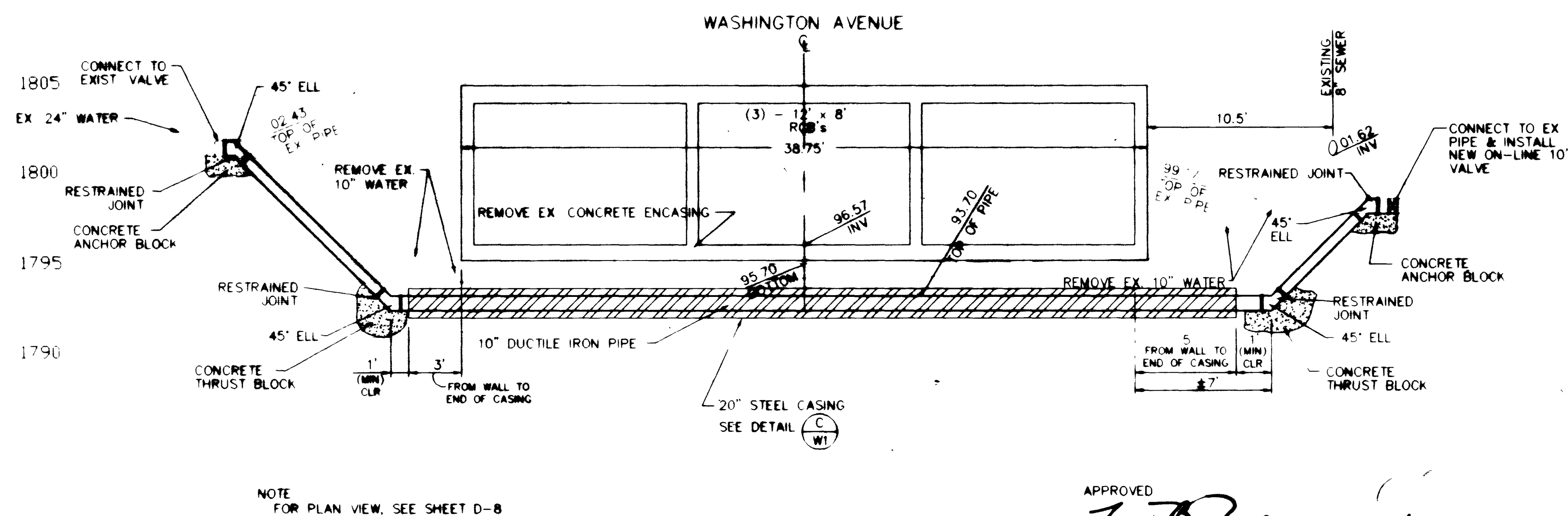


**NOTES:** (ALSO SEE SHEET 2)

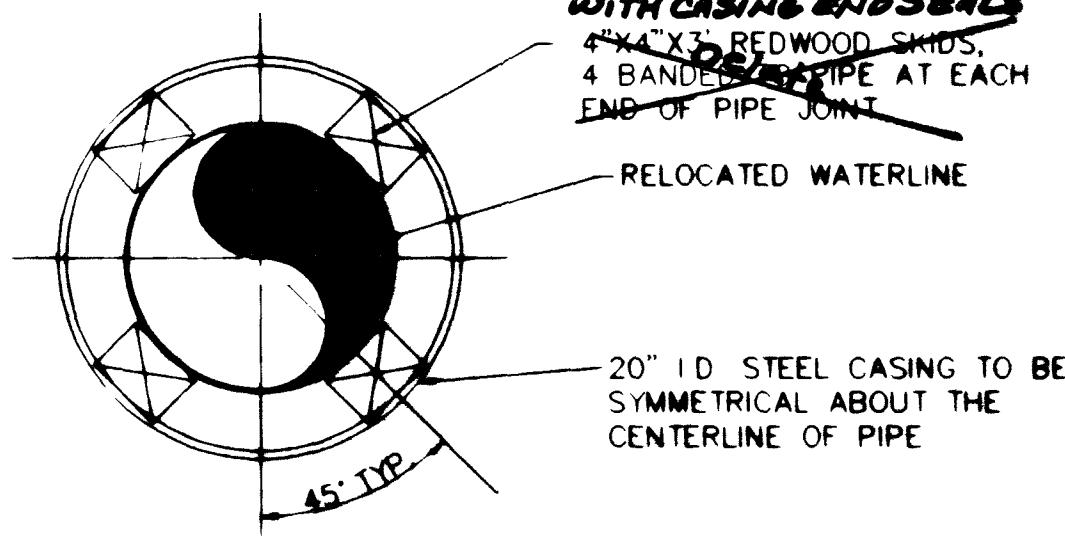
- 1 ALL NEW WATER PIPE SHALL BE DUCTILE IRON CLASS 50.
- 2 ABANDON VALVE AND CUT AND CAP WITHIN RIGHT-OF-WAY.
  - a ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWELVE INCHES (12") OF THE VALVE BOX AND THEN FILLING THE REMAINING PORTION OF THE VALVE BOX WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST 2,000 PSI.
  - b THE CONTRACTOR SHALL CUT THE EXISTING PIPE WITHIN THE RIGHT-OF-WAY OR EASEMENT BOUNDARY AND INSTALL A CAP WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATION. THE INSTALLATION OF A PLUG MAY BE PERMITTED, WITH DISTRICT APPROVAL. THE CONTRACTOR SHALL INSTALL A CONCRETE THRUST BLOCK IN ACCORDANCE WITH THE PROVISIONS OF THE DISTRICT'S STANDARD PLATE No. 5 AT ALL CAP OR PLUG LOCATIONS.
- 3 THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT OF A WATER-SEWER / STORM LINE CROSSING:
  - a WHEN PROTECTION OF THE WATERLINE IS CONSIDERED, THE MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") MUST BE MAINTAINED WHEN THE WATERLINE IS INSTALLED OVER THE SEWER / STORM LINE. IF THIS DISTANCE CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS OR THE WATERLINE MUST BE PLACED UNDER THE SEWER / STORM LINE. THE SEWER / STORM LINE MUST BE CONSTRUCTED WITH ANY ONE OF THE FOLLOWING:
    - 1 EXTRA HEAVY CAST IRON OR DUCTILE IRON PIPE
    - 2 WATER SUPPLY QUALITY MATERIAL
    - 3 ENCASEMENT WITH FOUR INCHES (4") MINIMUM CONCRETE SLEEVING OR WITH WATER QUALITY PIPE
  - b EACH OF THESE PROVISIONS MUST BE EXTENDED THE DISTANCE SHOWN ON EITHER SIDE OF THE WATERLINE AT NINETY DEGREES (90°) TO THE CROSSING.



APPROVED  
*[Signature]*  
 DATE 10/14/94

**10" WATER MAIN RELOCATION**

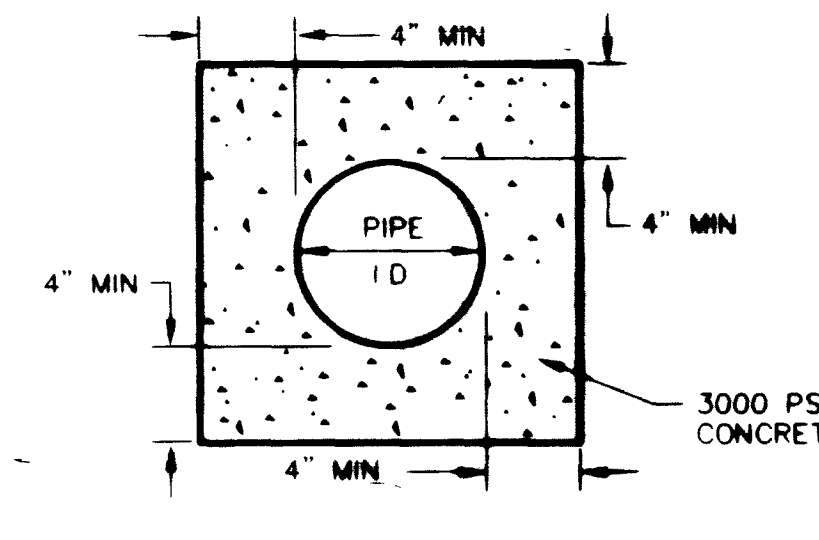
SCALE: 1" = 5'



- NOTES:**
- 1 STEEL PIPE CASING SHALL BE FABRICATED FROM A MINIMUM OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A283, GRADE B, C, OR D. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE GRIND TO A SMOOTH FINISH. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH ANNA C201. ANNA 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 THE ENDS OF EACH JOINT WITH SHIMS. INSTALL STAINLESS STEEL CASING SPACING AS PER CASCADE WATERWORKS MANUFACTURING CO. SPEC'S OR AN APPROVED EQUAL.

**TYPICAL CASING SECTION**

NTS



**TYPICAL CONCRETE ENCASEMENT**

NTS

**RECORD DRAWING**  
 These Record Drawings have been prepared based on information provided by others. The Engineer has not verified the accuracy of such information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.

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 1-800-227-2600

NO.	DATE	REVISIONS



DESIGNER: JTP  
 DRAWN: CK  
 CHECKED: BR  
 JOB NO. 94-2-21  
 SCALE:  
 HORIZ.:  
 VERT.: NOTED

2955 E. SUNSET ROAD  
 LAS VEGAS, NEVADA 89120  
 (702) 798-1007

**NEA**  
 CONSULTING ENGINEERS

PROJECT: CITY OF LAS VEGAS  
 WASHINGTON AVENUE CONVEYANCE SYSTEM

PRODUCT: WATER RELOCATION DETAILS

SHEET **W-1**  
 ALTERNATE DESIGN  
 10/13/94  
 12 OF 23

