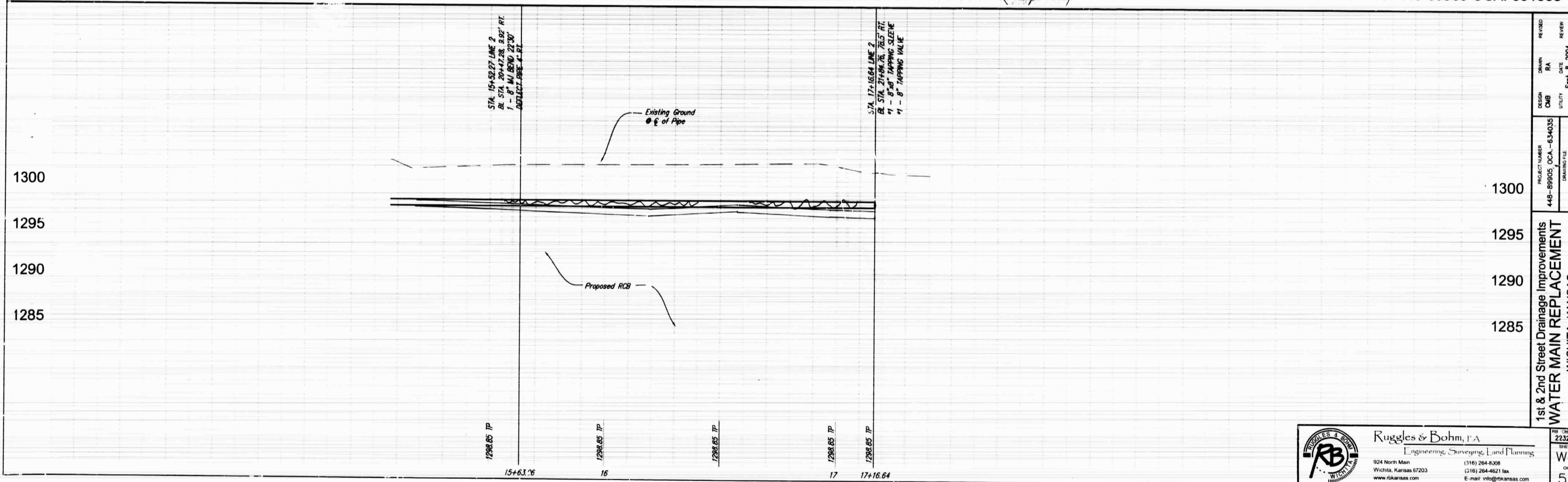
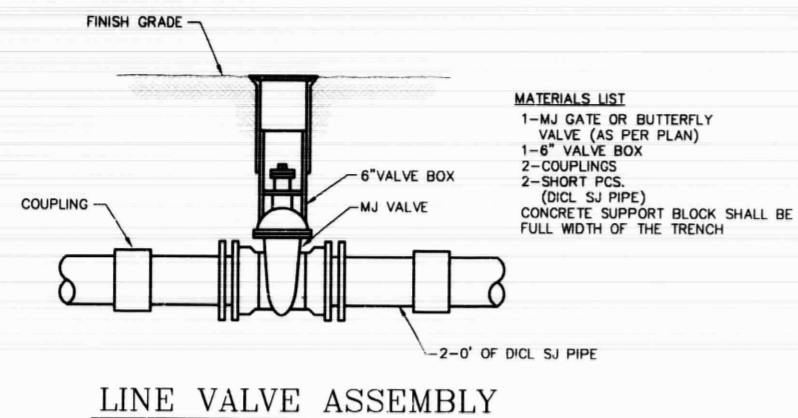


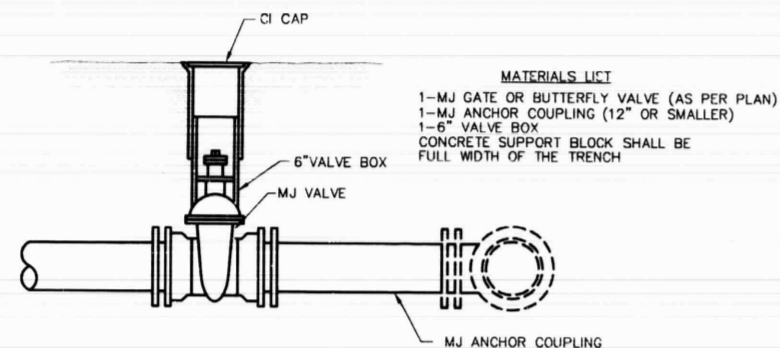
PIPE SECTION

WATER LINE PROJECT NO. 448-89905 OCA. 634035

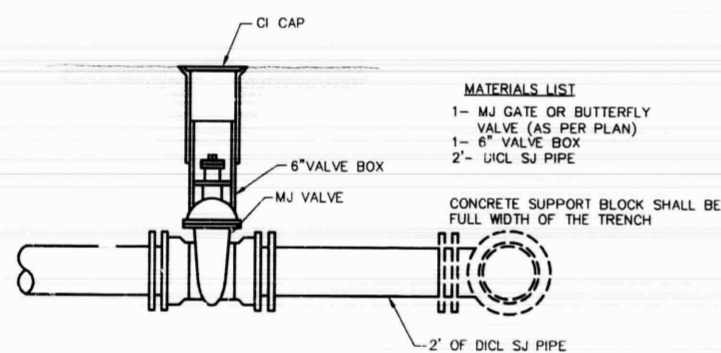




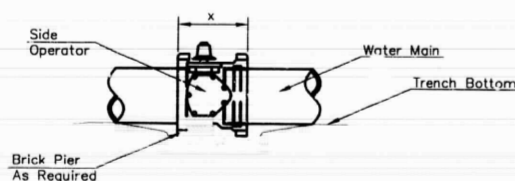
LINE VALVE ASSEMBLY



ANCHORED VALVE ASSEMBLY



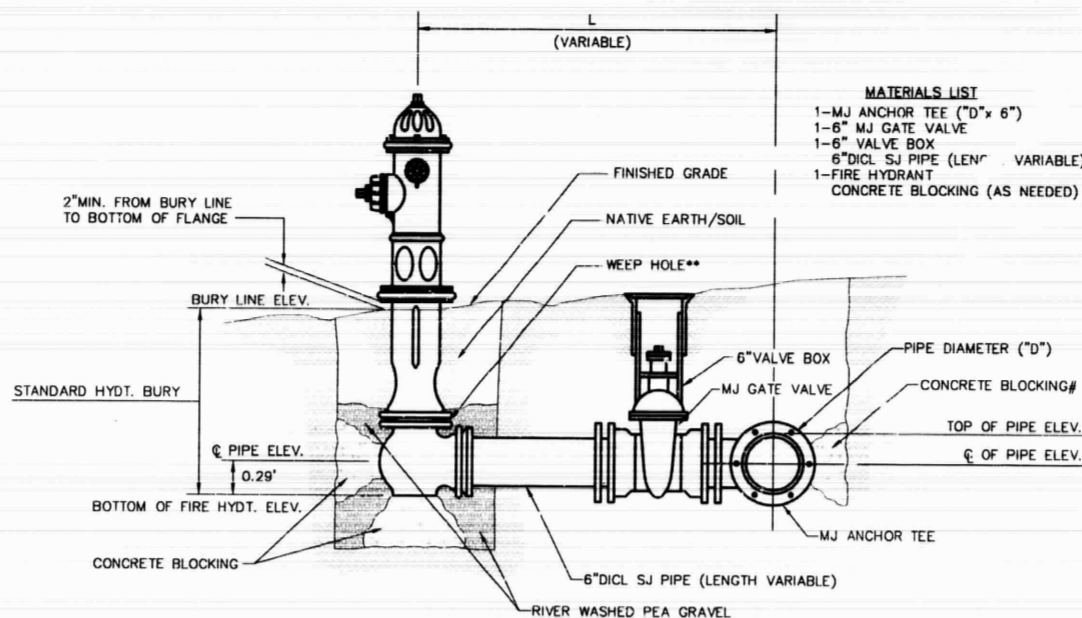
VALVE ASSEMBLY



**NOTES**

- This detail covers Butterfly Valve installation, in-situ, 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

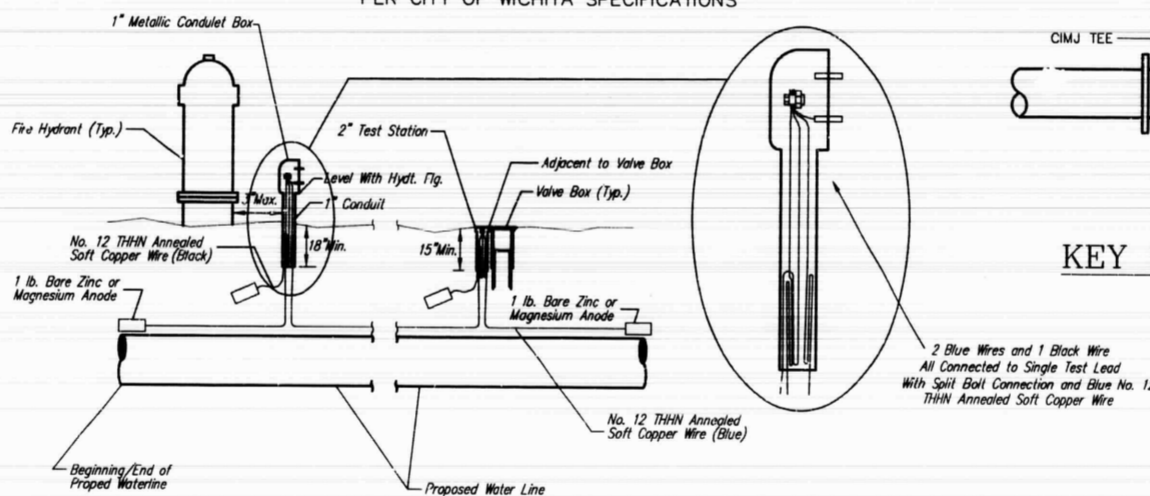


FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS

- \*\* 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 REQUIRED			
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*
BL STA. 16+08.19			
BL STA. 19+64.23			



**TRACER WIRE**

Conductive type pipe locator/tracer wire shall be installed to locate Polyvinyl Chloride (PVC) or any nonmetallic 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**

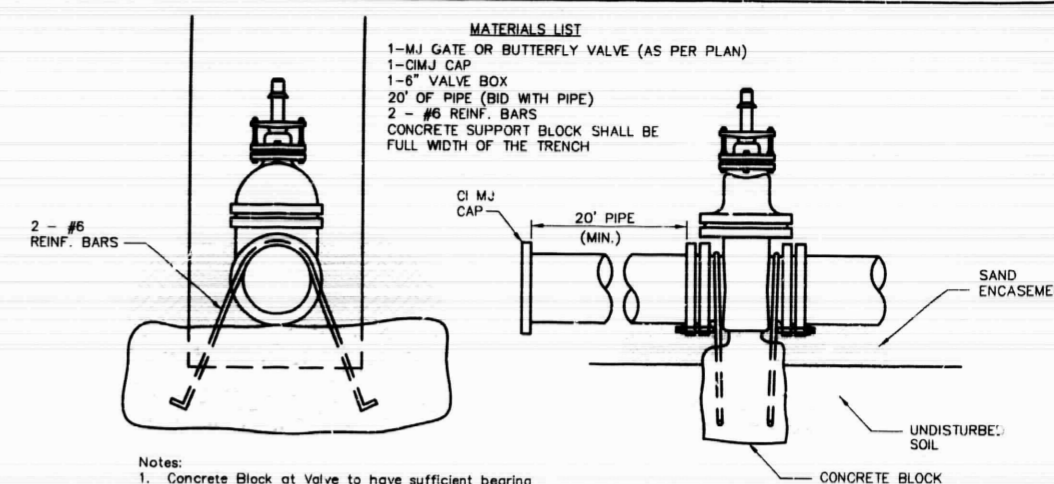
The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AORA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2FS33 as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end capping. 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 down/drain 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

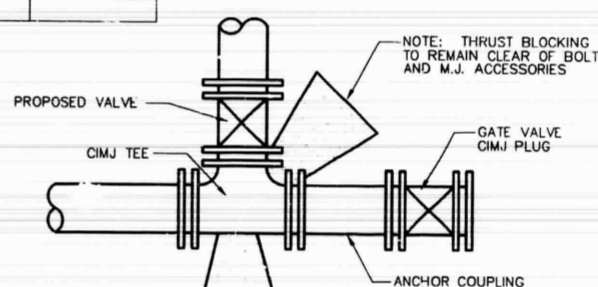
COST IS SUBSIDIARY TO PIPE INSTALLATION



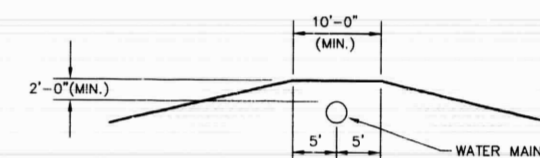
- Notes:  
 1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table of right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.  
 2. The thrust block shall be constructed such that bolts, nuts, 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 #/sq
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	18965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL

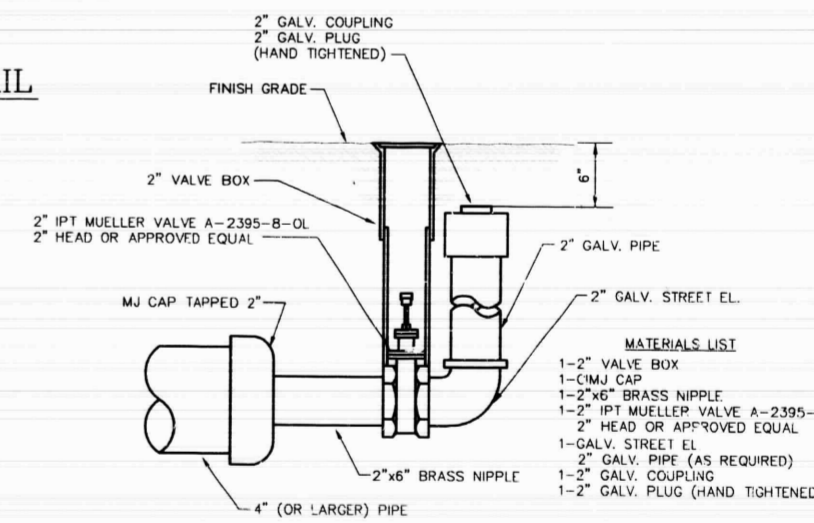


KEY BLOCK DETAIL



PROTECTIVE FILL DETAIL

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



2" BLOWOFF ASSEMBLY

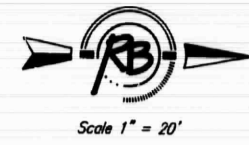
<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE        CITY HALL - SEVENTH FLOOR        435 NORTH MAIN STREET        WICHITA, KANSAS 67202        (316) 268-0201        (316) 268-2114 FAX</p>	<b>STANDARD WATER ASSEMBLY DETAILS</b>	
	NEIL D. CABLE P.E. - CITY ENGINEER	
	PROJECT NUMBER 448-89905	OCA # 634035
	DATE DEC 98	SHEET W5 OF 51

Revised. 6-7-00, MCG

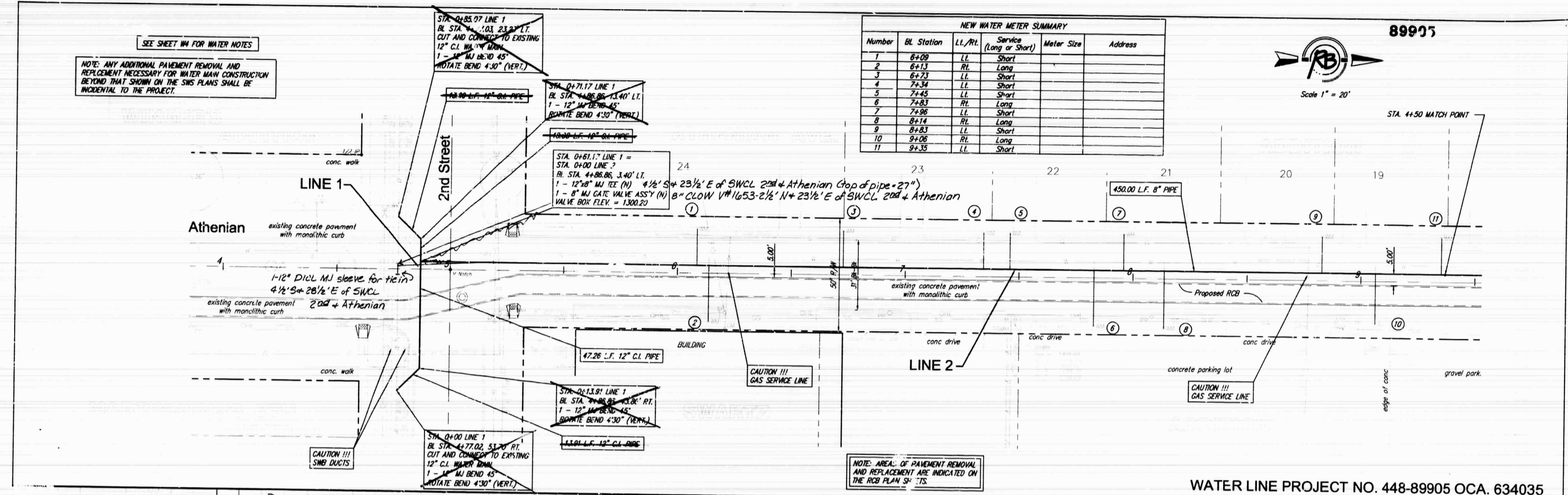
SEE SHEET W4 FOR WATER NOTES

NOTE: ANY ADDITIONAL PAVEMENT REMOVAL AND REPLACEMENT NECESSARY FOR WATER MAIN CONSTRUCTION BEYOND THAT SHOWN ON THE SMS PLANS SHALL BE INCIDENTAL TO THE PROJECT.

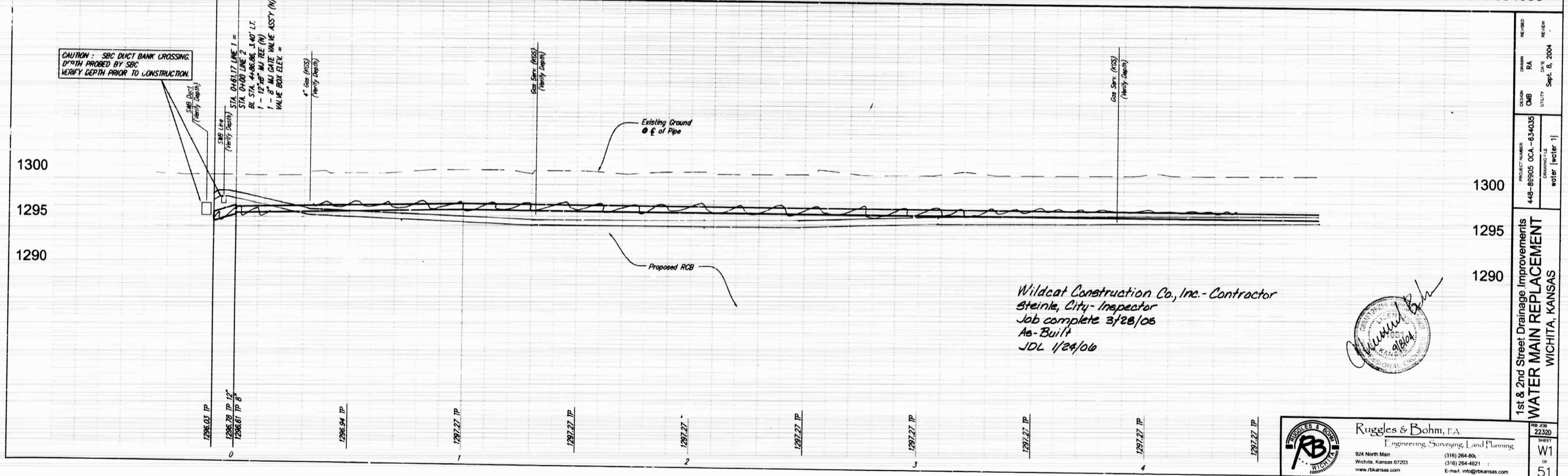
NEW WATER METER SUMMARY					
Number	BL Station	L./R.L.	Service (Long or Short)	Meter Size	Address
1	6+00	LL	Short		
2	6+13	RL	Long		
3	6+23	LL	Short		
4	7+34	LL	Short		
5	7+45	LL	Short		
6	7+83	RL	Long		
7	7+96	LL	Short		
8	8+14	RL	Long		
9	8+83	RL	Long		
10	9+06	LL	Short		
11	9+35	LL	Short		



89905



WATER LINE PROJECT NO. 448-89905 OCA. 634035



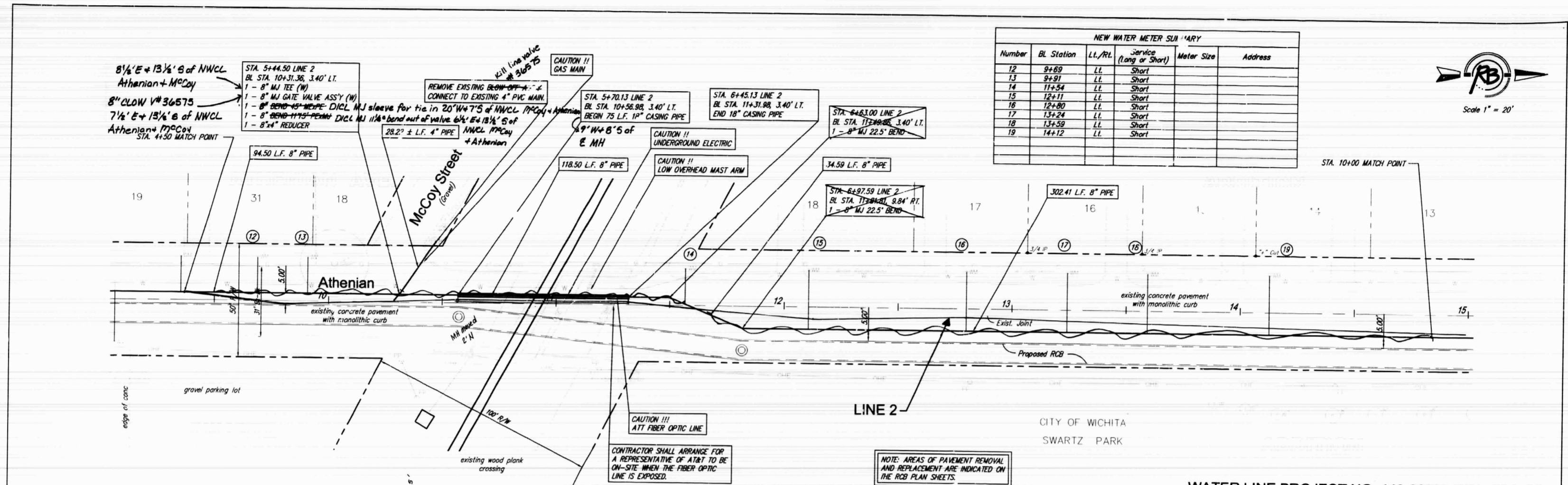
Wildcat Construction Co., Inc. - Contractor  
 Steine, City - Inspector  
 Job complete 3/28/06  
 As-Built  
 JDL 1/24/06



**Ruggles & Bohm, P.A.**  
 Engineering, Surveying, Land Planning  
 924 North Main  
 Wichita, Kansas 67203  
 www.rbkansas.com  
 (316) 264-800  
 (316) 264-6221  
 E-mail: rrb@rbkansas.com

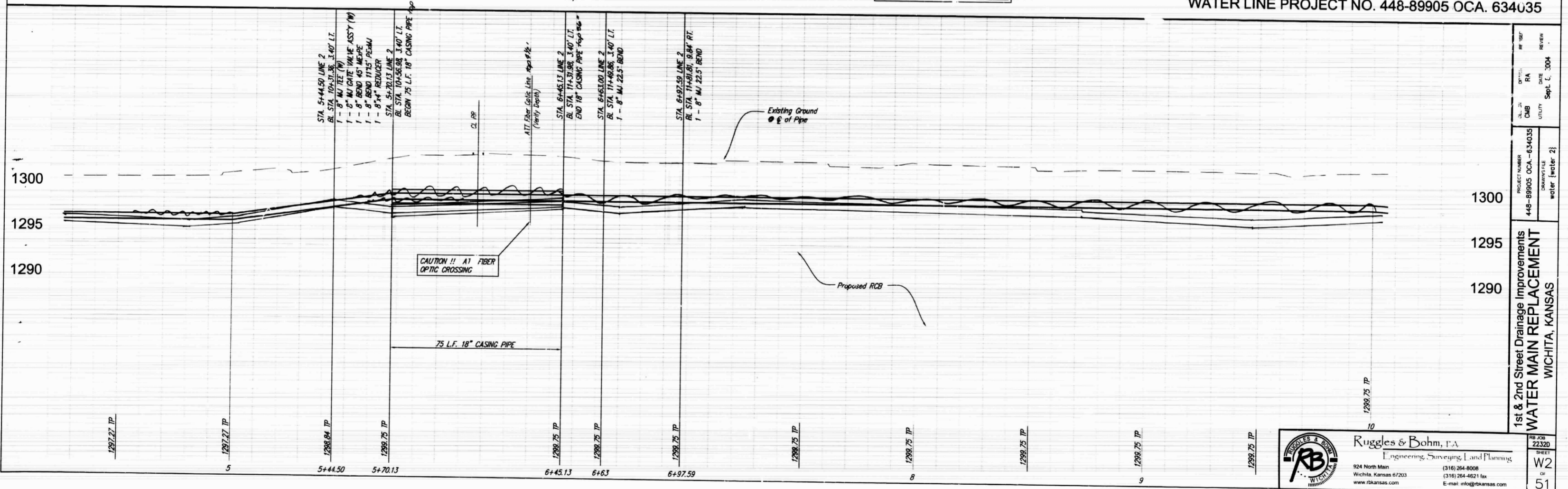
DESIGN: OMB  
 PROJECT NUMBER: 448-89905 OCA-634035  
 PROJECT TITLE: WATER MAIN REPLACEMENT  
 CITY: WICHITA, KANSAS  
 DATE: Sept. 8, 2004

W1  
 51



NEW WATER METER SUBMARRY

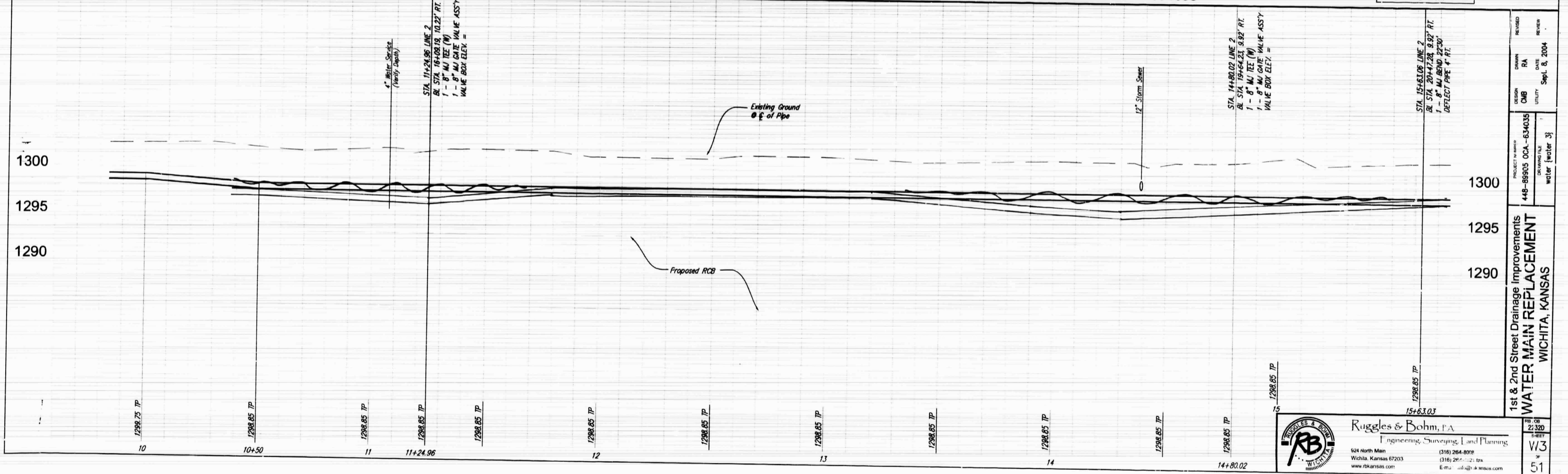
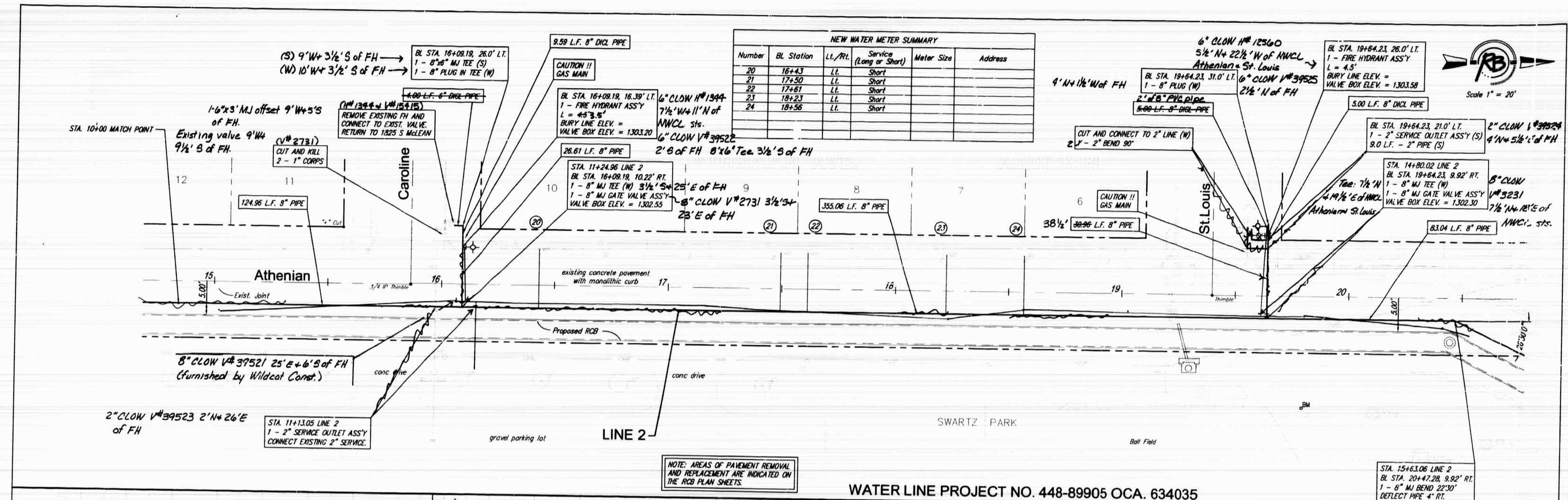
Number	BL Station	Lt./Rt.	Service (Long or Short)	Meter Size	Address
12	9+69	LL	Short		
13	9+91	LL	Short		
14	11+54	LL	Short		
15	12+11	LL	Short		
16	12+80	LL	Short		
17	13+24	LL	Short		
18	13+59	LL	Short		
19	14+12	LL	Short		



WATER LINE PROJECT NO. 448-89905 OCA. 634035

PROJECT NUMBER: 448-89905 OCA-634035  
 DRAWN/TITLE: WATER [water 2]  
 1st & 2nd Street Drainage Improvements  
 WATER MAIN REPLACEMENT  
 WICHITA, KANSAS

**Ruggles & Bohm, P.A.**  
 Engineering, Surveying, L. and Planning  
 924 North Main  
 Wichita, Kansas 67203  
 www.rbkansas.com  
 (316) 264-8008  
 (316) 264-4621 fax  
 E-mail: rfb@rbkansas.com



**Ruggles & Bohm, P.A.**  
 Engineering, Surveying, Land Planning  
 524 North Main  
 Wichita, Kansas 67203  
 (316) 264-8099  
 www.rugglesandbohm.com

PROJECT NO. 448-89905 OCA-634035  
 WATER MAIN REPLACEMENT  
 WICHITA, KANSAS

DATE: Sept. 8, 2004

W3  
 51