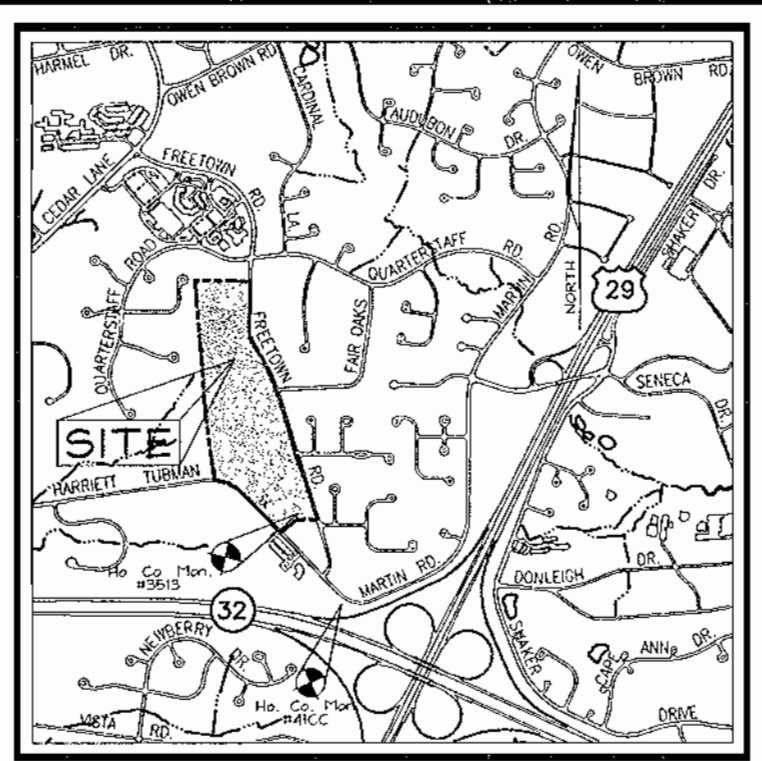


GENERAL NOTES

- 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 (410) 754-6281
 - Verizon Telephone Company: (410) 313-2366
 - Howard County Bureau of Utilities: (410) 313-3553
 - AT&T Cable Location Division: 850-4620
 - B.G.E. Co. Contractor Services: 787-4620
 - B.G.E. Co. Underground Damage Control: 531-5533
 - State Highway Administration: 531-5533
- Site analysis:
 - Area of parcel 249: 20.98 ac.
 - Area of parcel 249: 10.00 ac.
 - Area of parcel 265: 10.00 ac.
 - Total Site Area: 40.98 acs.
 - Present zoning: RSC-NEW TOWN
 - Use of structure: Educational, School
 - Proposed building area: 20,387.23 sf
 - Existing building area: 156,278.21 sf
 - Total building area: 176,665.44 sf
 - Building coverage on site: 4.06Ac. or 9.9% of gross area
 - Paved parking lot/area: 7.10 Ac. or 17% of gross area
 - There are no steep slopes on-site
 - Total limit of disturbance = 3.794 acres
- Project background:
 - Location: Columbia, Md.; Tax Map 35, Parcels 249, 249, 265
 - Zoning: RSC-NEW TOWN
 - Section/Area: N/A
 - Site Area: 40.98 Acres
 - DPZ references: SDP-76-20, SPD-71-22, WP-91-65, WP-91-199 and WP-95-93
- 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 Field Surveys 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 3,500 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.
- All storm drain pipe bedding shall be Class 'C'.
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument No. 41CC and No. 3513 were used for this project.
- A noise study is not required for this project.
- Existing topography is based on field run information performed by Vogel & Associates Inc., in February 2001.
- See sheet 5 for paving section details.
- All curb and gutter to be Howard County Standard concrete Detail R3.01 unless otherwise specified.
- There are no wetlands, streams, or flood plains located within the limit of disturbance.
- Where drainage flows away from curb, contractor to reverse the gutter pan.
- All elevations are to finished/bottom of curb unless otherwise noted.
- All dimensions are to face of curb unless otherwise noted.
- This site is exempt from the Forest Conservation Ordinance in accordance with Section 16.1202(b)(1)(iii) of Howard County Code with a site development plan and mass grading permit approved prior to 12/31/92.
- Contractor to connect roof drains to storm drain system, as shown.
- Contractor to sod all areas within 10' of the addition. All other areas to be seeded and mulched.
- Proposed fire hydrant and 6" water line to be constructed by Advanced Deposit Order.
- Stormwater Management in accordance with 2000 Maryland Stormwater Management Manual. This project is exempt from Cpv, since the 1-year Q is less than 2.0cfs. Rev and WQv are provided by an Infiltration Trench.
- A traffic study is not required for this project.

SITE DEVELOPMENT PLAN ATHOLTON HIGH SCHOOL



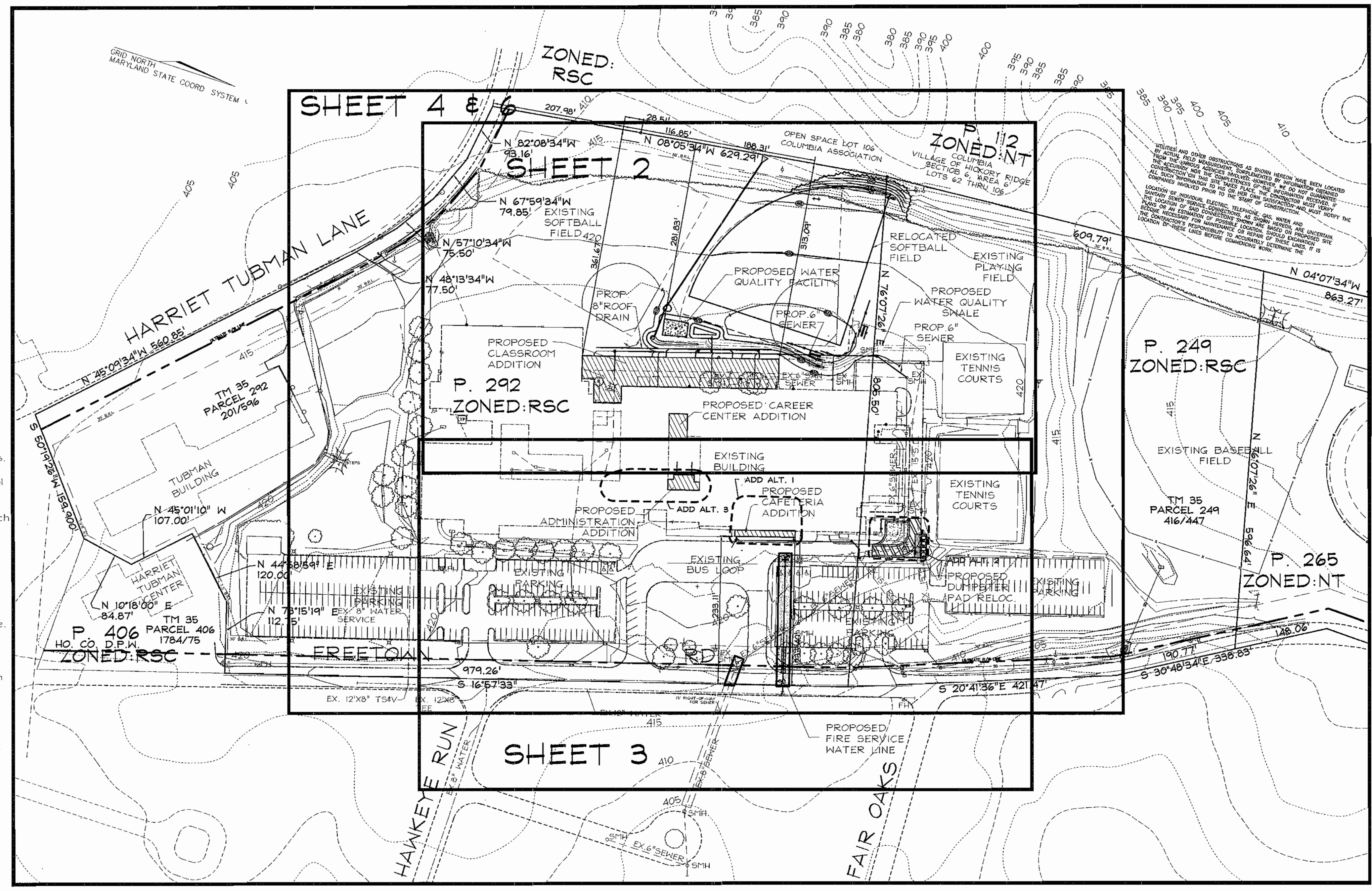
VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS

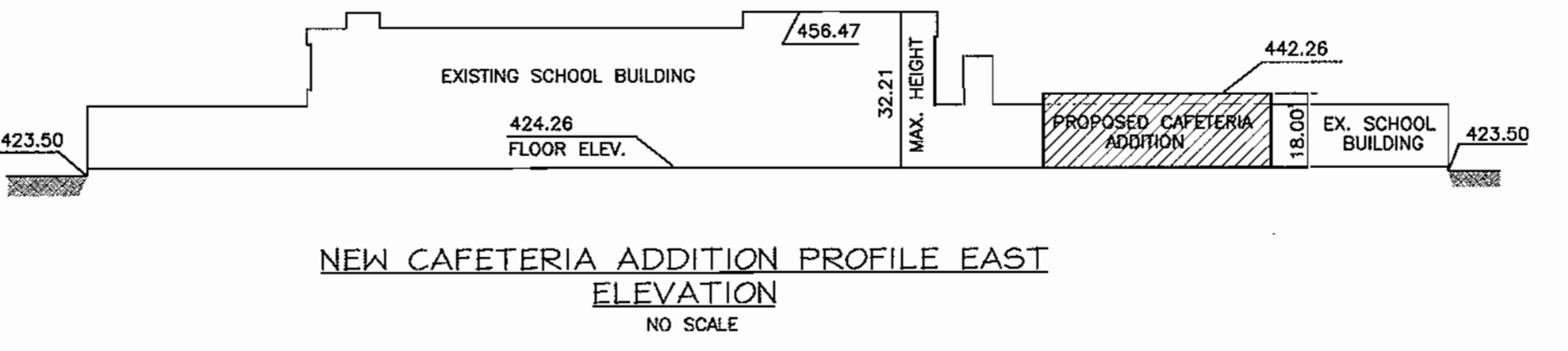
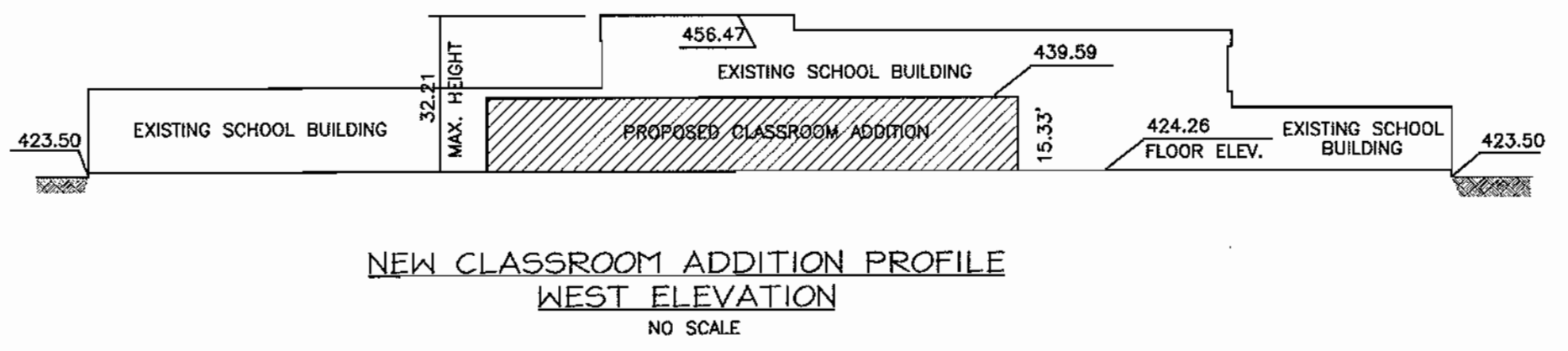
Howard County Monument #41CC	N 552,494.254' E 1,347,062.412'
Howard County Monument #3513	N 553,573.688' E 1,346,098.104'
BENCHMARK = F.F. ELEV. 424.00'	

LEGEND

	382 EXISTING CONTOUR
	PROPOSED CONTOUR
	SPOT ELEVATION
	DIRECTION OF FLOW
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	EX. 8" WATER EXISTING WATER LINE
	EX. 6" SEWER EXISTING STORM DRAIN
	EX. 6" SEWER EXISTING SANITARY LINE
	6" SEWER PROPOSED SEWER LINE
	4" RL PROPOSED ROOF DRAIN
	8" ROOF DRAIN PROPOSED WATER LINE
	EXISTING UTILITY EASEMENT
	PROPOSED 2" BITUMINOUS CONCRETE OVERLAY
	PROPOSED HEAVY-DUTY OVERLAY
	PROPOSED CONCRETE DUMPSTER AREA PAVING
	PROPOSED BUILDING ADDITION



LOCATION MAP
SCALE: 1"=100'



PARKING TABULATION

PARKING REQUIRED	1 PER 3 STUDENTS
EDUCATIONAL/SCHOOL:	= 384 SPACES
EXISTING HC PARKING:	= 8 SPACES
TOTAL EXISTING PARKING:	= 390 SPACES
TOTAL SPACES REQUIRED:	(1235 STUDENTS) @ 1 PER 3 STUDENTS = *412 SPACES

NOTE: DUE TO SHORTAGE OF PARKING SPACES, THE SCHOOL WILL PROVIDE BUSING FOR THE NUMBER OF STUDENTS IN EXCESS OF AVAILABLE PARKING.

COVER SHEET
SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
VARIOUS BUILDING ADDITIONS

TAX MAP #35
5th ELECTION DISTRICT

GRID NO. 24
PARCELS 249, 249, & 249
HOWARD COUNTY, MARYLAND

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/12/01
DIRECTOR DATE

NO.	REVISION	DATE

SHEET INDEX

DESCRIPTION	SHEET NO.
Civil Cover Sheet	1 of 12
Site Development Plan	2 of 12
Site Development Plan	3 of 12
Demolition Plan	4 of 12
Site Details	5 of 12
Erosion & Sediment Control Plan	6 of 12
Erosion & Sediment Control Details	7 of 12
Sanitary Sewer and Roof Drain Profiles	8 of 12
Stormwater Management, Profiles, Details & Specifications	9 of 12
Landscape Plan & Details	10 of 12
Existing Conditions Drainage Area Map	11 of 12
Developed Conditions Drainage Area Map	12 of 12

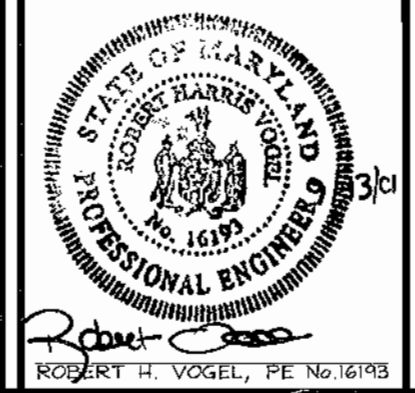
OWNER/DEVELOPER
HOWARD COUNTY PUBLIC SCHOOLS
10910 RTE. 108
ELLCOTT CITY, MD 21042
(410) 313-6600

ADDRESS CHART

BUILDING #	STREET ADDRESS
1	6520 Freetown Road, Columbia, MD 21044

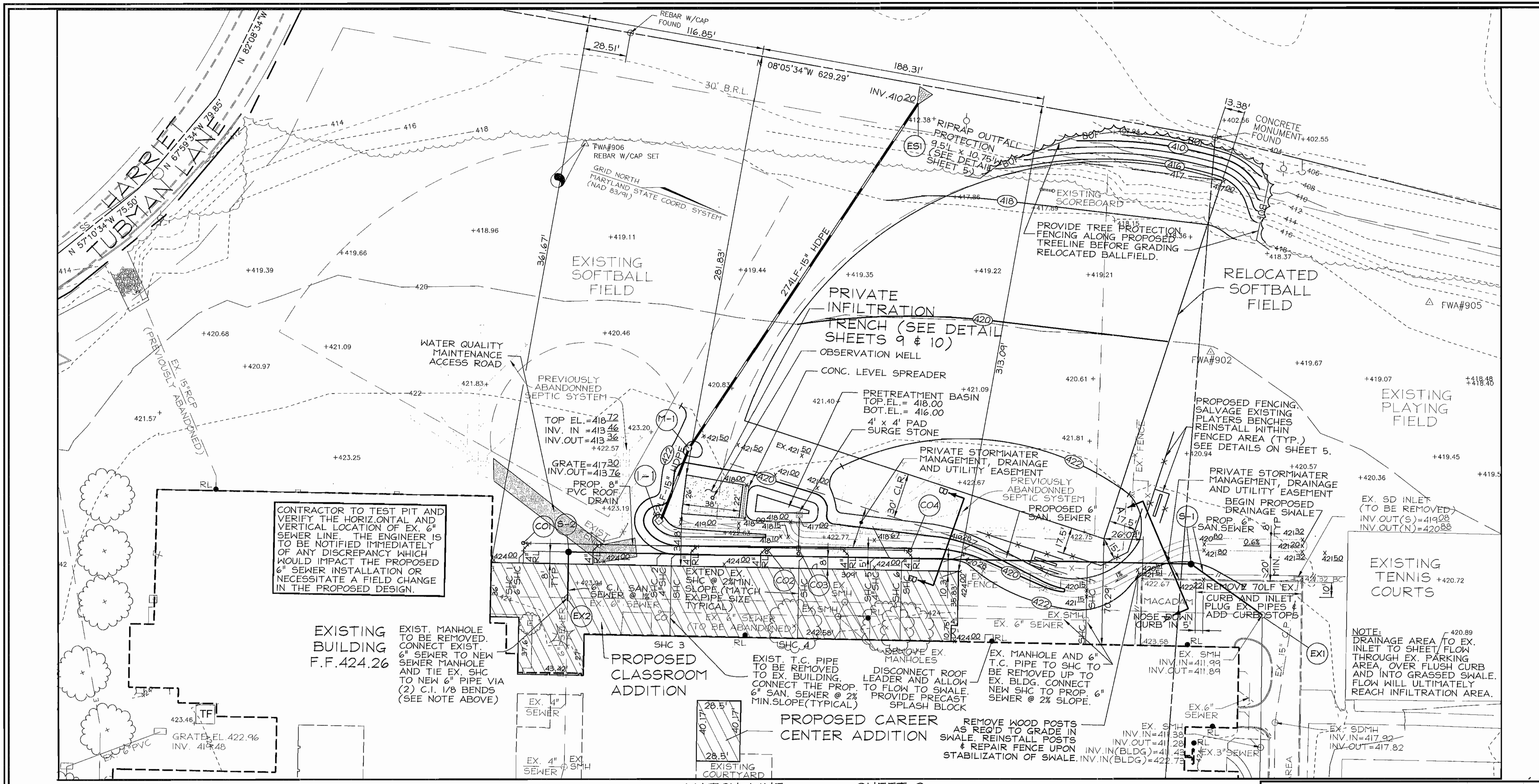
PROJECT NAME	SECTION/AREA	PARCEL NUMBER
Atholton High School	249, 249, 265	

DEED REF. 20V024	BLOCK NO. 24	ZONE RSC	TAX/ZONE 35	ELECT. DIST. 5th	CENSUS TR. 6056.02
416/447	494/265				
WATER CODE: E30	SEWER CODE: 5321300				



DESIGN BY: CLS
DRAWN BY: CLS
CHECKED BY: RHV
DATE: August 17, 2001
SCALE: 1"=100'
W.O. NO.: 2017122

1 SHEET OF 12



MATCH LINE SHEET 3

STORMWATER MANAGEMENT SUMMARY TABLE

D.A. NO	AREA (AC)	Rev REQ'D.	Rev PROV.	WQv REQ'D.	WQv PROV.	Cpv REQ'D.	Cpv PROV.	Qp10	Qp100	Qp10	Qp100
1	3.83	N/A	N/A	N/A	N/A	N/A	N/A	NOT DISTURBED			
2	5.45	665 CF	665 CF	4312 CF	4365 CF	N/A	N/A	17cfs	33cfs	13cfs	25cfs
3	5.08	N/A	N/A	N/A	N/A	N/A	N/A	NOT DISTURBED			
*4	15.20	N/A	N/A	**	**	N/A	N/A	79cfs	130cfs	81cfs	133cfs

*NOTE: AS PER SECTION 1.2 OF THE MDE 2000 STORMWATER MANAGEMENT MANUAL, AREAS CONTAINING LESS THAN 5000sf OF IMPERVIOUS COVERAGE ARE EXEMPT FROM Cpv.
 **NOTE: WATER QUALITY FOR THE NEW IMPERVIOUS IN D.A. #4 IS COMPENSATED FOR BY DIVERTING A LARGER AREA OF EXISTING PAVEMENT IN THE REAR OF THE BUILDING TO THE INFILTRATION TRENCH.

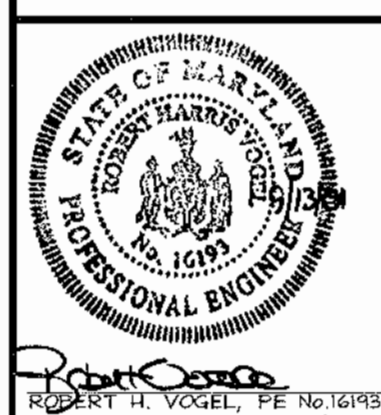
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 10/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10/12/01
 DIRECTOR

NO.	REVISION	DATE

OWNER/DEVELOPER
 HOWARD COUNTY PUBLIC SCHOOLS
 10910 RTE. 108
 ELLICOTT CITY, MD 21042
 (410) 313-6600

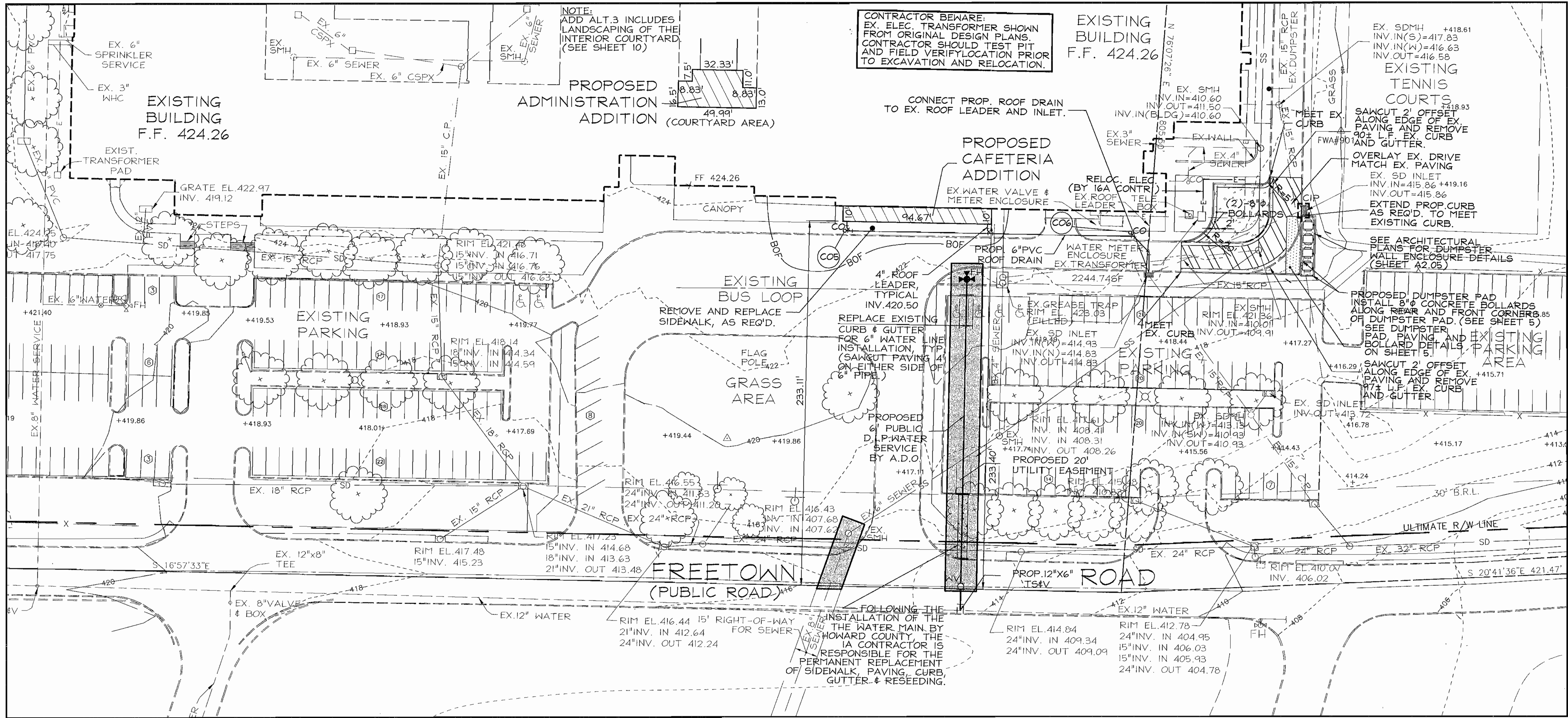
SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
 VARIOUS BUILDING ADDITIONS
 TAX MAP #35 GRID #24 PARCELS 265,249, # 292
 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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: CLS
 DRAWN BY: CLS
 CHECKED BY: RHV
 DATE: August 17, 2001
 SCALE: 1" = 30'
 P.L.O. NO.: 2017122
 2 SHEET OF 12

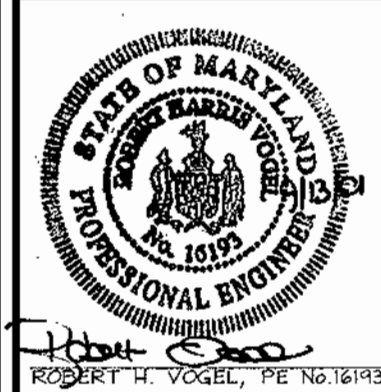
MATCH LINE SEE SHEET 2



**SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
VARIOUS BUILDING ADDITIONS**

TAX MAP #35 GRID #24 PARCELS 265,249, # 292
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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



DESIGN BY: CLS
DRAWN BY: CLS
CHECKED BY: RHY
DATE: August 17, 2001
SCALE: 1" = 30'
P.L.O. NO.: 2017122

3 SHEET OF 12

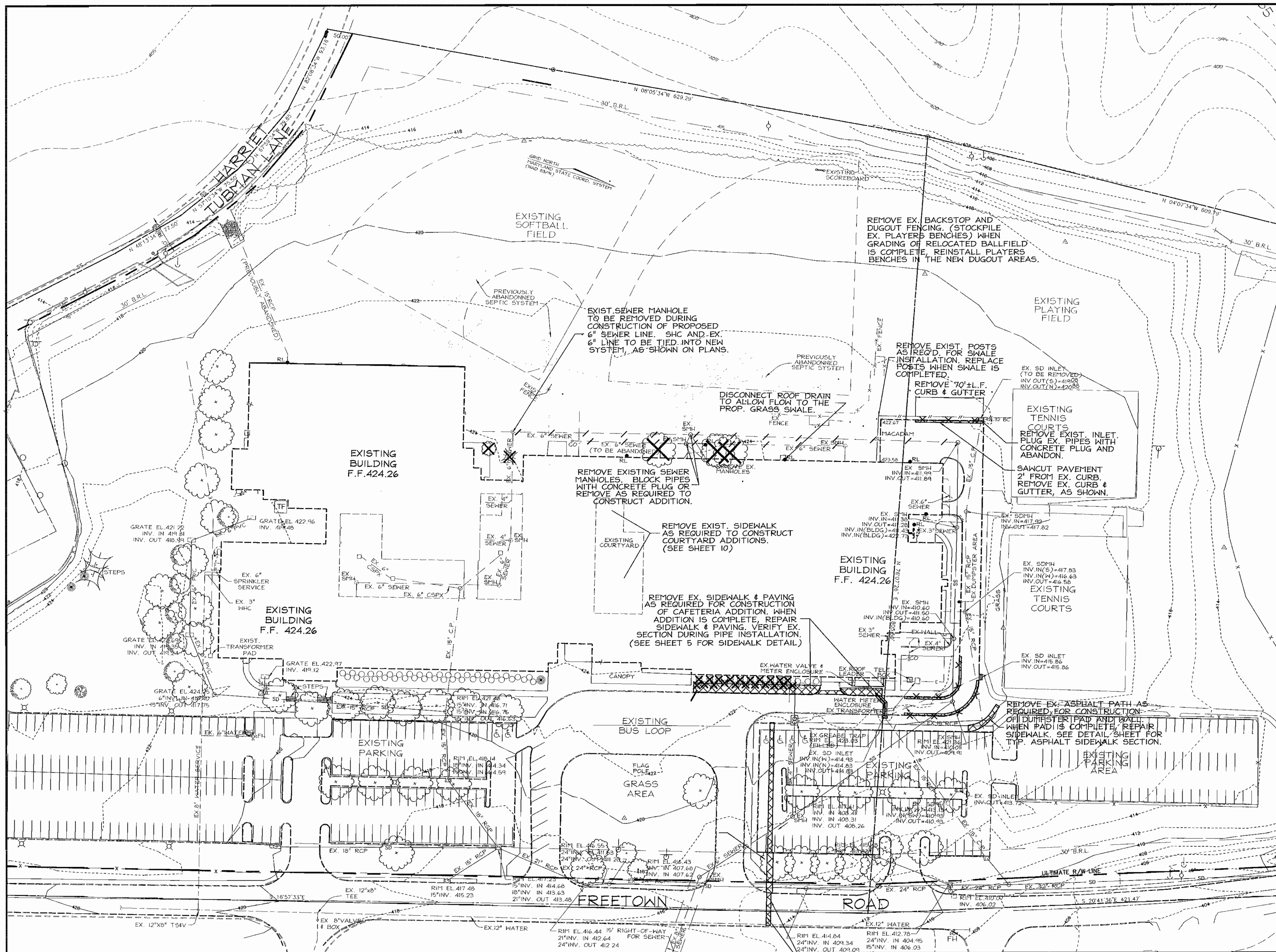
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/2/01






 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 10/5/01
 DIRECTOR DATE

NO.	REVISION	DATE

OWNER/DEVELOPER
HOWARD COUNTY PUBLIC SCHOOLS
10310 RTE. 108
ELLICOTT CITY, MD 21042
(410) 313-6600



DEMOLITION LEGEND

-  PAVING TO BE REMOVED
-  CURB & GUTTER TO BE REMOVED
-  EXIST. PIPE TO BE ABANDONED
-  EXIST. TREE TO BE REMOVED
-  EXIST. BUSH TO BE REMOVED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Dammann 10/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Kanitzer 10/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James P. Smith 10/12/01
 DIRECTOR DATE

IA CONTRACTOR SCOPE:
 FOLLOWING INSTALLATION OF PIPE AND BACKFILLING OF TRENCH WITH SUITABLE GRADED AGGREGATE BASE MATERIAL BY HO.CO., CONTRACTOR IS TO PERMANENTLY REPLACE SIDEWALK, PAVING, CURB AND GUTTER DAMAGED DURING THE INSTALLATION OF THE FIRE SERVICE LINE. THE CONTRACTOR IS TO FIELD VERIFY EXISTING PAVEMENT SECTION DURING THE TRENCHING OF PIPE AND MATCH EXISTING PAVING) (SEE SHEET 5 FOR CONSTRUCTION DETAILS)

A.D.O. - HOWARD COUNTY SCOPE:
 REMOVE EXISTING CURB AND GUTTER AS NEEDED FOR INSTALLATION OF FIRE SERVICE AND HYDRANT. SAWCUT EXISTING ROAD AND PARKING LOT 4' MAX EITHER SIDE OF PROPOSED WATER, OR AS REQ'D. FOR INSTALLATION OF PIPE. FOLLOWING INSTALLATION OF PIPE, TRENCH SHOULD BE BACKFILLED WITH SUITABLE GRADED AGGREGATE BASE MATERIAL COMPACTED TO HOWARD COUNTY STANDARDS.

NOTE:
 CARE SHOULD BE TAKEN TO DISTURB EXISTING TREES AS LITTLE AS POSSIBLE DURING INSTALLATION OF FIRE SERVICE AND SUBSEQUENT REPAIRS.

OWNER/DEVELOPER
 HOWARD COUNTY PUBLIC SCHOOLS
 10310 RTE. 103
 ELLICOTT CITY, MD 21042
 (410) 313-6600


NO.	REVISION	DATE

**DEMOLITION PLAN
 SITE DEVELOPMENT PLAN
 ATHOLTON HIGH SCHOOL
 VARIOUS BUILDING ADDITIONS**

TAX MAP #35 GRID #24 PARCELS 265,249, & 292
 5th 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: CLS
 DRAWN BY: CLS
 CHECKED BY: RHV
 DATE: August 17, 2001
 SCALE: 1"=50'
 W.O. NO.: 2017122



4 SHEET OF 12

FENCING NOTES AND SPECIFICATIONS

All posts, gate frames, braces, and top and bottom rails shall be galvanized Ss40 steel pipe as manufactured by Allied Tube and Conduit - Fence Division. Conduit fence division or equivalent standard schedule 40 steel pipe. The weight of zinc coating on pipe materials shall be 1.6 ounces per sq. ft. or greater.

Posts shall not be cut, spliced, or otherwise pieced together. Tape shall not be used to fasten or secure post caps, rail caps, or other fence parts.

Post spacing: Line posts shall be spaced at intervals not to exceed 8 feet average when measured from center to center between posts. Top rails between posts shall be everywhere level and true to line.

Wire Fabric - base metal of the fabric shall be a good commercial quality of NINE gauge CORE steel wire withstanding a 1,290 pound breaking load. Fabric shall be Fuse Bonded PVC coating to be at least 7 mil. of Polyvinyl Chloride bonded by the fusion method.

The fabric shall be zinc-coated by the hot-dip process after fabrication, or shall be fabricated from wire zinc-coated by the electrolytic or hot-dip process. The weight of the zinc coating shall not be less than 2 oz. per sq. ft. of actual surface covered when tested. The zinc used for the coating shall conform to the grade specified in ASTM Designation B6 standard specifications for slab zinc.

Fabric size shall be 2 inches determined by measuring the minimum clear distance between the wires forming parallel sides of the mesh, measured in either direction. Wire mesh fabric shall be knuckled at both top and bottom and secured with specified wire ties. Wire ties shall be twisted at least two times on each side, tightly rolled, and cut off so that ends stick out no more than 1/8 inch and face away from playing area.

Installation shall not commence without Landscape Architect's approval of submitted mill certificates indicating the materials meet the requirements specified herein.

Mill certificate submittals shall be accompanied by samples of all fabric, rails, posts, hinges, wire ties, and hardware expected to be used on the project. Work performed without approved submittals will not be eligible for payment.

Wire fabric shall be placed on the field side of posts. Fabric shall be made from high-grade materials and with good workmanship. The zinc coating shall be applied in a continuous process and shall not be applied to the fabric in roll form. Excessive roughness, blisters, sal ammoniac spots, bruises, and flanking are prohibited. These and other obvious defects, if present to any considerable extent, may provide basis for rejection.

Post Caps: Exposed ends of pipe posts shall be fitted with caps. The cap shall fit snugly and exclude moisture from the inner surface of the post. When top rail is provided, all posts shall be provided with caps having a ring or hole suitable for passage of the top rail. Caps shall be dome or loop style made of malleable steel coated with 2 oz. of galvanized material.

Rail Sleeves: Shall allow for expansion and contraction of the rail. Sleeves shall be 6 in. long or greater. Unless otherwise specified, construction shall be at contractor's option. Swagged-end connections are not allowed.

Wire Ties and Clips/Hog Rings: Wire ties and clips shall be provided for attaching fabric to line posts, top rails, or tension wire. Wire ties and clips shall be at intervals not greater than 14 inches when attaching fabric to line posts and top and bottom rail and tension wire. Wire ties and clips shall be 9 gauge wire. When tension wire is used, wire ties and clips for fastening fabric to tension wire shall be 11 gauge or greater in diameter.

Draw / Tension Bars: Draw bars connecting 2 in. x 2 in. to end, gate, and corner posts shall be of lengths no less than 2 inches less than the full height of the required chain link fabric. Draw bars shall be threaded through the fabric and attached to the post by post bands. A draw bar shall be provided where chain link fabric meets, ends, and at gate or corner posts.

Tension / Draw bars that are bent, deformed, or otherwise damaged at any time during construction shall be removed and replaced at contractor's expense.

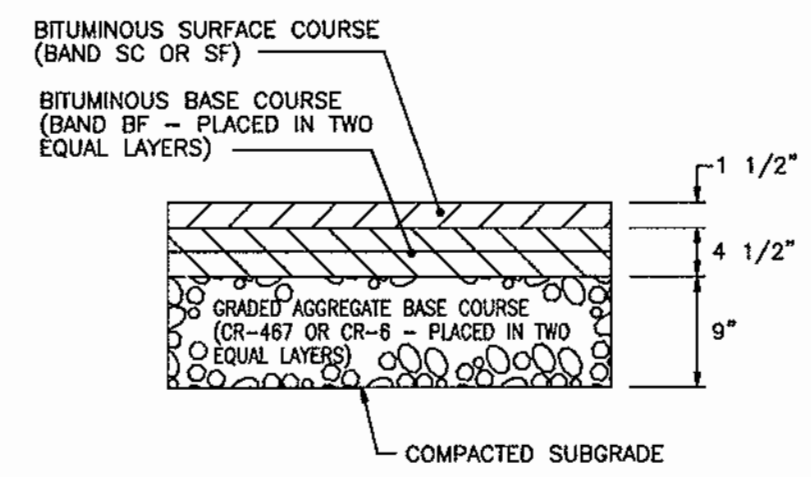
FENCING MATERIALS, POSTS, GATES, FABRIC, AND HARDWARE SHALL BE COATED WITH FUSE-BONDED PVC - BLACK COLOR.

PROVIDE 3" O.D. TERMINAL POST AT EACH CHANGE OF DIRECTION, AT ALL CORNERS AND INTERSECTIONS, AND EVERY 200 LIN. FT.

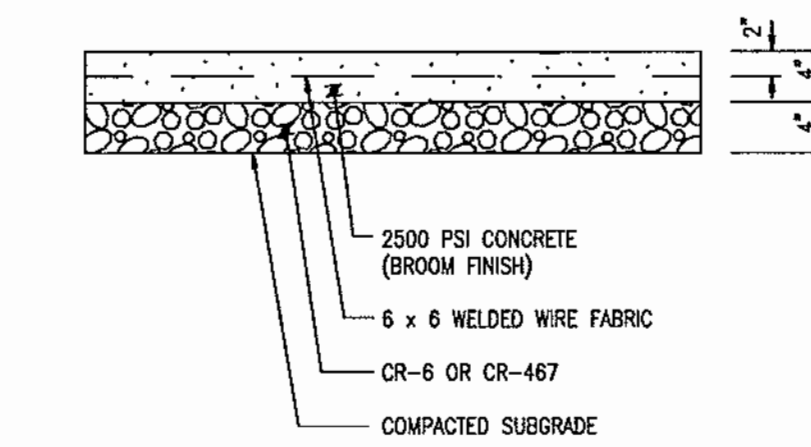
PROVIDE POST BANDS AT TERMINAL POSTS, GATE POSTS, BACKSTOP POSTS, AND DUGOUT POSTS EVERY 14 IN. O.C.

REPLACE TENSION RODS THAT ARE BENT OR DEFORMED DURING CONSTRUCTION.

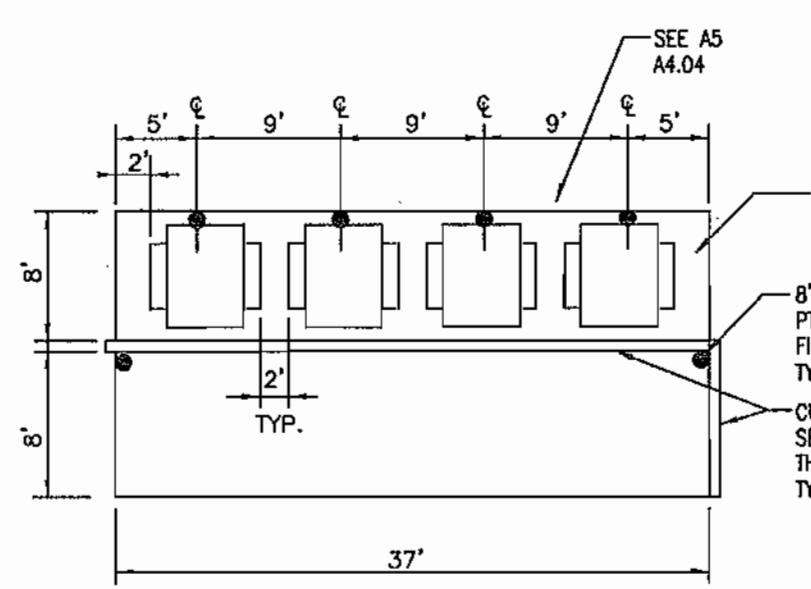
FENCING MATERIALS AND HARDWARE SHALL BE FUSE BONDED PVC - BLACK COLOR, AS SPECIFIED.



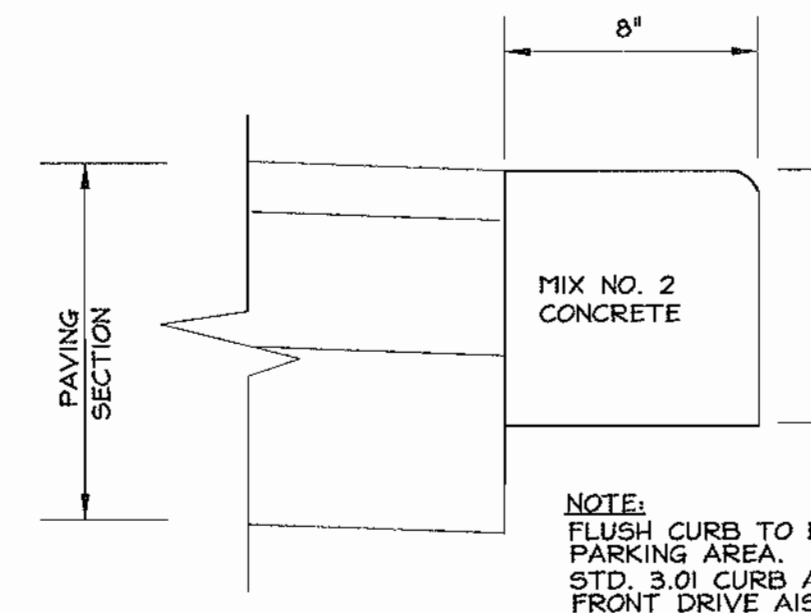
HEAVY-DUTY ASPHALT PAVING SECTION
NOT TO SCALE



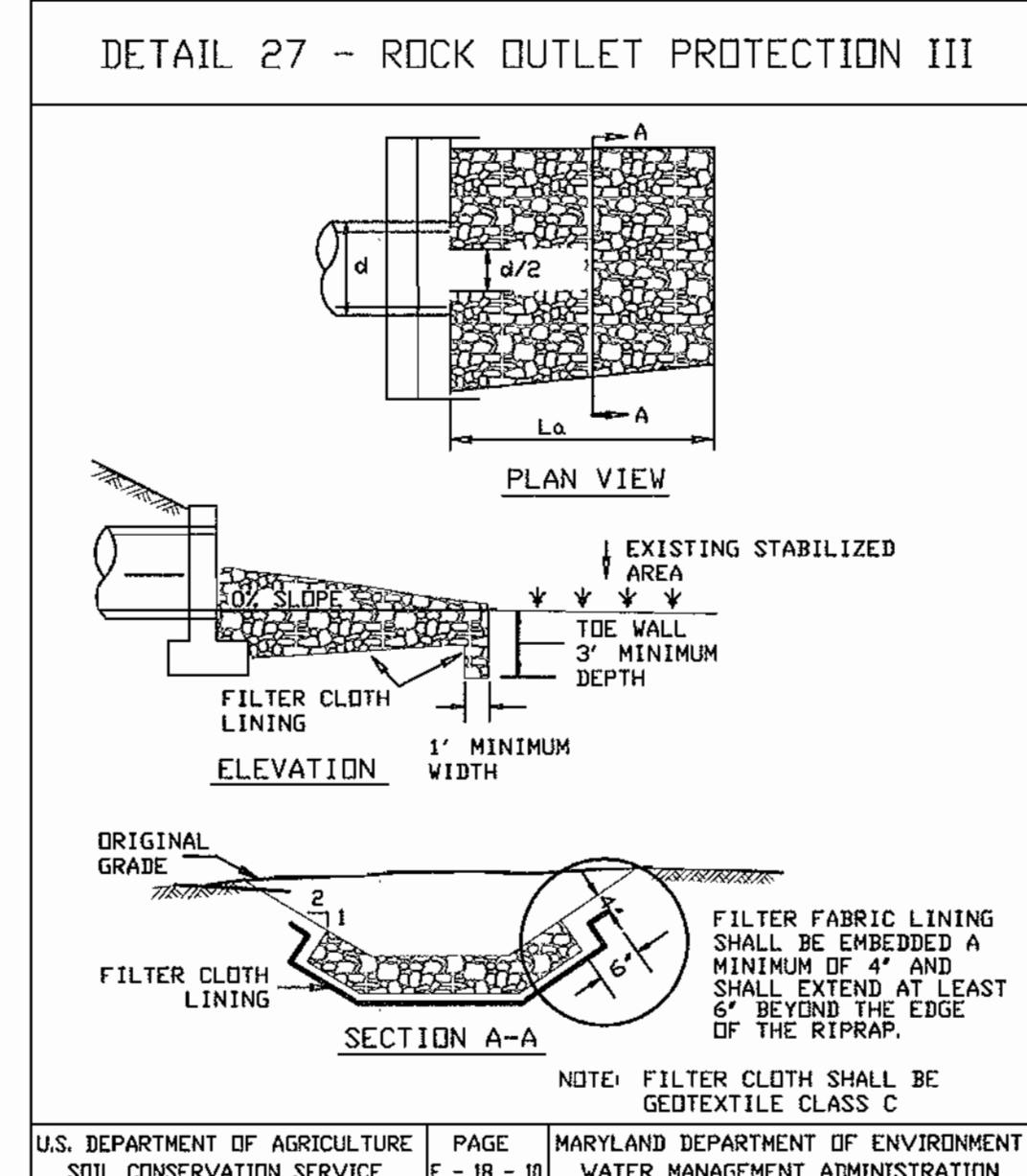
CONCRETE WALK SECTION
NOT TO SCALE



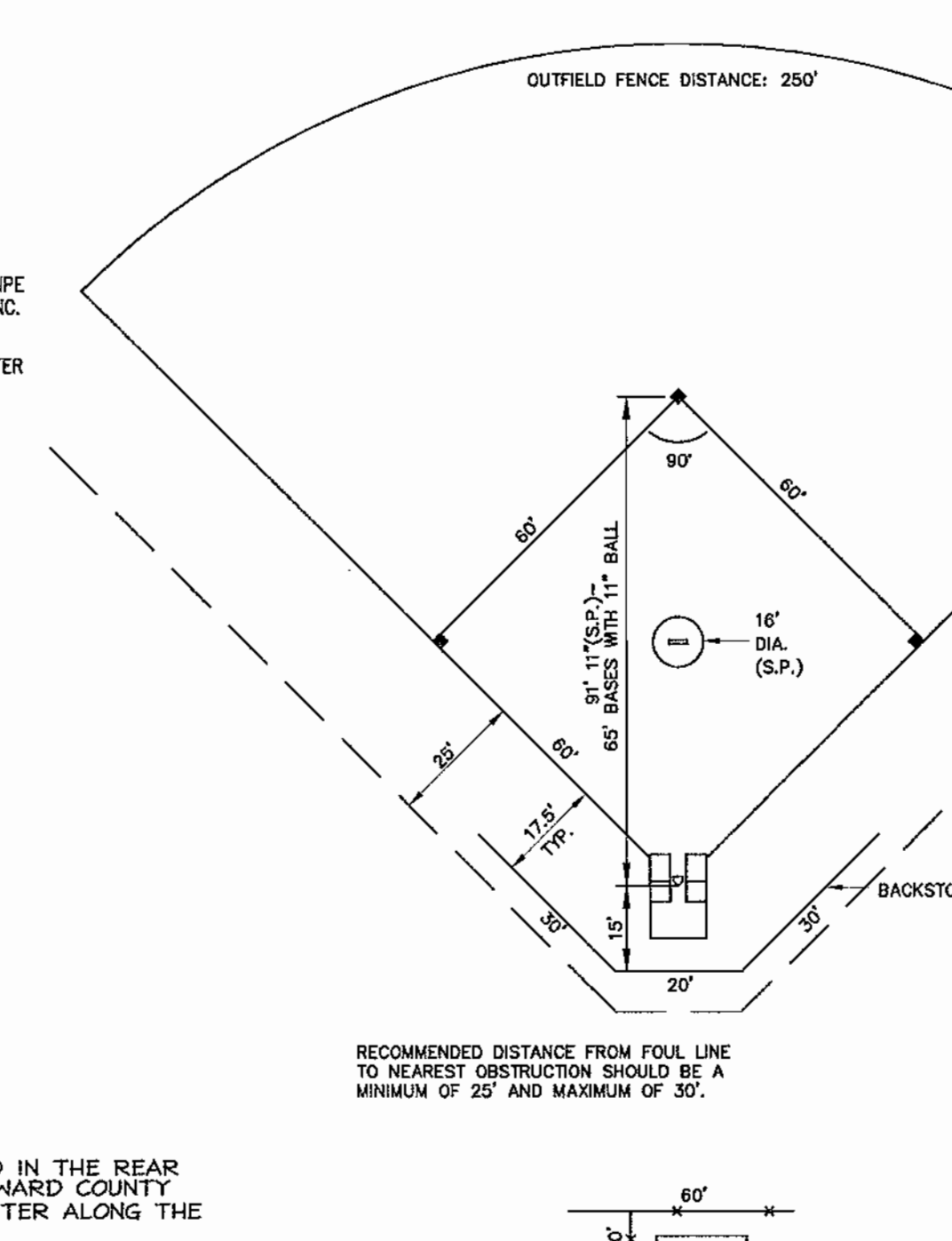
DUMPSTER PAD DETAIL
NOT TO SCALE



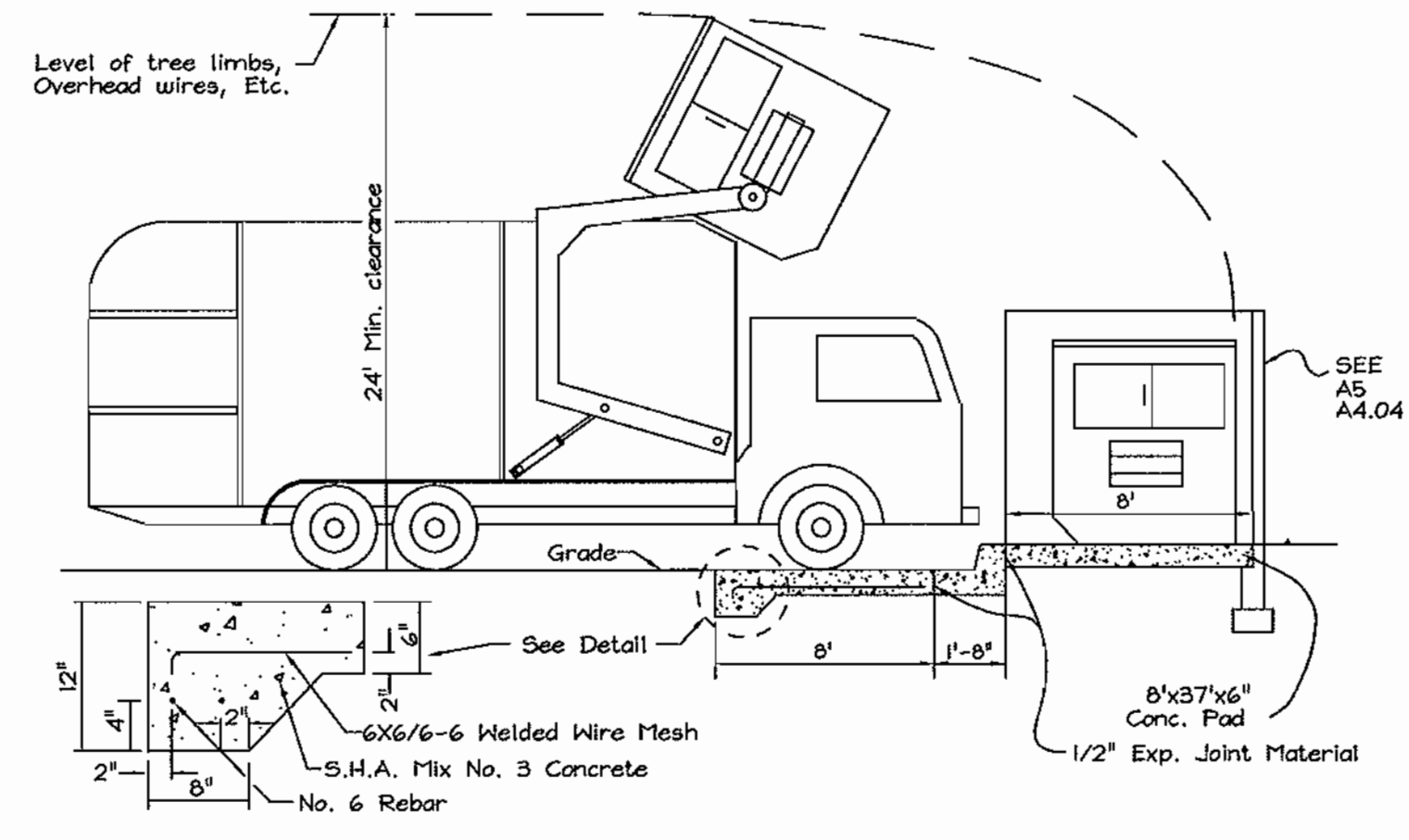
STANDARD FLUSH CURB STD. DETAIL R.3.01a
NO SCALE



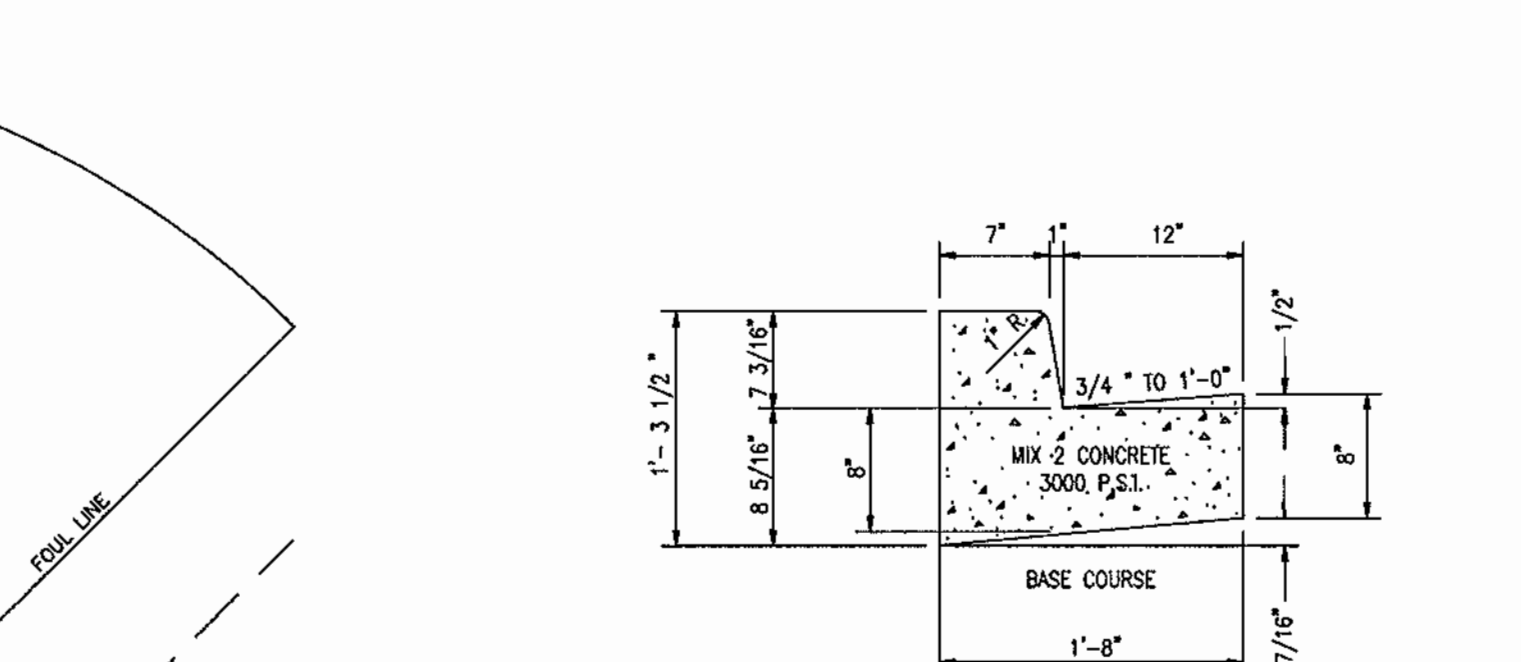
DETAIL 27 - ROCK OUTLET PROTECTION III



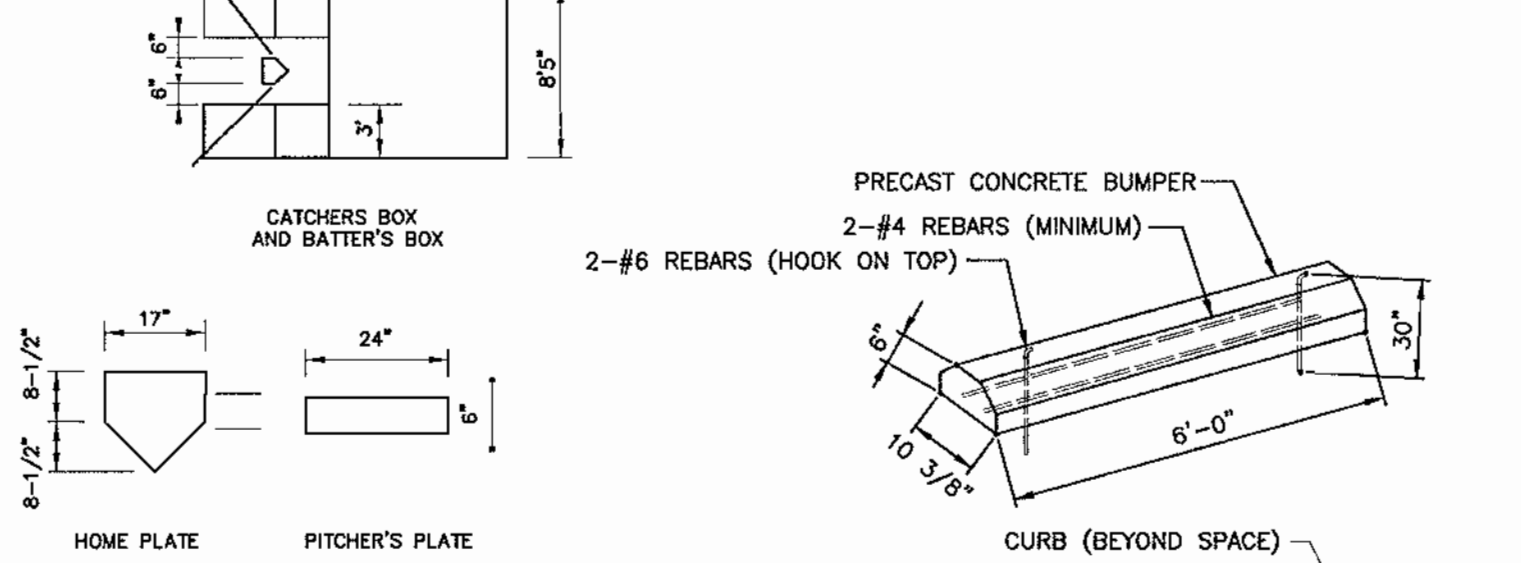
SOFTBALL FIELD DIAGRAM
NOT TO SCALE



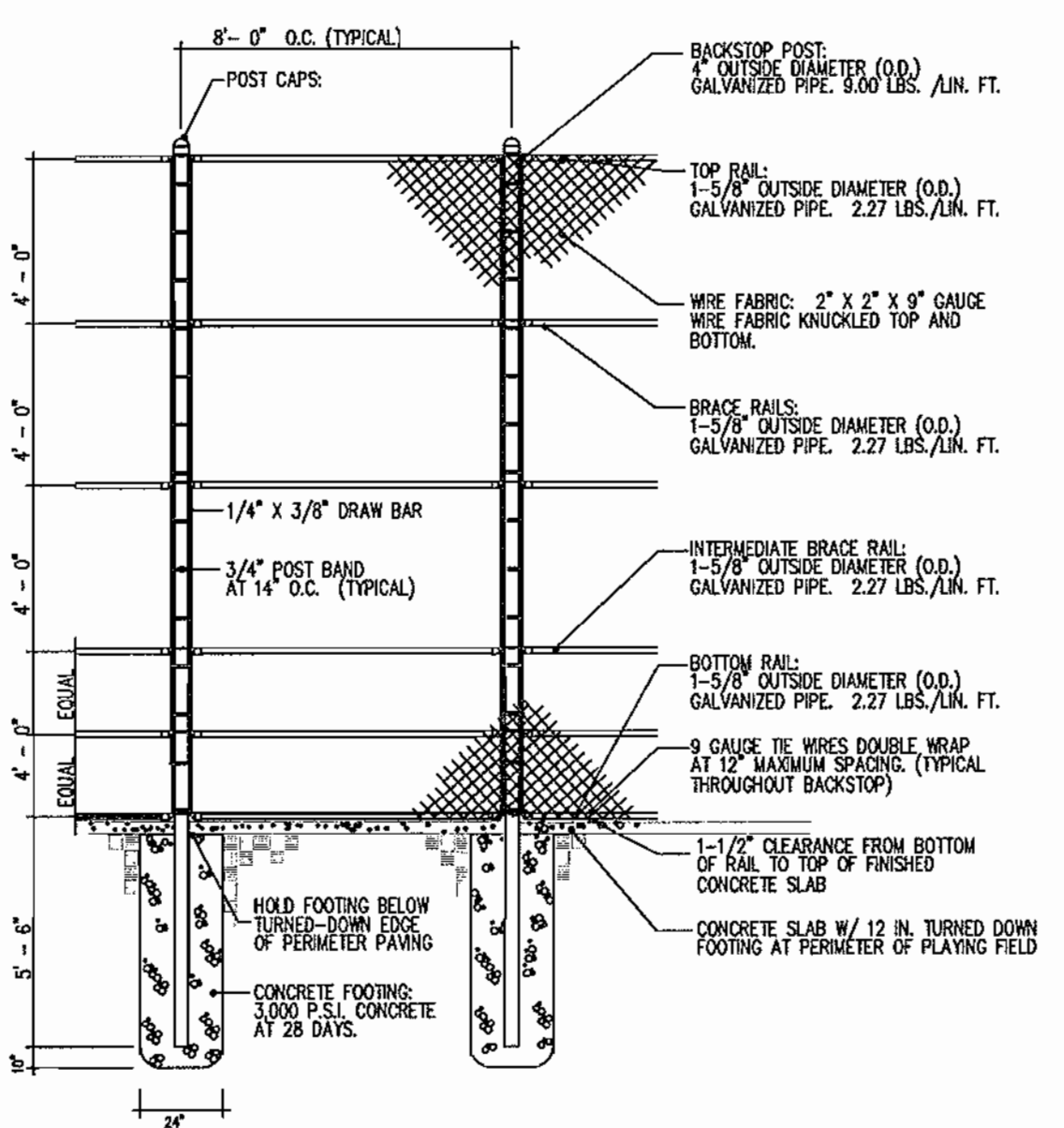
SOLID WASTE SERVICE PAD
HOWARD COUNTY STD. R. 11.01
NOT TO SCALE



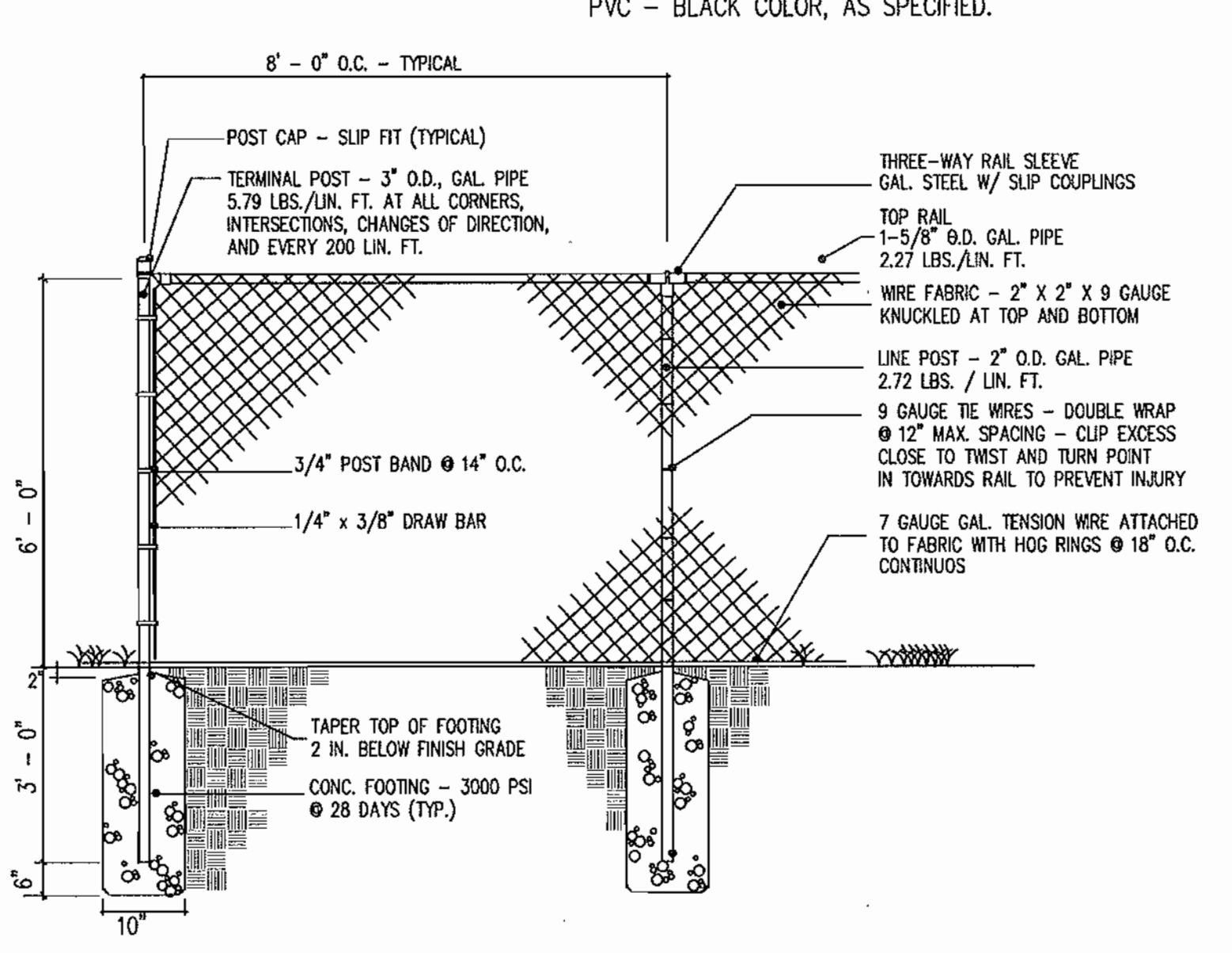
DETAIL - CURB AND GUTTER
HOWARD COUNTY STD. DETAIL R-3.01
NOT TO SCALE



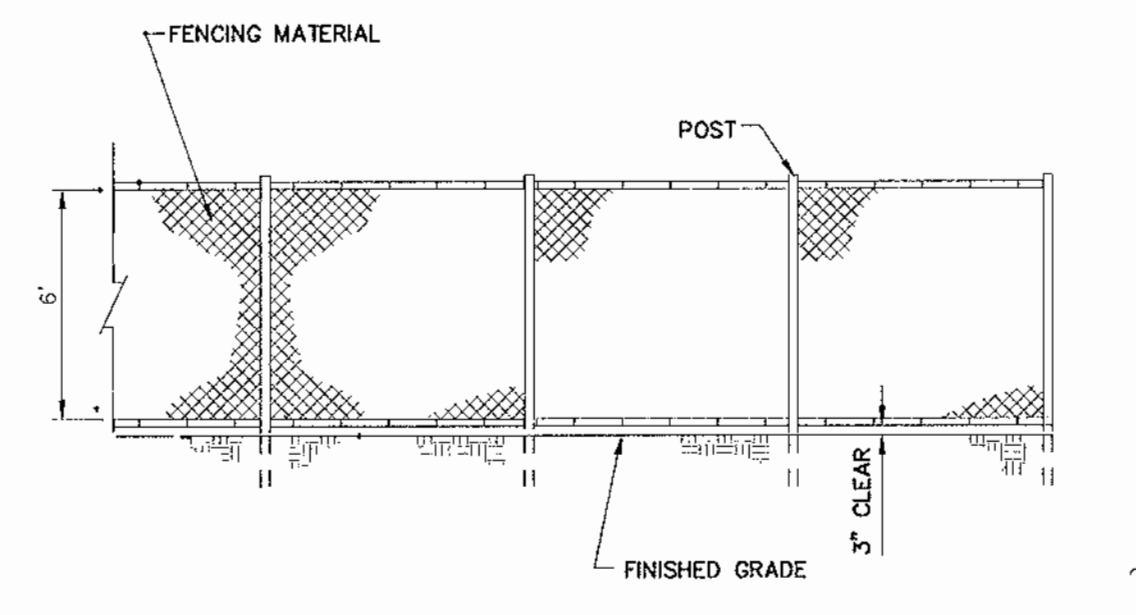
CONCRETE WHEEL STOP DETAIL
NOT TO SCALE



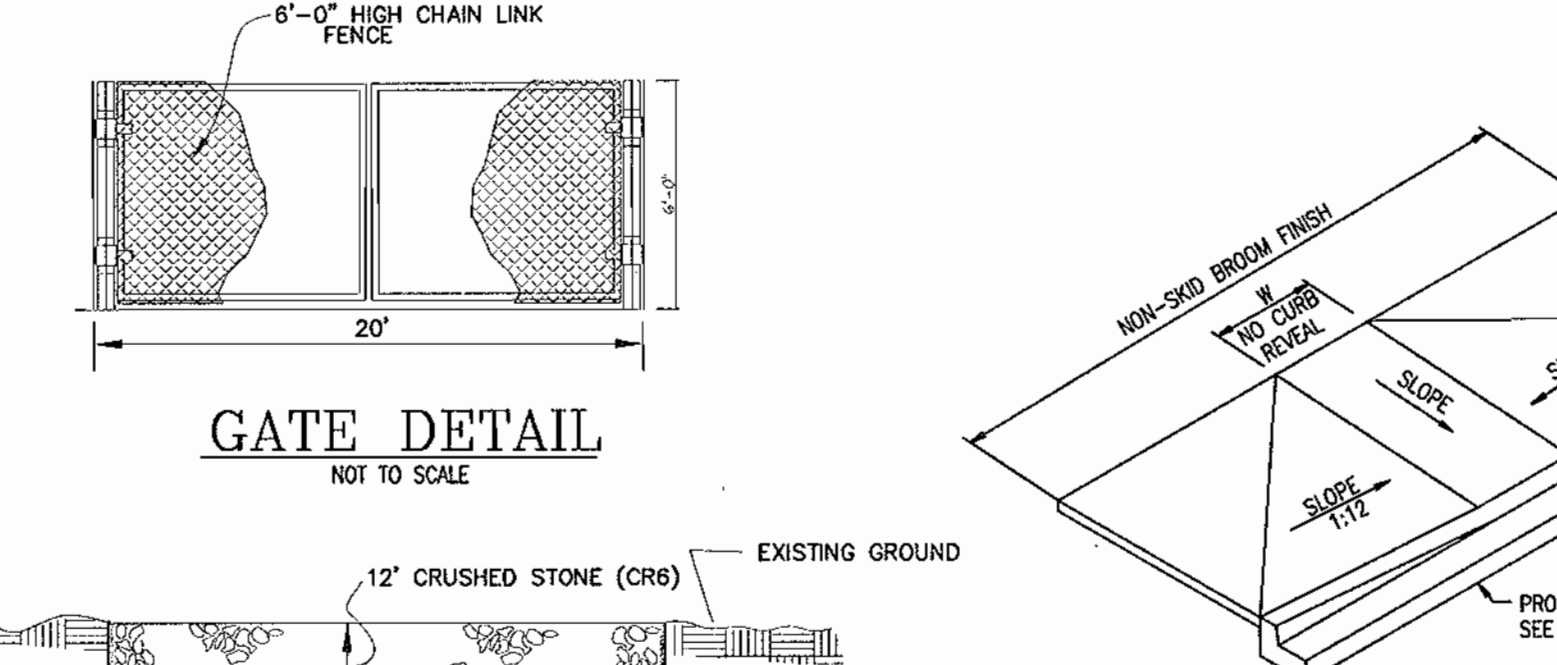
SOFTBALL BACKSTOP DETAIL
NOT TO SCALE



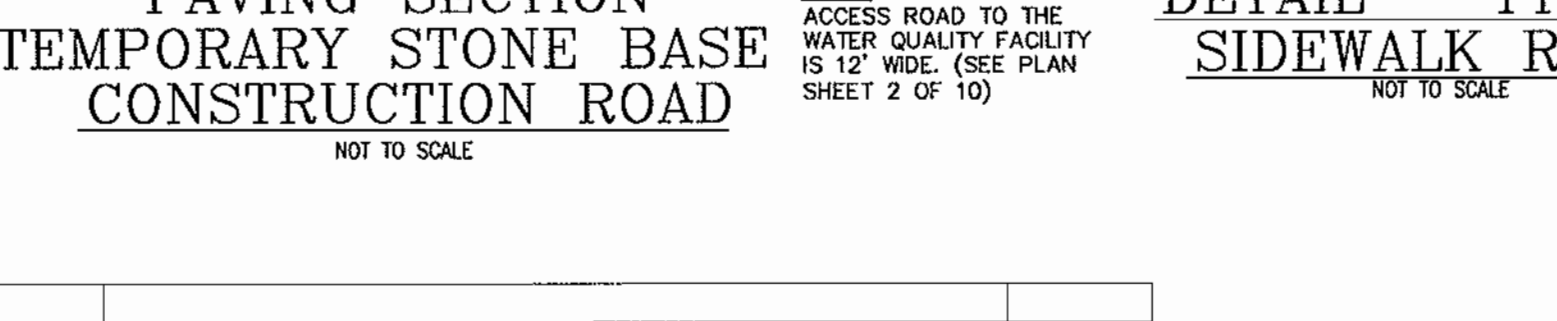
TYPICAL 6 FOOT FENCE DETAIL
NOT TO SCALE



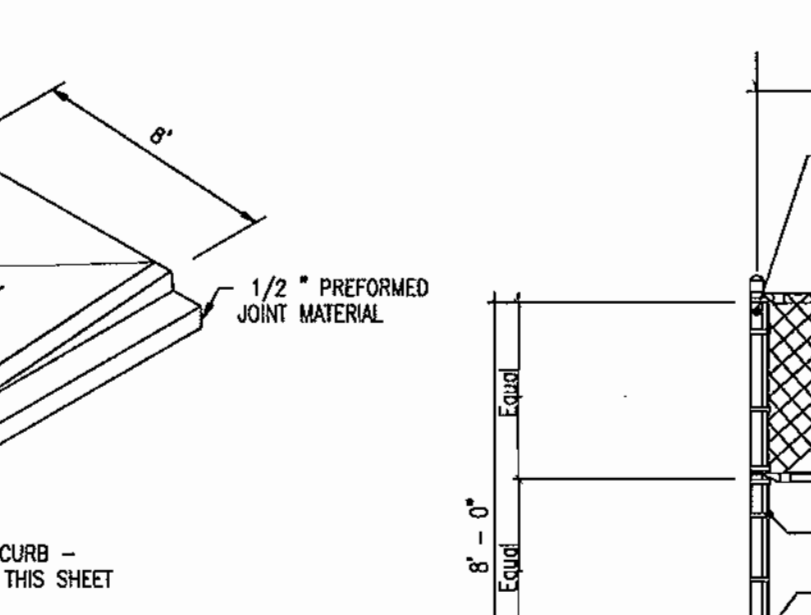
TEMPORARY CONSTRUCTION FENCE DETAIL
NOT TO SCALE



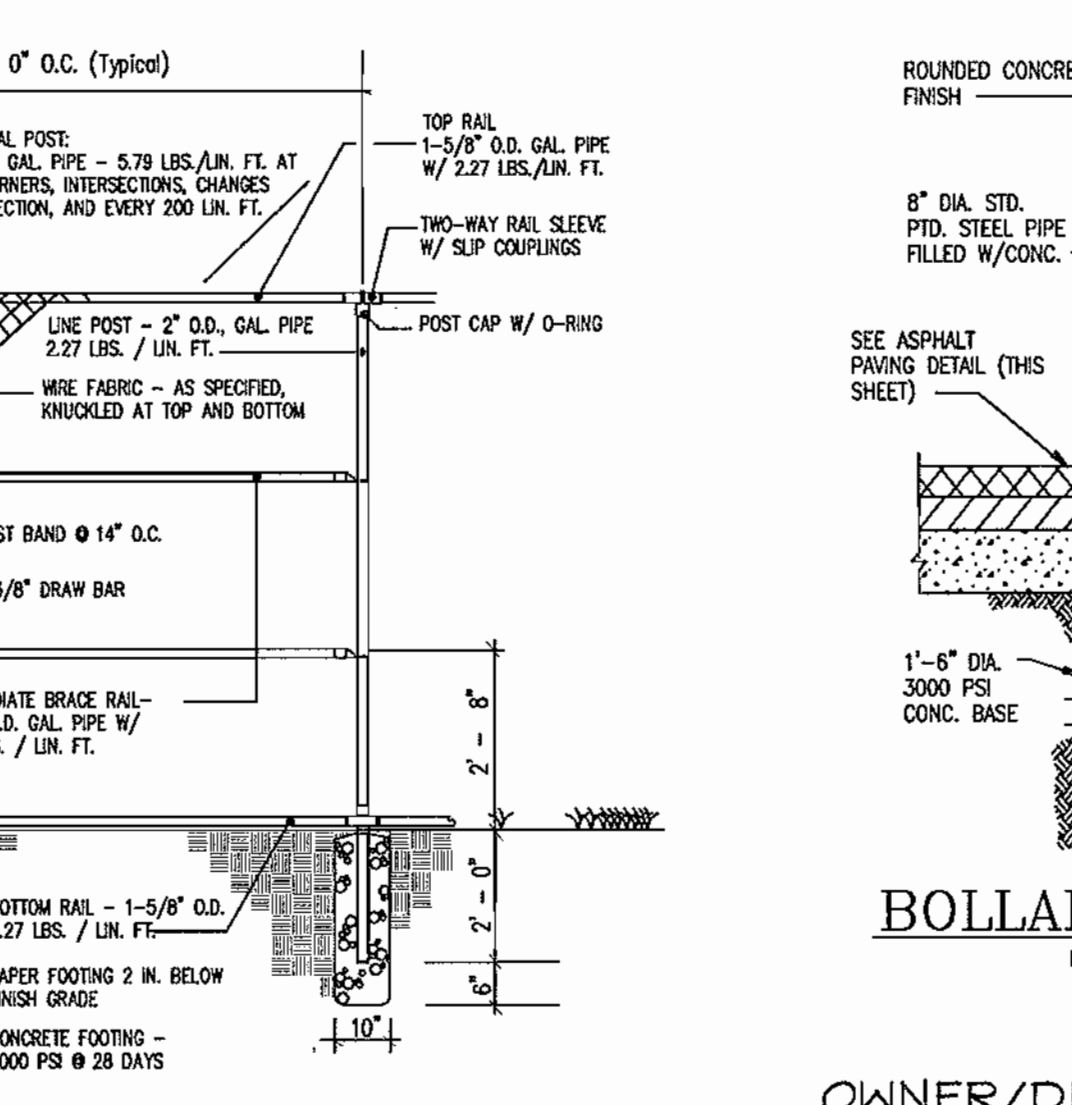
GATE DETAIL
NOT TO SCALE



PAVING SECTION TEMPORARY STONE BASE CONSTRUCTION ROAD
NOT TO SCALE



DETAIL - TYPE 2 SIDEWALK RAMP
NOT TO SCALE



TYPICAL 8 FOOT FENCE DETAIL
NOT TO SCALE



BOLLARD DETAIL
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: 10/2/01
 Chief, Division of Land Development: 10/5/11
 Director: 10/12/01

NO.	REVISION	DATE

SITE DETAILS
SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
VARIOUS BUILDING ADDITIONS

TAX MAP #35 GRID #24
 5th ELECTION DISTRICT

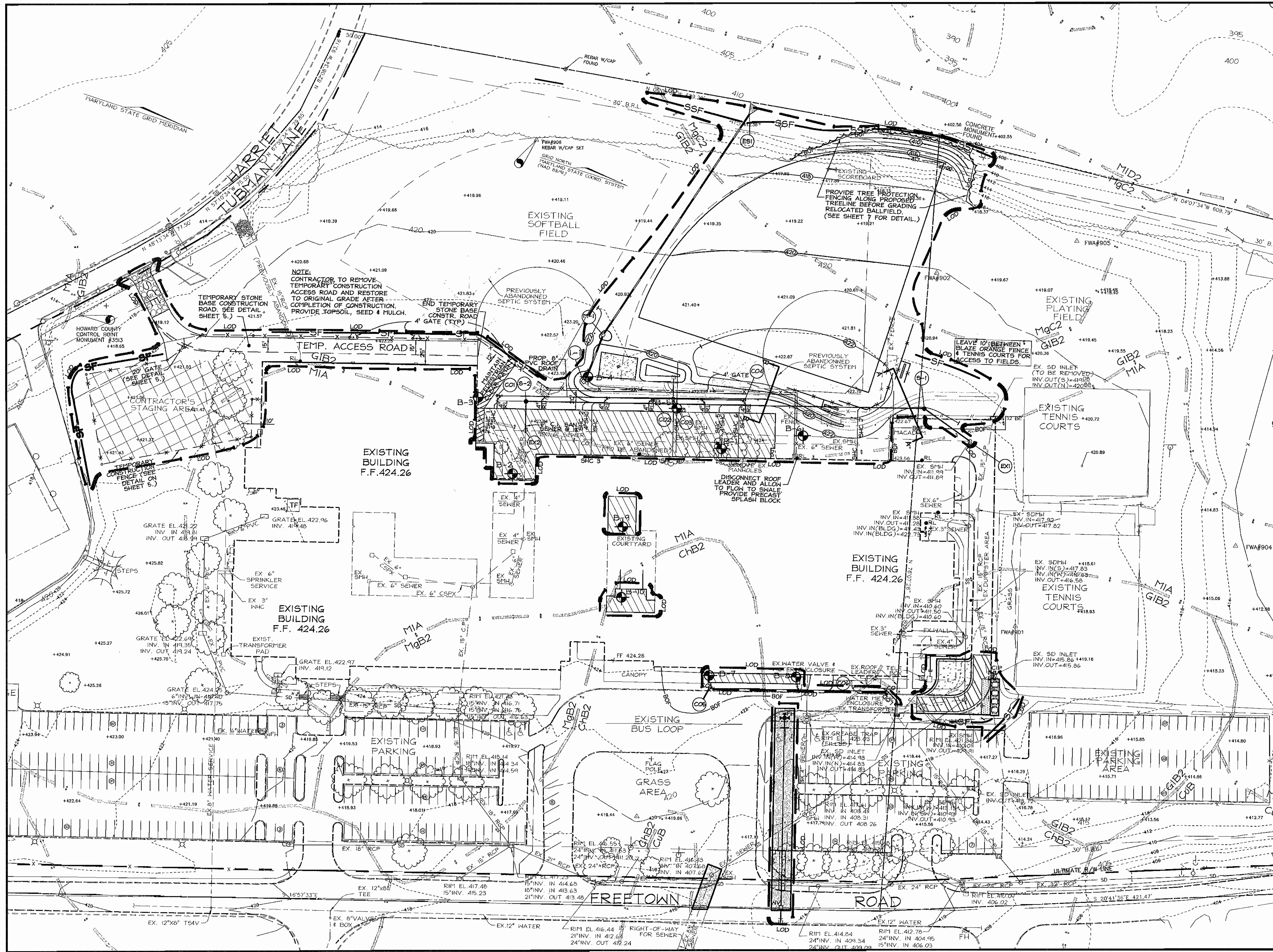
PARCELS 265,249, & 292
 HOWARD COUNTY, MARYLAND

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: CLS
 DRAWN BY: CLS
 CHECKED BY: RHV
 DATE: August 17, 2001
 SCALE: 1"=100'
 H.O. NO.: 2017122

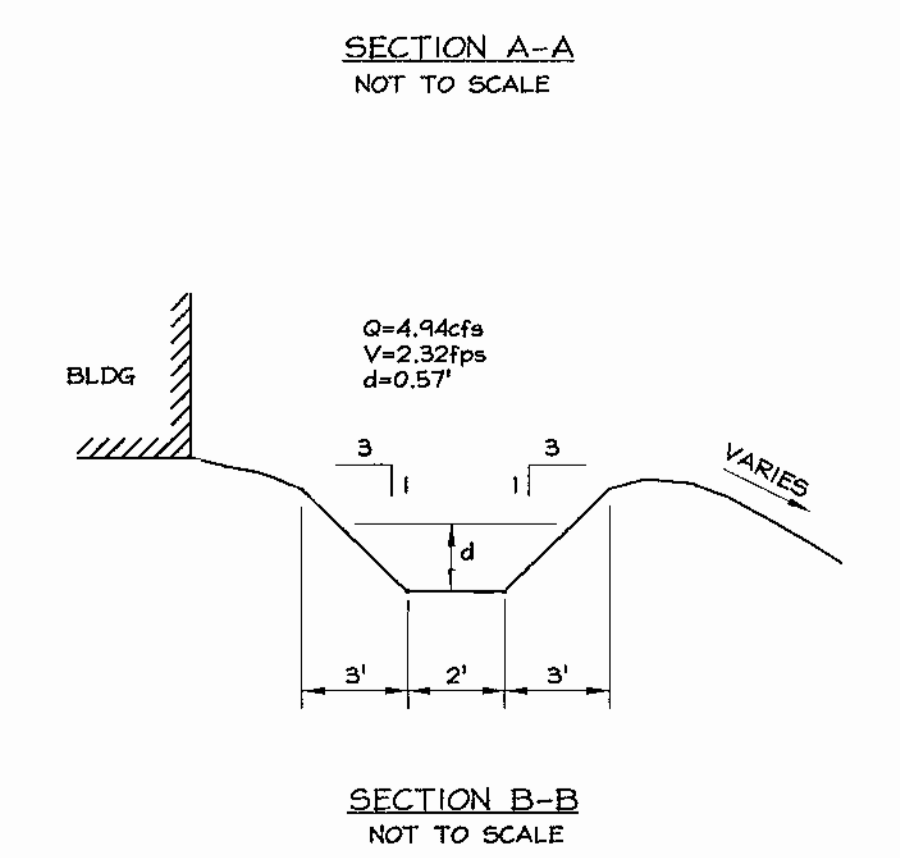
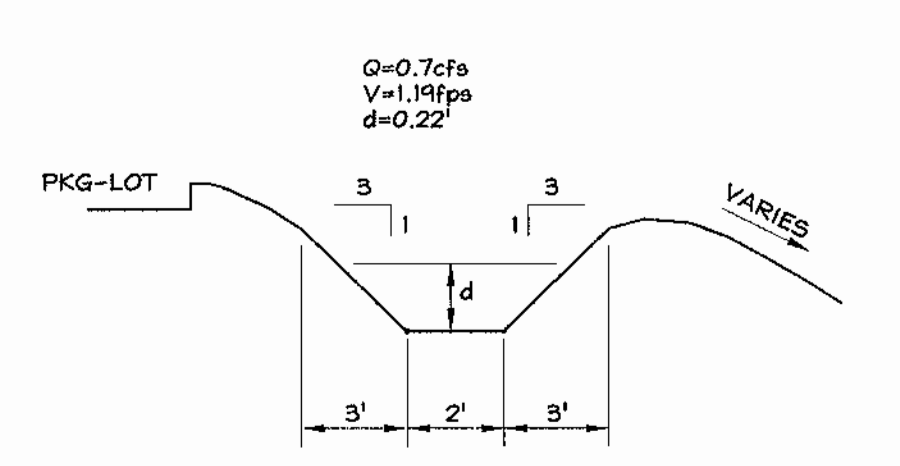
OWNER/DEVELOPER
 HOWARD COUNTY PUBLIC SCHOOLS
 10910 RTE. 108
 ELLICOTT CITY, MD 21042
 (410) 313-6600

5 SHEET OF 12



LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- CURB INLET PROTECTION
- PROP. SUPER SILT FENCE
- PROP. SILT FENCE
- BLAZE ORANGE FENCE
- SOILS BOUNDARY



NO.	REVISION	DATE

**EROSION & SEDIMENT CONTROL PLAN
SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
VARIOUS BUILDING ADDITIONS**

TAX MAP #35 GRID #24 PARCELS 265,249, & 292
5th 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: CLS
 DRAWN BY: CLS
 CHECKED BY: RHV
 DATE: August 17, 2001
 SCALE: 1"=50'
 W.O. NO.: 2017122

6 SHEET OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/2/01 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/5/01 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/12/01 DATE
 DIRECTOR

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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."

[Signature] 9/13/01 DATE
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"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."

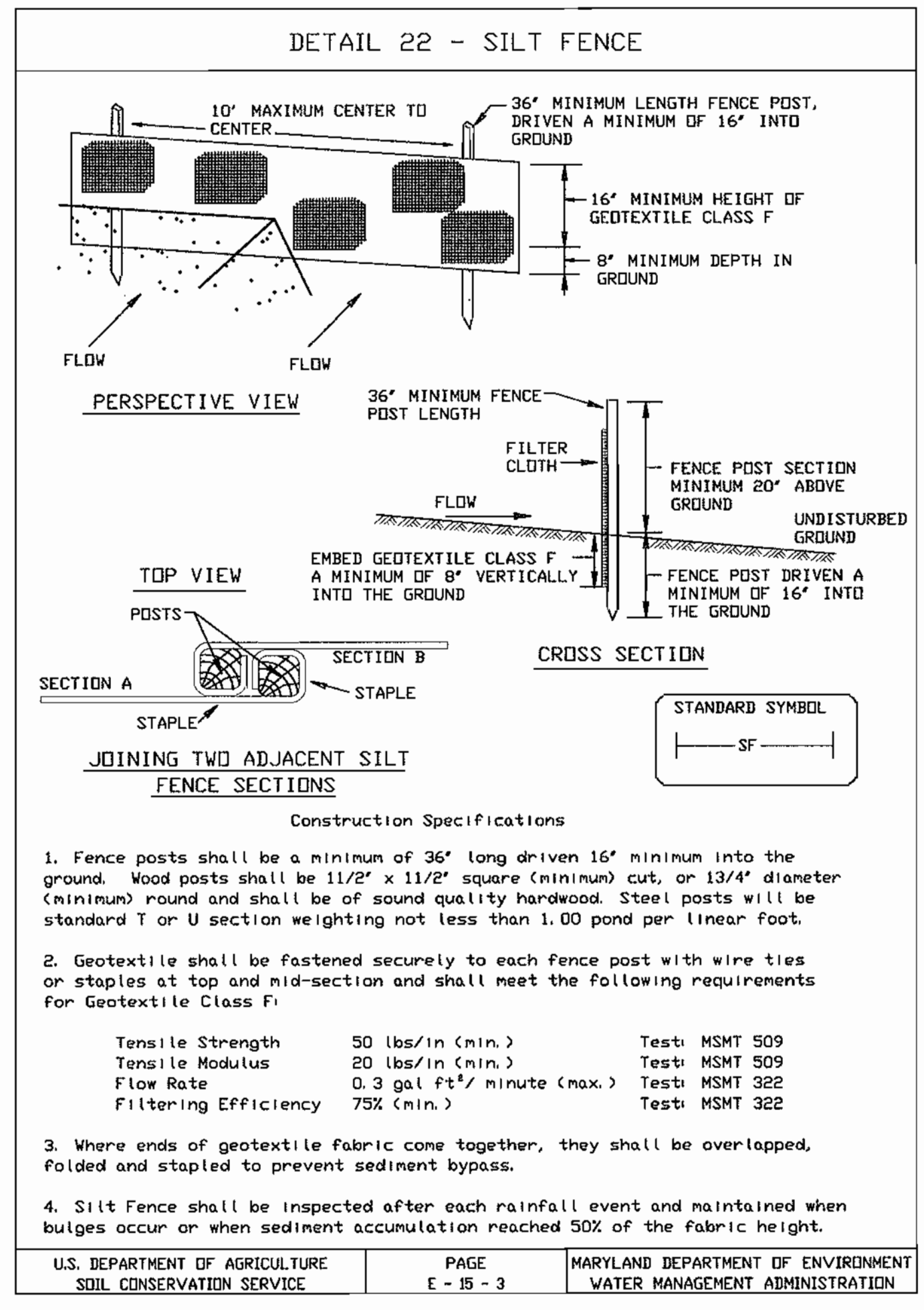
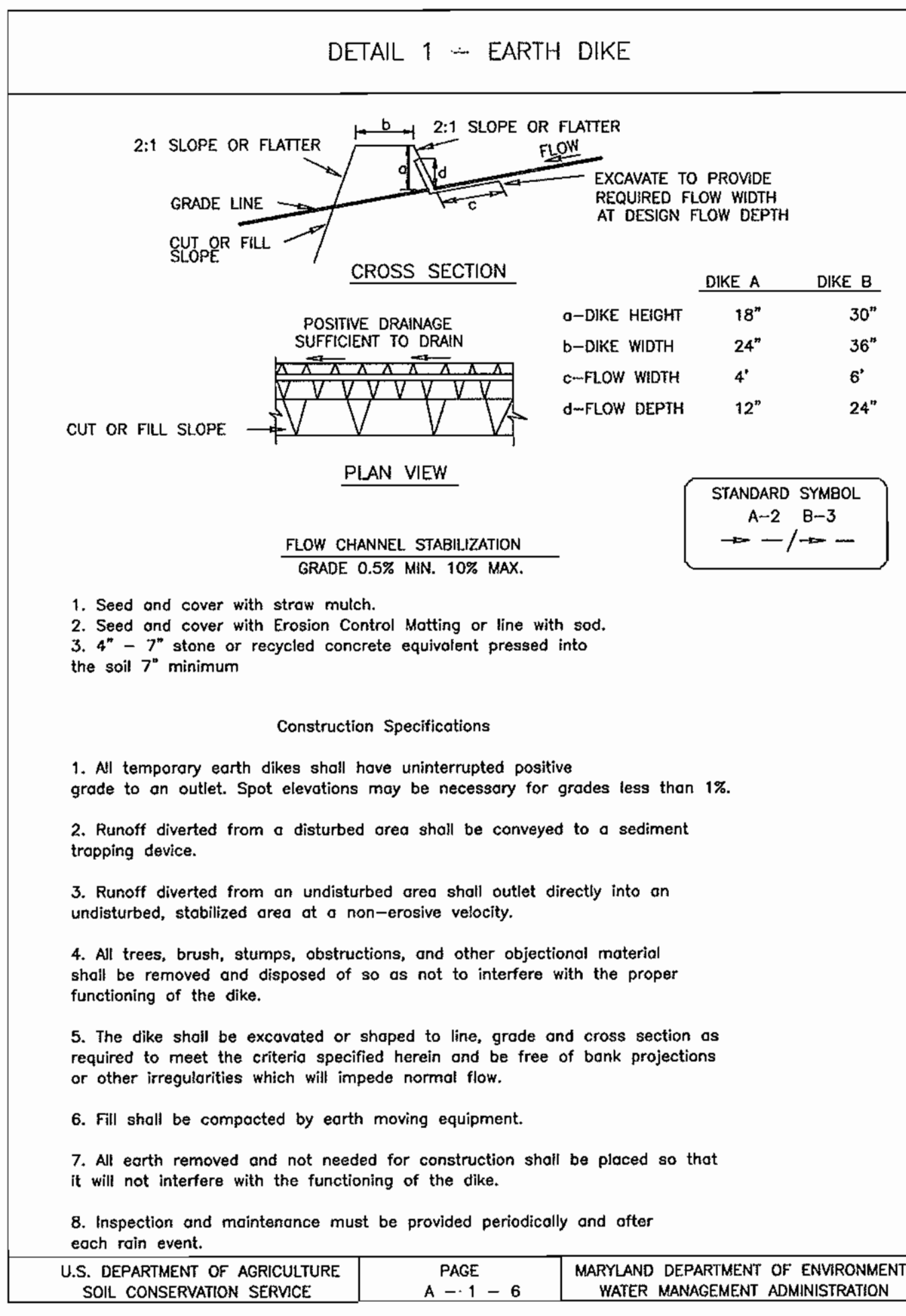
[Signature] 9/13/01 DATE
 SIGNATURE OF DEVELOPER
 Cathleen Conley Young

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

[Signature] 9/27/01 DATE
 USA-NATURAL RESOURCES CONSERVATION SERVICE

[Signature] 9/27/01 DATE
 HOWARD SCD

OWNER/DEVELOPER
 HOWARD COUNTY PUBLIC SCHOOLS
 10910 RTE. 105
 ELLICOTT CITY, MD 21042
 (410) 313-6600



21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose
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 unacceptable soil gradation.

Conditions Where Practice Applies

- I. This practice is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish containing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- II. 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 shown on the plans.

Construction and Material Specifications

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards as 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 Agricultural Experiment Station.
- II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - i. 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 soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
 - ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - iii. Where the subsoil is either 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 in the following procedures.
- III. For sites having disturbed areas under 5 acres:
 - i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
 - ii. For sites having disturbed areas over 5 acres:
 - a. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - i. a pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - ii. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - iii. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - iv. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - b. NOTE: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - c. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.
 - iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

SEDIMENT CONTROL NOTES

1. 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).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. 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.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. 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, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. 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.
7. Site Analysis:

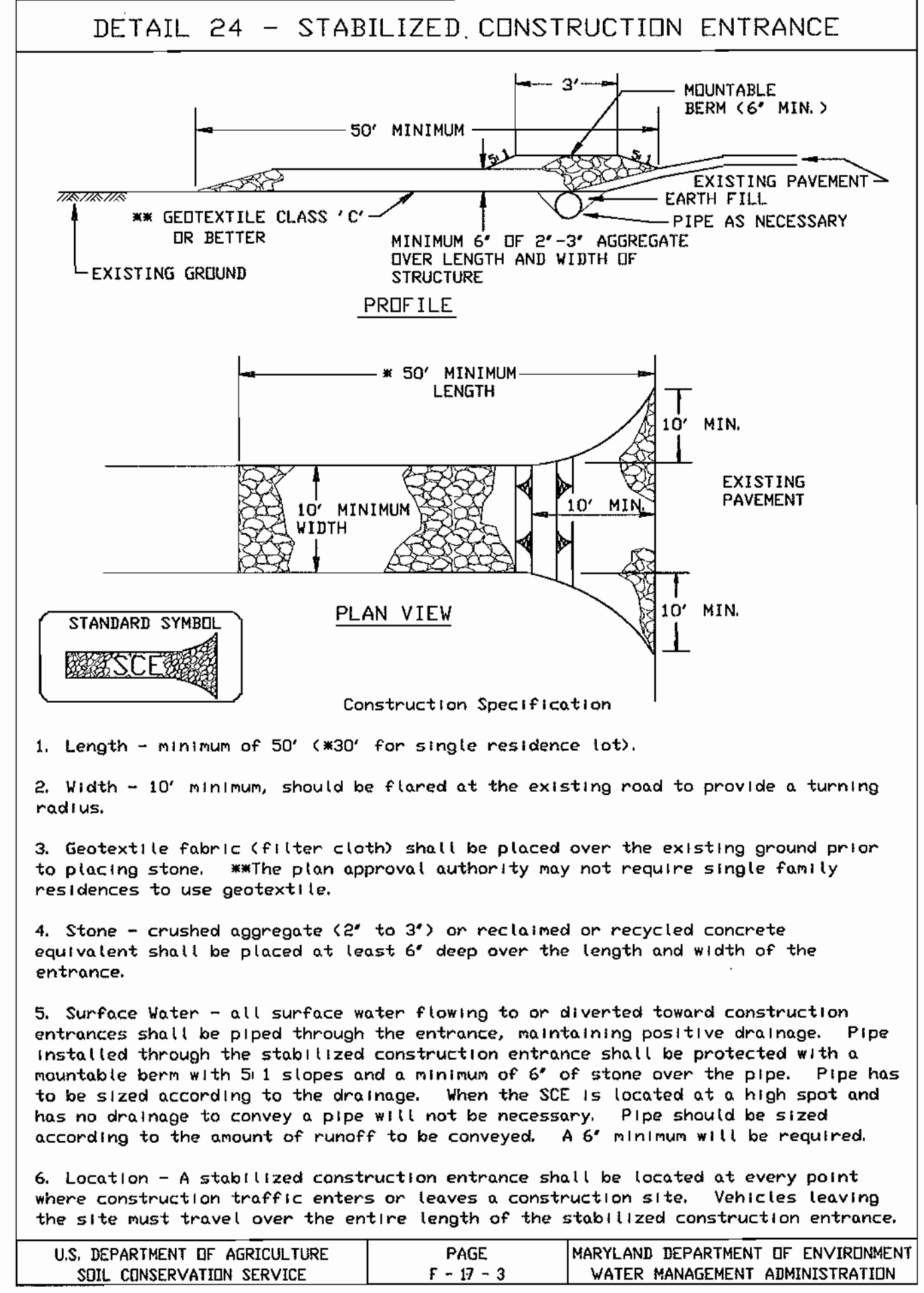
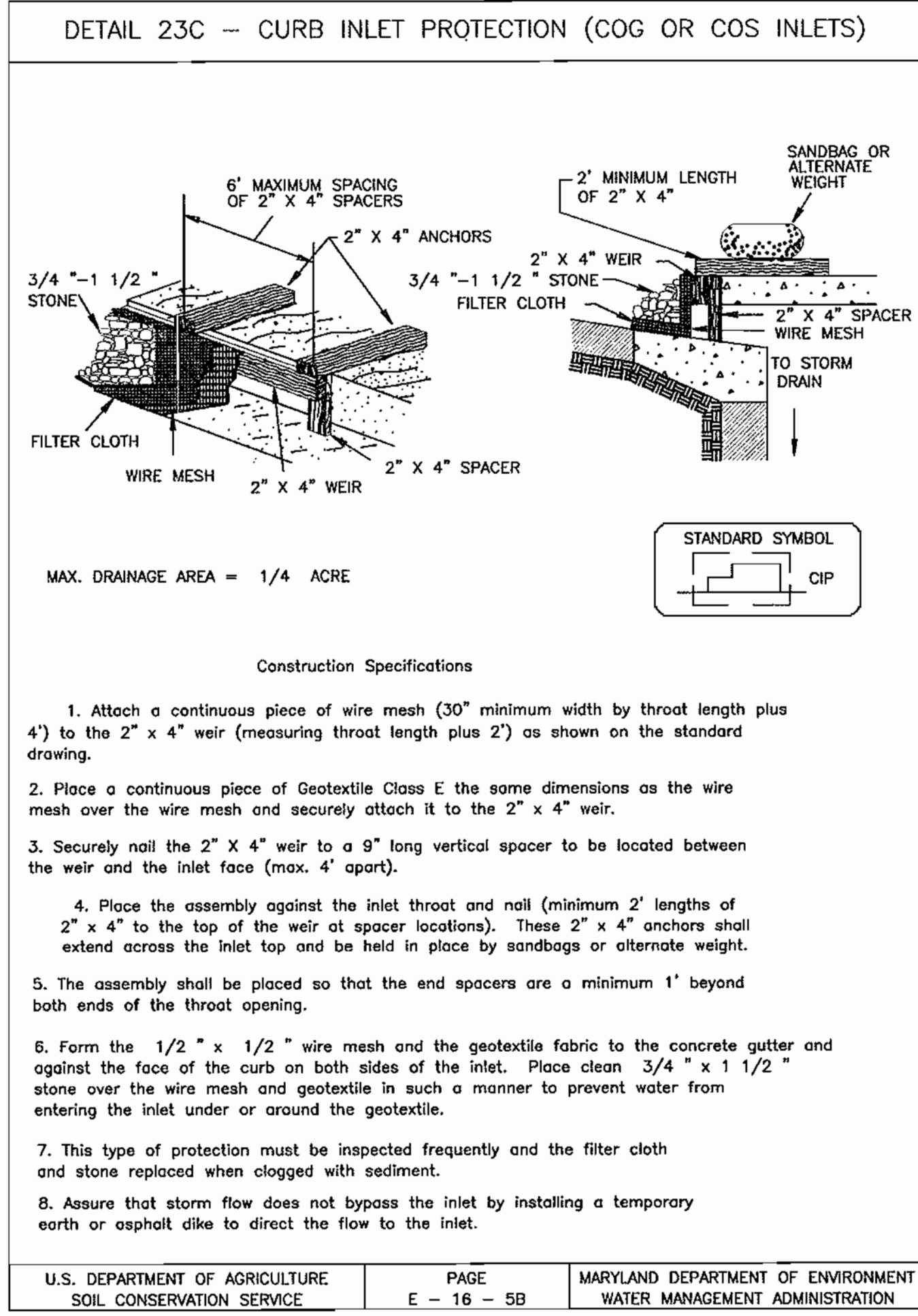
Total Area	40.98 Acres
Area Disturbed	3.734 Acres
Area to be roofed or paved	0.468 Acres
Area to be vegetatively stabilized	3.326 Acres
Total Cut	100 CY
Total Fill	6 CY

 Off-site waste/borrow area location:
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. All sediment control structures must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. 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.
11. 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

1. Obtain grading permit.
2. Notify Howard County Bureau of Inspections and Permits at (410)313-1860 at least 24 hours before starting any work.
3. Install Stabilized Construction Entrance and Silt Fence and Earth Dike.
4. Install Staging Area and Construct Temporary Construction Access Road. (4 days)
5. Rough grade site. Fine grade ball field and permanently stabilize. (1 1/2 weeks)
6. Construct Water, Sewer and Storm Drain, and install Inlet Protection. (4 weeks)
7. Begin building construction. Construct dumpster pad and remove curb and inlet at rear of building. Repave saucel area of rear parking lot and install straight curb flush with proposed ground along edge of new pavement. (2 weeks)
8. Grade in swale and pretreatment basin. Excavate and construct infiltration trench. Fine grade site and permanently stabilize disturbed areas. (1 week)
9. Install remaining proposed curb and gutter, pavement, curb stops and sidewalks. Permanently stabilize any disturbed areas. (4 days)
10. Install Landscaping. (1 week)
11. With permission of the inspector, remove all Sediment Controls from the site. Stabilize all disturbed areas immediately. (1 week)
12. During grading and after each rainfall, contractor will inspect and provide necessary maintenance to the Sediment Control measures on this plan.
13. 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, Swales and all slopes greater than 3:1.
 - B. 14 calendar days for all other disturbed areas.

NOTE:
Ball Field to be installed during the Fall to ensure field is stabilized before Spring training.



TEMPORARY SEEDING NOTES

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

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.)

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15: seed with 1/2 bushel per acre of annual rye (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 as soon as possible in the spring, or use sod.

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 2/8 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

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

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

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

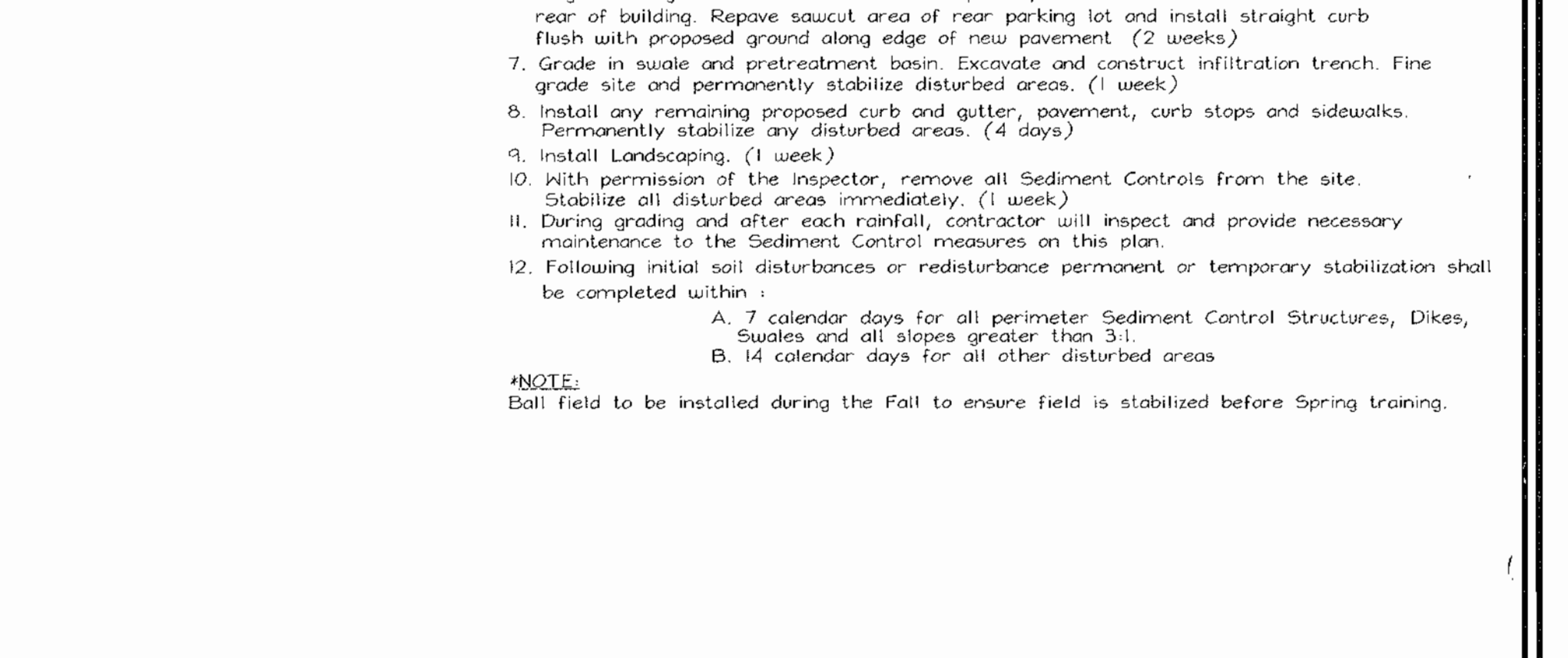
SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs./100 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 600 lbs. per acre 30-0-0 ureamform fertilizer (9 lbs./1000 sq.ft.)
- 2) 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 the periods March 1 thru April 30, and August 1 thru October 15: seed with 60 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. For the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre well anchored straw mulch and seed as 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 2/8 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 10/2/01 DATE

Chief, Division of Land Development: *[Signature]* 10/9/01 DATE

Director: *[Signature]* 10/12/01 DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

[Signature] 9/13/01 DATE

SIGNATURE OF ENGINEER: ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"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.

[Signature] 9/13/01 DATE

SIGNATURE OF DEVELOPER: Catherine Conley Young

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

[Signature] 9/27/01 DATE

HOWARD SCD

[Signature] 9/27/01 DATE

HOWARD SCD

OWNER/DEVELOPER

HOWARD COUNTY PUBLIC SCHOOLS
10910 RTE. 108
ELLCOTT CITY, MD 21042
(410) 313-6600

EROSION & SEDIMENT CONTROL DETAILS

SITE DEVELOPMENT PLAN

ATHOLTON HIGH SCHOOL

VARIOUS BUILDING ADDITIONS

TAX MAP #35 GRID #24
5th ELECTION DISTRICT

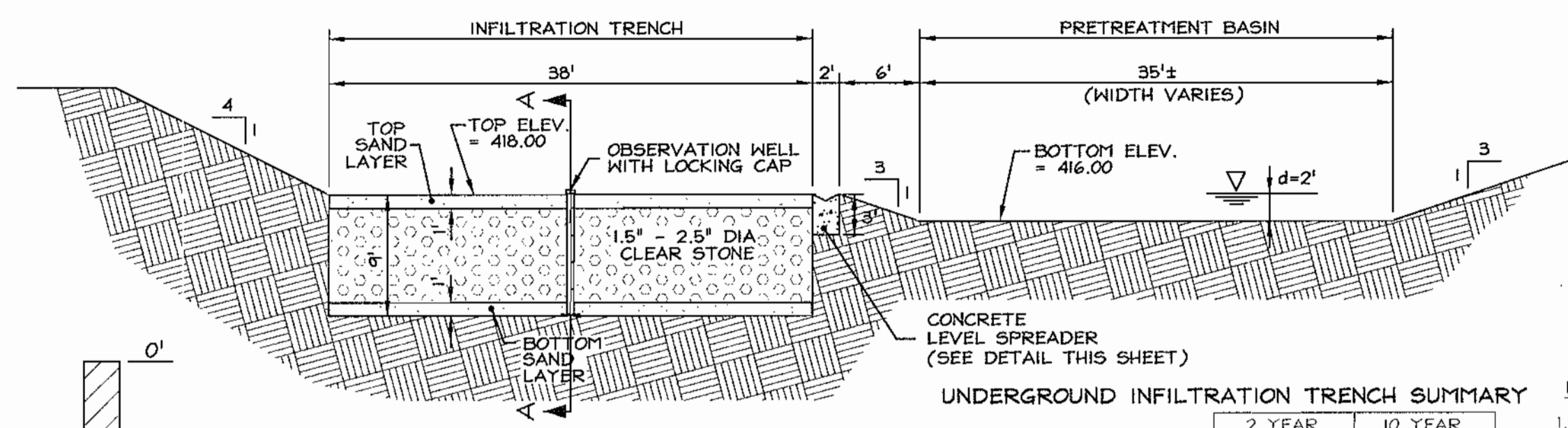
PARCELS 265,249, & 292
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.

7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-8226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

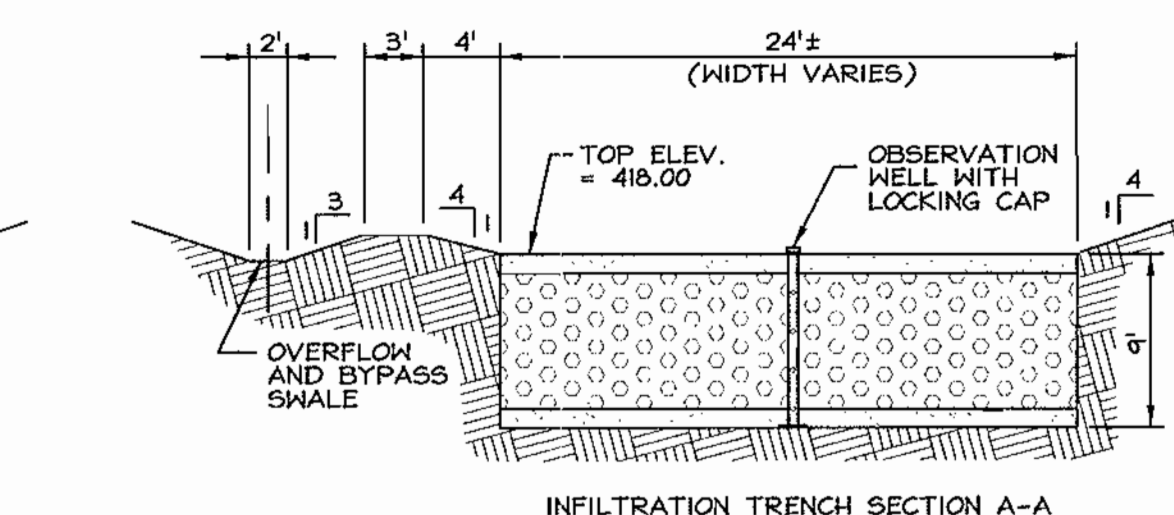
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DRAWN BY: CLS
CHECKED BY: RHV
DATE: August 17, 2001
SCALE: 1" = 30'
W.O. NO.: 2017122

7 SHEET OF 12



UNDERGROUND INFILTRATION TRENCH SUMMARY

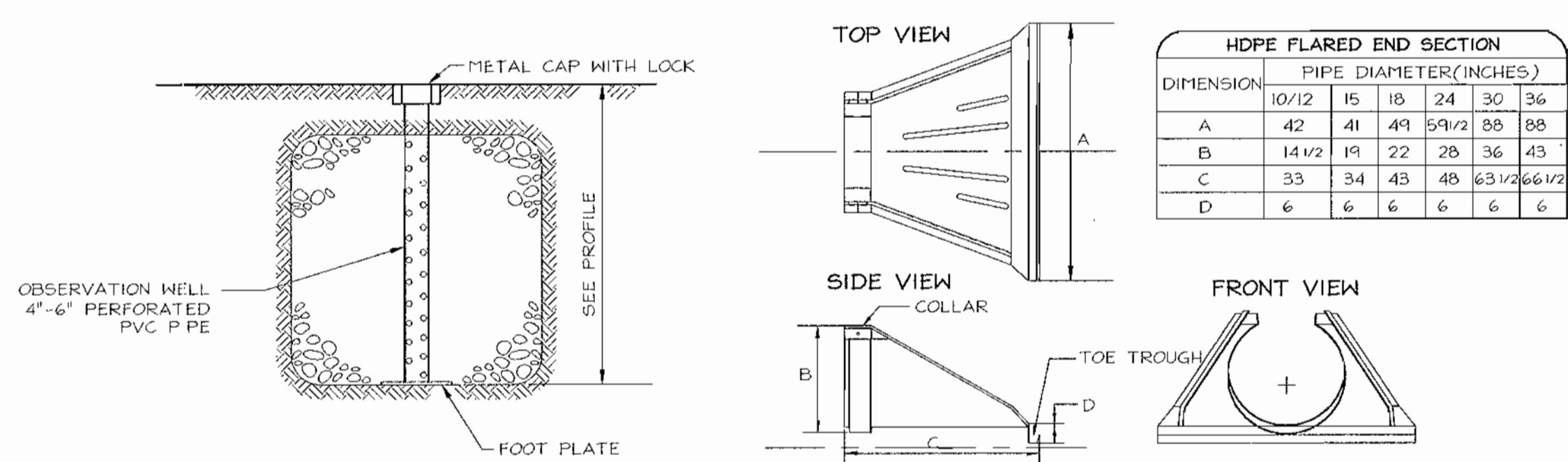
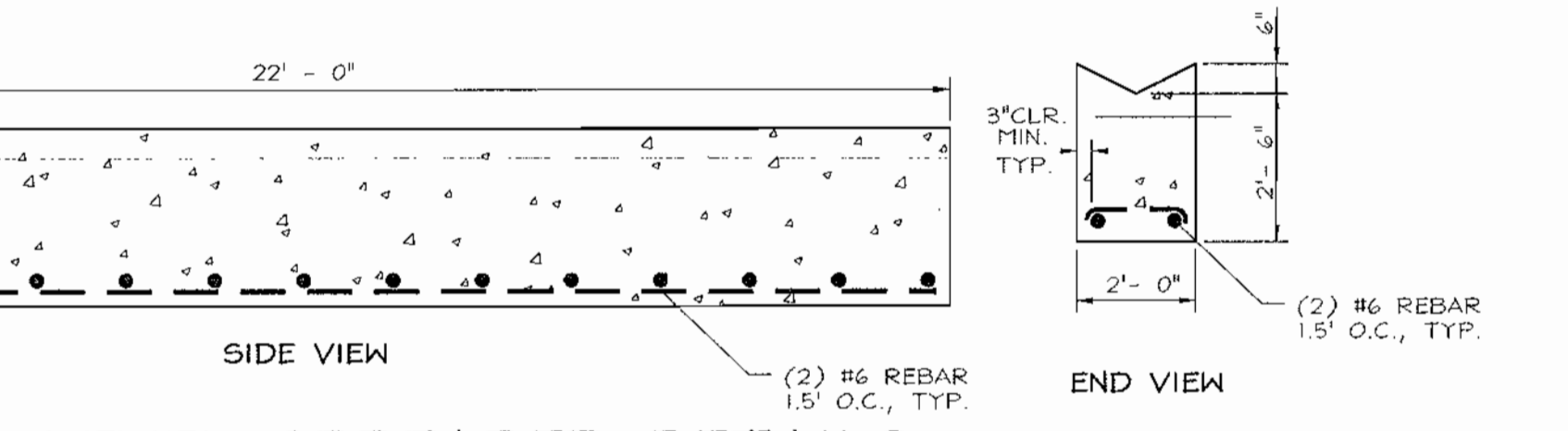
	2 YEAR	10 YEAR
FLOW INTO TRENCH	0.7 c.f.s.	1.6 c.f.s.
FLOW OUT OF TRENCH	0 c.f.s.	0 c.f.s.
W.S. ELEVATION	-	212.50
STORAGE VOLUME	-	5,658 cf



- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES**
1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
 2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
 3. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
 4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
 5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
 6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

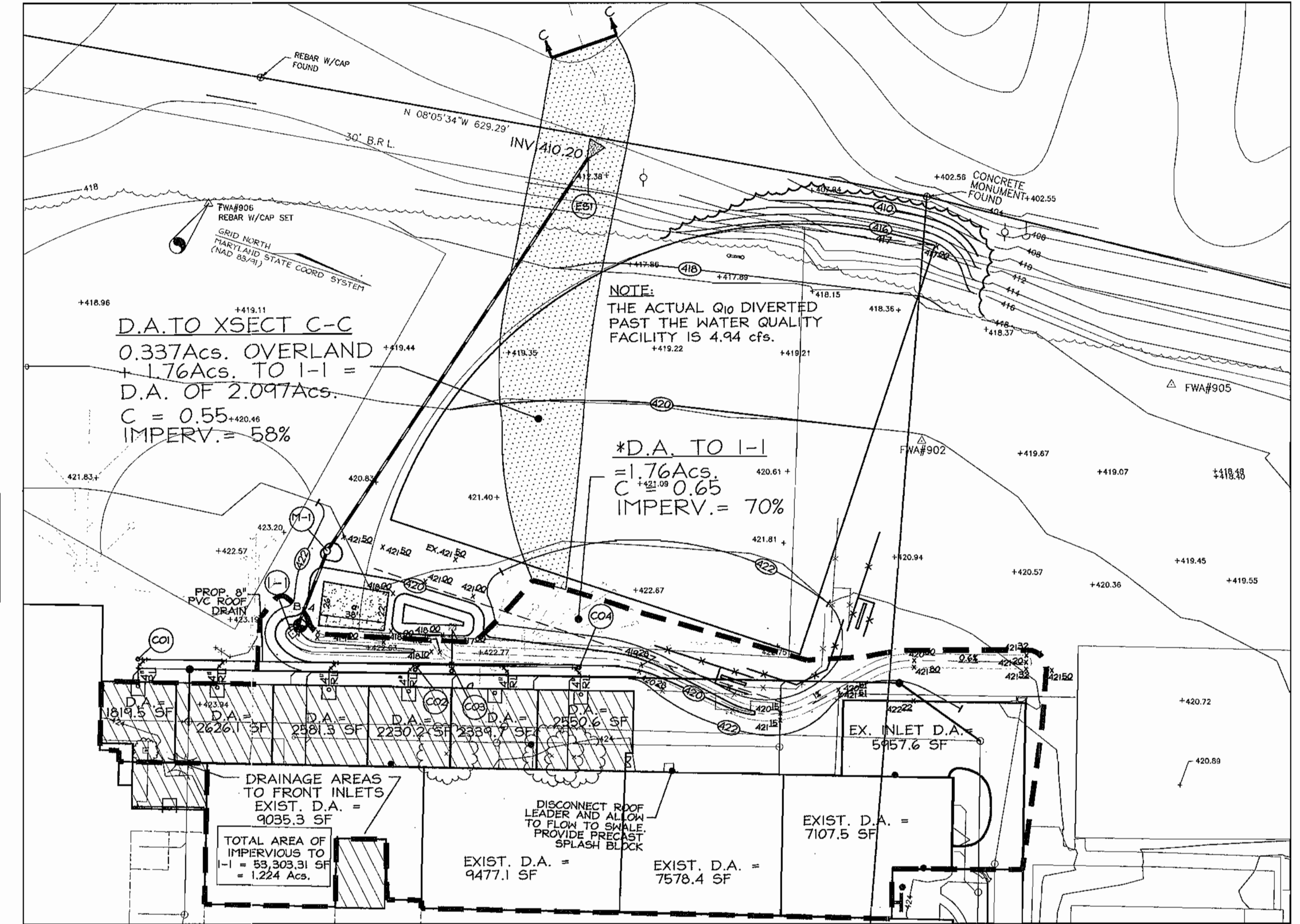
- B.2.A INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS**
1. AN INFILTRATION TRENCH MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION TRENCH HAS RECEIVED FINAL STABILIZATION.
 1. HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION TRENCH TO MINIMIZE COMPACTION OF THE SOIL.
 2. EXCAVATE THE INFILTRATION TRENCH TO THE DESIGN DIMENSIONS. EXCAVATED MATERIAL SHALL BE PLACED AWAY FROM THE TRENCH SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
 3. A CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, RMA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, EDITION 1994) SHALL INTERFACE BETWEEN THE TRENCH SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NON-WOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA FOLLOWS. ANY ALTERNATIVE FILTER FABRIC MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.

ATMCO 4552	CARTHAGE FX-805
GEOLON N70	MIRAFI 180-N
HEBTEC N07	

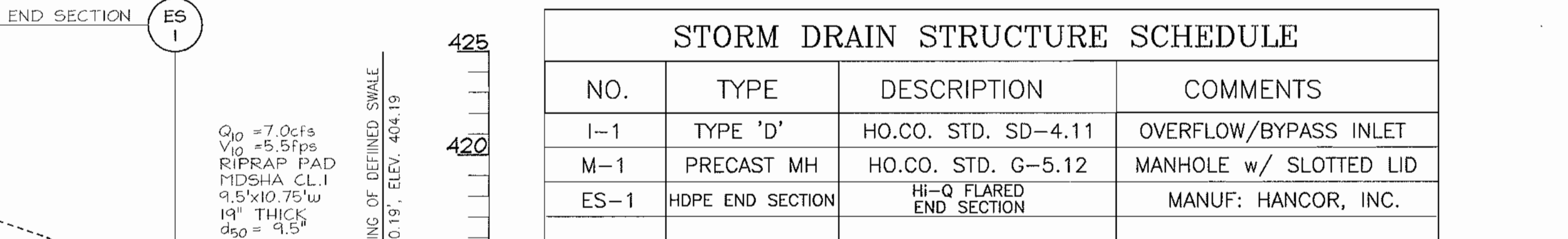
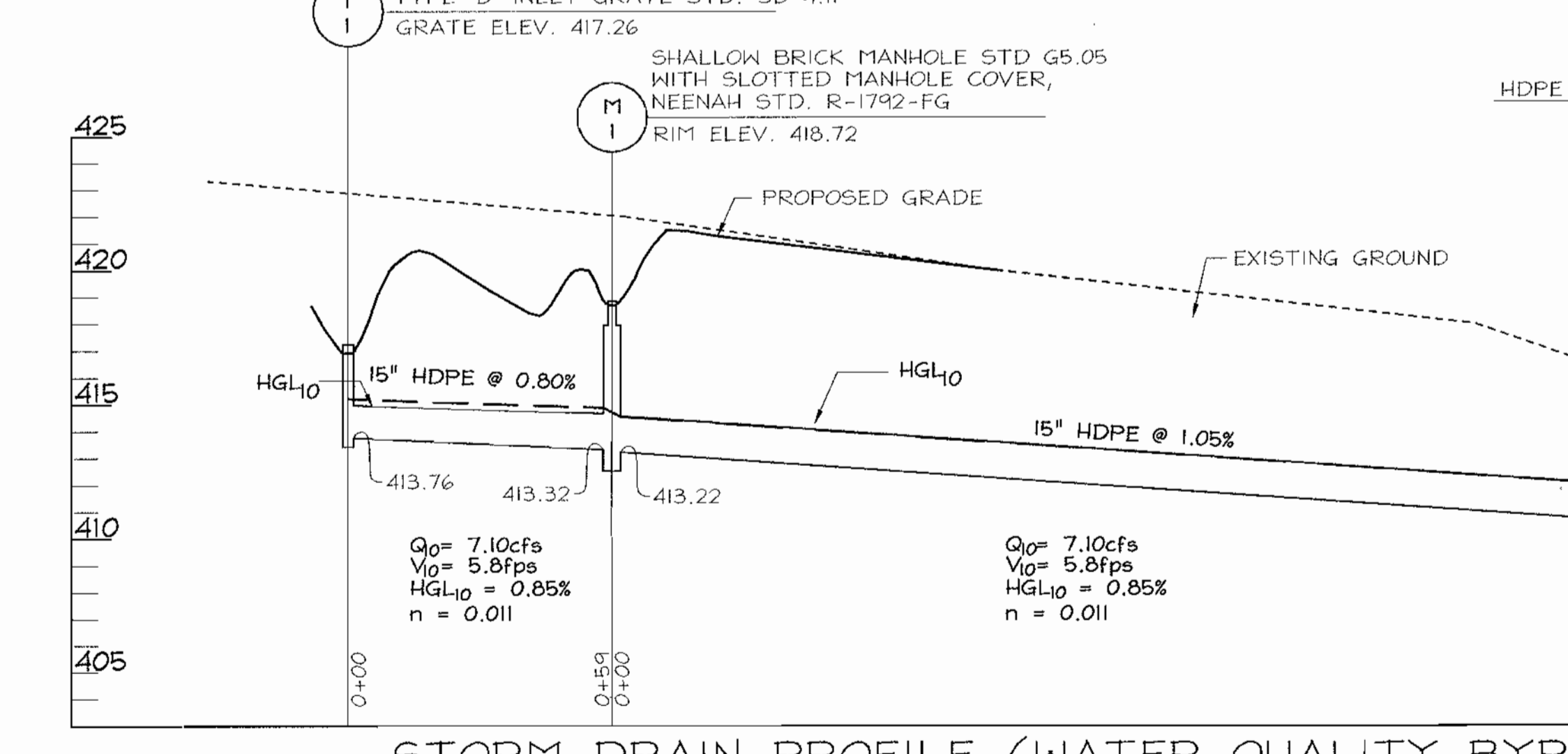


HDPE FLARED END SECTION

DIMENSION	PIPE DIAMETER (INCHES)
10/12	15 18 24 30 36
A	42 41 49 59 1/2 88 88
B	14 1/2 19 22 28 36 43
C	33 34 43 48 63 1/2 66 1/2
D	6 6 6 6 6 6 6 6



4. IF A 6 INCH SAND FILTER LAYER IS PLACED ON THE BOTTOM OF THE INFILTRATION TRENCH, THE SAND FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET AASHTO-M-43, SIZE NO.9 OR NO.10. ANY ALTERNATIVE SAND GRADATION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
5. THE STONE AGGREGATE SHOULD BE PLACED IN A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES. THE GRAVEL (ROUNDED BANK RUN GRAVEL IS PREFERRED) FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ONE OF THE FOLLOWING: AASHTO-M-43, SIZE NO.2 OR NO.3.
6. FOLLOWING THE STONE AGGREGATE PLACEMENT, THE FILTER FABRIC SHALL BE FOLDED OVER THE STONE AGGREGATE TO FORM A 6-INCH MINIMUM LONGITUDINAL LAP. THE DESIRED FILTER SOIL OR STONE AGGREGATE SHALL BE PLACED OVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.
7. CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE. ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.
8. VOIDS MAY OCCUR BETWEEN THE FABRIC AND THE EXCAVATION SIDES SHALL BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS. THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
9. VERTICALLY EXCAVATED WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR COHESIONLESS SOILS ARE DOMINANT. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE SLOPES TO MAINTAIN STABILITY.
10. PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM-D-1785. ALL FITTINGS SHALL MEET ASTM-D-2729. PERFORATIONS SHALL BE 3/8 INCH IN DIAMETER. A PERFORATED PIPE SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. THE END OF THE PVC PIPE SHALL BE CAPPED. NOTE: PVC PIPE WITH A WALL THICKNESS CLASSIFICATION OF SDR-35 MEETING ASTM-D-3034 IS AN ACCEPTABLE SUBSTITUTE FOR THE SCHEDULE 40 PIPE.
11. THE OBSERVATION WELL IS TO CONSIST OF 4-INCH DIAMETER PERFORATED PVC SCHEDULE 40 PIPE (F278 OR F758, TYPE PS 28) WITH A CAP SET 6 INCHES ABOVE GROUND LEVEL AND IS TO BE LOCATED NEAR THE LONGITUDINAL CENTER OF THE INFILTRATION TRENCH. THE PIPE SHALL HAVE A PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING THE CAP. THE SCREW TOP LID SHALL BE A CLEANOUT WITH A LOCKING MECHANISM OR SPECIAL BOLT TO DISCOURAGE VANDALISM. THE DEPTH TO THE INVERT SHALL BE MARKED ON THE LID. THE PIPE SHALL BE PLACED VERTICALLY WITHIN THE GRAVEL PORTION OF THE INFILTRATION TRENCH AND A CAP PROVIDED AT THE BOTTOM OF THE PIPE. THE BOTTOM OF THE CAP SHALL REST ON THE INFILTRATION TRENCH BOTTOM.
12. CORRUGATED METAL DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, AND SHALL BE ALUMINIZED IN ACCORDANCE WITH AASHTO-D-274. ALUMINIZED PIPE IN CONTACT WITH CONCRETE SHALL BE COATED WITH AN INERT COMPOUND CAPABLE OF PREVENTING THE DELETERIOUS EFFECT OF THE ALUMINUM ON THE CONCRETE. PERFORATED DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, CLASS 2 AND SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. AN ALUMINIZED METAL PLATE SHALL BE WELDED TO THE END OF THE PIPE.
13. IF A DISTRIBUTION STRUCTURE WITH A NET WELL IS USED, A 4-INCH DRAIN PIPE SHALL BE PROVIDED AT OPPOSITE ENDS OF THE INFILTRATION TRENCH. DISTRIBUTION STRUCTURE TWO (2) CUBIC FEET OF POROUS BACKFILL MEETING AASHTO-M43, SIZE NO.57 SHALL BE PROVIDED AT EACH DRAIN.
14. IF A DISTRIBUTION STRUCTURE IS USED, THE MANHOLE COVER SHALL BE BOLTED TO THE FRAME.



STORM DRAIN PIPE SCHEDULE

SIZE	TYPE	LENGTH	DESCRIPTION
15"	HDPE	327 LF	-
8"	PVC	HDPE	ROOF DRAIN
6"	PVC	210 LF	ROOF DRAIN (ADD ALT 1)
4"	PVC	20 LF	CLEANOUTS
4"	PVC	90 LF	ROOF LEADERS
4"	PVC	14 LF	ROOF LEADERS (ADD ALT 1)

NOTE: ALL PVC PIPE TO BE SCHEDULE 40.

OWNER/DEVELOPER
 HOWARD COUNTY PUBLIC SCHOOLS
 10310 RTE. 108
 ELLICOTT CITY, MD 21042
 (410) 313-6600

STORMWATER MANAGEMENT PROFILES, DETAILS & SPECIFICATIONS SITE DEVELOPMENT PLAN ATHOLTON HIGH SCHOOL VARIOUS BUILDING ADDITIONS

TAX MAP #35 GRID #24
5th ELECTION DISTRICT

PARCELS 265, 249, & 292
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-8226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: CLS
 DRAWN BY: GPH
 CHECKED BY: RHY
 DATE: August 17, 2001
 SCALE: AS SHOWN
 W.O. NO.: 2017122

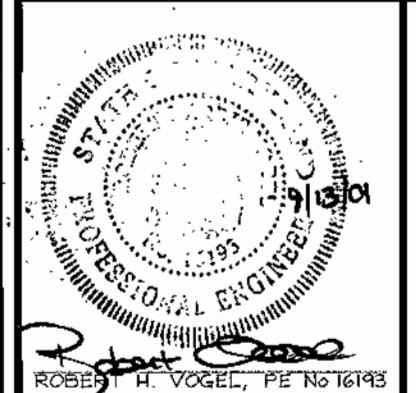
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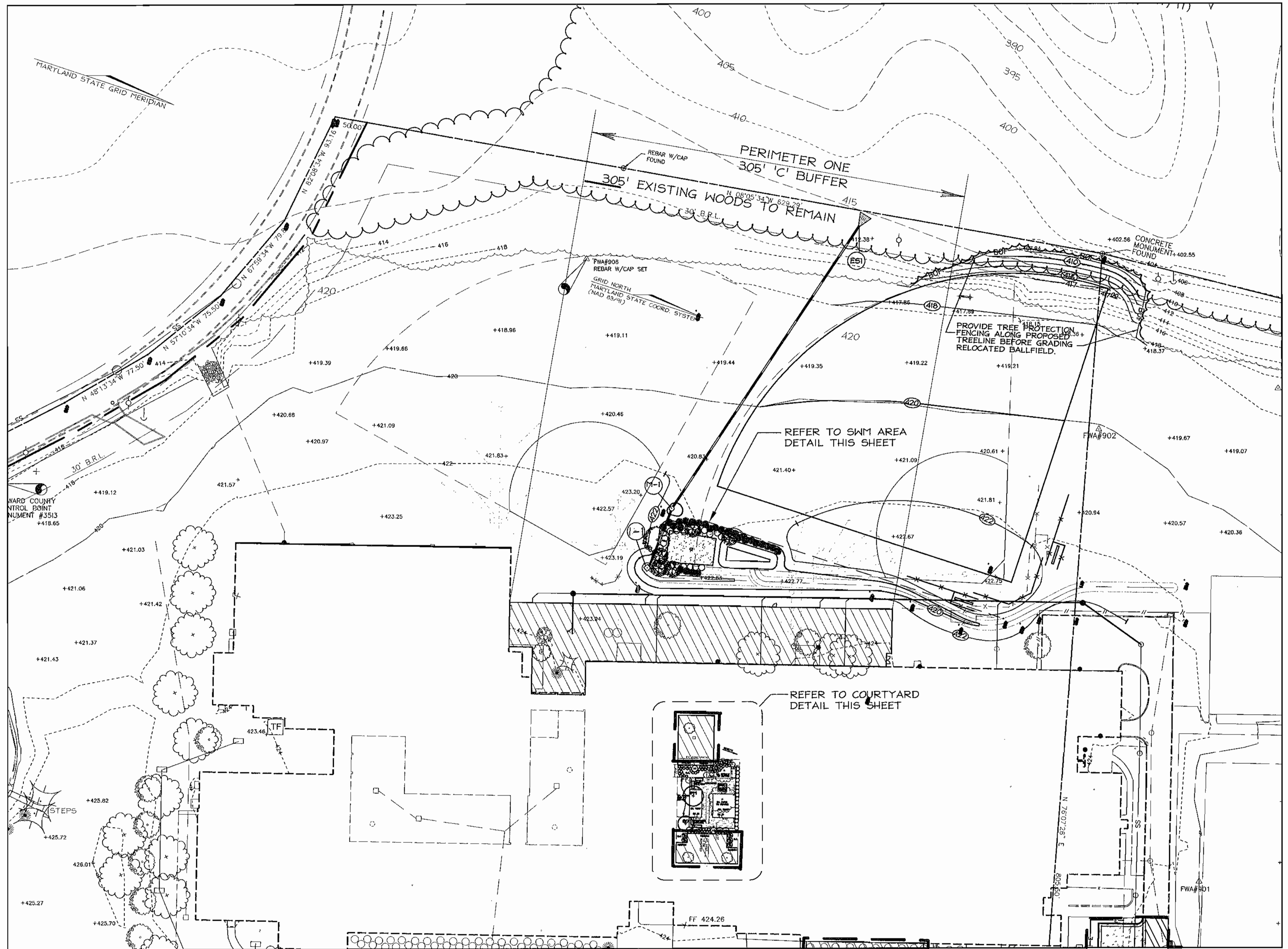
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

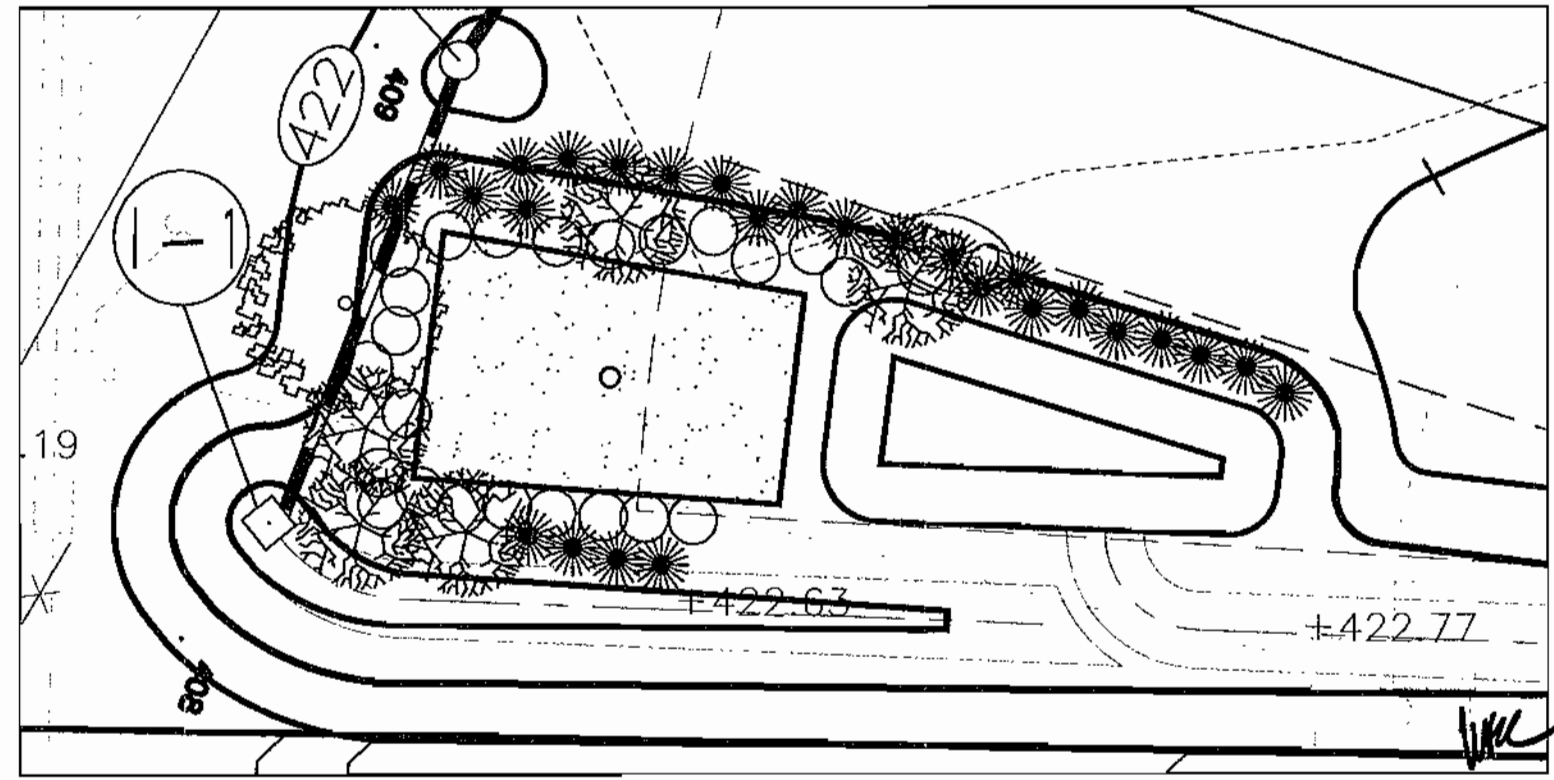
[Signature] 11/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/12/01
 DIRECTOR DATE

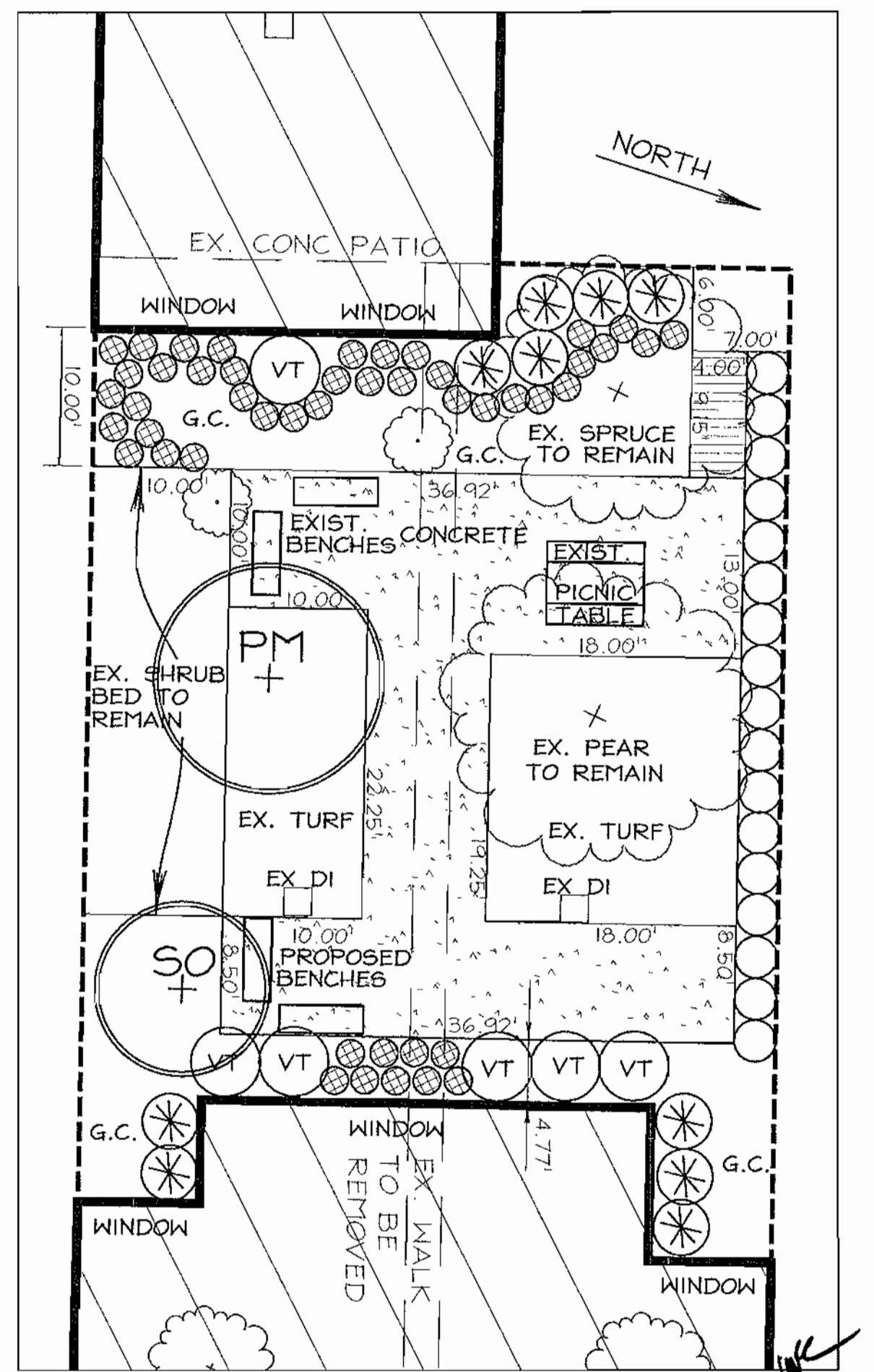




PLAN VIEW
SCALE: 1"=50'



SWM AREA PLANTING DETAIL
SCALE: 1"=20'



ADD ALT. 3
COURTYARD PLANTING DETAIL
SCALE: 1"=10'

LEGEND

- Existing Contour: ---
- Proposed Contour: - - -
- Spot Elevation: +52.22
- Direction of Flow: →
- Existing Trees to Remain: [Symbol]
- Light Poles: [Symbol]
- Shade Trees: [Symbol]
- Evergreen Shrubs: [Symbol]
- Deciduous Shrubs: [Symbol]
- Flowering Trees: [Symbol]
- Perimeter Landscape Edge: [Symbol]

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	220 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND \$)	NO
NUMBER OF TREES REQUIRED	4 SHADE TREES 11 EVERGREEN TREES
NUMBER OF TREES PROVIDED	1 SHADE TREE 27 EVERGREEN SHRUBS 15 ORNAMENTAL TREES

* 27 SHRUBS & 5 ORNAMENTAL TREES ARE BEING SUBSTITUTED FOR FIVE SHADE TREES & 11 EVERGREEN TREES

SWM AREA LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
[Symbol]	1	Acer rubrum 'Bouhall'	2 1/2" - 3" Cal.	B & B
[Symbol]	5	Cercis canadensis	1 1/2" - 2" Cal.	B & B
[Symbol]	27	Prunus laurocerasus 'Otto Luyken'	30" - 36" Ht.	B & B
[Symbol]	22	Ilex verticillata	30" - 36" Ht.	B & B

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AND SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCA&M PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOMS OF DRAINAGE SHALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- SIZES OF COURTYARD PLANT MATERIALS TO BE NO LARGER THAN DOOR OPENING.

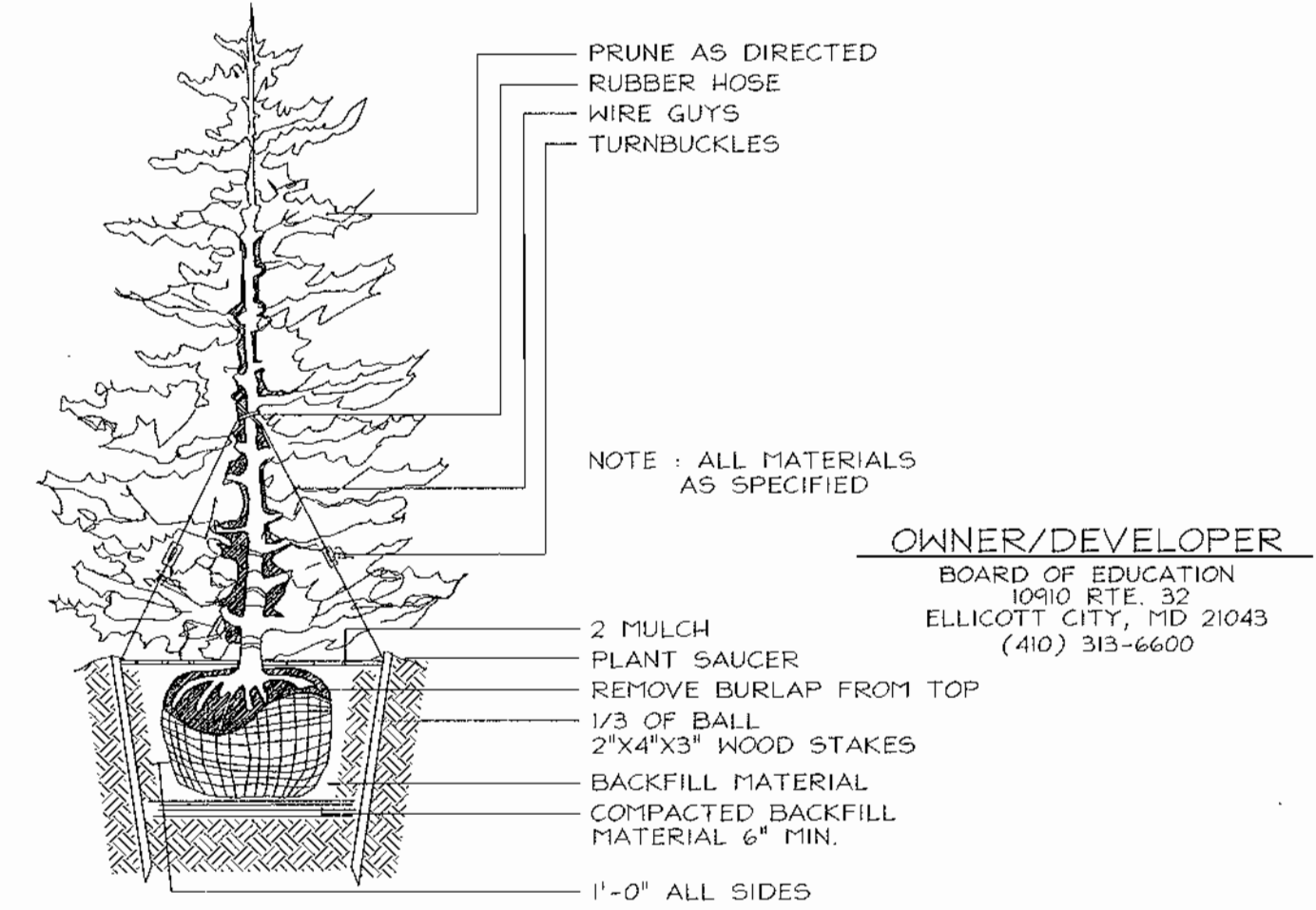
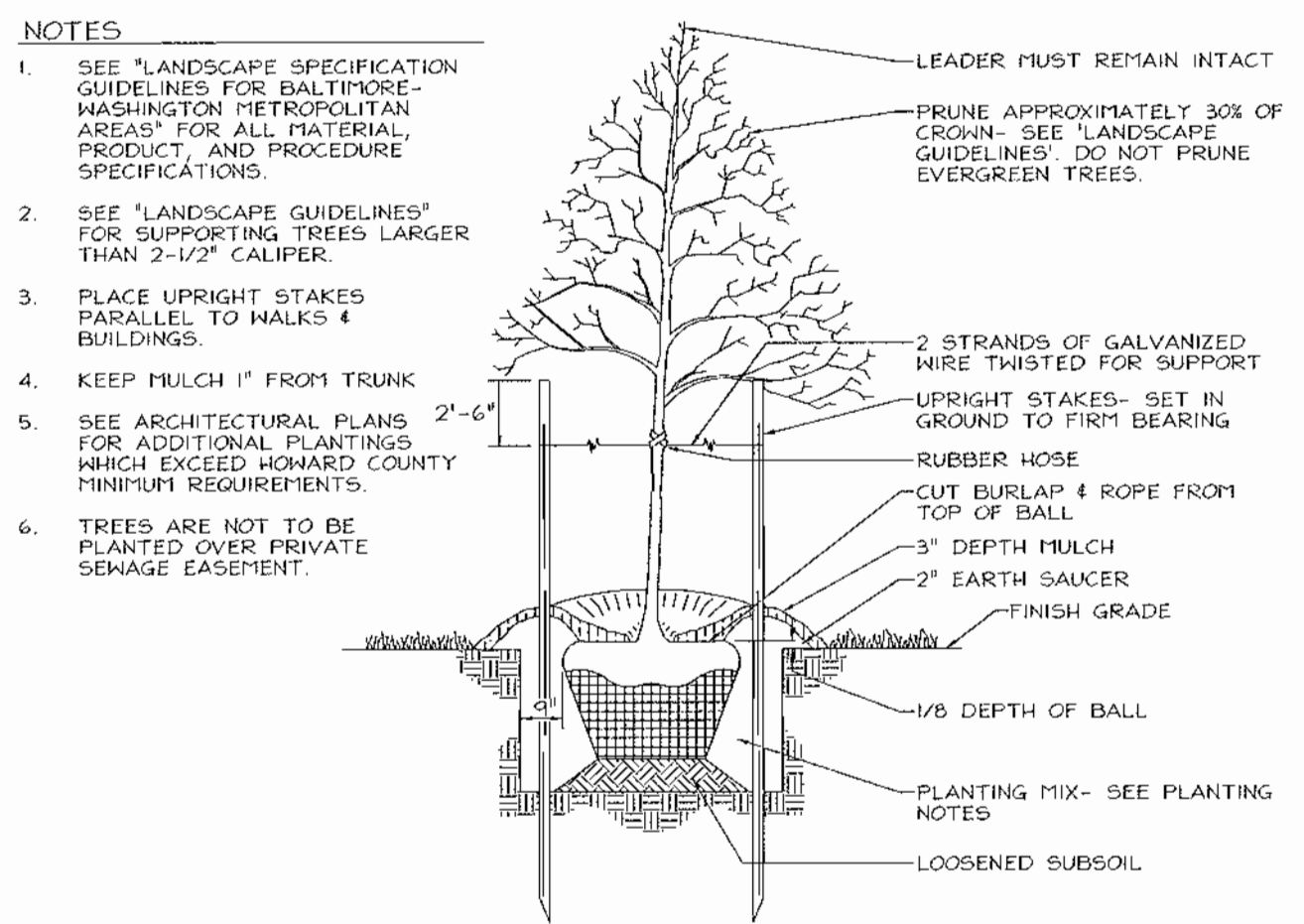
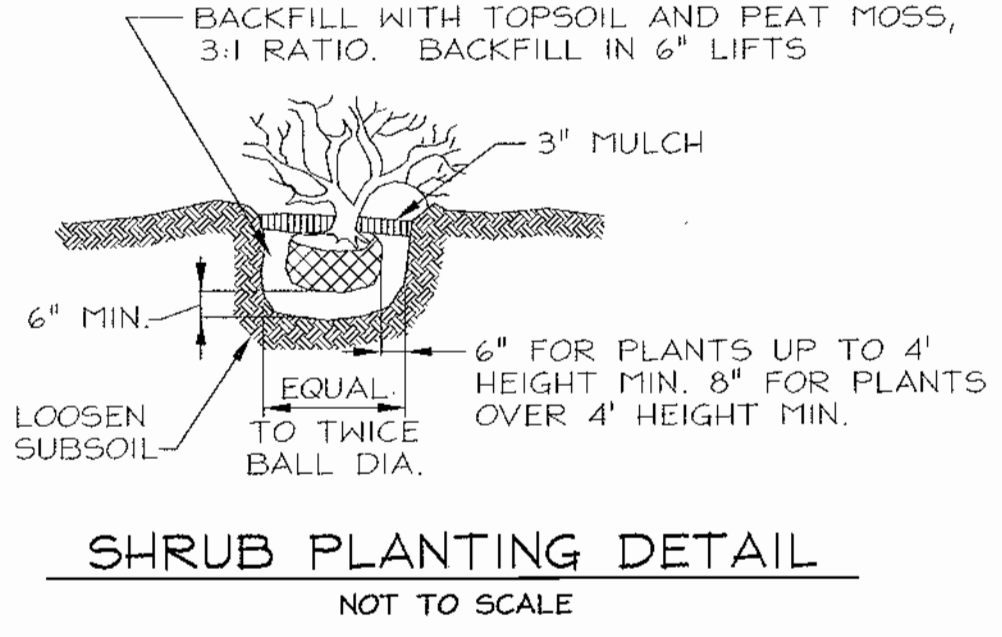
COURTYARD LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
PM	1	FRUNUS MARITIMA BEACH PLUM	3 GALLON	NATIVE
SO	1	STENHARTIA OVATA MOUNTAIN STENHARTIA (ADD LEAF MOLD TO SOIL)	3 GALLON	NATIVE, REGULAR WATERING
VT	6	VIBURNUM TRILOBUM AMERICAN Highbush CRANBERRY	3 GALLON	NATIVE
[Symbol]	10	RHOODENDENDRON PERICLYTENDROIDES PINKER FLOWER AZALEA	1 GALLON	NATIVE
[Symbol]	17	KALMIA LATIFOLIA 'SARAH' 'SARAH' 'DHAR' KALMIA	1 GALLON	NATIVE
[Symbol]	46	GAYLUSBAGIA FRONDOSA HUCKLEBERRY	1 GALLON	NATIVE

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation	1-5	1-5
Landscaping Type	1-5	1-5
Linear Feet of Roadway	305	305
Credit for Existing Vegetation	Yes+ 305'	Yes+ 305'
Credit for New Landscaping (Yes, No, Linear Feet)	Yes, No, Linear Feet	Yes, No, Linear Feet
Number of Plants Required	1400	1420
Shade Trees	0	0
Evergreen Trees	0	0
Other Trees (2 Substitution)	0	0
Shrubs (101 Substitution)	0	0
Describe Plant Substitution Credits (Detail if needed)		

* Existing Woods to Remain



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/5/11
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/12/01
DIRECTOR DATE

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.

[Signature] 9/13/01
SIGNATURE OF DEVELOPER DATE

TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE

TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

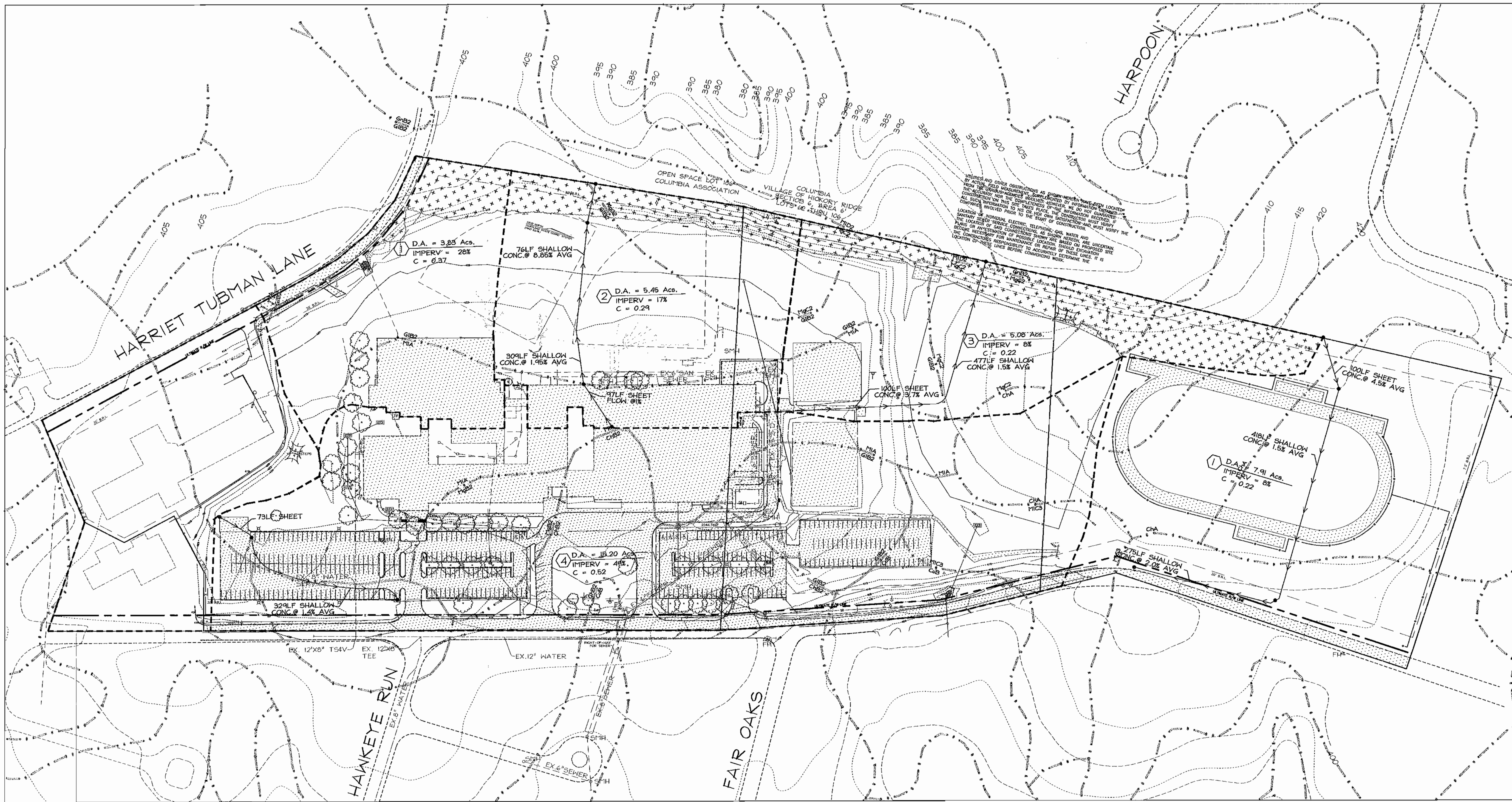
LANDSCAPE PLAN AND DETAILS
SITE DEVELOPMENT PLAN
ATHOLTON HIGH SCHOOL
VARIOUS BUILDING ADDITIONS

TAX MAP #35 GRID #24 PARCELS 265,249, & 292
5th 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: CLS
DRAWN BY: CLS
CHECKED BY: RLW
DATE: August 17, 2001
SCALE: AS SHOWN
NO. 2017122

10 SHEET OF 12



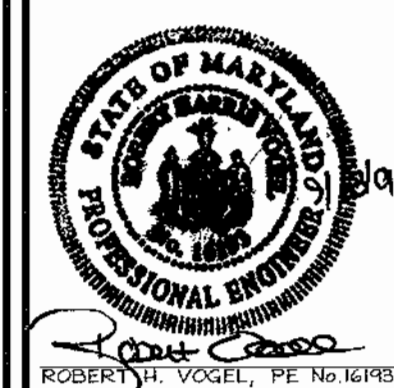
- LEGEND**
- EXISTING IMPERVIOUS AREA
 - EXISTING WOODED AREA
 - SOIL BOUNDARY AND CLASSIFICATION

NOTE
EXISTING SOILS ARE TYPE 'B'

**EXISTING CONDITIONS
DRAINAGE AREA MAP
ATHOLTON HIGH SCHOOL**

TAX MAP #35 GRID #24 PARCELS 265, 249 & 292
2nd 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: CLS
 DRAWN BY: CLS
 CHECKED BY: RHV
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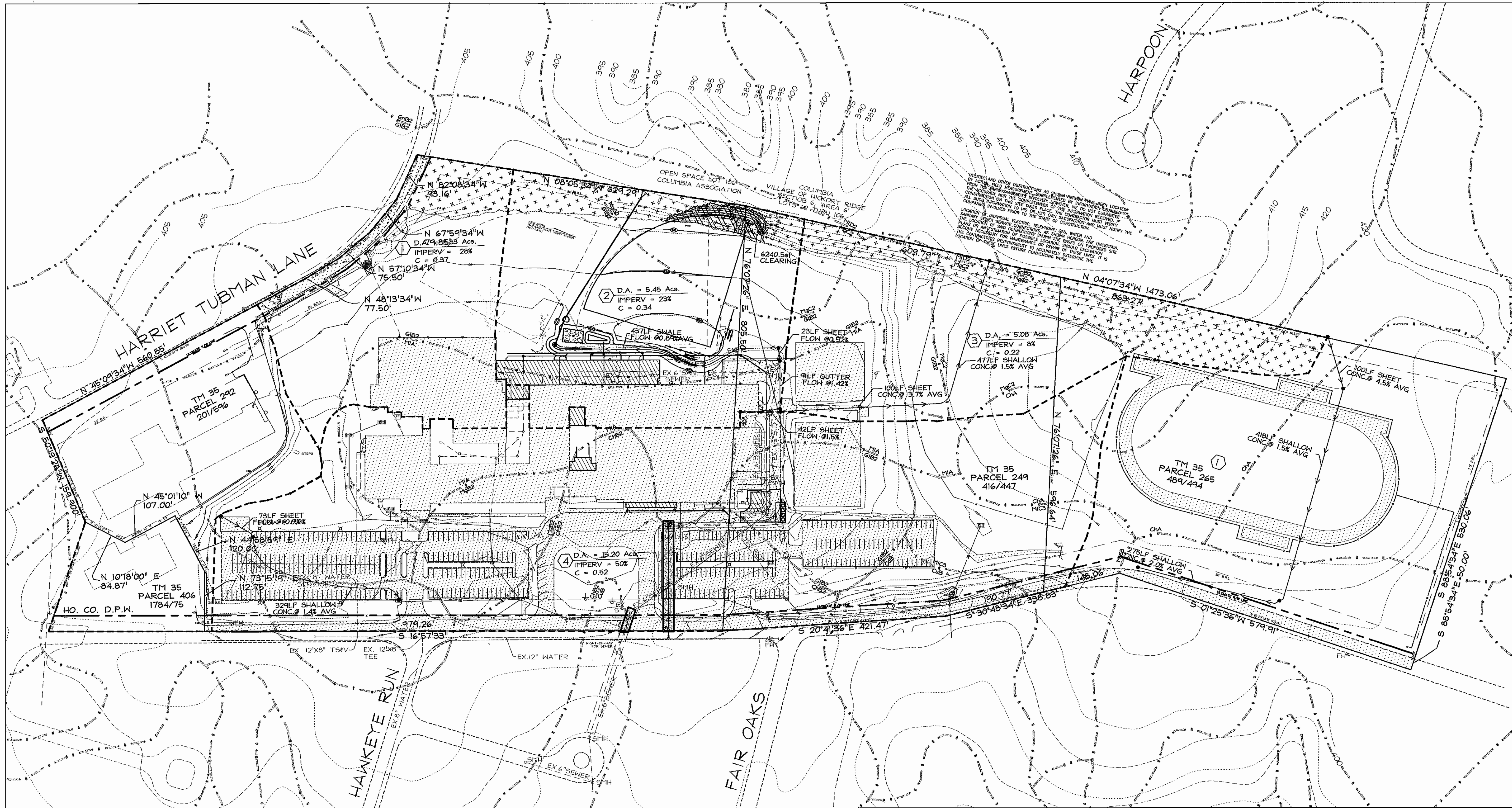
11 SHEET OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Andy Hamata
 CHIEF, DIVISION OF LAND DEVELOPMENT
Joseph J. ...
 DIRECTOR

DATE: 10/2/01
 DATE: 10/15/01
 DATE: 10/12/01

NO.	REVISION	DATE



- LEGEND**
- EXISTING IMPERVIOUS AREA
 - NEW IMPERVIOUS AREA
 - EXISTING WOODED AREA
 - PROPOSED CLEARING
 - SOIL BOUNDARY AND CLASSIFICATION

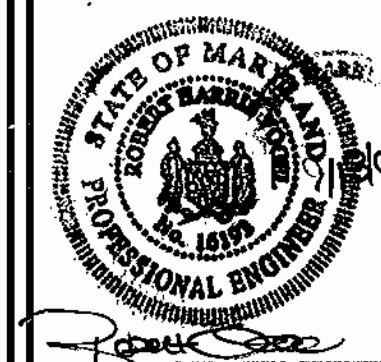
**DEVELOPED CONDITIONS
DRAINAGE AREA MAP
ATHOLTON HIGH SCHOOL**

TAX MAP #35 GRID #24 PARCEL 265, 249 & 242
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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12 SHEET OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. ... 10/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Cindy ... 10/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
... 10/12/01
DIRECTOR DATE

NO.	REVISION	DATE