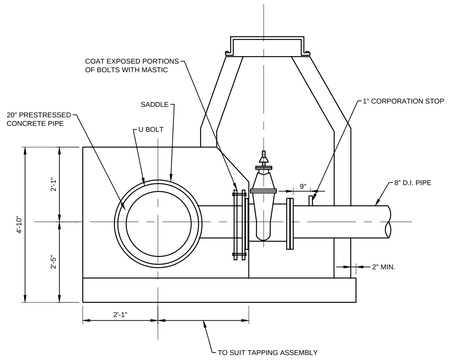
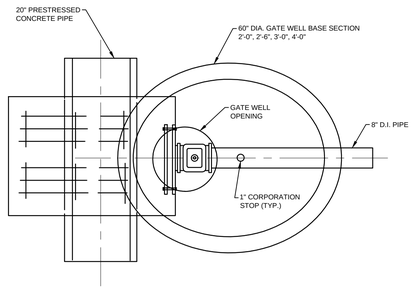


SECTION VIEW



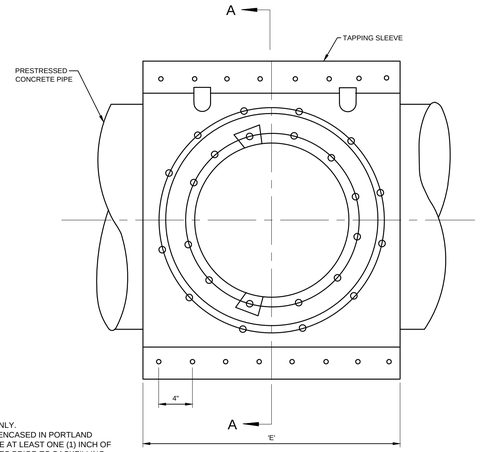
PLAN VIEW

20" x 8" CONCRETE PRESSURE TAP VALVE & WELL ASSEMBLY W/ CONCRETE ENCASEMENT

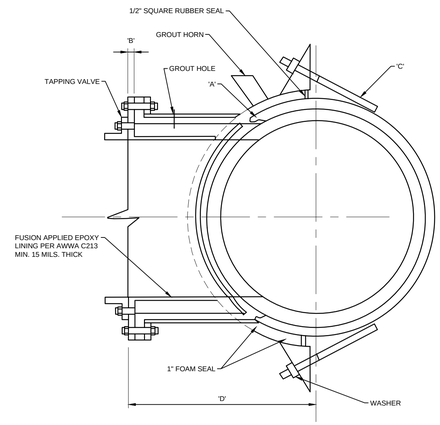
NOT TO SCALE

NOTES:

1. THESE DIMENSIONS ARE FOR REFERENCE ONLY.
2. ENTIRE SADDLE, INCLUDING STRAPS, TO BE ENCASED IN PORTLAND CEMENT MORTAR OR CONCRETE TO PROVIDE AT LEAST ONE (1) INCH OF THICKNESS OVER EXTERNAL STEEL SURFACES PRIOR TO BACKFILLING.
3. TAP SADDLES ARE DESIGNED FOR 150 PSI OPERATING PRESSURE.
4. FLANGE DRILLED AND TAPPED IN ACCORDANCE WITH AWWA C207 CLASS D, CENTERING RING CONFORMS TO MSS-SP 60.
5. GROUT SHALL SET A MINIMUM OF TWENTY-FOUR (24) HOURS PRIOR TO PRESSURE TESTING.



PLAN VIEW



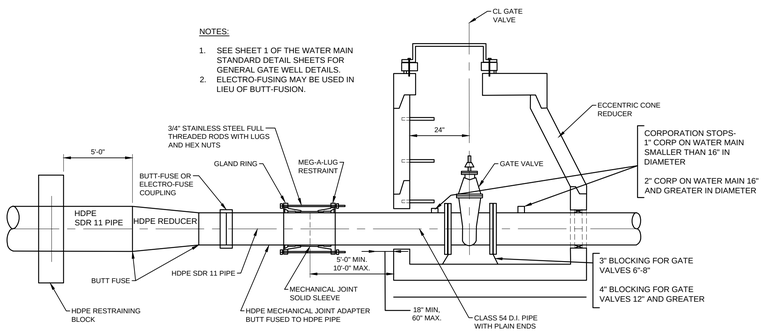
SECTION A-A

PIPE SIZE x TAP SIZE	A	B	C	D	E
16" x 4"	1/4"	7/8"	6	14-1/16"	24"
16" x 6"	1/4"	1-1/8"	6	14-5/16"	24"
16" x 8"	1/4"	1-1/8"	6	14-5/16"	24"
16" x 10"	1/4"	1-3/8"	7	14-9/16"	28"
16" x 12"	1/4"	1-3/8"	8	14-9/16"	32"
18" x 4"	1/4"	7/8"	6	15-3/8"	24"
18" x 6"	1/4"	1-1/8"	6	15-5/8"	24"
18" x 8"	1/4"	1-1/8"	6	15-5/8"	24"
18" x 10"	1/4"	1-3/8"	7	15-7/8"	28"
18" x 12"	1/4"	1-3/8"	8	15-7/8"	32"
20" x 4"	1/4"	7/8"	6	16-1/2"	24"
20" x 6"	1/4"	1-1/8"	6	16-1/2"	24"
20" x 8"	1/4"	1-1/8"	6	16-1/2"	24"
20" x 10"	1/4"	1-3/8"	7	17"	28"
20" x 12"	1/4"	1-3/8"	8	17"	32"
24" x 4"	1/4"	7/8"	6	18-3/4"	24"
24" x 6"	1/4"	1-1/8"	6	19"	24"
24" x 8"	1/4"	1-1/8"	6	19"	24"
24" x 10"	1/4"	1-3/8"	7	19-1/4"	28"
24" x 12"	1/4"	1-3/8"	8	19-1/4"	32"
30" x 4"	1/4"	7/8"	6	22-1/8"	24"
30" x 6"	1/4"	1-1/8"	6	22-3/8"	24"
30" x 8"	1/4"	1-1/8"	6	22-3/8"	24"
30" x 10"	1/4"	1-3/8"	7	22-5/8"	28"
30" x 12"	1/4"	1-3/8"	8	22-5/8"	32"
36" x 4"	1/4"	7/8"	6	25-1/2"	24"
36" x 6"	1/4"	1-1/8"	6	25-3/4"	24"
36" x 8"	1/4"	1-1/8"	7	25-3/4"	28"
36" x 10"	1/4"	1-3/8"	8	26"	32"
36" x 12"	1/4"	1-3/8"	9	26"	36"
42" x 4"	1/4"	7/8"	6	28-7/8"	24"
42" x 6"	1/4"	1-1/8"	7	29-1/8"	28"
42" x 8"	1/4"	1-1/8"	8	29-1/8"	32"
42" x 10"	3/8"	1-3/8"	9	29-3/8"	36"
42" x 12"	3/8"	1-3/8"	10	29-3/8"	40"
48" x 4"	3/8"	7/8"	7	32-1/4"	28"
48" x 6"	3/8"	1-1/8"	7	32-1/2"	28"
48" x 8"	3/8"	1-1/8"	7	32-1/2"	28"
48" x 10"	3/8"	1-3/8"	7	32-3/4"	28"
48" x 12"	3/8"	1-3/8"	9	32-3/4"	36"

CONCRETE TAPPING SLEEVE DETAILS

NOTES:

1. SEE SHEET 1 OF THE WATER MAIN STANDARD DETAIL SHEETS FOR GENERAL GATE WELL DETAILS.
2. ELECTRO-FUSING MAY BE USED IN LIEU OF BUTT-FUSION.

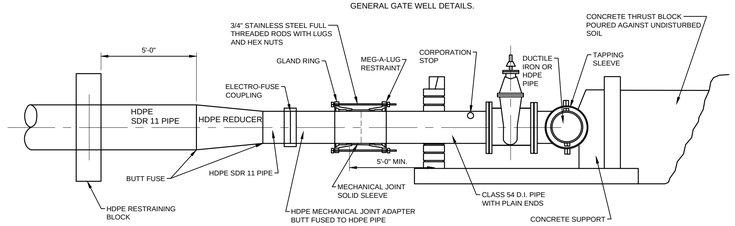


TYPICAL GATE VALVE CONNECTION TO HDPE

NOT TO SCALE

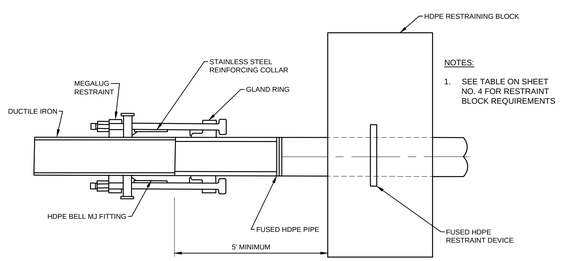
NOTES:

1. SEE SHEET 1 OF THE WATER MAIN STANDARD DETAIL SHEETS FOR GENERAL GATE WELL DETAILS.



HDPE TAPPING SLEEVE, VALVE & WELL

NOT TO SCALE



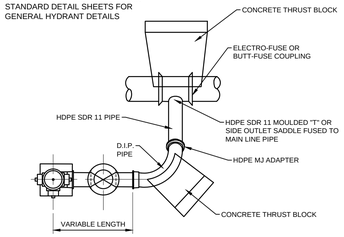
NOTES:

1. SEE TABLE ON SHEET NO. 4 FOR RESTRAINT BLOCK REQUIREMENTS

HDPE TO DUCTILE IRON TRANSITION

NOTES:

1. SEE SHEET 2 OF THE WATER MAIN STANDARD DETAIL SHEETS FOR GENERAL HYDRANT DETAILS



NOTES:

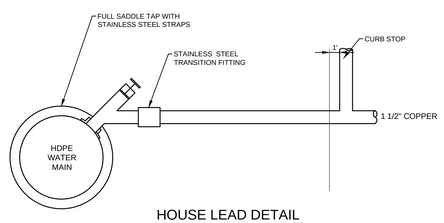
1. ALL HYDRANT LEADS TO BE FULLY RESTRAINED

PLAN HYDRANT SIDE OUTLET

NOT TO SCALE

NOTE:

ALL BURIED BOLTS SHALL BE CORTEN OR LOW ALLOY AND POLY-WRAPPED.



HOUSE LEAD DETAIL HDPE TO COPPER

NOT TO SCALE

DETAILS FOR HIGH DENSITY POLYETHYLENE PIPE (HDPE)

NF ENGINEERS
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WWW.NOWAKFRAUS.COM

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STATE OF MICHIGAN
TIMOTHY L. GERMAIN
ENGINEER NO. 42595
LICENSED PROFESSIONAL ENGINEER

PROJECT
City of Madison Heights

CLIENT
City of Madison Heights
300 W. 13 Mile Road
Madison Heights,
MI 48071

PROJECT LOCATION
City of Madison Heights,
Oakland County, MI

SHEET
Water Main Standard Details - Concrete and HDPE Connections

Know what's **below** **Call** before you dig.

DATE ISSUED/REVISED

DRAWN BY: J. Lawrey
DESIGNED BY: B. Brickel
APPROVED BY: T. Germain
DATE: December 9, 2019
SCALE: N.T.S.

NFE JOB NO. **L418**
SHEET NO. **D5**