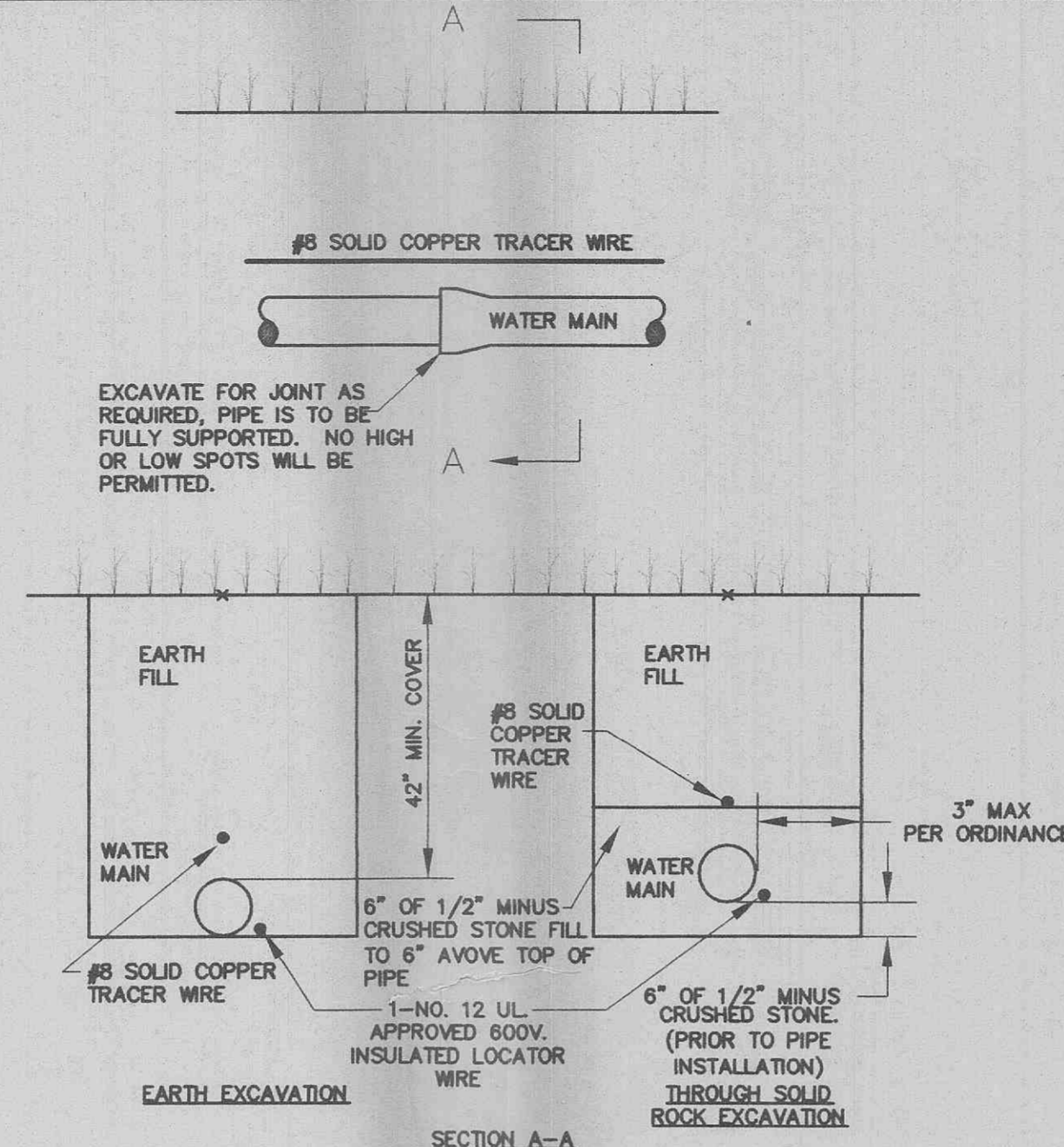
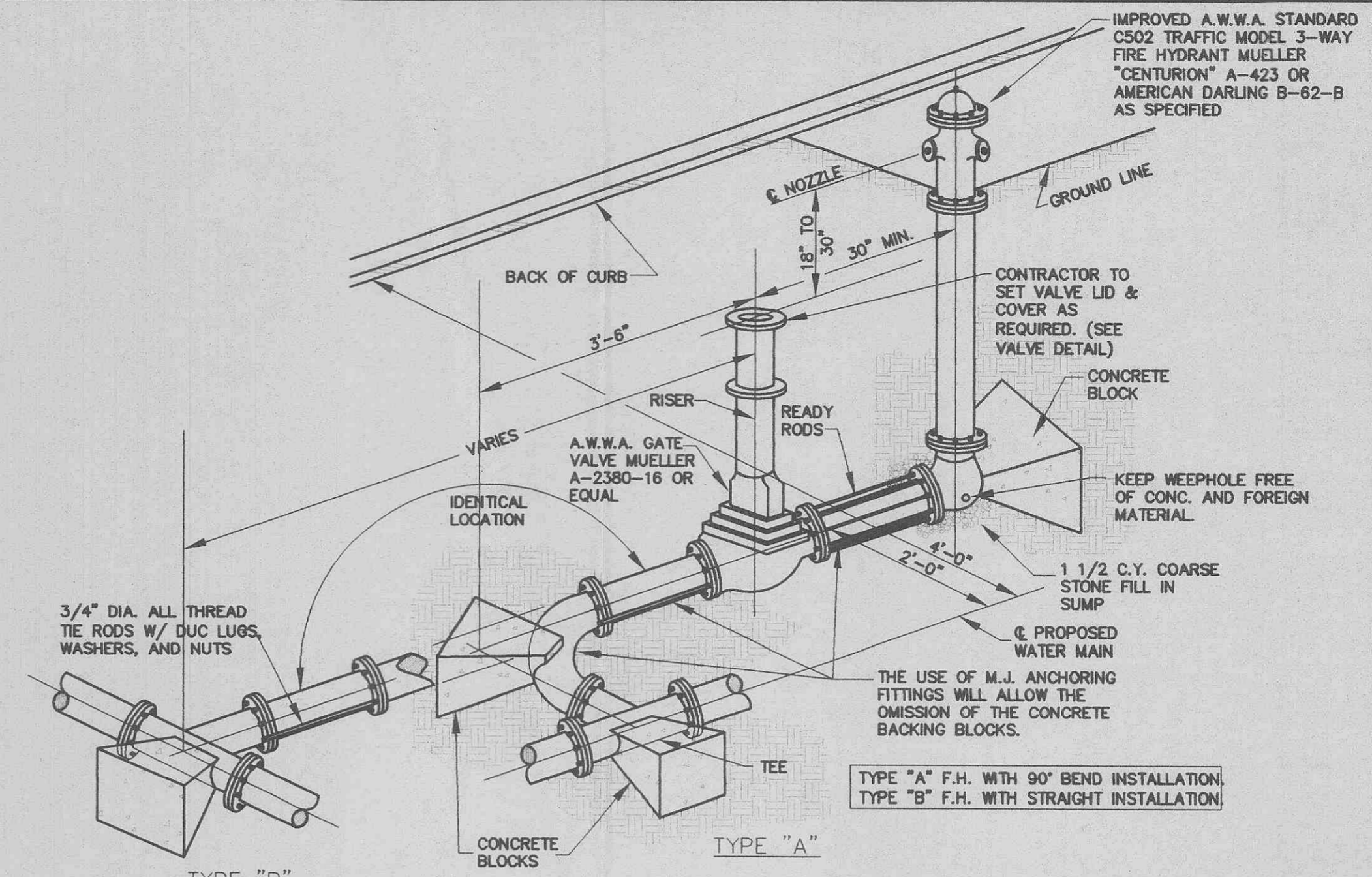


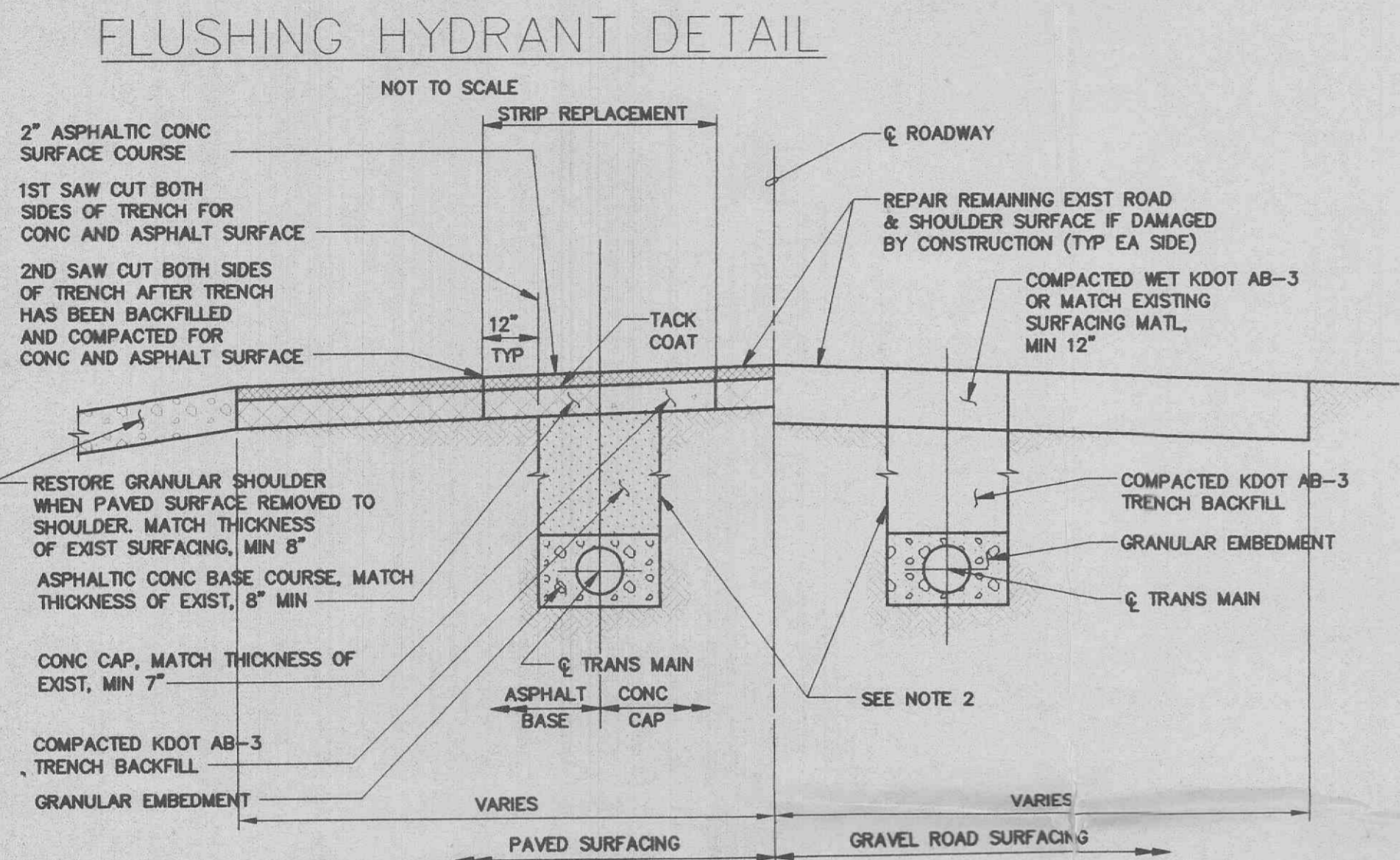
TYPICAL WATER MAIN AND FIRE HYDRANT LOCATIONS  
NOT TO SCALE



TYPICAL WATER MAIN INSTALLATION DETAILS  
NOT TO SCALE

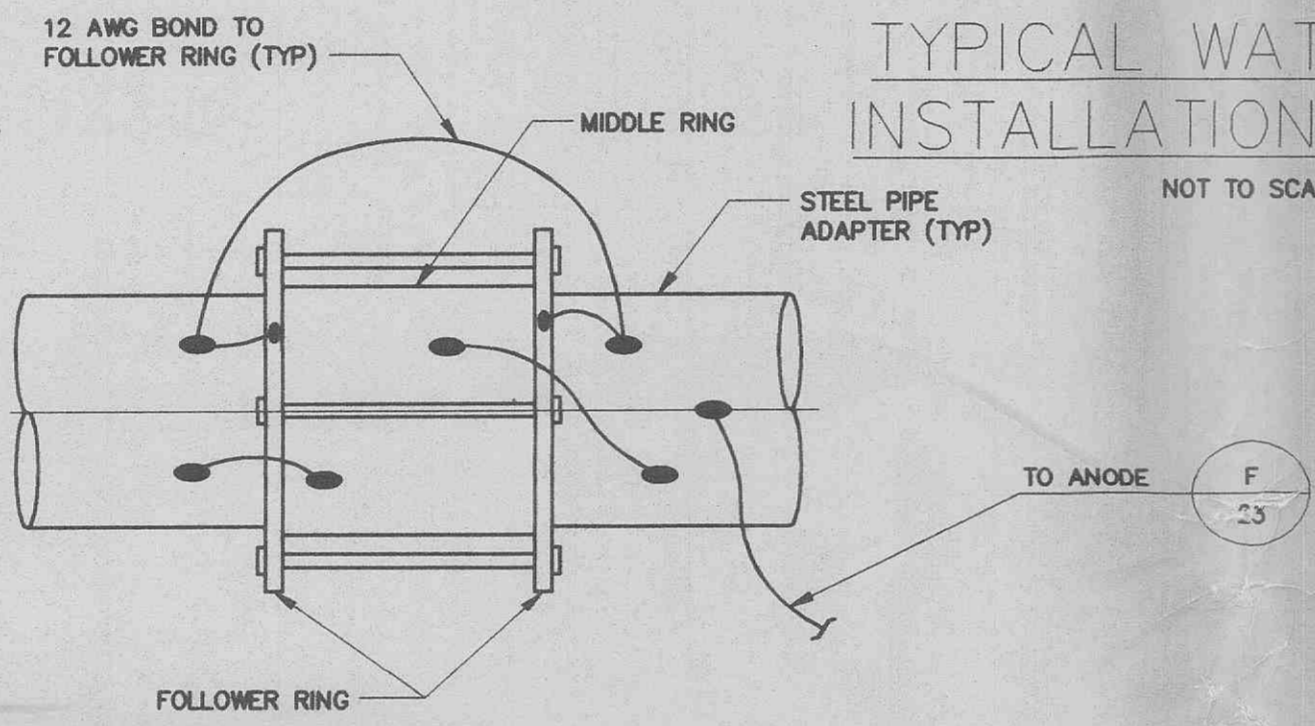


FIRE HYDRANT DETAIL  
NOT TO SCALE

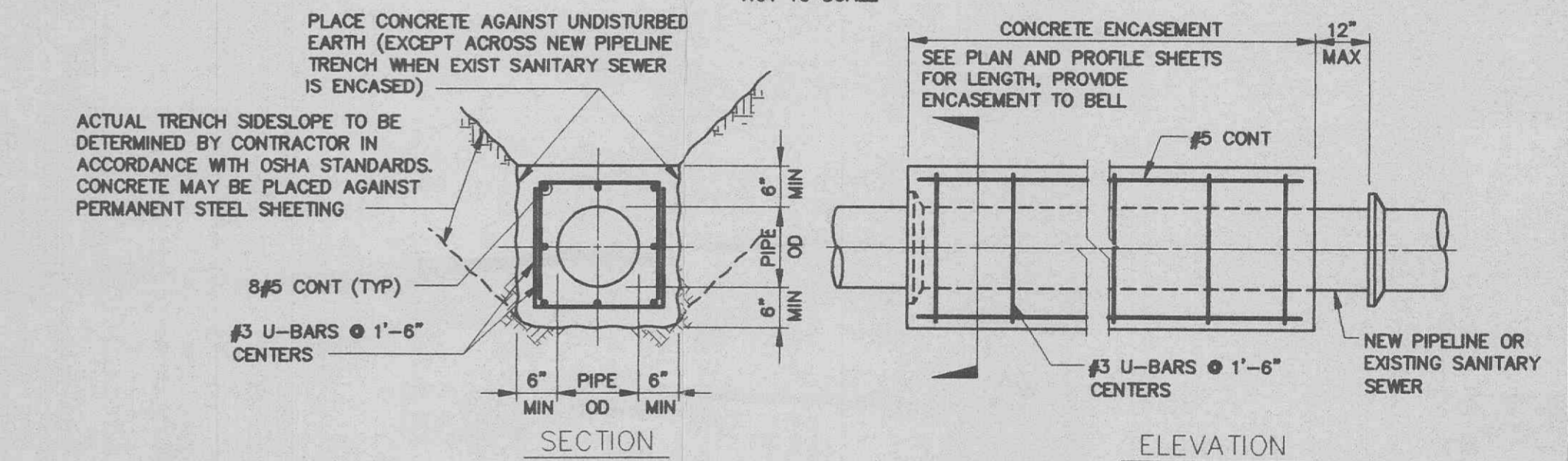


- NOTES:
- CONTRACTOR TO OBTAIN RIGHT-OF-WAY CONSTRUCTION UTILITY PERMIT FROM THE JOHNSON COUNTY KANSAS PUBLIC WORKS DEPARTMENT AND NOTIFY THEM FOR INSPECTION PRIOR TO ANY REPAIRS. SEE APPENDIX C OF THE SPECIFICATIONS FOR COPY OF UTILITY PERMIT FORM.
  - ACTUAL TRENCH SIDESLOPE TO BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH OSHA STANDARDS.
  - SEE PLAN SHEETS FOR LOCATION OF TRANSMISSION MAIN WITHIN STREET AND ROADWAYS.
  - THE DIMENSION OF THE GRANULAR EMBEDMENT ABOVE THE TOP OF THE TRANSMISSION MAIN SHALL BE 1/8 TIMES COVER, 6" MIN.
  - ASPHALTIC CONC BASE COURSE OR CONC CAP AS REQUIRED BY APPLICABLE CITY OR COUNTY.

STREET TRENCHING DETAIL AND CROSSING SECTION  
NO SCALE

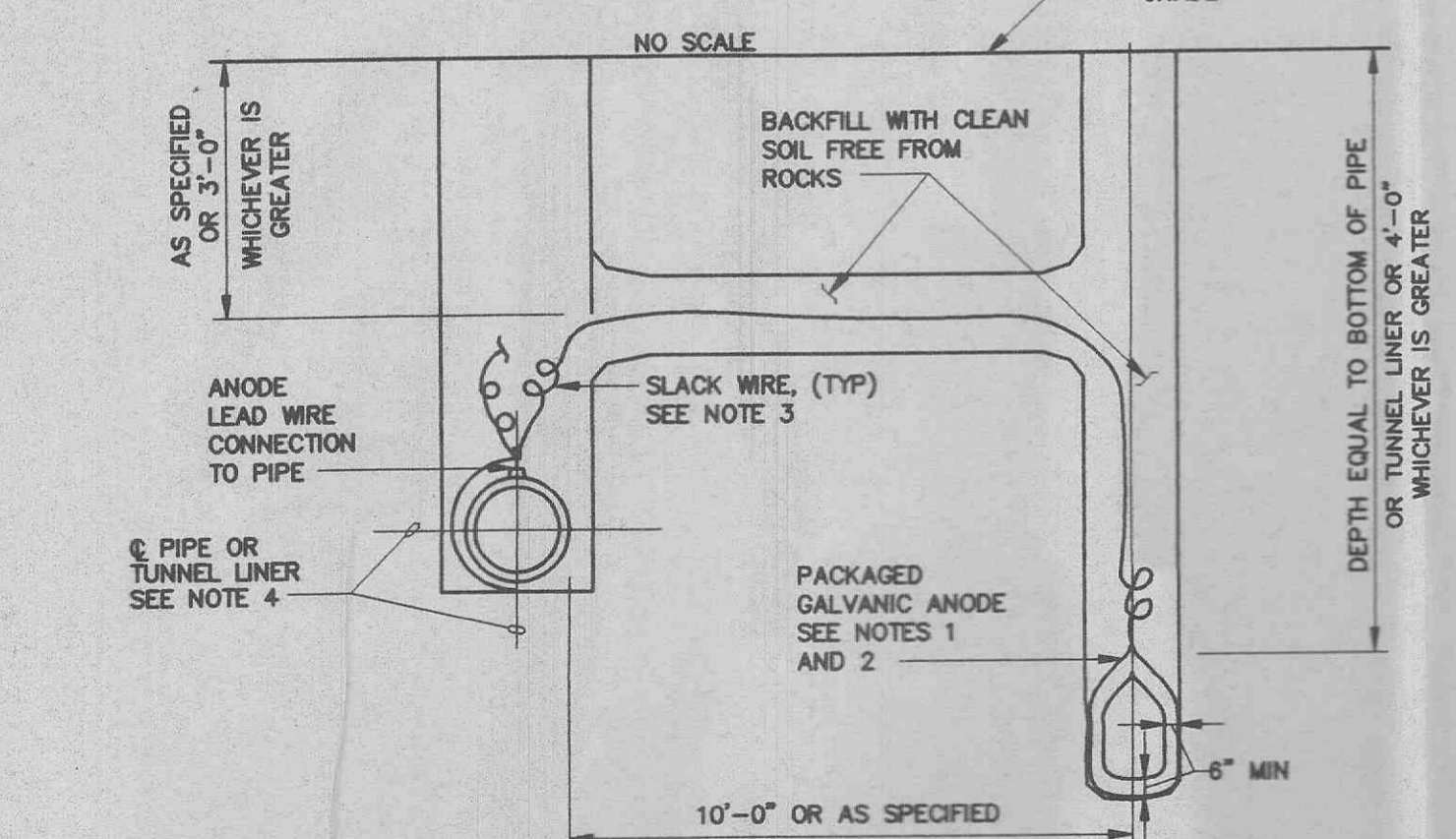


JOINT BONDING OF STEEL PIPE ADAPTERS FOR PCCP ALTERNATIVE  
NO SCALE

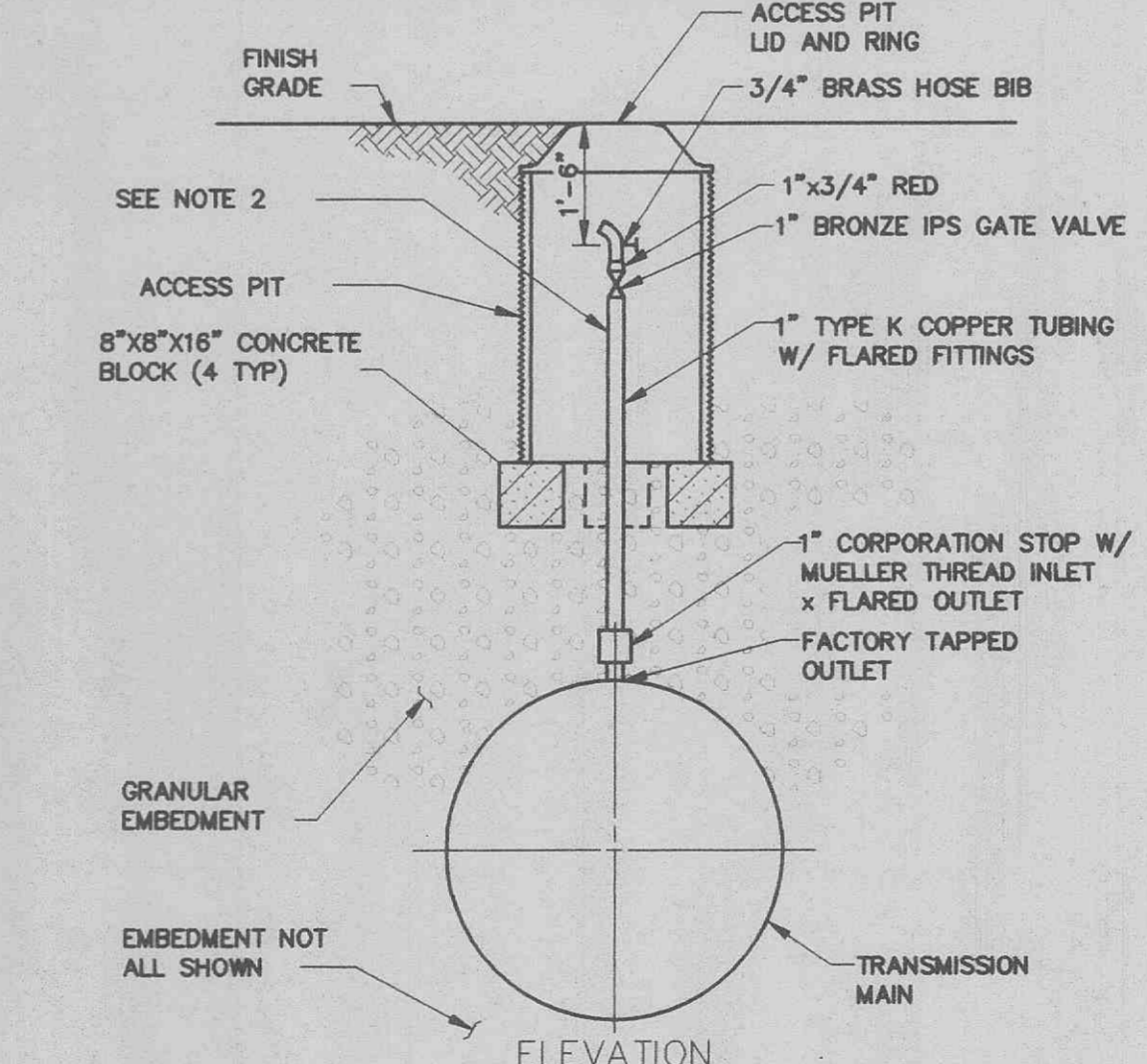


- NOTES:
- AT LOCATIONS WHERE THE TRANSMISSION MAIN CROSSES AN EXIST SANITARY SEWER, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - WHEN THE PIPELINE IS PROTECTED WITH POLYETHYLENE TUBE ENCASEMENT, THE CONCRETE ENCASEMENT IS TO COVER THE POLYETHYLENE ENCASEMENT.

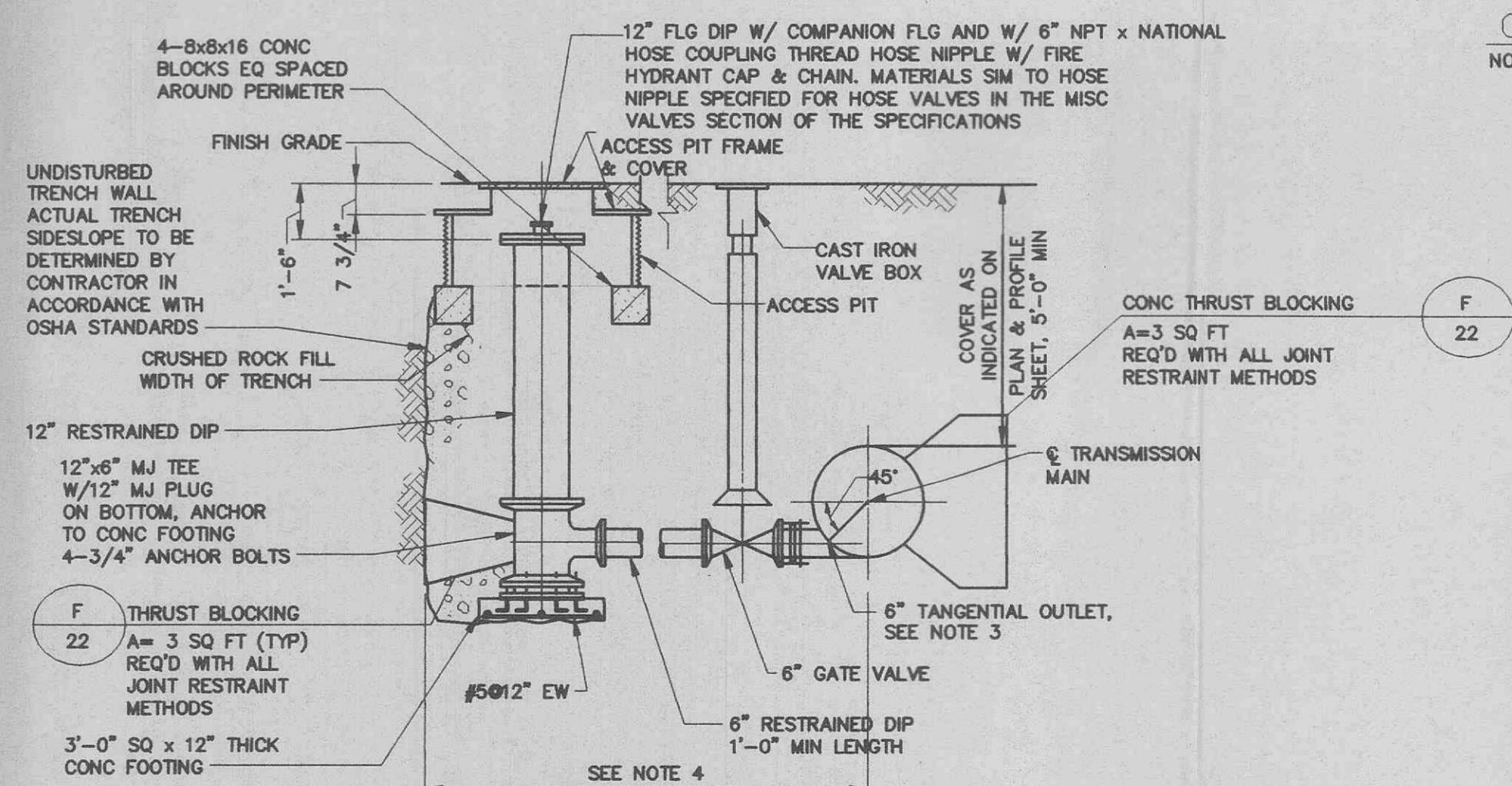
CONCRETE ENCASEMENT (G)  
NO SCALE



ANODE INSTALLATION FOR STEEL PIPE ADAPTERS FOR PCCP ALTERNATIVE AND FOR TUNNEL LINERS  
NO SCALE



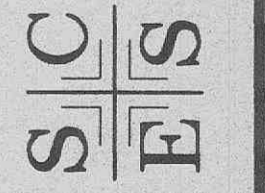
MANUAL AIR RELEASE VALVE ASSEMBLY (J)  
NO SCALE



BLOWOFF FACILITY (E)  
NO SCALE

PUND PLACE  
WATER DETAILS

ST. CHARLES ENGINEERING & SURVEYING, INC.  
801 S. FIFTH STREET, SUITE 202  
ST. CHARLES, MO 63301  
TEL:(636) 947-0607 FAX:(636) 947-2448



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