SITE DEVELOPMENT PLAN
WAYSIDE INN
BALDERSON RESIDENCE

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
3. 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
Bell Atlantic Telephone company:	1-888-586-4301
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

4. Site analysis:
   - Area of parcel : 1.94 Ac.±
   - Present zoning : R-20
   - Use of structure : Country Inn
   - Building area :
     - A. Existing Building : ..... 5,846 s.f.
     - Existing Bldg. to be removed : ..... 446 s.f.
     - B. Proposed Additions :
       - Rear Addition ..... 874 s.f.
       - Owners Addition ..... 1,582 s.f.
       - Deck, stairs & landings ..... 44 s.f.
     - C. Total Proposed Building: ..... 2500 s.f. (minus 446 sf of existing bldg removed) + 2054 sf or 35 % increase in gross bldg area of 5846 sf.

   Prop. Building Coverage: 437 Rear Addition; 648 Owner's Addition; 44 Deck, etc.; 1128 Total

   Building coverage on site : 0.257Ac. or 3 % of gross area (Includes Existing Building.)
   Paved parking lot/area : 0.15 Ac. or 7.7% of gross area (Includes Existing Pavement.)
   Area of 15.0%-24.99% slopes on site : 0 sf.
   Area of 25.0% or greater slopes on site : 0 sf.
   Total Contiguous area of 25.0%-50.0% slopes on site : 0 sf.
5. Project background:
   - Location : Ellicott City, Md.; Tax Map 24, Parcel 302
   - Zoning : R-20
   - Subdivision : N/A
   - Section/Area : N/A
   - Site Area : 1.94 Acres±
   - DPZ references : WP-99-12 E&V, WP-00-39
6. 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.
7. Any damage to public right-of-ways, paving, or existing utilities will be corrected at the contractor's expense.
8. 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 contractors 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.
9. All reinforced concrete for storm drain structures shall have a minimum of 28 days strength of 3,500 p.s.i.
10. 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.
11. Estimates of earthwork quantities are provided soley for the purpose of calculating fees.
12. 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.
13. All storm drain pipe bedding shall be Class 'C' .
14. The Boundary and existing topography is taken from field run survey with two foot contour intervals prepared by Hildenberg, Boender & Associates, Inc. dated January, 1997 and by Vogel & Associates, Inc. dated December 20, 1999. 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 Nos. 241A and 241B were used for this project.
15. A noise study was prepared by Vogel & Associates on August 16, 2000. Mitigation not required due to Commercial use.
16. All paving to be per details, sheet 2 , see sheet 2 for limits.
17. All curb and gutter to be Howard County Standard concrete Detail 3.01 unless otherwise specified.
18. Contractor responsible to construct all handicap parking and handicap access in accordance with current ADA requirements.
19. Where drainage flow away from curb, contractor to reverse the gutter pan.
20. All elevations are to flowline/bottom of curb unless otherwise noted.
21. All dimensions are to face of curb unless otherwise noted.
22. Public Water in Columbia Road per Contract No. 135-W. Public Sewer in Southfield Road per Contract No. 20-1080.
23. Stormwater Management is provided via a Bioretention Facility for water quality only.
24. All exterior lighting shall be oriented to reflect light downwards and inwards on the site away from all adjoining residential use properties and public roads in accordance with Section 134 of the Howard County Zoning Regulations.
25. Building to have inside Water Meter setting.
26. APFO traffic test prepared by Lee Cunningham & Associates on February, 2000.
27. This project is exempt from storm water quality control since the limit of disturbance is less then 5,000 s.f.
28. This project complies with the forest conservation requirements of section 16.1200 of the Howard County Code and Forest Conservation Manual with the filing of a Declaration of Intent (DOI) for a single lot clearing less than 40,000 square feet.
29. Reference BA. Case No. 99-12 E&V approved September 23,1999 for the expansion of a Country Inn Special Exception,subject to allow a maximum of 8 guests rooms, meals to be served at tables, indoors or on outdoor terrace or in guest rooms and provide a Type 'C' landscape buffer along the southwest property line. This case also reduced the 50 foot front setback from an arterial or major collector roadway to 30 feet for the construction of an addition to the existing Country Inn structure.
30. Waiver petition WP-00-39 originally denied February 28, 2000 to waive the requirement for a site development plan.
31. No clearing, grading or construction is permitted within the wetlands, stream ortheir required buffers, except as determined to be essential utility and SWM construction disturbances by the Department of Planning and Zoning in accordance with Section 16.116(f.) of the Howard County Subdivision and Land DEVELOPMENT Regulations AND THE SOIL CONSERVATION DISTRICT.
32. All existing trees to remain unless otherwise stated on the plan.
33. Trash dumpster not required, residential type receptacles to be provided.
34. The two existing wells and existing septic system shall be properly abandoned immediately following connection to the public facilities. Suitable documentation shall be submitted to the Health Dept. at that time.
35. The HOC held a public hearing on October 4, 2007 for a Certicate of Approval to replace an existing enclosed porch addition with a two story addition on the rear of the existing structure. The HOC approved the proposed improvements on November 5, 2007.

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 redisturbance, 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 germintion 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	1.94± Acres
Area Disturbed	0.78 Acres
Area to be roofed or paved	0.08 Acres
Area to be vegetatively stabilized	0.70 Acres
Total Cut	50 CY
Total Fill	50 CY *
Offsite waste/borrow area location	0 CY

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. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. 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.
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

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 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq.ft.)
2) Acceptable-Apply 2 tons per acre dolomatic 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. During 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 sod. 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 per acre (8 gal/1000 sq.ft.) for anchoring.

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

Note: The building permit for the "rear building addition must be applied for at the Department of Inspections, Licenses & Permits within one (1) year from the date of the red line revision.

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 2 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 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 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.

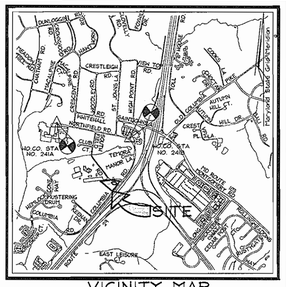
BENCHMARKS

Howard County Station NO. 241A

Howard County Station NO. 241B

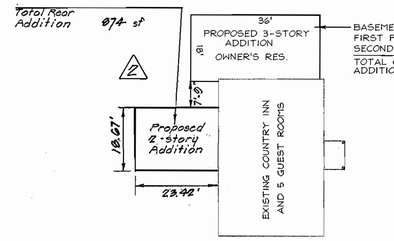
LEGEND

Existing Contour ---------- 382
Proposed Contour ---------- 382
Proposed Spot Elevation +82.93
Direction of Flow
Existing Trees to Remain
Light Poles ☼ Post Top
Concrete
Existing Tree
Proposed Tree
Wetland
Stream



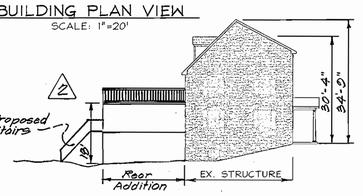
VICINITY MAP
SCALE: 1"=2000'

First Floor 437 sf
Second Floor 437 sf
Total Rear Addition 874 sf

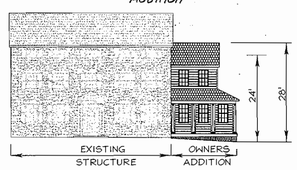


BASEMENT	648 SF.
FIRST FLOOR	648 SF.
SECOND FLOOR	286 SF.
TOTAL OWNER'S ADDITION	1582 SF.

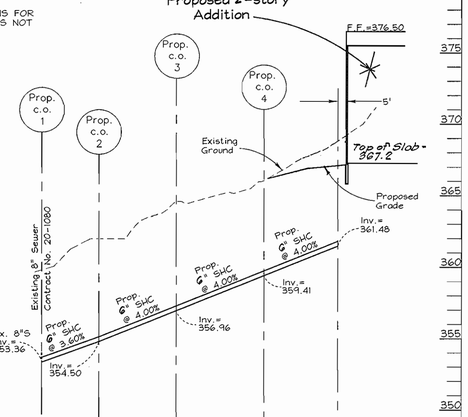
BUILDING PLAN VIEW
SCALE: 1"=20'



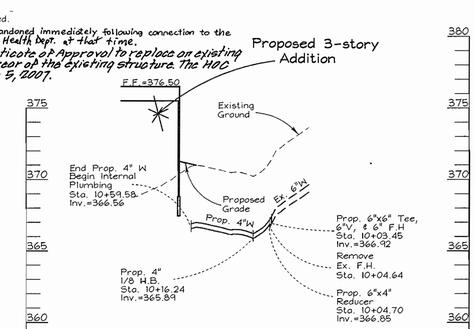
PROPOSED BUILDING MATERIALS:
DUTCH WOOD SIDING AND BRICK



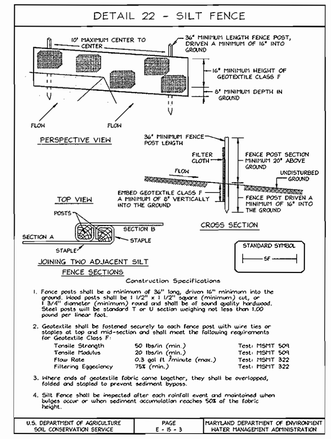
BUILDING ELEVATIONS
SCALE: 1"=20'

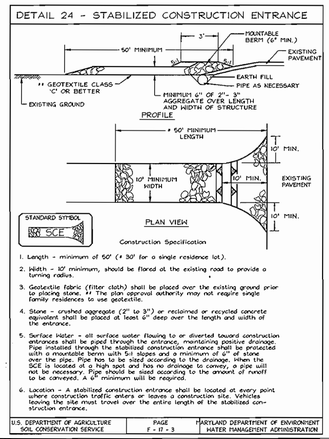


SEWER PROFILE
SCALE : HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



WATER PROFILE
SCALE : HORIZONTAL - 1"=50'
VERTICAL - 1"=5'





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 continuing 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 shall 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 Experimental 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 a 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 longer that 1 and 1/2" in diameter.
   ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, 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.

II. 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.

III. For sites having disturbed areas over 5 acres:
   i. On soil meeting topsoil specifications, soil test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      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.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      d. No sod or seed shall be placed on soil 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 phyto-toxic materials.

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.

   ii. Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
   ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
   iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
   iv. Topsoil shall not be place 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.

SEQUENCE OF CONSTRUCTION

1. Obtain Grading Permit.
2. Notify Howard County Bureau of Inspections and Permits (410) 313-1880 at Least 24 Hours Prior to Starting any Work.
3. Clear for and Install Stabilized Consfuction Entrance.
4. Install Perimeter Controls as Shown on Plans. ..... 1 day
* 5. Begin Building Construction. ..... 3 months
* 6. Install Water Connection ..... 2 days
* 7. Install Bioretention Facility. ..... 5 days
8. Complete Paving Operations for New Parking Pad. ..... 2 days
9. Following initial soil disturbance or redisturbance permanent or temporary stabilization shall be compliad with:
   A. 7 calendar days for all perimeter sediment control structures, dikes, swales, ditch perimeter slopes, and all slopes greater than 3:1
   B. 14 calendar days for all other disturbed areas.
10. Stabilize all Disturbed Areas, With Inspectors Approval Remove Sediment Control Devices.

* Items Which can be Done Concurrently.

PARKING TABULATION

Proposed Building	REQUIRED	PROPOSED
Country Inn: 1 Space per Guest Room; 1 space/ 8 Guest Rooms=	8 spaces	8 spaces
1 Residence (Owner)	2 spaces	3 spaces
Total Spaces	10 spaces	11 spaces

The existing garage shall be used for parking purposes only in accordance with Sections 133.D.2.a of the Howard County Zoning Regulations.

SHEET INDEX

Revisions		
No.	Description	Date
1	Revised areas & %'s in Gen Note #4, site analysis for bldg & deck coverage; revised limit of disturbed areas in S.C. note #7, Eliminated prop cottage, sunroom & deck from bldg plan view & elevation & added prop. rear addition & deck to some; added mean height dimensions for prop bldg.	1-07-02

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE 4-19-01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE 4/26/01
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/23/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/6/01

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 OF ENGINEER ROBERT H. VOGEL — DATE 3/29/01

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 OF DEVELOPER — DATE 3-25-2001

ADDRESS CHART
STREET ADDRESS
4344 Columbia Road, Columbia Md. 21042

SUBDIVISION NAME			SECTION/AREA		PARCEL NUMBER
N/A			N/A		302
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
N/A	23	R-20	24	2nd	6023.01

WATER CODE : F08 — SEWER CODE : 5751600

OWNER/DEVELOPER
Wayside Inn of Maryland Inc.
David A. Balderson
4344 Columbia Road
Ellicott City, Maryland 21042
410.461.4636

No.	Revision	Date
2	Added two (2) story addition to the rear of the existing structure.	11-9-07

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — REGISTERED PROFESSIONAL ENGINEER — 3/29/01
ROBERT H. VOGEL, P.E. No. 16193

COVER SHEET
WAYSIDE INN
BALDERSON RESIDENCE

Recording Reference: L. 5053 F. 348

TAX MAP 24 — BLOCK 23 — PARCEL 302, HO-144
2ND ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: D.D.S. JR.
DRAWN BY: D.D.S. JR.
CHECKED BY: R.H.V.
DATE: March 16, 2001
SCALE: As Shown
W.O. NO.: 00-005

SHEET 1 OF 2

C:\and Projects\00-005\dwg\8021s1.dwg Thu Mar 29 11:43:51 2001 ES

SDP-01-27

LEGEND

Existing Contour	- - - - - - -382
Proposed Contour	(382)
Spot Elevation	+82.53
Direction of Flow	←
Tree Protection Fence	
Existing Trees to Remain	
Stabilized Construction Entrance	SCE
Silt Fence	—SF—SF—
Earth Dike	ED A-1
Limit of Disturbance	LOD

N 577,000
E 1363250

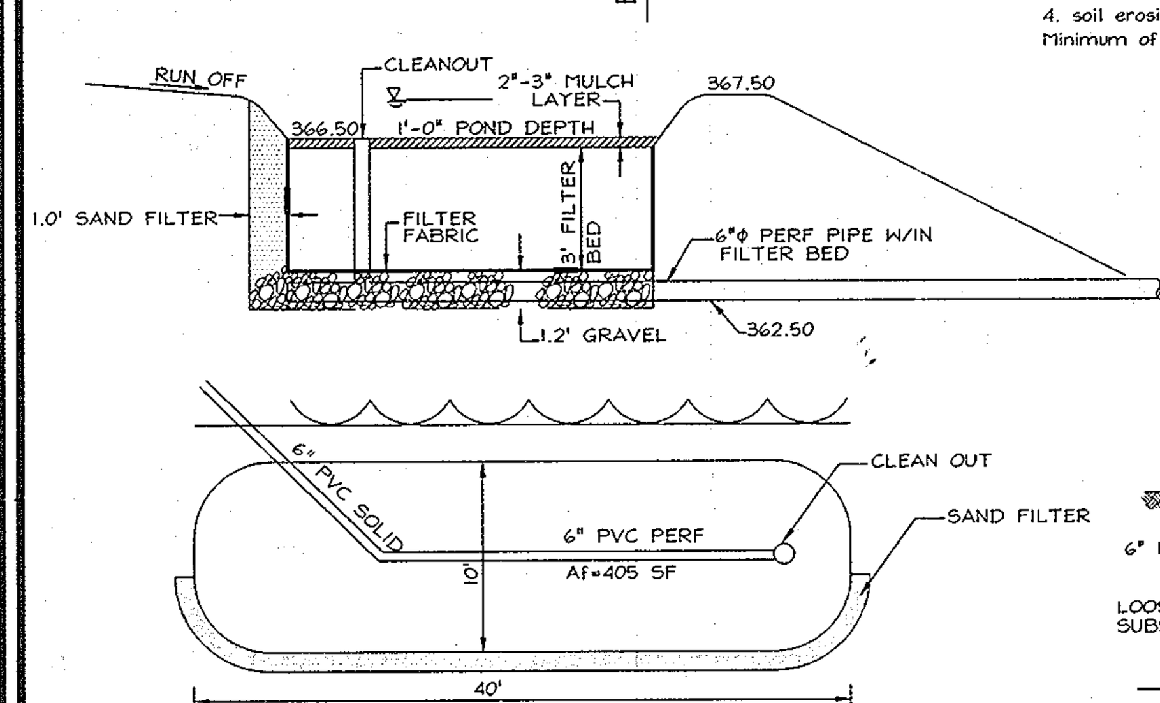
OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS

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 basis, with a Minimum of once per month and after heavy storm events.



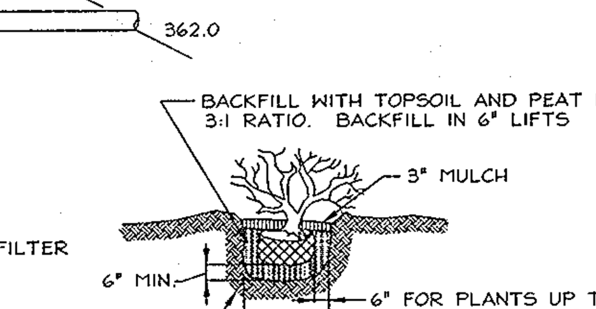
BIORETENTION AREA CROSS-SECTION

NOT TO SCALE

PLANTING SOIL: SAND 35-60%
3' DEEP : SILT 30-55%
: CLAY 10-25%

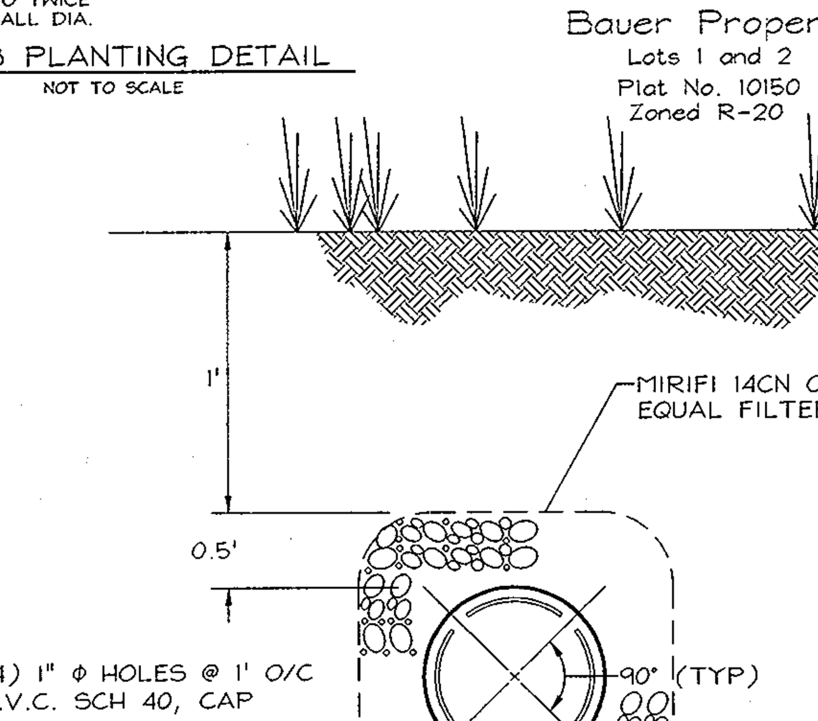
MULCH: SHREDDED HARDWOOD (AGED 6 MONTHS MIN.)
FILTER CLOTH: FILTER CLOTH CLASS 'C'
OPENING ASTM D-4751
STRENGTH ASTM D-4632
RESISTANCE ASTM D-4833

UNDERDRAIN GRAVEL: AASHTO M-43 0.25" TO 0.75"
6" PVC: SCHEDULE 40 OR SDR 35
SAND: AASHTO M-6 OR ASTM C-33 0.02" TO 0.04"



SHRUB PLANTING DETAIL

NOT TO SCALE

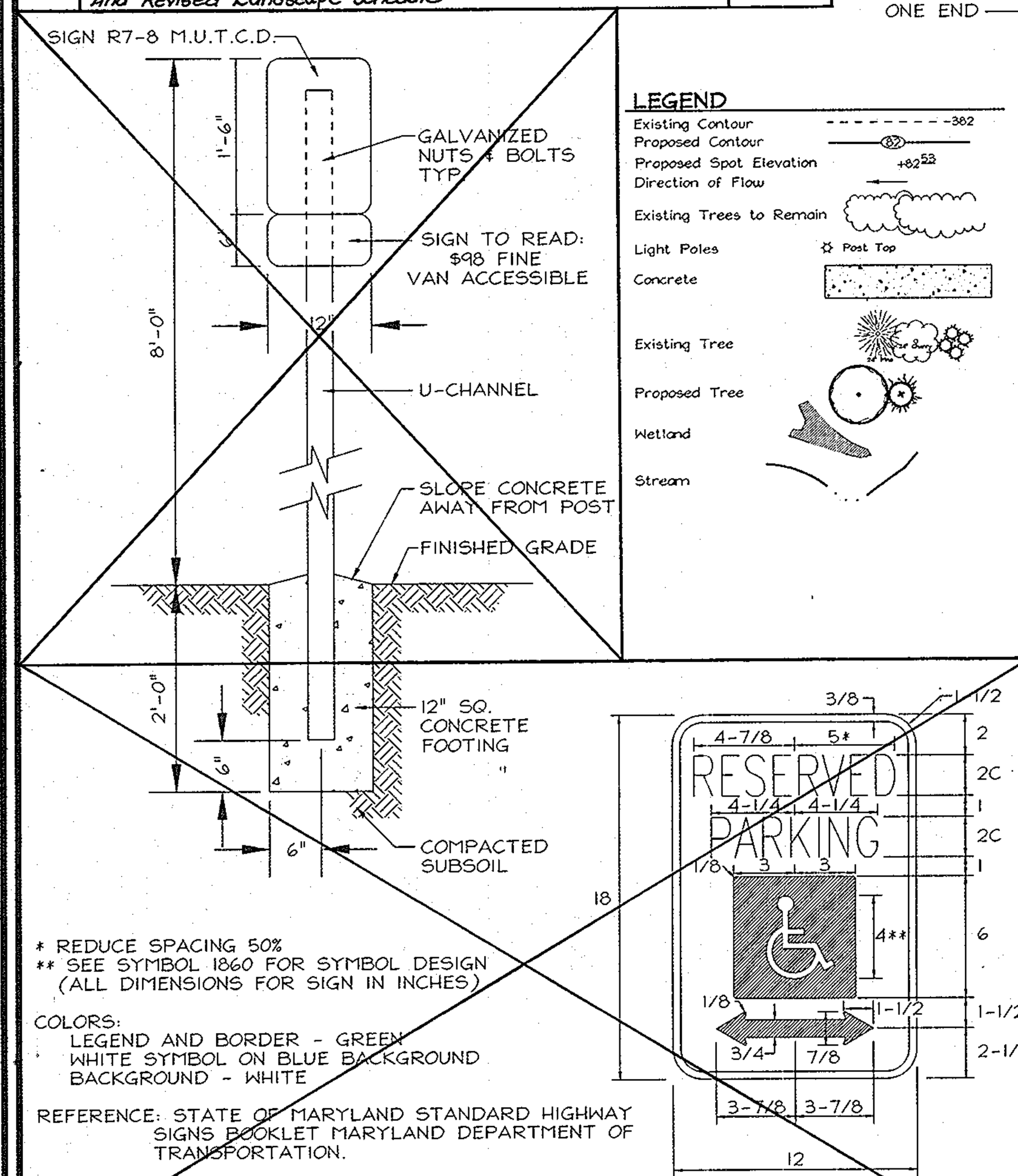


UNDERDRAIN DETAIL

6" P.V.C. SCH-40

NOT TO SCALE

Revisions		
No.	Description	Date
4	Revised Perimeter 'I' Credit For Ex. Trees, Added Landscaping And Revised Landscape Schedule	2/24/11



* REDUCE SPACING 50%
** SEE SYMBOL 1860 FOR SYMBOL DESIGN (ALL DIMENSIONS FOR SIGN IN INCHES)

COLORS:
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

REFERENCE: STATE OF MARYLAND STANDARD HIGHWAY SIGNS BOOKLET MARYLAND DEPARTMENT OF TRANSPORTATION.

HANDICAP PARKING SIGN

NOT TO SCALE

LEGEND

Existing Contour	- - - - - - -382
Proposed Contour	(382)
Proposed Spot Elevation	+82.53
Direction of Flow	←
Existing Trees to Remain	
Light Poles	Post Top
Concrete	
Existing Tree	
Proposed Tree	
Wetland	
Stream	

Appendix B.3. Construction Specifications for Sand Filters, Bioretention and Open Channels

B.3.B Specifications for Bioretention

1. Material Specifications

The allowable materials to be used in bioretention area are detailed in Table B.3.2.

2. Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

pH range 5.2 - 7.0
organic matter 1.5 - %4 (by weight)
magnesium 35 lb./ac
phosphorus (phosphate - P_2O_5) 75 lb./ac
potassium (potash - K_2O) 85 lb./ac
soluble salts nit to exceed 500 ppm

All bioretention areas shall have a minimum of one test. Each test shall consist of both the standard soil test for pH, phosphorus, and potassium and additional test of organic matter, and soluble salts. A textual analysis shall be performed for each location where the top soil was excavated.

Since different lab calibrate their testing equipment differently, all testing results shall come from the same testing facility.

Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

3. Compaction

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use hoes to remove original soil. If bioretention

B.3.4
Appendix B.3. Construction Specifications for Sand Filters, Bioretention and Open Channels
areas are excavated using loader, the contractor should use wide-track or marsh track equipment, or light equipment with turf type tire. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretenion facility before backfilling the required sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for bioretention areas can be found in Appendix A, Section A.2.3.

5. Plant Installation

Mulch should be placed to a uniform thickness of 2" to 3". Shredded hardwood much is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Root stock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

B.3.5

Appendix B.3. Construction Specifications for Sand Filters, Bioretention and Open Channels

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover plnting specifications.

Test. topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains are to be placed on a 3'-0" wide section filter cloth. Pipe is placed next, followed by the gravel bedding. The ends of underdrain pipes not terminating in an observation well shall be capped. observation well and/or

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5 clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

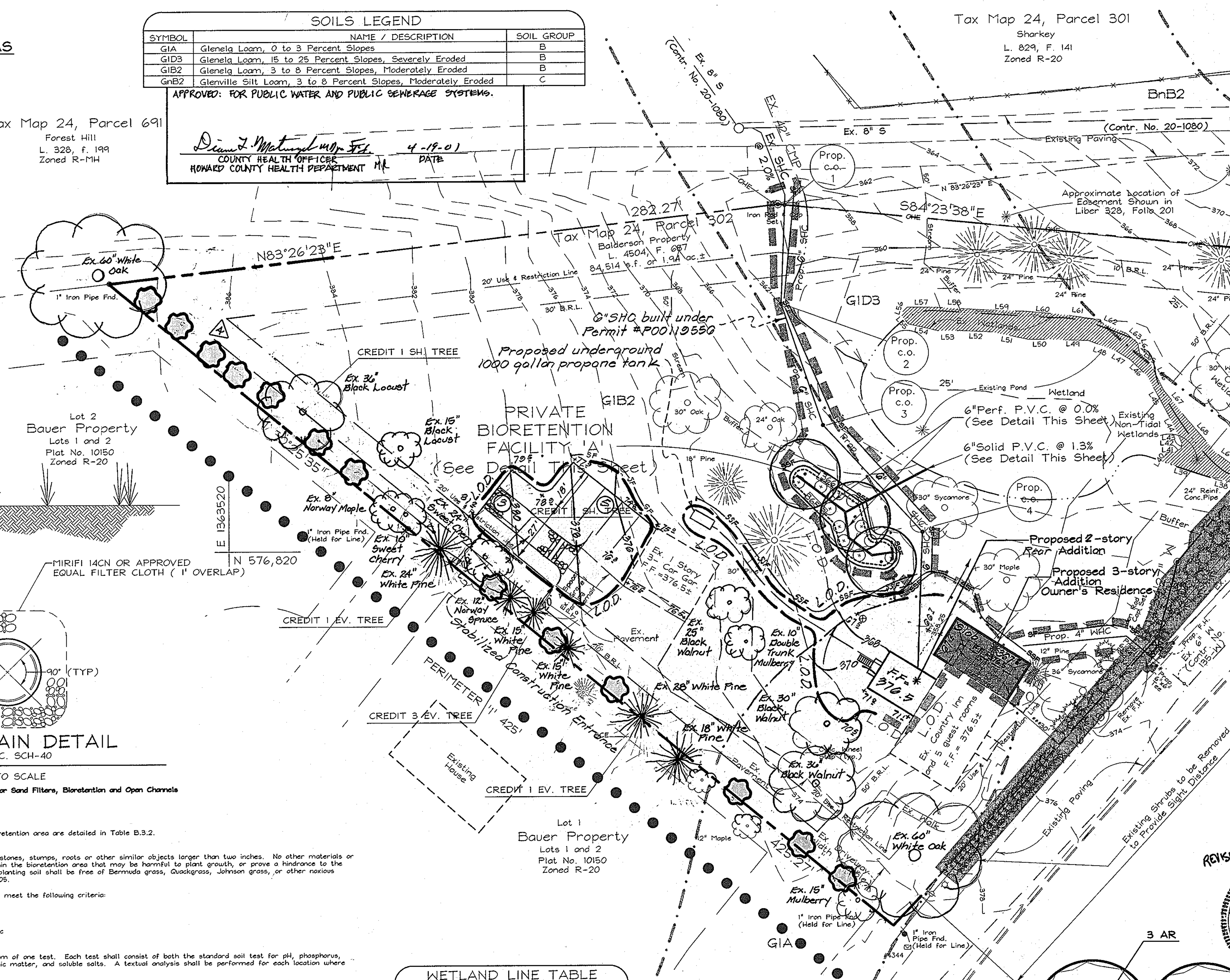
The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

SOILS LEGEND

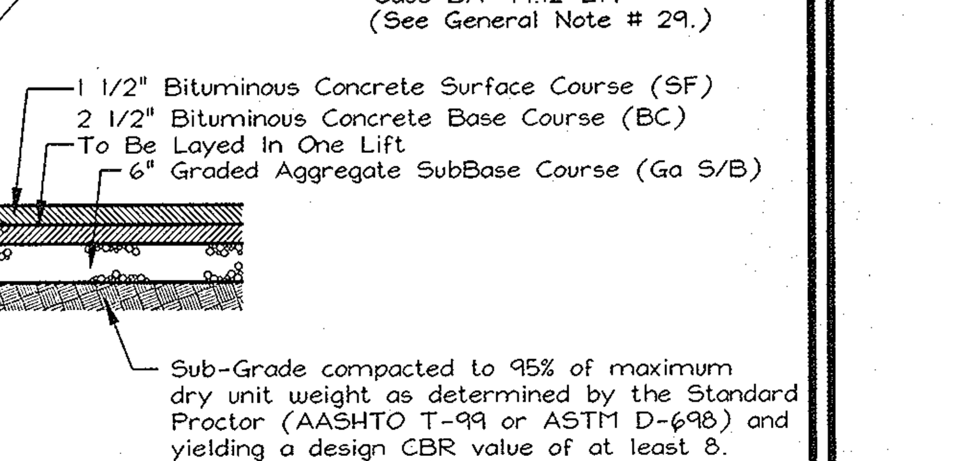
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GIA	Glenelg Loam, 0 to 3 Percent Slopes	B
GID3	Glenelg Loam, 15 to 25 Percent Slopes, Severely Eroded	B
GIB2	Glenelg Loam, 3 to 8 Percent Slopes, Moderately Eroded	B
GnB2	Glenville Silt Loam, 3 to 8 Percent Slopes, Moderately Eroded	C

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

Diane L. Matuszak MD, FS   4-19-01
COUNTY HEALTH OFFICER   DATE
HOWARD COUNTY HEALTH DEPARTMENT MR



**NOTE: Proposed Water within the Public Right-of Way will be Constructed by Advance Deposit Order (ADO).
***NOTE: 50' Structure Setback Reduced to 30' in Accordance with Case BA-99.12 E&V (See General Note # 29.)



PROPOSED TYPICAL PARKING LOT LIGHT DUTY PAVEMENT DETAIL

(Reference Howard County Std. Dtl. P-2)
n.t.s.

BIORETENTION PLANTING SCHEDULE

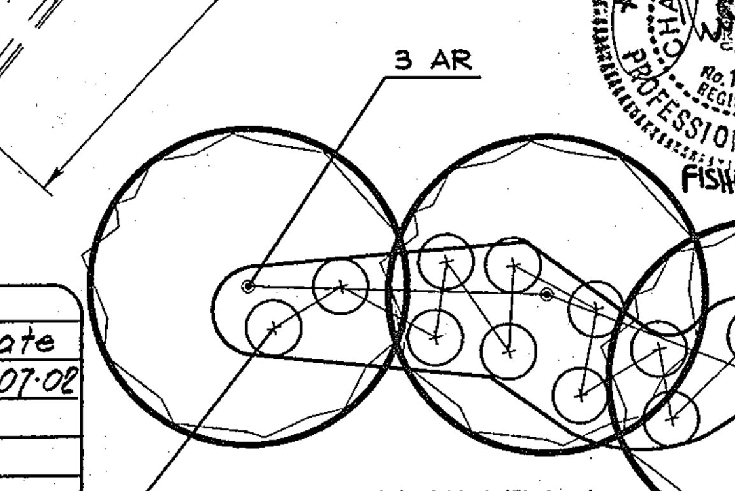
KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	ROOT
(large circle)	3	ACER RUBRUM/RED MAPLE	1 1/2"-2" CAL	B & B
(small circle)	11	ILEX VERTICILATA WINTERBERRY	18"-24" HEIGHT	CONT

REVISION 4 2/24/11
REVISION 1 2/25/02
REVISION 3 11/19/07

* LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
(symbol)	13	GIANT ARBORVITAE	6-7' HT.	B&B

* NOTE: This Schedule Applies to Perimeter Landscaping Only, See This Sheet Above for Bioretention Plantings. "This plan has been prepared in accordance with Section16.124 of the Howard County Landscape Manual. Financial surety for the required proposed 11 shade trees and 21 evergreen trees in the amount of $6,450 is part of the DPW, Developer's Agreement".

FISHER COLLINS & CARTER INC.



FACILITY A PLANTING DETAIL

NO SCALE

SCHEDULE A PERIMETER LANDSCAPE EDGE							
CATEGORY	ADJACENT TO ROADWAYS			ADJACENT TO PERIMETER PROPERTIES			
Perimeter/Frontage Designation Landscape Type				I C			
Linear Feet of Roadway Frontage/Perimeter				425			
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)				Yes 165	13 Shade Trees 8 Evergreens		
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)				N/A			
Number of Plants Required Shade Trees Evergreen Trees Shrubs				1:40(11) 1:20(21) 0(0)			
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 Substitution) Shrubs (10:1 Substitution) Describe Plant Substitution Credits Below if needed)				13 PROPOSED N/A	13 EXISTING & 8 EXISTING		

* NOTE: 1. The Type 'C' Buffer is Provided in Accordance with the Decision & Order BA-99-12E& V, Condition No. 3.
2. A Substitution for Two Shade Trees and 5 Evergreen Trees Has Been Made Due to Planting Constraints Along the Required Buffer at the Existing Driveway Location and per County Comments.

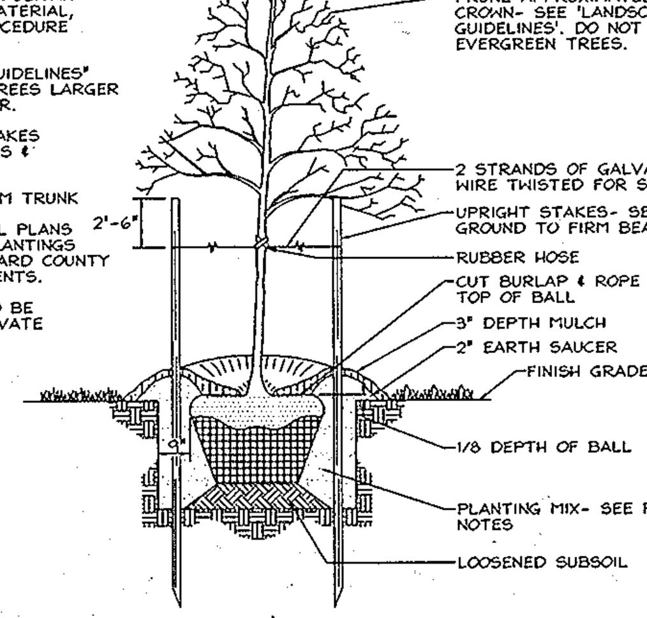
WETLAND LINE TABLE

LINE	LENGTH	BEARING
L36	3.16	S25°33'35"E
L37	5.14	S76°07'55"W
L38	20.27	N74°40'43"W
L39	17.94	N71°34'44"W
L40	4.38	N30°16'36"E
L41	3.47	N90°00'00"E
L42	2.97	N58°00'56"E
L43	2.23	N08°08'12"E
L44	9.31	N23°58'47"W
L45	22.83	N27°59'55"W
L46	9.64	N46°11'09"W
L47	7.08	N57°44'43"W
L48	12.47	N69°17'23"W
L49	17.67	N87°57'22"W
L50	7.57	N90°00'00"W
L51	15.46	N78°14'27"W
L52	13.95	N87°17'24"W
L53	8.83	N90°00'00"W
L54	12.62	N77°00'56"W
L55	4.56	N38°45'58"W
L56	3.71	N19°14'42"E
L57	13.61	S89°27'06"E
L58	22.10	S86°43'56"E
L59	15.46	S87°39'53"E
L60	13.93	S84°48'35"E
L61	14.00	S82°14'28"E
L62	15.60	S66°05'56"E
L63	6.26	S49°06'31"E
L64	4.14	S08°45'11"E
L65	5.37	S49°47'11"E
L66	13.67	S25°59'34"E
L67	15.34	S38°14'40"E
L68	19.00	S40°18'54"E
L69	11.72	S53°46'06"E
L70	8.73	S66°36'11"E

Revisions		
No.	Description	Date
1	Eliminated prop. cottage, sunroom & deck; added 4-sty rear addition & deck; added 8 parking spaces N.W. of existing garage; eliminated handicap parking & details; added 1000 gallon propane tank; moved 2 red maples & 2 white pines; revised L.O.D. & prop grading as necessary;	1.07.02
2	added stabilized construction entrance.	1.29.02

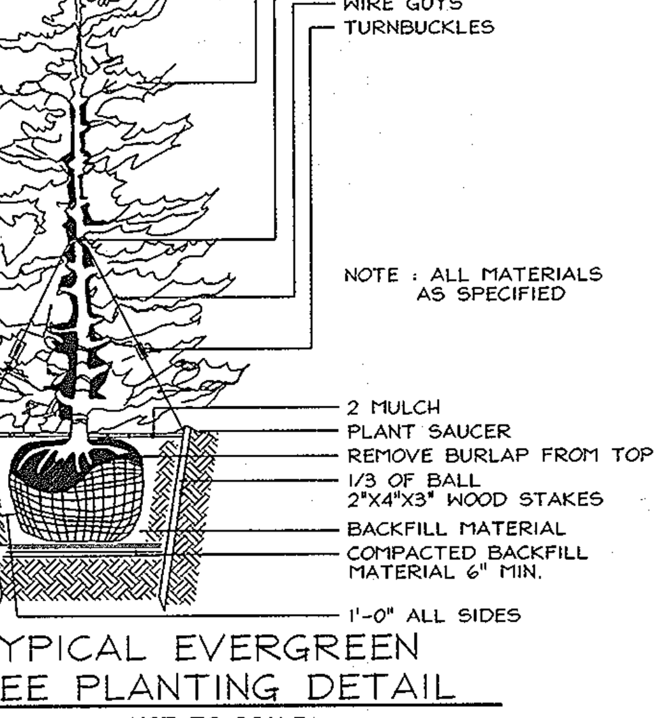
NOTES

1. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP MULCH 1" FROM TRUNK
5. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
6. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER   NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

No.	Revision	Date
3	Added two (2) story addition to the rear of the existing structure.	11.13.07

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

David A. Balderson   3-29-2001
(Owner's Name)   (Date)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR   4/26/01 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT   4/23/01 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION   4/6/01 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 OF ENGINEER   3/29/01 DATE
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 OF DEVELOPER   3-29-2001 DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA-NATURAL RESOURCES CONSERVATION SERVICE   DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

HOWARD SCD   DATE

ADDRESS CHART					
STREET ADDRESS					
4344 Columbia Road, Ellicott City, Md. 21042					
SUBDIVISION NAME N/A		SECTION/AREA N/A		PARCEL NUMBER 302	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
N/A	23	R-20	24	2nd	6023.01
WATER CODE : F08			SEWER CODE : 5751600		

SITE DEVELOPMENT & LANDSCAPE PLAN
WAYSIDE INN
BALDERSON RESIDENCE

TAX MAP 24   BLOCK 23   PARCEL 302, HO-144
2ND ELECTION DISTRICT   HOWARD COUNTY, MARYLAND
REF: HO-144

VOGEL & ASSOCIATES
ENGINEERS·SURVEYORS·PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

ROBERT H. VOGEL, P.E. No.16193

DESIGN BY: D.D.S. JR.
DRAWN BY: D.D.S. JR.
CHECKED BY: R.H.V.
DATE: March 29, 2001
SCALE: 1"=30'
W.O. NO.: 00-005

SDP-01-27

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