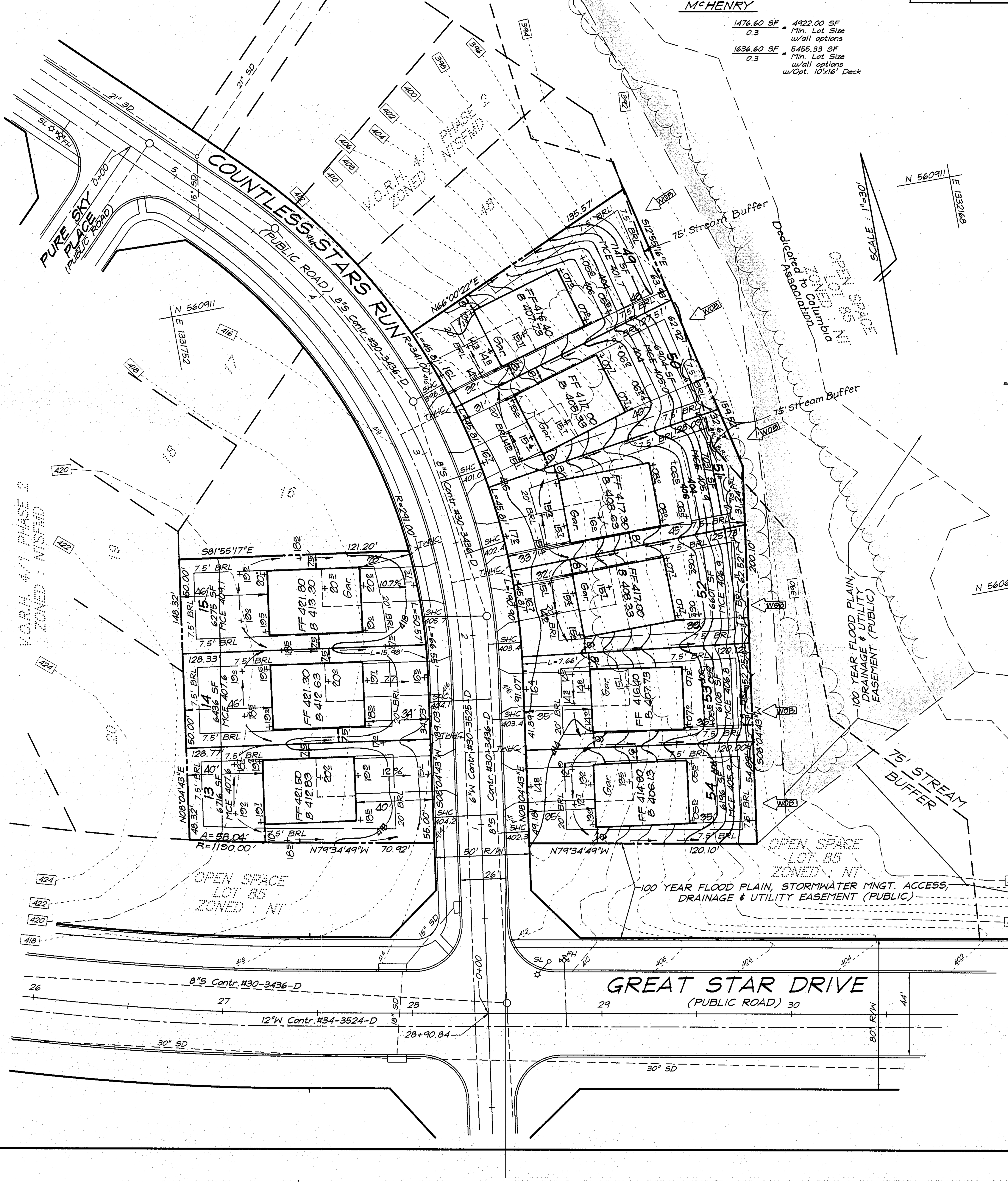
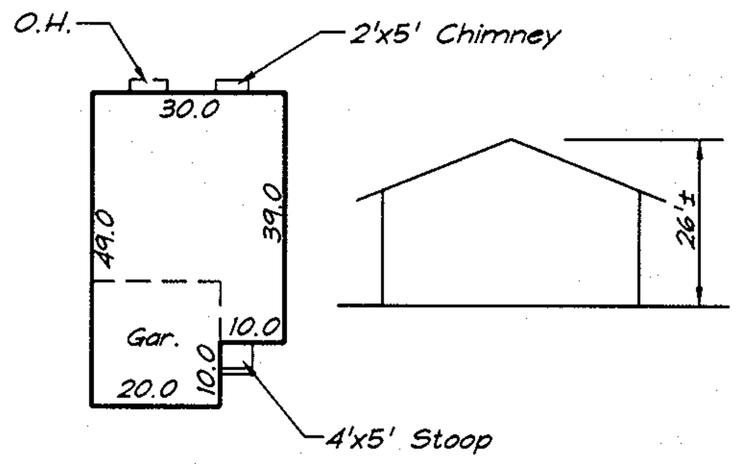




McHENRY

1476.60 SF / 0.3 = 4922.00 SF Min. Lot Size w/all options

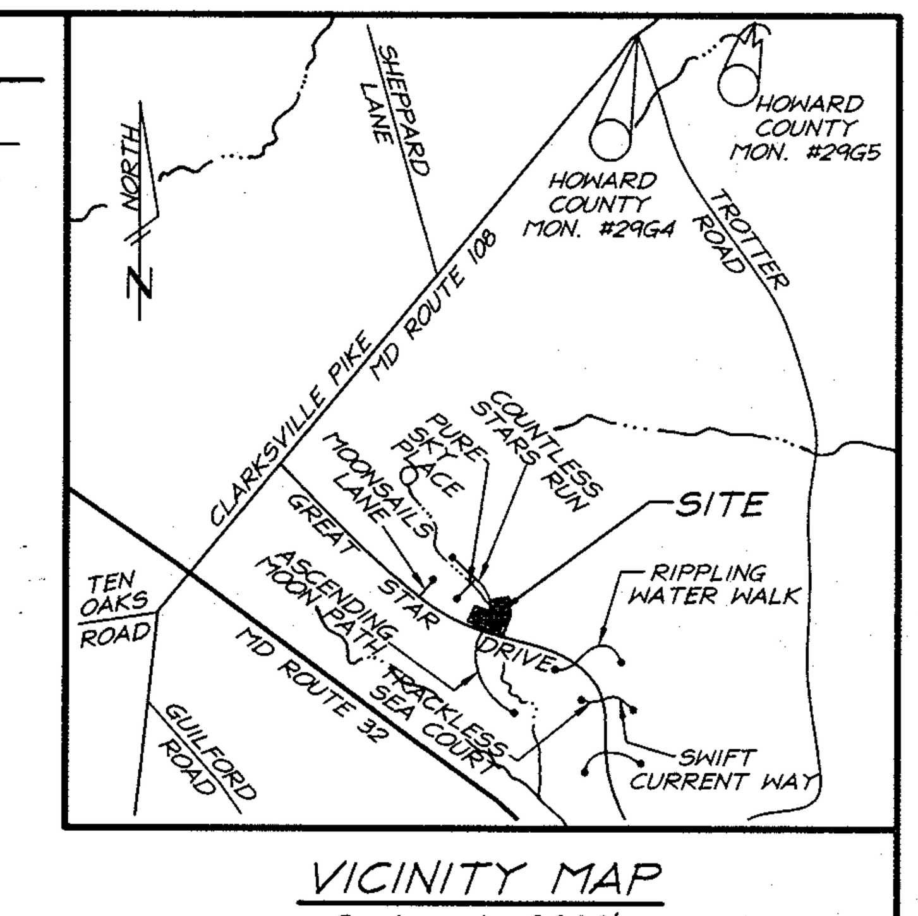
1636.60 SF / 0.3 = 5455.33 SF Min. Lot Size w/all options w/Opt. 10'x16' Deck

ADDRESS CHART

LOT NUMBER	STREET ADDRESS	
13	6001	COUNTLESS STARS RUN
14	6005	↓
15	6009	↓
49	6020	↓
50	6016	↓
51	6012	↓
52	6008	↓
53	6004	↓
54	6000	↓

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	348 (dashed)
PROPOSED CONTOUR	348 (solid)
DIRECTION OF DRAINAGE	←
WALK OUT BASEMENT	W.O.B.
SPOT ELEVATION	+ 78 4
STABILIZED CONSTRUCTION ENTRANCE	S.C.E.
EROSION CONTROL MATTING	ECM
SUPER SILT FENCE	SSF
SILT FENCE	SF
EARTH DIKE	ED (A-1)
LIMIT OF DISTURBED AREA	
TREE PROTECTION FENCE	
EXISTING TREES TO REMAIN	



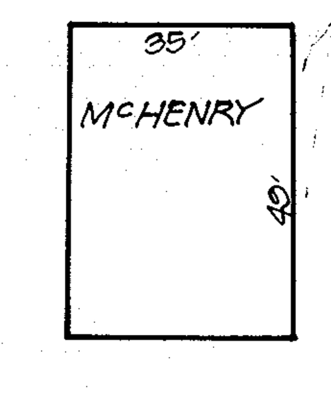
VICINITY MAP

Scale : 1:=2000'

BENCH MARKS

Ho. Co. Monument No. 29G4
Intersection of MD. Route 108 and Trotter Road

Ho. Co. Monument No. 29G5
an addtional 2,544± Northeasterly along MD. Route 108 away from Site



GENERIC BOX

GENERAL NOTES:

1. Subject property is zoned: NTSFMD per 10-18-93 Comprehensive Zoning Plan.
2. The total area included in this submission is : 1.364 Acres
3. The total number of lots included in this submission is: 9
4. Improvement to property : Single Family Detached
5. Shc elevations shown are located at the property line.
6. Department of Planning and Zoning reference file numbers are : S-93-21;P-95-10, F-96-123.
7. Utilities shown as existing are taken from approved Water and Sewer plans Contract #34-3525-D & #30-3436-D, and from approved Road Construction plans F-96-123, and actual field survey.
8. Any damage to county owned rights-of-way shall be corrected at the developer's expense.
9. All roadways are public and existing.
10. The existing topography was taken from Road Construction Plans F-96-123, prepared by Gutschick, Little & Weber, P.A. in January 1997.
11. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Control stations: 29G4 and 29G5
12. The contractor shall notify the Department of Public Works/ Division of Construction Inspection at (410) 313-1880 at least twenty-four (24) hours prior to the start of work.
13. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
14. For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R-6.03 & R-6.05.
15. In accordance with FDP-Phase 209 part VI, bay windows or chimneys not more than 10 feet in width may project not more than 4 feet into any setbacks; porches and decks may project not more than 3 feet into the front or rear setbacks. Wrap around porch cannot infringe into any required side yard setbacks. Exterior Basement Areaways may not encroach into any BRL.
16. Stormwater Management is provided per: F-96-123. Stormwater Management Quantity is by undersized culverts and valley Storage. Stormwater Management Quality will be provided by facilities at ES 101 and 301.

SHEET INDEX

DESCRIPTION	SHEET No.
SITE DEVELOPMENT PLAN	1 of 3
SEDIMENT AND EROSION CONTROL PLAN	2 and 3 of 3

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

SPECIAL NOTES:

This plan is for house siting and lot grading only. Improvements shown within the rights-of-way on this S.D.P. are not to be used forconstruction. For construction, see approved Road Construction Plans F-96-123 and/or approved Water and Sewer Plans Contract #34-3525-D & #30-3436-D.

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION (signature)	DATE 6/18/98
CHIEF, DIVISION OF LAND DEVELOPMENT Cindy Hamilton	DATE 6/19/98
DIRECTOR (signature)	DATE 6/22/98

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS			
COLUMBIA VILLAGE OF RIVER HILL	4/1	13 THRU 15 AND 49 THRU 54			
PLAT NO. 12850	BLOCK NO. 7	ZONE NTSFMD	TAX MAP NO. 35	ELECTION DIST. 5th	CENSUS TRACT 6055
WATER CODE 1-10			SEWER CODE 6653000		

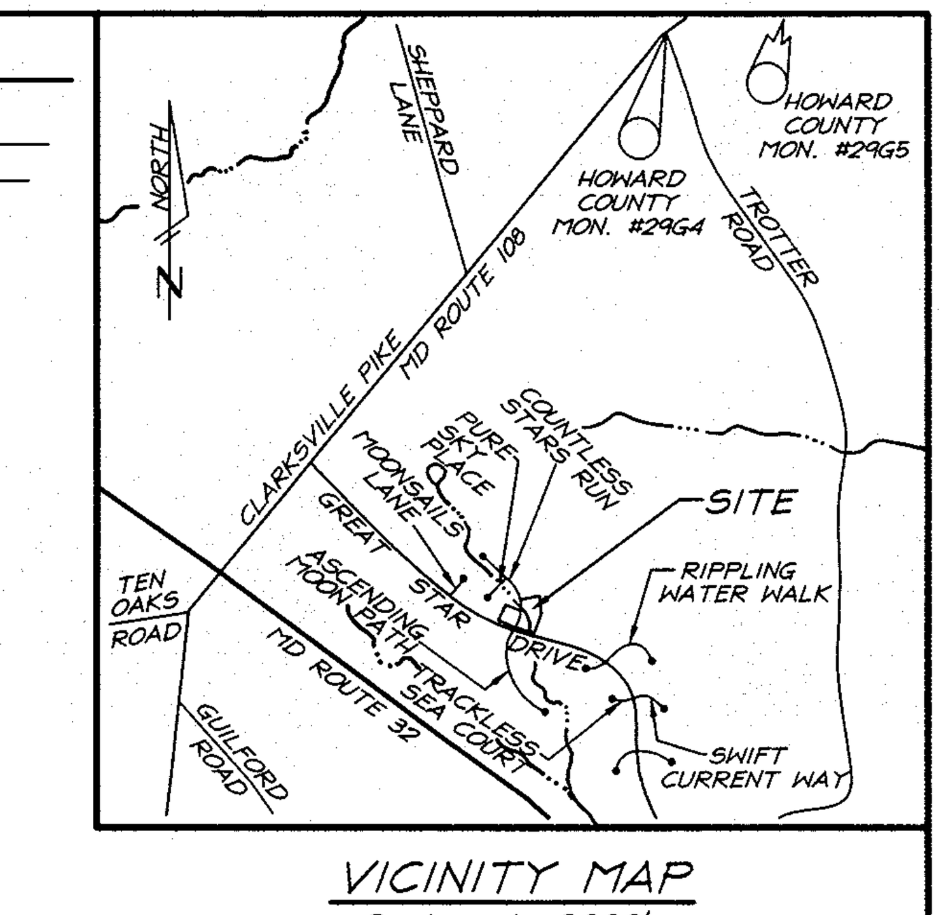
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED BAL	SITE DEVELOPMENT PLAN LOTS 13 THRU 15 AND 49 THRU 54 **COLUMBIA** **VILLAGE OF RIVER HILL** SECTION 4 AREA 1 PHASE 2 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN BAL PS		DRAWING 1 of 3
CHECKED JME		JOB NO. 98-012
DATE 5.8.98	FOR : GOODIER BUILDERS, Inc. 5054 Dorsey Hall Drive, Suite 205 Ellicott City, Maryland 21042	FILE NO. 98-012x

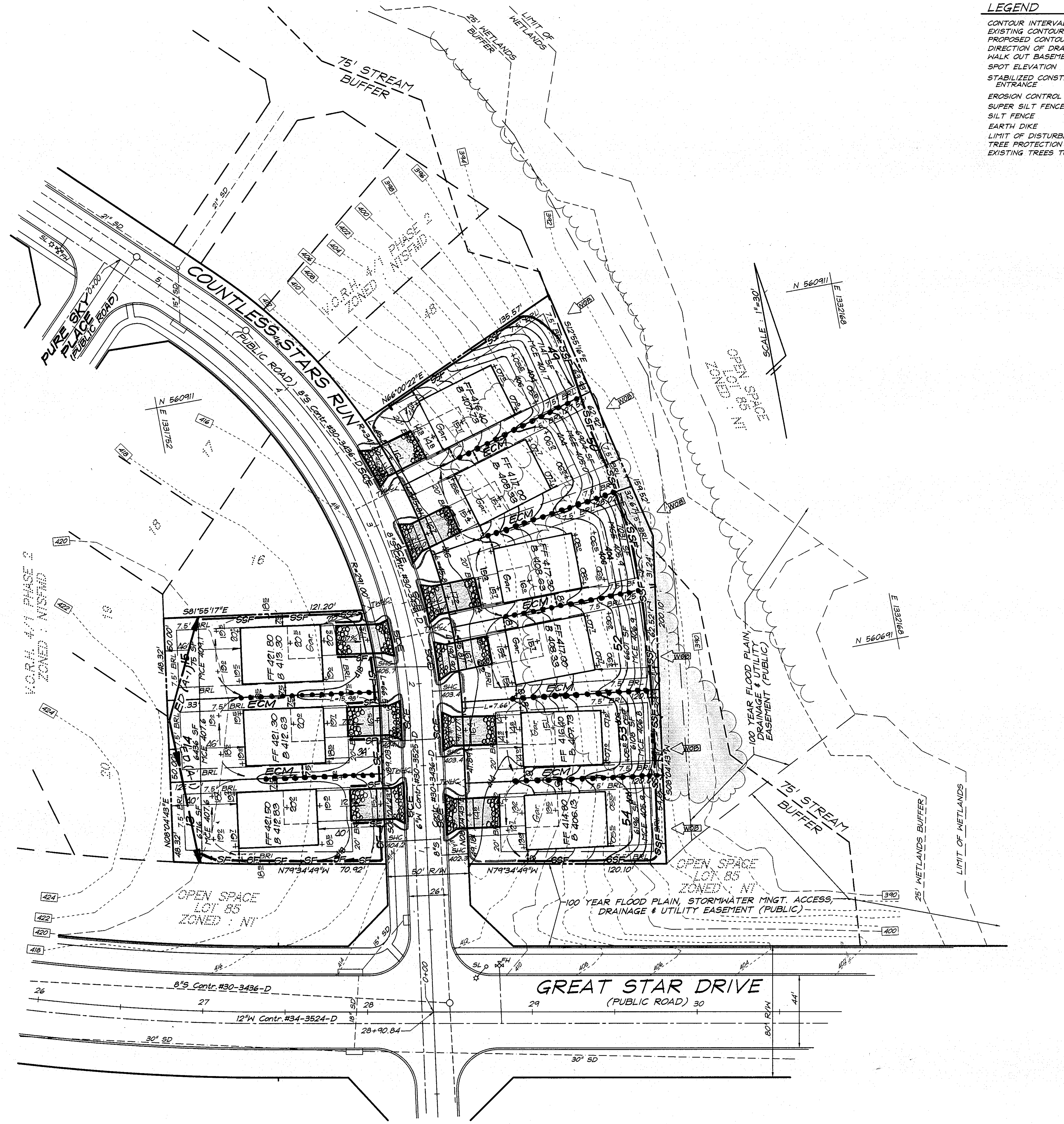
SDP 98-134

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	348
PROPOSED CONTOUR	348
DIRECTION OF DRAINAGE	
WALK OUT BASEMENT	W.O.B.
SPOT ELEVATION	+ 78 4
STABILIZED CONSTRUCTION ENTRANCE	S.C.E.
EROSION CONTROL MATTING	ECM
SUPER SILT FENCE	SSF — SSF — SSF
SILT FENCE	SF — SF — SF
EARTH DIKE	ED (A-1)
LIMIT OF DISTURBED AREA	
TREE PROTECTION FENCE	
EXISTING TREES TO REMAIN	



VICINITY MAP
Scale : 1:=2000'



DEVELOPER'S/BUILDERS CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. 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 Howard Soil Conservation District or their authorized agencies, as are deemed necessary."

Robert C Goodier — 5-7-98
Signature of Developer/Builder — Date

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

G. NELSON CLARK — 5-6-98
Date

STATE OF MARYLAND — G. NELSON CLARK

Reviewed for HOWARD S.C.D. and meets Technical Requirements.
6/16/98
Signature — Date
U.S. Natural Resources Conservation Service

This Development Plan is Approved For Soil Erosion and Sediment Control By The Howard Soil Conservation District
6/14/98
Approved — Date

APPROVED: DEPARTMENT OF PLANNING & ZONING

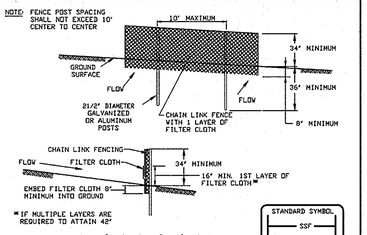
CHIEF, DEVELOPMENT ENGINEERING DIVISION	6/18/98 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	6/19/98 DATE
DIRECTOR	6/22/98 DATE

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD-21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED TD	SEDIMENT & EROSION CONTROL PLAN LOTS 13 THRU 15 AND 49 THRU 54 **COLUMBIA** **VILLAGE OF RIVER HILL** SECTION 4 AREA 1 PHASE 2 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN BAL		DRAWING 2 of 3
CHECKED TD		JOB NO. 98-012
DATE 5-8-98	FOR : GOODIER BUILDERS, Inc. 5054 Dorsey Hall Drive, Suite 205 Ellicott City, Maryland 21042	FILE NO. 98-012SE

SDP 98-134

DETAIL 33 – SUPER SILT FENCE



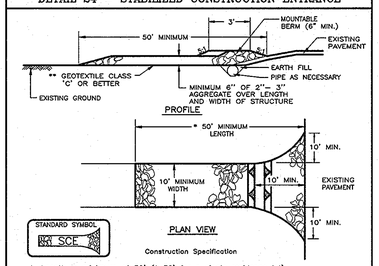
Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' Fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of Filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H – 26 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE

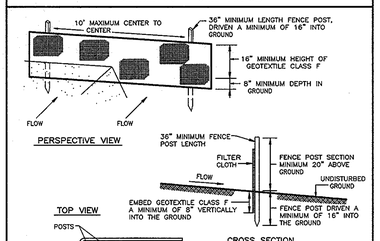


Construction Specification

1. Length – minimum of 50' (* 30' for a single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. ** The plan approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 – SILT FENCE



JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

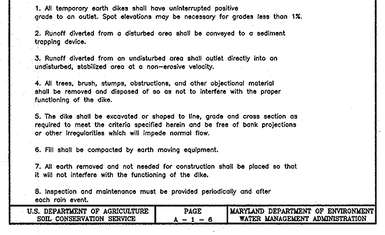
1. Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 2" x 2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/minute (max.)	Test: MSMT 322
Filtering Eggeclency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 15 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 – EARTH DIKE



	DIKE A	DIKE B
a–DIKE HEIGHT	18"	30"
b–DIKE WIDTH	24"	36"
c–FLOW WIDTH	4'	6'
d–FLOW DEPTH	12"	24"

FLOW CHANNEL STABILIZATION GRADE 0.5% MIN. 10% MAX.

Construction Specifications

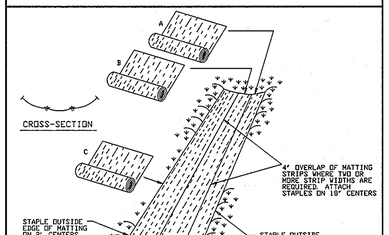
1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" – 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non–erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A – 1 – 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 – EROSION CONTROL MATTING



Construction Specifications

1. Key–in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross–section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4', shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed–in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 28 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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/1000 sq.ft.) and 600 lbs per acre 10–10–10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30–0–0 urea–form 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 10–20–20 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods 1March ! 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) the 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.

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 1March 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 1May 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.

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 adequate long–term 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 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 larger than 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, obtain test results showing that lime and fertilizer amendments required to raise the pH to 6.5 or higher.

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 phytotoxic residues.

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.

SEDIMENT AND EROSION CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313–1855).
2. All vegetative 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 SPECS. 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 stuctures, 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 perimeters in accordance with Vol.1, Chapter 7, of the 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 seedings, sod, temporary seeding and mulching (Sec 0.0). Temporary stabilization with mulch alone can only 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 of Site:	1.36 Acres
Area Disturbed:	1.36 Acres
Area to be roofed or paved:	0.49 Acres
Area to be vegetatively stabilized:	0.86 Acres
Total Cut:	1105 CY
Total Fill:	1253 CY
Offsite Waste/Borrow Area Location:	*

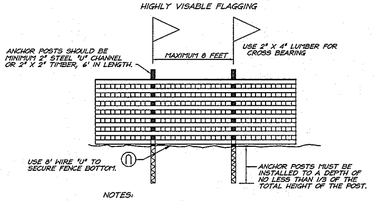
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. On all sites with disturbed 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.
12. The total amount of silt fence = 370 LF
13. The total amount of super silt fence = 550 LF
14. The total amount of earth dike = 195 LF

* It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	7
3. Install sediment and erosion control devices and stabilize.	14
4. Excavate for foundations, rough grade and temporarily stabilize.	30
5. Construct structures, sidewalks and driveways.	60
6. Final grade, Install Erosion Control matting and stabilize in accordance with standards and specifications.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

* Delay construction of houses on lots: N/A



NOTES:
1. Forest protection device only.
2. Retention area will be set as part of the review process.
3. Boundaries of retention area should be staked and flagged prior to installing device.
4. Root damage should be avoided.
5. Retention signage should be used.
6. Device should be maintained throughout construction.

BLAZE ORANGE PLASTIC MESH
TYPICAL TREE PROTECTION FENCE DETAIL
NO SCALE

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 6/18/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 6/19/98
DIRECTOR	DATE 6/22/98

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature Date 6/16/98
U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Approved 6/16/98

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

NAME 5-6-98 DATE

ENGINEER'S CERTIFICATE

I hereby 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.

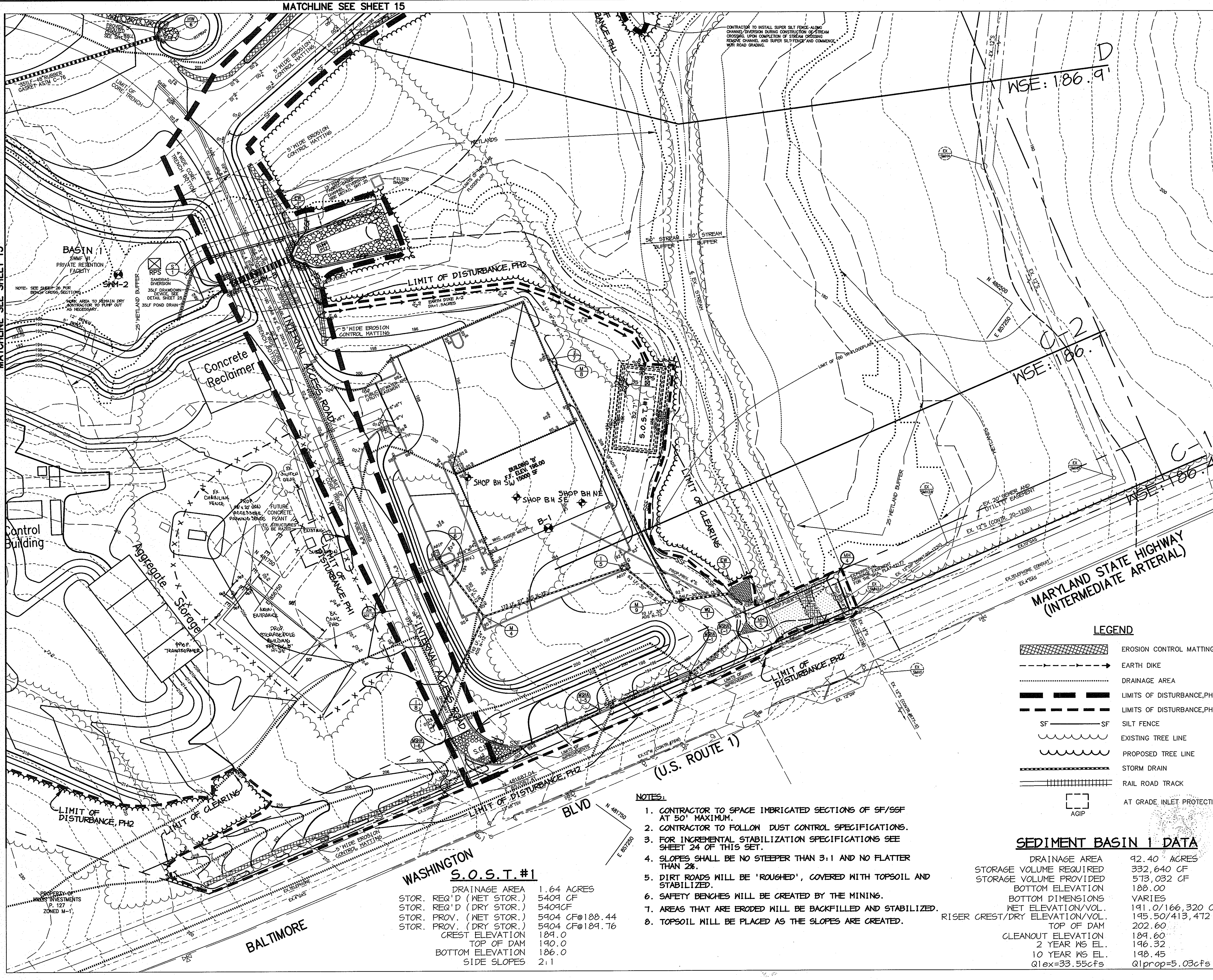
G. NELSON CLARK 5-6-98 DATE

STATE OF MARYLAND G. NELSON CLARK No. 10193 REGISTERED PROFESSIONAL ENGINEER

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381–7500 BALT. • (301) 621–8100 WASH.

DESIGNED TD	SEDIMENT AND EROSION CONTROL PLAN LOTS 13 THRU 15 AND 49 THRU 54 COLUMBIA VILLAGE OF RIVER HILL SECTION 4 AREA 1 PHASE 2 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE No Scale
DRAWN PS		DRAWING 3 of 3
CHECKED TD		JOB NO. 98–012
DATE 5.8.98	FOR : GOODIER BUILDERS, Inc. 5064 Dorsey Hall Drive, Suite 205 Ellicott City Maryland 21042	FILE NO. 98–012SE

SDP 98-134



LEGEND

(hatched)	EROSION CONTROL MATTING
- - -▸- - -▸- - -▸	EARTH DIKE
....	DRAINAGE AREA
▬ ▬ ▬	LIMITS OF DISTURBANCE,PH1
▬ ▬ ▬ ▬ ▬	LIMITS OF DISTURBANCE,PH2
SF ——— SF	SILT FENCE
(scalloped)	EXISTING TREE LINE
(scalloped)	PROPOSED TREE LINE
(chain)	STORM DRAIN
(ticks)	RAIL ROAD TRACK
AGIP	AT GRADE INLET PROTECTION

NOTES:

1. CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

S.O.S.T.#1

DRAINAGE AREA	1.64 ACRES
STOR. REQ'D (WET STOR.)	5409 CF
STOR. REQ'D (DRY STOR.)	5409CF
STOR. PROV. (WET STOR.)	5904 CF@188.44
STOR. PROV. (DRY STOR.)	5904 CF@189.76
CREST ELEVATION	189.0
TOP OF DAM	190.0
BOTTOM ELEVATION	186.0
SIDE SLOPES	2:1

SEDIMENT BASIN 1 DATA

DRAINAGE AREA	92.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	188.00
BOTTOM DIMENSIONS	VARIES
WET ELEVATION/VOL.	191.0/166,320 CF
RISER CREST/DRY ELEVATION/VOL.	195.50/413,472 CF
TOP OF DAM	202.60
CLEANOUT ELEVATION	189.60
2 YEAR WS EL.	196.32
10 YEAR WS EL.	198.45
Q1ex=33.55cfs	Q1prop=5.03cfs

Dennis E. Knight 7/8/08

STATE OF MARYLAND SEAN CHARLES ISGAN NO. 17002 REGISTERED PROFESSIONAL ENGINEER 7/31/07

DATE	NO.	REVISION
7-8-08	4	ADDED POLE BLDG + SUBSTATION + FENCE
7-31-07	3	ADDED SHOP BOREHOLES

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

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

Christy J Reid 1.30.04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers /CS 2/17/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

2/12/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

3/15/04
DIRECTOR DATE

2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton HB 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION
6-15-05	2	CHANGED SHEET NO.
1-6-05	1	CHANGED SHEET NO.

DEVELOPER/OWNER:

(OWNER)	(DEVELOPER)
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
P.O. BOX 850	P.O. BOX 850
LAUREL, MD 20725	LAUREL, MD 20725
410.792.7234	410.792.7234

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1.30.04
DATE

STATE OF MARYLAND CHRISTOPHER J. REID NO. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY :	MAD
CHECKED BY :	C.J.R.
PROJECT NO :	99092/ SEDIM4.DWG
DATE :	JANUARY 29, 2004
SCALE :	1" = 50'
DRAWING NO.	15 OF 51

SDP-99-134

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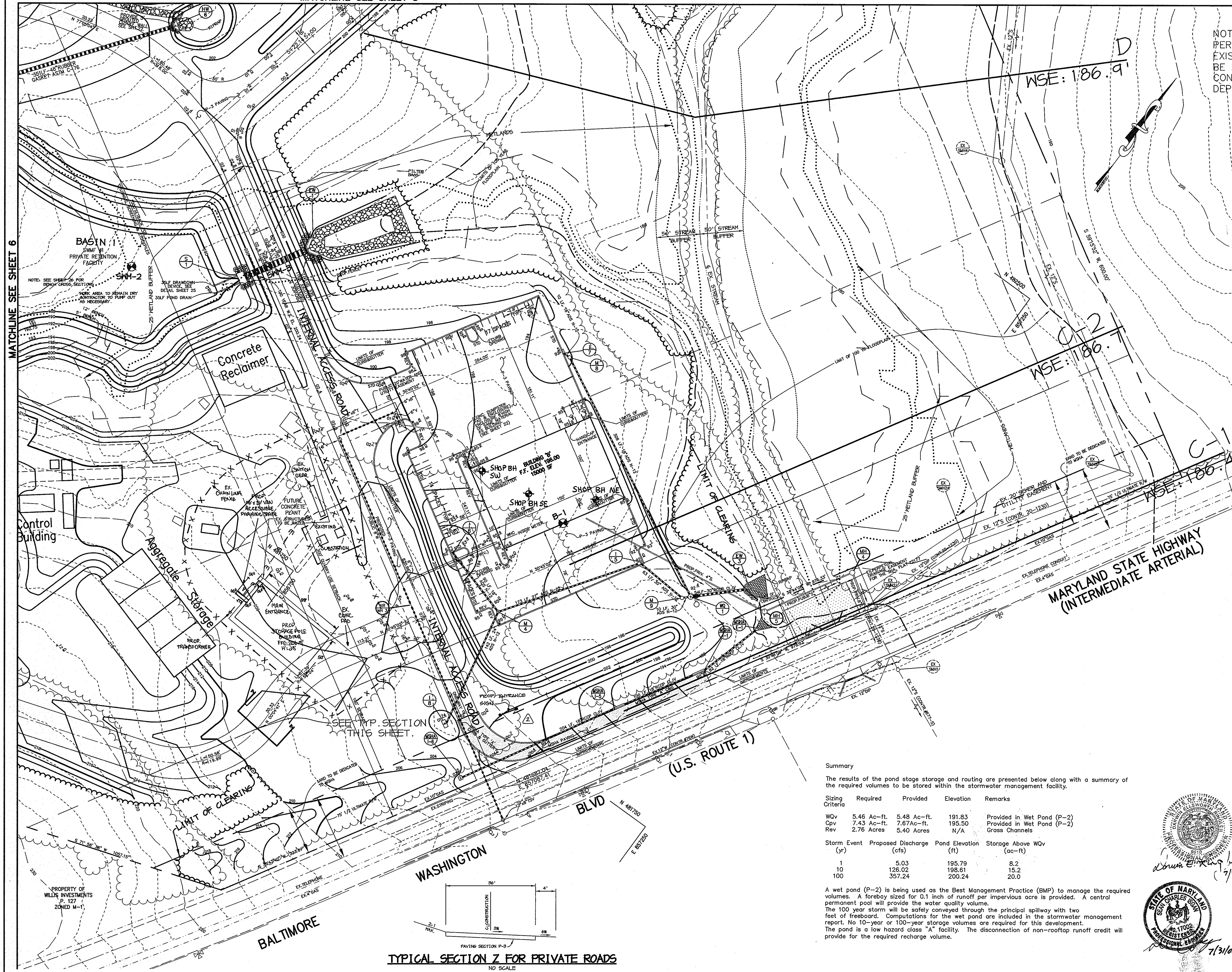

NOTE: EXISTING WELL ABANDONMENTS SHOULD BE PERFORMED BY LICENSED WELL DRILLERS. EXISTING SEPTIC SYSTEM ABANDONMENTS SHOULD BE PERFORMED BY PRIVATE CONTRACTORS. CONTACT HOWARD COUNTY HEALTH DEPARTMENT TO COORDINATE ABANDONMENT.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EASEMENT
- PROPOSED FENCE
- RIP RAP OUTLET PROTECTION
- LIMIT OF 100-YR FLOODPLAIN
- 10' BENCH
- 50'STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM
- P-3 PAVING
- MSHA PAVING

Summary

The results of the pond stage storage and routing are presented below along with a summary of the required volumes to be stored within the stormwater management facility.

Sizing Criteria	Required	Provided	Elevation	Remarks
WQv	5.46 Ac-ft.	5.48 Ac-ft.	191.83	Provided in Wet Pond (P-2)
Cpv	7.43 Ac-ft.	7.67Ac-ft.	195.50	Provided in Wet Pond (P-2)
Rev	2.76 Acres	5.40 Acres	N/A	Grass Channels

Storm Event (yr)	Proposed Discharge (cfs)	Pond Elevation (ft)	Storage Above WQv (ac-ft)
1	5.03	195.79	8.2
10	126.02	198.61	15.2
100	357.24	200.24	20.0

A wet pond (P-2) is being used as the Best Management Practice (BMP) to manage the required volumes. A forebay sized for 0.1 inch of runoff per impervious acre is provided. A central permanent pool will provide the water quality volume.
The 100 year storm will be safely conveyed through the principal spillway with two feet of freeboard. Computations for the wet pond are included in the stormwater management report. No 10-year or 100-year storage volumes are required for this development.
The pond is a low hazard class "A" facility. The disconnection of non-rooftop runoff credit will provide for the required recharge volume.

DATE	NO.	REVISION
7-8-08	4	ADDED POLE BLDG + SUBSTATION + FENCE
7-31-07	3	ADDED SHOP BOREHOLES
6-15-05	2	ADDED ENTRANCE SIGN, CHANGED SHEET NUMBER
1-6-05	1	CHANGED SHEET NO.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 3/15/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/20/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/11/04

DEVELOPER/OWNER:

(OWNER)
CHASE LIMITED PARTNERSHIP
P.O. BOX 850
LAUREL, MD 20725
410.792.7234

(DEVELOPER)
CHASE MINING LLC
P.O. BOX 850
LAUREL, MD 20725
410.792.7234

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

STATE OF MARYLAND — DARWIN ELLSWORTH RINGLER — 9610 — PROFESSIONAL ENGINEER — 7/8/08

STATE OF MARYLAND — SEAN CHARLES ISGAN — NO. 17002 — REGISTERED PROFESSIONAL ENGINEER — 7/31/07

1.30.04
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY : MAD
CHECKED BY : C.J.R.
PROJECT NO : 99092/ SDP-7.DWG
DATE : JANUARY 29, 2004
SCALE : 1" = 50'
DRAWING NO. 7 OF 51

SDP-99-134

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