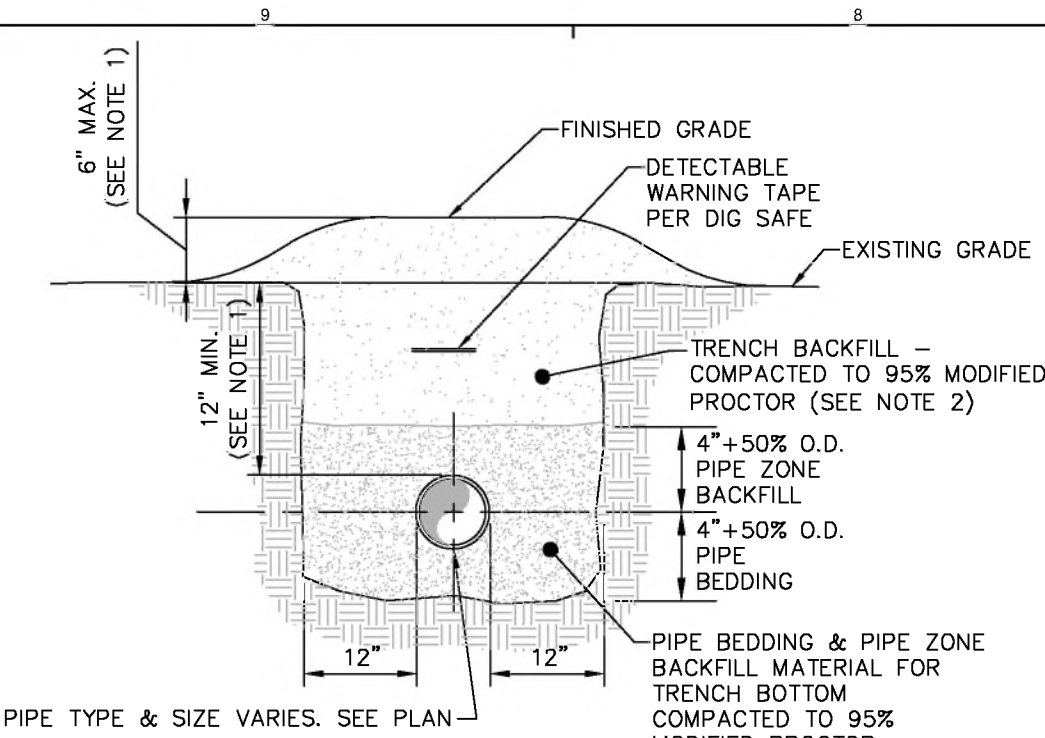


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Xref's Attached: X-B00BDEE, 222163-05\_24d66; ROGER E. KEATINGE SEAL  
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**NOTES:**  
1. MINIMUM COVER OVER TOP OF PIPE SHALL BE 18". IF 18" OF COVER CAN NOT BE ACHIEVED THROUGH EXCAVATION DUE TO THE PRESENCE OF ROCK, THE PIPE SHALL BE PLACED WITH 12" OF COVER TO EXISTING GRADE AND SHALL BE COVERED WITH AN ADDITIONAL 6" OF TRENCH BACKFILL MATERIAL TO OBTAIN 18" OF TOTAL COVER OVER TOP OF THE PIPE.  
2. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE AN IMPORTED NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

3. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

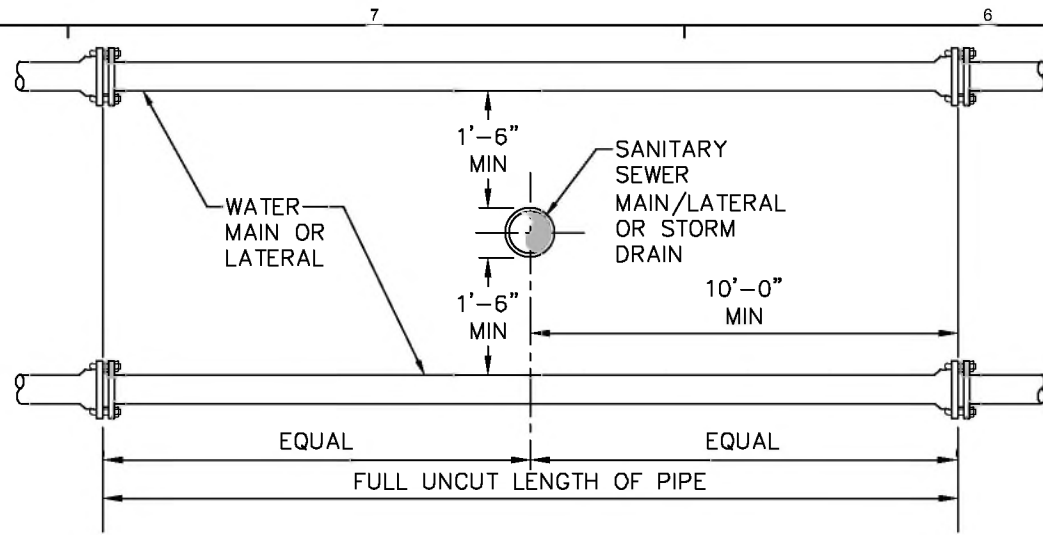
SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

4. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE BELOW FINISHED GRADE, DIRECTLY OVER PIPING.

5. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

**1 PIPE TRENCH DETAIL (TYPICAL)**  
SCALE: NOT TO SCALE

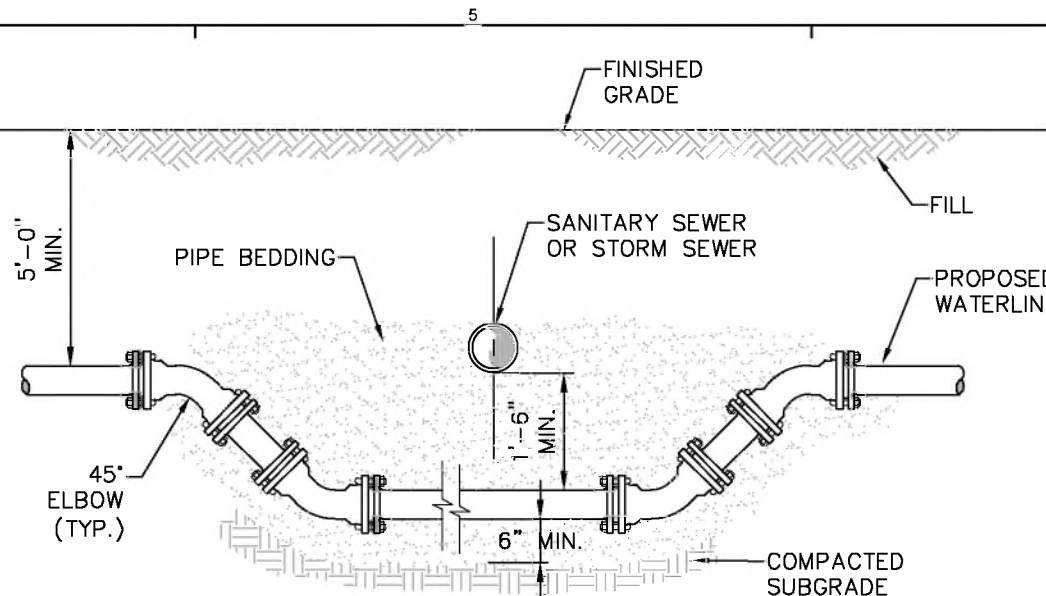


**NOTES:**  
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE NYS HEALTH DEPARTMENT. OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.  
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT, DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150psi TO ASSURE WATER TIGHTNESS.

**2 SANITARY/STORM SEWER AND WATERMAIN SEPARATION DETAIL**  
SCALE: NOT TO SCALE

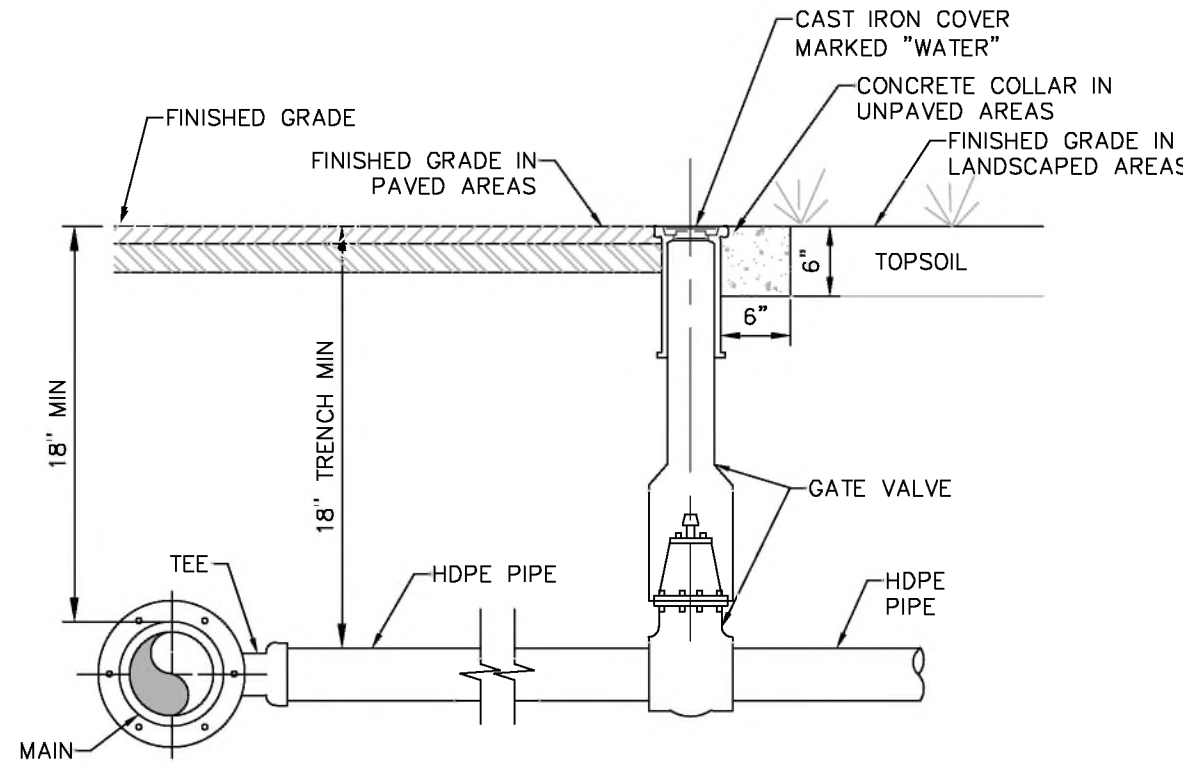
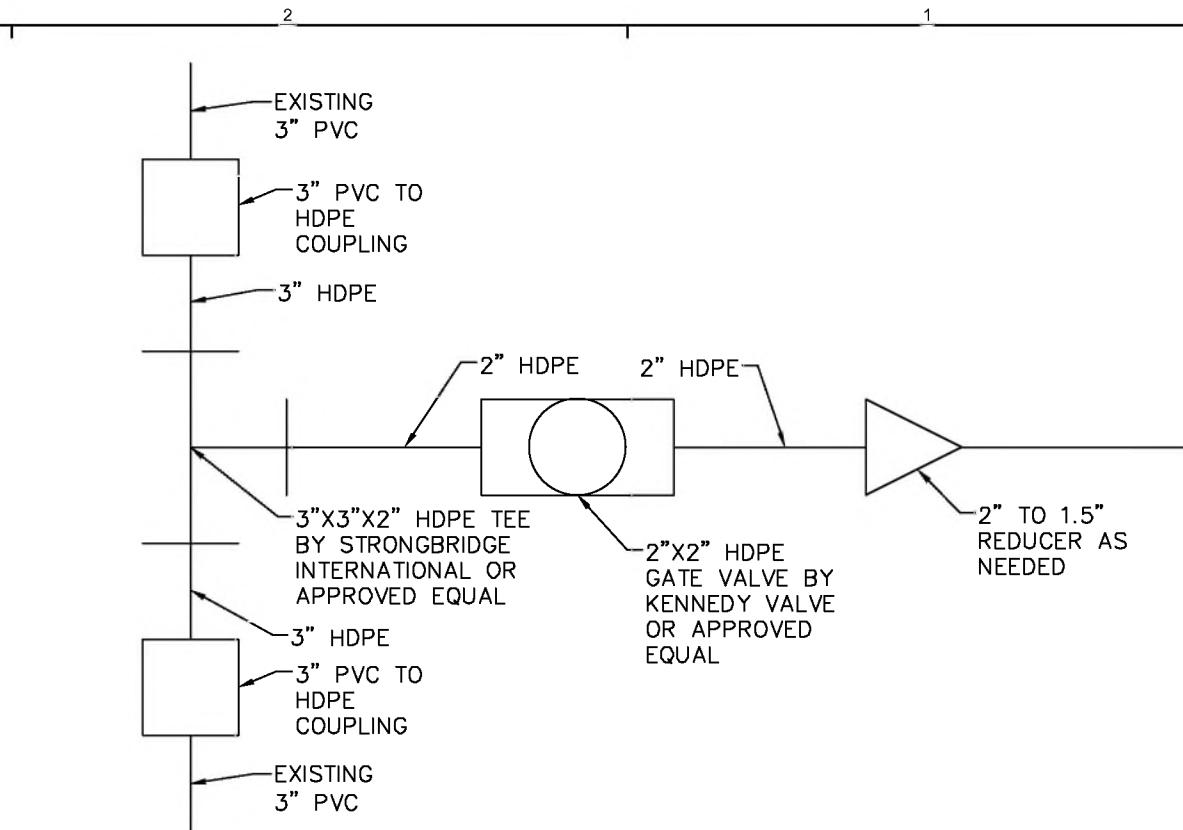
**WATER MAIN NOTES:**

1. THE WATER LINE MAY BE DEFLECTED WITHIN PIPE SPECIFICATIONS OR LAID DEEPER IN AREAS WHERE CROSSINGS WITH THE SANITARY LINE OCCUR, TO ACHIEVE THE REQUIRED 1.5' VERTICAL SEPARATION DISTANCE. (SEE WATERLINE OFFSET DETAIL FOR FURTHER INFORMATION).
2. WATER MAINS SHALL BE TESTED PER **AWWA SECTION C 600 OR C605**.
3. THE WATER MAIN IS TO BE INSTALLED AT A CONTINUOUS GRADE WITH NO ABRUPT HIGH OR LOW POINTS.



**NOTES:**  
1. WHEN THE ELEVATION OF THE SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION.  
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150psi TO ASSURE WATER TIGHTNESS.

**3 WATERLINE OFFSET DETAIL**  
SCALE: NOT TO SCALE



**4 HDPE SERVICE DETAIL**  
SCALE: NOT TO SCALE

New York State  
Parks, Recreation and  
Historic Preservation  
Governor Kathy Hochul  
Commissioner Erik Kulesseid

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**Project Title:**  
Camp Junior - Phase 3  
Campground Rehabilitation  
Contract No. D005876

**Project Location:**  
Harriman State Park  
Tiorati Brook Road  
Tuxedo, NY 10987

REVISIONS		
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Design By: SMF		
Checked By: REK		
Approved By: DMS		
Date: 03/16/2023		
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