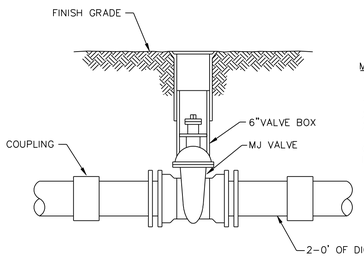
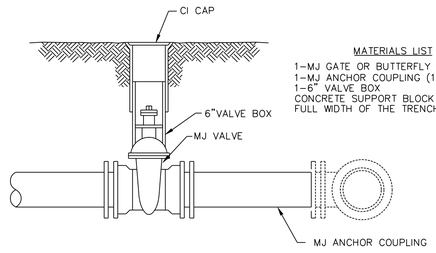


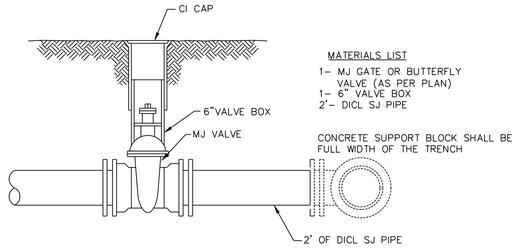
MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-6" VALVE BOX
2-COUPLINGS
2-SHORT PCS. (DICL SJ PIPE)
CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

LINE VALVE ASSEMBLY



MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-MJ ANCHOR COUPLING (12" OR SMALLER)
1-6" VALVE BOX
CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

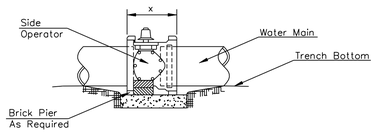
ANCHORED VALVE ASSEMBLY



MATERIALS LIST
1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1- 6" VALVE BOX
2'- DICL SJ PIPE

CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

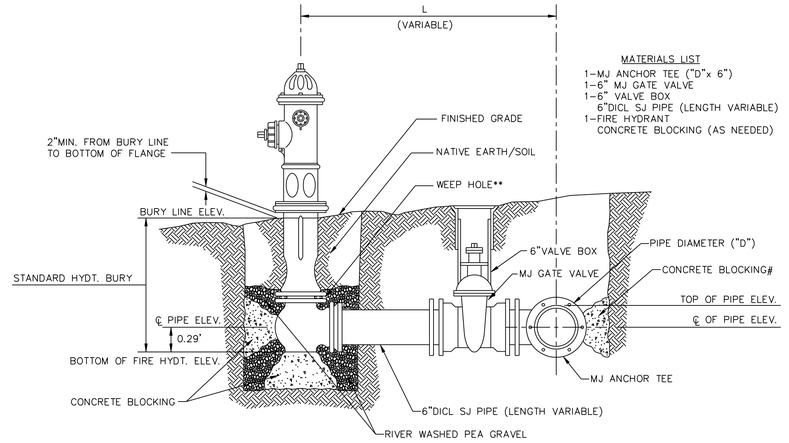
VALVE ASSEMBLY



NOTES

1. This detail covers Butterfly Valve installation, inclusive, regard-less of type of pipe or joint used. Larger lines to be detailed on plans.
2. 6" Valve Box and Cover required per City of Wichita Std. Specifications.
3. Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



MATERIALS LIST
1-MJ ANCHOR TEE ("D"x 6")
1-6" MJ GATE VALVE
1-6" VALVE BOX
6"DICL SJ PIPE (LENGTH VARIABLE)
1-FIRE HYDRANT
CONCRETE BLOCKING (AS NEEDED)

** CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

* IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY.

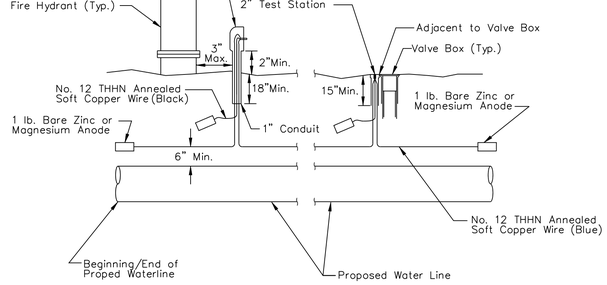
*Fire Hydrants

Proposed Station	Proposed Offset	Roadway	As-Built WL Size (IN)	Existing Bury Line Elev.	As-Built Top of Pipe Elev.	As-Built Hydrant Bury	Proposed Bury Line Elev.	Estimated Change in Bury (FT)
88+50.00	40.1' Lt.	Greenwich	12	1343.11	Unknown	Unknown	1342.60	-0.51
135+50.00	58.8' Lt.	Greenwich	8	1340.69	Unknown	Unknown	1342.50	1.81
140+15.00	38.1' Lt.	Greenwich	12	1343.44	Unknown	Unknown	1343.70	0.26
49+15.00	50.4' Rt.	Harry	16	1344.38	Unknown	Unknown	1343.52	-0.86
56+34.00	40.0' Rt.	Harry	16	1336.73	Unknown	Unknown	1337.90	1.17
63+34.00	33.0' Rt.	Harry	16	1330.55	Unknown	Unknown	1328.51	-2.04

*All work and materials required shall be SUBSIDIARY to the bid item "Fire Hydrant Assembly" Total:

FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS



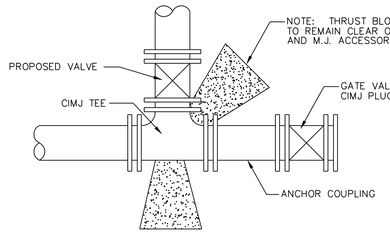
TRACER WIRE
Conductive type pipe locator/tracer wire shall be installed to locate Polyvinyl Chloride (PVC) or any nonmetallic waterline pipes. The wire shall be installed 6 inches above the proposed pipe, and shall extend the entire length of the proposed pipe. In directional drilling applications, the wire shall be taped to the top of 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 proposed alignment. When no fire hydrants are being installed or when deemed appropriate by the Area Engineer the flush mount alternative test station shall be used. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. The anode shall be installed a minimum of 5 feet away from the waterline. 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.

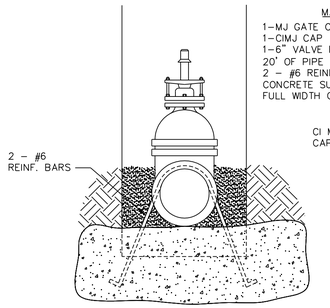
TEST STATIONS
The test station shall be a 1 inch condulet style test station as manufactured by COTT Manufacturing with a removable solid cover with one lead extending from the face; 2 inch flush style test station T2PS3B as manufactured by Handley Industries; or approved equal. The condulet style shall be attached to a 1 inch conduit with a minimum length of 36". The flush style shall have the word "WATER" stamped or molded into the plastic lid. All test stations shall be manufactured using molded blue plastic tops. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. The location of all test stations shall be approved by the Area 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 a minimum of 5 feet deep 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



KEY BLOCK DETAIL

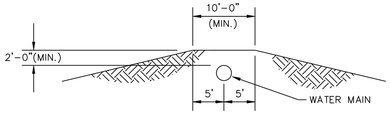


Notes:
1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
2. The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
3. All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES

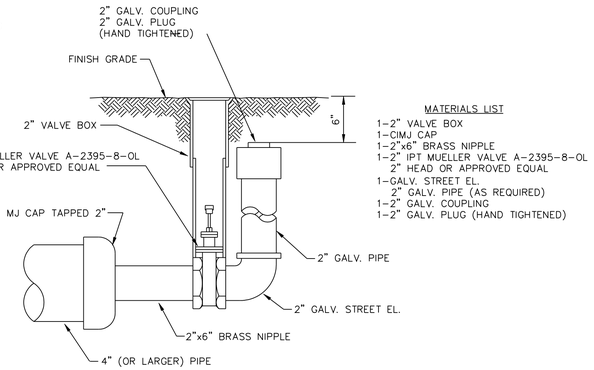
VALVE	THRUST AT 150 #/in²
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL



PROTECTIVE FILL DETAIL

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN (2) FEET. (COST SUBSIDIARY TO PIPE INSTALLATION)



MATERIALS LIST
1-2" VALVE BOX
1-CIMJ CAP
1-2"x6" BRASS NIPPLE
1-2" IPT MUELLER VALVE A-2395-8-OL
2" HEAD OR APPROVED EQUAL
1-GALV. STREET EL.
2" GALV. PIPE (AS REQUIRED)
1-2" GALV. COUPLING
1-2" GALV. PLUG (HAND TIGHTENED)

2" BLOWOFF ASSEMBLY

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD WATER ASSEMBLY DETAILS

JAMES L. ARMOUR P.E. - CITY ENGINEER

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DATE: NOV 98	SHEET 60 OF 255