

**GENERAL NOTES**

- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:  
 MISS UTILITY 1-800-257-7777  
 BELL ATLANTIC TELEPHONE CO. 725-9976  
 HOWARD COUNTY BUREAU OF UTILITIES: 313-2166  
 VERIZON CABLE LOCATION DIVISION: 393-3553  
 B.G.&E. CO. CONTRACTOR SERVICES: 850-4620  
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620  
 STATE HIGHWAY ADMINISTRATION: 531-5533
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 18 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- THE SUBJECT PROPERTY IS ZONED R-MH PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN. R-A-15 BULK REGULATIONS ARE UTILIZED PER SECTION 113.1.D.2 OF THE ZONING REGULATIONS.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENT NO'S. 4382 AND 4386.
- PROPERTY LINES ARE BASED ON HOWARD COUNTY PLAT NO. 16228.
- TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL PHOTOGRAMMETRIC SURVEY PERFORMED BY POTOMAC AERIAL SURVEY, DATED MARCH, 1998.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- A NOISE STUDY WAS PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 2005.
- A WETLAND DELINEATION WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC. DATED DECEMBER 2004.
- AN AFPO STUDY WAS PERFORMED BY THE TRAFFIC GROUP, INC. DATED DECEMBER 2004.
- A FOREST STAND DELINEATION WAS PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED DECEMBER 2004.
- A GEOTECHNICAL STUDY WAS PERFORMED BY ENGINEERING CONSULTING SERVICES, LTD. DATED DECEMBER 2004.
- 100 YEAR FLOODPLAIN IS BASED ON HOWARD COUNTY RECORD PLAT NO. 3545.
- NO BURIAL GROUNDS OR CEMETERIES ARE LOCATED ON THIS PROPERTY.
- THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 0.74 ACRES OF ONSITE RETENTION AND A FEE-IN-LIEU PAYMENT OF \$24,394.00 TO THE HOWARD COUNTY FOREST CONSERVATION FUND FOR 1.12 ACRES OF REFORESTATION.
- FINANCIAL SURETY FOR THE REQUIRED FOREST CONSERVATION HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,447.00 FOR THE RETENTION OF 32,235 SF (0.74 AC).
- STORMWATER MANAGEMENT HAS BEEN PROVIDED FOR THIS PROJECT UTILIZING THE 2000 MDE STORMWATER DESIGN MANUAL VOLUMES I AND II. WQV IS PROVIDED BY THE MICROPOOL EXTENDED DETENTION FACILITY (P-1) AND THE BIORETENTION FACILITY (F-6). REV IS PROVIDED BY STONE UNDER THE BIORETENTION FACILITY (F-6). CPV IS PROVIDED BY THE MICROPOOL EXTENDED DETENTION FACILITY (P-1). WQV AND REV CREDIT PROVIDED BY GRASS CHANNELS. WQV CREDIT ALSO PROVIDED BY NATURAL CONSERVATION EASEMENT. THE MICROPOOL EXTENDED DETENTION FACILITY (P-1) IS HAZARD CLASS 'A'. CPV REQUIREMENTS ARE PROVIDED BY THIS PLAN FOR THE FUTURE DEVELOPMENT OF THE ADJACENT PARCEL 'A'. THE MICROPOOL EXTENDED DETENTION FACILITY WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY THE OWNERS OF PARCEL 644 LOT 4, AND PARCEL 'A'.
- PERMETER LANDSCAPING SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$42,300.00 FOR 84 SHADE TREES, 30 EVERGREEN TREES AND 42 STREET TREES.
- THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCTOBER 2, 2005.
- SEWER SERVICE FOR THIS PROJECT WILL BE PRIVATE AND WILL BE PROVIDED BY HOWARD COUNTY CONTRACT NO. 13-3195.
- WATER SERVICE FOR THIS PROJECT WILL BE PUBLIC AND WILL BE PROVIDED BY HOWARD COUNTY CONTRACT NO. 13-3564-D.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- ALL TRASH COLLECTION TO BE PRIVATE.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL R3.01.
- ALL PAVING TO BE P-2 PAVING, HOWARD COUNTY STANDARD DETAIL R-2.01. THE PAVING SECTION WILL BE CONFIRMED OR MODIFIED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION BASED ON ACTUAL TESTING.
- FOUNDATION SOILS MUST BE EXAMINED BY THE SOILS ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTHS.
- TREE PROTECTION FENCE IS TO BE PROVIDED IN ANY AREA WHERE GRADING, CLEARING, OR ANY OTHER DISTURBANCE ARE LOCATED ADJACENT TO, NEAR, OR IN ANY WETLAND, WETLAND BUFFER, 100 YEAR FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT, OR ANY RETENTION FOREST CONSERVATION EASEMENTS. WHERE APPLICABLE, TREE PROTECTION SIGNS WILL BE POSTED ON SUPER SILT FENCE AND PROVIDE TREE PROTECTION.
- THIS PLAN IS SUBJECT TO ADMINISTRATIVE ADJUSTMENT AA-04-33 TO THE BULK REQUIREMENT GIVEN IN SECTION 112.D.4 OF THE ZONING REGULATIONS TO REDUCE THE REQUIRED 50' SETBACK FOR APARTMENTS FROM PROJECT BOUNDARY AND ZONING LINE TO 40' AND REDUCE THE REQUIRED 30' USE SETBACK TO 15' IN ORDER TO ACCOMMODATE A TRASH ENCLOSURE. THE DECISION AND ORDER, DATED JANUARY 25, 2005, HAS GRANTED APPROVAL SUBJECT TO THE FOLLOWING CONDITIONS:  
 1. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.  
 2. THE GRANTED ADMINISTRATIVE ADJUSTMENT SHALL APPLY SOLELY TO THE APARTMENT BUILDINGS AND TRASH ENCLOSURE AS DEPICTED ON THE ADMINISTRATIVE ADJUSTMENT PLAN SUBMITTED BY THE PETITIONER AND NOT TO ANY OTHER STRUCTURE, ADDITION, BUILDING OR USE.  
 3. A BUILDING PERMIT SHALL BE OBTAINED WITHIN TWO YEARS FROM THE DATE OF THIS ORDER AND SUBSTANTIAL CONSTRUCTION SHALL BE COMPLETED WITHIN THREE YEARS.  
 AA-04-33 APPROVAL IS FOR APT. BLDGS. A, B AND D-F AND THE NORTHERN TRASH ENCLOSURE.  
 ALL OTHER STRUCTURES AND USES SHALL COMPLY WITH THE REQUIRED STRUCTURE AND USE SETBACKS.
- THIS PROJECT FULFILLS THE MODERATE INCOME HOUSING OBLIGATIONS FOR THE ADJACENT OAKS AT WATERS EDGE PHASES I AND II SUBDIVISIONS UNDER SDP-03-41 AND SDP-03-154.
- CREDITED OPEN SPACE WILL BE COMPRISED OF (.37 ACRES LOCATED IN THE FOREST CONSERVATION EASEMENT AND FLOODPLAIN, AND 0.36 ACRES LOCATED ADJACENT TO THE COMMUNITY BUILDING AND BEHIND BUILDING 'C'. ALL OTHER AREAS OF THE SITE SHALL BE CONSIDERED NON-CREDITED OPEN SPACE.
- ALL UNITS AND THE COMMUNITY BUILDING WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- ALL WATER METERS WILL BE LOCATED INSIDE PROPOSED BUILDINGS.
- THE PARKING REQUIREMENT FOR THIS PROJECT WAS REDUCED FROM 2 SPACES PER UNIT TO 1.5 SPACES PER UNIT IN ACCORDANCE WITH A PERMISSIVE STUDY OF 8/16/05 AND THE PLANNING DIRECTOR'S RESPONSE LETTER OF 9/3/04.
- RECREATION OPEN SPACE IS PROVIDED BY THE COMMUNITY CENTER. THE USABLE RECREATION AREA WILL BE LOCATED IN THE "COMMUNITY ROOM / CHILDREN'S ACTIVITY CENTER" WITHIN THE COMMUNITY CENTER. THE TOTAL AREA OF THE COMMUNITY CENTER IS 2,496 SF. THE AREA OF THE "COMMUNITY ROOM / CHILDREN'S ACTIVITY CENTER" IS 1,081 SF. THE REQUIRED MODERATE INCOME UNITS FOR THE OAKS AT WATERS EDGE PHASE I (SDP-03-41) AND PHASE II (SDP-03-154) HAVE BEEN TRANSFERRED TO THIS PROJECT. 29 UNITS ARE REQUIRED FOR PHASE I, 12 UNITS ARE REQUIRED FOR PHASE II AND 15 UNITS ARE REQUIRED FOR THIS PROJECT. A TOTAL OF 54 UNITS ARE REQUIRED.
- MODERATE INCOME HOUSING UNITS ARE PROVIDED. THE MODERATE INCOME HOUSING DOCUMENTS HAVE BEEN RECORDED AT THE LAND RECORDS OF HOWARD COUNTY IN LIBER 7783 FOLIO 107, DATED NOVEMBER 2003.

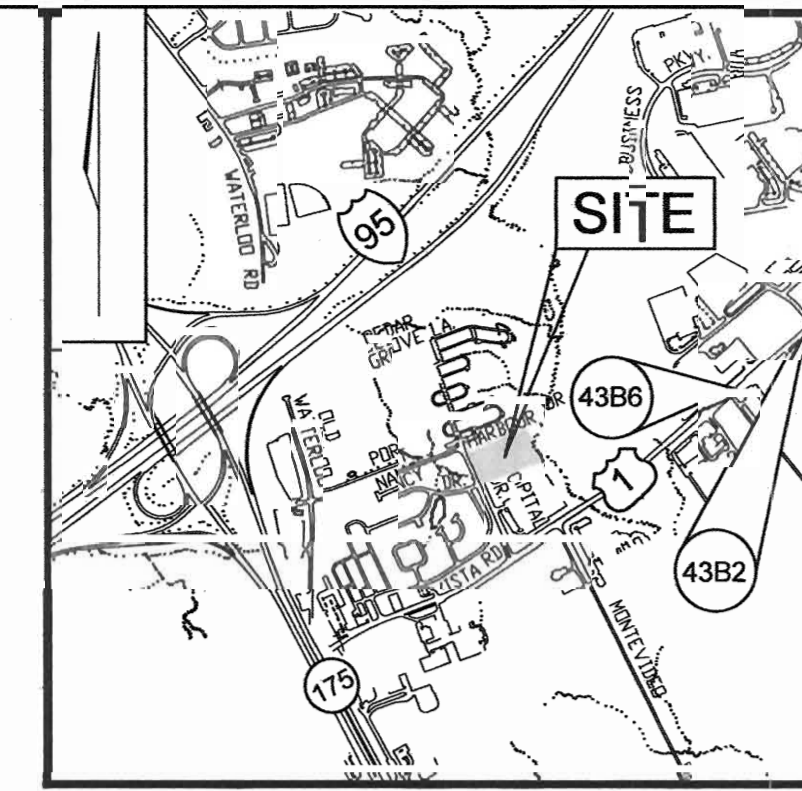
# SITE DEVELOPMENT PLAN

## PORT CAPITAL VILLAGE

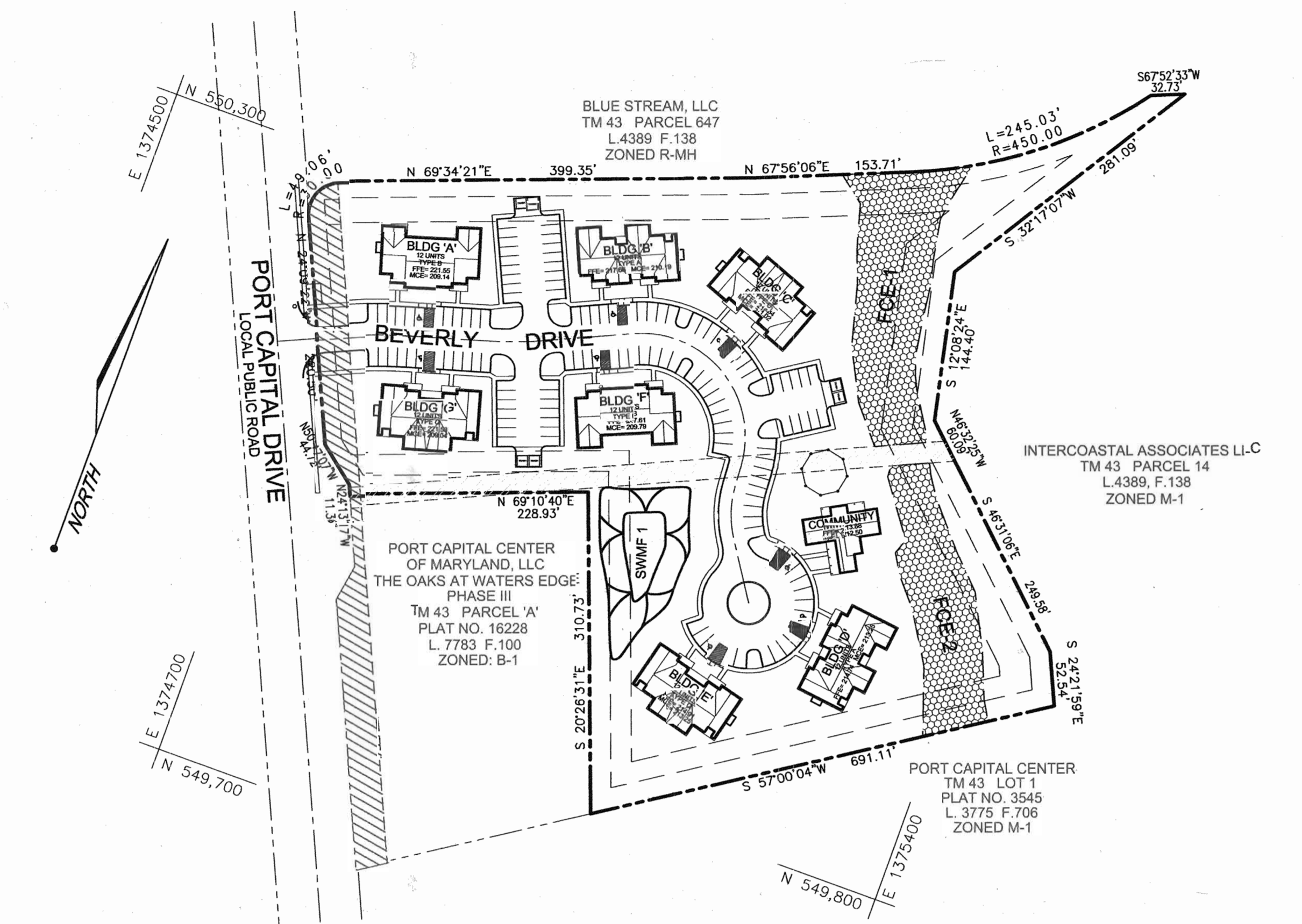
### (THE OAKS AT WATERS EDGE PHASE III)

### MODERATE INCOME HOUSING COMMUNITY

BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
4382	551,655.009	1,378,176.941	209.605'
4386	550,601.593	1,378,866.047	210.560'



VICINITY MAP  
SCALE: 1"=2000'



LOCATION PLAN  
SCALE: 1"=100'

ADDRESS CHART	
BUILDING	STREET ADDRESS
A	7111 AND 7115 BEVERLY DRIVE
B	7121 AND 7125 BEVERLY DRIVE
C	7131 AND 7135 BEVERLY DRIVE
D	7151 AND 7155 BEVERLY DRIVE
E	7150 AND 7154 BEVERLY DRIVE
F	7120 AND 7124 BEVERLY DRIVE
G	7110 AND 7114 BEVERLY DRIVE
COMMUNITY	7141 BEVERLY DRIVE

SITE ANALYSIS DATA CHART			
TOTAL PROJECT AREA	AREA OF PLAN SUBMISSION	LIMIT OF DISTURBED AREA	PRESENT ZONING
304,942 SF (7.00 AC)	304,942 SF (7.00 AC)	5.43 AC	R-MH
PROPOSED USE	TYPE OF UNIT	TOTAL UNITS ALLOWED	TOTAL UNITS PROPOSED
RESIDENTIAL	APARTMENT	84 (R-A-15)	84
PARKING SPACES REQUIRED	PARKING SPACES PROVIDED	HANDICAP SPACES REQUIRED	HANDICAP SPACES PROVIDED
126	129	13	13
OPEN SPACE REQUIRED	OPEN SPACE PROVIDED	RECREATION OPEN SPACE REQUIRED	RECREATION OPEN SPACE PROVIDED
1.75 AC	1.75 AC	840 SF	1,081 SF
DPZ FILE REFERENCE	FOR	DEED REFERENCE	
F-04-44, AA-04-33, SDP-03-041, SDP-03-154	F-06-58	LIBER 7783 FOLIO 100	

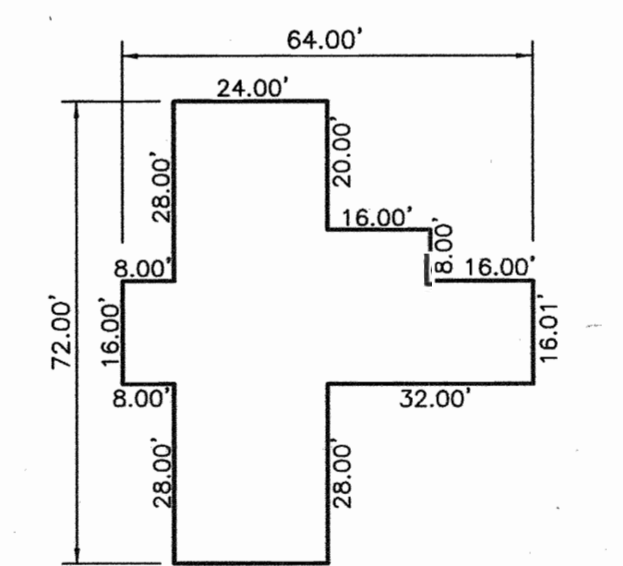
OPEN SPACE TABULATION CHART	
OPEN SPACE REQUIRED	NON-CREDITED OPEN SPACE PROVIDED
1.75 AC (25%)	2.92 AC (42%)
CREDITED OPEN SPACE PROVIDED	TOTAL OPEN SPACE PROVIDED
1.75 AC (25%)	4.67 AC (67%)

RECREATION OPEN SPACE TABULATION CHART	
RECREATION OPEN SPACE REQUIRED (REGULAR)	RECREATION OPEN SPACE PROVIDED (CONSTRUCTED AMENITY)
400 SF PER UNIT = 33,600 SF	10 SF PER UNIT = 840 SF
RECREATION OPEN SPACE PROVIDED (REGULAR)	RECREATION OPEN SPACE PROVIDED (CONSTRUCTED AMENITY)
0 SF	1,081 SF

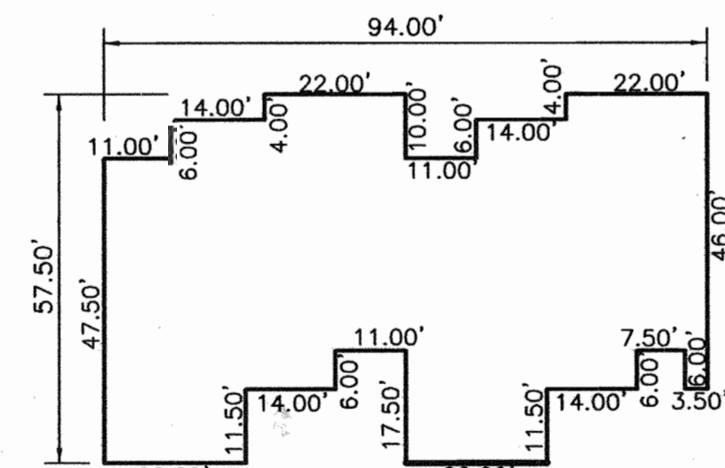
DENSITY TABULATION CHART		
GROSS AREA OF SITE	AREA OF FLOODPLAIN	TOTAL AREA OF STEEP SLOPES
304,942 SF (7.00 AC)	27,443 SF (0.63 AC)	38,154 SF (0.87 AC)
NET AREA OF SITE	TOTAL UNITS ALLOWED	TOTAL UNITS PROPOSED
245,534 SF (5.64 AC)	84 (R-A-15)	84

PERMIT INFORMATION CHART					
SUBDIVISION NAME		SECTION/REA		LOT/PARCEL NO.	
THE OAKS AT WATERS EDGE		PHASE III		LOT 4	
PLAT REF.	TAX MAP	GRID NO.	ZONE	ELECT. DIST.	CENSUS TR.
16228 + 1742	43	3	R-MH	1ST	6012.02
WATER CODE:	B01	SEWER CODE:	2420000		

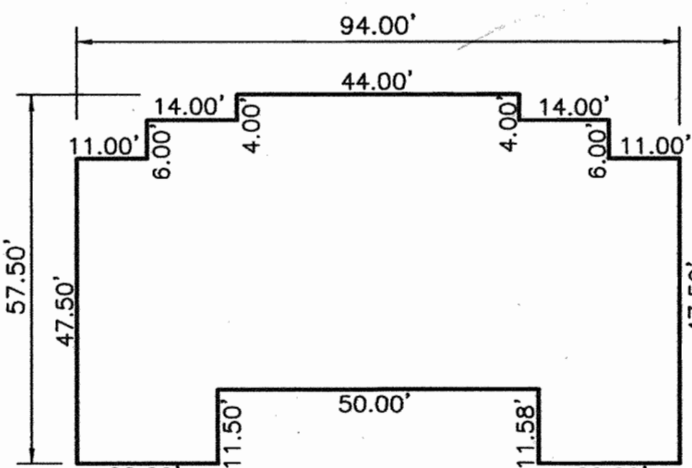
SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1
SITE LAYOUT PLAN	2
GRADING AND SEDIMENT EROSION CONTROL PLAN	3
LANDSCAPING AND FOREST CONSERVATION PLAN	4
STORM DRAIN PROFILES	5
SEWER PROFILES	6
STORMWATER MANAGEMENT DETAILS	7
SEDIMENT EROSION CONTROL PLANS	8



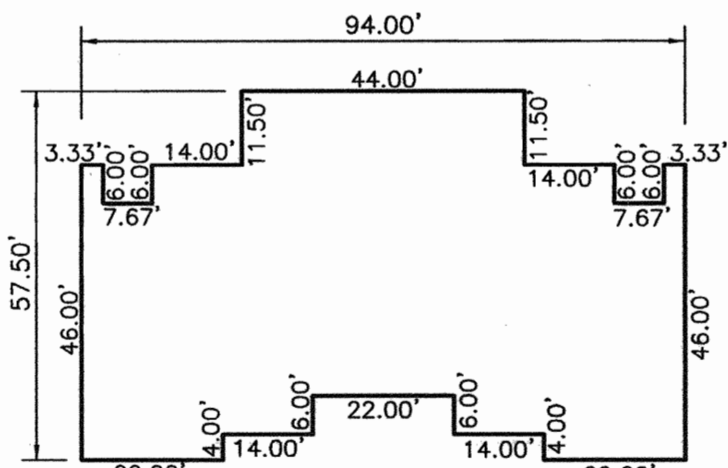
COMMUNITY BUILDING  
SCALE: 1"=30'



BUILDING TYPE 'A'  
SCALE: 1"=30'



BUILDING TYPE 'B'  
SCALE: 1"=30'



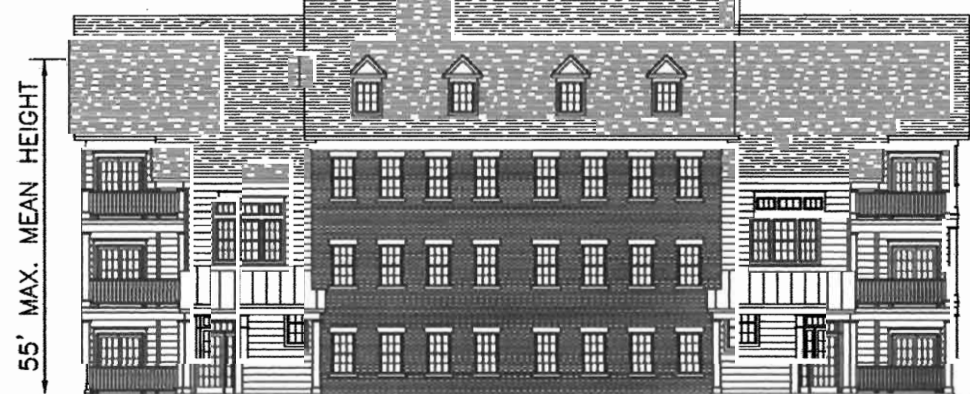
BUILDING TYPE 'C'  
SCALE: 1"=30'



COMMUNITY BUILDING ELEVATION  
NOT TO SCALE



BUILDING TYPE 'A' ELEVATION  
NOT TO SCALE



BUILDING TYPE 'B' ELEVATION  
NOT TO SCALE



BUILDING TYPE 'C' ELEVATION  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/10/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 12/23/05  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 12/23/05  
DIRECTOR DATE

**OWNER**  
HOWARD COUNTY HOUSING COMMISSION  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046  
(410) 313-6320

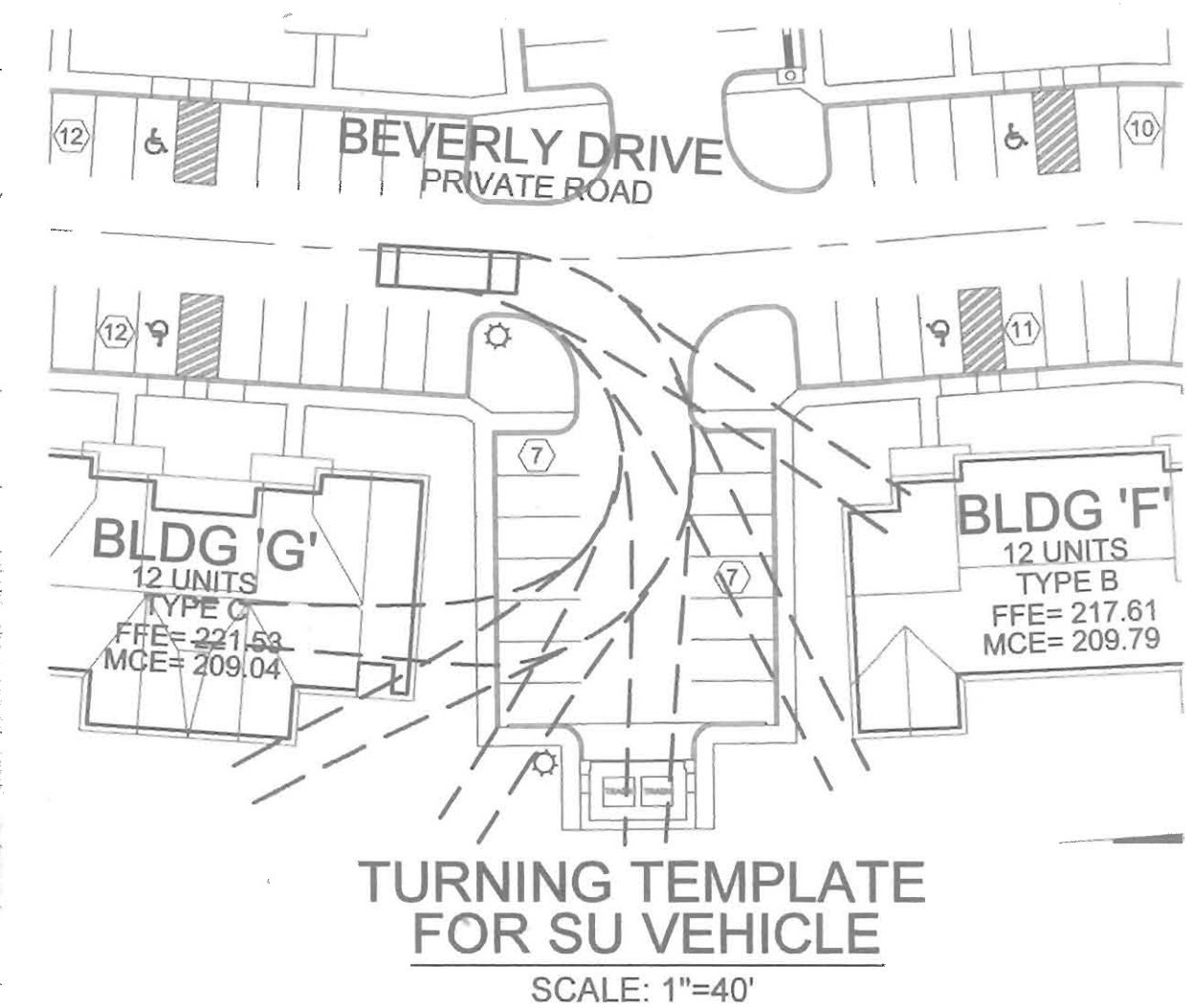
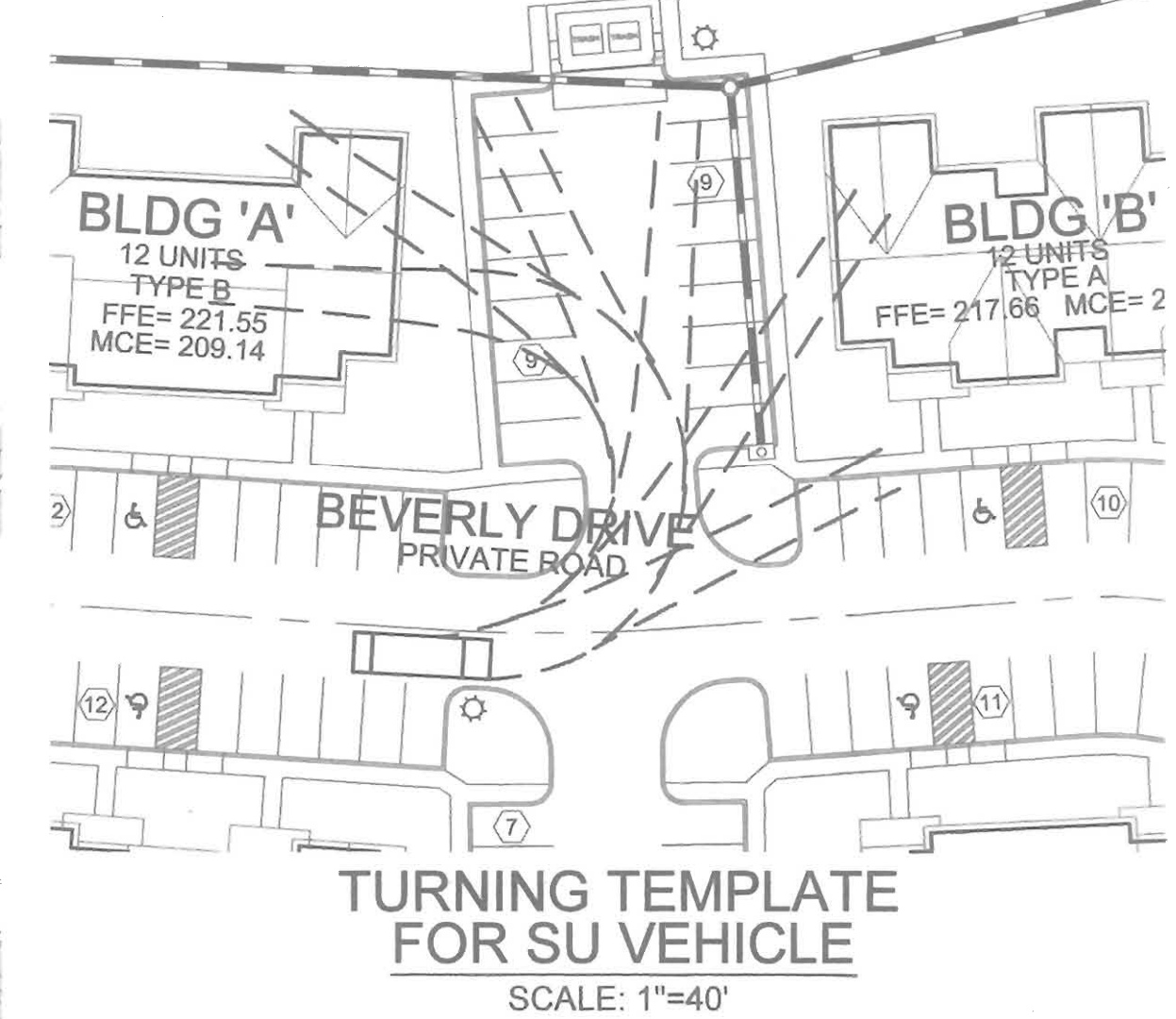
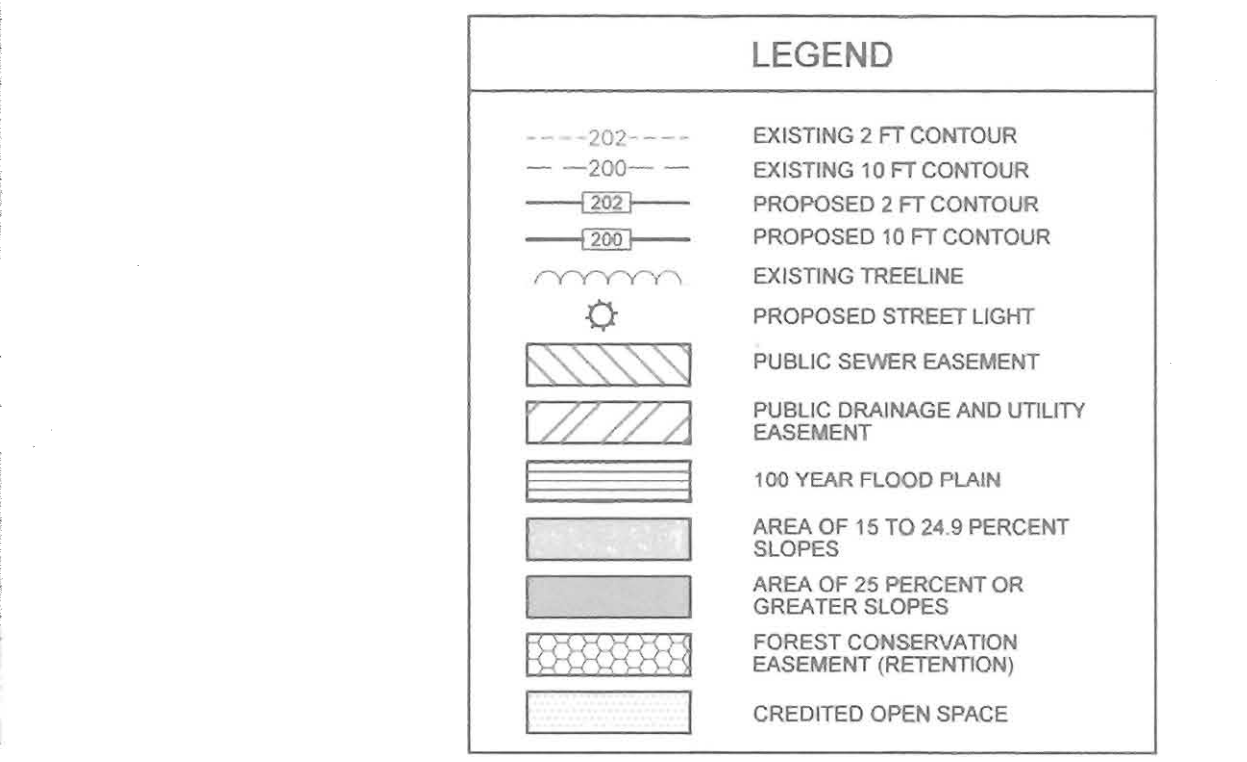
**DEVELOPER**  
MEI DEVELOPMENT CO., INC.  
C/O THE INGERMAN GROUP  
1100 PENNSYLVANIA AVE, SUITE 700  
WILMINGTON, DE 19806  
(302) 661-1560

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

DESIGN BY: LIT  
DRAWN BY: LIT  
CHECKED BY: RHV  
DATE: MAY 12, 2005  
SCALE: AS NOTED  
W.O. NO.: 04-09.00

1 SHEET OF 8

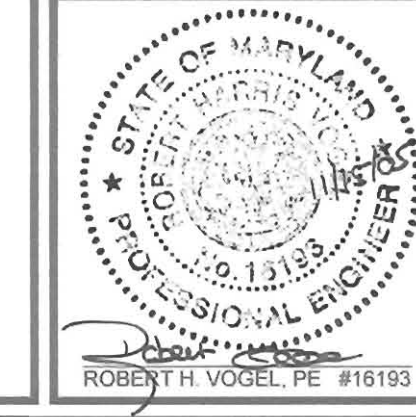


NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN  
SITE LAYOUT PLAN  
PORT CAPITAL VILLAGE  
(THE OAKS AT WATERS EDGE PHASE III)  
LOT 4**

DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
TAX MAP 43 GRID 3 PARCEL 644 LOT 4  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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



DESIGN BY: LJT  
DRAWN BY: LIT  
CHECKED BY: RHW  
DATE: MAY 12, 2005  
SCALE: 1"=40'  
W.O. NO.: 04-09-00

**2** SHEET OF **8**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/1/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 12/23/05  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 12/23/05  
DIRECTOR DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SCD DATE

**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.

*[Signature]* 11/15/05  
ROBERT H. VOGEL, PE #16193 DATE

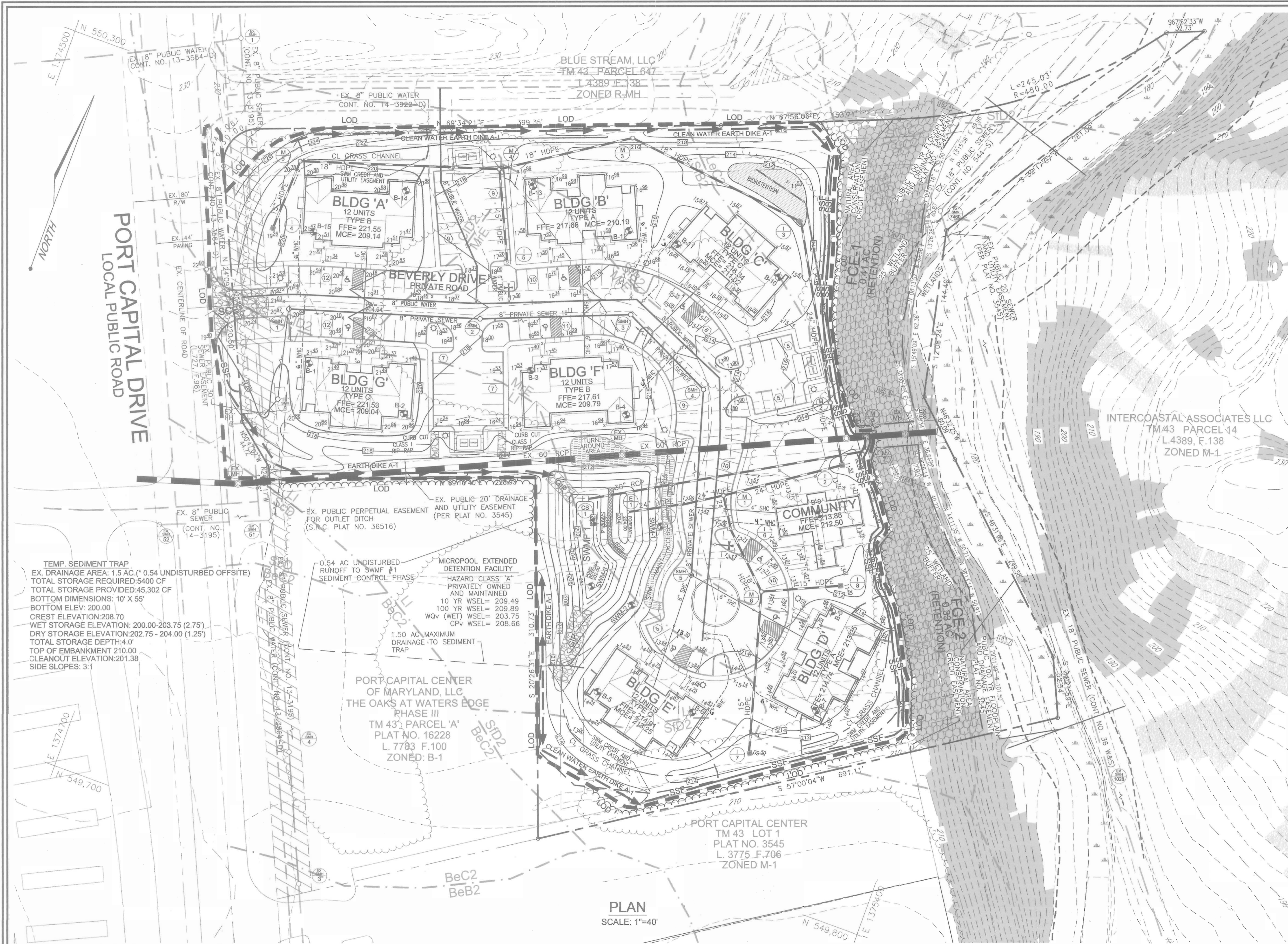
**DEVELOPER'S CERTIFICATE**

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.

*[Signature]* 4/11/05  
M. BRAD INGERMAN DATE

**OWNER**  
HOWARD COUNTY HOUSING COMMISSION  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046  
(410) 313-6320

**DEVELOPER**  
MBI DEVELOPMENT CO., INC.  
C/O THE INGERMAN GROUP  
1100 PENNSYLVANIA AVE, SUITE 700  
WILMINGTON, DE 19806  
(302) 661-1560



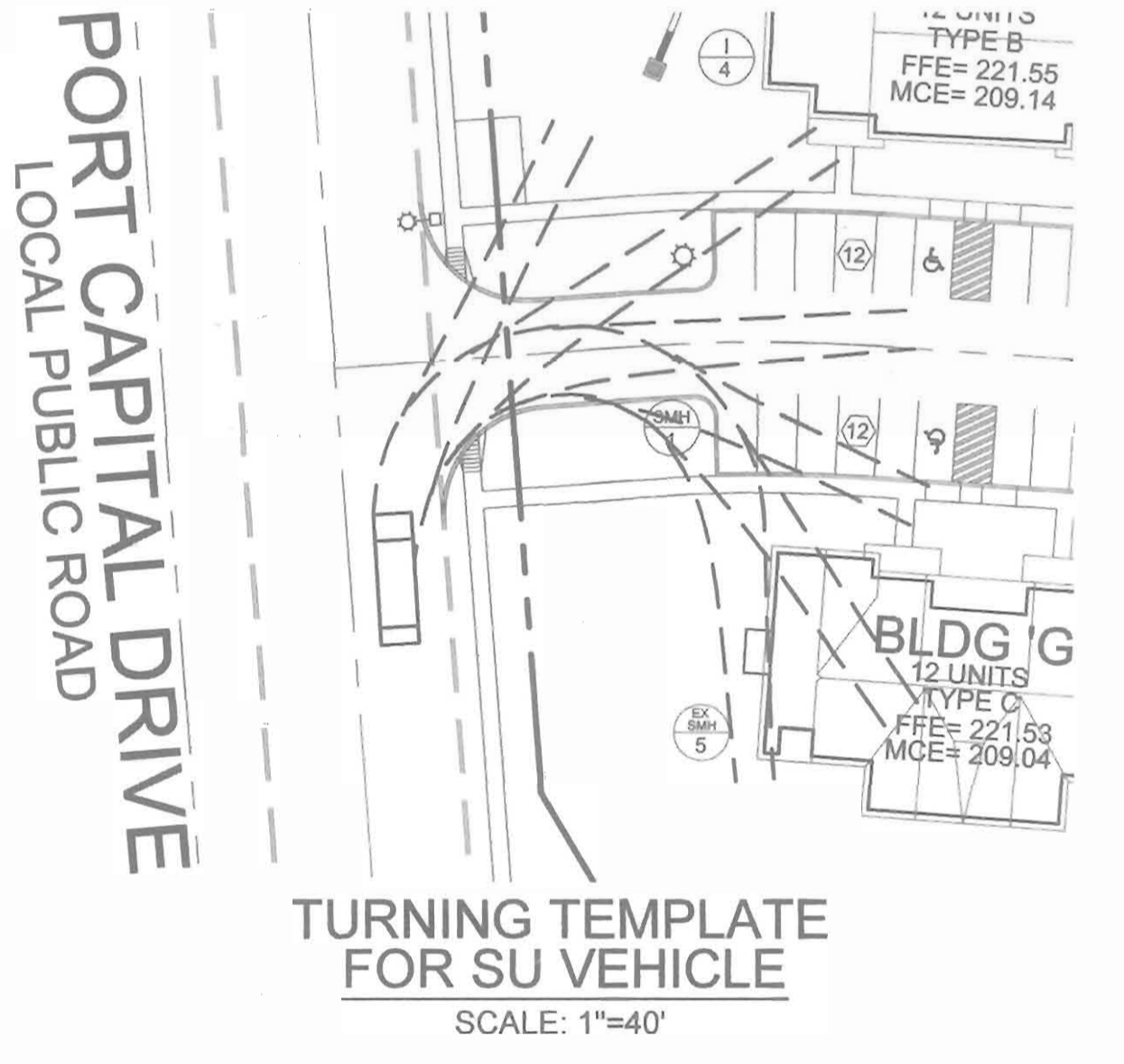
**LEGEND**

- 202 --- EXISTING 2 FT CONTOUR
- 200 --- EXISTING 10 FT CONTOUR
- 202 --- PROPOSED 2 FT CONTOUR
- 200 --- PROPOSED 10 FT CONTOUR
- SSF --- SUPER SILT FENCE
- LOD --- LIMIT OF DISTURBANCE
- --- EXISTING TREELINE
- --- PROPOSED TREELINE
- --- EARTH DIKE
- --- PUBLIC SEWER EASEMENT
- --- PUBLIC DRAINAGE AND UTILITY EASEMENT
- --- 100 YEAR FLOOD PLAIN
- --- AREA OF 15 TO 24.9 PERCENT SLOPES
- --- AREA OF 25 PERCENT OR GREATER SLOPES
- --- FOREST CONSERVATION EASEMENT (RETENTION)
- --- STABILIZED CONSTRUCTION ENTRANCE

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP
BaC2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
CD2	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
LcC2	LEZORE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
LI	LEONARDTOWN SILT LOAM	D
McE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
Maf	MONTALTO AND RELAY VERY STONY SILT LOAMS, 25 TO 60 PERCENT SLOPES	C
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
SIB2	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SD2	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B

PAGE 30 OF THE HOWARD COUNTY SOIL SURVEY



**TEMP. SEDIMENT TRAP**  
 EX. DRAINAGE AREA: 1.5 AC. (\* 0.54 UNDISTURBED OFFSITE)  
 TOTAL STORAGE REQUIRED: 5400 CF  
 TOTAL STORAGE PROVIDED: 45,302 CF  
 BOTTOM DIMENSIONS: 10' X 55'  
 BOTTOM ELEV.: 200.00  
 CREST ELEVATION: 208.70  
 WET STORAGE ELEVATION: 200.00-203.75 (2.75')  
 DRY STORAGE ELEVATION: 202.75 - 204.00 (1.25')  
 TOTAL STORAGE DEPTH: 4.0'  
 TOP OF EMBANKMENT 210.00  
 CLEANOUT ELEVATION: 201.38  
 SIDE SLOPES: 3:1

0.54 AC UNDISTURBED RUNOFF TO SWMF #1 SEDIMENT CONTROL PHASE  
 MICROPOL EXTENDED DETENTION FACILITY  
 HAZARD CLASS 'A' PRIVATELY OWNED AND MAINTAINED  
 10 YR WSEL= 209.49  
 100 YR WSEL= 209.89  
 WQV (WET) WSEL= 203.75  
 CPV WSEL= 208.66  
 1.50 AC MAXIMUM DRAINAGE TO SEDIMENT TRAP

PORT CAPITAL CENTER OF MARYLAND, LLC  
 THE OAKS AT WATERS EDGE  
 PHASE III  
 TM 43, PARCEL 'A'  
 PLAT NO. 16228  
 L. 7783 F.100  
 ZONED: B-1

PORT CAPITAL CENTER  
 TM 43 LOT 1  
 PLAT NO. 3545  
 L. 3775 F.706  
 ZONED M-1

**PLAN**  
 SCALE: 1"=40'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Chief, Development Engineering Division*  
 DATE: 12/11/05

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE  
 DATE: 11/20/05  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 DATE: 11/22/05

ENGINEERS 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.  
 DATE: 11/15/05

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.  
 DATE: 11/11/05

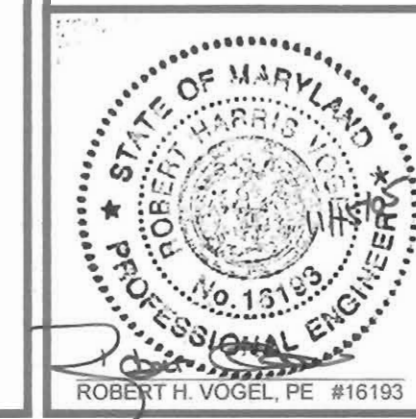
**OWNER**  
 HOWARD COUNTY HOUSING COMMISSION  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MD 21046  
 (410) 313-6320

**DEVELOPER**  
 MBI DEVELOPMENT CO., INC.  
 C/O THE INGERMAN GROUP  
 1100 PENNSYLVANIA AVE, SUITE 700  
 WILMINGTON, DE 19806  
 (302) 661-1560

NO.	REVISION	DATE

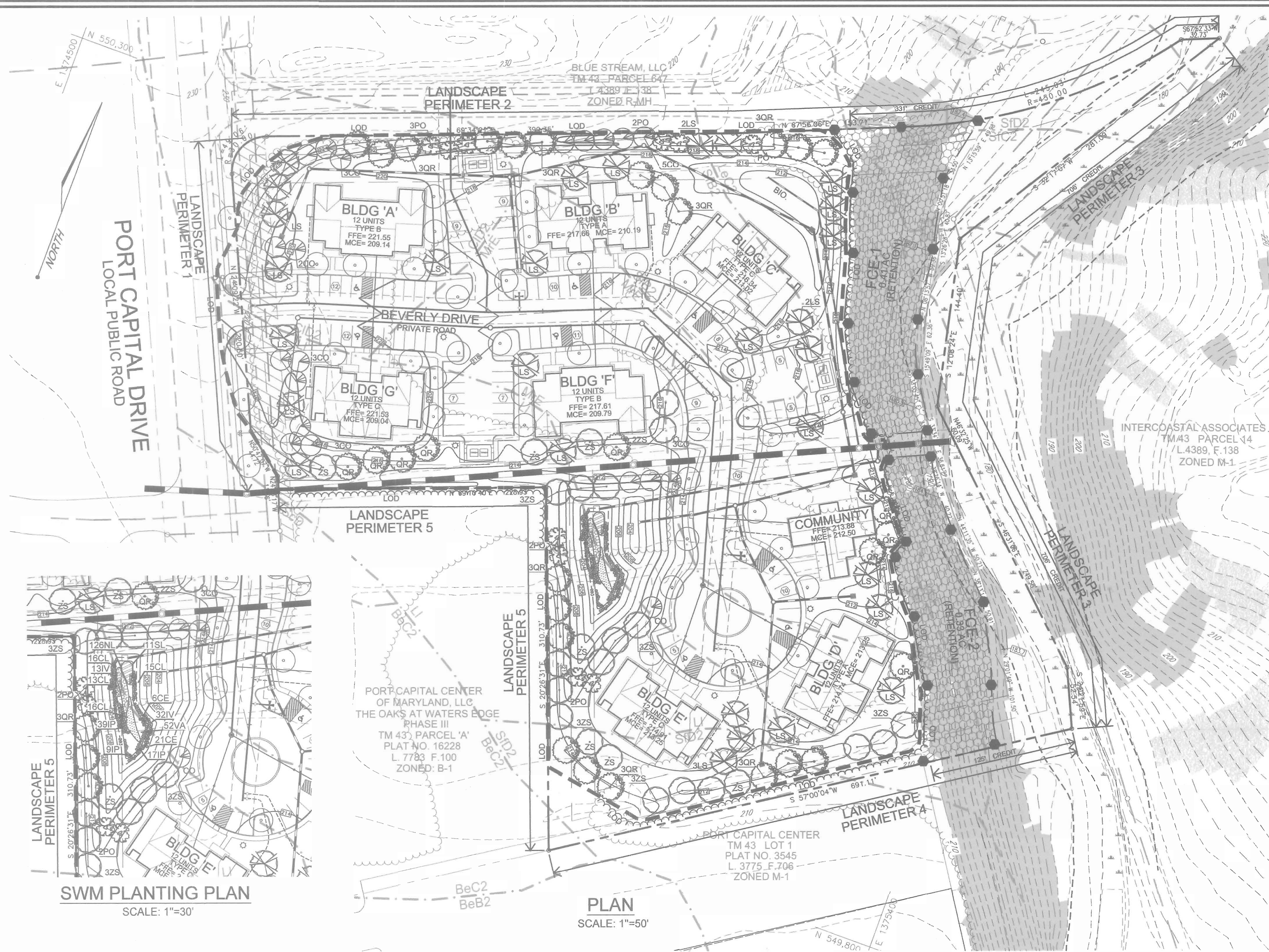
**SITE DEVELOPMENT PLAN  
 GRADING AND SEDIMENT EROSION CONTROL PLAN  
 PORT CAPITAL VILLAGE  
 (THE OAKS AT WATERS EDGE PHASE III)  
 LOT 4**  
 DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
 TAX MAP 43 GRID 3 PARCEL 644 LOT 4  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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



DESIGN BY: LJT  
 DRAWN BY: LJT  
 CHECKED BY: RHV  
 DATE: MAY 12, 2005  
 SCALE: 1"=40'  
 W.O. NO.: 04-09-00

3 SHEET OF 8



### LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
LS	30	LIQUIDAMBAR STYRACIFLUA AMERICAN SWEETGUM	2 1/2"-3" Cal.	B & B
QR	30	QUERCUS ROBUR 'FASTIGIATA' COLUMNAR ENGLISH OAK	2 1/2"-3" Cal.	B & B
ZS	24	ZELKOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN ZELKOVA	2 1/2"-3" Cal.	B & B
CO	20	CYPRESS OCYPRAS LEYLANDI LEYLAND CYPRESS	5' - 6' Ht.	B & B
CO	10	PICEA OMORIKA SERPIAN SPRUCE	6' - 8' Ht.	B & B

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAAW PLANTING SPECIFICATIONS.  
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.  
 3. FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.  
 4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

### SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES				
	1	2	3	4	5
Perimeter/Frontage Designation	B	A	A	A	A
Linear Feet of Roadway	307'	860'	706'	691'	508'
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	No	Yes* 331'	Yes* 706'	Yes* 125'	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No
Number of Plants Required	150	11	160	160	9
Shade Trees	7	11	0	10	9
Evergreen Trees	8	14	-	-	-
Other Trees (2:1 Substitution)	-	-	-	-	-
Shrubs (10:1 Substitution)	-	-	-	-	-
Describe Plant Substitution Credits Below if needed	-	-	-	-	-

\* Existing Woods to Remain

### SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	129
NUMBER OF TREES AND ISLANDS REQUIRED	13
NUMBER OF TREES AND ISLANDS PROVIDED	13
SHADE TREES	-
OTHER TREES (2:1 SUBSTITUTION)	-

### SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	84
NUMBER OF TREES REQUIRED (1:0U SFA; 1:3 DU APTS)	28
NUMBER OF TREES PROVIDED	28
SHADE TREES	-
OTHER TREES (2:1 SUBSTITUTION)	-

### SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

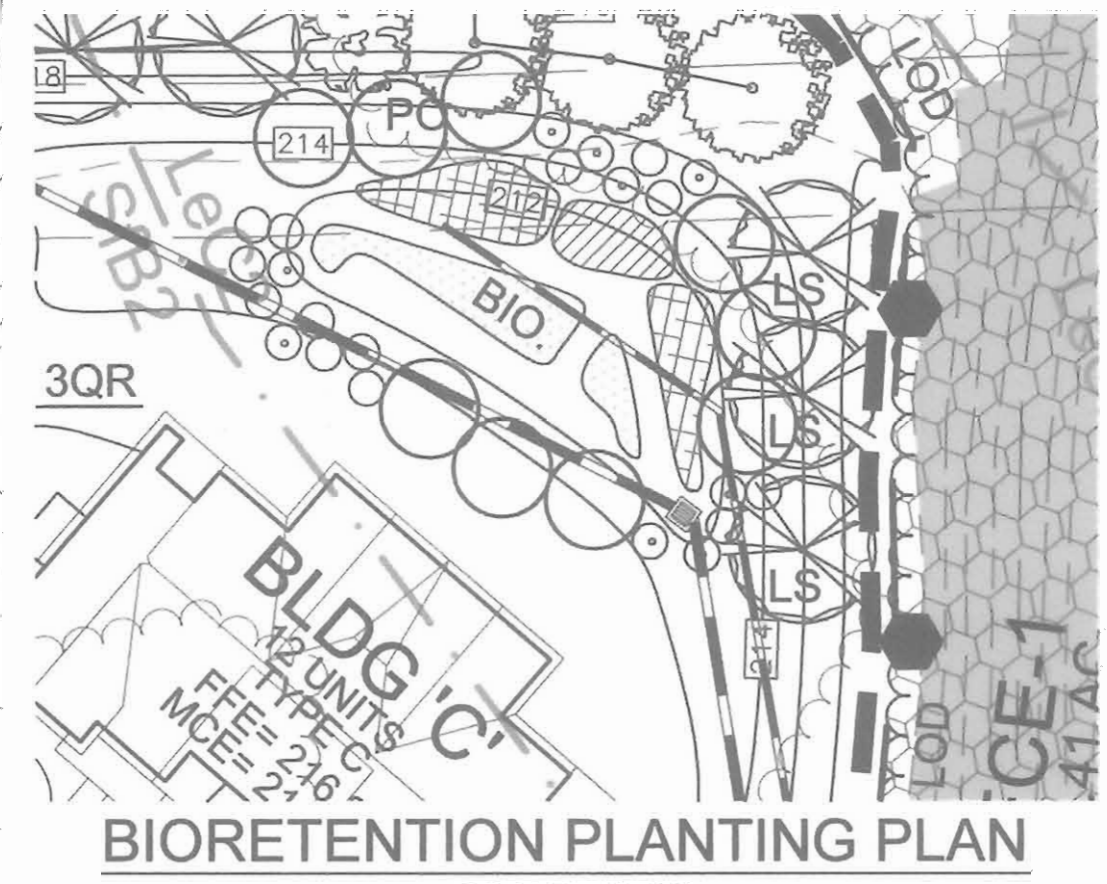
LINEAR FEET OF PERIMETER	465 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	YES, 188 LF (PERIMETER BUFFER 5)
NUMBER OF TREES REQUIRED	(227 LF)
SHADE TREES	8 SHADE TREES
EVERGREEN TREES	8 EVERGREEN TREES
NUMBER OF TREES PROVIDED	8 SHADE TREES
SHADE TREES	8 EVERGREEN TREES
EVERGREEN TREES	0 TREES (0 SUBSTITUTION TREES)
OTHER TREES (2:1 SUBSTITUTION)	-

### STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
BEVERLY DRIVE	1680/40	42	42

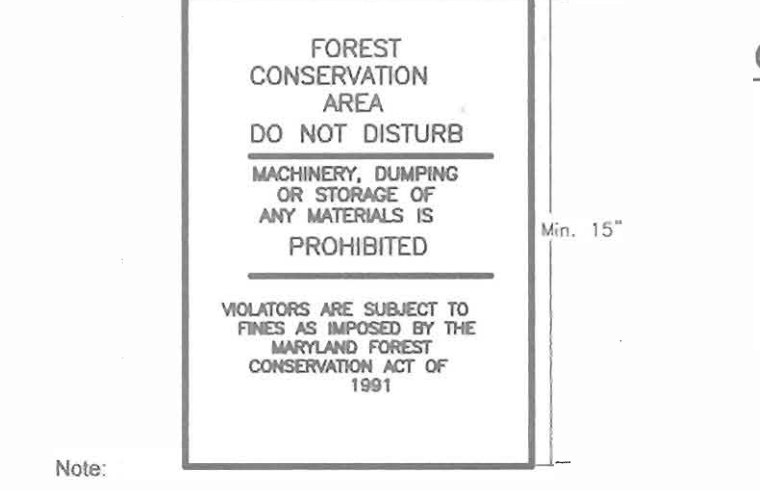
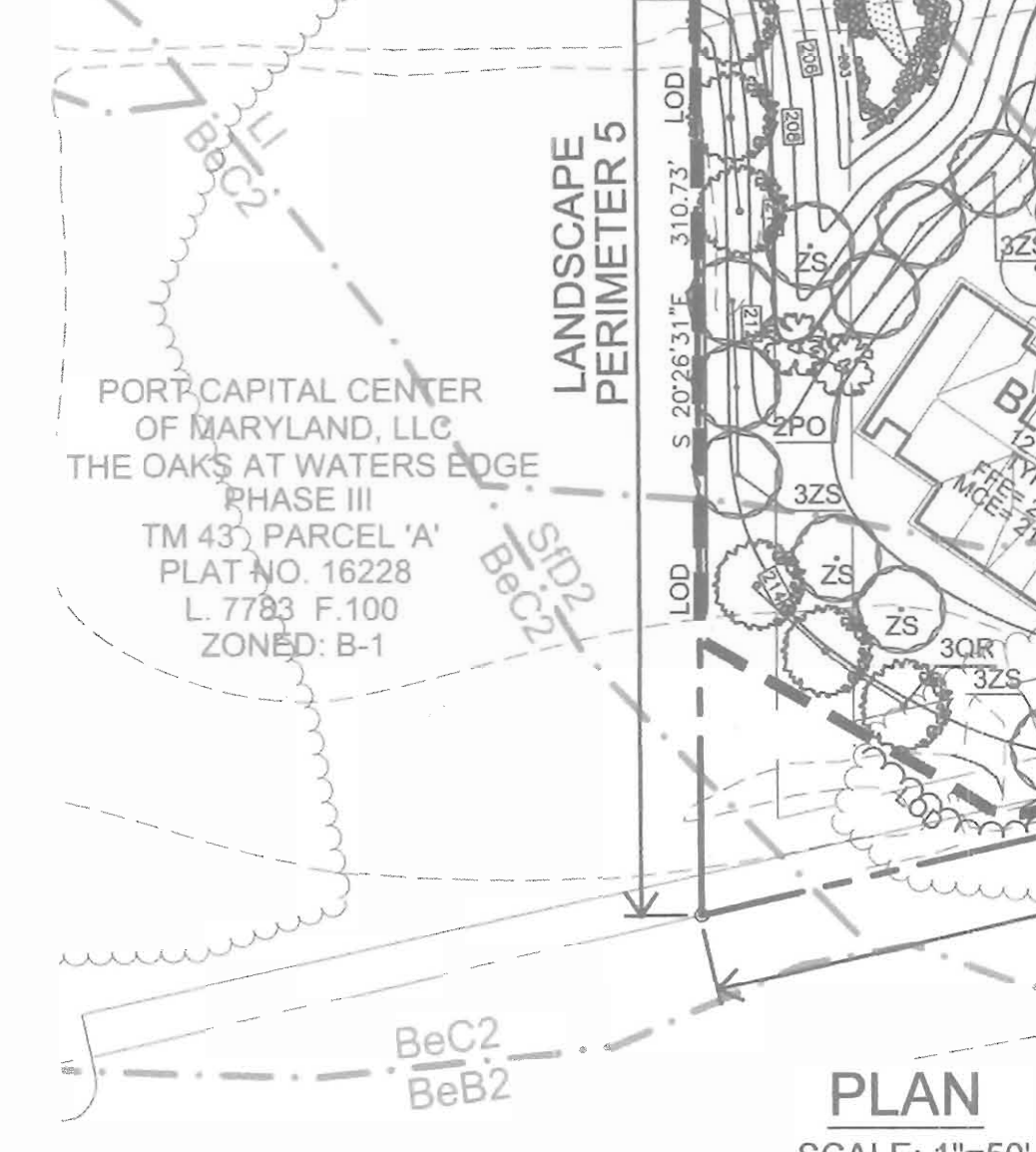
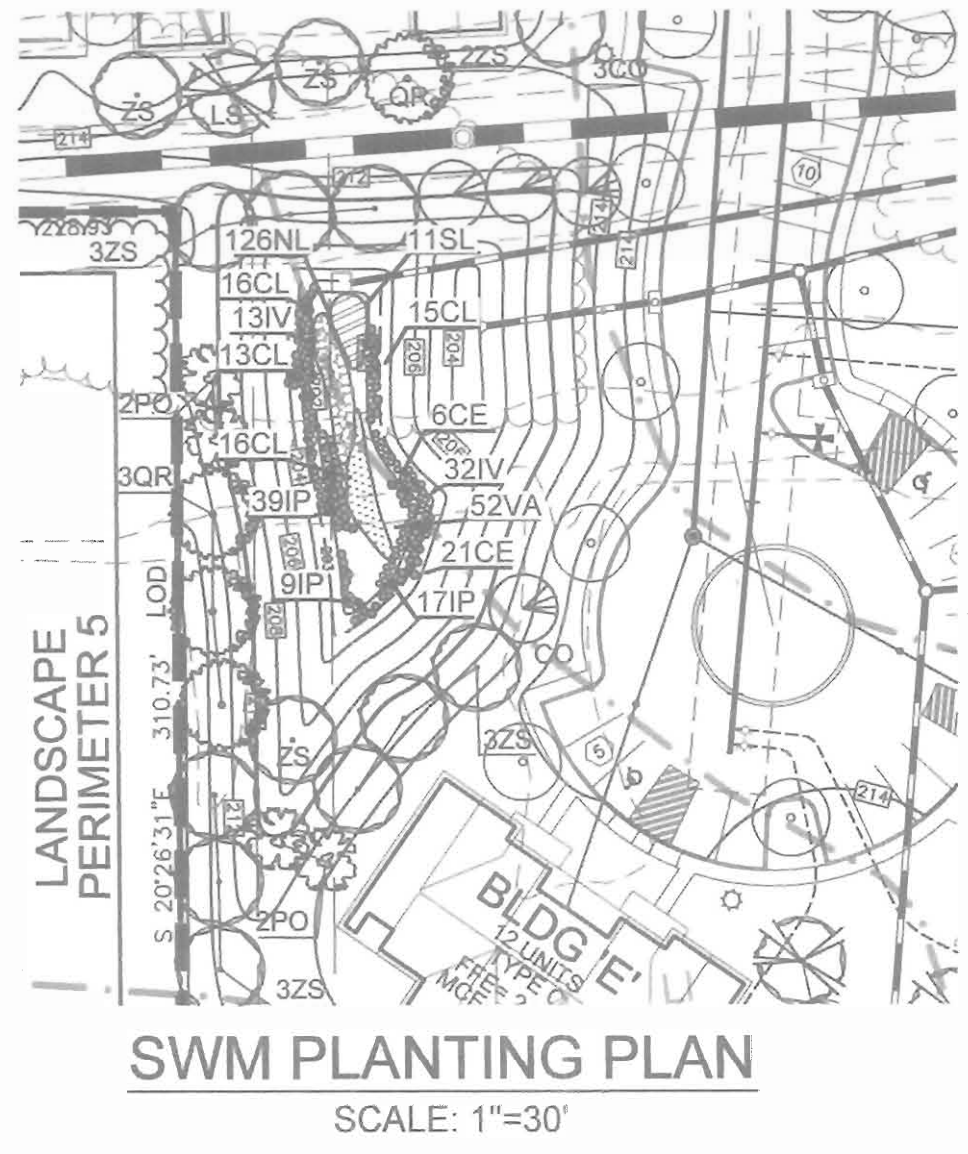
### STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
CO	42	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B



### BIORETENTION PLANTING SCHEDULE

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	ROOT
OR	8	NYSSA SYLVANICA BLACK GUM	1 1/2"-2" CAL.	B & B
OR	10	ILEX VERTICILLATA WINTERBERRY	2'-3" HEIGHT	B & B OR CONT
OR	12	ILEX GLABRA INKBERRY	18"-24" HEIGHT	B & B OR CONT
OR	100	VACCINIUM CORYMBOSUM HIGHBUSH BLUEBERRY	12"-15" HEIGHT	CONT
OR	200	LOBELIA CARDINALIS CARDINAL FLOWER	8"-12" HEIGHT	CONT
OR	300	LIROPE SPICATA CREEPING LILY TURF	2" POT	18" O/C



Note:  
 1. Bottom of signs to be higher than top of tree protection fence.  
 2. Signs to be placed approximately 50-100' feet apart. Conditions on site affecting visibility may warrant placing signs closer or farther apart.  
 3. Attachment of signs to trees is prohibited.

### FOREST CONSERVATION WORKSHEET

NET TRACT AREA	7.00 AC				
A. TOTAL TRACT AREA	0.83 AC				
B. AREA WITHIN 100 YEAR FLOODPLAIN	7.00 AC				
C. NET TRACT AREA	7.00 AC				
LAND USE CATEGORY (FROM TABLE 3.2.1, PAGE 40, MANUAL)					
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.					
ARA	MOR	IDA	HDR	MPD	CIA
0	0	0	1	0	0
D. AFFORESTATION THRESHOLD	15% X D = 0.96 AC				
E. CONSERVATION THRESHOLD	20% X D = 1.27 AC				
EXISTING FOREST COVER:					
F. EXISTING FOREST COVER	1.48 AC				
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	0.21 AC				
BREAK EVEN POINT:					
H. BREAK EVEN POINT	1.32 AC				
I. FOREST CLEARING PERMITTED WITHOUT MITIGATION	0.18 AC				
PROPOSED FOREST CLEARING:					
J. TOTAL AREA OF FOREST TO BE CLEARED	0.74 AC				
K. TOTAL AREA OF FOREST TO BE RETAINED	0.74 AC				
PLANTING REQUIREMENTS:					
L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD	0.05 AC				
M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD	1.07 AC				
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	0.00 AC				
O. TOTAL AFFORESTATION REQUIRED	1.12 AC				
Q. TOTAL AFFORESTATION REQUIRED	0.00 AC				
R. TOTAL PLANTING REQUIRED	1.12 AC				

### GENERAL NOTES

- THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 0.74 ACRES OF ONSITE RETENTION AND A FEE-IN-LIEU PAYMENT OF \$24,394.00 TO THE HOWARD COUNTY FOREST CONSERVATION FUND FOR 1.12 ACRES OF REFORESTATION.
- FINANCIAL SURETY FOR THE REQUIRED FOREST CONSERVATION HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,447.00 FOR THE RETENTION OF 32,235 SF (0.74 AC.).
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$42,300.00 FOR 84 SHADE TREES, 30 EVERGREEN TREES AND 42 STREET TREES.

### LEGEND

- EXISTING 2 FT CONTOUR
- EXISTING 10 FT CONTOUR
- PROPOSED 2 FT CONTOUR
- PROPOSED 10 FT CONTOUR
- LIMIT OF DISTURBANCE
- EXISTING TREELINE
- PROPOSED TREELINE
- PUBLIC SEWER EASEMENT
- PUBLIC DRAINAGE AND UTILITY EASEMENT
- 100 YEAR FLOOD PLAIN
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- FOREST CONSERVATION EASEMENT (RETENTION)

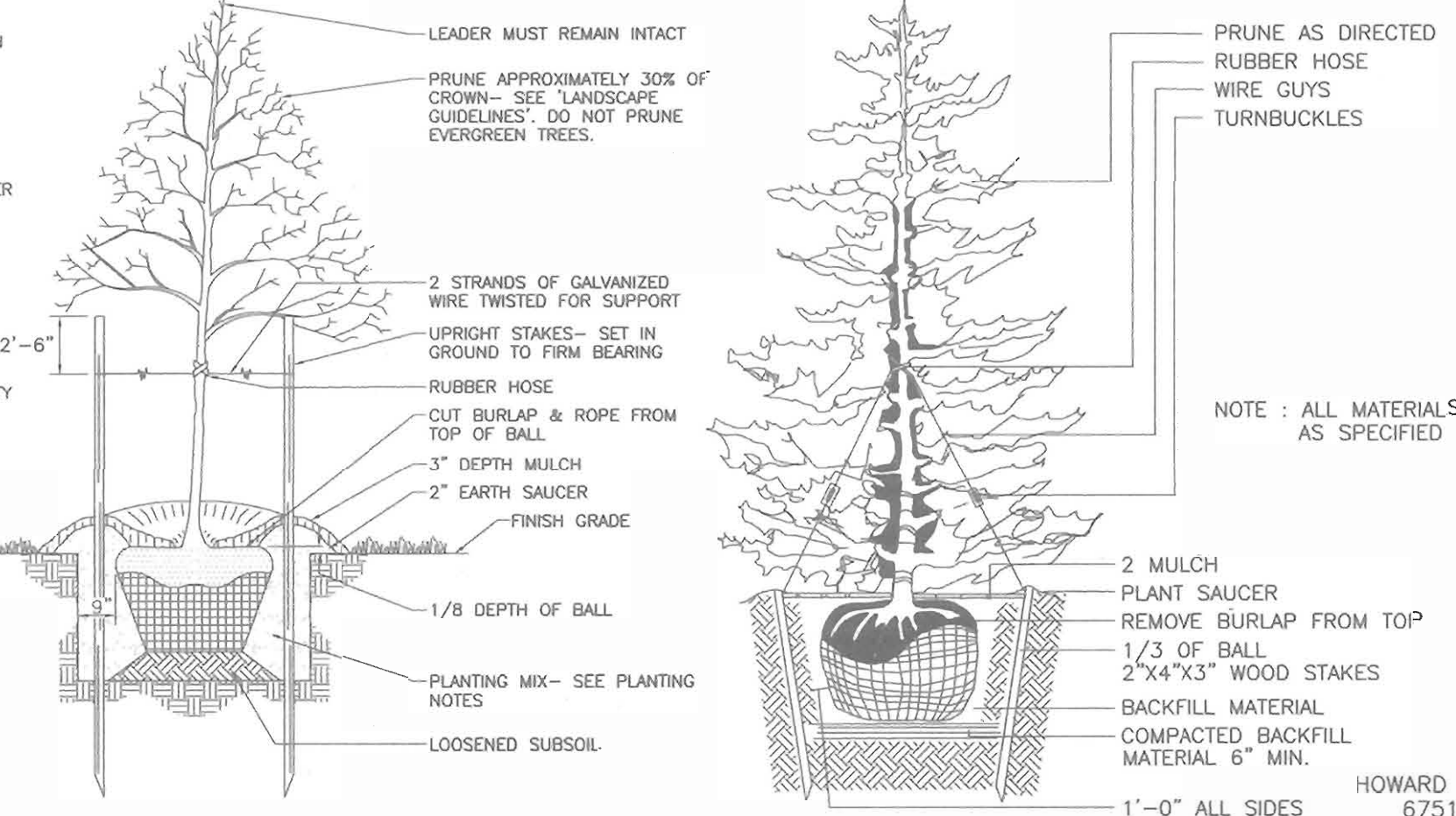
### EMERGENT PLANTING SCHEDULE POND 1

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
VA	52	Vallisneria americana Wild Celery	plug	2' oc
IP	55	Iris pseudacoris Yellow Water Iris	plug	1.5' oc
IV	55	Iris versicolor Blue Flag (wear gloves)	plug	1.5' oc
SL	11	Sagittaria latifolia Duck Potato (do not plant tubers)	plug	4' oc
CE	27	Cyperus esculentus Yellow Nut Sedge	plug	2' oc
NL	126	Nuphar luteum Spatterdock	plug	1.5' oc
CL	64	Carex lacustris Lake Sedge	plug	2' oc

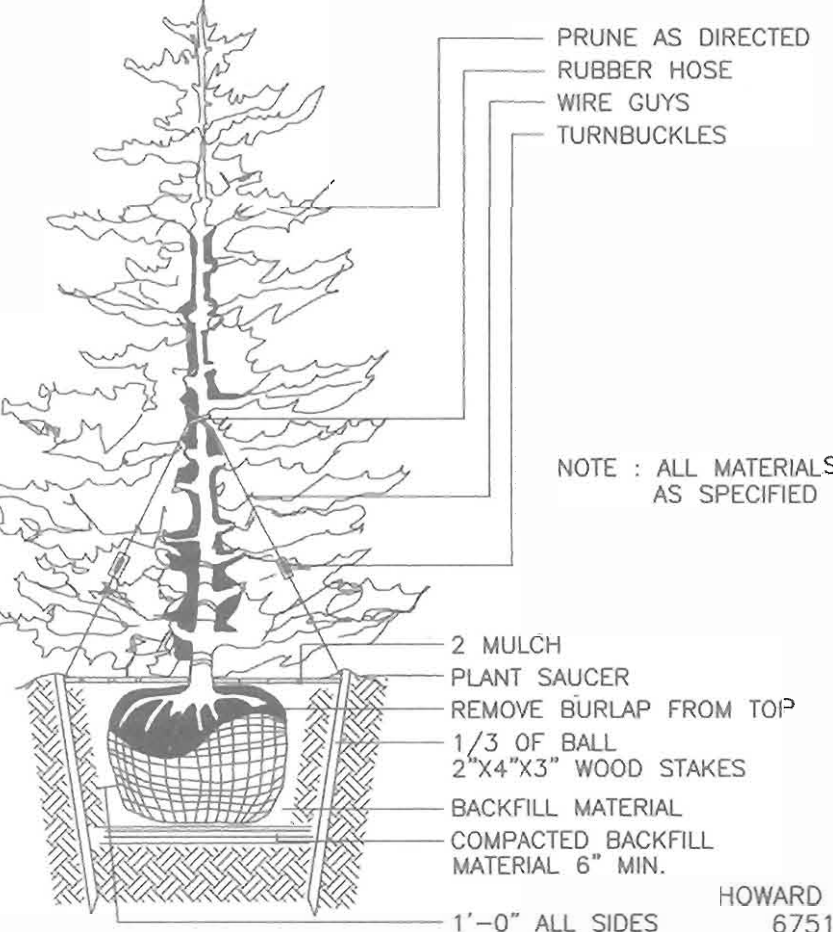
ADD THREE INCHES OF TOPSOIL TO PLANTING AREA. STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVIA NATIVE NURSERY OR EQUAL.  
 ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAAW SPECIFICATIONS.

### NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK 2'-6"
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWERAGE EASEMENT.



TREE PLANTING AND STAKING  
 DECIDUOUS TREES UP TO 2-1/2" CALIPER  
 NOT TO SCALE



OWNER  
 HOWARD COUNTY HOUSING COMMISSION  
 COLUMBIA CATEWAY DRIVE  
 COLUMBIA, MD 21046  
 (410) 313-6320

DEVELOPER  
 MBI DEVELOPMENT CO., INC.  
 C/O THE INGERMAN GROUP  
 1100 PENNSYLVANIA AVE., SUITE 700  
 WILMINGTON, DE 19806  
 (302) 661-1560

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

LANDSCAPE CERTIFICATE  
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

M. BRAD INGERMAN  
 11/11/05

LARRY J. THOMPSON  
 DNR QUALIFIED PROFESSIONAL  
 11/11/05

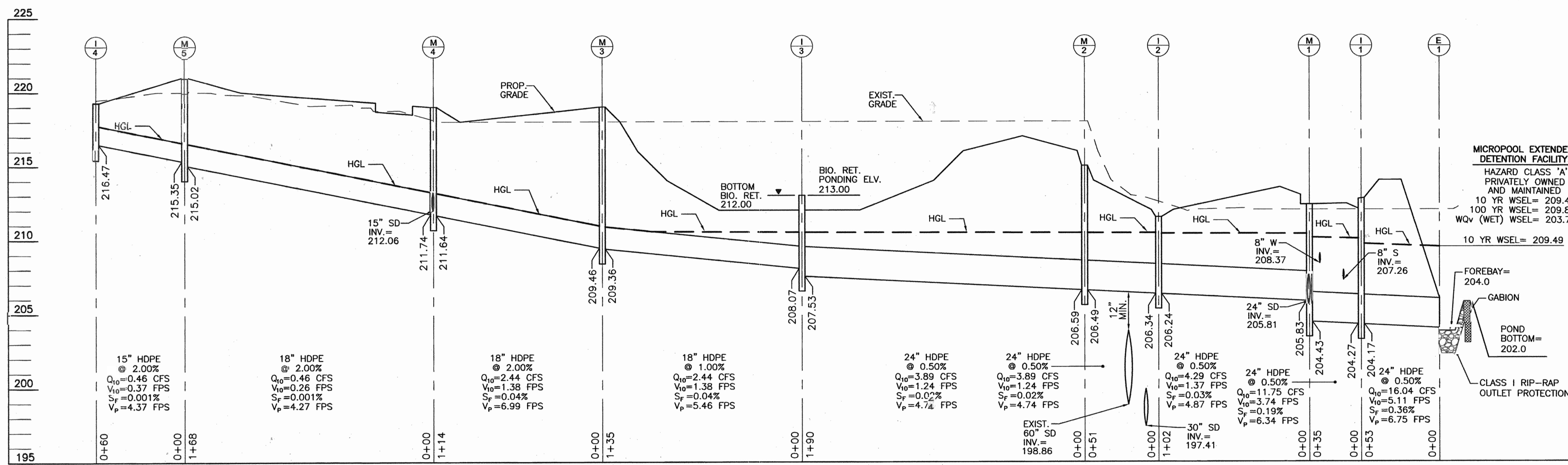
### SITE DEVELOPMENT PLAN LANDSCAPING AND FOREST CONSERVATION PLAN PORT CAPITAL VILLAGE (THE OAKS AT WATERS EDGE PHASE III) LOT 4

DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
 TAX MAP 43 GRID 3 PARCEL 644 LOT 4  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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DESIGN BY: LJT  
 DRAWN BY: LJT  
 CHECKED BY: RHV  
 DATE: MAY 12, 2005  
 SCALE: 1"=50'  
 W.O. NO.: 04-09-00

4 SHEET OF 8



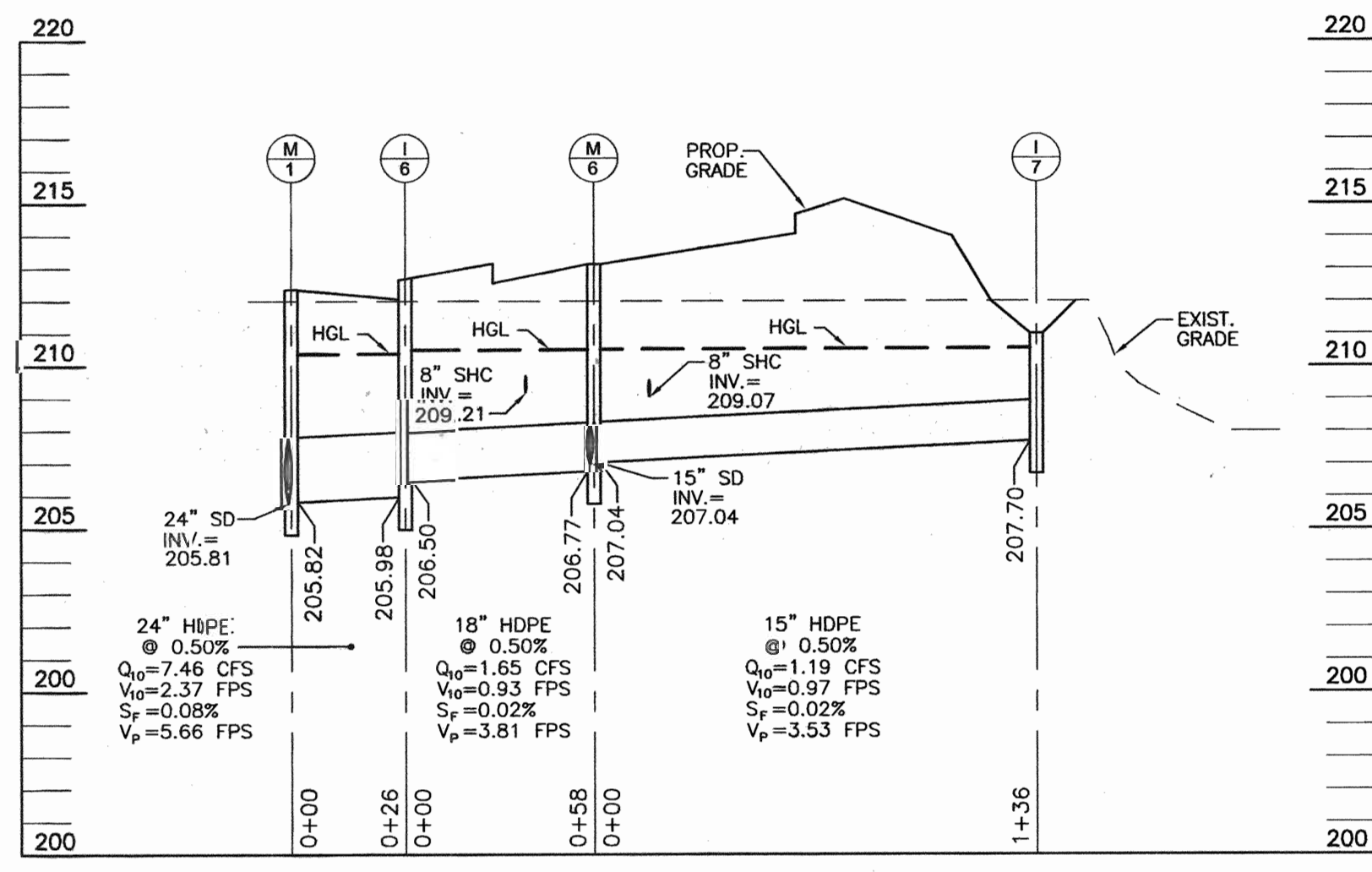
**STORM DRAIN PROFILE**  
SCALE: 1"=50' HORZ.  
1"=5' VERT.

INLET SCHEDULE							
NO.	TYPE	LOCATION		TOP ELEV.*	INV. IN	INV. OUT	REMARKS
		NORTHING	EASTING				
I-1	STANDARD PRECAST TYPE A-5	550,095	1,375,130	212.73	205.66	205.56	SD-4.40
I-2	STANDARD PRECAST TYPE D	550,175	1,375,250	211.52	206.34	206.24	SD-4.39
I-3	STANDARD PRECAST TYPE D	550,388	1,375,122	213.00	208.07	207.53	SD-4.39
I-4	STANDARD PRECAST TYPE D	550,199	1,374,719	219.30	---	216.47	SD-4.39
I-5	STANDARD PRECAST TYPE A-5	550,241	1,374,919	217.80	---	213.92	SD-4.40
I-6	STANDARD PRECAST TYPE A-5	550,091	1,375,178	217.66	211.50	210.98	SD-4.40
I-7	STANDARD PRECAST TYPE D	549,915	1,375,260	211.00	---	207.70	SD-4.39
I-8	STANDARD PRECAST TYPE D	550,077	1,375,284	211.20	---	207.70	SD-4.39

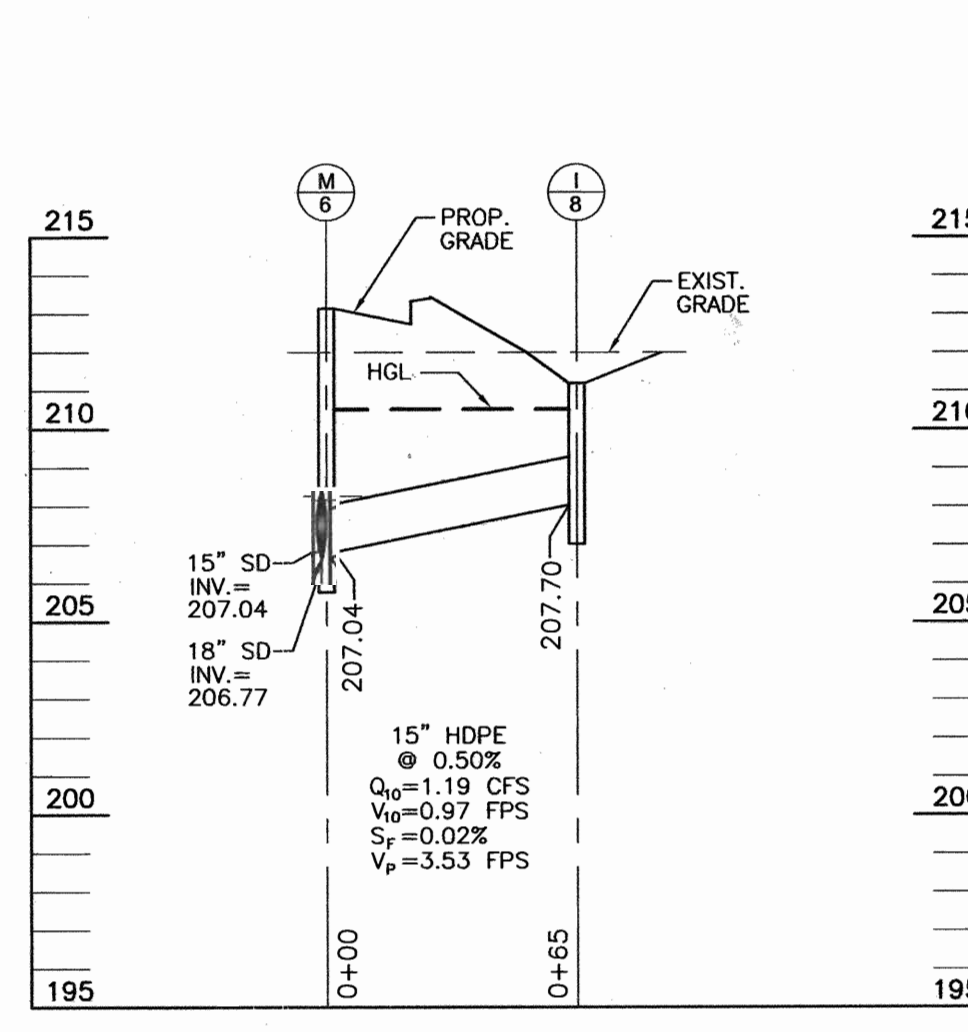
\*TOP ELEV.=TOP OF CURB FOR CURB INLETS  
\*TOP ELEV.=SLOT OPENING ELEVATION FOR TYPE D INLETS

STORM DRAIN MANHOLE SCHEDULE							
NO.	TYPE	LOCATION		TOP ELEV.	INV. IN	INV. OUT	REMARKS
		NORTHING	EASTING				
M-1	STANDARD 4' PRECAST MANHOLE	550,116	1,375,162	212.36	205.83	205.73	G-5.12
M-2	STANDARD 4' PRECAST MANHOLE	550,222	1,375,222	215.00	206.59	206.49	G-5.12
M-3	STANDARD 4' PRECAST MANHOLE	550,378	1,374,983	219.00	209.46	209.36	G-5.12
M-4	STANDARD 4' PRECAST MANHOLE	550,329	1,374,878	217.90	211.74	211.64	G-5.12
M-5	STANDARD 4' PRECAST MANHOLE	550,261	1,374,721	221.00	215.35	215.02	G-5.12
M-6	STANDARD 4' PRECAST MANHOLE	550,049	1,375,221	218.14	212.04	211.77	G-5.12
M-7	STANDARD 4' PRECAST MANHOLE	550,196	1,375,263	220.00	196.93	196.83	G-5.12
M-8	STANDARD 4' PRECAST MANHOLE	550,205	1,375,261	219.00	196.50	194.00	G-5.12

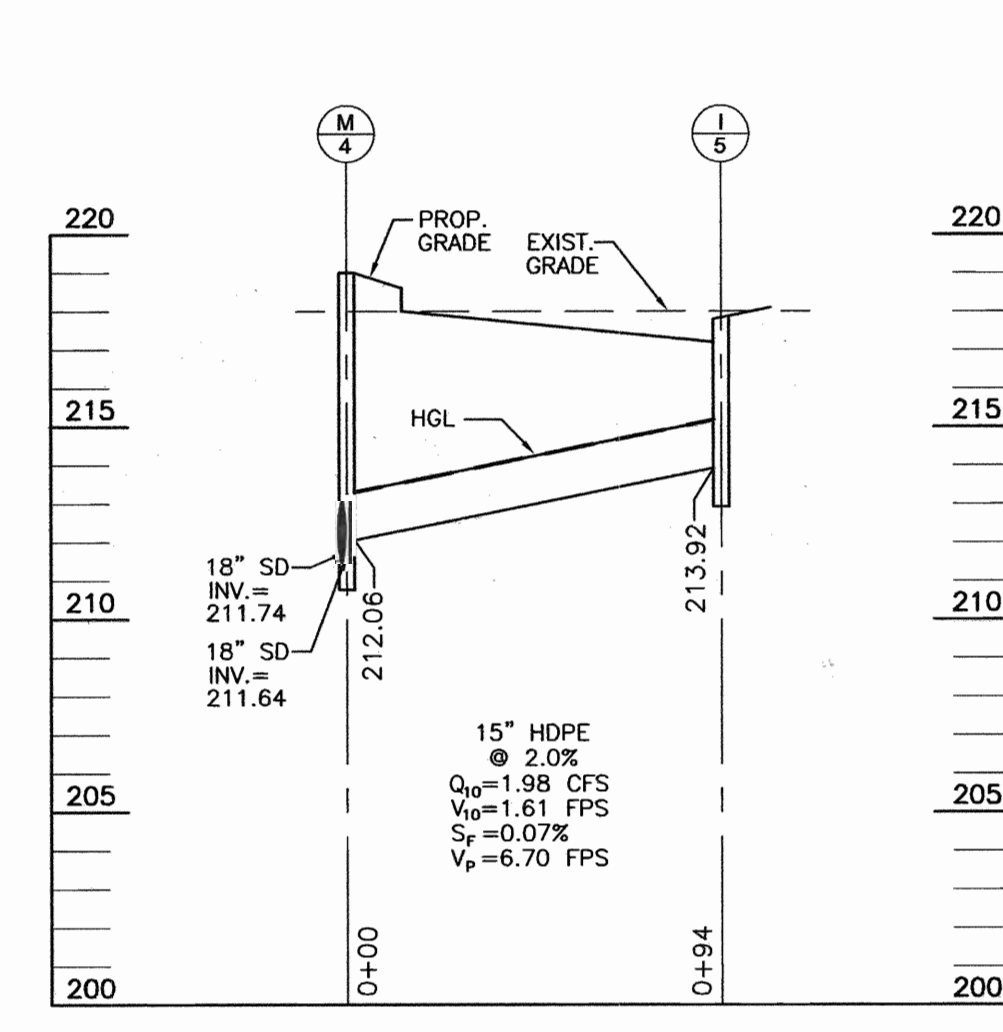
STRUCTURE SCHEDULE							
NO.	TYPE	LOCATION		TOP ELEV.	INV. IN	INV. OUT	REMARKS
		NORTHING	EASTING				
E-1	24" ROUND CMP END SECTION	550,074	1,375,089	206.00	---	204.00	SD-5.61 & SD-5.62



**STORM DRAIN PROFILE**  
SCALE: 1"=50' HORZ.  
1"=5' VERT.



**STORM DRAIN PROFILE**  
SCALE: 1"=50' HORZ.  
1"=5' VERT.



**STORM DRAIN PROFILE**  
SCALE: 1"=50' HORZ.  
1"=5' VERT.

PIPE SCHEDULE		
PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	355
18"	HDPE	475
24"	HDPE	438
30"	RCP	247

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN PROFILES**  
**PORT CAPITAL VILLAGE**  
(THE OAKS AT WATERS EDGE PHASE III)  
LOT 4  
DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
TAX MAP 43 GRID 3 PARCEL 844 LOT 4  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
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8407 MAIN STREET TEL: 410.461.7666  
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: LJT  
DRAWN BY: LJT  
CHECKED BY: RHY  
DATE: MAY 12, 2005  
SCALE: 1"=50'  
W.O. NO.: 04-09.00

5 SHEET OF 8

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
12/1/05  
12/23/05

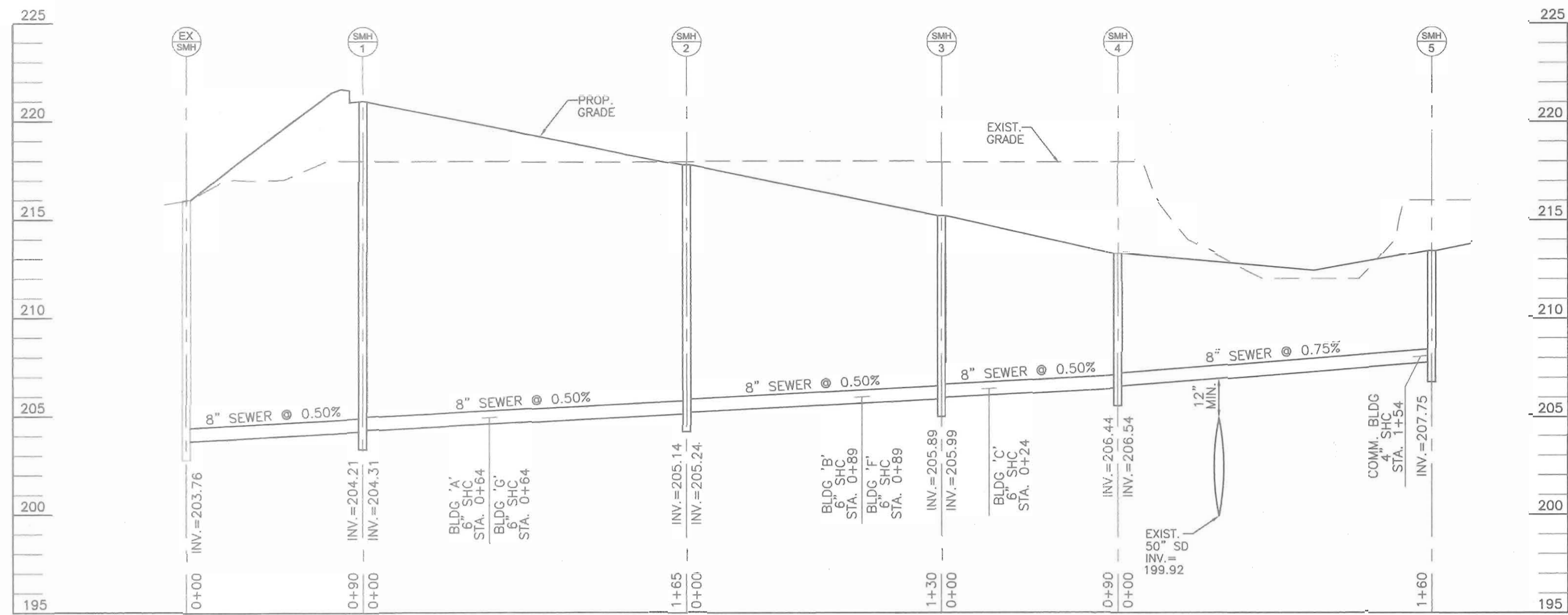
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
11/20/05  
11/22/05

ENGINEERS CERTIFICATE  
11/15/05  
ROBERT H. VOGEL, PE #16193

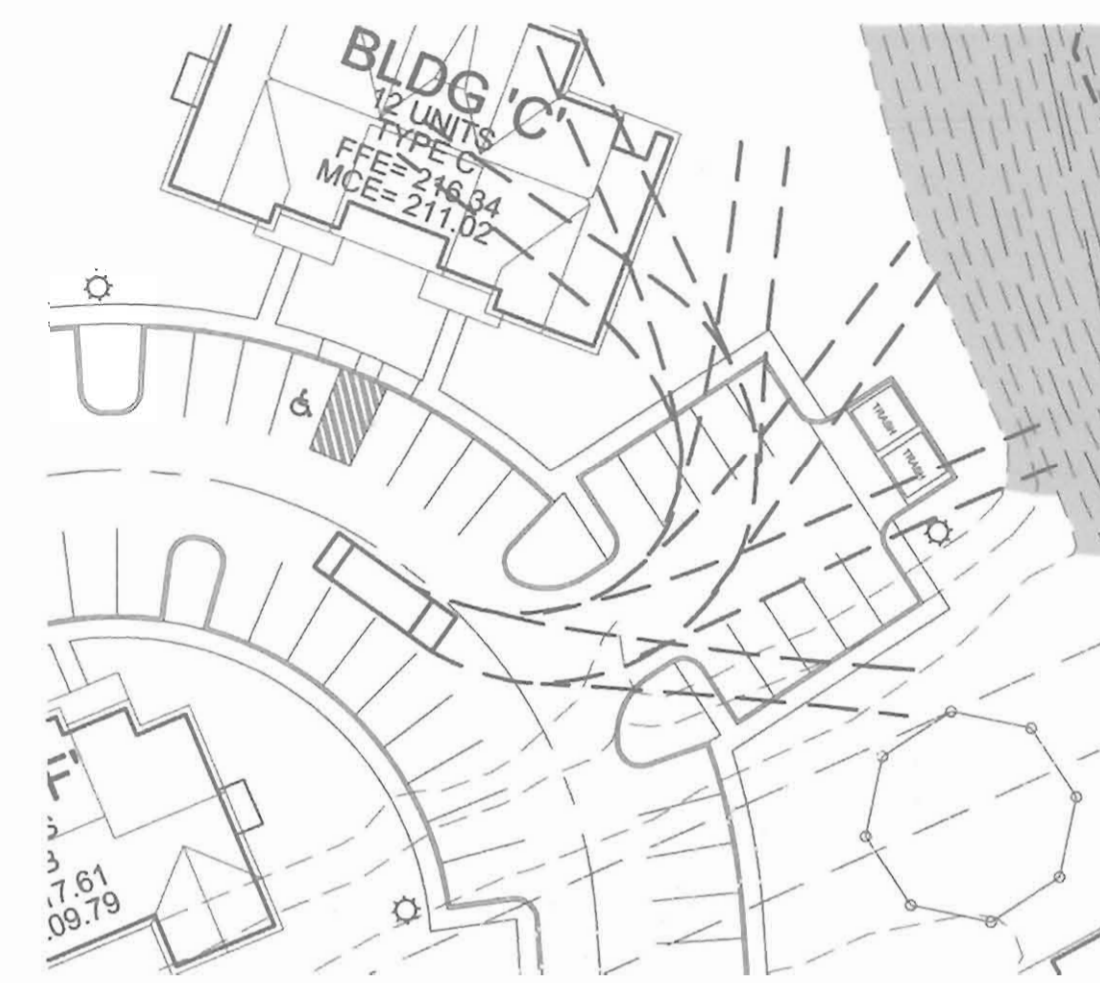
DEVELOPER'S CERTIFICATE  
11/11/05  
M. BRADY

**OWNER**  
HOWARD COUNTY HOUSING COMMISSION  
6751 COLUMBIA GATEWAY DRIVE  
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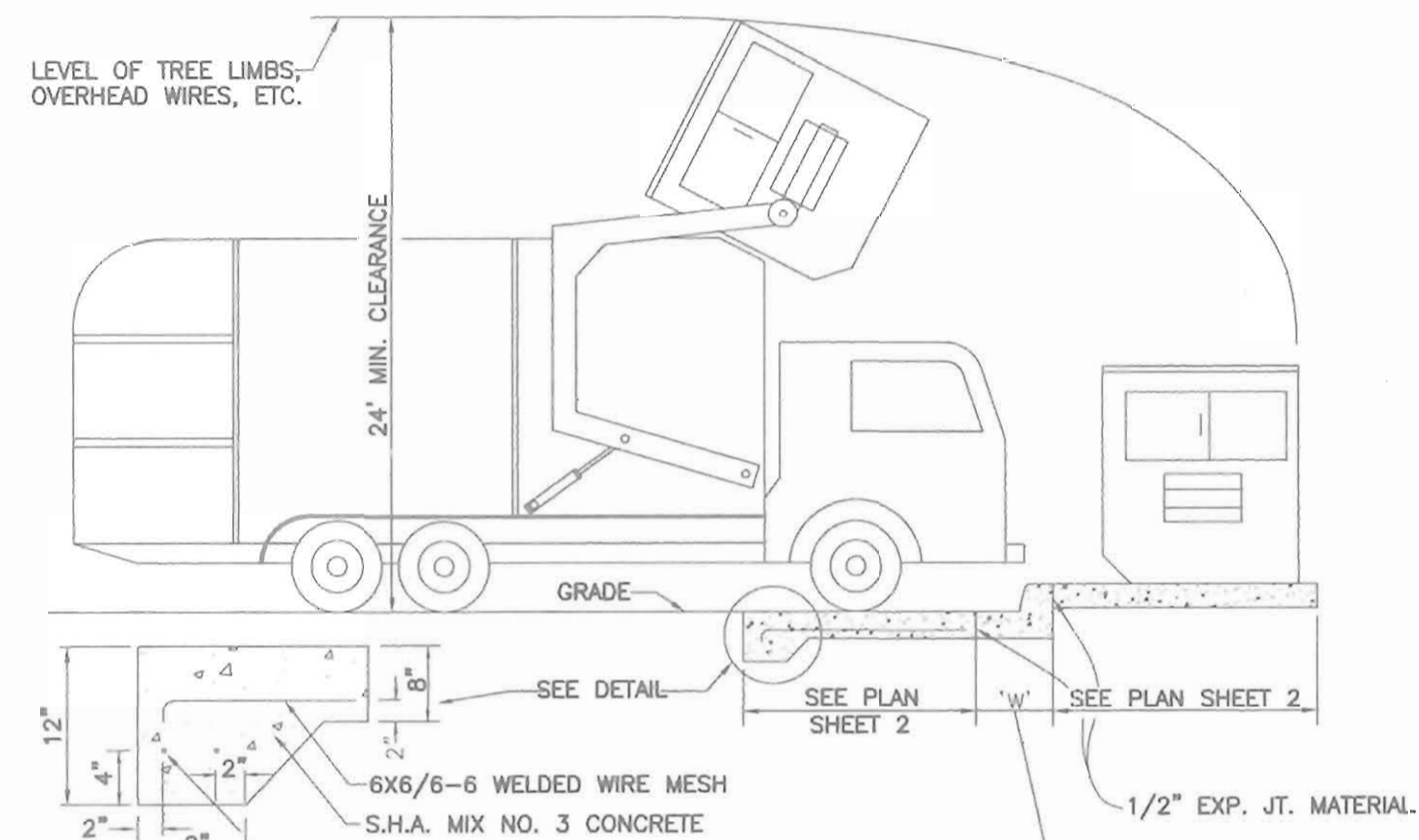
**SEWER PROFILE**  
SCALE: 1"=50' HORZ.  
1"=5' VERT.



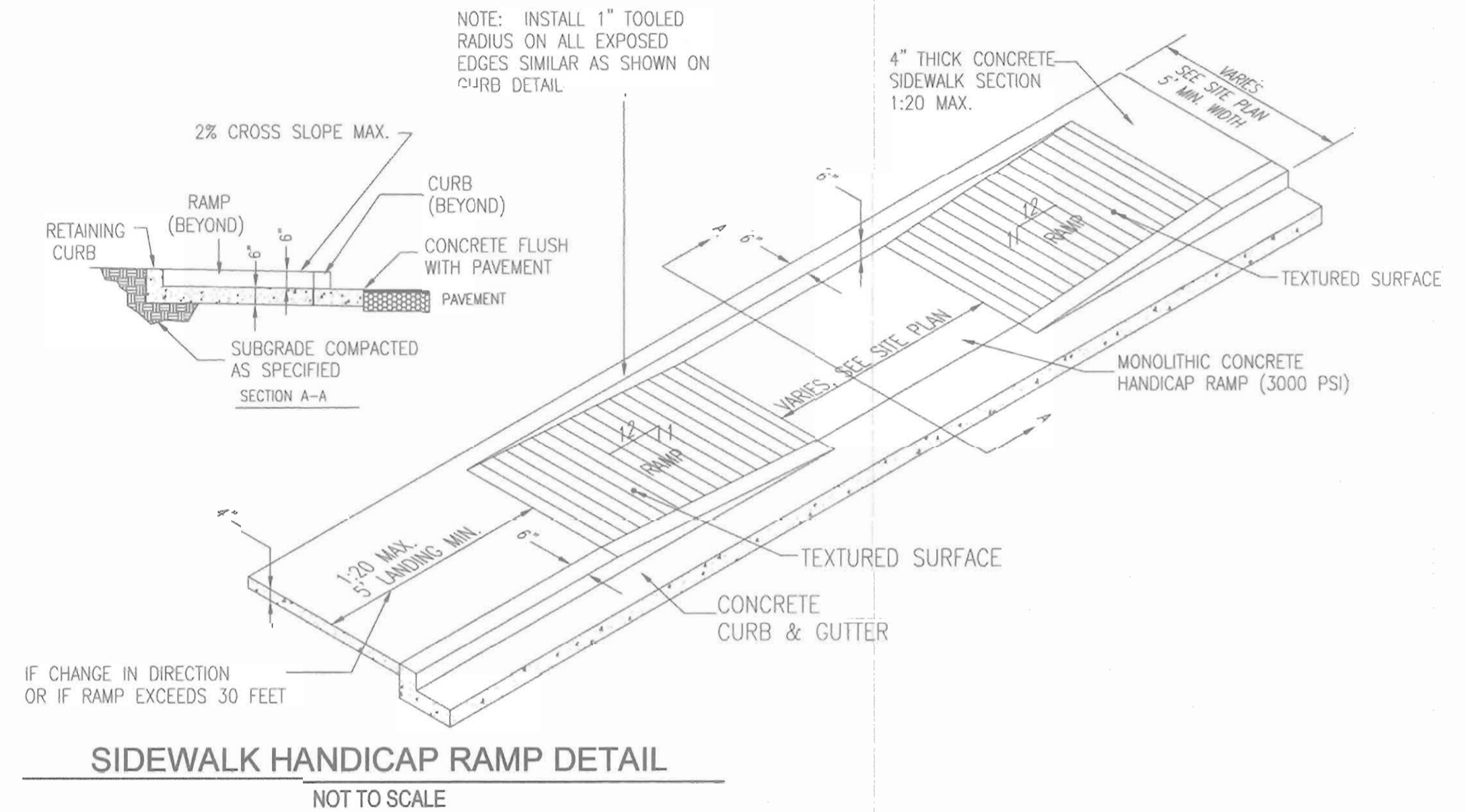
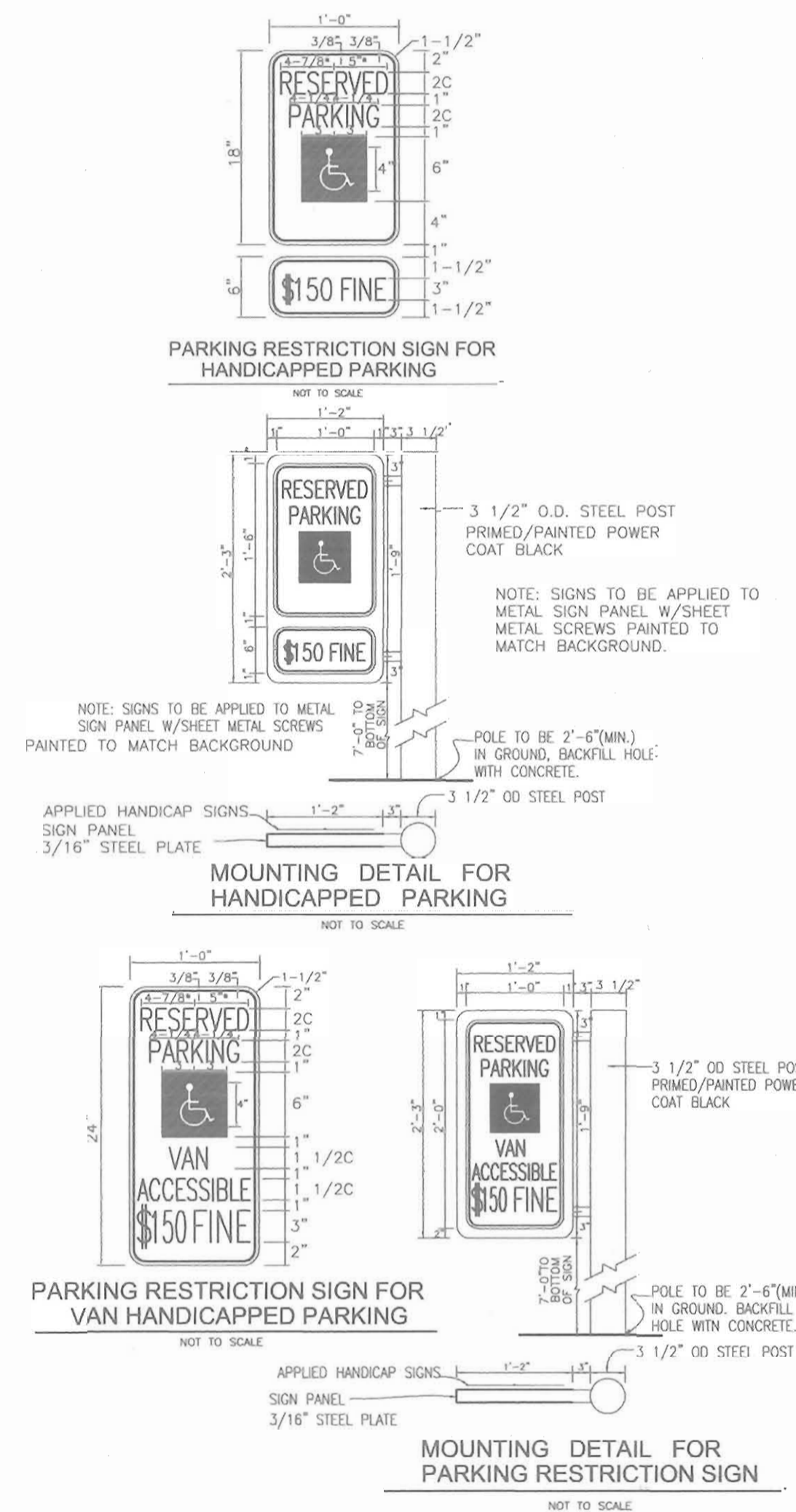
**TURNING TEMPLATE FOR SU VEHICLE**  
SCALE: 1"=40'

SEWER MANHOLE SCHEDULE							
NO.	TYPE	LOCATION		TOP ELEV.	INV. IN	INV. OUT	REMARKS
		NORTHING	EASTING				
SMH-1	STANDARD 4" PRECAST MANHOLE	550,139	1,374,755	221.00	204.31	204.21	S-1.31
SMH-2	STANDARD 4" PRECAST MANHOLE	550,187	1,374,913	217.80	205.24	205.14	S-1.31
SMH-3	STANDARD 4" PRECAST MANHOLE	550,235	1,375,034	215.22	205.99	205.89	S-1.31
SMH-4	STANDARD 4" PRECAST MANHOLE	550,195	1,375,115	213.29	206.54	206.44	S-1.31
SMH-5	STANDARD 4" PRECAST MANHOLE	550,042	1,375,160	213.45	—	207.75	S-1.31

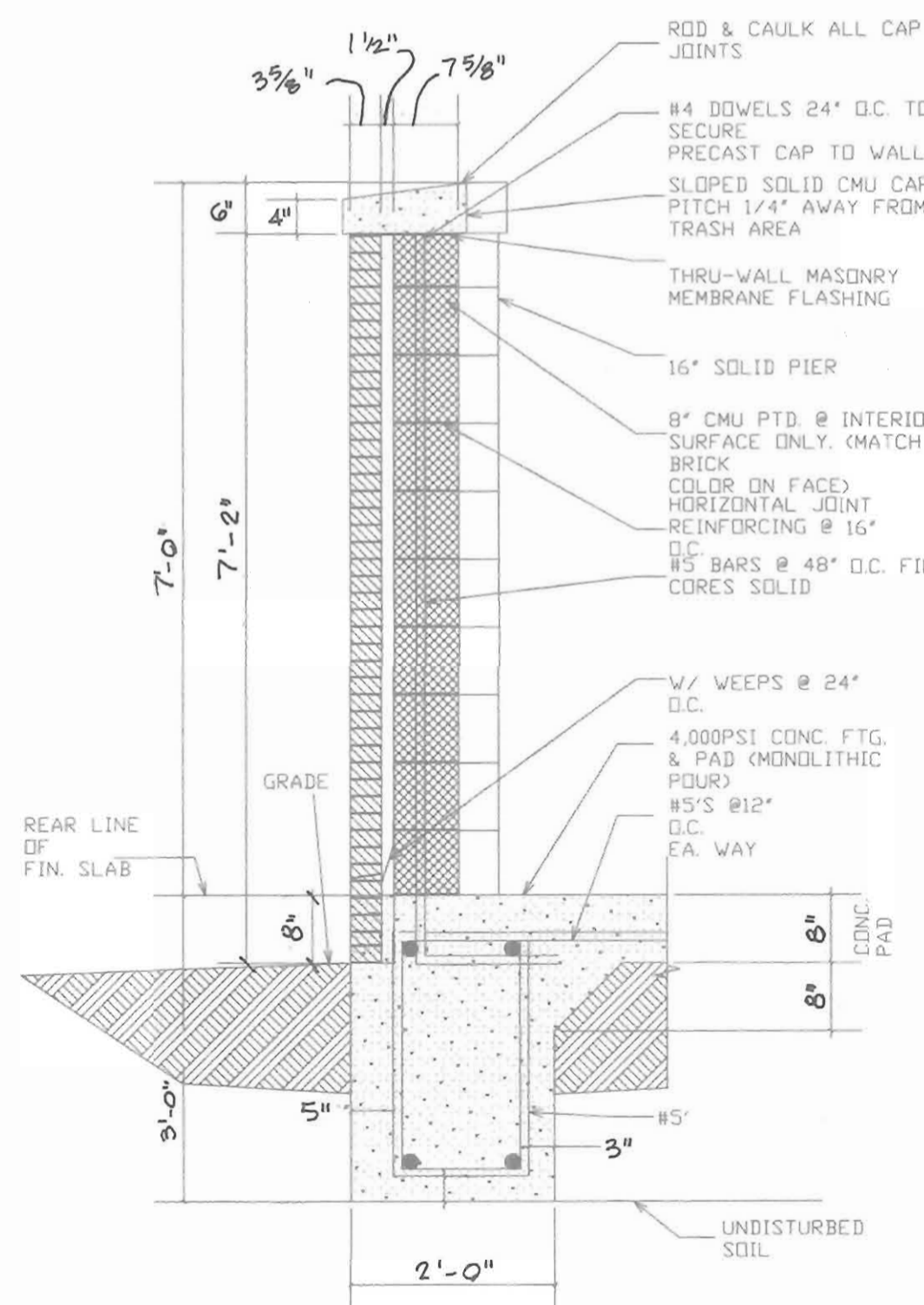
SEWER HOUSE CONNECTION SCHEDULE						
BLDG NO.	TYPE	ELEV. @ MAIN	CO INV. IN	CO INV. OUT	MCE	
B	6" SHC	206.02	—	—	210.19	
C	6" SHC	206.43	—	—	211.02	
D	6" SHC	207.85	209.05	208.95	213.25	
E	6" SHC	207.85	208.65	208.55	213.25	
F	6" SHC	206.02	—	—	209.79	
G	6" SHC	204.96	—	—	209.04	
COMM.	4" SHC	208.05	209.11	209.01	212.50	



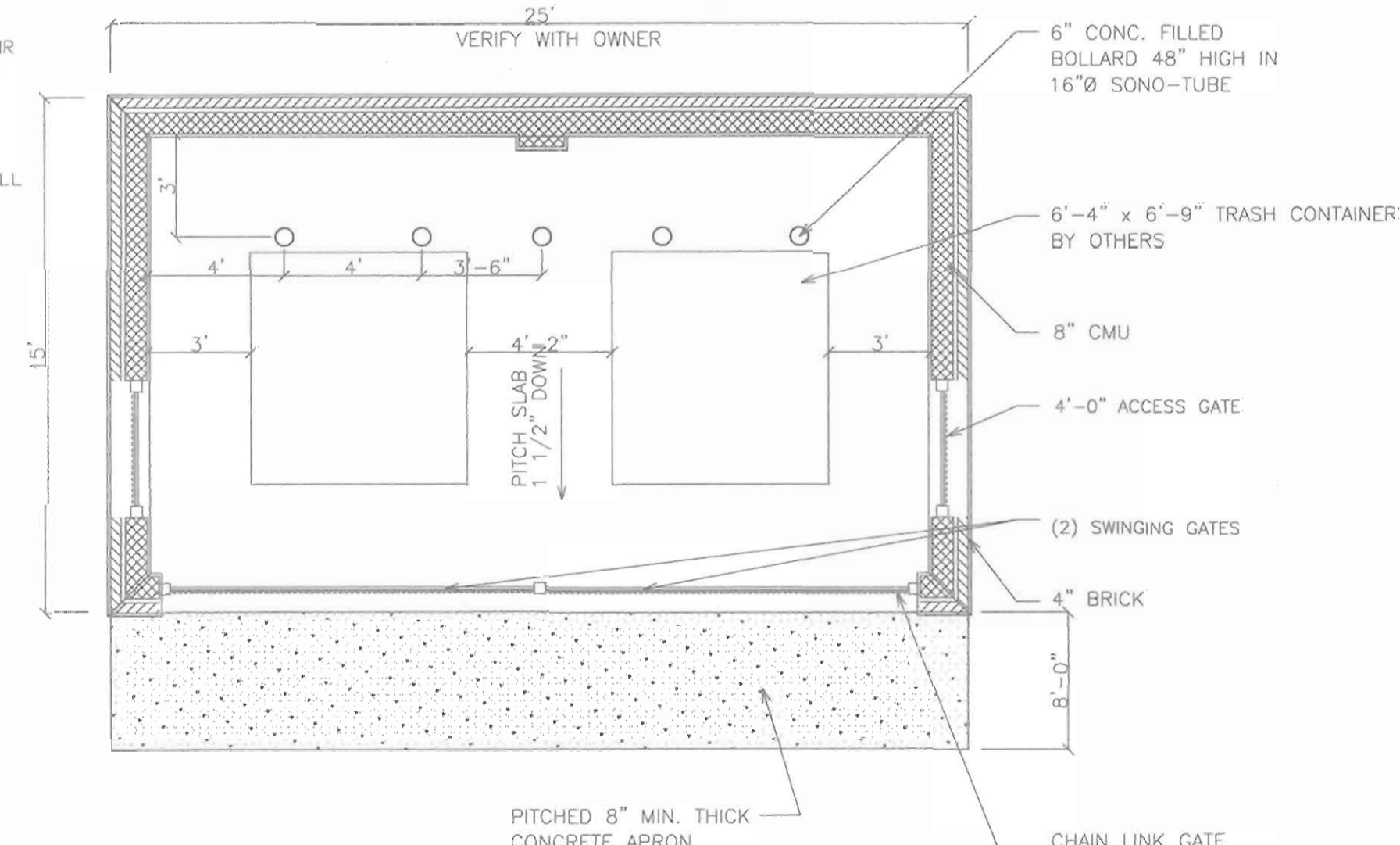
**SOLID WASTE SERVICE PAD**  
HOWARD COUNTY STD. R 11.01  
NOT TO SCALE



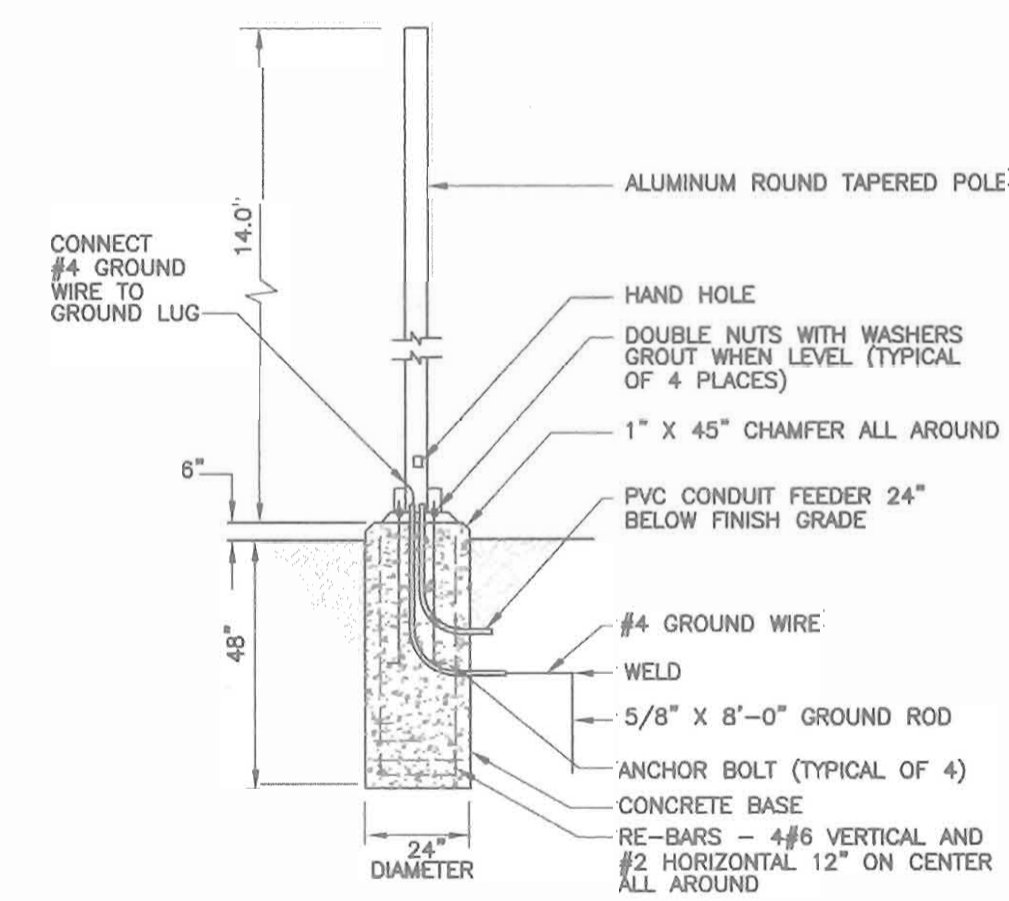
**SIDEWALK HANDICAP RAMP DETAIL**  
NOT TO SCALE



**TRASH ENCLOSURE WALL DETAIL**  
NOT TO SCALE



**TRASH ENCLOSURE DETAIL**  
NO SCALE



**POLE BASE DETAIL**  
NO SCALE

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN  
SEWER PROFILES  
PORT CAPITAL VILLAGE  
(THE OAKS AT WATERS EDGE PHASE III)  
LOT 4**

DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
TAX MAP 43 GRID 3 PARCEL 644 LOT 4  
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Alba DeLuca* 12/15/05  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Andy Hamilton* 12/23/05  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*David Lafferty* 12/23/05  
 DIRECTOR

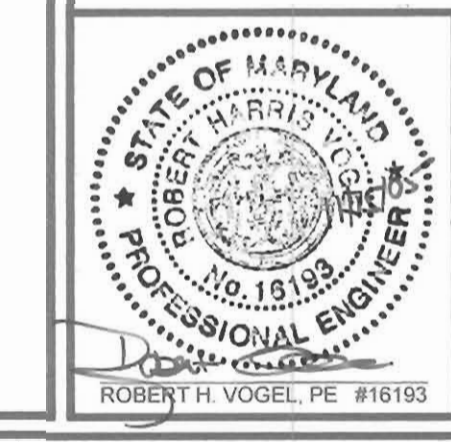
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 HOWARD SCD

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.  
 ROBERT H. VOGEL, PE #16193 11/15/05  
 DATE

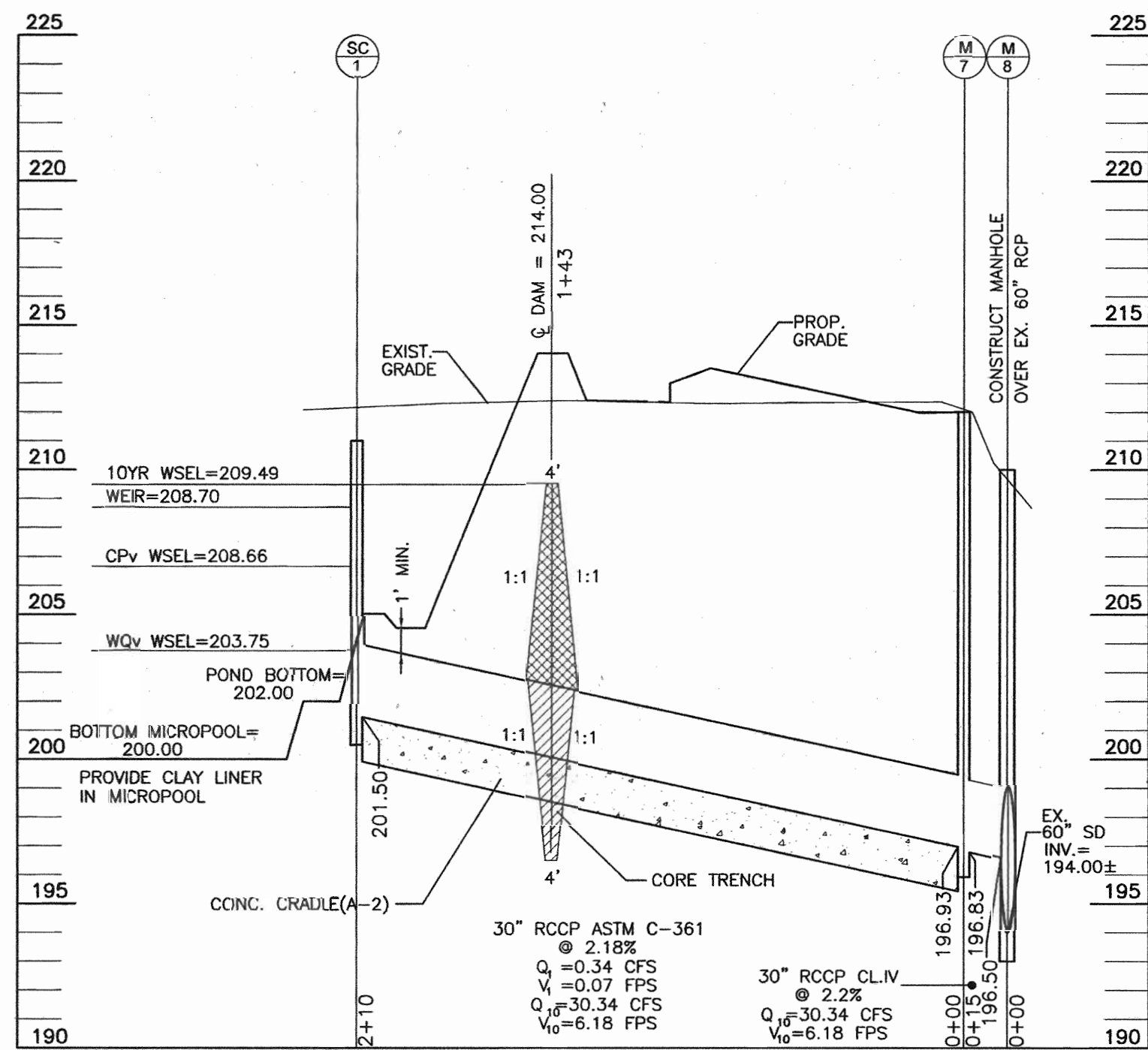
DEVELOPER'S CERTIFICATE  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED 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.  
 M. BRAD WIERMAN 11/16/05  
 DATE

**OWNER**  
 HOWARD COUNTY HOUSING COMMISSION  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MD 21046  
 (410) 313-6320

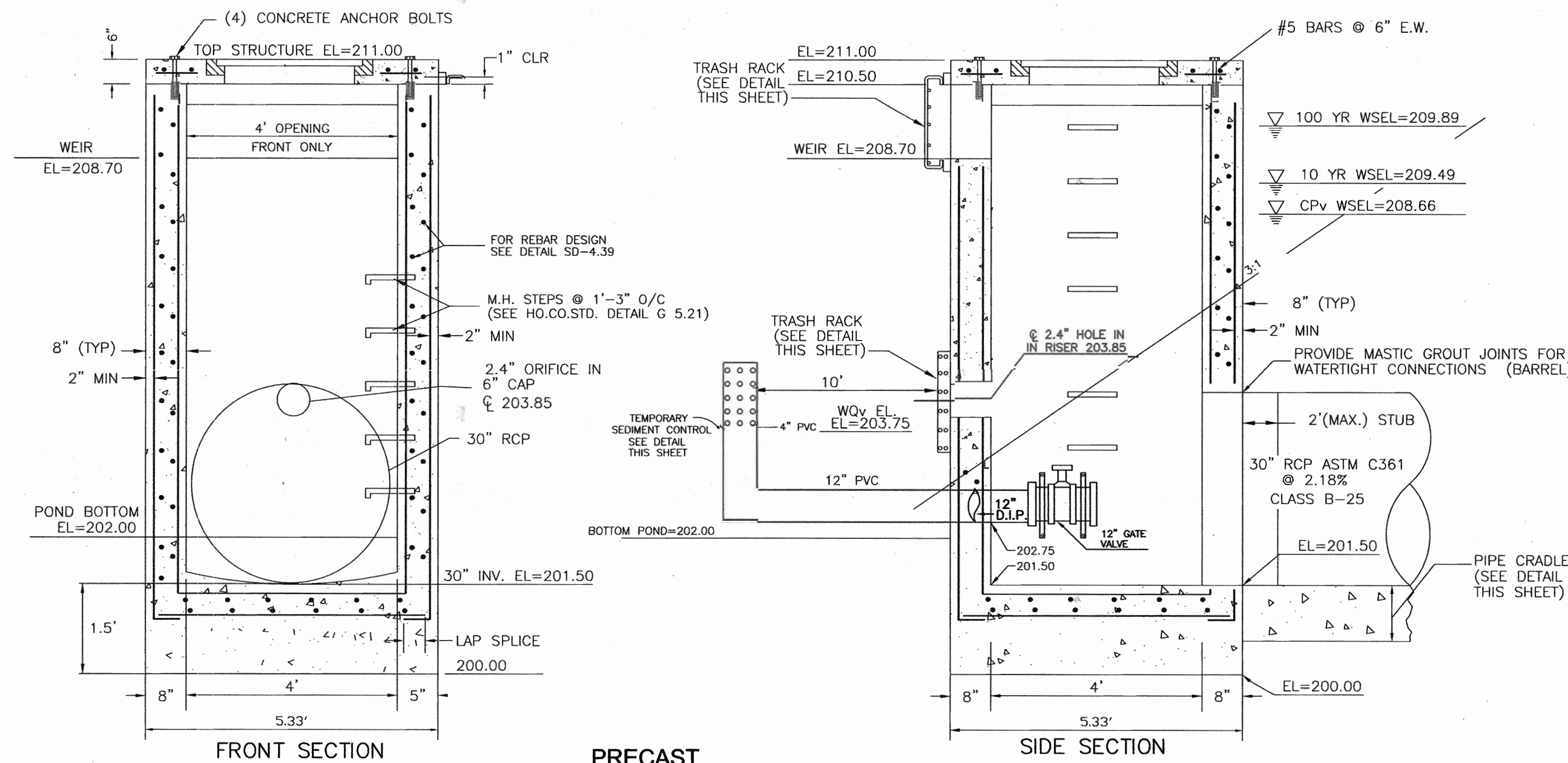
**DEVELOPER**  
 MBI DEVELOPMENT CO., INC.  
 C/O THE INGERMAN GROUP  
 1100 PENNSYLVANIA AVE., SUITE 700  
 WILMINGTON, DE 19806  
 (302) 661-1560



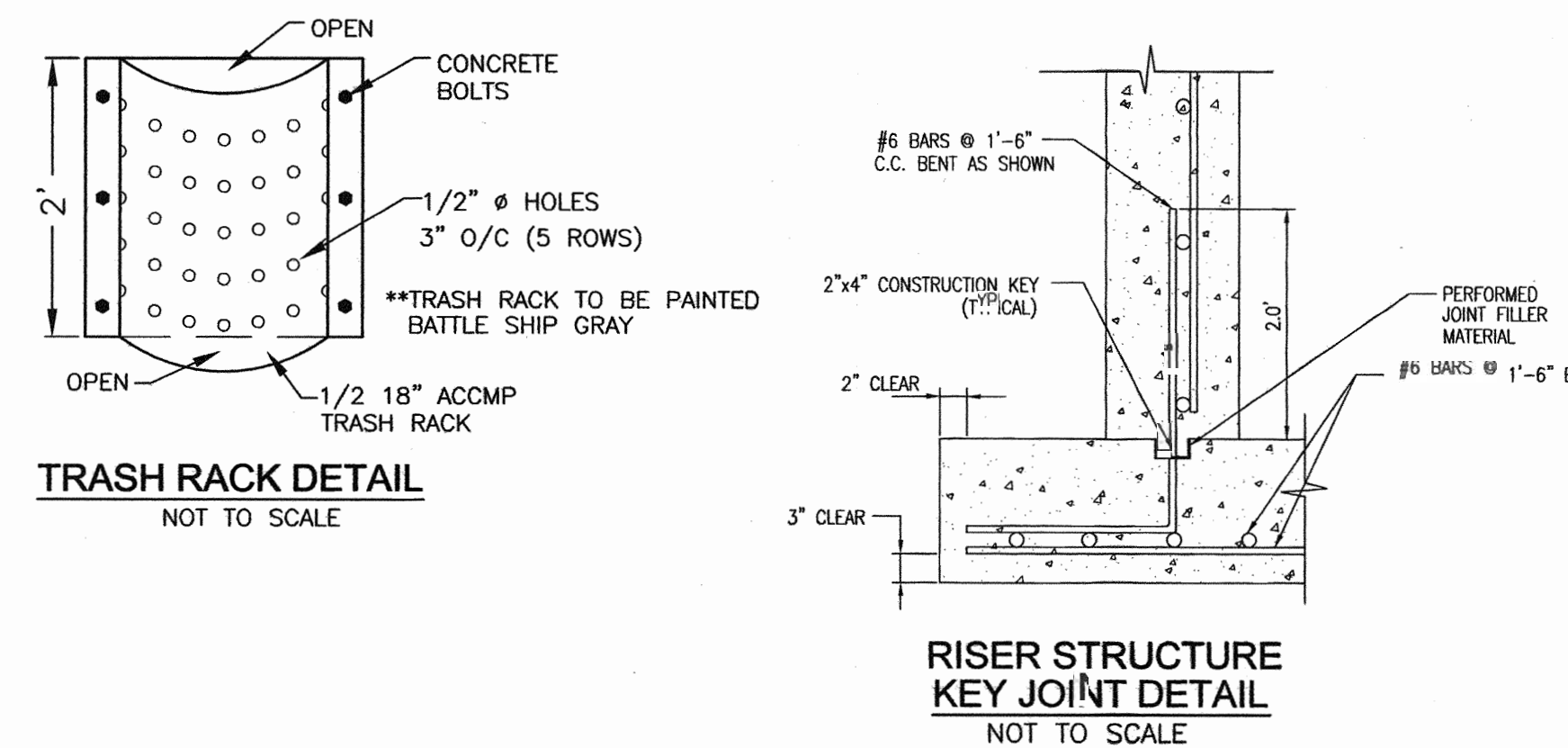
DESIGN BY: LIT  
 DRAWN BY: LIT  
 CHECKED BY: RHW  
 DATE: MAY 12, 2005  
 SCALE: 1"=50'  
 W.O. NO.: 04-09.00



**SECTION THROUGH PRINCIPAL SPILLWAY**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.

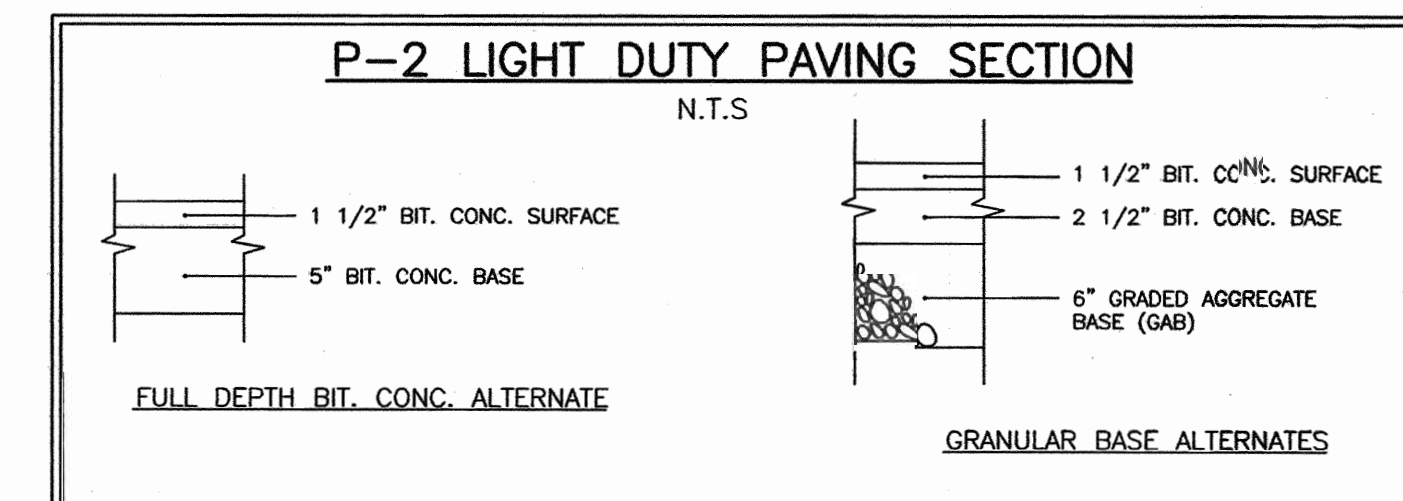


**PRECAST STRUCTURE CS-1 DETAIL**  
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**TRASH RACK DETAIL**  
NOT TO SCALE

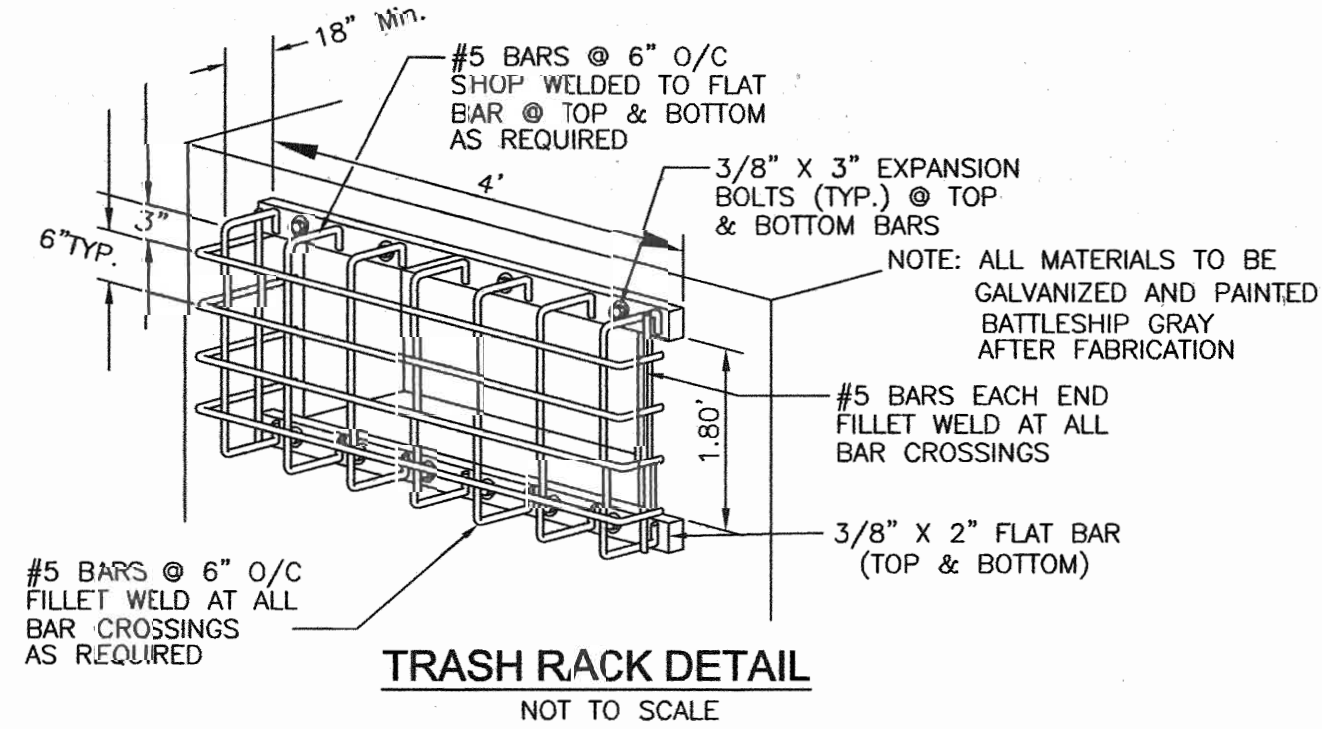
**RISER STRUCTURE KEY JOINT DETAIL**  
NOT TO SCALE



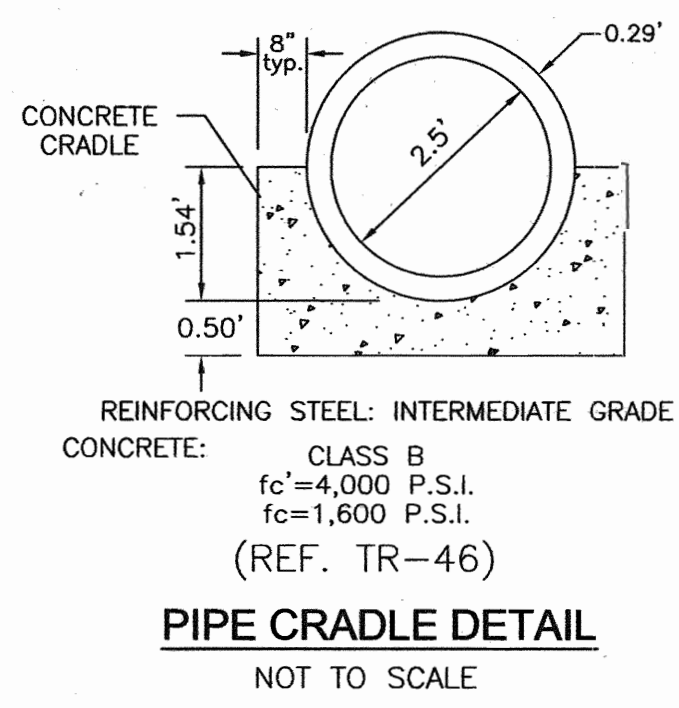
**P-2 LIGHT DUTY PAVING SECTION**  
N.T.S.

**FULL DEPTH BIT. CONC. ALTERNATE**

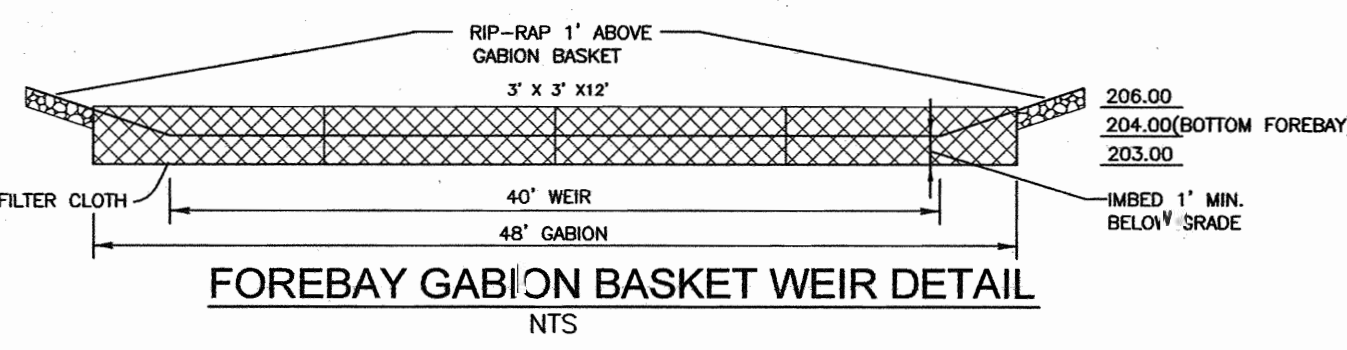
**GRANULAR BASE ALTERNATES**



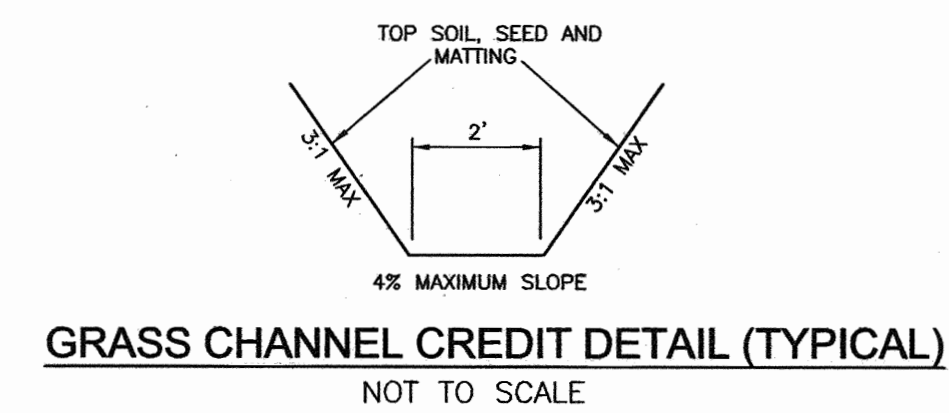
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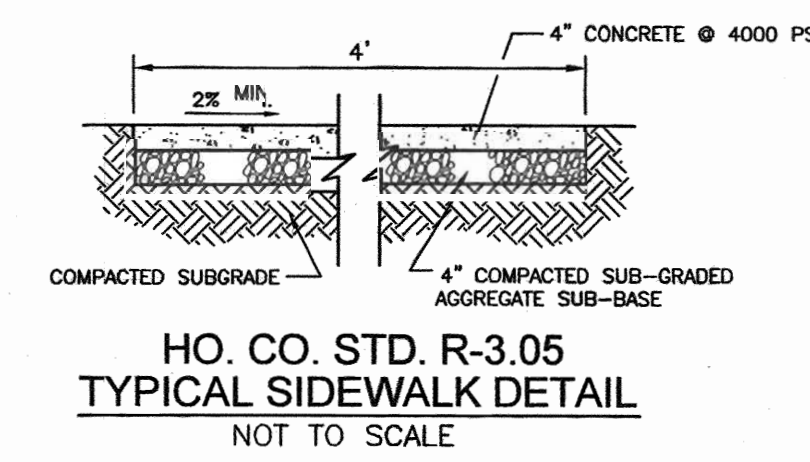
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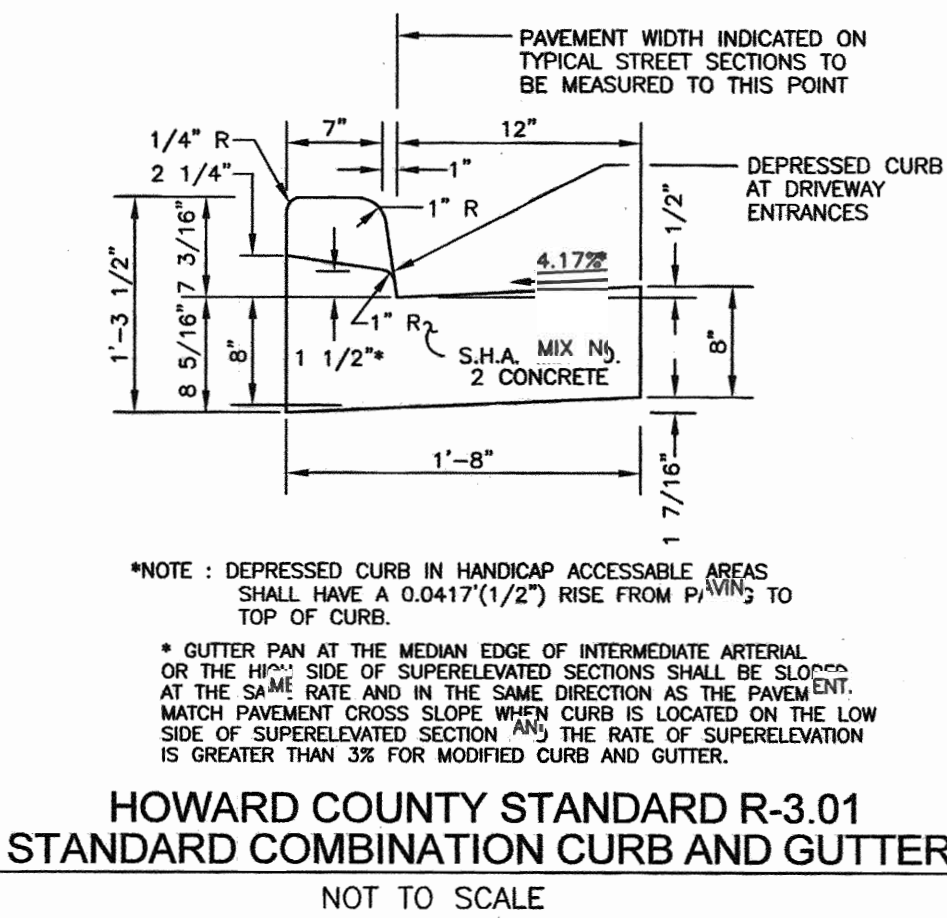
**FOREBAY GABION BASKET WEIR DETAIL**  
N.T.S.



**GRASS CHANNEL CREDIT DETAIL (TYPICAL)**  
NOT TO SCALE



**HO. CO. STD. R-3.05 TYPICAL SIDEWALK DETAIL**  
NOT TO SCALE



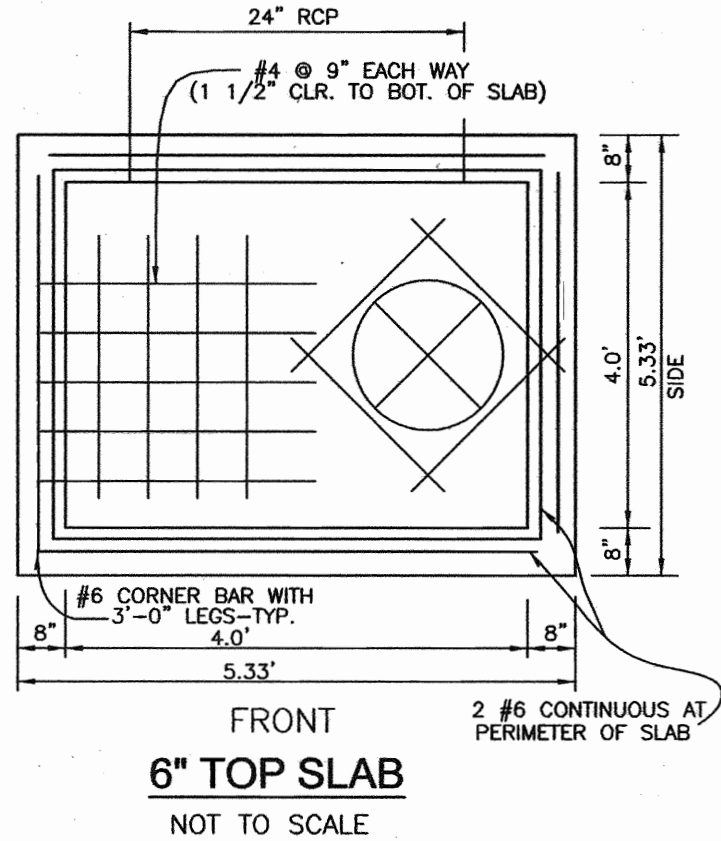
**HOWARD COUNTY STANDARD R-3.01 STANDARD COMBINATION CURB AND GUTTER**  
NOT TO SCALE

**OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT EXTENDED DETENTION FACILITY**

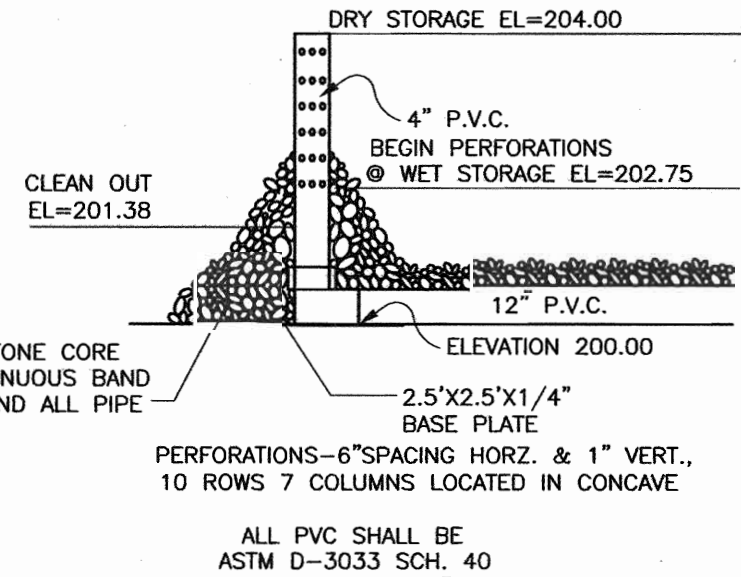
- STORMWATER MANAGEMENT FACILITY ROUTINE MAINTENANCE**
1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
  2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
  3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
  4. VISIBLE SIGNS OF EROSION IN THE FLOOD AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE**
1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
  2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERES WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

**OPERATION, MAINTENANCE AND INSPECTION**

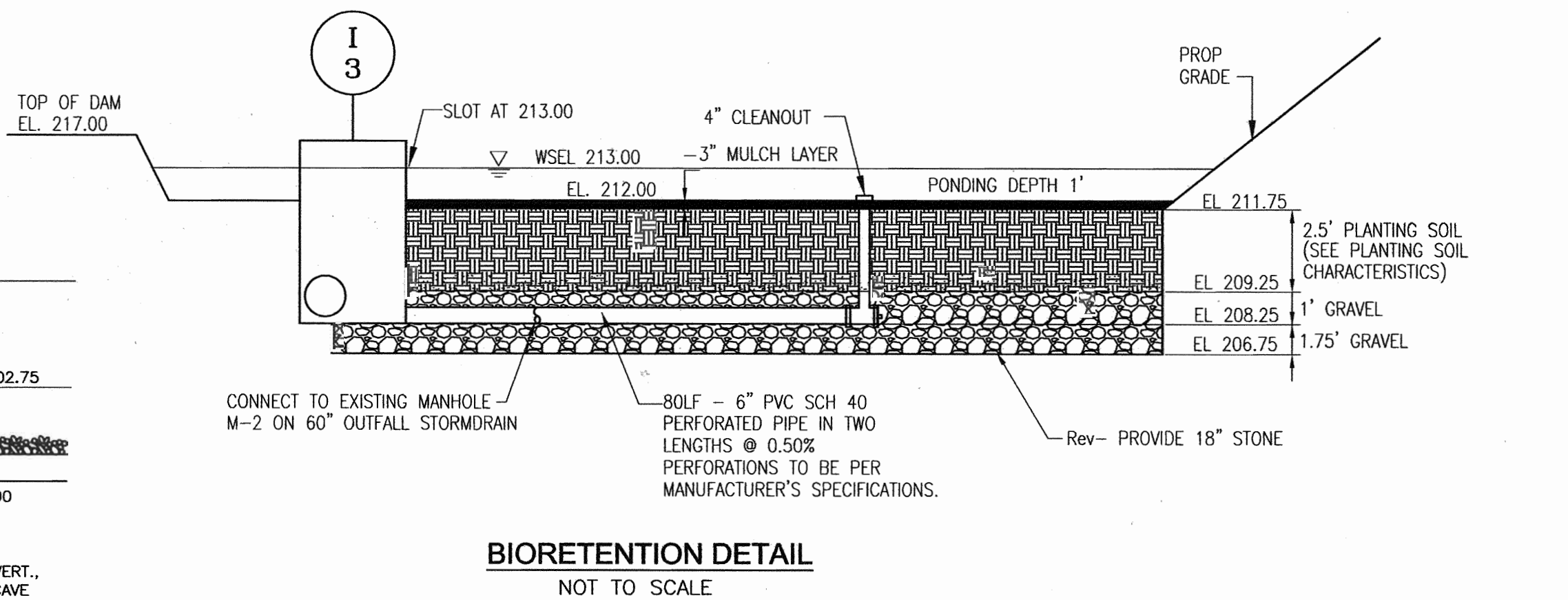
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (40-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATING OF DISTRESS SUCH AS EXCESSIVE



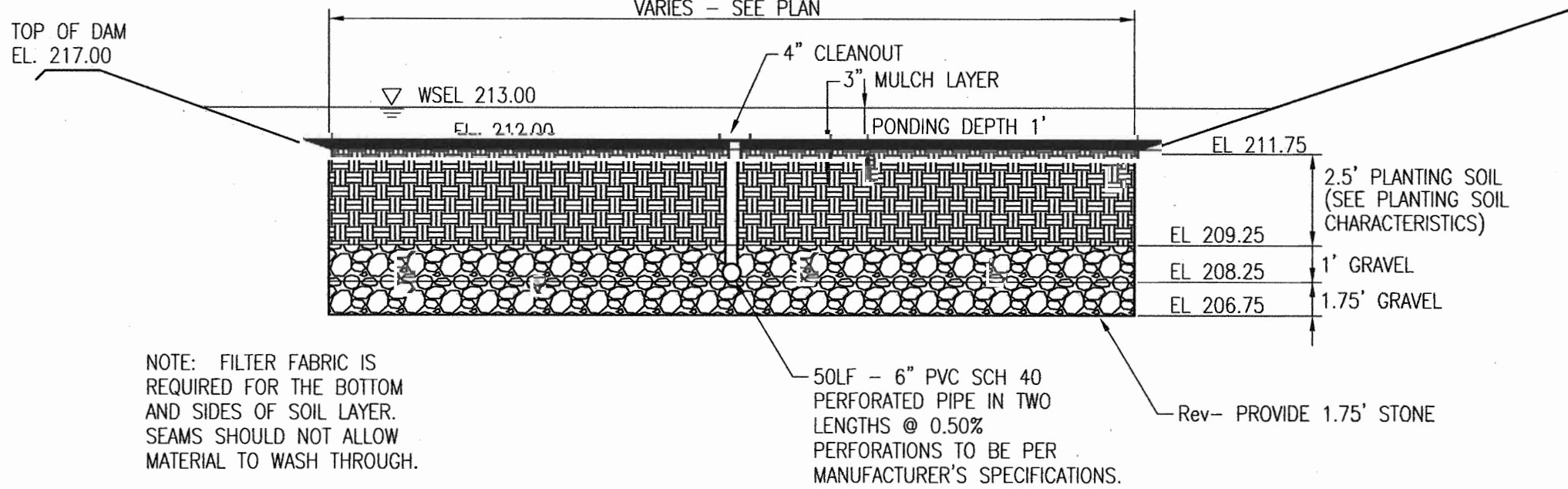
**6" TOP SLAB**  
NOT TO SCALE



**BASIN #2 SEDIMENT BASIN DEWATERING DEVICE I WITH 4" PERFORATED RISER**  
NOT TO SCALE



**BIORETENTION DETAIL**  
NOT TO SCALE



**BIORETENTION DETAIL**  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 12/10/05

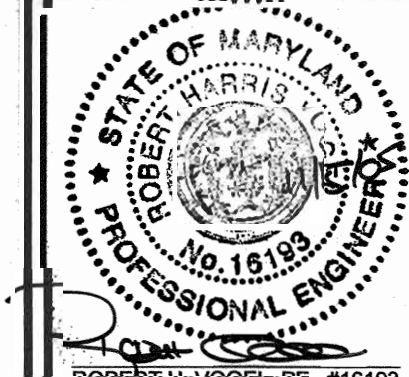
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
USDA-NATURAL RESOURCES CONSERVATION SERVICE  
DATE: 11/22/05

ENGINEERS 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.  
ROBERT H. VOGEL, PE 116193  
DATE: 11/15/05

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.  
M. BRAD INGLETT  
DATE: 11/10/05

OWNER  
HOWARD COUNTY HOUSING COMMISSION  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046  
(410) 313-6320

DEVELOPER  
MBI DEVELOPMENT CO., INC.  
C/O THE INGERMAN GROUP  
1100 PENNSYLVANIA AVE., SUITE 700  
WILMINGTON, DE 19806  
(302) 661-1560



DESIGN BY: LJT  
DRAWN BY: LJT  
CHECKED BY: RHV  
DATE: MAY 12, 2005  
SCALE: 1"=50'  
W.O. NO.: 04-09.00

7 SHEET OF 8

NO	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT DETAILS**  
**PORT CAPITAL VILLAGE**  
(THE OAKS AT WATERS EDGE PHASE III)  
LOT 4  
DPZ REF: F-04-044, AA-04-33, SDP-03-041, SDP-03-154  
TAX MAP 43 GRID 3 PARCEL 644 LOT 4  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELICOTT CITY, MD 21043  
TEL: 410-461-7666  
FAX: 410-461-8961

# SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 7, 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 SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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	7.00 AC
AREA TO BE ROOFED OR PAVED	5.43 AC
AREA TO BE VEGETATIVELY STABILIZED	2.33 AC
TOTAL CUT	3.10 CY
TOTAL FILL	10,000 CY
OFFSITE WASTE/BORROW AREA LOCATION	
- 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 CONTROLS 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 MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
  - TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

# 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

- DEFINITION**  
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
- PURPOSE**  
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- CONDITIONS WHERE PRACTICE APPLIES**
- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
    - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
    - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
    - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
    - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
  - FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION, AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.
- CONSTRUCTION AND MATERIAL SPECIFICATIONS**
- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL 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 A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 AND 1/2" IN DIAMETER.
    - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
    - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, 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.

# PERMANENT SEEDING NOTES

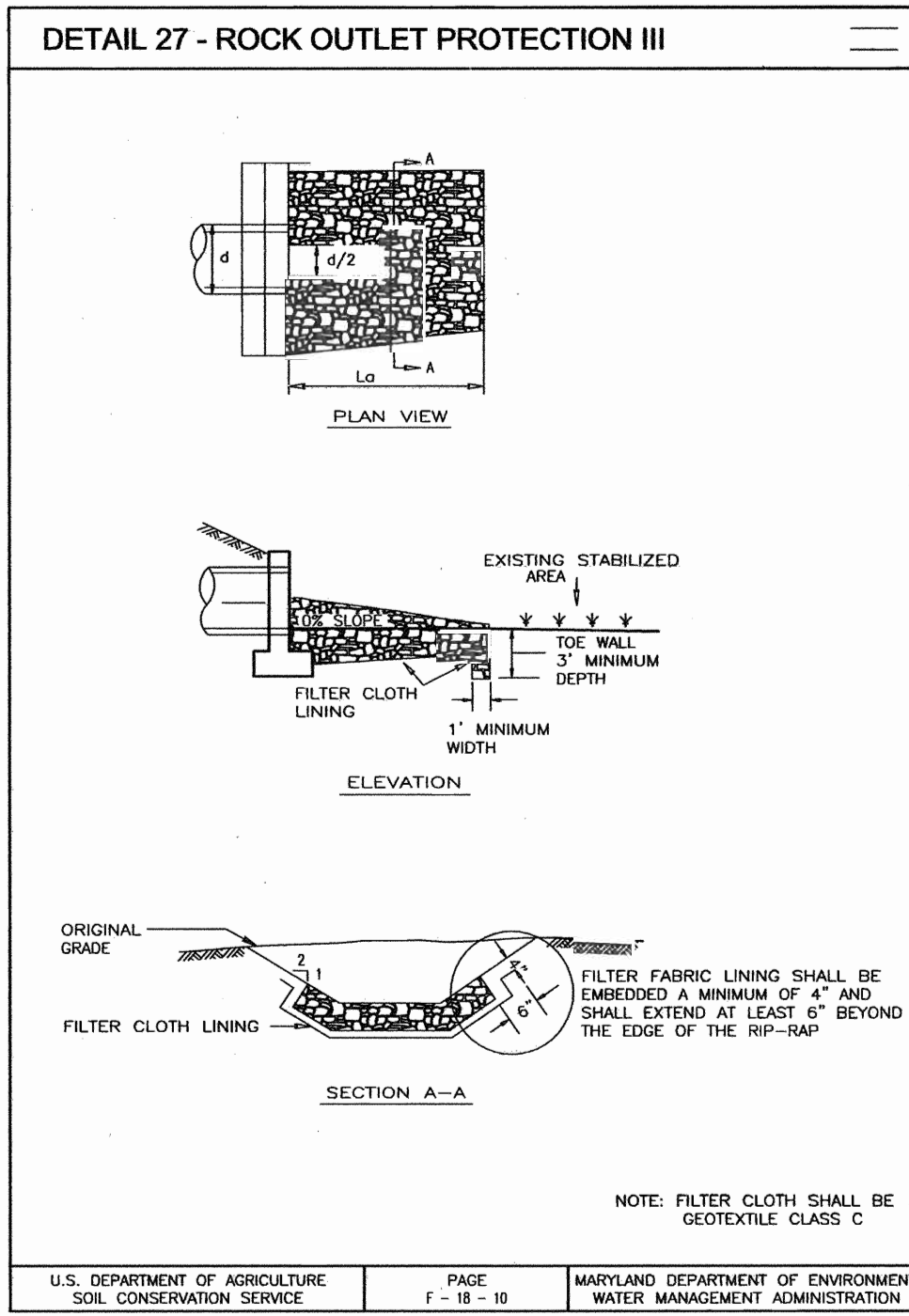
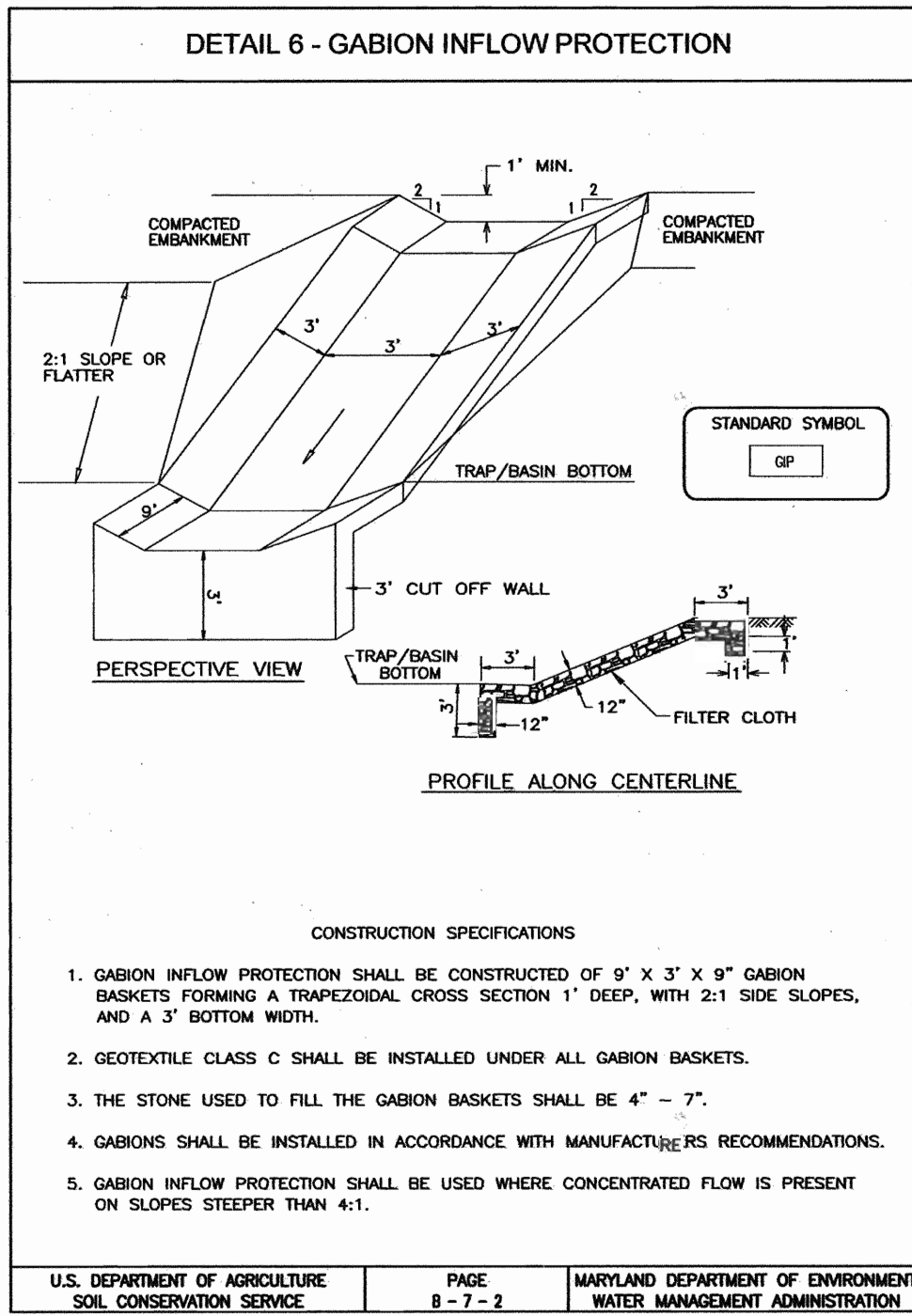
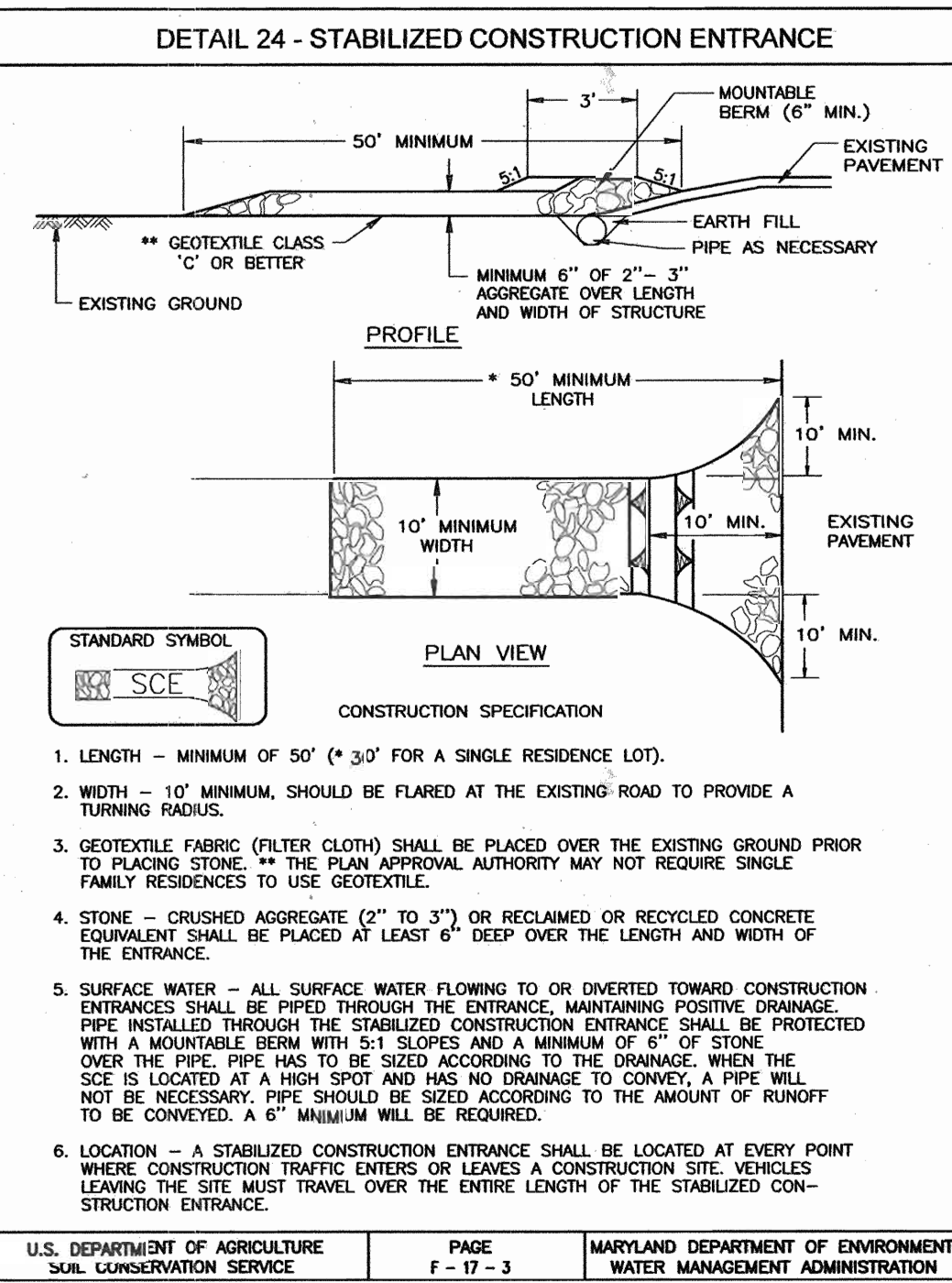
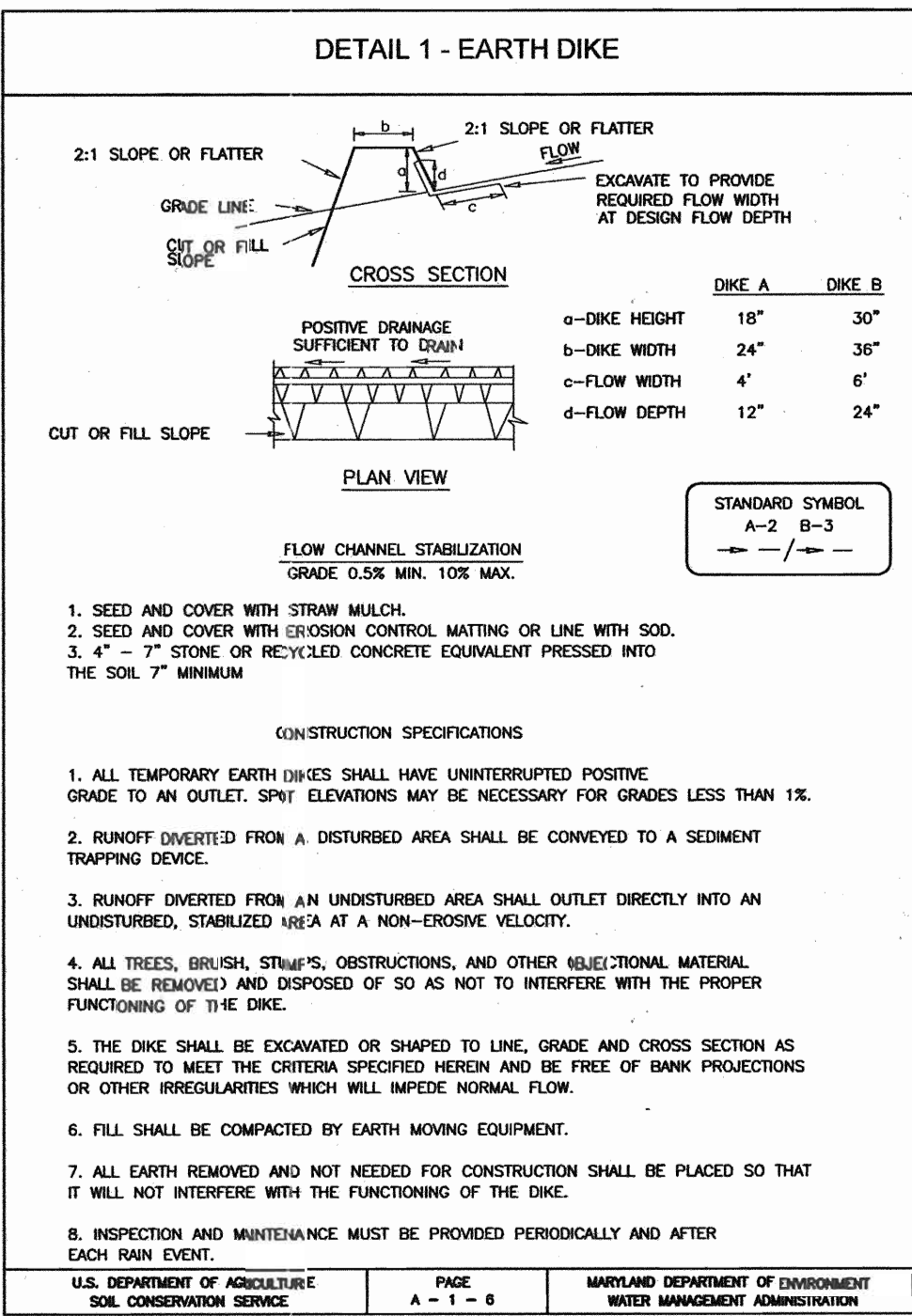
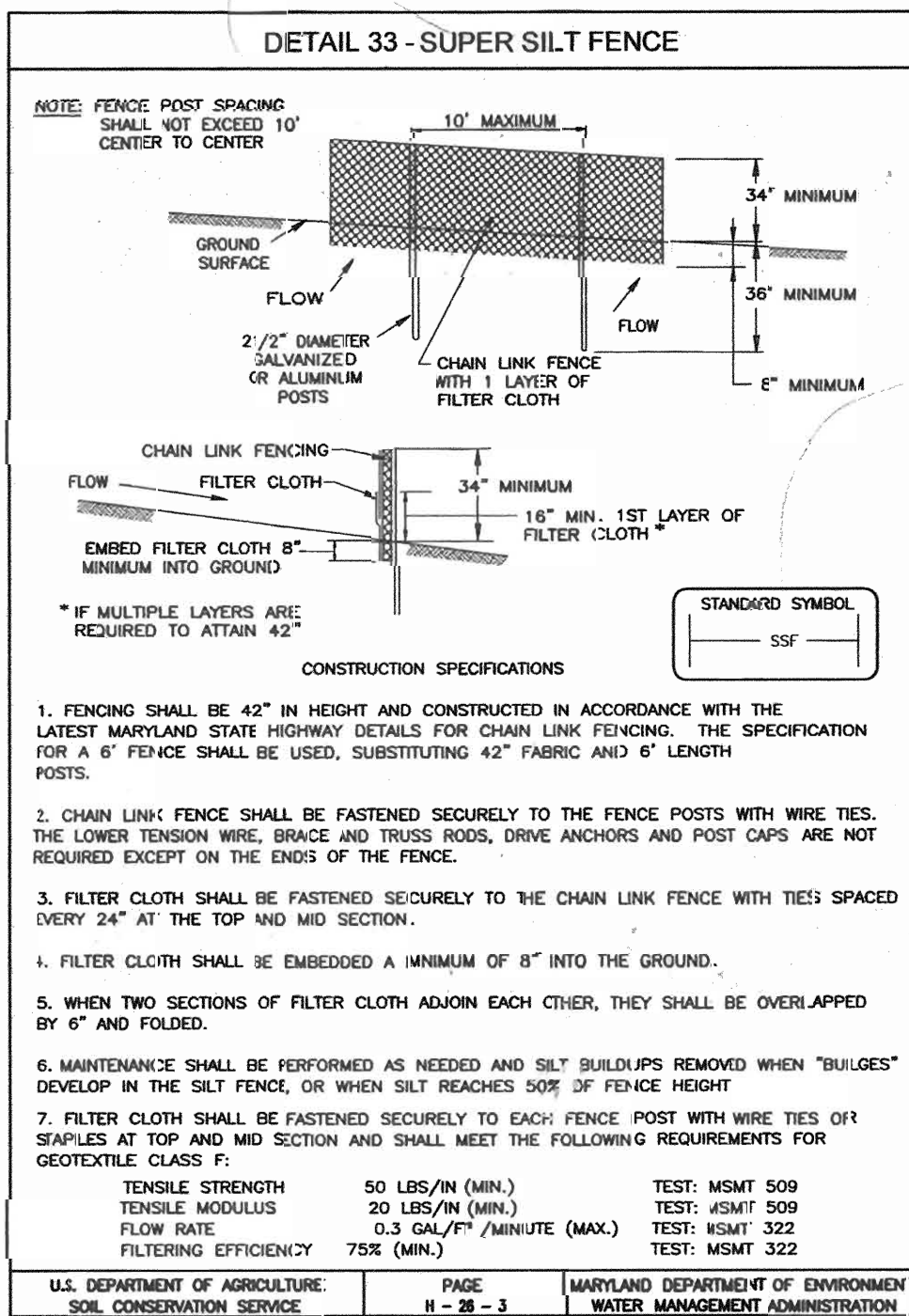
- APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./100 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 AT THE 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 APPLY 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 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE 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 SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.
- TEMPORARY SEEDING NOTES**
- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING 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 PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU 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 FEET 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.

# SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
  - NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410.313.1850) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
  - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS. (3 DAYS)
  - AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, ROUGH GRADE SITE, CONSTRUCT POND AND STORMDRAIN OUTFALL. (2 WEEKS)
  - INSTALL WATER AND SEWER AND STORMDRAIN SYSTEMS AND INLET PROTECTION. (2 WEEKS)
  - BEGIN BUILDING CONSTRUCTION AND GRADE ROADS. (1 WEEK)
  - AS BUILDING CONSTRUCTION CONTINUES, INSTALL CURB AND GUTTER, SIDEWALK AND PAVE ROAD. (2WEEKS)
  - WITH ROAD PAVED AND SIDEWALK COMPLETE, FINE GRADE REMAINING SITE AND CONSTRUCT BIO-RETENTION FACILITY. (2 WEEKS)
  - STABILIZE DISTURBED AREAS AND INSTALL PERIMETER LANDSCAPING AND STREET TREES. (3 DAYS)
  - UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES.
- NOTES**
- DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
  - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

# 30.0 DUST CONTROL

- DEFINITION**  
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.
- PURPOSE**  
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.
- CONDITIONS WHERE PRACTICE APPLIES**  
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
- SPECIFICATIONS**
- TEMPORARY METHODS**
- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
  - VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
  - TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
  - IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
  - BARRIERS - SOD BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
  - CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.
- PERMANENT METHODS**
- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
  - TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS.
  - SEE STANDARDS FOR TOPSOILING.
  - STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.
- REFERENCES**
- AGRICULTURAL HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USE IN PREVENTING SOIL LOSS.
  - AGRICULTURAL INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John Deane* 12/1/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Cindy Harris* 12/23/05  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Robert H. Vogel* 12/23/05  
DIRECTOR DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

*Jim M...* 11/20/05  
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*J. R. ...* 11/20/05  
HOWARD SCD DATE

ENGINEERS' 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.

*Robert H. Vogel* 11/15/05  
ROBERT H. VOGEL, PE #16193 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 CERTIFY THAT I/WE PERFORMED ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

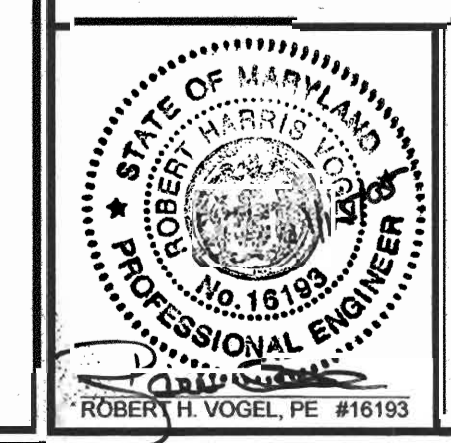
*M. Brad ...* 11/15/05  
M. BRAD ... DATE

OWNER

HOWARD COUNTY HOUSING COMMISSION  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046  
(410) 313-6320

DEVELOPER

MEI DEVELOPMENT CO., INC.  
C/O THE INGERMAN GROUP  
1100 PENNSYLVANIA AVE., SUITE 700  
WILMINGTON, DE 19806  
(302) 661-1560



DESIGN BY: LJT  
DRAWN BY: LJT  
CHECKED BY: RHV  
DATE: MAY 12, 2005  
SCALE: 1"=50'  
W.O. NO.: 04-02.0

8 SHEET OF 8