

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- BOUNDARY IS BASED ON RECORD PLAT NO. 23208-23210 AND 23245-23246.
- THE EXISTING TOPOGRAPHY SHOWN ONSITE IS BASED ON MASS GRADES AS SHOWN ON F-08-086.
- 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. 16E1 AND 0012 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. THE CONTRACT NUMBER IS 24-4551-D. THE DRAINAGE AREA IS LITTLE PATUXENT.
- SEWER IS PUBLIC. THE CONTRACT NUMBER IS 24-4551-D. THE DRAINAGE AREA IS LITTLE PATUXENT.
- THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- EXISTING UTILITIES SHOWN ARE BASED ON CONTRACT DRAWINGS, AERIAL AND FIELD SURVEYED LOCATIONS.
- THERE ARE NO WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, 100-YEAR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES THAT ARE AT LEAST 20,000 S.F. OF CONTIGUOUS AREA LOCATED ON THESE LOTS.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.
- STORMWATER MANAGEMENT QUALITY AND QUANTITY CONTROL WAS PROVIDED WITHIN THE 2 EXTENDED DETENTION FACILITIES WITH MICROPOOLS AND 2 OFFLINE RECHARGE CHAMBERS CONSTRUCTED UNDER F-08-080 AND F-10-022. THE PONDS ARE PRIVATELY OWNED AND JOINTLY MAINTAINED. THE RECHARGE CHAMBERS ARE PRIVATELY OWNED AND PRIVATELY MAINTAINED.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PHASE (PHASE 4) OF THE VILLAGES AT TURF VALLEY.
- THE SUBJECT PROPERTY IS ZONED PGCC PER THE 2-2-2004 COMPREHENSIVE ZONING PLAN AND "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7-28-2006.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-3/4" MIN.).
 - GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (425 LOAD).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET.
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- LANDSCAPING IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$4,500.00.
- THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.122(d)(1)(i) OF THE COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
- THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND/OR SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE 12-17-2013 ON WHICH DATE DEVELOPER AGREEMENT #F-08-086/24-4551-D WAS FILED AND ACCEPTED.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004. PER SECTION 126(h)(1) AND THE TURF VALLEY MULTI-USE SUBDISTRICT FDP, THIRD AMENDMENT, PLANNING BOARD APPROVAL OF THIS SITE DEVELOPMENT PLAN IS REQUIRED. THE PLANNING BOARD APPROVED THIS PLAN ON APRIL 15, 2010.
- THIS PROJECT IS SUBJECT TO THE TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, INC. UNDER S-86-13, UPDATED IN MARCH 2004.
- THE VILLAGES AT TURF VALLEY SUBDIVISION (PHASES 1-4) CONSTITUTED 241 TOTAL UNITS, WHICH MET THE SKETCH PLAN MILESTONE DATE OF JANUARY 1, 2001 THROUGH JUNE 30, 2002 FOR BOTH PHASE IVA (131 UNITS) & IVB (110 UNITS) AS ESTABLISHED BY THE REVISED PHASING PLAN DATED JUNE 21, 2000. UNDER P-08-013, 42 CONDOMINIUM UNITS THAT WERE APPROVED WERE USED FOR OAKMONT AT TURF VALLEY (F-02-082). THESE 42 CONDOMINIUM UNITS WERE NOT PREVIOUSLY INCLUDED WITH THE OAKMONT AT TURF VALLEY (F-02-82) PLANS. IN ORDER TO RECEIVE BUILDING ALLOCATIONS, THESE 42 CONDOMINIUM UNITS WERE SHOWN AND APPROVED ON THE PRELIMINARY PLAN FOR THE VILLAGES AT TURF VALLEY (P-08-013). THE SECOND AMENDMENT TO THE TURF VALLEY MULTI-USE FINAL DEVELOPMENT PLAN WAS RECORDED ON NOVEMBER 30, 2007, INCREASING THE PROJECTED UNITS IN THE OAKMONT AT TURF VALLEY AREA FROM 150 TO 200. AS A RESULT, THOSE 42 UNITS ARE NO LONGER A PART OF THE VILLAGES AT TURF VALLEY WHICH LEAVES UNIT TOTAL AT 199. HOWEVER, WITH THE APPROVAL OF WP-08-009 AN ADDITIONAL 21 UNITS WERE ADDED TO THE VILLAGES AT TURF VALLEY. THE FINAL UNIT TOTAL FOR THIS SUBDIVISION COMES TO 220.
- PRIOR TO GRADING PERMIT APPLICATION, THE PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 16.129 OF THE HOWARD COUNTY CODE. CERTIFICATE OF COMPLETION ISSUED.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.03.
- IN ACCORDANCE WITH SECTION 128 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 SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK (APPLIES FOR RESIDENTIAL SDP'S).

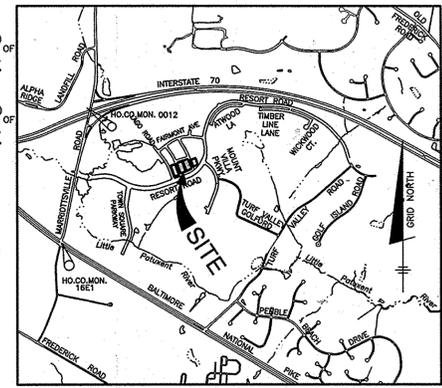
RESIDENTIAL SITE DEVELOPMENT PLAN

VILLAGES AT TURF VALLEY

PHASE 4

LOTS 177-190, 195-199 AND 308-311

BENCHMARKS
 NAD'83 HORIZONTAL
 HO. CO. #16E1 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3" DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.70'
 ELEVATION: 463.981'
 HO. CO. #0012 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF
 A 3" DEEP COLUMN OF CONCRETE.
 N 596502.760' E 1340864.37'
 ELEVATION: 466.295'



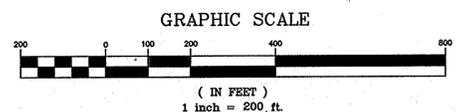
VICINITY MAP
 SCALE: 1" = 2000'
 ADC MAP: 19
 GRID: D4



ADDRESS CHART		
LOT	STREET ADDRESS	
177	2730	CHEEKWOOD CIRCLE
178	2732	CHEEKWOOD CIRCLE
179	2734	CHEEKWOOD CIRCLE
180	2736	CHEEKWOOD CIRCLE
181	2740	CHEEKWOOD CIRCLE
182	2742	CHEEKWOOD CIRCLE
183	2744	CHEEKWOOD CIRCLE
184	2746	CHEEKWOOD CIRCLE
185	2739	CHEEKWOOD CIRCLE
186	2737	CHEEKWOOD CIRCLE
187	2735	CHEEKWOOD CIRCLE
188	2733	CHEEKWOOD CIRCLE
189	2731	CHEEKWOOD CIRCLE
190	2759	CHEEKWOOD CIRCLE
308	2757	CHEEKWOOD CIRCLE
309	2755	CHEEKWOOD CIRCLE
310	2753	CHEEKWOOD CIRCLE
311	2751	CHEEKWOOD CIRCLE
195	2750	CHEEKWOOD CIRCLE
196	2752	CHEEKWOOD CIRCLE
197	2754	CHEEKWOOD CIRCLE
198	2756	CHEEKWOOD CIRCLE
199	2758	CHEEKWOOD CIRCLE

VILLAGES AT TURF VALLEY PHASING CHART				
PHASE/SECTION	S.F. ATTACHED	S.F. DETACHED	CONDOMINIUM	TOTAL
P1S1 (F10-026)	0	0	0	0
P1S2 (F08-080)	41	21	0	62
P1S3 (F15-076)	6	0	0	6
P2S1 (F08-084)	0	0	44*	44
P2S2 (F10-078)	0	48	0	48
P4 (F08-086)	15	8	0	23
P5 (F15-079)	36	0	0	36
MAINT SHOP (SDP-08-096)	0	0	1 (Access. Apt.)	1
TOTAL	98	77	45	220

* FUTURE CONDO BUILDING ON LOT 203



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.

BULK REGULATIONS :

PERMITTED USES : ALL USES AS PER TURF VALLEY PGCC DISTRICT, MULTI-USE SUBDISTRICT FINAL DEVELOPMENT PLAN, THIRD AMENDMENT, PLATS 21029-21031 (46 UNITS OUTLINED FROM RESIDENTIAL USES TO SPECIALTY STORES)

PROPOSED USE : SINGLE FAMILY ATTACHED & DETACHED

PERMITTED HEIGHT : SINGLE FAMILY ATTACHED - 34 FEET
 APARTMENT BUILDINGS - 80 FEET
 OTHER - 15 FEET
 ACCESSORY STRUCTURES - 15 FEET

MAXIMUM DENSITY FOR TOTAL PGCC DISTRICT IS 2.0 DWELLING UNITS PER ACRE.

MAXIMUM UNITS PER STRUCTURE :
 1. SINGLE FAMILY ATTACHED 8 UNITS PER STRUCTURE
 2. APARTMENTS LESS THAN 40 FEET IN HEIGHT 24 UNITS PER STRUCTURE
 3. APARTMENTS 40 FEET OR GREATER IN HEIGHT 120 UNITS PER STRUCTURE

MINIMUM LOT SIZE REQUIREMENTS :
 SINGLE FAMILY DETACHED 6,000 SQ.FT.
 EXCEPT ZERO LOT LINE DWELLINGS 4,000 SQ.FT.
 SINGLE FAMILY SEMI-DETACHED 4,000 SQ.FT.

MINIMUM LOT WIDTH AT BUILDING RESTRICTION LINE :
 SINGLE FAMILY DETACHED 50 FEET
 EXCEPT ZERO LOT LINE DWELLINGS 40 FEET
 SINGLE FAMILY SEMI-DETACHED 40 FEET

MAXIMUM BUILDING LENGTH FOR RESIDENTIAL STRUCTURE = 120 FEET, UNLESS APPROVED BY PLANNING BOARD TO A MAXIMUM OF 300 FEET.

PERMITTED SETBACKS:
 FROM ARTERIAL ROADS:
 RESIDENTIAL STRUCTURES - 50 FEET
 ACCESSORY USES - 30 FEET
 PARKING - 25 FEET
 FROM COLLECTORS AND LOCAL STREETS:
 RESIDENTIAL AND NON-RESIDENTIAL STRUCTURES - 30 FEET FROM A 60 FT. ROW
 20 FEET FROM A 50 FT. ROW
 10 FEET
 ACCESSORY USES - 30 FEET
 FROM NON-PDC ADJACENT PROPERTIES:
 FROM RESIDENTIAL DISTRICTS - 75 FEET
 FROM ALL OTHER DISTRICTS - 30 FEET
 FROM LOT LINES WITHIN PGCC MULTI-USE SUBDISTRICT
 SINGLE FAMILY DETACHED - SIDE - 7.5 FEET
 ZERO LOT LINE AND ALL OTHER USES - SIDE - 0 FEET
 A MINIMUM OF 10 FEET MUST BE PROVIDED BETWEEN STRUCTURES
 RESIDENTIAL - REAR - 20 FEET
 BETWEEN ATTACHED DWELLING UNITS AND APARTMENT BUILDINGS :
 FACE TO FACE - 30 FEET
 FACE TO SIDE/REAR TO SIDE - 30 FEET
 SIDE TO SIDE - 15 FEET
 REAR TO REAR - 60 FEET
 REAR TO FACE - 100 FEET

THERE IS A 60% MAXIMUM LOT COVERAGE REQUIREMENT FOR SFA LOTS AND NO SPECIFIED COVERAGE REQUIREMENT FOR APARTMENTS.

SITE ANALYSIS DATA CHART

A.) TOTAL PROJECT AREA 2.68 Ac.
 B.) AREA OF PLAN SUBMISSION 2.68 Ac.
 C.) LIMIT OF DISTURBED AREA 2.89 Ac.
 D.) PRESENT ZONING: PGCC (MULTI-USE SUBDISTRICT)
 E.) PROPOSED USE OF SITE: RESIDENTIAL SFD & SFA
 F.) FLOOR SPACE ON EACH LEVEL OF BLDG PER USE N/A
 G.) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S) 23
 H.) TOTAL NUMBER OF UNITS PROPOSED 23
 I.) MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE N/A
 J.) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING RECS AND/OR FDP CRITERIA PROVIDED UNDER F-08-086
 K.) NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES HANDICAPPED SPACES) PROVIDED UNDER F-08-086
 L.) OPEN SPACE ON-SITE PROVIDED UNDER F-08-086
 M.) AREA OF RECREATIONAL OPEN SPACE REQUIRED N/A
 AREA OF RECREATIONAL OPEN SPACE PROVIDED N/A
 N.) BUILDING COVERAGE OF SITE N/A
 PERCENTAGE OF GROSS AREA N/A
 O.) APPLICABLE DPZ FILE REFERENCES: S-03-01, WP-05-074, WP-08-009, S-86-13, P-06-13, #24-4522, F-08-060, WP-09-004, WP-09-211, F-10-026, WP-10-159, WP-11-168, WP-12-129, F-08-086, WP-13-128, WP-14-084, F-15-104

SHEET INDEX	
SHEET	TITLE
1	TITLE SHEET
2	SITE DEVELOPMENT & GRADING PLAN
3	SEDIMENT AND EROSION CONTROL PLAN
4	SEDIMENT & EROSION CONTROL NOTES AND DETAILS
5	LANDSCAPE PLAN

PERMIT INFORMATION CHART					
SUBDIVISION NAME:		SECTION/AREA:	LOT/PARCEL #		
VILLAGES AT TURF VALLEY		PHASE 4	LOTS 177 thru 199		
PLAT No.	GRID No.	ZONE	TAX MAP No.	ELECTION DISTRICT	CENSUS TRACT
23208-23210 23245-23246	11	PGCC	16	3rd	6030.00

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 Barbara M. Moore, RPHS, 3/24/2015
 HOWARD COUNTY HEALTH OFFICE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 3-24-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: [Signature] 3-31-15
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] 4/2/15
 DIRECTOR

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE 04/15/2010
 [Signature]

6-29-15 DATE LOT NUMBERS IN TITLE BK, ADDRESS CHART AND TITLE TO REFLECT
 [Signature] 6-29-15

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 418 ELICOTT CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-6644
 WWW.BE-CIVLENGINEERING.COM

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

BUILDER: JAMES KEELY AND COMPANY, INC.
 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093
 410-252-8600

VILLAGES AT TURF VALLEY
 PHASE 4
 LOTS 177-190, 195-199 AND 308-311
 (SINGLE FAMILY ATTACHED AND DETACHED)

TAX MAP: 16 GRID: 1 PARCEL: P/O 8 ZONED: PGCC
 ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

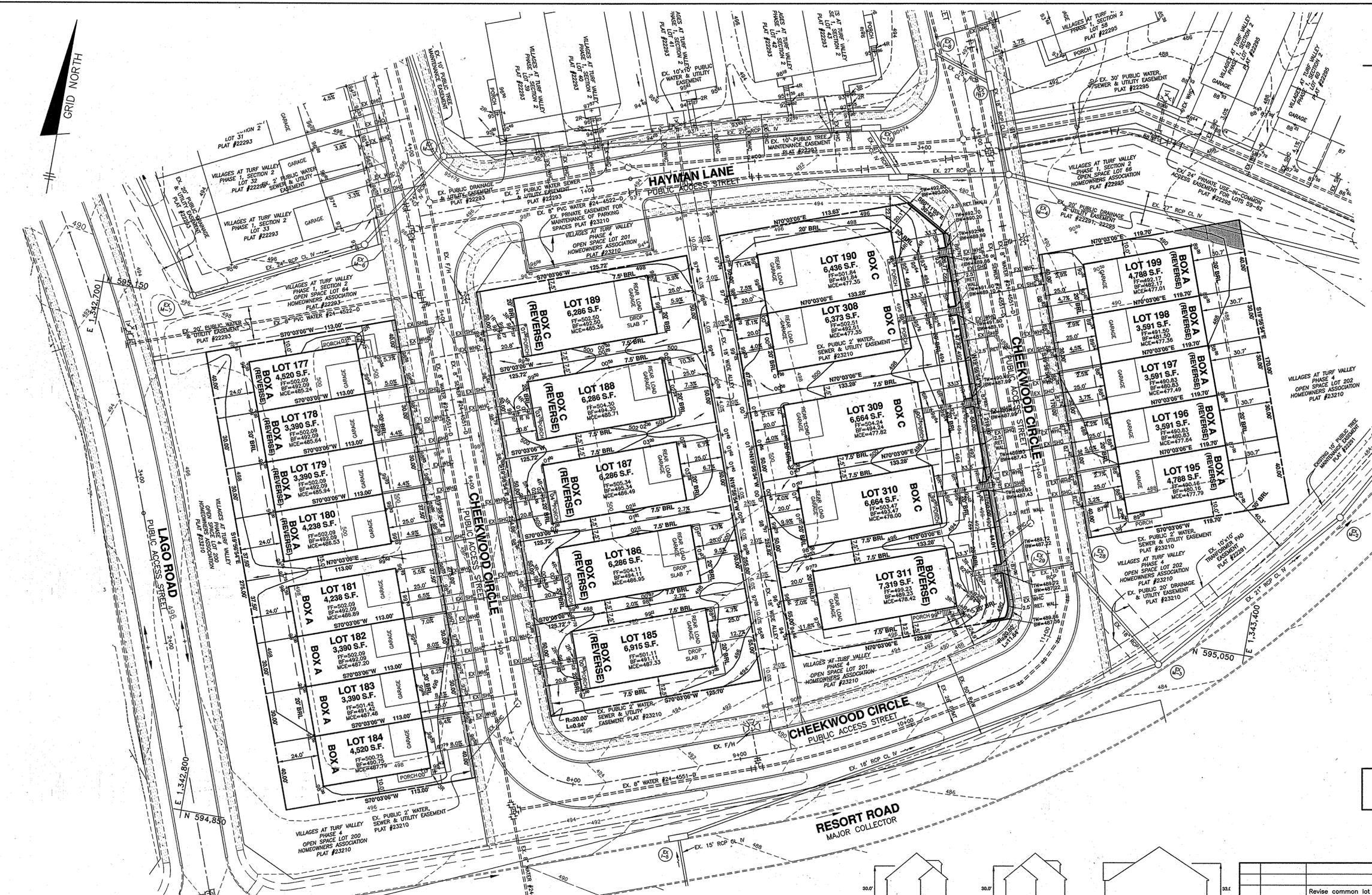
TITLE SHEET

DATE: MARCH, 2015 BEI PROJECT NO: 2086
 SCALE: AS SHOWN SHEET 1 OF 5



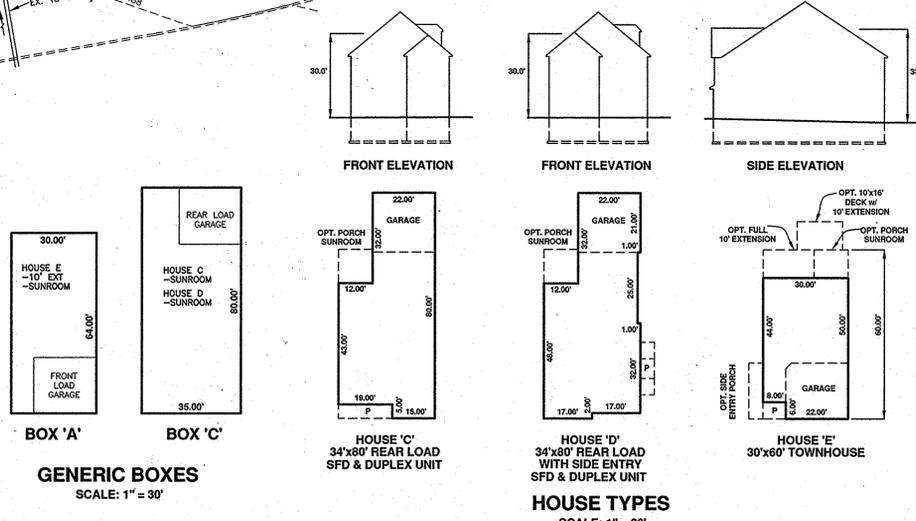
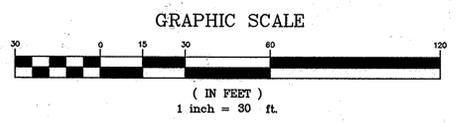
LEGEND

- BOUNDARY
- FF=502.53 FIRST FLOOR ELEVATION
- BF=492.53 BASEMENT FLOOR ELEVATION
- MCE=487.13 MINIMUM CELLAR ELEVATION
- 20' BRL INDICATES BUILDING RESTRICTION LINE
- EXISTING EASEMENTS
- EX SHC EXISTING SEWER HOUSE CONNECTION
- EX WHC EXISTING WATER HOUSE CONNECTION



THIS SHEET REPLACES PREVIOUS SHEET 2 THAT WAS SIGNED ON 4-20-2015

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE **04/15/2010**
[Signature]



NO.	DATE	REVISION
1	6-29-2015	Revise common lot lines by 2.18' of Lots 191 thru 194 and revise these lots to be Lots 308-311 per revision plat #23395-96. Revise Lot 311 to be a side entry porch. Revise Lots 195-199 to be "reverse" units in order to have a side entry porch on Lot 195. eliminate side entry porch on Lot 199.

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8480 BALTIMORE NATIONAL PIKE & SUITE 418 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6844
WWW.BE-CMLENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer in the State of Maryland, License No. 6-20-15.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 7-10-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 7-15-15
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 7-21-15
DIRECTOR DATE

VILLAGES AT TURF VALLEY
PHASE 4
LOTS 177-190, 195-199, & 308-311
(SINGLE FAMILY ATTACHED AND DETACHED)

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP
1205 YORK ROAD, FENTHOUSE LUTHERVILLE, MARYLAND 21093
410-825-8400

BUILDER: JAMES KEELY AND COMPANY, INC.
61 EAST PADONIA ROAD
TIMONIUM, MARYLAND 21093
410-252-9600

TAX MAP: 16 GRID: 1 PARCEL: P/O B ZONED: PGCC ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT & GRADING PLAN

DATE: MARCH, 2015 BEI PROJECT NO: 2086
SCALE: AS SHOWN SHEET 2 OF 5

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- 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).
- 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 THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 3 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES; BARS, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE 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-4-3), AND STOCKPILE AREA (SEC. B-4-3.1). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
TOTAL AREA OF SITE: 2.68 ACRES
AREA DISTURBED: 1.89 ACRES
AREA TO BE ROOFED OR PAVED: 2.59 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 1.30 ACRES
TOTAL CUT: 330* CY
TOTAL FILL: 330* CY
OFFSITE WASTE/BORROW LOCATION: SITE WITH APPROVED SSP AND ACTIVE GRADING PERMIT
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING OR FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL 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 PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRES 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.

*CUT/FILL NUMBERS ARE FOR SEDIMENT CONTROL PURPOSES ONLY. CONTRACTOR TO VERIFY.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION
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:
1. Select one or more of the species or mixtures listed in Table B.1 for the appropriate Plant Hardness 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 contained, then Table B.1 plus fertilizer and time rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.1.5 and maintain until the next seeding season.

B-4-5 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA
Definition: A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
Purpose: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
Conditions Where Practice Applies: Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
Criteria:
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3-Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access to the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 37 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL
Definition: Controlling the suspension of dust particles from construction activities.
Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on- and off-site damage including health and traffic hazards.
Conditions Where Practice Applies: Areas subject to dust blowing and movement where on- and off-site damage is likely without treatment.
Specifications:
1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tilling: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

B-4-3 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION
Definition: To stabilize disturbed soils with permanent vegetation for up to 6 months.
Purpose: To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.
Conditions Where Practice Applies: Exposed soils where ground cover is needed for 6 months or more.
Criteria:
A. Seed Mixtures
1. General Use:
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
b. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Manual, Section 242 - Critical Area Planning.
c. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
d. For areas requiring low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (100 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures:
a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture, application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
ii. Kentucky Bluegrass/Perennial Ryegrass: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixtures include: Certified Tall Fescue Cultivars 55 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in areas with shade, use a mixture of Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.
Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland." Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of cultivar identification and assurance of cultivar purity.
c. Ideal Times of Seeding for Turf Grass Mixtures:
Western MD: March 15 to June 1, August 1 to October 1 (Hardness Zones: 5b, 6a)
Central MD: March 1 to May 15, August 15 to October 15 (Hardness Zone: 6b)
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 7a, 7b)
d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/2 inch in diameter. The resulting seedbed must be in such condition that future growth of grasses will pose no difficulty.
e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

B. Sod:
1. Sod to provide quick cover on disturbed areas (2:1 grade or flatter).
1. General Specifications:
a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman that specify the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a stable slurry, provide ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
b. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a stable slurry, provide ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
c. WCFM materials must not contain elements or compounds at concentration levels that will be phytotoxic.
d. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 16 percent maximum and water holding capacity of 90 percent minimum.
2. Application:
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring:
a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 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 follow the contour.
ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
iii. Synthetic binders such as Acrylic DLR (Ago-Tack), DCA-70, Petrosol, Terra Tex II, Terra Tack or other approved products may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks.
iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS
Definition: The process of preparing the soils to sustain adequate vegetative stabilization.
Purpose: To provide a suitable soil medium for vegetative growth.
Conditions Where Practice Applies: Where vegetative stabilization is to be established.
Criteria:
A. Soil Preparation
1. Temporary Stabilization:
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must be smoothed or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
b. Apply fertilizer and lime as prescribed on the plans.
c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization:
a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lowgrass is to be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.
vi. Application of amendments or topsoil to require off-site soils do not meet the above conditions.
b. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
c. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
d. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rate lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slope 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.
e. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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.
f. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given site type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
g. Topsoiling is limited to areas having 2:1 or flatter slopes where:
i. The texture of the exposed subsoil material is not adequate to produce vegetative growth.
ii. 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.
iii. The original soil to be vegetated contains material toxic to plant growth.
iv. The soil is so acidic that treatment with limestone is not feasible.
v. Areas having slopes steeper than 2:1 require special consideration and design.
Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, nut grass, or other as specified.
c. 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.
6. Topsoil Application:
a. Erosion and sediment control practices must be maintained when applying topsoil. Uniformly distribute topsoil in a 5 to 8 inch layer and tightly compact to a minimum thickness of 4 inches. Spreading is to 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 must be corrected in order to prevent the formation of depressions or mounds.
b. Topsoil must not be placed if 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.
c. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Materials may be substituted with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #200 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION
Definition: Establishment of vegetative cover on cut and fill slopes.
Purpose: To provide timely vegetative cover on cut and fill slopes as work progresses.
Conditions Where Practice Applies: Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.
Criteria:
A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, 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 or completing the operation of the seeding season will necessitate the application of temporary stabilization.
B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the excavation.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, 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 grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation of the seeding season will necessitate the application of temporary stabilization.
Figure B.

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION
Definition: Using vegetation as cover to protect exposed soil from erosion.
Purpose: To promote the establishment of vegetation on exposed soil.
Conditions Where Practice Applies: On all disturbed areas not stabilized by other methods. This application is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.
Effects on Water Quality and Quantity
Stabilization practices 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 runoff to downstream areas.
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. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.
Vegetation will 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 practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.
Adequate Vegetative Establishment
Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.
1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an eroded groundcover, reestablish following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION
Definition: Establishment of vegetative cover on cut and fill slopes.
Purpose: To provide timely vegetative cover on cut and fill slopes as work progresses.
Conditions Where Practice Applies: Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.
Criteria:
A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, 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 or completing the operation of the seeding season will necessitate the application of temporary stabilization.
B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the excavation.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, 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 grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation of the seeding season will necessitate the application of temporary stabilization.
Figure B.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE
STANDARD SYMBOL
50 FT MIN.
EXISTING GROUND
MOUNTAIN BEAM (6 IN MIN.)
EARTH FILL PIPE (SEE NOTE 6)
EARTH FILL PIPE (SEE NOTE 6)
MIN. 6 IN. OF 2 TO 3 IN. OF GRANULAR FILL OVER TOP AND WIDTH OF ENTRANCE
PROFILE
50 FT MIN. LENGTH
PLAN VIEW
CONSTRUCTION SPECIFICATIONS:
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (50 FEET FOR SINGLE RESIDENCE). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADII.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED THROUGH THE SCE UNDER THE ENTRANCE. PROVIDE POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTAIN BEAM WITH 5/8 IN. DIAMETER AND A MOUNTAIN PIPE WITH 3/4 IN. DIAMETER.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 8 INCHES DEEP UNDER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT AND SOIL STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTAIN BEAM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY WASHING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION
STANDARD SYMBOL
PSM - * 4B/C
(* WOOD CELLULOSE FIBER)
KEY IN UPPER ROLL END
OVERLAP OR ABUT EDGES (TYP.)
6 IN MIN. OVERLAP AT ROLL END (TYP.)
FILL MAT VOIDS SEPARATED BY 8 IN. DEEP (MIN.) ROLL END (TYP.)
PREPARED FLOW CHANNEL WITH SEED IN PLACE
ISOMETRIC VIEW
CONSTRUCTION SPECIFICATIONS:
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SOIL GERMINATION AND NON-HARMFUL TO THE SOIL. IF PRESENT, NETTING MUST BE MADE OF POLYESTER OR POLYPROPYLENE. MATS MUST BE NON-FLAMMABLE AND SURFACE FINISH BONDING OR SEWING ON 5/8 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE FIBER.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1.8 INCHES WIDE AND 1.8 INCHES LONG. "T" SHAPED STAPLES MUST AVERAGE 1.8 INCHES WIDE AND 1.8 INCHES LONG. A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH LEG, WOOD STAPLES MUST BE ROUGH-SAWN HARDWOOD, 15 TO 24 INCHES IN LENGTH, 1/2 TO 3/4 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFIC MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SUBGRADE SURFACE, AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL EDGES BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DISKING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, AND ROLLING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON A FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG BEAM, KEYS AND ROLL EDGES.
9. IF USED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEPT AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL, AND LIGHTLY TAMP OR ROLL TO COMPACT AND STABILIZE THE MATTING.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate 1/		Seeding Depth 2/ (inches)	Recommended Seeding Dates by Plant Hardness Zone 3/			
	lb/ac	lb/1000ft ²		5b and 6a	6b	7a and 7b	
Cool-Season Grasses:							
Annual Ryegrass (<i>Lolium perenne</i> sp.)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 31	Feb 15 to Apr 30; Aug 15 to Nov 30	
Barley (<i>Hordeum vulgare</i>)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 31	Feb 15 to Apr 30; Aug 15 to Nov 30	
Oats (<i>Avena sativa</i>)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 31	Feb 15 to Apr 30; Aug 15 to Nov 30	
Wheat (<i>Triticum aestivum</i>)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 31	Feb 15 to Apr 30; Aug 15 to Nov 30	
Coronel Rye (<i>Secale cereale</i>)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15	
Warm-Season Grasses:							
Foxtail Millet (<i>Setaria italica</i>)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	
Pearl Millet (<i>Pennisetum glaucum</i>)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	

Notes:
1/ Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.
2/ Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late beyond the seeding dates for other temporary seedings.
3/ Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.
4/ Oats are the recommended nurse crop for warm-season grasses.
5/ For sandy soils, plant seeds at twice the depth listed above.
6/ The planting dates listed are averages for each zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

Permanent Seeding Summary

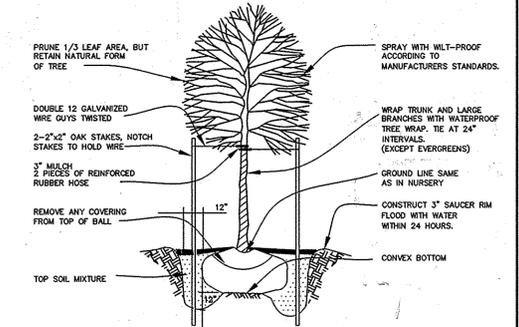
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)			Lime Rate
					N	P2O5	K2O	
Hardness Zone (from Figure B.3): 6b								
Seed Mixture (from Table B.3): Tall Fescue/Kentucky Bluegrass								
9	Bluegrass, Kentucky	40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	45 pounds per acre	90 lb/ac	90 lb/ac	2 tons/ac
		40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	(1.0 lb)	2 lb	2 lb	(90lb)
		40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	100 sf	1000 sf	1000 sf	1000 sf

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 04/15/2010
[Signature]
ENGINEER
3-2-15
DATE
DEVELOPER'S CERTIFICATE
"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO 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 COUNTY DEPARTMENT OF PLANNING AND ZONING."
[Signature]
3/2/15
DATE
DEVELOPER - MARK BODA
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature]
3/12/15
DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature]
3-25-15
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature]
3-31-15
DATE
VEGETATION DIVISION
[Signature]
4/26/10
DATE
DIRECTOR

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE
STANDARD SYMBOL
50 FT MIN.
EXISTING GROUND
MOUNTAIN BEAM (6 IN MIN.)
EARTH FILL PIPE (SEE NOTE 6)
EARTH FILL PIPE (SEE NOTE 6)
MIN. 6 IN. OF 2 TO 3 IN. OF GRANULAR FILL OVER TOP AND WIDTH OF ENTRANCE
PROFILE
50 FT MIN. LENGTH
PLAN VIEW
CONSTRUCTION SPECIFICATIONS:
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (50 FEET FOR SINGLE RESIDENCE). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADII.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED THROUGH THE SCE UNDER THE ENTRANCE. PROVIDE POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTAIN BEAM WITH 5/8 IN. DIAMETER AND A MOUNTAIN PIPE WITH 3/4 IN. DIAMETER.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 8 INCHES DEEP UNDER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT AND SOIL STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTAIN BEAM, AND SPECIFIED DIMENSIONS.

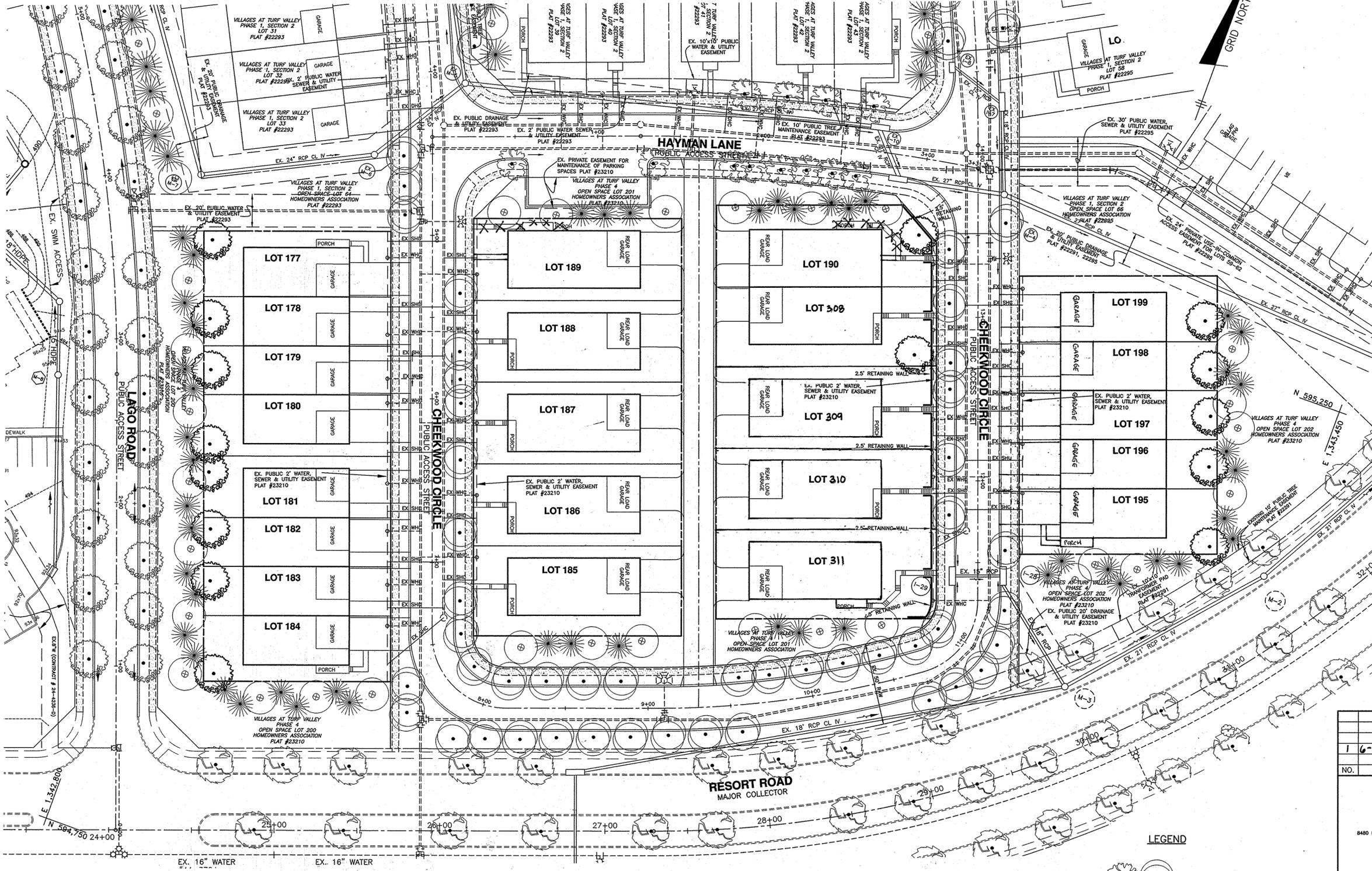
TREE PLANTING LIST				
SYMBOL	QUANTITY	NAME	REMARKS	DESCRIPTION
	15	ACER RUBRUM (Red maple)	2 1/2" - 3" cal.	TO BE PROVIDED BY THE BUILDER.

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
NUMBER OF SFA DWELLING UNITS	15
NUMBER OF TREES REQUIRED (1:DU SFA: 1:3 DU APTS)	15
NUMBER OF TREES PROVIDED	15
SHADE TREES	0
OTHER TREES (2:1 SUBSTITUTE)	0



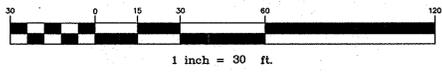
LANDSCAPE NOTES:

- TREES MAY NOT BE PLANTED WITHIN 5 FEET OF A DRAIN INLET, 5 FEET OF AN OPEN SPACE ACCESS STRIP, OR 10 FEET OF A DRIVEWAY.
- SEE TREE PLANTING DETAIL - THIS SHEET.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.
- THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT IN THE AMOUNT OF \$4,500.00.



LEGEND

-  EXISTING STREET TREES PLANTED UNDER F-08-060 & F-08-086
-  EXISTING STREET TREES PLANTED UNDER F-10-027
-  EXISTING PERIMETER TREES PLANTED UNDER F-08-086



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. ... 3-25-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

V. ... 3-31-15
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Monika J. ... 3/26/15
DIRECTOR DATE

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE *04/15/2010*
EMM

DEVELOPER'S/BUILDER'S CERTIFICATE

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

Mark Buda 3/3/15
MARK BUDA DATE

1 6-29-15 REVISE LOT LINES OF LOTS 191-194 TO BE 308-311. REVISE LOTS 195-199 TO BE GARAGE LEFT UNITS. UPDATE TITLE BLOCK		
NO.	DATE	REVISION
<p>BENCHMARK ENGINEERING, INC. ENGINEERS & LAND SURVEYORS & PLANNERS 8480 BALTIMORE NATIONAL PIKE & SUITE 415A ELICOTT CITY, MARYLAND 21043 (P) 410-465-0105 (F) 410-465-0644 WWW.BEG-CIVILENGINEERING.COM</p> <p>Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 20006, Expiration Date: 6-30-2015.</p> 		
OWNER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400		<p>VILLAGES AT TURF VALLEY PHASE 4 LOTS 177-190, 195-199 AND 308-311 (SINGLE FAMILY ATTACHED AND DETACHED)</p> <p>TAX MAP: 16 GRID: 1 PARCEL: P/O 8 ZONED: PGCC ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND</p> <p>LANDSCAPE PLAN</p> <p>DATE: MARCH, 2015 BEI PROJECT NO: 2086 SCALE: AS SHOWN SHEET 5 OF 5</p>
BUILDER: JAMES KEELY AND COMPANY, INC. 81 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600		
DESIGN: DBT	DRAWN: DBT	