

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARD AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF INSPECTION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-TTTT AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 313-4900 AT LEAST FIVE WORKING DAYS PRIOR TO STARTING ANY EXCAVATION WORK.
- PROJECT BACKGROUND:  
LOCATION: SEE VICINITY MAP IN THE UPPER RIGHT HAND CORNER OF THIS SHEET  
TAX MAP: 31  
ELECTION DISTRICT: 1  
ZONING: R-A-15 PER THE FEBRUARY 4, 2004 COMPREHENSIVE ZONING  
AREA OF BUILDABLE LOT FOR THIS SITE DEVELOPMENT PLAN: 2.02 AC. OR 80,181 SF.  
FOR OTHER SUBMISSIONS RELATED TO THIS SITE, SEE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: S 04-04 (APPROVED 2/15/05), W 04-105, F 06-014, W 06-045 25A-65, F 07-001, P-06-001, F-07-043, F 07-054, F 07-071, F 07-088 and F 10-112.
- 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.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- EXISTING TOPOGRAPHY HAS BEEN DERIVED FROM THE APPROVED PLANS FOR CONSTRUCTION UNDER F-08-006. ALL TOPOGRAPHY IS REPRESENTED BY 2-FOOT CONTOUR INTERVALS.
- COORDINATES AND BEARINGS ARE BASED UPON THE MD STATE PLANE SYSTEM (NAD '83).
- EXISTING WATER AND SEWER SHOWN HAS BEEN DERIVED FROM THE APPROVED PUBLIC WATER & SEWER PLANS UNDER CONTRACTS 14-4355-D, 14-4354-D & 14-4484-D.
- EXISTING STORM DRAIN SHOWN IS PER F 07-054, & F 08-006.
- STORMWATER MANAGEMENT QUALITY & QUANTITY CONTROL IS PROVIDED BY EXISTING FOND B, DESIGNED UNDER F-06-014. THE RECHARGE (Rw) REQUIREMENT IS MET UNDER F 08-006 AND THIS PLAN.
- THERE ARE NO STREAMS, WETLANDS, OR FLOODPLAINS RELATED TO THIS SITE.
- ALL CURB RADI ARE 5' UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL UTILIZE PVC PIPE FOR ALL SEWER HOUSE CONNECTIONS. CONTRACTOR SHALL UTILIZE D.I.P. (CL 52) FOR 6" WATER HOUSE CONNECTIONS.
- CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITY CONNECTIONS. SHOULD SUBSTANTIAL DISCREPANCIES ARISE, THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER BEFORE MAKING ADJUSTMENTS.
- USE TRENCH BEDDING CLASS 'C' FOR STORM DRAINS.
- PAVED AREAS INDICATED ARE PRIVATE EXCEPT AS NOTED.
- RECORDING REFERENCE: PLAT NO. 21425 (F 10-112).
- ALL PROPOSED RAMP SHALL BE IN ACCORDANCE WITH CURRENT ADA STANDARDS. ALL HANDICAP ACCESSIBLE SIDEWALKS SHALL HAVE A TWO PERCENT MAXIMUM GROSS SLOPE. PROVIDE A FIVE-FOOT BY FIVE-FOOT LEVEL (2 PERCENT MAX) LANDING AT THE TOP AND BOTTOM OF ALL RAMP AND BUILDING ENTRANCES AND EXITS. PROVIDE DETECTABLE WARNING SURFACE ON ALL RAMP IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R 4-07.
- ALL WATER METERS SHALL BE LOCATED INSIDE BUILDINGS.
- THE END OF THE PROPOSED UTILITY STUBS ARE LOCATED 5' FROM THE BUILDING FACE. FINAL CONNECTION TO THE BUILDING IS BY THE BUILDING PLUMBER.
- THE BUILDING-STORM DRAIN CONNECTIONS ARE TO BE CONSTRUCTED BY THE BUILDING PLUMBER.
- MAINTAIN 2% CROSS-SLOPES ON SIDEWALKS, PER STANDARD DETAILS. WHERE SIDEWALK IS ADJACENT TO BUILDING, SLOPE AWAY FROM BUILDING, AND UTILIZE EXPANSION JOINT MATERIAL AND SEALER IN THE JOINT BETWEEN THE SIDEWALK AND THE BUILDING WALL.
- THIS PARCEL DOES NOT APPEAR ON THE COUNTY'S CEMETERY INVENTORY AS HAVING CEMETERIES OR BURIAL GROUNDS. ALSO, THERE IS NO PHYSICAL EVIDENCE OF EITHER CEMETERIES OR BURIAL GROUNDS BEING PRESENT ON THE SITE.
- COORDINATES AND BEARINGS ARE BASED UPON THE '83 MD STATE COORDINATE SYSTEM (NAD '83) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 2248002, 2248003.
- FOREST CONSERVATION FOR THIS SITE HAS BEEN PROVIDED UNDER F-06-014 AND SUBSEQUENT PLATS F 08-117 AND F 10-060.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENTS AS NOTED ON SHEET 4. THE SURETY IS IN THE AMOUNT OF \$10,000.00.
- ALL OUTSIDE LIGHTING SHALL COMPLY WITH ZONING REGULATION SECTION 154 WHICH REQUIRES LIGHTS TO BE INSTALLED TO DIRECTLY REFLECT LIGHT DOWNWARDS AND INWARDS ON SITE AWAY FROM ALL ADJOINING PUBLIC STREETS AND RESIDENTIAL AREAS. NO OUTDOOR PARKING LOT LIGHTING IS PROPOSED.
- TRASH FOR THIS SITE SHALL BE COLLECTED BY A PRIVATE REFUSE COLLECTION COMPANY. NO EXTERIOR DUMPSTER OR DUMPSTER ENCLOSURE IS INDICATED.
- THE 10' STRUCTURE SETBACK REFERENCED FROM THE INTERNAL PUBLIC ROAD IS IN ACCORDANCE WITH ZONING SECTION 128.05b (17D).
- HOWARD COUNTY FIRE AND RESCUE GENERAL REQUIREMENTS:  
A. A KNOX BOX (FIRE DEPT. ACCESS BOX) IS REQUIRED TO BE PLACED IN FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED. NFPA-1 (8.2.2.5.1) AMENDED IN TITLE 17.  
B. MAINTAIN A MINIMUM CANOPY HEIGHT OF 13 FEET, 6 INCHES FOR EMERGENCY EQUIPMENT ACCESS. NFPA-1 (8.2.2.5.1) AMENDED IN TITLE 17.  
C. PROVIDE SIGNAGE ON THE BUILDING IDENTIFYING BUILDING ACCESS.
- ALL PUBLIC ROADS SHOWN WITHIN THESE PLANS ARE COUNTY ROADS.
- THE HOMEOWNER'S ASSOCIATION FOR PARCEL E-4 IS THE SHIPLEY'S GRANT COMMUNITY ASSOCIATION, INC. THE ARTICLES OF INCORPORATION FOR THE ASSOCIATION WERE FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON MAY 22, 2007 (RECEIPT NO. D1185125). THE DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR THE ASSOCIATION ARE RECORDED IN LIBER 10714 AT FOLIO 871 AND LIBER 11765 AT FOLIO 41.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO PROVIDE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
A. WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE)  
B. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/ TAR AND CHIP COATING (1-1/2" MINIMUM)  
C. GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS.  
D. STRUCTURES (CULVERTS AND BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (425,000 LBS) LOADING.  
E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-TY FLOOD WITH NO MORE THAN 1-FOOT DEPTH DRIVEWAY SURFACE.  
F. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- BEYOND WINDOWS, WINDOWS WELLS, CHIMNEYS, HEATING OR AIR CONDITIONING UNITS AND EXTERIOR STAIRWAYS IF NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NO MORE THAN 4 FEET INTO ANY REQUIRED SETBACK AREA IN ACCORDANCE WITH SECTION 128(A) OF THE ZONING REGULATIONS.
- THE GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY AND ARE NOT TO BE CONVERTED TO OTHER USES IN ACCORDANCE WITH SECTION 128(D) OF THE ZONING REGULATIONS UNLESS OTHER ON-SITE RESERVED GARAGE AND/OR PARKING SPACES ARE SECURED. UNLESS OTHERWISE PROHIBITED BY POSTED SIGNAGE OR CURB MARKING, ON-STREET PARALLEL PARKING ALONG THE CURB WITHIN THE PUBLIC RIGHT OF WAY IS ALLOWED FOR VISITOR AND OVERFLOW PARKING.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING, AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND THE 100 YEAR FLOODPLAIN.
- PER A LETTER DATED APRIL 8, 2011 FROM HOWARD COUNTY HOUSING TO HOWARD COUNTY DPZ, A MINI AGREEMENT IS NOT REQUIRED BY HOWARD COUNTY HOUSING FOR THIS SITE DEVELOPMENT PLAN. THE PROPOSED APARTMENT APARTMENT UNITS FOR PARCEL E-4 (ALONG WITH OTHER MINI TRANSFERS FROM THE SHIPLEY'S GRANT SITE) HAVE BEEN TRANSFERRED TO THE RESIDENCES OF ELICOTT GARDENS (SOP 07-036) BY A LETTER FROM HOWARD COUNTY HOUSING TO BENDER PROPERTY II, LLC AND BA WATERLOO TOWNHOMES, LLC DATED NOVEMBER 16, 2004. THE ONLY REMAINING OBLIGATION FOR THE SHIPLEY'S GRANT SITE IS TO PROVIDE 6 MINI TOWNHOMES IN PHASES V AND/OR VI OF THE PROJECT.

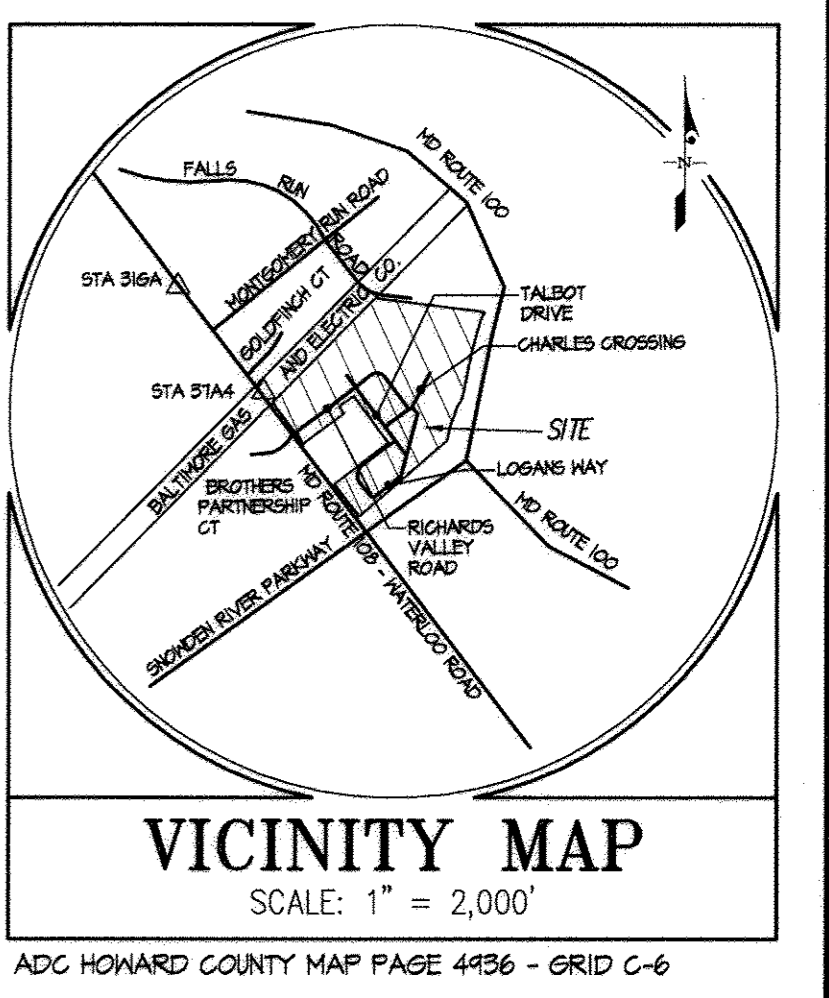
# SITE DEVELOPMENT PLAN

# SHIPLEY'S GRANT

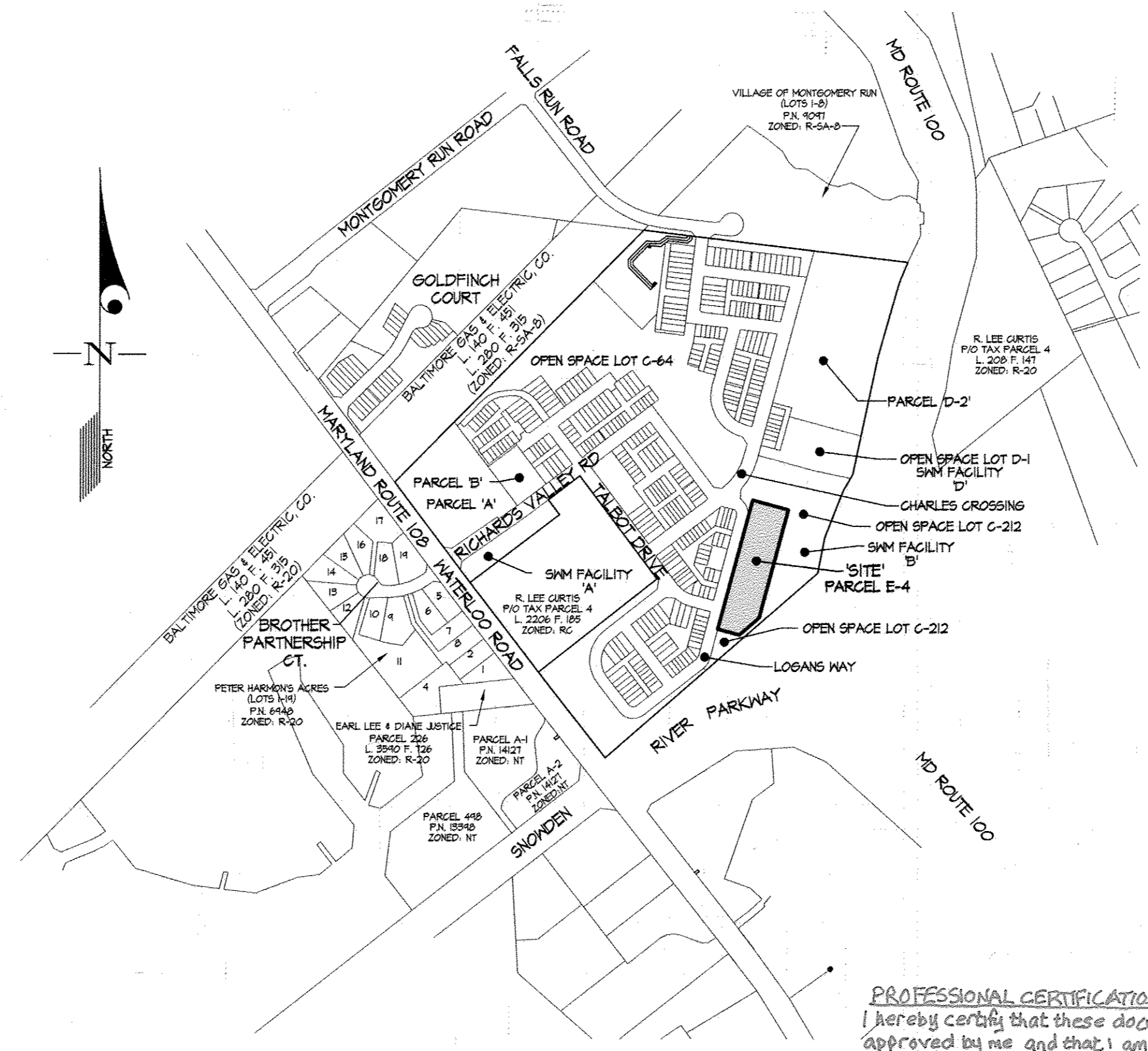
## PHASE IV, PARCEL E-4

## MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS

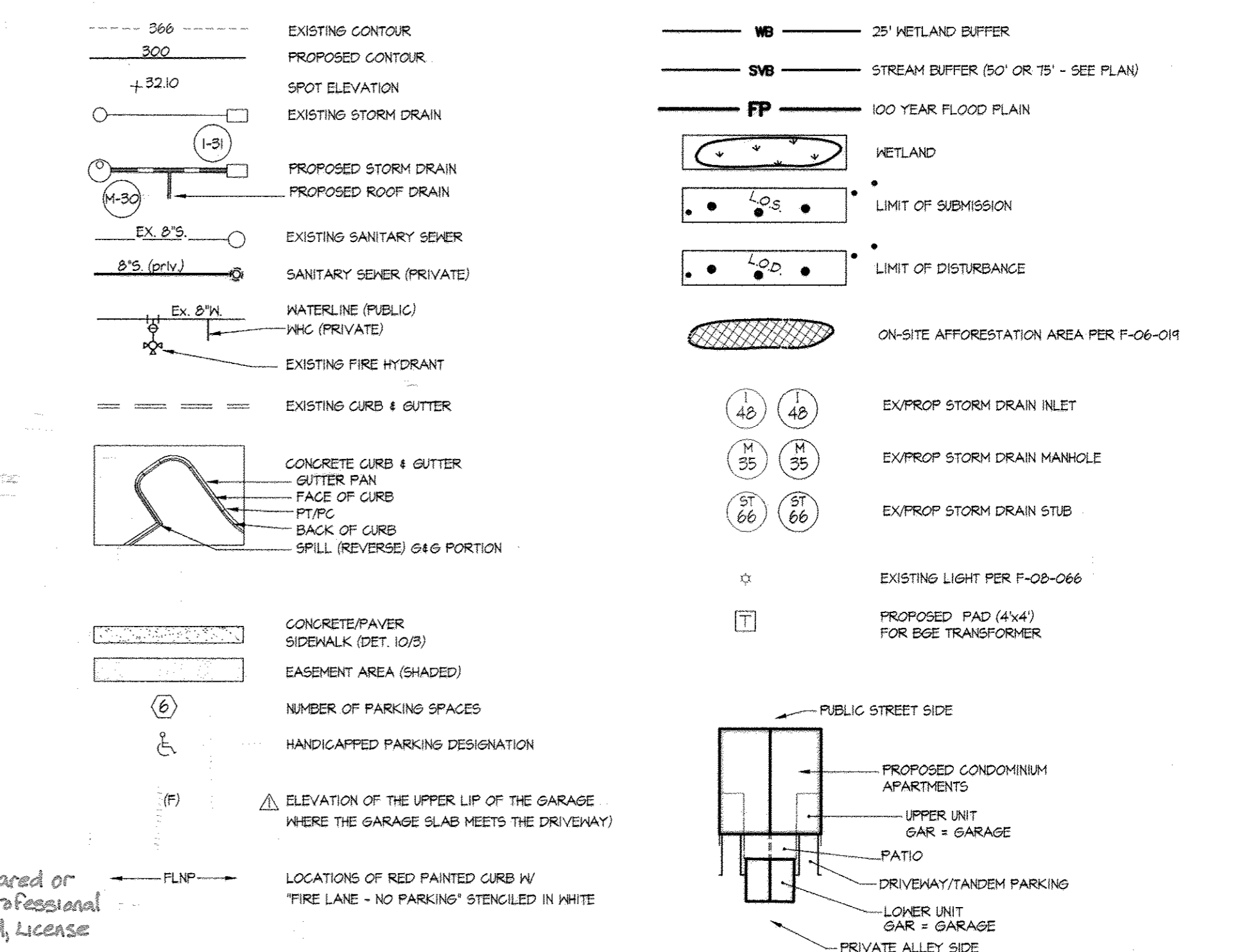
**Howard County Control Stations**  
 316A ELEV. = 511.65  
 STANDARD DISC ON CONCRETE MONUMENT  
 N 564,925.75, E 1,367,067.65  
 37A4 ELEV. = 497.28  
 STANDARD DISC ON CONCRETE MONUMENT  
 N 563,835.91, E 1,367,471.65



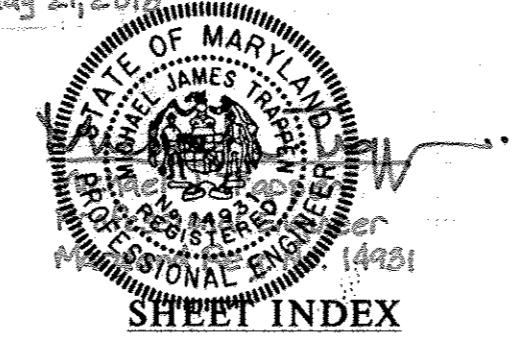
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**SITE DEVELOPMENT LEGEND**



**PROFESSIONAL CERTIFICATION**  
 I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14931, Expiration Date: May 21, 2016.



**LOT DEVELOPMENT DATA**

- GENERAL SITE ANALYSIS DATA
  - PRESENT ZONING: R-A-15
  - PROPOSED USE OF SITE: 40 MULTI-FAMILY DWELLING UNITS (APARTMENT)
  - PUBLIC WATER & SEWER TO BE UTILIZED (CONTR. NOS. 14-4355-D, 14-4354-D AND 14-4484-D).
  - PARKING REQUIRED PER ZONING AND DMV III (Table 2.11): (2 spaces/unit + 0.5 spaces/unit) x 40 units + 80 + 12 = 42 SPACES
- RECREATION OPEN SPACE FOR THIS SDP IS ADDRESSED UNDER F-07-043, F-07-054, SDF-07-047, SDF-07-048, F-08-006, F-09-008, F-10-048, SDF-10-082, SDF-10-087, F-11-026, SDF-12-045 & SDF-12-061
- AREA TABULATION
  - AREA OF THIS PARCEL: 2.021 AC. (PLAT NO. 21425)
  - AREA OF THIS PLAN SUBMISSION: 2.11 ACRES
  - AREA OF DISTURBANCE BY THIS SDP: 2.11 ACRES
- LOT DESIGNATION
 

DEVELOPMENT TYPE	PRINCIPAL STR. BLDG.	BUILDING LOT	MIN. UNIT/RES. BLDG.
APARTMENT	N/A	N/A	N/A
ACCESSORY STRUCTURES			
- STRUCTURE SETBACKS PER SECTION 122.D.4.a.
 

DEVELOPMENT TYPE	FRONT	REAR	SIDE
APARTMENT	30'	50'	30'
USES	30'	30'	30'

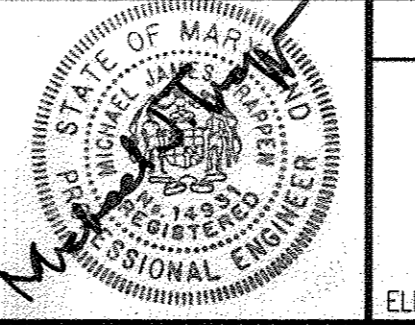
- AS A PART OF REDLINE REVISION NUMBER 1, THE LANDSCAPING HAS BEEN REVISED TO BE IN COMPLIANCE WITH THE PROPOSED CHANGES. THE DEVELOPER'S AGREEMENT WILL NOT BE AMENDED, THEREFORE THE DOLLAR AMOUNTS WILL NOT CHANGE. THE ADDITIONAL LANDSCAPING WILL NEED TO BE ADDRESSED ALONG WITH ALL OTHER REQUIRED LANDSCAPING PRIOR TO RELEASE OF ANY SURETY.
- BETWEEN APARTMENT BUILDINGS, THE MINIMUM SETBACK DISTANCES SHALL BE 30' FRONT TO FRONT, 60' BACK TO BACK, 100' FRONT TO BACK, 30' FOR FACE TO SIDE/REAR TO SIDE AND 15' FOR ALL OTHER CONDITIONS.
- SECTION 128(A) HAS BEEN APPLIED TO THIS SITE.

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**  
 Director: *Mark A. Lopez* 9/16/13  
 Chief, Division of Land Development: *Ket Leavelle* 9/10/13  
 Chief, Development Engineering Division: *John D. ...* 9/3/13

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK  
 TEL: 301-421-4024 FAX: 301-421-4186

**PREPARED FOR and OWNER**  
 BA Waterloo Condominium, LLC  
 c/o Bozzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
 Greenbelt, Maryland 20770  
 Attn: Duncan Slidell  
 Ph: 301-623-1525

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931, EXPIRATION DATE: MAY 21, 2016.



**SHIPLEY'S GRANT**  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423

**ADDRESS CHART**

STREET ADDRESS				STREET ADDRESS				STREET ADDRESS			
POD No.	LOWER UNIT	UPPER UNIT	ROAD NAME	POD No.	LOWER UNIT	UPPER UNIT	ROAD NAME	POD No.	LOWER UNIT	UPPER UNIT	ROAD NAME
A1	5441-1	5441-2	LOGANS WAY	B1	5424-1	5424-2	LOGANS WAY	C1	5411-1	5411-2	LOGANS WAY
A2	5445-1	5445-2		B2	5421-1	5421-2		C2	5404-1	5404-2	
A3	5443-1	5443-2		B3	5425-1	5425-2		C3	5407-1	5407-2	
A4	5441-1	5441-2		B4	5423-1	5423-2		C4	5405-1	5405-2	
A5	5434-1	5434-2		B5	5421-1	5421-2					
A6	5431-1	5431-2		B6	5418-1	5418-2					
A7	5435-1	5435-2		B7	5417-1	5417-2					
A8	5433-1	5433-2		B8	5415-1	5415-2					

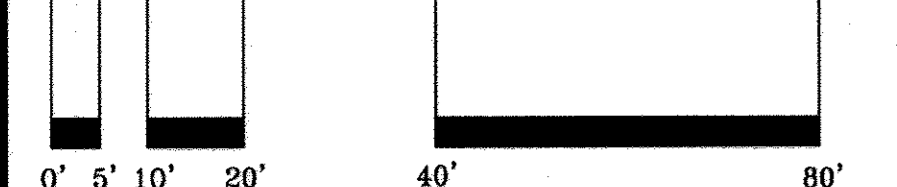
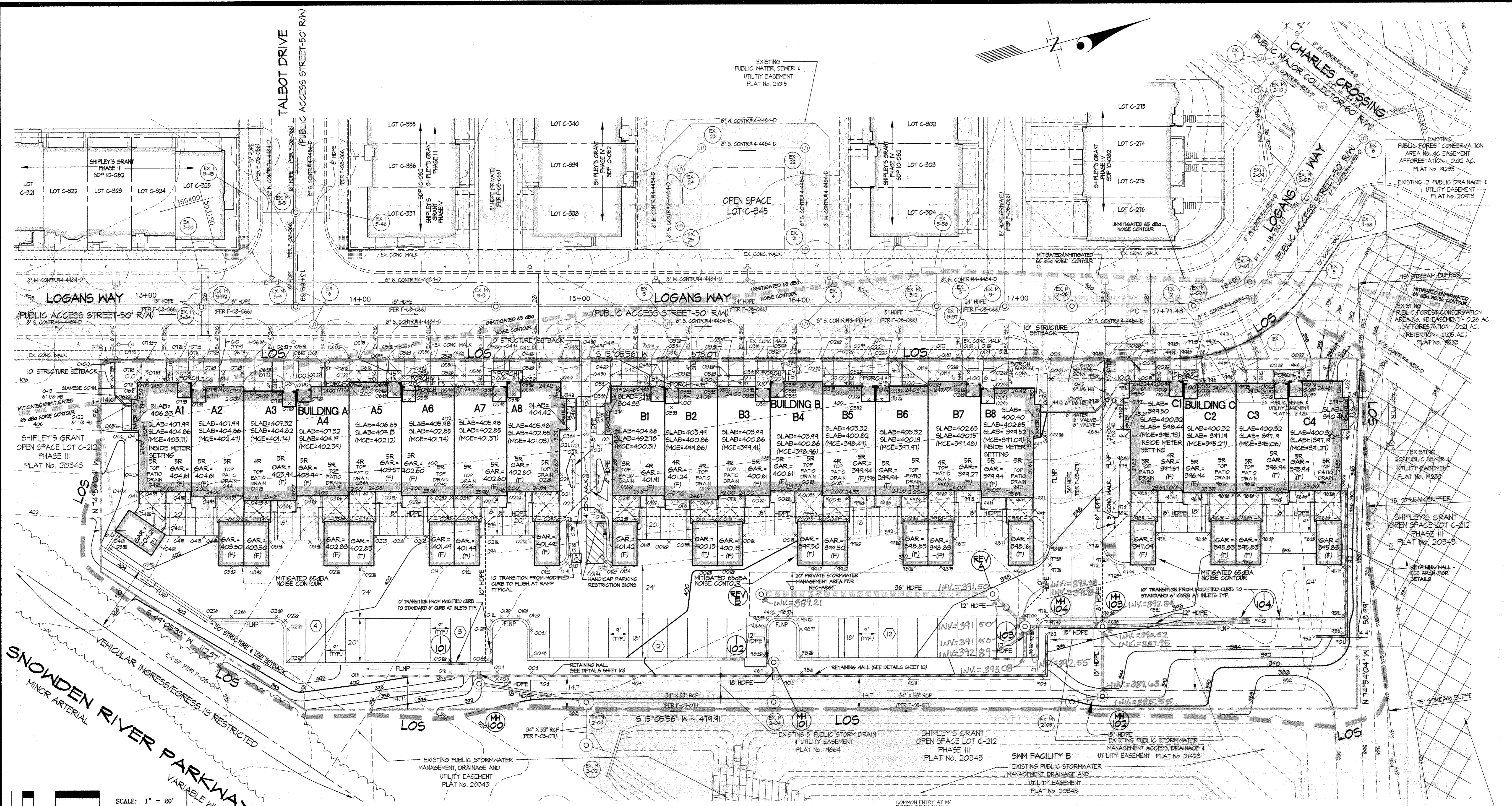
**PERMIT INFORMATION CHART**

SUBDIVISION NAME:	SHIPLEY'S GRANT	SECTION/AREA:	---	PARCEL:	PARCEL E-4
PLAT No.	21425	ZONE	R-A-15	TAX MAP	31
BLOCK	1	ELEC. DIST.	1	CENSUS TRACT	6011.02
WATER CODE:	DOT	SEWER CODE:	2780000		

**REVISED COVER SHEET**

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
August 2016	37-1&2	1 OF 11





APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark A. Cejka* 9/10/13  
 Director

*Neil S. Levenson* 9/10/13  
 Chief, Division of Land Development

*John J. ...* 9/13/13  
 Chief, Development Engineering Division

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
 BURTNSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NOTES:

- BRICK PAVEMENT ALL BUILDING CONSTRUCTIONS UNLESS NOTED OTHERWISE.
- ALL BUILDING WALLS WITHIN 10' OF A BGE TRANSFORMER SHALL BE CONSTRUCTED FOR A MINIMUM FIRE RESISTANCE RATINGS OF 3 HOURS.
- ALL ROOF DRAINS SHALL BE PIPED TO THE STORM DRAIN SYSTEM.
- THE 3 APARTMENT/CONDOMINIUM BUILDINGS ARE COMPOSED OF PODS, EACH OF WHICH CONTAINS A LOWER AND AN UPPER UNIT (2 UNITS PER POD). THE UNIT BREAK DOWN FOR EACH BUILDING IS:

BUILDING	NUMBER OF PODS	NUMBER OF UNITS
A	0 (A1 - A8)	16
B	0 (B1 - B8)	16
C	4 (C1 - C4)	40 TOTAL

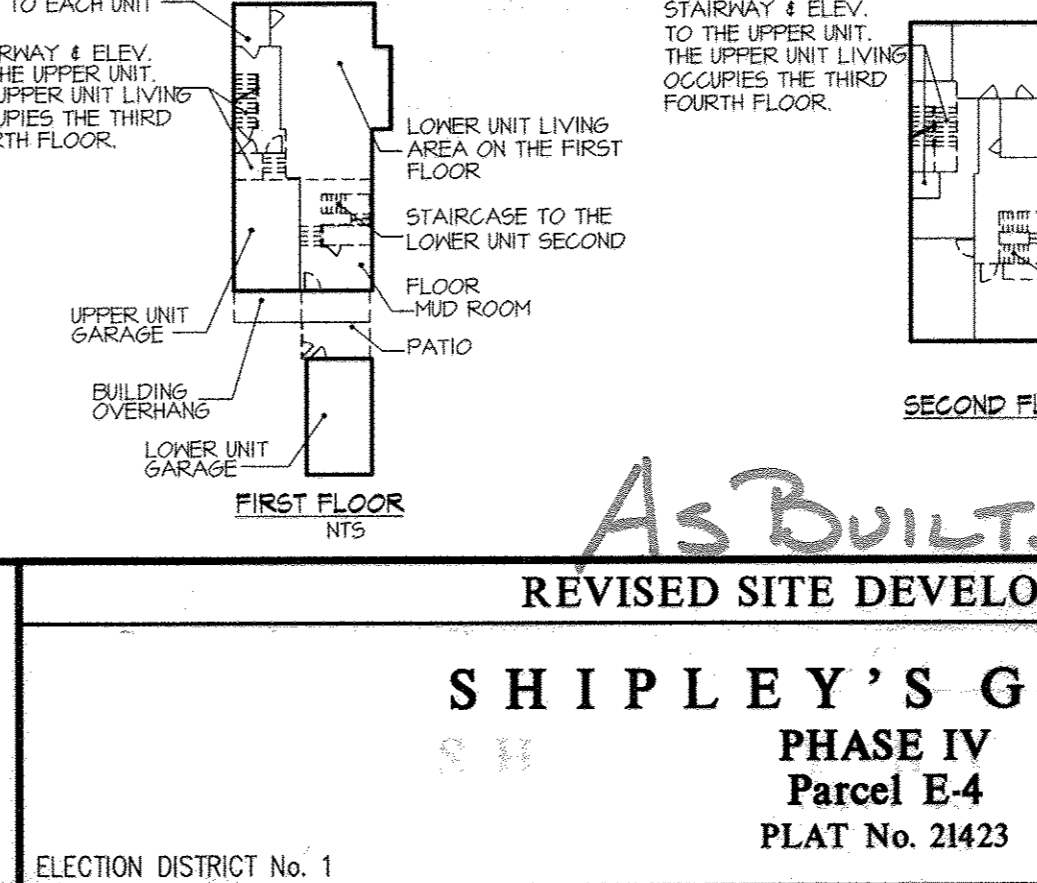
- EACH UPPER APARTMENT/CONDOMINIUM UNIT HAS INTERNAL (AND DIRECT ACCESS) TO AN INTEGRAL GARAGE. THE DRIVEWAY OUTSIDE EACH INTERNAL GARAGE AVAILABLE AS TANDEN PARKING FOR THE UNIT THAT IT SERVES. EACH LOWER APARTMENT/CONDOMINIUM UNIT HAS AN EXTERNAL GARAGE WITH ACCESS THROUGH AN EXTERNAL PATIO. SEE BUILDING CIRCULATION DIAGRAM RIGHT.

DATE: 1-26-2013 BY: MSJ APPR: mjt

**PROFESSIONAL CERTIFICATION**  
 I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14924, Expiration Date: May 21, 2018.

*Shilke*  
 DATE

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14637, EXPIRATION DATE: MAY 21, 2014.



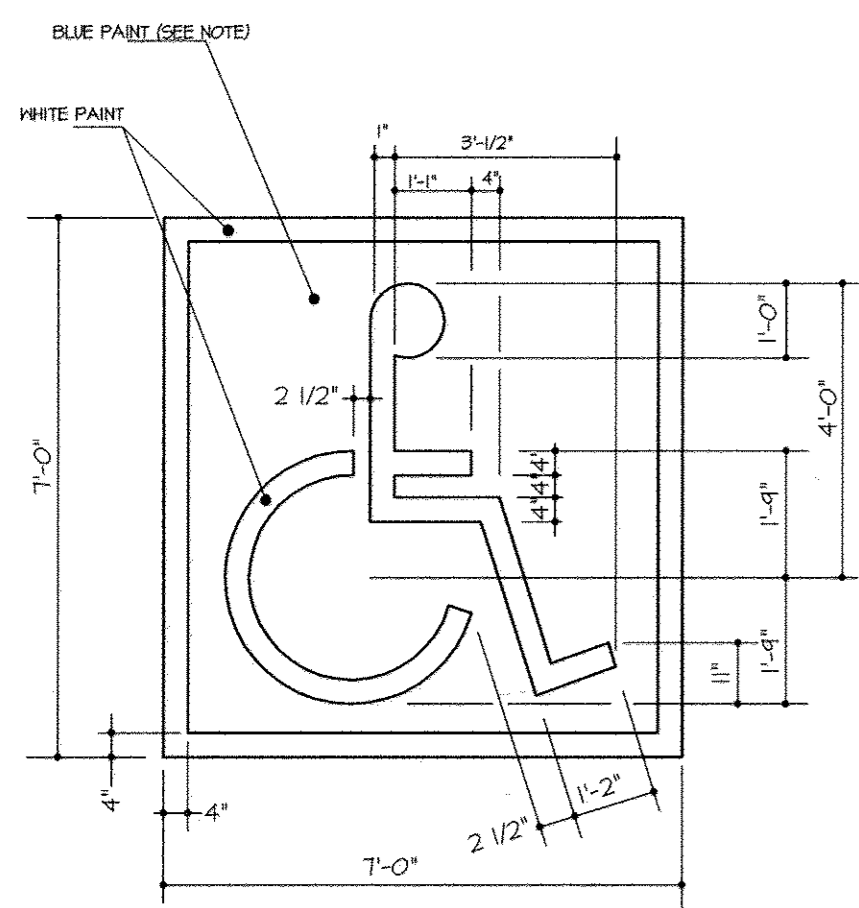
PREPARED FOR and OWNER  
 BA Waterloo Condominium, LLC  
 c/o Bozzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
 Greenbelt, Maryland 20770  
 Attn: Duncan Sliedell  
 Ph: 301-623-1525

**As Builts**  
 REVISED SITE DEVELOPMENT PLAN  
**SHIPLEY'S GRANT**  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423

SCALE	ZONING	G. L. W. FILE NO.
1"=20'	R-A-15	07002
DATE: AUG. 2013	TAX MAP - GRID: 37-1&2	SHEET: 2 OF 11

ASBUILTS SDF 10-087

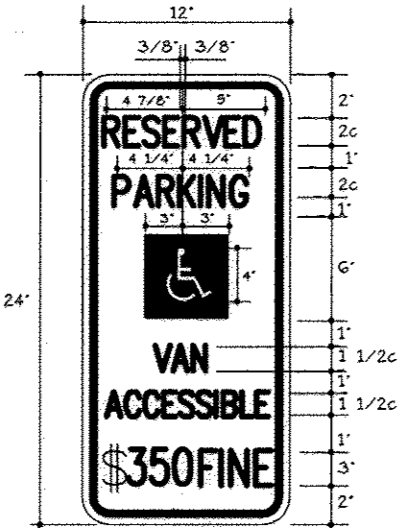




NOTE: SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND (WHITE ON BLUE, COLOR NO. 105040 IN FED. STANDARD 582-DOUBLE COAT TYP)

HANDICAP STENCIL DETAIL

N.T.S.

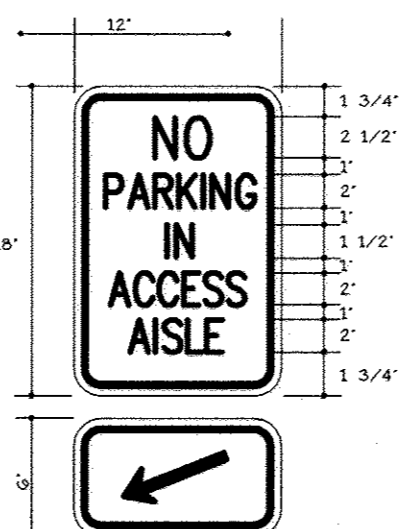


General Notes:

1. Signs shall meet design standards of the Federal Highway Administration and conform to the State of Maryland Standard Highway sign booklet detail R7-8.
2. One sign is required per space placed as shown on site plan.
3. Spaces indicated on site plan as "VAN" accessible shall be signed accordingly.
4. Colors: Legend and Border - green  
Symbol - white on blue background  
background - white

HANDICAP PARKING SIGNS DETAIL

N.T.S.

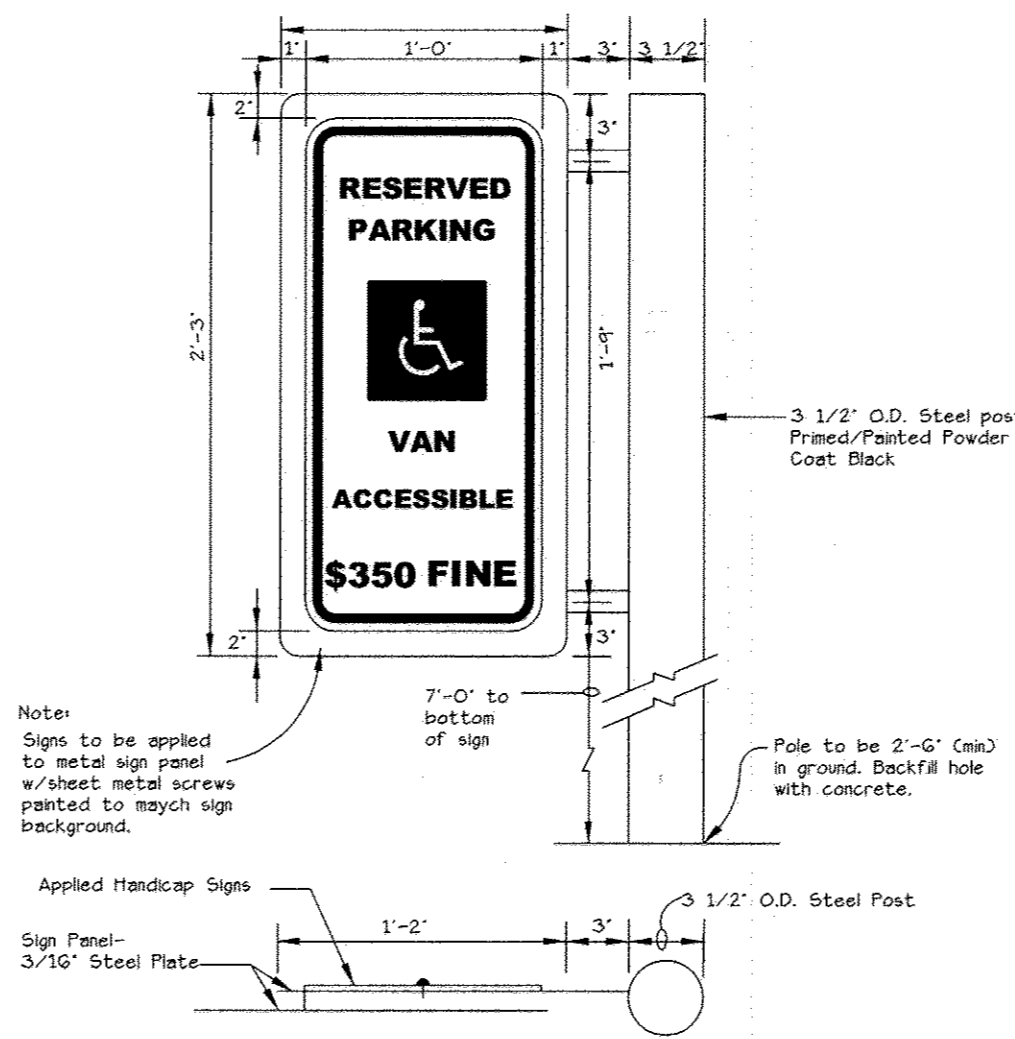


General Notes:

1. Signs shall meet design standards of the Federal Highway Administration and conform to the State of Maryland Standard Highway sign booklet detail R8-1(2).
2. One sign is required per access aisle placed as shown on site plan.
3. Colors: Legend and Border - green  
Symbol - white on blue background  
background - white

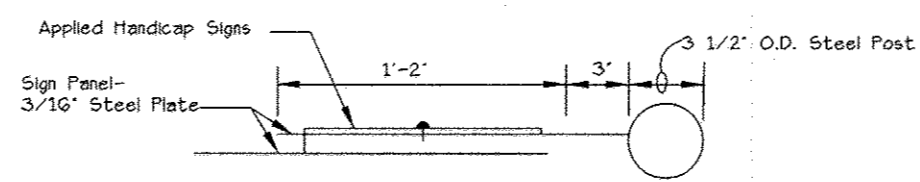
ACCESS ISLE SIGN DETAIL

N.T.S.



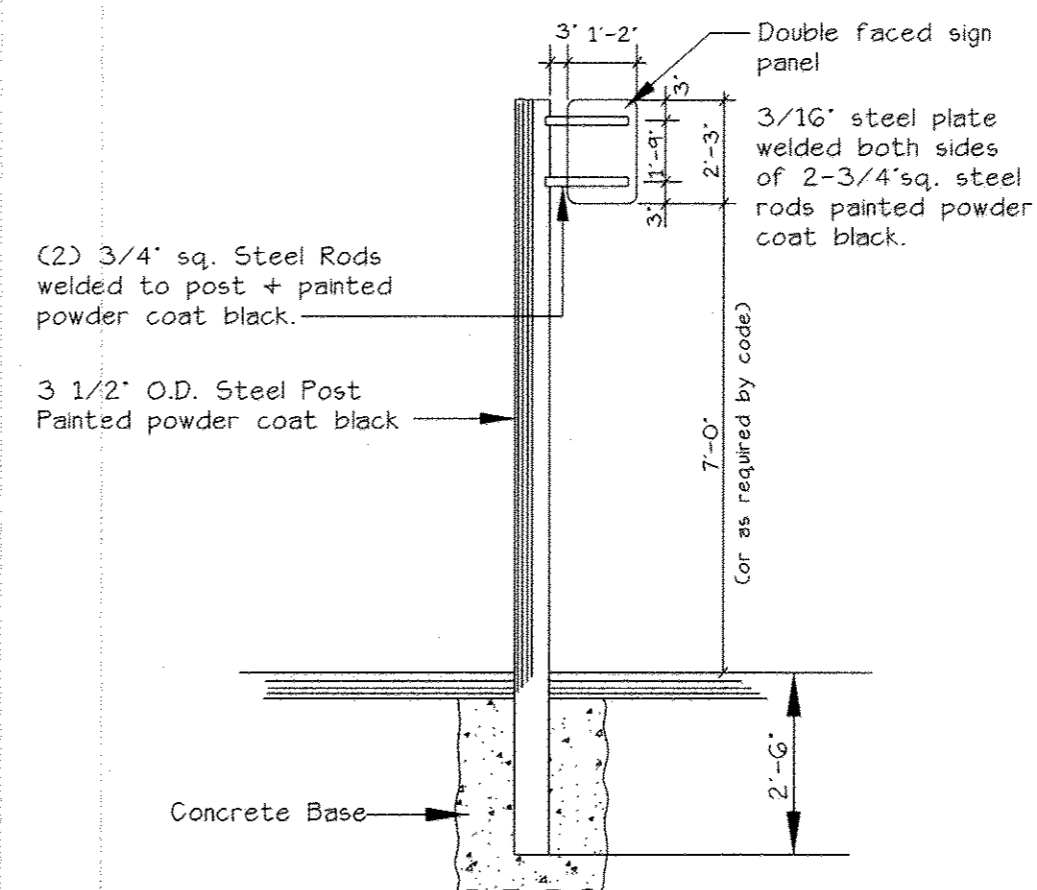
Note:

- Signs to be applied to metal sign panel w/ sheet metal screws painted to match sign background.
- Pole to be 2'-6" dia in ground backfill hole with concrete.



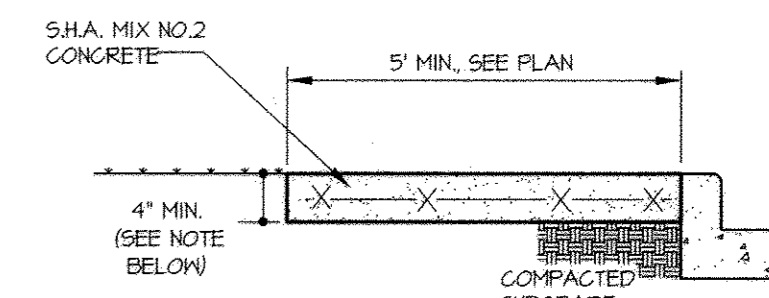
MOUNTING DETAIL FOR PARKING RESTRICTION SIGN

N.T.S.



POST & SIGN PANEL DETAIL FOR PARKING RESTRICTION SIGN

N.T.S.



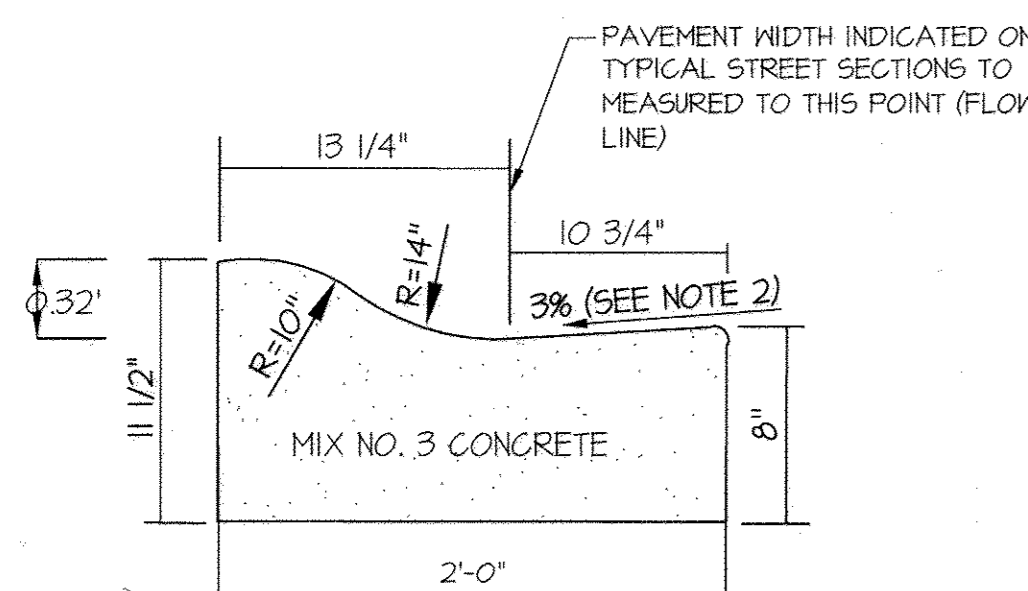
6"x6" #2.9 X #2.4 MESH (DISCONTINUE AT EXPANSION JOINT)

NOTE:

1. UNLESS SHOWN OTHERWISE, INSTALL EXPANSION JOINTS AT MAX. 20'-0" O.C. AND SCORING JOINTS AT MAX. 5'-0" O.C.
2. CONCRETE THICKNESS SHALL BE 4" AT DRIVEWAY LOCATIONS.
3. PROVIDE 1/2" PREFORMED BITUMINOUS EXPANSION JOINT WHERE SIDEWALK ABUTS AGAINST CURB AND SET SIDEWALK 1/4" ABOVE CURB PER HO. CO. DET. R-3.05.

TYPICAL SIDEWALK SECTION

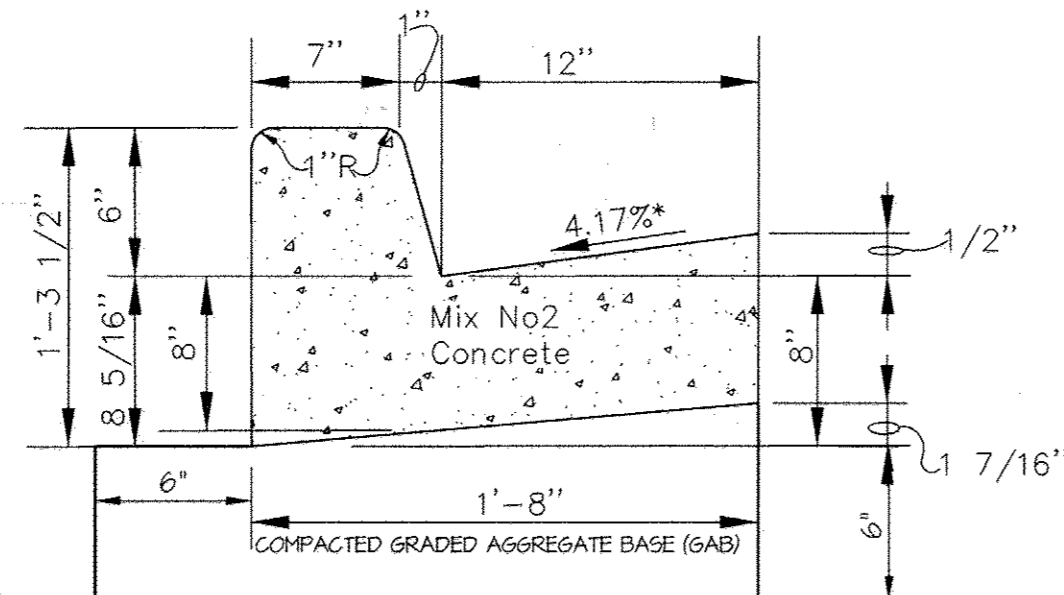
N.T.S.



THE GUTTER PAN AT THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT.

MODIFIED COMBINATION CURB AND GUTTER

N.T.S.



6" COMBINATION CURB AND GUTTER (AT INLETS ONLY)

N.T.S.



SCHEMATIC BUILDING C ELEVATION

N.T.S.

6" STANDARD, REVERSE AND MODIFIED COMBINATION CURB AND GUTTER NOTES:

1. 50' MAX. BETWEEN EXPANSION JOINTS & 10' MAX. BETWEEN CONTROL JOINTS.
2. STANDARD CURB & GUTTER SHALL BE USED WHERE THE ROADWAY SLOPES TOWARDS THE CURB & GUTTER. REVERSE CURB & GUTTER SHALL BE USED WHERE THE ROADWAY SLOPES AWAY FROM THE CURB & GUTTER.
3. A MINIMUM OF 2" OF COMPACTED STABILIZED EARTH OR EQUIVALENT SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER FLOW LINE (STANDARD CURB ONLY).
5. PROVIDE A 5' TRANSITION TO OPEN SECTION.



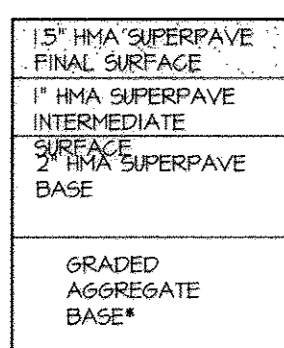
SCHEMATIC BUILDING A ELEVATION

N.T.S.



SCHEMATIC BUILDINGS B ELEVATION

N.T.S.



\* NOTE  
FOR CBR 3 TO 5, USE 8" GAB  
FOR CBR 5 TO 7, USE 4" GAB  
FOR CBR >7, USE 3" GAB

P-2

PAVING NOTES:

1. P-2 IS A HOWARD COUNTY R-2.01 SECTION DESIGNATION.
2. OTHER EQUIVALENT PAVING SECTIONS MAY BE USED WHEN APPROVED BY A PROFESSIONAL SOILS ENGINEER.

BITUMINOUS PAVING SECTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

<i>Mark A. Cayle</i>	9/4/13
Director	Date
<i>Robert J. ...</i>	9/10/13
Chief, Division of Land Development	Date
<i>...</i>	9/13/13
Chief, Development Engineering Division	Date

GLW GUTSCHICK LITTLE & WEBER, P.A.

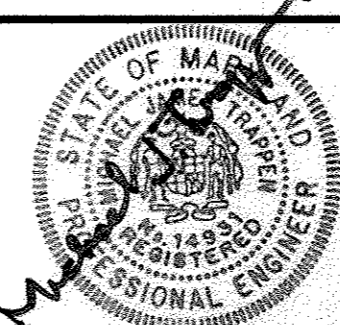
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT. 410-886-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

PREPARED FOR and OWNER

BA Waterloo Condominium, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, Maryland 20770  
Attn: Duncan Slidell  
Ph: 301-623-1525

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931  
EXPIRATION DATE: MAY 23, 2012



REVISED SITE AND HANDICAP ACCESSIBILITY DETAILS AND SHC TABLE

SHIPLEY'S GRANT NO ASBUILT INFORMATION  
PHASE IV  
Parcel E-4  
PLAT No. 21423

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
AUG, 2013	37-1&2	3 OF 11

ELECTION DISTRICT No. 1

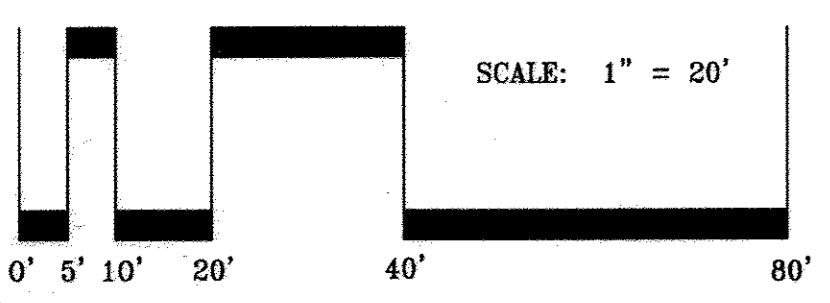
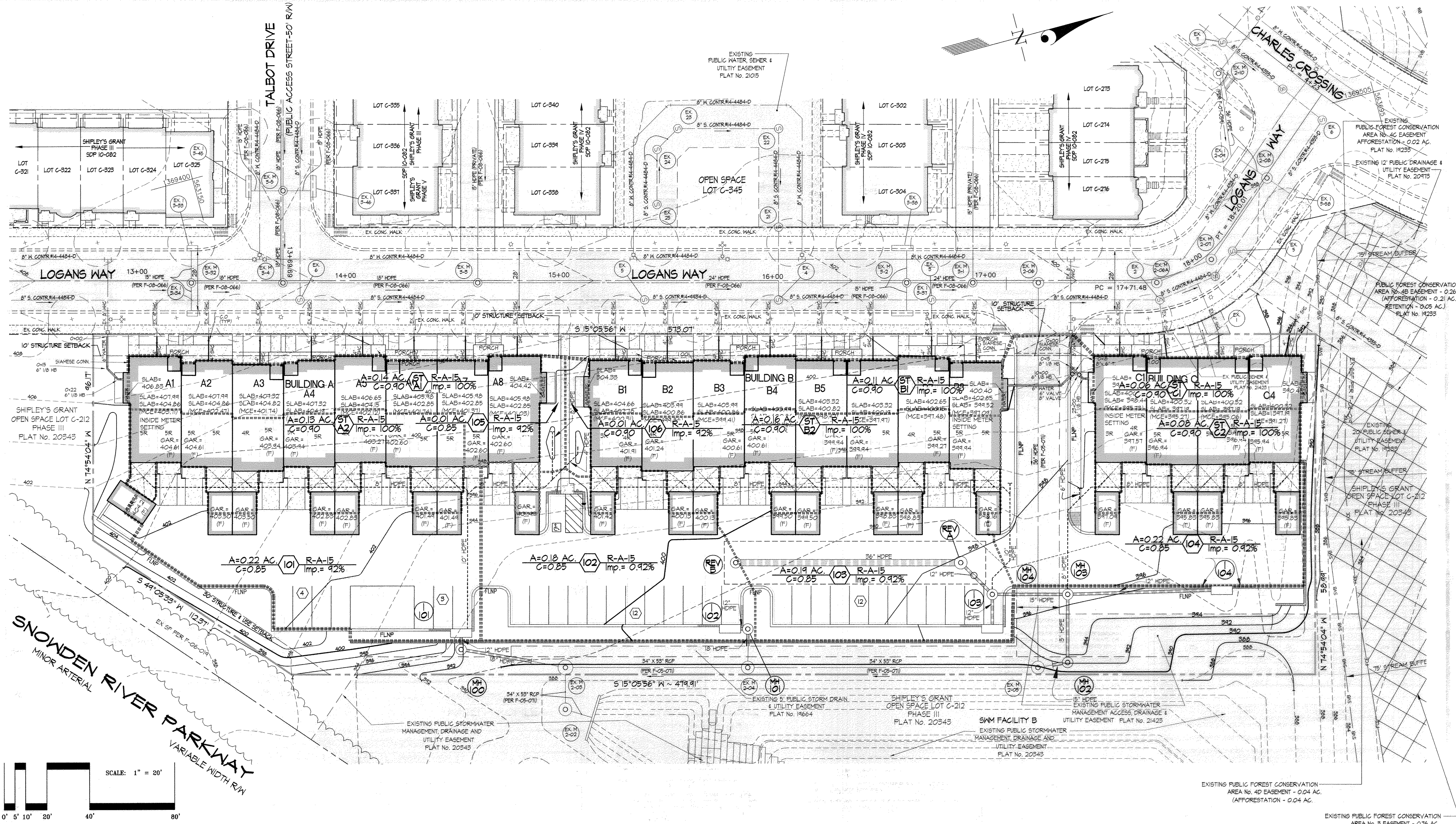
HOWARD COUNTY, MARYLAND

SDP 10-087









HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Paul H. Cagle* 9/1/13  
 Director Date

*Victoria Lewis* 9/10/13  
 Chief, Division of Land Development Date

*Chad Lamm* 9/13/13  
 Chief, Development Engineering Division Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3609 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK  
 BURTONTVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

T-26-2013	REV. STORM DRAIN & DRAINAGE AREA DELINEATIONS	MSJ	mjt
DATE	REVISION	BY	APPR.

PREPARED FOR and OWNER  
 BA Waterloo Condominium, LLC  
 c/o Bozzuto Homes, Inc.  
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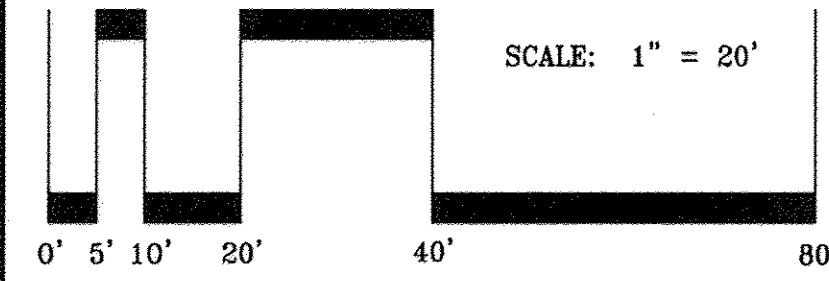
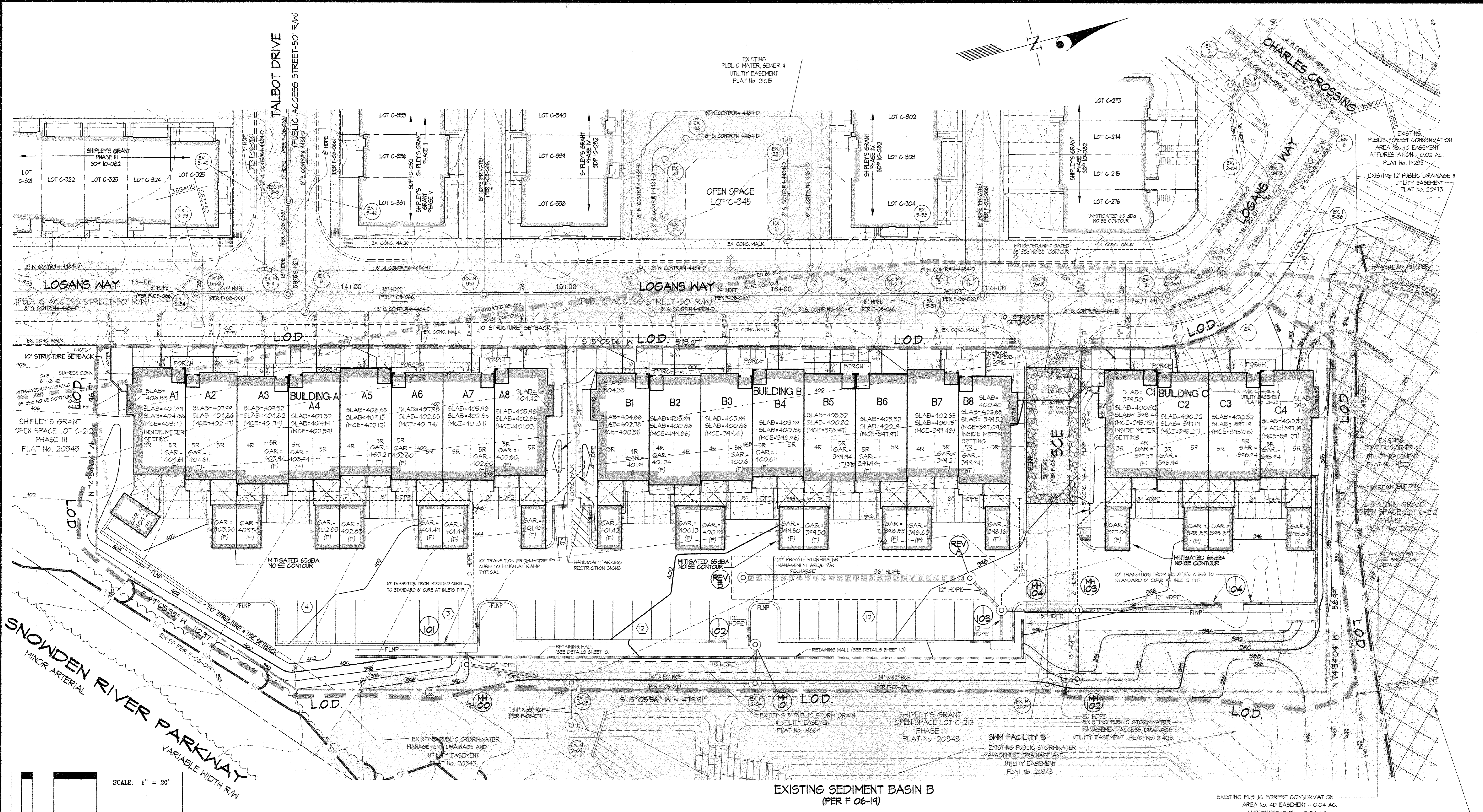
PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS  
 WERE PREPARED OR APPROVED BY  
 ME, AND THAT I AM A DULY LICENSED  
 PROFESSIONAL ENGINEER UNDER THE  
 LAWS OF THE STATE OF MARYLAND,  
 LICENSE NO. 14631  
 EXPIRATION DATE: MAY 21, 2014



REVISED DRAINAGE AREA MAP  
**SHIPLEY'S GRANT NO ASBUILT INFORMATION**  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=20'	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
AUG., 2013	37-1&2	5 OF 11





APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *David M. Long* 9/10/12  
 Chief, Division of Land Development: *Victoria L. ...* 9/10/13  
 Chief, Development Engineering Division: *...* 9/13/13

DEVELOPER'S/BUILDER'S CERTIFICATE  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.  
 SIGNATURE OF DEVELOPER/BUILDER: *...* 8/05/2013

ENGINEER'S CERTIFICATE  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 OF REGISTERED ENGINEER: *Michael J. ...* 8/20/13

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*Michael J. ...* 8/20/13  
 Registered Professional Engineer

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

GLWGUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
1-26-2013	REV. BLDG'S, PARKING LAYOUT, STORM DRAIN & GRADING		

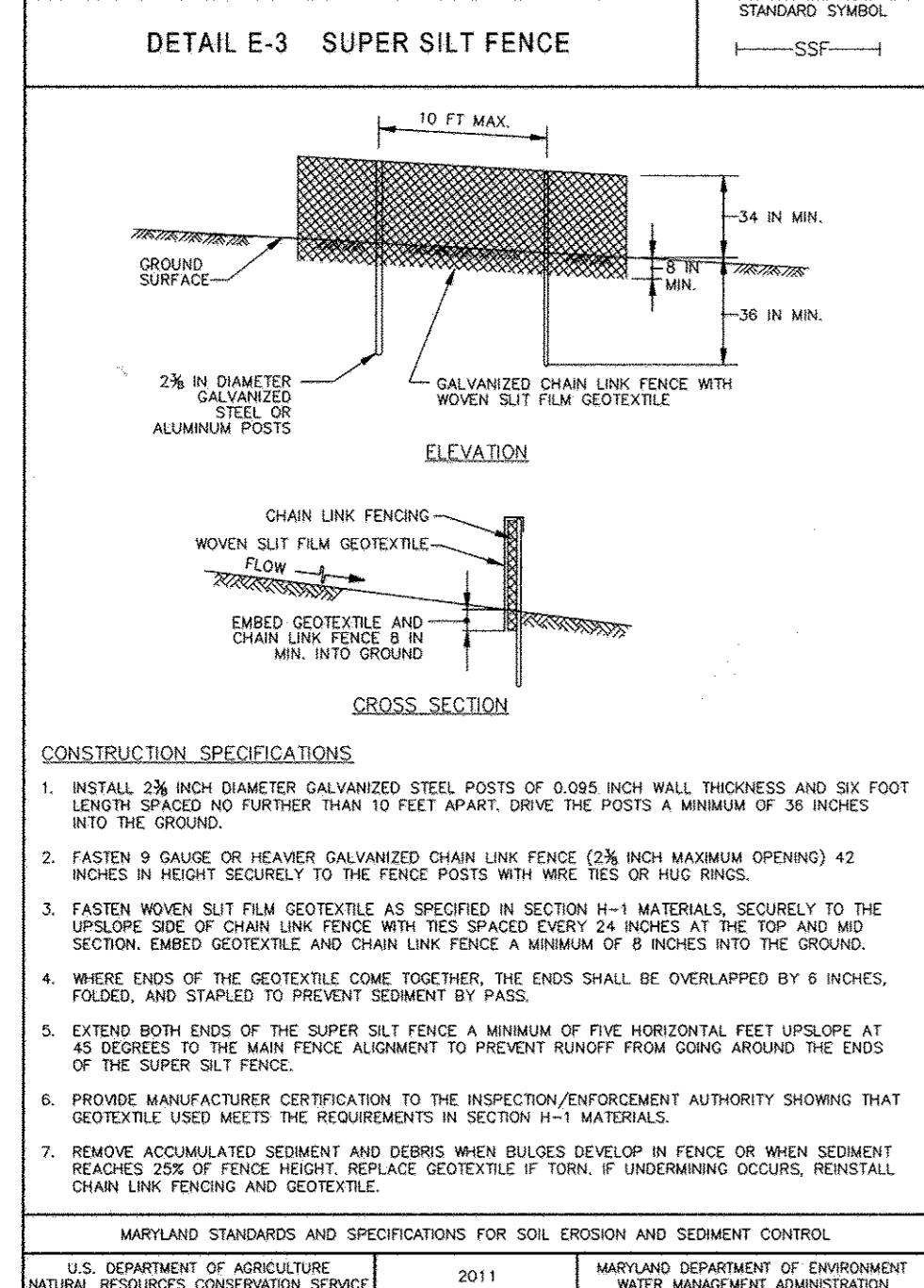
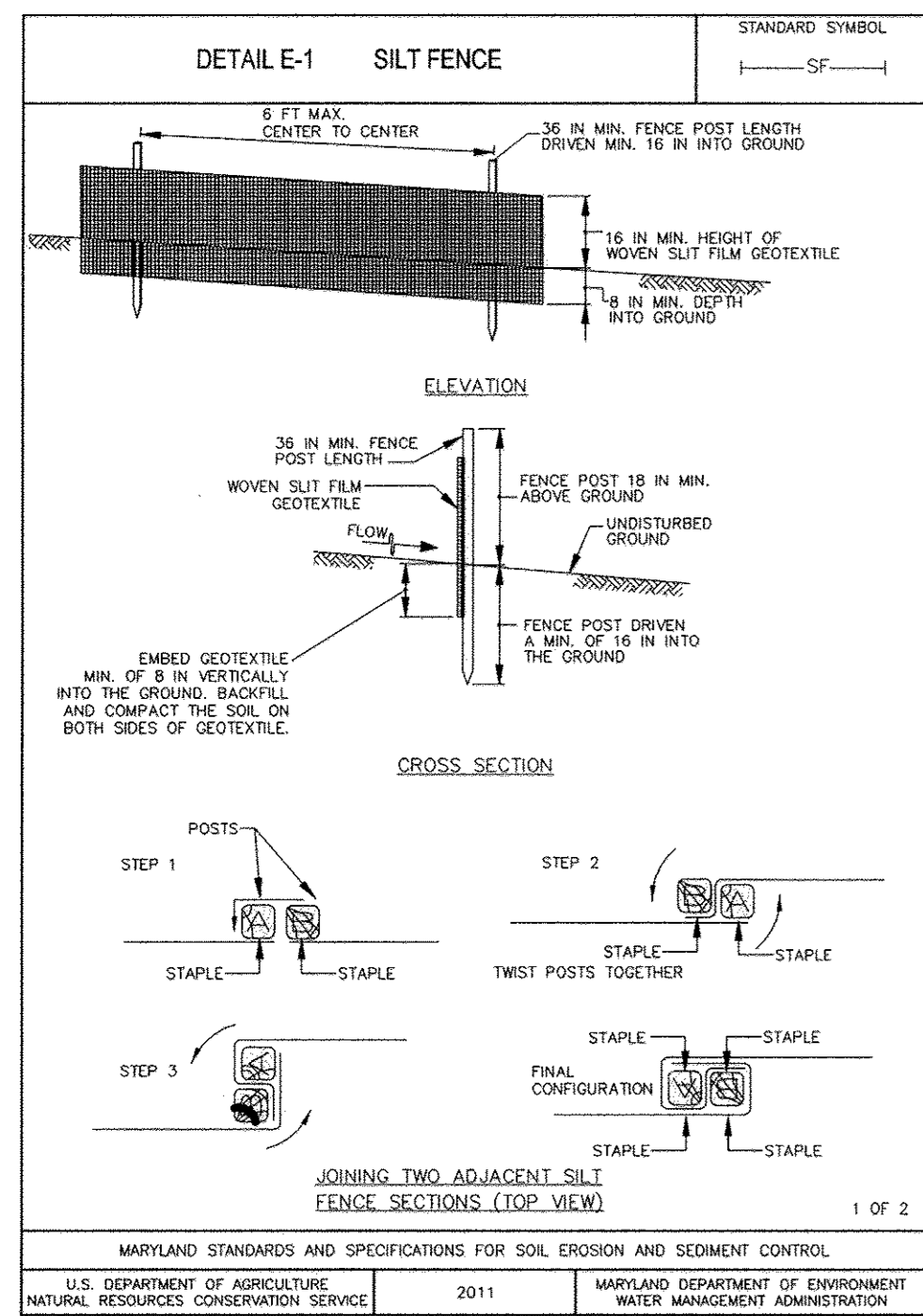
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PROFESSIONAL CERTIFICATION  
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 EXPIRATION DATE: MAY 21, 2014

REVISED SEDIMENT CONTROL PLAN  
 SHIPLEY'S GRANT  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423  
 ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
AUG, 2013	37-1&2	6 OF 11





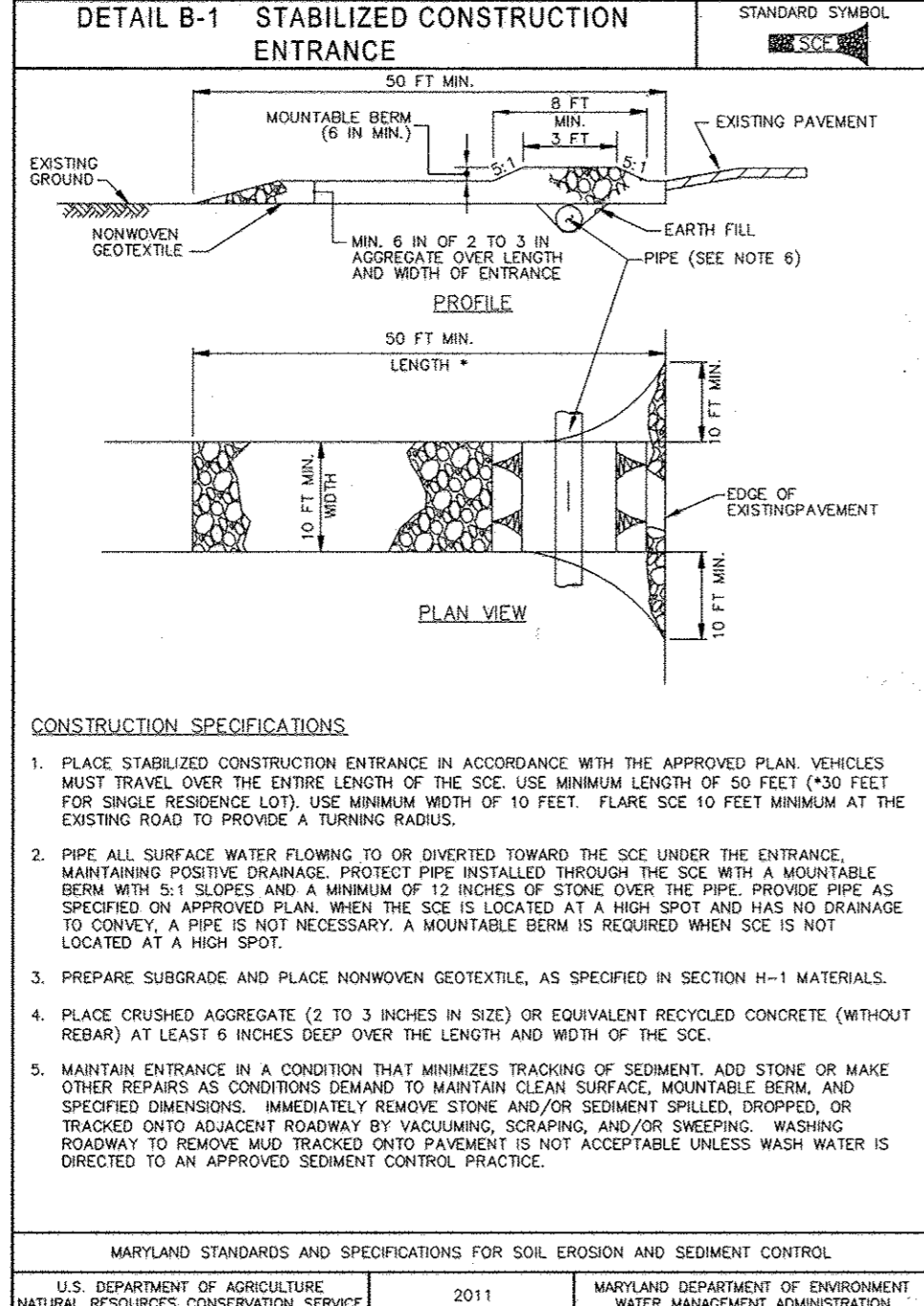
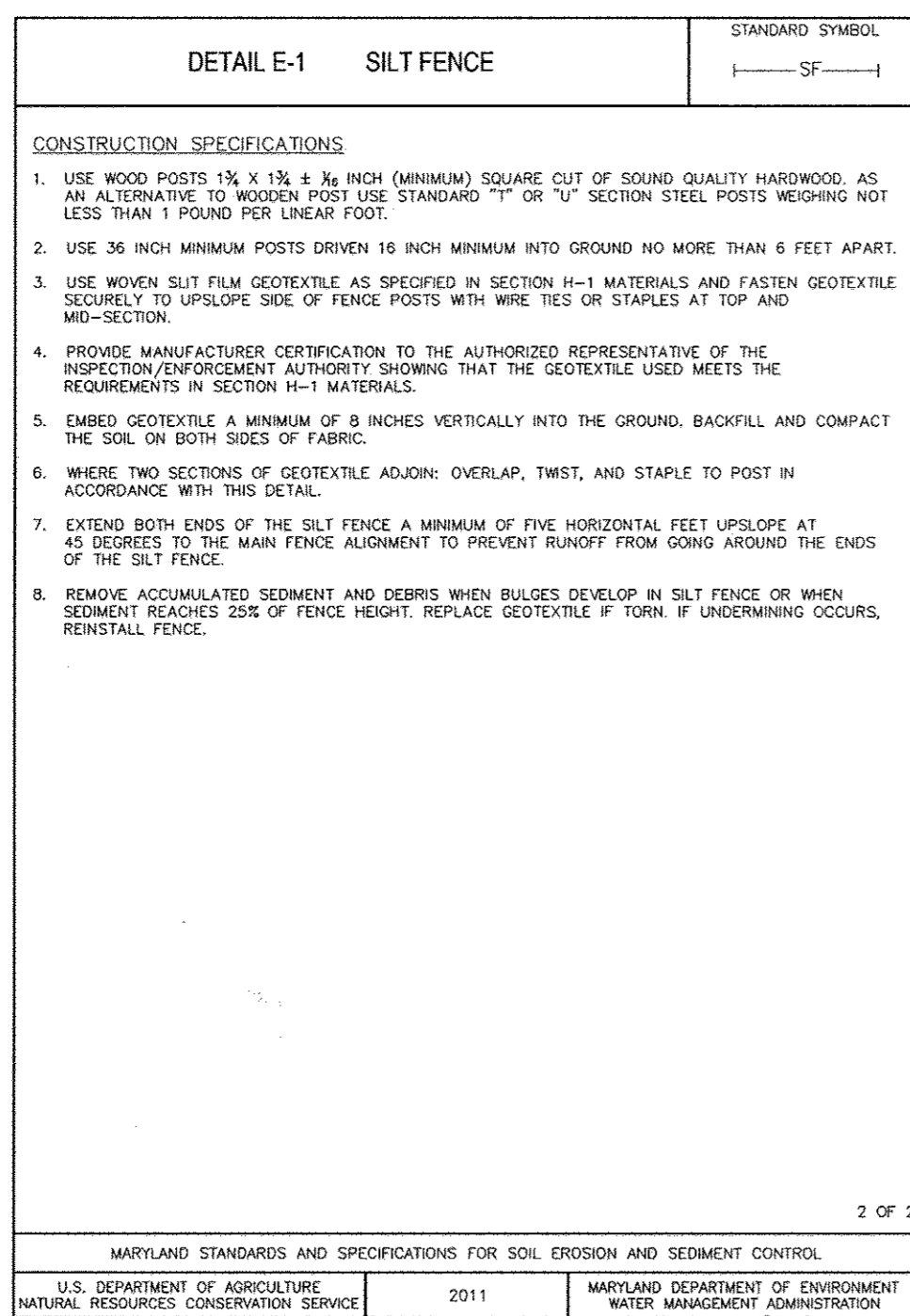
- SEQUENCE OF CONSTRUCTION**
1. Arrange pre-construction meeting with the Sediment Control Inspector and obtain the Grading Permit. (1 day)
  2. Install stabilized construction entrances and existing sediment controls installed under F 06-014 and F 08-006 and upgrade/repair as necessary (1 week)
  3. Grade site. (1 month)
  4. Begin building construction. Install site utilities. (1 month)
  5. Install curb and gutter, sidewalks, and base pave. Stabilize the building area with the finished floor slab. Stabilize remaining areas with grass seed and mulch. (2 months)
  6. When all areas drain to the Sediment Basin has been stabilized and permission has been granted by the Sediment Control Inspector, remove silt fence and super silt fence and stabilize remaining areas. (2 weeks)
  7. Finish building construction. Remove all remaining sediment controls and stabilize with grass seed and mulch. Install landscaping and surface paving.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Derek A. Leyle* 9/16/13  
Director Date

*Scott Redmond* 9/16/13  
Chief, Division of Land Development Date

*Michael J. Tracy* 9/23/13  
Chief, Development Engineering Division Date



- CONSTRUCTION SPECIFICATIONS**
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE CURB. USE MINIMUM WIDTH OF 50 FEET. FLARE SIDE TO SIDE MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
  2. FASTEN 3 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES.
  3. FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH THIS SPECIFIED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE A MINIMUM OF 6 INCHES INTO THE GROUND.
  4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
  5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM COMING AROUND THE ENDS OF THE SUPER SILT FENCE.
  6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTOR/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
  7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

**BUILDER'S CERTIFICATE**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND 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 HCCD."

*Michael J. Tracy* 9/16/13  
SIGNATURE OF DEVELOPER/BUILDER DATE

**B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION**

**DEFINITION**  
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

**PURPOSE**  
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

**CRITERIA**

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3 A.1.1 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

**TEMPORARY SEEDING SUMMARY**

No.	SPECIES	APPLICATION RATE (lb/acre)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER (10-10-10)		LIME RATE
					N	P	
1.	ANNUAL KYRIGRASS	40 lb/acre	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 lb/acre (10 lb./1,000 sq. ft.)	2 tons/acre (90 lb./1,000 sq. ft.)	
2.	PEARL MILLET	20 lb/acre	May 16 to July 31	0.5 INCHES			

**SEDIMENT CONTROL NOTES**

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 313-1855
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:  
A. 3 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DICES, SKALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3H:1V), AND  
B. 1 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
4. ALL SEDIMENT TRANSPORTATION SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOIL TEMPORARY SEEDINGS AND MULCHINGS (SEC. B). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. 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.
7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9. 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 MATERIAL APPROVAL IS MADE.
10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 3 PIPE LENGTHS OR THAT WHICH IS BAG SKIPPED AND STABILIZED WITHIN 1 WORKING DAY, WHICHEVER IS SHORTER.

**ENGINEER'S CERTIFICATE**

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 COUNTY CONSERVATION DISTRICT."

*Michael J. Tracy* 9/16/13  
SIGNATURE OF DEVELOPER/BUILDER DATE

**B-4-3 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

**DEFINITION**  
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE ESTABLISHMENT.

**PURPOSE**  
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

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

**CRITERIA**

1. TEMPORARY STABILIZATION
  - a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
  - b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
  - c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
  - a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:  
I. SOIL PH BETWEEN 6.0 AND 7.0.  
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).  
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: LOESS GRASS WILL BE PLANTED THEN A SANDY SOIL LESS THAN 30 PERCENT SILT PLUS CLAY WOULD BE ACCEPTABLE.  
IV. SOIL CONTAINS 15 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.  
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.  
b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.  
c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.  
d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.  
e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAYERS AREAS TO SMOOTH THE SURFACE. REMOVE LARGE OBJECTS FROM THE SURFACE. SOIL SHOULD BE LEFT IN A SUITABLE CONDITION FOR APPLICATION. LOOSEEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 3 TO 5 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

**B. TOPSOILING**

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
  - a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
  - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
  - c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
  - d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
  - a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS.
  - b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS, GRASS, QUACK GRASS, JOHNSON GRASS, NET SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
  - c. 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.
6. TOPSOIL APPLICATION
  - a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
  - b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
  - c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR JUDDY CONDITION WHEN THE SUBSOIL IS EXPOSED TO A DEPTH OF 100 INCHES. DEEPER PREPARATION BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
7. SOIL AMENDMENTS, FERTILIZER, AND LIME SPECIFICATIONS
  - a. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
  - b. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING, AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LABELS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTY OF THE PRODUCER.
  - c. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME) MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND A MINIMUM OF 70 PERCENT WILL PASS THROUGH A #200 MESH SIEVE.
  - d. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. WHERE THE SUBSOIL EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

**REVISSED SEDIMENT CONTROL NOTES AND DETAILS**

**SHIPLEY'S GRANT**  
PHASE IV  
Parcel E-4  
PLAT No. 21423

PREPARED FOR and OWNER  
BA Waterloo Condominium, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, Maryland 20770  
Attn: Duncan Slidel  
Ph: 301-623-1525

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931, EXPIRATION DATE: MAY 21, 2014.

*Michael J. Tracy* 9/16/13  
SIGNATURE OF DEVELOPER/BUILDER DATE

*John Robinson* 9/20/13  
RECORD SCD. DATE

**B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING**

**DEFINITION**  
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

**PURPOSE**  
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

**CONDITIONS WHERE PRACTICE APPLIES**  
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

**CRITERIA**

1. SEEDING
  - a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON A PROJECT. REFER TO TABLE A.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY THE SEED AND LABEL INFORMATION.
  - b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWING.
  - c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA. INOCULANTS AS DIRECTED ON THE PACKAGE, USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN KILL BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
  - d. SOD OR SEED MUST NOT 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 DISPERSION OF PHYTO-TOXIC MATERIALS.
2. APPLICATION
  - a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
    - i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1 PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
    - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDBED AREA WITH A HEAVY ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
  - b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
    - i. CULTIPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. PREPARED MEDIUM SHD BE APPLIED TO EACH OTHER.
    - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
  - c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
    - i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN 100 POUNDS PER ACRE TOTAL, SOLUBLE NITROGEN P205 (PHOSPHORUS), 200 POUNDS PER ACRE (K2O POTASSIUM), 200 POUNDS PER ACRE.
    - ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (80 TO 100 TONS PER ACRE) MAY BE APPLIED BY HYDROSEEDING. NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
    - iii. MULCH AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTING FERTILIZER APPLICATION.
    - iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

**B. MULCHING**

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
  - a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOULDY, CANKER, DECAYED, OR EXCESSIVELY DIRTY. NOTE: USE ONLY GREYISH STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
  - b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
    - i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMITY SPREAD SLURRY.
    - ii. WCFM INCLUDING DYE MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
    - iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER ON APPLICATION HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
    - iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
    - v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 40 PERCENT MINIMUM.
2. APPLICATION
  - a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
  - b. WHEN STRAW MULCH IS USED, IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED WHEN USING A MULCH ANCHORING TOOL. INCREASE THE APPLICATION RATE TO 25 TONS PER ACRE.
  - c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 100 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. ANCHORING
  - a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS LISTED BY PREFERENCE, DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
    - i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
    - ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 70 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
    - iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DUR (AGRO-TACK), DCA-10, RETROTECT, TEREX, AND TEREX MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CONTACTS. MULCH SUCH AS VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
    - iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAKED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3000 FEET LONG.

**B-4-3 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

**DEFINITION**  
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

**PURPOSE**  
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

**CONDITIONS WHERE PRACTICE APPLIES**  
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

**CRITERIA**

1. GENERAL USE
  - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
  - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SLOPES, STREAM BANKS, OR DYES OR FOR SPECIAL PURPOSES SUCH AS NATURE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 343 - CRITICAL AREA PLANTING.
  - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
  - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY 1/2 TONS PER ACRE FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (50 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
2. TURFGRASS MIXTURES
  - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
  - b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
    - i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF GENERAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 15 TO 22 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
    - ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE. FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
    - iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN DROUGHT RESISTANT AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO MEDIUM SHADE. RECOMMENDED CERTIFIED TALL FESCUE CULTIVARS 40 TO 100 PERCENT CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 15 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
    - iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY INTENSIVELY MANAGED TURF AREAS. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

**PERMANENT SEEDING SUMMARY**

No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER (10-20-20)		LIME RATE
					N	P	
1.	Certified Tall Fescue Blend (4:1 amounts of Falon IV, Penn 1901 & Rebel Exotic)	6-8 lb./1000 s.f.	Mar. 1 to May 15, Aug. 15 to Oct. 15	1/4 - 1/2 IN.	1.0 lb./1000 sq. ft. (45 lb./acre)	90 lb./1000 sq. ft.	

**PERMANENT SEEDING SUMMARY**

**HARDNESS ZONE: 6b (101 Fescue)**

**SEED MIXTURE: #5**

**APPLICATION RATE: 6-8 lb./1000 s.f.**

**SEEDING DATES: Mar. 1 to May 15, Aug. 15 to Oct. 15**

**SEEDING DEPTHS: 1/4 - 1/2 IN.**

**FERTILIZER (10-20-20): 1.0 lb./1000 sq. ft. (45 lb./acre)**

**LIME RATE: 90 lb./1000 sq. ft.**

**REVISIONS**

NO.	DATE	REVISION
1/26/2013	1/26/2013	REV. NOTES AND SITE ACREAGE

**SCALE**  
AS SHOWN

**ZONING**  
R-A-15

**G. L. W. FILE NO.**  
07002

**DATE**  
AUG., 2013

**TAX MAP - GRID**  
37-1&2

**SHEET**  
7 OF 11

**HOWARD COUNTY, MARYLAND**

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK  
BURTONVILLE, MARYLAND 20886  
TEL: 301-421-4024 FAX: 301-889-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DES. mjt DRN. mjt CHK.

**REVISIONS**

NO.	DATE	REVISION
1/26/2013	1/26/2013	REV. NOTES AND SITE ACREAGE

**PREPARED FOR and OWNER**  
BA Waterloo Condominium, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, Maryland 20770  
Attn: Duncan Slidel  
Ph: 301-623-1525

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931, EXPIRATION DATE: MAY 21, 2014.

*Michael J. Tracy* 9/16/13  
SIGNATURE OF DEVELOPER/BUILDER DATE

**REVISSED SEDIMENT CONTROL NOTES AND DETAILS**

**SHIPLEY'S GRANT**  
PHASE IV  
Parcel E-4  
PLAT No. 21423

ELECTION DISTRICT No. 1

**NO ASBUILT INFORMATION**

**SCALE**  
AS SHOWN

**ZONING**  
R-A-15

**G. L. W. FILE NO.**  
07002

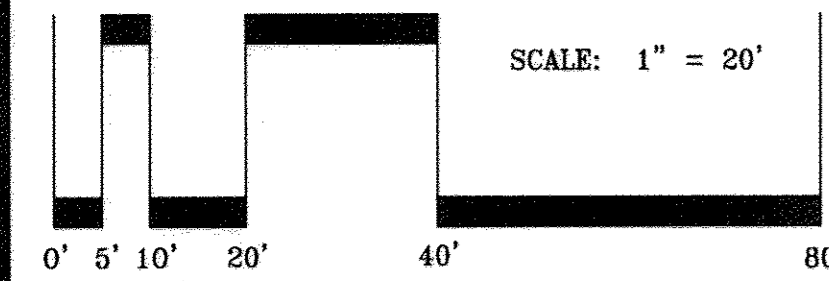
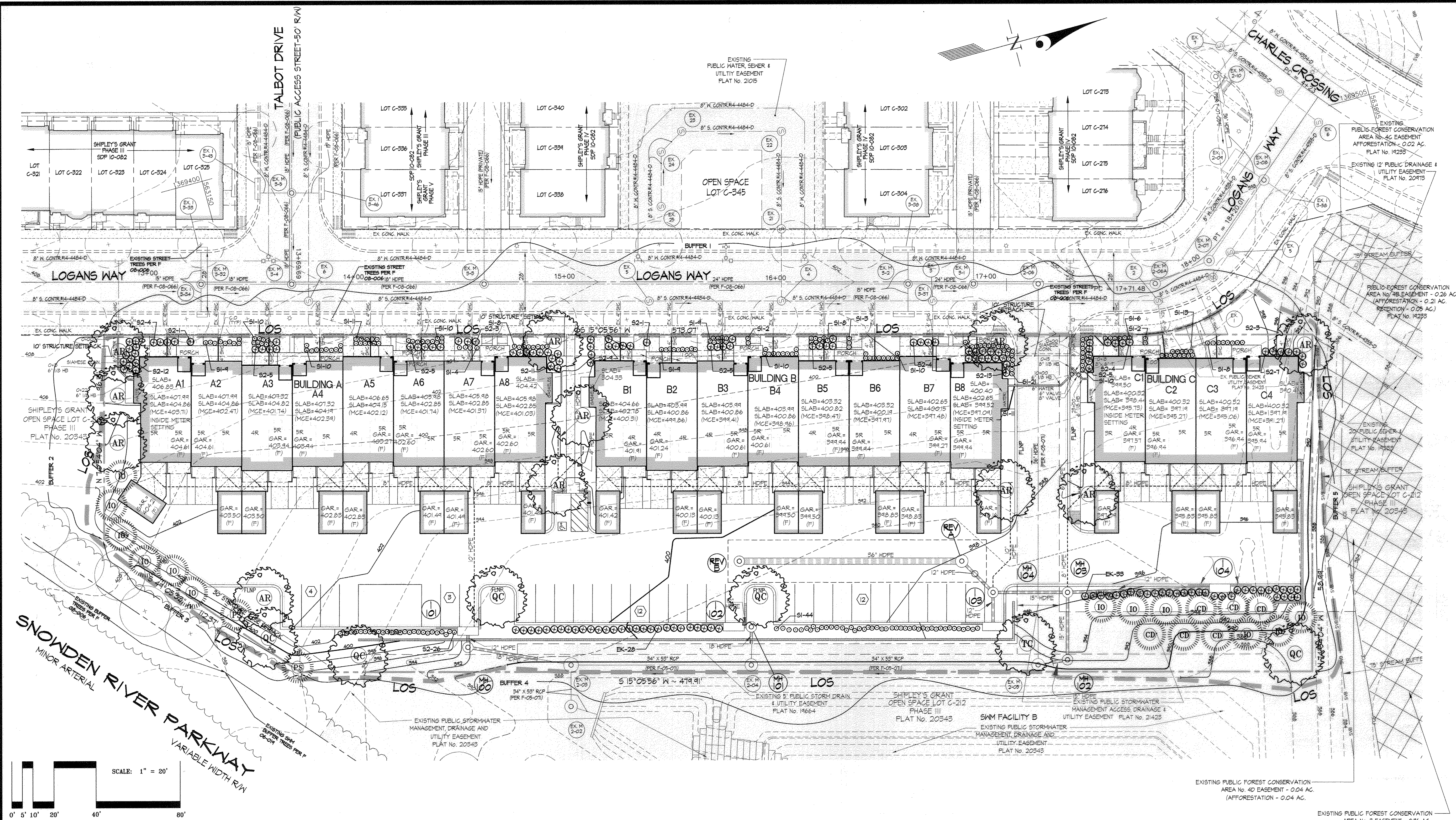
**DATE**  
AUG., 2013

**TAX MAP - GRID**  
37-1&2

**SHEET**  
7 OF 11

**HOWARD COUNTY, MARYLAND**





APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *Mark M. Loyce* 9/16/12  
 Chief, Division of Land Development: *Victor Schuch* 9/10/13  
 Chief, Development Engineering Division: *William* 9/13/13

DEVELOPER'S/BUILDER'S 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 LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 NAME: *BA* DATE: *9/10/13*

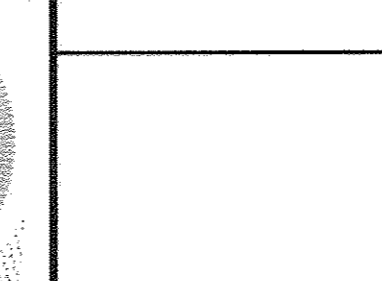
**THIS PLAN IS FOR PLANTING PURPOSES ONLY**

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
7-26-2013	REV. BLDG'S, PARKING LAYOUT, GRADING & LANDSCAPING	MEJ	mjt

PREPARED FOR and OWNER  
 BA Waterloo Condominium, LLC  
 c/o Bazzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
 Greenbelt, Maryland 20770  
 Attn: Duncan Slidell  
 Ph: 301-623-1525

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931  
 EXPIRATION DATE: MAY 20, 2014



REVISED LANDSCAPE PLAN  
**SHIPLEY'S GRANT**  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
AUG, 2013	37-1&2	8 OF 11

L:\CAD\UPR\MINIS\03000\PHASE IV\SDP - Parcel E-4\SDP\Revised\SDP-REVISED\LANDSCAPE\REPLACEMENT-SHEETS\07002-02-05-09-08.dwg  
 PLOTTED: 8/22/2013 8:32 AM, LAST SAVER: 8/22/2013 8:36 AM, PLOTTED BY: Mark Loyce



SCHEDULE-A: PERIMETER LANDSCAPE EDGE						
PERIMETER No.	1	2	3	4	5	
USE SITUATION	ADJACENT TO ROADWAY	INTERIOR	INTERIOR	INTERIOR	ADJACENT TO SHM FACILITY	INTERIOR
LANDSCAPE BUFFER TYPE	B	NONE	NONE	NONE	B	NONE
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	440 L.F.	83 L.F.	46 L.F.	112 L.F.	480 L.F.	154 L.F.
CREDIT FOR EXISTING VEGETATION	NONE				SEE SCHEDULE D	
CREDIT FOR WALL, FENCE OR BERM	NONE					
NUMBER OF PLANTS REQUIRED						
SHADE TREES	10					
EVERGREEN TREES	12					
SHRUBS	0					
NUMBER OF PLANTS PROVIDED						
SHADE TREES	3					
EVERGREEN TREES	0					
OTHER TREES (0: 2:1 substitution)	150*					
SHRUBS (10:1 substitution)						
SUBSTITUTIONS MADE						

**LANDSCAPE SURETY FOR REQUIRED TREES PER SCHEDULE-A:**

10 SHADE TREES @ \$300.00/TREE = \$3,000.00  
 12 EVERGREEN TREES @ \$150.00/TREE = \$1,800.00  
 TOTAL SURETY FOR SCHEDULE-A = \$4,800.00

\*COMMENTS:  
 (A) ALL PLANT QUANTITIES ABOVE THE NUMBER REQUIRED ARE OPTIONAL.  
 (B) OPTIONAL PLANT MATERIALS ARE VOLUNTARY AND NOT MANDATORY.  
 (C) DUE TO THE LIMITED SPACE AT THE FRONT OF THE BUILDING FOR TREE PLANTING, 10 SHRUBS HAVE BEEN SUBSTITUTED FOR THE REQUIRED 12 SHADE TREES AND 12 EVERGREEN TREES.

**PLANT LIST**

SYMBOL	QUANT.	SIZE	NAME (BOTANICAL/COMMON) OF PLANTS FOR SELECTION BY OWNER/BUYER	COMMENTS
<b>SHRUBS</b>				
S1	219	ALL 18" - 24" SPREAD	AZALEA VAR. 'SUNPO PINK', 'SUNPO WHITE', 'KADAPPO', 'COTONEASTER DAMMERI', 'CORAL BEAUTY', 'CORAL BEAUTY', 'COTONEASTER HORIZONTALIS', 'TOM THUMB', 'TOM THUMB', 'COTONEASTER JUNIPERUS HORIZONTALIS VAR. 'JUNIPER VAR.', 'BAR HARBOR', 'ANDORRA', 'WILTON BLUE RUS', 'JUNIPERUS PROCUMBENS NANA', 'DWARF JAPANESE GARDEN JUNIPER	ALL CONTAINERIZED
S2	121	ALL 24" - 30" SPREAD	AZALEA VAR. 'DELANARE VALLEY WHITE', 'HERSEY RED', 'HINO CRIMSON', 'BERBERIS THUNBERGII', 'ATROPURPUREA', 'CRIMSON PIGEON', 'CRIMSON PIGEON', 'BARBERRY DEUTZIA GRACILIS', 'SLENDER DEUTZIA', 'ILEX CRENATA HELLE', 'DWARF JAPANESE HOLLY', 'ILEX GLABRA COMPACTA', 'DWARF INKBERRY', 'WANONIA AGROCOLUM', 'OREGON GRAPE HOLLY', 'SPIREA NIPPONICA 'SNOWMOUND', 'SNOWMOUND SPIREA	ALL CONTAINERIZED
<b>SHADE TREE</b>				
AR	11	2.5-3" MIN. CAL.	ACER RUBRUM 'OCTOBER GLORY' OR 'AUTUMN BLAZE' / 'OCTOBER GLORY' OR 'AUTUMN BLAZE' RED MAPLE	
TC	1	2.5-3" MIN. CAL.	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	
QC	4	2.5-3" MIN. CAL.	QUERCUS PHELLOS / HILLOX OAK	
<b>EVERGREEN SHRUBS</b>				
EK	61	2 1/2 - 3" MIN. HGT.	EXONYMUS KLAUSCHOVICUS 'MANHATTAN' / MANHATTAN EXONYMUS	
<b>EVERGREEN TREE</b>				
CD	6	8" HT. MIN.	CEDRUS DEODARA / DEODAR CEDAR	
IO	12	8" HT. MIN.	ILEX OPACA / AMERICAN HOLLY	3 MALES AND 9 FEMALES
PS	2	8" HT. MIN.	PINUS STROBUS / EASTERN WHITE PINE	

**LANDSCAPE SURETY FOR REQUIRED TREES - ALL SCHEDULES:**

36 SHADE TREES @ \$300.00/TREE = \$10,800.00  
 24 EVERGREEN TREES @ \$150.00/TREE = \$3,600.00  
 TOTAL SURETY FOR SCHEDULE-B = \$14,400.00

SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	32
NUMBER OF TREES REQUIRED: SHADE TREES (1:1.0 SPACES)	3
NUMBER OF TREES PROVIDED: SHADE TREES (2:1 SUBSTITUTION)	3

**LANDSCAPE SURETY FOR REQUIRED TREES PER SCHEDULE-B:**

3 SHADE TREES @ \$300.00/TREE = \$900.00  
 TOTAL SURETY FOR SCHEDULE-B = \$900.00

SCHEDULE-C: RESIDENTIAL INTERIOR LANDSCAPING	
NUMBER OF UNITS	40
NUMBER OF TREES REQUIRED: SHADE TREES (1:3)	13
NUMBER OF TREES PROVIDED: SHADE TREES (1:1.5)	7
EVERGREEN TREES (1:1.5)	5
SHRUBS (10:1 SUBSTITUTION)	

**LANDSCAPE SURETY FOR REQUIRED TREES PER SCHEDULE-C:**

13 SHADE TREES @ \$300.00/TREE = \$3,900.00  
 5 EVERGREEN TREES @ \$150.00/TREE = \$750.00  
 TOTAL SURETY FOR SCHEDULE-C = \$4,650.00

**SCHEDULE-D: STORM WATER MANAGEMENT AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	480 L.F.
NUMBER OF TREES REQUIRED: SHADE TREES (1:50)	10
EVERGREEN TREES (1:40)	12
NUMBER OF TREES PROVIDED: SHADE TREES (1:50)	10
EVERGREEN TREES (1:40)	12
OTHER TREES (2:1 SUBSTITUTION)	
SHRUBS (10:1 SUBSTITUTION)	

**LANDSCAPE SURETY FOR REQUIRED TREES PER SCHEDULE-D:**

10 SHADE TREES @ \$300.00/TREE = \$3,000.00  
 12 EVERGREEN TREES @ \$150.00/TREE = \$1,800.00  
 TOTAL SURETY FOR SCHEDULE-D = \$4,800.00

**LANDSCAPE NOTES**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE OF THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET 1 SHALL APPLY.
- FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. CONTACT ENGINEER / LANDSCAPE ARCHITECT IF ANY RELOCATIONS ARE REQUIRED.
- PLANT QUANTITIES SHOWN ON PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
- ALL PLANT MATERIAL SHALL BE FULL, HEAVY, WELL FORMED, AND SYMMETRICAL, AND CONFORM TO THE A.A.N. SPECIFICATIONS, AND BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- NO SUBSTITUTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR HIS REPRESENTATIVE.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SEEDED OR SOCCED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS WHICH MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
- ALL EXPOSED EARTH WITHIN LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER PLANTING DETAILS.
- DO NOT PLANT WITHIN THE PUBLIC WATER, SEWER, OR UTILITY easements.
- SCHEDULES "A", "B", "C", AND "D" ARE PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 13,800.00 FOR FOLLOWING REQUIRED PLANT QUANTITIES:  
 24 EVERGREEN TREES AT \$150/TREE = \$ 3,600.00  
 34 SHADE TREES AT \$300/TREE = \$ 10,200.00

FOR LANDSCAPE INSPECTION TO OBTAIN THE RELEASE OF THE SURETY, CONTACT HOWARD COUNTY DEPT. OF PLANNING & ZONING AT 410-318-2260.

PREPARED FOR and OWNER  
 BA Waterloo Condominium, LLC  
 c/o Bozzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
 Greenbelt, Maryland 20770  
 Attn: Duncan Slidell  
 Ph: 301-623-1525

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15633  
 EXPIRATION DATE: MAY 21, 2012

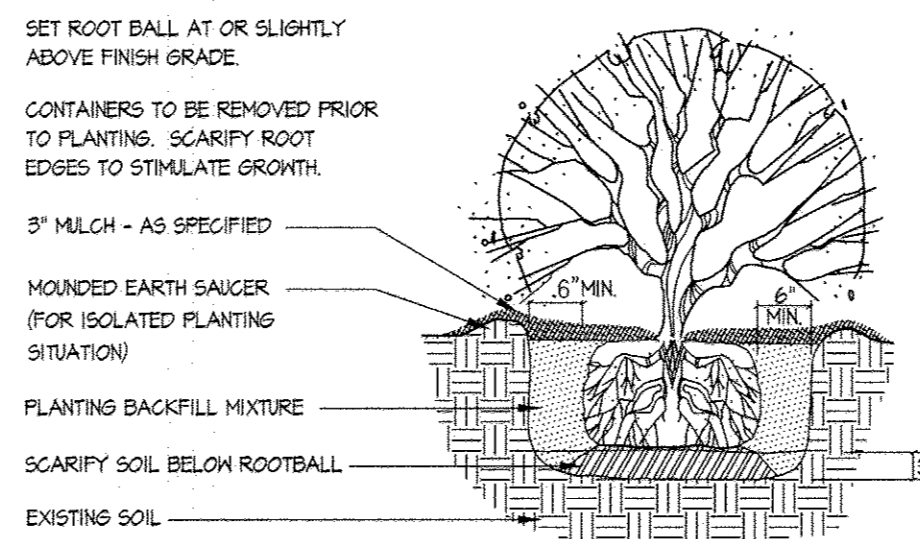


**REVISED LANDSCAPE SCHEDULES, NOTES, DETAILS AND PLANT LIST**

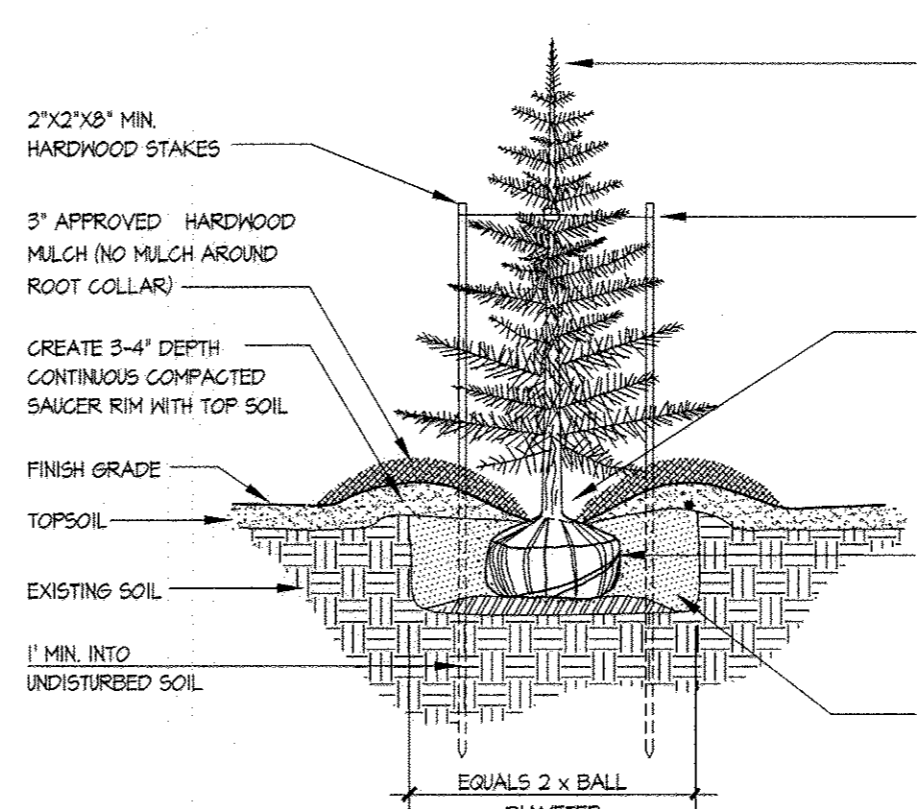
**SHIPLEY'S GRANT**  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423

NO ASBUILT INFORMATION

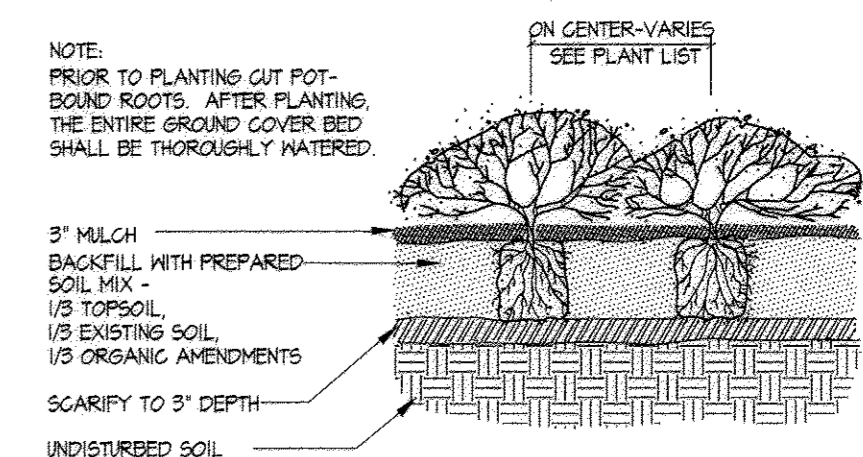
SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	07002
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AUG., 2013	37-1&2	9 OF 11



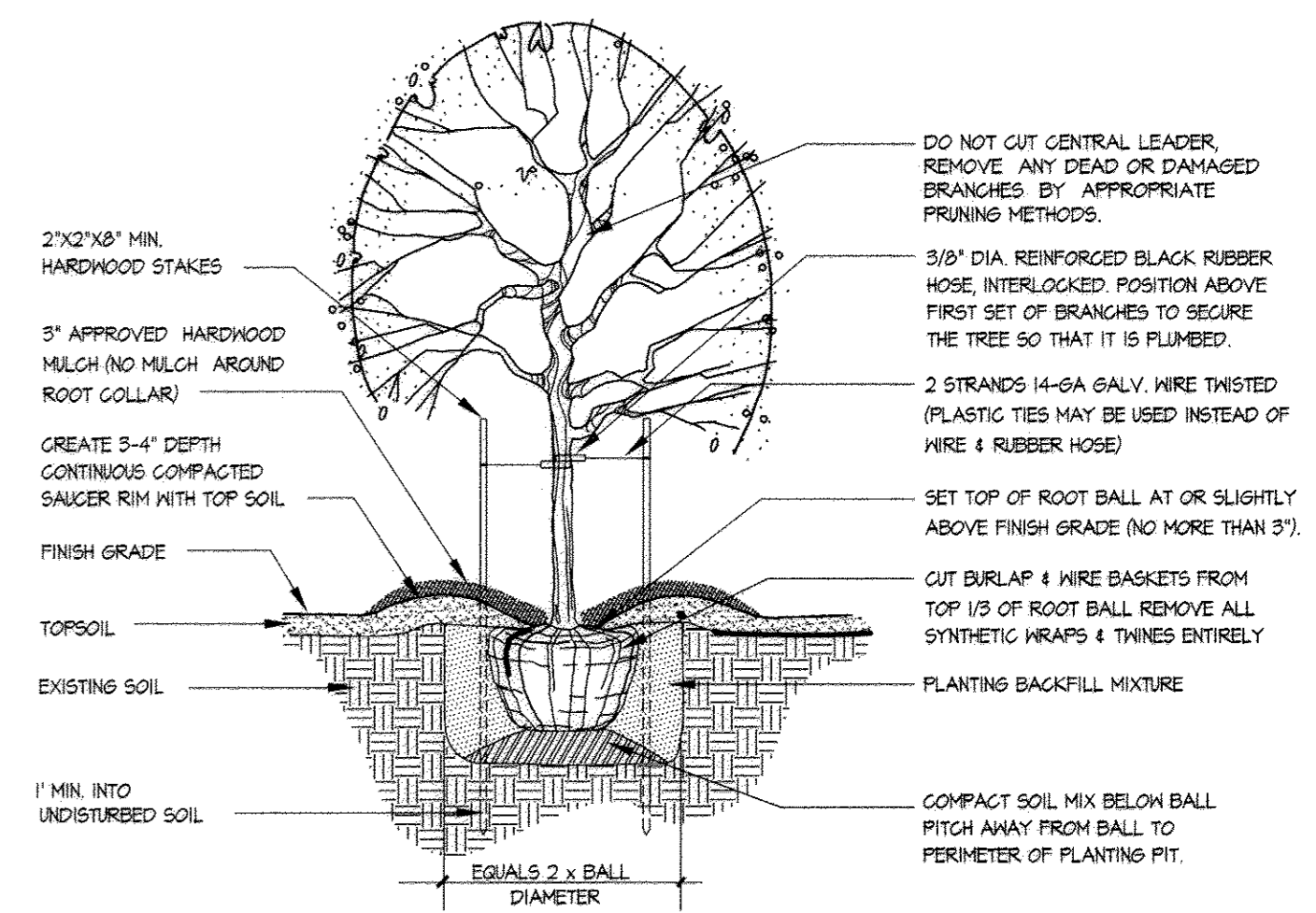
SHRUB PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



GROUNDCOVER PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL

**SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS**

**A. PLANT MATERIALS**

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP AND TRANSPORT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

- PLANT NAMES  
 PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH "STANDARDIZED PLANT NAMES," LATEST EDITION.
- PLANT STANDARDS  
 ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK," LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN (HERE- AFTER REFERRED TO AS AAN STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS AND MECHANICAL INJURIES.  
 ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE CONDITIONS AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER 'HEEL-ED-IN' PLANTS NOR PLANTS FROM GOLF STORAGE WILL BE ACCEPTED.
- PLANT MEASUREMENTS  
 ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE AS APPROVED BY THE DESIGN REVIEW COMMITTEE (DRG).  
 A. CALIPER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UNDER FOUR-INCH (4") CALIPER AND TWELVE (12") ABOVE GRADE FOR TREES FOUR INCHES (4") IN CALIPER AND OVER.  
 B. MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX FEET (6'), MAXIMUM EIGHT FEET (8').  
 C. CALIPER, HEIGHT, SPREAD AND SIZE OF BALL SHALL BE GENERALLY AS FOLLOWS:  

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3.5"	14'-16'	6'-8'	32" DIAMETER
3.5" - 4"	14'-16'	8'-10'	36" DIAMETER
4" - 4.5"	16'-18'	8'-10'	40" DIAMETER
4.5" - 5"	16'-17'	10'-12'	44" DIAMETER
5" - 5.5"	16'-20'	10'-12'	48" DIAMETER
5.5" - 6"	18'-20'	12'-14'	52" DIAMETER

 ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AS INDICATED IN THE "AAN STANDARDS".  
 D. PLANT IDENTIFICATION  
 LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL, GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.
- PLANT INSPECTION  
 THE OWNER OR HIS REPRESENTATIVE MAY, UPON REQUEST BY THE BUILDER OR DEVELOPER, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.

**B. PLANTING METHODS**

ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:

- PLANTING SEASONS  
 THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 1ST TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL. PLANTING MIXTURES ARE USED.  
 THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN THE GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOPSOIL SHALL BE USED AT ANY TIME.
- DIGGING  
 ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (BIB) IN ACCORDANCE WITH THE "AAN STANDARDS".  
 THE LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT FITS, VINE FITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:  
 A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.  
 B. ALL FITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES, DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL. DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL, AS SET FORTH IN THE FOLLOWING SCHEDULE.  
 C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.  
 D. DIAMETER AND DEPTH OF TREE FITS SHALL GENERALLY BE AS FOLLOWS:  

PLANT SIZE	ROOT BALL	FIT DIA.	FIT DEPTH
3" - 3.5" CAL.	32"	64"	28"
3.5" - 4" CAL.	36"	72"	32"
4" - 4.5" CAL.	40"	80"	36"
4.5" - 5" CAL.	44"	88"	40"
5" - 5.5" CAL.	48"	96"	44"
5.5" - 6" CAL.	52"	104"	48"

 A 20% COMPACTION FIGURE OF THE SOIL TO BE REMOVED IS ASSUMED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED FIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.

- WIRE AND CABLE  
 WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIPER, PROVIDE 3/8" TRN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CALIPER, PROVIDE 3/8" 7 STRAND CABLE CADMIUM PLATED STEEL, WITH GALVANIZED "EYE" THIMBLES OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.
- HOSE  
 SHALL BE #1/2" DIA. REINFORCED RUBBER HOSE, MINIMUM 1/2" ID. "PLASTIC LOCK TIES" OR "PAUL'S TREES BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.
- TREES UNDER 5" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS.
- PLANT PRUNING, EDGING AND MULCHING  
 A. EACH TREE, SHRUB OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES. ALL CUTS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED ANTISEPTIC TREE WOUND DRESSING.  
 B. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE FIT. SOD WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT FIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.  
 C. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A 3" LAYER OF FINE SHREDDED PINE BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.  
 D. PLANT INSPECTION AND ACCEPTANCE  
 THE COUNTY SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTINGS TO ASSURE THAT ALL WORK IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.  
 E. PLANT GUARANTEE  
 ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON, AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.  
 A. FOR THIS PURPOSE, THE "GROWING SEASON" SHALL BE THAT PERIOD BETWEEN THE END OF THE "SPRING" PLANTING SEASON AND THE COMMENCEMENT OF THE "FALL" PLANTING SEASON.  
 B. GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE "SPRING" PLANTING SEASON, SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING "SPRING" PLANTING SEASON.  
 SOCCEDING  
 ALL SOCCEDING SHALL BE IN ACCORDANCE TO THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS," LATEST EDITION, APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.  
 ALL SOD SHALL BE STRONGLY ROOTED SOD, NOT LESS THAN TWO YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. PROVIDE ONLY SOD CAPABLE OF GROWTH DEVELOPMENT WHEN PLANTED AND IN STRIPS NOT MORE THAN 18" WIDE X 4' LONG. PROVIDE SOD COMPOSED PRINCIPALLY OF IMPROVED STRAIN KENTUCKY BLUEGRASS, SUCH AS, COLUMBIA, VICTA, OR ESCORT.

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**

Director: *M. A. ...* Date: 7/14/12  
 Chief, Division of Land Development: *K. ...* Date: 7/10/13  
 Chief, Development Engineering Division #2: *A. ...* Date: 7/13/13

**DEVELOPER'S/BUILDER'S 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 LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME: *J. ...* DATE: 8/05/2013

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3509 NATIONAL TRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK  
 BURTOWNSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 301-421-4188

DATE	REVISION	BY	APPR.
7/26/2013	REV. SCHEDULE 'B', 'D' PLANT LIST & SURETY AMOUNT	msj	mjt

DATE	REVISION	BY	APPR.

DATE: 8/05/2013

ELECTION DISTRICT No. 1



SHIPLEY'S GRANT PHASE IV RETAINING WALL  
SEGMENTAL RETAINING WALL SPECIFICATIONS

PART 1 GENERAL

- 1.1 Work includes furnishing and installing Modular block retaining wall units to the lines and grades designated on the construction drawings and as specified herein.
- 1.2 REFERENCE STANDARDS
  - A. ASTM C90-75 (1981 rev) - Hollow Load Bearing Masonry Units
  - B. ASTM C140-75 (1981 rev) - Sampling and Testing Concrete Masonry Units
  - C. ASTM C145-75 (1981 rev) - Solid Load Bearing Concrete Masonry Units
- 1.3 DELIVERY, STORAGE AND HANDLING
  - A. Contractor should check the materials upon delivery to assure that proper material has been received.
  - B. Contractor should prevent excessive mud, wet cement, epoxy, and like materials which may affix themselves, from coming in contact with the materials.
  - C. Contractor should protect the materials from damage. Damaged material should not be incorporated into the reinforced retaining wall.

PART 2 RETAINING WALL

- 2.1 MATERIALS
  - A. Concrete Units
    - 1. Masonry units should be Anchor Diamond Pro Retaining Wall Units as indicated on the drawings.
    - 2. Concrete wall units should have a minimum 28 day compressive strength of 3000 psi, in accordance with ASTM C-90. The concrete should have adequate freeze/thaw protection with a maximum moisture absorption of 6 to 8 percent.
    - 3. Exterior dimensions may vary. Units are required to have a minimum of 1 square foot of face area each.
    - 4. Units should have angled sides and capable of attaining concave and convex alignment curves in accordance with manufacturer's recommendations.
    - 5. Units should be interlocked as to provide a minimum of 1-inch of setback per

2.2 RETAINING WALL INSTALLATION

- A. Excavation
  - 1. The owner's contractor should excavate to the lines and grades shown on the construction drawings. Under no circumstances should the excavation lines and grades be exceeded, except with owner's approval. The contractor should protect the excavation from sloughing by placing a membrane over the face of the excavation.
- B. Foundation Soil Preparation
  - 1. Foundation soil should be excavated as required for footing dimensions shown on the construction drawings, or as directed by the Engineer.
  - 2. Foundation soil should be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required strength should be removed and replaced with controlled, compacted material.
  - 3. Foundation soil should be examined by the Engineer to assure that it consists of natural material, or controlled, compacted fill. Existing fill is not

course of wall height.

- B. Base Material
  - 1. Material for footing should consist of compacted free-draining coarse aggregate meeting the requirements of ASTM #57 Crushed Stone aggregate (see 2.2, C.2 below). A minimum of 6 inches deep and 24 inches wide compacted base is required. The base materials should be approved by a Maryland Registered Professional Engineer.
- C. Reinforced Backfill
  - 1. Reinforced backfill soils behind the wall must be "select fill" meeting the requirements of AASHTO A-2.4 or more granular and have a friction angle of at least 28 degrees. The material should be non-plastic. The materials should be compacted and be approved by a Maryland Registered Professional Engineer.
- D. Drainage Fill
  - 1. Drainage fill behind the wall must be ASTM #57 stone. The materials should be compacted and be approved by a Maryland Registered Professional Engineer.

- C. Base Footing
  - 1. The leveling pad footing should be placed as shown on the construction drawings with a minimum thickness of 6 inches. The leveling pad material should consist of crushed stone meeting the gradation requirements for ASTM #57 crushed stone or as approved by a registered professional geotechnical engineer.
  - 2. Leveling pad footing materials should be installed upon undisturbed in-situ soils or controlled, compacted backfill.
  - 3. Material should be compacted so as to provide a level hard surface on which to place the first course of units. Compaction should be with mechanical plate compactors to 95% of ASTM D-698 (Standard Proctor) OR 92% of ASTM D-1557 (Modified Proctor).
  - 4. Footing should be prepared to insure complete contact of retaining wall unit with base. Gaps should not be allowed.
- D. Unit Installation
  - 1. First course of concrete wall units should be placed on the footing. The units should be checked for level and alignment. The first course is the most important to insure accurate and acceptable results.
  - 2. Insure that units are in full contact with base.
  - 3. Units are placed side by side for full length of wall alignment. Alignment may be done by means of a string line or offset from base line.
  - 4. At the end of each course where the wall changes elevation, units should be turned into the backfill. Units should be laid as to create the minimum radius possible. A minimum of 1 unit or as shown on the drawings should be installed into the grade. Only the front face of the units should be visible from the side of the wall.
  - 5. Diamond Pro units should be used to make convex and concave curves in accordance with manufacturer's recommendations.
  - 6. Cap units should be installed and bonded with construction adhesive or epoxy cement as required by manufacturer.
  - 7. Contractor should provide positive drainage for the back of the retaining walls during construction.

- 2.2 PRODUCTS
  - A. Geogrid should be SynTeen SF-35 or equivalent as approved by GTA.

PART 3 EXECUTION

- 3.1 FOUNDATION SOIL PREPARATION
  - A. The wall excavation should be excavated as shown on the drawings.
  - B. Foundation soil should be proof-rolled prior to fill and geogrid placement.
  - C. Foundation soil should be excavated to the lines and grades as shown or as directed by the Engineer.
  - D. Foundation soil must be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength.
  - E. Over-excavated areas should be filled with compacted granular material.
- 3.2 GEOGRID INSTALLATION FOR RETAINING WALLS
  - A. The geogrid soil reinforcement should be laid horizontally on compacted backfill, connected to the concrete wall units. Hook grid over the fiberglass connector, pull taut, and anchor before backfill is placed on the geogrid.
  - B. Slack in the geogrid at the wall unit connections should be removed in a manner, and to such a degree, as approved by the Engineer.
  - C. Geogrid should be laid at the proper elevation and orientation as shown on the construction drawings or as directed by the Engineer.
  - D. Correct orientation (roll direction) of the geogrid should be verified by the Contractor.
  - E. Geogrid should be secured in-place with staples, pins, sand bags, or backfill as required by fill properties, fill placement procedures, or weather conditions, or as directed by the Engineer.
  - F. Overlaps
    - 1. Uniaxial geogrid does not need to be overlapped in the across the roll direction, except to contain the fill at the slope face when wrap-around facing is used. Uniaxial grid should be overlapped a minimum of 48 inches in the roll direction, or as directed by the engineer.
    - 2. A layer of soil a minimum of 4 inches in thickness should be spread between uniaxial geogrid layers in the area to be overlapped, or as directed.
- 4. FILL PLACEMENT
  - A. Wall backfill material should be placed in 6-inch lifts and compacted to 95 percent of ASTM D-698 (Standard Proctor) OR 92 percent of ASTM D-1557 (Modified Proctor).
  - B. Backfill should be placed, spread, and compacted in such a manner that minimizes

- C. the development of wrinkles in and/or movement of the geogrid.
- D. Only hand-operated compaction equipment should be allowed within 3 feet of the wall face.
- E. Backfill should be placed from the wall outward to insure that the geogrid remains taut.
- F. Tracked construction equipment should not be operated behind or above the wall. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning should be avoided.

5. DRAINAGE

- A. Drainage fill should be placed behind the wall to the limits shown. The drainage fill should be a minimum of 12 inches. The drainage fill should be ASTM #57 stone. The drainage fill should be wrapped in filter fabric (Miraft 140N or equal) as shown on the drawings. Alternatively, 18 inches of drainage fill can be placed without the geotextile fabric.
- B. Positive drainage should be maintained during and after construction. Soils within the reinforced zone that become wet during construction should be dried to optimum moisture or removed.
- C. Perforated PVC pipe, 4-inches in diameter, should be provided in the drainage fill as shown on the drawings. The pipe should discharge by gravity from the face of the retaining walls through solid PVC weepholes, 4-inches in diameter, installed at a minimum of every 30 feet on center, as shown on the drawings, or by gravity at each end of the wall.

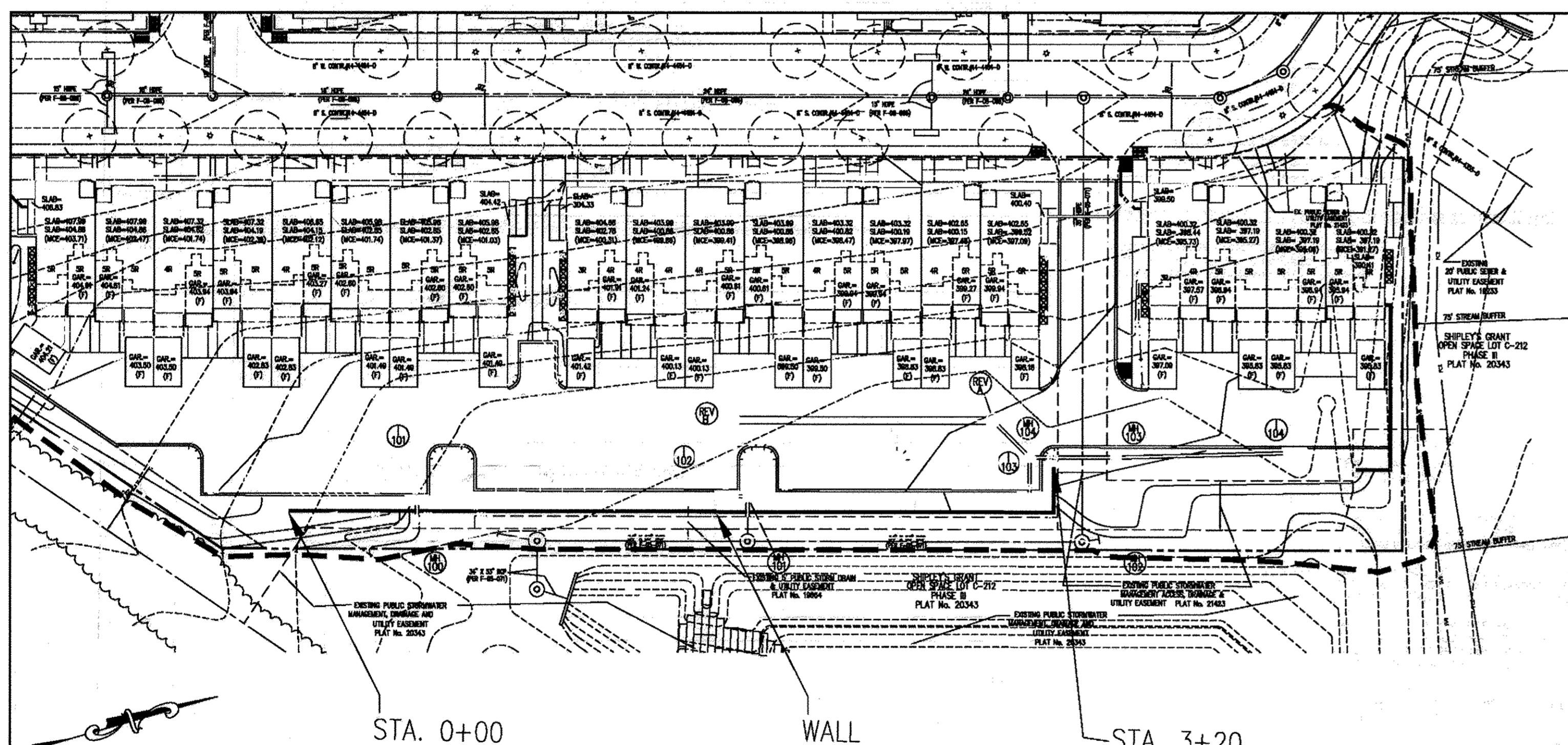
GENERAL NOTES

PART I CONSTRUCTION CERTIFICATION

- A. The required leveling pad subgrade bearing capacity should be certified by a Virginia Registered Professional Geotechnical Engineer prior to footing placement.
- B. Construction of retaining wall should be performed under the observations of a Maryland Registered Professional Engineer. Confirmation testing should be performed to verify material engineering properties. Upon completion of the work, the engineer should submit a signed and sealed report stating that the retaining wall was constructed in accordance with the plans, specifications, and accepted modifications (if applicable).

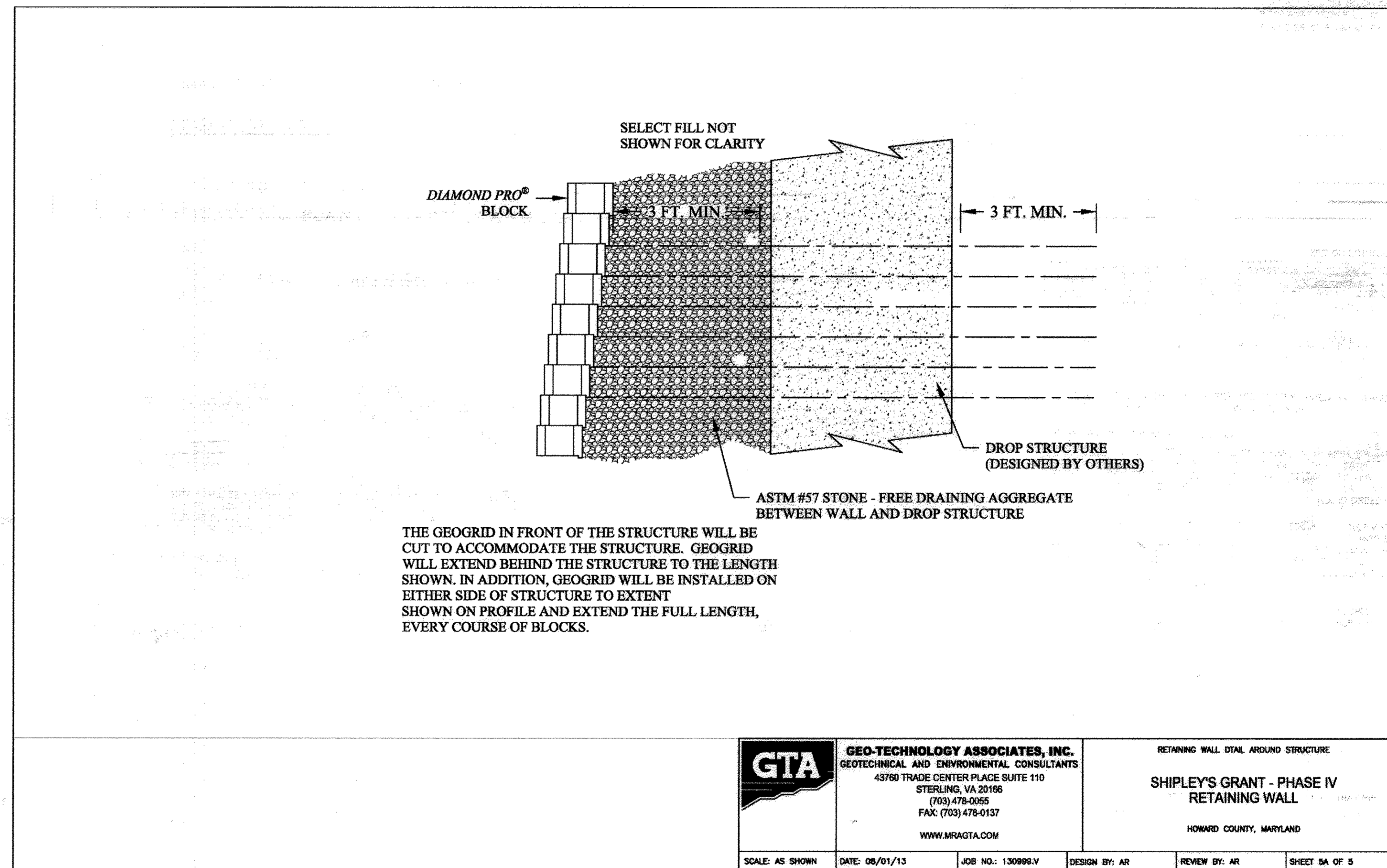
PART II DESIGN CRITERIA

- A. Required bearing capacity is 3,000 psf minimum.
- B. Design  $\phi = 28$  degrees
- C. Design unit weight = 120 pcf.
- D. Retaining wall was not designed to resist hydrostatic pressure.
- E. Construction will be monitored by a professional engineer.



Sheet 1/5

		<b>GEO-TECHNOLOGY ASSOCIATES, INC.</b> Geotechnical and Environmental Consultants 43760 Trade Center Place, Suite 110 Sterling, Virginia 20156 (703) 478-0055 Fax (703) 478-0137		Shipley's Grant - Phase IV Wall Location Plan Howard County, Maryland	
SCALE	DATE	SOURCE	REVIEWED BY	PROJECT NO.	
1" = 40'	May 2013	GLW	AR	130999.V	



		<b>GEO-TECHNOLOGY ASSOCIATES, INC.</b> GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS 43760 TRADE CENTER PLACE SUITE 110 STERLING, VA 20156 (703) 478-0055 FAX: (703) 478-0137 WWW.MRAGTA.COM		RETAINING WALL DETAIL AROUND STRUCTURE SHIPLEY'S GRANT - PHASE IV RETAINING WALL HOWARD COUNTY, MARYLAND	
SCALE: AS SHOWN	DATE: 08/01/13	JOB NO.: 130999.V	DESIGN BY: AR	REVIEW BY: AR	SHEET 5A OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Frank McLaughlin* 9/10/13  
Director Date

*Ken Seidman* 9/10/13  
Chief, Division of Land Development Date

*John Slidell* 9/23/13  
Chief, Development Engineering Division Date

DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.

PREPARED FOR and OWNER  
 BA Waterloo Condominium, LLC  
 c/o Bozzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
 Greenbelt, Maryland 20770  
 Attn: Duncan Slidell  
 Ph: 301-623-1525

*I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. Lic. No. 140045 Exp. 1-27-15*

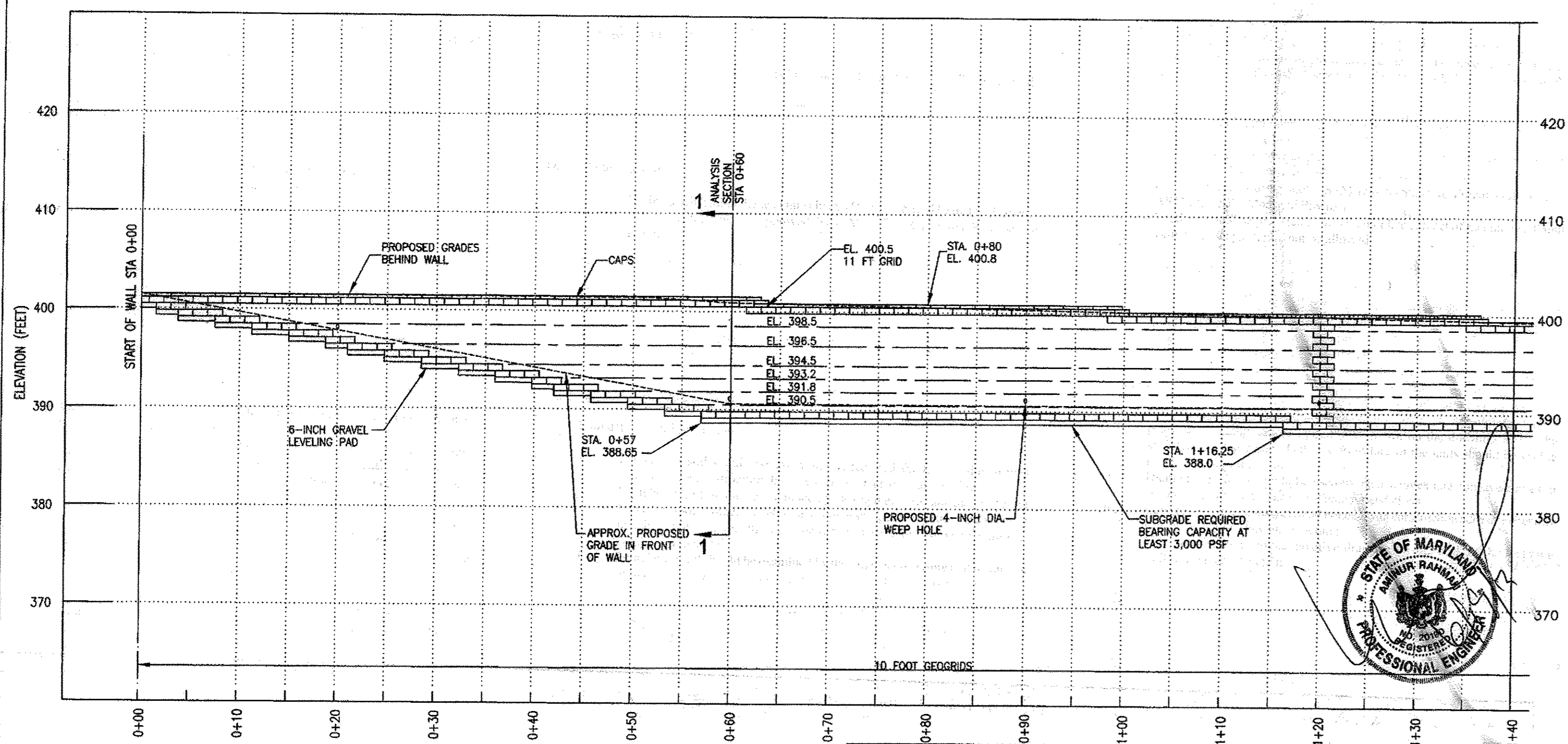
RETAINING WALL DETAILS AND SPECIFICATIONS

SHIPLEY'S GRANT  
 PHASE IV  
 Parcel E-4  
 PLAT No. 21423

NO ASBUILT INFORMATION

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
AUG, 2013	37-1&2	10 OF 11





**RETAINING WALL PROFILE**

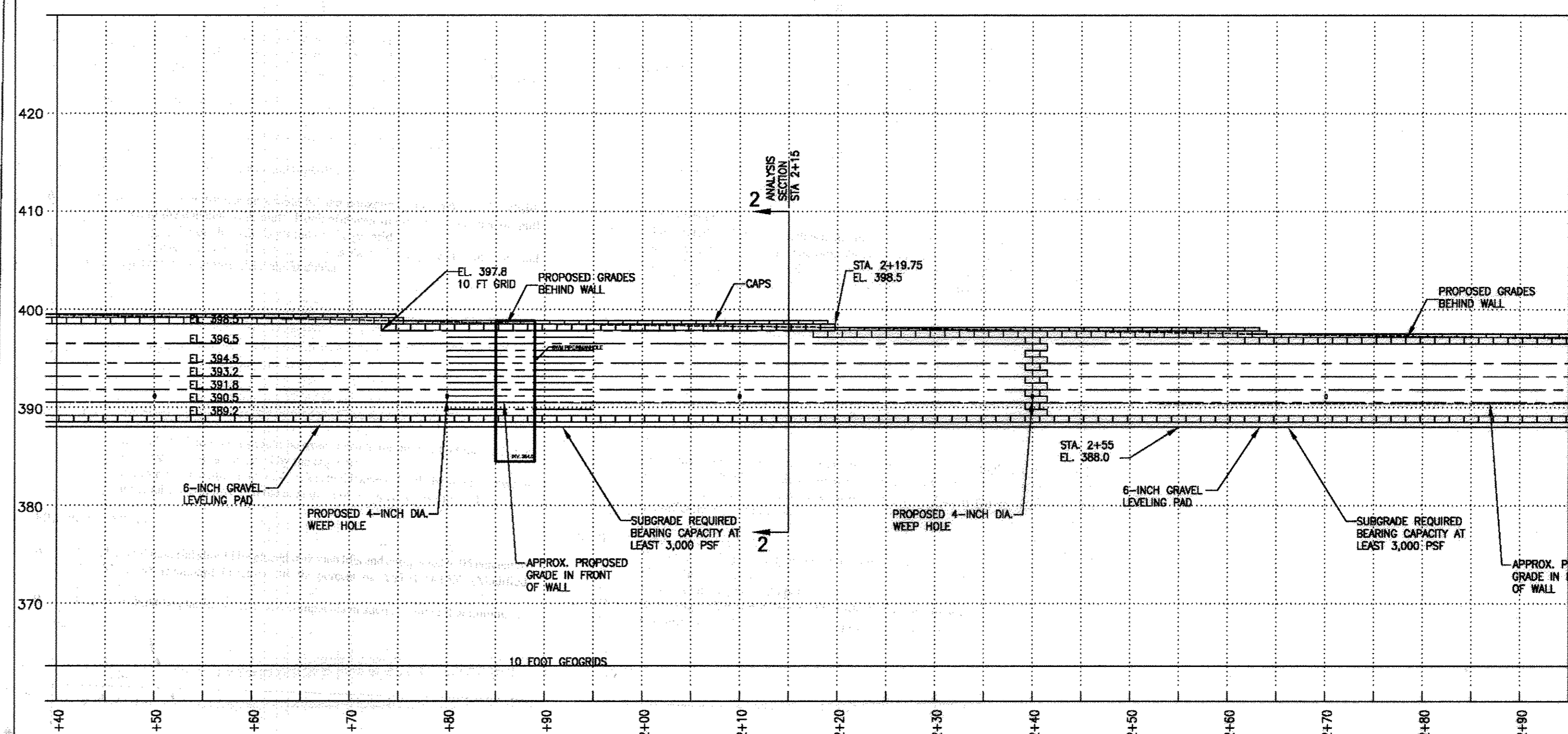
HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

NOTES:  
GRID TYPE - SYNTEEN SF35  
GRID LENGTH - AS SHOWN

**GTA** GEO-TECHNOLOGY ASSOCIATES, INC.  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
43780 TRADE CENTER PLACE SUITE 110  
STERLING, VA 20166  
(703) 478-0055  
FAX: (703) 478-0137  
WWW.MRAGTA.COM

RETAINING WALL PROFILE  
**SHIPLEY'S GRANT - PHASE IV**  
RETAINING WALL  
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 05/29/13 JOB NO.: 130999.V DESIGN BY: TC REVIEW BY: AR SHEET 2 OF 5



**RETAINING WALL PROFILE**

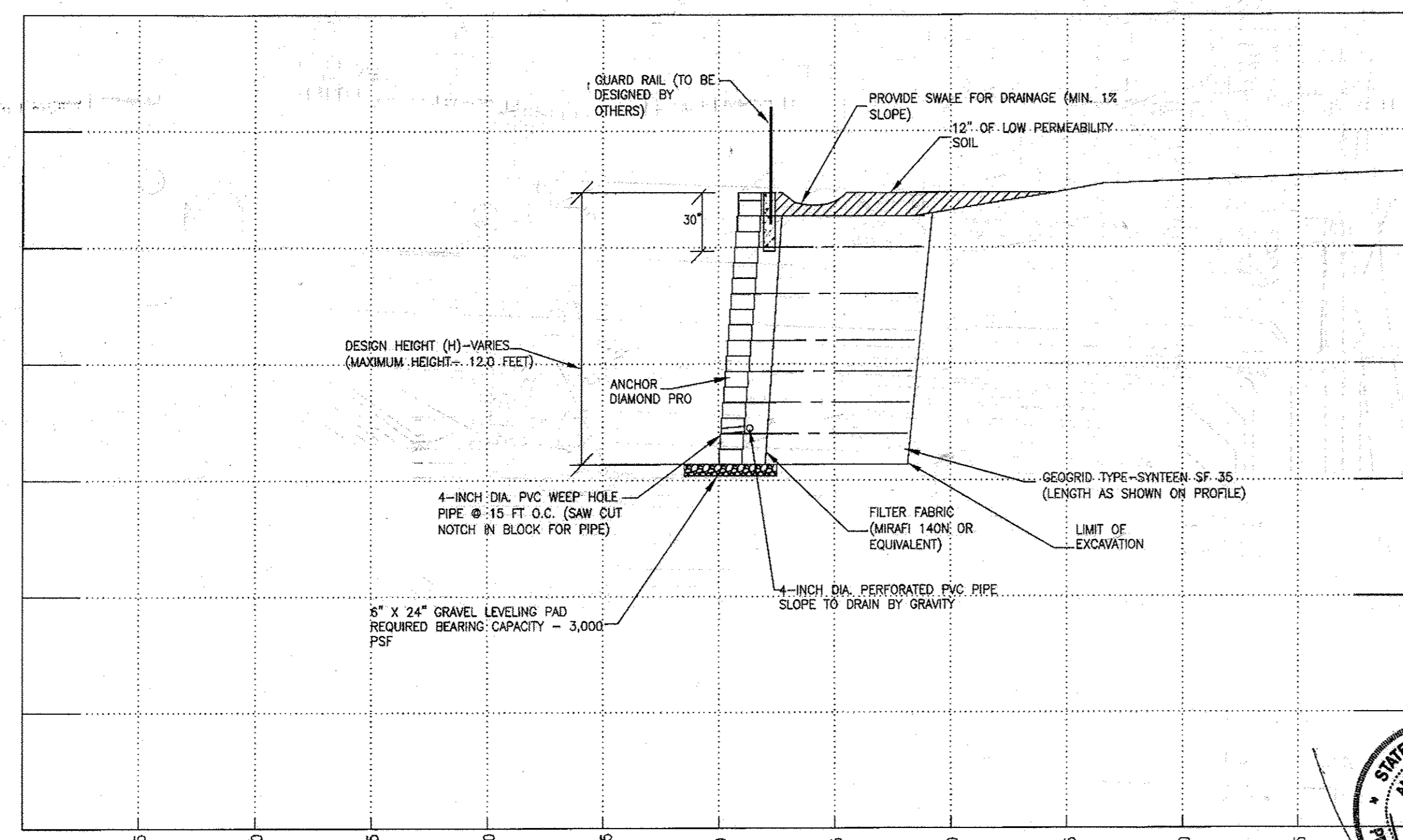
HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

NOTES:  
GRID TYPE - SYNTEEN SF35  
GRID LENGTH - AS SHOWN

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RETAINING WALL PROFILE  
**SHIPLEY'S GRANT - PHASE IV**  
RETAINING WALL  
HOWARD COUNTY, MARYLAND

DATE: 8/1/13 SHOW GEGRID AT MRI SCALE: AS SHOWN DATE: 05/29/13 JOB NO.: 130999.V DESIGN BY: AR REVIEW BY: AR SHEET 3 OF 5

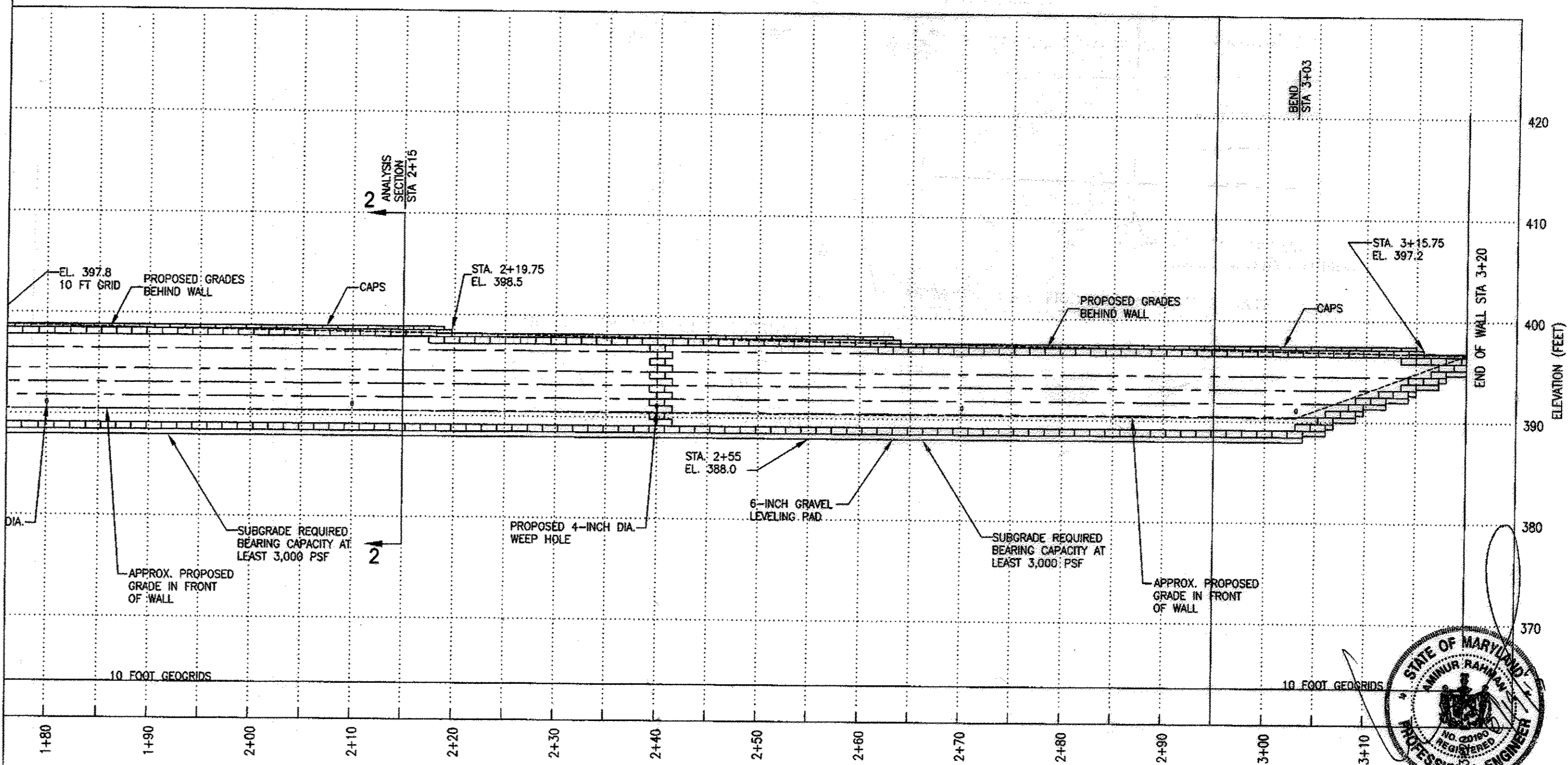


**TYPICAL RETAINING WALL SECTION**  
MAXIMUM GEOGRID LENGTH = 11 FEET

**GTA** GEO-TECHNOLOGY ASSOCIATES, INC.  
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STERLING, VA 20166  
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RETAINING WALL SECTION  
**SHIPLEY'S GRANT - PHASE IV**  
RETAINING WALL  
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 05/29/13 JOB NO.: 130999.V DESIGN BY: AR REVIEW BY: AR SHEET 5 OF 5



**RETAINING WALL PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

NOTES:  
GRID TYPE - SYNTEEN SF35  
GRID LENGTH - AS SHOWN

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RETAINING WALL PROFILE  
**SHIPLEY'S GRANT - PHASE IV**  
RETAINING WALL  
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 05/29/13 JOB NO.: 130999.V DESIGN BY: AR REVIEW BY: AR SHEET 4 OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: *David M. Coyle* Date: 7/14/12  
Chief, Division of Land Development: *Karl S. Levin* Date: 9/10/13  
Chief, Development Engineering Division: *John Slidell* Date: 9/11/13

DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.

PREPARED FOR and OWNER  
BA Waterloo Condominium, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, Maryland 20770  
Attn: Duncan Slidell  
Ph: 301-623-1525

I hereby certify that these documents were prepared or supervised by myself or a duly licensed professional engineer under the laws of the State of Maryland, License No. 00045 Dkt. 1-27-15

**RETAINING WALL DETAILS**  
**SHIPLEY'S GRANT**  
PHASE IV  
Parcel E-4  
PLAT No. 21423

**NO ASBUILT INFORMATION**

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15	07002
DATE	TAX MAP - GRID	SHEET
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ELECTION DISTRICT No. 1

HOWARD COUNTY, MARYLAND