

SITE DATA TABULATION

- GENERAL SITE DATA
 - a.) PRESENT ZONING: R-ED
 - b.) LOCATION: TAX MAP: 31, GRID 10, PARCEL 133
 - c.) APPLICABLE DPZ FILE REFERENCES: N/A
 - d.) PROPOSED USE OF SITE: SINGLE FAMILY DETACHED RESIDENTIAL
 - e.) PROPOSED WATER AND SEWER SYSTEMS: PUBLIC
- AREA TABULATION

	TOTAL
a.) TOTAL AREA OF SITE	4.05± AC.
b.) APPROXIMATE AREA OF 100 YEAR FLOODPLAIN	N/A
c.) APPROX. AREA OF STEEP SLOPES (23% OR MORE)	N/A
d.) NET AREA OF SITE	4.05± AC.
e.) AREA OF THIS PLAN SUBMISSION	4.05± AC.
f.) AREA OF PROPOSED BUILDABLE LOTS	1.25± AC.
g.) AREA OF PROPOSED PUBLIC ROAD RIGHT-OF-WAY	0.74± AC.
h.) AREA OF REQUIRED OPEN SPACE (50% OF SITE AREA)	2.025± AC.
i.) AREA OF PROPOSED OPEN SPACE LOTS	2.06± AC.
j.) AREA OF PROPOSED NON-CREDIT OPEN SPACE	0.00 AC.
- DENSITY TABULATION
 - a.) NET AREA OF THE SITE: 4.05± AC.
 - b.) TOTAL NUMBER OF BUILDABLE LOTS ALLOWED (2 D.U./NET AC.): 7
 - c.) TOTAL NUMBER OF BUILDABLE LOTS PROPOSED: 7 BUILDABLE LOTS FOR 1 EX. HOUSE TO REMAIN AND 6 PROPOSED SFD UNITS.
- UNIT/LOT TABULATION
 - a.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION: 7
 - b.) TOTAL NUMBER OF OPEN SPACE LOTS PROPOSED: 2
 - c.) TOTAL NUMBER OF NON-BUILDABLE LOTS PROPOSED: N/A

LEGEND

- SOILS CLASSIFICATION: ChB2
- SOILS DELINEATION: [Symbol]
- EXISTING CONTOURS (HOWARD COUNTY DIGITAL): [Symbol]
- LIMIT OF WETLANDS: [Symbol]
- EXISTING STREAM: [Symbol]
- EX. 25' WETLAND BUFFER: [Symbol]
- 75' STREAM BUFFER: [Symbol]
- PROPOSED LOD: [Symbol]
- EXISTING WOODS LINE: [Symbol]
- PROPOSED WOODS LINE: [Symbol]
- EXISTING DRAINAGE EASEMENT: [Symbol]
- PROPOSED TREE PROTECTION: TF [Symbol]
- PROPOSED SUPER SILT FENCE: SSF [Symbol]
- BGE YELLOW ZONE: [Symbol]
- BGE GREEN ZONE: [Symbol]
- EXISTING STRUCTURE: [Symbol]
- EXISTING WELL: W EX. WELL [Symbol]
- PROPOSED PERCOLATION TEST: P-10 [Symbol]
- EXISTING PERCOLATION TEST: P-10 [Symbol]
- NON-WOODY BUFFER: [Symbol]
- FCE-REFORESTATION AREA: [Symbol]
- FCE-RETENTION AREA: [Symbol]
- DRAINAGE EASEMENT: [Symbol]
- UTILITY EASEMENT: [Symbol]
- PRIVATE ACCESS AREA: [Symbol]
- EXISTING SEPTIC: [Symbol]
- PROPOSED SANITARY SEWER EASEMENT: [Symbol]
- PROPOSED SWM ACCESS: [Symbol]
- NON-CREDITED FCE AREA: [Symbol]

PRELIMINARY EQUIVALENT SKETCH PLAN

WELLER PROPERTY

1st. ELECTION DISTRICT - HOWARD COUNTY, MARYLAND



COORDINATE CHART (NAD '83)

No.	NORTH	EAST
200	571752.8026	1377182.8246
201	571885.9136	1377250.9588
202	571910.1333	1377581.8663
203	571950.4622	1377710.9625
204	571683.0310	1377786.0255
205	571455.7303	1377594.3209

PLAN VIEW
SCALE: 1" = 50'

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	7,334 S.F.	573 S.F.	6,761 S.F.
2	8,021 S.F.	365 S.F.	7,656 S.F.
5	7,555 S.F.	170 S.F.	7,385 S.F.
6	9,014 S.F.	1,009 S.F.	8,005 S.F.
7	10,141 S.F.	1,108 S.F.	9,033 S.F.

FOREST CONSERVATION EASEMENT CHART

FCE	AREA OF RETENTION FOREST	AREA OF REFORESTATION	TOTAL
FCE 1	0.70 ACRE	0.02 ACRE	0.72 ACRE
FCE 2	0.24 ACRE	0.04 ACRE	0.28 ACRE
TOTAL	0.94 ACRE	0.06 ACRE	1.00 ACRES

SHEET INDEX

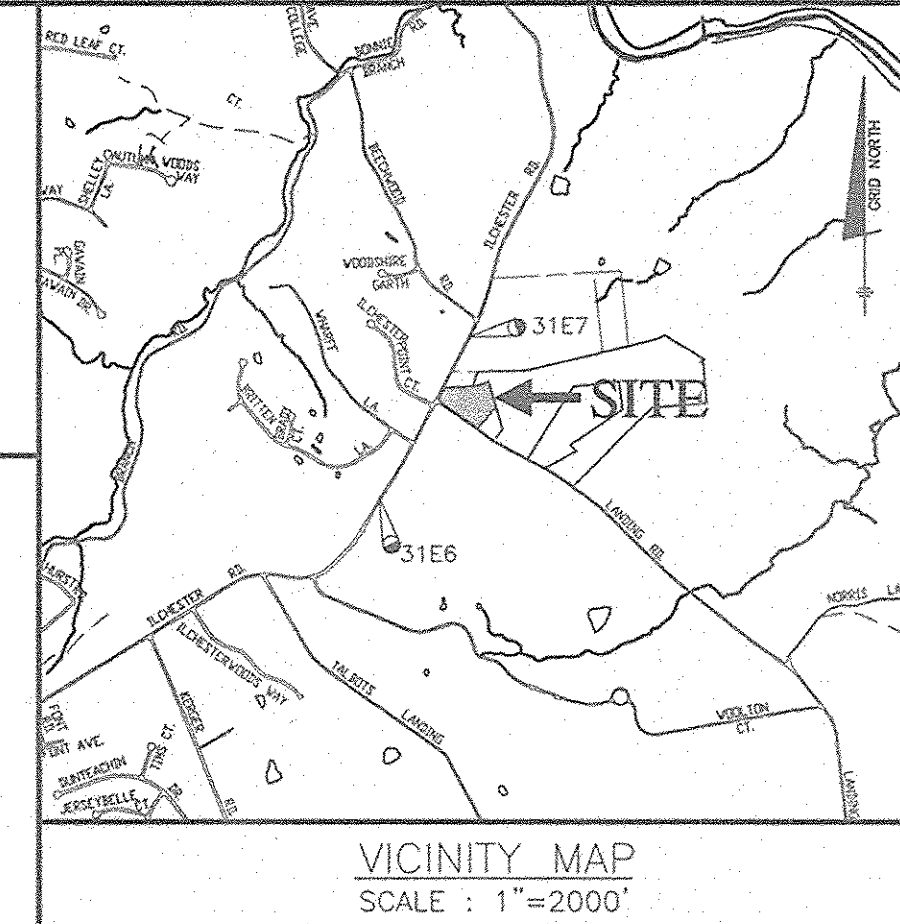
NO.	DESCRIPTION
1	PRELIMINARY EQUIVALENT SKETCH TITLE SHEET
2	PRELIMINARY EQUIVALENT SKETCH PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	LANDSCAPE PLAN
5	FOREST CONSERVATION PLAN
6	FOREST CONSERVATION NOTES AND DETAILS

BENCH MARKS NAD'83

HO. CO. #31E6
3/4" REBAR 0.5' BELOW SURFACE
5' SOUTHWEST OF ILCHESTER ROAD PAVING
500± WEST OF WMAF LANE
N 570852.3717 E 1376700.8467

HO. CO. #31E7
3/4" REBAR 0.5' BELOW SURFACE
9' SOUTHWEST OF ILCHESTER ROAD PAVING
250± WEST OF BEECHWOOD ROAD
N 572335.3503 E 1377504.0332

HO. CO. BM#2745004 ELEV. 364.78
USED FOR VERTICAL CONTROL.



GENERAL NOTES

- ALL ASPECTS OF THIS PROJECT SHALL BE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVER(S) HAVE BEEN APPROVED.
- PROJECT BACKGROUND:
LOCATION: TAX MAP 31, GRID 10, PARCEL 133
ZONING: R-ED
TOTAL TRACT AREA: 4.05 ACRES
NUMBER OF PROPOSED LOTS: 9 TOTAL (7 BUILDABLE LOTS FOR 1 EX. HOUSE TO REMAIN AND 6 PROPOSED SFD UNITS AND 2 OPEN SPACE LOTS)
- PUBLIC WATER AND SEWER SYSTEMS SHALL BE PROVIDED FOR THIS DEVELOPMENT.
- TRACT BOUNDARY BASED ON DEED FOR PARCEL 133.
- TOPOGRAPHY FROM FIELD SURVEY PERFORMED BY BENCHMARK ENGINEERING ON OR ABOUT MAY 5th 2005. CONTOURS SHOWN ARE AT 2 FOOT INTERVAL.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE NOS. 31E6 AND 31E7 WERE USED FOR THIS PROJECT.
- WETLAND DELINEATION PROVIDED BY ECO-SCIENCE PROFESSIONALS, INC. DATED 11/25/05.
- FOREST STAND DELINEATION PROVIDED BY ECO-SCIENCE PROFESSIONALS, INC. DATED 11/25/05.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN THE LANDSCAPE MANUAL SHALL BE COMPLIED WITH.
- NO DISTURBANCE SHALL OCCUR IN THE WETLANDS, 25' WETLAND BUFFER, 50' STREAM BUFFER OR FOREST CONSERVATION EASEMENTS, EXCEPT AS SHOWN ON THIS PLAN.
- MINIMUM BUILDABLE LOT SIZE SHALL BE 6,000 SQUARE FEET FOR SINGLE FAMILY DETACHED DWELLINGS.
- THIS PROJECT IS WITHIN THE HOWARD COUNTY METROPOLITAN DISTRICT.
- STORMWATER MANAGEMENT SHALL BE PROVIDED BY A BIO-RETENTION FACILITY FOR WGV, GRASSSED SWALES FOR REV AND A DETENTION FACILITY FOR CPV. ALL FACILITIES TO BE CLASS "A" STRUCTURES. STORMWATER MANAGEMENT FACILITY SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- TO THE BEST OF THE OWNER'S KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ONSITE.
- SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED FOR THIS PROJECT.
- FOREST CONSERVATION OBLIGATION IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODES AND FOREST CONSERVATION MANUAL FOR THIS SITE WILL BE MET BY THE RETENTION OF 40,946 SF @ \$0.20 AND REFORESTATION OF 2,614 SF @ \$0.50 AND PAYMENT OF \$8,167.50 TO HOWARD COUNTY FOR FEE-IN LIEU OF FOREST CONSERVATION, FOR 10,890 SF OF FOREST CONSERVATION OBLIGATION.
- AN APFO TRAFFIC ANALYSIS IS NOT REQUIRED FOR THIS PROJECT. THIS PROJECT IS LOCATED MORE THAN 1-1/2 MILES FROM THE NEAREST INTERSECTION OF TWO (2) MAJOR COLLECTOR ROADWAYS.
- THIS PLAN CONFORMS TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS, EFFECTIVE APRIL 13, 2004.
- THE DECISION AND ORDER FOR PB NO. 380 WAS SIGNED ON 10/18/07 FOR SP-06-012, WELLER PROPERTY.
- THE SEPTIC SYSTEM FOR THE EXISTING HOUSE SHALL BE ABANDONED UPON COMPLETION OF THE PUBLIC SEWER LINES WITHIN THE SITE.
- IN ACCORDANCE WITH SUBDIVISION SECTION 16.121 (a) (4) (i) THIS SUBDIVISION DOES NOT HAVE TO PROVIDE RECREATION OPEN SPACE BECAUSE IT PROPOSES LESS THAN TEN RESIDENTIAL UNITS/LOTS.

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[Signature]
PLANNING DIRECTOR

11/16/07
DATE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE 10/18/07
PB 380

NO	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 • FAX: 410-465-6644
EMAIL: bel@bel-cv-engineering.com

[Signature]
DONALD MASON
PROFESSIONAL ENGINEER
NO. 21443
EXPIRES 12/31/08

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. 21443, Expiration Date: 12-31-2008.

OWNER/DEVELOPER: CASCADE WALTHUR, L.L.C.
P.O. BOX 417
ELLCOTT CITY, MD 21041
PHONE: 410-465-4244

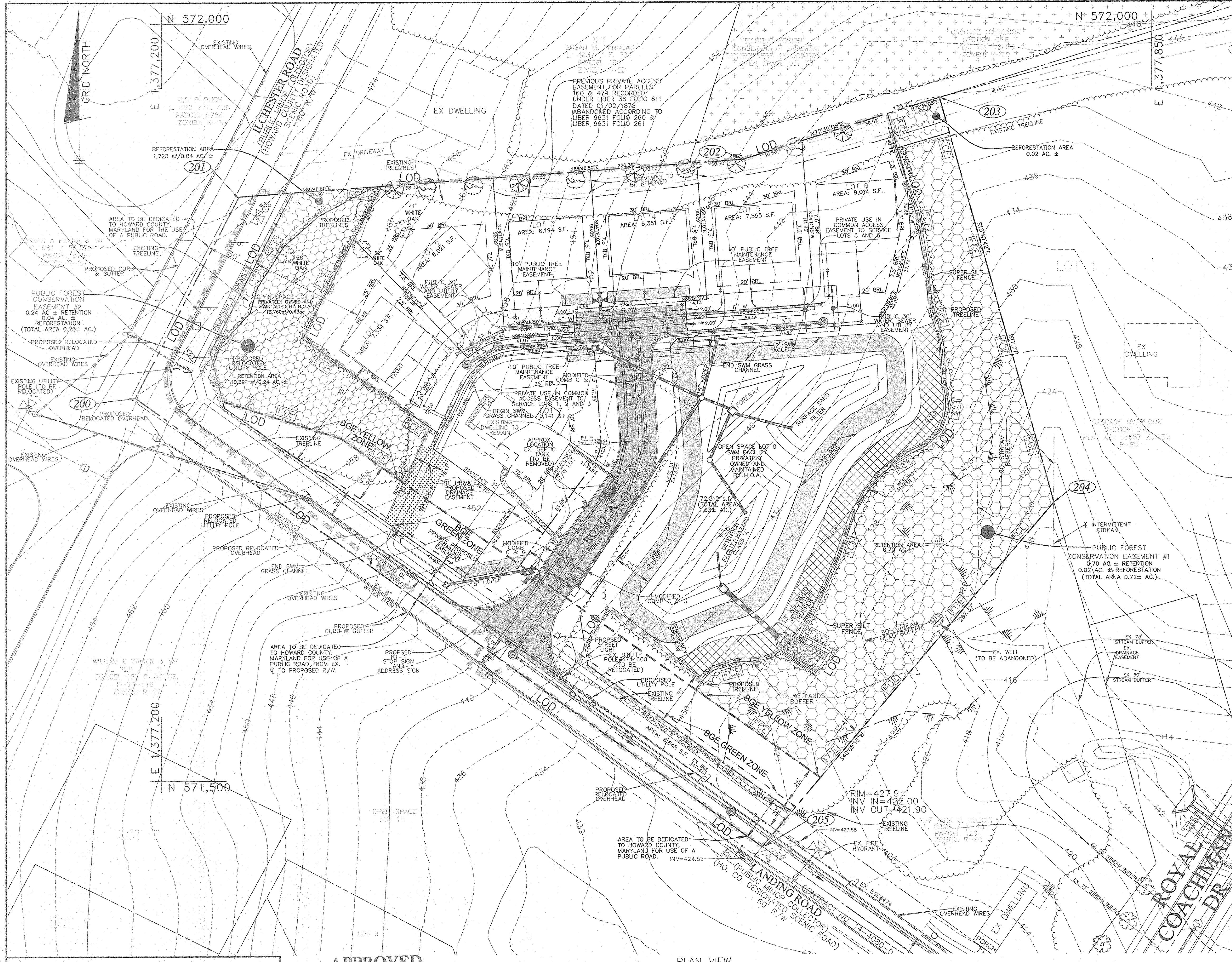
PROJECT: **WELLER PROPERTY**

LOCATION: TAX MAP 31, GRID 10, PARCEL 133
1st. ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: PRELIMINARY EQUIVALENT SKETCH TITLE SHEET

DATE: JUNE, 2006 PROJECT NO: 1817

DESIGN: WEO DRAFT: WEO CHECK: DAM SCALE: AS SHOWN SHEET 1 OF 6



OVERALL SUMMARY TABLE DRAINAGE AREA 1

Condition	Disch. (Q) 1-year cfs	Disch. (Q) 10-year cfs	Disch. (Q) 100-year cfs
existing	4.82	20.15	35.03
developed w/ swm @ study point	1.38	23.24	37.43
W.S. Elevation	432.5	432.9	433.1

SUMMARY TABLE GENERAL STORAGE REQUIREMENTS FOR THE DEVELOPED DRAINAGE AREA #1

Step	Requirement	Volume Required (Ac-ft)	Notes
1.	Water Quality Volume (WQv)	0.13 ac ft (5663 cf)	Provided in Bio-Retention facility
2.	Recharge Volume (Re _c)	0.0138 ac ft or 0.37 acres impervious	Provided within grassed swale
3.	Channel Protection Volume (Cp _v)	0.159 ac ft (6936 cf)	Provided in Detention pond facility
4.	Overbank Flood Protection Volume (Op)	N/A	Not required for this area
5.	Extreme Flood Volume (Q)	N/A	Not required for this area

LEGEND

- EXISTING CONTOURS (HOWARD COUNTY GIS)
- LIMIT OF WETLANDS
- EXISTING INTERMITTENT STREAM
- EX. 25' WETLAND BUFFER
- 50' STREAM BUFFER
- PROPOSED LOD
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED TREE PROTECTION
- PROPOSED SUPER SILT FENCE
- EXISTING STRUCTURE
- EXISTING WELL
- NON-WOODY BUFFER
- FCE-REFORESTATION AREA
- FCE-RETENTION AREA
- DRAINAGE EASEMENT
- UTILITY EASEMENT
- FCE AREA
- PRIVATE ACCESS AREA
- EXISTING SEPTIC
- NON-CREDITED FCE AREA

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

David J. Lyle
PLANNING DIRECTOR

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 10/18/07
PB 380

PLAN VIEW
SCALE: 1" = 30'

NO	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105, A FAX: 410-465-6644
EMAIL: bel@benchmark-engineering.com

Donald M. Weller
Professional Engineer

OWNER/DEVELOPER: CASCADE WALTHUR, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 PHONE: 410-465-4244	PROJECT: WELLER PROPERTY
LOCATION: TAX MAP 31, GRID 10, PARCEL 133 1st. ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: PRELIMINARY EQUIVALENT SKETCH PLAN
DATE: JUNE, 2006 FEBRUARY, 2007	PROJECT NO. 1817 SHEET 2 OF 6
DESIGN: WEO DRAFT: WEO CHECK: DAM	SCALE: AS SHOWN



LEGEND

- EXISTING CONTOURS (HOWARD COUNTY GIS)
- LIMIT OF WETLANDS
- EXISTING INTERMITTENT STREAM
- EX. 25' WETLAND BUFFER
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- UTILITY EASEMENT
- FCE AREA
- PRIVATE ACCESS AREA
- EXISTING SEPTIC
- NON-CREDITED FCE AREA

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

David K. Coughlin
PLANNING DIRECTOR

11/30/07
DATE

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE 10/18/07
PB 380

PLAN VIEW
SCALE: 1" = 30'

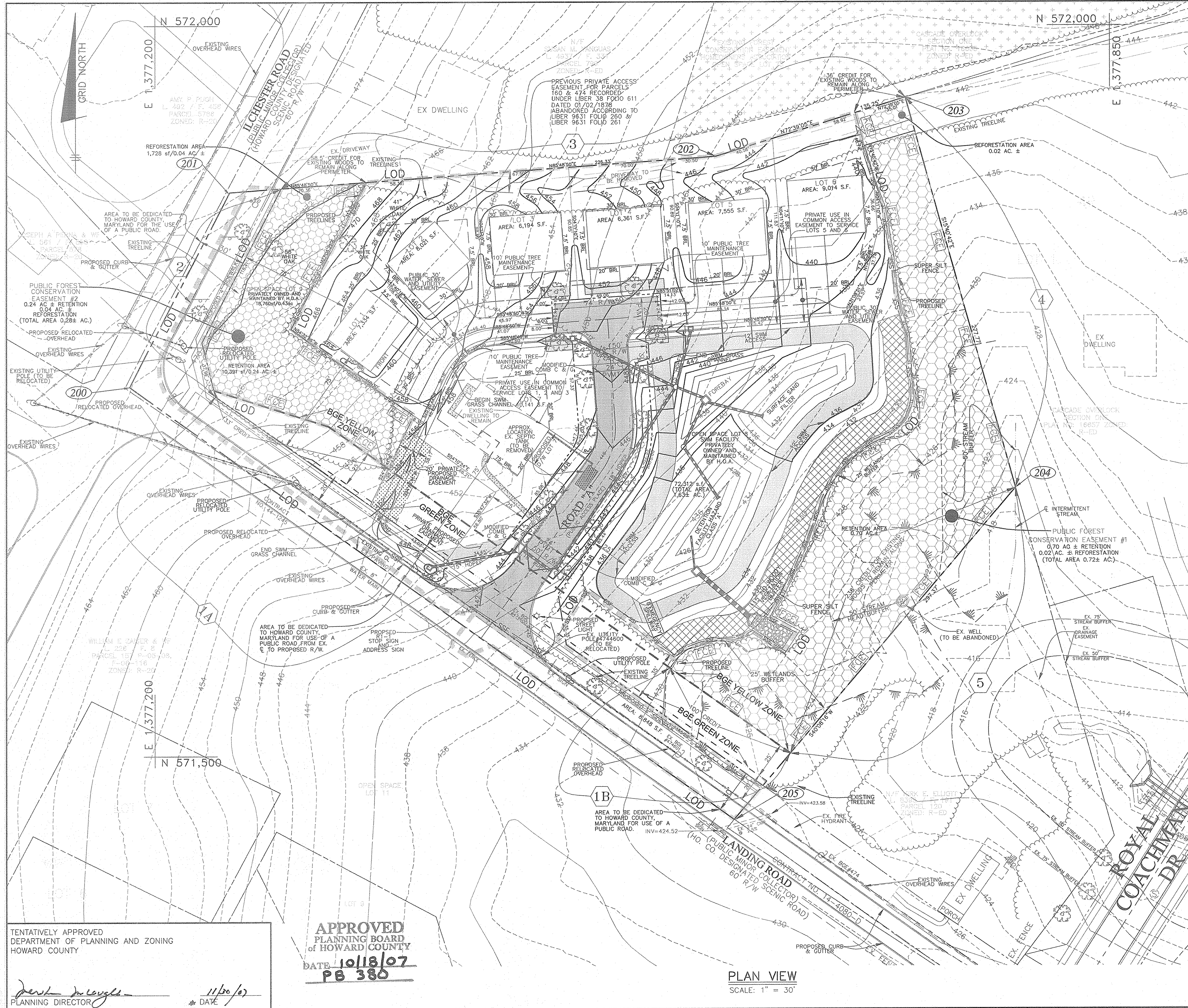
NO	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

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PHONE: 410-465-6103 A Fax: 410-465-6644
email: bel@bel-civilengineering.com

Professional Engineer
No. 21443
State of Maryland
Expiration Date: 12-31-2008

OWNER/DEVELOPER: CASCADE WALTHUR, L.L.C. P.O. BOX 417 ELLCOTT CITY, MD 21041 PHONE: 410-465-4244	PROJECT: WELLER PROPERTY
LOCATION: TAX MAP 31, GRID 10, PARCEL 133 1st. ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: PRELIMINARY EQUIVALENT SKETCH GRADING, EROSION AND SEDIMENT CONTROL PLAN	
DATE: JUNE 2006 FEBRUARY, 2007	PROJECT NO. 1817
DESIGN: WEO DRAFT: WEO CHECK: DAM	SCALE: AS SHOWN SHEET 3 OF 6



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY		ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO TRASH PAD								
	YES	NO	YES	NO	YES	NO							
PERIMETER NO. / LANDSCAPE TYPE	1A	B	1B	B	2	B	3	A	4	A	5	A	B
LINEAR FEET OF (FRONTAGE/PERIMETER)	194'	100'	149'	432'	278'	238'	32'						
CREDIT FOR EXISTING VEGETATION: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 133'	YES 100'	NO	NO	YES 278'	YES 238'	NO						
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO						
NUMBER OF PLANTS REQUIRED:													
SHADE TREES	4	3	3	8	-	-	1						
EVERGREEN TREES	5	4	4	-	-	-	1						
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-						
SHRUBS	-	-	-	-	-	-	-						
NUMBER OF PLANTS PROVIDED:													
SHADE TREES	2	3	-	3	-	-	-						
EVERGREEN TREES	14	8	10	10	-	-	-						
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-						
SHRUBS (10:1 SUBSTITUTE)	-	-	-	-	-	-	20						
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)													

NOTE:
 * 8 EVERGREENS HAVE BEEN PROPOSED IN LIEU OF 4 SHADE TREES WITHIN PERIMETER 1.
 * 6 EVERGREENS HAVE BEEN PROPOSED IN LIEU OF 3 SHADE TREES WITHIN PERIMETER 2.
 * 10 EVERGREENS HAVE BEEN PROPOSED IN LIEU OF 5 SHADE TREES WITHIN PERIMETER 3.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	LINEAR FEET OF PERIMETER	748' TYPE 'B'
NUMBER OF TREES REQUIRED	SHADE TREES (1:50)	15
	EVERGREEN TREES (1:40)	19
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)		*YES (44%)
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)		NO

* EXISTING VEGETATION TO REMAIN

LEGEND

SOILS CLASSIFICATION	ChB2
SOILS DELINEATION	---
EXISTING CONTOURS (HOWARD COUNTY DIGITAL)	---
LIMIT OF WETLANDS	---
EXISTING STREAM	---
EX. 25' WETLAND BUFFER	---
75' STREAM BUFFER	---
PROPOSED LOD	---
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
EXISTING DRAINAGE EASEMENT	---
PROPOSED TREE PROTECTION	---
PROPOSED SUPER SILT FENCE	SSF
BGE YELLOW ZONE	---
BGE GREEN ZONE	---
EXISTING STRUCTURE	---
EXISTING WELL	EX WELL
PROPOSED PERCOLATION TEST	P-10
EXISTING PERCOLATION TEST	P-10
NON-WOODY BUFFER	---
FCE-REFORESTATION AREA	---
FCE-RETENTION AREA	---
DRAINAGE EASEMENT	---
UTILITY EASEMENT	---
PRIVATE ACCESS AREA	---
EXISTING SEPTIC	---
PROPOSED SANITARY SEWER EASEMENT	---
PROPOSED SWM ACCESS	---
NON-CREDITED FCE AREA	---

LANDSCAPING NOTES

- PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE EXISTING VEGETATION TO REMAIN AND BY THE PLANTINGS AS SHOWN ON THESE PLANS.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PRESERVATION OF THE PERIMETER VEGETATION AND FOR THE PERIMETER PLANTINGS AS SHOWN ON THESE PLANS. BONDING FOR PLANTINGS IS THE OBLIGATION OF THE DEVELOPER AS PART OF THE DEVELOPERS AGREEMENT.
- TREES MUST BE A MINIMUM OF FOUR (4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE (5) FEET FROM ANY STORM DRAIN.
- A MINIMUM DISTANCE OF TWENTY (20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM ANY STREET LIGHTS.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.-16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 phone: 410-465-6105 • fax: 410-465-6644
 www.benchmarkengineering.com

Donald M. ...
 ulr/bj
 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. 21443, Expiration Date: 12-21-2008.

OWNER/DEVELOPER:	PROJECT:
CASCADE WALTHUR, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21043 PHONE: 410-465-4244	WELLER PROPERTY
LOCATION:	TAX MAP 31, GRID 10 & 11, PARCELS 133 1 st. ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TITLE:	PRELIMINARY EQUIVALENT SKETCH LANDSCAPE PLAN
DATE:	MARCH, 2006 FEBRUARY, 2007
PROJECT NO.:	1817
DESIGN: WEO DRAFT: WEO CHECK: DAM	SCALE: AS SHOWN SHEET 4 OF 6

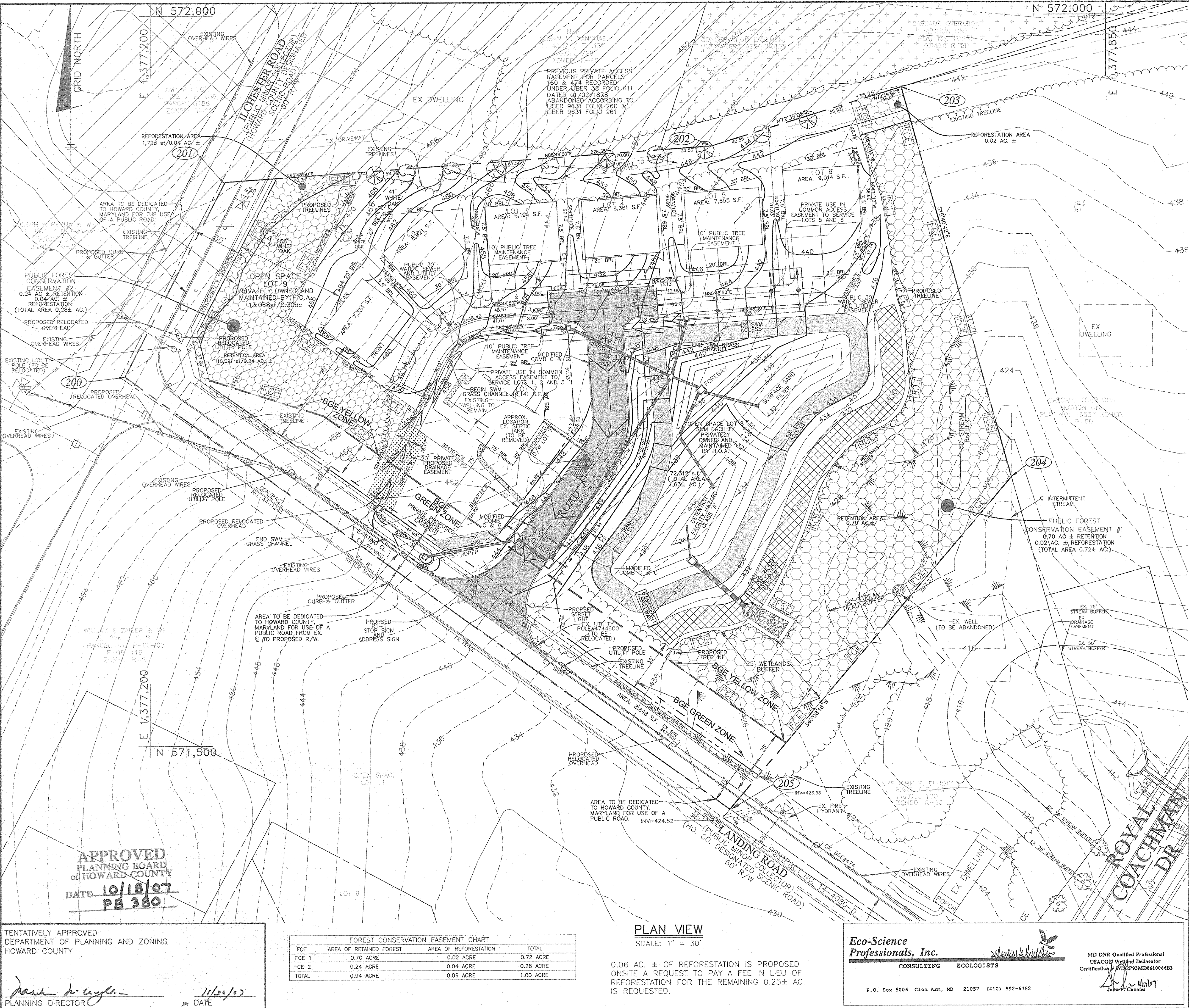
TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Devil ...
 PLANNING DIRECTOR

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY

DATE: 10/18/07
 PB 380

PLAN VIEW
 SCALE: 1" = 30'



FOREST CONSERVATION WORKSHEET
WELLER PROPERTY

NET TRACT AREA: 4.05

LAND USE CATEGORY (from Tract Technical Manual):

ARA	MDR	IDA	MDR	MPD	CIA
0	0	0	1	0	0

EXISTING FOREST COVER:

L. Existing forest cover	2.70
J. Area of forest above afforestation threshold	2.09
K. Area of forest above conservation threshold	1.89

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared	1.76
O. Total area of forest to be retained	0.94

PLANTING REQUIREMENTS:

P. Reforestation for clearing above conservation threshold	0.44
Q. Reforestation for clearing below conservation threshold	0.00
R. Credit for retention above conservation threshold	0.13
S. Total reforestation required	0.31
T. Total reforestation required	0.00
U. Credit for landscaping (may not exceed 20% of 'S')	0.00
V. Total reforestation and afforestation required	0.31

0.06 Ac. On Site Reforestation
0.26 Ac. Fee In Lieu

LEGEND

EXISTING CONTOURS (HOWARD COUNTY GIS)	--- ---
LIMIT OF WETLANDS	--- ---
EXISTING INTERMITTENT STREAM	--- ---
EX. 25' WETLAND BUFFER	--- ---
50' STREAM BUFFER	--- ---
PROPOSED LOD	--- ---
EXISTING TREELINE	--- ---
PROPOSED TREELINE	--- ---
PROPOSED TREE PROTECTION	TF
PROPOSED SUPER SILT FENCE	SSF
EXISTING STRUCTURE	[Symbol]
EXISTING WELL	W
NON-WOODY BUFFER	[Symbol]
FCE-REFORESTATION AREA	[Symbol]
FCE-RETENTION AREA	[Symbol]
DRAINAGE EASEMENT	[Symbol]
UTILITY EASEMENT	[Symbol]
FCE AREA	[Symbol]
PRIVATE ACCESS AREA	[Symbol]
EXISTING SEPTIC	[Symbol]
NON-CREDITED FCE AREA	[Symbol]

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 10/18/07
PB 380

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR: *[Signature]* DATE: 11/29/07

FOREST CONSERVATION EASEMENT CHART

FCE	AREA OF RETAINED FOREST	AREA OF REFORESTATION	TOTAL
FCE 1	0.70 ACRE	0.02 ACRE	0.72 ACRE
FCE 2	0.24 ACRE	0.04 ACRE	0.28 ACRE
TOTAL	0.94 ACRE	0.06 ACRE	1.00 ACRE

PLAN VIEW
SCALE: 1" = 30'

0.06 AC. ± OF REFORESTATION IS PROPOSED
ONSITE A REQUEST TO PAY A FEE IN LIEU OF
REFORESTATION FOR THE REMAINING 0.25± AC.
IS REQUESTED.

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOB Wetland Delineator
Certification # 0721993MD061004422

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

NO	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 A FAX: 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

[Professional Seal]
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. 21443, Expiration Date: 12-21-2008.

OWNER/DEVELOPER: PROJECT: **WELLER PROPERTY**

CASCADE WALTHUR, L.L.C.
P.O. BOX 417
ELLICOTT CITY, MD 21041
PHONE: 410-465-4244

LOCATION: TAX MAP 31, GRID 10 & 11, PARCELS 133
1 st. ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: PRELIMINARY EQUIVALENT SKETCH
FOREST CONSERVATION PLAN

DATE: MARCH 7, 2006 PROJECT NO. 1817
OCTOBER, 2006

DESIGN: WEO DRAFT: WEO CHECK: DAM SCALE: AS SHOWN SHEET 5 OF 6

FOREST PROTECTION PROCEDURES - Preconstruction Phase

- The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of forest conservation easement shown in the approved site development plan prior to the start of construction activity. All areas within protective easement are to be considered "off limits" to any construction activities. The optional protective fencing shall be installed at the outside edge of forested areas and should be combined with sediment control devices when possible. The limit of the critical root zone and therefore the location of the protective devices is to be determined as follows:

Edge of Forested Area - 1 foot of protective radius/inch of DBH or an eight foot protective radius, whichever is greater.

Critical Root Zone for the forest on this site is an average of 12 feet from the trunk of the tree. Critical root zones for Specimen Tree #1 and #2 are 34' and 30'.

- Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected areas
 Felling trees into protected areas
 Driving construction equipment into or through protected areas
 Burning in or in close proximity to protected areas
 Stacking or storing supplies of any kind
 Concrete wash-off areas
 Conducting trenching operations
 Grading beyond the limits of disturbance
 Parking vehicles or construction equipment
 Removal of root mat or topsoil
 Siting and construction of:
 Utility lines
 Access roads
 Impervious surfaces
 Stormwater management devices
 Staging areas

- Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Area" (see Figure "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and that root systems are protected from smothering, flooding, excessive wetting from dewatering operations, off-site runoff, spillage, and drainage or solutions containing materials hazardous to tree roots.
- The general contractor shall be responsible for any tree damaged or destroyed within the preservation areas whether caused by the contractor, his agents, employees, subcontractors, or licensees.
- Foot traffic shall be kept to a minimum in the protective areas.
- All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.
- The general contractor shall designate a "wash out" area onsite for concrete trucks which will not drain toward a protected area.
- A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.

FOREST PROTECTION PROCEDURES - Construction Phase

Forest and tree conditions should be monitored during construction and corrective measures taken when appropriate.

The following shall be monitored:

- Soil compaction
- Root injury - prune and monitor; consider crown reduction
- Limb injury - prune and monitor
- Flooded conditions - drain and monitor; correct problem
- Drought conditions - water and monitor; correct problem
- Other stress signs - determine reason, correct, and monitor

FOREST PROTECTION PROCEDURES - Post Construction Phase

The following measures shall be taken:

- Corrective measures if damages were incurred due to negligence:
 - Stress reduction
 - Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard.
- Removal of temporary structures:
 - No burial of discarded materials will occur onsite within the conservation area.
 - No open burning within 100 feet of a wooded area.
 - All temporary forest protection structures will be removed after construction.
 - Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.
 - Aerate compacted soil.
 - Replant disturbed sites with trees, shrubs and/or herbaceous plants.
 - Retain signs for retention areas or specimen trees.
 - A County official shall inspect the entire site.
- Future protection measures:
 - Howard County and the developer shall arrange for the dedication of an appropriate forest conservation easement at a later date.

FOREST PROTECTION PROCEDURES - Preconstruction Phase

Stress Reduction and Protection of Specimen Trees Isolated from Forest Retention Areas and General Forest Retention Areas (as they may apply)

Isolated specimen trees that are to be preserved will be examined to determine if stress reduction techniques are needed. Protective measures and their evaluation criteria are provided on this plan only if they are employed herein.

Root Pruning

Evaluation Criteria

Will the critical root zone be affected by construction activities such as grade changes, digging for foundations and roads or utility installation?

Design Considerations

- Prune prior to construction as shown on the plan (see Figure "Root Pruning Detail.")
- Prune root with a clean cut using proper pruning equipment such as a vibratory knife.
- Exact location of pruning trench should be identified, and immediately backfilled to cover exposed roots after pruning with soil removed other topsoil, peat moss, or other suitable material or with other high organic soil.
- For trees over 15" in diameter, root pruning may be done up to one year in advance of construction.
- Tree(s) will be monitored for signs of stress.

Crown Reduction or Pruning

Evaluation Criteria

Has the root system been significantly reduced (>30%) or are there dead, damaged, or diseased limbs?

Design Considerations

- Reduce only at specified times of the year:
 Flowering trees - only after flowering and before bud set
 Non-flowering trees - in late winter, early spring or mid summer
- No more than 1/3 of the crown should be removed at one time using acceptable pruning methods (see Figure "Crown Reduction Detail")
- Monitor for signs of stress

Watering

Evaluation Criteria

Will construction activities alter the hydrology of the site? Has or will root pruning occur?

Design Considerations

- Water only as necessary
- Monitor for signs of stress (see Figure "Tree Planting and Maintenance Calendar")

Fertilizing

Evaluation Criteria

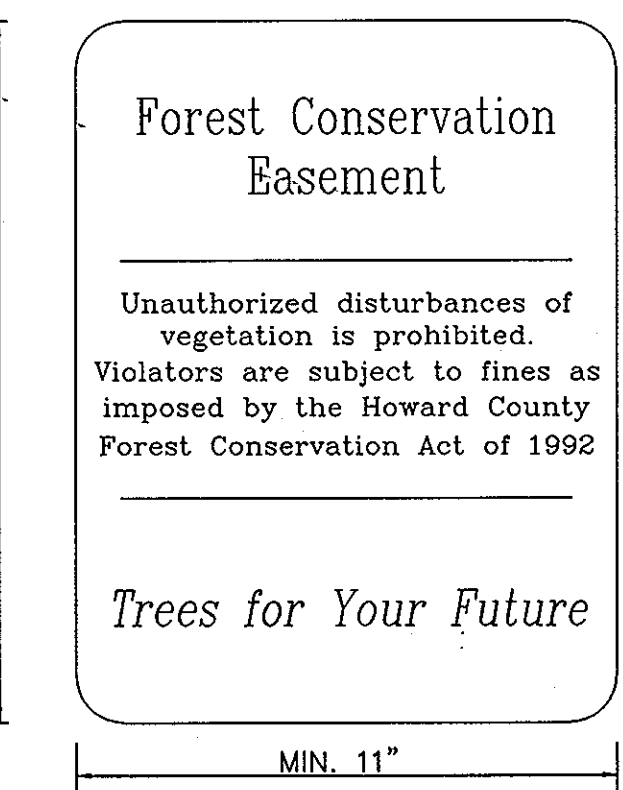
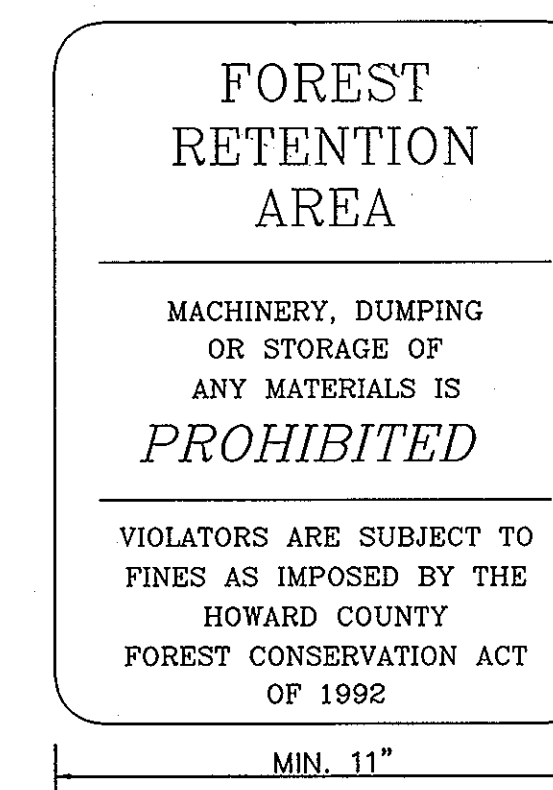
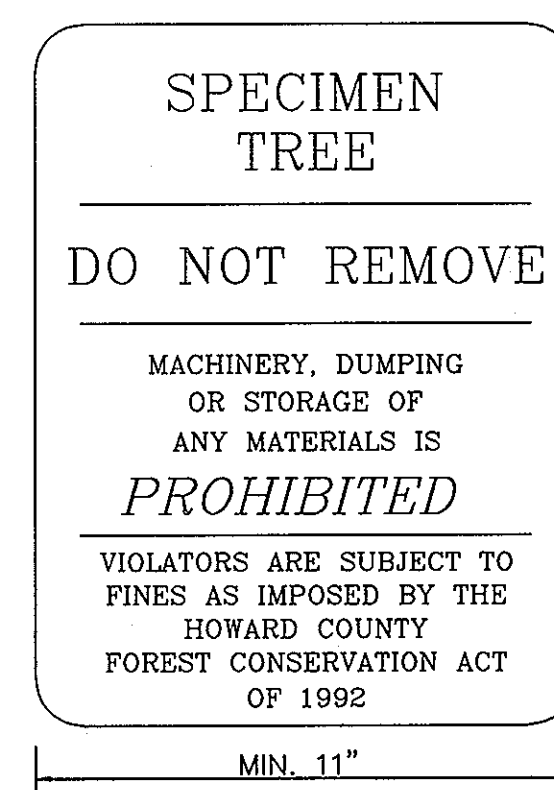
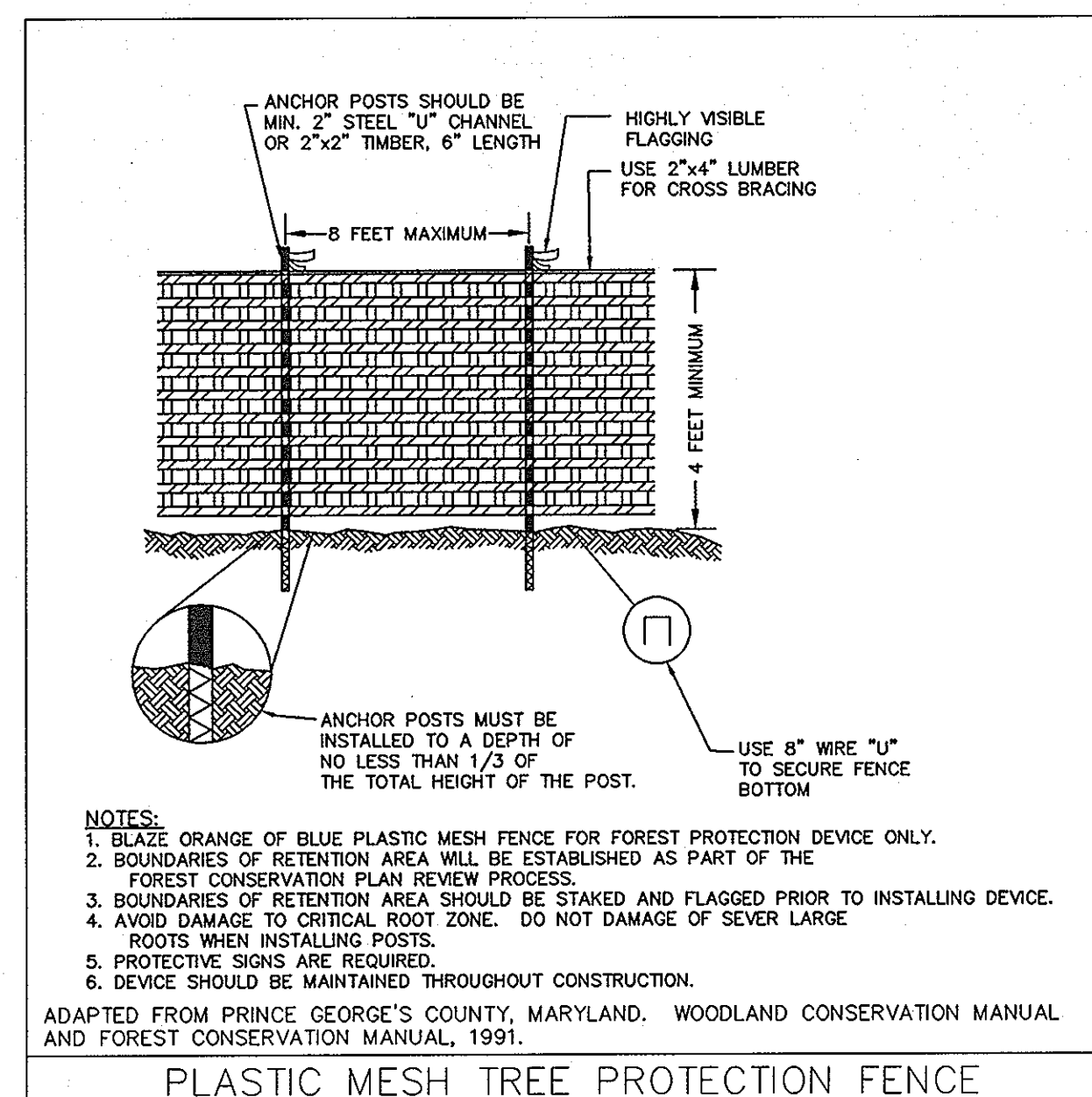
Is or will be tree(s) be under stressful conditions? Has or will root pruning occur?

Design Considerations

- Use low nitrogen and slow release fertilizers.
- Apply in late fall or early spring (see Figure "Tree Planting and Maintenance Calendar")
- For small trees (<3" in diameter), use punch hole method or pressurized injection method (see Figure "Application of Fertilizers by Injection.")
- For larger trees (>3" diameter), use punch hole method or pressurized injection method (see Figure "Application of Fertilizers by Injection.")
- Do not apply fertilizer any closer than 3' from tree trunk for pressurized injection method.
- Monitor for signs of stress.

FCP NOTES:

- Any forest conservation easement (FCP) area shown hereon is subject to protective covenants which may be found in the land records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpile, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits.
- Permanent signage will be posted at 50-100 foot intervals along all FCE limits.
- Forest conservation obligation in accordance with section 16.1202 of the Howard County codes and Forest Conservation manual for this site will be met by the retention of 40,946 sf @ \$0.20 and reforestation of 2,614 sf @ \$0.50 and payment of \$8,167.50 to Howard County for Fee-in Lieu of Forest Conservation, for 10,890 sf of Forest Conservation obligation.

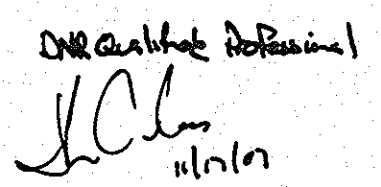



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 10/18/07
 PB 300

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

PLANNING DIRECTOR DATE

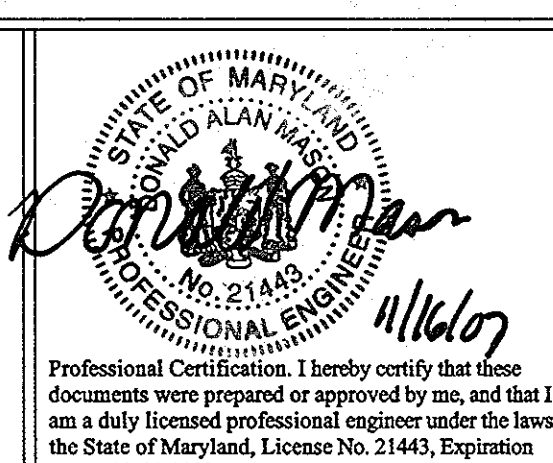
NO	DATE	REVISION





ENGINEERS • LAND SURVEYORS • PLANNERS

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 ELLICOTT CITY, MARYLAND 21043
 phone: 410-465-6105 • fax: 410-465-6644
 www.bel-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. 21445, Expiration Date: 12-21-2008.

OWNER/DEVELOPER:	PROJECT:
CASCADE WALTHUR, L.L.C. P.O. BOX 417 ELLICOTT CITY, MD 21041 PHONE: 410-465-4244	WELLER PROPERTY
LOCATION:	TAX MAP 31, GRID 10 & 11, PARCELS 133 1 st. ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TITLE:	PRELIMINARY EQUIVALENT SKETCH FOREST CONSERVATION PLAN
DATE:	NOVEMBER, 2006 FEBRUARY, 2007
DESIGN: WEO	DRAFT: WEO
CHECK: DAM	SCALE: AS SHOWN
PROJECT NO. 1817	SHEET NO. 6 OF 6