

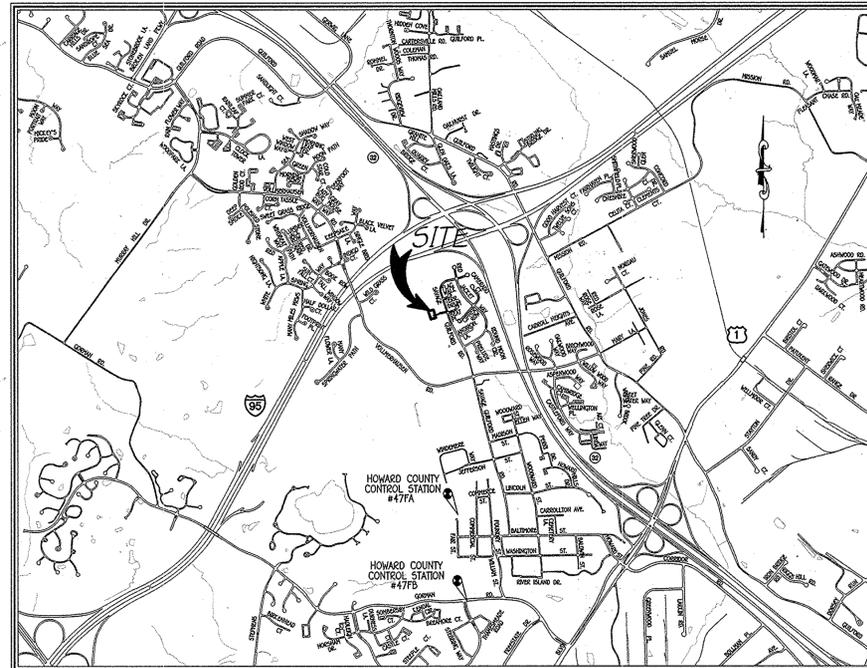
GENERAL NOTES

- 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 THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SUBJECT PROPERTY ZONED: R-20 PER THE 10/6/13 COMPREHENSIVE ZONING PLAN.
- THIS PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT AND THE COMP-LITE ZONING REGULATIONS DATED JULY 28, 2006.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK (APPLIES TO RESIDENTIAL 50FS).
- AS DETERMINED BY ECP-13-009, THERE ARE NO WETLANDS, STREAMS, 100 YEAR FLOODPLAIN, FOREST OR ASSOCIATED ENVIRONMENTAL BUFFERS LOCATED ON THIS SITE.
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE H.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF 1+1 ROOFTOP DISCONNECTION CREDITS AND 1+2 NON-ROOFTOP DISCONNECTION CREDITS. THESE PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED IN ACCORDANCE WITH INDIVIDUAL DECLARATION OF COVENANTS.
- TOPOGRAPHIC AND BOUNDARY INFORMATION SHOWN HEREON IS TAKEN FROM A FIELD SURVEY PREPARED BY FISHER COLLINS AND CARTER INC. ON OR ABOUT NOVEMBER 8, 2013.
- THIS PROPERTY IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS AS PER SECTION 16.1202(b)(2)(i) WITH THE SUBMISSION OF A DECLARATION OF INTENT. THE TOTAL CUTTING, CLEARING OR GRADING OF FOREST RESOURCES ON ON THIS PROPERTY IS 0.00 ACRES.
- AS DETERMINED ON ECP-13-009 NO FOREST STAND DELINEATION IS REQUIRED.
- WAIVER PETITION WP-12-025 WAS APPROVED 11/17/2011. THE DESCRIPTION AND ASSOCIATED EXHIBIT RECORDED IN THE DEEDS OF THE REALIGNED PARCELS BOUNDARIES AND ASSOCIATED EXHIBIT MUST BE IDENTICAL TO THE WAIVER PETITION EXHIBIT. THE ADJONDER DEED MUST BE RECORDED WITHIN 90 DAYS OF APPROVAL OF THE WAIVER (ON OR BEFORE FEBRUARY 7, 2012). RECORD A PRIVATE INGRESS/EGRESS EASEMENT TO PARCEL 8B-P2 AS SHOWN ON THE WAIVER EXHIBIT AS PART OF THE DEED PROCESS. IN ADDITION, IT IS RECOMMENDED TO RECORD A PRIVATE USE-IN-COMMON MAINTENANCE AGREEMENT BETWEEN PARCEL 28B-P2 AND PARCEL 311. THE INGRESS/EGRESS EASEMENT MUST BE RECORDED WITHIN 90 DAYS OF APPROVAL OF THE WAIVER (ON OR BEFORE FEBRUARY 7, 2012), ALONG WITH THE RECORDING OF THE ADJONDER DEEDS. A FULLY EXECUTED AND RECORDED COPY OF ALL DEEDS, EASEMENTS, AND AGREEMENTS, WITH THE APPLICABLE LIBER AND FOLIO(S) REFERENCED, MUST BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING WITHIN 30 DAYS AFTER THEIR RECORDATION (ON OR BEFORE MARCH 7, 2012). IT IS RECOMMENDED THAT FUTURE DEVELOPMENT PLANS FOR PARCEL 28B-P2 SEEK AN ALTERNATIVE ACCESS TO THE PARCEL, PERHAPS THROUGH A SHARED DRIVEWAY WITH EITHER PARCEL 30 OR AN EASEMENT RECORDED OVER PARCEL 28B-P1 AND PARCEL 412. IF CONDITIONS 1-4 ARE NOT MET WITHIN DATES SPECIFIED, THEN THE COUNTY WILL NOT RECOGNIZE THE RECONFIGURED PARCEL BOUNDARIES WITHOUT A REPROCESSING/RECONSIDERATION OF THE WAIVER REQUEST.
- THERE ARE NO CELESTIAL OR HISTORIC FEATURES ARE LOCATED ON THIS SITE.
- THE PROPERTY SHOWN IS LOCATED IN THE METROPOLITAN DISTRICT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 6 SMALL DECIDUOUS TREES AND 12 EVERGREEN TREES WILL BE POSTED AS PART OF THE GRADING PERMIT PACKAGE IN THE AMOUNT OF \$3,600.00.
- B.C.L. DENOTES BUILDING RESTRICTION LINE.
- PUBLIC WATER AND SEWER WILL BE PROVIDED TO THE SITE BY CONTRACT NO. 3-W AND CONTRACT NO. 12B-5 RESPECTIVELY.
- SERVICE CONNECTIONS
 - A. WHC: 1" W/ 1" OUTSIDE METER SETTING
 - B. SHC: 4" PVC
 - C. GONGER PUMP DISCHARGE: 1 1/2" HOPE LOW PRESSURE SEWER
- PARCEL #2 WAS CREATED BY DEED LIBER 13779, FOLIO 317, DATED JANUARY 26, 2012 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.
- THE USE-IN-COMMON MAINTENANCE AGREEMENT IS RECORDED BY DEED LIBER 13779, AND FOLIO 332, IS DATED JANUARY 26, 2012 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER OF CIVILITY SEWER SERVICE AND THE USE OF A PRIVATE ON-SITE PUMP AND PRIVATE LOW PRESSURE SEWER, WHICH WAS APPROVED ON AUGUST 2, 2013.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN, SEDIMENT & EROSION CONTROL PLAN AND SOILS MAP
3	SEDIMENT/EROSION CONTROL PLAN NOTES AND DETAILS

SITE DEVELOPMENT PLAN CHIU PROPERTY PARCEL 2

TAX MAP NO.: 42 GRID NO.: 22 PARCEL NO.: 28B
ZONED: R-20
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



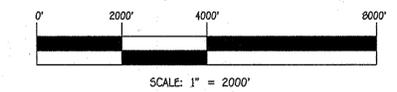
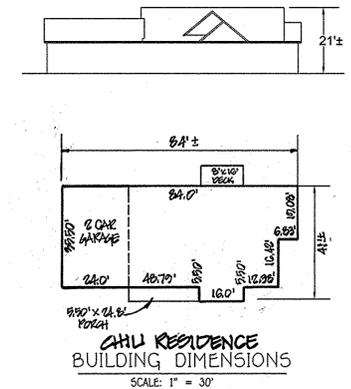
VICINITY MAP
SCALE: 1" = 2000'

REFERENCED
ADC MAP 40 E-2

HOWARD COUNTY GEODETIC CONTROL STATIONS
477B N 534,295.4007 E 1,361,228.6173
477A N 536,345.2058 E 1,361,008.5053

SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF PARCEL #2 = 0.559 AC.*
- B. TOTAL AREA OF THIS SUBMISSION = 0.559 AC.*
- C. LIMIT OF DISTURBED AREA = 0.4438 AC.*
- D. PRESENT ZONING DESIGNATION = R-20
- E. PROPOSED USE: SINGLE FAMILY DETACHED
- F. FLOOR SPACE ON EACH LEVEL OF BUILDING: N/A
- H. TOTAL NUMBER OF UNITS: 1 UNIT
- J. TOTAL NUMBER OF PARKING SPACES REQUIRED = 2 SPACES
- K. TOTAL NUMBER OF PARKING SPACES PROVIDED = 3 CAR GARAGE
- L. OPEN SPACE ON SITE: N/A
- M. BUILDING COVERAGE OF SITE: N/A
- O. PREVIOUS HOWARD COUNTY FILED: ECP-13-009.
- P. TOTAL AREA OF FLOODPLAIN: 0.00 AC.*
- Q. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.000 AC.*
- R. AREA OF WETLANDS = 0.00 AC.*
- S. AREA OF FOREST = 0.00 AC.*
- T. IMPERVIOUS AREA = 0.10 AC.*
- U. AREA OF ERODIBLE SOILS = 0.559 AC.*



PROFESSIONAL CERTIFICATION

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date: JULY 14, 2015.

Frank J. Manalansan II 2/27/14 DATE
FRANK J. MANALANSAN II

OWNER/BUILDER/DEVELOPER

HARRY Y. & MARY C. CHIU
SAVAGE GUILFORD ROAD
JESSUP, MARYLAND 20794
TEL. # (301) 498-3083

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kevin Schuler 3-20-14 Date
Chief, Division of Land Development

Paul Church 3-12-14 Date
Chief, Development Engineering Division #8

David A. Long 2/24/14 Date
Director - Department of Planning and Zoning

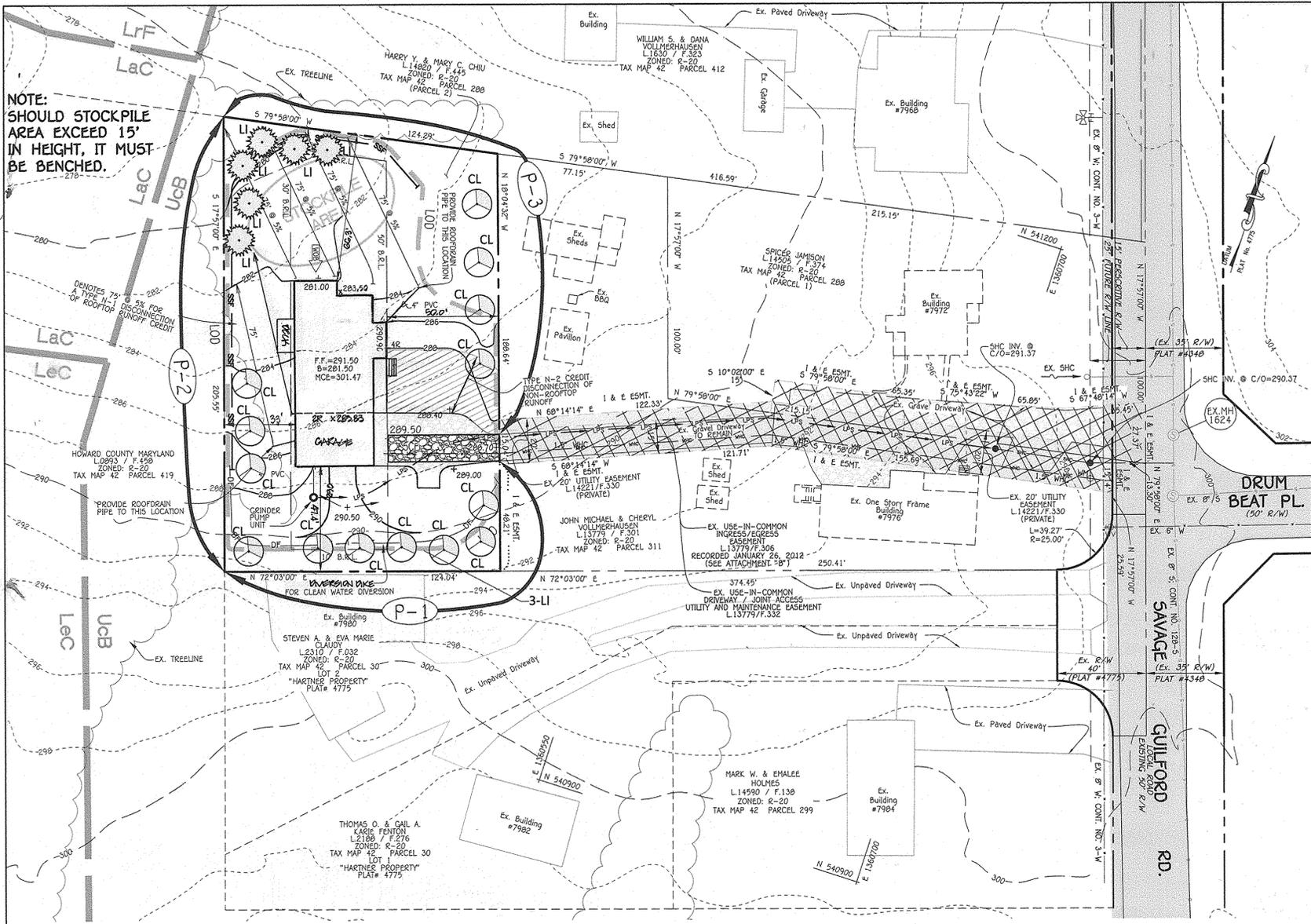
NO.	REVISION	DATE
1	REVISED HOME FOOTPRINT & ASSOCIATED GRADING	2/24/14

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14820/445	22	R-20	42	SIXTH	606902

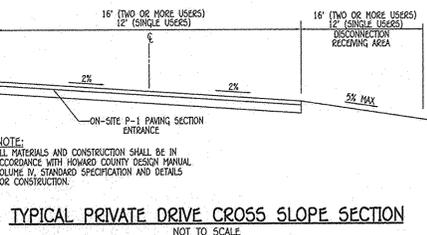
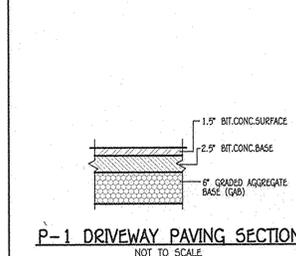
TITLE SHEET

CHIU PROPERTY PARCEL 2

7974 SAVAGE GUILFORD ROAD
TAX MAP NO.: 42 GRID NO.: 22 PARCEL NO.: 28B
ZONED: R-20
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: SEPTEMBER 27, 2013
SHEET 1 OF 3



NOTE:
SHOULD STOCKPILE AREA EXCEED 15' IN HEIGHT, IT MUST BE BENCHED.



OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

SOIL	NAME	CLASS	K _w
UcB	URBAN LAND, CHILLUM-BELTSVILLE COMPLEX, 0 TO 5% SLOPES	D	.37
LcC	LEGORE SILT LOAM, 0 TO 15% SLOPES	B	.02
LeB	LEGORE SILT LOAM, 3 TO 8% SLOPES, STONY	B	.02
LcC	LEGORE SILT LOAM, 0 TO 15% SLOPES, STONY	B	.02
LrF	LEGORE-RELAY GRAVELLY LOAMS, 25 TO 65% SLOPES, VERY STONY	B	.02

SOIL TYPES TAKEN FROM MAP 24 OF THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND FOUND ON THE HSCD WEBSITE. STABILIZATION EITHER TEMPORARY OR PERMANENT IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

PROFESSIONAL CERTIFICATION
"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476, expiration Date: JULY 14, 2015."

Frank J. Manalansan II 2/27/14
FRANK J. MANALANSAN II DATE

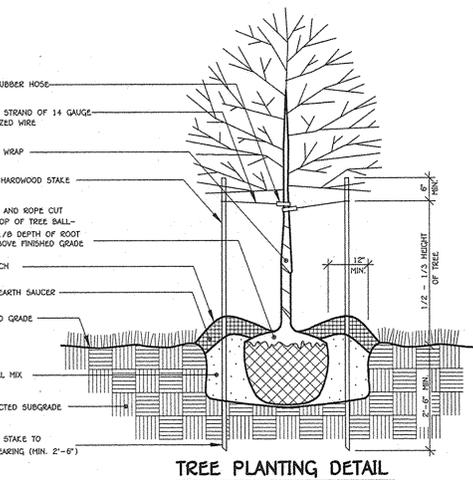
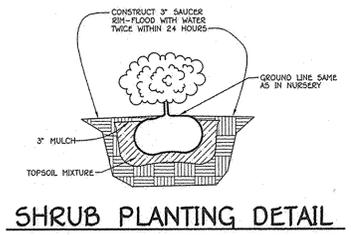
DEVELOPER'S CERTIFICATE
"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training 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."

Harry Y. Chiu 2/27/14
Signature of Developer DATE

This development plan is approved for soil erosion and sediment control by the HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Yphail Robinson 3/6/14
Howard SCD DATE

OWNER/BUILDER/DEVELOPER
HARRY Y. & MARY C. CHIU
SAVAGE GUILDFORD ROAD
JESSUP, MARYLAND 20794
TEL. # (301) 498-3083



SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
+ 526.50	SPOT ELEVATION
---	SUPER SILT FENCE
LOD	LIMITS OF DISTURBANCE
A-2	EARTH DIKE
---	EX. USE IN COMMON INGRESS / EGRESS EASEMENT
---	EX. 20' UTILITY EASEMENT
LI	CRAPMYRTLE
CL	LEYLAND CYPRESS

PERIMETER	SCHEDULE A PERIMETER LANDSCAPE EDGE (P-#)		
	P1	P2	P3
CATEGORY	Residential Adjacent to Residential	Residential Adjacent to Non-Residential	Residential Adjacent to Residential
LANDSCAPE TYPE	A	A	A
LINEAR FEET OF PERIMETER	175'	206'	250'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	NO	NO	NO
NUMBER OF PLANTS REQUIRED			
SHADE TREES	3	4	5
EVERGREEN TREES	0	0	0
SHRUBS	0	0	0
NUMBER OF PLANTS PROVIDED			
SHADE TREES	0	3	3
EVERGREEN TREES	6	4	4
OTHER TREES (2:1 SUBSTITUTION)	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	0	0	0

PLANTING SPECIFICATIONS
PLANTS, RELATED MATERIAL AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AA) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.

ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE).

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE, ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL, ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
TREES - DECIDUOUS (small)					
6	LI	Lagerstromia Indica Crapemyrtle	6'-8' Ht.	B & B	
EVERGREENS					
12	CL	Cupressocyparis leylandi Leyland Cypress	6'-8' Ht.	B & B	

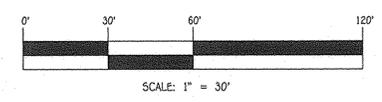
NOTE:
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 6 SMALL DECIDUOUS TREES, AND 12 EVERGREEN TREES HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$3,600.00.

LANDSCAPE DEVELOPER'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 year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Harry Y. Chiu 2/27/14
Name: Harry Y. Chiu Date:

This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required landscaping will be posted as part of the grading permit.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
10000 SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKCE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2999

NO.	REVISION	DATE
1	REVISED HOUSE FOOTPRINT & ASSOCIATED DRAINAGE	2/14/14



PROFESSIONAL CERTIFICATION
"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476, expiration Date: JULY 14, 2015."

Frank J. Manalansan II 2/27/14
FRANK J. MANALANSAN II DATE

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."

Harry Y. Chiu 2/27/14
Signature of Developer DATE

This development plan is approved for soil erosion and sediment control by the HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Yphail Robinson 3/6/14
Howard SCD DATE

OWNER/BUILDER/DEVELOPER
HARRY Y. & MARY C. CHIU
SAVAGE GUILDFORD ROAD
JESSUP, MARYLAND 20794
TEL. # (301) 498-3083

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING					
<i>Vivella Owens</i>		3-20-14		Date	
Chief, Division of Land Development					
<i>Chaf Robinson</i>		3-13-14		Date	
Chief, Development Engineering Division					
<i>David M. Coyle</i>		2/27/14		Date	
Director - Department of Planning and Zoning					
PROJECT	SECTION	PARCEL NOS.			
CHIUI PROPERTY	N/A	208			
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14820/445	22	R-20	42	SIXTH	606902

SITE DEVELOPMENT PLAN, SEDIMENT AND EROSION CONTROL PLAN AND SOILS MAP

CHIUI PROPERTY
PARCEL 2
7974 SAVAGE GUILDFORD ROAD
TAX MAP NO.: 42 GRID NO.: 22 PARCEL NO.: 208
ZONED: R-20
SAVAGE GUILDFORD ROAD
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: SEPTEMBER 27, 2013
SHEET 2 OF 3

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding or long term Seeding of erodible areas for Temporary Seeding and Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpiles and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and the infiltration rate. Vegetation will also help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil amendment composition and application rates for sites having disturbed area over 5 acres. (Not applicable to this site.)
- Soil Amendments (Fertilizer and Lime Specifications)**
 - Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis. (Not applicable to this site.)
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such a mesh that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3"-5" of soil by disk or other suitable means.
- Seeded Preparation**
 - Temporary Seeding**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3"-5" of soil by disk or other suitable means.
 - Permanent Seeding**
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but enough fine grained material (>50% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if legumes or cereal lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
 - Soil shall contain 1.0% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standards and Specifications for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3"-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as indicated on the plans.
 - Use soil amendments into the top 3"-5" of topsoil by disk or other suitable means. Branch areas should be raked to smooth the surface, remove large objects like stones and lumps, and ready the area for seed and application, where site conditions will not permit normal seeded preparation, loose surface soil by design or other equipment should be used to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 3"-5" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

- When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Much applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
- Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch (Mulch Anchoring). Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface to a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour.
 - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and crests of banks. The remainder of the area should be applied uniformly after binder application. Synthetic binders - such as Acrylic DLR (Aqua-Tack), DCA-70 Perseol, Terra Tex II, Terra Tack 40 or other approved equal may be used if rates recommended by the manufacturer to anchor mulch.
 - Lightweight plastic netting may be applied over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
- Incremental Stabilization - Cut Slopes
 - All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
- Construction sequence (Refer to Figure below)
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform Phase 1 excavation, dress and stabilize.
 - Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

- Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.
- Incremental Stabilization of Embankments - Fill Slopes
 - Embankments shall be constructed in lifts as prescribed on the plans.
 - Slopes shall be stabilized immediately after the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.
 - At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to control surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
 - Construction sequence (Refer to Figure below)
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill if possible unless other methods shown on the plans address this area.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize. Overseed previously seeded areas as necessary.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
- Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

- Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
- Purpose**
To provide a suitable soil medium for vegetative 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**
This practice is limited to areas having 2:1 or flatter slopes where:
 1. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 2. 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.
 3. The original soil to be vegetated contains material toxic to plant growth.
 4. The soil is so acidic that treatment with limestone is not feasible.
- 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**
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in the soil amendment specifications in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
 - Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loose, sandy loam, clay loam, silty 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. Rejected soil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of clumps, stones, sticks, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1000 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.
 - For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results detailing fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil has a soluble salt content greater than 500 parts per million shall not be used.
 - No soil 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.
- 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.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION 0135-19550.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1; 5 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4), AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER SEEDING AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATING CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	0.599 ACRES
AREA DISTURBED	0.469 ACRES
AREA TO BE DOOPED OR PAVED	0.100 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.459 ACRES
TOTAL CUT	50 CYCLOS
TOTAL FILL	50 CYCLOS

- OFF-SITE WASTE/DROGOW AREA LOCATION**
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 - SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING BY THE INSPECTION AGENCY IS MADE.
 - TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
 - ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
 - A PROJECT TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM AVERAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

TEMPORARY SEEDING NOTES (B-4-4)

- Definition**
To stabilize disturbed soils with vegetation for up to 6 months.
- Purpose**
To use fast growing vegetation that provides cover on disturbed soils.
- Conditions Where Practice Applies**
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
- Criteria**
- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
 - For sites having seeding performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
 - When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

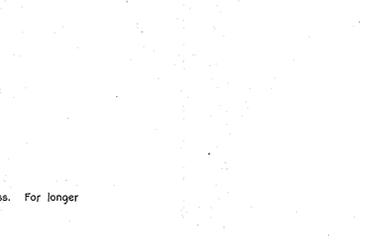
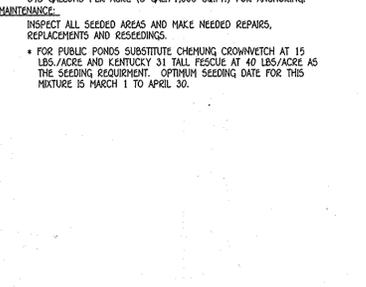
Temporary Seeding Summary

Hardiness Zone (from Figure B.3):	_____	_____	Fertilizer Rate (10-20-20)	Lime Rate
Seed Mixture (from Table B.1):	_____	_____	_____	_____
Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/acre (10 lb / 1000 sq ft)
OATS	72		1"	2 tons/acre (50 lb / 1000 sq ft)
RYE	112		1"	

- Topsoil Application**
 - When topsoiling, maintain erosion and sediment control practices such as diversions, grade stabilization structures, berms, waterways, and sediment control basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Seeding shall be performed in such a manner that seeding or seedling 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.
 - 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 seeded preparation.
 - Alternative for Permanent Seeding** - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform by the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of receipt of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements for use.
 - Composted sludge shall be applied at a rate of 1 to 1.000 square feet, and 1/3 the normal lime application rate.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.
- References: Guideline Specifications, Soil Preparation and Seeding, MD-WA, Pub. #, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute. Revised 1973.

PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDING PREPARATION:**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:**
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 300 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.
- FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, SEED BY OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) - USE 500; OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDING.**
- MULCHING:**
APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.) OF UNMOTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES, ON SLOPES 8 FEET OR HIGHER USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.
- MAINTENANCE:**
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.
FOR PUBLIC PLOWS SUBSTITUTE CHEMUNG CROWFOOTCH AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE IN THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

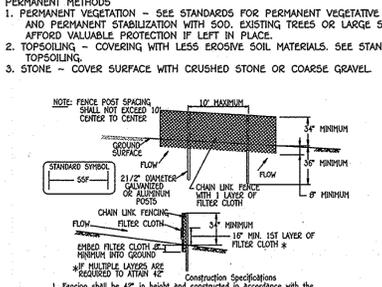


Super Silt Fence

Slope	Slope Steepness	Slope Length	Silt Fence Length
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 30%	5:1 - 3:1	100 feet	1,000 feet
30 - 50%	3:1 - 2:1	50 feet	500 feet

DUST CONTROL

- DEFINITION**
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.
- PURPOSE**
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.
- CONDITIONS WHERE PRACTICE APPLIES**
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
- SPECIFICATIONS**
- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
 - VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
 - TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN TILLAGE ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH SHOULD BE USED FOR THE DESIRED EFFECT.
 - IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AT NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW.
 - BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURGLAP FENCES, STRAW BALE DICES AND SHEEPSHED MATS CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
 - CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.



Super Silt Fence

Slope	Slope Steepness	Slope Length	Silt Fence Length
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 30%	5:1 - 3:1	100 feet	1,000 feet
30 - 50%	3:1 - 2:1	50 feet	500 feet

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT. (1 WEEK)
- NOTIFY "MHS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
- REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY.
- CLEAR AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS. (1 DAY)
- INSTALL THE STABILIZED CONSTRUCTION ENTRANCE. INSTALL ALL SUPER SILT FENCE, AND DIVERSION FENCE AS INDICATED ON THE PLANS. (1 WEEK)
- REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS.
- CONSTRUCT BUILDING. (2 MONTHS)
- FINALIZE GRADING OF AREA WITH L.O.D. AND PROVIDE PERMANENT SEEDING AND LANDSCAPING. (2 DAYS)
- CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH AND DEBRIS FROM FORESTS, FLOODPLAIN, STREAMS, WETLANDS AND OTHER BUFFERS.
- OBTAIN APPROVAL OF APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS)
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
- NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND/BASIN ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
COURTNEY SQUARE OFFICE PARK - 10272 BALDORVILLE ROAD
ELLCOTT CITY, MARYLAND 21042
(410) 441 - 2199

NO.	REVISION	DATE	FRANK J. MANALANSAN II

PROFESSIONAL CERTIFICATION
"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 21476. Expiration Date: JULY 14, 2015."

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 the Department of 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: *Henry Y. Chiu* 2/27/14
Date: 2/27/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John Robert 3-20-14
Chief, Division of Land Development
Date: 3-20-14

John Robert 3-12-14
Chief, Development Engineering Division
Date: 3-12-14

James A. W. C. 3-24-14
Director - Department of Planning and Zoning
Date: 3-24-14

PROJECT: CHIU PROPERTY SECTION: N/A PARCEL NOS.: 280

DEED REF. BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.
14820/445 22 R-20 42 SIXTH 606902

OWNER/BUILDER/DEVELOPER
HARRY Y. & MARY C. CHIU
SAVAGE GULFORD ROAD
JESSUP, MARYLAND 20794
TEL. # (301) 498-3083

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

CHIU PROPERTY
PARCEL 2
7974 SAVAGE GULFORD ROAD
TAX MAP NO.: 42 GRID NO.: 22 PARCEL NO.: 280
ZONED: R-20
SAVAGE GULFORD ROAD
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN/DATE: SEPTEMBER 27, 2013
SHEET 3 OF 3

PROFESSIONAL CERTIFICATION
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