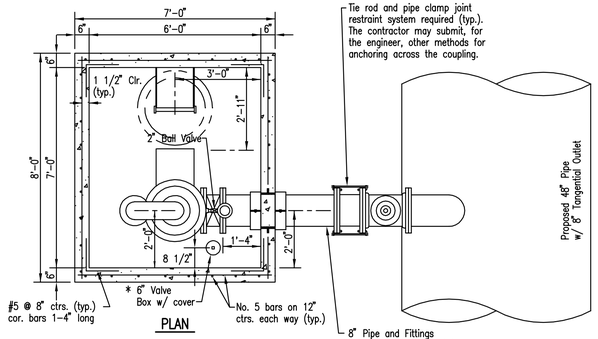
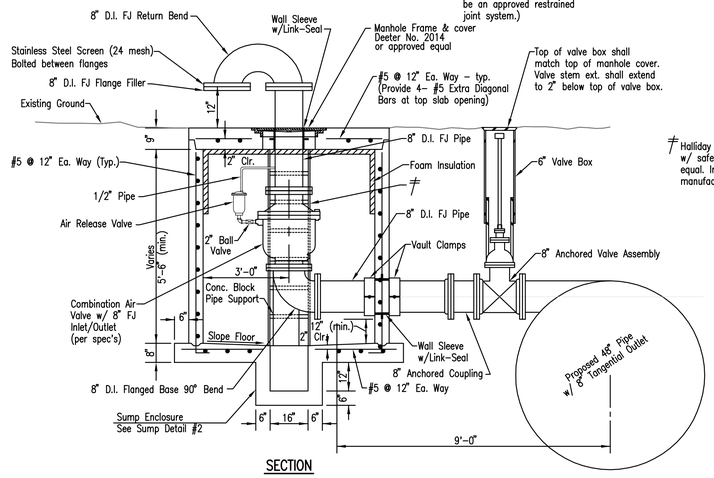


PLAN



SECTION

Halliday aluminum ladder w/ safety post or approved equal. Install per manufacturers specifications.

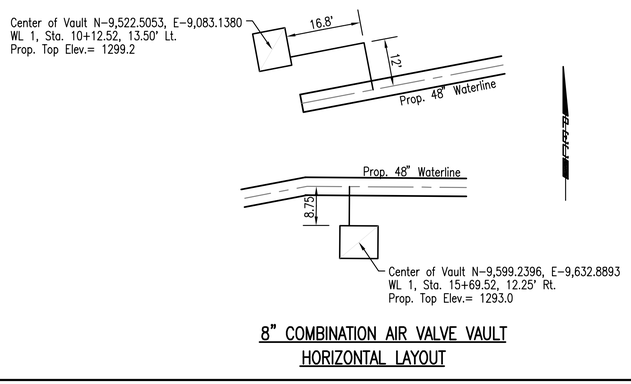
8" COMBINATION AIR VALVE VAULT

NO SCALE

NOTE: PROVIDE A "CONFINED ENTRY SPACE WARNING" SIGN, CHAMPION AMERICAN MODEL 73415HH OR APPROVED EQUAL, FOR VAULT AT LOCATION AS APPROVED BY THE ENGINEER. THE "CONFINED ENTRY SPACE WARNING" SIGN SHALL BE FASTENED TO THE TOP OF ALL VAULTS. IF NECESSARY FOR LANDSCAPING OR SITE CONSIDERATIONS, THE SIGN MAY BE FASTENED TO THE VAULT LID IF IT DOES NOT IMPEDE ACCESS OR AIR FLOW.

THE CONTRACTOR SHALL PROVIDE VERTICAL FITTINGS AS REQUIRED TO MEET THE REQUIREMENTS FOR DEPTH OF THE VAULT SHOWN IN THE DETAIL. THE TOP OF THE 12" PIPING INTO THE VAULT SHALL BE 5.2' (MIN.) BELOW EXISTING GRADE.

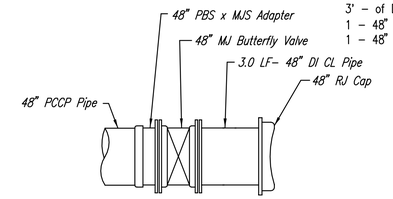
* VALVE BOXES SHALL BE FURNISHED WITH TAMPER PROOF LOCKING LIDS. McGARD INTIMIDATOR CURB-LOCK OR APPROVED EQUAL. TWO SOCKET WRENCH KEYS SHALL BE PROVIDED FOR EACH SIZE AND TYPE OF LOCKING LID. TYPICAL ALL VAULTS.



8" COMBINATION AIR VALVE VAULT HORIZONTAL LAYOUT

MATERIALS LIST

1 – 48" MJ Butterfly Valve
1 – 6" Valve Box
1 – 48" CI MJ Sleeve – Long
1 – 48" DI CL Spacer – 6" Long
3' – of DI CL SJ Pipe
1 – 48" MJS x PBB Adapter
1 – 48" PBS x MSJ Adapter



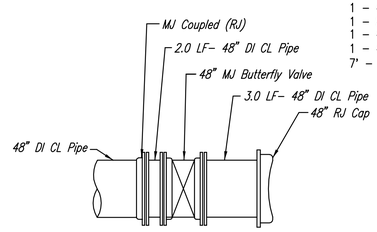
**THE CONTRACTOR SHALL UTILIZE RESTRAINED JOINT PIPE AND TIE RODS TO RESTRAIN ALL PIPING AT THE VALVE LOCATIONS.

48" LINE VALVE DETAIL

PCCP OPTION

MATERIALS LIST

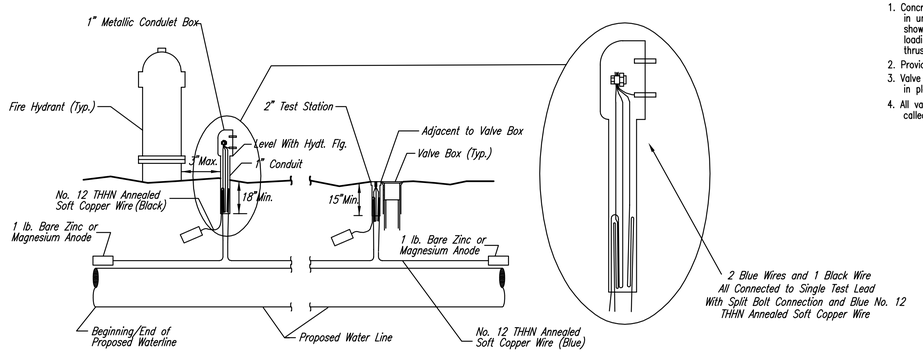
1 – 48" MJ Butterfly Valve
1 – 6" Valve Box
1 – 48" CI MJ Sleeve – Long
1 – 48" DI CL Spacer – 6" Long
7' – of DI CL SJ Pipe



**THE CONTRACTOR SHALL UTILIZE RESTRAINED JOINT PIPE AND TIE RODS TO RESTRAIN ALL PIPING AT THE VALVE LOCATIONS.

48" LINE VALVE DETAIL

DI CL OPTION



TRACER WIRE

Conductive type pipe locator/tracer wire shall be installed to locate waterline pipes. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

WIRE

The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

TEST STATIONS

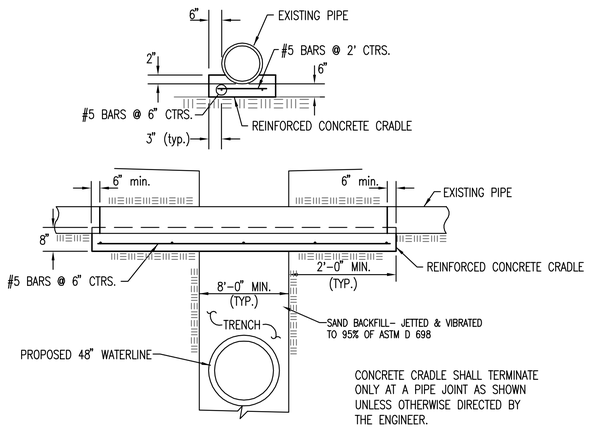
The test station for fire hydrant applications shall be a 1 inch galvanized condulet style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PSJB as manufactured by HANDLEY Industries or approved equal. The condulet style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

ANODES

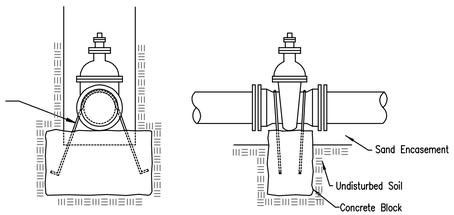
The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL

COST IS SUBSIDIARY TO PIPE INSTALLATION



CONCRETE CRADLE DETAIL

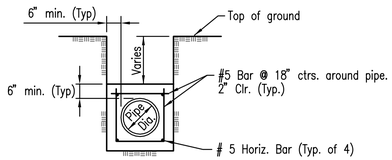


NOTES:

1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
2. Provide clearance around flanges to MJ accessories.
3. Valve block to be included in price bid for Valve, in place.
4. All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES	
VALVE	THRUST @ 150 PSI
4"	1,890 Lbs.
6"	4,245 Lbs.
8"	7,540 Lbs.
12"	16,965 Lbs.
16"	30,160 Lbs.

ANCHORED VALVE ASSEMBLY (SPECIAL)



CONCRETE ENCASEMENT DETAIL

No.	Revision	By	Date

WATERWALK PUBLIC IMPROVEMENTS – PHASE 2 PACKAGE 2
(SOUTHEAST 48" WATERLINE – PHASE 1A)

WATERLINE DETAILS

JAMES L. ARMOUR, P.E. – CITY ENGINEER
CITY OF WICHITA PROJECT NO. 448-90182

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by MDK | Job No. 35-05787-001-42 | Sht. 34 of 47
Drawn by JGA | Date March 2006

Saved: 05-25-2006 4:57:06 PM by JGA
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