PERVIOUS PLAY SURFACE SUB-CONTRACTOR REQUEST FOR PROPOSAL (RFP)

THOMAS JOHNSON ELEMENTRAY SCHOOL 100 E. HEATH STREET, BALTIMORE, MD 21230-4936

INSTALL CUSTOM-DESIGN PERVIOUS PLAY SURFACE



PARKS AND PEOPLE FOUNDATION
STIEFF SILVER BUILDING
800 WYMAN PARK DR
SUITE 010
BALTIMORE, MD 21211

FEBRUARY 12, 2015

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NOTE: Site Plan attached.

SUMMARY AND BACKGROUND

On behalf of the Baltimore City Public Schools system, the Parks & People Foundation is seeking Requests for Proposals to install a pervious play surface in a courtyard area being rehabilitated at the Thomas Johnson Elementary School, at 100 E. Heath St. in Baltimore, MD 21230-4936. Please note that this school is part of the Harry and Jeanette Weinberg Foundation Baltimore Elementary and Middle School Library Project, "a multi-year, collaborative effort to design, build, equip, and staff new or renovated elementary/ middle school libraries in high-poverty neighborhoods where many students face academic challenges" (see http://hjweinbergfoundation.org/about-us/foundation-programs/baltimore-library-project/). The Parks and People Foundation is partnering with this effort to provide outdoor reading spaces.

This project is part of a facility upgrade to the Thomas Johnson Elementary School exterior to improve stormwater management characteristics, decrease impervious surface area, and create exterior classroom areas. As it pertains to this Request for Proposals:

- 1. Parks & People is the Funding Agent for this project, and is responsible for project management within the parameters established under an agreement with the Baltimore City Public Schools and the funding source.
- 2. The bid being requested is for the installation of the pervious play surface, only, by the selected company as a sub-contractor to the general contractor.
- 3. Parks & People will select the subcontractor in this case, based upon experience, bid value, and references provided.
- 4. The selected subcontractor will be referred to the General Contractor for operational coordination and scheduling.
- 5. The General Contractor will be responsible for the site per normal industry procedures.

In addition, the pervious surface contractor is required to work with a designated local artist to design the graphics and color scheme to be installed. The subcontractor is to make best efforts to incorporate the design suggested. The submitted bid may include a line item for specialized design services.

CURRENT PROJECT STATUS

Parks & People is in the process of securing the building permit and other city agency permissions for this project. The General Contractor has been selected, and contract negotiations are nearly complete. The contract with the General Contractor will include references to working with the pervious surface subcontractor selected by Parks & People consistent with normal industry practices.

This site is within an operating public school. The contractor and all subcontractors are required maintain a safe and secure worksite consistent with industry standards as well

as any additional time, materials, and equipment limitations that are required by the school. Also, a Construction Log and pictures taken throughout the operation will be required. Copies will be kept onsite and forwarded to Parks and People for record keeping.

2. PROPOSAL GUIDELINES

This Request for Proposal represents the requirements for an open and competitive process. Proposals will be accepted until 5 pm EST March 12, 2015. Any proposals received after this date and time will be returned to the sender. All proposals must be signed by an official agent or representative of the company submitting the proposal.

Parks & People requests that if an organization will be preparing a proposal, that a representative send a non-binding Notice of Intent to Bid to the e-mail address provided below by February 26, 2015.

All costs must be itemized to include an explanation of all fees and costs.

As a subcontractor, the actual contract for work will be between the selected pervious surface installation company and the General Contractor. Both parties will be expected to make appropriate contractual arrangements. Parks & People will not be a party to those arrangements. All outsourcing or other subcontracting work associated with the installation of the pervious surface is between the selected subcontractor and the General Contractor.

3. PROJECT PURPOSE AND DESCRIPTION

The purpose of this project is as follows:

Design the graphic and install the pervious play surface in the location as shown on the accompanying site plan, in the role of a subcontractor to the General Contractor.

4. REQUEST FOR PROPOSAL AND PROJECT TIMELINE

Request for Proposal Timeline:

All proposals in response to this RFP are due no later than 5 pm EST March 12, 2015. An electronic copy of the proposal may be sent to the e-mail address provided below by that time and date. Please note that this electronic file must be in "*.pdf" format for proper delivery at Parks and People. Paper copies of the proposal may be submitted by mail or delivery service after that date, if the electronic version has been received by Parks and People by the due date and time.

Evaluation of proposals will be conducted from March 13 to March 20, 2015. If additional information or discussions are needed with any bidders during this period, the bidder(s) will be notified.

The selected bidder will be notified as soon as the decision is made. Upon notification, the selected subcontractor will be given the contact information for the General Contractor. It is expected that discussions with the General Contractor to begin as soon as possible. Also, the local artist contact information will be provided.

Notifications to bidders who were not selected will be made immediately after ratification.

Project Timeline:

Late March - April 2015 – A meeting on-site will be arranged with the General Contractor, selected pervious surface contractor, Parks & People, and representatives from Baltimore City Public Schools and Department of Recreation and Parks will be held on-site to discuss the specific construction timetables, methodology limitations, storage and security of the site.

The project scheduling and any operational limitations will be included in Performance Contract discussed. Please note that the school does have a summer camp operated by the City Department of Recreation and Parks, and the site security and operations will take that camp into account as an Exhibit. It is anticipated that the contract will be ratified by the end of September.

April 2015 – General Contractor will notify the city and make appropriate filings with regards to the existing building permit.

Scheduling the installation of the pervious play surface with the installer/supplier of that surface will the responsibility of the general contractor, in cooperation with Parks & People. Please note that the General Contractor and Parks & People anticipate that the pervious surface installer will need a minimum three (3) weeks lead time to prepare for the installation. Also, allow for three (3) days to put in the pervious surface and compete the transitional areas as installation is dependent upon good weather.

Mid-June to Mid-August 2015 – Construction Period

5. BUDGET

All proposals must include proposed costs to complete the tasks described in the project scope. Costs should be stated as one-time or non-recurring costs (NRC) or monthly recurring costs (MRC). Pricing should be listed by materials cost and labor for each construction item or project activity.

NOTE: All costs and fees must be clearly described in each proposal.

6. BIDDER QUALIFICATIONS AND ADDITIONAL INFORMATION

Bidders should provide the following items as part of their proposal for consideration:

- Description of experience in working on Baltimore City or other jurisdiction public school properties or, other publicly owned property.
- Include the following product information
 - o Environmental Product Declaration (EPD; see http://www.environdec.com/en/What-is-an-EPD/#.VNttZUo3N9A)
 - o Typical detail of the transition area between the pervious surface and the impervious surface surrounding the area of installation (in this case, concrete pavement and cast-in-place cement walls).

Please note that the typical detail information will be sent to the General Contractor for comment during the bid review period.

7. PROPOSAL EVALUATION CRITERIA

The Parks and People Foundation will evaluate all proposals based on the following criteria. To ensure consideration for this Request for Proposal, your proposal should be complete and include all of the following criteria:

- Overall capability to complete the project as shown on the approved site plan;
- Previous work: Bidders will be evaluated on examples of their work pertaining to Baltimore City public schools or other public facilities as well as client testimonials and references:
- Value and cost: Bidders will be evaluated on the cost of their solution(s) based on the work to be performed in accordance with the scope of this project;

Each bidder must submit their proposal to the address below by 5 p.m. March 12, 2014:

William T Pickens Green Infrastructure Project Manager Parks & People Foundation 800 Wyman Park Drive, Suite 010 Baltimore, MD 21211

Electronic copies (*.pdf files, only) may be sent to:

William.pickens@parksandpeople.org

SHEET INDEX SHEET NO. DESCRIPTION 0001-C-1 COVER SHEET 0001-C-2 EXISTING CONDITIONS & DEMOLITION PLAN 0001-C-3 PROPOSED CONDITIONS - SITE PLAN AND GRADING & SEDIMENT CONTROL PLAN 0001-C-4 STORMWATER MANAGEMENT - DRAINAGE AREAS, DETAILS & NOTES 0001-C-5 TYPICAL SECTIONS, DETAILS, & NOTES

0001-C-6 | EROSION & SEDIMENT CONTROL NOTES & DETAILS

50IL5 LEGEND								
50IL	NAME	CLA55	K FACTOR					
42E	Udorthents, smoothed, 0 to 35 percent slopes	A/D	0.20					
44UC	Urban Land, 0 to 15 percent slopes	D	_					

STORMWATER MANAGEMENT MAINTENANCE SCHEDULE									
PRACTICE	FREQUENCY OF INSPECTION	PREVENTIVE MAINTENANCE	MAINTENANCE REQUIREMENTS						
MICRO-BIORETENTION	SEASONALLY (AND AFTER A MAJOR STORM)		IRRIGATE DURING PROLONGED DRY PERIODS						
		IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH MORE APPROPRIATE SPECIES.	REMOVE ANY DEAD OR DYING VEGETATION AND REVEGETATE						
			REMOVE ACCUMULATED SEDIMENT FROM SURFACE OF FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.						
			IF WATER PONDS FOR MORE THAN 40 HOURS, REMOVE AND REPLACE THE TOP FEW INCHES OF THE FILTER MEDIA.						
MOSQUITO CONTROL		CHECK FOR STANDING WATER IN SPRING AND SUMMER	REMOVE STANDING WATER OR KILL LARVAE WITH APPROVED METHOD.						
			REPLACE MULCH ANNUALLY WHERE PRACTICE TREATS AREAS WITH HIGH CONCENTRATIONS OF HEAVY METALS. OTHERWISE, REPLACE TOP 2-3 INCHES AS NECESSARY.						

STORMWATER MANAGEMENT STORAGE REQUIREMENTS							
E5Dv	0 CF	61 CF	N/A (<5,000 SF DISTURBED) * 50ME STORAGE PROVIDED BY 2 MICRO-BIORETENTION FACILITIES				
Rev	0 CF	13 CF	N/A				
Сру	0 CF	0 CF	N/A				
Q10	0 CF	0 CF	N/A				
Q100	0 CF	0 CF	N/A				

BMP SUMMARY TABLE										
PRACTICE	DIMENSIONS	DRAINAGE AREA (ac)	IMPERVIOUS AREA TREATED (ac)	STORAGE VOLUME (ESDV) (cf)	TREATMENT VOLUME (E5Dv) (cf)	VOLUME (Rev) CAPTURED (cf)	Pe			
MICRO-BIORETENTION 1	SURFACE AREA = 20 SF 10 IN MEDIA W/ 0.4 FT PONDING	0.055	0.048	22	39	8	0.2			
MICRO-BIORETENTION 2	SURFACE AREA = 16 SF 10 IN MEDIA W/ 0.3 FT PONDING	0.010	0.004	12	22	5	2.1			
		TOTAL PROVIDED:	0.052	34	61	13				
		TOTAL REQUIRED:	0	0	0	0				

1. THIS IS A RESTORATION PROJECT AND THEREFORE STORMWATER MANAGEMENT IS NOT REQUIRED. 2. TOTAL IMPERVIOUS AREA ON-SITE REDUCED BY 173 SF DUE TO PAVEMENT REMOVAL AND REPLACEMENT WITH GRASS.

3. SINCE SOME STORMWATER MANAGEMENT IS BEING PROVIDED, COMPUTATIONS SHOWN REFLECT TARGET ESDV. SINCE ESDV IS NOT REQUIRED TO BE TREATED, ESD TO THE MEP IS BEING PROVIDED.

Site Rv = 0.05 + 0.009 (I) TARGET ESDv = [(Pe)*(Rv)*(A)] / 12= [(1.0)*(0.77)*(4,363)] / 12 = 0.05 + 0.009 (80)

EXISTING RCN = 95 PROPOSED RCN = 94

ESDV PROVIDED #1= (0.5 (67+16) x 0.3) + (16 x 0.4 x 1.5) = 22 CF E5Dv PROVIDED #2= (0.5 (63+26) x 0.4) + (26 x 0.4 x 1.5) = 39 CF

Pe = E5Dv x 12 / Rv x A Pe $(1) = 39 \times 12 / 0.042 \times 2397$

= 0.23Pe $(2) = 22 \times 12 / 0.30 \times 416$ = 2.12

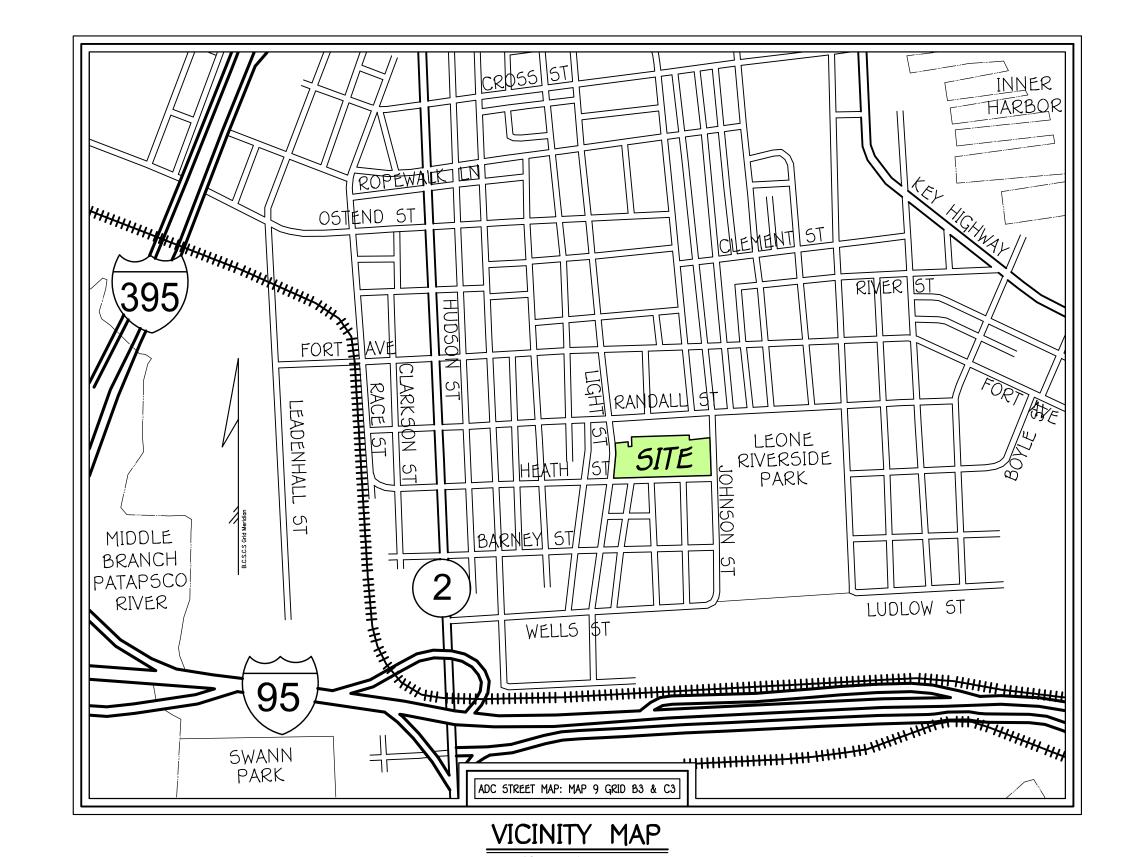
DEVELOPER

ATTN: PAUL TURNER, REAL ESTATE MANAGER

(410) 396-*8*670

SITE PLAN THOMAS JOHNSON SCHOOL

WARD 24 SECTION 6 BLOCK 1016 100 E. HEATH STREET RIVERSIDE BALTIMORE CITY, MARYLAND



DESIGN NARRATIVE

This site is exempt from stormwater managment per the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) since this project disturbs less than 5,000 square feet, however some site stormwater management is being provided to treat a portion of the site runoff in an effort of creating better hydrologic conditions on-site. Two small micro-bioretention / rain garden facilities have been provided to storage a portion of site runoff within walled planter areas.

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR

ADDRESS

100 E. HEATH STREET

APPROVED BY ME AND THAT I AM A DULY LICENSED

GENERAL NOTES

- . THE CONTRACTOR SHALL NOTIFY THE PERMITTING AND BUILDING INSPECTIONS DIVISION AT 443-964-1611 TO REQUEST AN INSPECITON. . THE CONTRACTOR SHALL NOTIFY (MISS UTILITY) AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- CONTRACTOR TO VERIFY TO HIS OWN SATISFACTION, LOCATION AND INVERT OF EXISTING UTILITIES.

 BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD SURVEY CONDUCTED BY S.J. MARTENET AND CO. INC. IN MAY 2013.

 ON-SITE UTILITIES MARKED BY UTILITY LOCATING SERVICE, INC.
- 6. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. SINCE THIS IS CONSIDERED A RESTORATION PROJECT, A WATER QUALITY WAIVER HAS BEEN APPLIED FOR. THE MAJORITY OF IMPROVEMENTS SHOWN ARE TO REMOVE PAVEMENT AND SIDEWALK, ALONG WITH IMPROVEMENTS TO THE ON-STREET AND OFF-STREET PARKING THAT INVOLVE PROVIDING TREE PITS. A MICRO-BIORETENTION HAS BEEN PROVIDED IN AN OFF-STREET PARKING AREA TO CATCH THE FIRST FLUSH OF RUNOFF. CLEANOUT DRAIN CAPS ARE BEING UTILIZED TO CONVEY EXCESS RUNOFF TO EXISTING STORM DRAIN SYSTEM ON-SITE.
- 7. THIS PROPERTY IS LOCATED OUTSIDE THE METROPOLITAN DISTRICT. 8. PROPERTY IS LOCATED OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA.
- 9. STEEP SLOPES EXIST TO THE REAR OF THE PROPERTY ALONG THE CSX RAILROAD. NO WETLANDS, STREAM(5) AND THEIR BUFFERS, 100 YEAR FLOODPLAIN, AND FOREST STANDS EXIST ON-SITE.
- 10. NO REMOVAL OF VEGETATIVE COVER OR TREES ON THE STEEP SLOPES IS PROPOSED. 11. GROSS SITE AREA: 2.8 ACRES. (LIMIT OF SUBMISSION: 0.10 ACRES±)
- 12. DISTURBED AREA: 4,363 SQ. FT. OR 0.10 ACRES±.
- 13. EXISTING ON-SITE IMPERVIOUS WITHIN LIMIT OF SUBMISSION: 3,705 SQ.FT. (0.005 ACRES).

 14. PROPOSED ON-SITE IMPERVIOUS WITHIN LIMIT OF SUBMISSION TO BE REMOVED AND REPLACED: 3,532 SQ.FT. (0.001 ACRES).

 15. NET PROPOSED IMPERVIOUS REMOVAL: 173 SQ.FT. (0.004 ACRES).
- 16. WATERSHED: MIDDLE BRANCH OF PATAPSCO RIVER. 17. SITE IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS SINCE DISTURBANCE IS LESS THAN 20,000 SQ.FT.

	STORMWATER MANAGEMENT MAINTENANCE LOG - MICRO-BIORETENTION 1									
PRACTICE	DATE OF SPRING & SUMMER INSPECTIONS	DATE OF ANNUAL INSPECTIONS & MULCH REPLACEMENT	DATE MAINTENANCE CONDUCTED	PROBLEM / ISSUE ENCOUNTERED	REMEDY FOR ISSUE / TYPE OF MAINTENANCE CONDUCTED					

STORMWATER MANAGEMENT MAINTENANCE LOG - MICRO-BIORETENTION 2									
PRACTICE	DATE OF SPRING & SUMMER INSPECTIONS	DATE OF ANNUAL INSPECTIONS & MULCH REPLACEMENT	DATE MAINTENANCE CONDUCTED	PROBLEM / ISSUE ENCOUNTERED	REMEDY FOR ISSUE / TYPE OF MAINTENANCE CONDUCTED				

PROFESSIONAL CERTIFICATION

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2016. PARKS & PEOPLE FOUNDATION 800 WYMAN PARK DRIVE, SUITE 010 BALTIMORE, MARYLAND 21211 (410) 448-5663 x107 ATTN: CHRISTINA BRADLEY Signature Of Professional Engineer DATE SECTION BLOCK NO. THOMAS JOHSON ELEMENTARY SCHOOL OWNERS LOT NO. ZIP CODE TAX/ZONE WARD MAYOR & CITY COUNCIL c/o BALTIMORE CITY PUBLIC SCHOOLS 214-6X160-3 0029 21230 200 E. NORTH AVENUE, ROOM #407A BALTIMORE, MARYLAND 21202

ZONING

R-8

THOMAS JOHNSON ELEMENTARY 5CHOOL

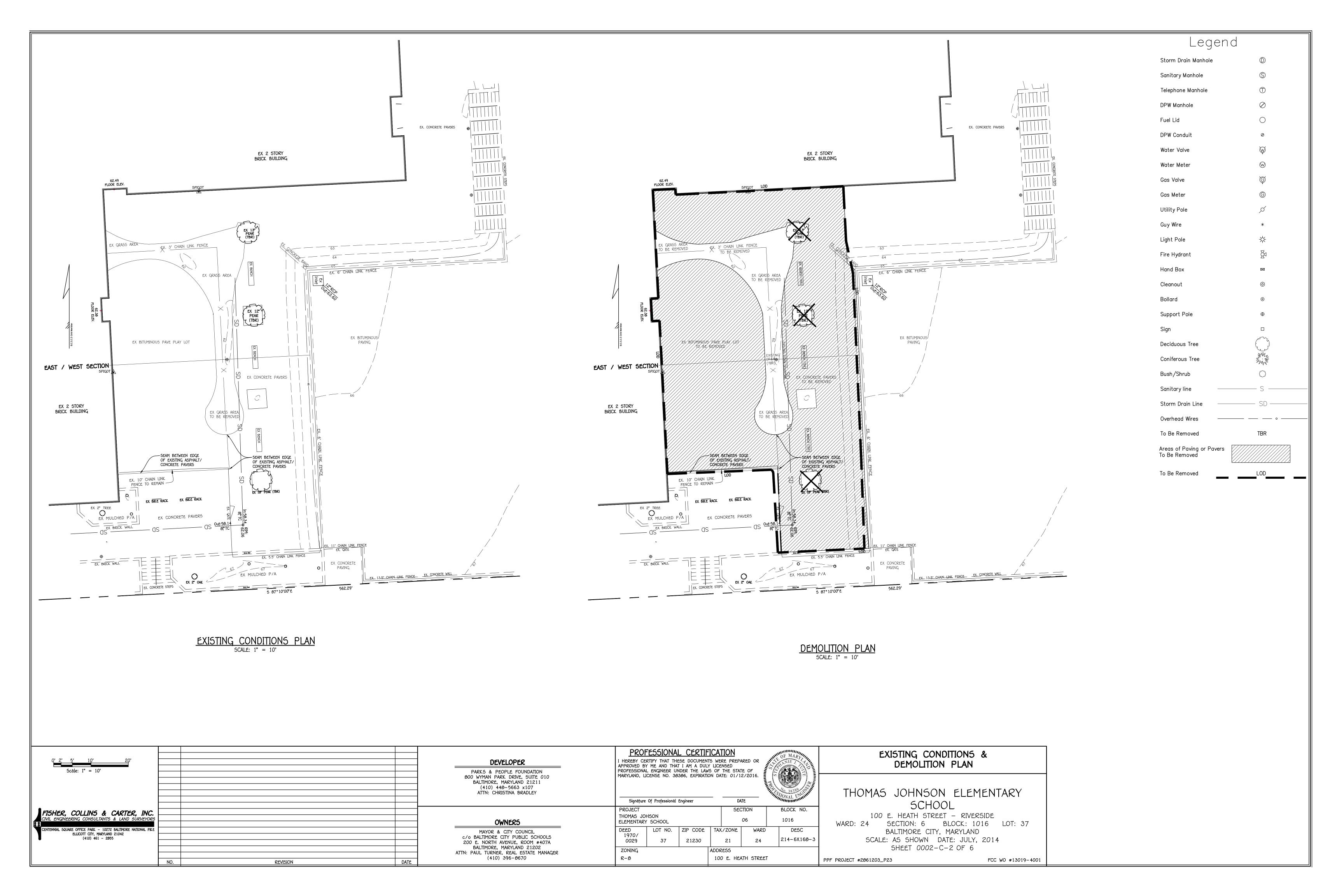
COVER SHEET

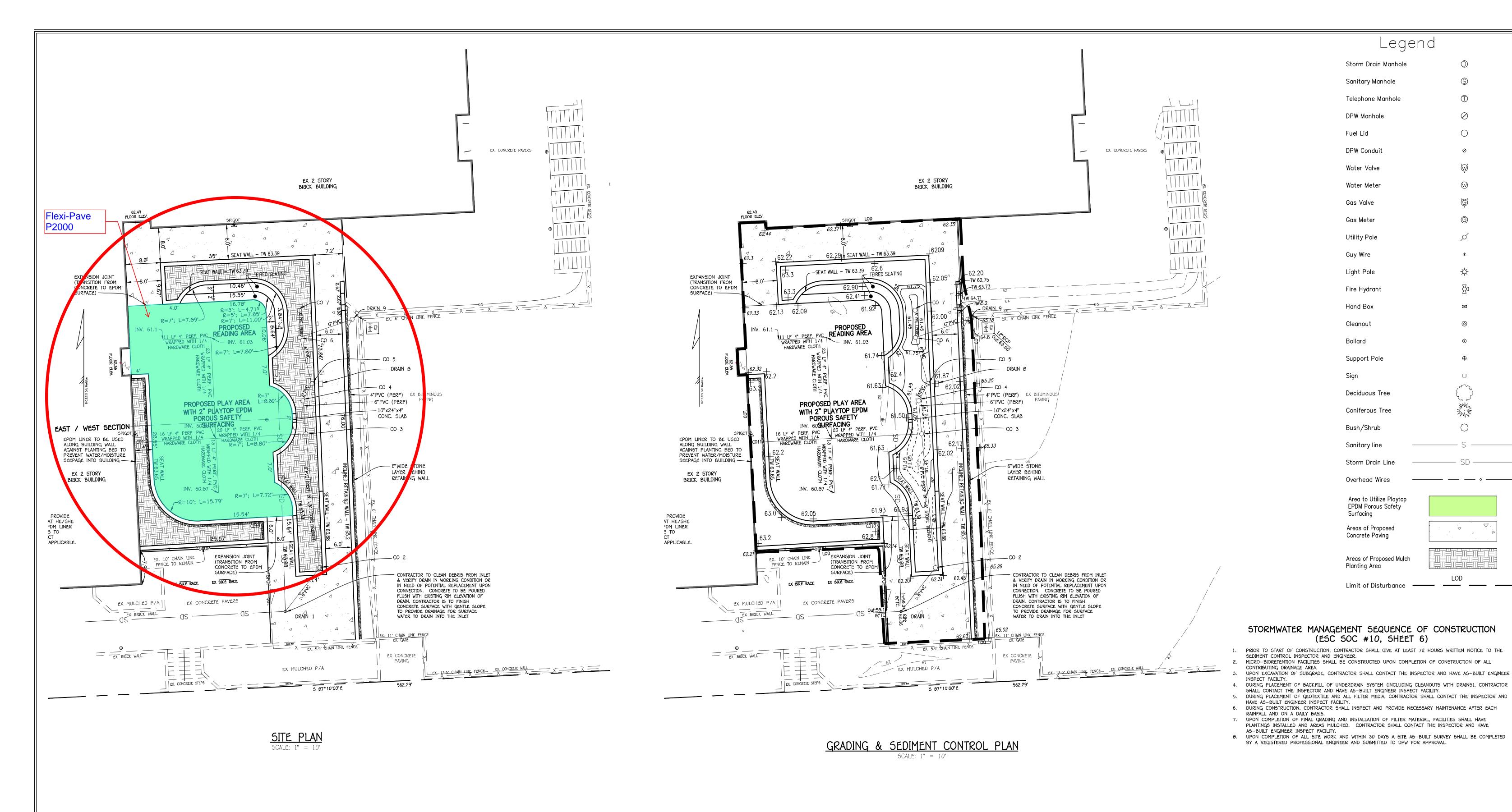
100 E. HEATH STREET - RIVERSIDE WARD: 24 SECTION: 6 BLOCK: 1016 LOT: 37 BALTIMORE CITY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2014 SHEET 0001-C-1 OF 6

PPF PROJECT #2861203_P23 FCC WO #13019-4001

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS NTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

ELLICOTT CITY, MARYLAND 21042





PROFESSIONAL CERTIFICATION

APPROVED BY ME AND THAT I AM A DULY LICENSED

Signature Of Professional Engineer

PROJECT

DEED

1970/

ZONING

R-8

0029

THOMAS JOHSON

ELEMENTARY SCHOOL

DEVELOPER

PARKS & PEOPLE FOUNDATION

800 WYMAN PARK DRIVE, SUITE 010 BALTIMORE, MARYLAND 21211 (410) 440-5663 x107

ATTN: CHRISTINA BRADLEY

OWNERS

MAYOR & CITY COUNCIL

c/o BALTIMORE CITY PUBLIC SCHOOLS

200 E. NORTH AVENUE, ROOM #407A

BALTIMORE, MARYLAND 21202

ATTN: PAUL TURNER, REAL ESTATE MANAGER

(410) 396-*8*670

DATE

Scale: 1" = 10'

FISHER, COLLINS & CARTER, INC.

ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055

VIL ENGINEERING CONSULTANTS & LAND SURVEYORS

NNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

MARYLAND, LICENSE NO. 36366, EXPIRATION DATE: 01/12/2016.

LOT NO. ZIP CODE TAX/ZONE

21230

DATE

SECTION

100 E. HEATH STREET

21

ADDRESS

WARD

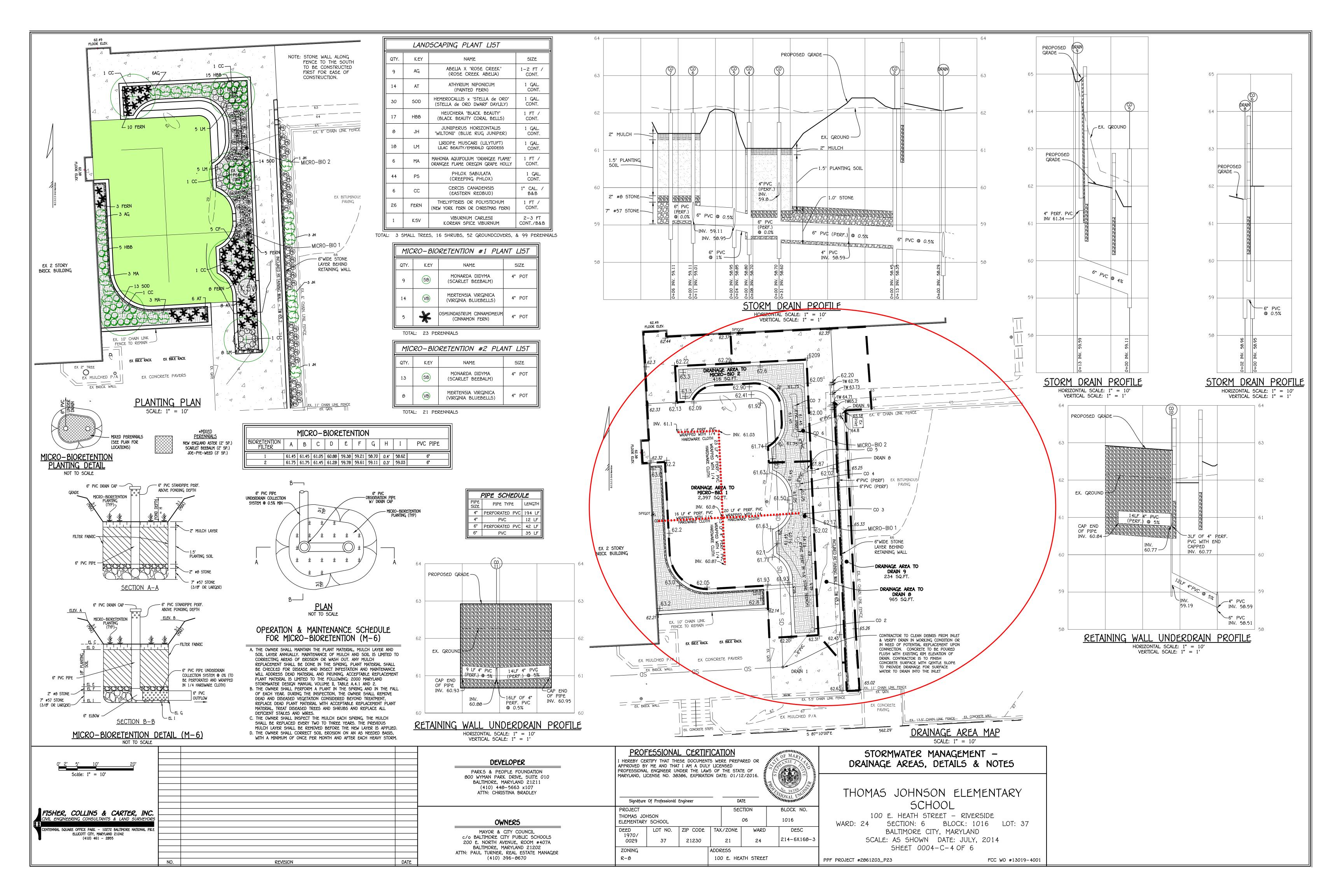
BLOCK NO.

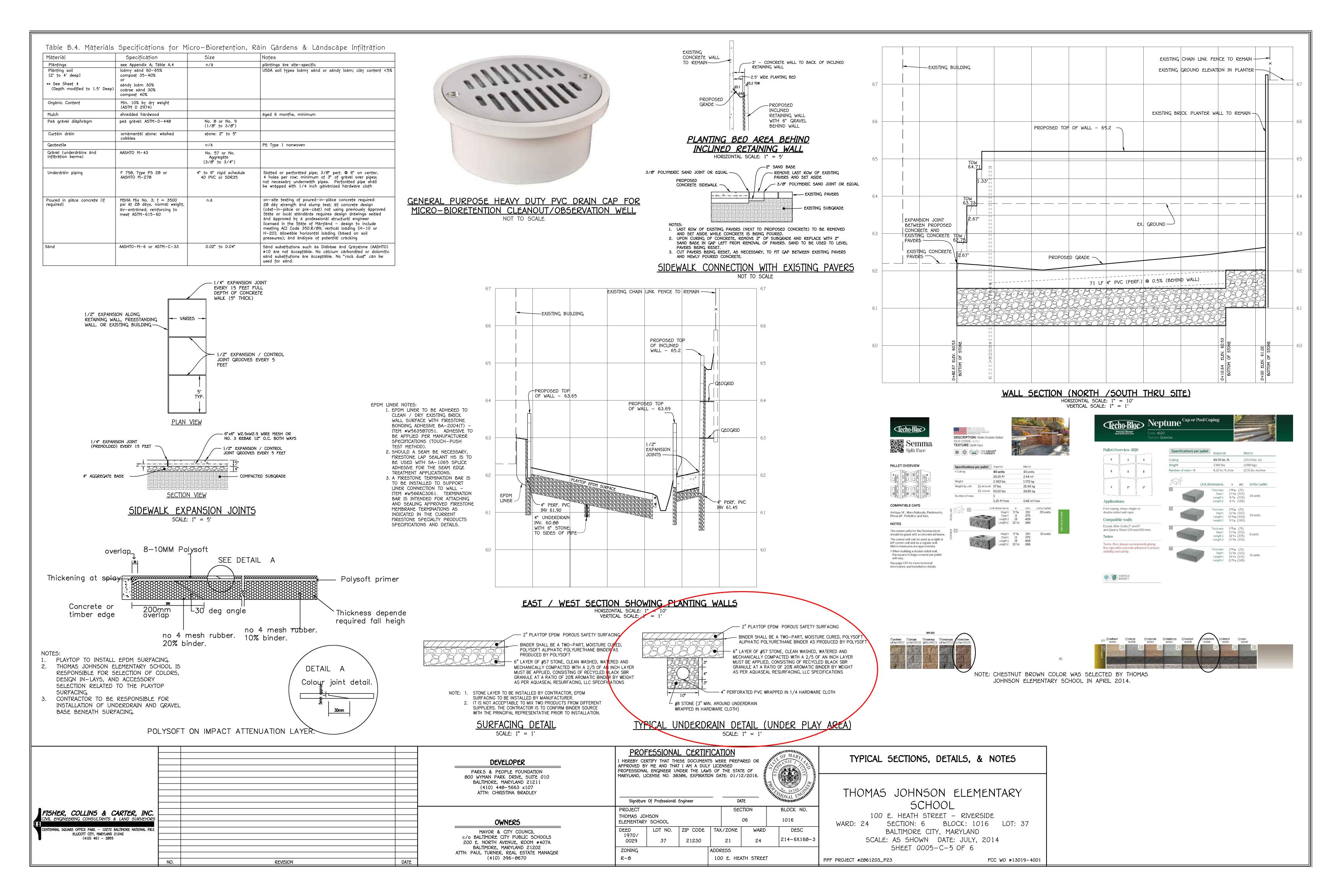
PROPOSED CONDITIONS -SITE PLAN AND GRADING & SEDIMENT CONTROL PLAN

THOMAS JOHNSON ELEMENTARY 5CHOOL

100 E. HEATH STREET - RIVERSIDE WARD: 24 SECTION: 6 BLOCK: 1016 LOT: 37 BALTIMORE CITY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2014

DESC 214-6X168-3 SHEET 0003-C-3 OF 6 PPF PROJECT #2061203_P23 FCC WO #13019-4001





B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover to protect exposed soil from erosion.

To promote the establishment of vegetation on exposed soil

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings

within the planting season.

- Adequate vegetative stabilization requires 95 percent groundcover.
- 2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
- 3. If an area has between 40 and 94 percent groundcover, over—seed and fertilize using half of the rates
- 4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2) A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

- b. Apply fertilizer and lime as prescribed on the plans.
- c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- 2. Permanent Stabilization
- a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
- 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) 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
- b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
- c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
- d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake 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.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- c. The original soil to be vegetated contains material toxic to plant growth.
- d. The soil is so acidic that treatment with limestone is not feasible
- 4. Areas having slopes steeper than 2:1 require special consideration and design. 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
- a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2
- b. Topsoil must be free of noxious plants or plant parts such as Bermuda 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 formation of depressions or water pockets.
- 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.

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 analyses.
- 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 90 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.

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 cover.

<u>Purpose</u>

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

A. Seeding

- Specifications a. All seed must meet the requirement 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.
- 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 hydroseeding. Note: It is very important to keep inoculant as cook 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 weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of

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 seeded area with 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
- 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 (phosphorus), 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 interruption.

(iv) When hydroseeding do not incorporate seed into the soil.

1. Mulch Materials (in order of preference)

each direction.

- 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, caked, decayed, 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 uniform fibrous physical state.
 - WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.
 - WCFM, including dye, must contain no germination or growth inhibiting factors. 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.
 - WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
 - 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

2. Application

Apply mulch to all seeded areas immediately after seeding 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

1.6 percent maximum and water holding capacity of 90 percent minimum.

application rate to 2.5 tons per acre. Wood cellulose fiber used as mulch must be applied to 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.

- 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:
 - 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.
 - 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.
 - 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 prohibited.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

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.

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

ardiness Zor beed Mixture	ne (from Figure B. (from Table B.1):	Fertilizer Rate (10-20-20)	Lime Rațe				
Species	Application Rate (lb/ac)	Seeding Da†es	Seeding Depths				
BARLEY	96	3/1 - 5/15,	1"	436 b/ac	2 †ons/dc		
OAT5	72	8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)		
RYE	112		1"				
FOXTAIL MILLET	30	5/16 - 7/31	0.5"				

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 desthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - 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

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 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

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

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 per 1000 square feet. One or

Select turforass varieties from those listed in the most current University of Maryland Publication,

and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" 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

c. 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 1 1/2 inches in diameter The resulting seedbed must be in such condition that future moving of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 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 seasons, or on adverse sites.

Permanent Seeding Summary

Hard Seed	iness Zone I Mixture (e (from Figure B. (from Table B.3):	3): <u>6b</u>	Ferțiliz	Lime Rațe			
No.	Species	Application Rate (lb/ac)	Seeding Dațes	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
					1000 sf)		,	,
3	DEER TONGUE	20	Mar. 1-May 15 May 16-Jun 15	1/4-1/2 in.	45 lbs. per acre	90 lb/ac (2 lb/	90 lb/ac (2 lb/	(90 lb/
	SHEEP FESCUE	20	Mar. 1-May 15 May 16-Jun 15	1/4-1/2 in.	(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 sf)
	CANADIAN WILD RYE	3	Mar. 1-May 15 May 16-Jun 15	1/4-1/2 in.				
	COMMON LESPEDEZA	10	Mar. 1-May 15 May 16-Jun 15	1/4-1/2 in.				

SEDIMENT & EROSION CONTROL NOTES

- 1. THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL AS SET FORTH IN THE MARYLAND SEDIMENT AND EROSION MANUAL AND BALTIMORE CITY CODE ARTICLE 7
- 2. SUBMIT A WRITTEN NOTIFICATION TO: THE DEPARTMENT OF PUBLIC WORKS, ENVIRONMENTAL COMPLIANCE & LABORATORY SERVICES: 3001 DRUID PARK DRIVE, ROOM 220, BALTIMORE, MD 21215, PHONE NUMBER, 410-396-0732, FAX 410-523-9047, DPW.ESCINSPECTIONS@BALTIMORECITY.GOV, AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION STATING
 - A. WHEN CONTRACTOR INTENDS TO BEGIN CONSTRUCTION B. DISPOSAL AREA OF SITE MATERIAL C. CONTRACTOR'S TENTATIVE CLOSING DATE.
- 3. INITIAL DISTURBANCE WILL BE LIMITED TO THAT NECESSARY TO GAIN ENTRANCE TO THE SITE AND INSTALL NECESSARY SEDIMENT CONTROLS AS PER THE
- 4. ALL SEDIMENT CONTROLS AND CRITICAL SLOPES MUST BE STABILIZED WITHIN THREE CALENDAR DAYS. ALL OTHER INACTIVE DISTURBED AREAS ON THE PROJECT SITE MUST BE STABILIZED WITHIN SEVEN CALENDAR DAYS.
- 5. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE WHENEVER POSSIBLE AND CONFINED TO AN AREA WHERE IT WILL NOT BE OBSTRUCT THE
- 6. PUMPING OF SEDIMENT LADEN WATER WILL NOT BE ALLOWED UNLESS IT IS FILTERED BY WAY OF AN APPROVED SEDIMENT TRAPPING DEVICE.
- 7. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES IS MANDATORY
- 6. ANY SEDIMENT CONTROL DEVICES DISTURBED DURING UTILITY CONSTRUCTION MUST BE RESTORED IMMEDIATELY
- 9. ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO MINIMIZE TRACKING OF MUD ON TO PUBLIC RIGHT-OF-WAYS.
- A PROPER MANNER. NO FLUSHING WILL NOT BE PERMITTED. ALL MATERIAL MUST BE REMOVED BY MEANS OF SHOVELING AND SWEEPING.

10. ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL TRACKED, SPILLED OR WASHED ON TO ADJACENT ROADS MUST BE IMMEDIATELY REMOVED AND DISPOSED OF IN

- 11. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 5,000 SQ. FT , THE CONTRACTOR SHALL HAVE A BALTIMORE CITY EROSION AND SEDIMENT CONTROL INSPECTOR INSPECT AND APPROVE THE WORK COMPLETED AT THE STAGES OF CONSTRUCTION SPECIFIED BELOW: UPON COMPLETION OF THE INSTALLATION OF THE PERIMETER SEDIMENT CONTROLS;
 - b. DURING ALL GRADING AND BUILDING OPERATIONS; c. UPON FINAL STABILIZATION OF THE ENTIRE SITE PRIOR TO REMOVAL OF THE SEDIMENT CONTROLS
- 12. THE CONTRACTOR SHALL NOT DEVIATE FROM THE APPROVED SEDIMENT AND EROSION CONTROL PLAN WITHOUT FIRST RECEIVING APPROVAL FROM THE SURFACE WATER MANAGEMENT DIVISION, VARIATIONS TO THE ORIGINAL PLAN MUST BE SUBMITTED IN WRITING WITH ALL PROPOSED MODIFICATIONS STILL BEING
- HIGHLIGHTED, SUBSTANTIAL CHANGES WILL NECESSITATE AMENDMENT OF THE GRADING /BUILDING PERMIT 13. SITE ANALYSIS: TOTAL AREA OF SITE (LIMIT OF SUBMISSION) 0.10 ACRE5 AREA DISTURBED ACRES

0.10 0.08 AREA TO BE ROOFED OR PAVED ACRES 0.02 AREA TO BE VEGETATIVELY STABILIZED ACRES CU.YD5. CU.YD5. OFFSITE WASTE/BORROW AREA LOCATION

SEQUENCE OF CONSTRUCTION

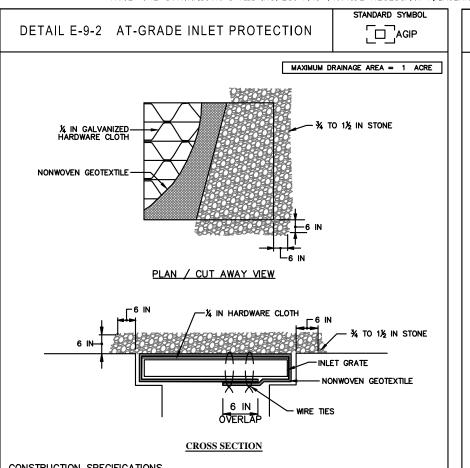
CU.YD5.

- OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH DPW. (2 WEEKS) NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-000-257-7777. PROVIDE A WRITTEN NOTIFICATION TO THE SWM / ESC INSPECTION SECTION AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION TO THE DEPARTMENT OF PUBLIC WORKS', SURFACE WATER MANAGEMENT DIMISION.
- IF REQUIRED BY INSPECTOR, INSTALL SILT FENCE ON PAVEMENT AND INLET PROTECTION. (1 DAY) REMOVE EXISTING PAVERS / PAVING AND EXISTING DRAIN AS SHOWN ON PLANS. (2 DAYS)
- INSTALL TEMPORARY SEEDING AS NECESSARY.
- AT TIME OF EXCAVATION OF AREA FOR PROPOSED INCLINED RETAINING WALL, ONLY REMOVE SOIL IN AN AREA THAT CAN BE CONSTRUCTED WITHIN THE SAME DAY. SUPPORT FOR THE GRADE AS WELL AS EXISTING UPHILL PAVED PLAY AREA AND EXISTING CONCRETE TERRACE WALL THAT IS ADJACENT TO THE EXISTING PAVED PLAY AREA IS REQUIRED. UPON CONSTRUCTION OF THE AREA AROUND THE PROPOSED DRAIN, CONSTRUCT DRAIN BEHIND WALL. FOLLOW MANUFACTURER RECOMMENDATIONS FOR INSTALLATION OF THE WALL. SOIL TO BE COMPACTED IN LIFTS BEHIND THE WALL TO ADD NEEDED SUPPORT. UPPER 12" OF SOIL BEHIND RETAINING WALL TO NOT BE COMPACTED IN ORDER TO PROVIDE SUITABLE SOIL FOR PLANTINGS. (2 DAYS)
- INSTALL UNDERGROUND PIPING (INCLUDING HARDWARE CLOTH AND GRAVEL SURROUNDING PIPE) ASSOCIATED WITH DRAINAGE AND MICRO-BIORETENTION FACILITIES. (2
- PRIOR TO INSTALLATION OF EPDM LINER AGAINST BUILDING WALL, EXTERIOR BUILDING WALL TO BE CLEANED AND DRIEDTO PROVIDE PROPER SURFACE FOR ADHESIVE SUBGRADE IN PLANTER SHALL BE COMPACTED AND SLOPED AT TWO PERCENT SLOPE TOWARD GRAVEL BENEATH PLANTER WALL. ADHESIVE SHALL BE APPLIED TO SURFACE OF BUILDING WALL AND ONCE TACKY TO TOUCH LINER TO BE PLACED AGAINST SURFACE AND SMOOTHED. LINER SHALL BE EXTENDED ABOVE PROPOSED GROUND SURFACE IN PLANTER AND LAY ON COMPACTED SUBGRADE TO THE GRAVEL BASE FOR PLANTER WALL PRIOR TO SOIL BEING ADDED WITHIN THE PLANTER. INSTALL TERMINATION BAR TO HOLD UPPER EDGE OF LINER. CARE SHALL BE TAKEN NOT TO PUNCTURE THE LINER EITHER WITH EQUIPMENT OF SOIL MATERIAL. FINE GRADE WHERE NECESSARY, CONSTRUCT CONCRETE SIDEWALK AREAS (BEING SURE TO REMOVE LAST ROW OF EXISTING PAVERS TO REMAIN IN ORDER TO POUR
- LOCATIONS AND STONE BASE FOR PLAYTOP EPDM POROUS SURFACING. FILL PLANTERS WITH SUITABLE SOIL FOR PLANTINGS, COMPACTED WHERE SPECIFIED. (5

CONCRETE AND UPON SETTING CUT AND REPLACE ON SAND BASE WITH POLYMERIC SAND JOINTS), CONSTRUCT PLANTER WALLS, TIERED SEATING IN DESIGNATED

- CONSTRUCT MICRO-BIORETENTION FACILITIES AND INSTALL PLANT MATERIAL IN ACCORDANCE WITH SWM SEQUENCE OF CONSTRUCTION ON SHEET 3. (3 DAYS) UPON COMPLETION OF ALL OTHER SITE WORK, INSTALL PLAYTOP EPDM POROUS SURFACING. (2 DAYS) ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL
- DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS.

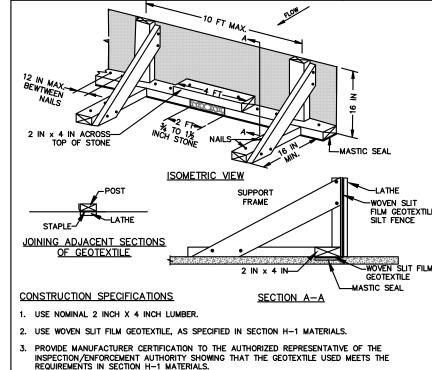


U.S. DEPARTMENT OF AGRICULTURE
ATURAL RESOURCES CONSERVATION SERVICE

- CONSTRUCTION SPECIFICATIONS . USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE. PLACE CLEAN 34 TO 11/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED

INLET	PROTECTION	ON DOES NO	T COME	PLETELY DRAIN MOVE ACCUMUL	WITHIN 2	4 HOURS	AFTER A	STORM	EVENT, I	T IS
	MARYLAND	STANDARDS	AND S	PECIFICATIONS	FOR SOIL	EROSION	AND SE	DIMENT	CONTROL	

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION



DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL

----SF0P------|

- 4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART. 5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
- 3. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
- 8. PROVIDE A MASTIC SEAL BETWEEN PAYEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION. 9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.

10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR DEVELOPER PARKS & PEOPLE FOUNDATION 800 WYMAN PARK DRIVE. SUITE 010 BALTIMORE, MARYLAND 21211 (410) 448-5663 x107 ATTN: CHRISTINA BRADLEY Signature Of Professional Engineer PROJECT FISHER, COLLINS & CARTER, INC THOMAS JOHSON OWNERS ELEMENTARY SCHOOL NNIAL 5QUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKI MAYOR & CITY COUNCIL 1970/ c/o BALTIMORE CITY PUBLIC 5CHOOLS 0029 21230 200 E. NORTH AVENUE, ROOM #407A BALTIMORE, MARYLAND 21202 ZONING ATTN: PAUL TURNER, REAL ESTATE MANAGER R-8 (410) 396-8670

APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2016 DATE SECTION BLOCK NO. LOT NO. | ZIP CODE TAX/ZONE DESC WARD 214-6X168-3

ADDRESS

100 E. HEATH STREET

EROSION & SEDIMENT CONTROL NOTES & DETAILS

THOMAS JOHNSON ELEMENTARY 5CHOOL

100 E. HEATH STREET - RIVERSIDE WARD: 24 5ECTION: 6 BLOCK: 1016 LOT: 37 BALTIMORE CITY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2014

SHEET 0006-C-6 OF 6

PPF PROJECT #2061203_P23 FCC WO #13019-4001