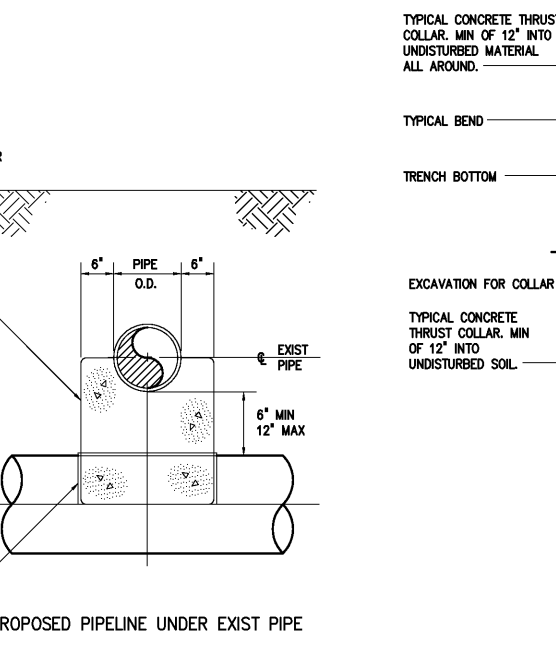
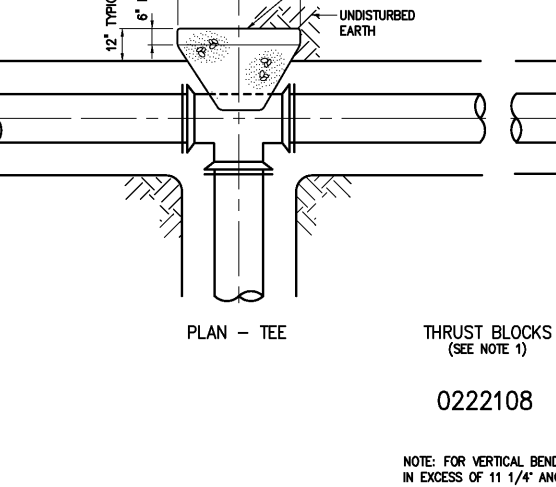
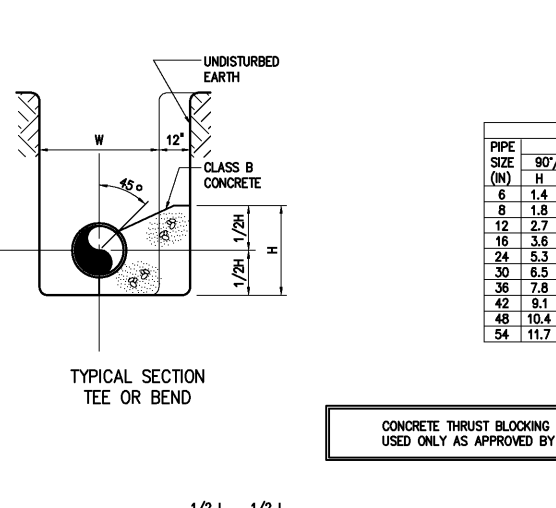
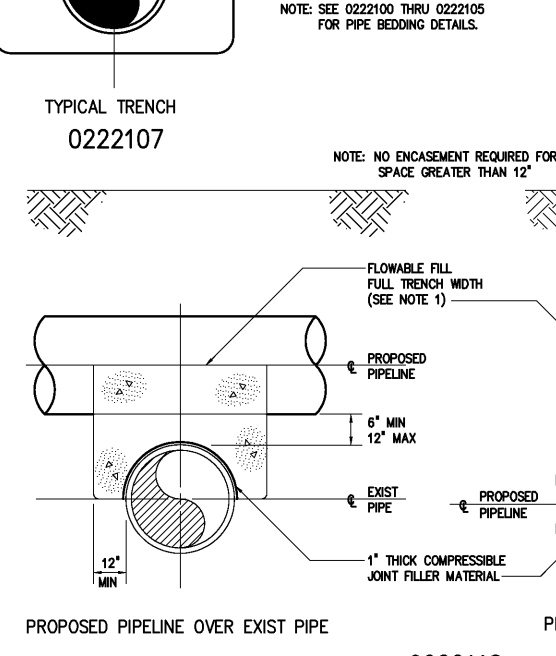
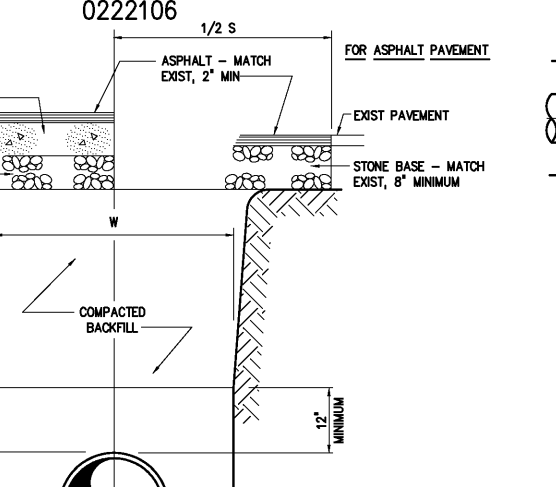


TRENCH EXCAVATION LIMITS		
INTERNAL DIAMETER OF PIPE	WIDTH OF TRENCH	W=MIN
4"-6"	3'-9"	2'-0"
8"-10"	3'-9"	2'-2"
12"	3'-9"	O.D.+2'
14"-16"	4'-2"	O.D.+2'
18"	4'-4"	O.D.+2'
20", 21"	4'-8"	O.D.+2'
24"	4'-11"	O.D.+2'
27"	5'-9"	O.D.+2'
30"	6'-7"	O.D.+2'
36"	7'-4"	O.D.+2'
42"	8'-2"	O.D.+2'
48"	8'-9"	O.D.+2'
54"	9'-4"	O.D.+2'
60"	9'-10"	O.D.+2'
72"	11'-0"	O.D.+2'
78"	11'-8"	O.D.+2'
84"	12'-0"	O.D.+2'
90"	12'-6"	O.D.+2'
96"	13'-0"	O.D.+2'
108"	14'-0"	O.D.+2'
DEPTH OF CUT	S	MAXIMUM PAVEMENT REPLACEMENT WIDTH
0-6'	S=W+4'	
>6-8'	S=W+8'	
>8-10'	S=W+12'	
>10-12'	S=W+16'	
>12-14'	S=W+20'	
>14-16'	S=W+24'	
>16-18'	S=W+28'	
>18'	S=W+32'	

W = TRENCH WIDTH AT BOTTOM OF PIPE. TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.



1 CONCRETE THRUST BLOCKS, ARCHES, ENCASEMENTS, FLOWABLE FILL, ETC. SHALL BE FORMED USING PLYWOOD OR SANDBAGS TO PROVIDE REQ'D SHAPE.

CONCRETE THRUST BLOCK SCHEDULE*												
PIPE SIZE (IN)	90°/TEE		45°		BEND		22 1/2'		11 1/4'		5 5/8'	
	H	L	H	L	H	L	H	L	H	L	H	L
6	1.4	2.8	1.0	2.1	0.7	1.5	0.5	1.0	XXX	XXX	XXX	XXX
8	1.8	3.7	1.4	2.7	1.0	1.9	0.7	1.4	XXX	XXX	XXX	XXX
12	2.7	5.4	2.0	4.0	1.4	2.8	1.0	2.0	XXX	XXX	XXX	XXX
16	3.6	7.1	2.6	5.2	1.9	3.7	1.3	2.6	XXX	XXX	XXX	XXX
24	5.3	10.5	3.9	7.7	2.8	5.5	2.0	3.9	XXX	XXX	XXX	XXX
30	6.5	13.1	4.8	9.6	3.4	6.9	2.4	4.9	XXX	XXX	XXX	XXX
36	7.8	15.6	5.8	11.5	4.1	8.2	2.9	5.8	XXX	XXX	XXX	XXX
42	9.1	18.2	6.7	13.4	4.8	9.5	3.4	6.8	XXX	XXX	XXX	XXX
48	10.4	20.7	7.6	15.3	5.4	10.9	3.9	7.7	XXX	XXX	XXX	XXX
54	11.7	23.3	8.6	17.1	6.1	12.2	4.3	8.7	XXX	XXX	XXX	XXX

* BASED ON AVERAGE SOIL PASSIVE BEARING STRENGTH OF 2000 PSF USING SF OF 1.5. DIMENSIONS FOR BLOCKS IN FEET

DESIGNED	H & S
DRAWN	H & S
CHECKED	
PROJ. ENGR.	H & S
APPROVED	

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CITY OF ROANOKE
VIRGINIA

REGIONAL WATER POLLUTION CONTROL PLANT
PROCESS TRAIN IMPROVEMENTS

MISCELLANEOUS STANDARD DETAILS

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.	DATE	JANUARY 2004
	H & S JOB NUMBER	30788C
	CONTRACT NUMBER	C
	DRAWING NUMBER	D4