

CONSTRUCTION PLANS FOR THE CITY OF WICHITA WATER DISTRIBUTION SYSTEM ADJUSTMENTS

**HARRY STREET, WEBB TO GREENWICH
WICHITA, SEDGWICK COUNTY, KANSAS
PROJECT NO. 448-89298
INDEX CODE: 635602**

SCALE : 1 = 1000

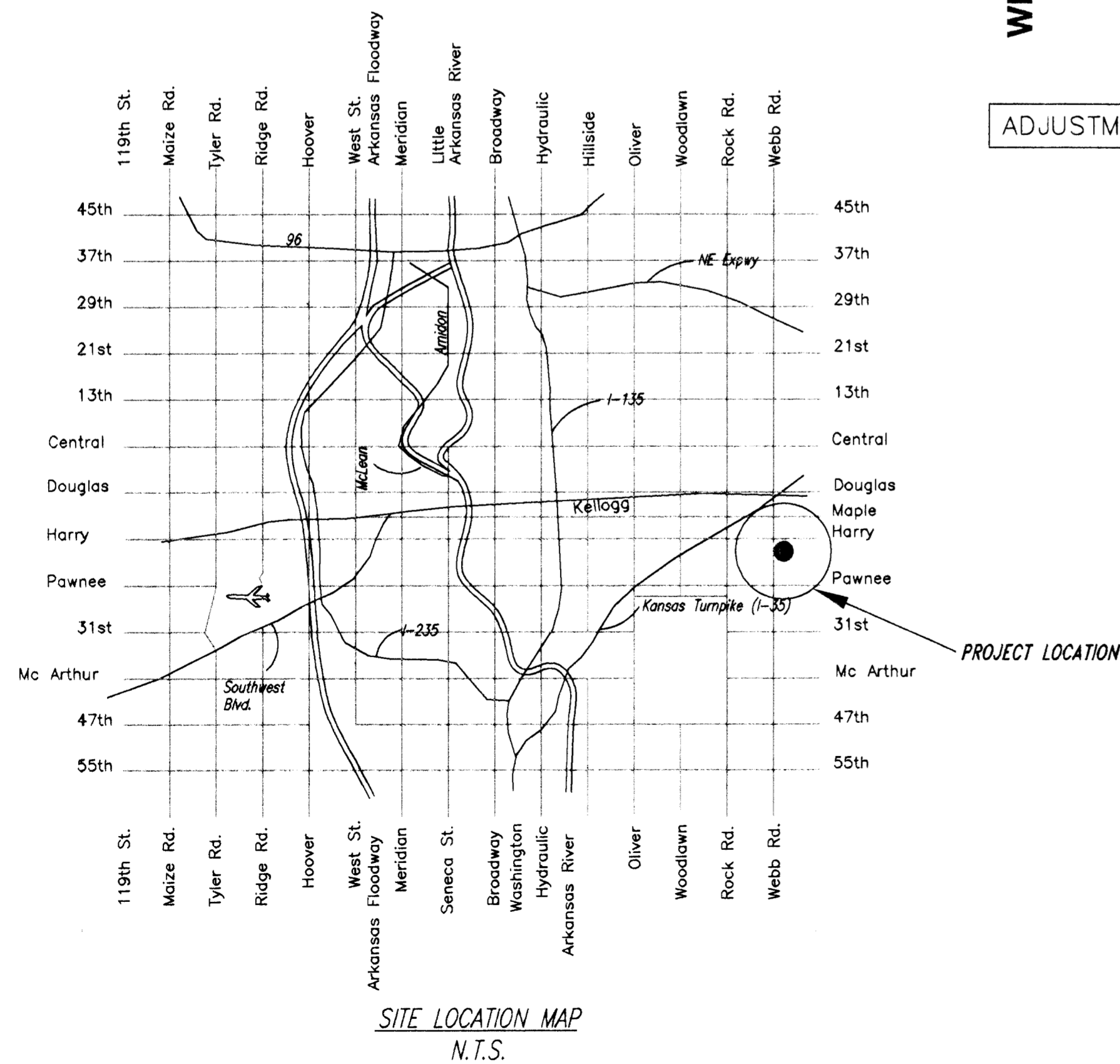
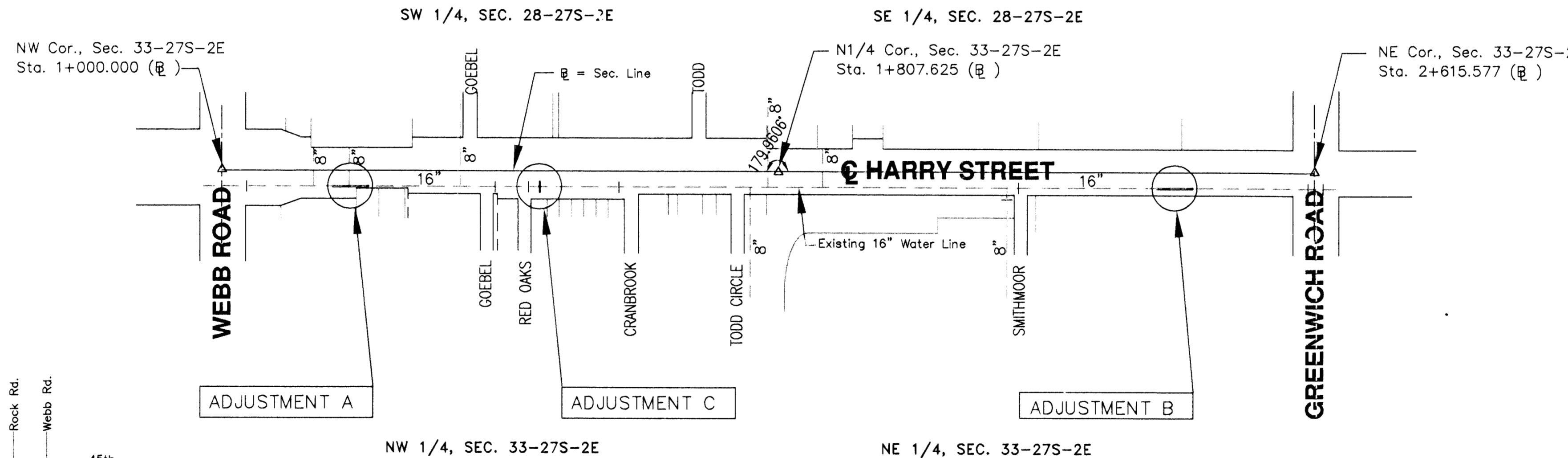
INDEX OF SHEETS

SHEET NO.:	1	TITLE SHEET
	2	STANDARD WATER ASSEMBLY DETAIL
	3	PROFILE SHEET

GENERAL NOTES:

- CONTRACTOR IS SOLELY RESPONSIBLE TO NOTIFY AND TO MAKE ANY NECESSARY ARRANGEMENTS WITH UTILITY COMPANIES FOR ANY NEEDED ADJUSTMENTS OF UTILITY FACILITIES PRIOR TO START OF WORK.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE AS MINIMUM ADVANCE NOTICE OF FORTY EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE CALL	687-2470
SOUTHWESTERN BELL TELEPHONE COMPANY	1-316-571-2611
CABLEVISION	262-4270 or 263-2061
KPL GAS SERVICE	263-7511
KANSAS GAS & ELECTRIC	264-1141
CITY OF WICHITA WATER DEPARTMENT	268-4908
CITY OF WICHITA SEWER DEPARTMENT	268-4071
PEOPLES NATURAL GAS	942-8811
- THE WATER MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN BY THE PLANS. TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE. THE COST FOR ANY NECESSARY TREE TRIMMING, CLEARING AND/OR GRUBBING SHALL BE INCLUDED IN THE PRICE BID FOR INSTALLED WATER MAIN PIPE.
- OPENING AND CLOSING WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTION SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED TO THE PROJECT AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
- EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL KNOWN UTILITY COMPANIES WITHIN THE PROJECT AREA. CONTRACTOR WILL REQUEST THAT UTILITY COMPANIES FIELD-LOCATE THEIR EXISTING UNDERGROUND FACILITIES. CONTRACTOR SHALL ADJUST THE HORIZONTAL AND VERTICAL LOCATION OF THE NEW WATERLINES SUCH THAT THEY DO NOT CONFLICT WITH EXISTING UTILITIES.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAW.
- GRASS AREAS DISTURBED BY CONSTRUCTION OR STORAGE OF MATERIALS SHALL BE REPLANTED EITHER BY SEEDING OR SODDING WITH THE SAME TYPE OF GRASS AS WAS EXISTING PRIOR TO WATER LINE CONSTRUCTION IN ACCORDANCE WITH CITY OF WICHITA ADMINISTRATIVE REGULATION NO. 78.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTING THE CONSTRUCTION OF THIS PROJECT, A MINIMUM OF THREE(3) DAYS ADVANCE NOTICE PRIOR TO BEGINNING CONSTRUCTION.
- TOP OF EXISTING WATER LINE ELEVATIONS ARE TAKEN FROM CITY RECORDS. CONTRACTOR SHALL UNCOVER THE EXISTING WATER LINE IN ORDER TO ASCERTAIN THIS ELEVATION PRIOR TO BEGINNING CONSTRUCTION. ADJUSTMENTS IN PROFILE GRADE MAY HAVE TO BE MADE IF TOP OF EXISTING WATER LINE ELEVATION IS DIFFERENT THAN AS SHOWN ON PLANS.



TIES TO THREE SECTION CORNERS:

NW Cor., Sec. 33-27S-2E
 POT: 3/4" Iron in Thimble, Sta. 1+000
 18.007 M S. to "X" cut on N. end Island.
 17.898 M S. to "X" cut on S. end Island.
 17.919 M W. to "X" cut on E. end Island.
 18.038 M E. to "X" cut on W. end Island

N1/4 Cor., Sec. 33-27S-2E
 POT: Fd. 1" Iron in Thimble, Sta. 1+807.625
 18.020 M S. to 3 Nails in E. side PP.
 12.619 M S. to 60 d nail in N. side PP.
 14.941 M NNE to 3 nails in E. side PP.
 15.011 M N. to S. edge MH rim.

NE Cor., Sec. 33-27S-2E
 POT: 3/8" Iron - 0.1 below surface of road.
 18.148 M NW to nail & shiner in SW side PP.
 17.764' NE to penny glued to SW corner signal base.
 13.254' SE to nail & shiner in NE side PP.
 19.11 M SW to nail & shiner in SE side PP.

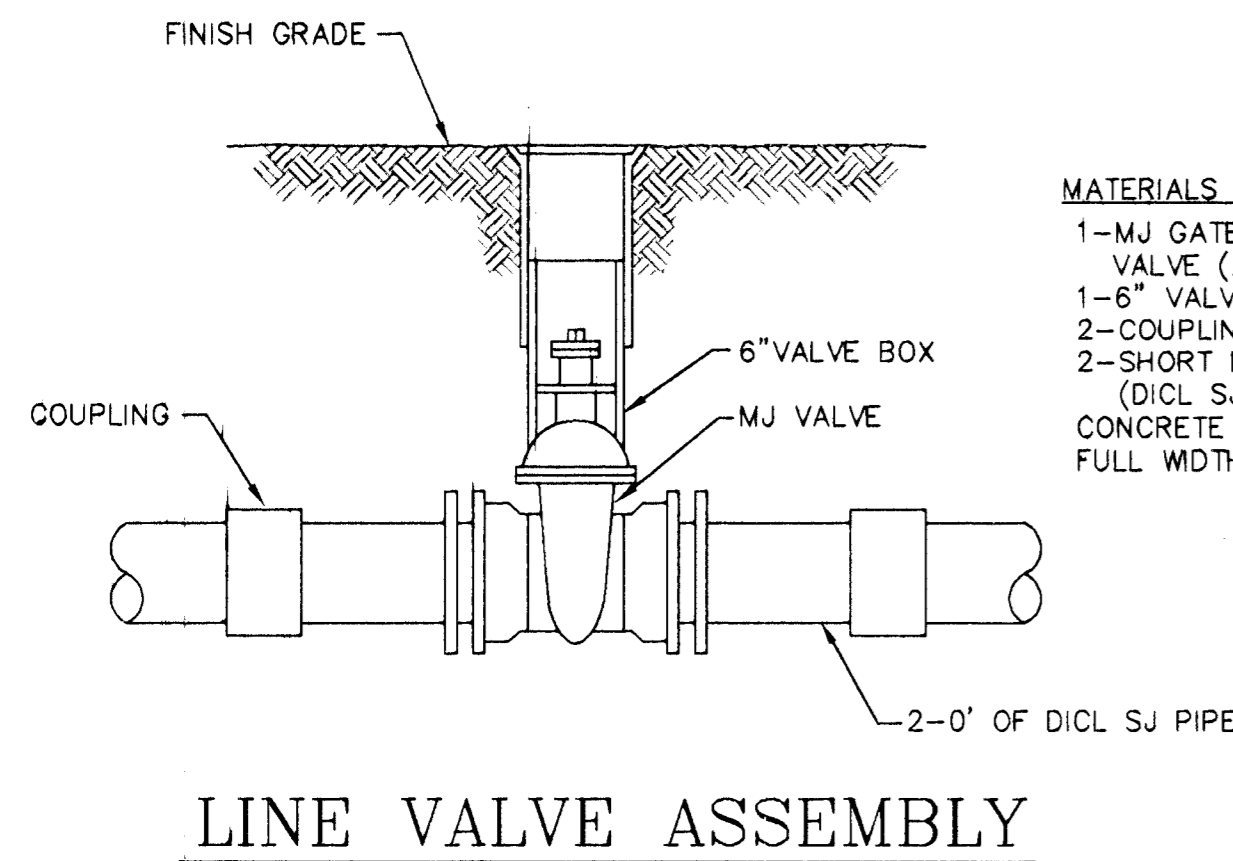


BENCH MARKS:

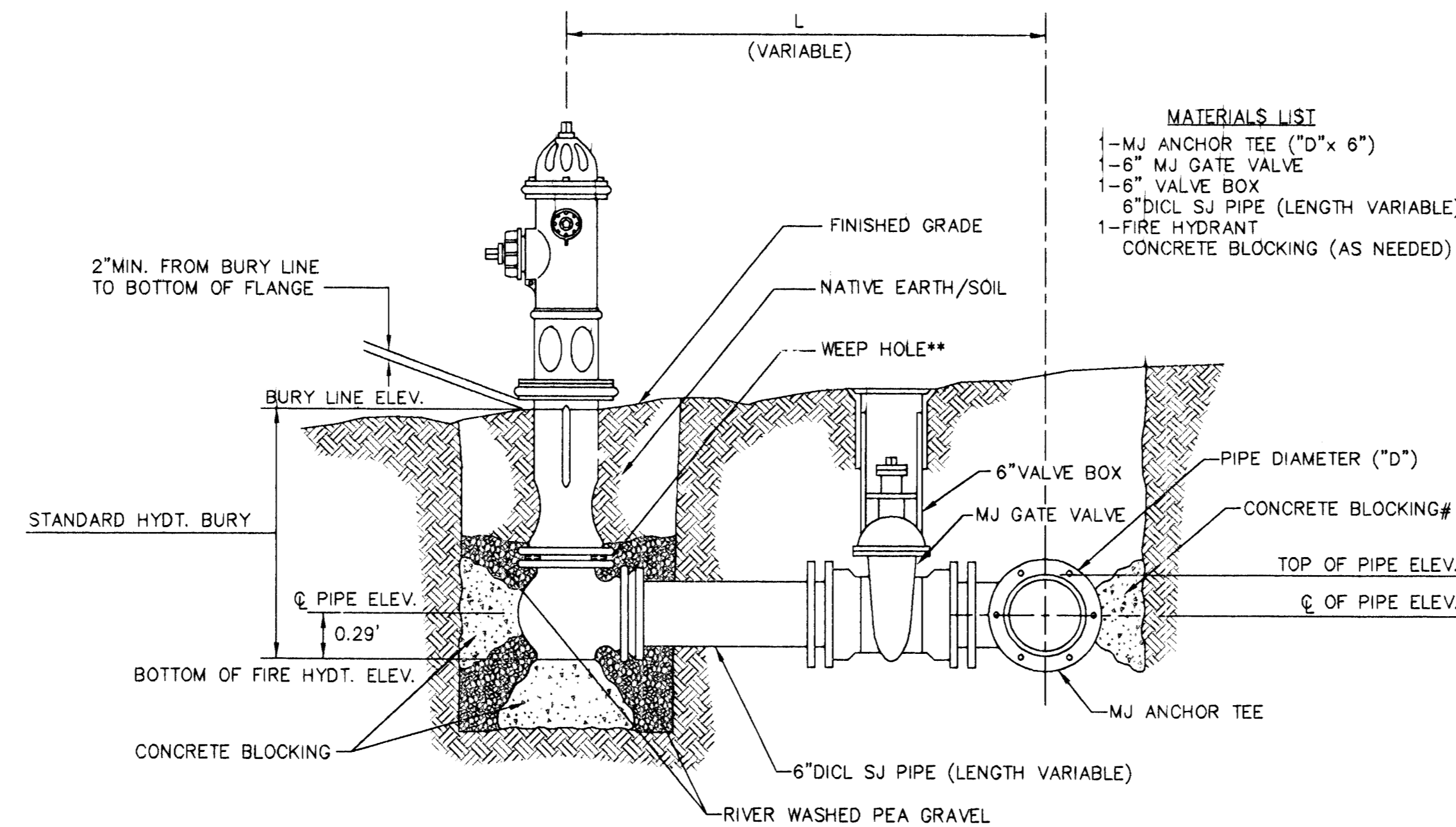
Benchmark # 1: City disc on Signal base on NW corner intersection of Webb & Harry.
 Elev. = 414.240

Benchmark # 2: City Disc on signal base on NE corner intersection of Greenwich & Harry.
 Elev. = 409.600

TITLE SHEET		
SCALE:	APPROVED:	DRAWN BY:
DATE:	CHECKED:	SHEET NO.:
PROJECT NO.:	1 OF 3	
MUNICIPAL ENGINEERS, P.A. 254-LAURA, SUITE 201, WICHITA, KANSAS 67211 316-262-3842 (TEL.) 316-262-8634 (FAX)		



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

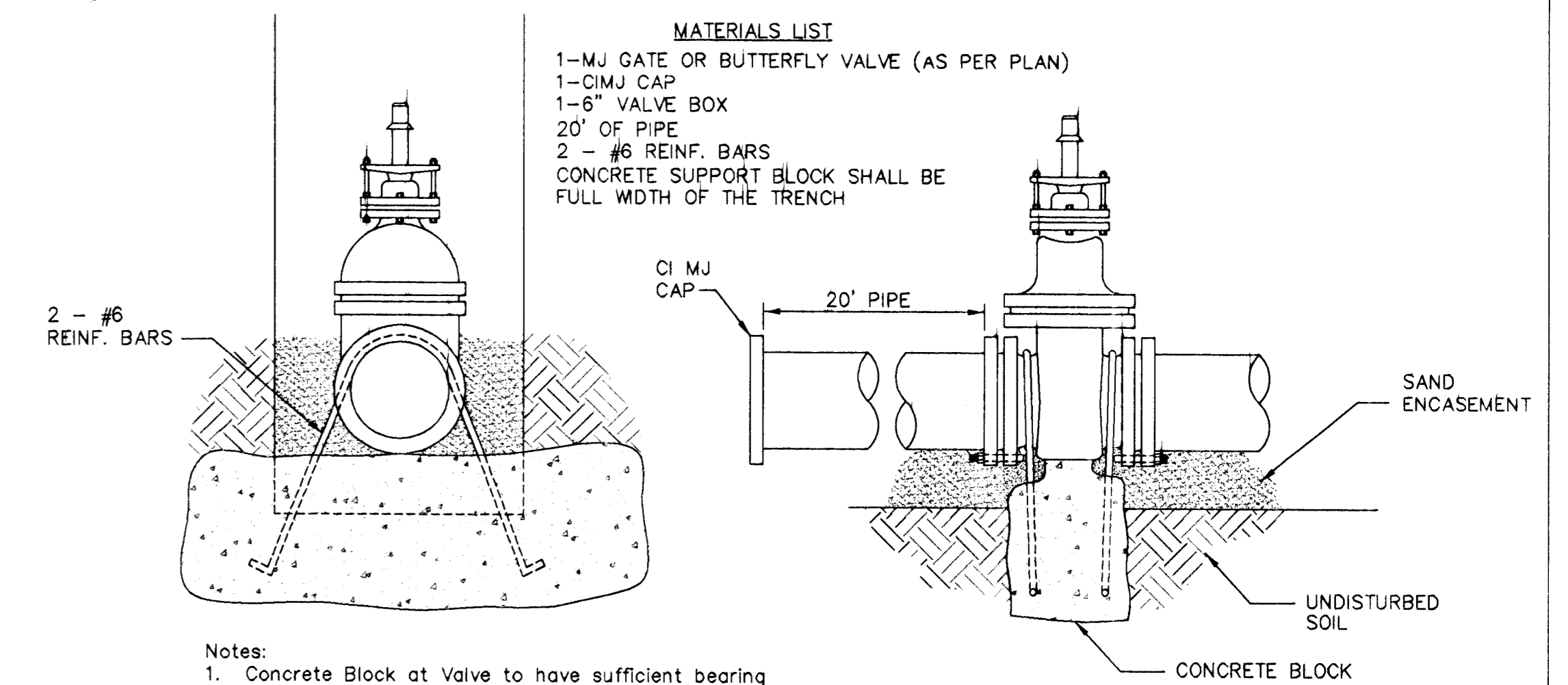


- MATERIALS LIST**
- 1-MJ ANCHOR TEE ("D"x 6")
 - 1-6" MJ GATE VALVE
 - 1-6" VALVE BOX
 - 6" DI/CL SJ PIPE (LENGTH VARIABLE)
 - 1-FIRE HYDRANT
 - CONCRETE BLOCKING (AS NEEDED)

** 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.



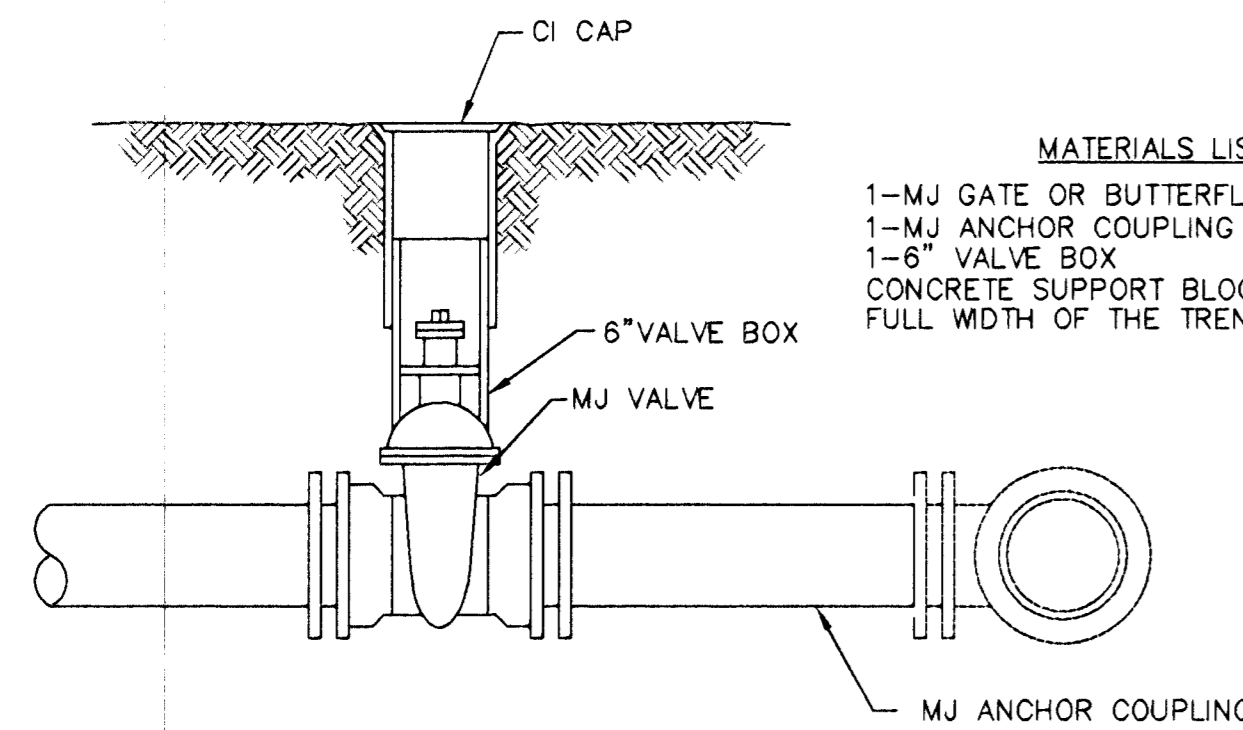
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-CIMJ CAP
 - 1-6" VALVE BOX
 - 20' OF PIPE
 - 2 - #6 REINF. BARS
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

Notes:

- 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.
- The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
- 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 #/sq. in.
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

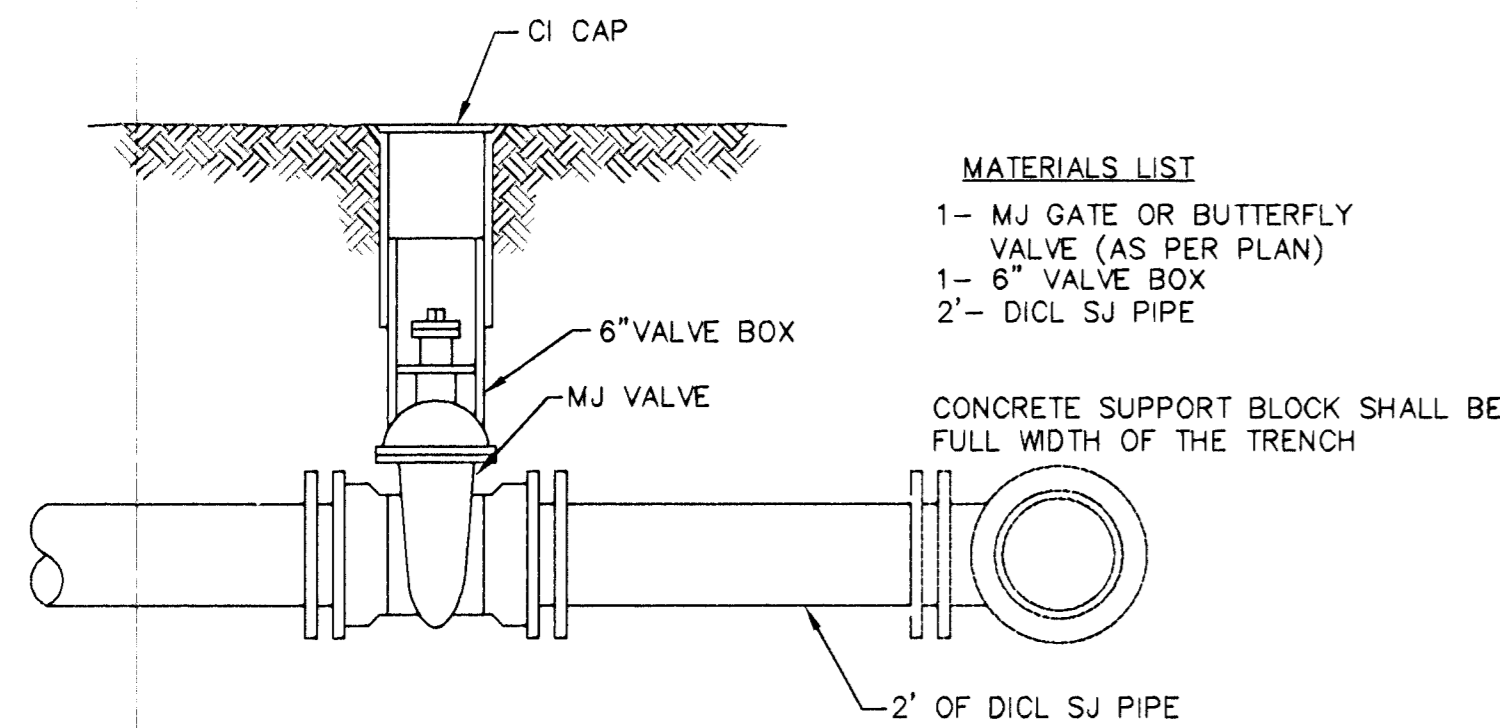
ANCHORED VALVE ASSEMBLY, SPECIAL



- 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

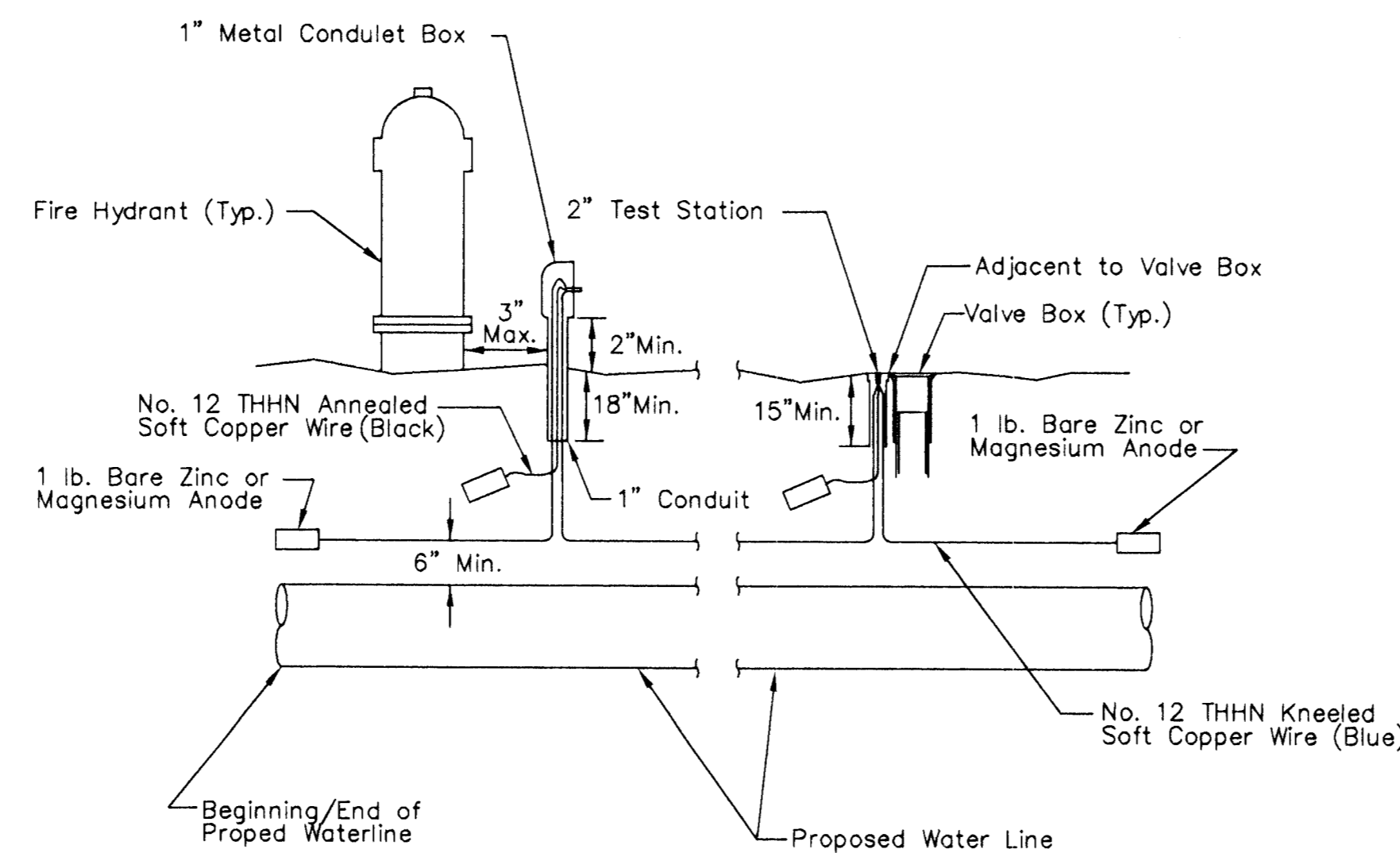
ANCHORED VALVE ASSEMBLY

FIRE HYDRANT ASSEMBLY PER CITY OF WICHITA SPECIFICATIONS



- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-6" VALVE BOX
 - 2'- DI/CL SJ PIPE
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

VALVE ASSEMBLY



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.

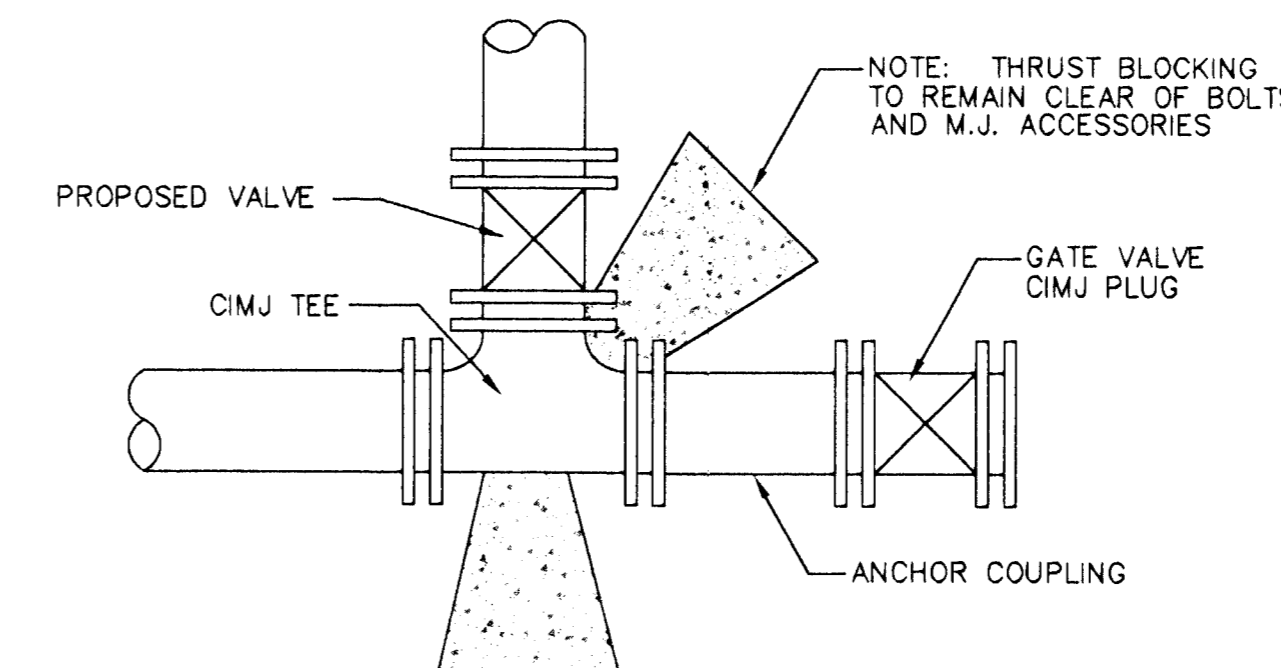
TEST STATIONS

The test station shall be a 1 inch conduit 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 conduit 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

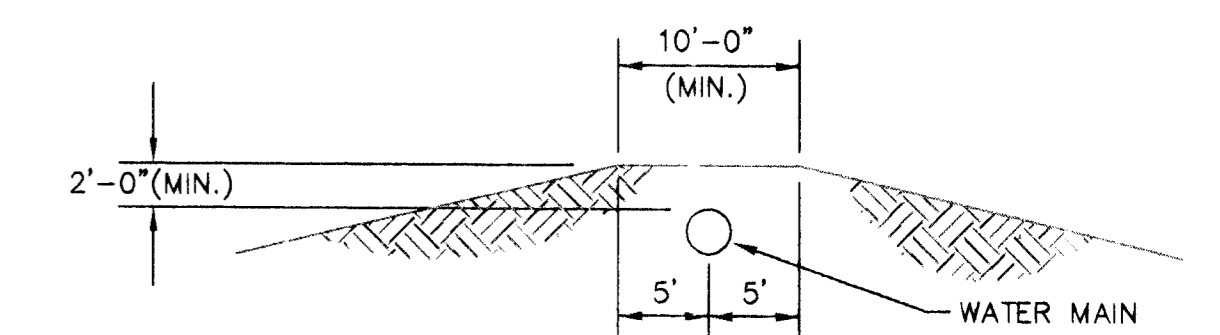
The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried a minimum of 5 feet deep at each test station. The anodes shall be connected to Black No. 12 THHN kneeled soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL



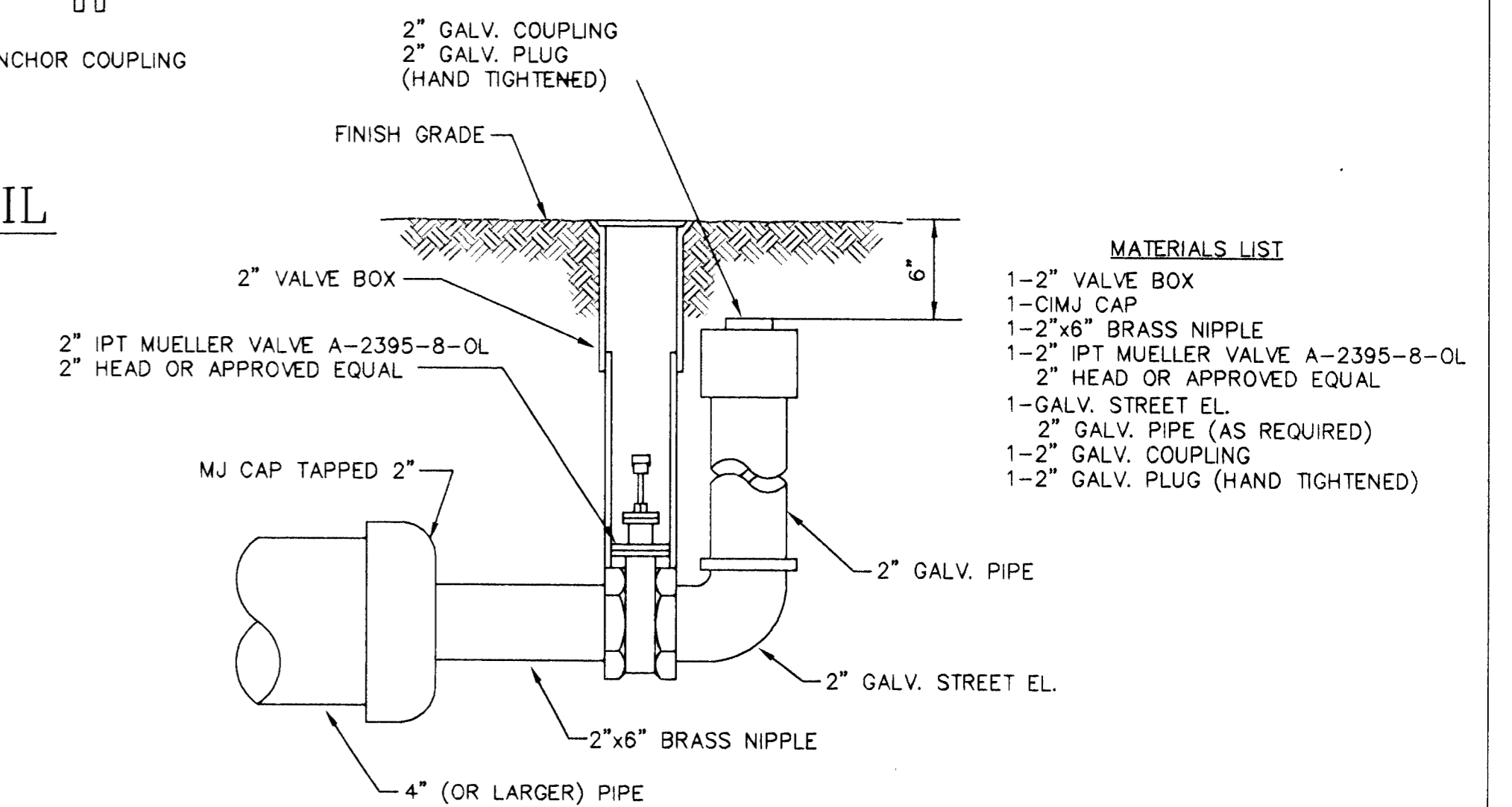
NOTE: THRUST BLOCKING TO REMAIN CLEAR OF BOLTS AND M.J. ACCESSORIES

KEY BLOCK DETAIL



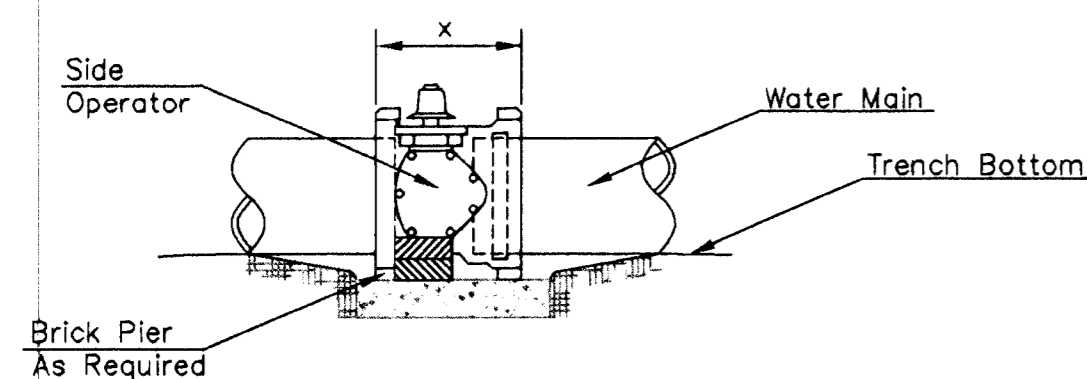
PROTECTIVE FILL DETAIL

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

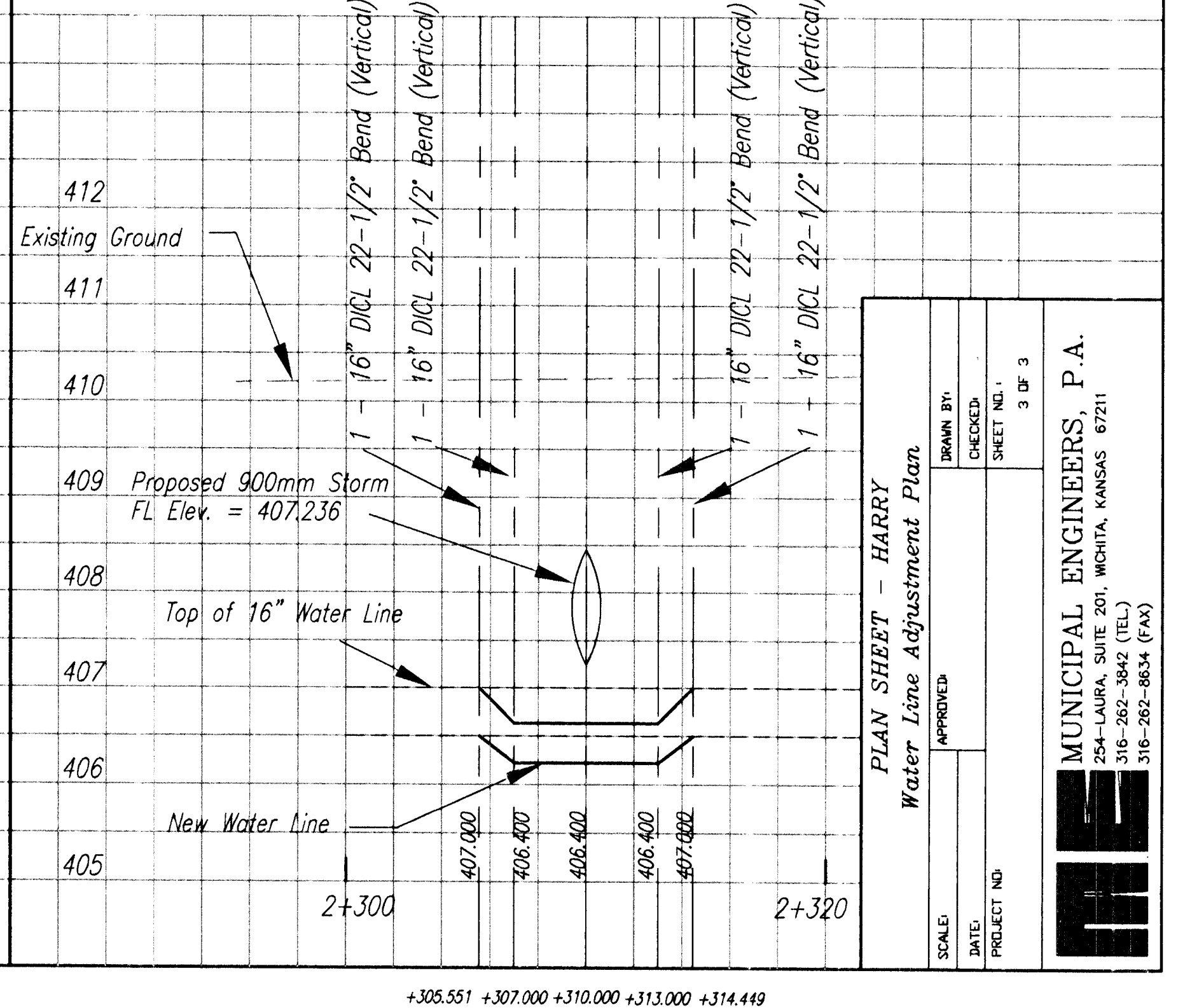
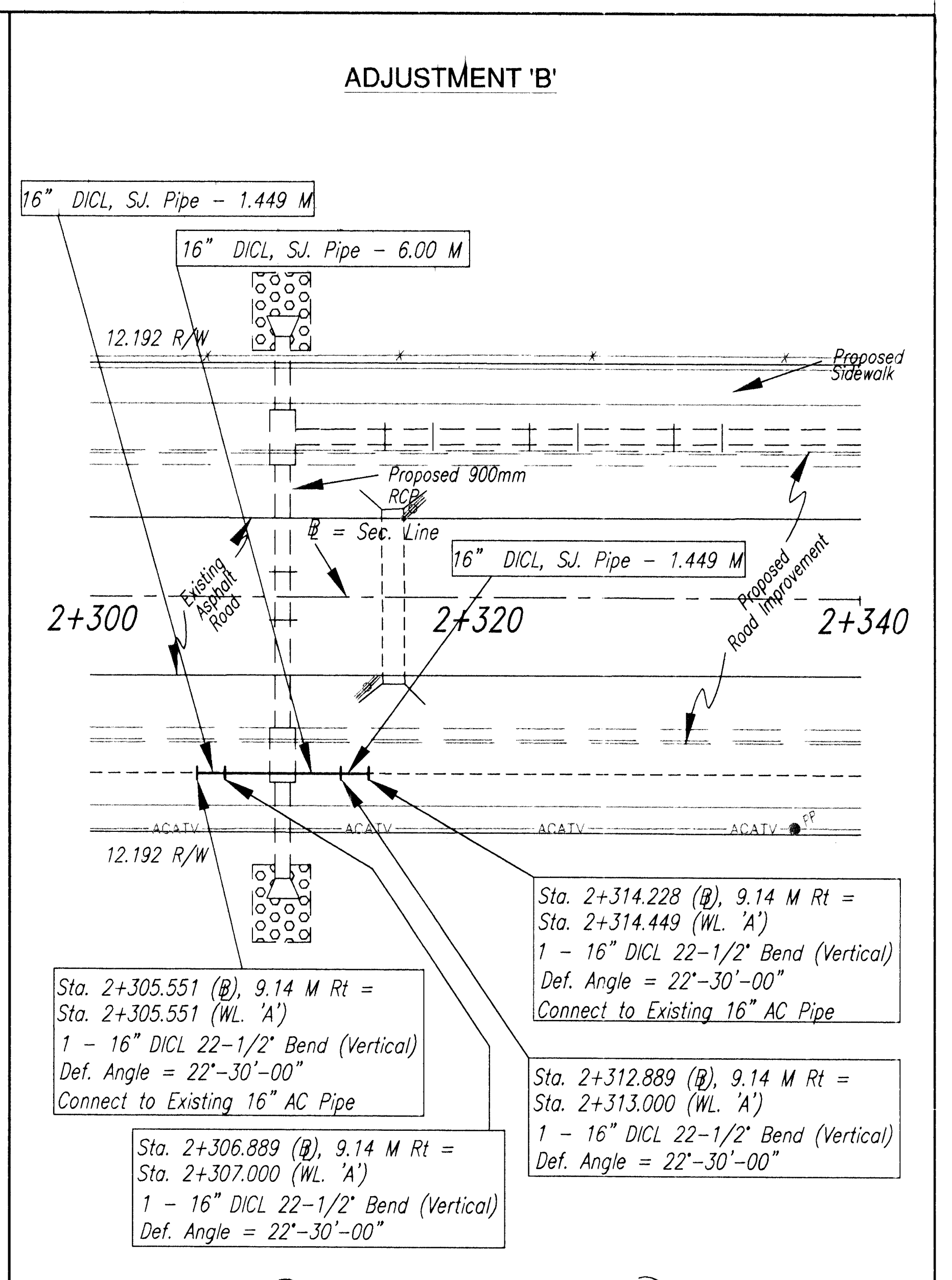
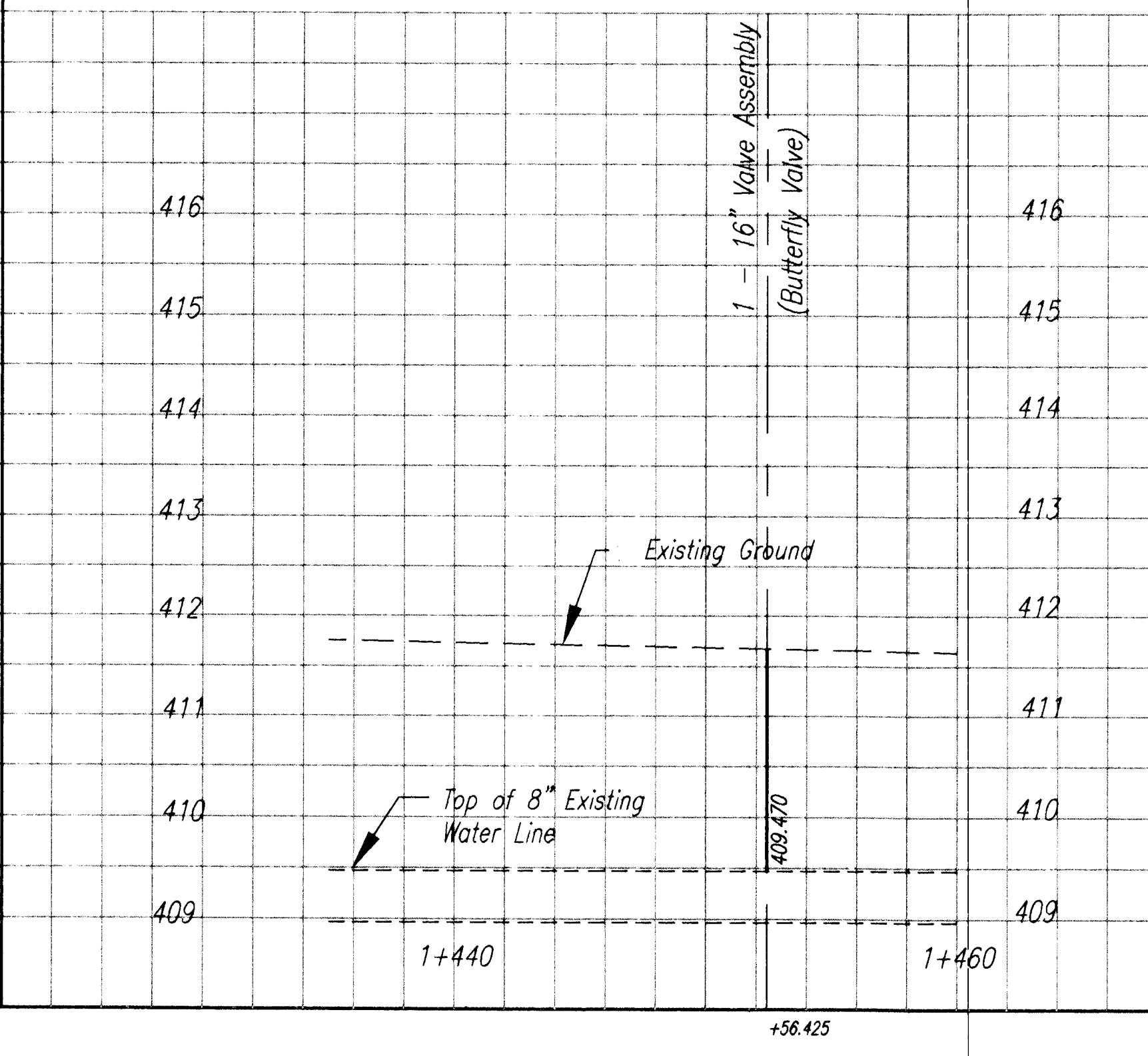
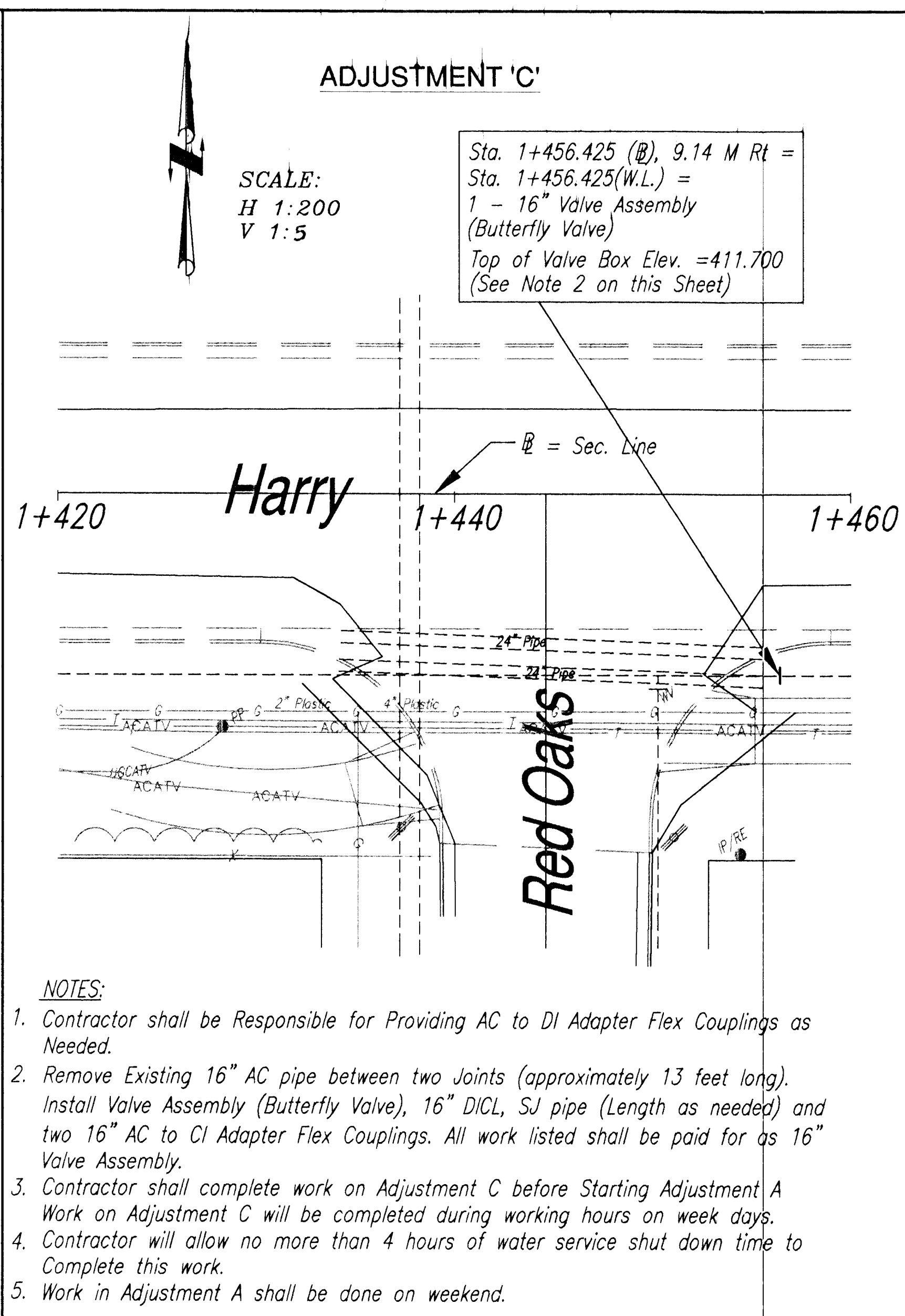
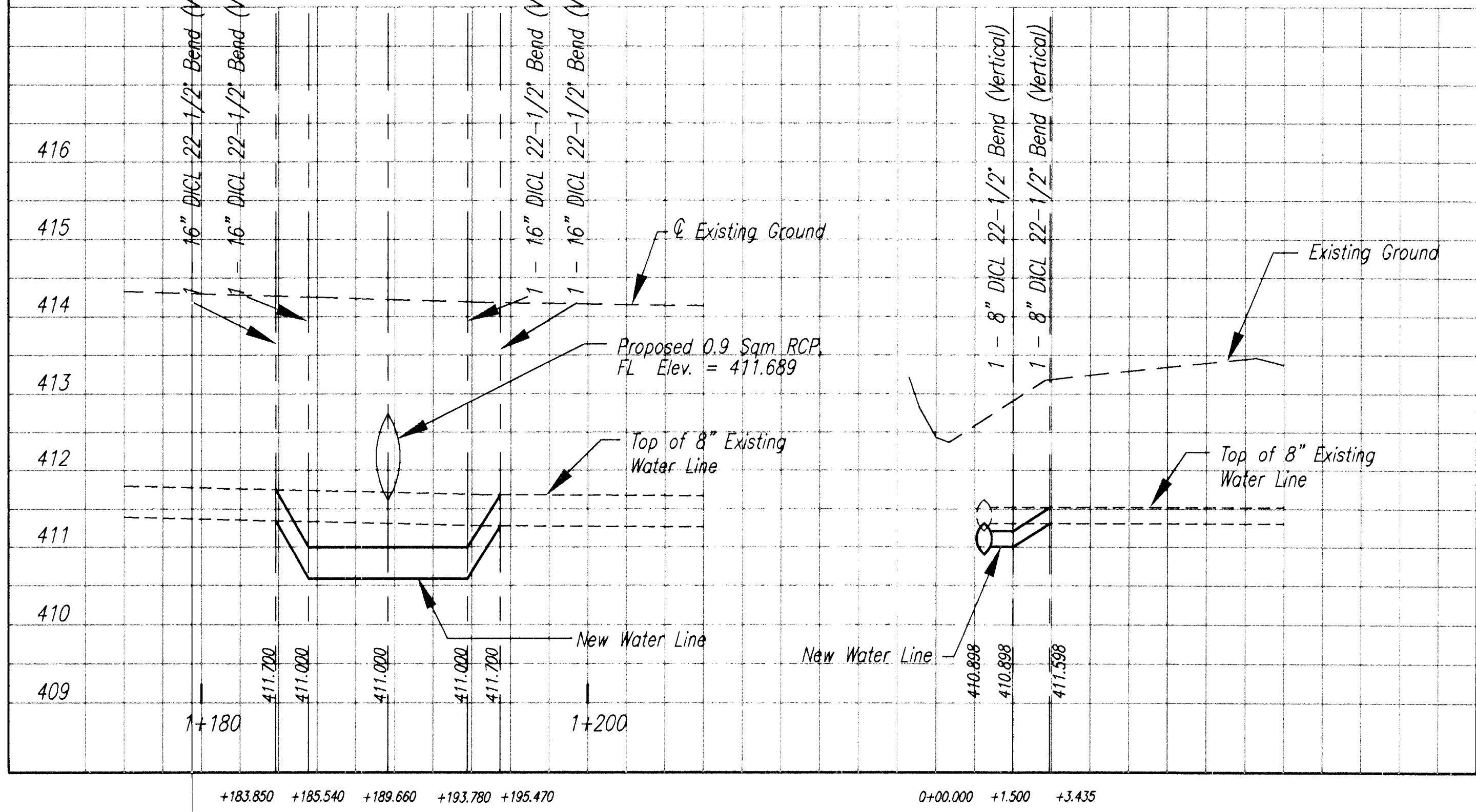
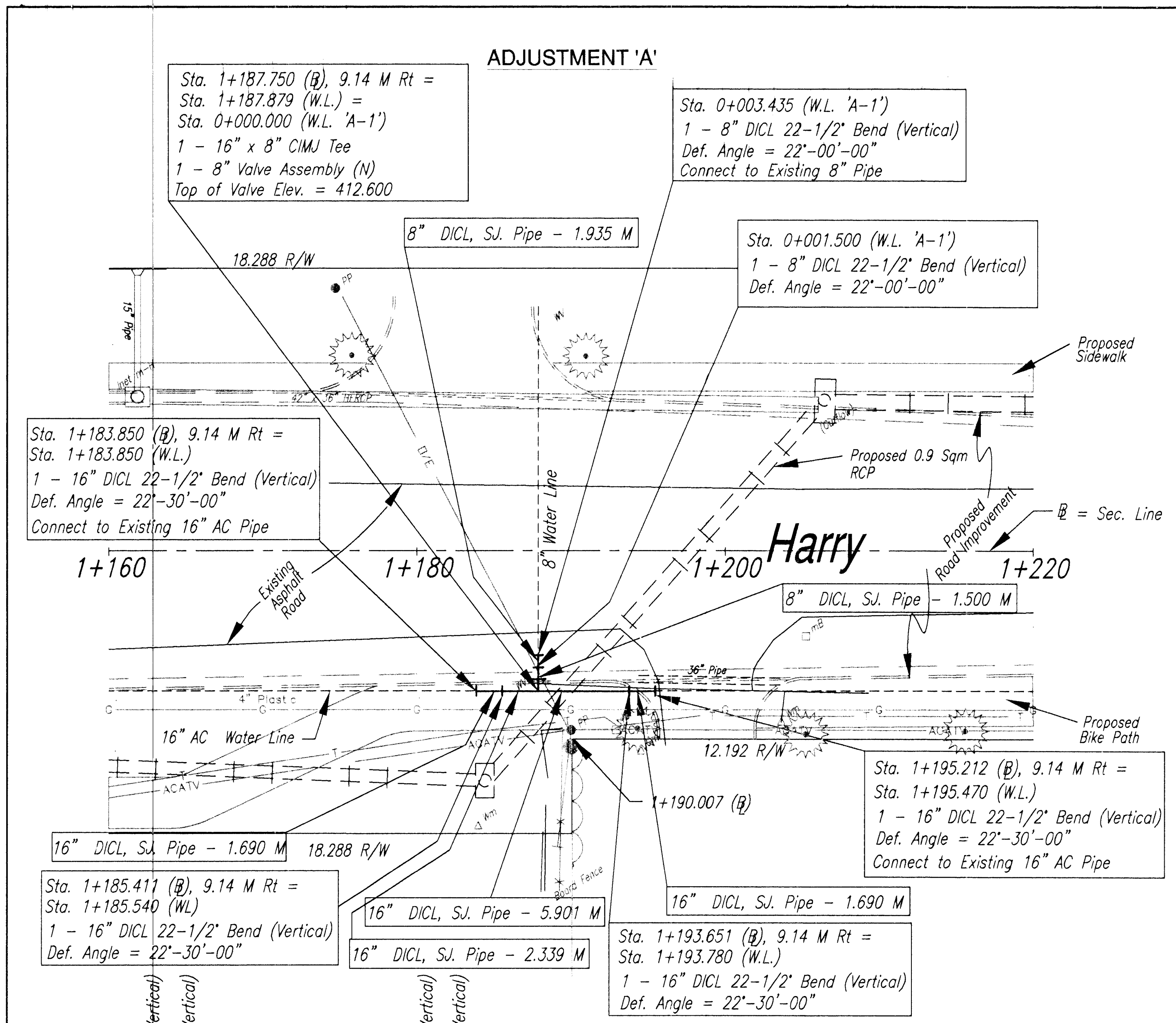


NOTES

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

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION

<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX</p>	STANDARD WATER ASSEMBLY DETAILS	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 448-89298	INDEX CODE
DATE NOV 98	SHEET 2 OF 3	



- NOTES:**
- Contractor shall be Responsible for Providing AC to DI Adapter Flex Couplings as Needed.
 - Remove Existing 16" AC pipe between two Joints (approximately 13 feet long). Install Valve Assembly (Butterfly Valve), 16" DI CL, S.J pipe (Length as needed) and two 16" AC to CI Adapter Flex Couplings. All work listed shall be paid for as 16" Valve Assembly.
 - Contractor shall complete work on Adjustment C before Starting Adjustment A Work on Adjustment C will be completed during working hours on week days.
 - Contractor will allow no more than 4 hours of water service shut down time to Complete this work.
 - Work in Adjustment A shall be done on weekend.

PLAN SHEET - HARRY
Water Line Adjustment Plan

SCALE:	DRAWN BY:	CHECKED:	SHEET NO. 3 OF 3
DATE:	PROJECT NO:		

MUNICIPAL ENGINEERS, P.A.
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