

LENGTH FOR PIPE							
		DEAD END/					
	UPPER						
45 '	22.5 °	11.25 *	45 °	22.5 °			
34	16	8	8	4	80		
22	11	6	8	4	2	52	
47	23	12	13	6	3	114	

LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:

COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E. TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL

- WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- RECORDER LOCATIONS.
- MINIMUM LONGITUDINAL SLOPE OF 2%.
- MANUAL, SECTION 2.3.0.
- BACK OF CURB.
- EASEMENT.
- CCSUD CCN. \sim

PIPE SIZE 12





- UTILITIES (N.B.U.) FOR WATER, SEWER, AND ELECTRIC SERVICE TO THE SITE.

RESTRAINT LENGTH TABLE SHOWN BELOW.

				RE	STRAIN	ED
PIPE INSIDE	MATERIAL	TERIAL HORIZONTAL BENDS				
		90*	45 °	22.5 °	11.25*	4
8"	PVC	29	13	6	3	
8"	DUCTILE IRON	25	10	5	3	
12"	PVC	41	17	9	4	



830-629-8
830-625-3
830-643-6
830-643-6
888-876-5
830-303-1
210-283-1
210-658-4
830-545-6

PIPE SIZE	PIPE LENGTH		DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES	IRRIGATION METER 5/8"
		SIZE				,
8	5915	5/8"	174	9	0	2
12	4910	5/8"	32	7	0	0

RESTRAINED LENGTH FOR PIPE												
PIPE INSIDE	PIPE INSIDE MATERIAL HORIZONTAL BENDS			VERTICAL BENDS				DEAD END/ INCLINE VALVES				
DIAMETER							UPPER L			LOWER		
		90 °	45 °	22.5 *	11.25*	45 °	22.5 °	11.25*	45 °	22.5 °	11.25*	
8"	PVC	29	13	6	3	34	16	8	8	4	2	80
8"	DUCTILE IRON	25	10	5	3	22	11	6	8	4	2	52
12"	PVC	41	17	9	4	47	23	12	13	6	3	114

TEE					
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.		
8"	8"	PVC	70		
8"	8"	DUCTILE IRON	45		
12"	8"	PVC	64		

1) SAFETY FACTOR	=	1.5 TO 1
2) TEST PRESSURE	=	200psi.
3) SOIL DESIGNATION	=	MANUFACTURE
4) DEPTH OF COVER	=	3.5 FEET (TYPI
5) DEPTH OF COVER	=	5 FEET (LOWER
6) LENCTH ALONC PUN	_	2 FFFT

