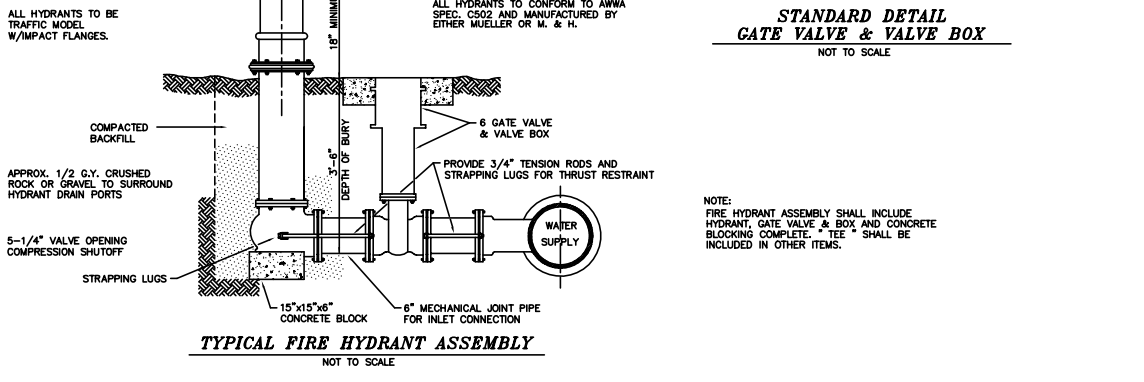
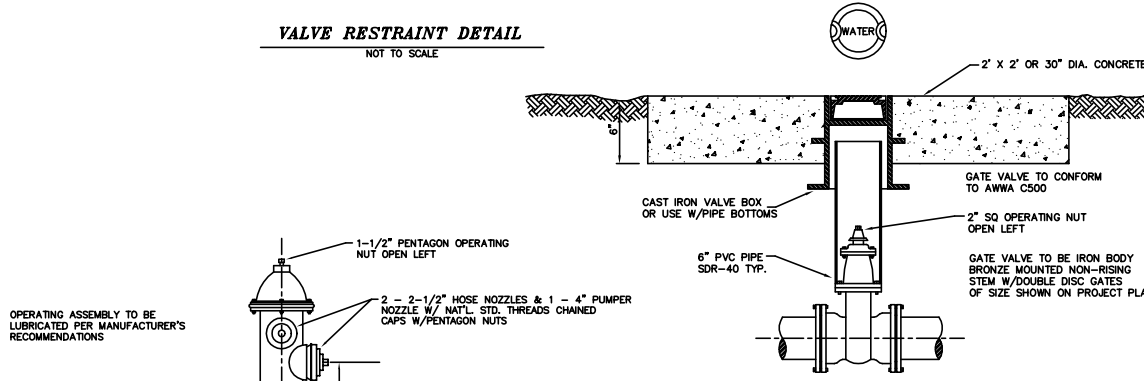
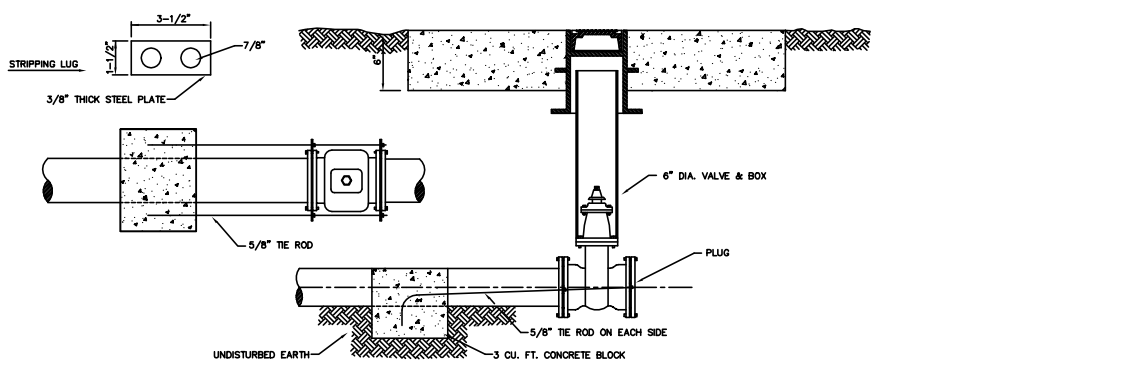
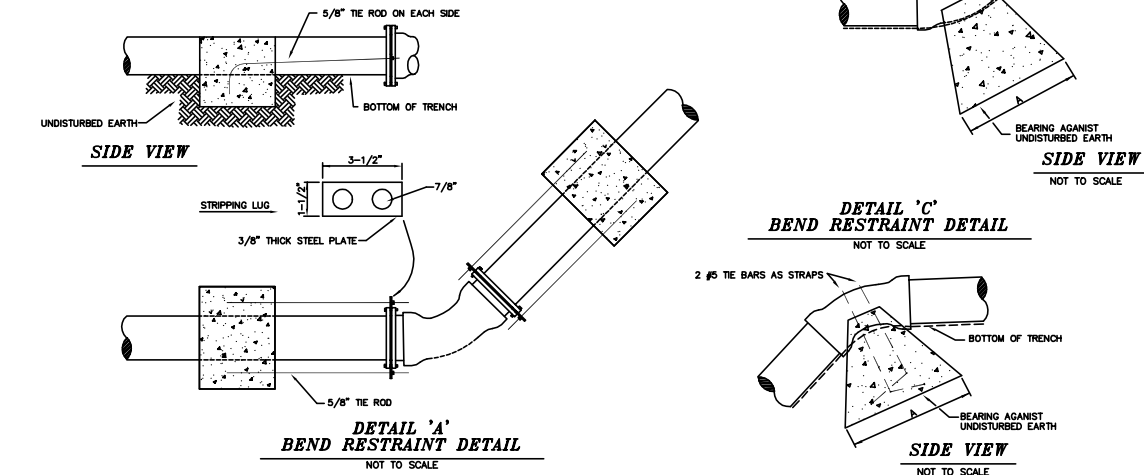


NOTES:
RESTRAINING FITTINGS OR FULL RUN TIE RODS AS APPROVED BY THE ENGINEER MAY BE USED AS TEMPORARY BEND RESTRAINTS TO ALLOW IMMEDIATE RETURN OF SYSTEM TO OPERATION. P.C. CONCRETE ANCHORS AND THRUST BLOCKS SHALL BE PLACED AS PERMANENT RESTRAINTS.



NOTE:
FIRE HYDRANT ASSEMBLY SHALL INCLUDE HYDRANT, GATE VALVE & BOX AND CONCRETE BLOCKING COMPLETE. "TEE" SHALL BE INCLUDED IN OTHER ITEMS.

DETAIL 'B' BEND RESTRAINT DETAIL
NOT TO SCALE

DETAIL 'C' BEND RESTRAINT DETAIL
NOT TO SCALE

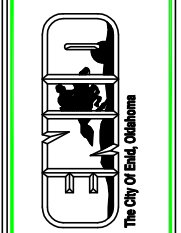
DETAIL 'A' BEND RESTRAINT DETAIL
NOT TO SCALE

VALVE RESTRAINT DETAIL
NOT TO SCALE

STANDARD DETAIL GATE VALVE & VALVE BOX
NOT TO SCALE

TYPICAL FIRE HYDRANT ASSEMBLY
NOT TO SCALE

The City of Elmd
401 West Owen L. Corbett Road
Elmd, Oklahoma 73102
Telephone: (405) 234-0600 Fax: (405) 234-0604
Contacts:
Robert Hill, Director of Engineering Services, Est. 344
Tom Rouse, City Engineer, Est. 340



REVISIONS

Number	Date	Description
1	10/10/81	This Sheet

Project Number: MISCELLANEOUS WATER LINE CONSTRUCTION STANDARD
Project Location: SWD - 2

Sheet Title: MISCELLANEOUS WATER LINE CONSTRUCTION STANDARD
Project Title: SWD - 2

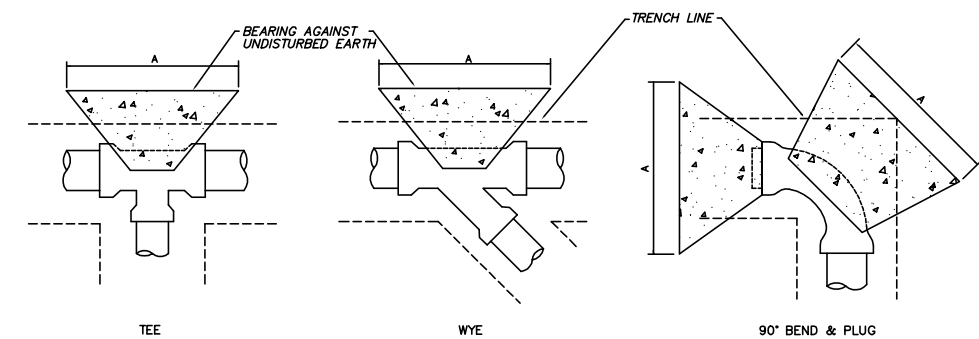


Date: 8/1/81
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Drawn By: P.B.
Designed By: R.H.
Approved By: R.H.
Sheet: of

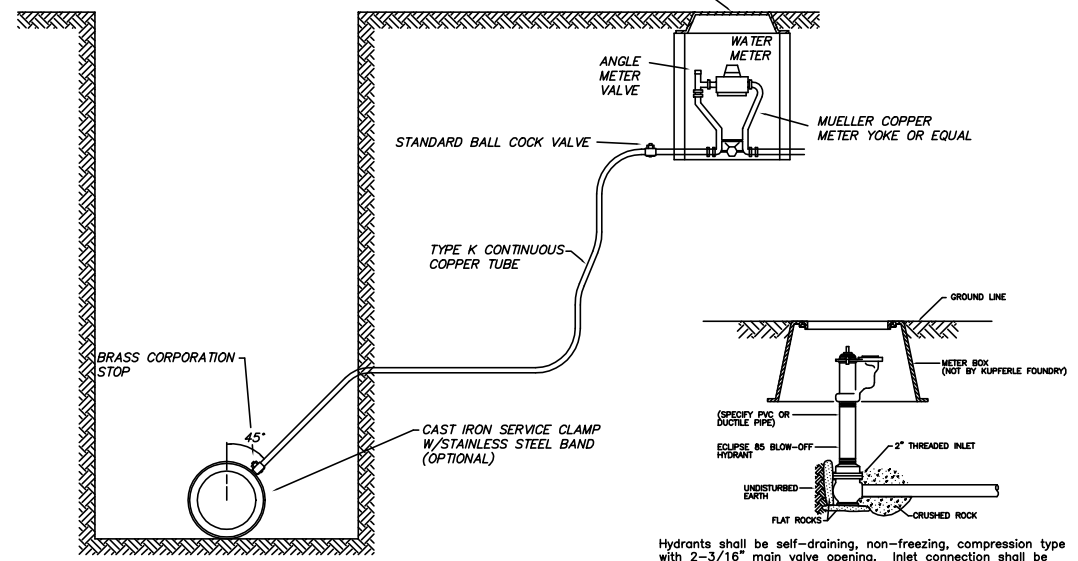
CONCRETE ANCHOR SCHEDULE

PIPE SIZES	DIAMETER (I.D.) ²	"A" BEARING AREA IN SQUARE FEET			
		22-1/2' BEND	45' BEND & WYES	90' BEND	TEE & PLUG
4	17.8	0.68	1.34	2.3	1.75
6	39.4	1.5	2.95	5.45	3.85
8	70.4	2.7	5.3	9.8	6.85
10	108.2	4.15	8.15	15.0	10.6
12	155.2	5.95	11.7	21.6	15.2
14	213.0	8.15	16.0	29.6	21.0
16	278.0	10.65	21.0	38.7	27.3
18	351.0	13.45	26.5	48.9	34.5
20	434.0	16.60	32.65	60.5	42.5
24	625.0	23.95	47.0	87.0	62.0

ASSUMPTIONS: SAFE SOIL BEARING PRESSURE = 2,000 P.S.F.
DESIGN PRESSURE MAXIMUM = TEST PRESSURE = 250 P.S.I.



CONCRETE ANCHORS FOR PIPE FITTINGS
NOT TO SCALE



NOTES:
1. ALWAYS PUT A BEND OR "GOOSENECK" IN SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND "GIVE" TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.
2. SOIL AROUND SERVICE CONNECTION SHALL BE COMPACTED TO DENSITY OF SURROUNDING SOIL.

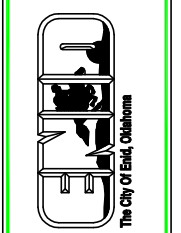
BLOW-OFF HYDRANT DETAIL
ECLIPSE NO. 85 BY THE KUPFERLE FOUNDRY COMPANY OR EQUIVALENT
NOT TO SCALE

Hydrants shall be self-draining, non-freezing, compression type with 2-3/16" main valve opening. Inlet connection shall be (1-1/4"IP, 1-1/2"IP, 2"IP, 2-1/2"IP, 3"IP, 2"MU or 3"MU). Outlet size shall be (any size up to 2-1/2"NST).

Principal interior operating parts shall be brass and removable from the hydrant for servicing without excavating the hydrant.

Hydrants shall be set in 4 cubic feet of crushed stone to allow for proper drainage of the hydrant. Recommendations of the AWWA should be followed for installation of the hydrants.

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REVISIONS

Number	Date	Description
1	10/10/81	This Sheet

Project Number: WATER LINE BLOCKING AND SERVICE LINE DETAILS
Project Location: SWD - 1

Sheet Title: WATER LINE BLOCKING AND SERVICE LINE DETAILS
Project Title: SWD - 1



Date: 8/1/81
Scale: NO SCALE
Cad File: b:\PHAL\SPES\SWD1-2
Drawn By: P.B.
Designed By: R.H.
Approved By: R.H.
Sheet: 4 of 5