

- ALL INFORMATION AND DETAILS ON THESE DRAWINGS SHALL BE CONSTRUCTED AS PER THE PLANS OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY THE CONTRACTOR
- STORM DRAINAGE SLOPES ARE TO BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER
- APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN. THESE LOCATIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

AT&T 1-800-252-1133
 COMCAST 410-461-1362
 BG&E (CONTRACTOR SERVICES) 410-850-4620
 BG&E (UNDERGROUND DRAINAGE CONTROL) 410-787-9068
 MISS UTILITY 1-800-257-7777
 HOWARD COUNTY BUREAU OF UTILITIES 410-313-4900
 HOWARD COUNTY DIVISION OF CONSTRUCTION INSPECTION 410-313-1880
 VERIZON 1-800-743-0033/410-224-9210

THE CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION OF ENGINEERING FOR VERIFICATION AND/OR INFORMATION REGARDING:

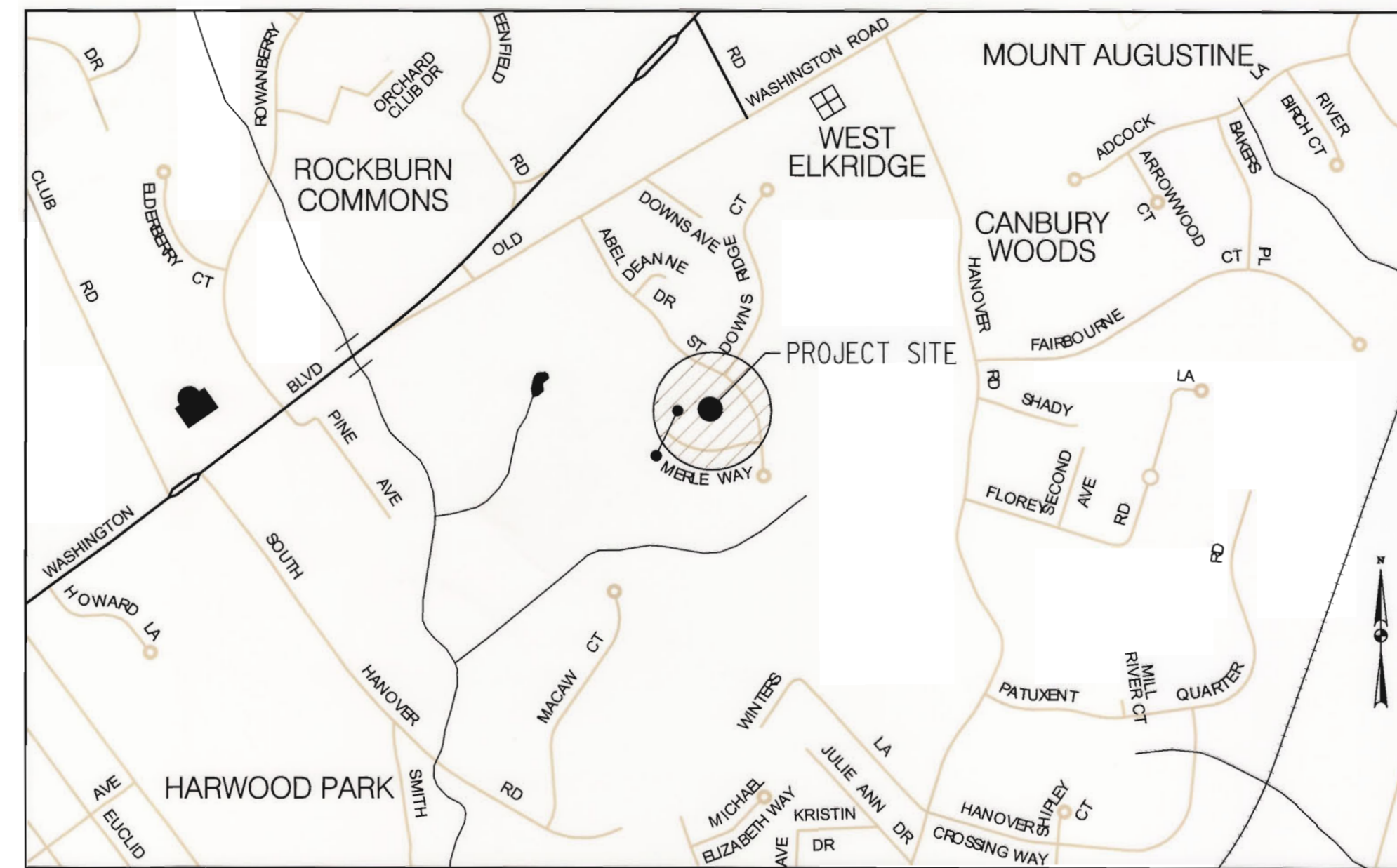
- PROPOSED/EXISTING RIGHT-OF-WAY.
 - UTILITY RELOCATION.
 - MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
 - EROSION/SEDIMENT CONTROL CERTIFICATION AND PERMIT.
 - HORIZONTAL/VERTICAL SURVEY CONTROL.
 - GRADING PERMIT.
- SEE HOWARD COUNTY STANDARD DETAILS NO'S G-101 AND G-102 FOR STANDARD SYMBOLS.
 - HORIZONTAL COORDINATES ARE BASED ON MD NAD 83/91 DATUM AND VERTICAL ELEVATIONS ARE BASED ON NAVD 1988 ELEVATIONS, TRANSFERRED FROM N.G.S. AND HOWARD COUNTY CONTROL STATIONS:
 COUNTY MONUMENT 47CC (HORIZONTAL AND VERTICAL)
 N 528,939.75
 E 1,354,223.5
 ELEV. 226.27
 COUNTY MONUMENT 0051 (OLD '47GA') (HORIZONTAL ONLY) PID NO. A18508
 N 532,404.18
 E 1,351,627.37
 ELEV. 349.70
 - A STAGING AND STOCKPILE AREA WILL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE HOWARD COUNTY ENGINEER. STOCKPILING WILL NOT BE PERMITTED ON SITE.
 - TOPOGRAPHY SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON DATED SEPTEMBER 2014.
 - UTILITY TEST HOLES PERFORMED BY JOHNSON, MIRMIRAN AND THOMPSON, MARCH 2015.
 - STATIONS FOR TYPE 'S' COMBINATION INLETS ARE GIVEN TO THE GEOMETRIC CENTER OF THE STRUCTURE. OFFSETS ARE GIVEN TO THE FACE OF THE INLET HEADPIECE (FLOWLINE OF MODIFIED COMBINATION CURB AND GUTTER). TOP OF CURB (T.C.) ELEVATIONS ARE GIVEN TO THE TOP OF THE INLET HEADPIECE.
 - STATIONS FOR PRECAST STD. TYPE A-5 & STD. TYPE A-10 INLETS ARE GIVEN TO THE GEOMETRIC CENTER OF THE STRUCTURE. OFFSETS ARE GIVEN TO THE FACE OF THE CURB. TOP ELEVATIONS ARE GIVEN TO THE TOP OF CURB (T.C.).
 - STATIONS AND OFFSETS FOR 48" DIA. PRECAST MANHOLES ARE GIVEN TO THE GEOMETRIC CENTER OF THE STRUCTURE. TOP ELEVATIONS ARE GIVEN TO THE TOP OF MANHOLE RIM (T.R.).

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET (TI-1)
2	STORM DRAIN AND GRADING PLAN
3-4	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
5	EROSION AND SEDIMENT CONTROL PLAN

CONVENTIONAL SIGNS

MAILBOX		M.B.	PROPOSED PIPE/CULVERT	
EXISTING FENCE LINE		X	EXISTING PIPE/CULVERT	
EXISTING RIGHT OF WAY LINE		X	UTILITY POLE	
BASE LINE		500	HEDGE / TREE LINE	
FIRE HYDRANT		F.H.	BUSH / DECIDUOUS TREE	
PROPOSED FULL DEPTH PAVEMENT			CONIFEROUS TREE	
PROPOSED GRINDING & HMA PAVEMENT OVERLAY			RIP-RAP	
PROPOSED CONCRETE SIDEWALK, DRIVEWAY ENTR.			SUPER SILT FENCE	
WATER LINE		W	STANDARD INLET PROTECTION	
GAS LINE		G	AT-GRADE INLET PROTECTION	
SAN. SEWER		SAN	CURB INLET PROTECTION	
UG ELECTRIC		E	LIMITS OF DISTURBANCE	
UG TV CABLE		CATV	STABILIZED CONSTRUCTION ENTRANCE	
FILL LINE		F		



LOCATION MAP
 SCALE 1" = 2000'
 CAPITAL PROJECT NO. D-1124-25

ABEL STREET DRAINAGE IMPROVEMENTS

HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2015

By the Developer:
 '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.'

 5/13/15
 Date
 MARSHALL N. DAVIDSON
 Signature of Developer
 Print name below Signature

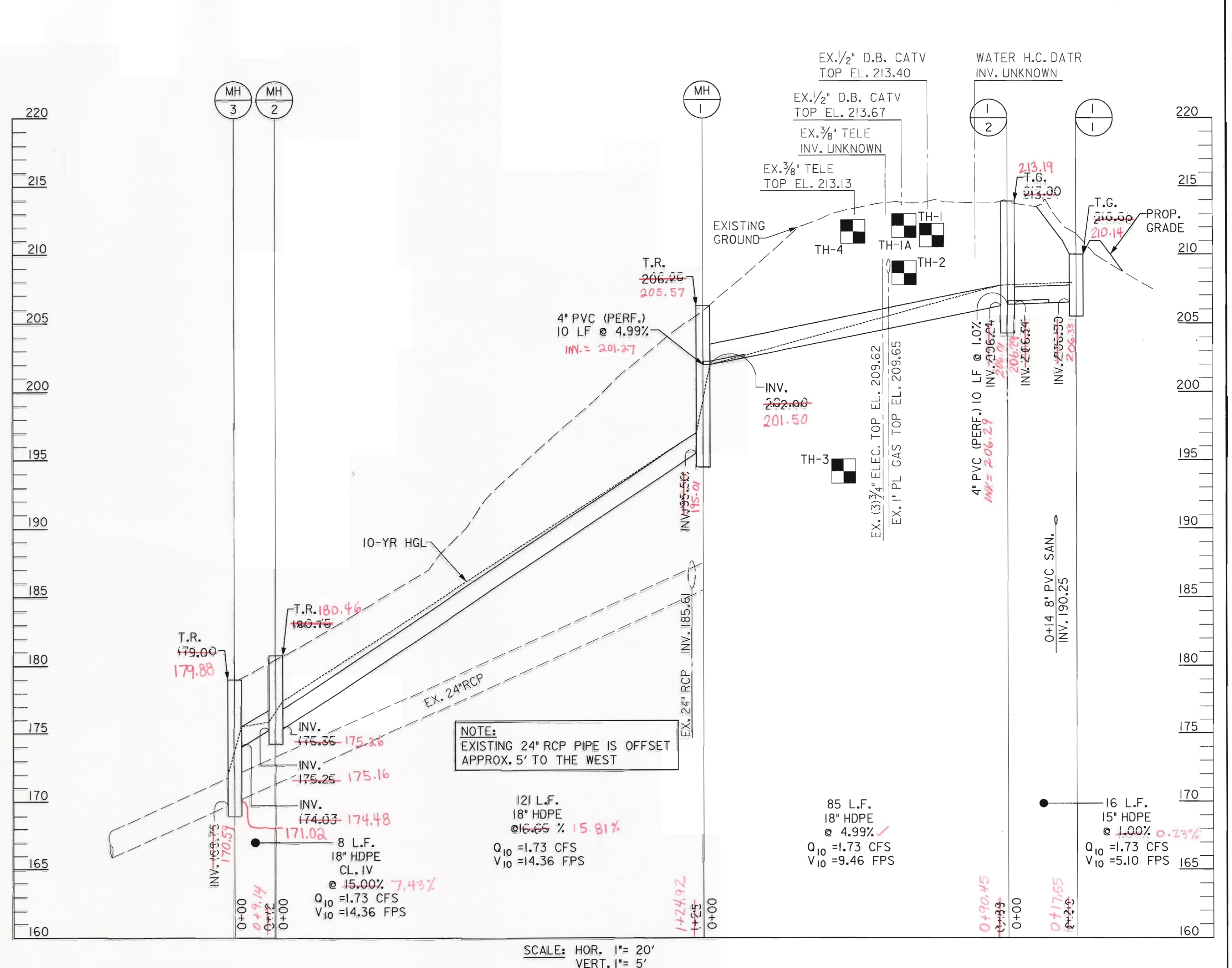
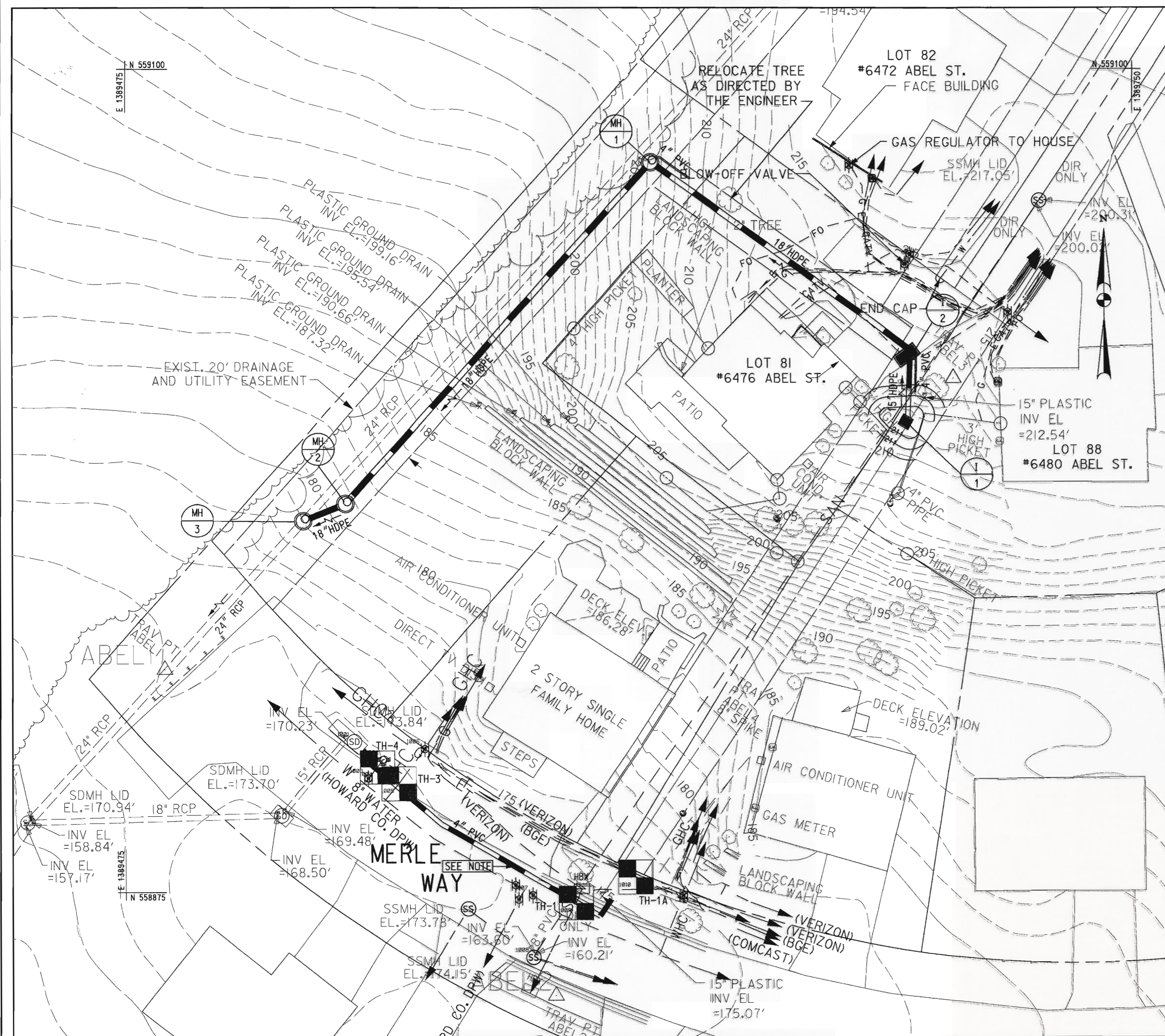
By the Engineer:
 'I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.'

 05/07/15
 Date
 PAUL F. CLEMENT
 Signature of Engineer
 Print name below Signature

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Howard Soil Conservation District _____ Date _____

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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Steve Shanan CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION		 Maura E. Biddle CHIEF, BUREAU OF ENGINEERING DEPUTY DIRECTOR OF PUBLIC WORKS		 JOHNSON, MIRMIRAN & THOMPSON Engineering A Brighter Future® 72 Loveton Circle Baltimore, Maryland 21152-0949	 PAUL F. CLEMENT 05/07/15	DES: JRB BY: JMB CHK: SAM DATE: FEB 2015	CAPITAL PROJECT NO. D-1124-25	TITLE SHEET ABEL STREET - DRAINAGE IMPROVEMENTS	SHEET 1 OF 5
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PIPE SCHEDULE			
FROM	TO	TYPE	LENGTH
I-1	I-2	15" HDPE	16 L.F.
I-2	MH-1	18" HDPE	85 L.F.
MH-1	MH-2	18" HDPE	121 L.F.
MH-2	MH-3	18" HDPE	8 L.F.

DRAINAGE STRUCTURE SCHEDULE					
NO.	NORTHING	EASTING	TYPE	STD. REF.	DEPTH
I-1	559,003.75	1,389,688.07	YARD INLET	D-4.14	3.50'
I-2	559,021.95	1,389,688.40	DOUBLE TYPE 'S' INLET	D-4.23	7.65
MH-1	559,074.71	1,389,618.38	48" DIA. STD. PRECAST MANHOLE	G-5.12	10.75'
MH-2	558,981.46	1,389,535.06	48" DIA. STD. PRECAST MANHOLE	G-5.12	5.50'
MH-3	558,976.81	1,389,523.55	48" DIA. STD. PRECAST MANHOLE	G-5.12	9.25'

NOTE: HDPE SMOOTH WALL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 AND M294. PIPE MATERIAL SHALL BE HIGH DENSITY POLYETHYLENE CONFORMING WITH THE REQUIREMENTS OF CELL CLASS 324420C AS DEFINED AND DESCRIBED IN ASTM D3350.

NOTE: COORDINATES SHOWN ARE GIVEN AT THE GEOMETRIC CENTER OF THE DRAINAGE STRUCTURE.

UTILITY NOTE:
PROPOSED INLET, I-2, IS IN CONFLICT WITH A 1/2" D.B. CABLE TV CONDUIT. CONTRACTOR SHALL RELOCATE CABLE AS DIRECTED BY THE ENGINEER.

UTILITY TEST HOLES - MERLE WAY					
NO.	NORTHING	EASTING	TYPE	TOP ELEV.	DEPTH
1	558,872.0787	1,389,597.7962	(2) 1" PL. CONDUITS - FIBER OPTIC	172.52	1.86'
A	558,879.1647	1,389,614.1036	2.5" PL. GAS	172.85	3.20'
3	558,904.8217	1,389,549.5283	0.75" COPPER WATER - WHC	168.87	4.89'
4	558,909.3894	1,389,543.6448	6" WATER	168.80	4.99'

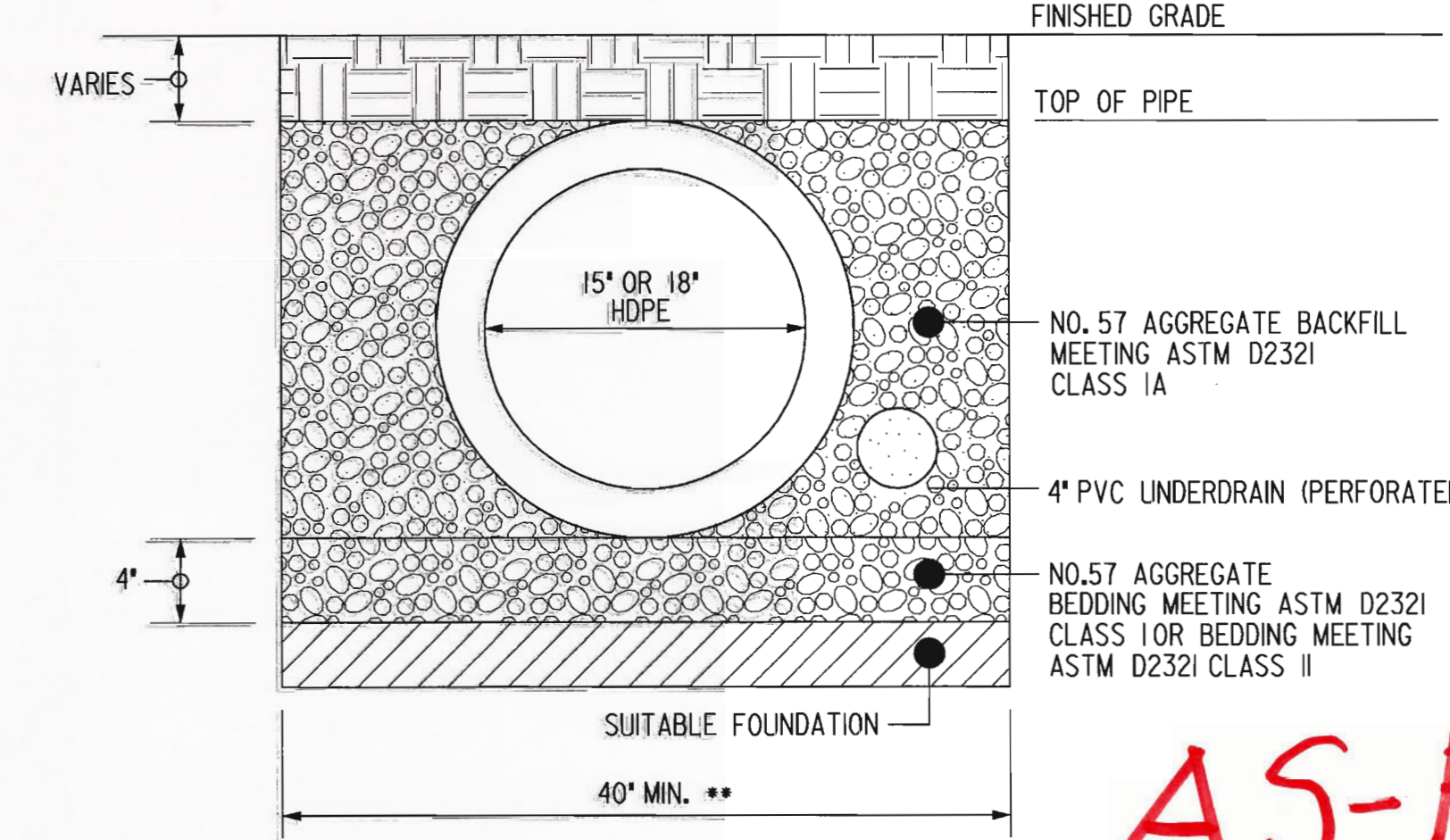
UTILITY TEST HOLES - ABEL STREET					
NO.	NORTHING	EASTING	TYPE	TOP ELEV.	DEPTH
1	559,038.4395	1,389,669.8908	1/2" D.B. CABLE - CATV	213.40	0.54'
1A	559,042.1321	1,389,665.9047	1/2" D.B. CABLE - CATV	213.67	0.28'
2	559,044.3625	1,389,662.7411	1" PL. GAS	209.65	4.29'
3	559,045.4593	1,389,661.3642	(3) 3/4" DB CABLES - ELECTRIC	209.62	4.24'
4	559,050.4118	1,389,654.8721	3/8" D.B. CABLE - TELE	213.13	0.53'

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2015

** PROVIDE 10 L.F. OF PERFORATED 4" PVC UPSTREAM OF STRUCTURES I-2 AND MH-1, RUN PVC PIPE PARALLEL TO STORM DRAIN PIPE. MATCH INVERT AND SLOPE OF PROPOSED HDPE PIPE. INCREASE TRENCH WIDTH AS NECESSARY TO ACCOMMODATE 4" PVC WITHIN NO. 57 STONE BACKFILL WITH 4" MIN STONE AROUND PVC PIPE. WRAP PVC WITH CLASS SD TYPE II GEOTEXTILE, NON-WOVEN.

NOTE:
INSTALL SOLID 4" PVC UNDERDRAIN OUTLET PIPE EXTENDING FROM EXISTING SLOPE UNDERDRAIN ALONG MERLE WAY AND TIE-IN TO EXISTING INLET AS SHOWN ON PLAN. MINIMUM PIPE SLOPE SHALL BE 1-PERCENT. MINIMUM PIPE DEPTH SHALL BE 3' BELOW PAVEMENT. SEE UTILITY TEST HOLE RESULTS FOR INFORMATION REGARDING POTENTIAL CONFLICTS TO AVOID. INSTALL CLEANOUT AT CONNECTION BETWEEN PERFORATED UNDERDRAIN AND OUTLET PIPE. CONTRACTOR SHALL REPLACE CONCRETE CURB AND GUTTER IN-KIND TO MATCH EXISTING CONDITIONS. INSTALL EXPANSION JOINT BETWEEN DRIVEWAY CONCRETE AND NEW CURB AS DIRECTED BY THE ENGINEER.

STABILIZE ALL DISTURBED AREAS WITH 4" TOPSOIL AND SEED. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH TYPE 'A' SOIL STABILIZATION MATTING. ALL OTHER AREAS SHALL BE STABILIZED WITH STRAW MULCH.



TYPICAL HDPE STORM TRENCH INSTALLATION DETAIL *
NOT TO SCALE

AS-BUILT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Janey An 5/13/15
DIRECTOR OF PUBLIC WORKS

Meamin 5/13/2015
CHIEF, BUREAU OF HIGHWAYS

Steve Sheeran 5/13/15
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

Miriam & Rutler 5/13/15
CHIEF, BUREAU OF ENGINEERING
DEPUTY DIRECTOR OF PUBLIC WORKS

JMT
JOHNSON, MIRMAN & THOMPSON
Engineering A Brighter Future®
72 Loveton Circle Baltimore, Maryland 21152-0949

STATE OF MARYLAND
FRANKLIN COUNTY
PROFESSIONAL ENGINEER
15466
EXPIRES 7/15

DES: JRB
BY: JRB
NO.:
DATE: FEB 2015

DRN: JMB
CHK: SAM

MAP NO.:
BLOCK NO.:

CAPITAL PROJECT NO.
D-1124-25

SCALE
1" = 20'

SHEET
2 OF 5

STORM DRAIN & GRADING PLAN
ABEL STREET - DRAINAGE IMPROVEMENTS

ELECTION DISTRICT I
HOWARD COUNTY, MARYLAND

Abel Street

SDMH 1 Top 205.57
 INV."IN" (SE) 18"HDPE 201.50
 INV."OUT" (SW) 18"HDPE 195.01
 INV."IN" (NE) 4"PVC 201.27

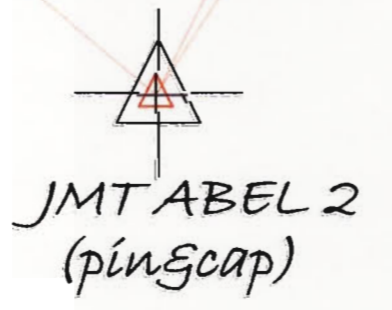
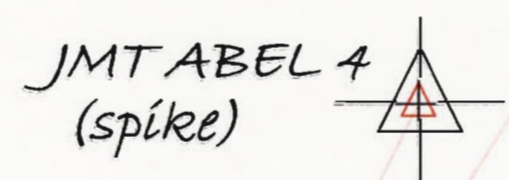
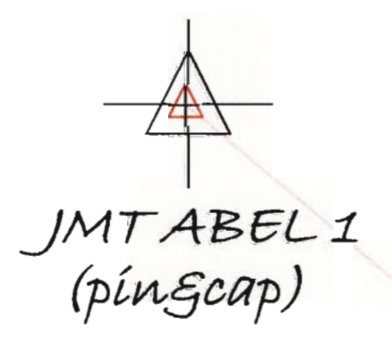
INLET 2 Top 213.19
 INV."IN" (S) 15"HDPE 206.29
 INV."OUT" (NW) 18"HDPE 206.01
 INV."IN" (S) 4"PVC 206.29

SDMH 3 Top 179.88
 INV."IN" (NE) 24"RCP 171.02
 INV."OUT" (SW) 24"RCP 170.59
 INV."IN" (E) 18"HDPE 174.48
 INV."IN" (NE) 4"PVC 175.10

SDMH 2 Top 180.46
 INV."IN" (NE) 18"HDPE 175.26
 INV."OUT" (W) 18"HDPE 175.16

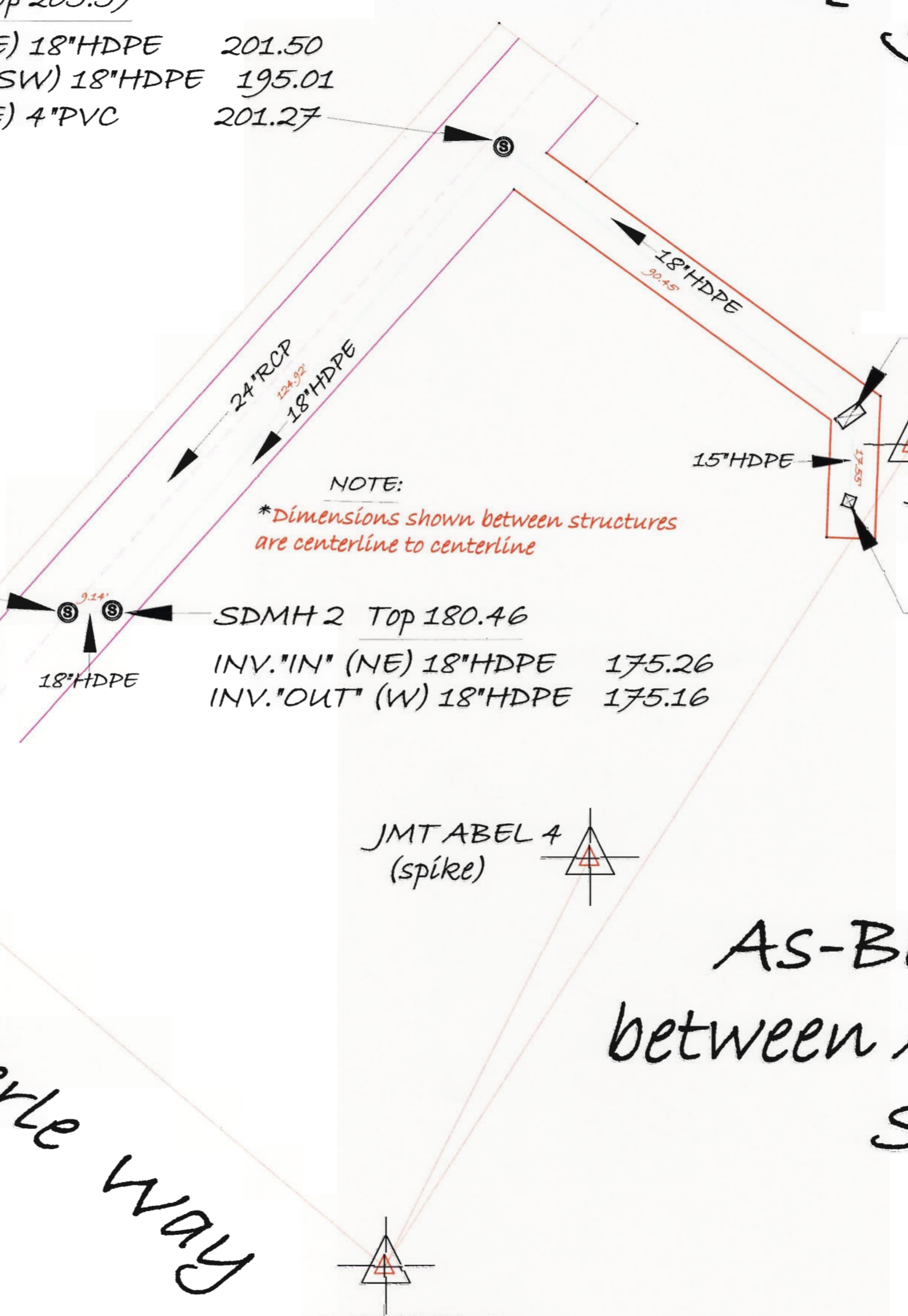
INLET 1 Top 210.14
 INV."OUT" (N) 15"HDPE 206.33

NOTE:
 *Dimensions shown between structures
 are centerline to centerline



As-Built (Storm Drain)
 between Abel St. and Merle Way
 September 2015

Merle Way



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

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

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

Conditions Where Practice Applies

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

Criteria

A. Seeding

1. Specifications

a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.

b. Mulch 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 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 elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition

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

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- Select one or more of the species or seed mixtures listed in Table B.I for the appropriate Plant Hardness 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.I plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- 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.I.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardness Zone (from Figure B.3): 6B				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
Annual Ryegrass	40	3-1 to 5-15 and 8-1 to 10-15	0.5 in.	436 lb/ac (10lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
Foxtail Millet	30	5-16 to 7-31	0.5 in.		
Pearl Millet	20	5-16 to 7-31	0.5 in.		

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A.

Seeding Mixtures

1. General Use

- Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness 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.
- 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 - Critical Area Planting.
- For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
- 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.

Permanent Seeding Summary

NO.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)			Lime Rate
					N	P ₂ O ₅	K ₂ O	
1	Switch Grass	10	3-1 to 5-15 and 5-16 to 6-15	0.25-0.5 in.	45 lb/ac (1.0lb/1000 sf)	90 lb/ac (2.0lb/1000 sf)	90 lb/ac (2.0lb/1000 sf)	2 tons /ac (90 lb/1000 sf)
	Creeping Red Fescue	15	3-1 to 5-15 and 5-16 to 6-15	0.25-0.5 in.				
	Wild Indigo	2	3-1 to 5-15 and 5-16 to 6-15	0.25-0.5 in.				

2. Turfgrass Mixtures

- Areas where turfgrass may be desired include lawns, parks, playgrounds and commercial sites which will receive a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions of purpose. Enter selected mixture(s), application rates and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - 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.
 - Kentucky Bluegrass/Perennial Ryegrass: 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.
 - 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 per 1000 square feet. One or more cultivars may be blended.
 - 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: 1 1/2 to 3 pounds per 1000 square feet.
- Notes:
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 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.
- Ideal Times of Seeding for Turf Grass Mixtures
Central MD: March 11 to May 15, August 15 to October 15 (Hardness Zone: 6B)
 - 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 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 - If soil moisture is deficient, supply new seedlings 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 seedlings are made late in the planting season, in abnormally dry or hot seasons or on adverse sites.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2015

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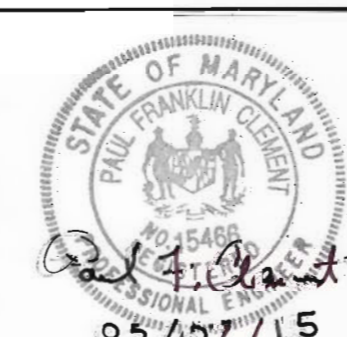
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John A. ... 5/15/15
DIRECTOR OF PUBLIC WORKS

... 5/15/15
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

... 5/13/15
CHIEF, BUREAU OF ENGINEERING
DEPUTY DIRECTOR OF PUBLIC WORKS

JMT
JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future®
72 Loveton Circle Baltimore, Maryland 21152-0949



DES:	JRB	BY	INO.	DATE
DRN:	JMB			
CHK:	SAW			
DATE:	FEB 2015			

CAPITAL PROJECT NO.
D-1124-25

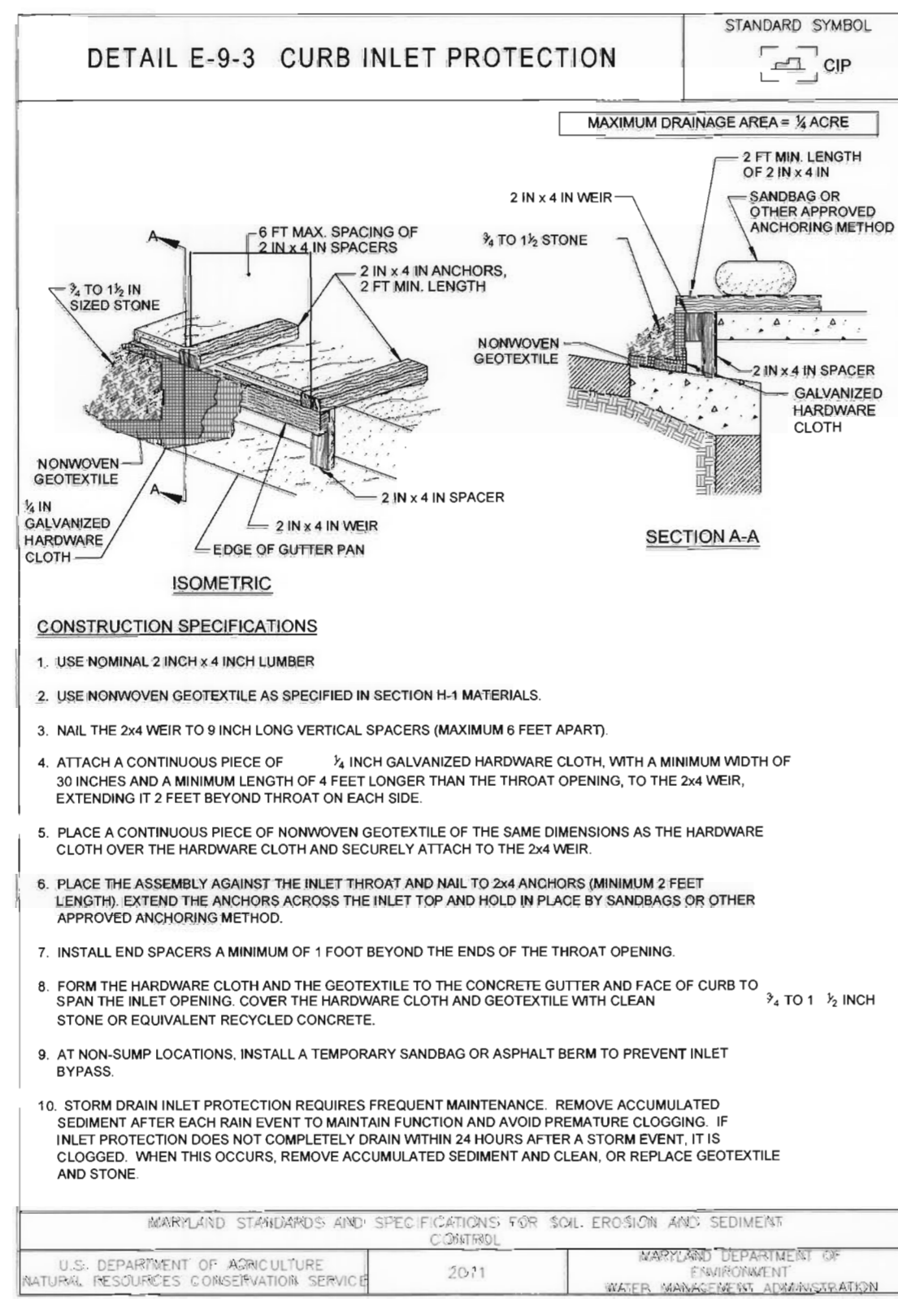
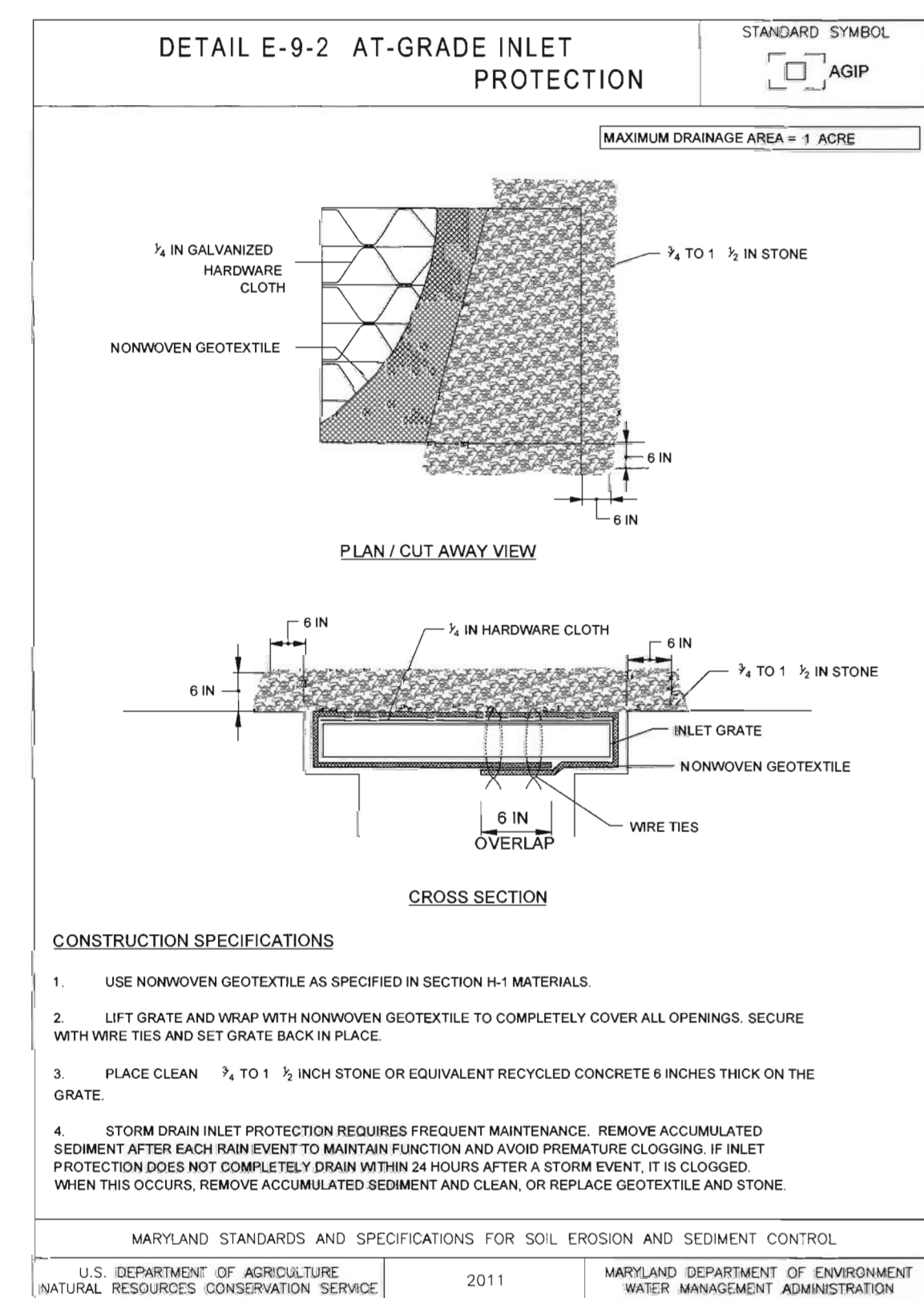
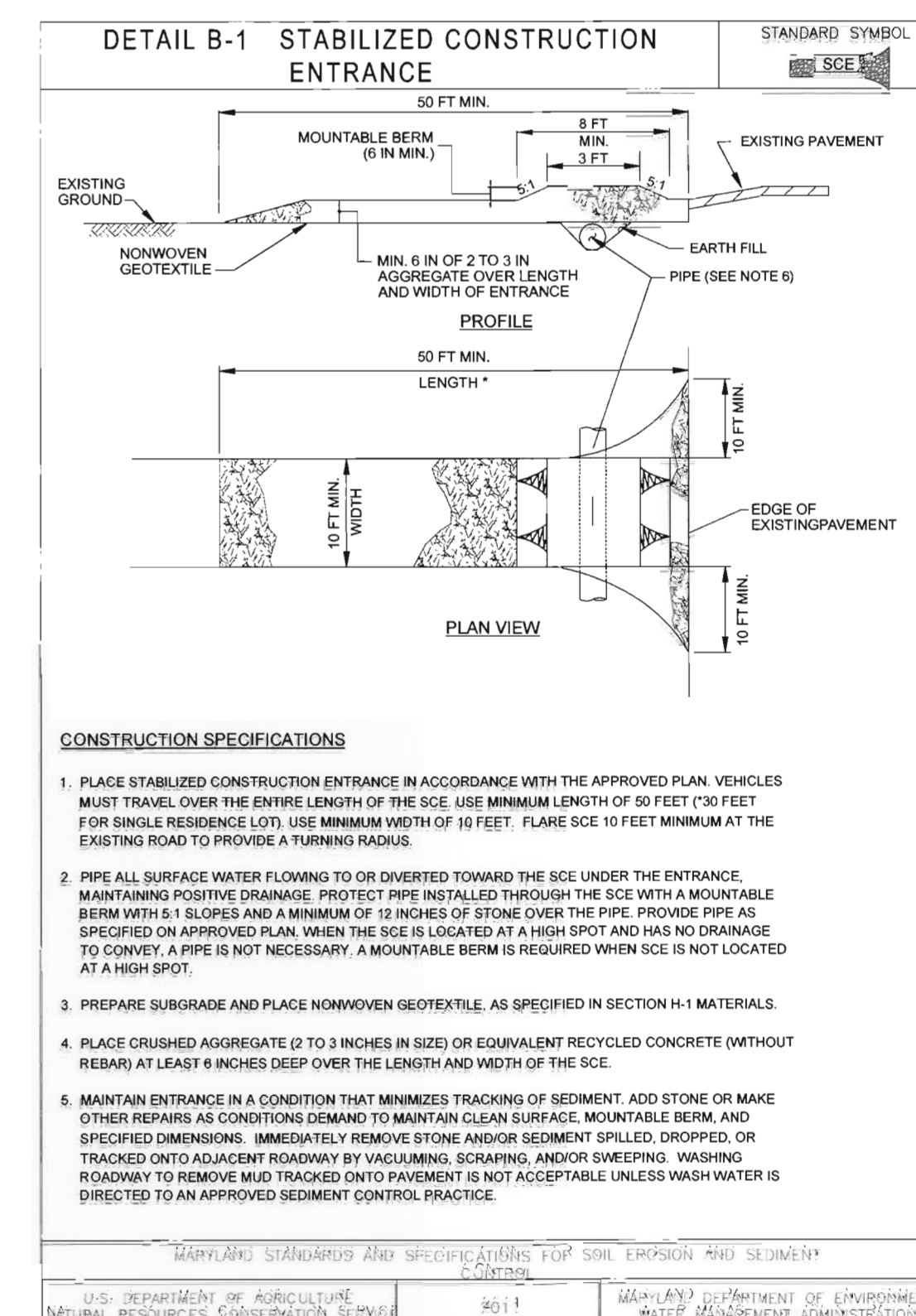
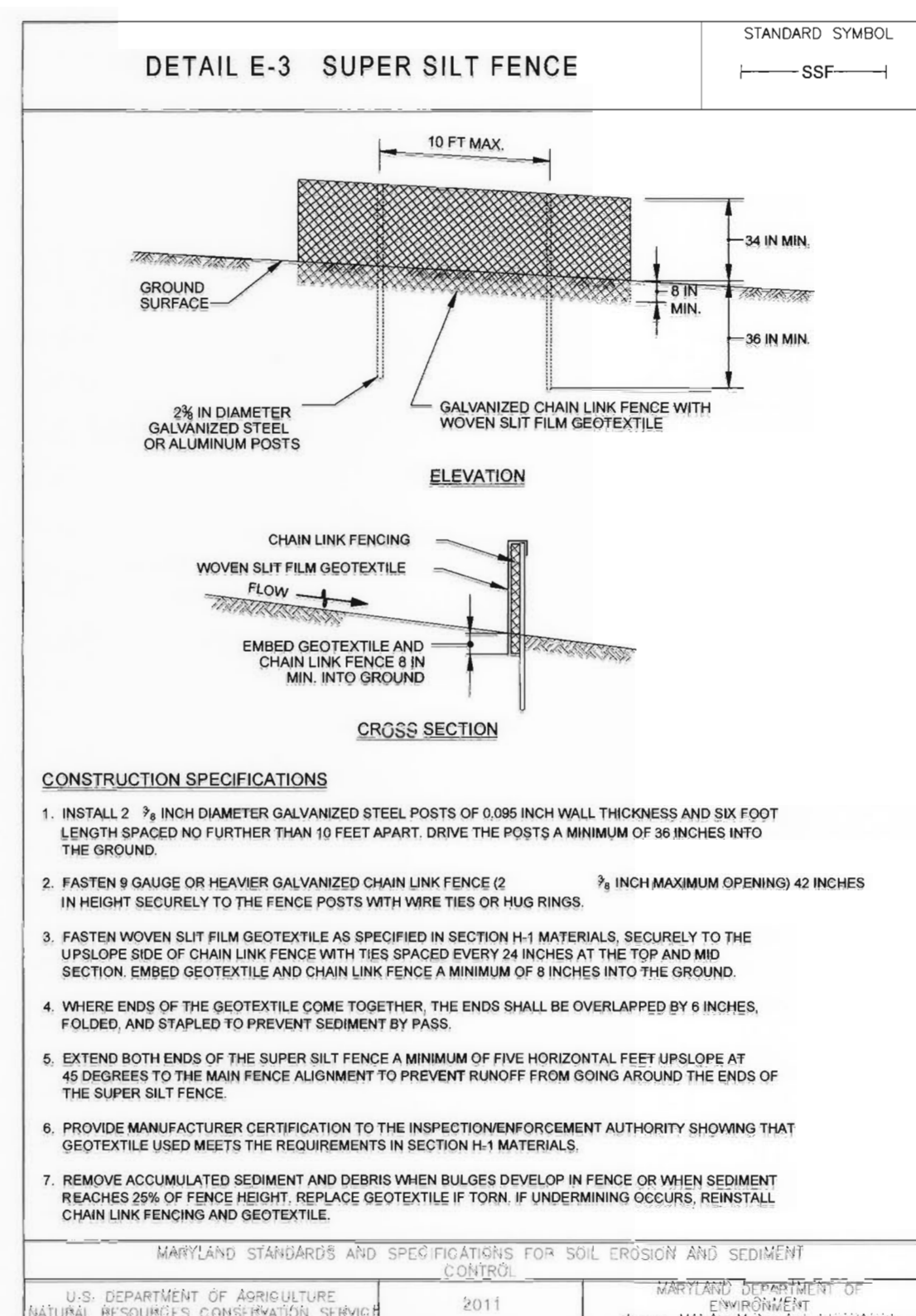
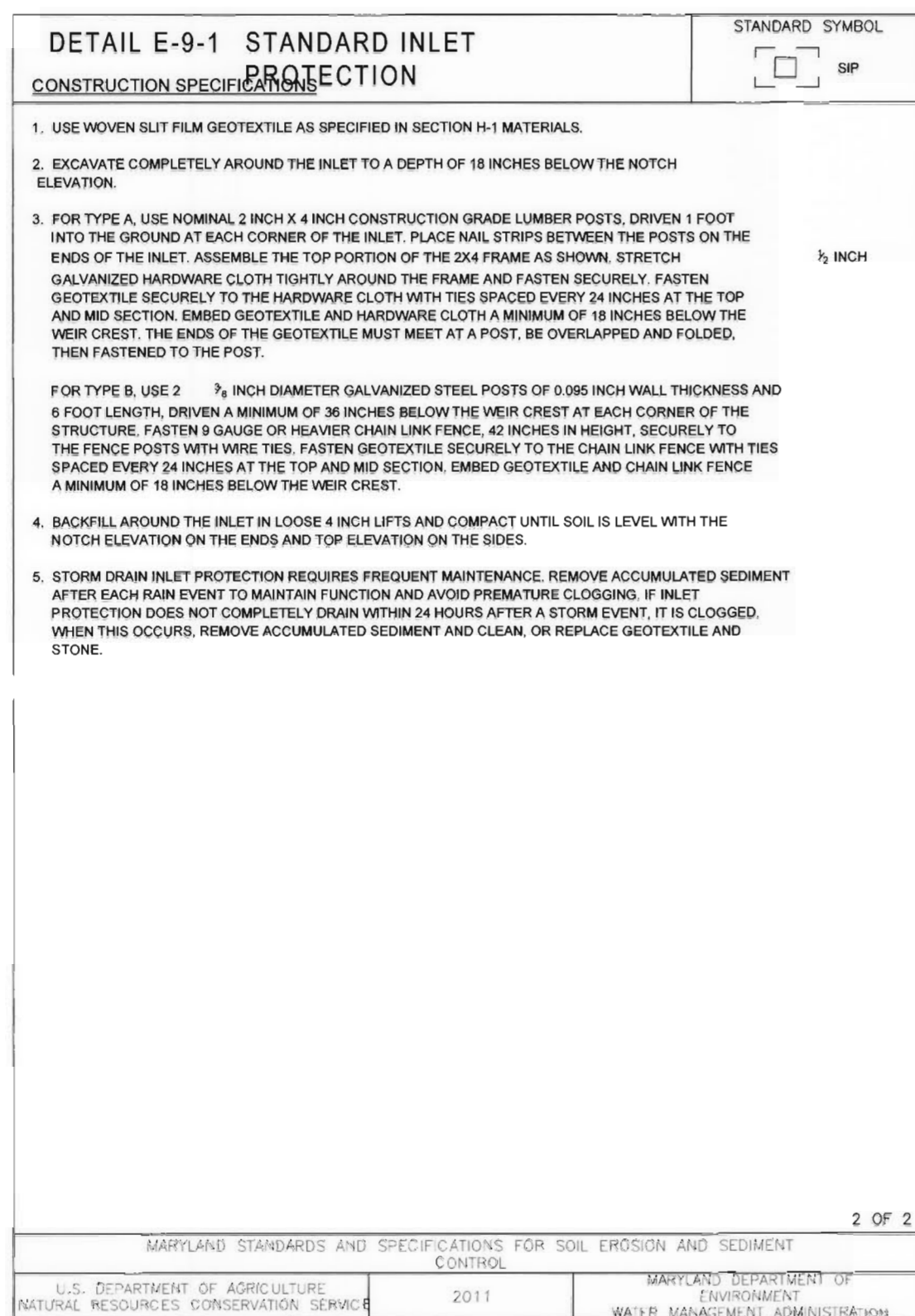
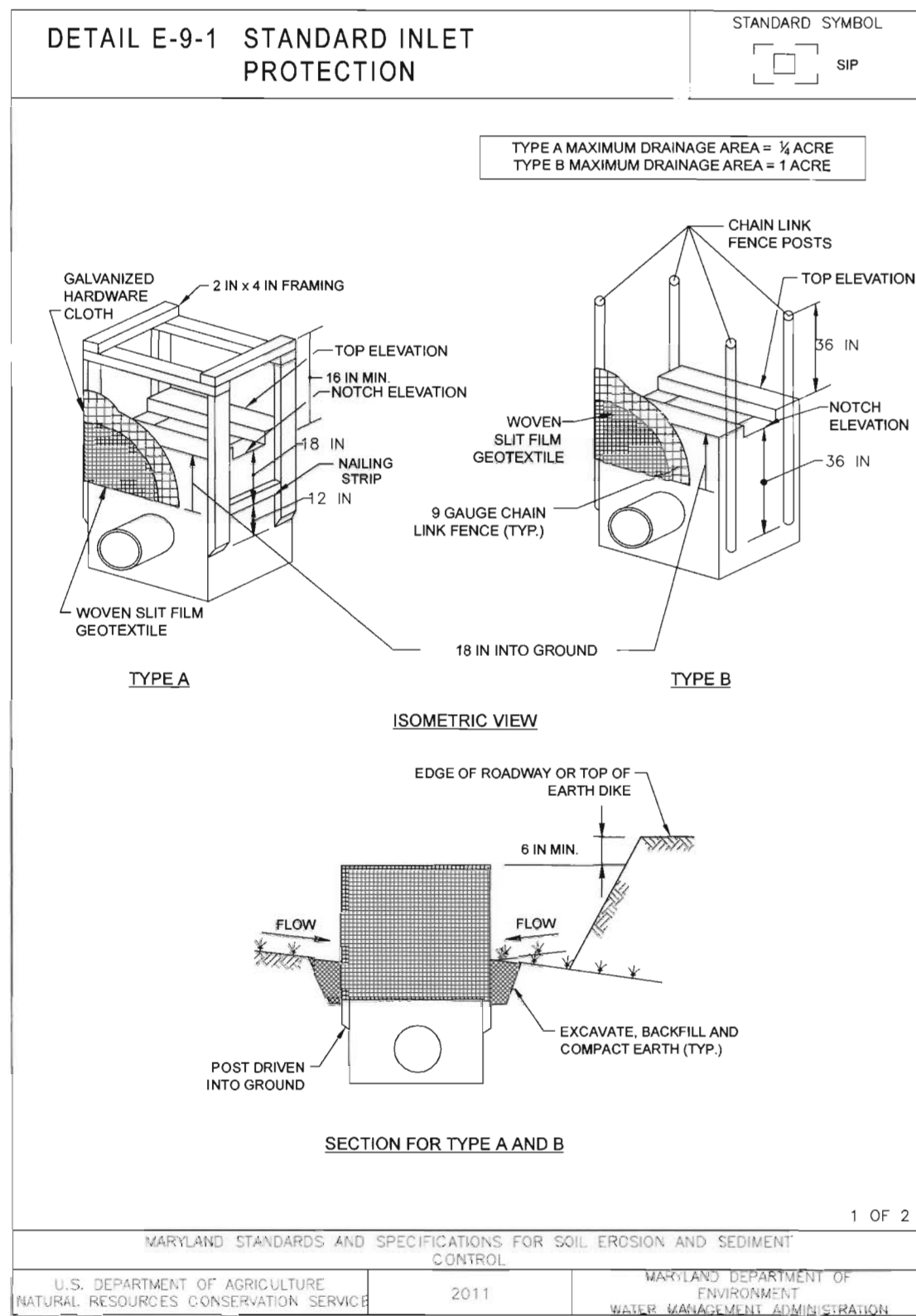
MAP NO. BLOCK NO.

EROSION AND SEDIMENT CONTROL PLAN
ABEL STREET - DRAINAGE IMPROVEMENTS

ELECTION DISTRICT 1
HOWARD COUNTY, MARYLAND

SCALE
1" = 20'

SHEET
3 OF 5



*PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2015

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Steve Shaver* 5/13/15
Chief, Transportation and Special Projects Division

Chief, Bureau of Highways: *Armenian* 5/15/15
Chief, Bureau of Engineering: *Thomas A. Ruttle* 5/13/15
Deputy Director of Public Works

JOINT
Engineering A Brighter Future®
72 Loveton Circle Baltimore, Maryland 21152-0949

Professional Engineer Seal: *Paul J. Blawie* 05107/15

DES:	JRB	BY:	NO.	DATE:
DRN:	JMB			
CHK:	SAM			
DATE:	FEB 2015			

CAPITAL PROJECT NO.
D-1124-25

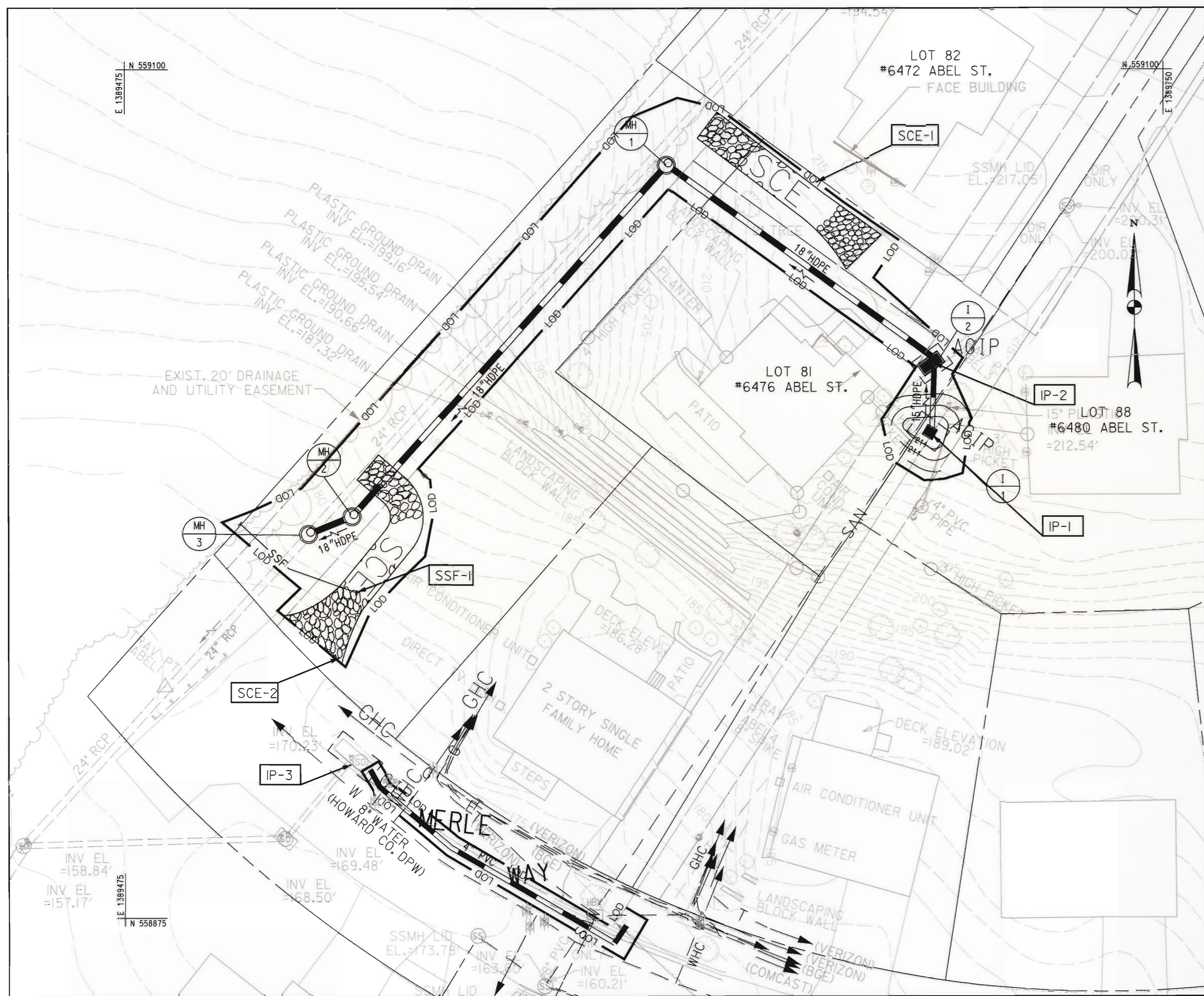
MAP NO. BLOCK NO.

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
ABEL STREET - DRAINAGE IMPROVEMENTS

ELECTION DISTRICT I
HOWARD COUNTY, MARYLAND

SCALE
1" = 20'

SHEET
4 of 5



HOWARD SOIL CONSERVATION DISTRICT STANDARD ESC PLAN & REQUIREMENTS

- A. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE EXCEPT THAT NECESSARY FOR INSTALLATION OF THE CONTROLS.
- B. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- C. ALL CLEARING AND GRADING SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:
 1. LIMIT INITIAL CLEARING AND GRUBBING FOR THE INSTALLATION OF THE CONSTRUCTION ENTRANCE, PERIMETER CONTROLS, AND ANY REMAINING CONTROLS.
 2. INSTALL STABILIZED CONSTRUCTION ENTRANCES, PERIMETER SILT FENCE, AND ANY OTHER SEDIMENT CONTROLS.
 3. CLEAR, GRUB, AND GRADE THE REMAINDER OF THE SITE AS SPECIFIED BY THE LIMITS OF DISTURBANCE SHOWN ON THE PLAN.
 4. PROVIDE TEMPORARY STABILIZATION OF ANY AREA THAT WILL NOT BE ACTIVELY GRADED WITHIN THREE (3) DAYS.
 5. CONSTRUCT ANY STRUCTURES AND UTILITIES.
 6. PROVIDE FINAL GRADING AND STABILIZATION ACCORDING TO THE SEEDING OR SODDING SPECIFICATIONS (MINIMUM STABILIZATION BY SEEDING AND MULCHING).
 7. AFTER THE SITE HAS BEEN STABILIZED WITH ADEQUATE VEGETATION, AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL PRACTICES AND STABILIZE REMAINING DISTURBED AREAS.
- D. ALL EROSION AND SEDIMENT CONTROL DEVICES REQUIRE CONTINUAL MAINTENANCE. ANY CONTROLS THAT ARE DAMAGED OR DISTURBED SHALL BE RESTORED OR REPAIRED BEFORE THE END OF EACH DAY.
- E. DEVELOPED ACTIVITIES SHALL NOT IMPAIR ANY DRAINAGE, CREATE AN EROSION HAZARD, OR CREATE A SOURCE OF SEDIMENT TO ANY ADJACENT WATERCOURSE, WETLAND, OR PROPERTY.
- F. ANY PUMPING OF WATER MUST BE FILTERED AND DONE ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- G. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS ON THE SURFACE AREAS OF ALL SEDIMENT CONTROLS, STOCKPILES, AND PERIMETER SLOPES; AND SEVEN (7) DAYS FOR ALL OTHER DISTURBED AREAS ON THE SITE NOT BEING ACTIVELY GRADED.

SITE ANALYSIS:

TOTAL AREA OF SITE:	23,387	SQUARE FEET
TOTAL AREA OF DISTURBANCE:	6,300	SQUARE FEET
TOTAL VOLUME OF EXCAVATION OR FILL:	7	CUBIC YARDS
PIPE TRENCH EXCAVATION:	197	CUBIC YARDS

SUPER SILT FENCE	
SSF-1	37 L.F.

INLET PROTECTION	
IP-1	1 EA, AGIP
IP-2	1 EA, AGIP
IP-3	1 EA, CIP

STABILIZED CONSTRUCTION ENTRANCE	
SCE-1	50 TONS
SCE-2	50 TONS

NOTE:
STOCKPILING WILL NOT BE PERMITTED ON SITE.

NOTE:
TRACKING OF SEDIMENT ONTO ROADS IS NOT PERMITTED. IF SEDIMENT IS TRACKED ONTO ROADS, IT SHOULD BE CLEARED AND HAULED OFF SITE AT THE END OF EACH WORKING DAY.

NOTE:
NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE.

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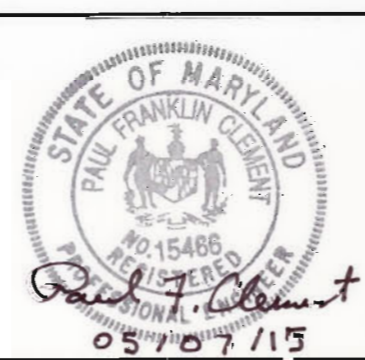
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/15/15
DIRECTOR OF PUBLIC WORKS

[Signature] 5/15/2015
CHIEF, BUREAU OF HIGHWAYS

[Signature] 5/13/15
CHIEF, BUREAU OF ENGINEERING
DEPUTY DIRECTOR OF PUBLIC WORKS

JMT
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HOWARD COUNTY, MARYLAND