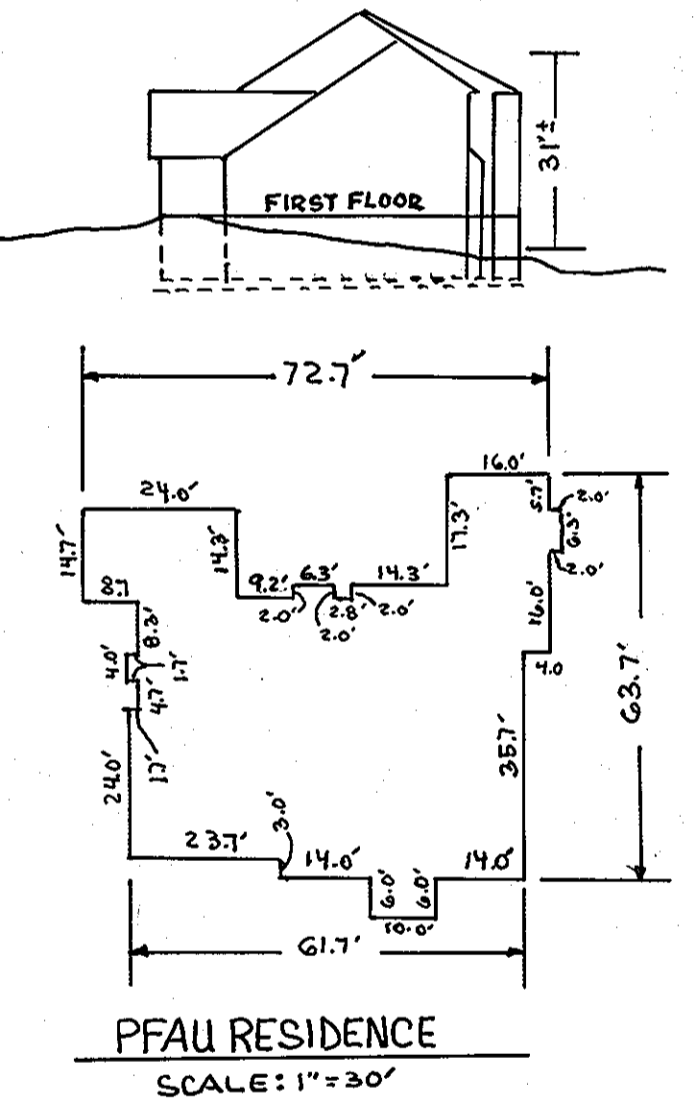


MATCH LINE SEE SHEET 5

MATCH LINE SEE SHEET 2

MATCH LINE SEE SHEET 2

MATCH LINE SEE SHEET 4



N/F JOHN H. NEEDS
AND OLGA M. NEEDS
L 302 / F. 200
PARCEL 174
ZONED: R-ED

- LEGEND**
- - - - - EXISTING CONTOURS PER F-03-150 PAD GRADES
 - — — — PROPOSED CONTOURS
 - — — — EXISTING TREELINE
 - — — — INDICATES A WALKOUT BASEMENT
 - ⊕ ⊙ EXISTING STREET TREES PLANTED UNDER F-03-150
 - — — — LANDSCAPE PERIMETER EDGE
 - — — — BUILDING RESTRICTION LINE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS 5TH EDITION
 - — — — BUILDING RESTRICTION LINE PER RECORDED PLAT NO. 16655-16662
 - — — — THE BRL BASED ON THE 5TH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL CONTROL WHERE SHOWN.

PLAN VIEW
SCALE: 1" = 30'

NO.	DATE	REVISION
7-10-09		REVISE LOT 32 TO SHOW A WATERFORD (REVISE GRADES PER AS-BUILT CONDITIONS)
11-21-08		REVISE GRADES: HOUSE TYPE ON LOT 30 PER AS-BUILT CONDITIONS
8-27-08		REVISE GENERIC BOX AND GRADING ON LOT 14
7-23-08		REVISE GRADES ON LOT 33 PER AS-BUILT CONDITIONS
8-6-07		LOT 33 HOUSE MODEL REV. TO WATERFORD W/OPT
1-3-07		REVISE GRADES / HOUSE TYPE ON LOT 27 PER AS-BUILT CONDITIONS
11-14-06		ADD MONTCLAIRE TO LOT 26 AND REVISE GRADES PER AS-BUILT CONDITIONS
11-7-06		ADD WATERFORD TO LOTS 25 AND REVISE SPOT ELEV. FOR AS-BUILT CONDITIONS
6-2-06		REVISE GRADES ON LOT 31 PER AS-BUILT CONDITIONS
3-28-05		SITE THE PFau RESIDENCE ON LOT 31 AND REVISE GRADING

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS

Donald M. Mason

8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 A FAX: 410-465-6644
EMAIL: Benchmark@cois.com

6/8/04

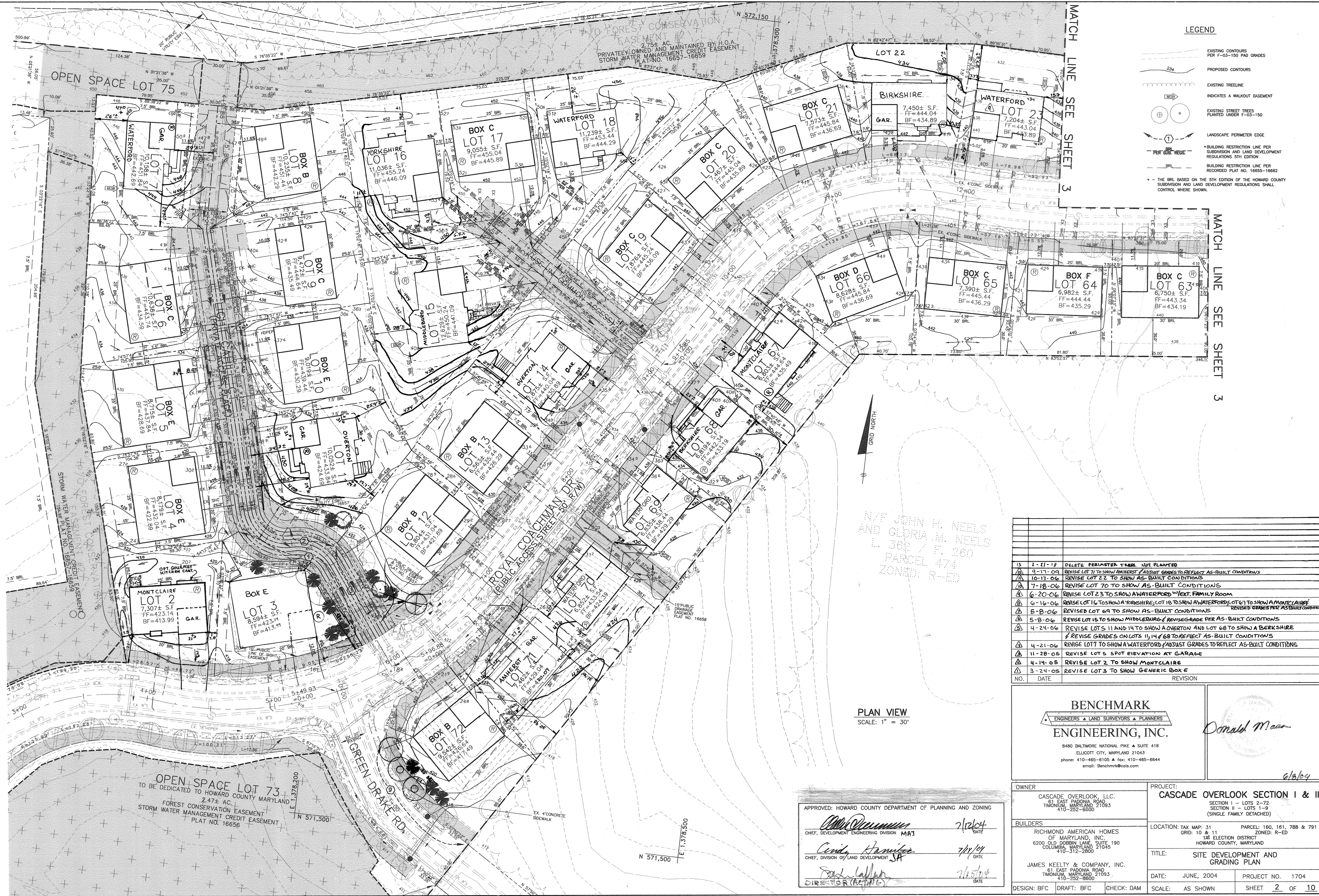
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Demaree 7/12/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

Cindy Harvath 7/14/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Erin Kelly 7/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DIRECTOR (ACTING) DATE

OWNER CASCADE OVERLOOK, LLC. 51 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	PROJECT: CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 OLD DOBBIN LANE SUITE 190 COLUMBIA, MARYLAND 21045 410-312-5800	LOCATION: TAX MAP: 31 PARCEL: 160, 161, 788 & 791 GRID: 10 & 11 ZONED: R-ED 181 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
JAMES KEELY & COMPANY, INC. 51 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	TITLE: SITE DEVELOPMENT AND GRADING PLAN
DESIGN: BFC DRAFT: BFC CHECK: DAM	DATE: JUNE, 2004 PROJECT NO. 1704 SCALE: AS SHOWN SHEET 3 OF 10



N/F JOHN H. NEEDS
AND GLORIA H. NEEDS
L 368 / F. 260
PARCEL 474
ZONED: R-ED

NO.	DATE	REVISION
13	2-21-12	DELETE PERIMETER TREES NOT PLANTED
12	9-17-09	REVISE LOT 11 TO SHOW AMHERST ADJUST GRADES TO REFLECT AS-BUILT CONDITIONS
11	10-17-06	REVISE LOT 22 TO SHOW AS-BUILT CONDITIONS
10	7-18-06	REVISE LOT 70 TO SHOW AS-BUILT CONDITIONS
9	6-20-06	REVISE LOT 23 TO SHOW A WATERFORD W/EXT. FAMILY ROOM
8	6-16-06	REVISE LOT 16 TO SHOW A YORKSHIRE; LOT 18 TO SHOW A WATERFORD; LOT 61 TO SHOW A MONTCLAIRE
7	5-8-06	REVISE LOT 69 TO SHOW AS-BUILT CONDITIONS
6	5-8-06	REVISE LOT 15 TO SHOW MIDDLEBURG & REVISE GRADE PER AS-BUILT CONDITIONS
5	4-24-06	REVISE LOTS 11 AND 14 TO SHOW AN OVERTON AND LOT 68 TO SHOW A BIRKSHIRE & REVISE GRADES ON LOTS 11, 14 & 68 TO REFLECT AS-BUILT CONDITIONS
4	4-21-06	REVISE LOT 7 TO SHOW A WATERFORD ADJUST GRADES TO REFLECT AS-BUILT CONDITIONS
3	11-28-05	REVISE LOT 5 SPOT ELEVATION AT GARAGE
2	4-14-05	REVISE LOT 2 TO SHOW MONTCLAIRE
1	3-24-05	REVISE LOT 3 TO SHOW GENERIC BOX E

PLAN VIEW
SCALE: 1" = 30'

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 & FAX: 410-465-6644
EMAIL: Benchmark@bcis.com

Donald Maer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. Maer 7/12/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

Condy Hamilton 7/14/04
CHIEF, DIVISION OF LAND DEVELOPMENT SA DATE

Frank Lallier 7/15/04
DIRECTOR (R.A.M.C.) DATE

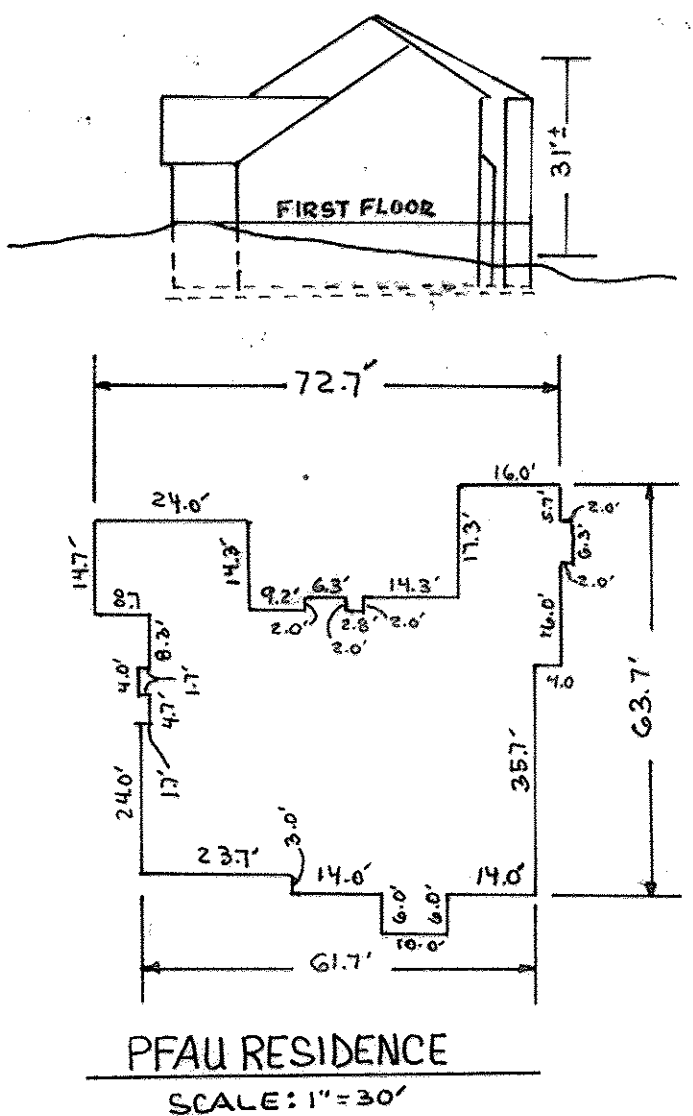
OWNER	CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	PROJECT:	CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS	RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 OLD DOBBIN LANE, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2800	LOCATION: TAX MAP: 31 GRID: 10 & 11 188 ELECTION DISTRICT HOWARD COUNTY, MARYLAND	PARCEL: 160, 161, 788 & 791 ZONED: R-ED
	JAMES KEELY & COMPANY, INC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	TITLE:	SITE DEVELOPMENT AND GRADING PLAN
DESIGN: BFC	DRAFT: BFC	CHECK: DAM	DATE: JUNE, 2004 PROJECT NO. 1704
			SCALE: AS SHOWN SHEET 2 OF 10

MATCH LINE SEE SHEET 5

MATCH LINE SEE SHEET 2

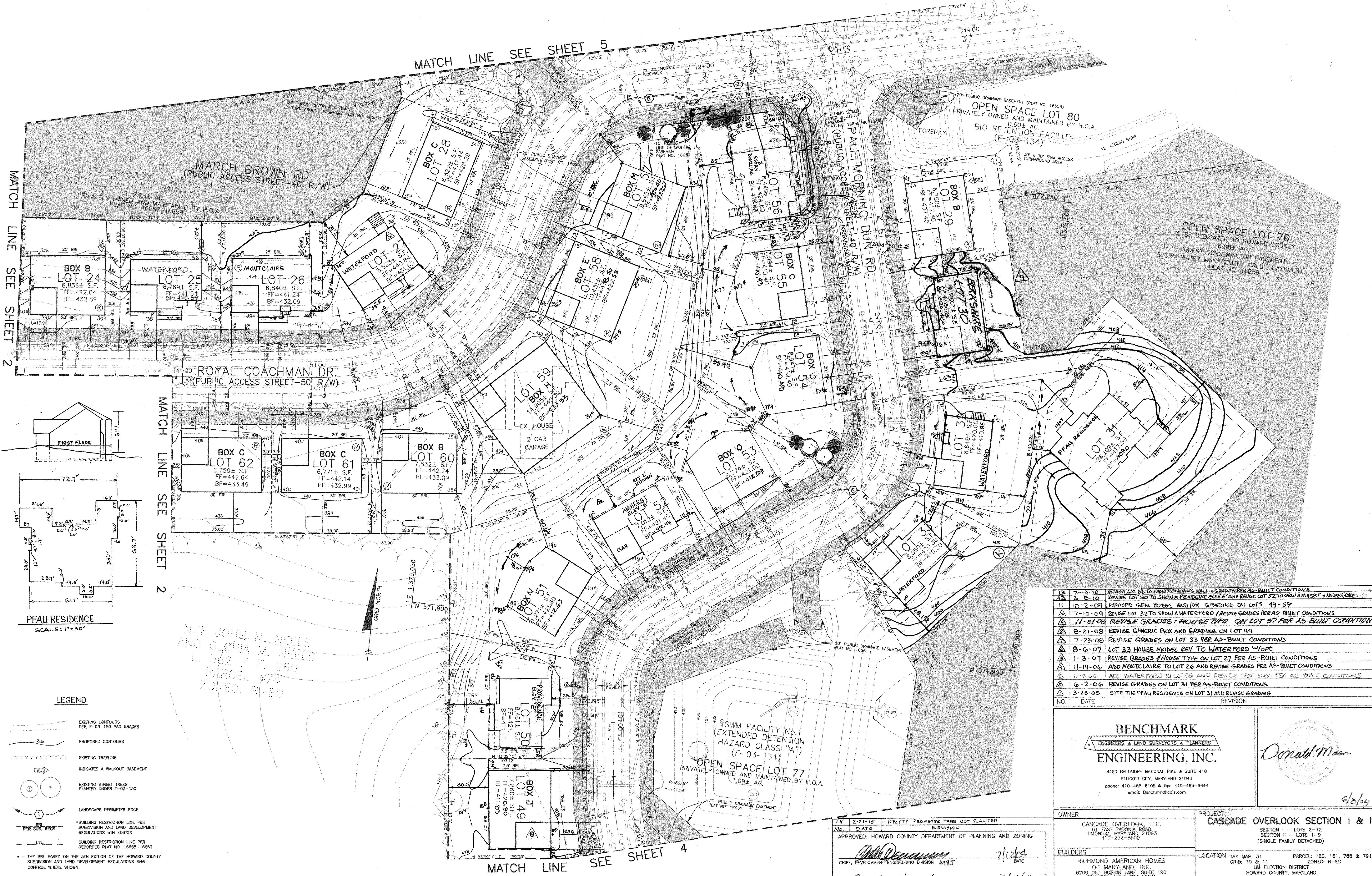
MATCH LINE SEE SHEET 2

MATCH LINE SEE SHEET 4



N/F JOHN H. NEEDS AND GLORIA M. NEEDS L. 362 / F. 260 PARCEL # 74 ZONED: R-ED

- LEGEND**
- EXISTING CONTOURS PER F-03-150 PAD GRADES
 - PROPOSED CONTOURS
 - EXISTING TREELINE
 - INDICATES A WALKOUT BASEMENT
 - EXISTING STREET TREES PLANTED UNDER P-03-150
 - LANDSCAPE PERIMETER EDGE
 - BUILDING RESTRICTION LINE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS 5TH EDITION
 - BUILDING RESTRICTION LINE PER RECORDED PLAT NO. 16655-16662
 - THE BRL BASED ON THE 5TH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL CONTROL WHERE SHOWN.



PLAN VIEW
SCALE: 1" = 30'

NO.	DATE	REVISION
1	7-13-10	REVISE LOT 51 TO SHOW RETAINING WALL & GRADES PER AS-BUILT CONDITIONS
2	8-10-10	REVISE LOT 50 TO SHOW PROVIDENCE ELEVATION AND REVISE LOT 52 TO SHOW AMHERST & REVISE GRADE
3	10-2-09	REVISED GEN. BOXES AND FOR GRADING ON LOTS 49-57
4	7-10-09	REVISE LOT 32 TO SHOW WATERFORD / REVISE GRADES PER AS-BUILT CONDITIONS
5	11-21-08	REVISE GRADES: HOUSE TYPE ON LOT 30 PER AS-BUILT CONDITIONS
6	8-27-08	REVISE GENERIC BOX AND GRADING ON LOT 49
7	7-23-08	REVISE GRADES ON LOT 33 PER AS-BUILT CONDITIONS
8	6-6-07	LOT 33 HOUSE MODEL REV. TO WATERFORD W/OPT
9	1-3-07	REVISE GRADES & HOUSE TYPE ON LOT 27 PER AS-BUILT CONDITIONS
10	11-14-06	ADD MONTCLAIRE TO LOT 26 AND REVISE GRADES PER AS-BUILT CONDITIONS
11	11-7-06	ADD WATERFORD TO LOT 25 AND REVISE SPOT ELEV. PER AS-BUILT CONDITIONS
12	6-2-06	REVISE GRADES ON LOT 31 PER AS-BUILT CONDITIONS
13	3-28-05	SITE THE PFAU RESIDENCE ON LOT 31 AND REVISE GRADING

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
EMAIL: BENCHMNRK@AOL.COM

Donald M. ...

1/4 2-21-18 DELETE PERIMETER TREES NOT PLANTED
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

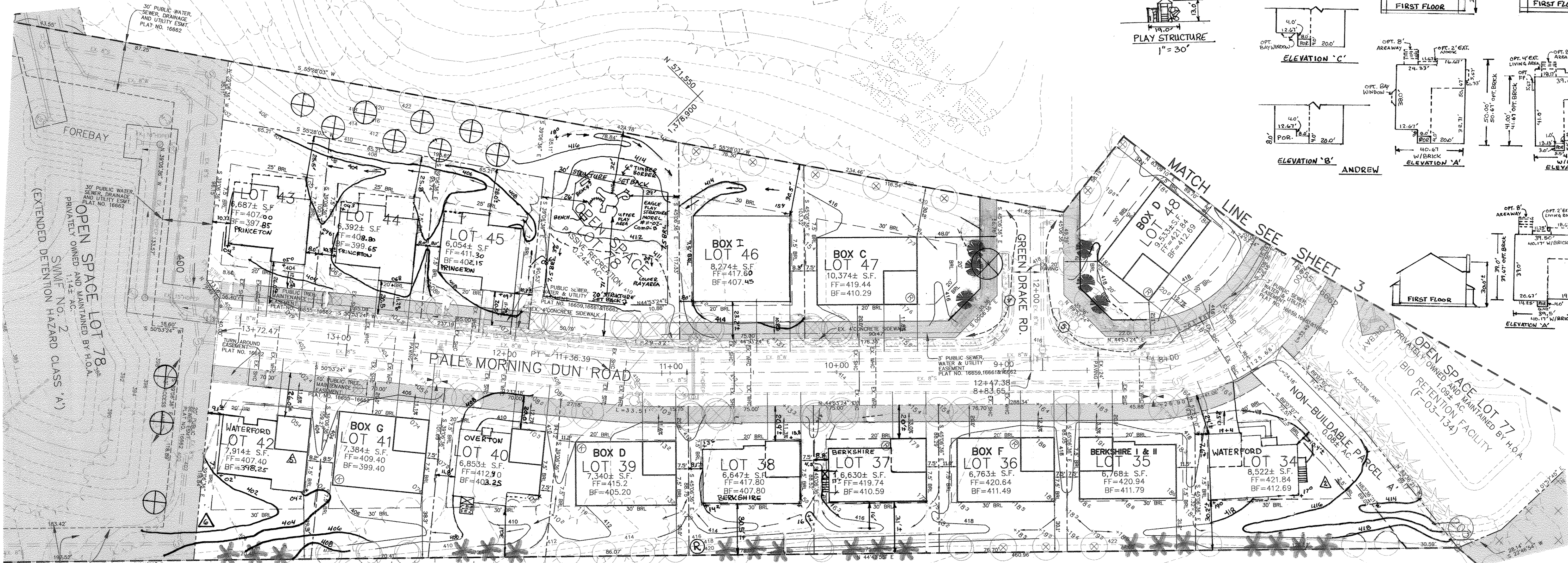
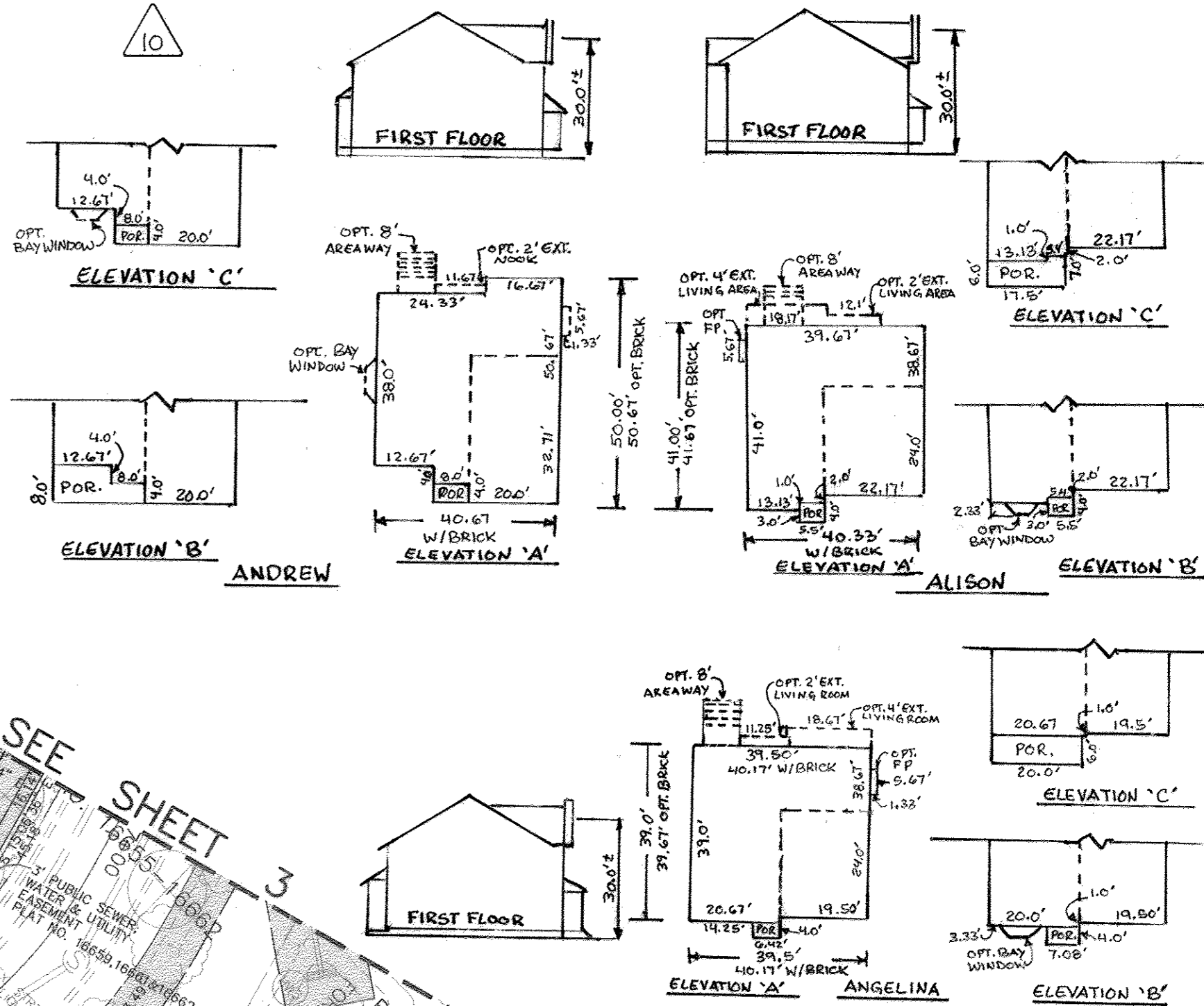
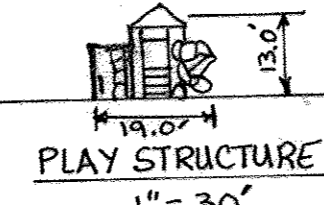
Michael ... 7/12/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

Cindy ... 7/18/09
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

James ... 7/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION - DIRECTOR (ACTING)
DATE

OWNER CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	PROJECT: CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 OLD DOBBIN LANE, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2800	LOCATION: TAX MAP: 31 PARCEL: 160, 161, 788 & 791 GRID: 10 & 11 ZONED: R-ED 188 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
JAMES KEELY & COMPANY, INC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	TITLE: SITE DEVELOPMENT AND GRADING PLAN
DESIGN: BFC DRAFT: BFC CHECK: DAM	DATE: JUNE, 2004 PROJECT NO. 1704
SCALE: AS SHOWN	SHEET 3 OF 10

EAGLE PLAY
STRUCTURE
MODEL
11-02-COMP-B
LOT 78



OPEN SPACE LOT 78
PRIVATELY OWNED AND MAINTAINED BY H.O.A.
(EXTENDED DETENTION HAZARD CLASS 'A')
SUNIF AC. 2

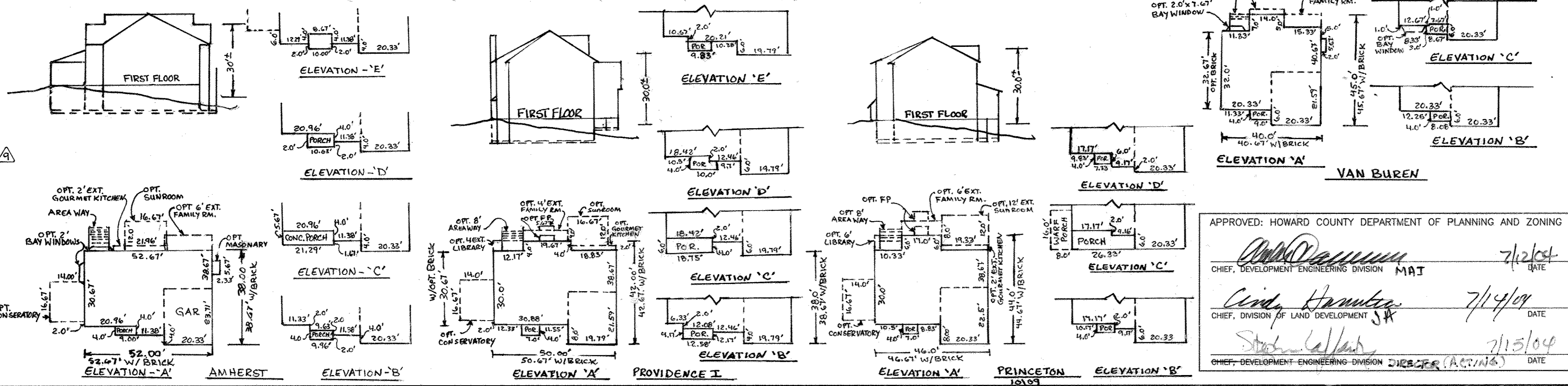
MATCH LINE SEE SHEET 3

OPEN SPACE LOT 77
PRIVATELY OWNED AND MAINTAINED BY H.O.A.
BIO RETENTION FACILITY
(F-05-13A)

PLAN VIEW
SCALE: 1" = 30'

LEGEND

- EXISTING CONTOURS PER F-03-150 PAD GRADES
- PROPOSED CONTOURS
- INDICATES TREELINE
- INDICATES A WALKOUT BASEMENT
- EXISTING STREET TREES PLANTED UNDER F-03-150
- LANDSCAPE PERIMETER EDGE
- BUILDING RESTRICTION LINE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS 5TH EDITION
- BUILDING RESTRICTION LINE PER RECORDED PLAT NO. 16655-16662
- THE BRL BASED ON THE 5TH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL CONTROL WHERE SHOWN.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Matthew J. Mat 7/2/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Chris Hunter 7/14/04
CHIEF, DIVISION OF LAND DEVELOPMENT

Steve Leland 7/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

12	2-21-15	ADD ADDITIONAL LANDSCAPE TREE LOCATION AND DELETE PERMITS TREES NOT PLANTED
11	11-10-11	ADD PLAY STRUCTURE & PLAY AREAS, GAMES ON LOT 78
10	11-18-09	ADDED PROVIDENCE I, PRINCETON, VAN BUREN, ANGELINA, ALISON & ANDREW HOUSE MODELS
9	9-17-09	ADDED AMHERST MODEL
8	5-5-09	REVISE LOT 40 TO REMOVE GENERIC BOX AND ADD OVERTON OPTIONS
7	8-27-08	REVISE LOTS 43-45 FOR PRINCETON AND LOT 46 FOR NEW GENERIC BOX
6	6-20-08	REVISE LOT 42 TO MATCH AS-BUILT CONDITIONS
5	10-16-07	REVISE LOT 42 FOR HOUSE MODEL REV. WATERFORD
4	8-10-07	REVISE LOT 37 FOR HOUSE MODEL REV. BERKSHIRE
3	8-6-07	REVISE LOT 38 FOR HOUSE MODEL REV. BERKSHIRE
2	6-22-07	REVISE LOT 34 TO MATCH AS-BUILT CONDITIONS
1	6-30-06	REMOVE BERKSHIRE & SHOW WATERFORD ON LOT 34 & REVISE SPOT ELEVATIONS
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: BENCHMKN@COIA.COM

Donald Mean

OWNER: CASCADE OVERLOOK, LLC.
61 EAST PADONIA ROAD
TIMONUM, MARYLAND 21093
410-252-8800

PROJECT: CASCADE OVERLOOK SECTION I & II
SECTION I - LOTS 2-72
SECTION II - LOTS 1-9
(SINGLE FAMILY DETACHED)

BUILDERS: RICHMOND AMERICAN HOMES OF MARYLAND, INC.
6200 OLD DOBBIN LANE, SUITE 190
COLUMBIA, MARYLAND 21045
410-312-2800

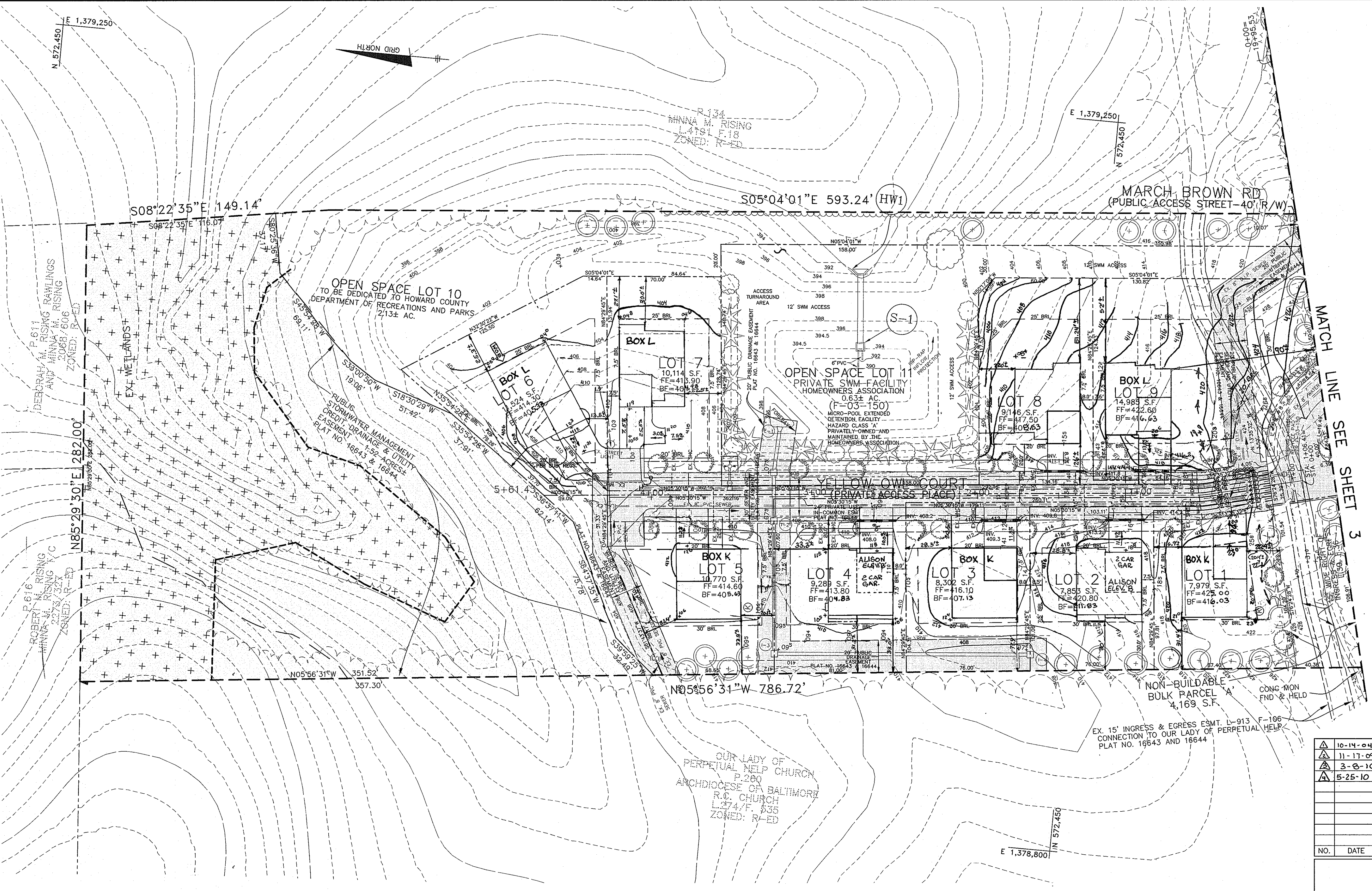
JAMES KEELY & COMPANY, INC.
61 EAST PADONIA ROAD
TIMONUM, MARYLAND 21093
410-252-8800

LOCATION: TAX MAP: 311 PARCEL: 160, 161, 788 & 791
GRID: 10 & 11 ZONED: R-ED
188 ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND GRADING PLAN

DATE: JUNE, 2004 PROJECT NO. 1704

DESIGN: BFC DRAFT: BFC CHECK: DAM SCALE: AS SHOWN SHEET 4 OF 10



LEGEND

- EXISTING CONTOURS PER F-03-134 PAD GRADES
- PROPOSED CONTOURS
- EXISTING TREELINE
- INDICATES A WALKOUT BASEMENT
- EXISTING STREET TREES PLANTED UNDER F-03-134
- LANDSCAPE PERIMETER EDGE
- BUILDING RESTRICTION LINE PER SUBDIVISION AND LAND DEVELOPMENT REGULATIONS 5TH EDITION
- BUILDING RESTRICTION LINE PER RECORDED PLAT NO. 16643 AND 16644
- * - THE BRL BASED ON THE 5TH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL CONTROL WHERE SHOWN.

PLAN VIEW
SCALE: 1" = 30'

10-14-04	REV. BRL'S TO REFLECT RECORDED PLAT #16644/HSE. ON LOT 1 FROM BOX B TO 3000 SF
11-17-09	REVISE GENERIC BOX AND GRADING ON LOTS 1-9
3-8-10	ADD ALISON TO LOTS 2 & 4 AND REVISE GRADES
5-25-10	REVISE LOTS 8 & 9 PER AS-BUILT CONDITIONS

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
EMAIL: Benchmark@ceals.com

Donald Moon

6/8/04

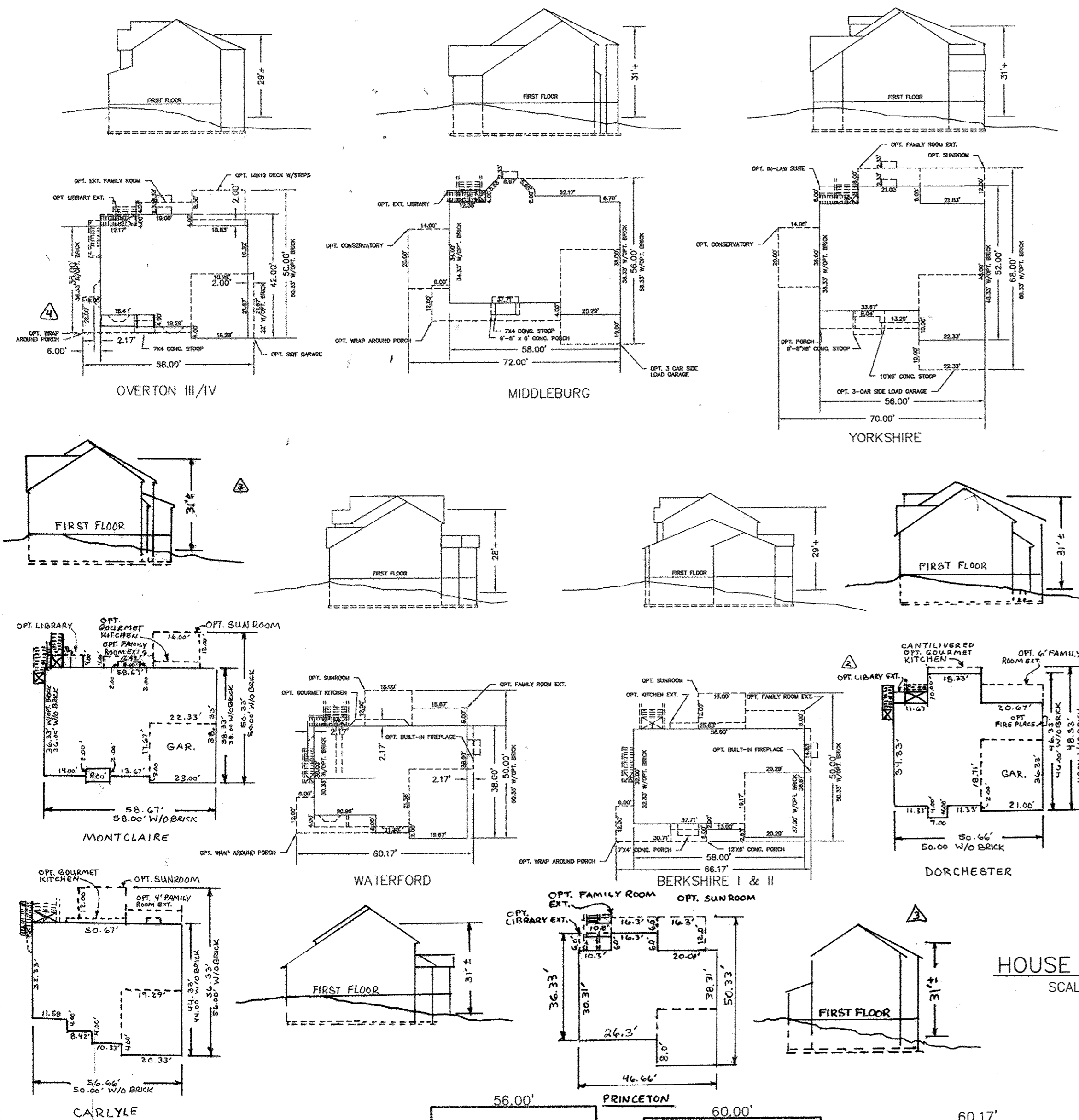
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

	7/12/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	7/14/04
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
	7/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE

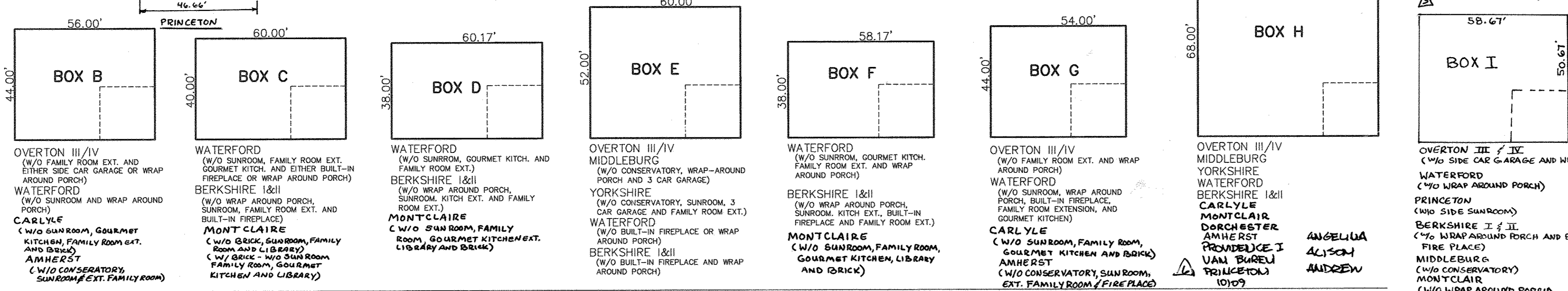
OWNER CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	PROJECT: CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 OLD DOBBIN LANE, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2800	LOCATION: TAX MAP: 31 GRID: 11 183 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
JAMES KEELY & COMPANY, INC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	TITLE: SITE DEVELOPMENT AND GRADING PLAN
DESIGN: BFC	DATE: JUNE, 2004
DRAFT: BFC	PROJECT NO.: 1704
CHECK: DAM	SCALE: AS SHOWN
SCALE: AS SHOWN	SHEET 5 OF 10

RICHMOND AMERICAN HOMES III/IV

KEELTY HOMES

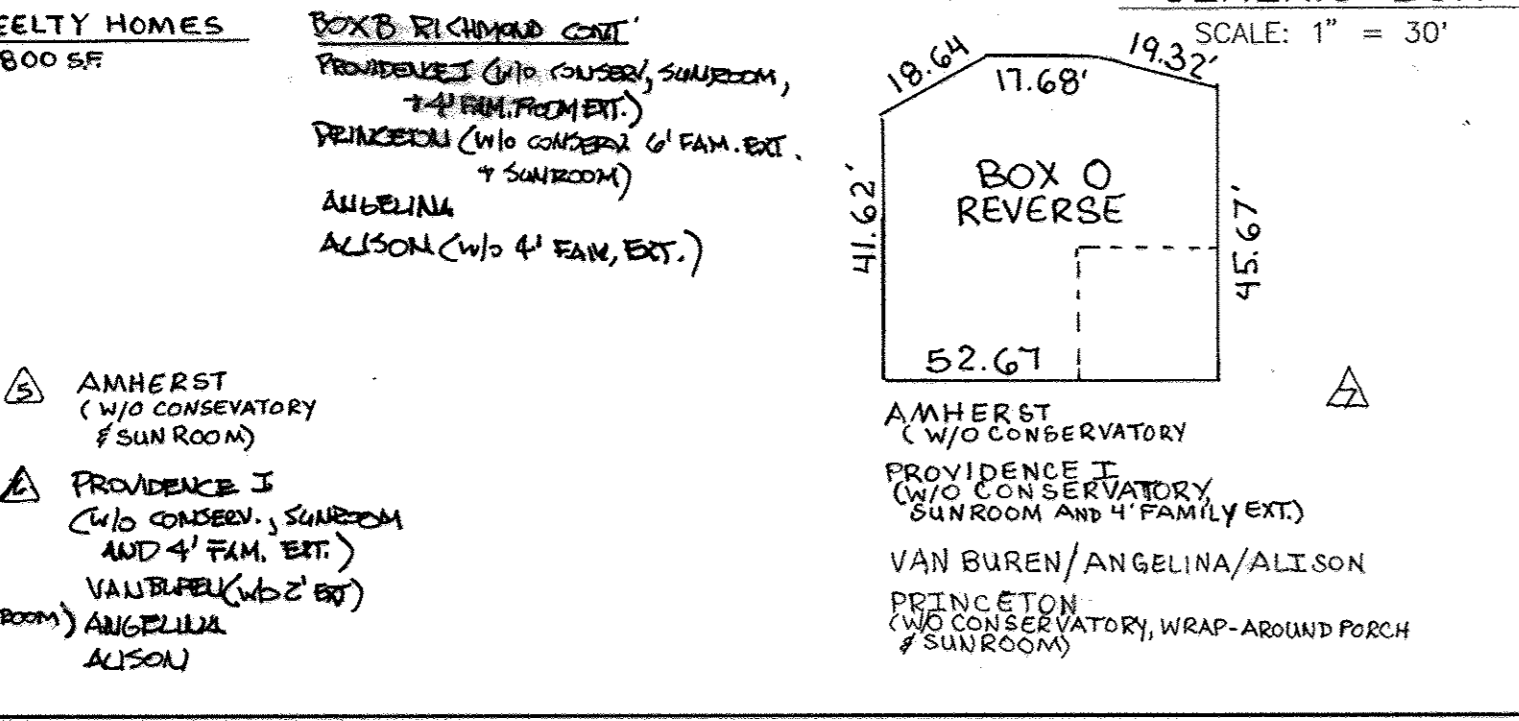
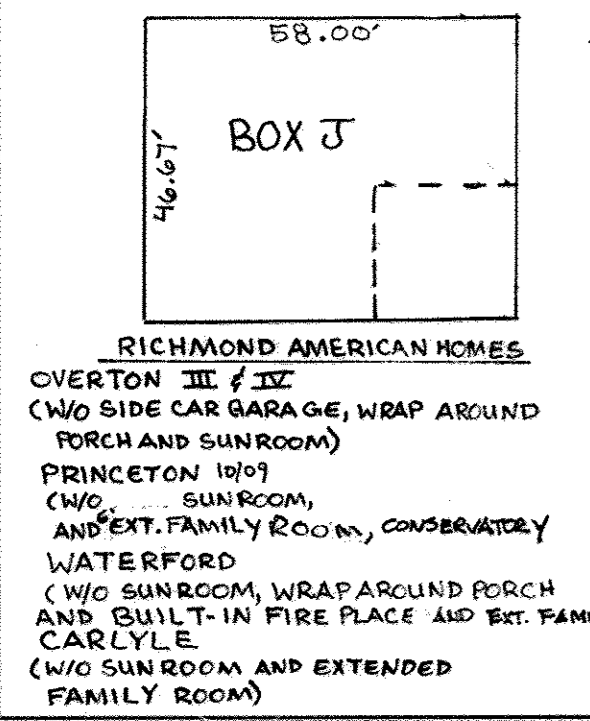


HOUSE FOOTPRINTS
SCALE: 1" = 30'

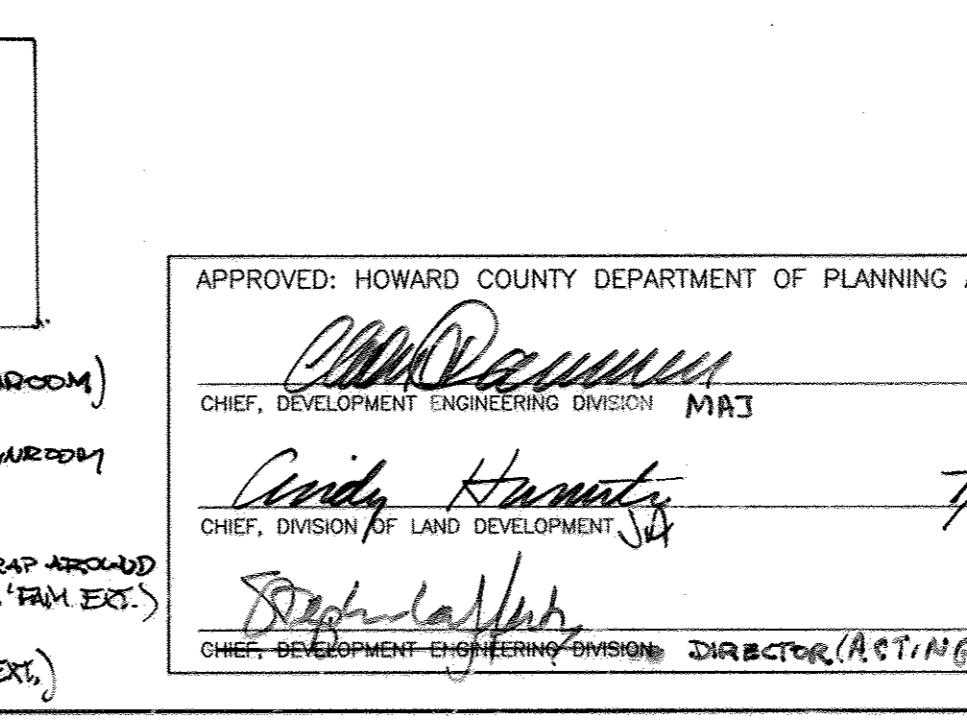
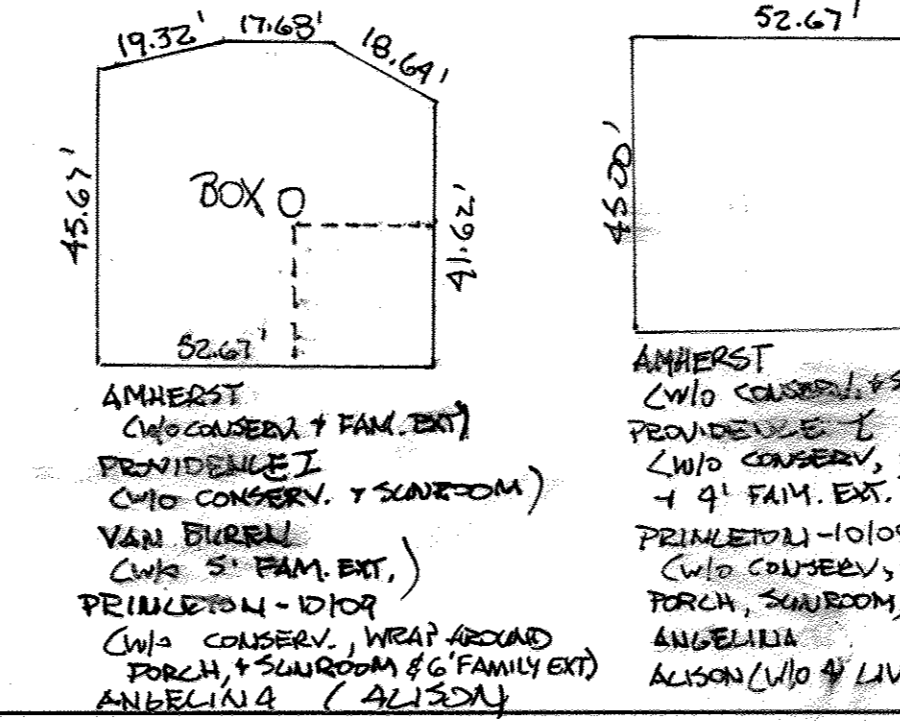
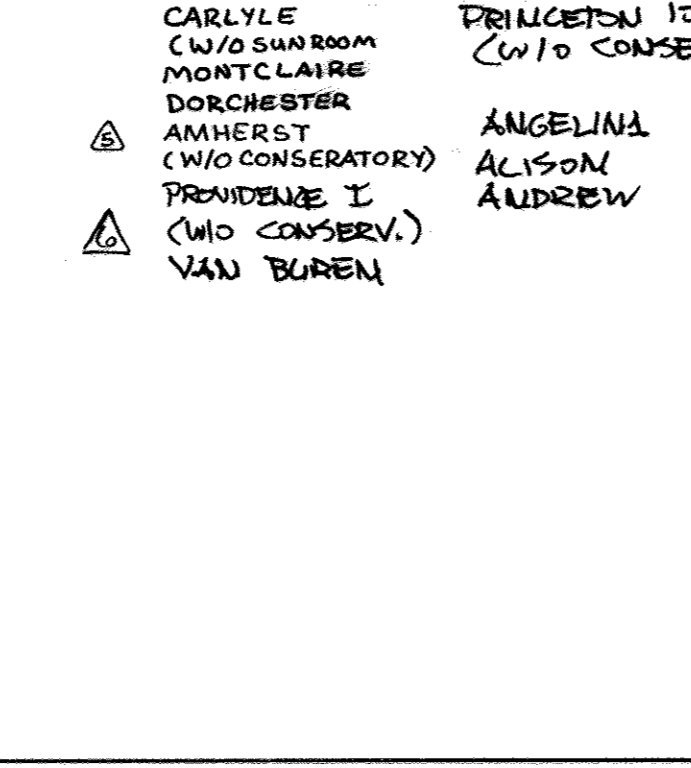


RICHMOND AMERICAN HOMES

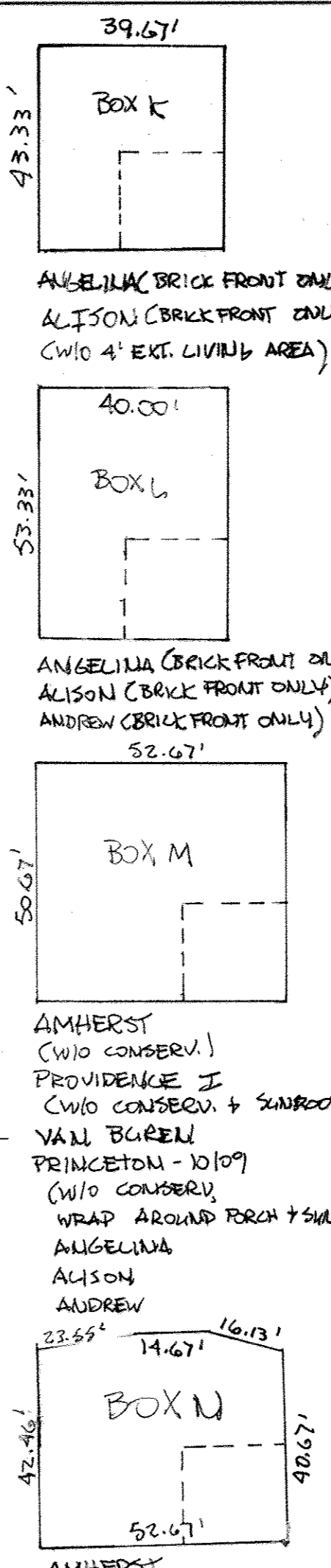
KEELTY HOMES



BOX E RICHMOND AMERICAN CONT.



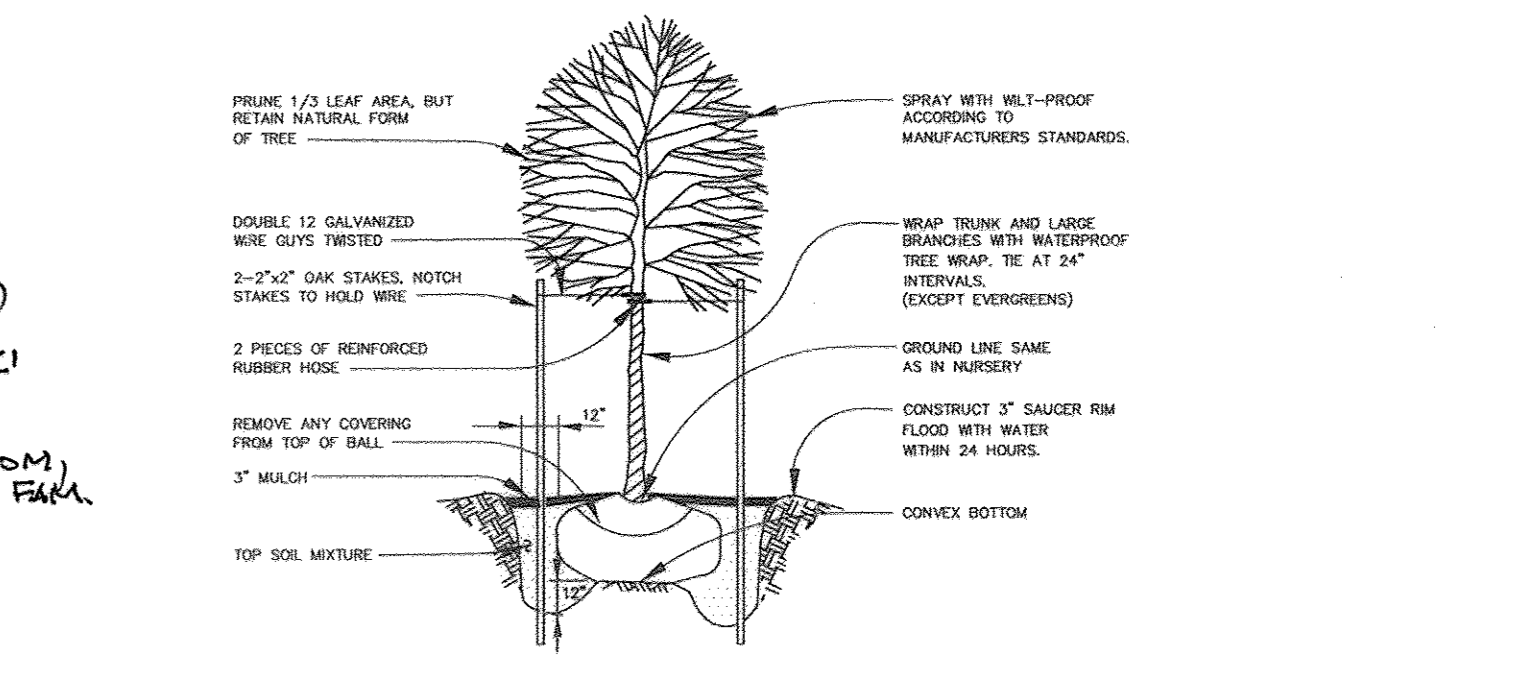
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signatures and Dates]
 DATE: 7/12/04
 DATE: 7/14/04
 DATE: 7/15/04



CATEGORY	ADJACENT TO ROADS							
	1	2	3	4	5	6	7	8
LANDSCAPE TYPE	1	2	3	4	5	6	7	8
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	141.00'	52.79'	78.61'	92.12'	106.66'	88.85'	100.56'	69.12'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (SHADE TREES, EVERGREEN TREES, OTHER TREES (2:1 SUBSTITUTE), SHRUBS)	3	1	2	2	2	2	2	2
NUMBER OF PLANTS PROVIDED (SHADE TREES, EVERGREEN TREES, OTHER TREES (2:1 SUBSTITUTE), SHRUBS (10:1 SUBSTITUTE))	1	1	1	4	0	2	0	1
SURETY REQUIRED	\$1350	\$450	\$600	\$1050	\$1050	\$900	\$1050	\$600

SYMBOL	QUANTITY	NAME	REMARKS
(Symbol)	5	PLANTANUS ACERIFOLIA (Bloodgood London Plane)	2 1/2" MIN. CAL. FULL HEAD
(Symbol)	24	PINUS STROBUS (Eastern White Pine)	5'-6" Ht. UNSHEARED
(Symbol)	11	QUERCUS PALUSTRIS GREEN PILLER	2 1/2" - 3" CAL.

LANDSCAPE NOTES:
 1. TREES SHOULD BE PLANTED A MINIMUM OF 4 FEET FROM CURB OR SIDEWALK AND 10 FEET FROM A DRIVEWAY
 2. A MINIMUM DISTANCE OF 20 FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHT.
 3. PERIMETER LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL SHALL BE PROVIDED AS SHOWN ON THIS SITE PLAN FOR LOTS 3, 11, 12, 47, 48, 54, 56, 57 AND 72.
 4. LANDSCAPING FOR THE TRASH PADS AND SHRUBS ARE BONDED WITH F-03-134 AND F-03-150
 5. TOTAL LANDSCAPE SURETY UNDER THIS PLAN IS \$8,400.00.
 6. # 11 REQUIRED SHADE TREES HAVE BEEN RELOCATED AS FOLLOWS: 3 AT LOT 42 AND 8 BEHIND LOTS 43-45.



TREE PLANTING DETAIL
NOT TO SCALE

NO.	DATE	REVISION
10-18-04		ADDED (W/O SIDE PORCH) TO BOX C & BOX F 3200 SF DESIGN UNIT
3-24-05		ADDED CARLYLE, DORCHESTER AND MONTCLAIRE MODELS TO FOOTPRINTS AND BOX MATRIX
8-27-05		ADDED PRINCETON MODEL AND GENERIC BOXES I & S
5-5-09		ADDED 'ELEVATION TO THE OVERTON HOUSE MODEL
9-17-09		ADDED AMHERST TO GENERIC BOXES
10-3-09		ADDED GEN. BOX K-D & C NEW MODELS TO MATRIX
3-8-10		ADDED (W/O 6' FAMILY RM EXT.) TO BOX O AND REVERSE GEN. BOX O
2-21-13		REVISE LANDSCAPE PLANT LIST

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: Benchmark@bcis.com

OWNER CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONUM, MARYLAND 21093 410-252-8800	PROJECT: CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 DOBBIN LANE, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2800	LOCATION: TAX MAP: 31 PARCEL: 160, 161, 258, 788 & 791 GRID: 10 & 11 ZONED: R-ED 18 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: HOUSE FOOTPRINTS, GENERIC BOXES AND LANDSCAPING DETAILS	DATE: JUNE, 2004 PROJECT NO. 1704
DESIGN: BFC DRAFT: BFC CHECK: DAM	SCALE: AS SHOWN SHEET 6 OF 10



ENGINEER'S CERTIFICATE
 I, DONALD A. MASON, P.E., # 21443, CERTIFY THAT 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 SOIL CONSERVATION DISTRICT.

Donald Mason 6/8/04
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE
 I, JIM MOYER, JR., CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Jim Moyer, Jr. 7/1/04
 DEVELOPER - JIM MOYER, JR. DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
John R. Robertson 7/1/04
 HOWARD SCD REVIEWER DATE

APPROVED - HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John R. Robertson 7/1/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

Conrad Roberts 7/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT JR DATE

Steph Laffan 7/15/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION PROJECT (A.C.T.I.M.) DATE

- LEGEND**
- EXISTING CONTOURS PER F-03-134
 - PROPOSED CONTOURS
 - EXISTING TEMPORARY CONTOURS INSTALLED UNDER F-03-134
 - EXISTING TREELINE
 - INDICATES A WALKOUT BASEMENT
 - EXISTING STREET TREES PLANTED UNDER F-03-134
 - EXISTING TREE PROTECTION FENCE INSTALLED UNDER F-03-134
 - EXISTING SUPER SILT FENCE INSTALLED UNDER F-03-134
 - EXISTING GARTH LINE INSTALLED UNDER F-03-134
 - STABILIZED CONSTRUCTION ENTRANCE
 - SUPER SILT FENCE
 - LIMIT OF DISTURBANCE
 - EROSION CONTROL MATTING
 - EXISTING EROSION CONTROL MATTING
 - SOILS TYPE
 - SOILS DELINEATION LINE

MATCH LINE SEE SHEET 9

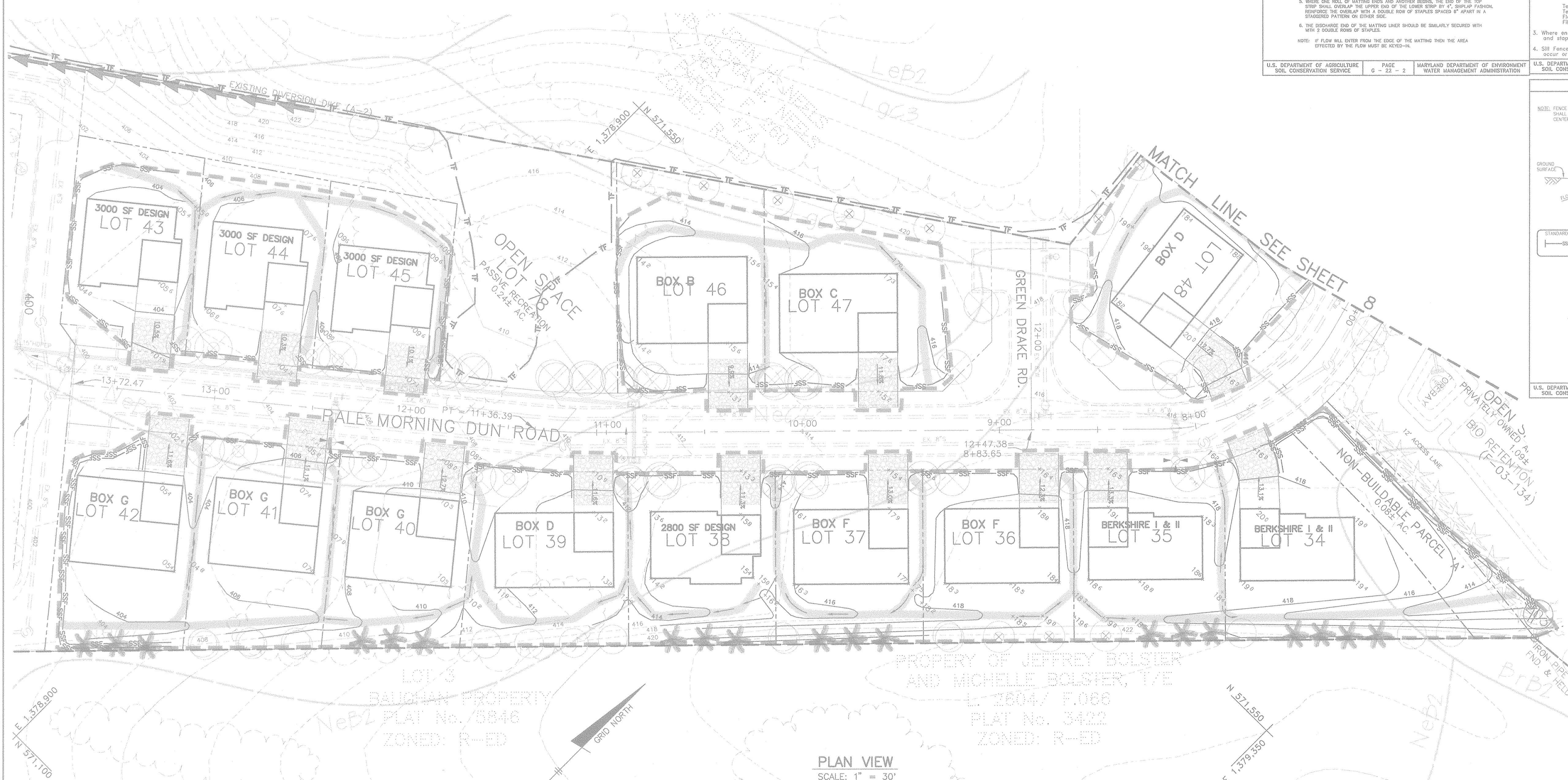
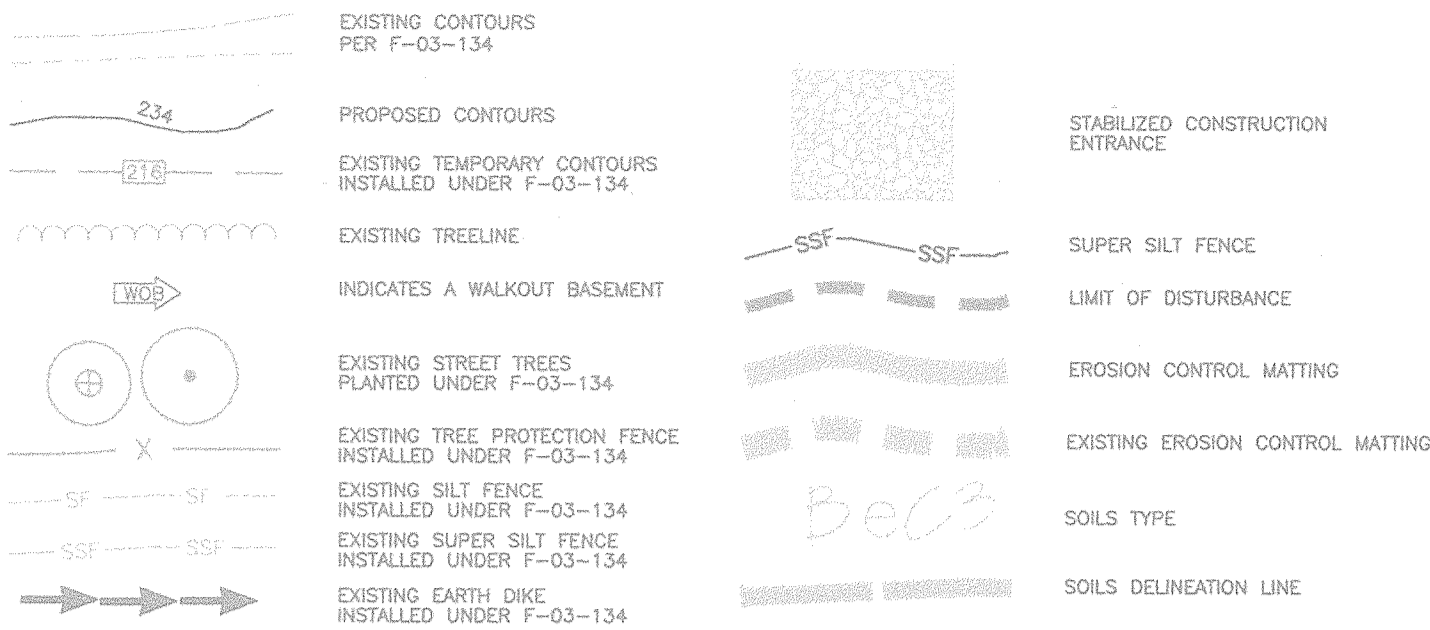
PLAN VIEW
 SCALE: 1" = 30'

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY

NOTE: THE HOUSES LOCATED ON LOTS 32 & 33 MAY NOT BE CONSTRUCTED UNTIL PERMISSION IS RECEIVED FROM THE SEDIMENT CONTROL INSP.

NO.		DATE		REVISION	
<p align="center">BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC.</p> <p>8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-6105 • fax: 410-465-6844 email: Benchmark@cois.com</p>					
OWNER		PROJECT:			
CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONIU, MARYLAND 21093 410-252-8600		CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)			
BUILDERS		LOCATION: TAX MAP: 31 PARCEL: 160, 161, 788 & 791 GRID: 10 & 11 138 ELECTION DISTRICT 188 ELECTION DISTRICT HOWARD COUNTY, MARYLAND			
RICHMOND AMERICAN HOMES OF MARYLAND, INC. 6200 OLD DOBBIN LANE, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2800		TITLE: SEDIMENT, EROSION CONTROL AND SOILS PLAN			
JAMES KEELY & COMPANY, INC. 61 EAST PADONIA ROAD TIMONIU, MARYLAND 21093 410-252-8600		DATE: JUNE, 2004		PROJECT NO. 1704	
DESIGN: BFC	DRAFT: BFC	CHECK: DAM	SCALE: AS SHOWN	SHEET 8 OF 10	

LEGEND

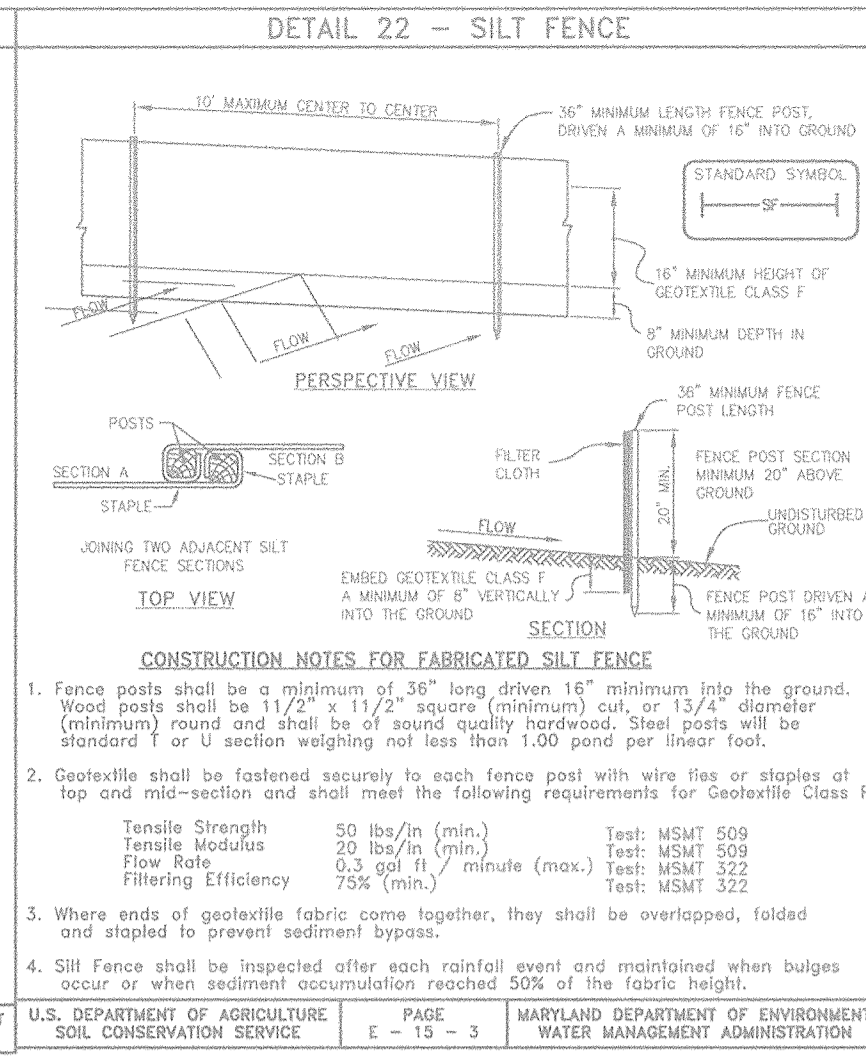
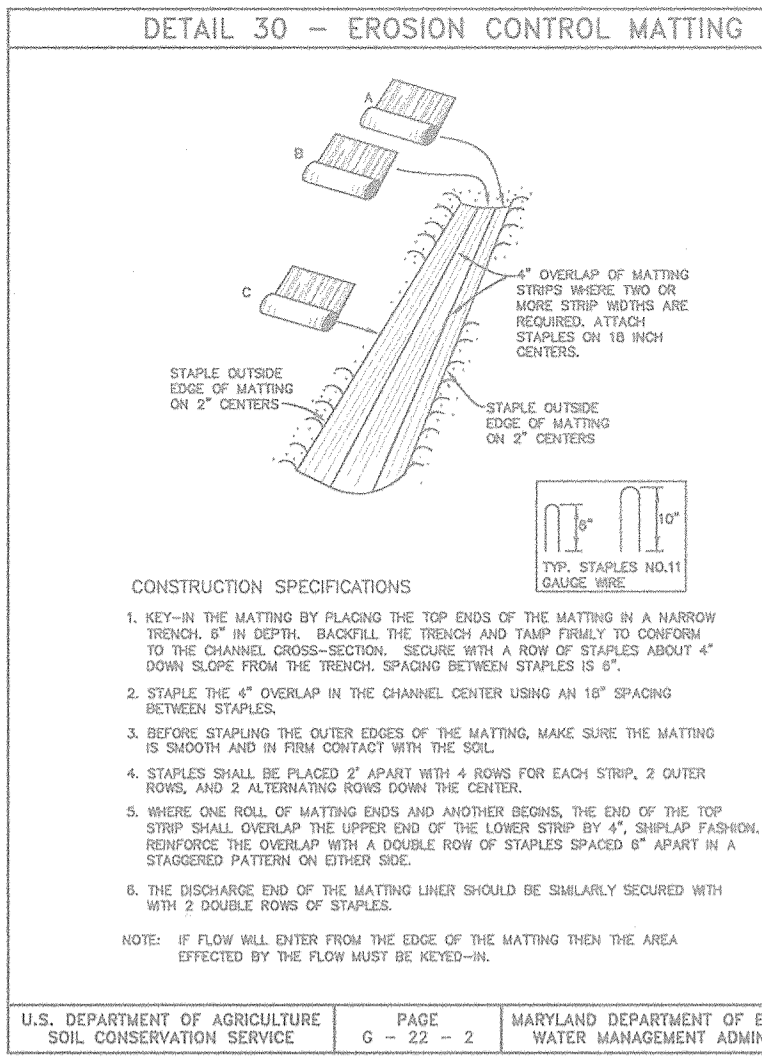


PLAN VIEW
SCALE: 1" = 30'

SOILS LEGEND

SYMBOL	DESCRIPTION	SOIL GROUP	SYMBOL	DESCRIPTION	SOIL GROUP
AdB2	ALDINO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C*	AgB2	AURA GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	C
AgC2	AURA GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C	BeB2	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	Cx
AgE2	AURA GRAVELLY LOAM, 10 TO 30 PERCENT SLOPES, SEVERELY ERODED	C	CmB2	CHILLUM SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
BeC3	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	C*	CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
BrB2	BRANDYWINE LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	A	CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
BrC3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	A	LgC3	LEGORE SILT CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
BrD3	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	A	MpB2	MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
DeB2	DELANCO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C*	SuD2	SUNNY FINE SANDY LOAM, 5 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
Em	ELKTON SILT LOAM	C/D	SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C*	WaB	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	Dx
IuB	TUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C*			
KeB2	KELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	Dx			
LeB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B			
LeC2	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B			
Mo	MIXED ALLUVIAL LAND	B*			
MpE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	B			
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B			
NcC2	NESHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B			
NsD3	NESHAMINY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B			
ReC2	RELAY SILT LOAM, 3 TO 15 PERCENT SLOPES, MODERATELY ERODED	B			
SuB2	SUNNY FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B			

* INDICATES HYDRIC SOIL
TAKEN FROM SOIL SURVEY HOWARD COUNTY, MARYLAND MAP NO. 21

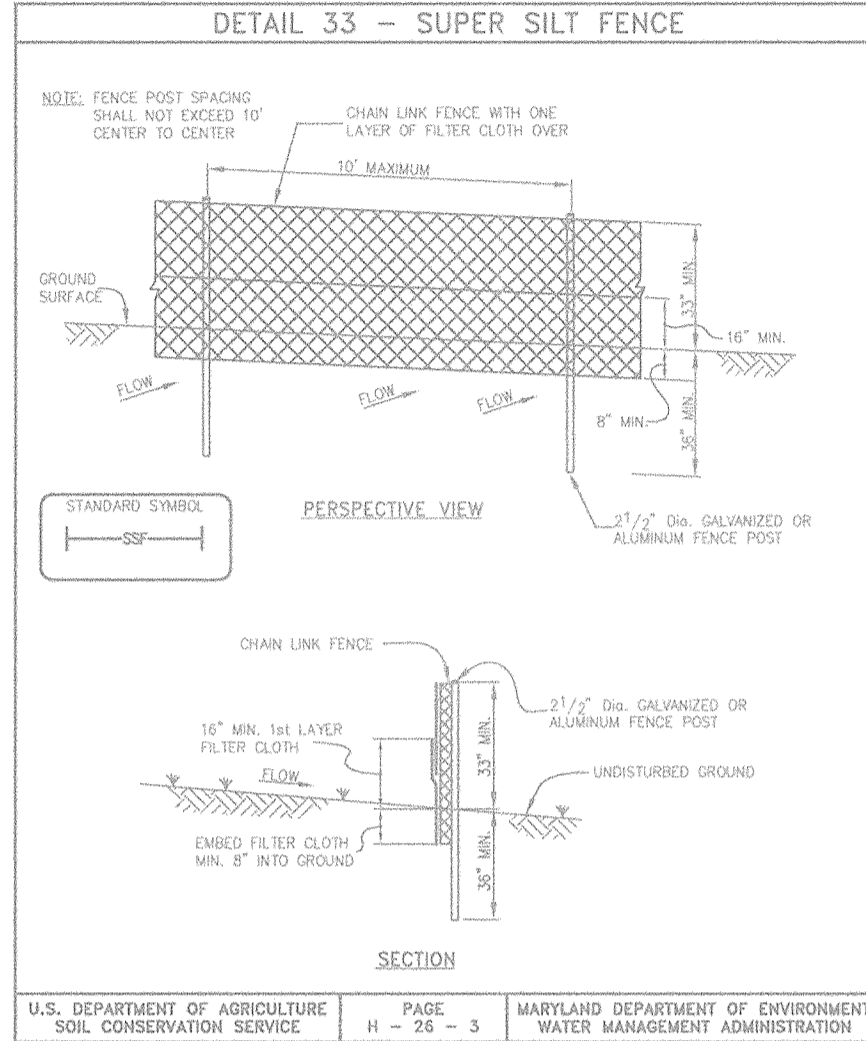


SILT FENCE

SILT FENCE DESIGN CRITERIA

Slope Slopes	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	50 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

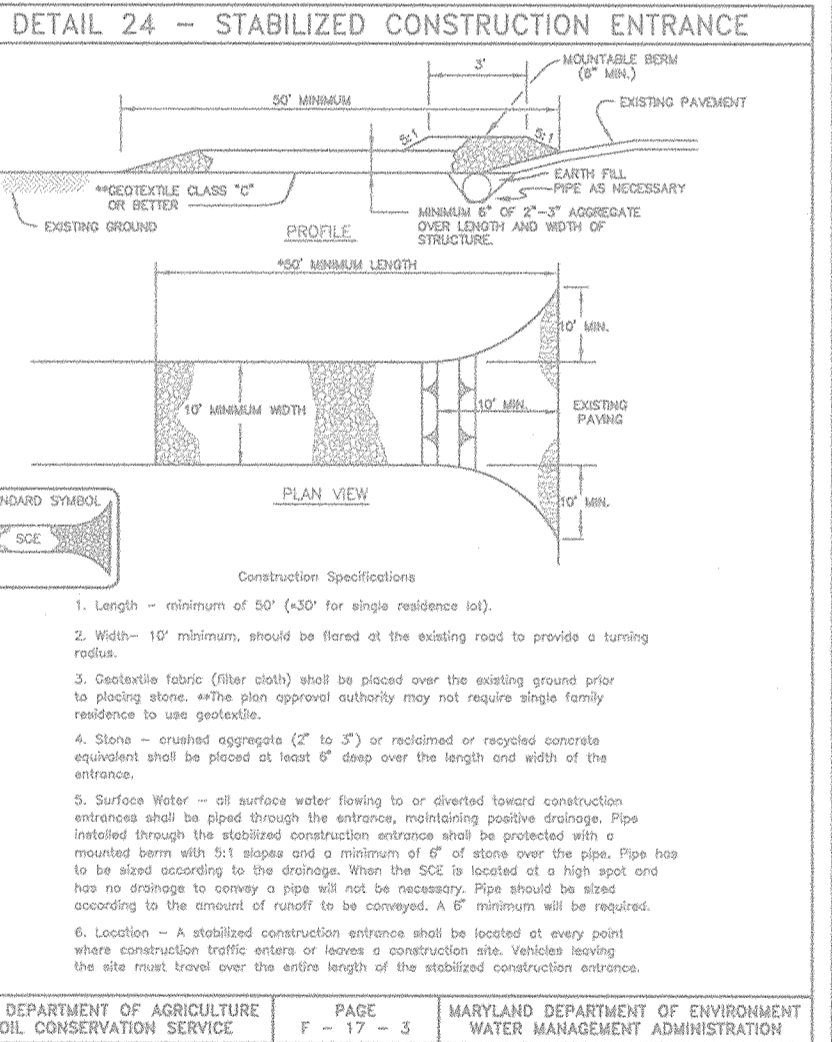
Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited, in these areas a silt fence may be the only perimeter control required.



SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (150' for slope resistance 10).
- Width - 10" minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone, with site approval authority may not require slope stability resistance to be installed.
- Stone - crushed aggregate (2" to 3") or recycled or recycled concrete equipment shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be placed through the entrance, maintaining positive drainage. Flow entering through the stabilized construction entrance shall be protected with 18" installed berm with 5:1 slopes and a minimum of 4' of stone over the slope. Flow has to be placed upstream by the drainage. When the site is located at a high spot and has no drainage to remove a trap will be necessary. This should be done.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must leave over the entire length of the stabilized construction entrance.



THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY

REVIEWER FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Meyer 7/1/04
USDA - NATURAL RESOURCES CONSERVATION

John K. Roberts 7/1/04
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Matthew 7/12/04
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAT

Arnie 7/11/04
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT SA

John 7/15/04
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION JABOR (P.C.T.M.C.)

ENGINEER'S CERTIFICATE

"I CERTIFY THAT 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 SOIL CONSERVATION DISTRICT."

Donald Mason 6/8/04
DATE
ENGINEER - DONALD A. MASON, P.E. # 21443

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Donald Mason 6/8/04
DATE

BENCHMARK ENGINEERS, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 • FAX: 410-465-8644
EMAIL: BENCHMKN@comcast.com

Donald Mason
6/6/04

NO.	DATE	REVISION

OWNER
CASCADE OVERLOOK, LLC.
61 EAST PADONIA ROAD
TIMONIUM, MARYLAND 21093
410-252-8800

BUILDERS
RICHMOND AMERICAN HOMES OF MARYLAND, INC.
6200 OLD DOBBIN LANE SUITE 180
COLUMBIA, MARYLAND 21045
410-312-2800

JAMES KEELY & COMPANY, INC.
61 EAST PADONIA ROAD
TIMONIUM, MARYLAND 21093
410-252-8800

PROJECT: CASCADE OVERLOOK SECTION I & II
SECTION I - LOTS 2-7
SECTION II - LOTS 1-9
(SINGLE FAMILY DETACHED)

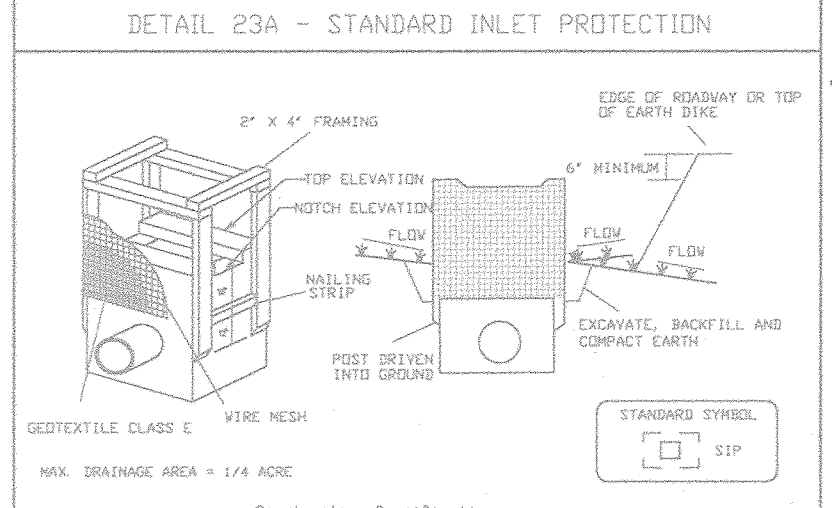
LOCATION: TAX MAP: 31
GRID: 10 & 11
138 ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ZONED: R-ED

TITLE: SEDIMENT, EROSION CONTROL AND SOILS PLAN AND DETAILS

DATE: JUNE, 2004
PROJECT NO.: 1704

DESIGN: BFC
DRAFT: BFC
CHECK: DAM

SCALE: AS SHOWN
SHEET: 9 OF 10



- Construction Specifications**
- Excavate completely around the inlet to a depth of 18" below the match elevation.
 - For each 4' of construction grade (lumber posts) into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2' x 4' frame using the overlap joint shown on Detail 23A. The top of the frame must be 4" below the adjacent roadway where flooding and safety issues may arise.
 - Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
 - Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to the inlet match elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
 - Backfill around the inlet in compacted 6" layers until the top of the inlet is level with the match elevation on the ends and top elevation on the frame.
 - If the inlet is not in a sump, construct a compacted earth dike above the dike line directly below the inlet. The dike should be at least 6" higher than the top of the frame.
 - The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.
- U.S. DEPARTMENT OF AGRICULTURE PAGE 1-3 of 5 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES AND PERMITS DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1850).
- 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 SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 52) AND MULCHING (SEC. 53). 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE (THIS SUBMISSION)	15.03 ACRES
AREA DISTURBED	14.53 ACRES
AREA TO BE ROOFED OR PAVED	5.48 ACRES
AREA TO BE VEGETATIVELY STABILIZED	8.61 ACRES
TOTAL CUT	33,784 CY
TOTAL FILL	9,590 CY
OFFSITE WASTE/BORROW AREA LOCATION	*

*IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW SITE AND NOTIFY AND OBTAIN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY 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 PERIMETER EROSION AND SEDIMENT CONTROLS, BUT 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 OBTAINED.
- TRUCKS 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.

PERMANENT SEEDBED PREPARATIONS

- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
 - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF KEEPING LONGGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.
- MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
- MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TOPSOIL SPECIFICATIONS

- Topsoil salvaged from the existing site may be used provided that it meets that 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 USDA-SSC in cooperation with Maryland Agricultural Experiment Station.
 - Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsols and soil contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutcracker, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
 - For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.0 or higher.
 - Organic content or topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble soil content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 2". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
 - Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 to 30/1,000 square feet, and 1/2 the normal lime application rate.
- References: Guidelines Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.
- - - INDICATES SINGLE HOUSE CONSTRUCTION.

SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
- DAY 1 1.) OBTAIN GRADING PERMIT.
- DAY 2-8 2.) INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP. THE EXISTING CONTROLS THAT WERE INSTALLED UNDER F-03-134 AND F-03-150 THAT ARE TO REMAIN SHALL BE INSPECTED AND/OR MOVED AS SHOWN ON THESE PLANS TO ENSURE THEY MEET COMPLIANCE WITH SPECIFICATIONS. ANY REMAINING CONTROLS INSTALLED UNDER F-03-134 AND F-03-150 THAT WILL NOT BE UTILIZED UNDER THIS SDP SHALL BE REMOVED BY THE DEVELOPER.
- DAY 9-12 3.) EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
- DAY 13-82 4.) CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS.
- DAY 83-87 5.) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES AND FLUSH STORM DRAIN SYSTEM.
- DAY 88-91 6.) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.
2. EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOD SHOULD BE USED.

PLAN VIEW
SCALE: 1" = 30'

TEMPORARY SEEDBED PREPARATIONS

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT). SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LONGGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.
- MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
- REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY

LEGEND

- EXISTING CONTOURS PER F-03-150
- PROPOSED CONTOURS
- EXISTING TEMPORARY CONTOURS INSTALLED UNDER F-03-150
- EXISTING TREELINE
- INDICATES A WALKOUT BASEMENT
- EXISTING STREET TREES PLANTED UNDER F-03-150
- EXISTING TREE PROTECTION FENCE INSTALLED UNDER F-03-150
- EXISTING SILT FENCE INSTALLED UNDER F-03-150
- EXISTING SUPER SILT FENCE INSTALLED UNDER F-03-150
- EXISTING EARTH DIKE INSTALLED UNDER F-03-150
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- EXISTING EROSION CONTROL MATTING
- SOILS TYPE
- EXISTING INLET PROTECTION INSTALLED UNDER F-03-150
- SOILS DELINEATION LINE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT 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 SOIL CONSERVATION DISTRICT."

Donald Mason 6/8/04
ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

John K. Patton 6/8/04
DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Meyer 7/1/04
USEE, NATURAL RESOURCES DIVISION DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John K. Patton 7/1/04
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John K. Patton 7/12/04
DATE

Cindy Hanada 7/15/04
DATE

Stephen Laffer 7/15/04
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DIRECTOR (ACTING)

NO.	DATE	REVISION

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS, INC.

8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 • FAX: 410-465-8644
EMAIL: Benchmark@cois.com

Donald Mason 6/8/04

OWNER	CASCADE OVERLOOK, LLC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	PROJECT:	CASCADE OVERLOOK SECTION I & II SECTION I - LOTS 2-72 SECTION II - LOTS 1-9 (SINGLE FAMILY DETACHED)
BUILDERS	RICHMOND AMERICAN HOMES OF MARYLAND, INC. 8200 OLD DOBBS LANE, SUITE 1190 COLUMBIA, MARYLAND 21045 410-312-2800	LOCATION:	TAX MAP: 31 GRID: 11 188 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
JAMES KEELY & COMPANY, INC. 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 410-252-8600	DESIGN: BFC	DRAFT: BFC	CHECK: DAM
DATE: JUNE, 2004	PROJECT NO.: 1704	SCALE: AS SHOWN	SHEET NO. OF 10