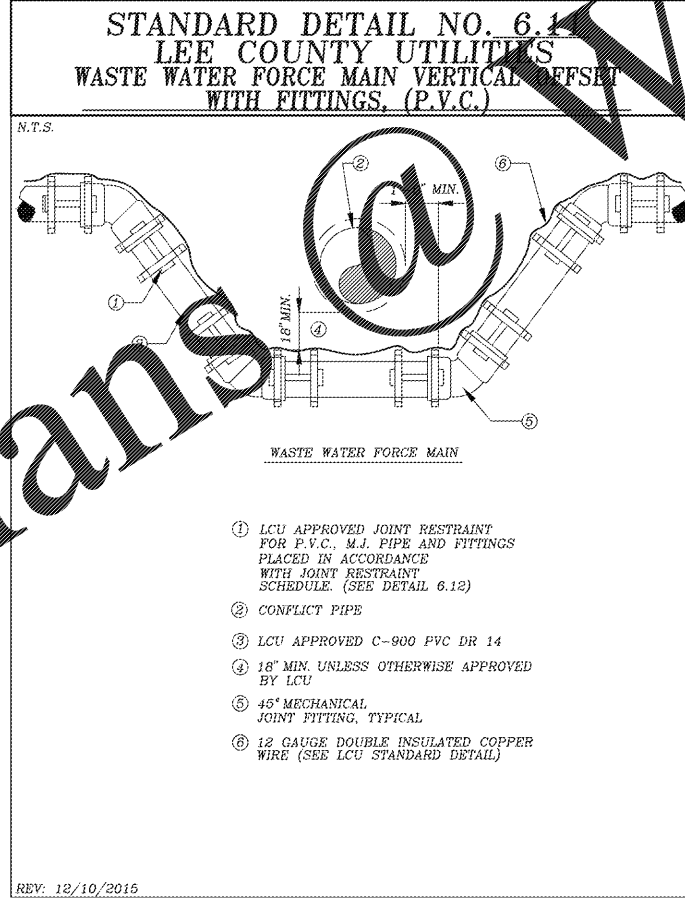
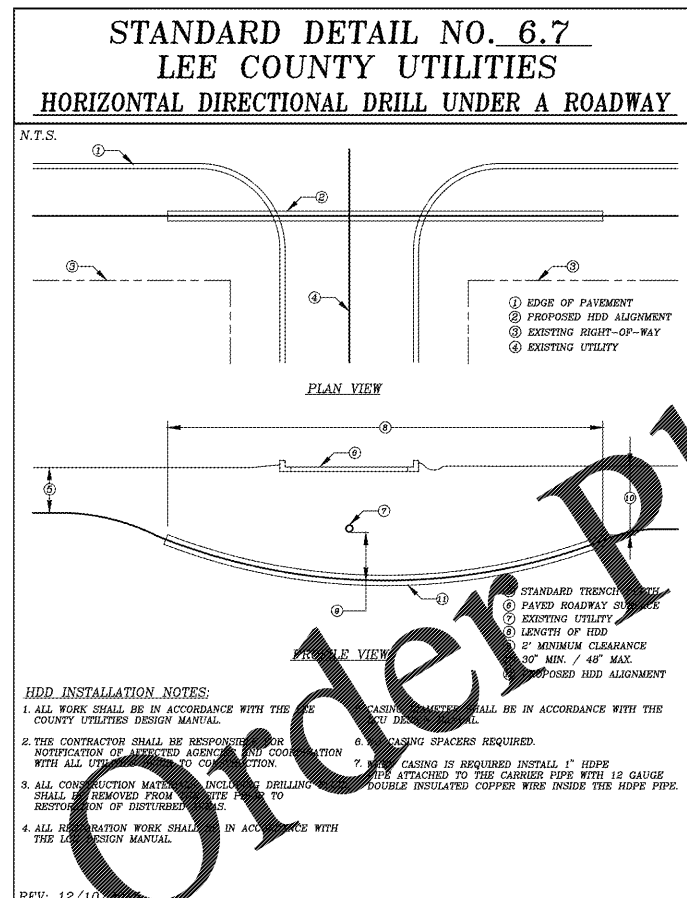
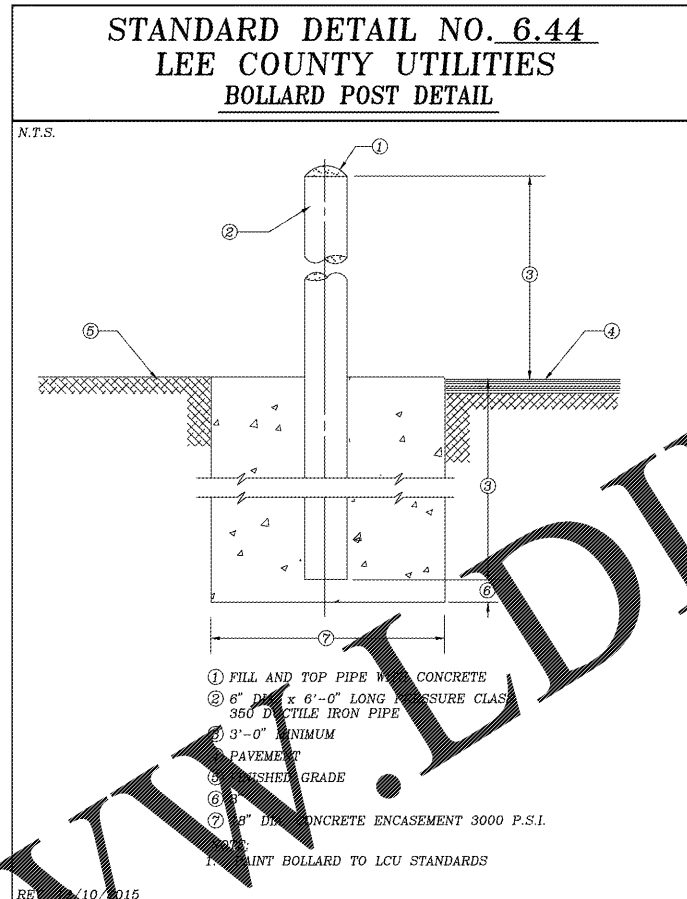
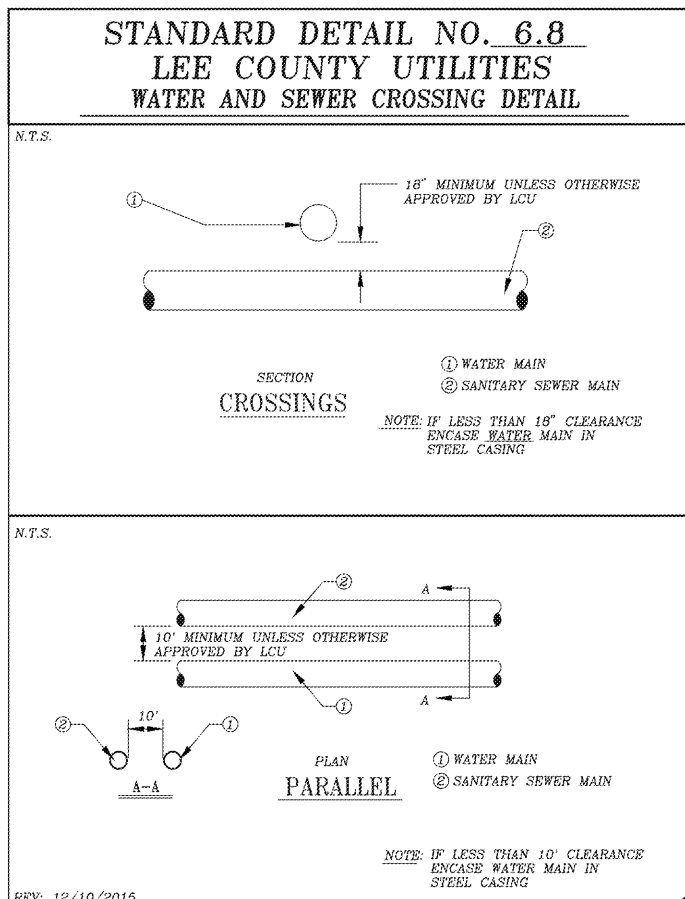
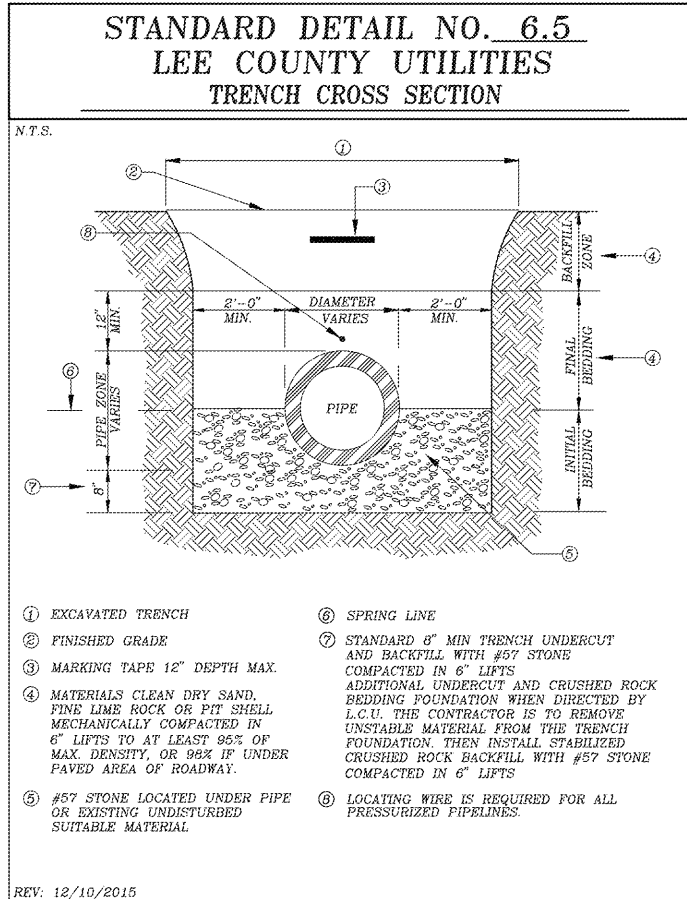


P:\CAD\2017\17-108\CONSTRUCTION\17-108\_DTL-UTIL.dwg, 13 UTILITY DETAILS, 12/26/2018 8:09:18 AM, Avalon Engineering Inc.



### STANDARD DETAIL NO. 6.12 LEE COUNTY UTILITIES RESTRAINED LENGTH SCHEDULE

N.T.S.

DUCTILE IRON PIPE

PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)				DEAD END	HORIZONTAL TEE
	90°	45°	22-1/2°	11-1/4°		
4	17	7	4	2	29	6
6	23	10	5	2	40	17
8	29	12	6	3	53	29
10	35	14	7	4	63	38
12	41	17	8	4	74	49
16	51	21	11	5	94	68
24	69	29	14	7	131	105
30	81	34	17	8	156	129

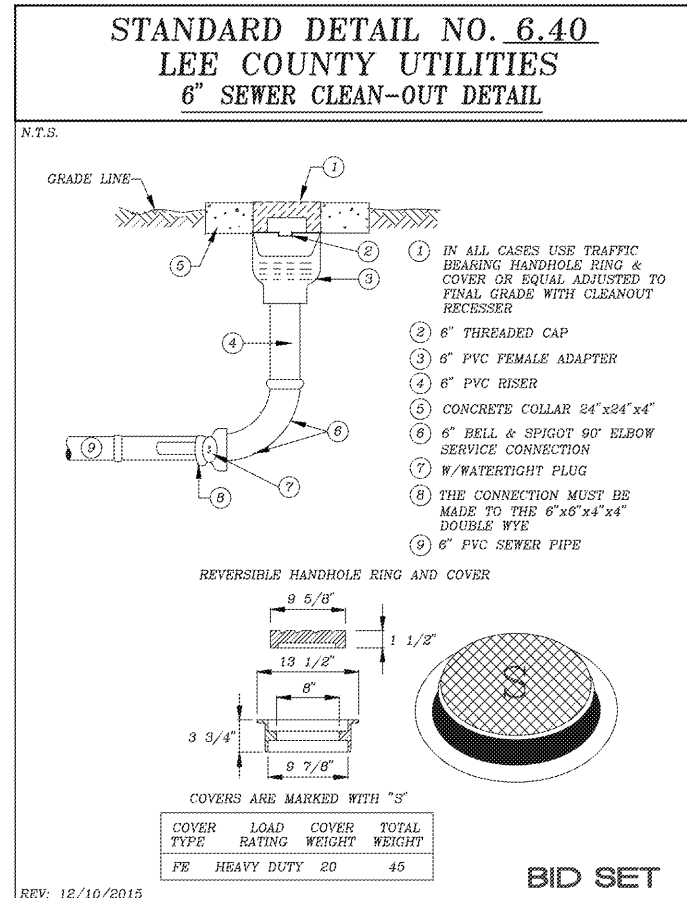
PVC PIPE

PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)				DEAD END	HORIZONTAL TEE
	90°	45°	22-1/2°	11-1/4°		
4	20	8	4	2	45	8
6	29	12	6	3	63	25
8	36	15	8	4	83	43
10	44	18	9	5	99	58
12	51	21	11	5	116	74
16	63	26	13	7	149	103
24	87	36	18	9	208	158
30	102	42	21	10	248	194

A COMPLETE JOINT RESTRAINING SCHEDULE FOR ALL ENCOUNTERED VERTICAL & HORIZONTAL BENDS, VERTICAL OFFSETS, TEES, AND DEAD ENDS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

LENGTH FIGURES BASED ON FOLLOWING:  
Pressure = 150 psi, FS = 1.5, trench type = 3, 30" cover on Bare pipe, Soil type = GP & SP

REV: 12/10/2015



Brendon D. Sloan  
FL. LICENSE # 69978

DATE	BY	REVISION DESCRIPTION
10/15/17	BS	CONTRACT SUBMITTAL
12/12/18	BS	CONTRACT COMMENTS 11/25/17
01/26/19	BS	PER LCU COMMENTS
01/26/19	BS	REV SET

**AVALON ENGINEERING, INC.**  
2503 DEL PRADO BLVD. #200  
CAPE CORAL, FLORIDA 33904  
FBPE#3128 (239) 573-2077

**DOLLAR GENERAL**  
1643 Willamsonburg Square  
Lakeland, Florida 33803  
(863) 808-1320

**UTILITY DETAILS**  
LEE COUNTY UTILITIES

BID SET  
(NOT FOR CONSTRUCTION)

01/26/18

17-108/CONST  
13 of 15