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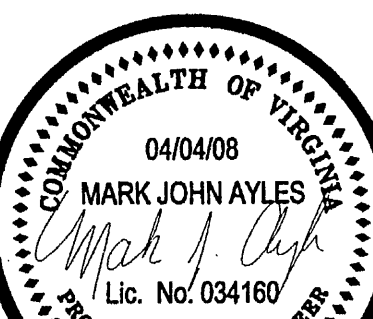
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NEW FACILITY NORTH ROANOKE COUNTY FIRE STATION

HERSBERGER ROAD ROANOKE, VIRGINIA

UTILITY PLAN



COMMISSION No.

07046H

SHEET

SP-4

No. 4 of 11

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HUGHES ASSOCIATES ARCHITECTS

A PROFESSIONAL CORPORATION

WATER NOTES

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED WATER LINES.

ALL WATER LINES SHALL BE INSTALLED AS SHOWN ON THE PLANS. ALL PIPES, VALVES, AND FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.

WATER LINES SHALL BE PRESSURE TESTED, DISINFECTED, AND TESTED IN ACCORDANCE WITH AWWA STANDARDS (LATEST EDITION), AND WITH WESTERN VIRGINIA WATER AUTHORITY DESIGN & CONSTRUCTION STANDARDS.

THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, AND NECESSARY TAPS AND SHALL PERFORM ALL WORK REQUIRED FOR STERILIZATION, TESTING, AND FLUSHING.

ALL TRENCHES SHALL BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FUTURE PAVEMENT AND STRUCTURES.

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND UNCOVERING ALL VALVE VAULTS, METERS, ETC., AFTER PAVING AND ADJUSTING TO FINAL GRADE.

THE WATER SERVICE FOR THIS PROJECT REQUIRES A CONCRETE VAULT. CONTACT CLEARFLOW AT (540) 942-3300 TO ORDER THE VAULT. THE APPLICANT IS RESPONSIBLE FOR PAYMENT. COORDINATION OF THE VAULT DELIVERY, AND INSTALLATION OF THE WATER SERVICE BETWEEN THE AUTHORITY MAIN AND THE VAULT. PRIOR TO START OF CONSTRUCTION, CALL THE AUTHORITY INSPECTOR AT 537-3243. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS AND COMPONENTS OF THE METER SERVICE AND VAULT IN ACCORDANCE WITH AUTHORITY STANDARDS.

BURIED WATER LINES 2" TO 4" IN DIAMETER SHALL BE DR21 PVC PIPE. TYPE K COPPER PIPE SHALL ALSO BE USED FOR SERVICE CONNECTIONS FROM THE WATER MAIN TO THE NEW METER.

 MATERIAL NOTES
 ALL MATERIALS AND METHODS MUST COMPLY WITH THE WVA WATER AND SEWER DESIGN & CONSTRUCTION STANDARDS, CURRENT EDITION.

PVC PLASTIC GRAVITY PIPE (4" THROUGH 15") SHALL MEET SDR-35 REQUIREMENTS FOR ASTM D3034, AND (18" THROUGH 27") ASTM-F678. PVC PLASTIC PRESSURE PIPE 2" TO 4" IN DIAMETER SHALL MEET DR21PVC REQUIREMENTS FOR ASTM D2241.

FITTINGS AND PIPE SHALL BE OF A GASKET PUSH ON JOINT TYPE MEETING ASTM D3212. FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D3034.

DUCTILE IRON SEWER PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH SPECIFICATIONS AWWA C151/ANSI 21.51. WALL THICKNESS SHALL BE CLASS 52.

GENERAL UTILITY NOTES

COORDINATE CONSTRUCTION OF GAS SERVICE GAS SERVICE AND CONNECTION WITH ROANOKE GAS COMPANY (540) 777-4427.

TELEPHONE SERVICE AND CONFLICTS SHOULD BE COORDINATED WITH VERIZON @ (540)-265-7534.

TEMPORARY ELECTRICAL SERVICE, PERMANENT ELECTRICAL SERVICE, AND CONFLICTS SHOULD BE COORDINATED WITH AEP (800) 956-4237.

CONSTRUCTION OF WATER AND SEWER SERVICE SHALL BE COORDINATED WITH THE WESTERN VIRGINIA WATER AUTHORITY (540) 853-5700.

UTILITY NOTES

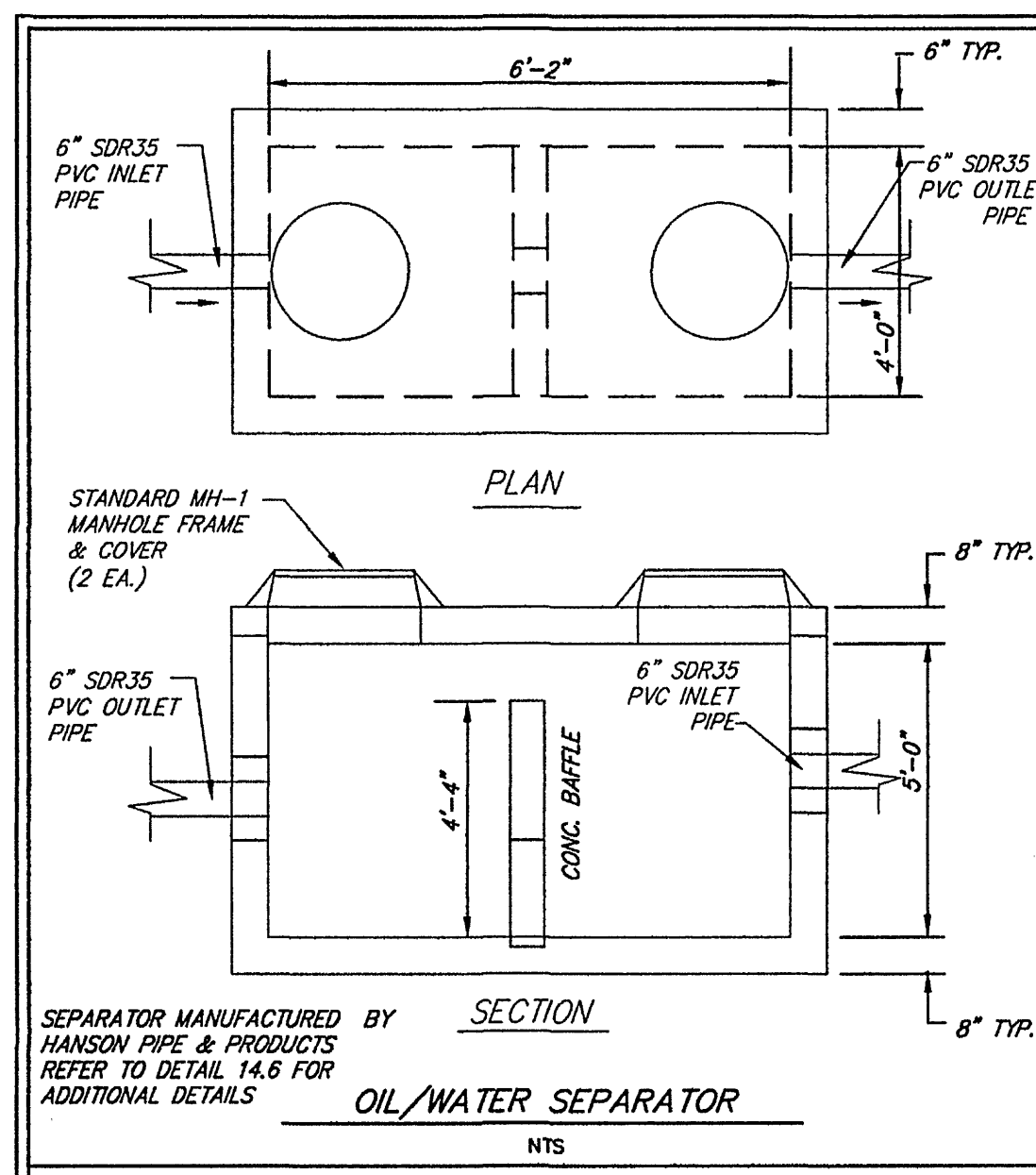
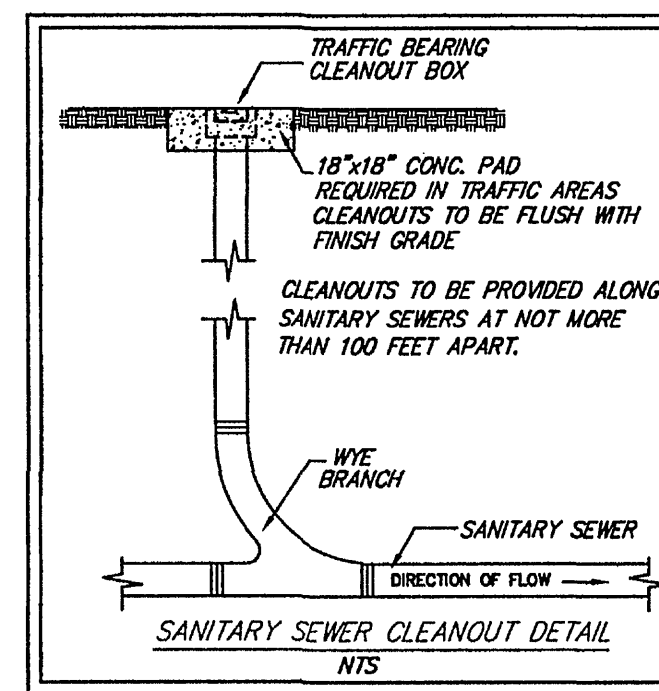
A MINIMUM OF THREE (3) FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

ALL SANITARY SEWER WORK SHALL BE CONSTRUCTED TO THE LINES AND GRADES INDICATED. PIPE BEDDING AND BACKFILL SHALL BE CAREFULLY CONTROLLED. ALL WORK SHALL COMPLY WITH ALL LOCAL CODES AND REQUIREMENTS.

ALL TRENCHES SHALL BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FUTURE PAVEMENT, STRUCTURES, AND UTILITIES.

BURIED SANITARY SEWER PIPE SHALL BE SDR-35 PVC. DUCTILE IRON PIPE, CLASS 52 SHALL BE USED IN APPROVED LOCATIONS WHERE COVER IS 3' OR LESS.

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND UNCOVERING ALL CLEANOUTS, MANHOLES, ETC., AFTER PAVING AND ADJUSTING TO FINAL GRADE.

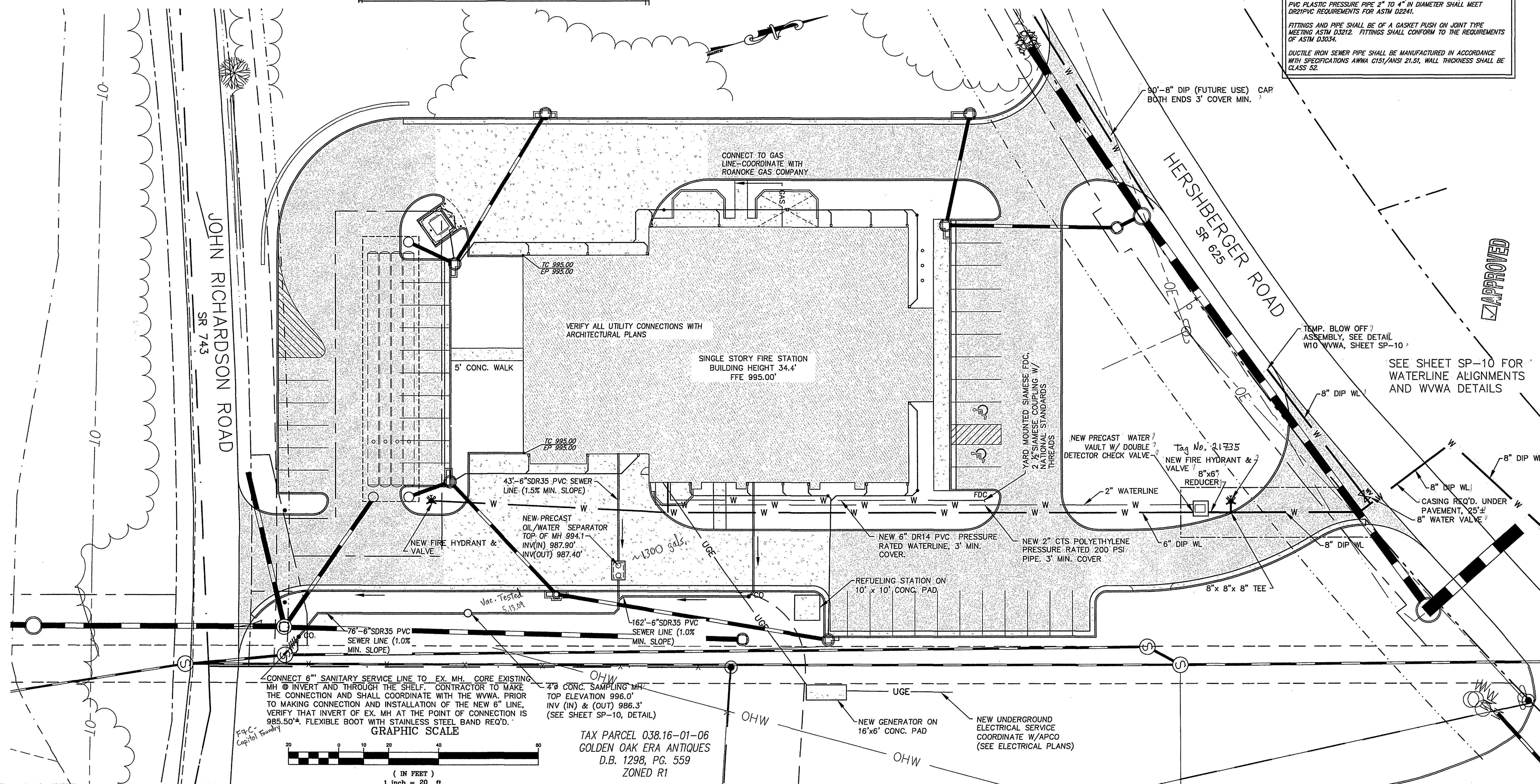


*SEE SHEET SP-6 FOR ADDITIONAL NOTES AND DETAILS

INSPECTION AND MAINTENANCE FOR THE STORMTECH CHAMBER SYSTEM

AS A MINIMUM, STORMTECH RECOMMENDS ANNUAL INSPECTIONS. INITIALLY, THE ISOLATOR ROW SHOULD BE INSPECTED EVERY 6 MONTHS FOR THE FIRST YEAR OF OPERATION. FOR SUBSEQUENT YEARS, THE INSPECTION SHOULD BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION. THE INSPECTION IS AS FOLLOWS:

1. INSPECT ISOLATOR ROW FOR SEDIMENT
 - 1.1. INSPECTION PORTS (IF PRESENT)
 - 1.1.a. REMOVE LID FROM FLOOR BOX FRAME
 - 1.1.b. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD RESULTS ON MAINTENANCE LOG.
 - 1.1.c. IF SEDIMENT IS AT OR ABOVE THE LOWER ROW OF SIDEWALL HOLES (APPROXIMATELY 3 INCHES) PROCEED TO STEP 2. IF NOT PROCEED TO STEP 3.
 - 1.2. ALL ISOLATOR ROWS
 - 1.2.a. REMOVE COVER FROM MANHOLE AT UPSTREAM END OF ISOLATOR ROW USING A FLASHLIGHT, INSPECT DOWN ISOLATOR ROW THROUGH OUTLET PIPE
 - 1.2.b. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE.
 - 1.2.c. IF SEDIMENT IS AT OR ABOVE THE LOWER ROW OF SIDEWALL HOLES (APPROXIMATELY 3 INCHES) PROCEED TO STEP 2. IF NOT PROCEED TO STEP 3.
2. CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
 - 2.1. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING NOZZLE SPREAD OF 45 INCHES OR MORE IS PREFERABLE.
 - 2.2. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN.
 - 2.3. VACUUM MANHOLE PUMP AS REQUIRED.
3. REPLACE ALL CAPS, LIDS AND COVERS, RECORD OBSERVATIONS AND ACTIONS.
4. INSPECT & CLEAN CATCH BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.



As-Built 7.2.10 K. Winslow