

CITY OF HENDERSONVILLE PROJECT SPECIFIC DETAILS

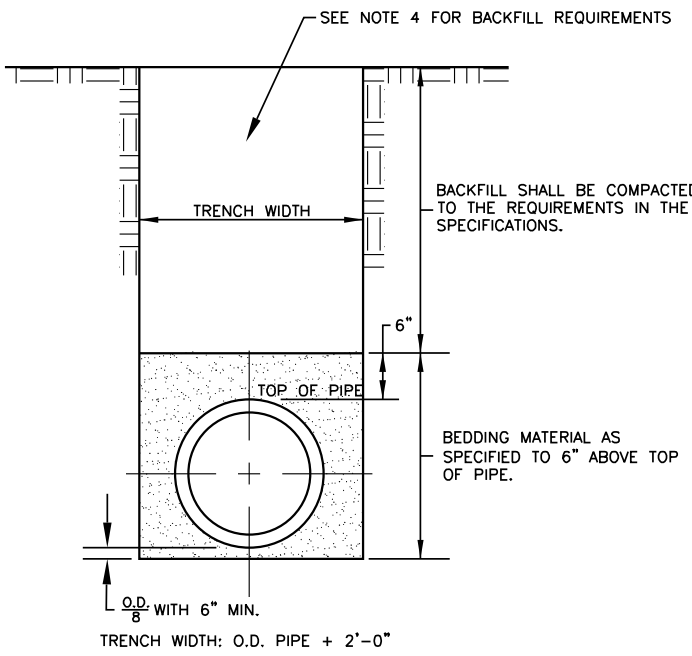
STRUCTURE 440350
HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
B-5929		UC-3C
DESIGNED BY:	ELM	
DRAWN BY:	ELM	
CHECKED BY:	MUP	
APPROVED BY:	MUP	
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		8/1/2025
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

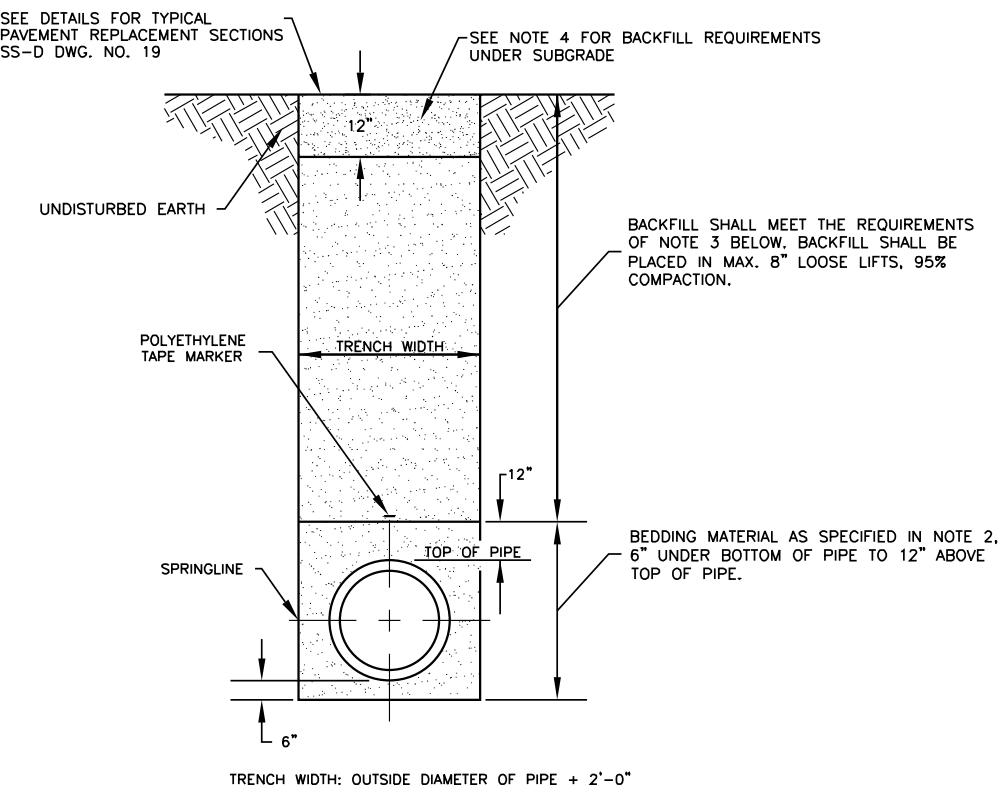
JMT Johnson, Mirmiran, & Thompson Inc.
2550 West Tyvola Road, Suite 120,
Charlotte, NC 28217
License No: C-3097



- NOTES:
- BEDDING CLASSIFICATION SHALL MEET OR EXCEED ASTM D2321 CLASS 1 BEDDING FOR FLEXIBLE PIPING, AND ASTM C12, CLASS 'B' BEDDING FOR RIGID PIPING.
 - IN ROCK OR WET SOIL, PIPE MUST BE BEDDED IN AT LEAST 6" OF #57 WASHED STONE.
 - FORCE MAIN BEDDING SHALL BE SELECT NATURAL SAND WELL COMPACTED IN 6" LIFTS.
 - TRENCHES EXCAVATED OUTSIDE EXISTING ROAD AND RAILWAY RIGHTS-OF-WAY SHALL BE BACKFILLED WITH COMMON BACKFILL MATERIAL, CONSISTING OF EXCAVATED MATERIALS EXCEPT HIGHLY ORGANIC SILTS AND CLAYS AND TAMPED THOROUGHLY. FILL SHALL BE DEPOSITED IN SUCCESSIVE, UNIFORM, APPROXIMATELY HORIZONTAL LAYERS. MATERIAL SHALL BE FREE OF ROOTS, STONES, AND DEBRIS. ALL MATERIAL SHALL HAVE AN IN-PLACE DENSITY OF AT LEAST 85% OF MAXIMUM DRY DENSITY (STANDARD PROCTOR) OR AS APPROVED BY THE ENGINEER. COMMON BACKFILL SHALL NOT CONTAIN STONE BLOCKS, BROKEN CONCRETE, MASONRY RUBBLE, OR OTHER SIMILAR MATERIALS. IT SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE READILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE, AND FROZEN SOIL WILL NOT BE PERMITTED.
 - WHERE EXCAVATED MATERIAL, AFTER REMOVAL OF ROCKS, STUMPS, PLANT MATERIAL, AND OTHER EXTRANEOUS MATERIAL AND PROPER DEWATERING, DRYING, PROTECTION, AND STORAGE OF THE EXCAVATION BY THE CONTRACTOR, CANNOT BE PREPARED TO MEET THE REQUIREMENTS FOR COMMON BACKFILL, DUE TO THE NATURE OF THE MATERIAL (E.G., EXCESSIVE ROCK, MUCK, ORGANICS, CLAY, SILT, OR OTHER MATERIAL), AND AS DETERMINED BY THE ENGINEER, THE UNACCEPTABLE EXCAVATION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AND REPLACED BY IMPORTED BACKFILL MEETING THE REQUIREMENTS OF STRUCTURAL BACKFILL. IMPORTED STRUCTURAL BACKFILL SHALL BE FREE OF ORGANICS, ROOTS OR OTHER DELETERIOUS MATERIALS AND SHALL NOT CONTAIN MORE THAN FIVE PERCENT (BY WEIGHT) ORGANIC MATERIAL, HAVE A PLASTICITY INDEX (PI) GREATER THAN 25, OR HAVE A MAXIMUM DRY DENSITY LESS THAN 80 POUNDS PER CUBIC FOOT. IMPORTED STRUCTURAL FILL SHOULD CONSIST OF MATERIAL CLASSIFIED AS ML, CL, SC, OR SM, OR BETTER PER ASTM D-2487 AND BE CAPABLE OF BEING COMPACTED TO 95% STANDARD PROCTOR.
 - THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL COMPACTION REQUIREMENTS.

DATE: 10/19/2023 SS-D DWG. NO. 1
SCALE: NOT TO SCALE
City of Hendersonville Engineering Department
305 Williams Street
Hendersonville, NC 28792
(828) 697-3000 (office)
www.cityofhendersonville.org

GRAVITY SEWER
TRENCH CONSTRUCTION
OUTSIDE PAVEMENT

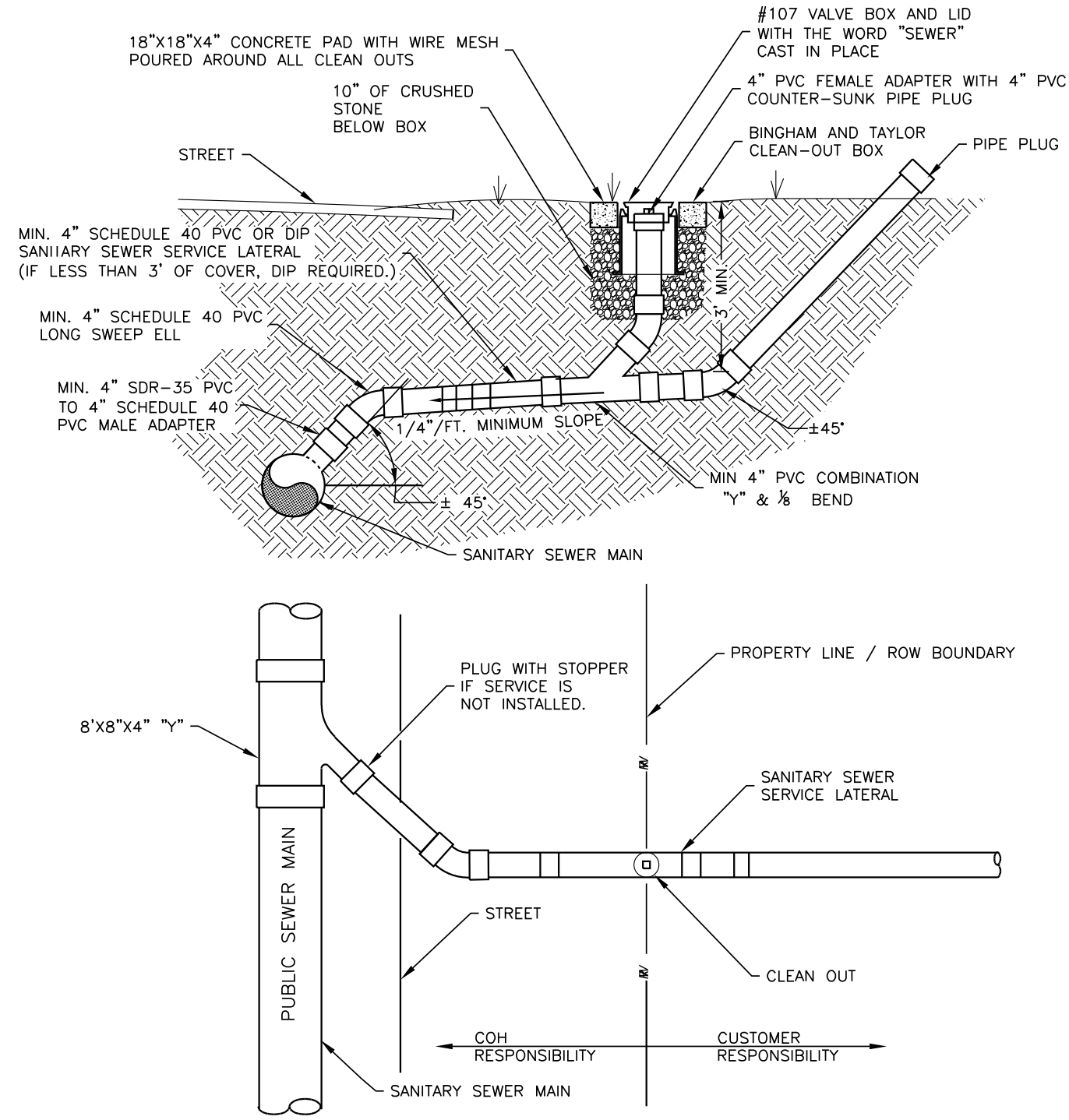


- NOTES:
- THIS TRENCH BACKFILL DETAIL APPLIES TO AREAS UNDER PAVEMENT, CURB AND GUTTER, AND SIDEWALK.
 - BEDDING CLASSIFICATION SHALL MEET OR EXCEED ASTM D2321 CLASS 1 BEDDING FOR FLEXIBLE PIPING, AND ASTM C12, CLASS B BEDDING FOR RIGID PIPING.
 - COMMON BACKFILL MATERIAL SHALL CONSIST OF EXCAVATED MATERIALS EXCEPT HIGHLY ORGANIC SILTS AND CLAYS. FILL SHALL BE DEPOSITED IN SUCCESSIVE, UNIFORM, APPROXIMATELY HORIZONTAL LAYERS NOT EXCEEDING EIGHT (8) INCHES IN DEPTH FOR THE FULL WIDTH. MATERIAL SHALL BE FREE OF ROOTS, STONES, AND DEBRIS AND CAPABLE OF BEING COMPACTED TO 95% STANDARD PROCTOR. COMMON BACKFILL SHALL NOT CONTAIN STONE BLOCKS, BROKEN CONCRETE, MASONRY RUBBLE, OR OTHER SIMILAR MATERIALS. IT SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE READILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE, AND FROZEN SOIL WILL NOT BE PERMITTED.

WHERE EXCAVATED MATERIAL, AFTER REMOVAL OF ROCKS, STUMPS, PLANT MATERIAL, AND OTHER EXTRANEOUS MATERIAL AND PROPER DEWATERING, DRYING, PROTECTION, AND STORAGE OF THE EXCAVATION BY THE CONTRACTOR, CANNOT BE PREPARED TO MEET THE REQUIREMENTS FOR COMMON BACKFILL, DUE TO THE NATURE OF THE MATERIAL (E.G., EXCESSIVE ROCK, MUCK, ORGANICS, CLAY, SILT, OR OTHER MATERIAL), AND AS DETERMINED BY THE ENGINEER, THE UNACCEPTABLE EXCAVATION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AND REPLACED BY IMPORTED BACKFILL MEETING THE REQUIREMENTS OF STRUCTURAL BACKFILL. IMPORTED STRUCTURAL BACKFILL SHALL BE FREE OF ORGANICS, ROOTS OR OTHER DELETERIOUS MATERIALS AND SHALL NOT CONTAIN MORE THAN FIVE PERCENT (BY WEIGHT) ORGANIC MATERIAL, HAVE A PLASTICITY INDEX (PI) GREATER THAN 25, OR HAVE A MAXIMUM DRY DENSITY LESS THAN 80 POUNDS PER CUBIC FOOT. IMPORTED STRUCTURAL FILL SHOULD CONSIST OF MATERIAL CLASSIFIED AS ML, CL, SC, OR SM, OR BETTER PER ASTM D-2487 AND BE CAPABLE OF BEING COMPACTED TO 95% STANDARD PROCTOR.
 - THE TOP 12 INCHES OF FINAL BACKFILL FOR ROAD OR STREET SUBGRADE SHALL BE COMPACTED TO 98% STANDARD PROCTOR.
 - THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL COMPACTION REQUIREMENTS.

DATE: 10/19/2023 SS-D DWG. NO. 2
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www.cityofhendersonville.org

GRAVITY SEWER
TRENCH CONSTRUCTION
UNDER PAVEMENT



DATE: 10/19/2023 SS-D DWG. NO. 4
SCALE: NOT TO SCALE
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305 Williams Street
Hendersonville, NC 28792
(828) 697-3000 (office)
www.cityofhendersonville.org

STANDARD SERVICE CONNECTION
LATERAL AND CLEANOUT

