

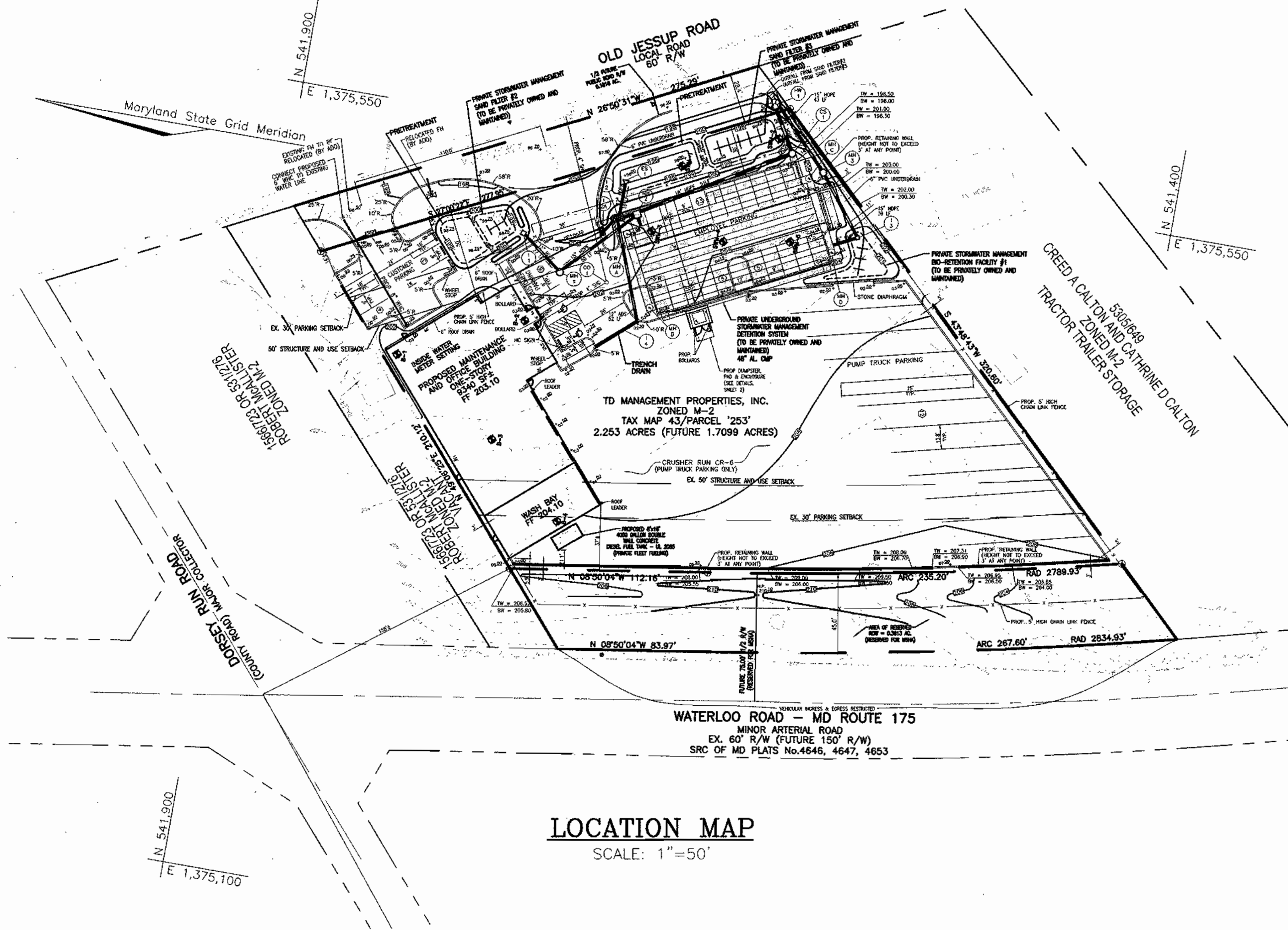
GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The contractor is to notify the following utilities or agencies at least five days before starting work on these drawings:
 - Miss Utility: 1-800-257-7777
 - Verizon: 410-754-6281
 - Howard County Bureau of Utilities: 313-2366
 - AT&T Cable Location Division: 393-3553
 - B.G.&E. Co. Contractor Services: 850-4620
 - B.G.&E. Co. Underground Damage Control: 787-4620
 - State Highway Administration: 531-5533
- Site analysis:
 - Area of parcel: 2.253 Ac.
 - Area of land reserved for MSHA: 0.3613 Ac.
 - Future 1/2 public road R/W area: 0.1818 Ac.
 - Future area of parcel: 1.7099 Ac.
 - Present zoning: M2
 - Use of structure:
 - Sales: 4360 s.f.
 - Leasing & Maintenance of Vehicles and Equipment: 4980 s.f.
 - Building area: 9,340 sf (one level)
 - Disturbed area: 88,267 sf
 - Building coverage on site: 0.21 Ac. or 12.3% of gross area
 - Paved parking lot/area: 1.25 Ac. or 73.1% of gross area
 - Area of landscape island: 0.01 Ac. or 0.6% of gross area
 - Cut: 1,727 CY Fill: 2,433 CY
- Project background:
 - Location: Columbia, Md.; Tax Map 43, Block 21, Parcel 253
 - Zoning: M-2
 - Subdivision: N/A
 - Section/Area: N/A
 - Site Area: 1.7099 Ac.
 - DPZ references: BA 02-16
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to start of work.
- Any damage to public right-of-ways, paving, or existing utilities will be corrected at the contractor's expense.
- Existing utilities located from Road Construction Plans, Field Surveys, Public Water and Sewer Extension Plans and available record drawings. Approximate location of existing utilities are shown for the contractor's information. Contractor shall locate existing utilities well in advance of construction activities and take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- All reinforced concrete for storm drain structures shall have a minimum of 28 days strength of 4,500 p.s.i.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- Estimates of earthwork quantities are provided solely for the purpose of calculating fees.
- Soil compaction specifications, requirements, methods and materials are to be in accordance with the recommendations of the project Geotechnical Engineer. Geotechnical Engineer to confirm acceptability of proposed paving section, based on soil test prior to construction.
- All storm drain pipe bedding shall be Class 'C'.
- The existing topography is taken from field run survey with two foot contour intervals prepared by Frederick Ward & Associates, Inc. dated October 2001, and topographic survey prepared by others. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System.
- A noise study is not required for this project.
- All paving to be minimum Howard County standard P-2 unless otherwise noted.
- All curb and gutter to be Howard County Standard concrete Detail 3.01 unless otherwise noted.
- Contractor responsible to construct all handicap parking and handicap access in accordance with current ADA requirements.
- Where drainage flows away from curb, contractor to reverse the gutter pan.
- All elevations are to flowline/bottom of curb unless otherwise noted.
- All dimensions are to face of curb unless otherwise noted.
- Public Water available along Old Jessup Road (12" Water) Contract #PHC-54-D.
- Public Sewer available along Old Jessup Road (8" Sewer) Contract #612-S.
- Stormwater management quantity is provided by the proposed underground detention system. Water quality is proposed by a bio-retention system, and two sand filter structures. The proposed SWM facilities shall be privately owned and maintained by Hollerbach Equipment.
- All exterior lighting shall conform to Zoning Regulations Section 134, and detail on Sheet 3.
- Building to have Inside Water Meter setting.
- Traffic Impact Study prepared by The Traffic Group, dated August, 2002.
- Geotechnical report prepared by Herbst/Benson & Associates dated September 3, 2002.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.
- There are no wetlands on-site.
- This plan is subject to BA-02-16V, a variance petition to Section 123.D.2.(A) and Section 123.D.2.(C) of the Zoning Regulations, approved July 19, 2002, to reduce the structure and use setback from Maryland Route 175 Right-of-Way from 50 feet to 11.1 feet for a fuel tank, 5.9 feet for a building, and 3 feet for an outdoor inspections area, and a variance to reduce the parking setback from Old Jessup Road from 30 feet to 0.0 feet; provided, however, that the variances will apply only to the uses and structures as described in the petition submitted, and not to any other activities, uses, structures, or additions on the Property.
- Debris is to be kept out of all stormwater management facilities during and after construction.
- The forest conservation requirement of 0.28 Ac. or 12,196.80 sf ~~HAS BEEN~~ fulfilled through fee-in-lieu payment of \$6,098.40. Obligation ~~HAS BEEN~~ paid to the Forest Conservation Fund.
- There are no cemeteries or grave sites on this property.
- The proposed landscaping and fence within the reserved MSHA right of way has been approved by MSHA. An alternate inset for the "Future Relocation of the 5' Fence and Landscaping" along MD RTE. 175 has been provided on Sheet 2, if required in the future by MSHA.
- Design manual waiver approved August 25, 2003; to allow private storage area to be gravel.
- Financial surety for the required landscaping has been posted as a part of the DPW Developer's Agreement in the amount of \$16,650.00.

HOLLERBACH EQUIPMENT

SITE DEVELOPMENT PLAN

PARCEL 253



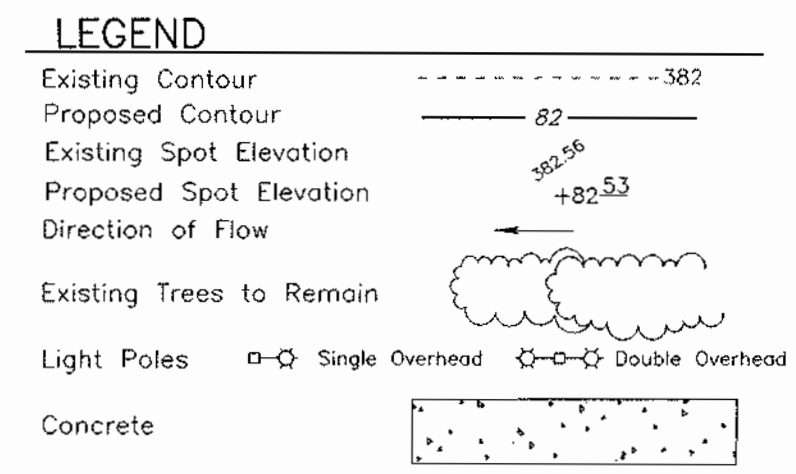
SHEET INDEX

DESCRIPTION	SHEET NO.
Cover Sheet	1 of 8
Site Layout Plan	2 of 8
Sediment and Erosion Control Plan	3 of 8
Sediment Control Details And Miscellaneous Details	4 of 8
Storm Drain Drainage Area Map and Utility Profiles	5 of 8
Stormwater Management Notes and Details	6 of 8
Landscape Plan	7 of 8
Forest Stand Delineation	8 of 8

PARKING TABULATION

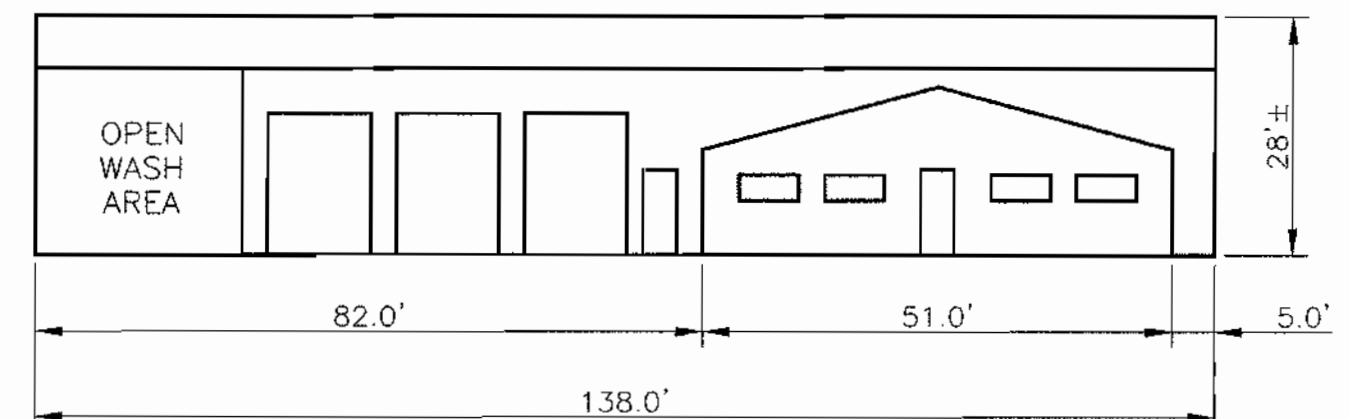
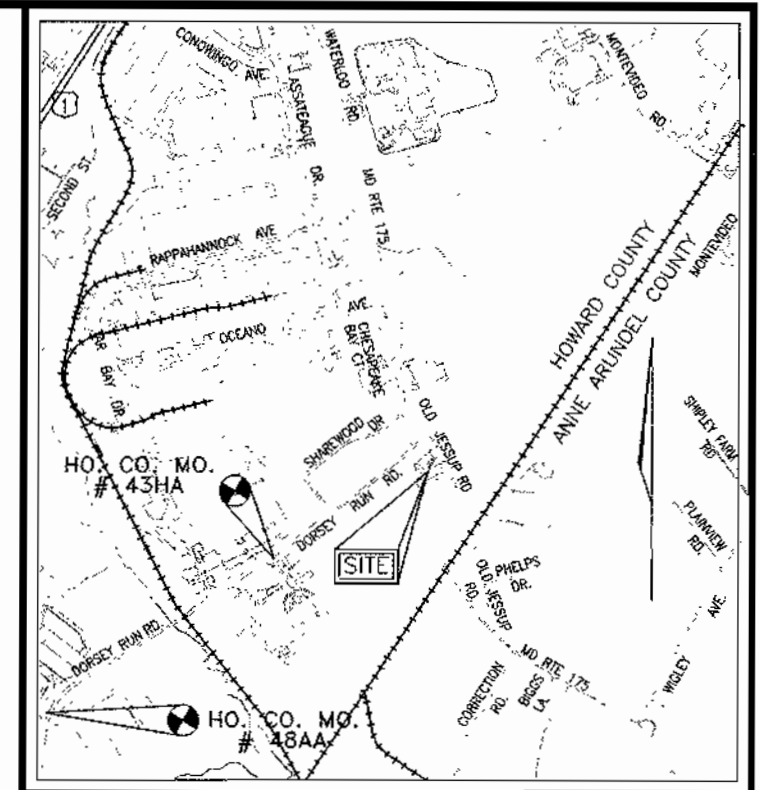
VEHICLE SALES, RENTAL, AND ANCILLARY USES	REQUIRED
BUILDING AREA (EXCLUDING SERVICE BAYS) = 4360 SF	9 SPACES
1 SPACE/1000 SF	
3 SERVICE BAYS	9 SPACES
3 SPACE / BAY	
TOTAL SPACES: REQUIRED	18 SPACES
TOTAL SPACES: PROVIDED	36 SPACES**
	(INCLUDING 2 HANDICAP)

** THERE ARE 12 TRUCK SPACES LOCATED ON-SITE FOR VEHICLES OWNED/USED BY THE COMPANY WHICH ARE EXCLUDED FROM THE TOTAL NUMBER OF SPACES PROVIDED.



BENCHMARKS

HOWARD COUNTY BENCHMARK 48AA	N 539314.900	E 1371539.251	ELEV. 240.81
HOWARD COUNTY BENCHMARK 43HA	N 540761.716	E 1373837.365	ELEV. 224.91



PROPOSED METAL BUILDING
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] 6/16/04
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] 6/16/04
 DIRECTOR: [Signature] 5/16/04

OWNER/DEVELOPER
 DENNIS ANDREWS
 T.D. PROPERTIES MANAGEMENT, LLC
 8414 WASHINGTON BOULEVARD
 JESSUP, MD 20794

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
253	7926 OLD JESSUP RD

PERMIT INFORMATION CHART

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
5744/41	21	M-2	43	1st	6012.02

WATER CODE: 801 SEWER CODE: 3020000

SITE DEVELOPMENT PLAN
COVER SHEET
HOLLERBACH EQUIPMENT

TAX MAP #43 BLOCK #21 PARCEL '253'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS: 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS: Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

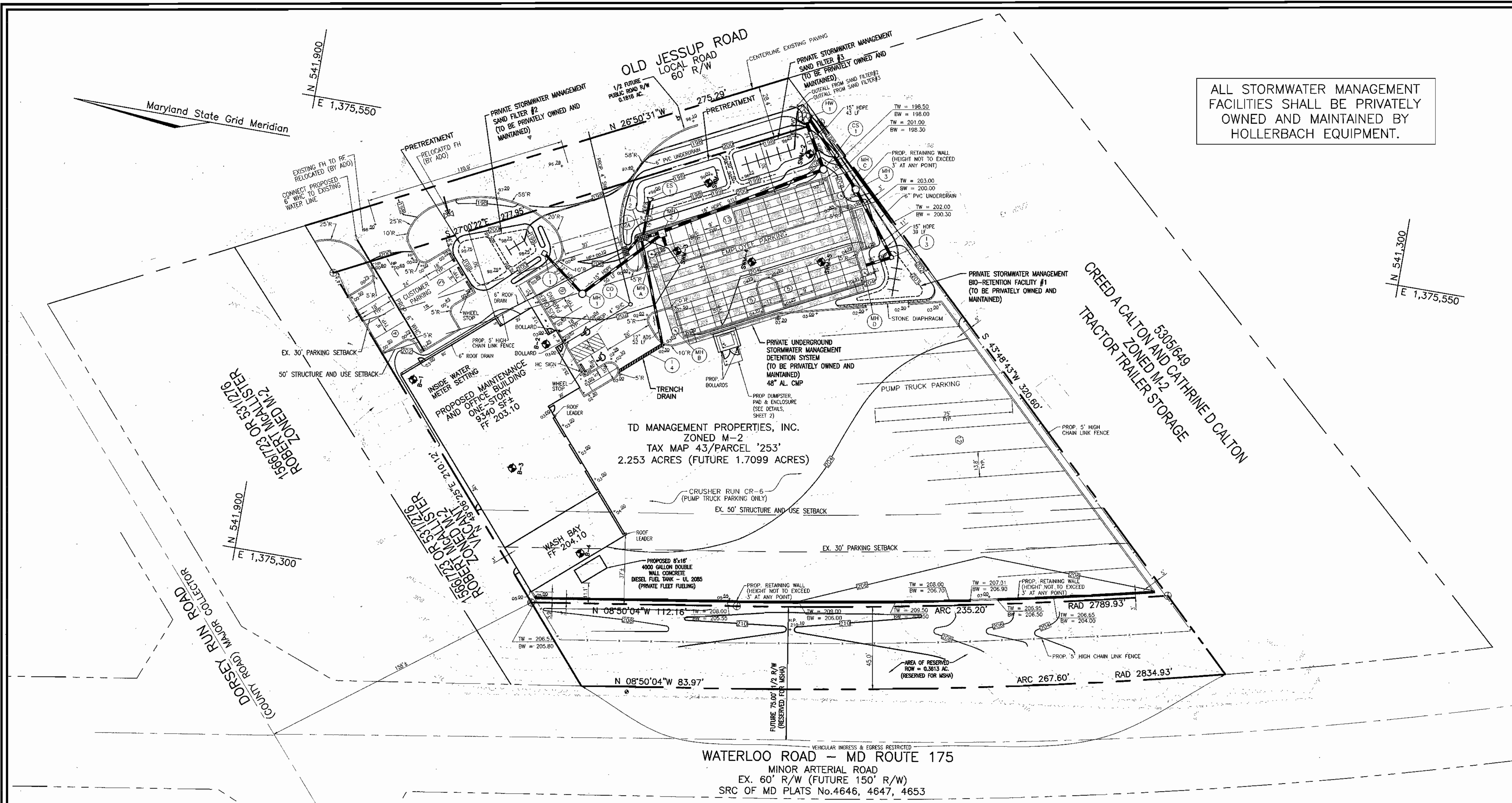
DESIGN BY: RHY
 DRAWN BY: DZ
 CHECKED BY: RHY
 DATE: MAY 2004
 SCALE: AS SHOWN
 W.O. NO.: 2014071

1 SHEET OF 8

LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING GUY WIRE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING BOLLARD
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING SD MANHOLE
	EXISTING STORM DRAIN
	EXISTING TREES (FIELD LOCATED)
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING VEGETATION (APPROXIMATE LOCATION)
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED STORM DRAIN INLET
	PROPOSED SIDEWALK

ALL STORMWATER MANAGEMENT FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED BY HOLLERBACH EQUIPMENT.



WATERLOO ROAD - MD ROUTE 175
MINOR ARTERIAL ROAD
EX. 60' R/W (FUTURE 150' R/W)
SRC OF MD PLATS No.4646, 4647, 4653

SITE PLAN
SCALE: 1"=30'

OWNER/DEVELOPER
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

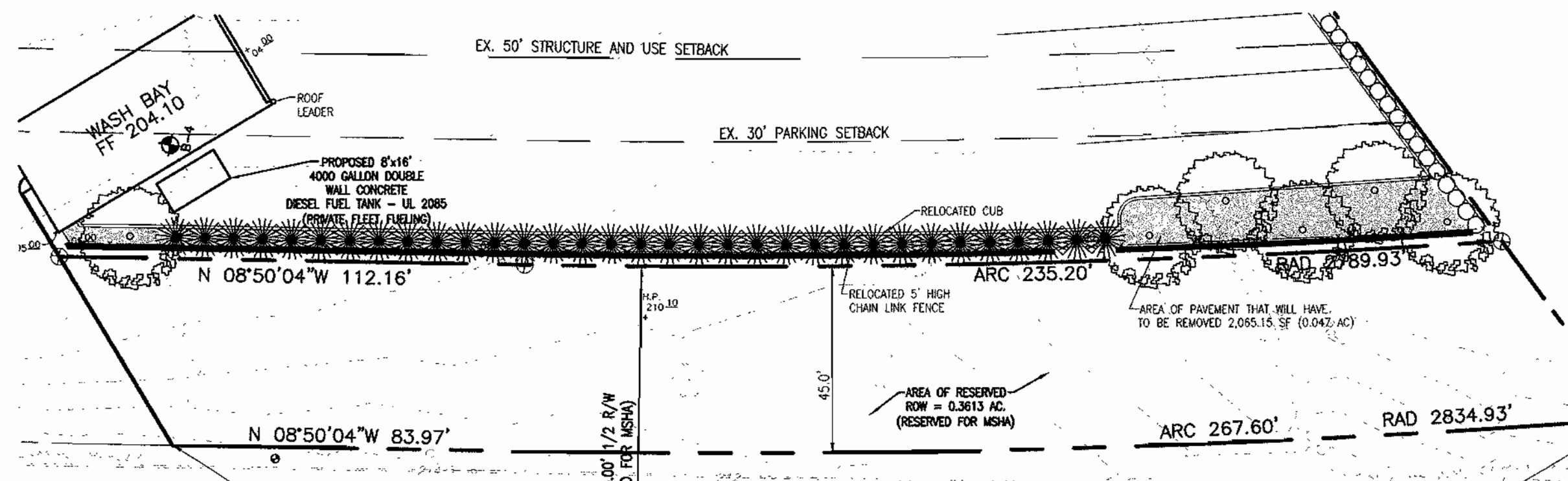
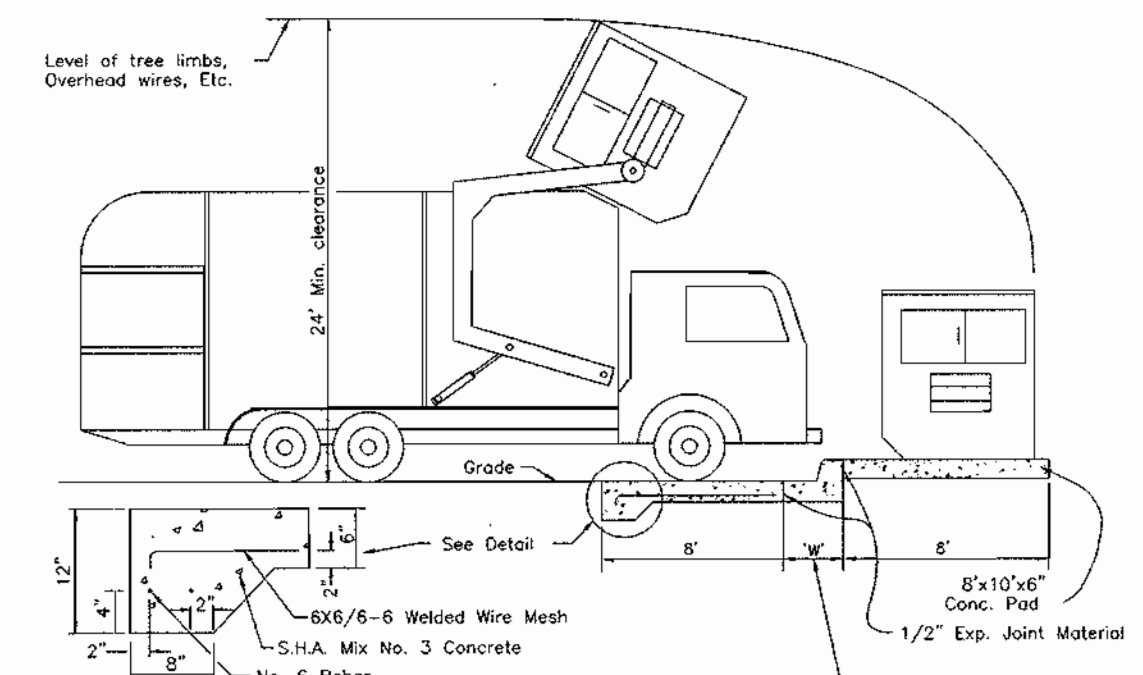
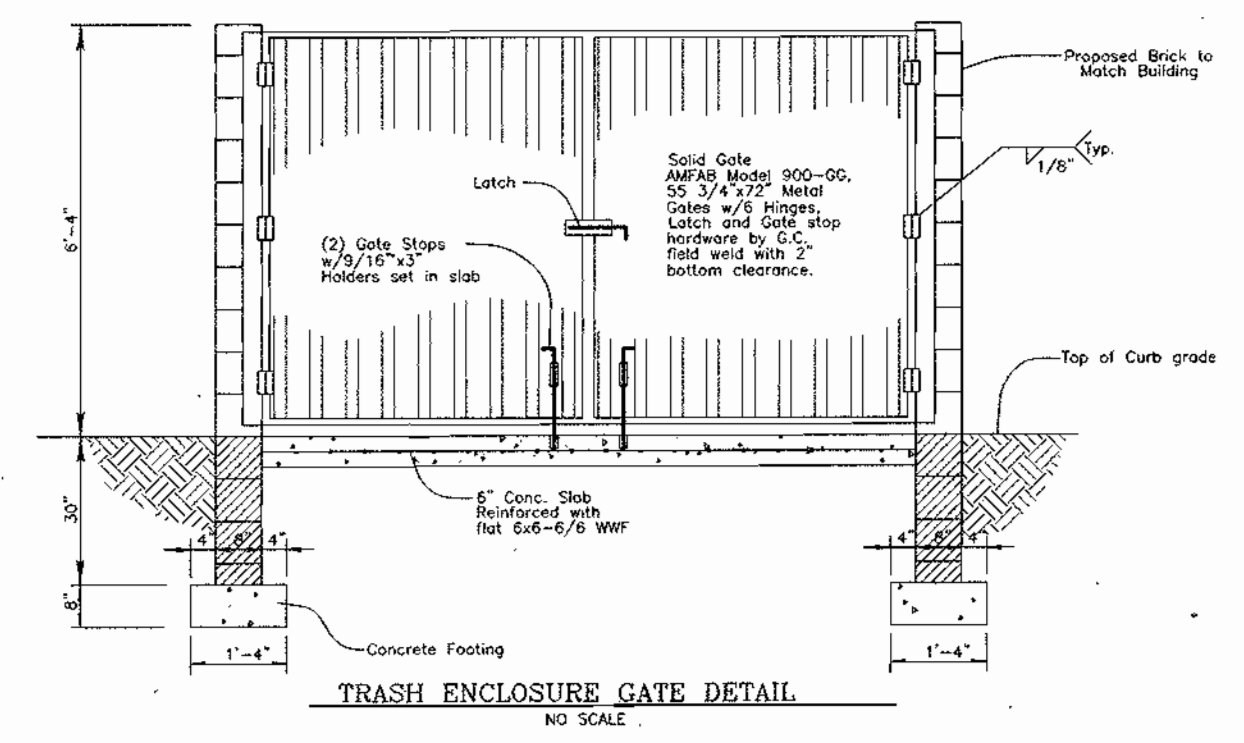
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN
HOLLERBACH EQUIPMENT

TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

	DESIGN BY: <u> </u> RHV	<p>2 SHEET OF 8</p>
	DRAWN BY: <u> </u> DZ	
	CHECKED BY: <u> </u> RHV	
	DATE: <u> </u> MAY 2004	
	SCALE: <u> </u> 1"=30'	
W.O. NO.: <u> </u> 2014071		



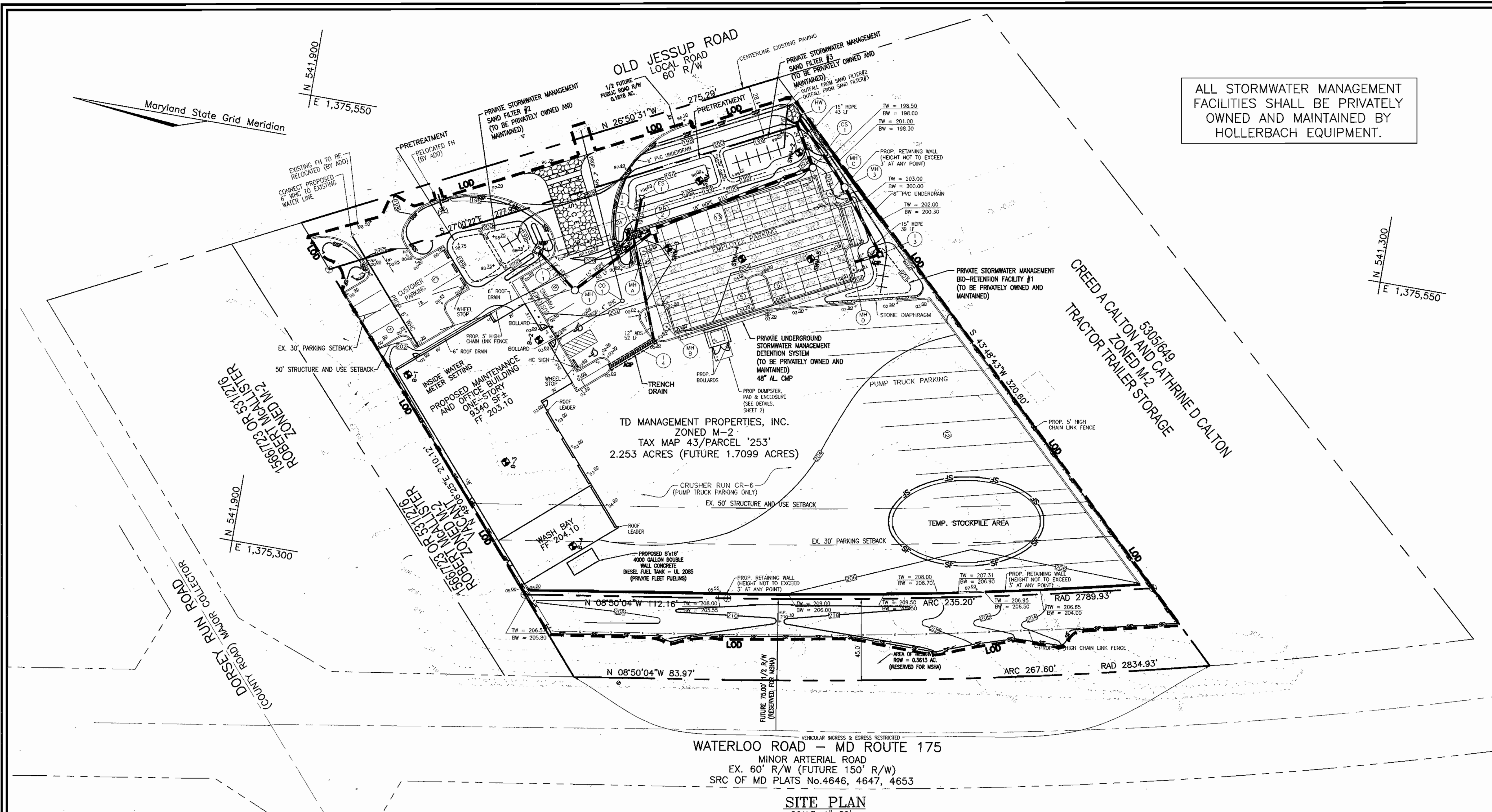
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE 4/14/04

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/24/04

DIRECTOR DATE 7/1/04

FUTURE RELOCATION OF 5' FENCE AND LANDSCAPING
(IF REQUIRED BY MSHA)
SCALE: 1"=30'



ALL STORMWATER MANAGEMENT FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED BY HOLLERBACH EQUIPMENT.

- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED SPOT ELEVATION
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING GUY WIRE
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING BOLLARD
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING SD MANHOLE
 - EXISTING STORM DRAIN
 - EXISTING TREES (FIELD LOCATED)
 - EXISTING TREELINE (FIELD LOCATED)
 - EXISTING VEGETATION (APPROXIMATE LOCATION)
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - MIC2 SOILS BOUNDARY
 - BrB2 SOILS BOUNDARY
 - SF SILT FENCE
 - LOD LIMIT OF DISTURBANCE
 - CIP CURB INLET PROTECTION
 - AGIP AT GRADE INLET PROTECTION
 - PROPOSED STORM DRAIN INLET
 - PROPOSED SIDEWALK
 - STABILIZED CONSTRUCTION ENTRANCE

TD MANAGEMENT PROPERTIES, INC.
ZONED M-2
TAX MAP 43/PARCEL '253'
2.253 ACRES (FUTURE 1.7099 ACRES)

WATERLOO ROAD - MD ROUTE 175
MINOR ARTERIAL ROAD
EX. 60' R/W (FUTURE 150' R/W)
SRC OF MD PLATS No.4646, 4647, 4653

SITE PLAN
SCALE: 1"=30'

OWNER/DEVELOPER
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
SEDIMENT AND EROSION
CONTROL PLAN
HOLLERBACH EQUIPMENT**

TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MAY 2004
SCALE: 1"=30'
W.O. NO.: 2014071

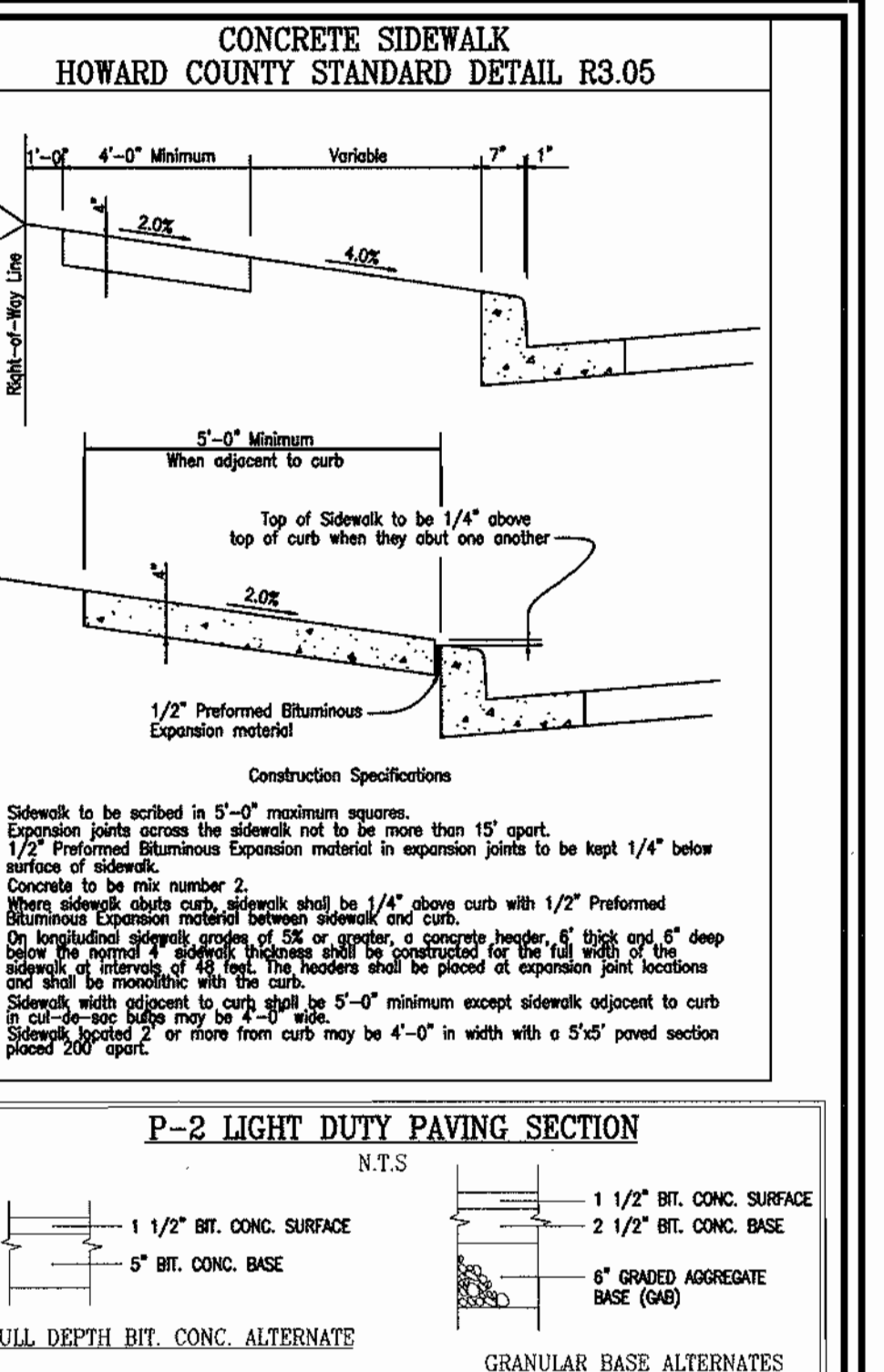
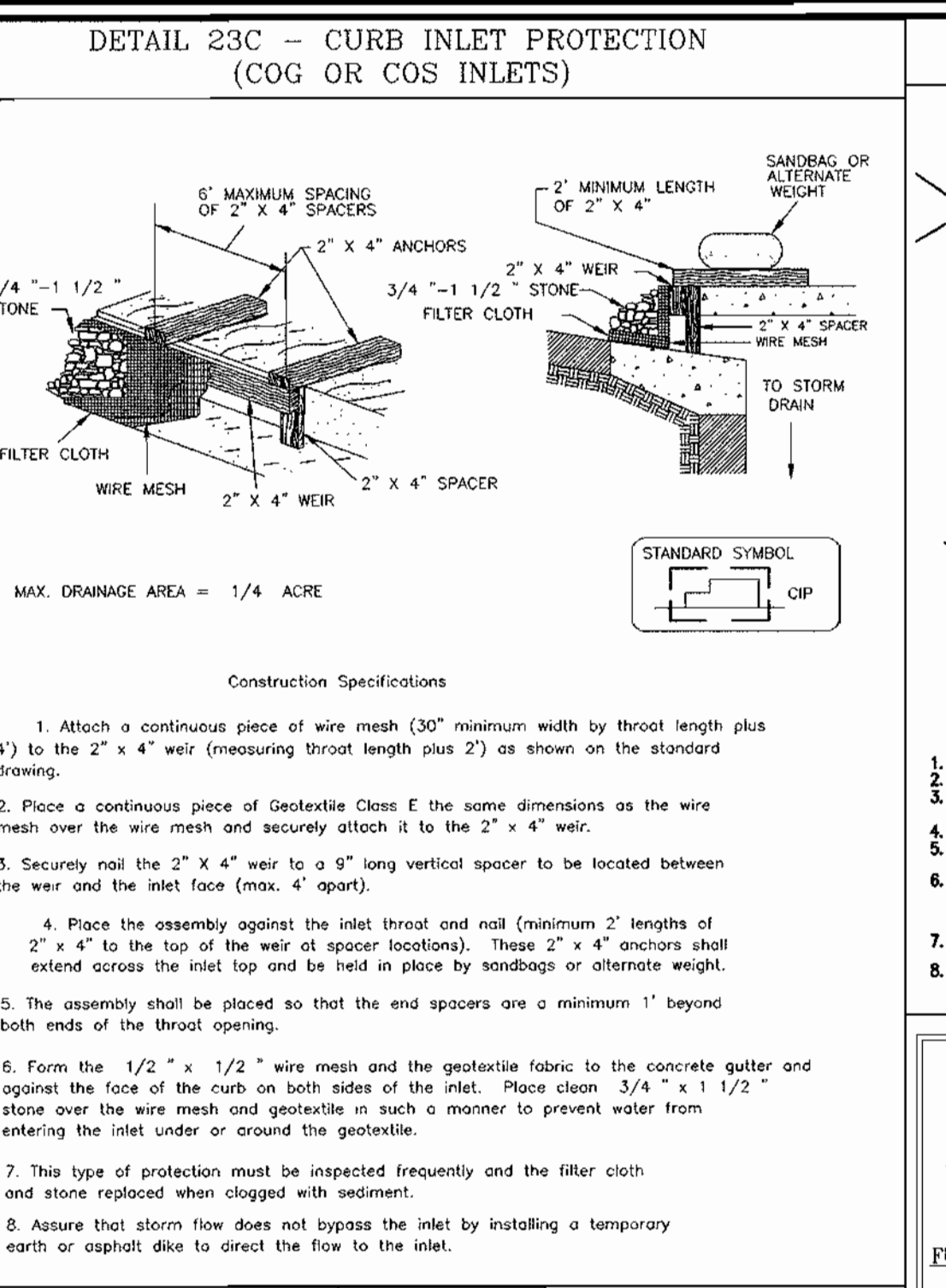
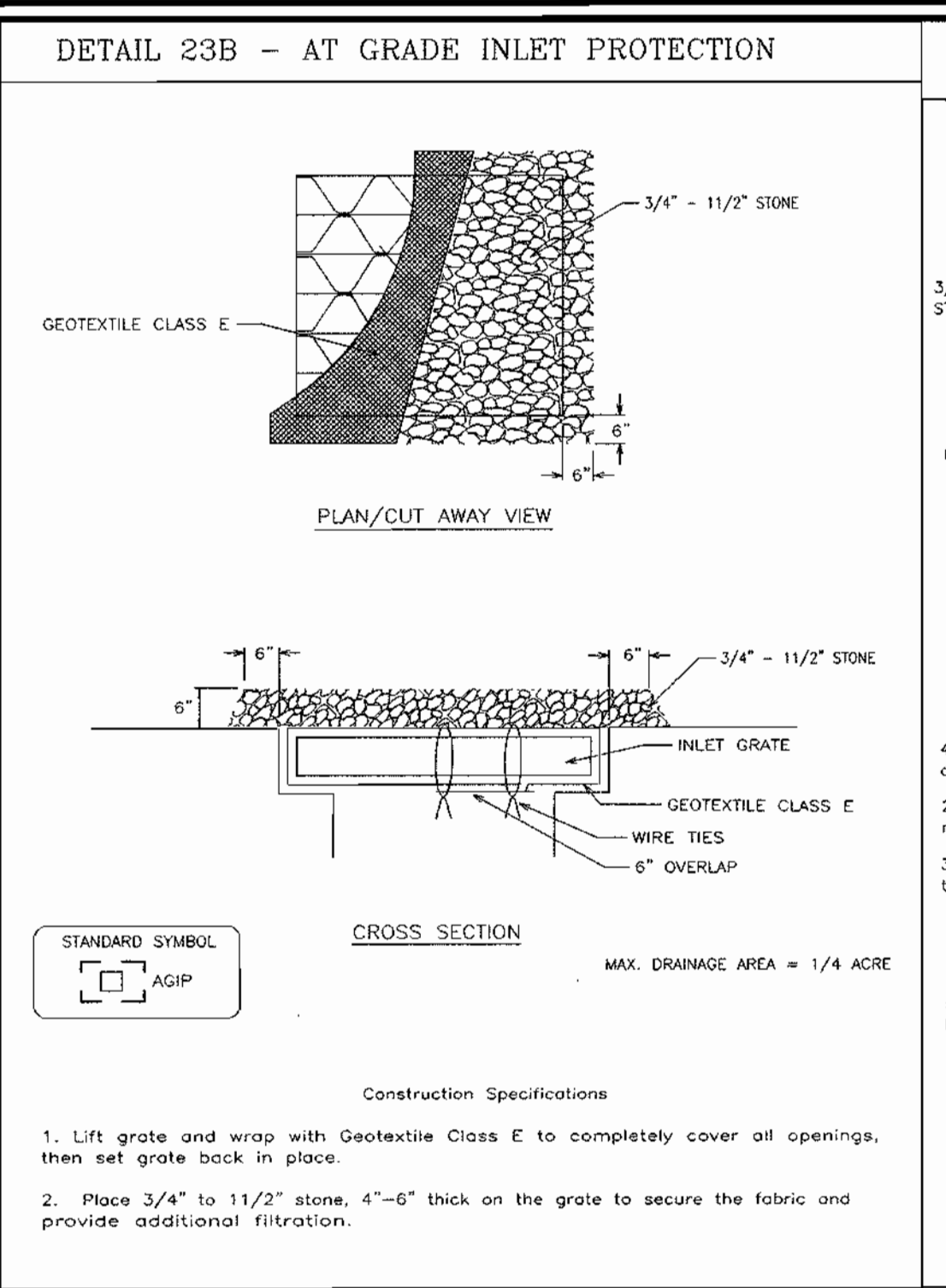
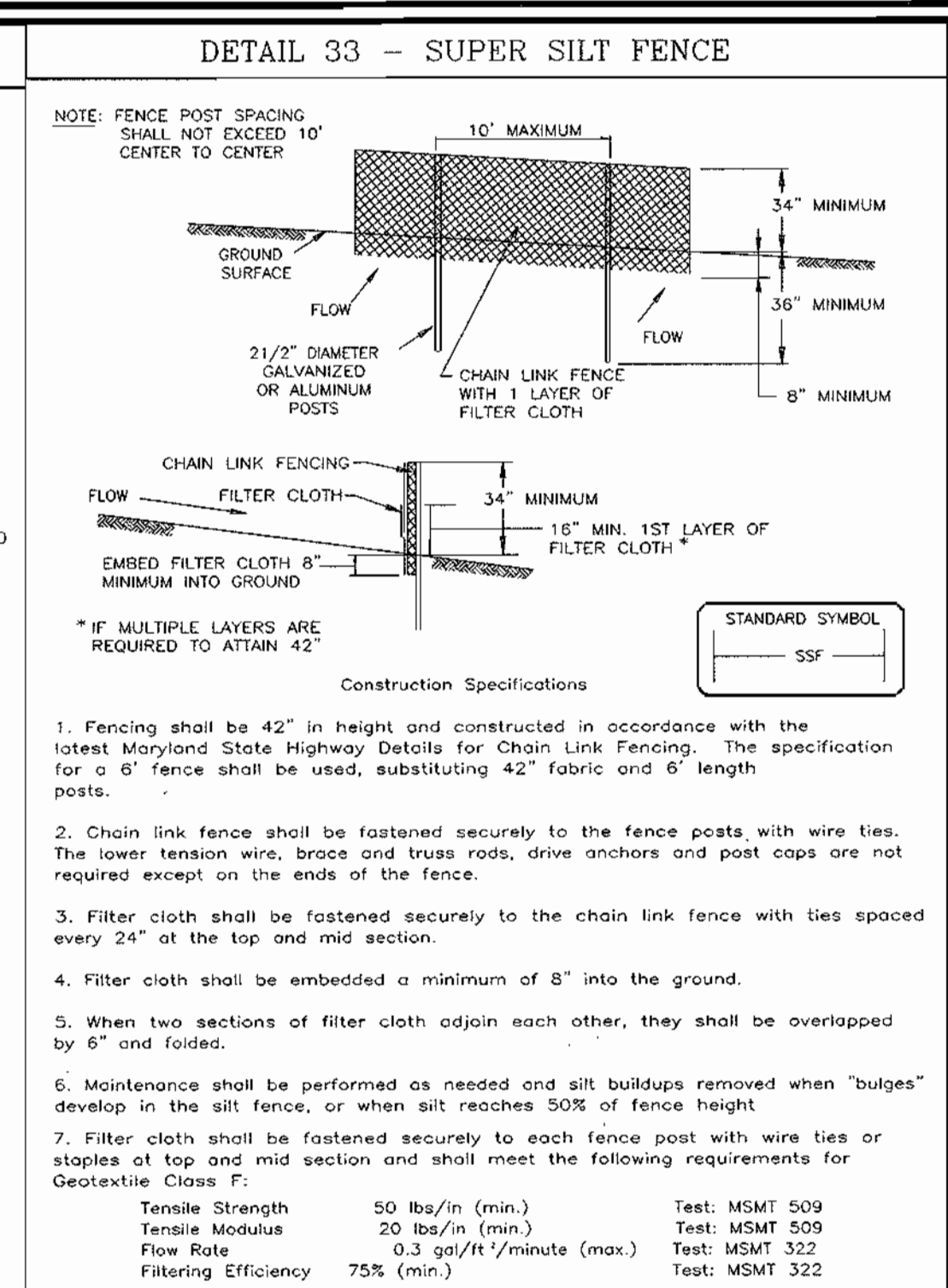
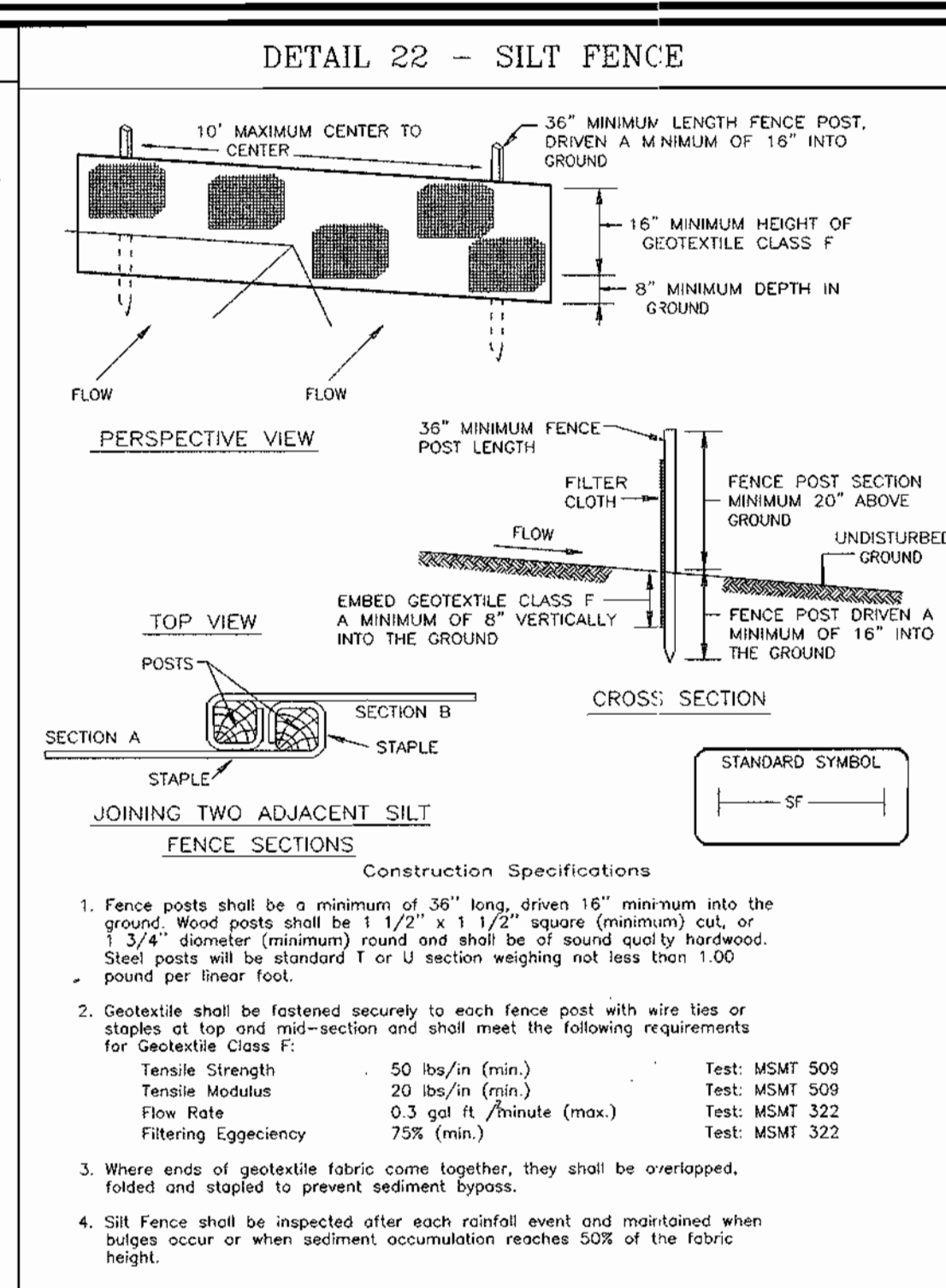
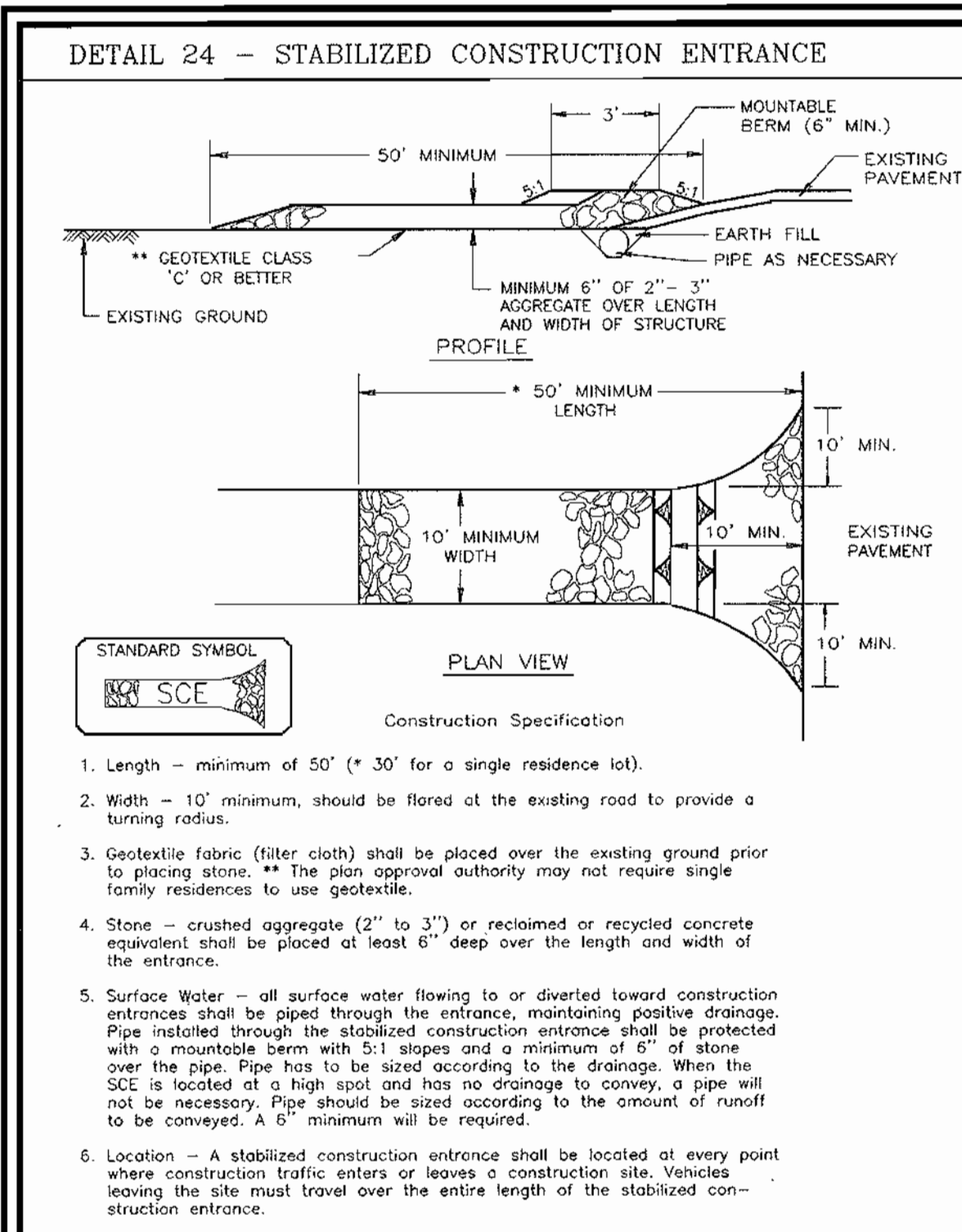
3 SHEET OF 8

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE 6/18/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/23/04
DIRECTOR DATE 7/1/04

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 6/18/04
USDA-NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPLIED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John K. Roberts 6/18/04
HOWARD S.C.D. DATE

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
Dennis Andrews 6-3-04
SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert H. Vogel 6/3/04
SIGNATURE OF ENGINEER ROBERT H. VOGEL, P.E. DATE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 1 - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5C	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously seeded.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following:

- Preferred—Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 uream fertilizer (9 lbs./1000 sq.ft.).
- Acceptable—Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For periods March 1 thru April 30, and August 1 thru October 15, seed with 1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq.ft.) for the period May 1 thru July 31, seed with 50 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre well anchored straw mulch and seed soon as possible in the spring (Option 2) Use seed, Option (3) Seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons asphalt on flat areas.

MAINTENANCE: Inspect all seeded areas and make needed repairs.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to seeding.

To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes.
 - The texture of the exposed subsoil/parent material is sand, silt, or loam.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains less than 1% organic matter.
 - The soil is so acidic that treatment with lime is required.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization methods and materials.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Department of Environment and Natural Resources.
- Topsoil Specifications - Soil to be used as topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textures and shall contain less than 5% by volume of cinders, roots, stones, slag, coarse fragments, gravel, sticks, rods, trash, or other materials larger than 1" and 1/2" in diameter.
- Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, or other noxious weeds, or other plants that are highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

SEDIMENT CONTROL NOTES

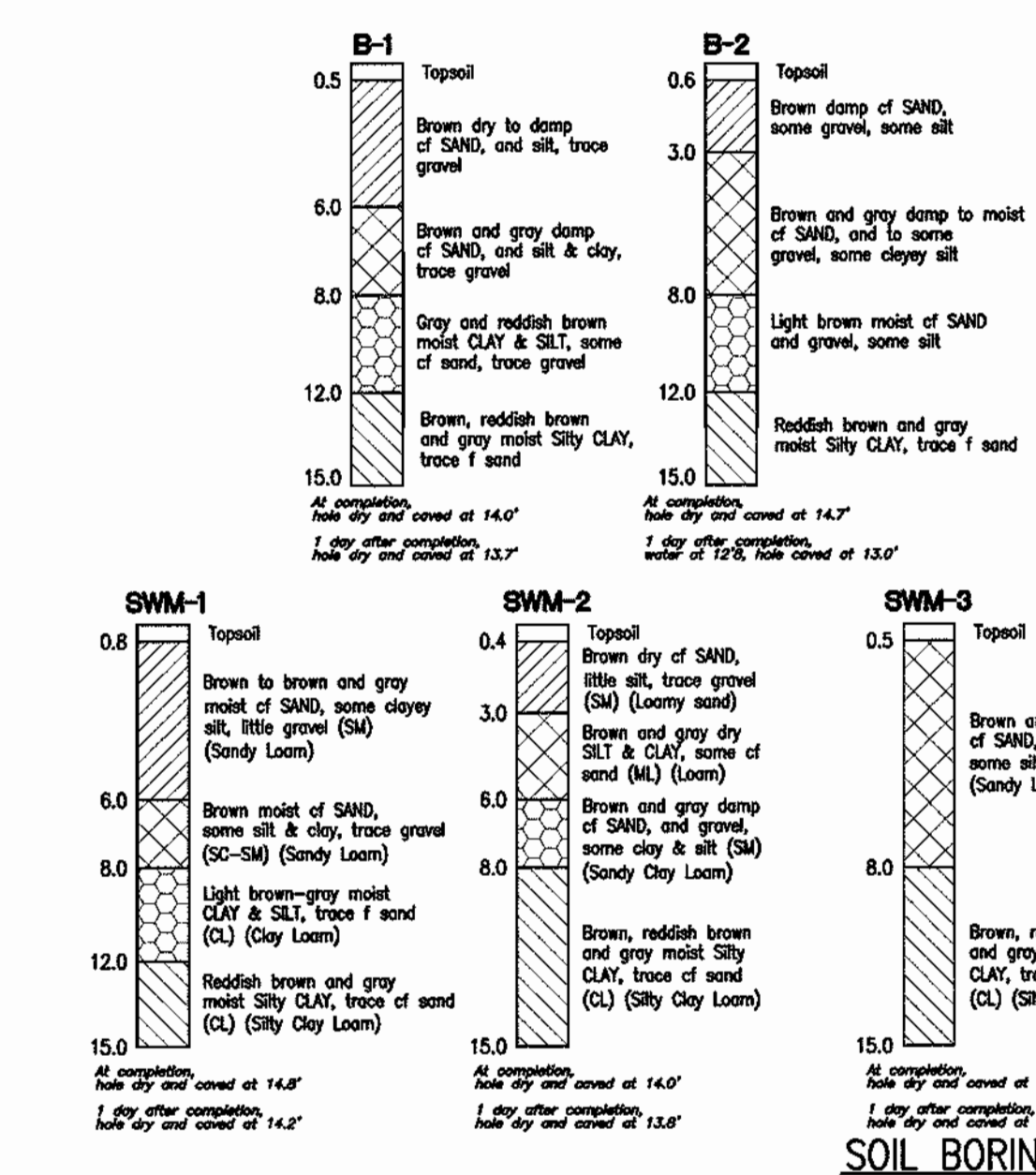
- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
- All vegetation and structural practices are to be installed according to the provisions of the plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1; (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, soil, temporary seeding, and mulching (Sec. 5). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area	1,709.9 Acres
Area Disturbed	2.93 Acres
Area to be roofed or paved	1.46 Acres
Area to be vegetatively stabilized	0.27 Acres
Total Cut	1,722.27 CY
Total Fill	2,433.32 CY

 Offsite waste/borrow area location
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
 - to be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit

SEQUENCE OF CONSTRUCTION

- OBTAIN HOWARD COUNTY GRADING PERMIT. (WEEK 1)
- NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. (WEEK 1)
- CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (WEEK 1)
- INSTALL ALL SILT FENCE AS INDICATED ON PLANS. (WEEK 2)
- INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (WEEK 2)
- SEED AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE WITH SEED AND MULCH. (WEEK 3)
- ROUGH GRADE SITE. (WEEK 3)
- INSTALL STORM DRAIN UTILITIES, 48" AL-UMC UNDERGROUND PIPES AND CONTROL STRUCTURES WITH RELATED APPEARANCES. STABILIZE INLET WITH INLET PROTECTION IMMEDIATELY UPON COMPLETION OF STORM DRAIN INSTALLATION, SUMP PITS (ALONG WITH PUMPS) FOR Dewatering. (WEEK 4)
- COMPLETE INSTALLATION OF STORM DRAIN/SWM FACILITY SYSTEM AND REMAINING ON-SITE UTILITIES. STORM DRAINS SHALL BE COVERED TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. (WEEK 4)
- INSTALL CURB AND GUTTER. (WEEK 6)
- BEGIN BUILDING CONSTRUCTION. (WEEK 6)
- COMPLETE BUILDING CONSTRUCTION. (WEEK 14)
- INSTALL PAVING BASE COURSE REMOVE INLET PROTECTION PER THE SEDIMENT CONTROL INSPECTOR AS WORK PROGRESSES. (WEEK 15)
- INSTALL PAVING SURFACE COURSE. (WEEK 16)
- FINE GRADE AND STABILIZE REMAINING SITE. INSTALL LANDSCAPING. (WEEK 17)
- CLEAN AND FLUSH OUT STORM DRAIN SYSTEM. DISPOSE OF SEDIMENT LADEN MATERIAL CLEANED OUT OF STORM DRAIN IN A MANNER APPROVED BY THE SEDIMENT CONTROL INSPECTOR. (WEEK 18)
- CONSTRUCT BMP BIO-RETENTION #1 AND SAND FILTERS #2 AND #3, ONLY AFTER THE ENTIRE SITE HAS BEEN STABILIZED.
- REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (WEEK 19)



TEMPORARY SEEDING NOTES

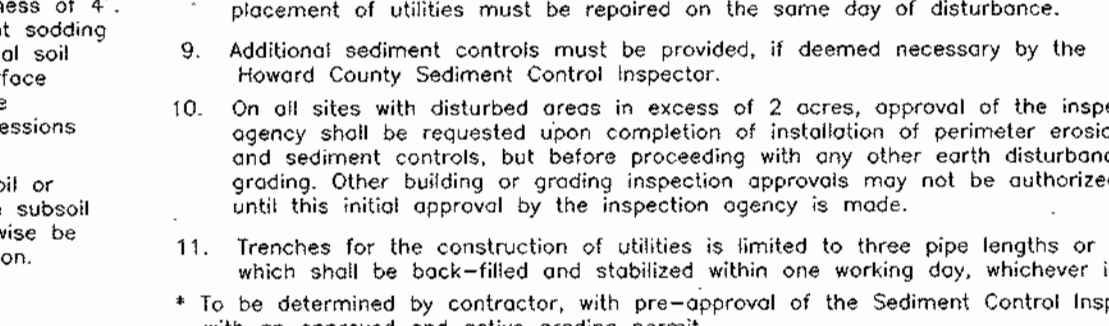
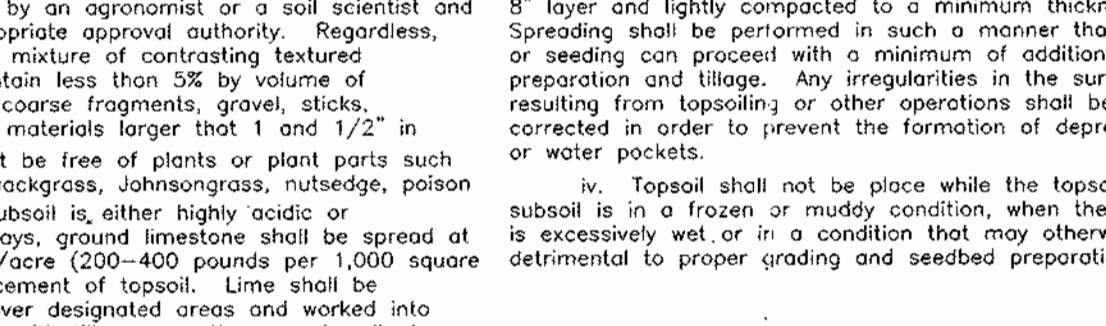
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously seeded.

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer.

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 1 1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq.ft.) for the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed soon as possible in the spring.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons asphalt on flat areas.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT



STRUCTURE SCHEDULE

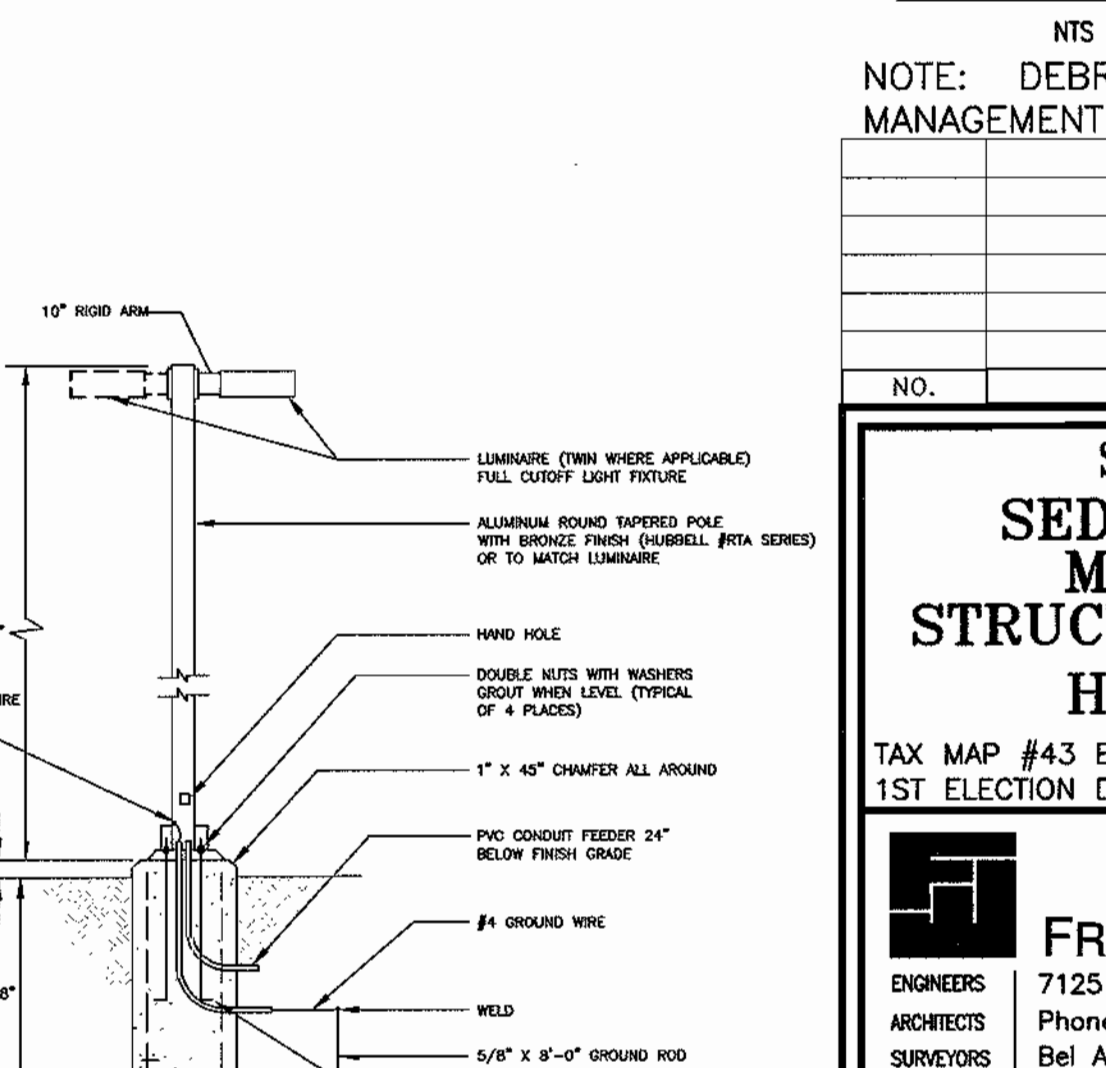
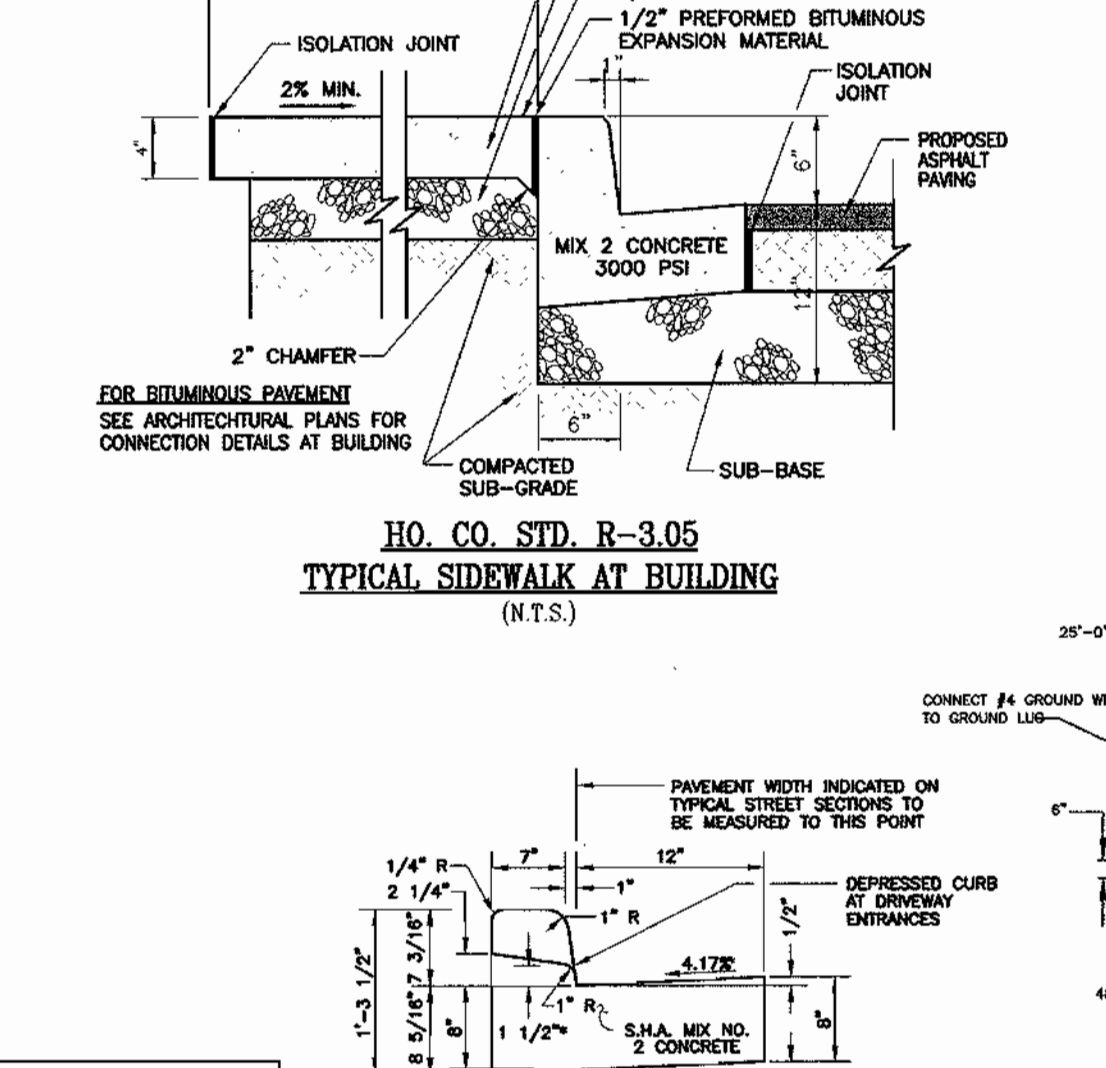
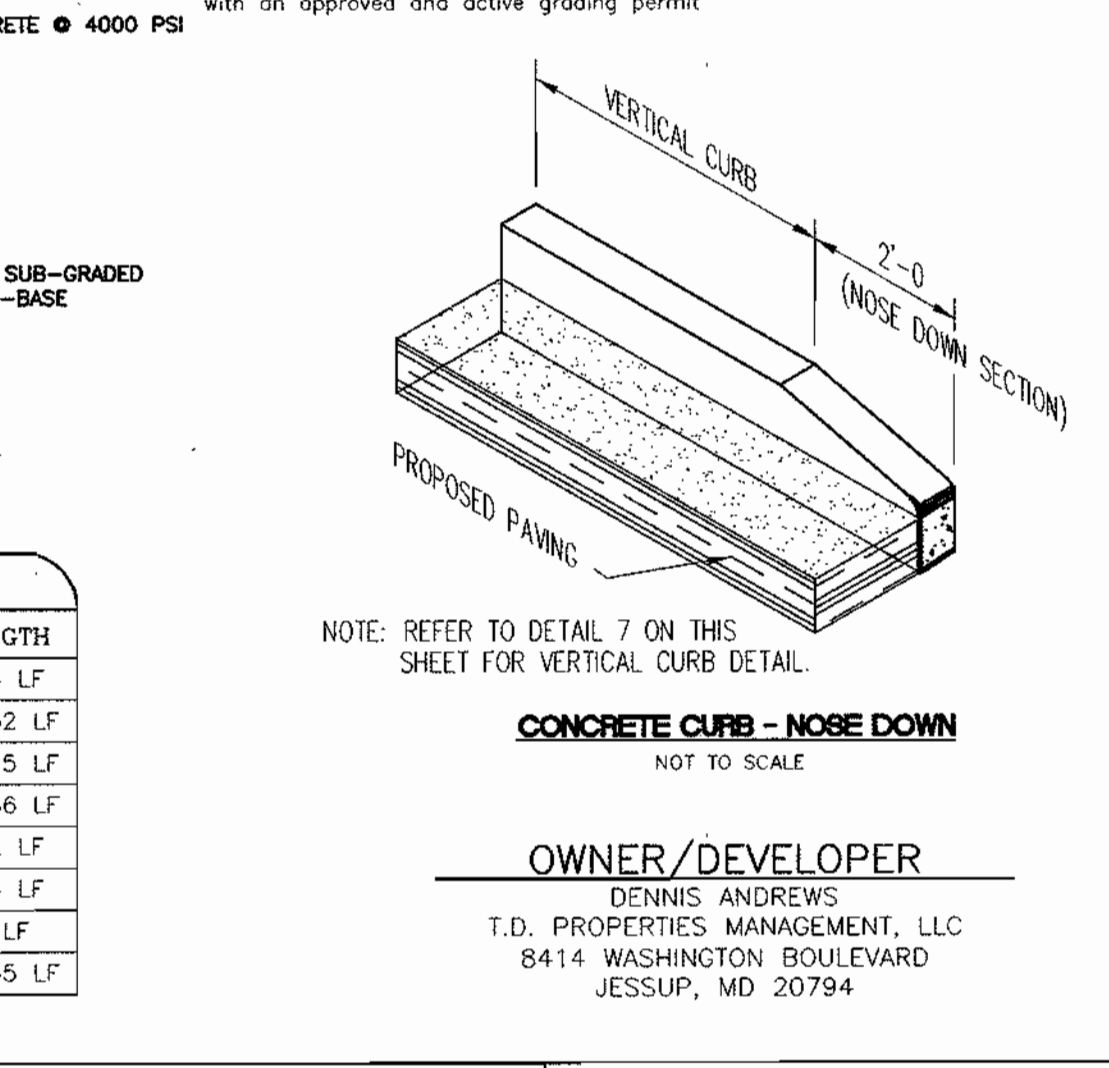
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	HO. CO. STD. DETAIL
I-1	TYPE 'D' INLET GRATE	N 541762 E 1375487	200.97	198.47	SD 4.11	
I-2	DOUBLE TYPE 'S' COMBINATION INLET	N 541710 E 1375505	202.00	199.90	SD 4.34	
I-2A	TYPE 'A-S' INLET	N 541718 E 1375496	200.60	198.19	SD 4.01	
I-3	TYPE 'D' INLET GRATE	N 541575 E 1375516	203.33	199.90	SD 4.11	
I-4	TRENCH DRAIN	N 541700 E 1375440	202.30	201.00		
E-1	CONCRETE END SECTION	N 541710 E 1375525	196.50	SD 5.52		
HW-1	TYPE 'A' HEADWALL	N 541633 E 1375581	199.00	196.00	SD 5.11	
MH-1	STANDARD PRECAST MANHOLE	N 541737 E 1375469	200.90	198.32	G 5.11	
MH-2	SHALLOW BRICK MANHOLE	N 541700 E 1375509	202.24	198.05	G 5.05	
MH-3	STANDARD PRECAST MANHOLE	N 541601 E 1375551	202.24	196.60	G 5.11	
CS-1	CONTROL STRUCTURE	N 541620 E 1375558	204.50	198.45	SEE SHEET 51	

NOTE: 1. Top elevations are to the center of the structure at top of curb for Double Type 'S' Comb. Inlets, center top of grate for Double Type 'S' Inlet and top of Manhole cover for Precast Manholes.
2. For top slab slopes see grading plan.
3. See Architectural plans for roof drain details.

PIPE SCHEDULE

SIZE	TYPE	LENGTH
12"	HDPE	54 LF
15"	HDPE	132 LF
18"	HDPE	115 LF
6"	PVC	286 LF
12"	ADS	52 LF
15"	CMP	14 LF
18"	CMP	5 LF
6"	ROOF DRAIN	145 LF

NOTE: REFER TO DETAIL 7 ON THIS SHEET FOR VERTICAL CURB DETAIL.



SITE DEVELOPMENT PLAN

SEDIMENT CONTROL DETAILS

MISCELLANEOUS DETAILS

STRUCTURE AND PIPE SCHEDULES

HOLLERBACH EQUIPMENT

TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS: 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS: Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW
DRAWN BY: DZ
CHECKED BY: RHW
DATE: MAY 2004
SCALE: 1"=30'
S.W. NO.: 2014071

4 SHEET OF 8

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 6/10/04

DATE: 6/10/04

DATE: 7/1/04

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

BY THE DEVELOPER: Jim Moore, 6/10/04

BY THE ENGINEER: Robert H. Vogel, P.E., 6/10/04

DATE: 6-4-04

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CURRENT ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING CONSTRUCTION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

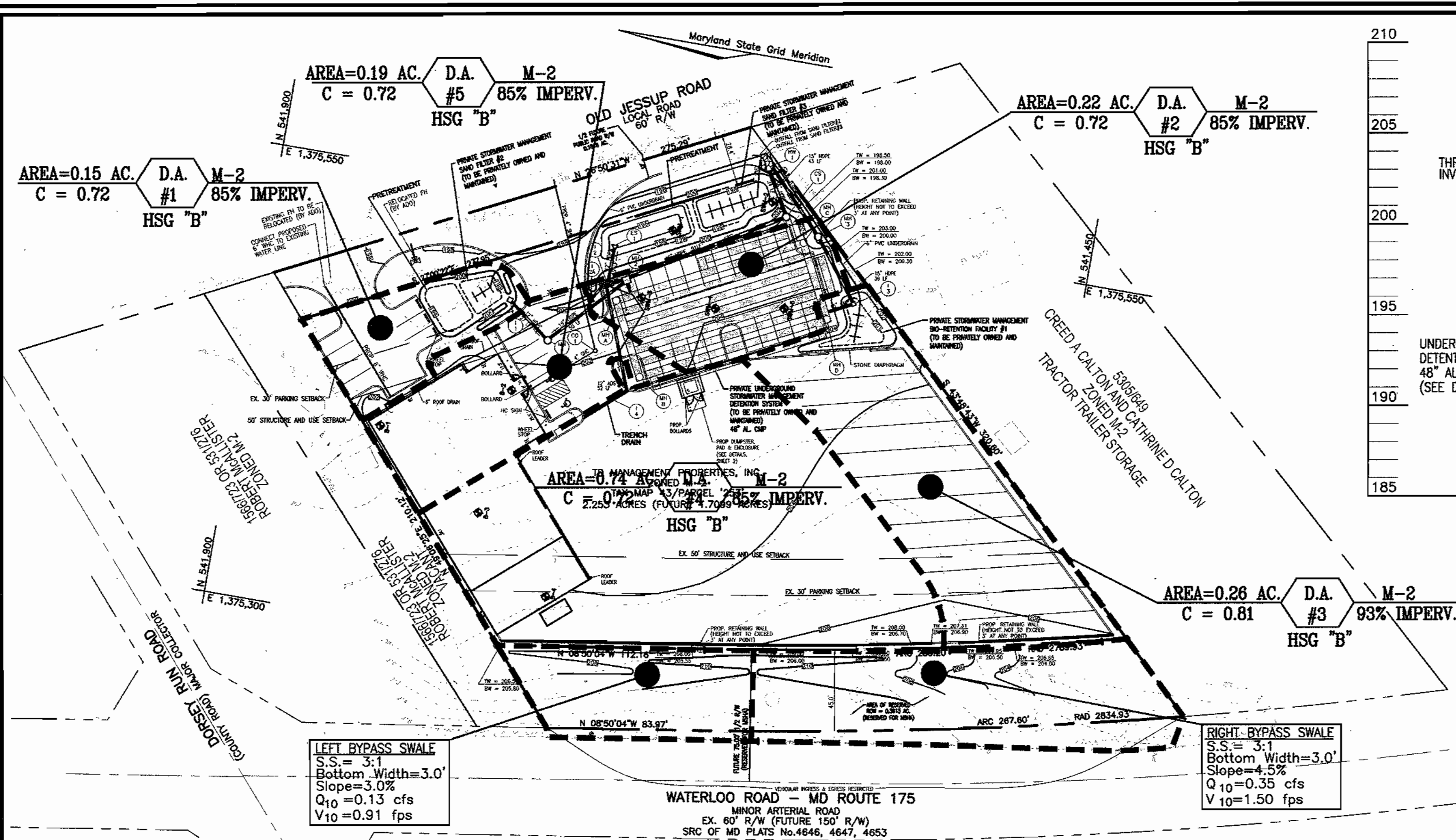
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

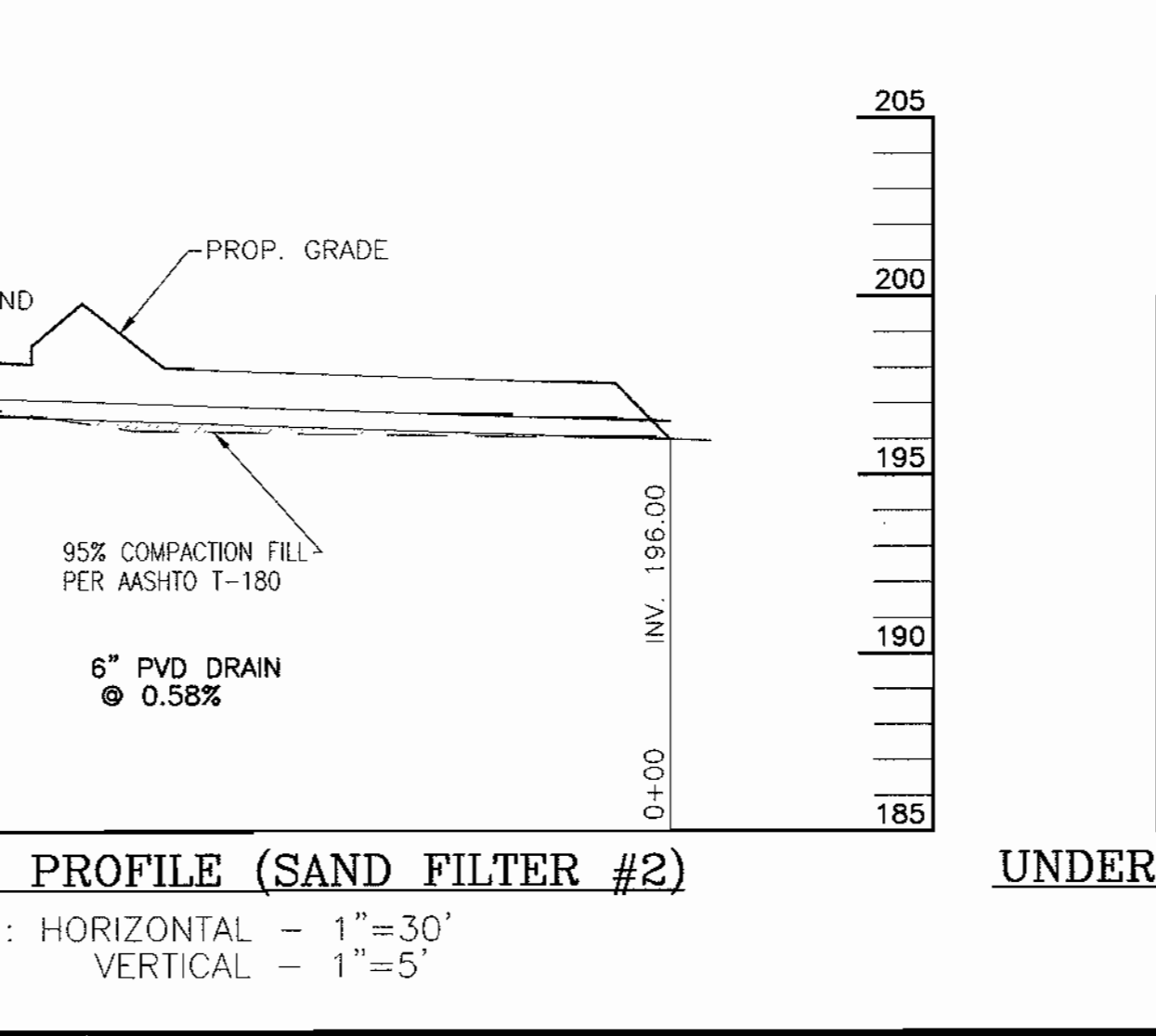
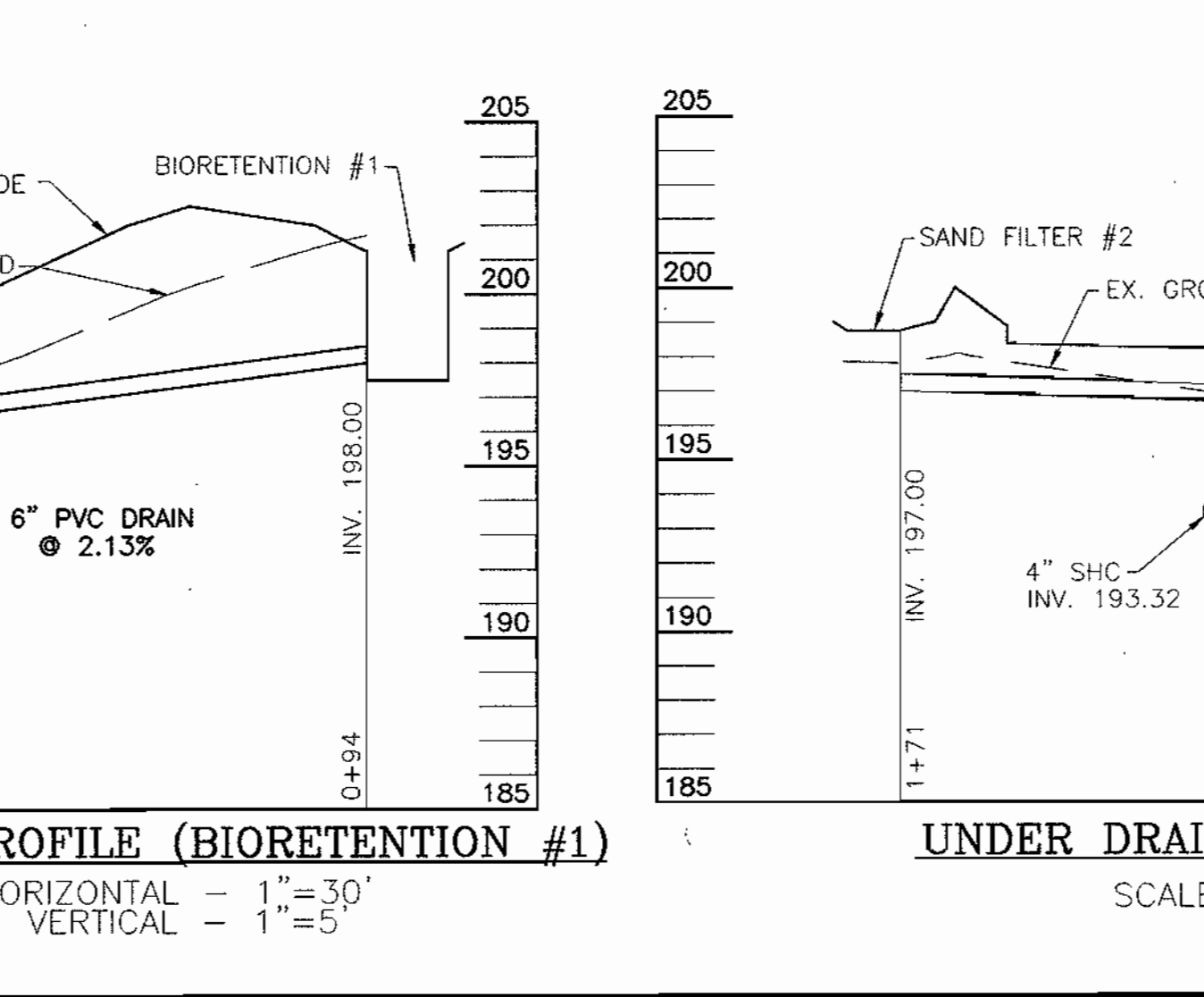
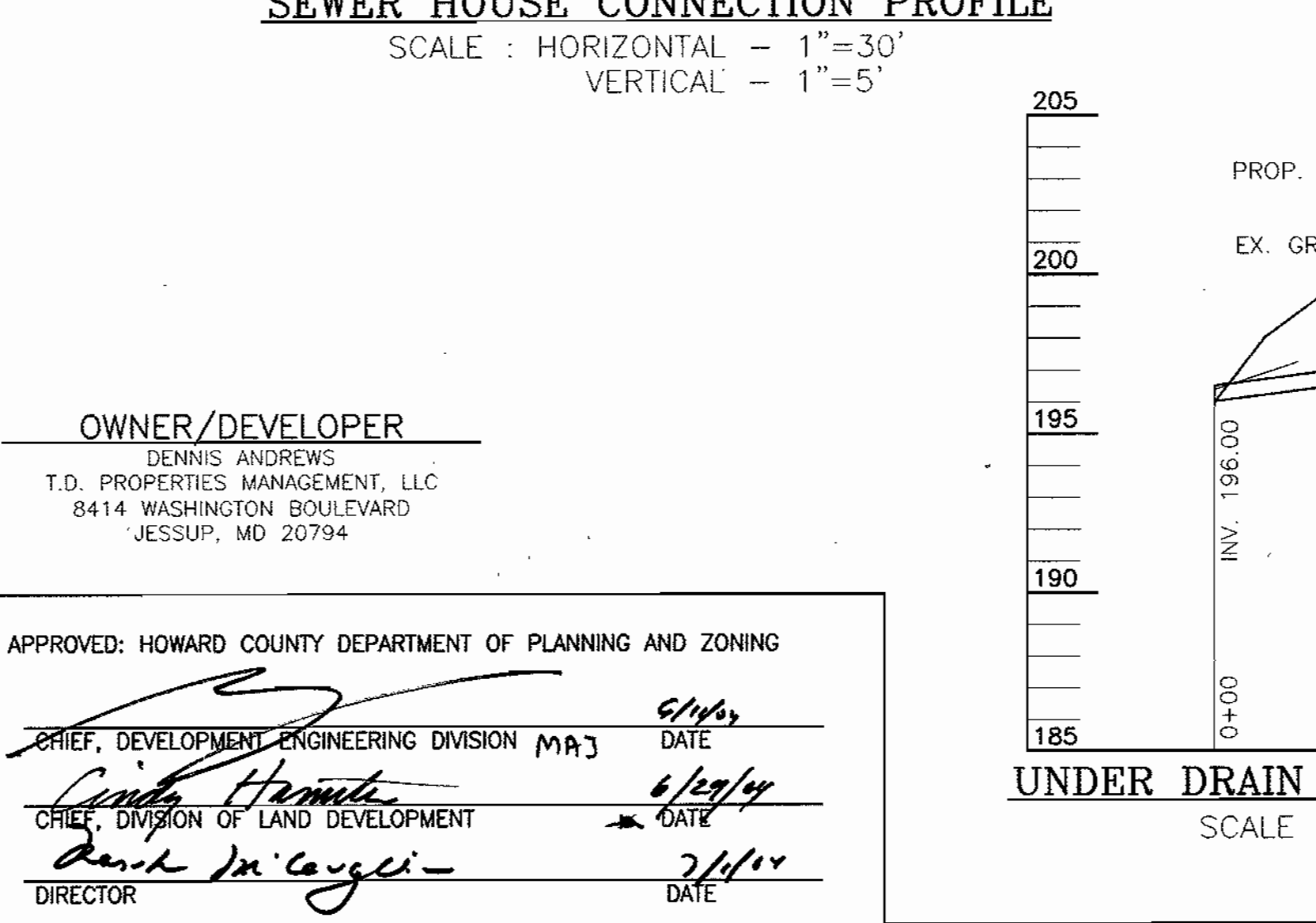
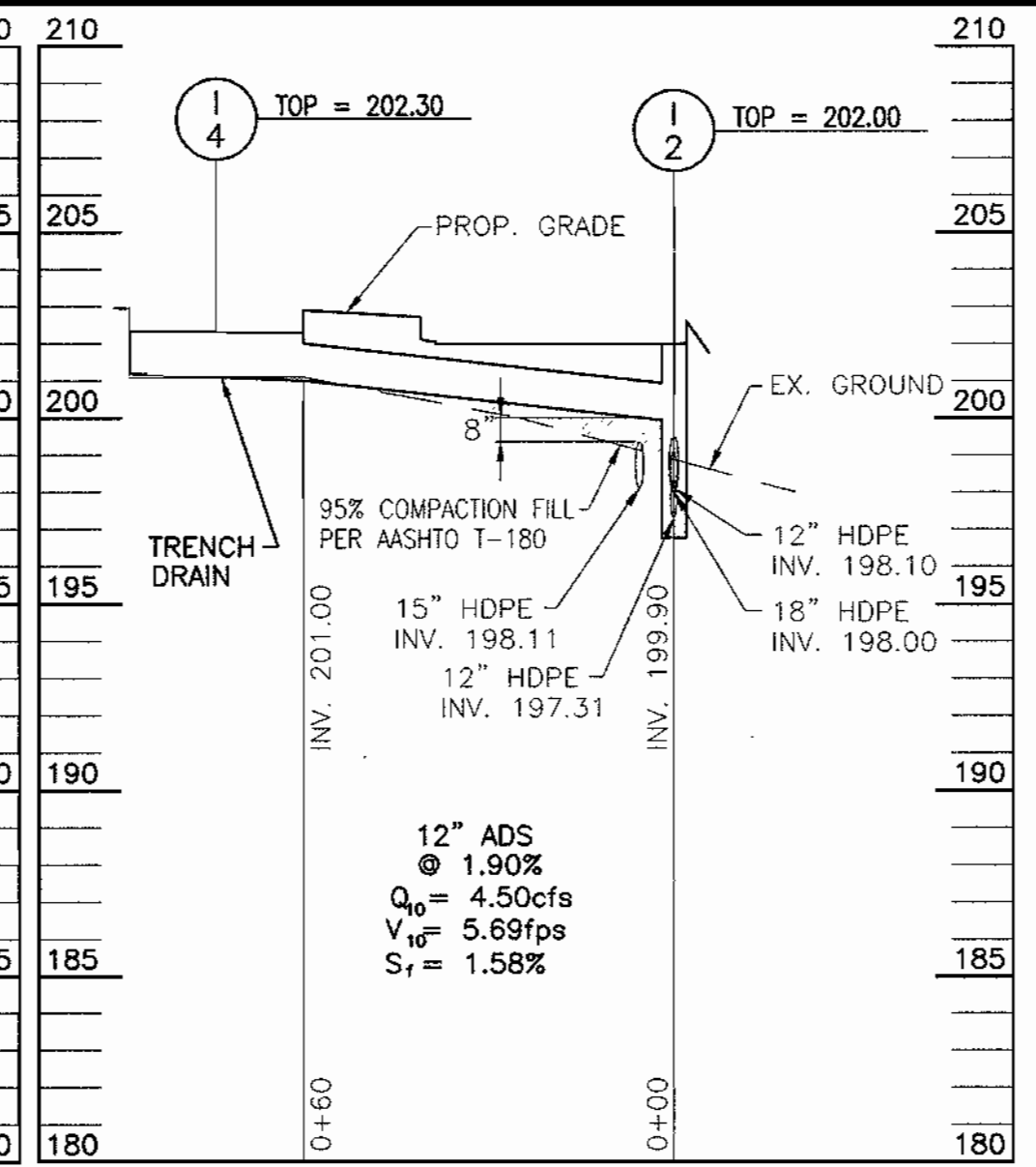
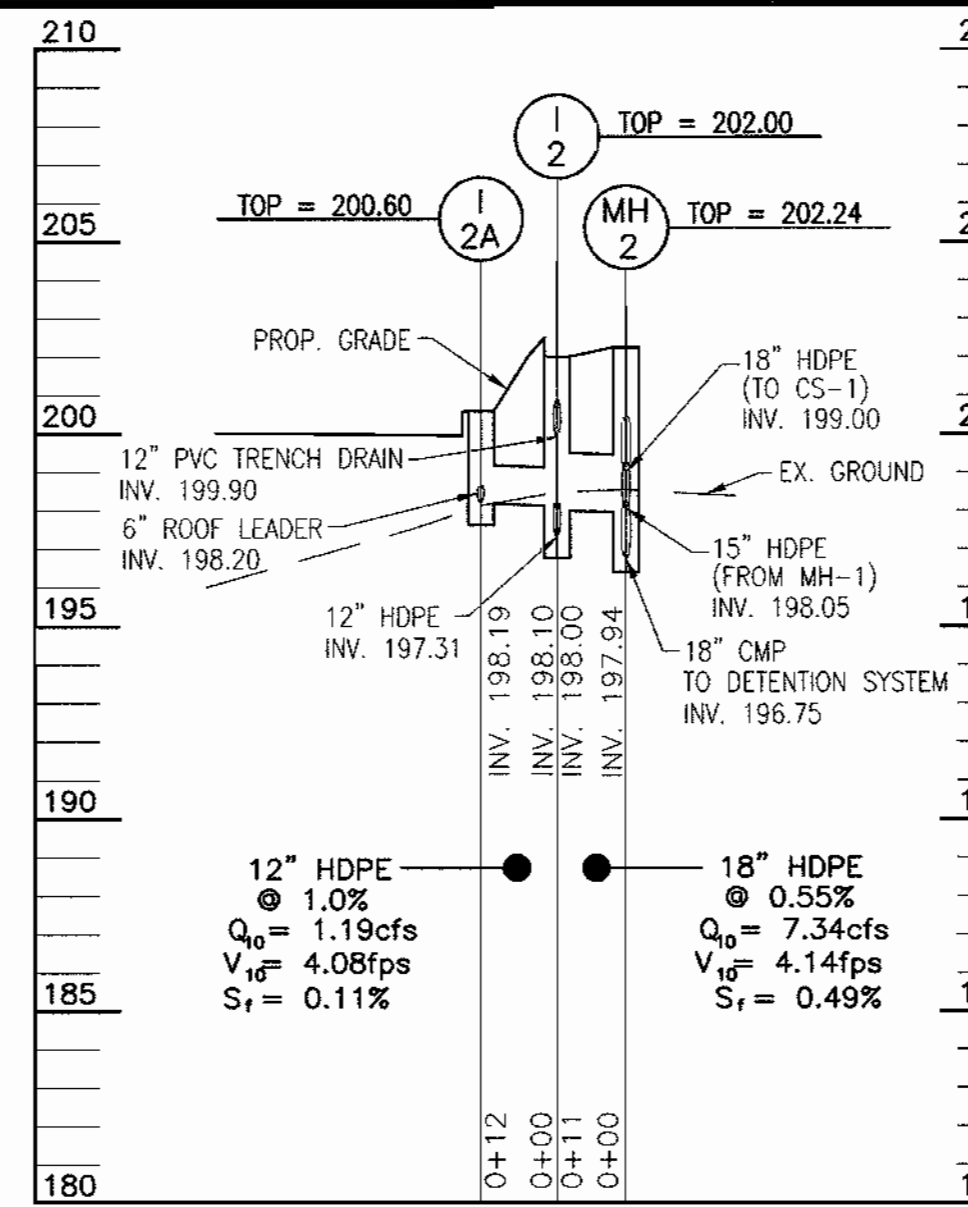
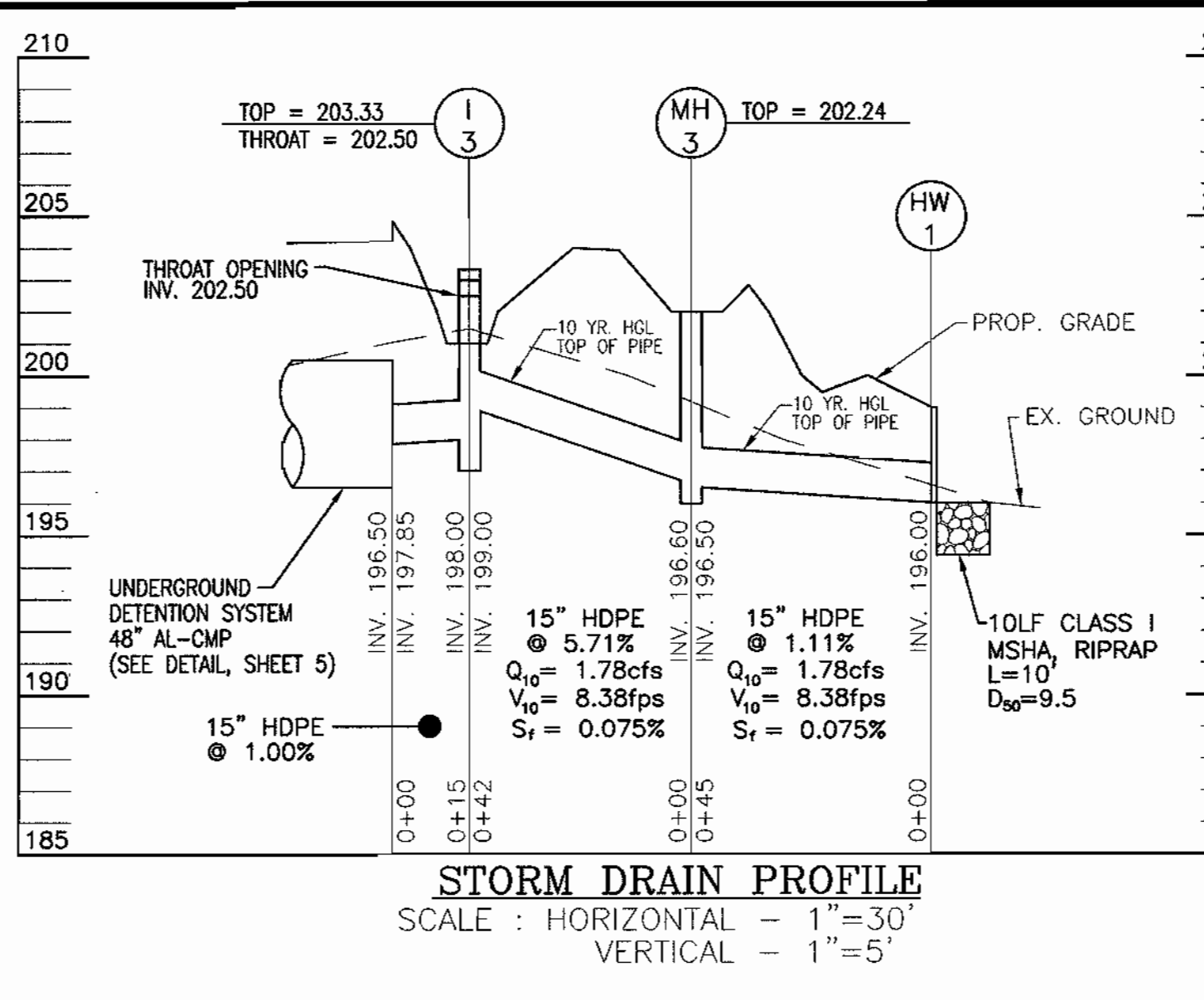
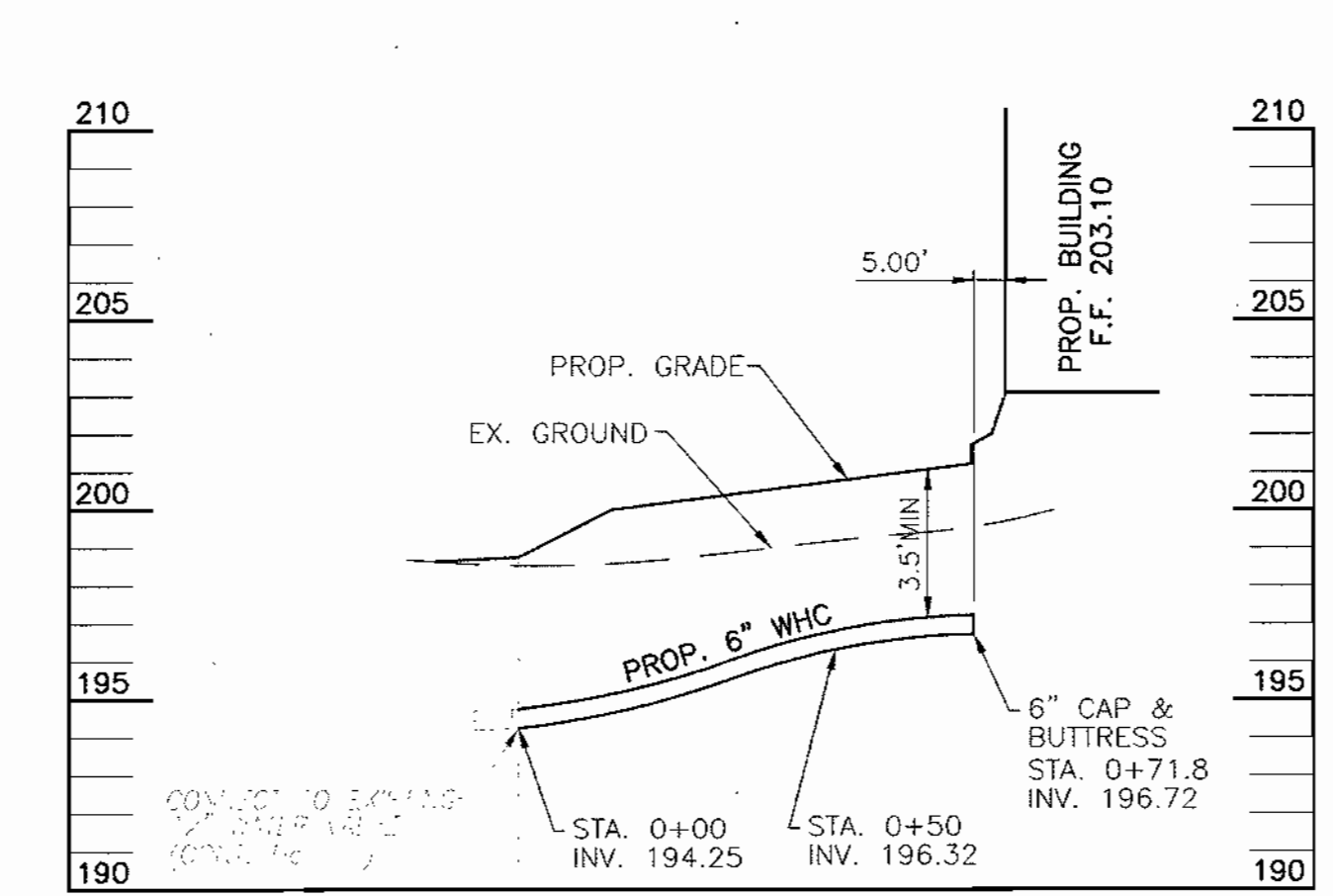
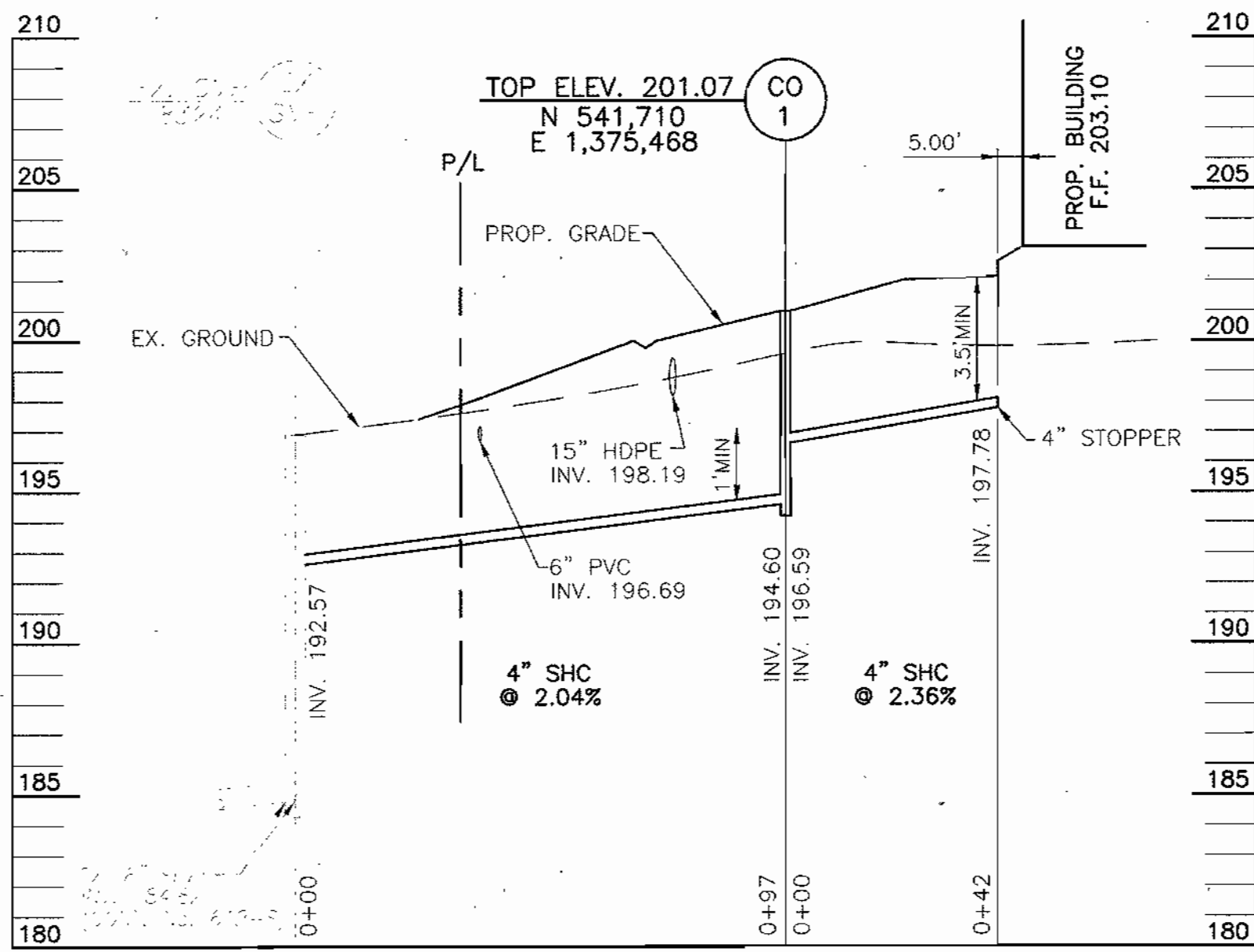
STATE OF MARYLAND PROFESSIONAL ENGINEER

ROBERT H. VOGEL, PE No. 16193

SDP-03-116



STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=50'



OWNER/DEVELOPER
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 6/14/14
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 6/14/14
DIRECTOR
DATE: 7/1/14

NO.	REVISION	DATE

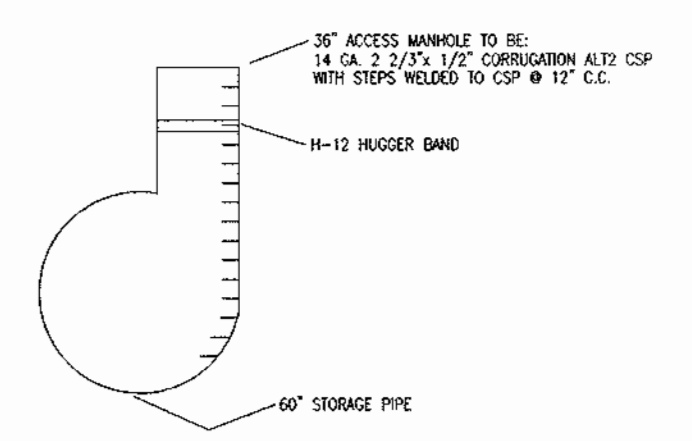
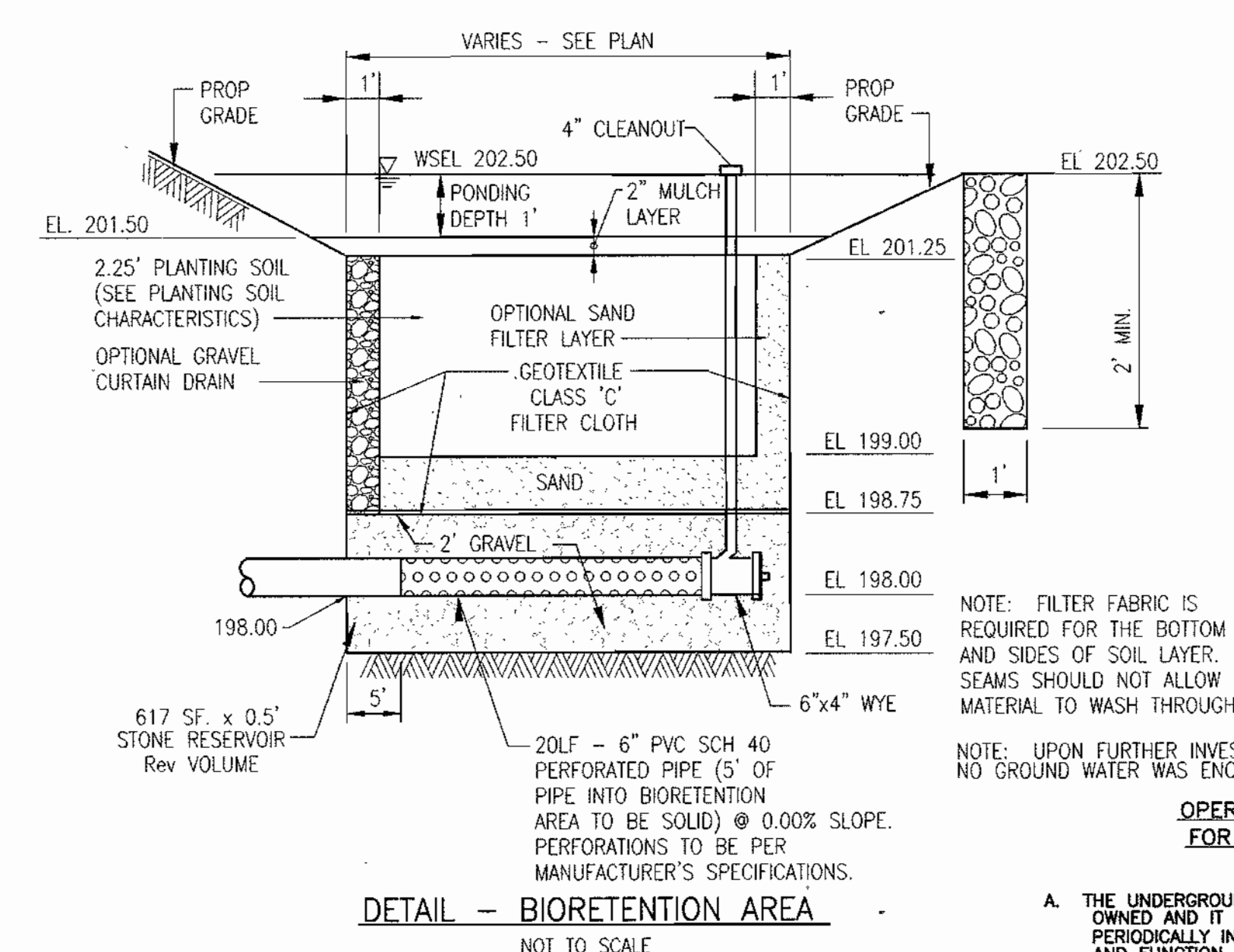
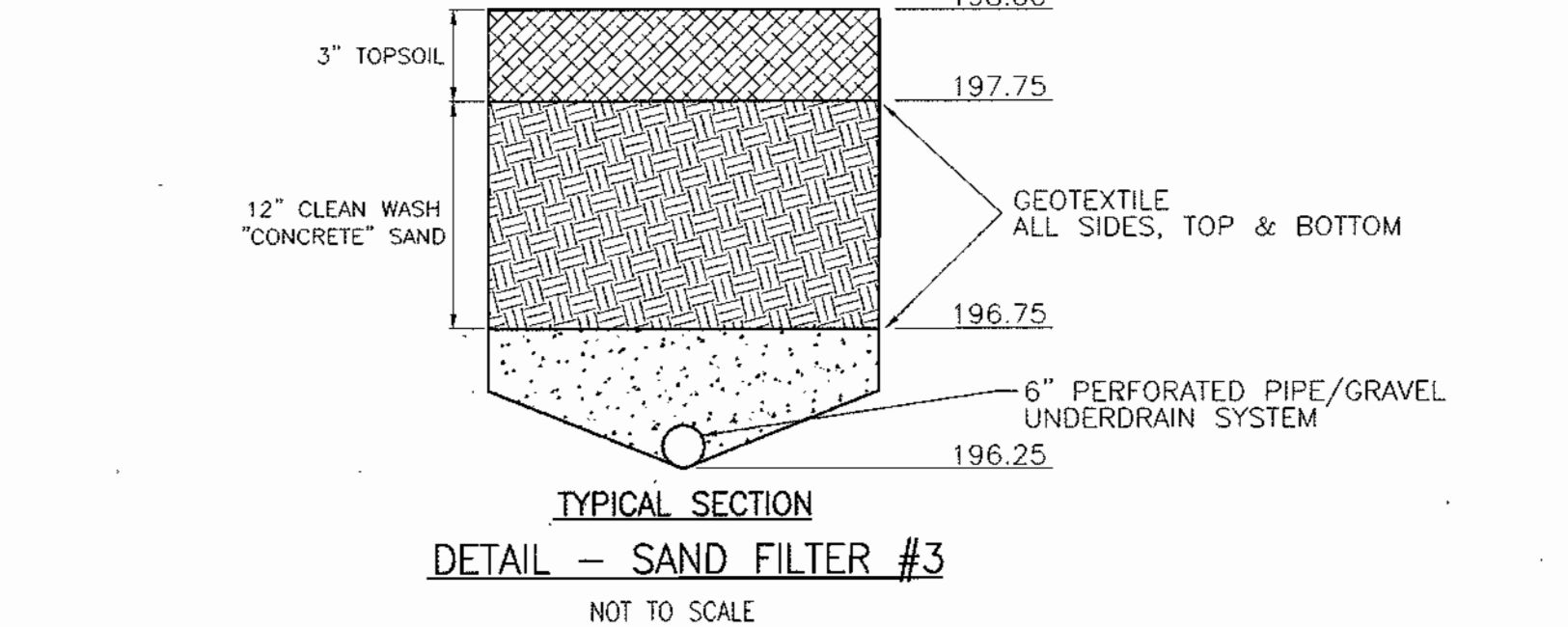
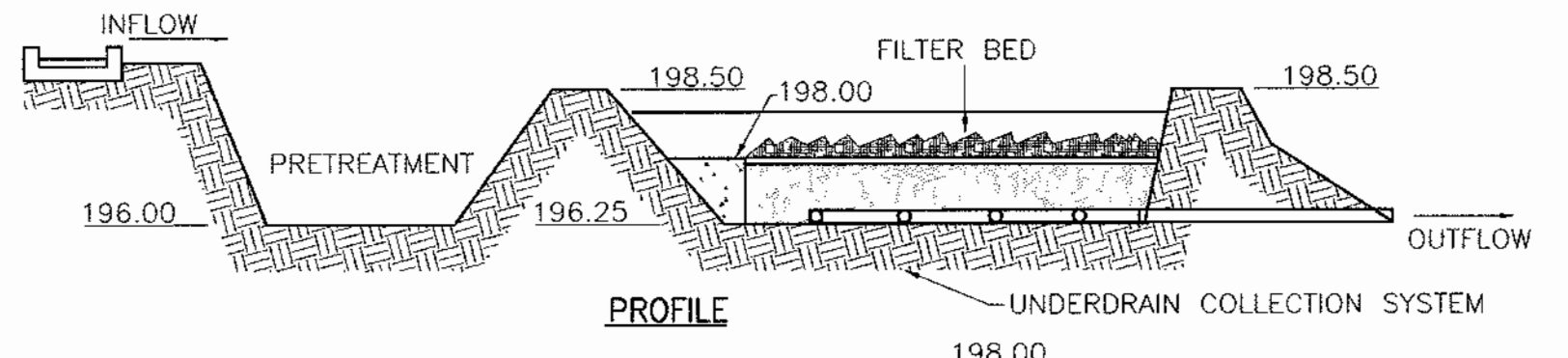
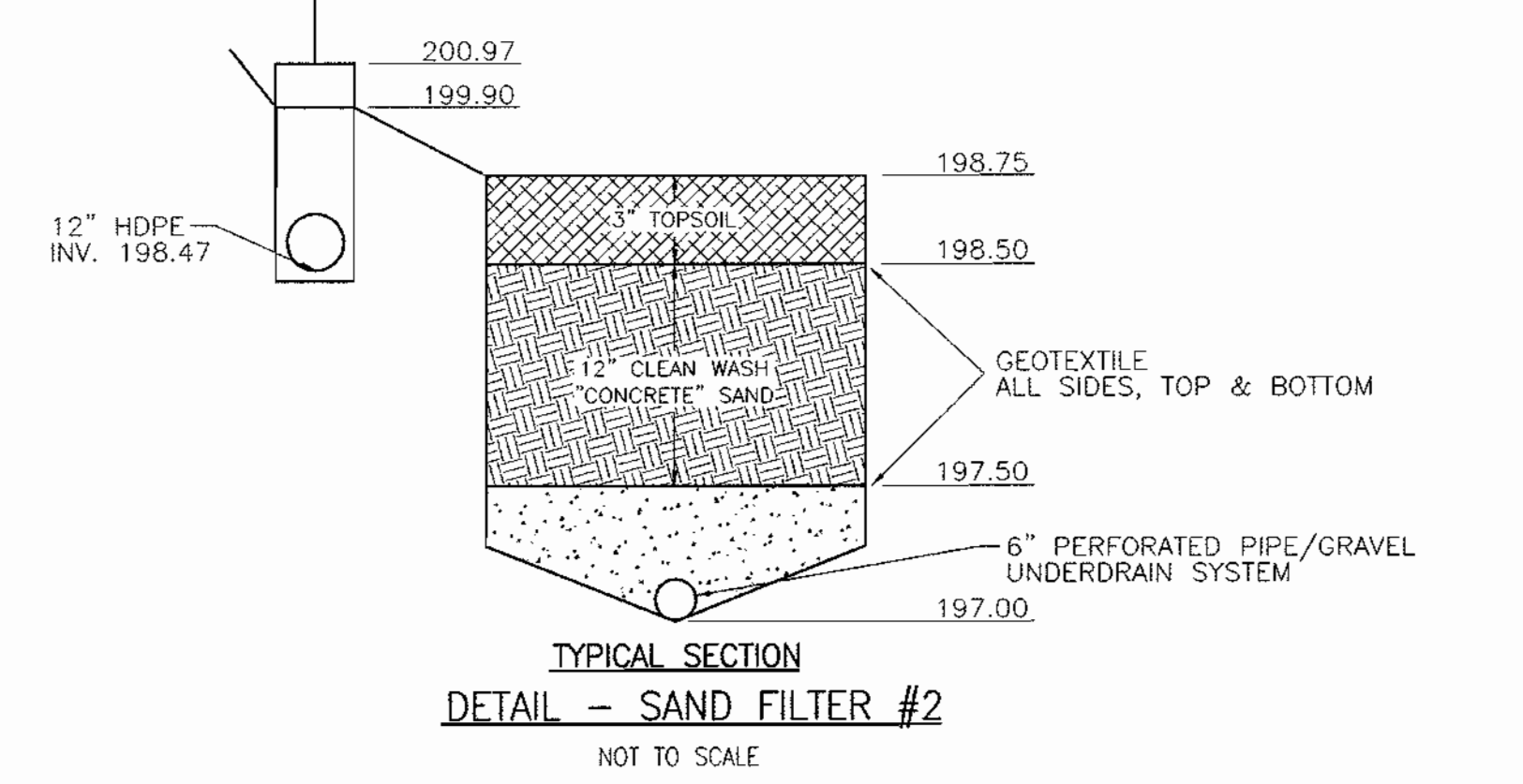
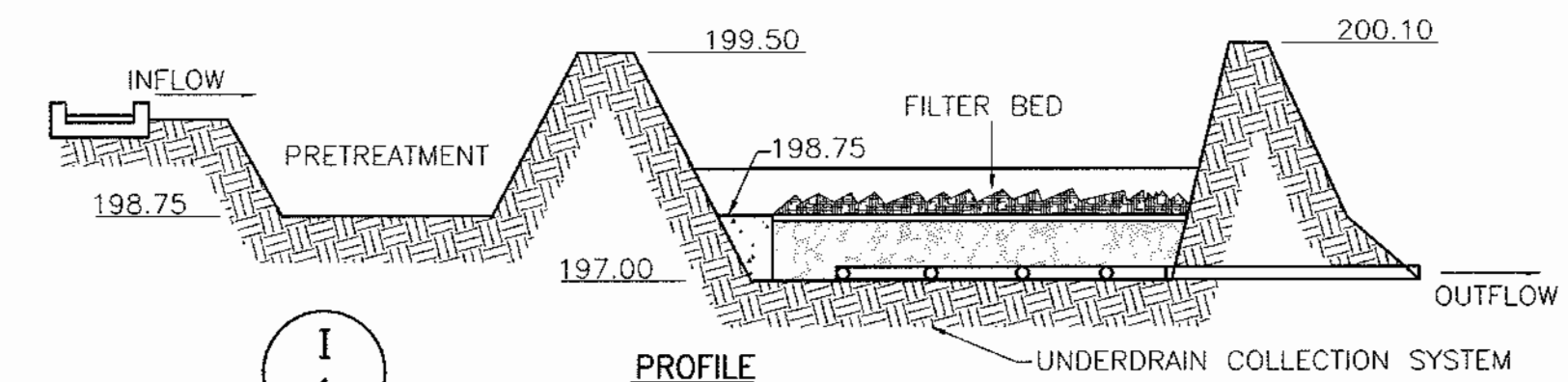
**SITE DEVELOPMENT PLAN
STORM DRAIN DRAINAGE
AREA MAP AND
UTILITY PROFILES
HOLLERBACH EQUIPMENT**

TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS: 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS: Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW
DRAWN BY: DZ
CHECKED BY: RHW
DATE: MAY 2004
SCALE: AS SHOWN
W.O. NO.: 2014071

5 SHEET OF 8



SUMMARY TABLE-ENTIRE SITE

REQUIREMENT	REQUIREMENT			PROVIDED		
	D.A. 1	D.A. 2	D.A. 3	D.A. 1	D.A. 2	D.A. 3
DRAINAGE AREA (Ac.)	0.26	0.15	1.30			
WATER QUALITY VOLUME (WQV) (c.f.)	771	436	3846	771	436	3846
RECHARGE VOLUME (REV) (c.f.)	200	115	1002	200	115	1002
*CHANNEL PROTECTION VOLUME (Q ₁₀ /C _{pv}) (c.f.s.)	0.17		0.09			
Q ₁₀ (c.f.s.)	2.51		9.32			
Q ₁₀₀ (c.f.s.)	5.38		13.24			

*Discharges shown represent the pre and post development discharges for the 1 year/C_{pv} storm, the 10 year and 100 year peak runoff for the entire site. For purposes of stormwater management quantity design, the area of 1.71 acres was used, and it was not broken down into sub-areas, since the entire area is controlled in the underground detention system.

OPERATION AND MAINTENANCE SCHEDULE FOR SURFACE SAND FILTER

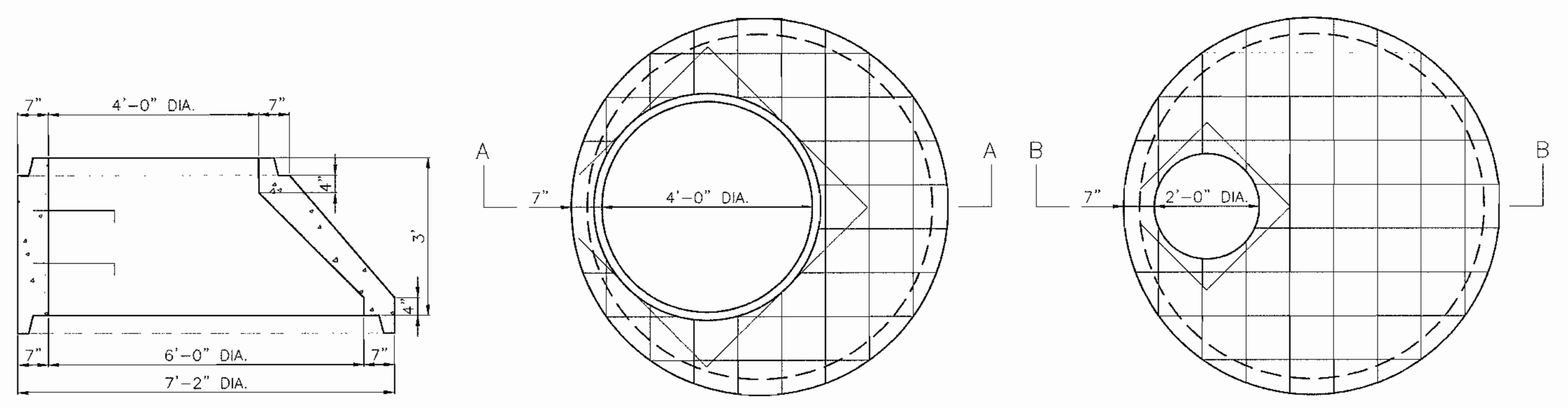
1. THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN DRAWDOWN TIMES WITHIN THE CHAMBER EXCEEDS 36 HOURS. TRASH AND DEBRIS SHALL BE REMOVED AS NECESSARY.
2. SEDIMENT SHOULD BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF MORE THAN SIX INCHES. VEGETATION WITHIN THE SEDIMENTATION CHAMBER SHOULD BE LIMITED TO A HEIGHT OF 18 INCHES.
3. WHEN THE FILTERING CAPACITY OF THE FILTER DIMINISHES SUBSTANTIALLY (E.G. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS), THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHOULD BE DISPOSED IN AN ACCEPTABLE MANNER (E.G. LANDFILL). SILT/SEDIMENT SHOULD BE REMOVED FROM THE FILTER BED WHEN THE ACCUMULATION EXCEEDS ONE INCH.
4. DIRECT MAINTENANCE ACCESS SHALL BE PROVIDED TO THE PRETREATMENT AREA AND THE FILTER BED.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND FACILITIES

- A. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- B. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- C. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFLOW IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- D. THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
- E. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
- F. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.



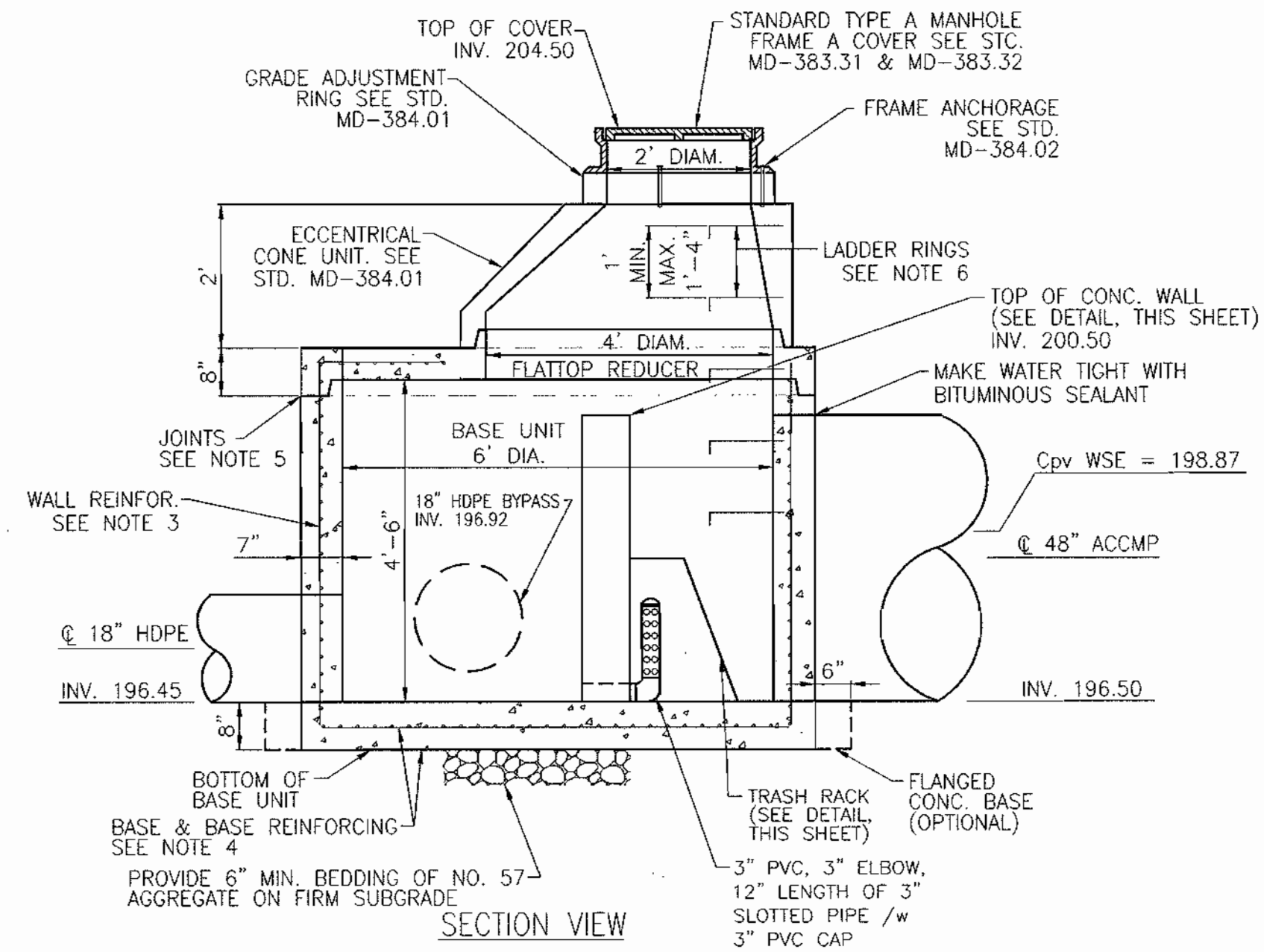
ECCENTRIC CONE REDUCER (ALTERNATE FOR FLATTOP REDUCER)

FLATTOP REDUCER

FLAT SLAB TOP

SECTION A-A

SECTION B-B



CONTROL STRUCTURE NO. 1 MD SHA STD. 384.05

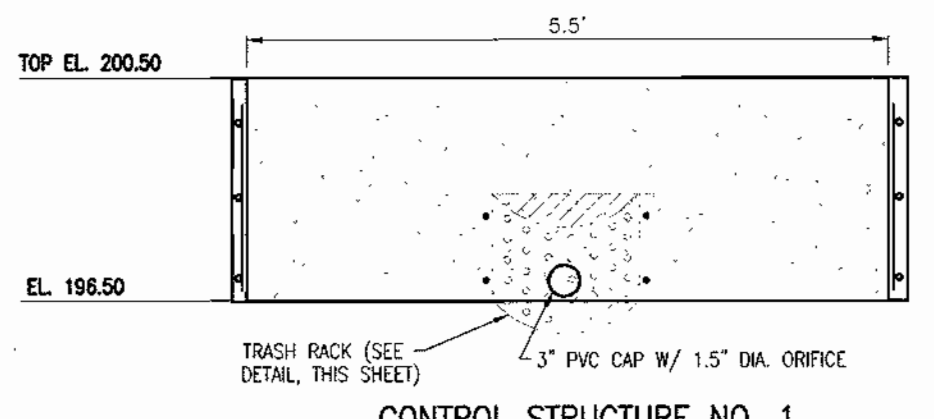
SCALE: 1/2" = 1'

CONTROL STRUCTURE NOTES:

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 P.S.I.)
3. WALL REINFORCEMENT FOR BASE UNITS AND RISER UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.2 in.²/ft FOR THE 84" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82.
4. BASE REINFORCEMENT TO BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 in.²/ft. THE BASE SHALL BE CAST MONOLITHIC WITH THE BASE UNIT OR JOINED PER MANUFACTURERS DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR, RUBBER O-RING GASKETS MEETING ASTM C361 AND C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD-383.91 OR MD-383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE PIPE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THEN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIPSTONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. MD-384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 10'-1" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 10'-1" THE COST OF THE DRIPSTONE LANDING, NO. 57 AGGREGATE GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.

OWNER/DEVELOPER

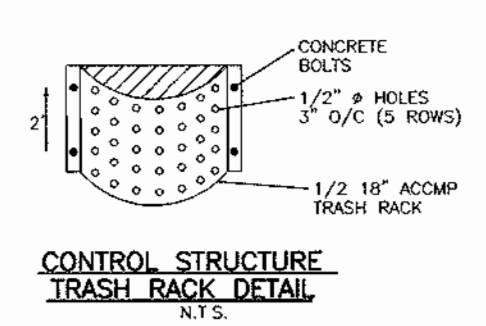
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794



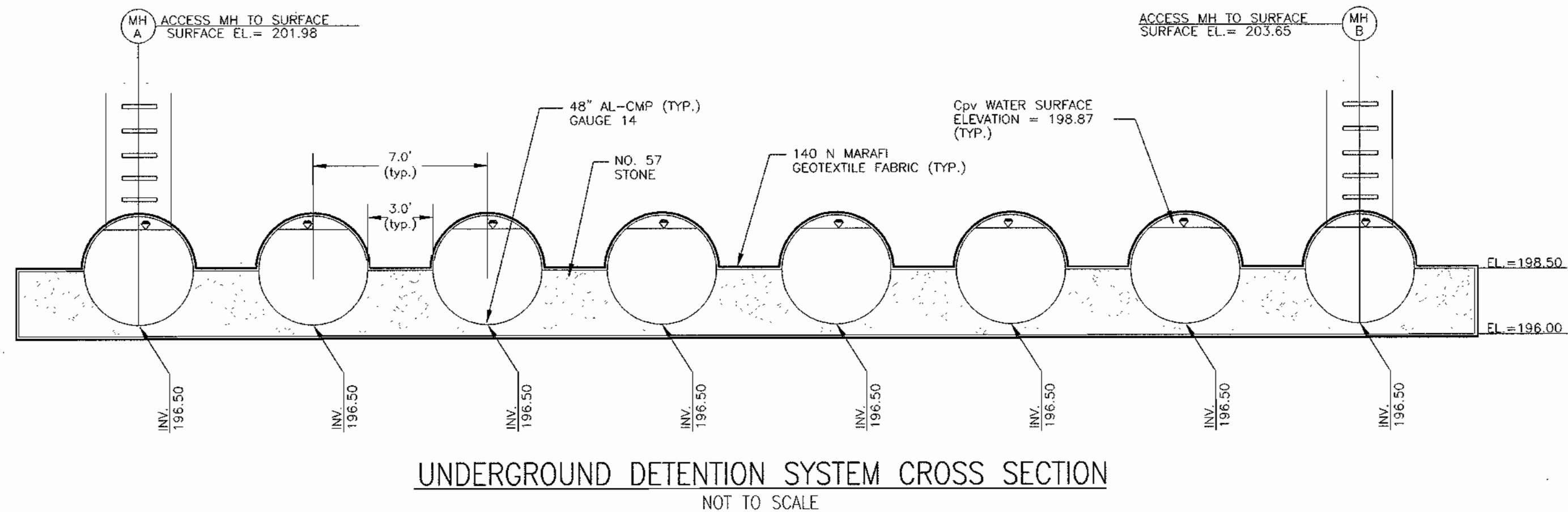
CONTROL STRUCTURE NO. 1 CONCRETE WALL DETAIL (NOT TO SCALE)

CONTROL STRUCTURE CONCRETE WALL NOTES

1. CONCRETE WALL SHALL BE MIX NO. 6 (4500 P.S.I.)
2. WALL REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MIN. AREA OF 0.21 in.²/ft WELDED WIRE FABRIC.
3. WALL SHALL BE CAST-IN-PLACE, POURED MONOLITHIC USING FORMS.



CONTROL STRUCTURE TRASH RACK DETAIL (NOT TO SCALE)



UNDERGROUND DETENTION SYSTEM CROSS SECTION (NOT TO SCALE)

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT
NOTES AND DETAILS
HOLLERBACH EQUIPMENT

TAX MAP #43 BLOCK #21 PARCEL '25'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

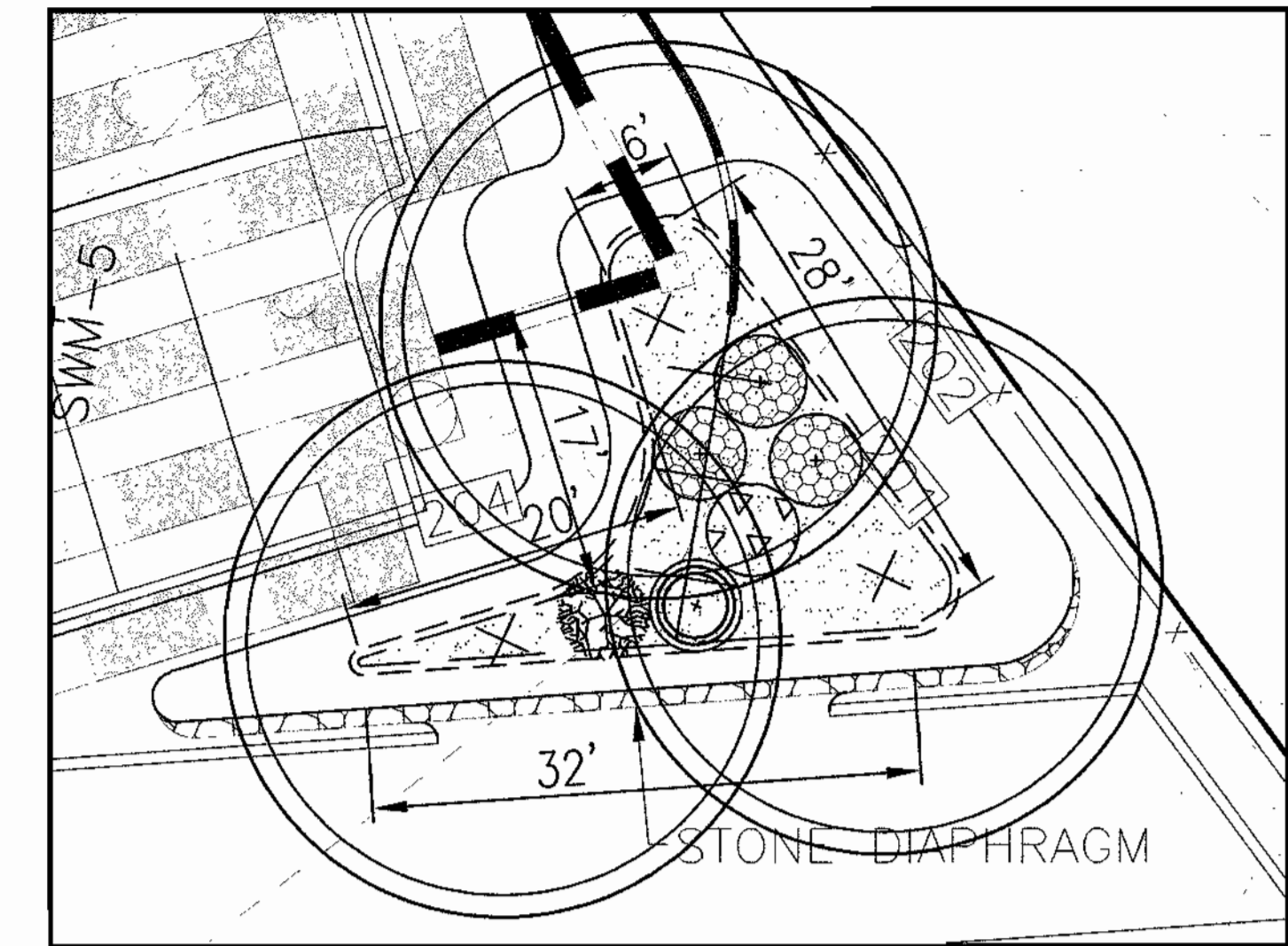
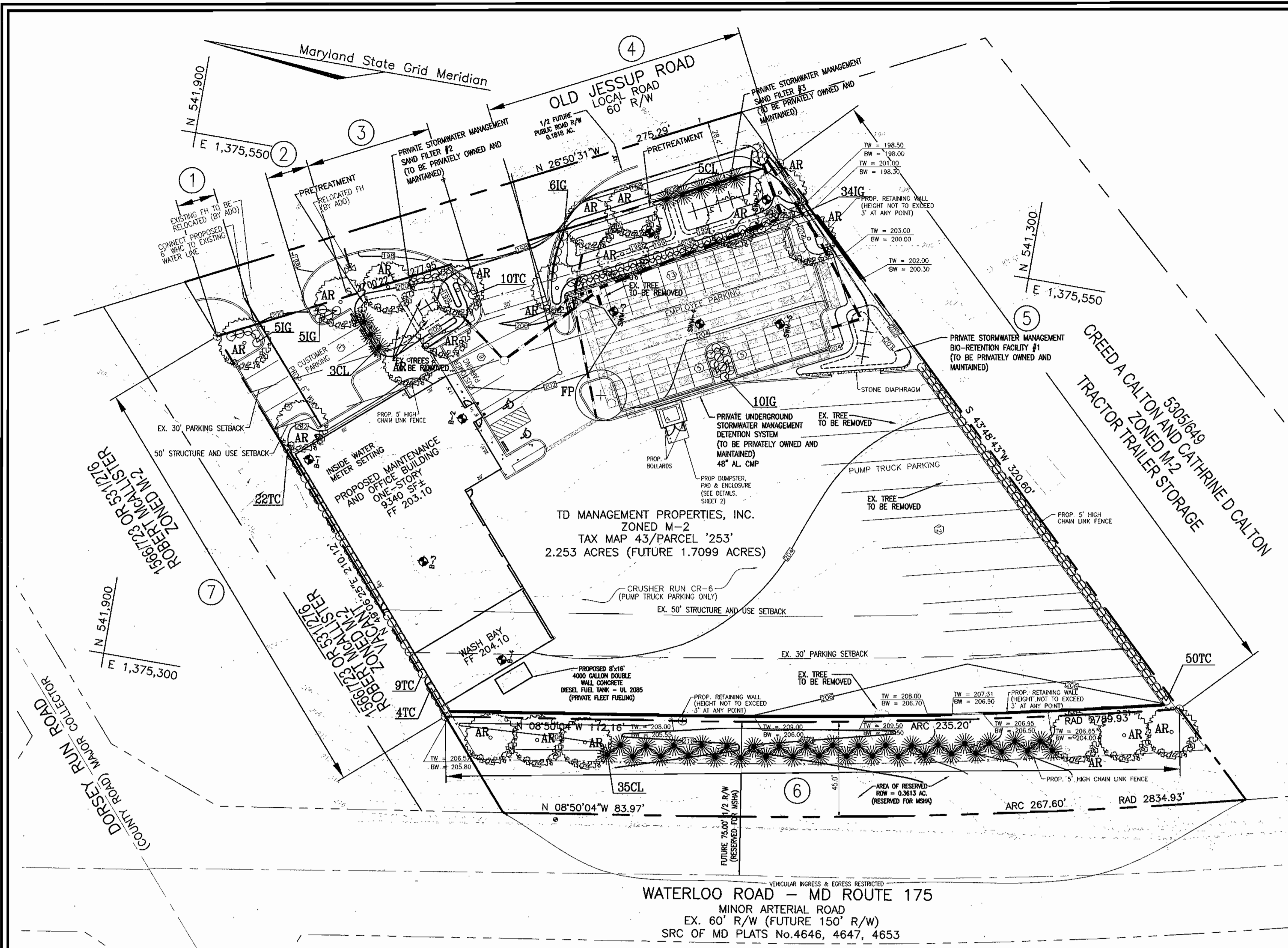


DESIGN BY: RHW
DRAWN BY: DZ
CHECKED BY: RHW
DATE: MAY 2004
SCALE: AS SHOWN
W.O. NO.: 2014071

6 SHEET OF 8

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION (M&Z) DATE 4/1/04
DATE 6/29/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 7/1/04
DIRECTOR DATE



BIO RETENTION LANDSCAPING
SCALE: 1"=10'

NBR	AREA	STEMS REQUIRED	STEMS PROVIDED
1	537 SF	8	-

BIORETENTION AREAS ARE LANDSCAPED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0229 STEMS PER SQUARE FOOT).

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
3	3	CLADRASTIS LUTEA 'SWEETSHADE' SWEETSHADE YELLOWWOOD	1 1/2"-2" CAL.	B & B
4	1	ILEX GLABRA COMPACTA DWARF HICKBERRY	3 GALLON	CONT
1	1	VIBURNUM TRICOLORUM AMERICAN Highbush CRANBERRY	5 GALLON	CONT
1	1	KALMA LATIFOLIA MOUNTAIN LAUREL	5 GALLON	CONT
1	1	RHODOSODRON HY. 'GLACIER' OR 'WHITE ROSEBUD' GLACIER OR WHITE ROSEBUD HYBRID AZALEA	3 GALLON	CONT
510	510	LINDSEY MUSCOURI 'MAJESTIC' MAJESTIC LILY TURF	2" POT	1" O.C.

LINEAR FEET OF PERIMETER	103 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	YES, 100%
NUMBER OF TREES REQUIRED (B) BUFFER) 2 SHADE TREES 3 EVERGREEN TREES	0 SHADE TREES 3 EVERGREEN TREES
NUMBER OF TREES PROVIDED	SEE BIORETENTION PLANT LIST

*BIORETENTION AREAS ARE LANDSCAPED BASED ON A DENSITY OF 1000 STEMS PER PLANTED ACRE.
*SURETY FOR BIORETENTION PROVIDED IN THE BID COST ESTIMATE

- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED SPOT ELEVATION
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING GUY WIRE
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING BOLLARD
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING SD MANHOLE
 - EXISTING STORM DRAIN
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED STORM DRAIN INLET
 - PROPOSED LIGHT POLE
 - PROPOSED SHADE TREE
 - PROPOSED EVERGREEN TREE
 - PROPOSED SHRUB
 - LANDSCAPE PERIMETER

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING, SWM'S AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS A PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$16,650.00.
- SEE SHEET 2 FOR THE INSERT DETAIL FOR THE "FUTURE RELOCATION OF THE 5' FENCE AND LANDSCAPING" ALONG MD RTE. 175 IF REQUIRED IN THE FUTURE BY THE MSHA.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

OWNER/DEVELOPER
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794

LANDSCAPE PLAN
SCALE: 1"=30'

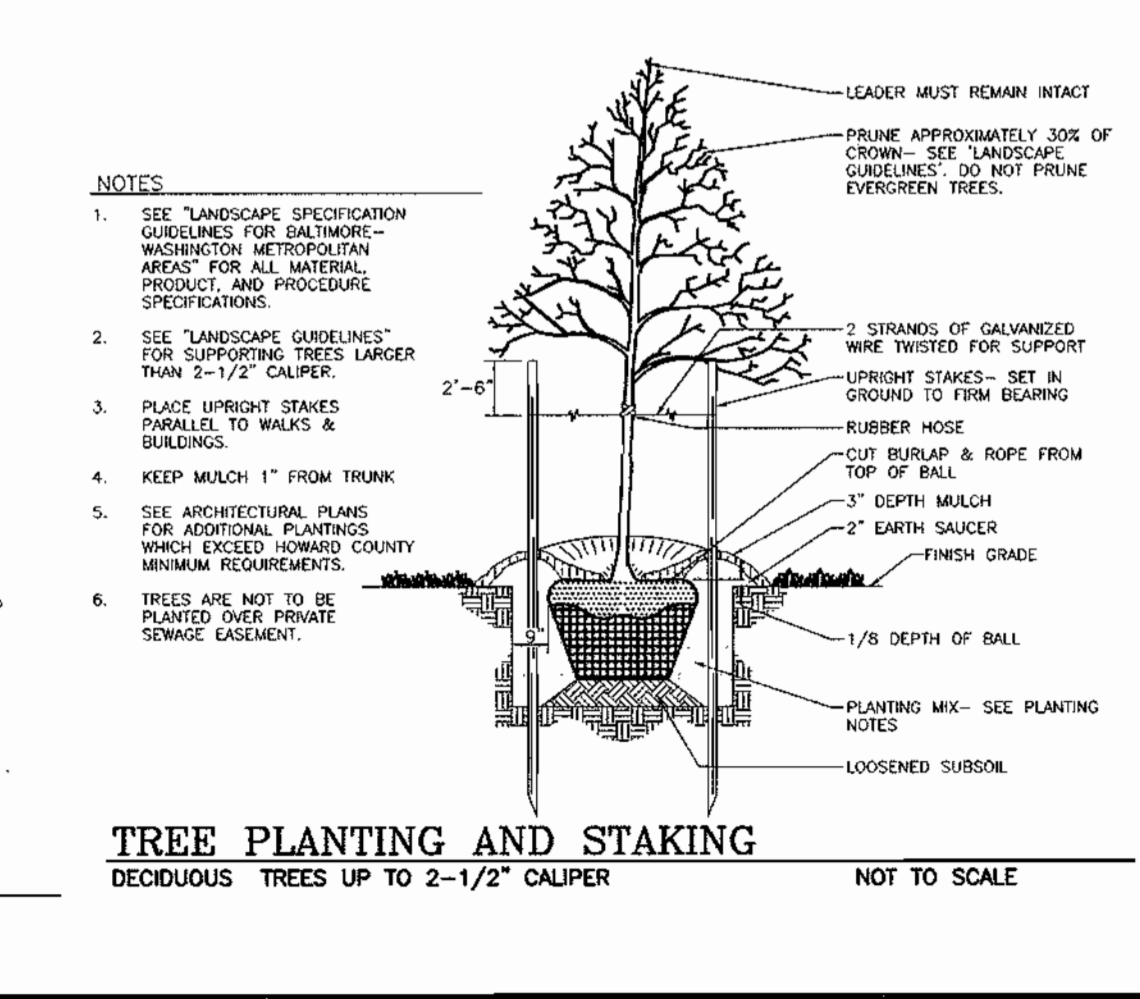
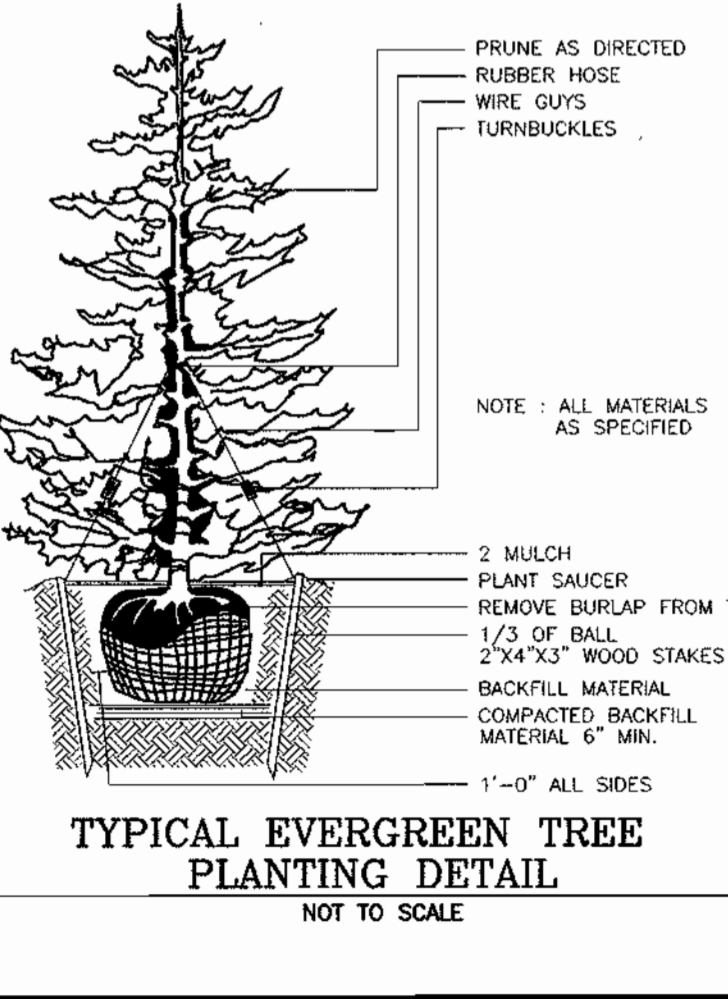
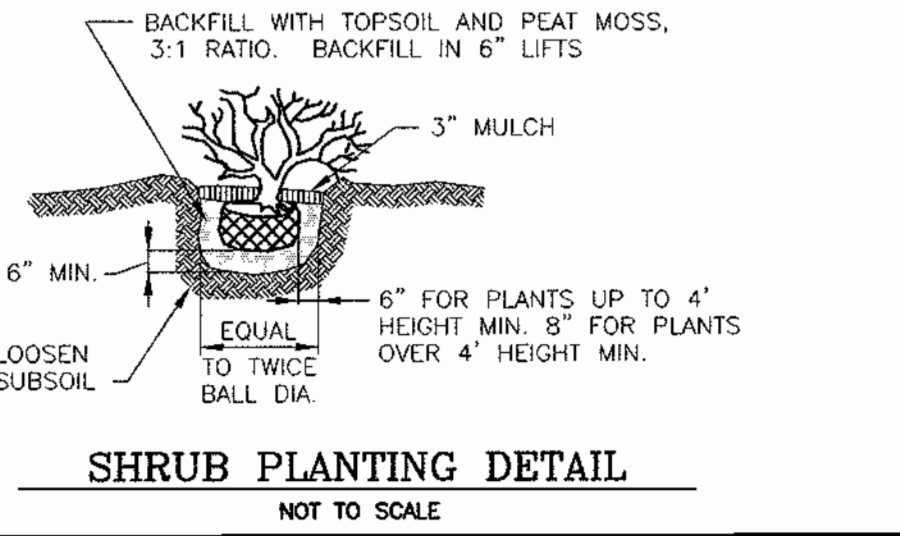
KEY	QUAN.	BOTANICAL NAME	SIZE	REM
AR	19	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL.	B & B
FP	1	FRAXINUS P. 'MARSHALLS SEEDLESS'	2 1/2" - 3" CAL.	B & B
CL	43	CUPRESSOCYPRIS LEYLANDI LEYLANDI CYPRESS	5' - 6' HT.	B & B
TC	95	TAXUS CUSPIDATA 'NADA' / DWARF JAPANESE YEW	18" - 24" SP.	B & B
IC	60	TAXUS CUSPIDATA 'NADA' / DWARF JAPANESE YEW	24" - 30" HT.	B & B

CATEGORY	ADJACENT TO ROADWAYS				ADJACENT TO PERIMETER PROPERTIES			
	1	2	3	4	5	6	7	8
Perimeter/Frontage Designation	F	E	B	A	D	A		
Linear Feet of Roadway Frontage/Perimeter	19	20	60	124	321	347	210	
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	No	No	No	No	No	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	No	No	No	No	No	No	No
Number of Plants Required	1:40 1	1:40 1	1:50 3	1:50 3	1:60 6	1:60 6	1:60 4	
Shade Trees	1	1	1	1	2	2	1	
Evergreen Trees	1:04 5	1:04 5	-	-	1:10 35	1:10 35	1:10 35	
Shrubs	-	-	-	-	-	-	-	
Number of Plants Provided	1	1	1	2	6	6	4	
Evergreen Trees	-	-	0	1	35	35	35	
Other Trees (2:1 Substitution)	5	5	10	40	50	50	30	
Shrubs (10:1 Substitution)	-	-	-	-	-	-	-	
Describe Plant Substitution Credits (Below if needed)								

•• 10 Shrubs substituted for 1 evergreen tree in Perimeter 3.
••• 40 Shrubs substituted for 3 evergreen trees and 1 shade tree in Perimeter 4.
•••• 30 Shrubs substituted for 3 shade trees in Perimeter 7.

LINEAR FEET OF PERIMETER	131 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED (B) BUFFER) 3 SHADE TREES 5 EVERGREEN TREES	0 SHADE TREES 3 EVERGREEN TREES
NUMBER OF TREES PROVIDED	3 SHADE TREES 5 EVERGREEN TREES

LINEAR FEET OF PERIMETER	217 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED (B) BUFFER) 4 SHADE TREES 5 EVERGREEN TREES	0 SHADE TREES 5 EVERGREEN TREES
NUMBER OF TREES PROVIDED	4 SHADE TREES 5 EVERGREEN TREES



Number of parking spaces	36
Number of trees and islands required	2
Number of trees and islands provided	-
Shade Trees	1
Other Trees (2:1 Substitution)	-
Shrubs (10:1 Substitution)	10*

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Dennis Andrews 6-4-04
SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

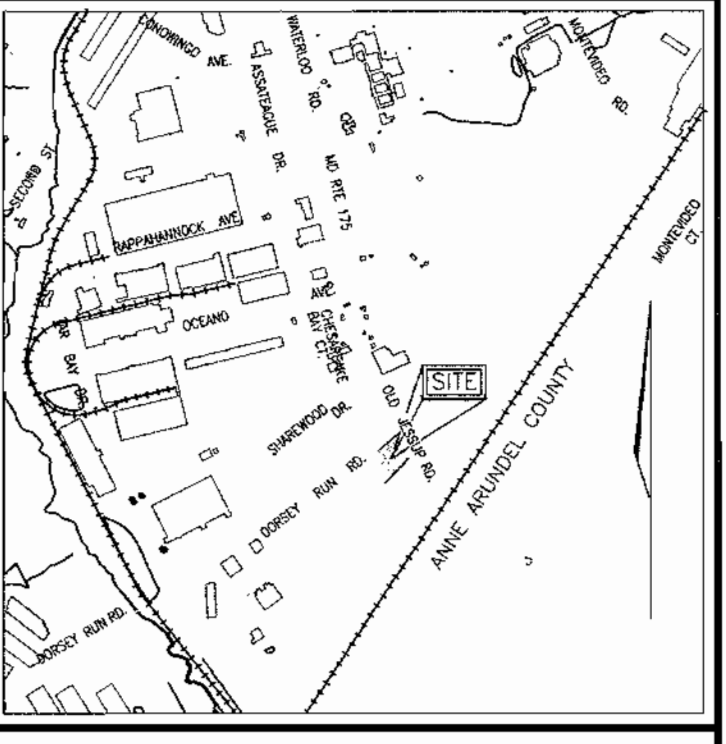
6/1/04 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ
6/21/04 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT
7/1/04 DATE
DIRECTOR

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
SITE LANDSCAPE PLAN
HOLLERBACH EQUIPMENT
TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW
DRAWN BY: DZ
CHECKED BY: RHW
DATE: MAY 2004
SCALE: 1"=30'
W.O. NO.: 2014071
7 SHEET OF 8



VICINITY MAP
SCALE: 1"=2000'

LEGEND

- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- EXISTING GUY WIRE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING BOLLARD
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING SD MANHOLE
- EXISTING STORM DRAIN
- EXISTING TREES (FIELD LOCATED)
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING VEGETATION (APPROXIMATE LOCATION)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY

OWNER/DEVELOPER
DENNIS ANDREWS
T.D. PROPERTIES MANAGEMENT, LLC
8414 WASHINGTON BOULEVARD
JESSUP, MD 20794

HOWARD COUNTY
FOREST CONSERVATION WORKSHEET

ZONED: C/1/A

NET TRACT AREA:

A. TOTAL TRACT AREA	2.253 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00 AC
C. AREA WITHIN THE MSHA RESERVED ROAD R/W	0.3613 AC
D. NET TRACT AREA	1.8917 AC

LAND USE CATEGORY:

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED M2

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	0	0	1

E. AFFOREST THRESHOLD 15% X D = 0.28 AC
F. CONSERVATION THRESHOLD 15% X D = 0.28 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 0.00 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 0.00 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.00 AC

BREAK EVEN POINT:

J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION = 0.00 AC
K. CLEARING PERMITTED WITHOUT MITIGATION = 0.00 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED = 0.00 AC
M. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.00 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.00 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
R. TOTAL REFORESTATION REQUIRED = 0.00 AC
S. TOTAL AFFORESTATION REQUIRED = 0.28 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 0.28 AC

THE FOREST CONSERVATION REQUIREMENTS OF 0.28 AC OR 12,196.80 SF HAS BEEN FULFILLED THROUGH A FEE-IN-LEU PAYMENT OF \$6,098.40. OBLIGATION HAS BEEN PAID TO THE FOREST CONSERVATION FUND.

NO.	REVISION	DATE

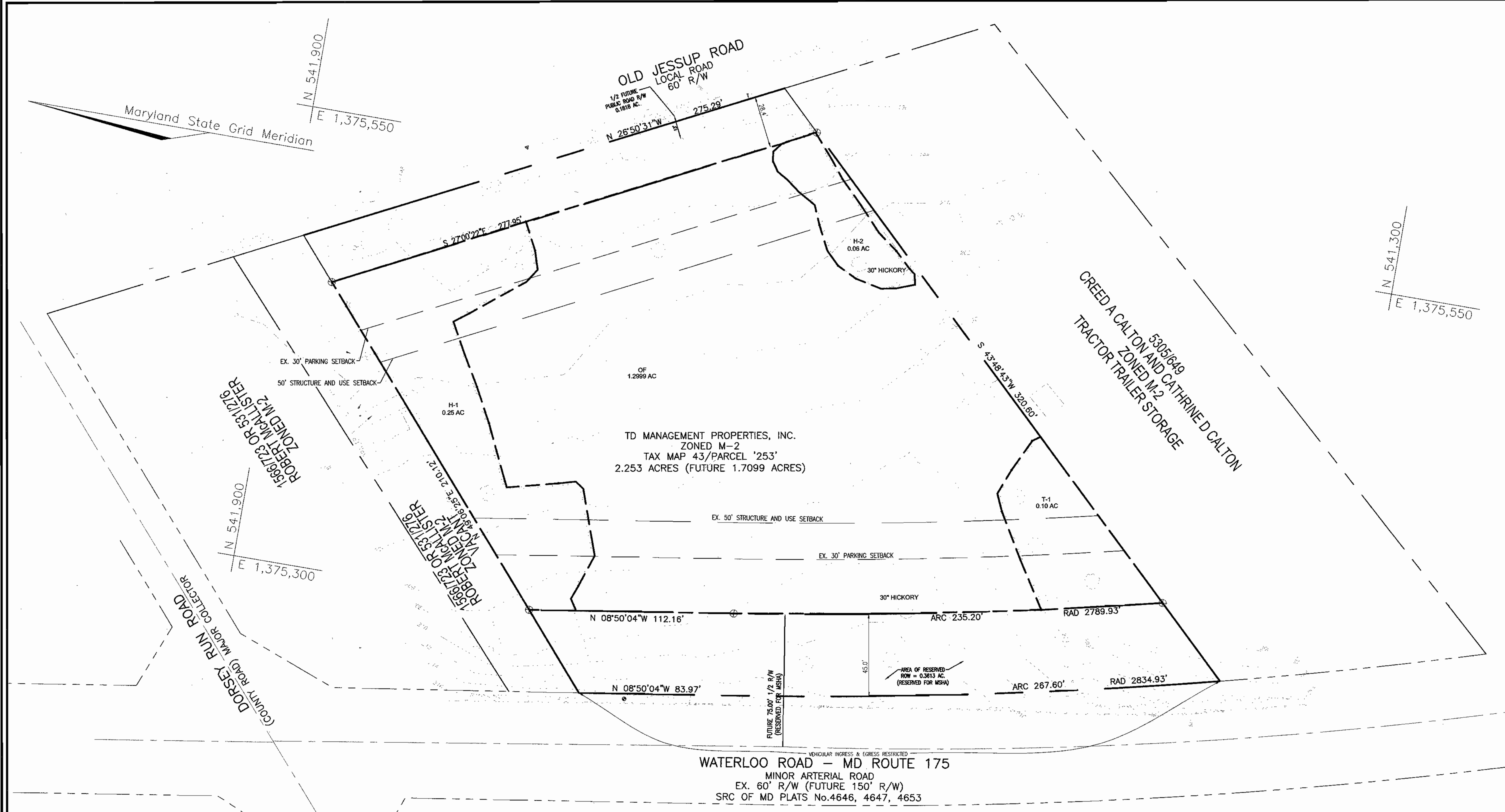
SITE DEVELOPMENT PLAN
FOREST STAND DELINEATION PLAN
HOLLERBACH EQUIPMENT
TAX MAP #43 BLOCK #21 PARCEL '253'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW
DRAWN BY: DZ
CHECKED BY: ACS
DATE: MAY 2004
SCALE: 1"=30'
W.O. NO.: 2014071

LARRY J. THOMPSON
DNR QUALIFIED PROFESSIONAL

8 SHEET OF 8



HOLLERBACH EQUIPMENT
FOREST STAND ANALYSIS TABLE

KEY	A. TYPE OF COMMUNITY	B. AREA	C. SOILS INFORMATION			D. EXISTING VEGETATION	E. STAND CHARACTERISTICS			F. FOREST AREA IN SEN. ENV	G. HABITAT
			1. SOILS TYPES	2. TYPICAL FOREST COVER FOR SOILS TYPE	3. WOODLAND SUITABILITY INDEX		1. SIZE (DIA)	2. AGE (YRS)	3. GENERAL CONDITION		
H-1	HEDGEROW	0.25 Ac	SIC2	MIXED HARDWOODS MAINLY OAKS	8	HICKORY, RED MAPLE, VIRGINIA CREEPER, POISON IVY, MULTIFLORA ROSE, AMERICAN HOLLY	6-30"	15-25	GOOD	0.00 AC	P
H-2	HEDGEROW	0.06 Ac	SIC2	MIXED HARDWOODS MAINLY OAKS	8	HICKORY, RED MAPLE, VIRGINIA CREEPER, POISON IVY, MULTIFLORA ROSE, WHITE SPRUCE	6-30"	15-25	GOOD	0.00 AC	P
T-1	TREE GROUP AND SPECIMEN TREES	0.10 Ac	SIC2	MIXED HARDWOODS MAINLY OAKS	8	HICKORY, RED MAPLE, VIRGINIA CREEPER, POISON IVY, MULTIFLORA ROSE, AMERICAN HOLLY	6-30"	15-25	GOOD	0.00 AC	P
OF	OPEN FIELD	1.299 Ac	SIC2	MIXED HARDWOODS MAINLY OAKS	8	RUSH (sp.), REED GRASS, SEDGE (sp.), HICKORY	6-30"	15-25	GOOD	0.00 AC	P

SUPPLEMENTAL INFORMATION

CURRENT TOTAL ACREAGE: 2.253 AC
MSHA RESERVED ROAD R/W ACREAGE: 0.3613 AC
DEDICATED LOCAL ROAD R/W ACREAGE: 0.1818 AC
FUTURE ACREAGE: 1.7099 AC
ZONED: M2

ENVIRONMENT AREA TOTALS

STAND H-1 0.25 ACRES
STAND H-2 0.06 ACRES
STAND T-1 0.10 ACRES
STAND OF 1.299 ACRES
TOTAL 1.7099 ACRES

NOTES

- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY FREDERICK WARD & ASSOCIATES, INC. DATED OCTOBER 2001, AND TOPOGRAPHIC SURVEY PREPARED BY OTHERS. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THERE IS NO 100 YEAR FLOODPLAIN ON SITE.
- THERE ARE NO WETLANDS ON SITE.
- THERE ARE NO HISTORIC SITES ON THE SUBJECT PARCEL.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION
SIC2	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* DATE 6/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* DATE 6/2/04
DIRECTOR *[Signature]* DATE 7/1/04