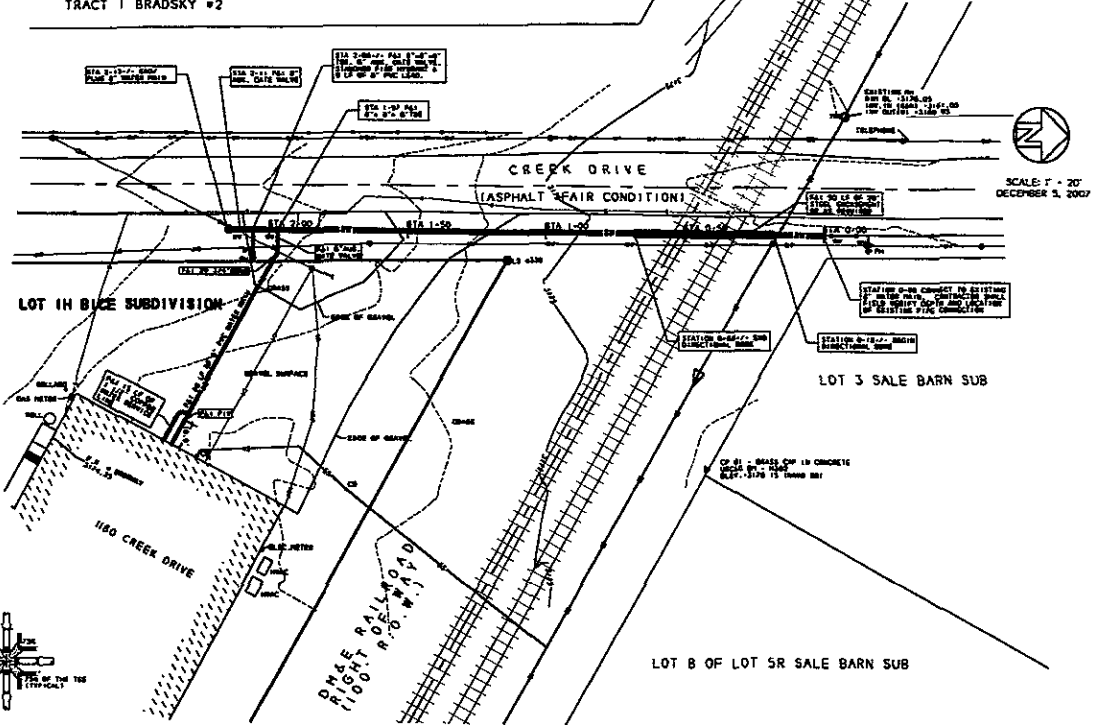


FIRE HYDRANT ASSEMBLY DETAIL

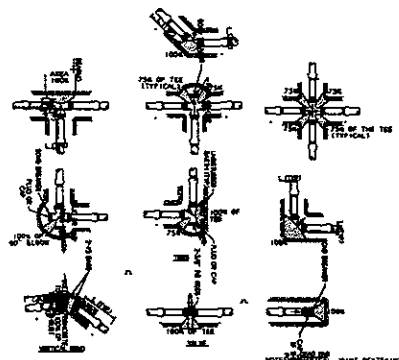


SCALE: 1" = 20'  
DECEMBER 5, 2007

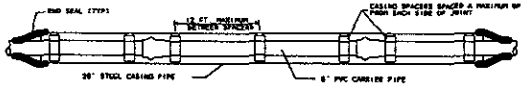
CONCRETE THRUST BLOCKS FOR THURST BLOCKS (CP 1)

TYPE	MIN. SIZE OF CONCRETE	MIN. THICKNESS	MIN. WIDTH	MIN. HEIGHT
1	12" x 12" x 12"	12"	12"	12"
2	12" x 12" x 12"	12"	12"	12"
3	12" x 12" x 12"	12"	12"	12"
4	12" x 12" x 12"	12"	12"	12"
5	12" x 12" x 12"	12"	12"	12"
6	12" x 12" x 12"	12"	12"	12"
7	12" x 12" x 12"	12"	12"	12"
8	12" x 12" x 12"	12"	12"	12"
9	12" x 12" x 12"	12"	12"	12"
10	12" x 12" x 12"	12"	12"	12"
11	12" x 12" x 12"	12"	12"	12"
12	12" x 12" x 12"	12"	12"	12"
13	12" x 12" x 12"	12"	12"	12"
14	12" x 12" x 12"	12"	12"	12"
15	12" x 12" x 12"	12"	12"	12"
16	12" x 12" x 12"	12"	12"	12"
17	12" x 12" x 12"	12"	12"	12"
18	12" x 12" x 12"	12"	12"	12"
19	12" x 12" x 12"	12"	12"	12"
20	12" x 12" x 12"	12"	12"	12"
21	12" x 12" x 12"	12"	12"	12"
22	12" x 12" x 12"	12"	12"	12"
23	12" x 12" x 12"	12"	12"	12"
24	12" x 12" x 12"	12"	12"	12"
25	12" x 12" x 12"	12"	12"	12"
26	12" x 12" x 12"	12"	12"	12"
27	12" x 12" x 12"	12"	12"	12"
28	12" x 12" x 12"	12"	12"	12"
29	12" x 12" x 12"	12"	12"	12"
30	12" x 12" x 12"	12"	12"	12"
31	12" x 12" x 12"	12"	12"	12"
32	12" x 12" x 12"	12"	12"	12"
33	12" x 12" x 12"	12"	12"	12"
34	12" x 12" x 12"	12"	12"	12"
35	12" x 12" x 12"	12"	12"	12"
36	12" x 12" x 12"	12"	12"	12"
37	12" x 12" x 12"	12"	12"	12"
38	12" x 12" x 12"	12"	12"	12"
39	12" x 12" x 12"	12"	12"	12"
40	12" x 12" x 12"	12"	12"	12"
41	12" x 12" x 12"	12"	12"	12"
42	12" x 12" x 12"	12"	12"	12"
43	12" x 12" x 12"	12"	12"	12"
44	12" x 12" x 12"	12"	12"	12"
45	12" x 12" x 12"	12"	12"	12"
46	12" x 12" x 12"	12"	12"	12"
47	12" x 12" x 12"	12"	12"	12"
48	12" x 12" x 12"	12"	12"	12"
49	12" x 12" x 12"	12"	12"	12"
50	12" x 12" x 12"	12"	12"	12"

1. THRUST BLOCKS FOR THURST BLOCKS A THURST BLOCK SHALL BE INSTALLED AT THE POINT OF CHANGE OF DIRECTION OF THE PIPE TO BE THURSTED.
2. THRUST BLOCKS SHALL BE INSTALLED AT THE POINT OF CHANGE OF DIRECTION OF THE PIPE TO BE THURSTED.
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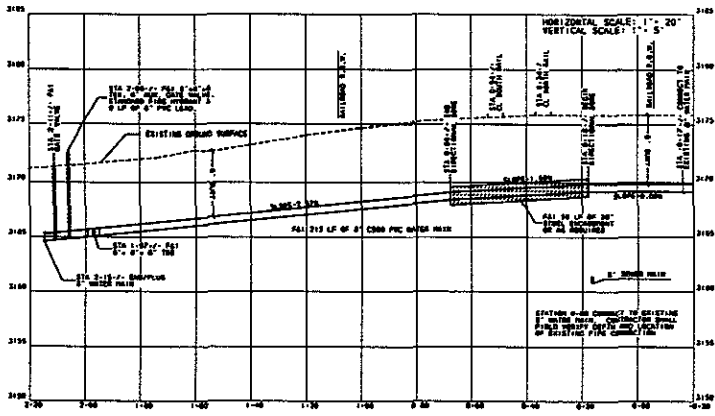
CONCRETE THRUST BLOCKS AND RESTRAINTS FOR PVC PIPE



TYPICAL CASING SPACER CONFIGURATION



STEEL CASING/CASING SPACER SECTION



UTILITY NOTE:  
THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON ARE TO BE APPROVED BY THE CITY OF RAPID CITY, SOUTH DAKOTA. THE CITY ENGINEER'S OFFICE SHALL BE CONTACTED FOR A LISTING OF ALL UTILITIES AT THE POINT OF INTERSECTION OF THE PROPOSED WATER MAIN WITH ANY EXISTING UTILITY. THE CITY ENGINEER'S OFFICE SHALL BE CONTACTED FOR A LISTING OF ALL EXISTING UTILITIES AT THE POINT OF INTERSECTION OF THE PROPOSED WATER MAIN WITH ANY EXISTING UTILITY.

DESIGNER/ENGINEER CERTIFICATE  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF SOUTH DAKOTA.  
STEPHEN W. THOMPSON, P.E., M.E., C.E.P.  
DATE: 12/5/07



BRITTON ENGINEERING & LAND SURVEYING, INC.  
8035 BLACK HAWK ROAD, SUITE 5, PO BOX 649  
BLACK HAWK, SD 57718  
PH: (605) 716-7998

LOT 14 BICE SUB  
SEC 5, T1N, R4E, B1M, RAPID CITY  
PENNINGTON COUNTY, SOUTH DAKOTA

WATER MAIN PLAN & PROFILE  
LOT 14 BICE SUB

RECEIVED