

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 START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY NJR ASSOCIATES, INC., DATED APRIL 2006.
- 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. 46EA AND 46EB WERE USED FOR THIS PROJECT.
- THE PROJECT BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PREPARED BY NJR ASSOCIATES, INC., DATED APRIL 2006.
- THE SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LIE ZONING REGULATIONS EFFECTIVE ON 7/28/06.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- STORMWATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO-RETENTION AND DRYWELLS. THE MICRO-BIORETENTION FACILITIES AND DRYWELLS ARE PRIVATELY OWNED AND MAINTAINED.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS, FIELD SURVEY, ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- SEWER SERVICE WILL REQUIRE GRINDER PUMP.
- THE DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.06. NO CURBUILT REQUIRED.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING AT&T:
 - BGE (CONSTRUCTION SERVICES) 410-637-8713
 - BGE (EMERGENCY) 410-685-0123
 - BUREAU OF UTILITIES 410-313-4000
 - COLONIAL PIPELINE CO 410-795-1390
 - MISS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
 - VERIZON 1-800-743-0033
- THERE IS AN EXISTING STRUCTURE LOCATED ON LOT 1 TO REMAIN.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 18 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 FRONT OR REAR YARD SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.); PERMEABLE SURFACE - 12" ASTM C-33 3/4" TO 2" STONE WITH 7" PERMEABLE CONCRETE
 - C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
 - D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
 - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - F) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- WATER AND SEWER SERVICE FOR THIS PROJECT WILL BE PUBLIC. WATER WILL BE PROVIDED THROUGH CONTRACT NO. 24-4076. SEWER WILL BE PROVIDED THROUGH CAPITAL PROJECT #24-3905.
- PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- DEED REFERENCE: PARCEL 72 (LOT 2); L.14978 / F.201
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO HISTORIC STRUCTURES EXIST ON THIS SITE.
- THERE ARE NO STEEP SLOPES WITHIN THE LIMITS OF THIS PROJECT.
- THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS PROJECT.
- FOREST STAND DELINEATION PLAN WAS PREPARED UNDER F07-104
- THE F07-104 PROJECT IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(B)(1)(VIII) OF THE HOWARD COUNTY CODE FOR MINOR SUBDIVISION THAT CREATES ONLY ONE LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL.
- NO WETLANDS EXIST ON-SITE PER FIELD INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC., AUGUST 2006.
- A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT.
- PER F07-104, PERIMETER LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. LANDSCAPING FOR LOT 2 HAS BEEN PROVIDED AS SHOWN HEREON. FINANCIAL SURETY IN THE AMOUNT OF \$3,000.00 FOR THE REQUIRED 10 SHADE TREES SHALL BE POSTED AS PART OF THE GRADING PERMIT FOR LOT 2
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- OPEN SPACE OBLIGATIONS FOR THE PROJECT HAVE BEEN MET UNDER F07-104 BY A PAYMENT OF A FEE IN LIEU.
- TEST PITS TO DETERMINE GROUND WATER AND ROCK ELEVATIONS WERE PERFORMED WHERE SHOWN HEREON ON APRIL 9, 2013. NO ROCK WAS WITNESSED. WATER WAS PRESENT IN SWM #1 AT A DEPTH OF 10.5 FEET, AT A DEPTH 4' BELOW THE BOTTOM OF THE MICRO-BIORETENTION FACILITY.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR OUTSIDE METER SETTING UNLESS OTHERWISE NOTED
- AT&T HAS AN EXISTING 18.5' EASEMENT THAT CROSSES LOTS 1 & 2, LIBER 167 FOLIO 160.
- PER RECORDED LIBER 167 FOLIO 160, THE 7 FT SETBACK FROM THE AT&T EASEMENT HAS BEEN ESTABLISHED BY AT&T, THE 7 FT BRL FROM THE AT&T EASEMENT IS REQUIRED BY AT&T AND IS NOT A HOWARD COUNTY REGULATION.
- THIS PLAN IS SUBJECT TO WP 13-016. THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.120(B)(4)(iii), REQUIRING A 35' ENVIRONMENTAL SETBACK FROM THE STREAM BANK BUFFER FOR CONSTRUCTION OF A HOUSE AND DRIVEWAY ON LOT 2 OF THE TAKIAR PROPERTY AND DENIED THE WAIVER TO SECTION 16.116(A)(2)(i) PROHIBITING GRADING, REMOVAL OF TREES AND COVER, PAVING AND STRUCTURES WITHIN 50' OF AN INTERMITTENT STREAM FOR GRADING AND A DECK. APPROVAL TO SECTION 16.120(B)(4)(iii) IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - SUBMISSION OF A SITE DEVELOPMENT PLAN FOR CONSTRUCTION OF A NEW HOUSE ON LOT 2 IS REQUIRED PRIOR TO ISSUANCE OF ANY GRADING OR BUILDING PERMITS.
 - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES ARE PERMITTED WITHIN THE RECORDED 50' INTERMITTENT STREAM BANK BUFFER AS SHOWN ON PLAT NO. 20453 FOR LOT 2.
 - THE LIMIT OF DISTURBANCE (LOD) AND SETBACK FOR THE NEW HOUSE AND DRIVEWAY CONSTRUCTION ON LOT 2 SHALL BE PULLED BACK OUT OF THE 50' INTERMITTENT STREAM BANK BUFFER TO ALLOW INSTALLATION OF THE REQUIRED SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH SECTION 16.116(B)(1)(i) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. A SUPER SILT FENCE SHALL BE USED OR THE LOD ASSOCIATED WITH THE NEW HOUSE AND DRIVEWAY CONSTRUCTION TO FURTHER REDUCE THE POTENTIAL IMPACT TO THE STREAM SYSTEM FROM STORM WATER RUN-OFF DURING THE CONSTRUCTION ACTIVITY ON LOT 2.
 - THE APPLICANT SHALL MITIGATE ANY POTENTIAL LONG TERM STREAM DEGRADATION FROM EXCESSIVE STORM WATER DRAINAGE BY INSTALLING A LANDSCAPED BED OF SHRUBS, PERENNIALS, ORNAMENTAL GRASSES AND GROUND COVER PLANTINGS ON THE HILLSIDES BETWEEN THE PROPOSED NEW HOUSE AND THE STREAM.
 - THE APPLICANT SHALL BE ADVISED THAT AT THE SITE DEVELOPMENT PLAN REVIEW, A FURTHER EVALUATION WILL TAKE PLACE REGARDING THE FINAL PLACEMENT OF THE PROPOSED NEW HOUSE AND DRIVEWAY ON LOT 2 TO LESSEN THE IMPACT WITHIN THE 35' ENVIRONMENTAL BUILDING RESTRICTION LINE (BRL) THROUGH A POSSIBLE SHIFTING OF THE HOUSE FURTHER TO THE WEST. ADDITIONALLY, THE PROPOSED DECK SHALL BE RELOCATED TO THE REAR OF THE HOUSE TO AVOID ANY ENCROACHMENT INTO THE 50' STREAM BANK BUFFER.
 - ALTHOUGH NOT A CONDITION OF APPROVAL, THIS DIVISION RECOMMENDS THAT THE APPLICANT RE-EXAMINE THE PROPOSED HOUSE FOOTPRINT AND MODEL TO REDUCE THE HOUSE LENGTH SO AS TO LESSEN THE IMPACT WITHIN THE 35' ENVIRONMENTAL BRL.

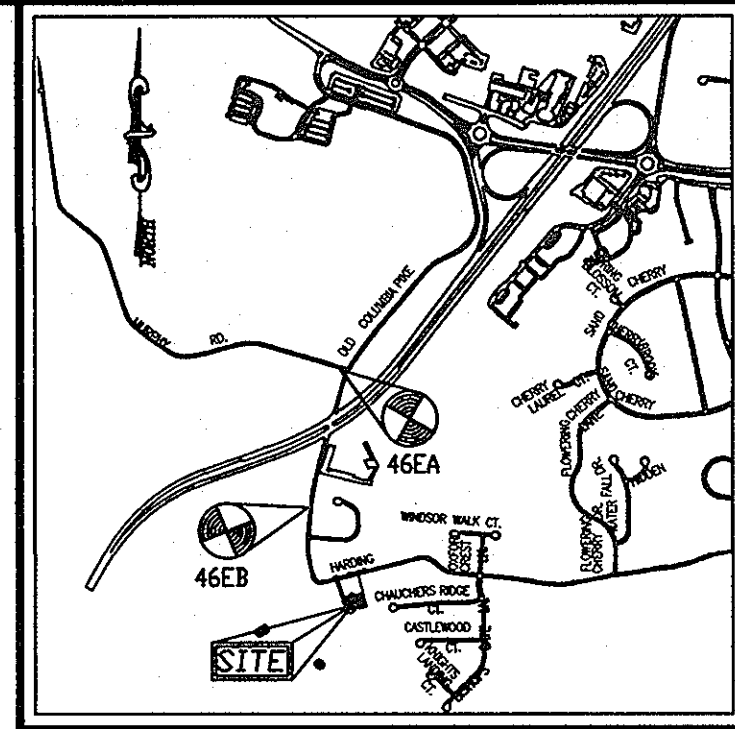
SITE DEVELOPMENT PLAN

TAKIAR PROPERTY

SFD LOT 2

DEED REF. L.14978 / F.201

SHEET INDEX		
DESCRIPTION	SHEET NO.	
COVER SHEET	1 OF 4	
SITE LAYOUT PLAN	2 OF 4	
SOILS MAP, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN	3 OF 4	
LANDSCAPE PLAN AND SITE DETAILS	4 OF 4	



LEGEND

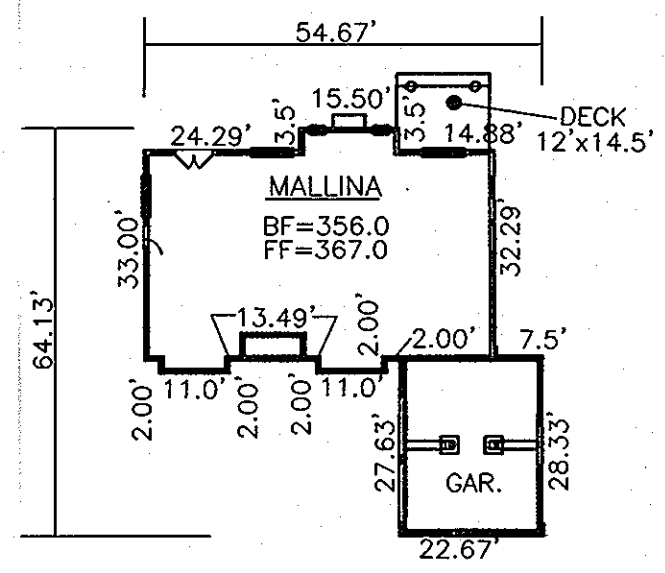
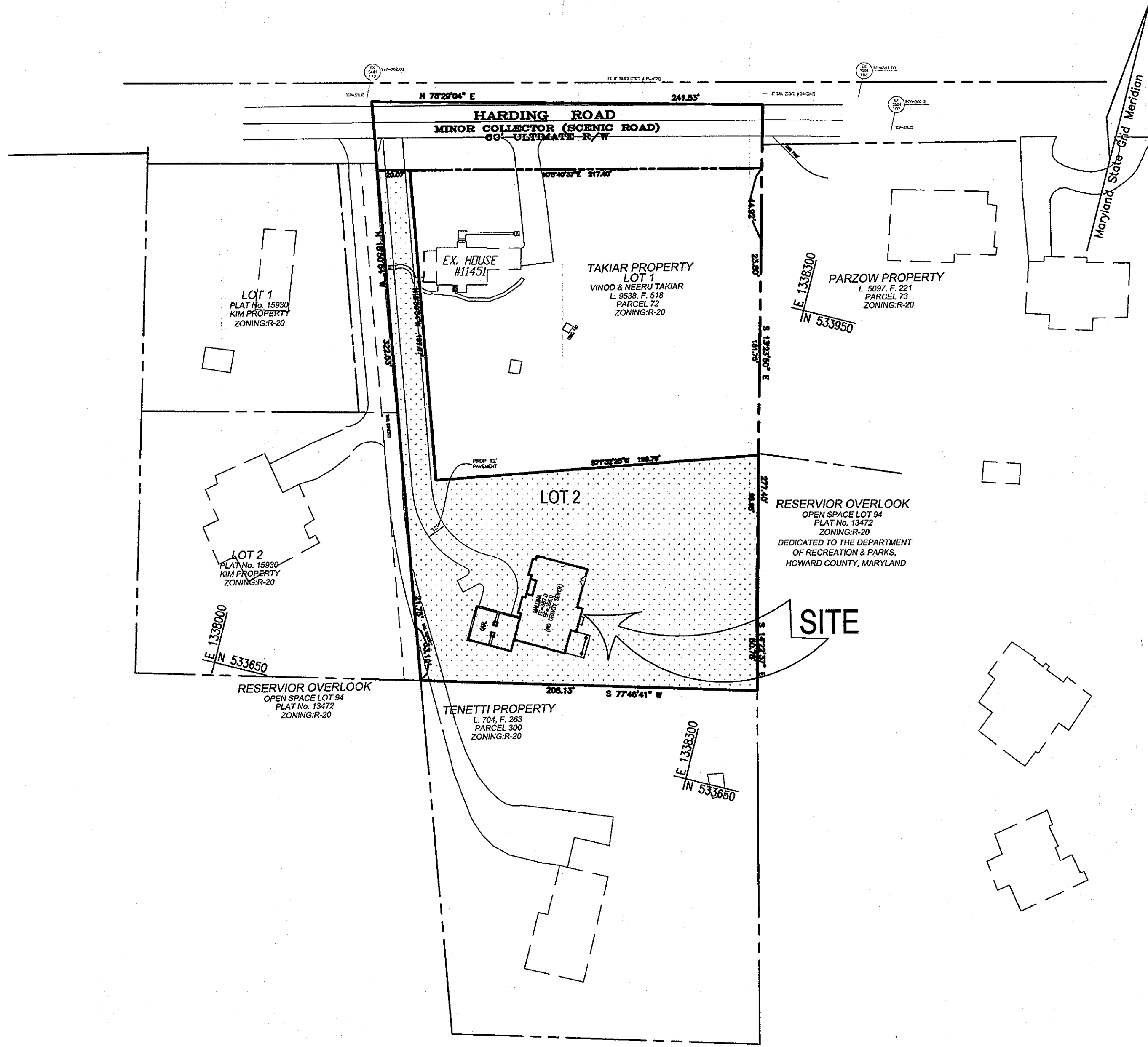
---	PROPERTY LINE
---	RIGHT-OF-WAY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING PAVEMENT
---	EXISTING FENCE
X	EXISTING CURB

VICINITY MAP

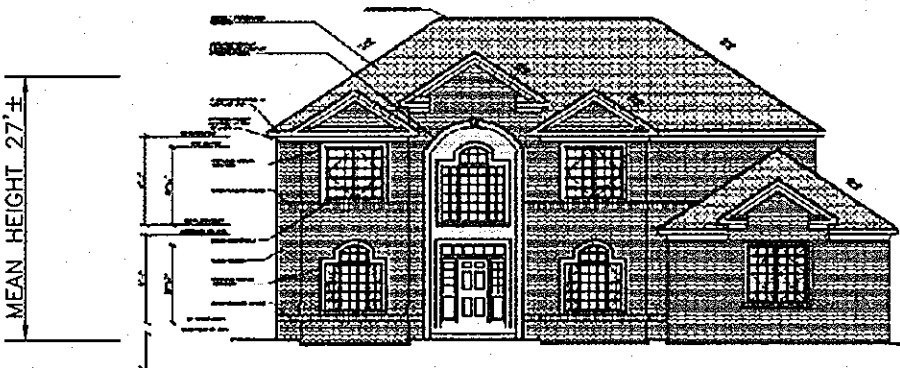
SCALE: 1"=2000'
ADC MAP COORDINATE: PG. 4815 B6

BENCHMARKS

	NORTHING	EASTING	ELEVATION
48EA	536,185.4096	1,338,091.7315	414.509'
48EB	534,750.2199	1,337,742.8106	412.647'



MALLINA MODEL PLAN
SCALE: 1"=30'

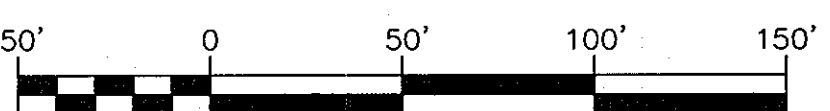


MALLINA MODEL ELEVATION
NOT TO SCALE

OWNER/DEVELOPER

CHANDRAKANTH MALLINA
4607 EMBASSY DRIVE - APT. 202
OWINGS MILLS, MARYLAND 21117
410-292-8817

LOCATION MAP
SCALE: 1"=50'



SITE ANALYSIS DATA

A. TOTAL PROJECT AREA:	32,624 SF (0.749 AC.)
B. AREA OF PLAN SUBMISSION:	32,624 SF (0.749 AC.)
C. LIMIT OF DISTURBED AREA:	24,604 SF (0.564 AC.)
D. PRESENT ZONING DESIGNATION:	R-20
E. PROPOSED USES FOR SITE AND STRUCTURES:	SFD RESIDENTIAL
F. TOTAL NUMBER OF UNITS ALLOWED:	1
G. TOTAL NUMBER OF UNITS PROPOSED:	1
H. OPEN SPACE REQUIRED:	0.00 AC.
I. PROPOSED IMPERVIOUS AREA:	6,600 SF (0.15 AC.)
J. PROPOSED GREEN OPEN AREA:	26,024 SF (0.60 AC.)
K. AREA OF WETLANDS AND BUFFERS:	0 SF (0.00 AC.)
L. AREA OF FLOODPLAIN & BUFFERS:	0 SF (0.00 AC.)
M. AREA OF FOREST:	0 SF (0.00 AC.)
N. AREA OF FOREST TO BE REMOVED:	0 SF (0.00 AC.)
O. AREA OF FOREST TO BE REMAIN:	0 SF (0.00 AC.)
P. AREA OF STEEP SLOPES (15% & GREATER):	0 SF (0.00 AC.)
Q. ERODIBLE SOILS:	0 SF (0.00 AC.)
R. DPZ REFERENCES:	F-07-104, L.9538 F.518, WP-13-016

STORMWATER MANAGEMENT PRACTICES CHART

HOUSE	ESD PRACTICE
11465 HARDING ROAD	TWO DRY WELLS (M-5)
DRIVEWAY	MICRO-BIORETENTION (M-6)
	NON-ROOF TOP DISCONNECTION (N-2)

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
F-07-104 TAKIAR PROPERTY - LOT 2	11455 HARDING ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER
TAKIAR PROPERTY	N/A	LOT2/PARCEL 72

PLAT OR L/F
20453
14978/201

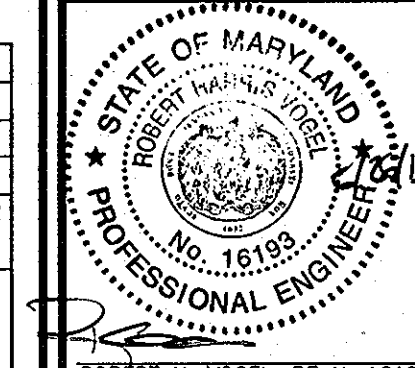
GRID NO. ZONING TAX MAP NO. ELECT. DIST. CENSUS TR.
15 R-20 46 6TH 6068.02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 7/10/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 7/19/13
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 7/24/13
DIRECTOR



DESIGN BY: EDS
DRAWN BY: JER
CHECKED BY: RHW
DATE: JUNE 2013
SCALE: AS SHOWN
W.O. NO.: 13-04

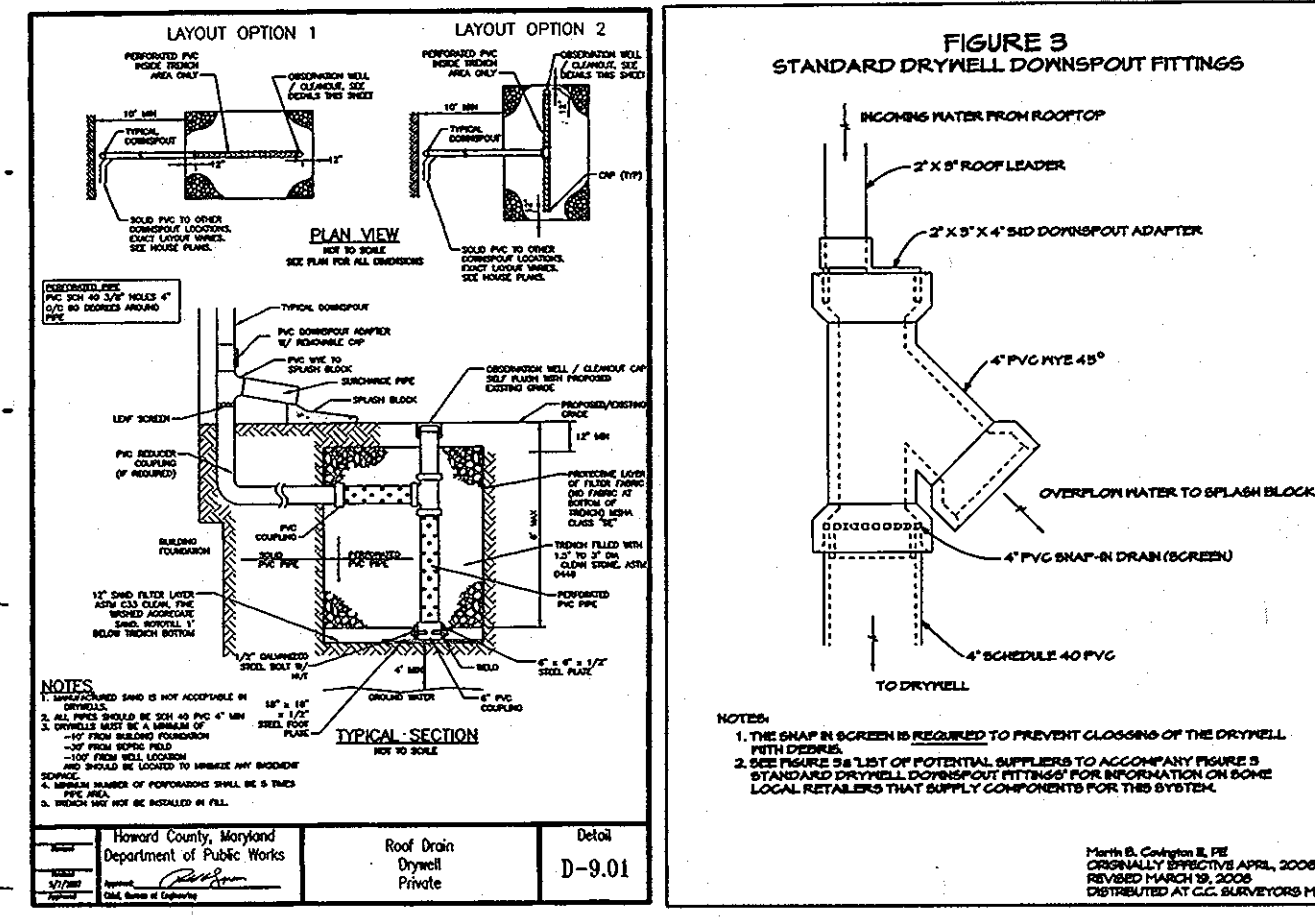
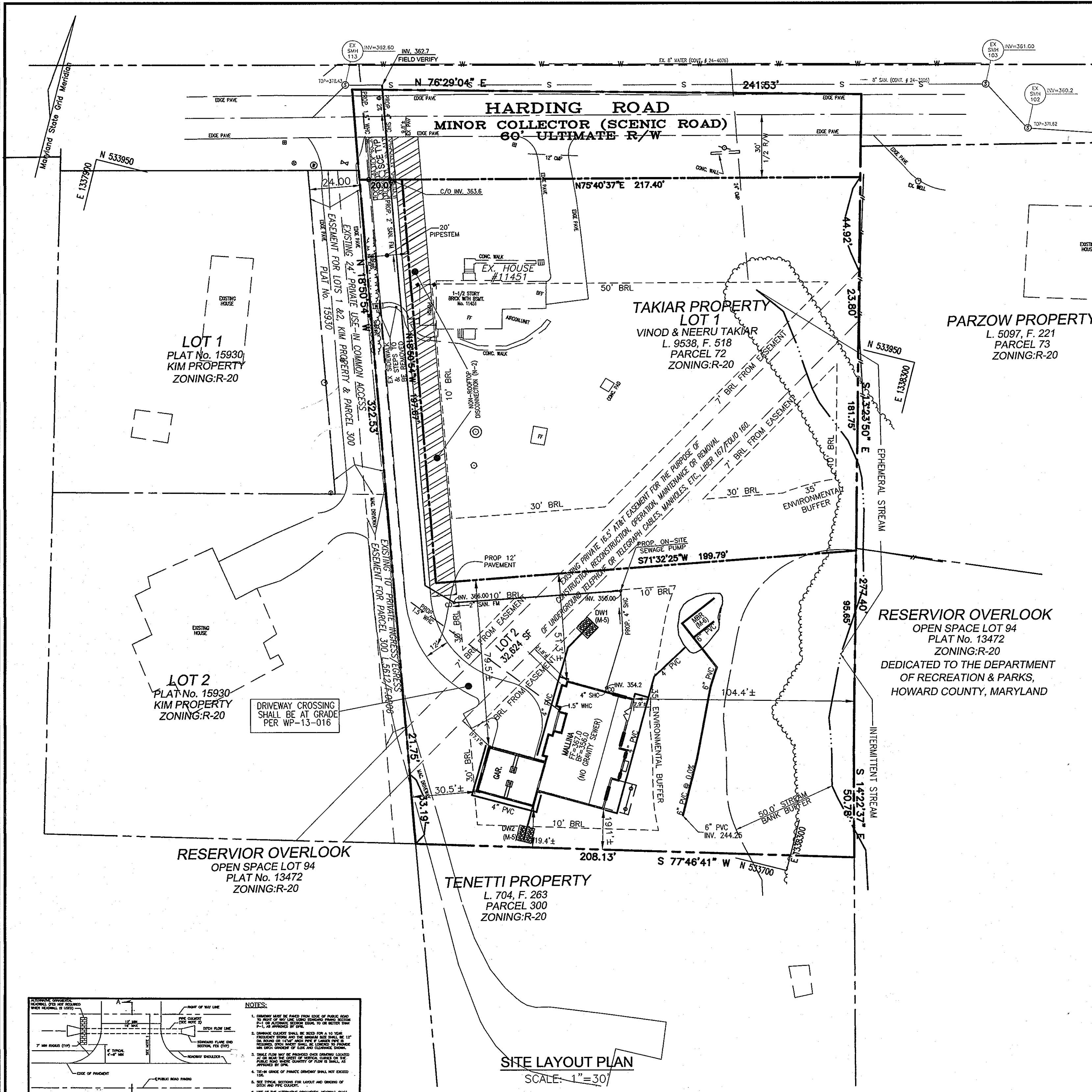
PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE: 09-27-2014.

1 SHEET OF 4

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

6TH ELECTION DISTRICT TAX MAP: 46 GRID: 15 DPZ REF'S: F-07-104, WP-13-016 ZONED: R-20 PARCEL: 72 BLOCK: 15 HOWARD COUNTY, MARYLAND

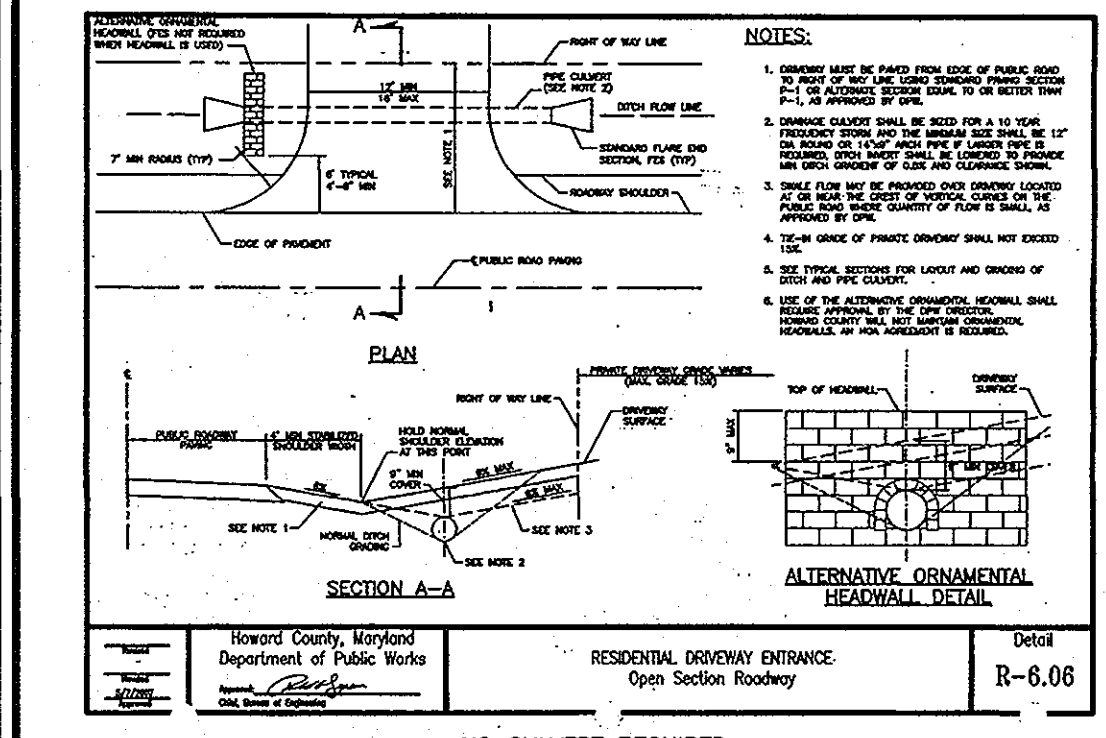
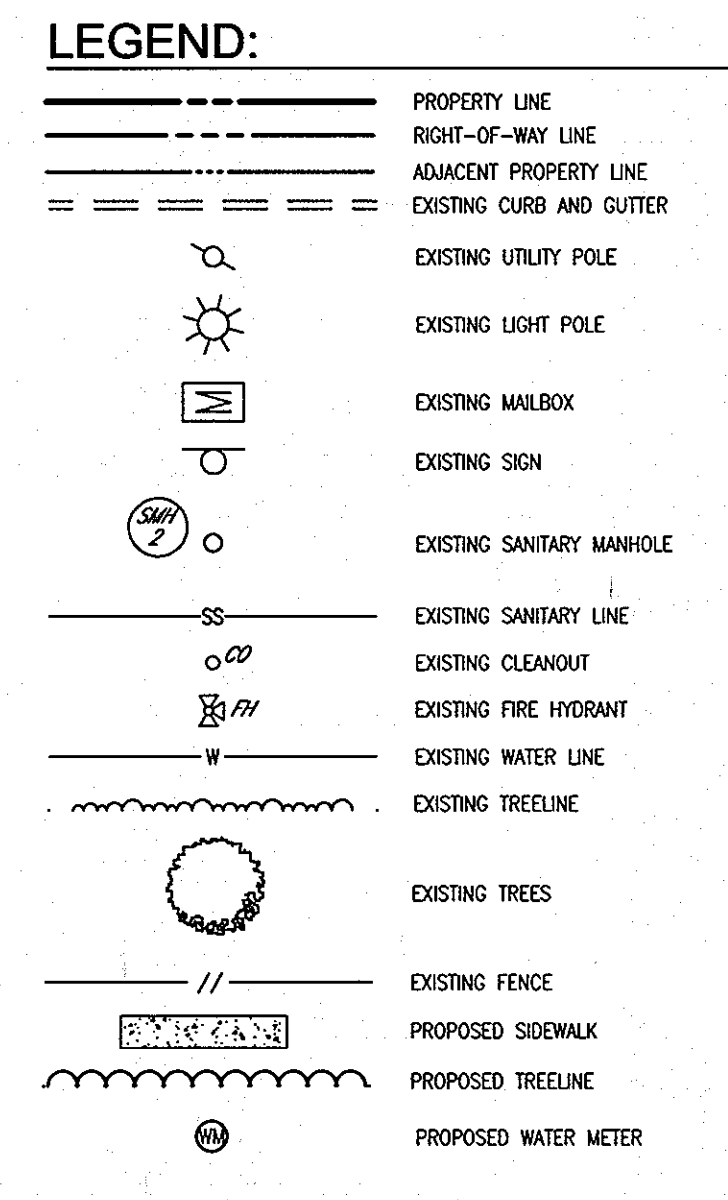


DRY WELL CHART

FACILITY	SIZE	EX. GROUND	PROP. GROUND	TOP STONE	INV. STONE	INV. SAND
DW 1	7.2'x7.2'x5	355.8	356.50	355.50	350.50	349.00
DW 2	7.2'x7.2'x5	355.8	356.00	355.00	350.00	349.00

*ELEVATION AT CENTER OF DRY WELL

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

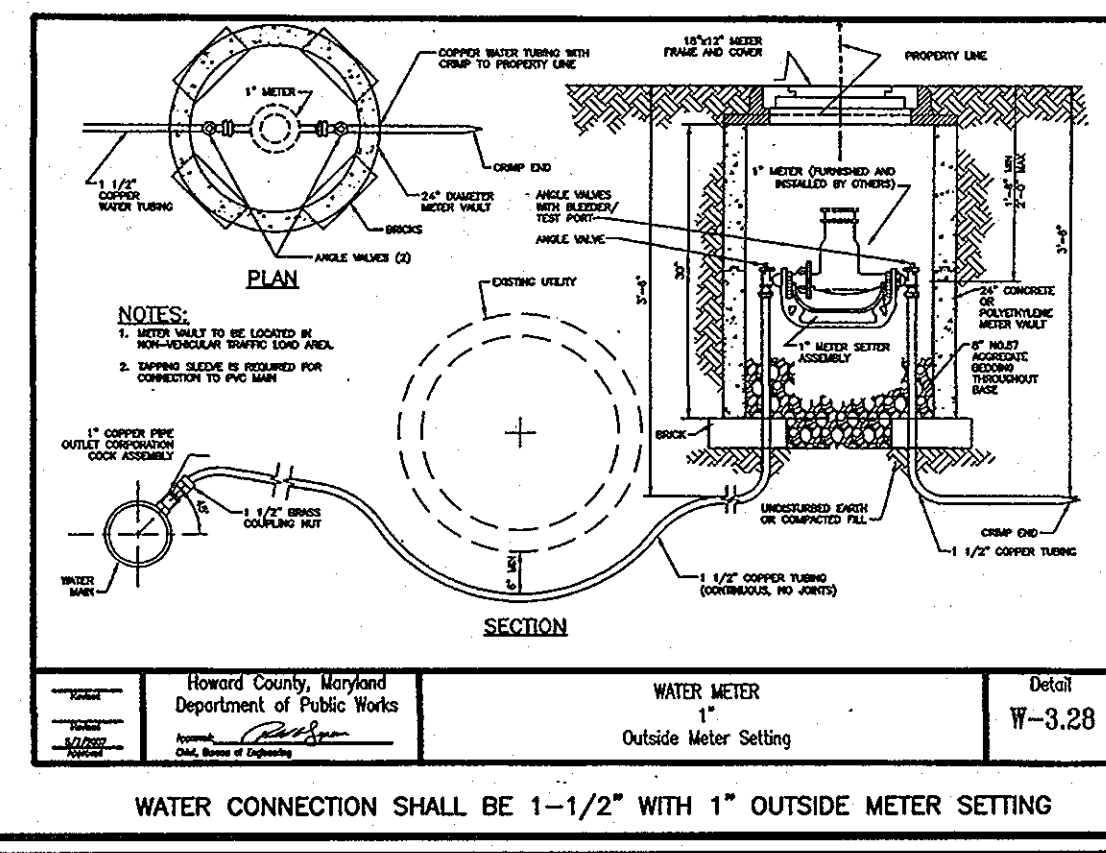


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. ... 7/18/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Keith ... 7/19/13
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Patrick ... 7/24/13
 DIRECTOR DATE



PAVING SECTIONS

SECTION	ROAD AND STREET	THICKNESS	MIN. THICKNESS	MAX. THICKNESS	MIN. WIDTH	MAX. WIDTH	MIN. SPACING	MAX. SPACING
P-1	RESIDENTIAL DRIVEWAY ENTRANCE	1.5" ASPHALT	1.5"	1.5"	3.0'	3.0'	3.0'	3.0'
P-2	DRIVEWAY SURFACE	1.5" ASPHALT	1.5"	1.5"	3.0'	3.0'	3.0'	3.0'
P-3	DRIVEWAY SURFACE	1.5" ASPHALT	1.5"	1.5"	3.0'	3.0'	3.0'	3.0'
P-4	DRIVEWAY SURFACE	1.5" ASPHALT	1.5"	1.5"	3.0'	3.0'	3.0'	3.0'

OWNER/DEVELOPER
 CHANDRAKANTH MALLINA
 4807 EMBASSY DRIVE - APT. 202
 OWINGS MILLS, MARYLAND 21117
 410-292-8817

NO. REVISION DATE

SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN
TAKIAR PROPERTY
 (SFD RESIDENTIAL)
 LOT 2

6TH ELECTION DISTRICT
 TAX MAP: 46 GRD: 15
 DPZ REF'S: F-07-104, WP-13-016

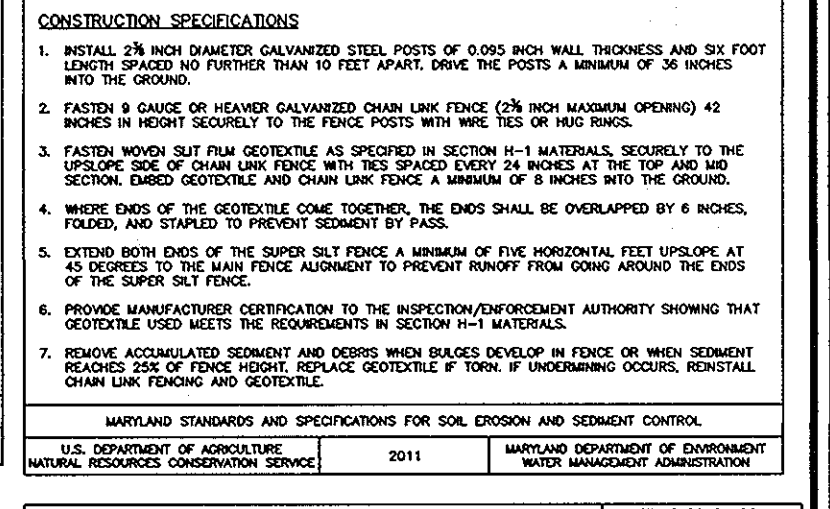
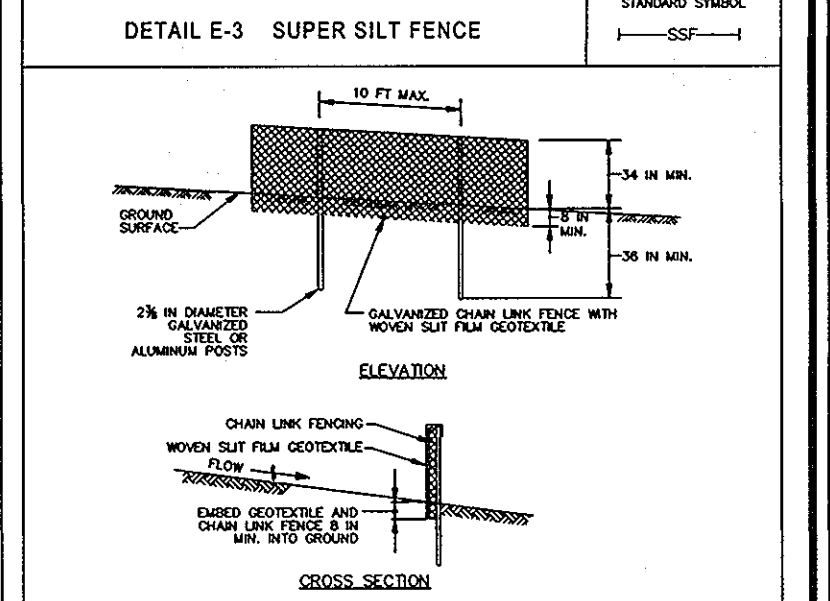
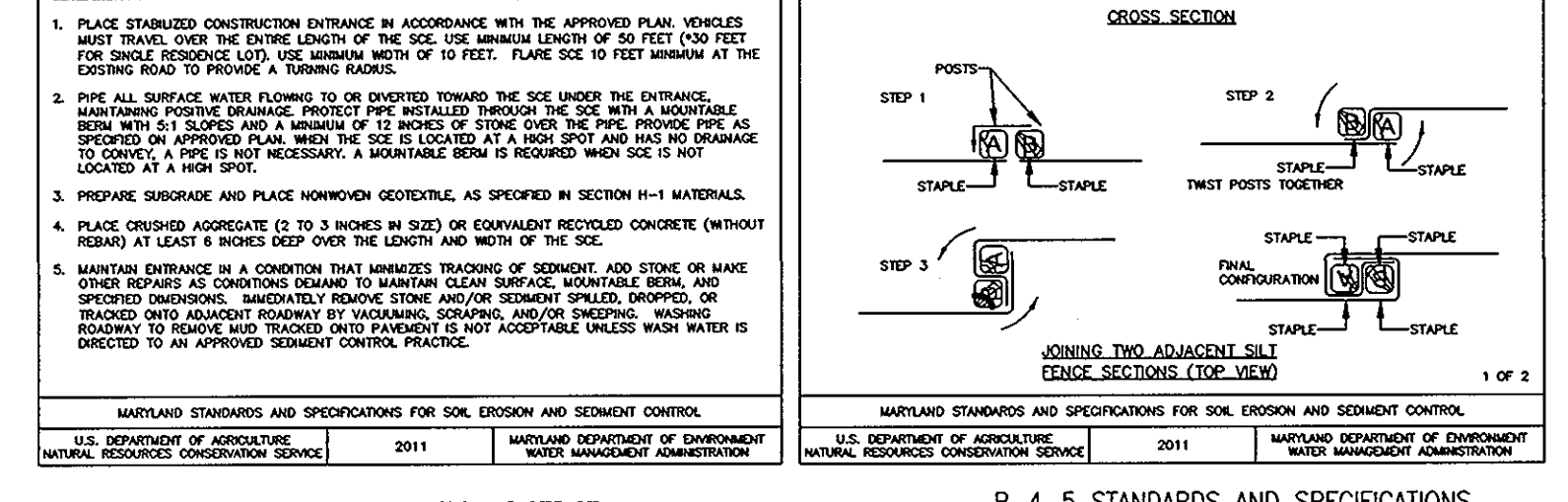
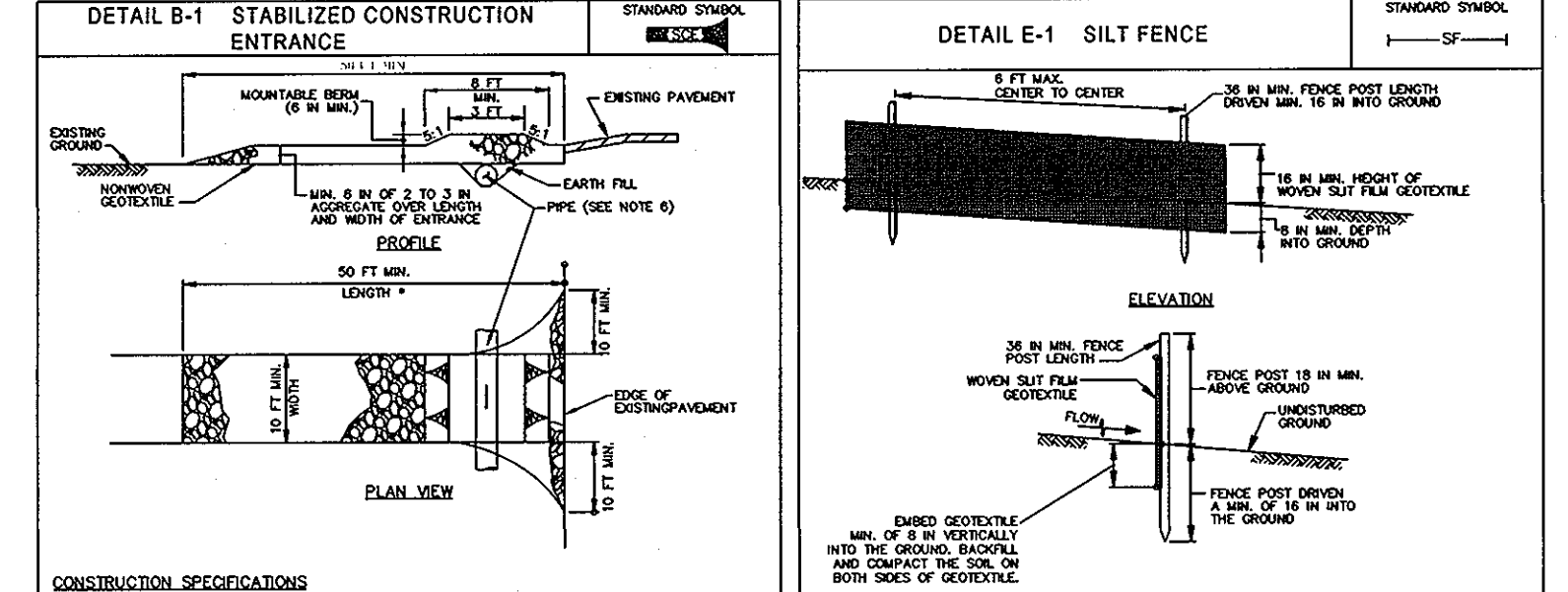
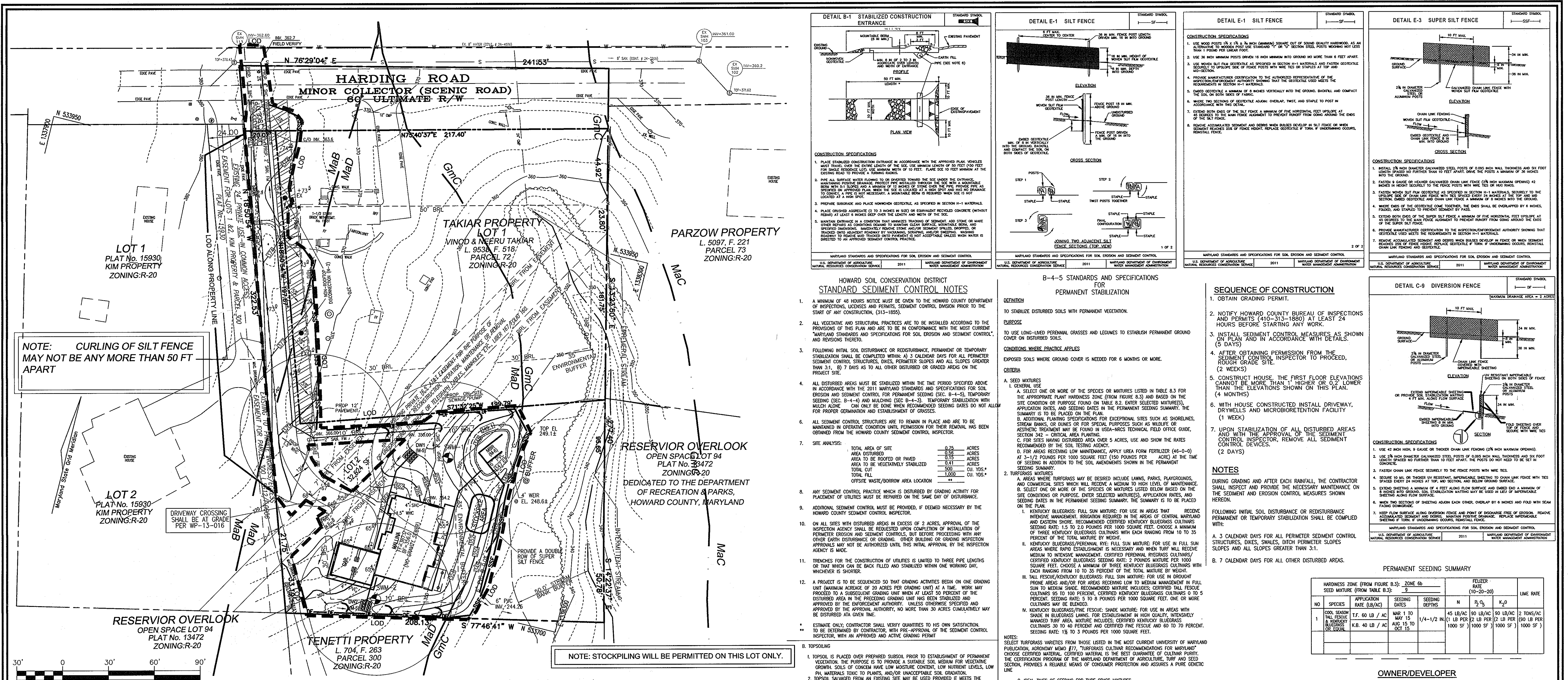
ZONED: R-20
 PARCEL: 72 BLOCK: 15
 HOWARD COUNTY, MARYLAND

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DESIGN BY: EDS
 DRAWN BY: JER
 CHECKED BY: RHV
 DATE: JUNE 2013
 SCALE: AS SHOWN
 W.D. NO.: 13-04

2 SHEET OF 4



HOWARD SOIL CONSERVATION DISTRICT STANDARD 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. (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 HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION, MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 3 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES AND ALL SLOPES GREATER THAN 3:1. (E) 7 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, PERMANENT SEEDING (SEC. B-4-4), TEMPORARY SEEDING (SEC. B-4-3), TEMPORARY STABILIZATION WITH MULCH (SEC. B-4-4), AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH 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.
- SOIL ANALYSIS:

TOTAL AREA OF SITE	0.75 ACRES
AREA TO BE DISTURBED	0.58 ACRES
AREA TO BE ROOFED OR PAVED	0.41 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.17 ACRES
TOTAL CUT	500 CU. YDS.
TOTAL FILL	45 CU. YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITIES FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEDED 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 SEDIMENT CONTROL AND BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MINIMUM ACREAGE OF 30 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 ENGINEER OR INSPECTOR UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- ESTIMATE ONLY; CONTRACTOR SHALL VERIFY QUANTITIES TO HIS OWN SATISFACTION. TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, WITH AN APPROVED AND ACTIVE GRADING PLAN.

PERMANENT SEEDING SUMMARY

HARDNESS ZONE (FROM FIGURE B.1):	ZONE 6b	FEZZER RATE (10-20-20)	LINE RATE
NO. SPECIES	APP. RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS
1 COOL SEASON TALL FESCUE OR BERMUDA	11.0 LB/AC	MAR 15 TO MAY 15	45 LB/AC, 90 LB/AC, 140 LB/AC, 180 LB/AC
1 TURFGRASS OR CROWN	10.0 LB/AC	AUG 15 TO OCT 15	140 LB/AC, 180 LB/AC, 230 LB/AC, 280 LB/AC

OWNER/DEVELOPER

CHANDRANATH MALLINA
4607 EMERALD DRIVE, APT. 202
OWINGS MILLS, MARYLAND 21117
410-292-8817

BY THE DEVELOPER:
[Signature]
DATE: 06/26/2013

BY THE ENGINEER:
[Signature]
DATE: 7/9/13

SOILS, GRADING, EROSION, AND SEDIMENT CONTROL PLAN

SCALE: 1"=30'

SYMBOL	NAME / DESCRIPTION	TYPE	K-FACTOR	HTDRG	INUS	INUS	INUS	INUS	INUS	INUS	INUS
MAb	MANOR LOAM, 3 TO 8 PERCENT SLOPES	A	24	NO	NO	NO	NO	NO	NO	NO	NO
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	24	NO	NO	NO	NO	NO	NO	NO	NO
GmC	GLENVILLE SILT LOAMS, 8 TO 15 PERCENT SLOPES	C	37	NO	NO	NO	NO	NO	NO	NO	NO

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

ELIGIBLE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

- A. SOIL PREPARATION**
 - TEMPORARY STABILIZATION SEEDING 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 CRUSHERS, OR OTHER EQUIPMENT ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH ROSS 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 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- SOIL STABILIZATION**
 - 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 20 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MOISTURE AMOUNT OF MOISTURE, AN EXCEPTION IF LOESSWILLS WILL BE PLANTED IN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 15 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - 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.
 - SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAYERS INTO CONTACT. RAKE OR OBJECTS SUBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSE SOIL MATERIALS MUST BE REMOVED FROM THE SURFACE. TRACKS FROM CONSTRUCTION EQUIPMENT ON THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 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 FRABLE.
 - SOIL AMENDMENTS TO BE INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. SEEDBED LOOSING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

- TOPSOILING:**
 - TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A MEDIUM WITH HIGH LEVEL OF MAINTENANCE. GROWTH SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADIENTS.
 - 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 SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY US-NRCS.
 - TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. B. THE SOIL MATERIALS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS. C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMEWATER IS NOT FEEBLE.
 - 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 HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SOIL INSTALLATION**
 - SOIL MUST BE UNIFORMLY DISTRIBUTED TO A DEPTH OF 2 TO 3 INCHES WITH A POWERED DRAG BAR OR OTHER APPROVED METHOD TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE TOP GRASS AND ROOTS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL BE WITHOUT DIFFICULTY.
 - E IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 3 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.
- SOIL:** TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
 - GENERAL SPECIFICATIONS
 - CLASS OF TURFGRASSES MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH, PLUS OR MINUS 1/8" INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GRASS AND THATCH. BROKEN PADS AND TORN OR CRACKED SOIL SHOULD NOT BE ACCEPTABLE.
 - STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - SOD MUST NOT BE CRUSHED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY AFFECTLY AFFECT ITS SURVIVAL.
 - ECESSIVELY DRY OR WET SOIL MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
 - SOil INSTALLATION
 - DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY OVERWATER THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND THINLY MIXED AGAINST EACH OTHER. SPACER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. DUST THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT WIND WHICH WOULD CAUSE AIR DRYING OF THE JOINTS.
 - WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH SPACING JOINTS, ROLL AND TAMP, PLEO OR OTHERWISE SECURE THE SOD TO PREVENT RATES FOR BOTH THE LONG AND SHORT EDGES. ENSURE SOIL IS BETWEEN SUBSOIL ROOTS AND UNDERLIEG SOIL SURFACE.
 - IF WATER IS SOIL IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND BRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
 - SOil MAINTENANCE
 - IN THE ABSENCE OF ADEQUATE RAINFALL, WATER MUST DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST TO A DEPTH OF 4 INCHES. WATER MUST BE APPLIED TO THE SOIL SURFACE AT LEAST EVERY 5 TO 7 DAYS.
 - AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
 - DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1850) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- INSTALL SEDIMENT CONTROL MEASURES AS SHOWN ON PLAN AND IN ACCORDANCE WITH DETAILS. (5 DAYS)
- AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, ROUGH GRADE SITE. (2 WEEKS)
- CONSTRUCT HOUSE, THE FIRST FLOOR ELEVATIONS CANNOT BE MORE THAN 1' HIGHER OR 0.2' LOWER THAN THE ELEVATIONS SHOWN ON THIS PLAN. (4 MONTHS)
- WITH HOUSE CONSTRUCTED INSTALL DRIVEWAY, DRYWELLS AND MICROBIORETENTION FACILITY (1 WEEK)
- UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES. (2 DAYS)

NOTES

- DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - A. 3 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DITCH PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - B. 7 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signatures]
DATE: 7/10/13
DATE: 7/9/13
DATE: 7/26/13

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

- Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
- Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

STANDARD STABILIZATION NOTE

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

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

6TH ELECTION DISTRICT
WEST MAP 46 GRID 15
DPP REF: F-07-104, WP-13-016

SITE DEVELOPMENT PLAN SOILS MAP, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN - DETAILS TAKIAR PROPERTY

(SPF RESIDENTIAL)
LOT 2

ROBERT H. VOGEL ENGINEERING, INC.

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TEL: 410-461-7666
FAX: 410-461-8961

DESIGN BY: EDS
DRAWN BY: JER
CHECKED BY: RHV
DATE: JUNE 2013
SCALE: AS SHOWN
W.O. No.: 13-04

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183
EXPIRATION DATE: 09-27-2014

3 SHEET OF 4

