

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
GAC	B			GALA LOAM, 8 TO 15 PERCENT SLOPES	0.24
GAB	B			GLENELO LOAM, 3 TO 8 PERCENT SLOPES	0.2
GAD	B	D		GLENELO URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	0.2
GAP	B	C		GLENELO SALT LOAM, 3 TO 8 PERCENT SLOPES	0.37**
GAP*	YES	C		GLENELO SALT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
GAP*	YES	B		MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

ENVIRONMENTAL CONCEPT PLAN AJ GILL PROPERTY TAX MAP 41, PARCEL 259, GRID 9

Key (X#)	Species	Size (in. DBH)	CRZ (feet radius)	Comments	Resolution
1	Tulip poplar	41	61.5	good condition	Removal
2	Tulip poplar	30.5	45.75	good condition	Retention
3	Tulip poplar	36.5	54.75	good condition	Removal
4	Tulip poplar	34	51	good condition	Retention
5	Tulip poplar	36.5	54.75	good condition	Removal
6	White Oak	49	73.5	fair condition, some limb dieback and tree house	Removal

SWM DESIGN NARRATIVE:

NATURAL RESOURCES SHALL BE PRESERVED, THERE ARE ENVIRONMENTALLY SENSITIVE AREAS (SLOPES, WETLANDS, ERODIBLE SOILS, FLOODPLAIN, FOREST, STREAMS, AND THEIR BUFFERS) AREAS ON-SITE. MOST OF THOSE FEATURES ARE NOT BEING DISTURBED BY THIS PLAN. THERE IS APPROXIMATELY 474 SF OF WETLAND BUFFER BEING DISTURBED. THE IMPERVIOUS AREA OF THE SITE IS MINIMIZED. SITING THE SWM PRACTICE NEAR THE DRIVEWAY, UTILIZING A SHARED DRIVEWAY, MINIMIZING WIDTH OF THE INDIVIDUAL DRIVEWAY AND KEEPING THE DRIVEWAY LENGTH MINIMAL ALL ARE CONDITIONS THAT REDUCE THE IMPERVIOUS AREAS. ERODIBLE SOILS WITH A KW OF 0.35 OR GREATER ARE NOT BEING DISTURBED. FOREST IS DISTURBED TO THE MINIMAL AMOUNT. FOREST CONSERVATION EASEMENT IS PROVIDED FOR PERMANENT PROTECTION OF RETENTION AREA.

EXISTING FLOW PATTERNS SHALL BE MAINTAINED. UNDER ULTIMATE CONDITIONS MOST DRAINAGE FLOW SHALL EXIT THE PROPERTY AT THE SAME GENERAL LOCATION AS IT DOES UNDER EXISTING CONDITIONS. THIS IS AT THE NORTHERN PROPERTY LINE AND INTO THE FLOOD AREA OF THE ADJACENT STREAM.

IMPERVIOUS AREA IS BEING HELD TO A MINIMUM BY LOCATING THE PROPOSED HOUSES CLOSE TO THE SEPTIC SETBACKS AND UTILIZING THE MINIMUM WIDTH FOR DRIVEWAY.

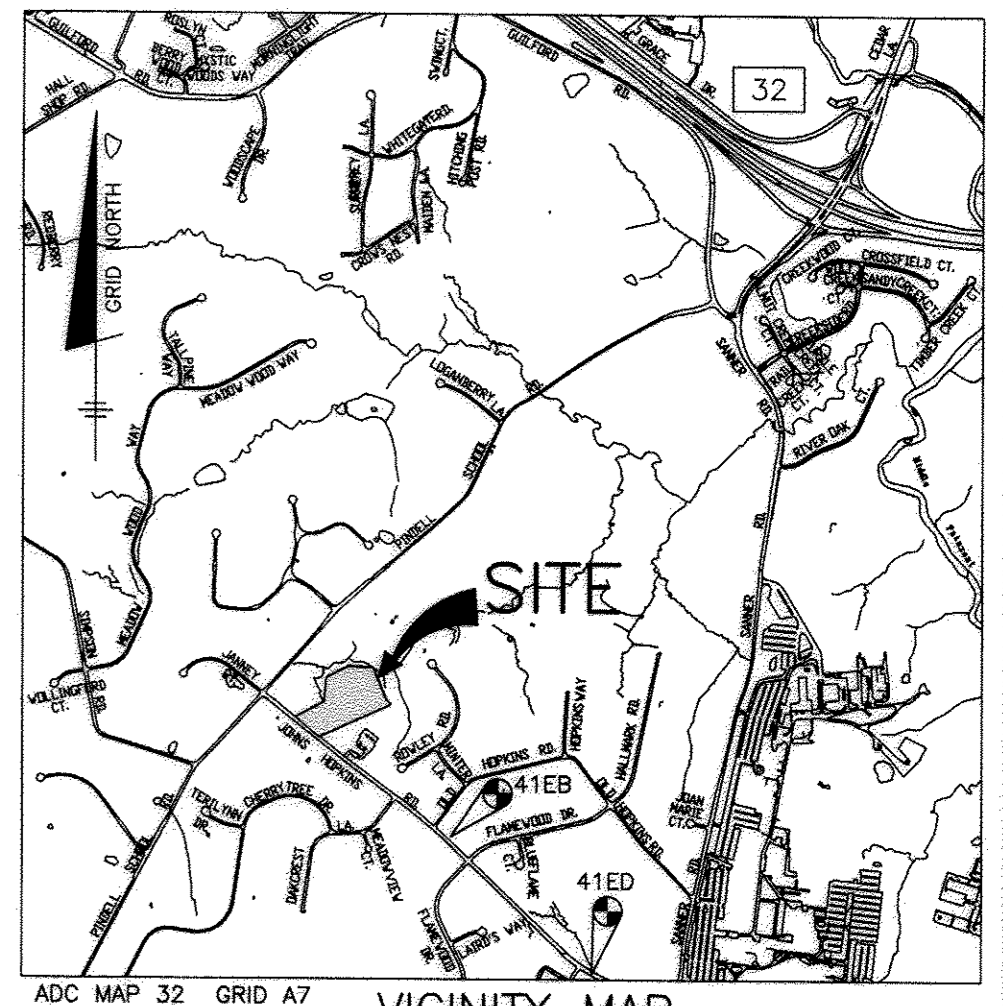
FOREST CLEARING IS KEPT AS LOW AS POSSIBLE. AS APPROVED BY (WP-17-044) FOUR SPECIMEN TREES ARE TO BE REMOVED TO ALLOW THE DRIVEWAY TO AVOID THE WETLANDS, ALSO 474 SF OF WETLAND BUFFER TO BE DISTURBED.

SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED. A SCHEMATIC CONCEPT IS SHOWN WITHIN THIS PLAN SET. IT IS ANTICIPATED THAT WITH THE MOST CONSISTENT MAINTENANCE AND SUPER SILT FENCE ALONG THE PERIMETER, EROSION CONTROL MATING SHALL BE USED FOR SWALES. THERE ARE NO IMPACTS TO SWM DESIGN BASED ON SEDIMENT AND EROSION CONTROL.

THE PROPOSED (M-6) MICRO BIO-RETENTION FACILITIES SHALL ADEQUATELY TREAT THE PROPOSED IMPERVIOUS AREAS. THE PRACTICES SHALL DISCHARGE AT LOCATION THAT ARE NOT DETRIMENTAL TO THE ADJACENT PROPERTIES. INLETS SHALL BE PLACED IN THE MICRO-BIORETENTION FACILITY SO HIGHER STORMS WILL FLOW TO THE UNDERDRAIN PIPE. FULL TREATMENT IS BEING PROVIDED THEREFORE THIS PROJECT CAN BE CONSIDERED TO BE TREATED TO THE MAXIMUM EXTENT PRACTICAL.

NOTES:

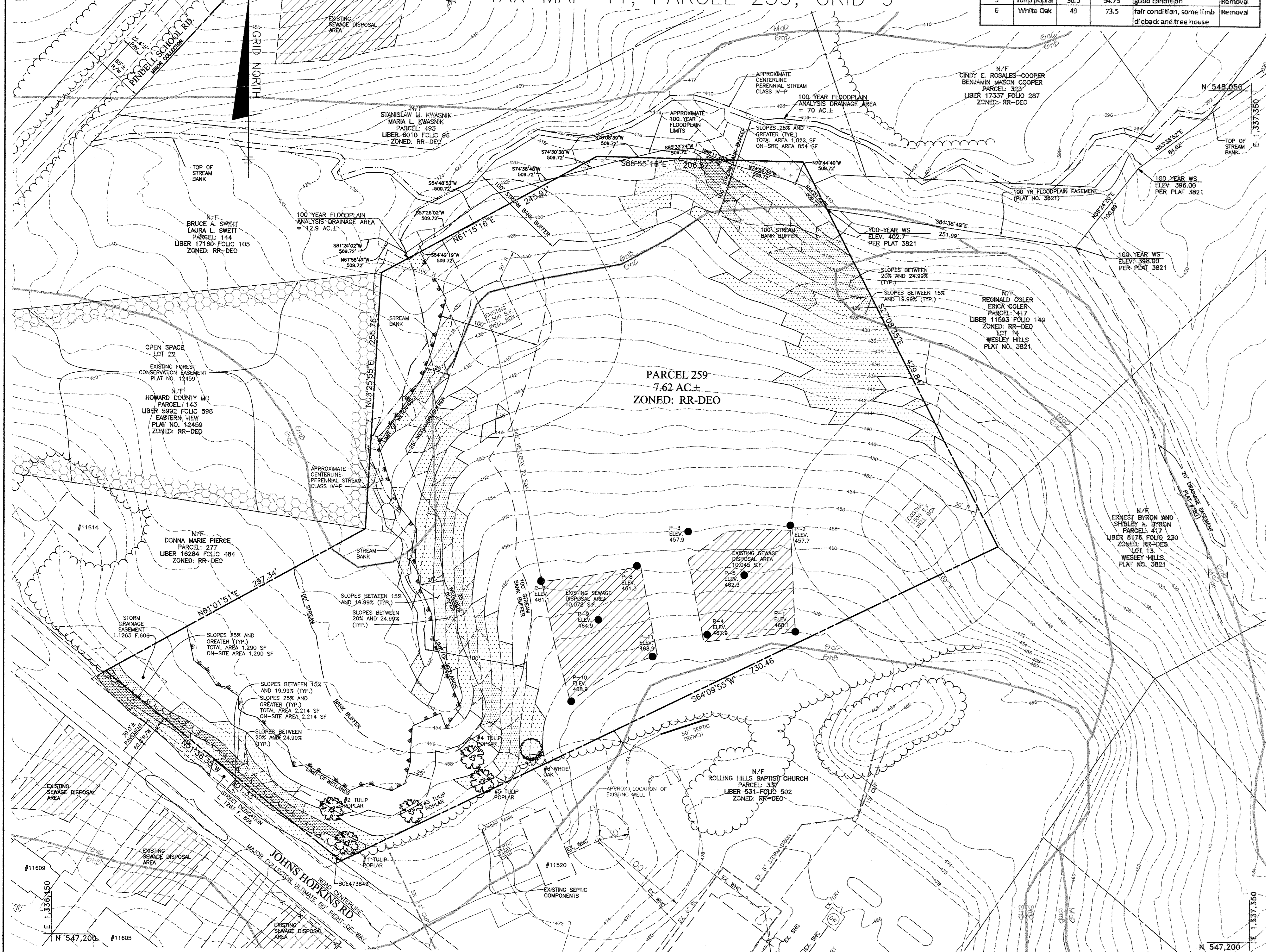
- EXISTING ZONING: RR-DEO
- DEED REFERENCE: 14121/00176
- SITE ANALYSIS DATA:
 - A. TOTAL AREA OF SITE: 7.62 AC.
 - B. EXISTING IMPERVIOUS AREA: 0.00 AC.
 - C. EXISTING GREEN AREA: 7.62 AC.
 - D. EXISTING FORESTED AREA: 7.54 AC.
 - E. EXISTING SITE USE: VACANT
 - F. AREA OF PLAN SUBMISSION: 7.62 AC.
 - G. LIMIT OF DISTURBANCE: 2.40 AC.
 - H. IMPERVIOUS AREA: 0.62 AC.
 - I. REVEGETATED AREA: 1.78 AC.
 - J. PROPOSED USE: 2 SINGLE FAMILY DETACHED RESIDENTIAL.
 - K. PREVIOUS SUBMITTAL: WP-17-044
- THIS LOT WILL UTILIZE A CUSTOM SEDIMENT AND EROSION PLAN SINCE THE LIMIT OF DISTURBANCE EXCEEDS THE 30,000 SQUARE FEET THRESHOLD.
- STORMWATER MANAGEMENT FOR THIS PROPOSAL IS PROVIDED WITH THE APPROVAL OF THE SUPPLEMENTAL ENVIRONMENTAL CONCEPT PLAN AND MAY BE REVISED WITH THE FINAL PLANS & BUILDING PERMIT.
- THERE ARE NO EXISTING DWELLINGS ON SITE.
- TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES ON SITE.
- ON JANUARY 25, 2017 THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING APPROVED A REQUEST FOR AN ALTERNATIVE COMPLIANCE (WP-17-044) OF SECTION 16.120(B)(4)(iii)(B), SECTION 16.1205(A)(7)&(10) AND SECTION 16.116(A)(1) & (3) SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL:
 - SUBMISSION OF A FINAL PLAN APPLICATION FOR REVIEW BY THE SRC AGENCIES.
 - SUBMISSION OF A SIGNED PERCOLATION CERTIFICATION FROM THE BUREAU OF ENVIRONMENTAL HEALTH SHOWING BOTH LOTS.
 - PROVIDING THE REQUIRED ROADWAY WIDENING DEDICATION ALONG JOHN HOPKINS ROAD WITH FINAL PLAN.
 - THE APPLICANT SHALL OBTAIN ALL REQUIRED AUTHORIZATIONS AND PERMITS FROM THE MARYLAND DEPARTMENT OF ENVIRONMENT AND U.S. ARMY CORPS OF ENGINEERS FOR ANY DISTURBANCE WITHIN THE WETLANDS AND THEIR BUFFERS AND WETLANDS MITIGATION REQUIRED. REFERENCE ANY APPLICABLE MDE OR USACE PERMITS OR TRACKING NUMBERS ON THE ASSOCIATED PLANS AND BUILDING OR GRADING PERMITS.
 - NO DISTURBANCE IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE AS SHOWN ON THE ALTERNATIVE COMPLIANCE EXHIBIT UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED BY THE APPLICANT TO BE JUSTIFIED. BEST MANAGEMENT PRACTICES FOR GRADING AND DRIVEWAY CONSTRUCTION SHALL BE USED BY THE CONTRACTOR TO LIMIT THE DISTURBANCE.
 - PROVIDE MITIGATION FOR THE REQUESTED REMOVAL OF THE 4 SPECIMEN TREES LOCATED WITHIN THE SITE. THE DEVELOPER IS REQUIRED TO PLANT FOUR 3" CALIPER NATIVE SHADE TREES ON THE PROPOSED LOTS. THESE TREES WILL BE SHOWN ON THE FINAL SUPPLEMENTAL PLAN.
- FOREST CONSERVATION IS NOT REQUIRED SINCE THIS DEVELOPMENT IS A MINOR SUBDIVISION THAT CREATES ONE ADDITIONAL LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL, SEE SECTION 16.1202(B)(1)(VIII).
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- THERE ARE ERODIBLE SOILS WITHIN THE PROPERTY LIMITS.



HOWARD COUNTY GEODETIC COORDINATES:

41E1	N 546,222.22
	E 1,337,778.22
	ELEV = 463.78
41E0	N 544,800.61
	E 1,339,251.13
	ELEV = 405.70

Site Analysis Data Sheet	
Gross Area	7.62 ac
100yr Floodplain	0.04 ac
Steep Slopes 20% or greater	0.37 ac
Wetlands (outside of floodplain)	1.03 ac
Wetlands Buffer (outside of floodplain)	1.58 ac
Stream	427 lf
Stream Buffer (outside of floodplain)	2.43 ac
Forested Area	7.54 ac
Highly Erodible Soils	2.32 ac
Limit of Disturbance	2.40 ac
Impervious Area	0.62 ac
Green Space (within LOD)	1.79 ac

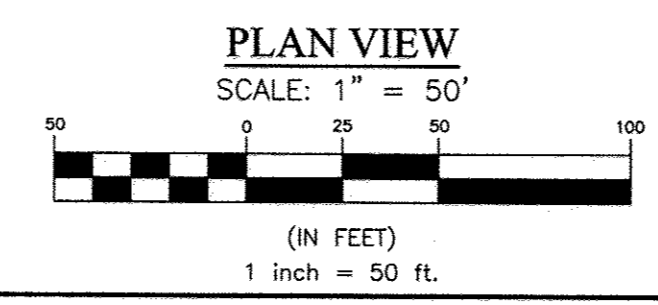


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 1-31-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 1-5-18
CHIEF, DIVISION OF LAND DEVELOPMENT

LEGEND	
EXISTING WOODS LINE	EXISTING CONTOURS
PROPOSED WOODS LINE	PROPOSED CONTOURS
WHITE OAK SPECIMEN TREE	LIMIT OF WETLANDS
TULIP POPLAR SPECIMEN TREE	SLOPES 15% TO 19.99%
SOILS CLASSIFICATION	SLOPES 20% TO 24.99%
SOILS DELINEATION	SLOPES 25% AND GREATER
EXISTING STRUCTURE	PERCOLATION TEST PASSED
EXISTING SEPTIC FIELD	EXISTING WELL
EXISTING WELL BOX	EXISTING WELL BOX
LIMITS OF DISTURBANCE (EFFECTIVE AREA)	PROPOSED STRUCTURE
FLOODPLAIN	EXISTING FOREST CONSERVATION EASEMENT



SHEET INDEX	
No.	DESCRIPTION
1	COVER SHEET, EXISTING CONDITIONS PLAN AND SOILS MAP
2	GRADING & STORMWATER MANAGEMENT PLAN, DRAINAGE AREA MAP, NOTES AND DETAILS
3	SEDIMENT & EROSION CONTROL PLAN, DRAINAGE AREA MAP, NOTES AND DETAILS

NO.	DATE	REVISION

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. 45377. Expiration Date: 06-06-2018.

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 315.4 ELLICOTT CITY, MARYLAND 21043
(P) 410-485-6105 (F) 410-485-8644
WWW.BE-CIVILENGINEERING.COM

[Signature]
1/2/18

OWNER: HAJEET S. GILL, RAJDEEP K. GILL, 8111 CHAPEL MANOR LANE, ELLICOTT CITY, MARYLAND 21043, PHONE: 443-509-4019

AJ GILL PROPERTY
JOHNS HOPKINS ROAD
A SUBDIVISION OF PARCEL 259 Lots 1+2

TAX MAP: 41 - GRID: 9 - PARCEL: 259 - ZONED: RR-DEO
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

COVER SHEET, EXISTING CONDITIONS PLAN AND SOILS MAP

DATE: NOVEMBER, 2017 | BEI PROJECT NO: 2473
SCALE: AS SHOWN | SHEET 1 OF 3

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
GSC	B			GALIA LOAM, 8 TO 15 PERCENT SLOPES	0.24
GGB	B			GLENLEIGH LOAM, 3 TO 6 PERCENT SLOPES	0.2
GGB*	B		D	GLENLEIGH URBAN LAND COMPLEX, 0 TO 6 PERCENT SLOPES	0.2
Gmb*	YES	C		GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37**
Gcb*	YES	C	D	GLENVILLE SILT LOAM, 0 TO 6 PERCENT SLOPES	0.3702**
MAD	B			MANOR LOAM, 15 TO 25 PERCENT SLOPES	0.24

* INDICATES HYDRIC SOILS
 ** HIGHLY ERODIBLE SOILS WITH K OF 0.35 OR GREATER AND ON GRADES 5% OR STEEPER, OR SOILS ON GRADES 15% OR GREATER
 SOILS ARE TAKEN FROM THE NRCS WEB SOIL SURVEY AUGUST 2014, MAP 23



Practice	DA (sf)	Imp Area (sf)	% Imp	Rv	Required	Provided	% DA?	Required ESDv	Provided	Pe	Required	Provided	Ownership
(M-6) Micro Bio-Retention #1	12,030	1,558	13%	0.17	241	334	PASS	267	397	2.36	0.0015	Private	
(M-6) Micro Bio-Retention #2	5,623	3,850	68%	0.67	112	283	PASS	499	536	1.72	0.0028	Private	
(M-6) Micro Bio-Retention #3	13,595	4,055	30%	0.32	272	402	PASS	577	743	2.06	0.0034	Shared/Private	
(M-6) Micro Bio-Retention #4	13,129	7,370	56%	0.56	263	886	PASS	972	1483	2.44	0.0061	Private	
(M-6) Micro Bio-Retention #5	7,204	4,000	56%	0.55	144	322	PASS	528	601	1.82	0.0010	Private	
(M-5) Drywell DW-1	900	900	100%	0.95	N/A	N/A	N/A	71	98	1.38	0.0022	Private	
(M-5) Drywell DW-2	550	550	100%	0.95	N/A	N/A	N/A	44	72	1.65	0.0017	Private	
Totals per individual Drainage Areas	52,451	22,283	42%	0.43	625	1019		2895	3933	2.08	0.0099	0.0187	
Totals per Whole Site	104,641	26,869	26%		637			3922					

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER DRY WELLS (M-5)

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
- WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- 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.

LOT NUMBER	ADDRESS	MICRO-BIO-RETENTION (M-6) QUANTITY	DRYWELLS
1	JOHN HOPKINS RD CLARKSVILLE MD, 21029	3	0
2	JOHN HOPKINS RD CLARKSVILLE MD, 21029	2	2

Name of Development:	GI Property	SWM
Watershed:	Middle Patuxent River	
Watershed Designation:	2-13-146	Class: IV-P
Area of Site:	104,641 square feet	
Impervious Cover:	26,869 square feet	Percent: 26%
Area of A soils:	0 square feet	Percent: 0%
Area of B soils:	104,641 square feet	Percent: 100%
Area of C soils:	0 square feet	Percent: 0%
Area of D soils:	0 square feet	Percent: 0%
Target RCN:	55	
Achieved Pe:	1.60 inches	
Achieved ESDv:	2.08 inches	pass 130%
Target ESDv:	3922 cubic feet	
Achieved ESDv:	3933 cubic feet	pass 100%
Target Rev:	0.0099 ac-ft	
Achieved Rev:	0.0187 ac-ft	pass 190%
Required Qr:	0 cubic feet	N/A
Provided Qr:	0 cubic feet	N/A

Step 1: Determine ESD Implementation Goals

A. Determine Pre-Developed Conditions

HSG	RCN	"Area (ft ²)"	Percent
A	38	0	0%
B	55	104641	100%
C	70	0	0%
D	77	0	0%
Target RCN		55	104641

B. Determine Initial Target Pe Using Table 5.3

HSG	"Area (ft ²)"	"Impervious Percent"	Target Pe
A			
B	104641	26.869	30%
C			
D			
Weighted Pe	104641	26869.0046	30%

Percent Impervious is rounded to the next higher increment of 5

D. Compute Qe

$Q_e = \text{Runoff depth used to size ESD practices}$
 $Q_e = P_e \cdot R_v$

$P_e = 1.6$ inches
 $R_v = 26\%$
 $R_v = 0.05 + (0.0099)$
 $R_v = 0.28$
 $Q_e = 0.45$ inches

Target $P_e = 1.6$ inches
 $Q_e = 0.45$ inches
 ESDv = 3922 cubic feet

Total Site Recharge Volume Calculations

Recharge Volume
 Drainage Area = main site
 A = 2.40 Area in Acres

I = 26% Impervious

HSG	% Of Site	Soil Specific Recharge Factor
A	0%	0.38
B	30%	0.26
C	59%	0.15
D	4%	0.06

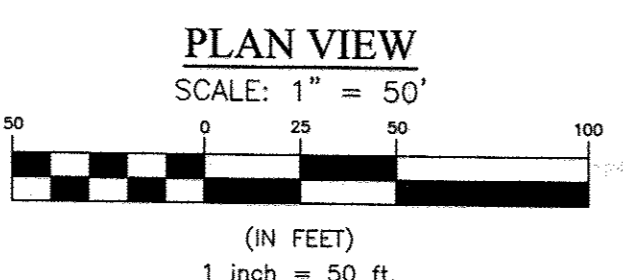
Recharge Using Percent Volume Method
 $Rev = 0.0099 \text{ ac-ft} \text{ OR } 430 \text{ cu ft}$
 Recharge Using Percent Area Method
 $Rev = 0.11$ acres

Requirement may be met by either
 a) treating 430 cu ft using structural methods,
 b) treating 0.11 acres using non-structural methods, or
 c) a combination of both

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11-30-18

[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 1-5-19



EXISTING WOODS LINE	EXISTING CONTOURS	EXISTING STRUCTURE	LIMITS OF DISTURBANCE (EFFECTIVE AREA)
PROPOSED WOODS LINE	PROPOSED CONTOURS	PERCOLATION TEST PASSED	PROPOSED STRUCTURE
WHITE OAK SPECIMEN TREE	LIMIT OF WETLANDS	EXISTING SEPTIC FIELD	FLOODPLAIN
TULIP POPLAR SPECIMEN TREE	SLOPES 15% TO 19.99%	EXISTING WELL	EXISTING FOREST CONSERVATION EASEMENT
SOILS CLASSIFICATION	SLOPES 20% TO 24.99%	EXISTING WELL BOX	
SOILS DELINEATION	SLOPES 25% AND GREATER		

NO. DATE REVISION

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043
 (P) 410-485-6105 (F) 410-485-8644
 WWW.BEI-CIVILENGINEERING.COM

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. 45273, Expiration Date: 06-08-2018

[Signature]
 PROFESSIONAL ENGINEER

OWNER: HAJEET S. GILL, RAJDEEP K. GILL, 8111 CHAPEL MANOR LANE, ELLICOTT CITY, MARYLAND 21043, PHONE: 443-509-4019

AJ GILL PROPERTY
 JOHN HOPKINS ROAD
 A SUBDIVISION OF PARCEL 259 Lots 1+2

TAX MAP: 41 - GRID: 9 - PARCEL: 259 - ZONED: RR-DEO
 ELECTION DISTRICT NO. 5
 HOWARD COUNTY, MARYLAND

GRADING & STORMWATER MANAGEMENT PLAN,
 DRAINAGE AREA MAP, NOTES AND DETAILS

DATE: NOVEMBER, 2017 BEI PROJECT NO: 2473
 SCALE: AS SHOWN SHEET 2 OF 3



SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
Sh	B			GAILA LOAM, 8 TO 15 PERCENT SLOPES	0.24
ShB	B			GLENDEL LOAM, 3 TO 8 PERCENT SLOPES	0.2
ShC	C	D		GLENDEL URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.2
ShD	C			GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37**
ShE	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShF	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShG	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShH	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShI	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShJ	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShK	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShL	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShM	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShN	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShO	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShP	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShQ	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShR	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShS	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShT	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShU	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShV	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShW	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShX	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShY	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**
ShZ	YES	C	D	GLENVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37**

** INDICATES HYDRIC SOILS
 ** HIGHLY ERODIBLE SOILS: SOILS WITH K OF 0.35 OR GREATER AND ON GRADES 5% OR STEEPER, OR SOILS ON GRADES 15% OR GREATER
 SOILS ARE TAKEN FROM THE NRCS WEB SOIL SURVEY AUGUST 2014, MAP 23.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (DAY 1)
- HOLD ON-SITE PRE-CONSTRUCTION MEETING. (DAY 2)
- CLEAR AND GRUB AS NECESSARY TO INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS (I.E. EARTH DIKES, TEMP. PIPE, SILT FENCE, SUPER SILT FENCE, ETC.) (DAY 3-4)
- CLEAR FIRST 840' OF DRIVEWAY TO WYE IN FRONT OF DWELLINGS AND ONE STOCKPILE AREA) GRADE DRIVEWAY AND SWALE, INSTALL DRIVEWAY AND TEMPORARILY STABILIZE ANY DISTURBED AREAS. (DAY 5-15)
- UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, PROCEED TO CLEAR AND GRUB WITHIN THE PERIMETER. (DAY 16-20)
- EXCAVATE FOR HOUSE FOUNDATION, POUR AND BACKFILL. (DAY 21-28)
- BRING REMAINING INDIVIDUAL DRIVEWAY TO SUBGRADE. DO NOT INSTALL SWALES AT THIS TIME. (DAY 29-30)
- FINISH HOUSE CONSTRUCTION. (DAY 31-120)
- CONSTRUCT MBR #1-#5 & DW #1-#2. DO NOT INSTALL MULCH OR PLANTINGS AT THIS TIME. INSTALL SILT FENCE AROUND PERIMETER OF MB FACILITY. ONCE THE ROOF OF THE HOUSE IS COMPLETED, INSTALL THE ROOF DRAINS. (DAY 121-126)
- PAVE THE INDIVIDUAL DRIVEWAY. (DAY 127-131)
- INSTALL SEPTIC LINE, SEPTIC TANK, PUMP AND TRENCHES. (DAY 132-140)
- FINAL GRADE THE LOT AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDBED NOTES INCLUDING EROSION CONTROL MATTING WITHIN ALL SWALES, IF APPLICABLE, AS SHOWN ON THE PLAN. AT THIS TIME, PROCEED TO INSTALL MULCH AND PLANTINGS OF MBRS #1-#5. (DAY 141-142)
- UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS WITH THE PERMANENT SEEDBED NOTES. (DAY 143)

NO.	DATE	REVISION

BENCHMARK
 ENGINEERS LAND SURVEYORS PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELLICOTT CITY, MARYLAND 21045
 (P) 410-485-6105 (F) 410-485-8644
 WWW.BENCHMARKENGINEERING.COM

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. 45377 Expiration Date: 06-08-2018

[Signature]
 1/2/18

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 1-31-18
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 1-5-18
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

LEGEND

EXISTING WOODS LINE	PROPOSED WOODS LINE	WHITE OAK SPECIMEN TREE	TULIP POPLAR SPECIMEN TREE	SOILS CLASSIFICATION	SOILS DELINEATION	EXISTING CONTOURS	PROPOSED CONTOURS	HIGHLY ERODIBLE SOILS	SLOPES 15% TO 19.99%	SLOPES 20% TO 24.99%	SLOPES 25% AND GREATER	EXISTING STRUCTURE	PERCOLATION TEST PASSED	EXISTING SEPTIC FIELD	EXISTING WELL	EXISTING WELL BOX	LIMITS OF DISTURBANCE	PROPOSED STRUCTURE	FLOODPLAIN	LIMIT OF WETLANDS	STREAM	STABILIZED CONSTRUCTION ENTRANCE	SILT FENCE	SUPER SILT FENCE	EROSION CONTROL MATTING	EARTHDIKE	EXISTING FOREST CONSERVATION EASEMENT	TEMPORARY GATION OUTLET STRUCTURE

PLAN VIEW
 SCALE: 1" = 50'
 (IN FEET)
 1 inch = 50 ft.

OWNER:
 HAJEET S. GILL
 RAJDEEP K. GILL
 8111 CHAPEL MANOR LANE
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 443-509-4019

AJ GILL PROPERTY
 JOHNS HOPKINS ROAD
 A SUBDIVISION OF PARCEL 259 Lots 1+2

TAX MAP: 41 - GRID: 9 - PARCEL: 259 - ZONED: RR-DEO
 ELECTION DISTRICT NO. 5
 HOWARD COUNTY, MARYLAND

SEDIMENT & EROSION CONTROL PLAN,
 DRAINAGE AREA MAP, NOTES AND DETAILS

DATE: NOVEMBER, 2017 BEI PROJECT NO: 2473
 DESIGN: JC DRAWN: BEI SCALE: AS SHOWN SHEET 3 OF 3