

STORMWATER MANAGEMENT
COST ESTIMATE

BMP #1 CONTECH CDS 2025

ID # (AS ASSIGNED BY COUNTY)

COST \$ 20,000

BMP #2

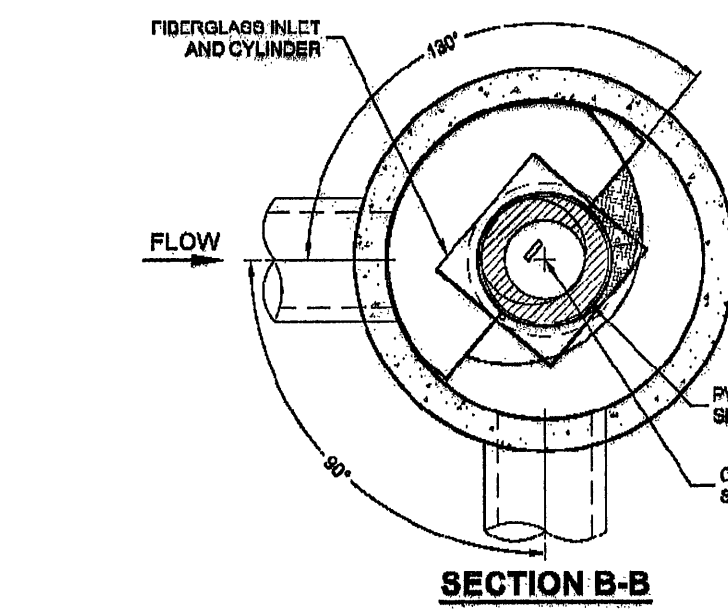
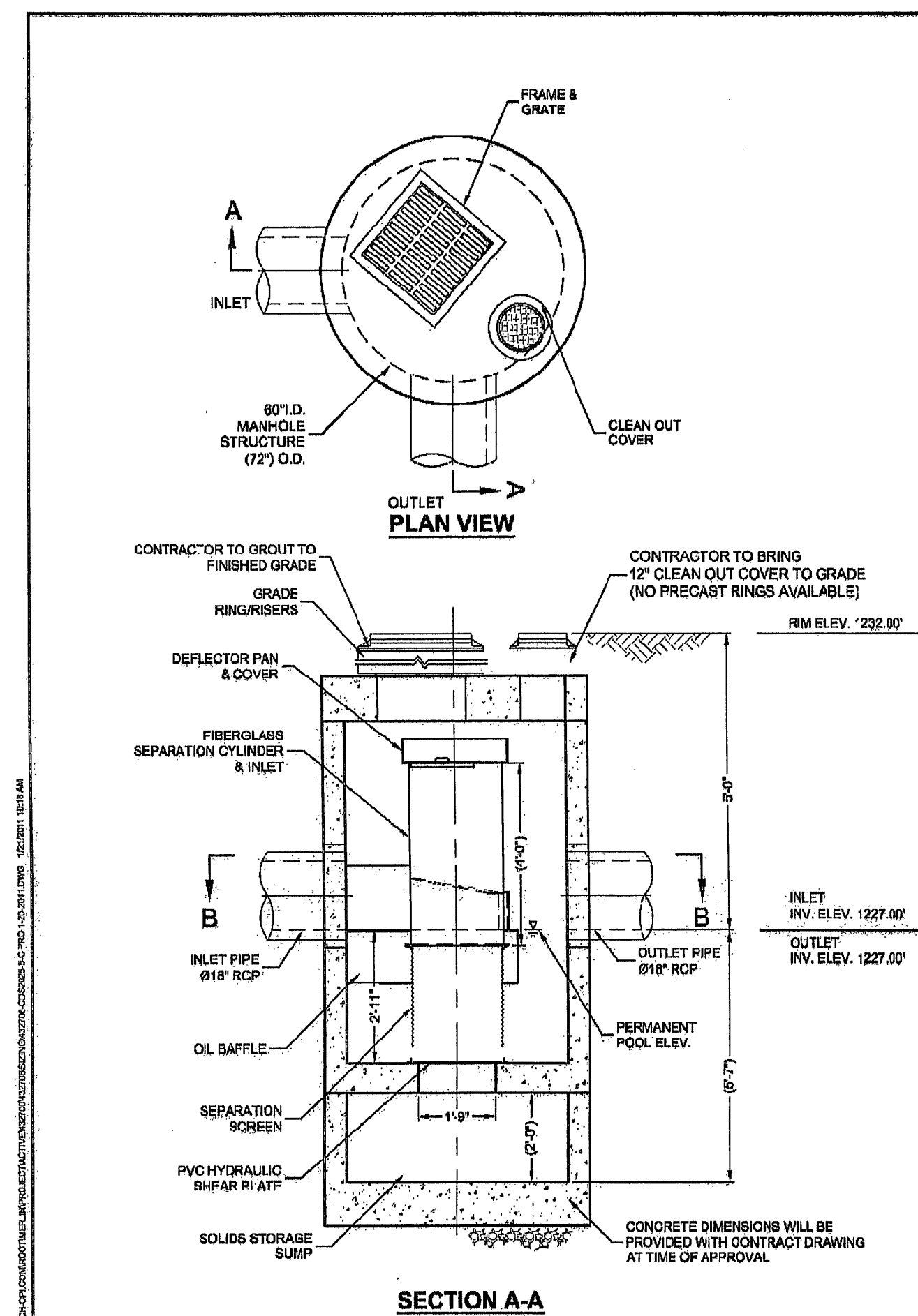
ID #

COST \$

LUMP SUM \$ 20,000

CONSTRUCTION NOTES

- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COUNTY OF ROANOKE STORMWATER MANAGEMENT ORDINANCE AND DESIGN MANUAL, LATEST ADDITION.
- ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEED.
- THE PERMITTEE/OWNER SHALL CONTACT THE COUNTY OF ROANOKE FOR INSPECTION AND APPROVAL PRIOR TO CONVERTING ANY SEDIMENT TRAP AND/OR BASIN INTO A PERMANENT STORMWATER MANAGEMENT FACILITY.
- PRIOR TO FINAL ACCEPTANCE AND BOND RELEASE OF THE PROJECT, THE PERMITTEE/OWNER SHALL SUBMIT TO THE COUNTY OF ROANOKE AS-BUILT DOCUMENTATION CONFIRMING THAT THE STORM DRAINAGE SYSTEM AND STORMWATER MANAGEMENT FACILITIES AND PRACTICES ARE IN CONFORMANCE WITH THE APPROVED PLANS. AS-BUILTS SHALL MEET THE REQUIREMENTS SET FORTH IN THE STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 15.



MATERIALS LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET & CYLINDER	CONTECH
1	28"x28" DEFLECTOR PAN & COVER	CONTECH
1	2400 MICRON SEP. SCREEN	CONTECH
1	ISCALANT FOR JOINTS	CONTRACTOR
1	GRADE RINGS/ RIBBERS	CONTRACTOR
1	3/12"x6" CLEAN OUT COVER	CONTRACTOR
1	24"x24" FRAME AND GRATE	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY	1.80 CFS
PEAK FLOW	4.20 CFS
RETURN PERIOD	25 YRS

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-cpi.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H20 AND CASTINGS SHALL MEET AASHTO M300 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
- PVC HYDRAULIC SHEAR PLATE IS PLACED ON BEHIND AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

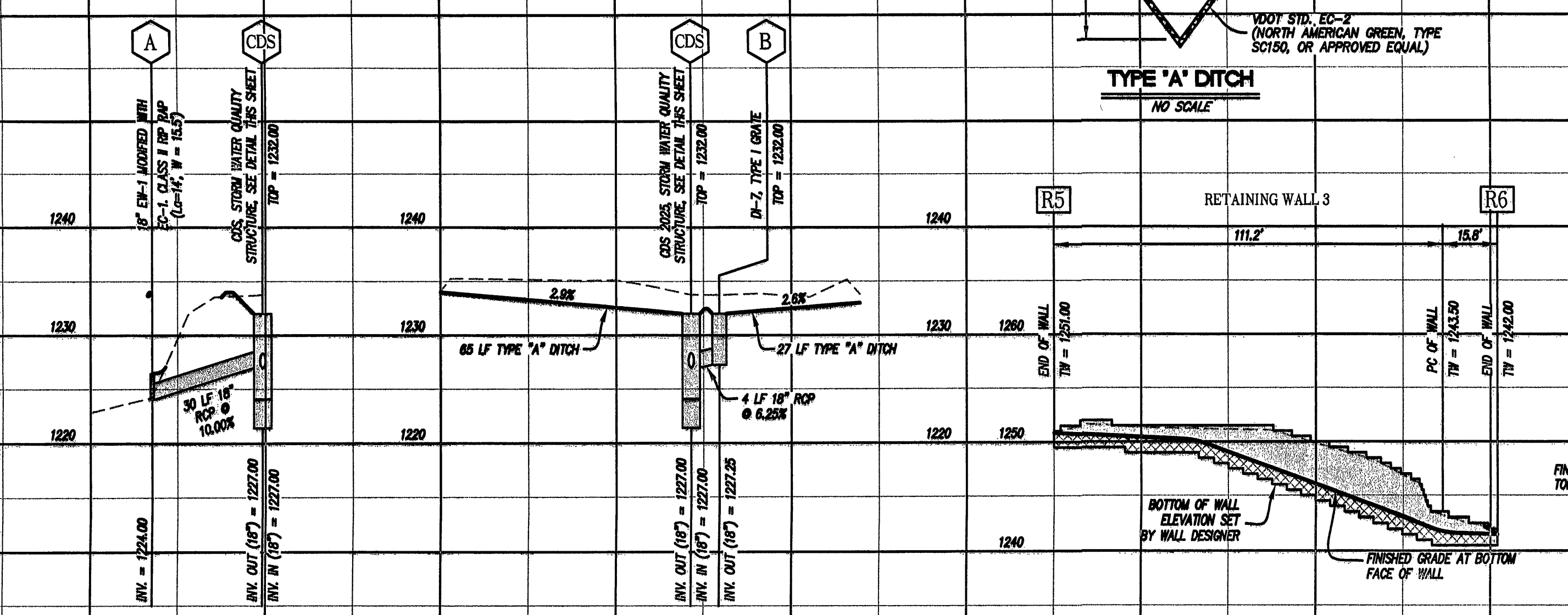
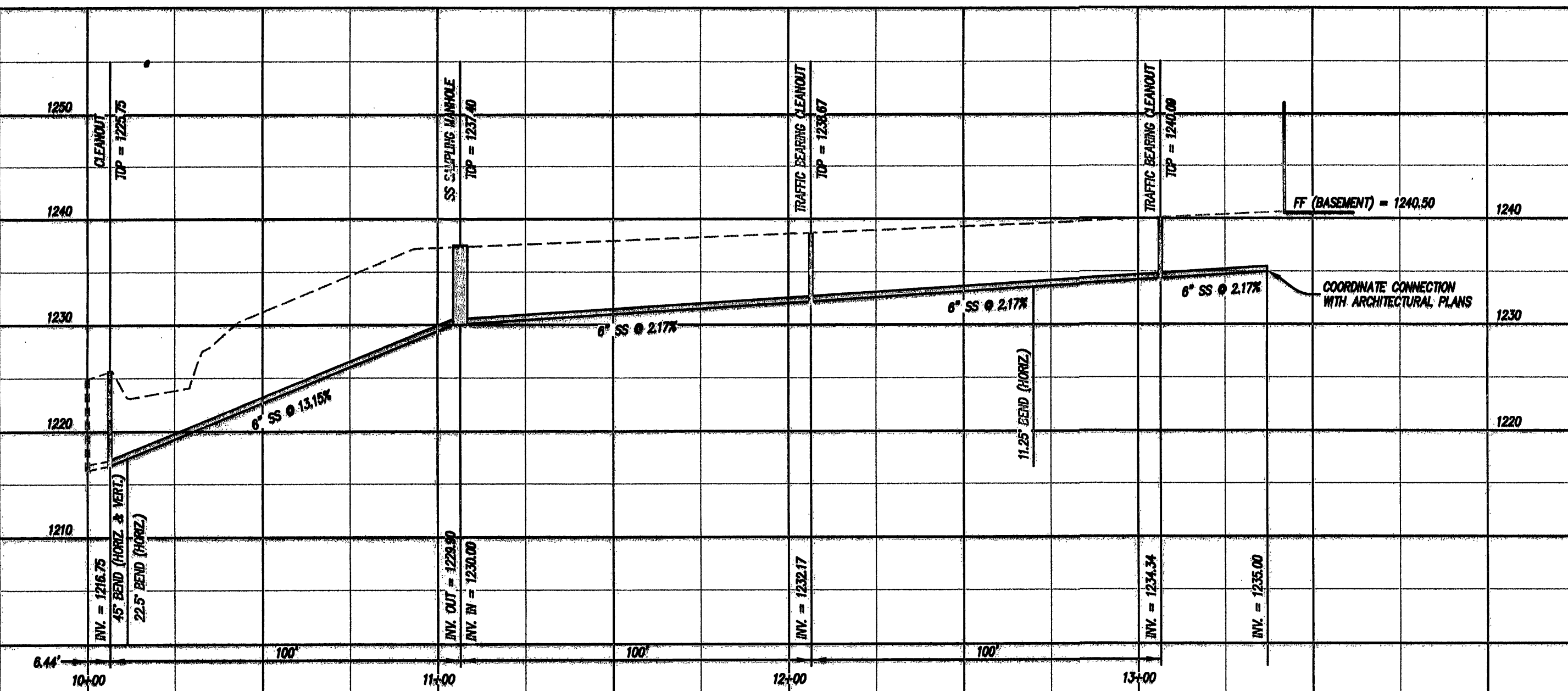
INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING OUTLIFTS PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT:
APPROXIMATE HEAVIEST PICK = 15,000 LBS.CONTECH
PROPOSAL
DRAWING

NO SCALE

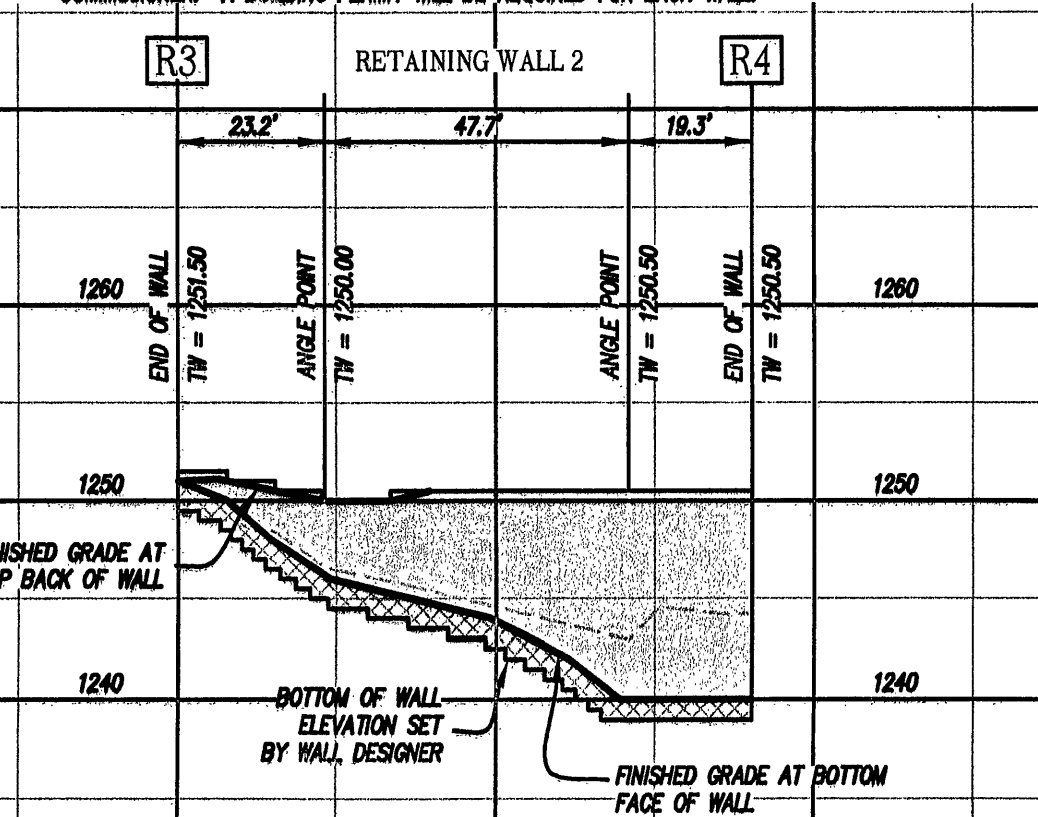
SANITARY SEWER LATERAL PROFILE



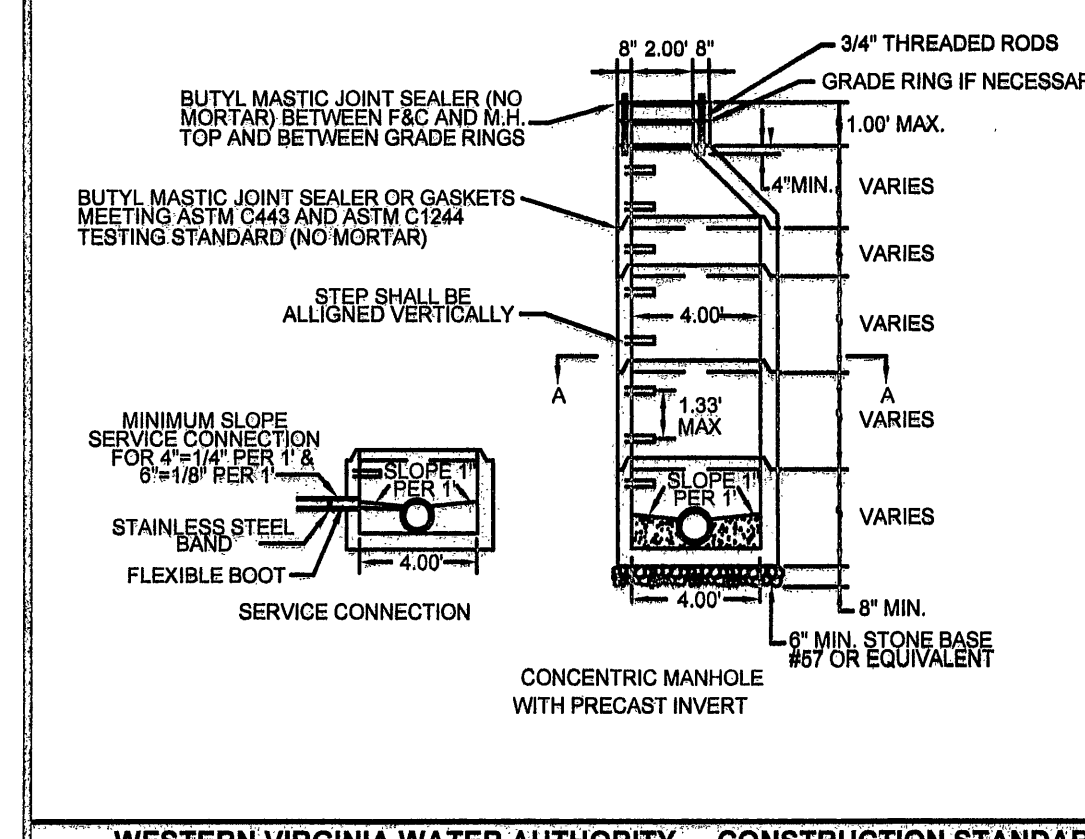
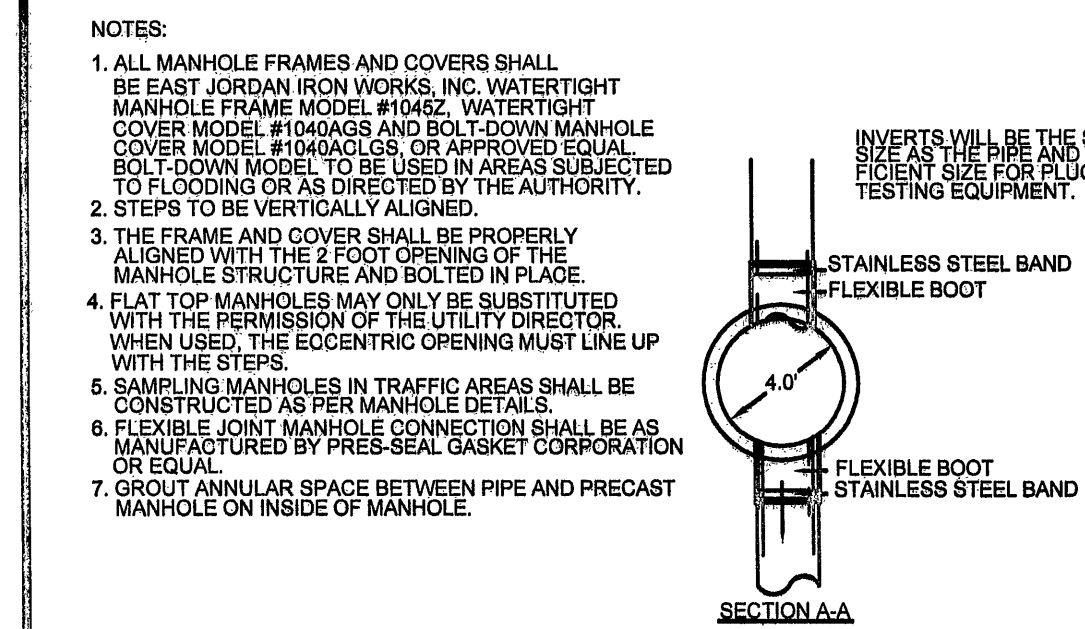
STORM DRAIN PROFILES

RETAINING WALL NOTES:

- TH = TOP OF WALL
- PROFILES OF WALLS ARE ALONG THE BOTTOM FACE OF WALL
- WALL DESIGNER SHALL PROVIDE TO THE OWNER DESIGN DRAWINGS FOR THE RETAINING WALL. SUCH DRAWINGS TO INCLUDE TYPE AND STYLE OF WALL AND HANDRAIL/GUARDRAIL DETAILS. THE NEED FOR ANY HANDRAIL/GUARDRAIL TO BE BASED ON BUILDING CODE REQUIREMENTS. DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA. WALL DETAILS AND PROFILES SHOWN IN THESE PLANS ARE FOR SCHEMATIC DETAIL ONLY. LUMSDEN ASSOCIATES ASSUMES NO RESPONSIBILITY OR LIABILITY RELATING TO FAILURES RESULTING FROM SAME. A QUALIFIED GEOTECHNICAL ENGINEER SHOULD MONITOR THE INSTALLATION OF THE RETAINING WALL AND THE CONSTRUCTION OF THE CUT AND FILL SLOPES TO INSURE ADEQUATE SOIL COMPACTION, TESTING, STABILIZATION, SLOPE STABILITY, AND STRUCTURAL INTEGRITY, ETC. GEOTECHNICAL ENGINEER SHALL BE LICENSED AS A PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA.
- RETAINING WALL DESIGNS MUST BE REVIEWED AND APPROVED BY THE ROANOKE COUNTY BUILDING COMMISSIONER. A BUILDING PERMIT WILL BE REQUIRED FOR EACH WALL.



RETAINING WALL PROFILES



WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION	DATE	DESCRIPTION
1	07/01/04	ADDED RETAINING WALL AND ACCESS DRIVE, PAVING AREA, LANDSCAPING, AND MODIFIED RETAINING WALLS 1 AND 2
2	03/01/08	AND ADDED RETAINING WALL 3

4" STANDARD MANHOLE
FOR PIPE 15"
OR SMALLER

S-01

LUMSDEN ASSOCIATES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
ROANOKE, VIRGINIAL.A.
LUMSDEN ASSOCIATES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
ROANOKE, VIRGINIA
Lic. No. 039002
1/16/12PROFILES AND
STORMWATER
MANAGEMENT
NOTES AND DETAILSVARSITY LANDSCAPING &
GROUNDS
PREPARED FOR
STRUCTURES DESIGN/BUILD
CARE SPRING MAGISTERIAL DISTRICT
ROANOKE COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION
1	1/16/12	ADDED RETAINING WALL AND ACCESS DRIVE, PAVING AREA, LANDSCAPING, AND MODIFIED RETAINING WALLS 1 AND 2
2		AND ADDED RETAINING WALL 3
3		
4		
5		

SHEET 5 OF 8