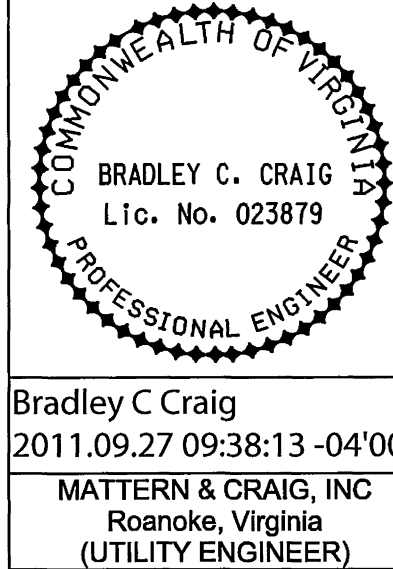
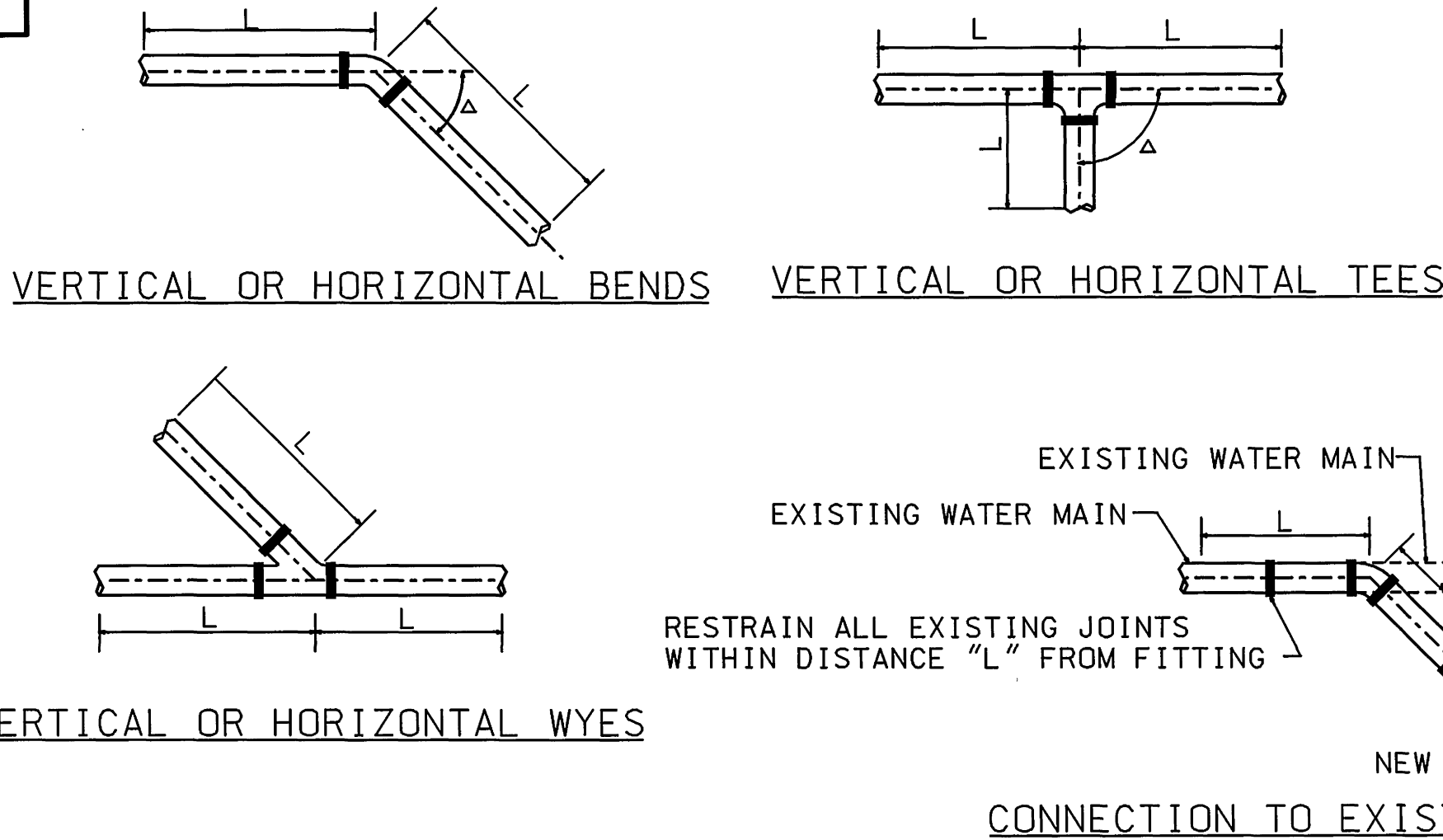


WATER - STANDARD DETAILS

CONSTRUCTION DATA

PIPE SIZE (IN.)	L = MINIMUM LENGTH OF RESTRAINED PIPE (FT)											
	Δ = 90°			Δ = 45°			Δ = 22.5°			Δ = 11.25°		
	HORIZ.	VERT. UP	VERT. DOWN	HORIZ.	VERT. UP	VERT. DOWN	HORIZ.	VERT. UP	VERT. DOWN	HORIZ.	VERT. UP	VERT. DOWN
4	45	45	78	19	19	32	9	9	15	4	4	8
6	64	64	110	26	26	45	13	13	22	6	6	11
8	82	82	142	34	34	59	16	16	28	8	8	14
10	99	99	171	41	41	71	20	20	34	10	10	17
12	115	115	200	48	48	83	23	23	40	11	11	20
16	146	146	255	60	60	106	29	29	51	14	14	25
18	160	160	282	66	66	117	32	32	56	16	16	28
24	201	201	358	83	83	148	40	40	71	20	20	35
36	271	271	490	112	112	203	54	54	97	27	27	48



REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA.		116	U000-128-132 C-501	10(6)

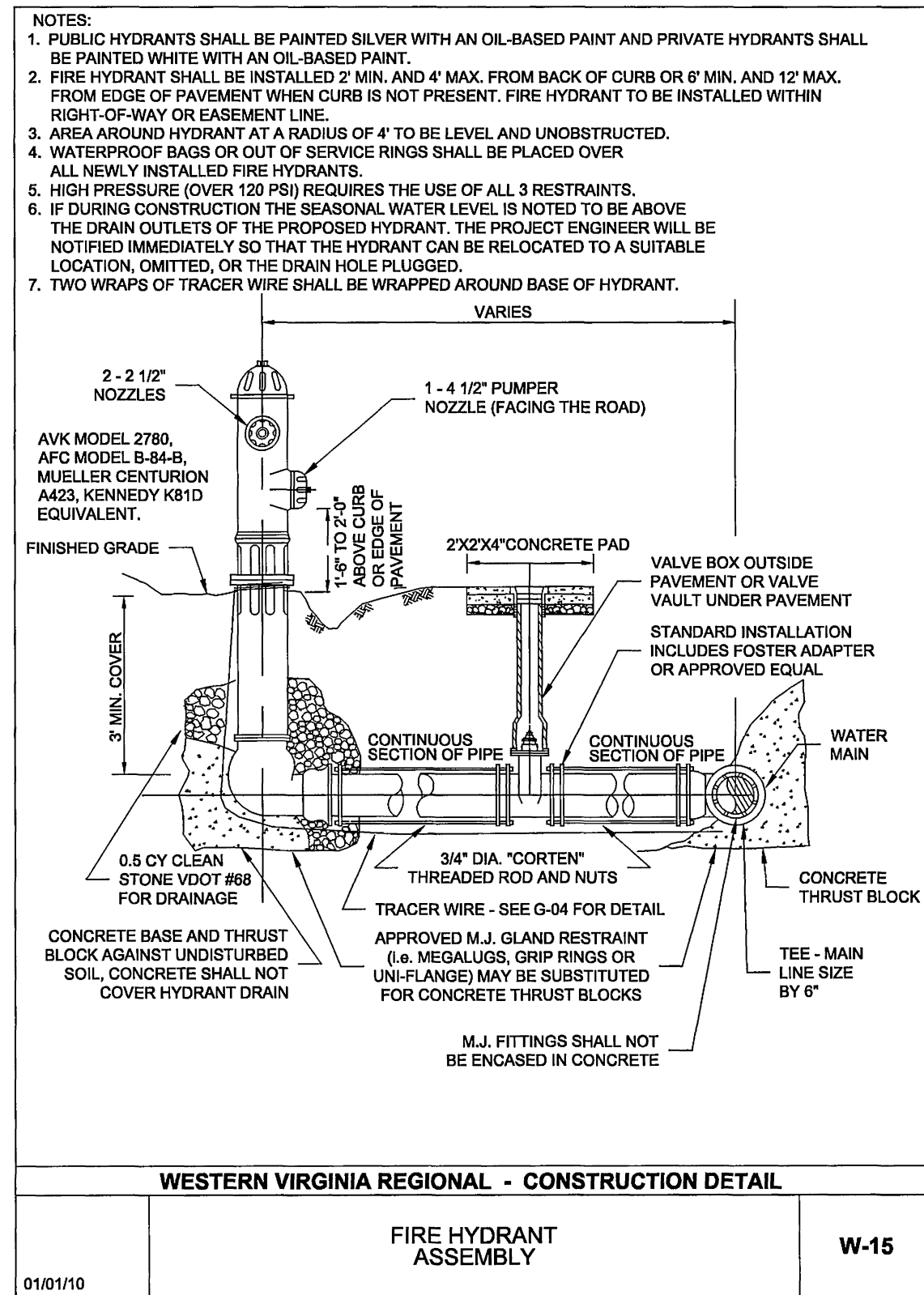
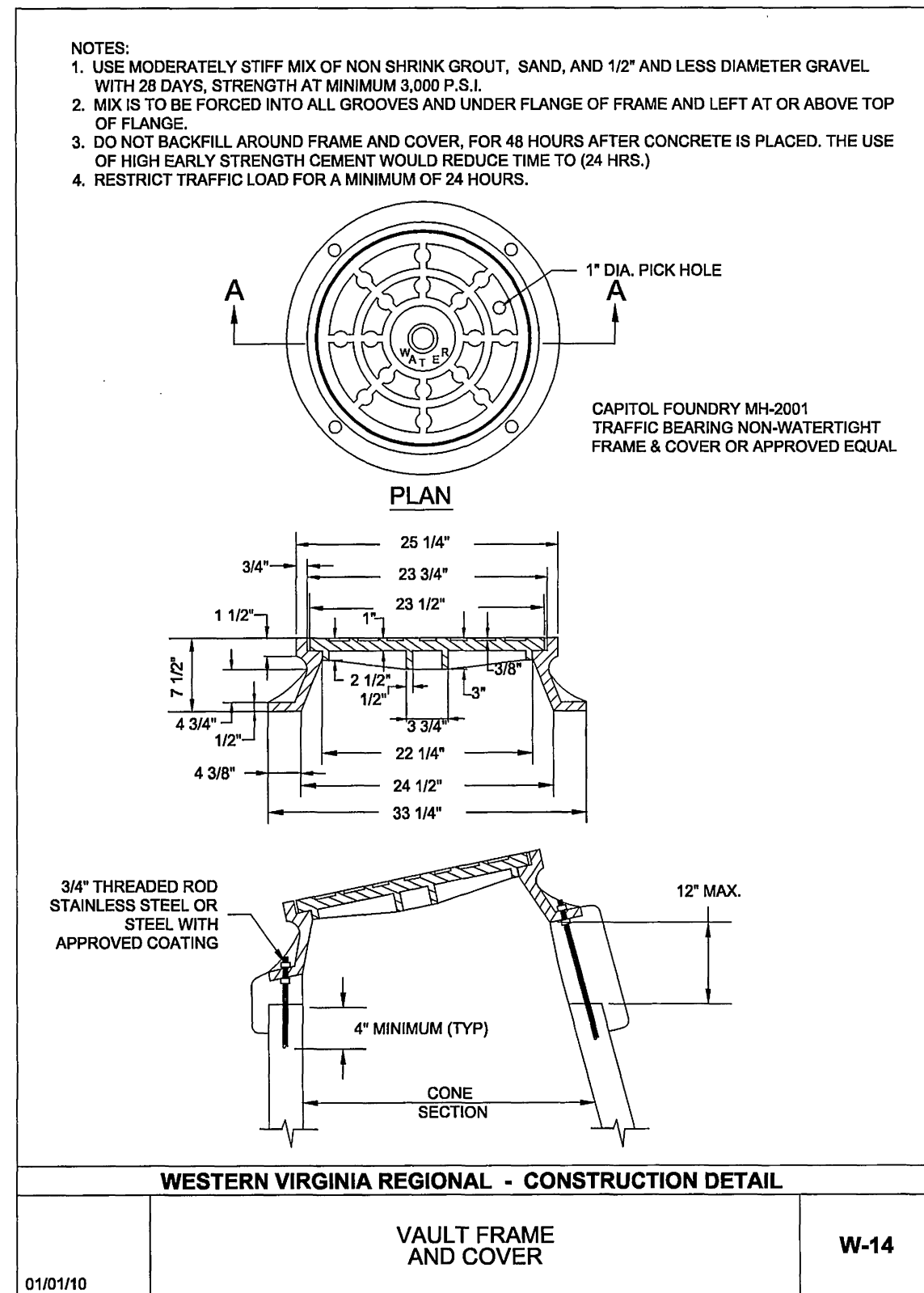
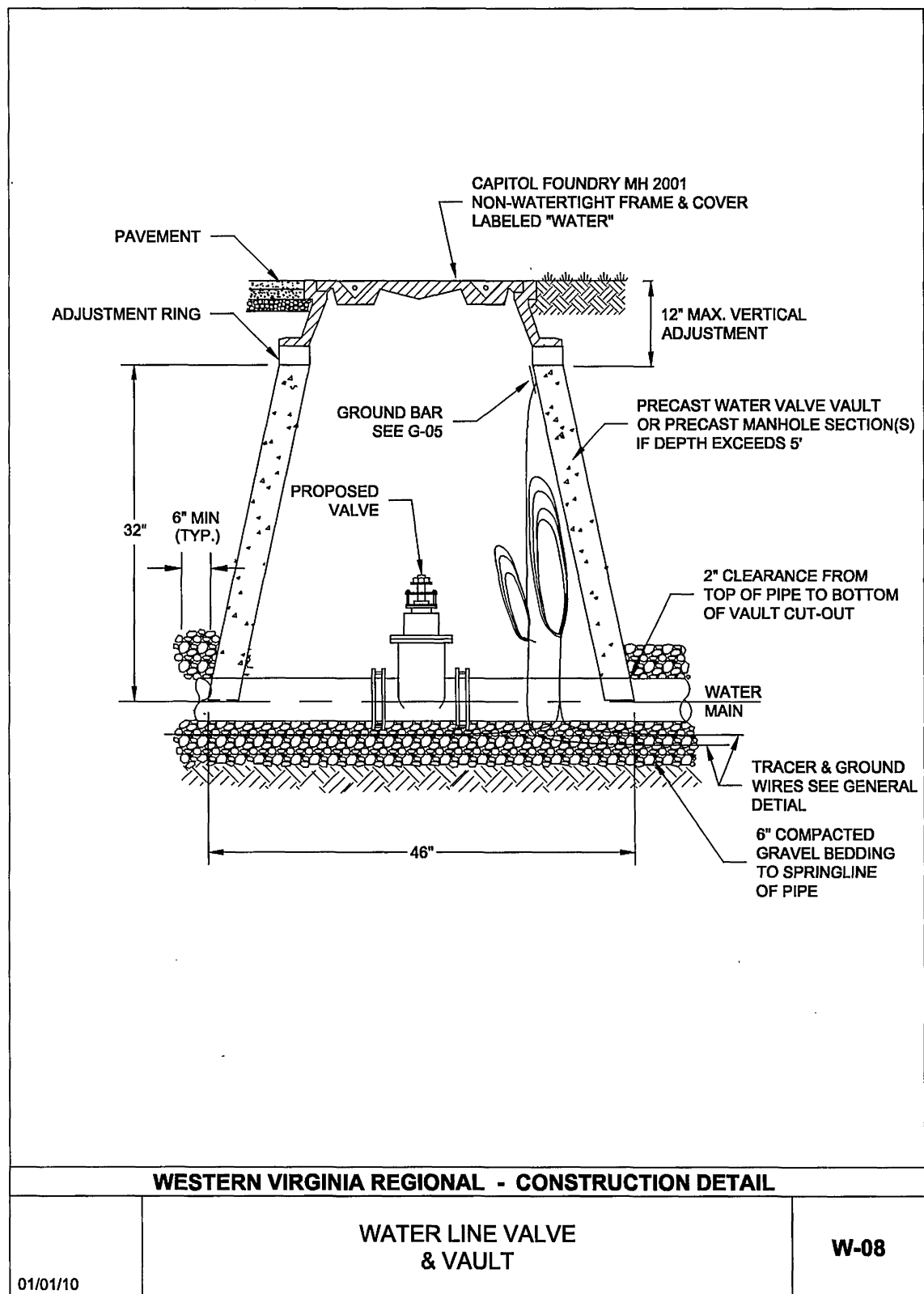
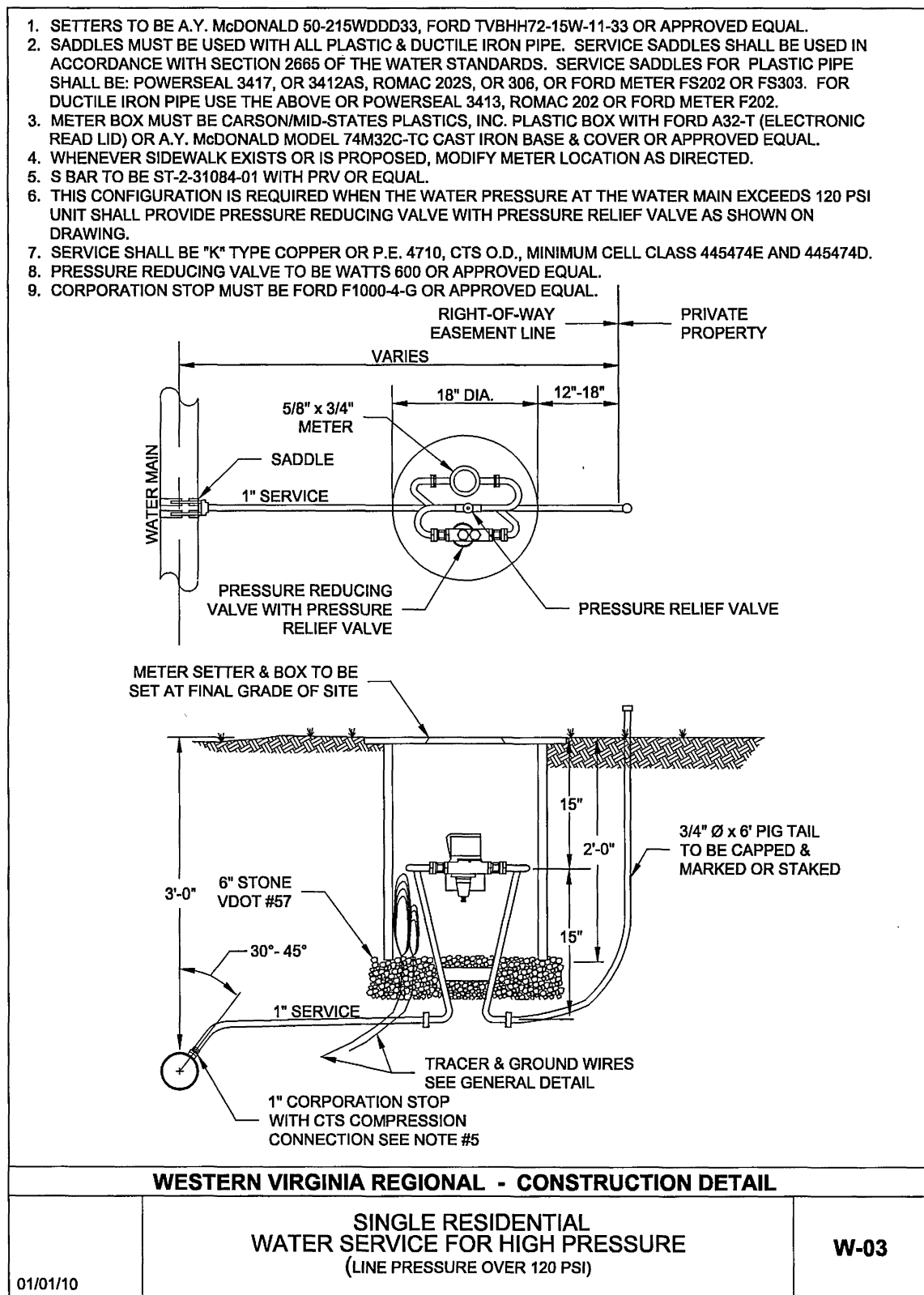
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

NOTE:

- MECHANICAL JOINT RESTRAINING DEVICES SHALL BE EBAA IRON, INC. MEGALUG, WITH A WORKING PRESSURE OF 250 PSI AND A MINIMUM DESIGN SAFETY FACTOR OF 2.
- THE RESTRAINED LENGTH OF WATER MAIN IS BASED ON THE FOLLOWING: AN INTERNAL PRESSURE OF 200 PSI WITH A FACTOR OF SAFETY OF 2, 3 FEET OF PIPE COVER, PIPE BEDDED ON 4" OF LOOSE MATERIAL WITH COMPACTED BEDDING EXTENDING TO THE TOP OF PIPE AND A SOIL TYPE CLASSIFICATION OF "ML" AND A FACTOR OF SAFETY OF 2.
- PLUGS SHALL BE RESTRAINED BASED ON THE RESTRAINED LENGTH FOR 90° VERTICAL BENDS.
- VALVES, TEES, AND WYES SHALL BE RESTRAINED BASED ON THE RESTRAINED LENGTH FOR 45° HORIZONTAL BENDS.
- EXISTING WATER MAIN ADJACENT TO PROPOSED BENDS, WYES, VALVES, TEES, AND PLUGS SHALL BE UNCOVERED AND THE EXISTING JOINTS SHALL BE RESTRAINED FOR THE LENGTH INDICATED. IF THE EXISTING WATER MAIN WILL NOT ACCEPT THE MECHANICAL JOINT RESTRAINING MECHANISM, THE EXISTING WATER MAIN SHALL BE REPLACED WITH DUCTILE IRON WATER MAIN FOR THE LENGTH INDICATED.

TYPICAL DETAILS AND CONSTRUCTION DATA – MECHANICAL JOINT RESTRAINING DEVICES

NOT TO SCALE



PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	U000-128-132		10(6)

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REVISED BY:

\$TIME\$TAMP\$