inlet			
	(ft)	(%)	(%)	(ft)	(%)	n	(min)	(min)	(min)	(min)	(min)	(min)	(in/hr)	(ac)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			
10	10	1.3	0.9	88	1.3	0.014	1.04	0.33	5.00	1.25	10.32	D	0.06	0.7	28	1	10.5	2.08	0.24	1.04	3.3	-2.6	sag	3	5.00	4.00	-3.32
11	60	1.3	0.9	20	1.2	0.014	2.56	0.08	5.00	1.25	10.32	C	0.11	1.3	28	1	10.5	2.08	0.24	1.04	3.2	-1.8	sag	3	5.00	4.00	-2.67
12	85	3	0.9	15	3.5	0.014	2.31	0.03	5.00	1.25	10.32	B	0.14	1.7	28	1	10.5	2.08	0.24	1.04	5.4	-3.8	sag	3	5.00	4.00	-2.33
20	90	1.5	0.9	10	1.3	0.014	2.99	0.04	5.00	1.25	10.32	E	0.29	3.3	28	1	10.5	2.08	0.24	1.04	3.3	0.0	sag	3	5.00	4.00	-0.65

ROOF DRAIN DESIGN TABLE																								
Return Frequency 10-yr																								

PIPE DESIGN TABLE																							
Return Frequency 10 yr										Pipe Capacity													
Line	Inlet Struct. #	Inlet Type	Inlet Tc (min)	Pipe Tc (min)	K	C	I (in/hr)	A Inlet (ac)	A Total (ac)	Pipe (cfs)	Pipe dia. (in)	Mannings "n"	slope (%)	Full Pipe Capacity (cfs)	Full Pipe Velocity (fps)	Gravity Flow Pipe Velocity (fps)	Pressure Flow Pipe Velocity (fps)	Gravity Pipe Flow Depth (feet)	Minor Head Loss Coefficient	Gravity kV ² /2g (feet)	Pressure kV ² /2g (feet)	Length to downstream struct. (ft)	Pressure Slope of Friction %
1	12	CI	5.00	5.00	1.00	0.90	7.35	0.14	0.14	1.0	15	0.012	0.80	6.3	5.1	3.7	0.8	0.33	1.00	0.21	0.01	81	0.02%
	RD1	AI	2.28	5.37	1.00	0.90	7.24	0.11	0.36	2.4	15	0.012	0.80	6.3	5.1	4.7	1.9	0.53	0.50	0.17	0.03	42	0.11%
	11	CI	5.00	5.52	1.00	0.90	7.20	0.11	0.48	3.1	15	0.012	0.80	6.3	5.1	5.1	2.5	0.61	0.50	0.20	0.05	63	0.20%
	10	CI	5.00	5.72	1.00	0.90	7.14	0.06	0.54	3.5	15	0.012	0.80	6.3	5.1	5.2	2.8	0.65	0.50	0.21	0.06	37	0.24%
	10A Connection to Ex 36" HDPE Pipe Structure																						
2	20	CI	5.00	5.00	1.00	0.90	7.35	0.29	0.29	1.9	15	0.012	3.07	12.3	10.0	7.2	1.6	0.33	1.00	0.80	0.04	67	0.07%
	10A Connection to Ex 36" HDPE Pipe Structure																						
4	RD1	AI	2.28	2.28	1.00	0.90	8.30	0.11	0.11	0.8	6	0.012	6.00	1.5	7.6	7.8	4.2	0.27	1.00	0.94	0.27	90	1.81%
	x1	connection at Line 1																					
	1	Line 3 not used																					
2	Inlet RD1 represents the roof drain from Lot 4E-2A building (approx 4800 sf)																						

Return Frequency 100 yr										Pipe Capacity															
Line	Inlet Struct. #	Inlet Type	Tc	Tc	K	C	I	A	A	Pipe	Pipe	Pipe	Pipe	Full Pipe	Full Pipe Velocity	Gravity Flow Pipe Velocity	Pressure Flow Pipe Velocity	Gravity Pipe Flow Depth	Minor Head Loss Coefficient	Gravity kV ² /2g	Pressure kV ² /2g	Length to downstream struct.	Pressure Slope of Friction		
			(min)	(min)			(in/hr)	(ac)	(ac)	(cfs)	(in)	"n"	(%)	(cfs)	(fps)	(fps)	(fps)	feet	"K"	feet		(ft)	%		
1	12	CI	5.00	5.00	1.25	0.90	10.32	0.14	0.14	1.7	15	0.012	0.80	6.3	5.1	4.3	1.4	0.44	1.0	0.3	0.03	81	0.06%		
	RD1	AI	2.28	5.37	1.25	0.90	10.17	0.11	0.36	4.2	15	0.012	0.80	6.3	5.1	5.5	3.4	0.74	0.5	0.2	0.09	42	0.35%		
	11	CI	5.00	5.52	1.25	0.90	10.11	0.11	0.48	5.5	15	0.012	0.80	6.3	5.1	5.8	4.4	0.90	0.5	0.3	0.15	63	0.60%		
	10	CI	5.00	5.72	1.25	0.90	10.03	0.06	0.54	6.1	15	0.012	0.80	6.3	5.1	5.8	4.9	0.99	0.5	0.3	0.19	37	0.74%		
	10A Connection to Ex 36" HDPE Pipe Structure																								
2	20	CI	5.00	5.00	1.25	0.90	10.32	0.29	0.29	3.3	15	0.012	3.07	12.3	10.0	8.4	2.7	0.44	1.0	1.1	0.12	67	0.23%		
	10A Connection to Ex 36" HDPE Pipe Structure																								
4	RD1	AI	2.28	2.28	1.25	0.90	11.59	0.11	0.11	1.4	6	0.012	6.00	1.5	7.6	8.6	7.3	0.39	1.0	1.2	0.83	90	5.53%		
	x1	connect at Line 1																							
	1	Line 3 not used																							
	2	Inlet RD1 represents the roof drain from Lot 4E-2A building (approx 4800 sf)																							

BY	REVISION	DATE
RC/ACA	REVISED STORM SEWER	11-20-23
RC/ACA	AGC INTERNAL QC	9-20-23
RC/ACA	REVISED PER CITY COMMENTS	3-27-23
RC/ACA	FOR REVIEW	2-17-23

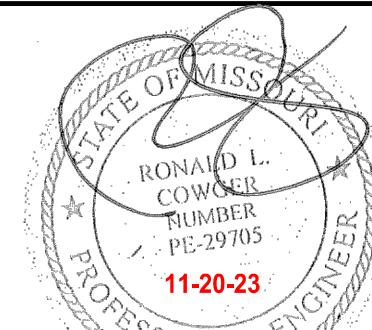


AGC Engineers, INC.

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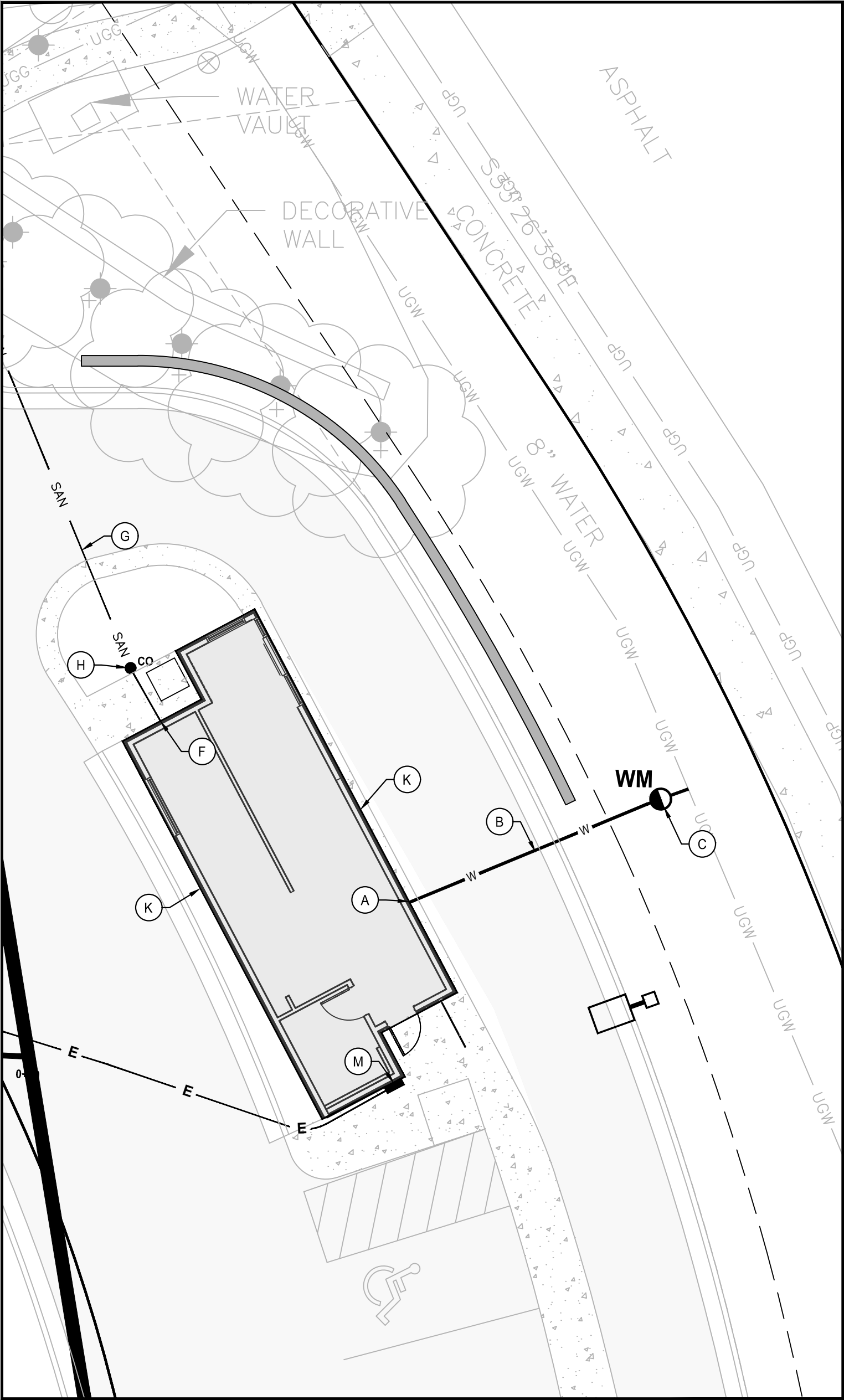
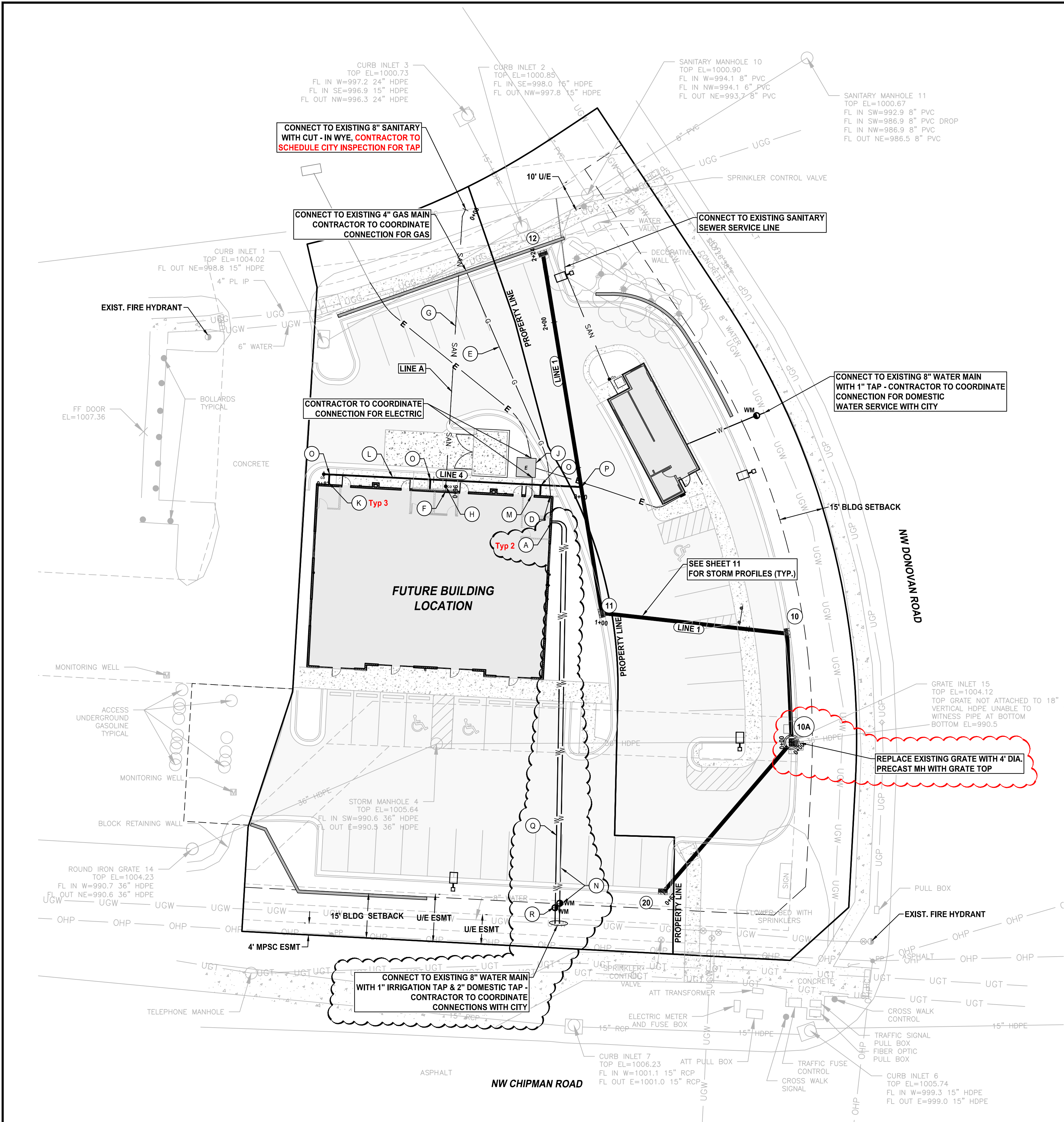
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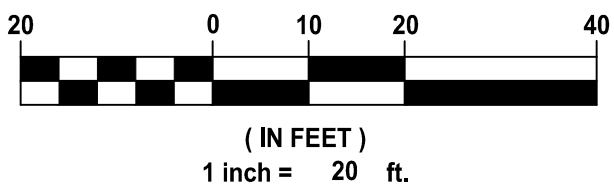
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- NOTES:**
- CONTRACTOR SHALL COORDINATE WITH SUPERSTAR HOLDINGS, LLC PRIOR TO BEGINNING UNDERGROUND UTILITIES TO VERIFY SPECIFIC TENANT REQUIREMENTS SUCH AS DOMESTIC WATER, WATER METER AND FIRE LINE SIZES, CONDUITS TO / FROM MESSAGE BOARDS, AND GROUND LOOP DETECTION SYSTEMS.
 - SANITARY SEWER CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTSIDE BOTTOM OF THE WATER MAIN AND THE OUTSIDE TOP OF THE SANITARY SEWER. MAINTAIN EIGHTEEN INCHES (18") MINIMUM SEPARATION FROM THE TOP OF THE SANITARY SEWER TO THE BOTTOM OF THE WATER MAIN. WHEN WATER LINE GOES UNDER A SANITARY SEWER THEN THE SANITARY SEWER SHOULD BE PRESSURE RATED PIPE OR ENCASED IN CONCRETE.

- KEY LEGEND**
- (A) DOMESTIC WATER ENTRY (RE: MEP)
 - (B) 1" SOFT "K" COPPER SERVICE LINE DOMESTIC WATER LINE (CONFIRM WITH MEP PRIOR TO INSTALLATION)
 - (C) 1" WATER METER AND METER PIT
 - (D) GAS ENTRY (RE: MEP)
 - (E) GAS LINE (RE: SPIRE OR MEP FOR GAS SIZE AND MATERIAL)
 - (F) SANITARY SEWER ENTRY (RE: MEP)
 - (G) 6" PVC (SDR-26) SANITARY SEWER LINE (2% MIN. SLOPE)
 - (H) CLEANOUT
 - (I) PHONE / DATA SERVICE ENTRY (RE: ARCH)
 - (J) ELECTRICAL TRANSFORMER (RE: MEP)
 - (K) DOWNSPOUT (RE: ARCH) (SEE DOWNSPOUT DRAIN DETAIL)
 - (L) 6" HDPE DOWNSPOUT STORM LINE
 - (M) ELECTRICAL ENTRY
 - (N) 1" IRRIGATION METER AND LINE
 - (O) 6" X 6" WYE CONNECTION
 - (P) 6" X 15" WYE CONNECTION
 - (Q) 2" SOFT "K" COPPER SERVICE LINE DOMESTIC WATER LINE (CONFIRM WITH MEP PRIOR TO INSTALLATION)
 - (R) 2" WATER METER AND METER PIT

BY	REVISION	DATE
RC/ACA	REVISED STORM SEWER	11-20-23
ACA	REVISED WATER SERVICE LINE	10-18-23
RC/ACA	AGC INTERNAL QC	9-20-23
RC/ACA	REVISED PER CITY COMMENTS	3-27-23
RC/ACA	FOR REVIEW	2-17-23

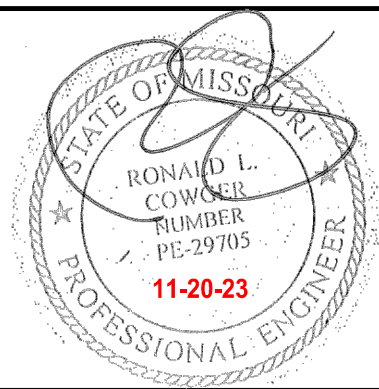


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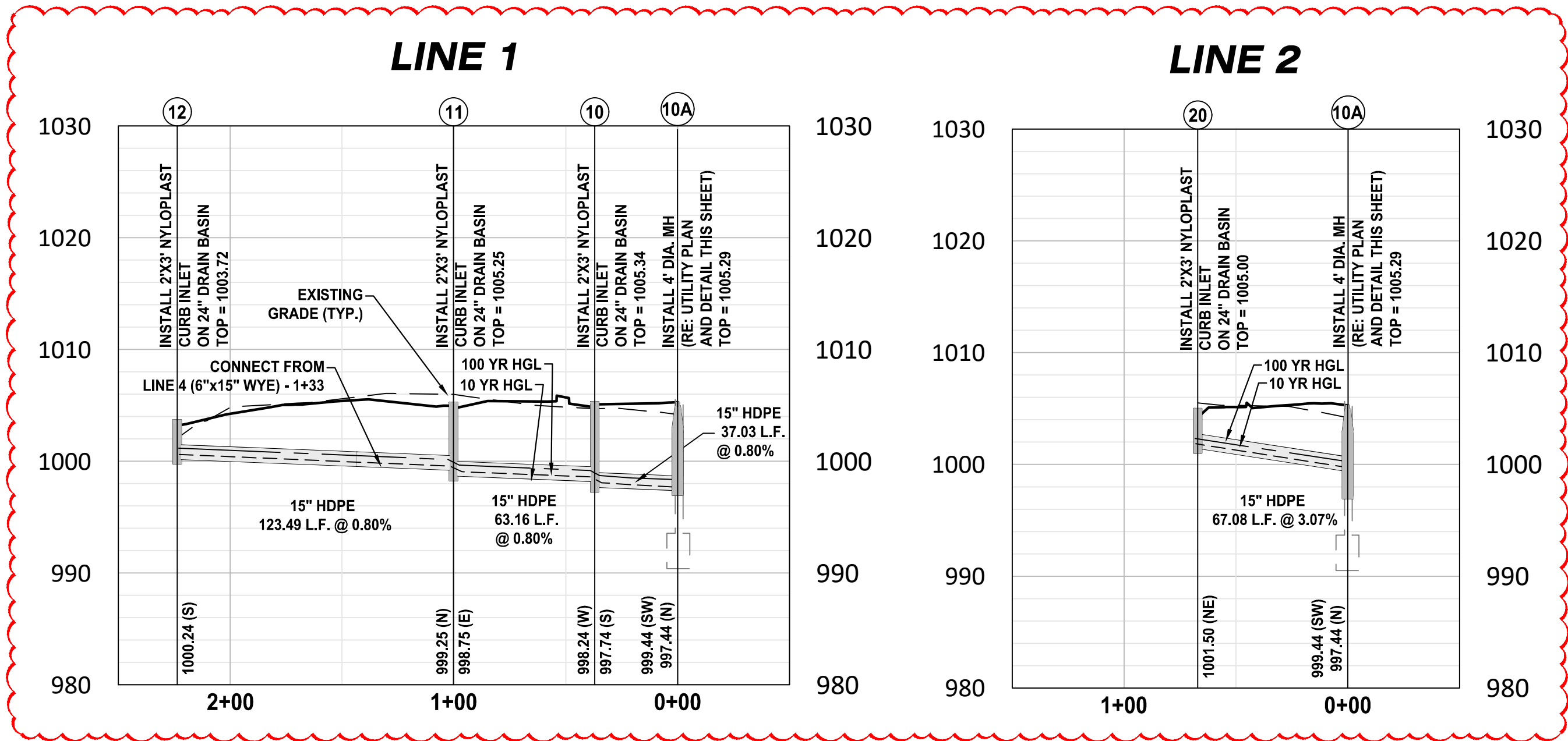
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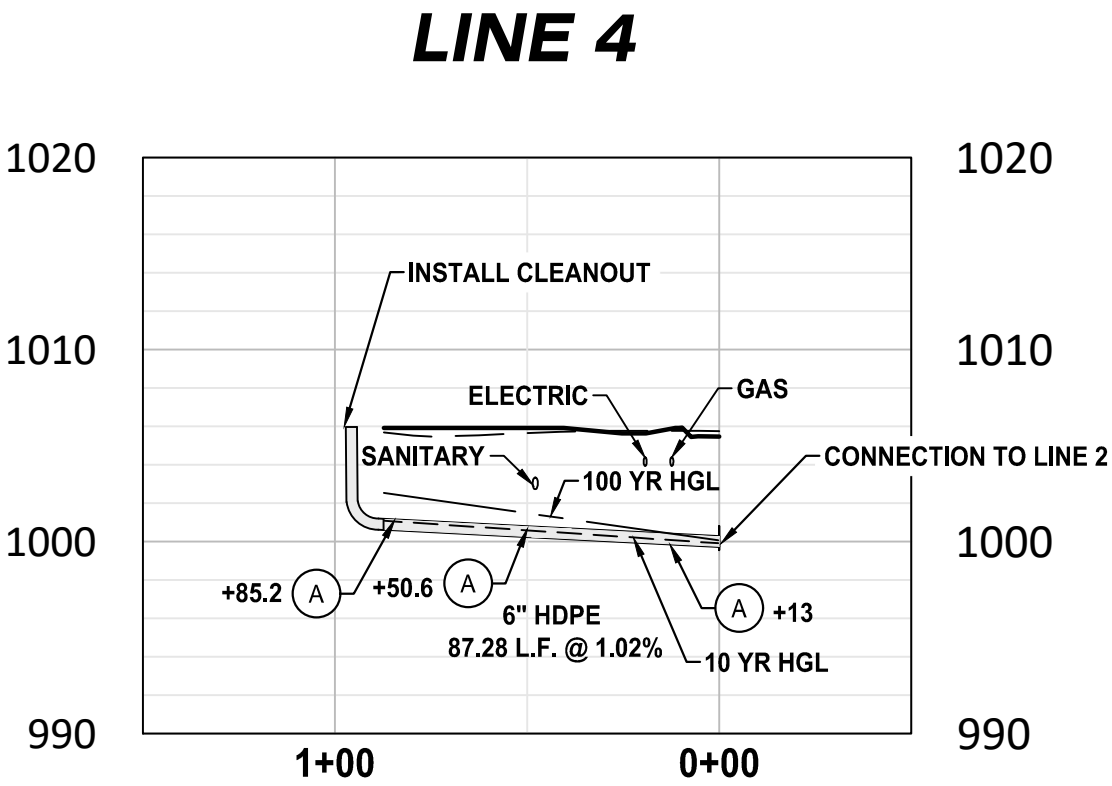


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SITE DEVELOPMENT PLANS
UTILITY PLAN



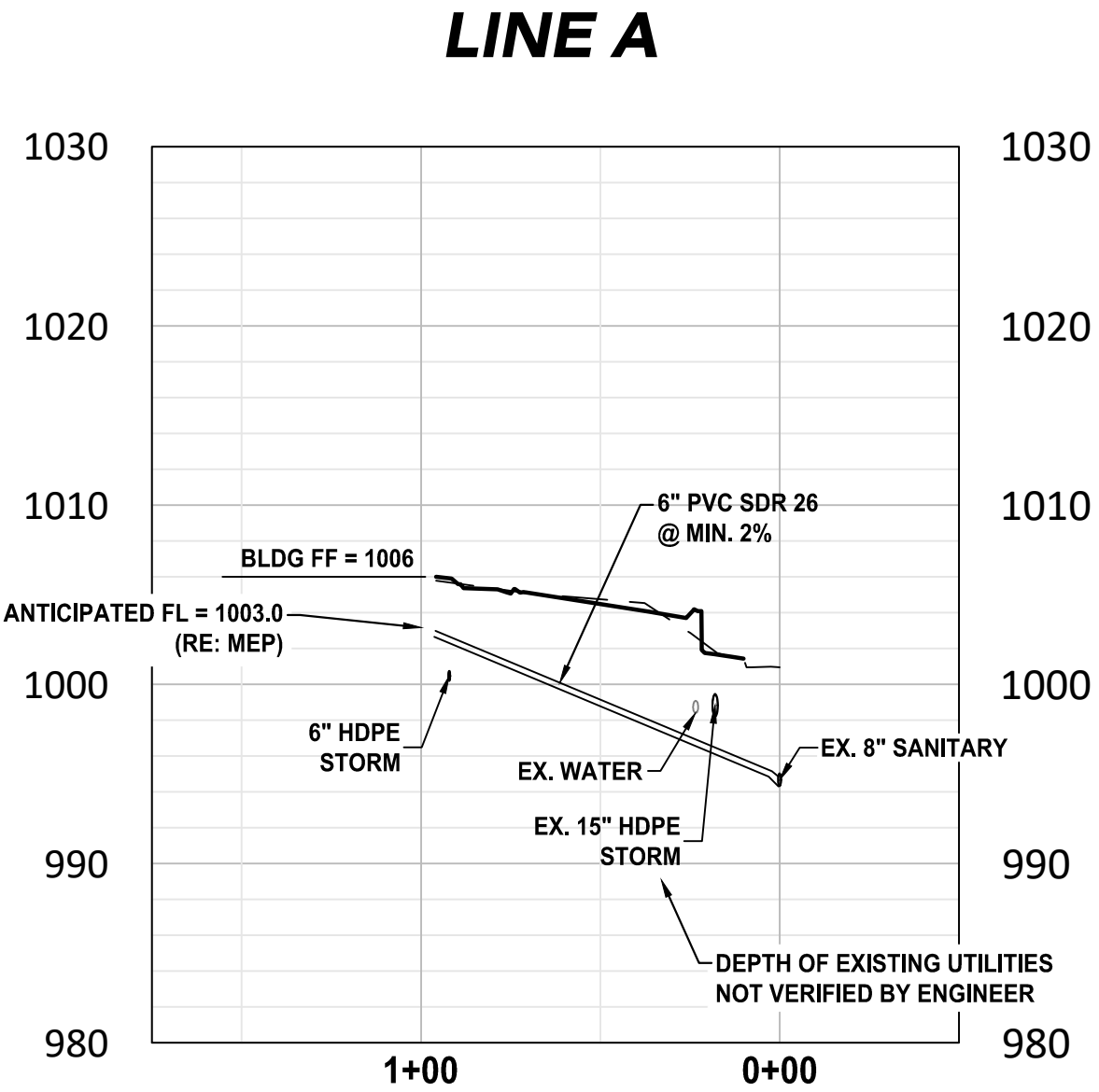
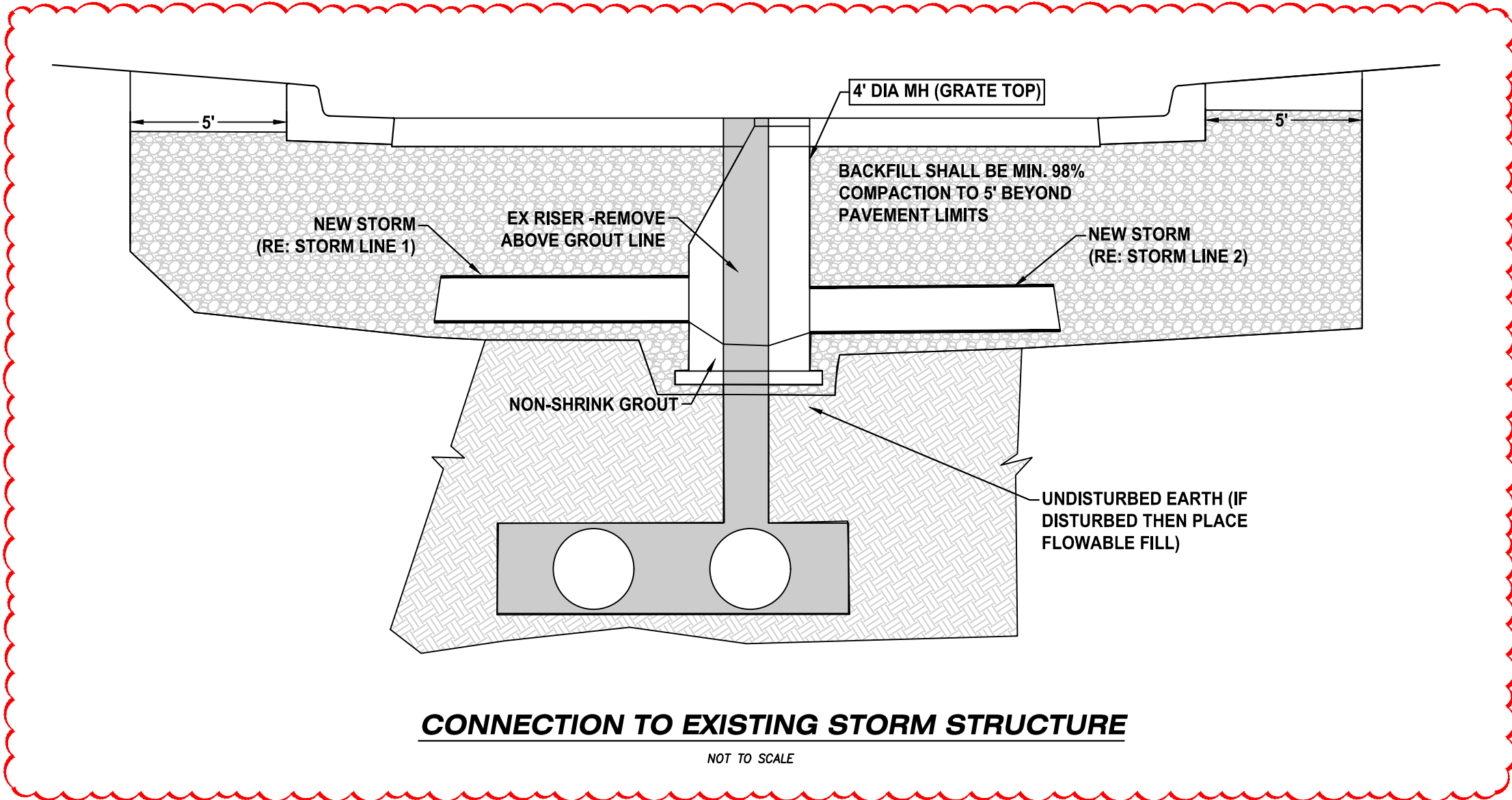
LINE 3 NOT USED



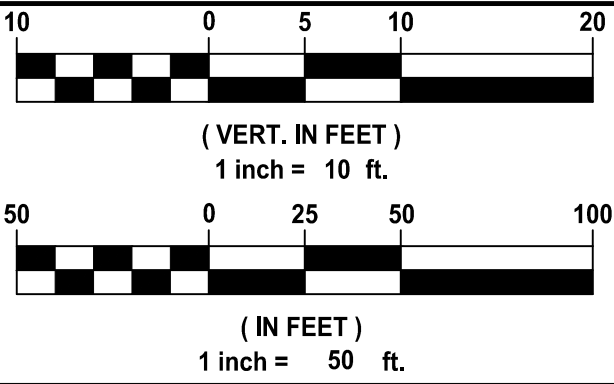
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KEY LEGEND

(A) DOWNSPOUT CONNECTION



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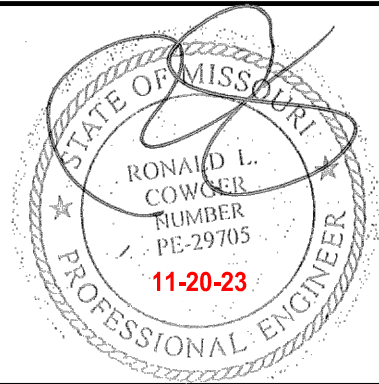


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