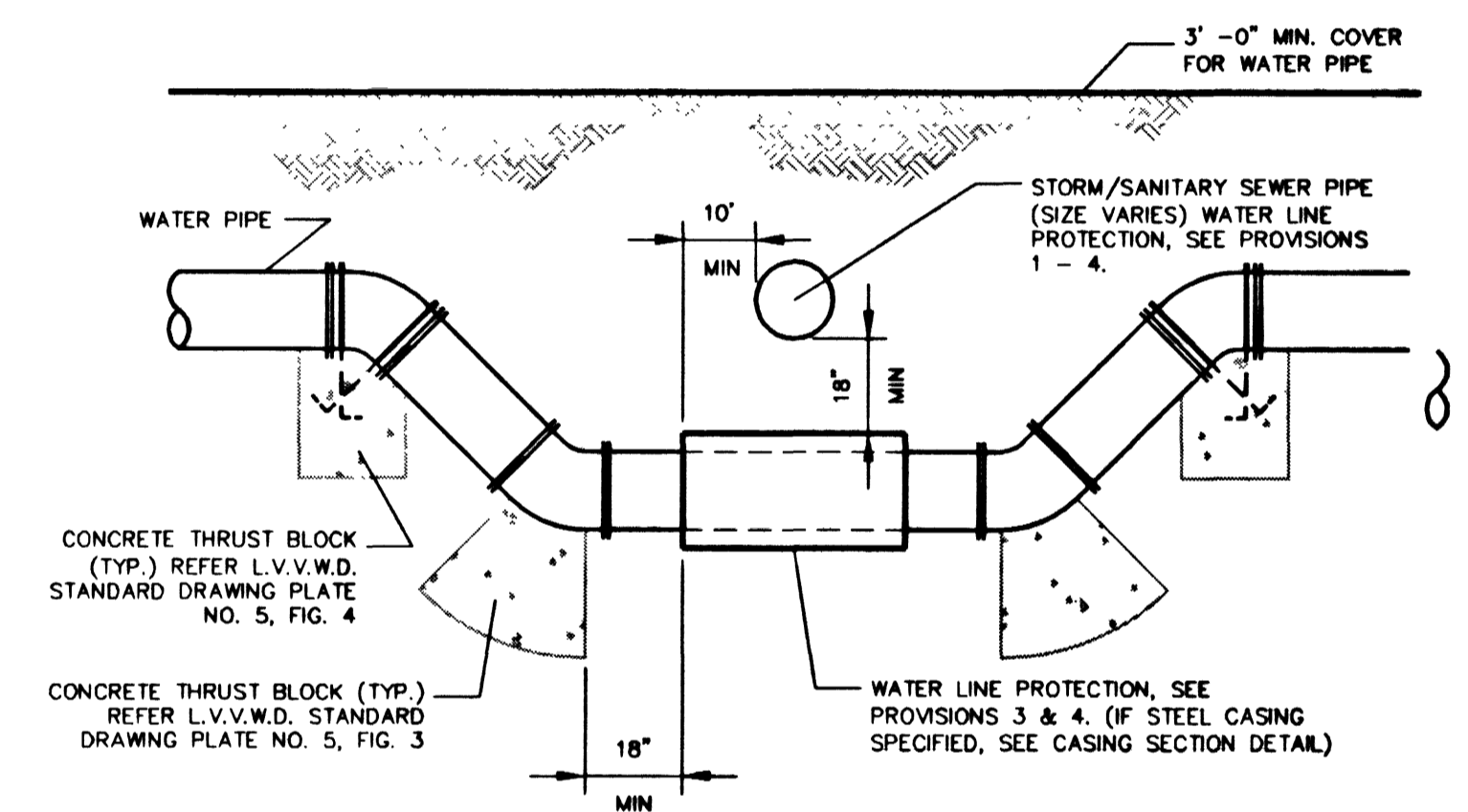


PIPE 4" THRU 12" PIPE 14" THRU 18" PIPE 18" THRU 24"

NOTE: ALL CASINGS ARE TO BE SYMMETRICAL ABOUT THE CENTERLINE OF PIPE.

1. STEEL PIPE SHALL BE FABRICATED FROM A MINIMUM OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A238, GRADE B, C, OR D. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE GROUNDED TO A SMOOTH FINISH. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C201, "AWWA STANDARD FOR FABRICATED ELECTRICALLY WELDED STEEL WATER PIPE". COATINGS FOR STEEL CASING ARE NOT REQUIRED.
2. PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.
3. THE PIPE SHALL BE SUPPORTED AT EACH END OF EACH JOINT WITH SPACERS. AFTER INSTALLATION OF THE PIPE, THE CASING SHALL BE SEALED AT BOTH ENDS WITH CASING END SEALS.

TYPICAL CASING SECTION



WHERE THE WATER MAIN IS BELOW THE SEWER MAIN, OR IS LESS THAN 18" ABOVE THE SEWER MAIN, THE WATER LINE SHALL BE PROTECTED BY CONSTRUCTION OF THE STORM/SANITARY SEWER AS FOLLOWS:

1. EXTRA HEAVY CAST IRON PIPE; OR
2. WATER SUPPLY QUALITY MATERIALS MEETING AWWA STANDARDS; OR
3. SEWER OR WATER MAIN ENCASUREMENT WITH FOUR INCHES, MINIMUM, OF CEMENT SLURRY (300 PSI±); OR
4. SEWER OR WATER MAIN SLEEVED WITH WATER QUALITY PIPE WITHOUT JOINTS.

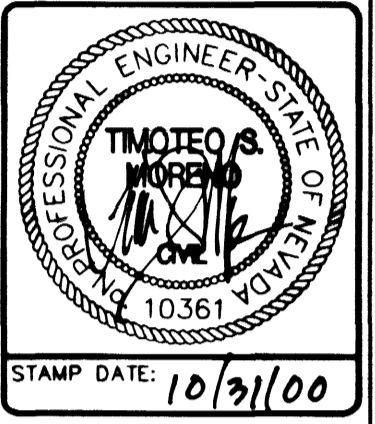
THE PROVISION UTILIZED SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING. THE PROVISION UTILIZED SHALL ALSO BE EXTENDED FOR OTHER THAN 90 DEGREE CROSSINGS TO THE POINT AT WHICH THE TEN FOOT SEPARATION BETWEEN THE WATER AND SEWER LINES IS ACHIEVED (10/SINE OF CROSSING ANGLE).

REF: UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS, 1995, 2.19.02
DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, 1991, 2.2.21

STORM/SANITARY SEWER WATER CROSSING DETAIL

N.T.S.

NO.	DATE	BY	APP'D.	REVISION DESCRIPTION



3610 North Rancho Drive
Las Vegas, Nevada 89130
Telephone: (702) 648-9700
Fax: (702) 648-4143

SOUTHWEST ENGINEERING
LAND PLANNING • MAPPING • DEVELOPMENT

UTILITY DETAILS

PARADISE MEADOWS UNIT 2

CITY OF LAS VEGAS

TITLE PROJECT CITY OF LAS VEGAS

WORK ORDER NO. 000313

DESIGN BY: SJW

DATE: 7/24/00

SCALE: NONE

CADFILE: pm2un

SHEET 7 OF 16 SHEETS

CLY DWG NO. 3074-4651-2

APPROVAL

LAS VEGAS VALLEY WATER DISTRICT _____ DATE _____

NOTICE TO CONTRACTOR !

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY.

CALL before you Dig

1-800-227-2600 UNDERGROUND SERVICE (USA)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

CALL 1-702-593-6111