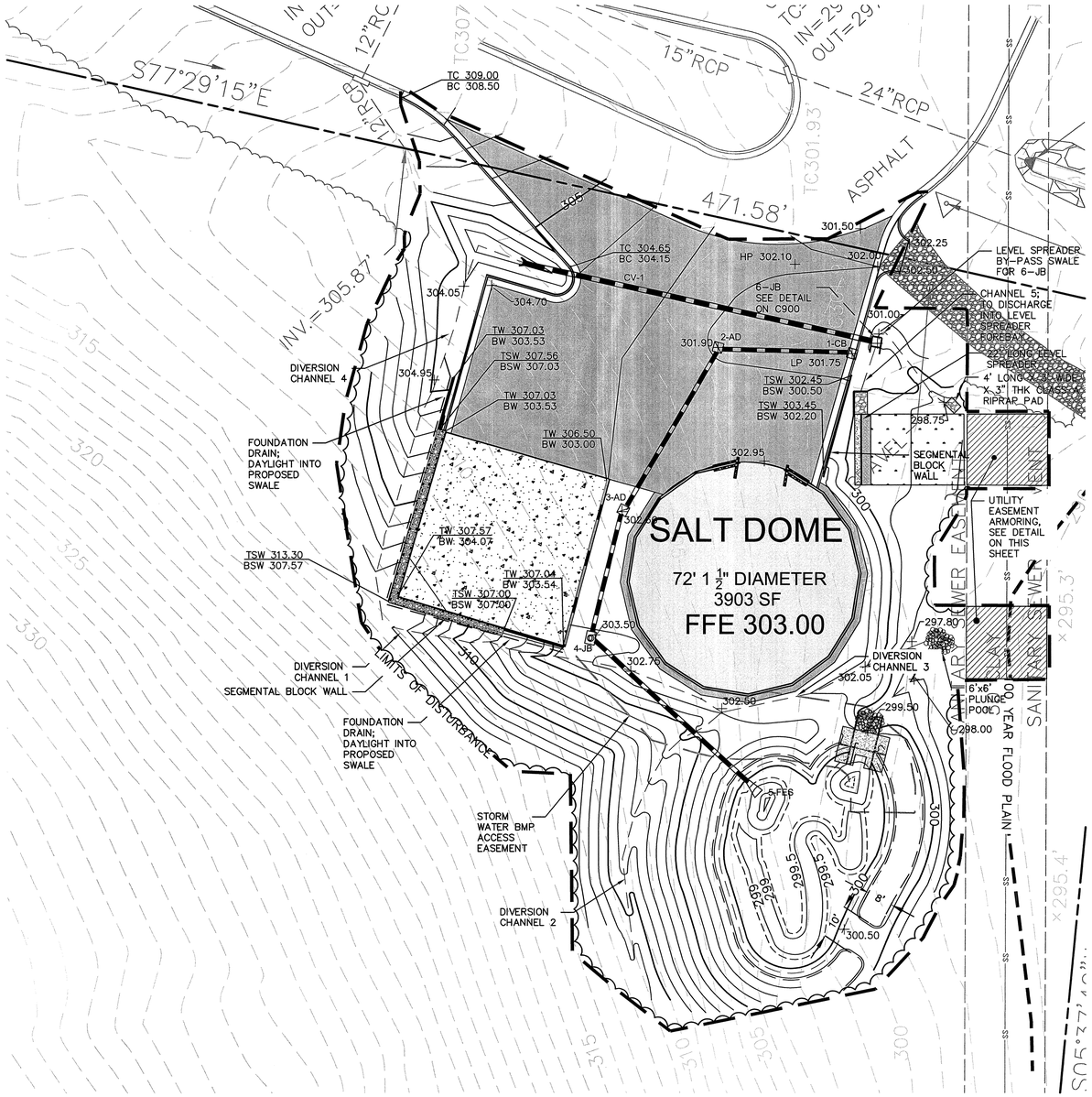
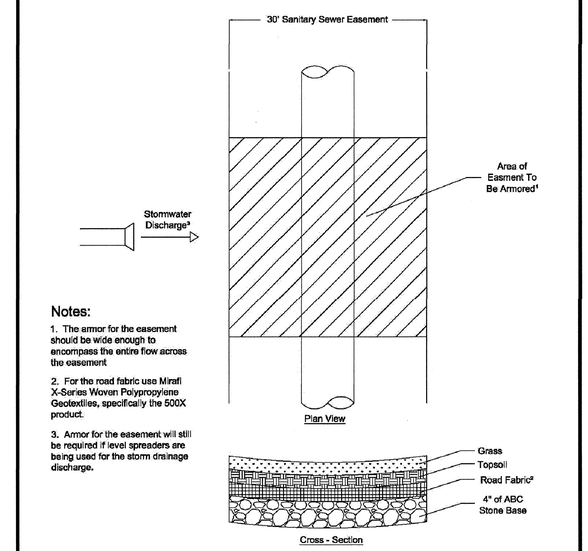


GENERAL NOTES

1. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES AREA INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
2. PIPE LENGTHS ARE MEASURED FROM CENTERS OF STRUCTURES. CONTRACTOR SHALL ADJUST LENGTHS AS REQUIRED & MAINTAIN DESIGN SLOPES AS A MINIMUM.
3. STORMWATER DRAINAGE SYSTEMS AND ROADWAYS ARE TO BE PRIVATELY OWNED AND MAINTAINED.
4. NO NEW GRADING TO BE DONE INSIDE THE EXISTING SANITARY SEWER EASEMENT.
5. ALL STORM DRAINAGE PIPES AND SHALL BE WRAPPED WITH A DOUBLE LAYER OF NON-WOVEN FILTER FABRIC ON THE OUTSIDE OF THE PIPE AT EACH JOINT. THE FABRIC WRAP SHALL COVER A TW-FOOT LENGTH OF PIPE AND SHALL BE CENTERED OVER THE JOINT. ATTACH FILTER FABRIC TO PIPE CONCRETE NAILS.

TOTAL DISTURBED AREA = 41,156 SF



Notes:

1. The armor for the easement should be wide enough to encompass the entire flow across the easement
2. For the road fabric use Mirafi X-Series Woven Polypropylene Geotextiles, specifically the 500X product.
3. Armor for the easement will still be required if level spreaders are being used for the storm drainage discharge.

DURHAM 1869 CITY OF MEDICINE

DATE: AUGUST 13, 2008	Utility Easement Armoring	SCALE: NONE
REVISED:	CITY OF DURHAM, NORTH CAROLINA DEPARTMENT OF PUBLIC WORKS	DETAIL NO. XX-X.X

STORM DRAINAGE TABLE

Upstream Structure	Downstream Structure	Diameter (in)	Material	Elevation Ground (Start) (ft)	Invert (Upstream) (ft)	Length (ft)	Slope (%)	Downstream Elevation Ground (ft)	Invert (Downstream) (ft)
1-CB	2-AD	15	Class III RCP	301.75	299.15	42	0.71	301.90	298.85
2-AD	3-AD	15	Class III RCP	301.90	298.75	58	0.78	302.60	298.30
3-AD	4-JB	18	Class III RCP	302.60	298.20	33	0.76	302.60	297.95
4-JB	5-FES	18	Class III RCP	302.60	297.85	72	0.71	298.00	297.34

CULVERT TABLE

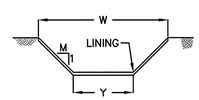
Culvert	Section Size	Material	Upstream Invert Elevation (ft)	Length (ft)	No. of Barrels	Constructed Slope (%)	Downstream Invert Elevation (ft)	Velocity (ft/s)
CV-1	15"	Class IV RCP	301.50	110	1	1.36	300.00	6.05

LEVEL SPREADER TABLE

Level Spreader Summary Table		
Level Spreader Length	22	FT
Grass Filter Strip Length	30	FT
Forebay Size	340	SF

CHANNEL TABLE

Upstream Structure	Downstream Structure	Diameter (in)	Material	Elevation Ground (Start) (ft)	Invert (Upstream) (ft)	Length (ft)	Slope (%)	Downstream Elevation Ground (ft)	Invert (Downstream) (ft)
1-CB	2-AD	15	Class III RCP	301.75	299.15	42	0.71	301.90	298.85
2-AD	3-AD	15	Class III RCP	301.90	298.75	58	0.78	302.60	298.30
3-AD	4-JB	18	Class III RCP	302.60	298.20	41	0.76	303.50	297.89
4-JB	5-FES	18	Class III RCP	303.50	297.79	70	0.71	298.00	297.30



NOTE: SEE CHANNEL TABLE FOR PROPER DIMENSIONS OF EACH CHANNEL

CITY OF DURHAM
PUBLIC WORKS DEPARTMENT
APPROVED

ENGINEERING JDW DATE 1/5/09
STORM WATER DATE 1/7/09
TRANSPORTATION DATE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

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Project No. C7043

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REGISTERED PROFESSIONAL ENGINEER SEAL 15834 NORTH CAROLINA RYAN PAUL LONGSHORE 12-17-08

City of Durham-Salt Dome

Camden Avenue
Durham, NC

REVISIONS

FINAL COD CONSTRUCTION DRAWINGS SUBMITTAL	12-17-2008

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JOB NUMBER: C7043
DRAWN: ACP
CHECKED: RPL
DATE: 08-19-2008

GRADING PLAN

C400