





EX. PUBLIC FOREST CONSERVATION EASEMENT AREA #2E - 4.05 AC. (2.24 AC. AFF. & 2.61 AC. RET.) PLAT NO. 20412

EX. PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT Plat No. 18737

BALTIMORE GAS & ELECTRIC CO.  
L. 140 F. 451  
L. 280 F. 315  
(ZONED: R-5A-8)

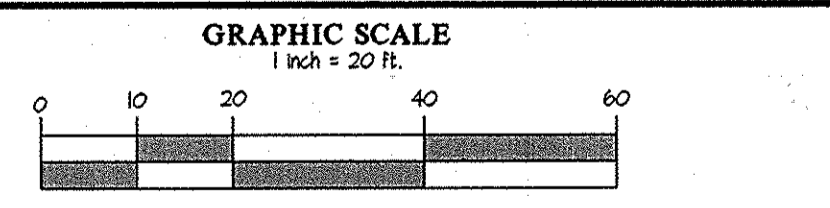
PART OF PARCEL G-1  
VILLAGE OF MONTGOMERY RUN 2  
A  
CONDOMINIUM VILLAGE OF  
MONTGOMERY RUN  
SECTION I, AREA 1  
P.N. 0643  
(ZONED: R-SA-8)

**BUILDING A**  
15 UNITS / 4 STORIES  
40,000 SF TOTAL  
F.F.E. = 416.67  
W/PRIVATE  
INSIDE METER SETTING

**BUILDING B**  
15 UNITS / 4 STORIES  
40,000 SF TOTAL  
F.F.E. = 415.57  
W/PRIVATE  
INSIDE METER SETTING

RETAINING WALL #1  
3' MAX HEIGHT  
SEE DETAILS SHEET 4

RETAINING WALL #2  
3' MAX HEIGHT  
SEE DETAILS SHEET 4



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Res. 2 K. G. ...* Date: 5/1/12

Chief, Division of Land Development: *K. ...* Date: 5/13/13

Chief, Development Engineering Division: *...* Date: 4/12/13

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
5909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
7.5.2016	Revised number of units	34	...

PREPARED FOR:  
BA Waterloo Townhomes, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, MD 20770  
CONTACT: Duncan Slidell  
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. ...*

**SITE DEVELOPMENT PLAN**

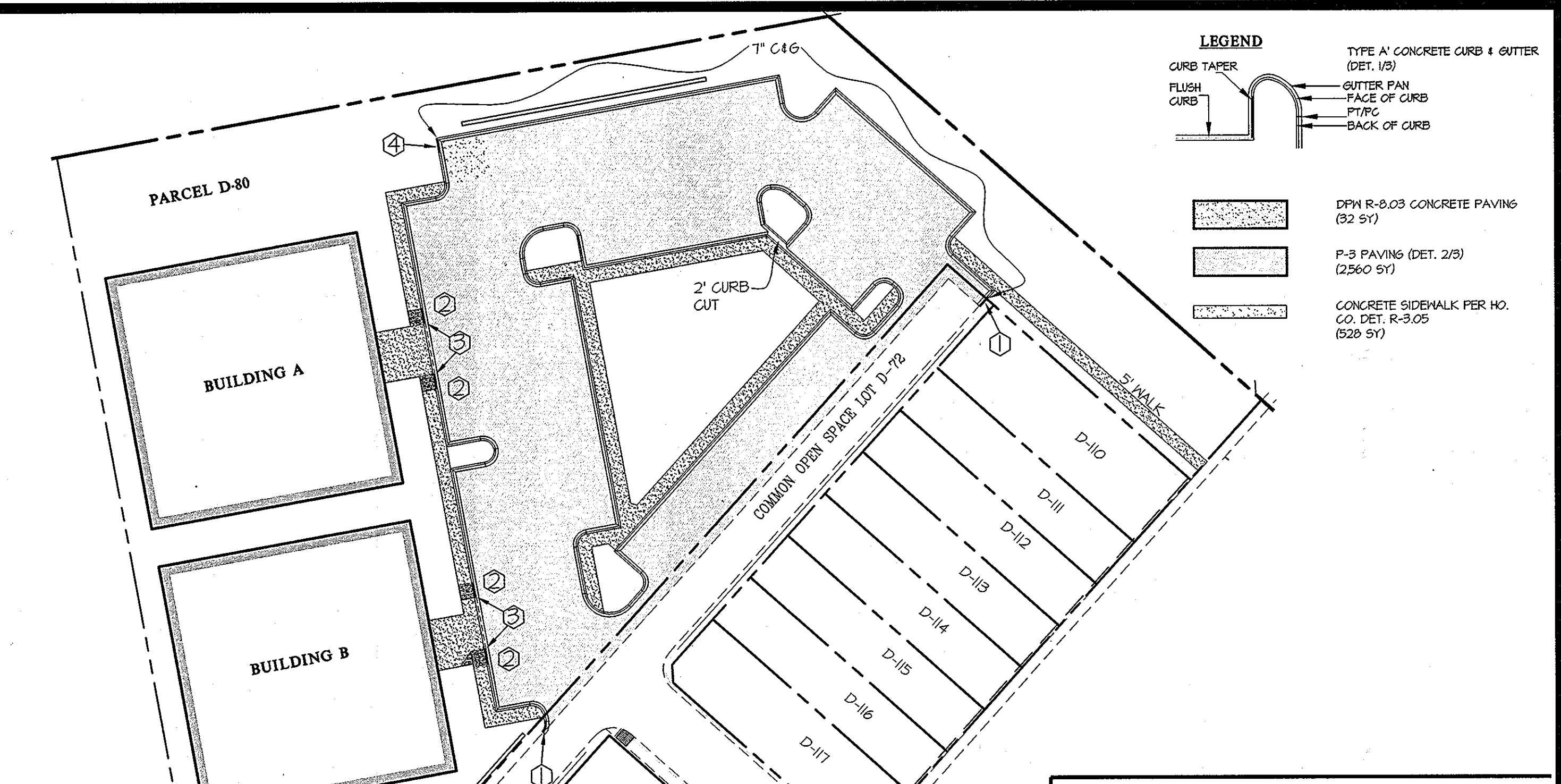
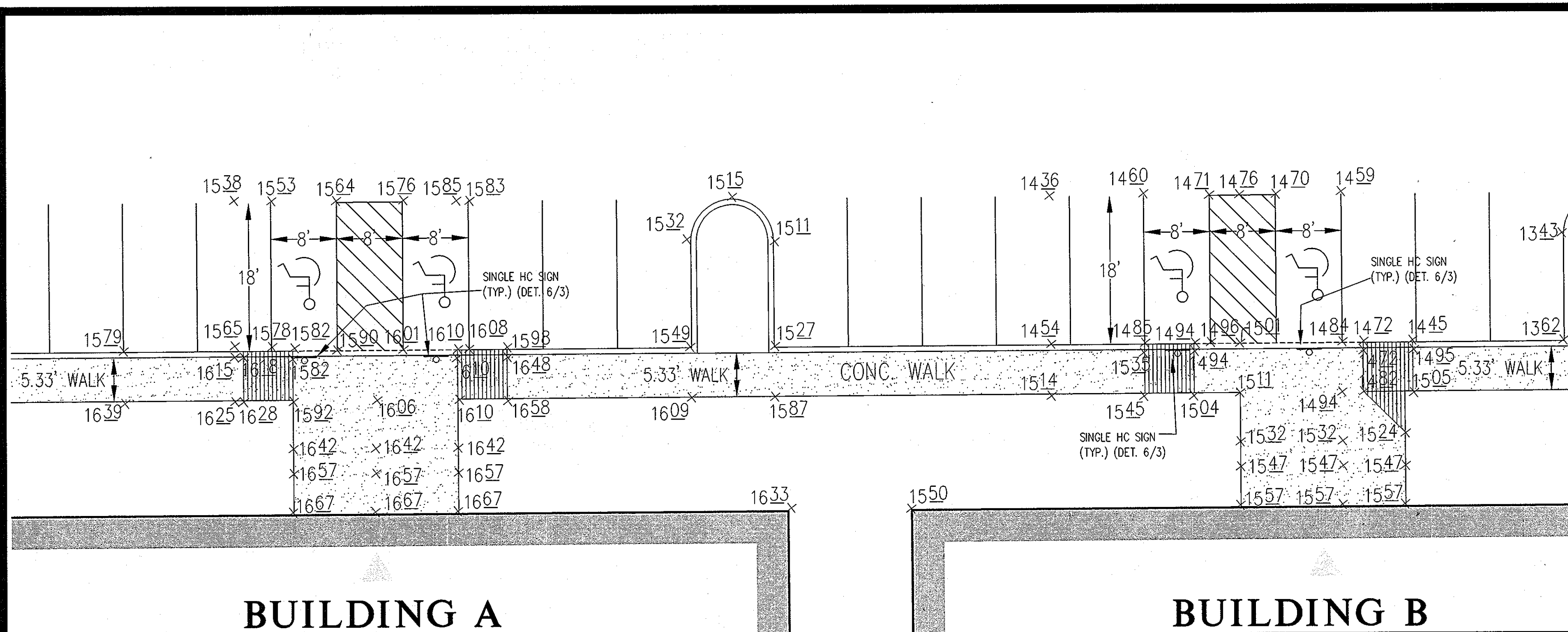
**SHIPEY'S GRANT**  
PHASE VI, PARCEL D-80  
PLAT NO. 22312-23204

MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS

ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE NO.
1"=20'	R-A-15	09002
DATE	TAX MAP - GRID	SHEET
MAR., 2013	37 - 1&2	2 OF 10

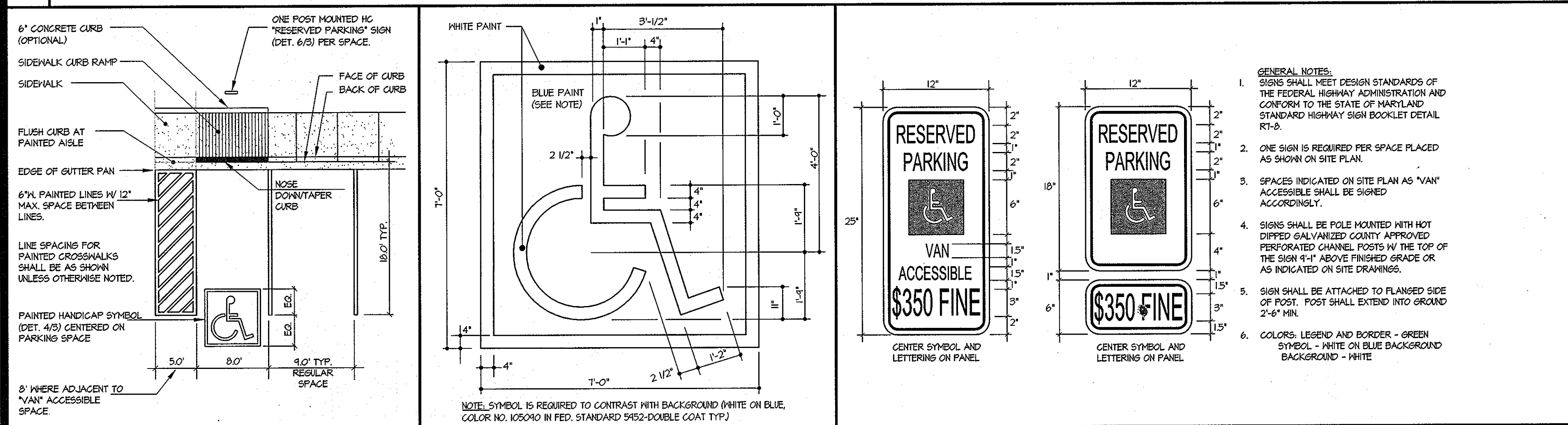
- NOTES:
- FOR CURB TYPE, & PAVING DELINEATION INFORMATION SEE SHEETS 3 AND 4.
  - UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE FC/SPTS, CORNERS AND TERMINUSES.
  - ALL ON-SITE PAVING AND ROADWAYS ARE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
  - ALL ON-SITE STORM SYSTEMS ARE PRIVATELY MAINTAINED. ALL ON-SITE WATER ARE PRIVATELY MAINTAINED EXCEPT THE PORTION OF THE 8" FIRE HYDRANTS AND P&G THAT ARE WITHIN THE "PUBLIC WATER & UTILITY EASEMENT".
  - FOR INFORMATION OF THE PUBLIC PORTION OF THE ON-SITE WATER LINE, SEE DPH CONTRACT NO. 44-4740-D. THE PRIVATE PORTION OF ALL P&G ARE 6" UNLESS NOTED OTHERWISE. ALL WATER METERS ARE LOCATED INSIDE THE BUILDINGS.
  - ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BLDG, CURB, ETC.) AND ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS NOTED OTHERWISE.
  - ALL CURB RADII ARE 5' (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE.
  - BRICK POINT ALL BUILDING CONSTRUCTION UNLESS NOTED OTHERWISE.
  - ALL ROOF DRAINS SHALL BE PIPED TO THE STORM DRAIN SYSTEM.
  - ALL BUILDING WALLS WITHIN 1/2' OF A BSE TRANSFORMER SHALL BE CONSTRUCTED FOR A MINIMUM FIRE RESISTANCE RATING OF 3 HOURS.
  - FOR SPOT ELEVATIONS IN HANDICAPPED PARKING SPACES SEE SHEET 3.



**BUILDING A**

**BUILDING B**

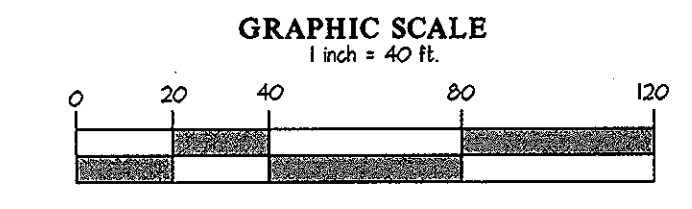
**HANDICAPPED ACCESSIBILITY DETAILS** SCALE: 1" = 10'



**CURB TRANSITION NOTES**

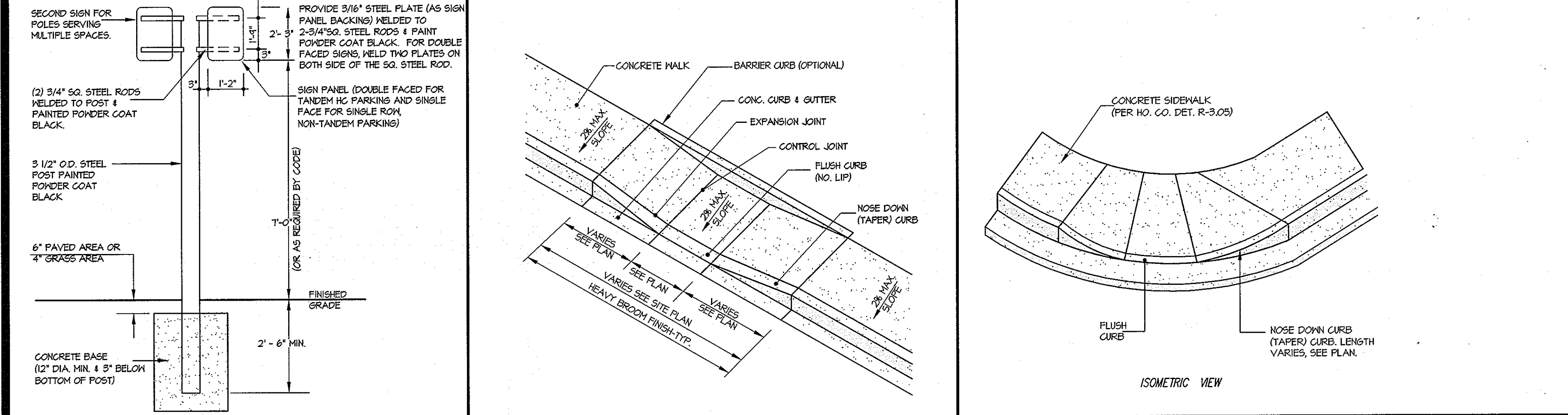
- NOSE DOWN CURB PER R-3.02
  - TRANSITION FROM 6" COMBINATION CURB AND GUTTER TO FLUSH CURB AND GUTTER (5' MIN.) PER R-3.02.
  - CURB AND GUTTER (DEPRESSED WITH NO LIP) PER R-3.01
  - TRANSITION FROM 6" COMBINATION CURB AND GUTTER TO 1" COMBINATION CURB AND GUTTER
- \*NOTE: ALL SIDEWALK RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE. SEE HOWARD COUNTY DETAIL R-4.07.

**PAVING AND CURB DELINEATION PLAN**

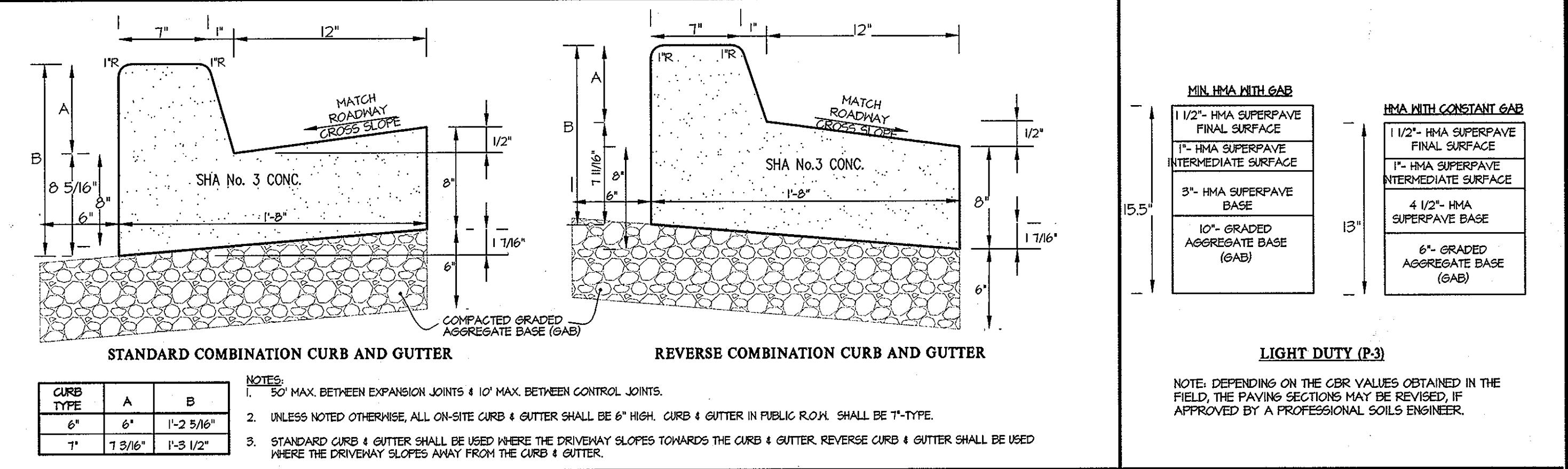


- NOTES:**
- ALL CURB AND GUTTER ARE 6" TYPE-A (DET. 1/3) UNLESS NOTED OTHERWISE ON THIS PLAN.
  - ALL CURB RADII ARE 5' (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE.
  - ALL SIDEWALKS ARE 5.33' WIDE (FROM BACK OF CURB) UNLESS NOTED OTHERWISE.
  - FOR TYPICAL PAVING SECTIONS AND CURB DETAILS, SEE THIS SHEET.
  - ALL PAVEMENT MARKINGS TO BE APPLIED USING "SETFAST PREMIUM ALKYLID TRAFFIC PAINT" BY SHERVIN WILLIAMS OR APPROVED EQUAL. ALL PAVEMENT ARROWS, "ONLY" MARKINGS, STOP BARS, STOP BAR MARKINGS AND CROSSWALK MARKINGS MUST BE INSTALLED IN THERMOPLASTIC.
  - 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 AND PUTTING THE ROADWAY INTO SERVICE.

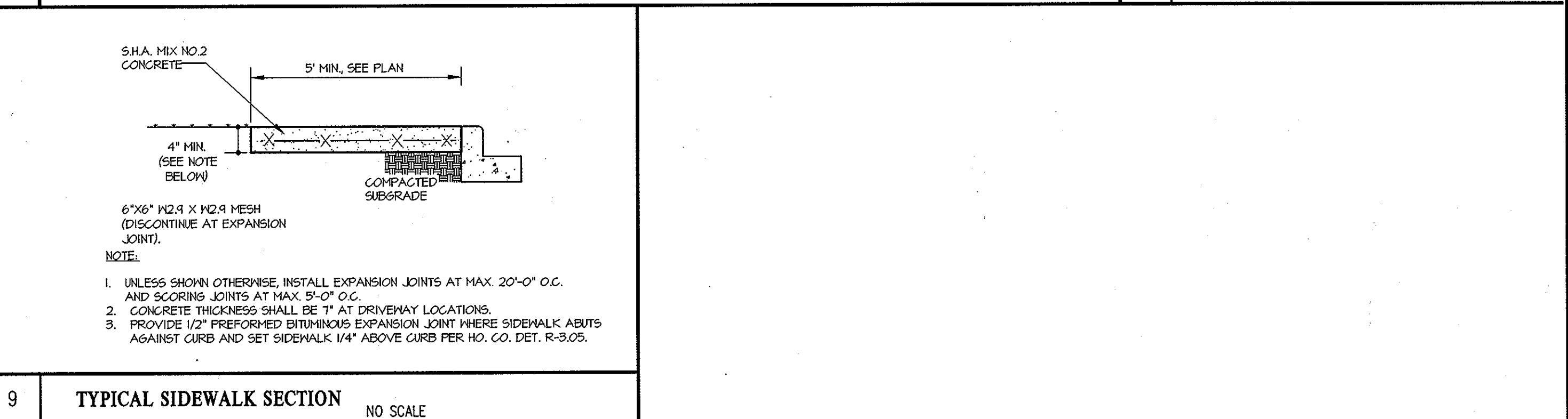
**3 PARKING SPACE LAYOUT** NO SCALE      **4 HANDICAP SPACE STENCIL LAYOUT** NO SCALE      **5 HANDICAP PARKING SIGNS DETAIL** NO SCALE



**PAVING AND CURB DELINEATION PLAN** SCALE: 1" = 40'



**1 TYPE-A CONCRETE CURB AND GUTTER (STANDARD AND REVERSE)** NO SCALE      **2 BITUMINOUS PAVING SECTIONS** NO SCALE



**6 POST & SIGN DETAIL FOR PARKING RESTRICTION SIGN** NO SCALE      **7 TYPE-A HANDICAP RAMP DETAIL** NO SCALE      **8 TYPICAL CURB/NOSE DOWN TAPER AT INTERSECTION** NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Mark R. Leagle* Date: 5/14/13

Chief, Division of Land Development: *Victor J. ...* Date: 5/13/13

Chief, Development Engineering Division: *...* Date: 4/12/13

GRAPHIC SCALE 1 inch = 10 feet

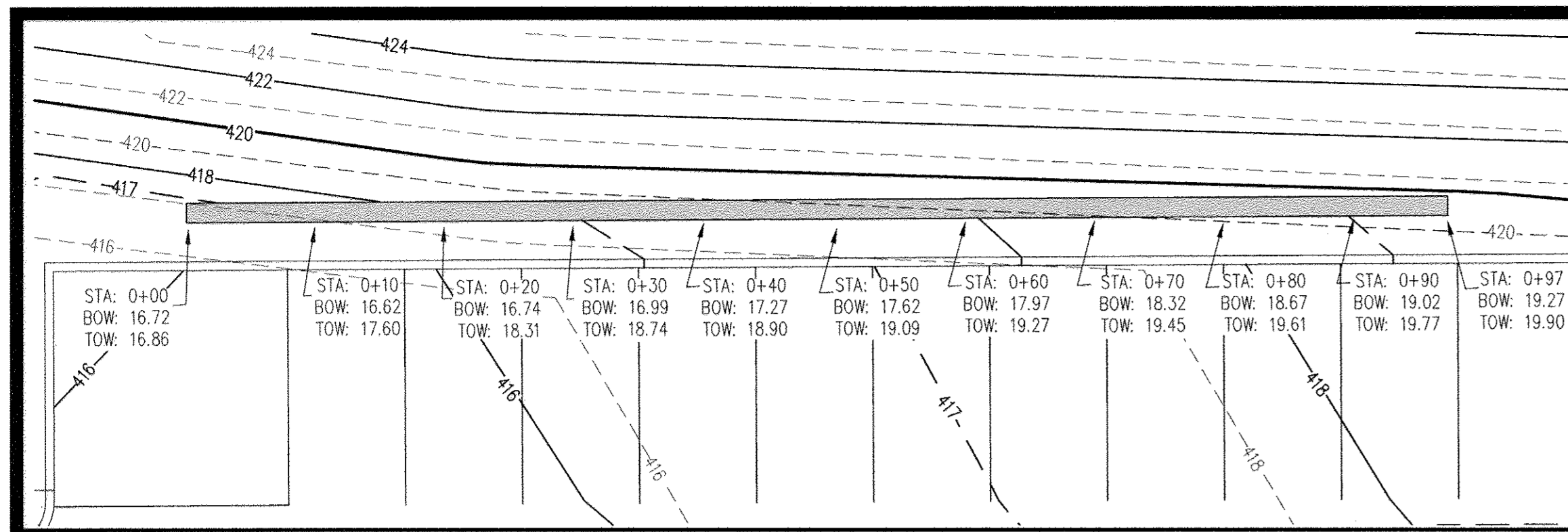
**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
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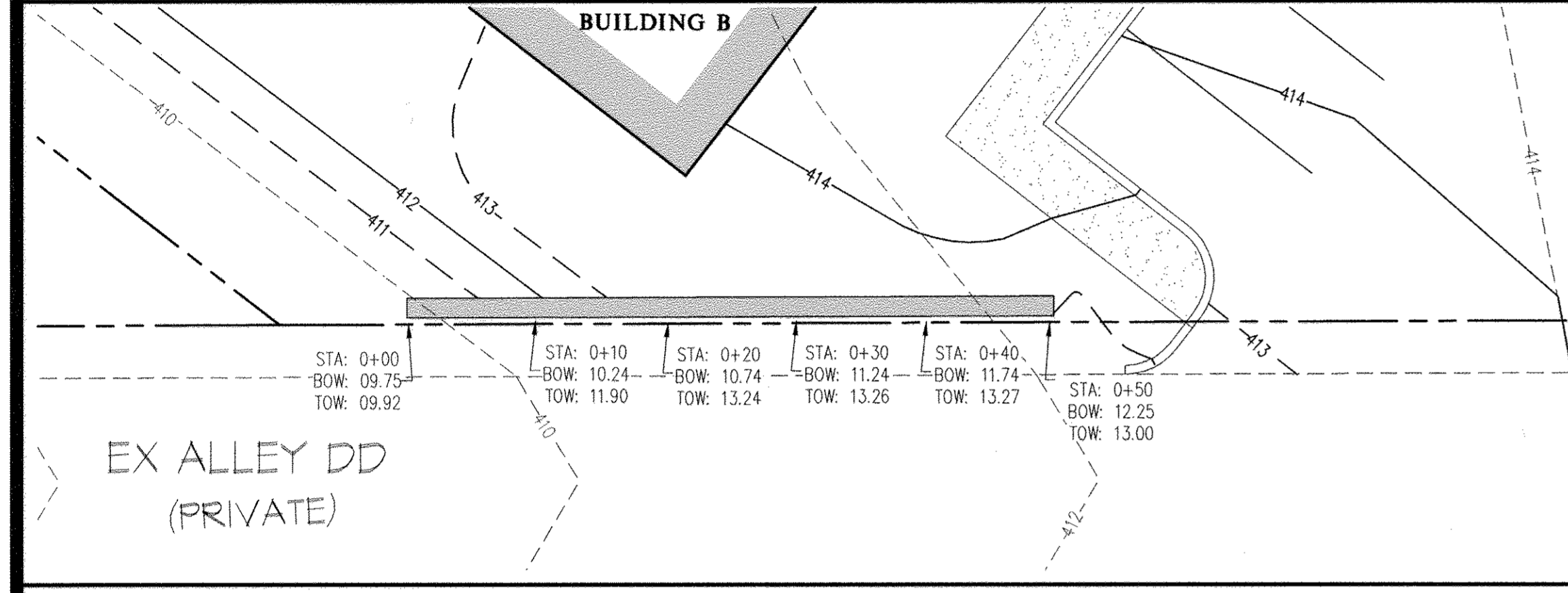
PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931  
EXPIRATION DATE: MAY 21, 2014

**SITE PLAN DETAILS**  
**SHIPEY'S GRANT**  
PHASE VI, PARCEL D-80  
PLAT NO: 22272-2374  
MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS  
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	R-A-15	09002
DATE	TAX MAP - GRID	SHEET
MAR., 2013	37 - 1&2	3 OF 10



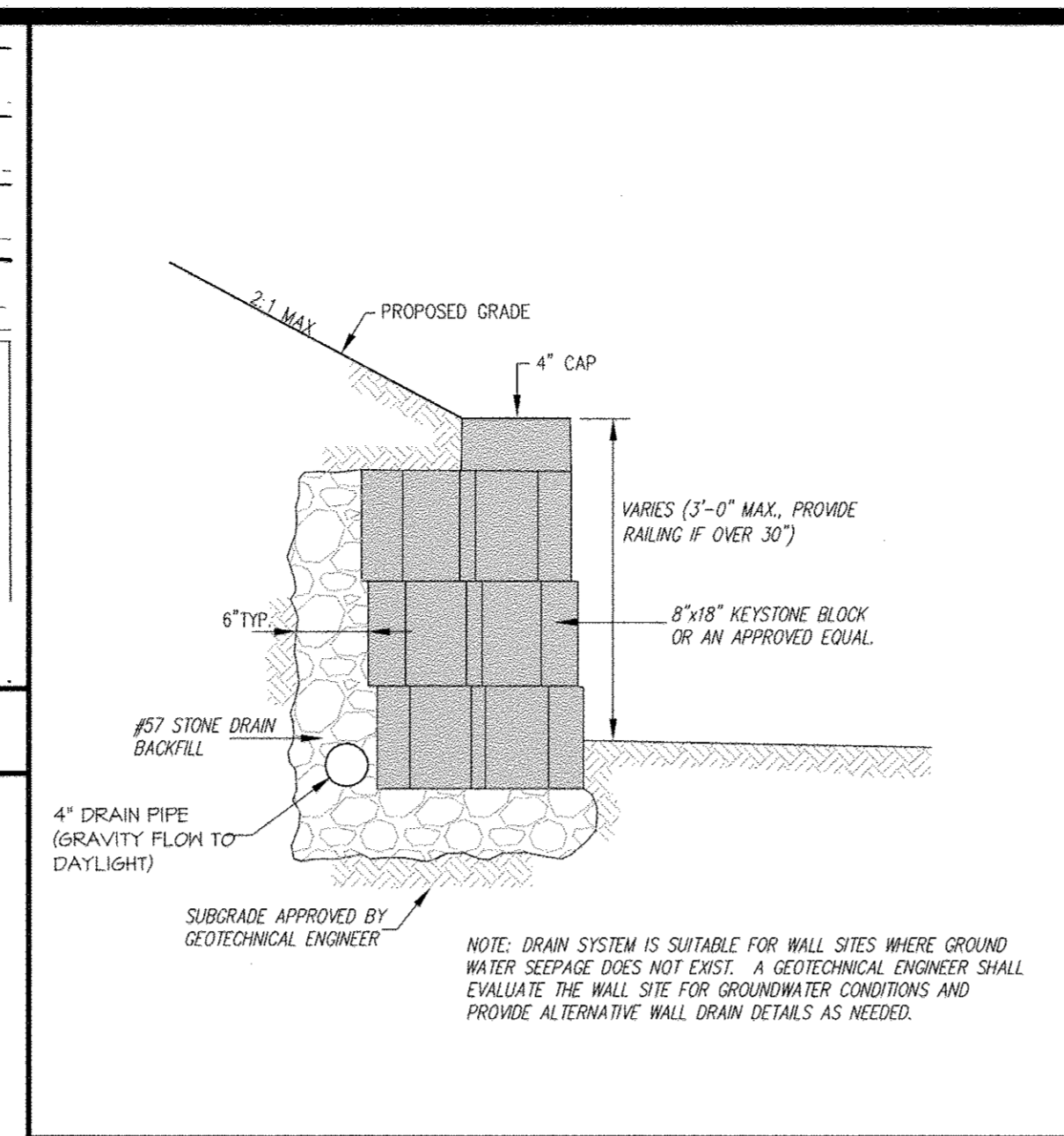
RETAINING WALL # 1 DETAILS SCALE: 1" = 10'



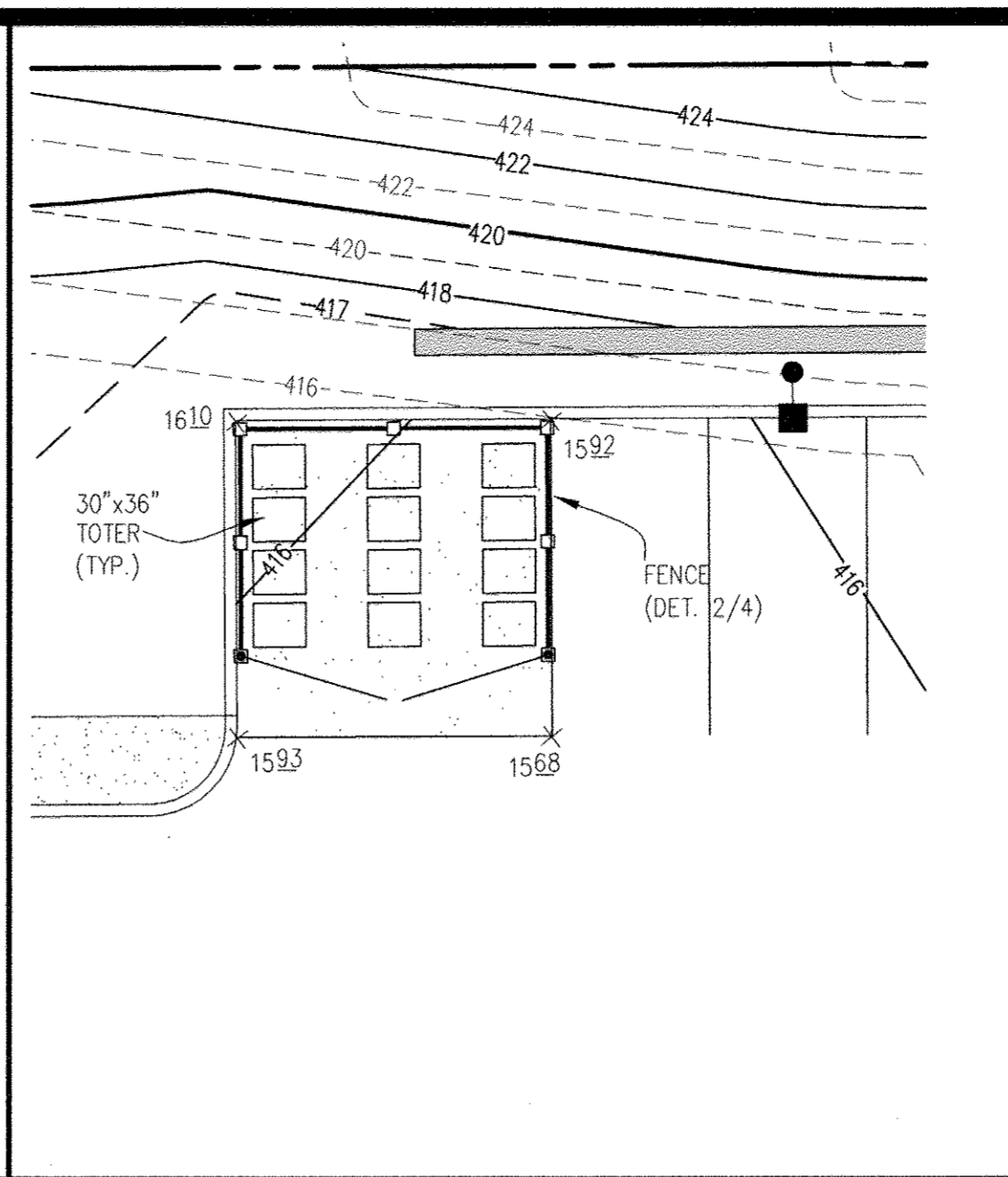
RETAINING WALL # 2 DETAILS SCALE: 1" = 10'



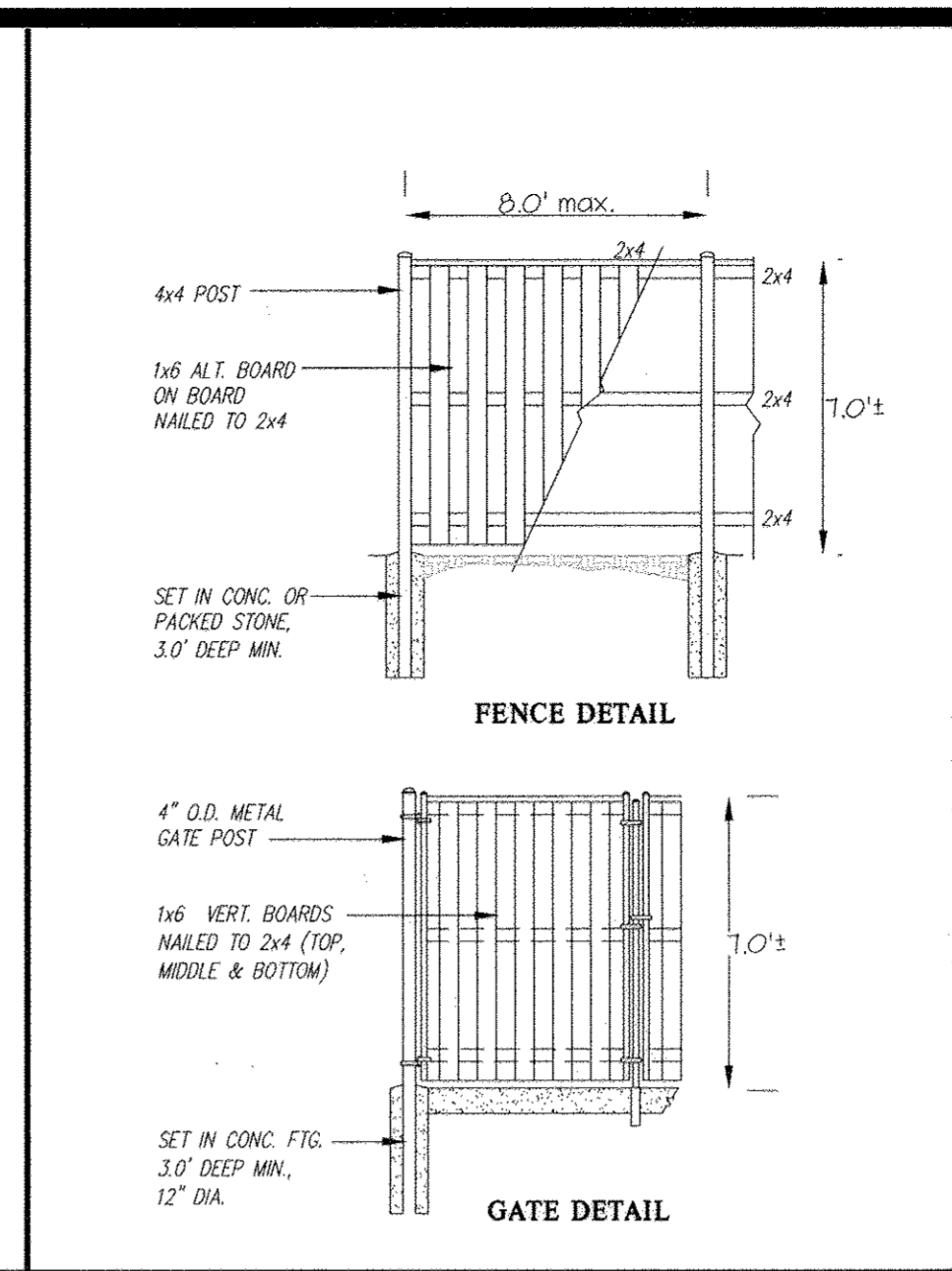
FRONT ELEVATION NO SCALE



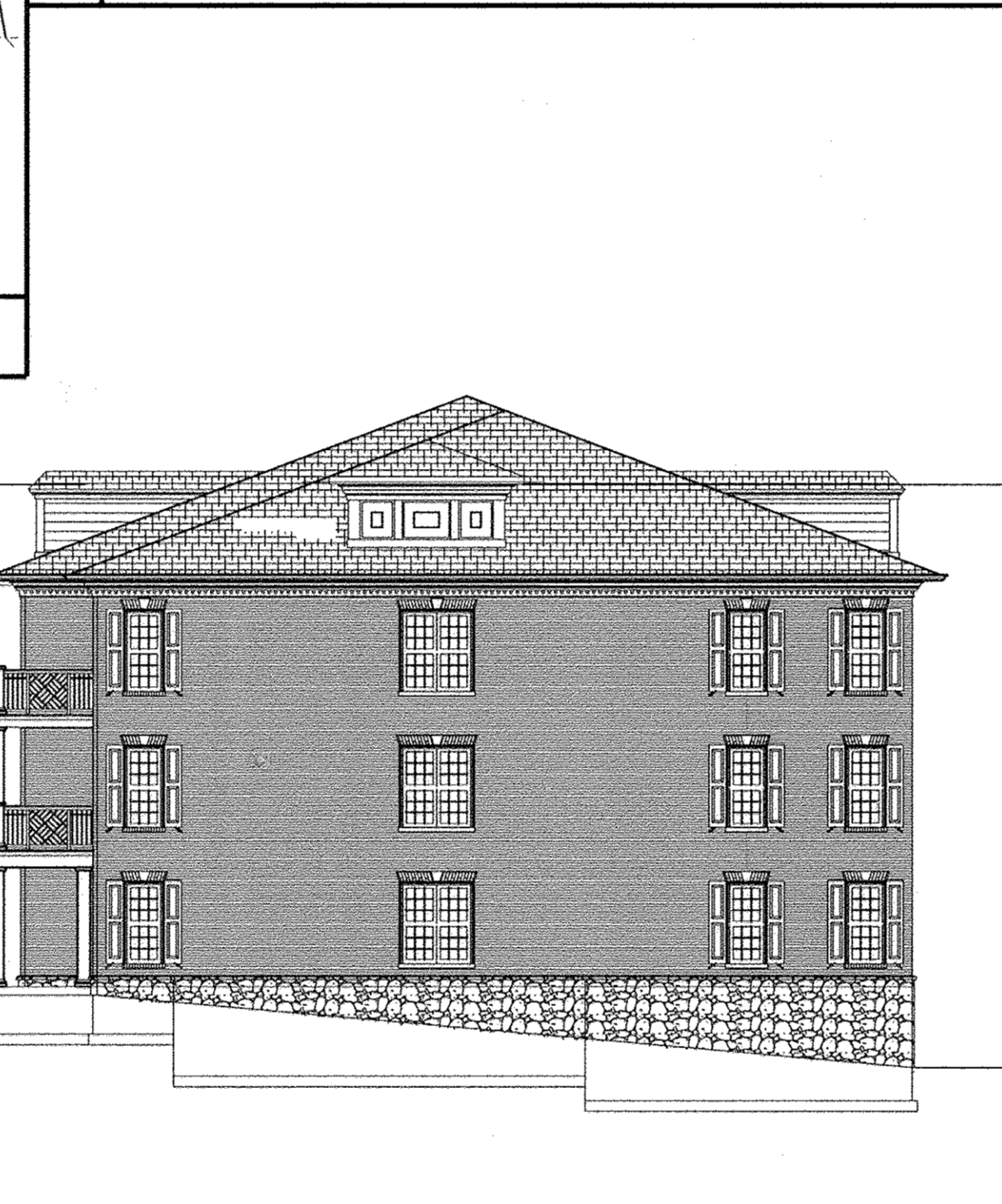
1 GARDEN WALL DETAIL (WALL 1 & 2) NO SCALE



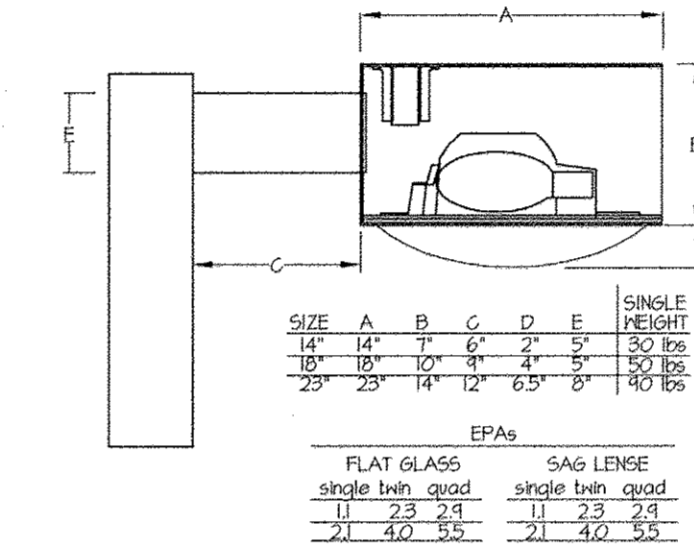
TRASH ENCLOSURE DETAILS SCALE: 1" = 10'



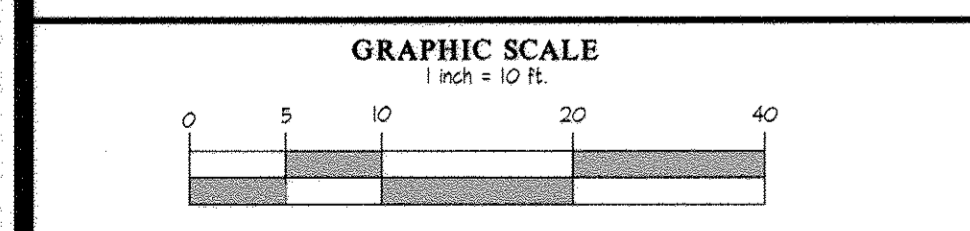
2 GATE and FENCE DETAIL FOR TRASH ENCLOSURE NO SCALE



RIGHT SIDE ELEVATION NO SCALE



LIGHT INFORMATION		
Symbol	Description	Quantity
■ • ■	TWIN TYPE III, WITH HORIZONTAL 400 WATT HIGH PRESSURE SODIUM LAMP ON A 30 FOOT ROUND TAPERED STEEL POLE (BROWN) ECOLUME ECA-182-3H-400HPS-BRP OR APPROVED EQUAL.	1
■ •	SINGLE TYPE III, WITH HORIZONTAL 400 WATT HIGH PRESSURE SODIUM LAMP ON A 30 FOOT ROUND TAPERED STEEL POLE (BROWN) ECOLUME ECA-181-3H-400HPS-BRP OR APPROVED EQUAL.	0
■ • •	ECA-234-3H-1000MH-480V-SC/PTF-3-EC23-DM4090-SC/KNW R1E/50-110-1000-3.5-BC	0



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Howard W. ...* Date: 5/14/13

Chief, Division of Land Development: *...* Date: 5/13/13

Chief, Development Engineering Division: *...* Date: 4/12/13

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NO.	DATE	REVISION	BY	APP'R.

PREPARED FOR:  
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 c/o Bozzuto Homes, Inc.  
 7850 Walker Drive, Suite 400  
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*Michael J. ...*

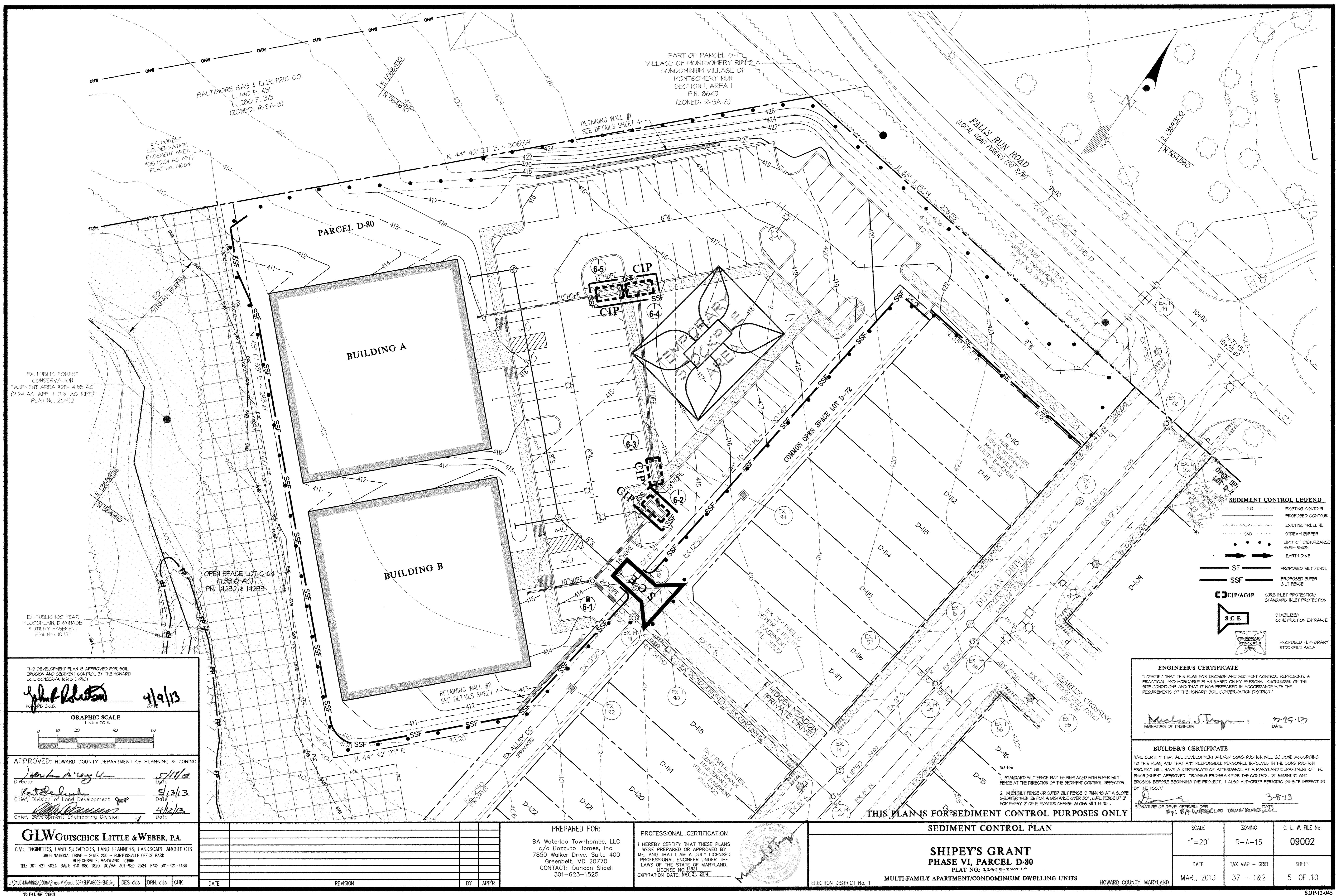
SITE PLAN DETAILS

**SHIPEY'S GRANT**  
**PHASE VI, PARCEL D-80**  
 PLAT NO: 2002-2177

SCALE: AS SHOWN  
 ZONING: R-A-15  
 DATE: MAR., 2013  
 TAX MAP - GRID: 37 - 1&2  
 SHEET: 4 OF 10

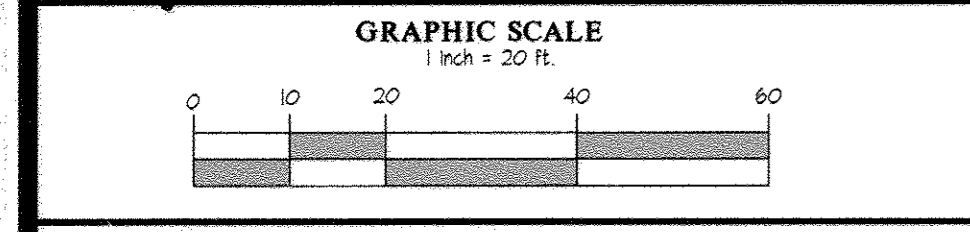
ELECTION DISTRICT No. 1  
 MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS  
 HOWARD COUNTY, MARYLAND

G. L. W. FILE No. 09002



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

*[Signature]* 4/9/13  
 HOWARD S.C.D.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*[Signature]* 5/1/13  
 Director

*[Signature]* 5/13/13  
 Chief, Division of Land Development

*[Signature]* 4/12/13  
 Chief, Development Engineering Division

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DATE	REVISION	BY	APP'R.

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 CONTACT: Duncan Sldell  
 301-623-1525

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*[Signature]*  
 Michael J. Tray

SEDIMENT CONTROL PLAN

**SHIPEY'S GRANT**  
 PHASE VI, PARCEL D-80  
 PLAT NO: 222772-222774

MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS

ELECTION DISTRICT No. 1

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	09002
DATE	TAX MAP - GRID	SHEET
MAR., 2013	37 - 1&2	5 OF 10

**SEDIMENT CONTROL LEGEND**

- 400 - EXISTING CONTOUR
- - PROPOSED CONTOUR
- - EXISTING TREELINE
- - STREAM BUFFER
- - STREAM TRENCH
- - LIMIT OF DISTURBANCE / SUBMISSION
- - EARTH DIKE
- SF - PROPOSED SILT FENCE
- SSF - PROPOSED SUPER SILT FENCE
- CIP/AGIP - CURB INLET PROTECTION / STANDARD INLET PROTECTION
- SCE - STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY STOCKPILE AREA - PROPOSED TEMPORARY STOCKPILE AREA

**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]* 3-15-13  
 SIGNATURE OF ENGINEER DATE

**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 HSCD.

*[Signature]* 3-8-13  
 SIGNATURE OF DEVELOPER/BUILDER DATE

- NOTES:
- STANDARD SILT FENCE MAY BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
  - WHEN SILT FENCE OR SUPER SILT FENCE IS RAINING AT A SLOPE GREATER THAN 5% FOR A DISTANCE OVER 50', CURB FENCE UP 2' FOR EVERY 2' OF ELEVATION CHANGE ALONG SILT FENCE.

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

**B-4.2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

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

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

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

**CRITERIA**

**A. SOIL PREPARATION**

**1. TEMPORARY STABILIZATION**

- a. SEEDING 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 PLOWS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE UNROUNDING CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES IN THE 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: IF LOWER SALT WILL BE PLACED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
- v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

**3. APPLICATION**

- a. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- b. 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.
- c. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- d. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. TAKE CARE TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOUSEN THE SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGILE. SEEDING 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 NUTRIENT 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.**

**TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:**

- 1. 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 CONTRACTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF ONIONS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.
- 2. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NOT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- 3. 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.
- 4. TOPSOIL APPLICATION
  - a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
  - b. UNIFORMLY DISTRIBUTING 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 SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM OPERATING OR OTHER OPERATIONS IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
  - c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL IS A FRESHEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

**C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**

- 1. 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 ANALYSIS.
- 2. 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 LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
- 3. 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 98 TO 100 PERCENT WILL PASS THROUGH A #200 MESH SIEVE.
- 4. 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 IS OTHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

**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 PERMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

**CRITERIA**

**A. SEEDING**

**1. SPECIFICATIONS**

- 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 ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
- b. MULCH AVAILABLE 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 THAWES.
- c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANTS AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN 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 FUNGICIDES FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION 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 SEEDING AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
- b. DRILL OR MULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH FIRM AFTER PLANTING.
  - i. MULTIPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDED AREAS MUST BE FIRM AFTER PLANTING.
  - 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 OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
  - ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 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. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERFERING FACTORS.
  - 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, MOLDY, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE 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 DUSTY FIBROUS PHYSICAL STATE.
  - i. WCFM IS TO BE DIED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY 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 16 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

**2. APPLICATION**

- a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TO 4 TONS PER ACRE TO A UNIFORM THICKNESS 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 2.5 TONS PER ACRE.
- c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 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 750 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 ULR (ACRO-TACK), DCA-70, PETROSE, TERRA TACK, TERRA MANUFACTURER APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH. SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
    - iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

**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.
- 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-4-3.1.8 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

**TEMPORARY SEEDING SUMMARY**

HARDINESS ZONE: 6b		SEED MIXTURE:		FERTILIZER RATE (10-10-10)		LIME RATE
No.	SPECIES	APPLICATION RATE (lb/acre)	SEEDING DATES	SEEDING DEPTHS	435 lb/acre (10 lb/1,000 sq ft)	2 tons/acre (90 lb/1,000 sq ft)
1	ANNUAL RYEGRASS	40 lb/acre	Mar. 1 to May 15 05, Aug. 1 to Oct. 31	0.5 INCHES		
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) 313-1805
- 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 PERMETER DIKES, SWALES, DITCHES, PERMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO VERTICAL (3:1); AND
  - b. 7 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE UNDER ACTIVE GRADING.
- 4. ALL SEDIMENT TRAPS/BASINS SHOW MUST 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 WITH THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDINGS AND MULCHING (SEC. B). TEMPORARY STABILIZATION, WITH MULCH ALONE, CAN ONLY BE APPLIED TO AREAS WHERE SEEDING DATES DO NOT ALLOW FOR PROPER SEEDING 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.

**TOTAL AREA OF SITE**

AREA DISTURBED	1,86± AC.
AREA TO BE ROOFED OR PAVED	1,85± AC.
AREA TO BE VEGETATIVELY STABILIZED	0.72± AC.
OFF-SITE WASTE/ERRORIUM AREA LOCATION	NA

**STANDARDS AND SPECIFICATIONS FOR DUST CONTROL**

CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

**DEFINITION**  
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

**CRITERIA**  
AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

**CONDITIONS WHERE PRACTICE APPLIES**  
AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

**DEFINITION**  
AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

**GENERAL SPECIFICATIONS**

- 1. MULCHES: SEE SECTION B-4-2.2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS. SECTION B-4-3 SEEDING AND MULCHING, AND SECTION B-4-4 TEMPORARY STABILIZATION. MULCH MUST BE ANCHORED TO PREVENT BLOWING.
- 2. VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION.
- 3. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART. SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.
- 4. IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS.
- 5. HARROWS: SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
- 6. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

**2. SOD INSTALLATION**

- a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
- b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS LAYED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOIL IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT WINDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
- c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
- d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

**3. SOD MAINTENANCE**

- a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SO DURING THE HEAT OF THE DAY TO PREVENT WILTING.
- b. AFTER THE FIRST WEEK, SO WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
- c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

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

*John M. Robertson* 4/9/13  
HOWARD S.C.D. DATE

**B-4.5 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.

**CRITERIA**  
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

**CRITERIA**

**A. SEED MIXTURES**

- 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 SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 412 - 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 UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 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. ENTER SELECTIONS 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 MAINTENANCE. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 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 MAINTENANCE. 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 PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 5 TO 5 PERCENT. SEEDING RATE: 5 TO 6 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 MAINTAINED TURF GRASS MIXTURES INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 2 POUNDS PER 1000 SQUARE FEET.

**NOTES**

- 1. SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"
- 2. CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
- 3. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:
  - MARYLAND: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
  - CENTRAL MD: MARCH 15 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
  - SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
- 4. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND FRAME THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- 5. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH. 1/2 TO 1 INCH EVERY 2 TO 4 DAYS UNTIL THE SEEDS ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

**PERMANENT SEEDING SUMMARY**

**HARDINESS ZONE: 6b**  
**SEED MIXTURE: #9 (Tall Fescue/ Kentucky Bluegrass)**

No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
9	*Certified Tall Fescue blend (95% by weight), Falcon IV Penn 1901 & Rebel Exodo and Certified Kentucky Bluegrass blend (5% by weight)	6-8 lb/1,000 sq ft	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

\* Other cultivars listed as "proven" in the most current UMD TT-77 may also be used

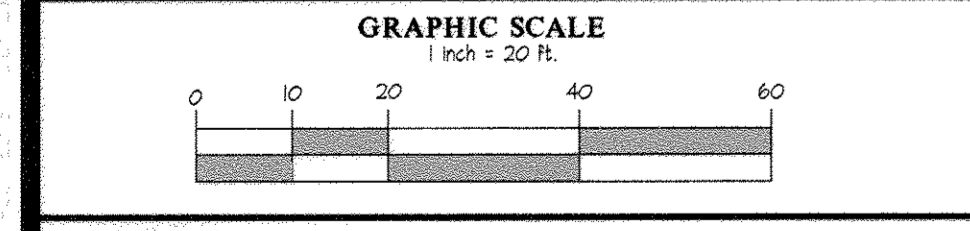
**B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER)**

**1. GENERAL SPECIFICATIONS**

- a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
- b. SOD MUST BE MACHINE CUT AT A UNIFORM JOINT OF 3/4 INCH, PLUS OR MINUS 1/16 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER TO FOOT OF THE SECTION.
- d. SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

**2. SOD INSTALLATION**

- a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
- b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS LAYED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOIL IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT WINDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
- c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
- d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMP



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Mark DeLegge* Date: 5/14/13

Chief, Division of Land Development: *Kate DeLeon* Date: 5/13/13

Chief, Development Engineering Division: *Michael J. ...* Date: 4/12/13

**GLW GUTSCHICK 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 BALT: 410-580-1820 DC/VA: 301-588-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:  
BA Waterloo Townhomes, LLC  
c/o Bozzuto Homes, Inc.  
7850 Walker Drive, Suite 400  
Greenbelt, MD 20770  
CONTACT: Duncan Stidell  
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. 14991  
EXPIRATION DATE: MAY 21, 2014

**STORM DRAIN DRAINAGE AREA MAP**

**SHIPEY'S GRANT**  
**PHASE VI, PARCEL D-80**  
PLAT NO: 22722-22724

MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS

ELECTION DISTRICT No. 1

HOWARD COUNTY, MARYLAND

**LEGEND**

- SOIL BOUNDARY
- SOIL TYPE
- STORM DRAIN
- DRAINAGE DIVIDE

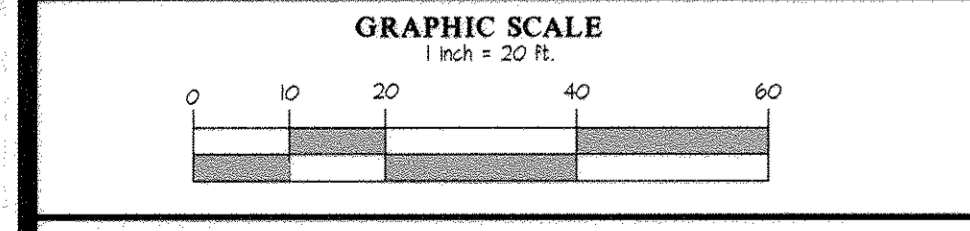
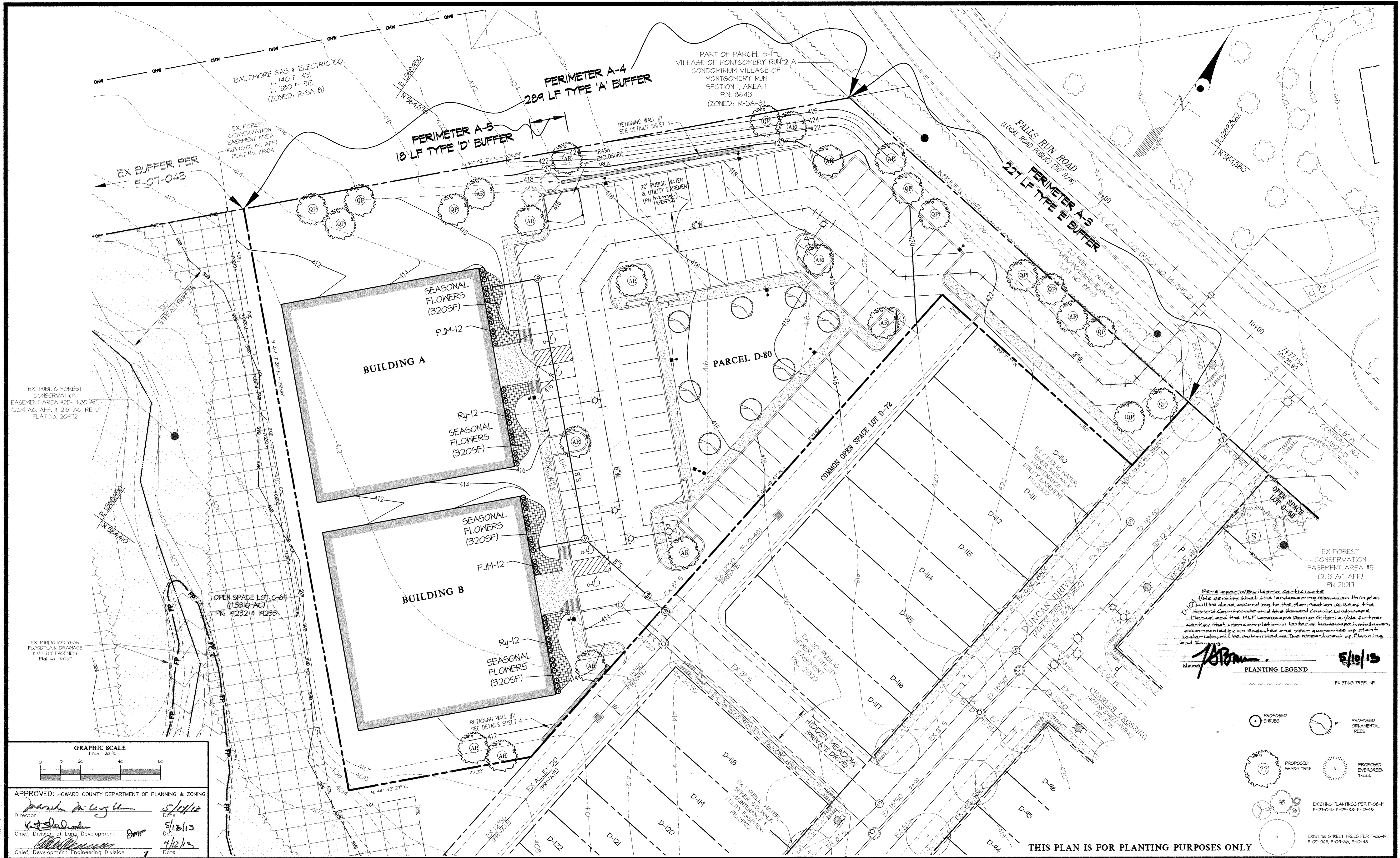
**'C' FACTOR COMPUTATIONS**

STRUCTURE	AREA (AC.)	'C'	IMPERVIOUS
I 6-5	0.26	0.85	100%
I 6-4	0.35	0.85	100%
I 6-3	0.20	0.85	100%
I 6-2	0.30	0.85	100%
RD-1	0.23	0.85	100%
RD-2	0.23	0.85	100%

SCALE	ZONING	G. L. W. FILE NO.
1"=20'	R-A-15	09002
DATE	TAX MAP - GRID	SHEET
MAR., 2013	37 - 1&2	7 OF 10







APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Michael A. Long* 5/14/12 Date

Chief, Division of Land Development: *John Smith* 5/13/13 Date

Chief, Development Engineering Division: *John Smith* 4/12/13 Date

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 7850 Walker Drive, Suite 400  
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 EXPIRATION DATE: MAY 21, 2014

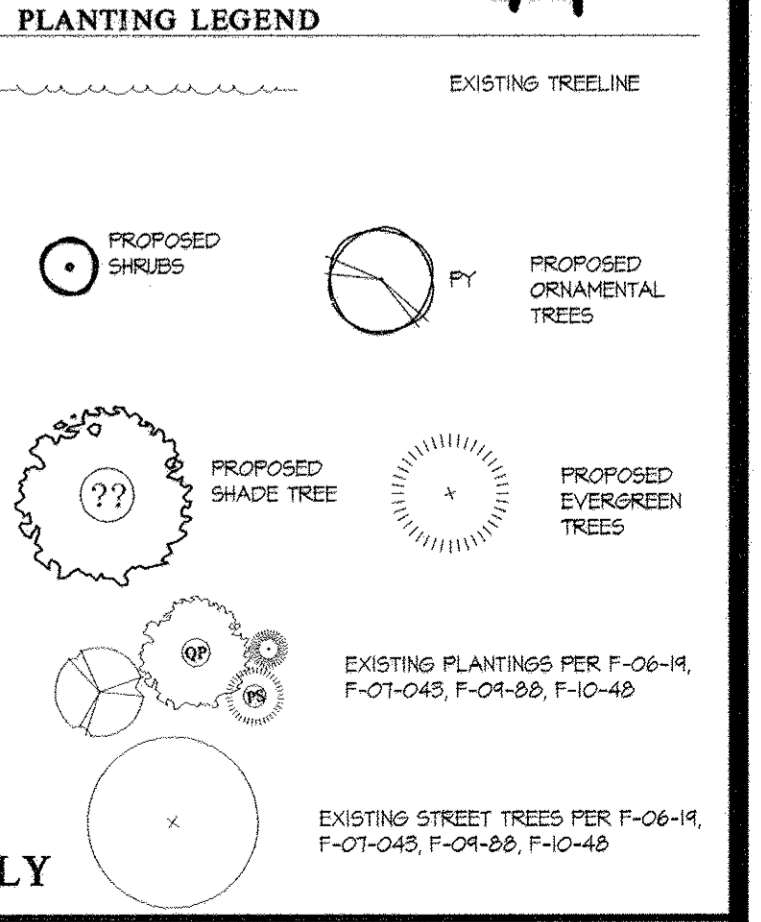
*Michael J. T...*

LANDSCAPE PLAN  
**SHIPEY'S GRANT**  
 PHASE VI, PARCEL D-80  
 PLAT NO. 23322-22774  
 MULTI-FAMILY APARTMENT/CONDOMINIUM DWELLING UNITS

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	09002
DATE	TAX MAP - GRID	SHEET
MAR., 2013	37 - 1&2	9 OF 10

Developer/Builder's Certificate  
 I hereby certify that the landscaping shown on this plan will be done according to the plan, Section 10.12.4 of the Howard County Code and the Howard County Landscape Manual and the MFL Landscape Design Criteria. I also 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.

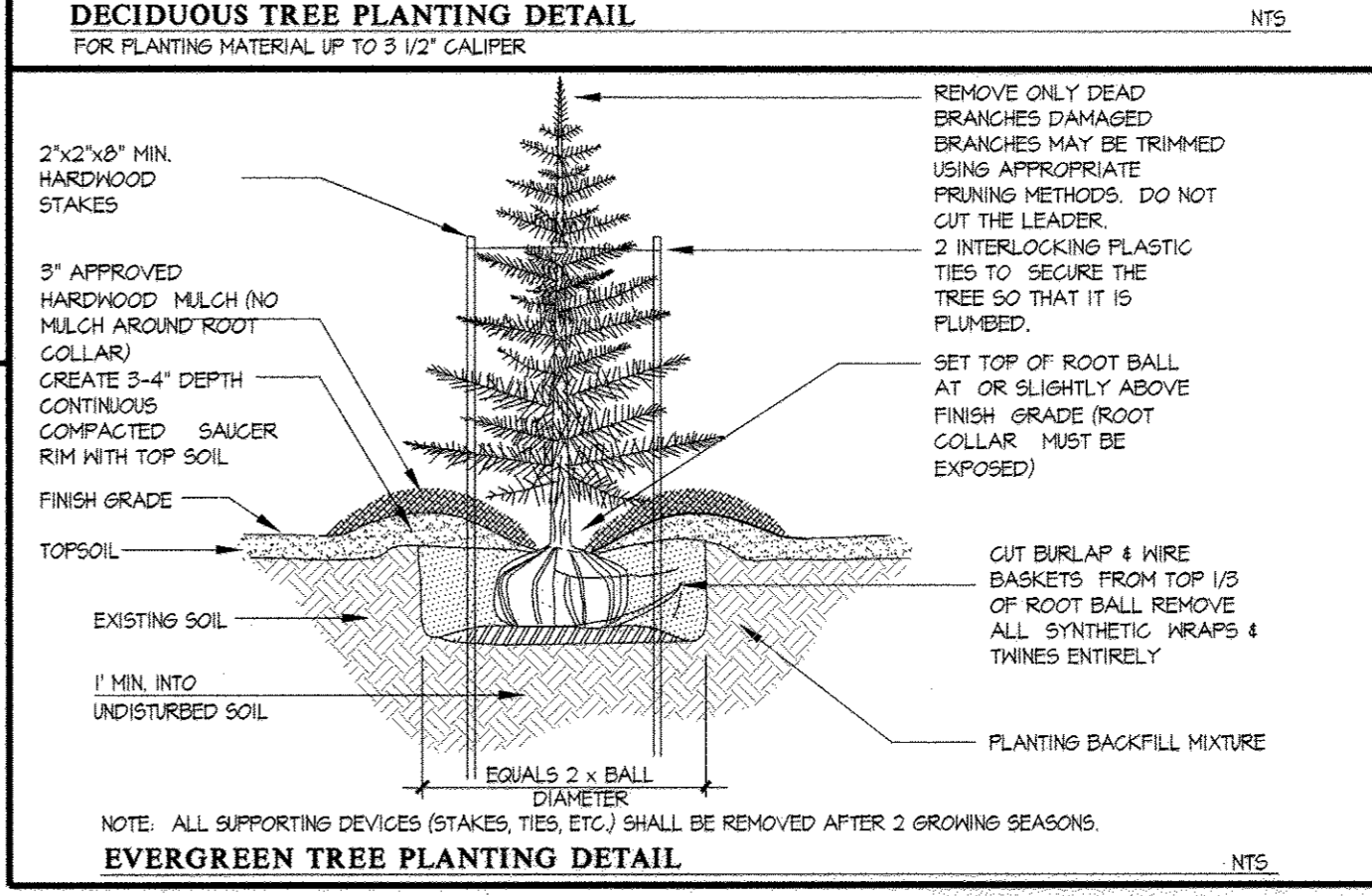
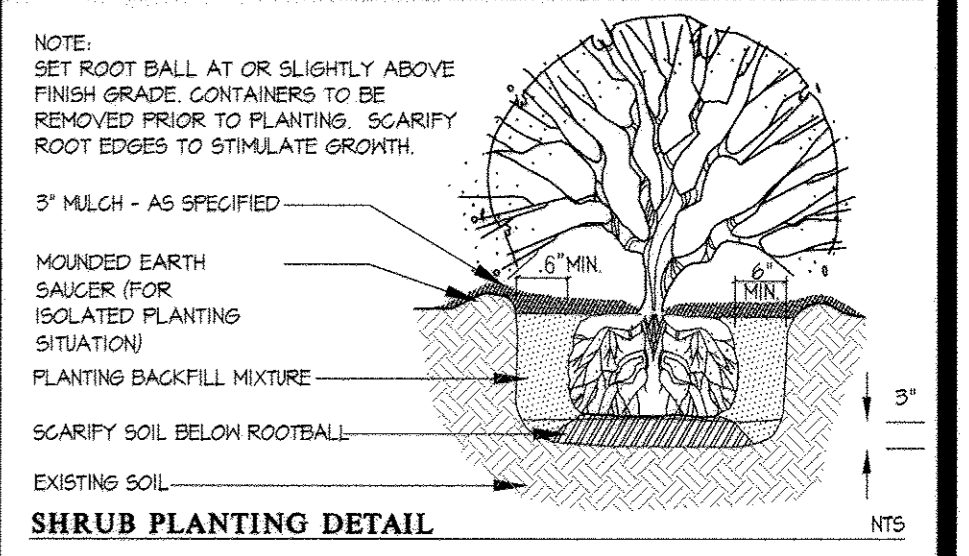
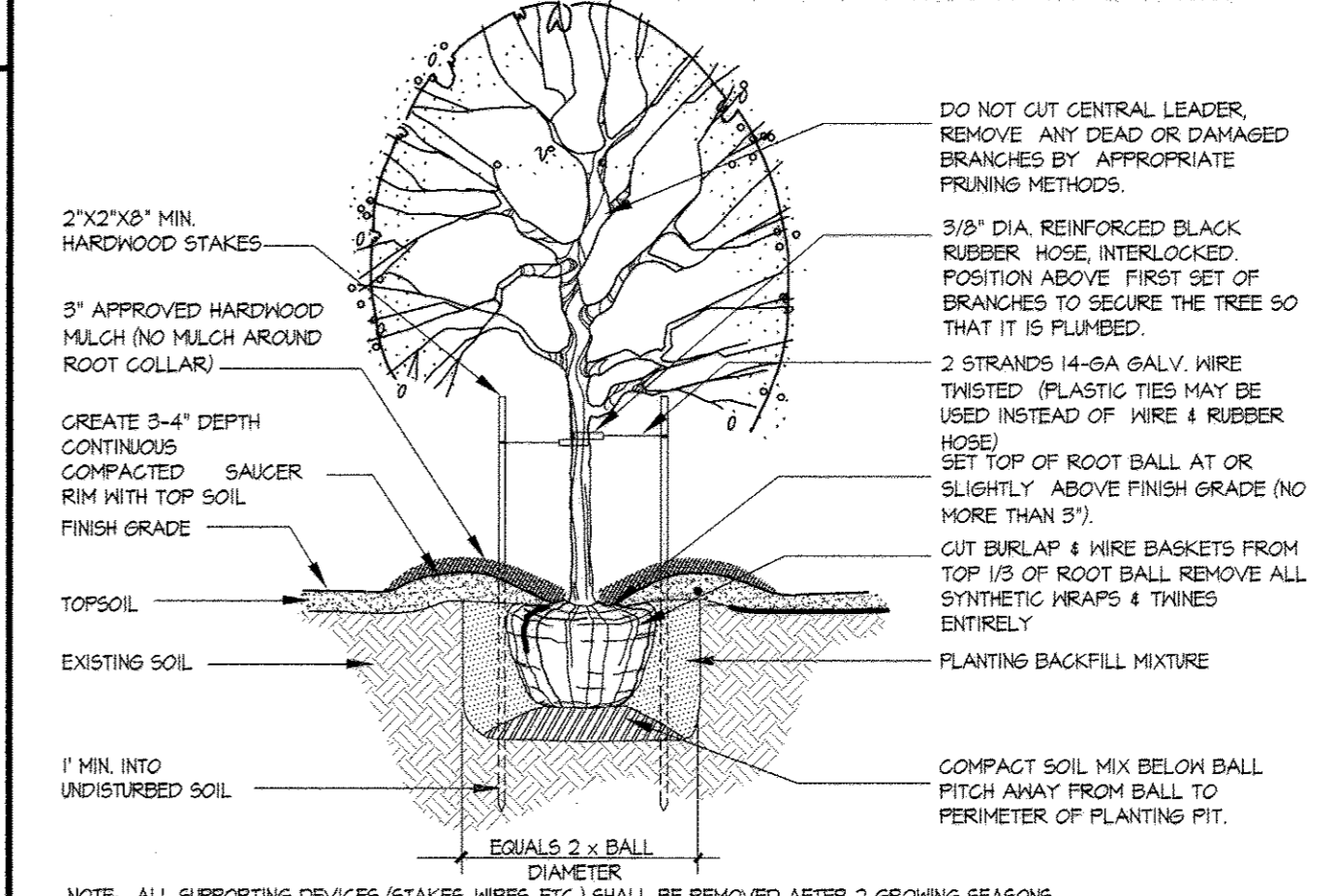
Name: *ASB...* 5/10/13



THIS PLAN IS FOR PLANTING PURPOSES ONLY

**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.
- 1. PLANT NAMES**  
PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH 'AAN' STANDARDS.
- 2. 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.
- 3. PLANT MEASUREMENTS**  
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 HEELED-IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- 4. PLANT IDENTIFICATION**  
LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDOLES OR BUNDOLES 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.
- 5. PLANT INSPECTION**  
THE OWNER MAY REQUEST, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, TO 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:
- 1. 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 PROVIDING THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL. PLANTING MIXTURES ARE USED.
- 2. DIGGING**  
ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (B4B) IN ACCORDANCE WITH THE 'AAN STANDARDS'.
- 3. EXCAVATION OF PLANT PITS**  
THE LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
- 4. STAKING, GUYING AND WRAPPING**  
ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:  
A. STAKES: SHALL BE SOUND WOOD 2" X 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS MINIMUM 7'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MINOR TREES.  
B. WIRE AND CABLE: WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIFER PROVIDE 5/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CALIFER, PROVIDE 3/8" 1 STRAND CABLE GALVANIZED STEEL WITH GALVANIZED 'EYE' THIMBLES OF WIRE AND HOSE ON TREES UP TO 3" IN CALIFER.  
C. HOSE: SHALL BE NEW, 2 PLY REINFORCED RUBBER HOSE, MINIMUM 1/2" I.D. 'PLASTIC LOCK TIES' OR 'PAUL'S TREES BRACES' MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIFER.  
D. ALL TREES UNDER 3" IN CALIFER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS.
- 5. 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 PIT. 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 PIT 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. 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 PIT. 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 PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.  
E. 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.
- 6. PLANT INSPECTION AND ACCEPTANCE**  
THE DESIGN REVIEW COMMITTEE SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTING PROJECTS ON A PERIODIC BASIS TO ASSURE THAT ALL WORK IS PROCEEDING IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- 7. 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 'SPRINGS' PLANTING SEASON, AND THE COMMENCEMENT OF THE 'FALL' PLANTING SEASON.  
B. GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE 'SPRINGS' PLANTING SEASON, SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING 'SPRINGS' PLANTING SEASON.
- SODDING**  
ALL SODDING 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.



- LANDSCAPE NOTES**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE & 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 NO. 1 SHALL APPLY.
  - FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. CONTACT CONSTRUCTION MANAGER OR OWNER IF ANY RELOCATIONS ARE REQUIRED.
  - PLANT QUANTITIES SHOWN ON THE 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, SYMMETRICAL AND CONFORM TO THE AAN SPECIFICATIONS. IN ADDITION ALL REQUIRED PLANTING FOR THE LANDSCAPE ISLANDS IN THE PARKING LOT SHALL CONFORM TO THE HOWARD COUNTY LANDSCAPE MANUAL. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THIS PLAN. SEE SHEET 21 FOR PLANTING DETAILS.
  - NO SUBSTITUTION SHALL BE MADE WITHOUT PRIOR APPROVAL FROM HOWARD COUNTY DPZ AND THE OWNER OR HIS REPRESENTATIVE.
  - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SOODED OR SEEDDED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATION. A MINIMUM OF 4" OF TOPSOIL SHALL BE PROVIDED TO ALL PLANTING AREAS.
  - THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS THAT MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
  - ALL EXPOSED EARTH WITHIN THE LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER THE PLANTING DETAILS.
  - DO NOT PLANT WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENT.
  - VERIFY THE LOCATION AND DEPTH OF THE COMMUNICATION LINE(S) WITHIN THE AT&T R/W PRIOR TO ANY PLANTING WITHIN THIS R/W. THE CONTRACTOR SHALL CONTACT SUW FOR ANY NECESSARY RELOCATION OF PLANT MATERIALS.
  - THE SCHEDULES ON THIS SHEET ARE PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$10,040.00 FOR THE FOLLOWING PLANTS:

**SCHEDULE-A: PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER PROPERTIES		
	A-3	A-4	A-5
LANDSCAPE BUFFER TYPE	TYPE E	TYPE A	TYPE D
LINEAR FEET OF ROADWAY/ PERIMETER FRONTAGE/BLDG.	227'	289'	18'
CREDIT FOR EX. VEGETATION (YES, NO; LINEAR FEET; DESCRIBE BELOW IF NEEDED)	NONE	NONE	NONE
CREDIT FOR WALL, FENCE OR BERM (YES, NO; LINEAR FEET; DESCRIBE BELOW IF NEEDED)	YES, PARKING IS MORE THAN 3' BELOW ROADWAY	NONE	NONE
NUMBER OF PLANTS REQUIRED			
SHADE TREES	6 (1:40)	5 (1:60)	1 (1:60)
EVERGREEN TREES	0	0	2 (1:10)
ORNAMENTALS	0	0	0
SHRUBS	0	0	0
NUMBER OF PLANTS PROVIDED			
SHADE TREES	6	5	1
EVERGREEN TREES	0	0	2
ORNAMENTALS	0	0	0
SHRUBS	0	0	0
SUBSTITUTIONS MADE	0	0	0

**SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	78 COMMON SURFACE SPACES
NUMBER OF SHADE TREES REQUIRED (1 PER 10 RES. SPACES, 1 PER 20 COMMERCIAL SPACES U)	8
NUMBER OF TREES PROVIDED	8
OTHER TREES (2:1 SUBSTITUTION)	0

**SCHEDULE-C: RESIDENTIAL INTERNAL LANDSCAPING**

NUMBER OF DWELLING UNITS	32 (16 UNITS PER APARTMENT/CONDO BLDG.)
NUMBER OF TREES REQUIRED (1 PER SPA DV, 1 PER 3 APFTS DV)	11 SHADE TREES
NUMBER OF TREES PROVIDED	7 SHADE TREES
OTHER TREES (2:1 SUBSTITUTIONS WITH ORNAMENTAL OR EVERGREEN TREES)	8 ORNAMENTAL TREES
NUMBER OF SHRUBS PROVIDED	48 SHRUBS

BUFFER TYPE	SHADE TREES/LF	EVG. TREES/LF	SHRUBS/LF
A	1:60	0	0
B	1:50	1:40	0
C	1:40	1:20	0
D	1:60	1:10	0
E	1:40	0	1:4

2 EVERGREEN TREES AT \$150/TREE = \$300.00  
 51 SHADE TREES AT \$300/TREE = \$15,300.00  
 48 SHRUBS AT \$30/SHRUB = \$1,440.00

TO REQUEST A LANDSCAPE INSPECTION TO OBTAIN THE RELEASE OF THE POSTED LANDSCAPE SURETY, SUBMIT A WRITTEN REQUEST OF LANDSCAPE INSPECTION, ALONG WITH A COPY OF THE ONE YEAR LANDSCAPE PLANT WARRANTY, TO THE DIVISION OF LAND DEVELOPMENT, HO. CO. DEPT. OF PLANNING AND ZONING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*David A. Wright* 5/14/13  
 Director Date

*Neil Stalinski* 5/13/13  
 Chief, Division of Land Development Date

*William* 4/2/13  
 Chief, Development Engineering Division Date

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 AND THE M/LF LANDSCAPE DESIGN CRITERIA. 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.

*BA Waterloo* 3-8-13  
 NAME: BA WATERLOO TOWNHOMES, LLC DATE

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
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DES. dds DRN. dds CHK.

DATE	REVISION	BY	APP'R.

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EXPIRATION DATE: MAY 21, 2014

*Michael J. Tray*

**THIS PLAN IS FOR PLANTING PURPOSES ONLY**

**LANDSCAPE NOTES AND DETAILS**

**SHIPEY'S GRANT**  
 PHASE VI, PARCEL D-80  
 PLAT NO: 22-27-23-22-27-14

DATE: MAR., 2013

ELECTION DISTRICT No. 1

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	R-A-15	09002
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