NORTHFIELD ROAD SIDEWALK PLAN - PHASE 1

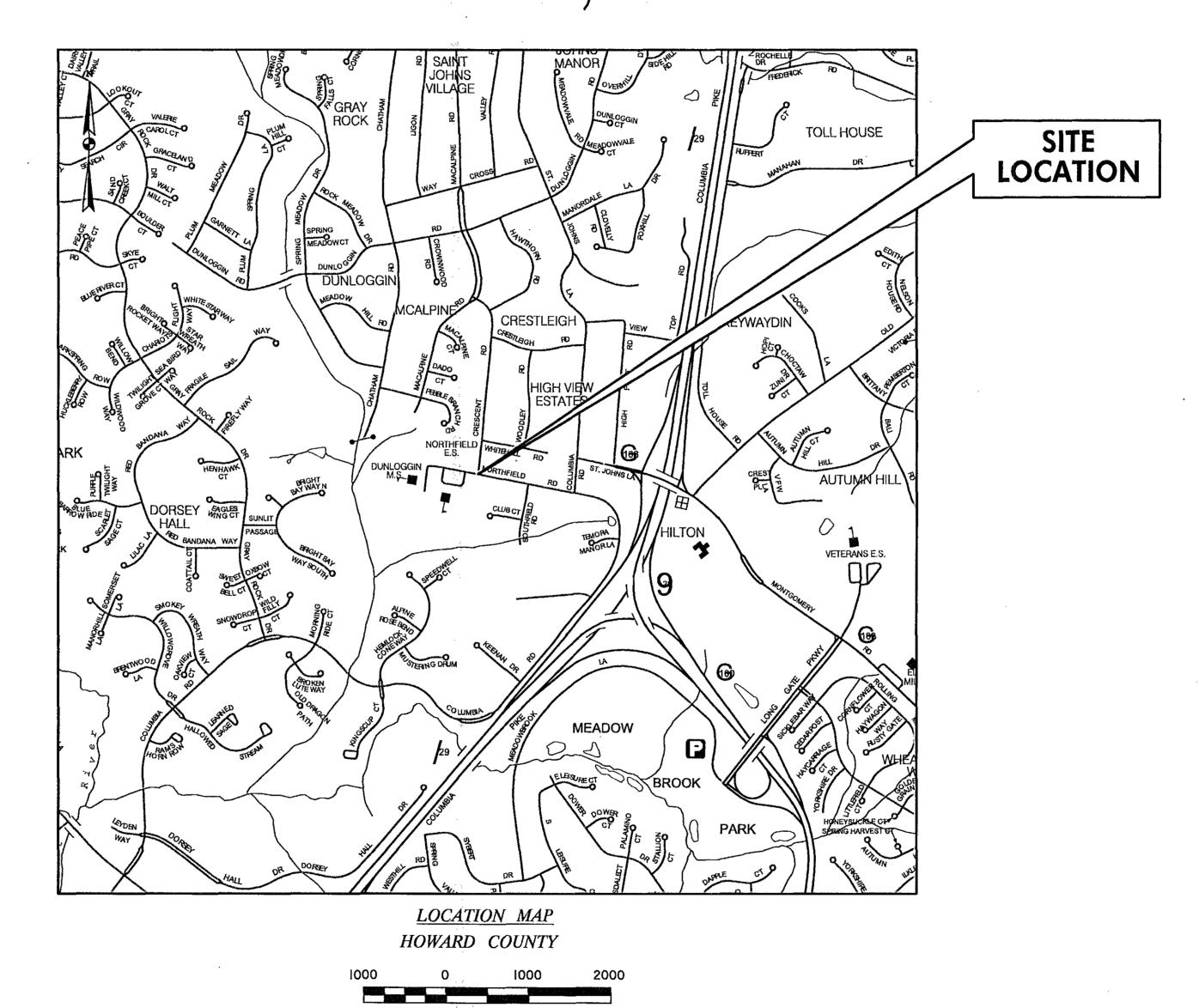
INDEX OF DRAWINGS

- 1 TITLE SHEET
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- 6 EROSION AND SEDIMENT CONTROL PLAN
- 7 EROSION AND SEDIMENT CONTROL DETAILS AND NOTES 1
- 8 EROSION AND SEDIMENT CONTROL DETAILS AND NOTES 2

DEVELOPER'S CERTIFICATION "I/WE CERTIFY THAT ALL DEVELOPMENT AND 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 DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT." STERO Sharar SIGNATURE OF DEVELOPER ENGINEER'S CERTIFICATION "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. " 7/9/2014 URS CORPORATION 4 NORTH PARK DRIVE HUNT VALLEY. MD 21030 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATI

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CAPITAL PROJECT K-5035



PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT 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. 16156
EXPIRATION DATE: 8/28/2014

TRAVERSE POINTS AND BENCHMARK INFORMATION								
POINT NO.	NORTHING	EASTING	ELEVATION					
24F3	581,299.858	1,360,713.774	365.347					
24F4	582,298.642	1,360,571.016	386.118					
24IA	579,167.044	1,360,260.252	357.152					
24lB	578,753.50	1,362,302.987	390.56					

GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 HOWARD COUNTY PUBLIC SCHOOLS AT 410-313-6600 AND MISS UTILITY AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK
- THE HORIZONTAL AND VERTICAL CONTROL FOR THESE PLANS ARE BASED ON THE MARYLAND STATE SYSTEM OF PLANE COORDINATES AS ESTABLISHED FROM THE FOLLOWING HOWARD COUNTY CONTROL POINTS:

 24F3, 24F4, 24IA, 24IB
- THE SYSTEM OF COORDINATES USED IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:

HORIZONTAL: NAD83/2011 VERTICAL: NAVD88

- 3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- 4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE NATURAL RESOURCES CONSERVATION SERVICE.
- 5. TOPOGRAPHIC SURVEYS WERE PERFORMED BY URS CORPORATION IN APRIL 2014.
- 6. THE PROPERTY LINES AND EASEMENT LINES ARE APPROXIMATE.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- 8. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHOD, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- 9. APPROXIMATE UTILITIES ARE SHOWN FROM AVAILABLE RECORDS AND/OR FIELD RECONNAISSANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

UTILITY CONTACTS:

AT&T
BGE (CONSTRUCTION SERVICES)
BGE (EMERGENCY)
HOCO BUREAU OF UTILITIES
COLONIAL PIPELINE CO.
MISS UTILITY
STATE HIGHWAY ADMINISTRATION

(410) 637-8713 (410) 685-0123 (410) 313-4900 (410) 795-1390 1-800-257-7777 (410) 531-5533 1-800-743-0033

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS

DATE

CHIEF. TRANSPORTATION AND SPECIAL PROJECTS DIVISION

DATE

CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, BUREAU OF HIGHWAYS

DATE



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DES: RLL			3		
DRN: CDF					
CHK: DTM					
DATE:7/2014	BY	NO.		REVISION	 DATE

SCALE: 1" = 1000

TITLE SHEET

BLOCK NO.

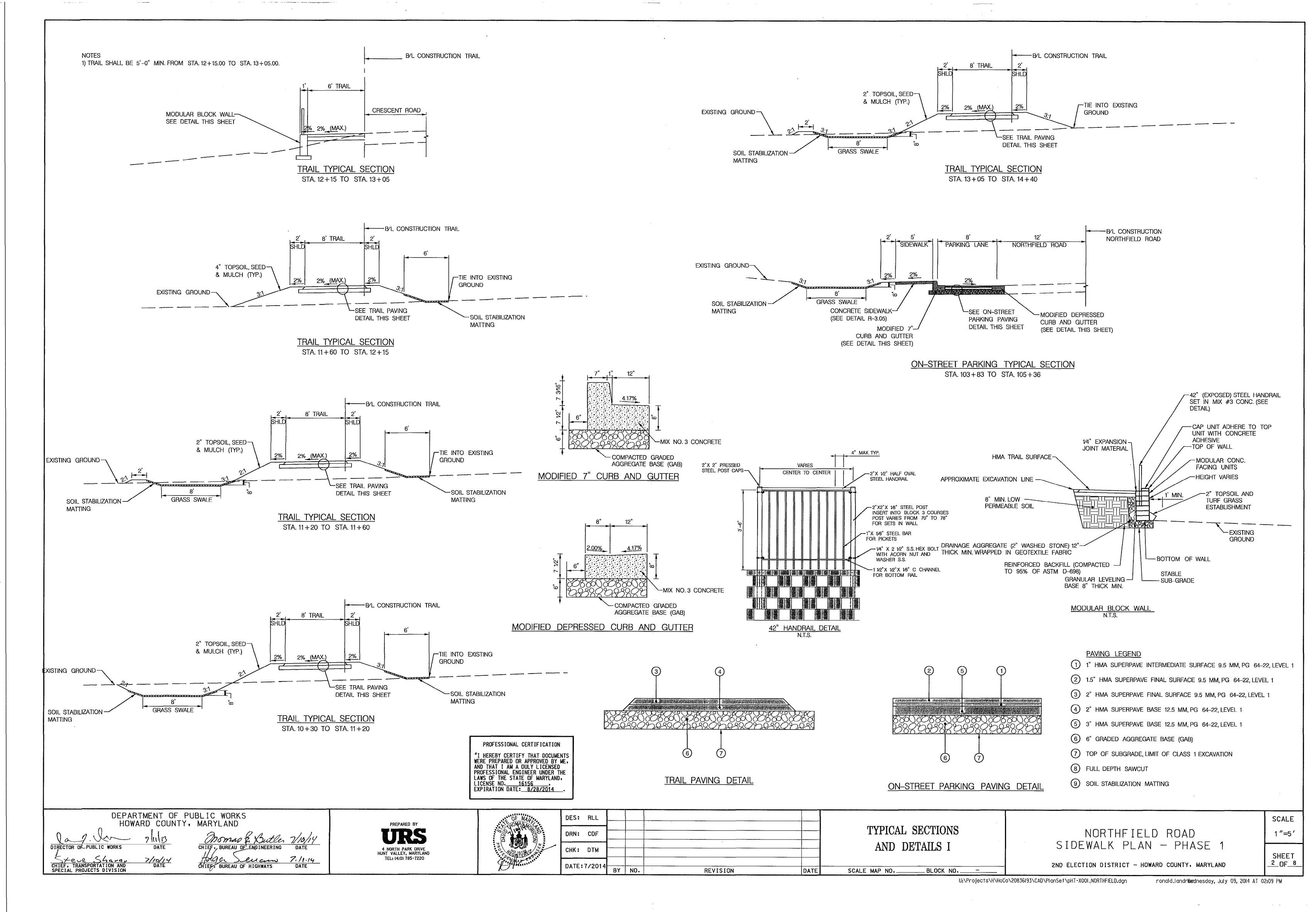
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NORTHFIELD ROAD SIDEWALK PLAN - PHASE 1

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN
SHEET

1 OF 8

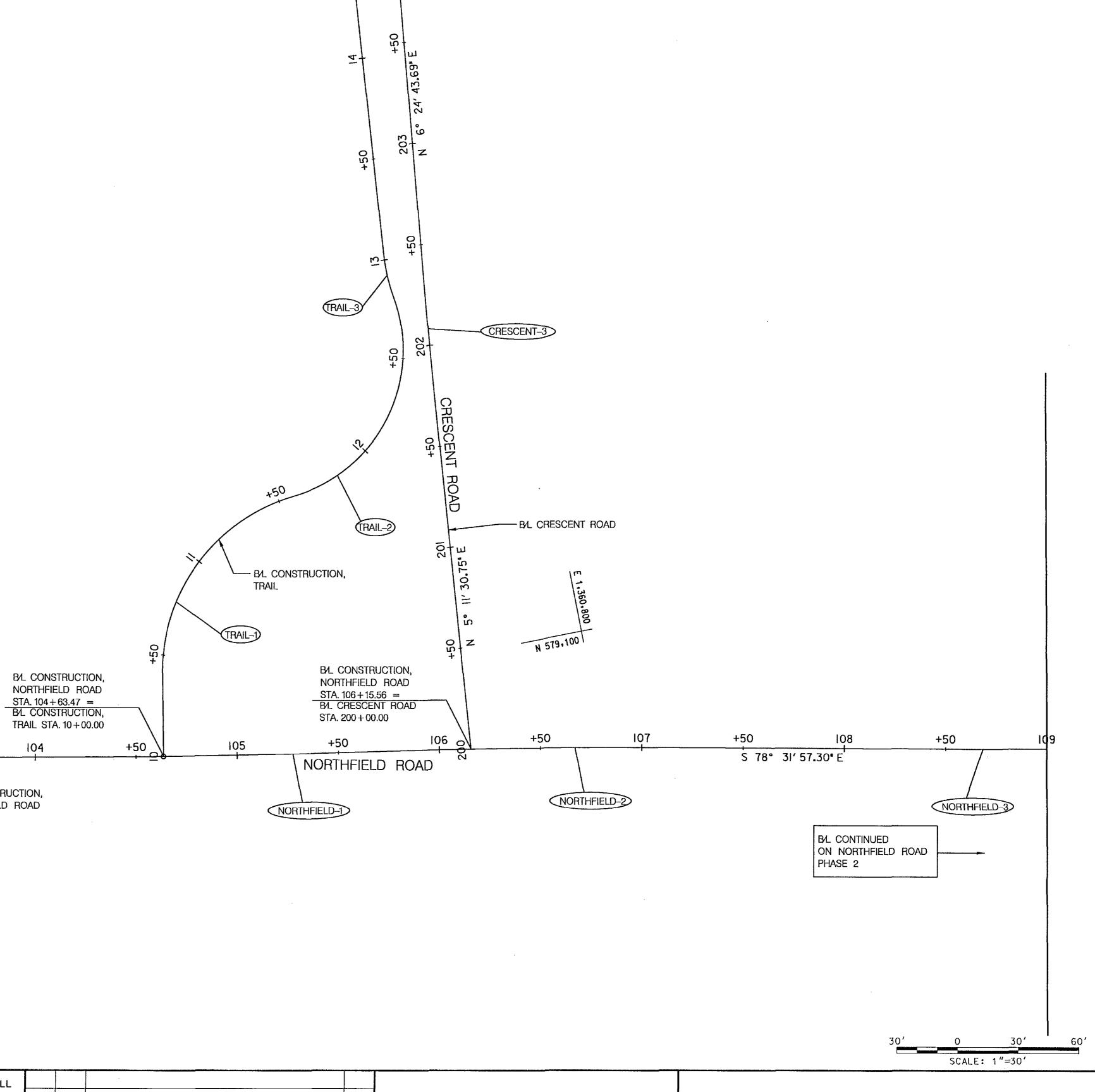


N TO	N 579.550
	m/

CURVE DATA									
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL			
TRAIL-1	74° 28' 32.58" RT	63° 39′ 43.12″	90.00	68.41	116.99	23.05			
TRAIL-2	94° 02' 13.44" LT	76° 23' 39.74"	75.00	80.48	123.09	35.01			
TRAIL-3	14° 04' 00.50" RT	63° 39' 43.11"	90.00	11.10	22.10	0.68			
NORTHFIELD-1	1° 31' 33.43" LT	1° 08' 45.30"	5,000.00	66.59	133.16	0.44			
NORTHFIELD-2	2° 08' 49.11" RT	1° 25' 56.62"	4,000.00	74.95	149.89	0.70			
NORTHFIELD-3	0° 43' 46.83" LT	0° 45' 50.20"	7,500.00	47.76	95.51	0.15			
NORTHFIELD-4	0° 21' 55.28" RT	0° 22' 55.10"	15,000.00	47.83	95.65	0.08			
CRESCENT-1	1° 13' 12.94" RT	1° 35' 29.58"	3,600.00	38.34	76.67	0.20			

CURVE	STATION	NORTHING	EASTING	BEARING
		B/L TRAIL		<u>, I</u>
	POT 10+00.00	579,097.5760	1,360,605.3406	N 10° 27' 44.45" E
	PC 10+40.72	579,119.6167	1,360,592.9185	N 10° 27' 44.45" E
TRAIL-1	PI 11+09.13	579,186.8869	1,360,605.3406	g in provident communities in the last control of the control to t
	PT 11+57.70	579,192.9227	1,360,673.4813	N 84° 56' 17.04" E
	PC 11+57.70	579,192.9227	1,360,673.4813	N 84° 56' 17.04" E
TRAIL-2	PI 12+38.18	579,200.0233	1,360,753.6433	
	PT 12+80.79	579,279.4817	1,360,740.9206	N 9° 05' 46.40" W
	PC 12+80.79	579,279.4871	1,360,740.9206	N 9° 05' 46.40" W
TRAIL-3	PI 12+91.90	579,290.4514	1,360,739.1652	
	PT 13+02.89	579,301.5135	1,360,740.1273	N 4° 58' 14.10" E
	POT 14+43.18	579,441.2737	1,360,752.2824	N 4° 58' 14.10" E
		B/L NOTRHFIELD RO	DAD	
	POT 100+00.00	579,166.6789	1,360,130.3183	S 79° 09' 12.98" E
NORTHFIELD-1	PC 104+29.95	579,085.7722	1,360,552.5879	S 79° 09' 12.98" E
	PI 104+96.54	579,073.2423	1,360,617.9846	- Comment of Balance comments and comment comments are a second comments.
	PT 105+63.12	579,062.4582	1,360,683.6918	S 80° 40' 46.41" E
, , , , , , , , , , , , , , , , , , , ,	PC 105+63.12	579,062.4582	1,360,683.6918	S 80° 40' 46.41" E
NORTHFIELD-2	PI 106+38.07	579,050.3193	1,360,757.6546	
	PT 107+13.00	579,035.4179	1,360,831.1108	S 78° 31′ 57.30" E
	PC 108+35.47	579,011.0703	1,360,951.1326	S 78° 31' 57.30" E
NORTHFIELD-3	PI 108+83.23	579,001.5755	1,360,997.9370	A Contract of the Contract of
	PT 109+30.98	578,992.6776	1,361,044.8586	S 79° 15' 44.13" E
	PC 112+83.37	578,927.0230	1,361,391.0757	S 79° 15' 44.13" E
NORTHFIELD-4	PI 113+31.20	578,918.1125	1,361,438.0634	And the second s
	PT 113+79.02	578,908.9026	1,361,484.9933	S 78° 53' 48.85" E
	POT 120+06.56	578,788.0532	1,362,100.7914	S 78° 53' 48.85" E
		B/L CRESCENT RO	AD	
	POT 200+00.00	579,053.6252	1,360,735.3888	N 5° 11' 30.75" E
	PC 201+62.25	579,215.2117	1,360,750.0713	N 5° 11' 30.75" E
CRESCENT-1	PI 202+00.59	579,253.3915	1,360,753.5404	
	PT 202+38.92	579,291.4887	1,360,757.8219	N 6° 24' 43.69" E
	POT 204+22.45	579,473.8694	1,360,778.3183	N 6° 24' 43.69" E

+50



PROFESSIONAL CERTIFICATION

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LICENSE NO. 16156
EXPIRATION DATE: 8/28/2014

+50

BAL CONSTRUCTION,
 NORTHFIELD ROAD

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

INTEGRAT OF PUBLIC WORKS

DATE

CHIEF, BUREAU OF ENGINEERING

CHIEF, TRANSPORTATION AND
DATE

CHIEF, TRANSPORTATION AND
DATE

CHIEF, BUREAU OF HIGHWAYS

CHIEF, BUREAU OF HIGHWAYS

DATE

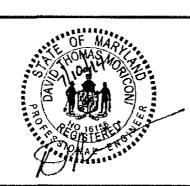
+50

PREPARED BY

URS

4 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
TEL: (410) 785-7220

S 79° 09′ 12.98′ E



DATE:7/2014	BY	NO.	REVISION	DATE	SCALE MAP NO
CHK: DTM					
DRN: CDF					GEOMI
DES: RLL					

GEOMETRY PLAN

BLOCK NO.

NORTHFIELD ROAD SIDEWALK PLAN - PHASE 1

2ND ELECTION DISTRICT - HOWARD COUNTY. MARYLAND

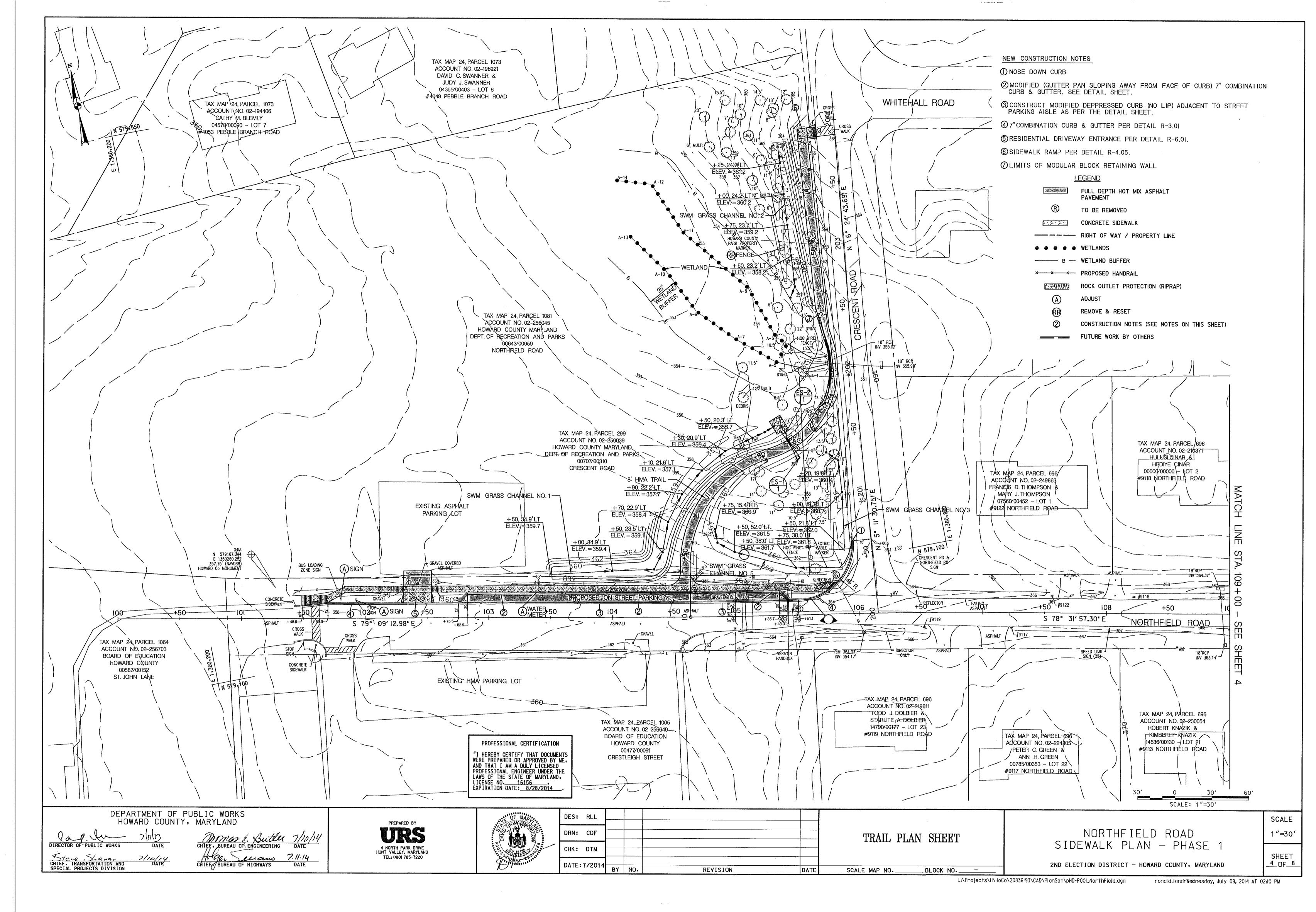
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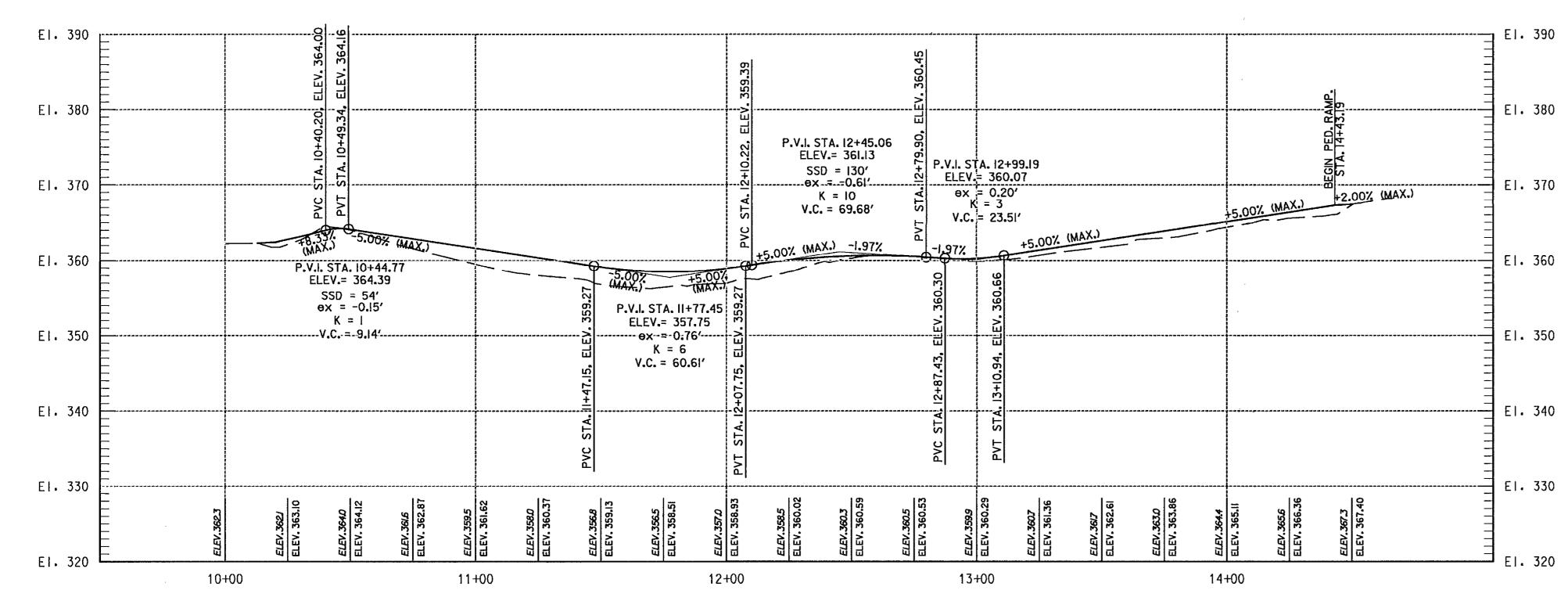
SCALE

1"=30'

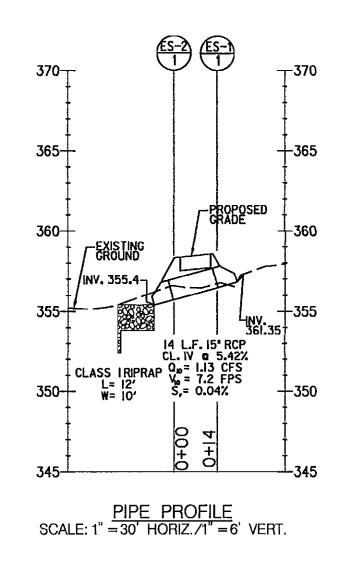
SHEET

3 OF 8





SCALE: 1" = 30' HORIZ /1" = 10' VER



STRUCTURE SCHEDULE										
STRUCTURE	W	ORK POINT*		STRUCTURE	HOWARD CO.	INVERT E	LEVATION	TOP	REMARKS	
DESIGNATION	BASELINE	STATION	OFFSET	TYPE	DETAIL NO.	IN	OUT	ELEVATION	KEMARNS	
END SECTION										
ES-I/I	TRAIL	11+77.45	3.24′ RT	CONCRETE END SECTION	D-5.51		361.35			
ES-2/I	TRAIL	11+77.45	10.27' LT	CONCRETE END SECTION	D-5.5I	355.4				

PROFESSIONAL CERTIFICATION

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS

DATE

CHIEF, TRANSPORTATION AND
CHIEF, BUREAU OF HIGHWAYS
DATE





	DES: RLL					
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_	CHK: DTM	1				
	DATE:7/20	4 BY	NO.	REVISION	DATE	

PROFILE SHEET

BLOCK NO.

SCALE MAP NO.____

NORTHFIELD ROAD SIDEWALK PLAN - PHASE 1

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

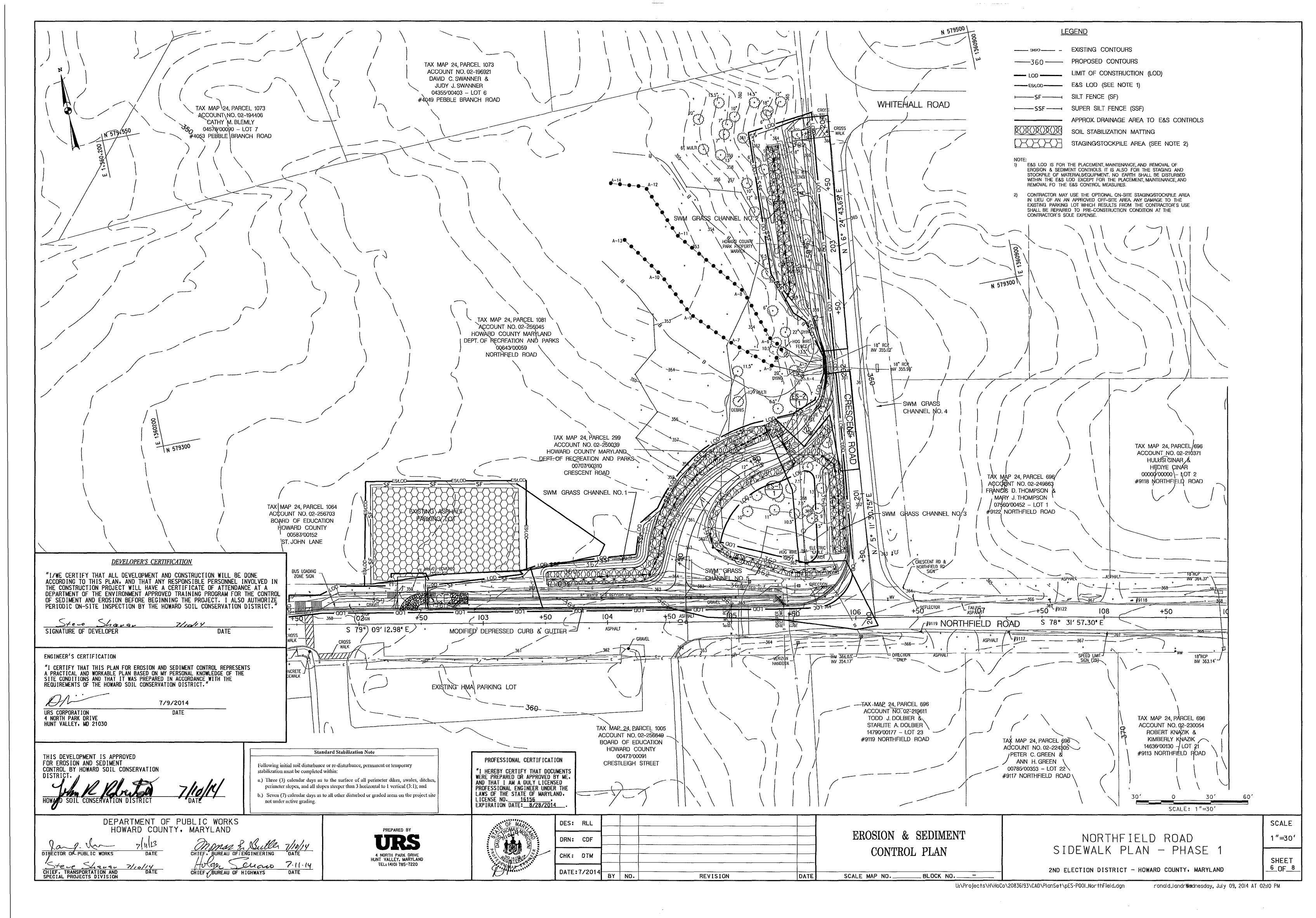
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1"=30'

SHEET

5 OF 8

CI - HUWARD COUNTY, MARYLAND



B-42 STANDARDS AND SPECIFICATIONS

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilization

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applie

A. Soil Preparation

Where vegetative stabilization is to be established

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 mounte n 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.

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
- 2. Permanent Stabilization a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil
- 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 lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay)
- iv. Soil contains 1.5 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
- 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
- e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen 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 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 friable. Seedbed loosening may be unnecessary on newly disturbed areas.

- 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
- ontent, 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 larger than 11/2 inches in diameter.
- b. Topsoil must be free of noxious plants or plant parts such as Bennuda grass, quack grass, Johnson grass, nut 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 sodding 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
- c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading

and seedbed preparation. Soil Amendments (Fertilizer and Lime Specifications)

Steve Shavar

ENGINEER'S CERTIFICATION

URS CORPORATION

4 NORTH PARK DRIVE

HUNT VALLEY, MD 21030

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT

CONTROL BY HOWARD SOIL CONSERVATION

- 1. Soil tests must be performed to determine the exact ratios and application rutes for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a ecognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application b 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 he 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 #20 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.

DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE

ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN

DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL

OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

"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.

THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A

5. Where the subsoil is either 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

The application of seed and mulch to establish vegetative cove

To protect disturbed soils from erosion during and at the end of construction Conditions Where Practice Applie

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading <u>Criteria</u>

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 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 thaws
- 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 hydrosceding. Note: It is very important to keep noculant 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 chemicals used for weed control until sufficient time has clapsed (14 days min.) to permi dissipation of phyto-toxic materials.

- 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 seeded area with a weighted roller to provide good seed to soil
- b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
- ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in
- 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; P2O3 (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

- hydrosecding). Normally, not more than 2 tons are applied by hydrosecding 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 interruption.
- iv. When hydroseeding do not incorporate seed into the soil.

- 1. Mulch Materials (in order of preference)
- a. Straw consisting of thoroughly threshed wheat, tye, 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, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in
- b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose
- 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 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
- 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 90 percent minimum.

- 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 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
- 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.

- Perform mulch arichoring 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,
- 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 DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the 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
- iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000

B-4-5 STANDARDS AND SPECIFICATIONS

PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation

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

A. Seed Mixtures

- 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 342 - Cruical Area Planting. c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil
- 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 amendmen shown in the Permanent Seeding Summary.
- Turfgrass Mixtures a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites
- 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 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 management, Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding
- Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentuck 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 management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds pe
- 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 area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 11/2 to 3 pounds per 1000 square feet,
- Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland Choose certified material. Certified material is the best guarantee of cultivar purity. The ertification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line
- e. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 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)
- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will
- e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (% to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot

Permanent Seeding Summary

		one (from Figu e (from Table B		1	Lime Rate			
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ 0	Line Raie
TALL	FESCUE	100	3/1-5/15	14-13 in	45 pounds	00.00	90 lb/ac	2 5
			8/1-10/15	14-15 in	per acre	(2 lb/ (2 lb/	(2 lb/	(90 117)
				1/4- 1/4 in	1000 st)	1000 sf)	1000 sf)	

Sod: To provide quick cover on disturbed areas (2:1 grade or flatter)

the subsoil immediately prior to laying the soc

- 1. General Specification a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to
- b. Sod must be machine cut at a uniform soil thickness of % inch, plus or minus % inch, at the time
- of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads a tom 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 10 percent of the
- d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its
- a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate
- wedged against each other. Stagger lateral joints to promote more uniform growth and strength.

 Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to
 prevent voids 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.

b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly

- a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently
- b. After the first week, sod watering is required as necessary to maintain adequate moisture
- c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless

B-4-4 STANDARDS AND SPECIFICATIONS

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months

permanent stabilization practices are required

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,

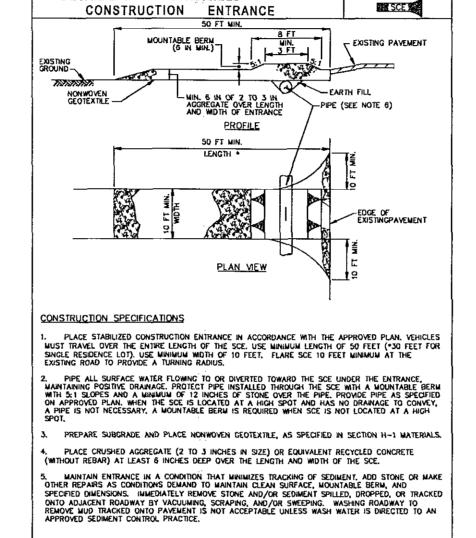
Criteria

- 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.b and maintain until the next seeding season.

Temporary Seeding Summary

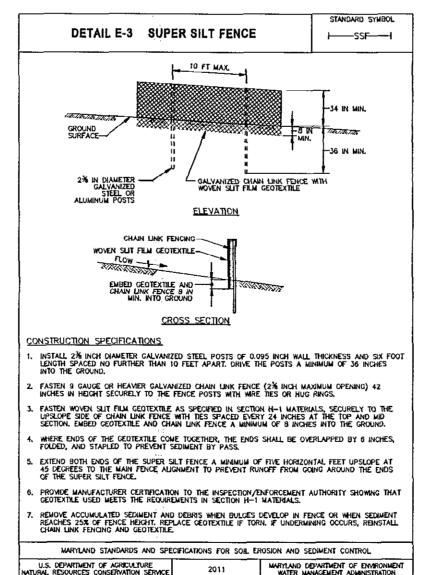
	Hardiness Zon Seed Mixture	Fertilizer Rate	Lime Rate						
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-20-20)				
6	FOXTAIL MILLET	30	5/16 - 7/31	0.5 IN.	436 lb/ac	2 tons/ac (90 lb/1000 sf)			
7	PEARL MILLET	20	5/16 - 7/31	0.5 IN.					
					(10 lb/1000 sf)				

STABILIZED



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

WATER MANAGEMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION



SEOUENCE OF CONSTRUCTION - GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE HOWARD SOIL CONSERVATION DISTRICT AT (410) 489-7987 AT LEAST SEVEN (7) DAYS PRIOR TO ANY EARTH DISTURBANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE INSPECTOR.
- 2. UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK, THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND UTILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE UTILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
- 3. THE EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONING PRIOR TO CLEARING THE ENTIRE SITE. CLEAR AND GRUB FOR EROSION AND SEDIMENT CONTROL MEASURES OR DEVICES ONLY ON COMMENCEMENT OF CONSTRUCTION.
- 4. INSTALL STABILIZED CONSTRUCTION ENTRANCES, AND OTHER EROSION SEDIMENT CONTROL DEVICES AS PER THE EROSION AND SEDIMENT CONTROL PLANS. THE LOCATIONS FOR STABILIZED CONSTRUCTION ENTRANCES SHOWN ON THE PLANS ARE APPROXIMATE, AND EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD WITH APPROVAL FROM THE ENGINEER AND INSPECTOR.
- 5. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
- 6. CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILE AREA AND IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL E/S CONTROLS FOR STAGING AND STOCKPILE AREAS AS REQUIRED BY THE INSPECTOR.
- 7. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIEDN ON THE TRAFFIC CONTROL PLAN SHEETS. STORM DRAIN SYSTEMS SHALL ALWAYS BE CONSTRUCTED FROM THE DOWNSTREAM ENDS, INLET PROTECTIONS SHALL BE INSTALLED AT EXISTING INLETS BEFORE ANY DISTURBANCE IN THE WORK AREA NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUN OFF IS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE, CONTRACTOR SHALL USE PORTABLE SEDIMENT TANK TO DEWATER THE WORKING AREA DURING CONSTRUCTION
- 8. CONSTRUCTION SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:

SEQUENCE OF CONSTRUCTION

- THE FOLLOWING SEQUENCE OF CONSTRUCTION DESCRIBES, IN PART, THE STEPS REQUIRED TO COMPLETE THE PROPOSED WORK. CONTRACTOR IS RESPONSIBLE FOR DETERMINING INTERIM SEQUENCE OF CONSTRUCTION, MEANS, METHODS, MATERIALS, LABOR AND/OR EQUIPMENT NECESSARY TO SATISFACTORILY CONSTRUCT THE FEATURES AS SHOWN ON THE PLANSET, IT SHALL BE CLEARLY UNDERSTOOD THAT FAILURE TO SPECIFICALLY MENTION ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR*S RESPONSIBILITY TO COMPLETE THE PROJECT TO THE OWNER'S SATISFACTION.
- 1. OBTAIN THE GRADING PERMIT PRIOR TO CONSTRUCTION (1 DAY).
- 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE) AS INDICATED ON THE PLANSET (1 DAY).
- 3. INSTALL SILT FENCE (SF) AND SUPER SILT FENCE (SSF) AS INDICATED ON THE PLANSET (1 DAY).
- 4. CONTRACTOR SHALL NOT CONVEY DIRTY WATER TO ES-1/1 BY TEMPORARILY PLUGGING ES-1/1 UNTIL UPSTREAM AREAS ARE CONSTRUCTED AND STABILIZED. 5. CONSTRUCT THE PROPOSED PARKING AISLE, COMBINATION CURB & GUTTER AND

MODIFIED DEPRESSED CURB & CUTTER STARTING DOWNSTREAM AND WORKING

- UPSTREAM, CONTRACTOR SHALL ONLY WORK IN A SECTION OF PAVEMENT WHICH CAN BE STABILIZED AT THE END OF EACH WORK DAY (14 DAYS). 6. CONSTRUCT THE NEW TRAIL AND SIDEWALK INCLUDING ALL GRADING, PEDESTRIAN RAMPS DRIVEWAY APRONS/TIE-INS. ANY DRAINAGE SYSTEM SHALL
- 7. CONSTRUCT THE STORMWATER MANAGEMENT GRASS CHANNELS WORKING DOWNSTREAM TO UPSTREAM AFTER ALL CONSTRUCTION WORK UPSTREAM OF

BE CONSTRUCTED STARTING DOWNSTREAM AND WORKING UPSTREAM (14

THE GRASS CHANNELS HAVE BEEN COMPLETED AND STABILIZED (7 DAYS). 8. UPON THE HOWARD COUNTY INSPECTOR'S APPROVAL, REMOVAL ALL EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZE THE REMAINING DISTURBED AREAS WITH PERMANENT SEEDING (1 DAY).

NOTE: THE TIME LINE EXCLUDES WEATHER RELATED DELAYS.

SEDIMENT CONTROL GENERAL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION 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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

- A. THREE (3) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTÙRES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
- B. SEVEN (7) CALENDAR DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITECT SITE
- 4. 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 SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC.B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 5. 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

6. SITE ANALYSIS:

TOTAL AREA OF SITE - 8.6 ACRES

TOTAL FILL - 500 CY *

- AREA DISTURBED 0.8 ACRES AREAS TO BE ROOFED OR PAVED - 0.2 ACRES (INCLUDES OVERLAY AREA) AREA TO BE VEGETATIVELY STABILIZED - 0.6 ACRES TOTAL CUT - 900 CY *
- OFF-SITE WASTE SITE HOWARD COUNTY LANDFILL OFF-SITE BORROW SITE - APPROVED SITE WITH AN ACTIVE GRADING PERMIT
- ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

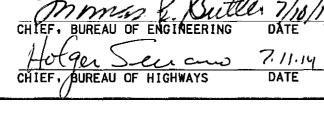
7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING

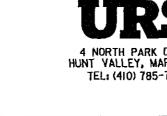
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- 11. ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 12. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BE STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- 13. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- 14. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 15. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH
- 16. CONSTRUCTION WITHIN, ALONG OR ACROSS STREAM CHANNELS SHALL, AS A MINIMUM, CONFIRM TO CRITERIA DESCRIBED UNDER "MARYLAND'S WATERWAY CONSTRUCTION GUIDELINES.
- 17. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOLUME 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL STORM DRAINAGE.
- * APPROXIMATE

MAY AFFECT THE WORK.

7/9/2014

TRANSPORTATION AND SPECIAL PROJECTS DIVISION







DES: BIL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT 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. 16156 - EXPIRATION DATE: 8/28/2014

	DES. NEL				
	DRN: CDF				
	CHK: DTM				
	DATE:7/2014	BY	NO.	REVISION	

EROSION AND SEDIMENT CONTROL DETAILS AND NOTES - 1

BLOCK NO.

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

ronold_landr\mathrednesday, July 09, 2014 AT 02:10 PM

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NORTHFIELD ROAD

SIDEWALK PLAN - PHASE '

SCALE

AS SHOWN

SHEET

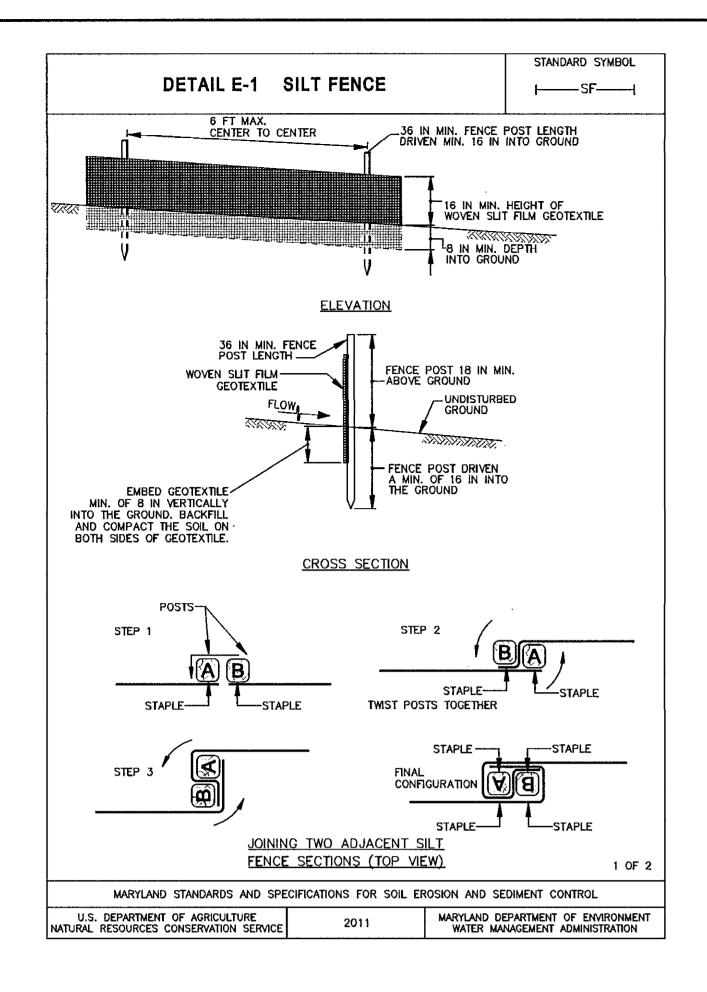
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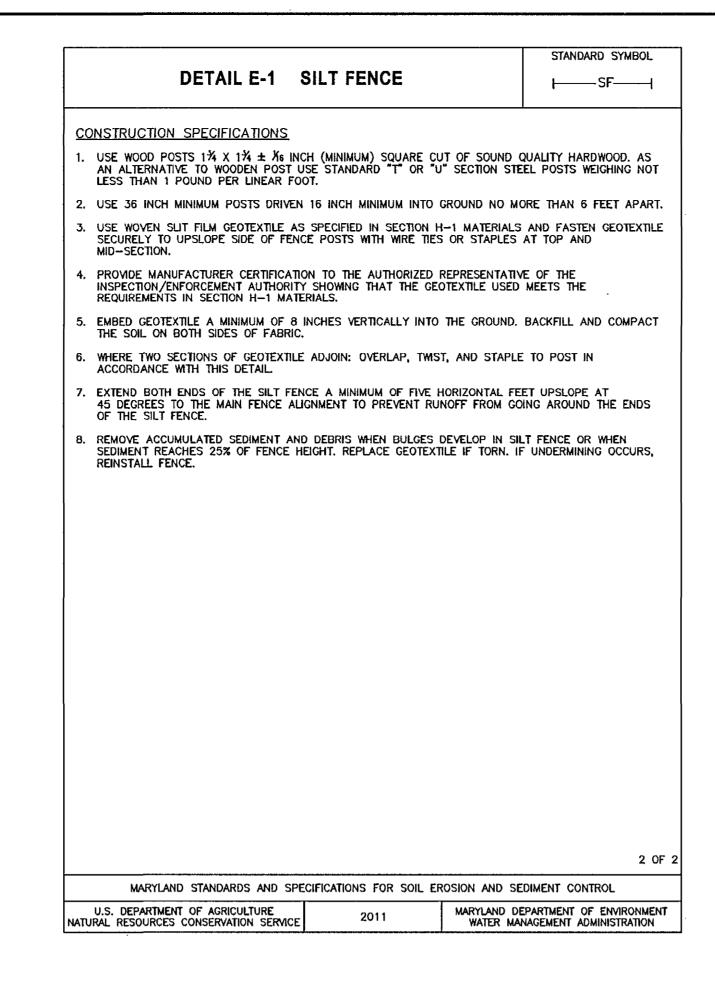
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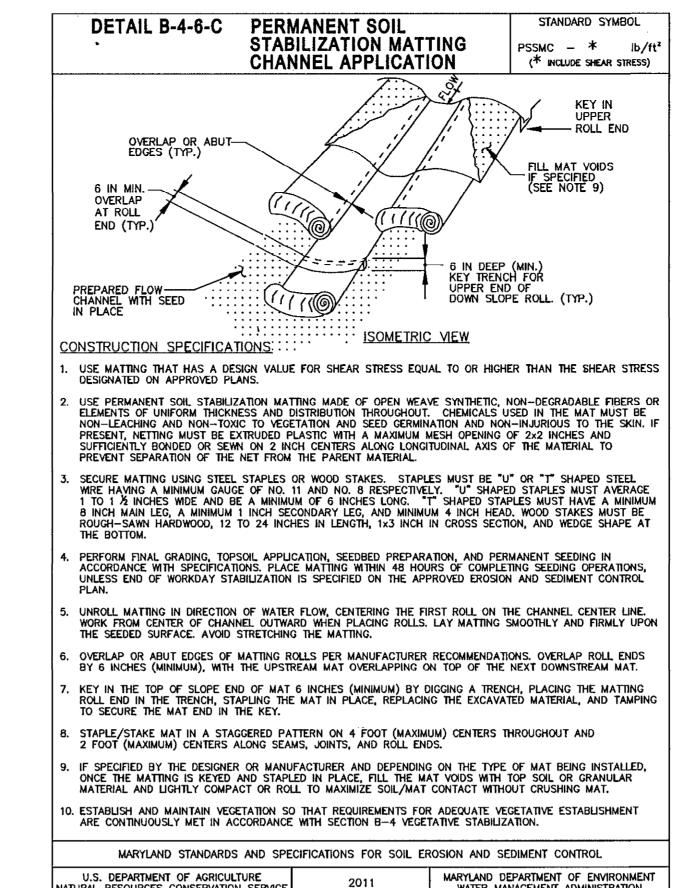
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

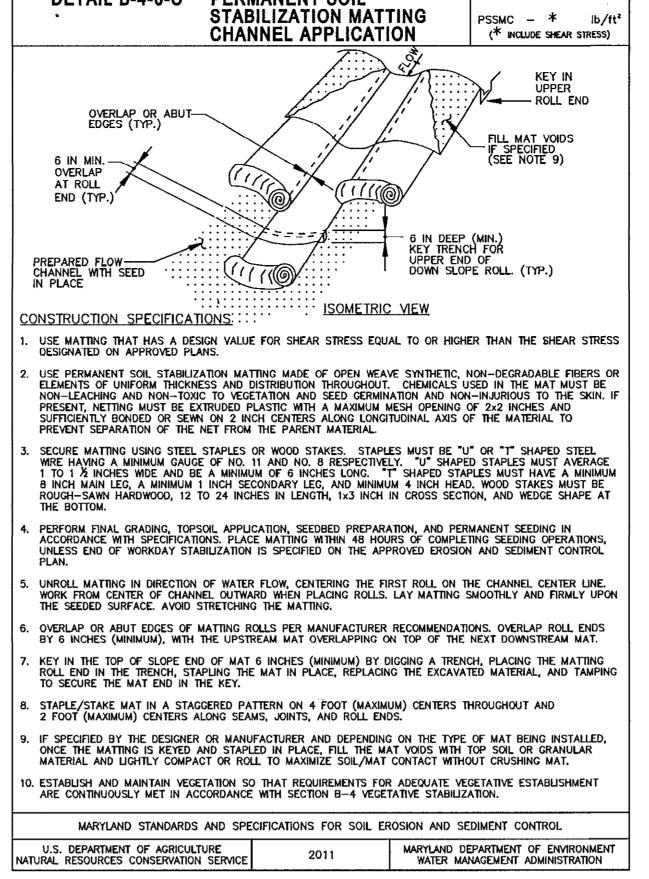
4 NORTH PARK DRIVE HUNT VALLEY, MARYLAND TEL: (410) 785-7220

PREPARED BY









B-4-8 STANDARDS AND SPECIFICATIONS

STOCKPILE AREA

<u>Definition</u>

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

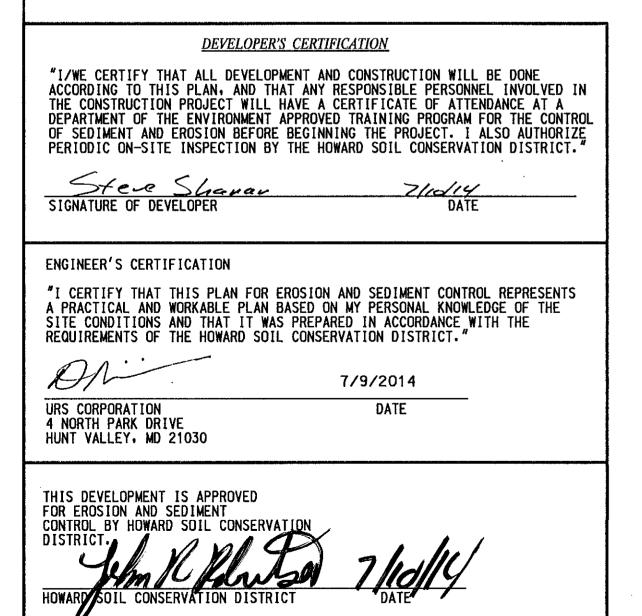
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

<u>Criteria</u>

- 1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
- 4. Access the stockpile area from the upgrade side.
- 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

<u>Maintenance</u>

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.



DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

CHIEF. BUREAU OF ENGINEERING

CHIEF BUREAU OF HIGHWAYS

Jellens

PROFESSIONAL CERTIFICATION "I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED

PREPARED BY 4 NORTH PARK DRIVE HUNT VALLEY, MARYLAND TEL: (410) 785-7220



/	DES: RLL				
	DRN: CDF				-
	CHK: DTM				
	DATE:7/2014	BY	NO.	REVISION	DATE

EROSION AND SEDIMENT CONTROL DETAILS AND NOTES - 2

BLOCK NO.

SCALE MAP NO.

NORTHFIELD ROAD SIDEWALK PLAN - PHASE

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET

<u>8</u> OF 8