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GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL TOPOGRAPHIC SURVEY PREPARED BY VIRGINIA RESOURCE MAPPING DATED MARCH 31, 2006, AND FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED APRIL 24, 2008 AND JUNE 11, 2009. BOUNDARY SURVEY WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED DECEMBER 12, 2006.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 50B5 AND 50B4 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. CONTRACT NO. 24-4669-D.
- SEWER IS PUBLIC. CONTRACT NO. 24-4669-D.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED IN A DRY POND WHICH PROVIDES CHANNEL PROTECTION VOLUME, 10 AND 100-YEAR CONTROL. WATER QUALITY IS PROVIDED IN A BIORETENTION FACILITY, GRASS CHANNEL CREDIT WITH CHECK DAMS, AND SHEET FLOW TO BUFFER WITH LEVEL SPREADERS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. 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. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- A 100-YEAR FLOODPLAIN STUDY WAS APPROVED UNDER SDP-08-118. THERE ARE NO CHANGES OR IMPACTS TO THE FLOODPLAIN PROPOSED WITH THIS PLAN.
- WETLANDS ARE FOUND ON THIS PROJECT PER FIELD VISIT AND WETLAND DELINEATION BY JOHNSON MIRMIRAN & THOMPSON DATED JUNE 2005 & MAY 2009. FLOODPLAIN, STREAMS, STREAM BUFFERS, AND STEEP SLOPES ARE ALSO LOCATED ON SITE. NO DISTURBANCE TO THE WETLANDS IS PROPOSED FOR THE PROPOSED GRADING. 0.04 ACRES OF STREAM BUFFER DISTURBANCE IS PROPOSED FOR THE PROPOSED OUTFALL TO MEET MDE, SCD, AND COUNTY REQUIREMENTS. MDE AND SCD REQUIRE THAT THE OUTFALL BE LOCATED ON A SLOPE OF LESS THAN 10%. THE LOCATION SHOWN IS THE ONLY AREA IN THE VICINITY OF THE STORMWATER MANAGEMENT FACILITY THAT IS AT A SLOPE OF LESS THAN 10% PER SECTION 16.116(c). THIS DISTURBANCE IS NECESSARY.
- A TRAFFIC STUDY WAS APPROVED FOR THIS SITE STUDY PREPARED BY TRAFFIC CONCEPTS.
- THE SUBJECT PROPERTY IS ZONED R-SC PER THE 02-02-04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING AMENDMENTS DATED JULY 28, 2006.
- ALL ELEVATIONS SHOWN ARE BASED ON NAVD 1988.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S: SDP-08-118, F-07-129, F-08-201, AND F-10-97.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION OUTLINED IN THESE PLANS.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. NO LANDSCAPE SURETY IS REQUIRED FOR THIS PLAN AS THIS IS A COUNTY PROJECT.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PRESERVING 18.66 ACRES OF ON-SITE RETENTION AND BY EXCEEDING THE BREAK-EVEN POINT OF 18.31 ACRES. NO FOREST CONSERVATION SURETY IS REQUIRED FOR THIS PROJECT AS IT IS A COUNTY PROJECT. WAIVER PETITION WP-10-133 HAS BEEN APPROVED FOR CLEARING ASSOCIATED WITH THE ELEMENTARY SCHOOL SITE COFFSET CLEARING.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES ON THE SUBJECT PROPERTY.
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN WETLANDS, STREAMS, REQUIRED BUFFERS, 100 YEAR FLOODPLAIN AND 25% OR GREATER SLOPES, EXCEPT AS PERMITTED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING AS ESSENTIAL OR NECESSARY DISTURBANCES (SEE GENERAL NOTE 13). 0.04 ACRES OF STREAM BUFFER DISTURBANCE IS NEEDED FOR THE PROPOSED OUTFALL TO MEET MDE, SCD, AND COUNTY REQUIREMENTS.
- FOR AREAS WHICH WILL NOT BE DISTURBED AGAIN IN THE SHORT TERM, PERMANENT GRASS SEED MIXTURES SHALL BE UTILIZED PER SPECIFICATION AND THE NOTES ON SHEET 5.
- ALL TOPSOIL SHALL BE STOCKPILED AND STORED ON SITE. TOPSOIL SHALL BE SCREENED ON SITE.
- CONTRACTOR SHALL PROVIDE A BALANCED SITE. IF THE SITE CANNOT BE BALANCED, THE CONTRACTOR SHALL BE PERMITTED TO USE THE SCHOOL BALLFIELD AREA FOR CUT OR FILL TO BALANCE THE SITE.
- A WAIVER WAS APPROVED ON MARCH 18, 2010 FOR THE SWM LAG TIME REQUIREMENT AND MEASURED IMPERVIOUS AREA VS ZONING REQUIREMENT.
- THIS PROJECT MEETS ALL FIVE CRITERIA LISTED IN SECTION 128.A.10 OF THE HOWARD COUNTY ZONING REGULATIONS WHICH ALLOWS TWO OR MORE CONTIGUOUS LOTS OR PARCELS TO BE TREATED AS A SINGLE PARCEL FOR DEVELOPMENT PURPOSES. SETBACKS FROM INTERNAL LOT LINES ARE NOT APPLICABLE.

SITE DEVELOPMENT PLAN

NORTH LAUREL PARK

WEST SIDE AMENITIES

CAPITAL PROJECT C-0304

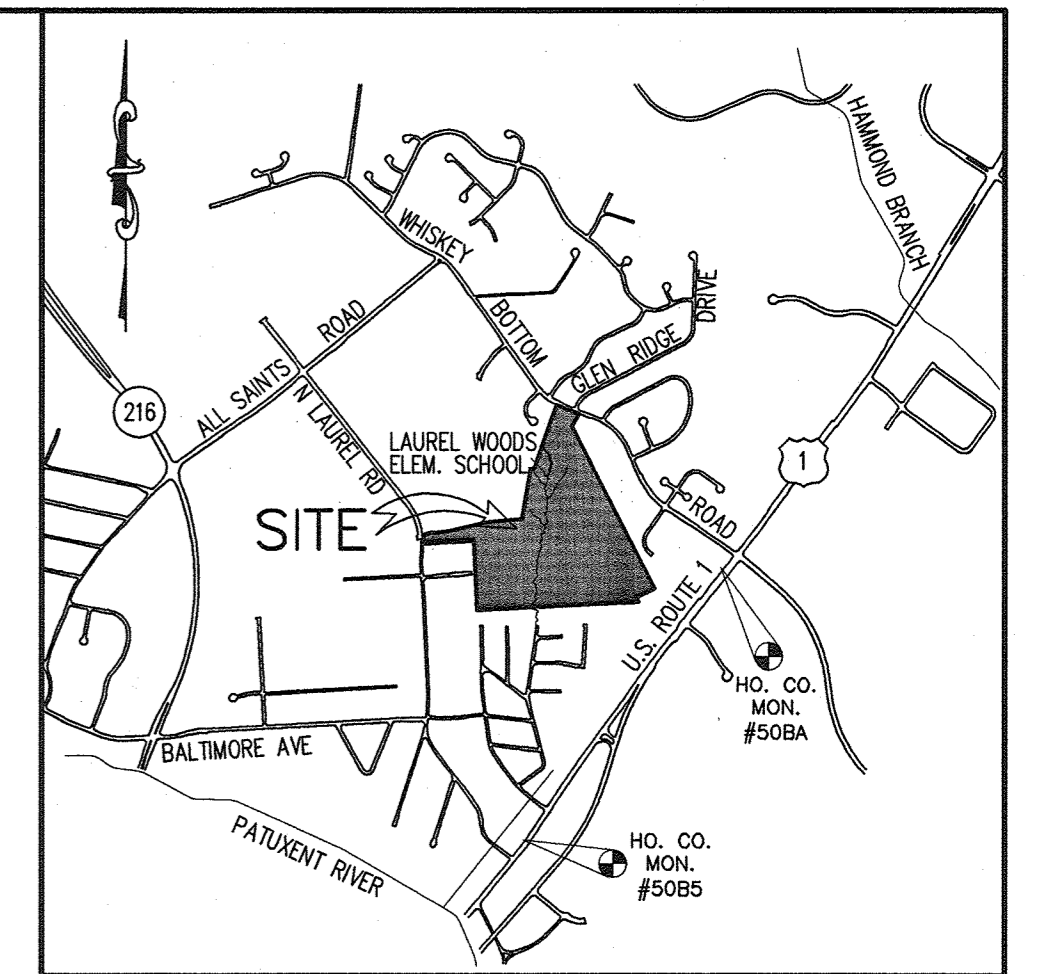
PLANS PREPARED FOR

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

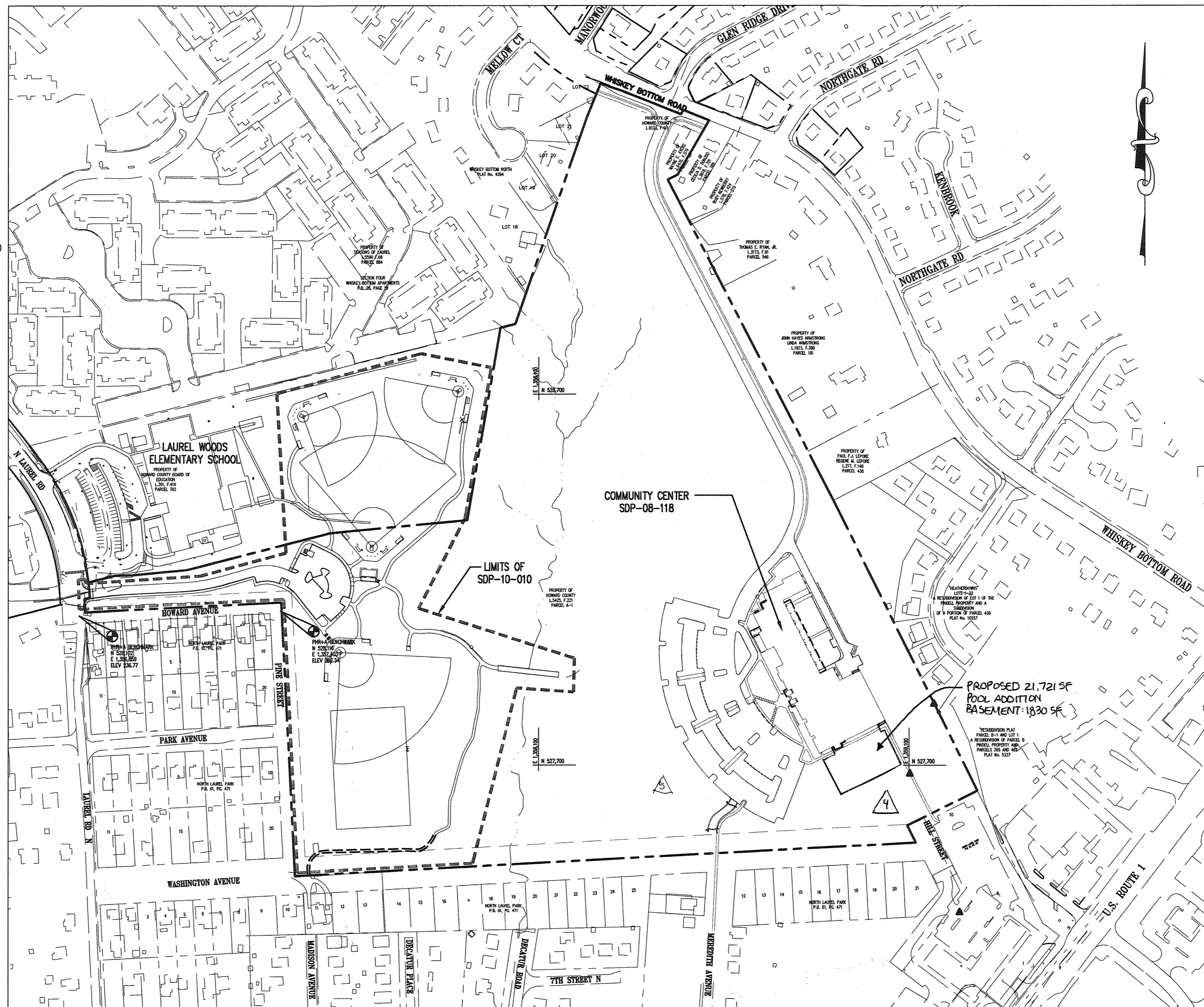
HOWARD COUNTY, MARYLAND

BENCHMARKS
 HOWARD COUNTY SURVEY CONTROL: 50BA
 ELEVATION 248.625'
 N 527,567.677 E 1,359,772.604
 LOCATION IS ±180' SOUTH OF WHISKEY
 BOTTOM ROAD ALONG SOUTH BOUND US
 ROUTE 1.

HOWARD COUNTY SURVEY CONTROL: 50B5
 ELEVATION 177.385'
 N 524,999.374 E 1,357,925.748
 LOCATION IS ±150' NORTH OF N LAUREL
 ROAD ALONG SOUTH BOUND US ROUTE 1.



VICINITY MAP
 SCALE: 1" = 200'
 COPYRIGHT ADC THE MAP PEOPLE, PERMITTED USE
 NO. 2071188
 HOWARD COUNTY ADC MAP 5169 GRIDS F2 & G2



LOCATION PLAN
 1" = 200'

SITE DATA ANALYSIS CHART

TOTAL PROJECT AREA:	49.655 AC ±	△
	(2,141,215 SF ±)	
AREA OF PLAN SUBMISSION:	15.32 AC (667,436 SF)	
LIMIT OF DISTURBED AREA:	15.32 AC (667,436 SF)	
LOD F OF THE POOL EXPANSION:	577,458 SF (1.32 ACRES) △	
PRESENT ZONING:	R-SC	
EXISTING USES:	VACANT LOT	
PROPOSED USES:	BALL FIELDS	
PARKING REQUIRED:	30 SPACES/FIELD*	
TOTAL PARKING PROVIDED FOR PARK:	61 SPACES PROVIDED**	
TOTAL HC PARKING PROVIDED FOR PARK:	3 SPACES	

*BASED ON SIMILAR HOWARD COUNTY PARK SITES.
 **61 SPACES ARE PROVIDED ON SITE. IN ADDITION, APPROXIMATELY 67 SPACES ARE PROVIDED AT LAUREL WOODS ELEMENTARY SCHOOL.

△ SEE SDP-08-118 FOR PARKING ANALYSIS FOR THE PROPOSED POOL ADDITION.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas J. Butler 12/3/10
 DIRECTOR DATE

John P. ... 11/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

... 12/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

3/18/20 5 PAPPED DRAWING FOR GRADING EGRESS TO
 11/12/14 4 POOL ADDITION PLAN AND EXPANSION AND AMENDED
 FOREST CONSERVATION EGRESS PLAN
 DATE NO. REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE SHEET

Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY : JSN
 DRAWN BY: JSN
 PROJECT NO : C400SDP01.DWG
 DATE : SEPTEMBER 7, 2010
 SCALE : 1" = 200'
 DRAWING NO. 1 OF 43

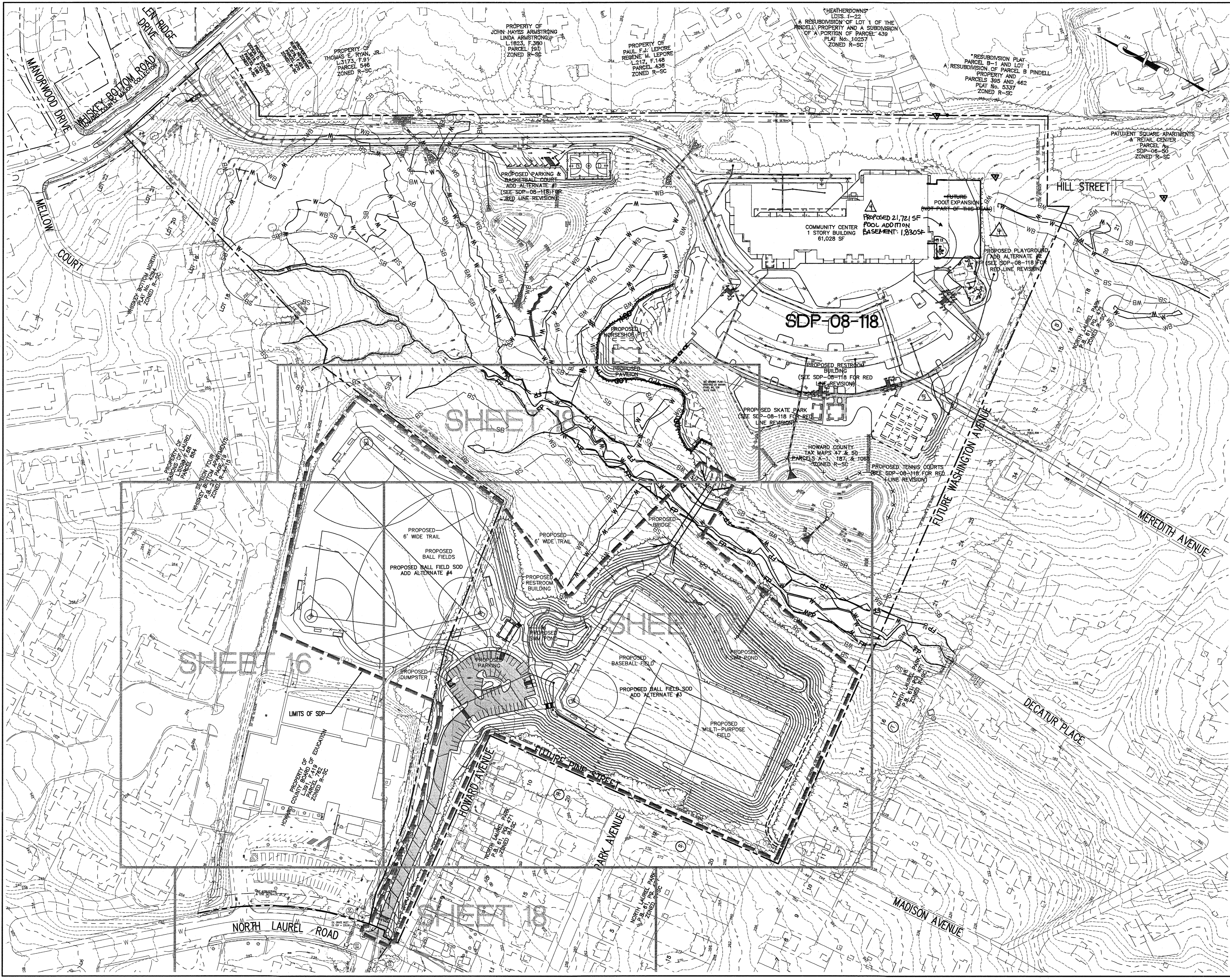
PERMIT INFORMATION CHART

PARCEL NUMBER	STREET ADDRESS
A-1	9260 NORTH LAUREL ROAD

- THE SUBJECT PROPERTY IS ZONED R-SC PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT HAS ESSENTIAL AND NECESSARY DISTURBANCES TO ENVIRONMENTALLY SENSITIVE FEATURES OR BUFFERS PER SECTION 16.116(c) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. THE DISTURBANCE IS NECESSARY IN ORDER TO PROVIDE AN OUTFALL ONTO AN EXISTING SLOPE OF LESS THAN 10 PERCENT IN ACCORDANCE WITH MDE AND SCD REQUIREMENTS. THERE ARE NO AREAS OUTSIDE OF THE STREAM BUFFER WHICH ARE LESS THAN 10 PERCENT.
- WAIVER PETITION WP-10-133 WAS APPROVED ON MAY 3, 2010 TO ALLOW OFF SITE FOREST CLEARING OF 0.07 ACRES (3,114 SF) ON THE NEIGHBORING LAUREL WOODS ELEMENTARY SCHOOL SITE (PARCEL 762) BASED ON SECTION 16.1202.b.1.3. OF THE HOWARD COUNTY ZONING REGULATIONS.
- A FOREST STAND DELINEATION WAS SUBMITTED FOR THIS PROPERTY UNDER SDP-08-118.
- Stormwater Management Administration & Waiver: Stormwater management is provided in accordance with the 2006 Maryland Stormwater Design Manual. It was determined that this project met the criteria outlined in the MDS Guidelines for implementation to acceptance of the 2006 Design Criteria and granted a waiver. This plan (SDP-10-010) received technical complete approval for SWM on 5/14/10. A grading permit shall be approved prior to May 4, 2010. This plan is also subject to the expiration of this waiver unless all stormwater management is constructed by May 4, 2011. Conditions of Approval:
- NO SUM FOR POOL AREA IS PROVIDED WITH THE REDLINE OF SDP-08-118. SIMPLIFIED FOR THE POOL ADDITION WAS APPROVED ON OCTOBER 24, 2010.
- THE 0.19 ACRES OF FOREST CONSERVATION BEING REMOVED WITH REVISION #4 IS BEING MITIGATED BY THE FOREST BANK AT THE PRESERVE AT CLARKSVILLE F-06-072.
- SEE SDP-08-118 FOR ALL PLANS & SPECIFICATIONS RELATED TO THE POOL ADDITION AND EMERGENCY ACCESS.
- CON: This site requires additional SWM in the form of 10 and 100 year management.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

SUBDIVISION NAME	SECT./AREA	PARCEL
NORTH LAUREL PARK	WEST SIDE AMENITIES	187, A-1, & 1065
PLAT NO. 21398-21402	TAX MAP NO.	ELECT. DIST. CENSUS TRACT
F-10-97	22 & 3/4 R-SC	47 & 50 6 606903



LEGEND

EXISTING 2' CONTOUR	---	302
EXISTING 10' CONTOUR	---	300
PROPOSED 2' CONTOUR	---	302
PROPOSED 10' CONTOUR	---	300
PROPERTY LINE AND RIGHT OF WAY	---	
FLOODPLAIN	FP	
EX. TREELINE	---	
LIMIT OF CLEARING	---	
LIMIT OF DISTURBANCE	L.O.D.	
PROPOSED LIGHT POLE	⊙	
EX. FIRE HYDRANT	⊕	
PROP. FIRE HYDRANT	⊕	
WETLANDS	W	
WETLAND BUFFER	WB	
STREAM BUFFER	SB	
LIMITS OF SDP	---	

NOTE: SEE SDP-08-118 FOR DETAILED DESIGN OF EMERGENCY ACCESS.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas G. Butler 12/13/10
DIRECTOR DATE

John D. ... 11/18/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

3/10/10 5 ADDED DRIVEWAY FOR EMERGENCY EGRESS TO THE SHORTEST AVENUE
11/12/10 4 ADDED POOL ADDITION, PLAYGROUND EXPANSION AND AMENDED FOREST CONSERVATION EASEMENTS

DATE	NO.	REVISION
	4	

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
REVISED
OVERALL SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL 9-11-10

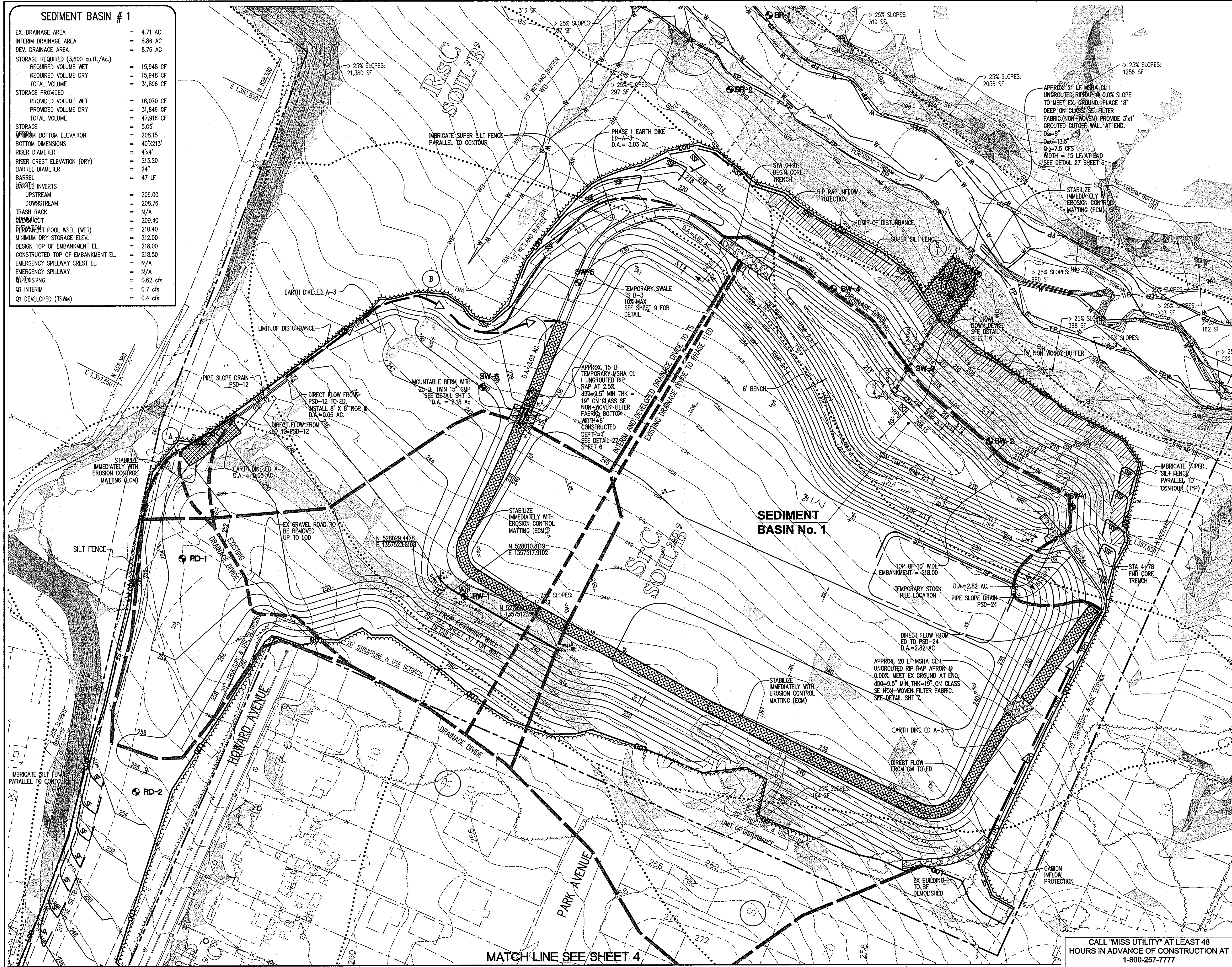
DESIGNED BY : JSN
DRAWN BY : JSN
PROJECT NO : 14468-1-2
C400SDP02.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 100'
DRAWING NO. 2 OF 43

By: *Shawn ...*
PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33854, EXPIRATION DATE 09-24-11

SEDIMENT BASIN # 1

EX. DRAINAGE AREA	= 4.71 AC
INTERIM DRAINAGE AREA	= 8.86 AC
DEV. DRAINAGE AREA	= 8.76 AC
STORAGE REQUIRED (3,600 cu.ft./Ac.)	= 15,948 CF
REQUIRED VOLUME WET	= 15,948 CF
REQUIRED VOLUME DRY	= 15,948 CF
TOTAL VOLUME	= 31,896 CF
STORAGE PROVIDED	= 16,070 CF
PROVIDED VOLUME WET	= 31,846 CF
PROVIDED VOLUME DRY	= 47,916 CF
TOTAL VOLUME	= 5.05'
STORAGE	= 208.15
MINIMUM BOTTOM ELEVATION	= 40'x213'
BOTTOM DIMENSIONS	= 4'x4'
RISER DIAMETER	= 213.20
RISER CREST ELEVATION (DRY)	= 24"
BARREL DIAMETER	= 47 LF
BARREL INVERTS	= 209.00
UPSTREAM	= 208.76
DOWNSTREAM	= N/A
TRASH RACK	= 209.40
ORIFICE	= 210.40
PERMANENT POOL WSEL (WET)	= 212.00
MINIMUM DRY STORAGE ELEV.	= 218.00
DESIGN TOP OF EMBANKMENT EL.	= 218.50
CONSTRUCTED TOP OF EMBANKMENT EL.	= N/A
EMERGENCY SPILLWAY CREST EL.	= N/A
EMERGENCY SPILLWAY	= 0.62 cfs
EXISTING	= 0.7 cfs
Q1 INTERIM	= 0.4 cfs
Q1 DEVELOPED (TSWM)	

NOTE: SEE SHEET 4 FOR LEGEND, AND SHEETS 6-7, AND 9 FOR SEDIMENT CONTROL DETAILS



BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: *[Signature]* DATE: 9-21-10

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER: *[Signature]* DATE: 9-21-10

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT: *[Signature]* DATE: 11/10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: *[Signature]* DATE: 12/13/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 11/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 12/10/10

DATE	NO.	REVISION
OWNER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414		
DEVELOPER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414		
PROJECT		
NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK		
AREA		
TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE		
MASS GRADING & SEDIMENT CONTROL PLAN PHASE I		
Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282		

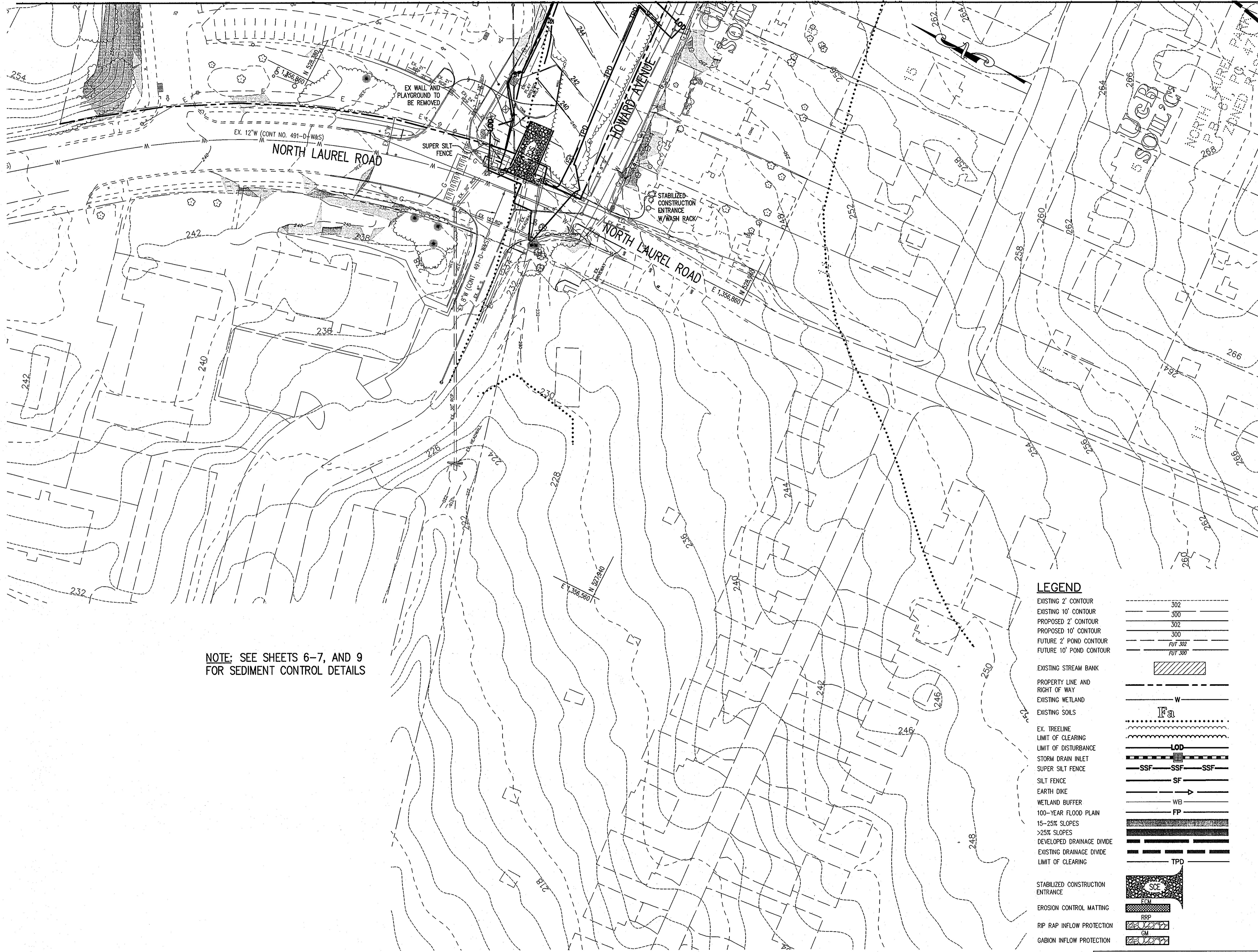
SEAL: *[Professional Seal]* 9-21-10

DESIGNED BY: SCM
 DRAWN BY: JSN
 PROJECT NO: 14466-1-2
 C:\400SDP03.DWG
 DATE: SEPTEMBER 7, 2010
 SCALE: 1" = 40'
 DRAWING NO. 3 OF 43

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

MATCH LINE SEE SHEET 4

MATCH LINE SEE SHEET 3



NOTE: SEE SHEETS 6-7, AND 9 FOR SEDIMENT CONTROL DETAILS

LEGEND

- EXISTING 2' CONTOUR 302
- EXISTING 10' CONTOUR 300
- PROPOSED 2' CONTOUR 302
- PROPOSED 10' CONTOUR 300
- FUTURE 2' POND CONTOUR FUT 302
- FUTURE 10' POND CONTOUR FUT 300
- EXISTING STREAM BANK
- PROPERTY LINE AND RIGHT OF WAY W
- EXISTING WETLAND
- EXISTING SOILS
- EX. TREELINE
- LIMIT OF CLEARING
- LIMIT OF DISTURBANCE
- STORM DRAIN INLET
- SUPER SILT FENCE
- SILT FENCE
- EARTH OKE
- WETLAND BUFFER
- 100-YEAR FLOOD PLAIN
- 15-25% SLOPES
- >25% SLOPES
- DEVELOPED DRAINAGE DIVIDE
- EXISTING DRAINAGE DIVIDE
- LIMIT OF CLEARING
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING
- RIP RAP INFLOW PROTECTION
- GABION INFLOW PROTECTION

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

 ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

 DIRECTOR DATE

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA
 TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
MASS GRADING & SEDIMENT CONTROL PLAN PHASE I
Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

SEAL

 DESIGNED BY : JSN
 DRAWN BY : JSN
 PROJECT NO : 14466-1-2
 C400SDP04.DWG
 DATE : SEPTEMBER 7, 2010
 SCALE : 1" = 40'
 DRAWING NO. 4 OF 43

Project 14466-1-2 PLANS C-00SDP04.DWG

STANDARD SEDIMENT CONTROL NOTES

- 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 (313-1885).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THE PERMIT AND IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G), TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 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.
- SITE ANALYSIS:

TOTAL AREA OF SITE	52.17 ACRES
AREA DISTURBED	15.44 ACRES
AREA TO BE PAVED	1.20 ACRES
AREA TO BE VEGETATIVELY STABILIZED	14.24 ACRES
TOTAL CUT	43,300 CU. YARDS
TOTAL FILL	43,300 CU. YARDS

 OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING 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.
- 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OF WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 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 UNLOADING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. WHERE AREAS WILL NOT BE REDISTURBED AGAIN IN THE SHORT TERM, USE PERMANENT SEEDING AS NOTED BELOW.

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.).

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 1-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS. PER 1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 10 LBS. PER ACRE OF FOXTAIL MILLET. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS. PER 1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH FOLLOWING MIXTURE: 100% TALL TURF TYPE FESCUE (3 WAY BLEND) AT 6 LBS./1,000 SF. ALL SEED VARIETIES MUST BE SELECTED FROM LIST OF RECOMMENDED CULTIVARS OF TURF-TYPE TALL FESCUES AS INDICATED BY THE UNIVERSITY OF MARYLAND AGRONOMY MIMED 77 (REVISED MAY 1995) OR MOST CURRENT EDITION. SEED MIX SHALL CONSIST OF A THREE-WAY BLEND (34%, 33%, AND 33%) OF TURF-TYPE TALL FESCUES FROM ABOVE UNIVERSITY OF MARYLAND LIST OR RECOMMENDED CULTIVARS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS:

- 2 TONS PER ACRE OF WELL-ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.
- USE SOD.
- SEED AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
 PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
 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.

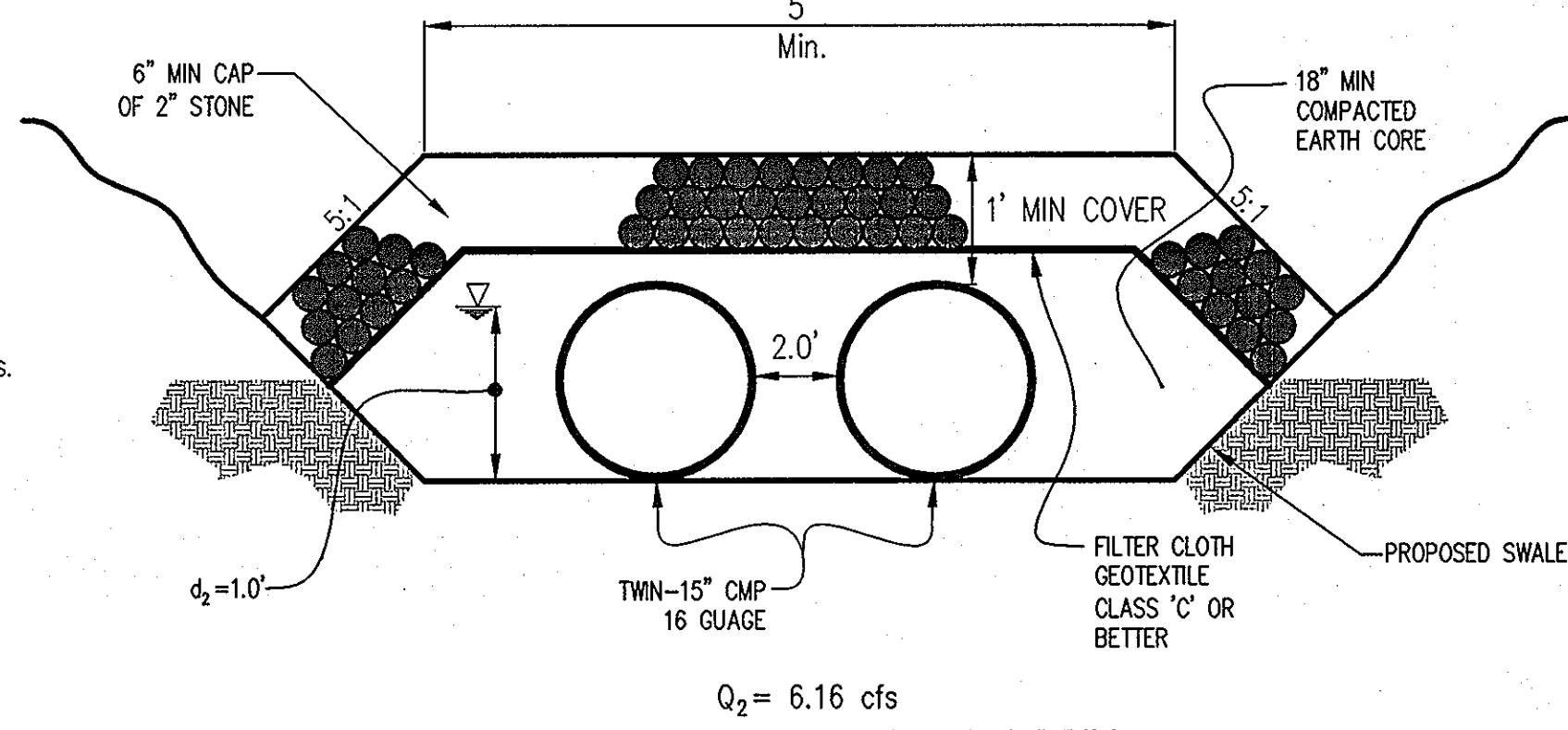
CONDITIONS WHERE PRACTICE APPLIES
 I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 --a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 --b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT 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.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS
 I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT 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-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTATION STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 --I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING AND SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CIMERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1-1/2" IN DIAMETER.
 --II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 --III. WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES:
 III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 --I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 --I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 --a. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 --b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 --c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 --d. NO SOD OR SEED SHALL 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.
 NOTE: TOPSOIL SUBSTITUTES TO 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.
 --II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 V. TOPSOIL APPLICATION
 --I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 --II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
 --III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 --IV. TOPSOIL SHALL NOT BE PLACED WHILE 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.
 VI. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 --I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 --a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 --b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 --c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 --d. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE. REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SOODING, MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

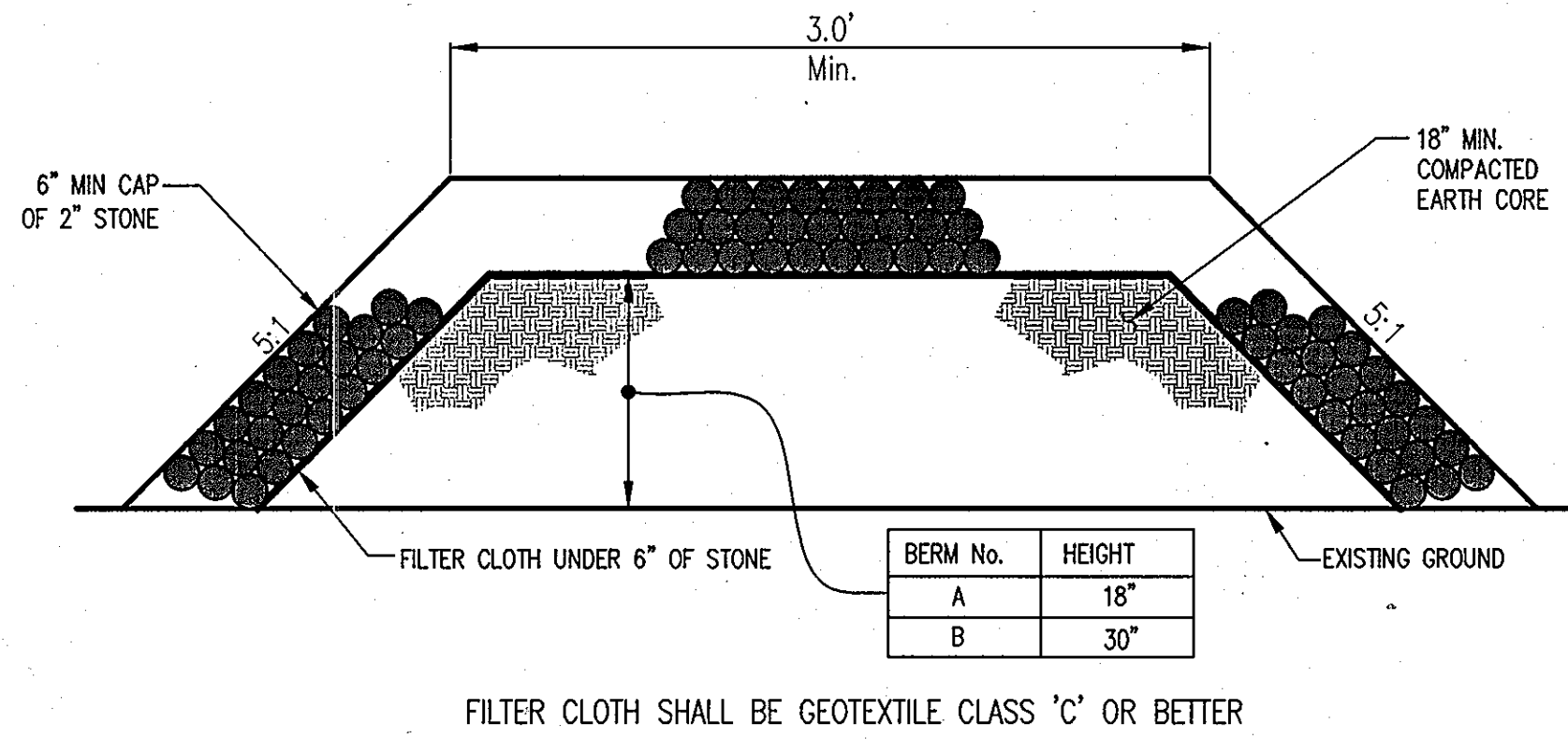
ALL TOPSOIL TO BE STOCKPILED AND STORED ON SITE!



TEMPORARY SWALE CROSSING W/MOUNTABLE BERM
 (NOT TO SCALE)

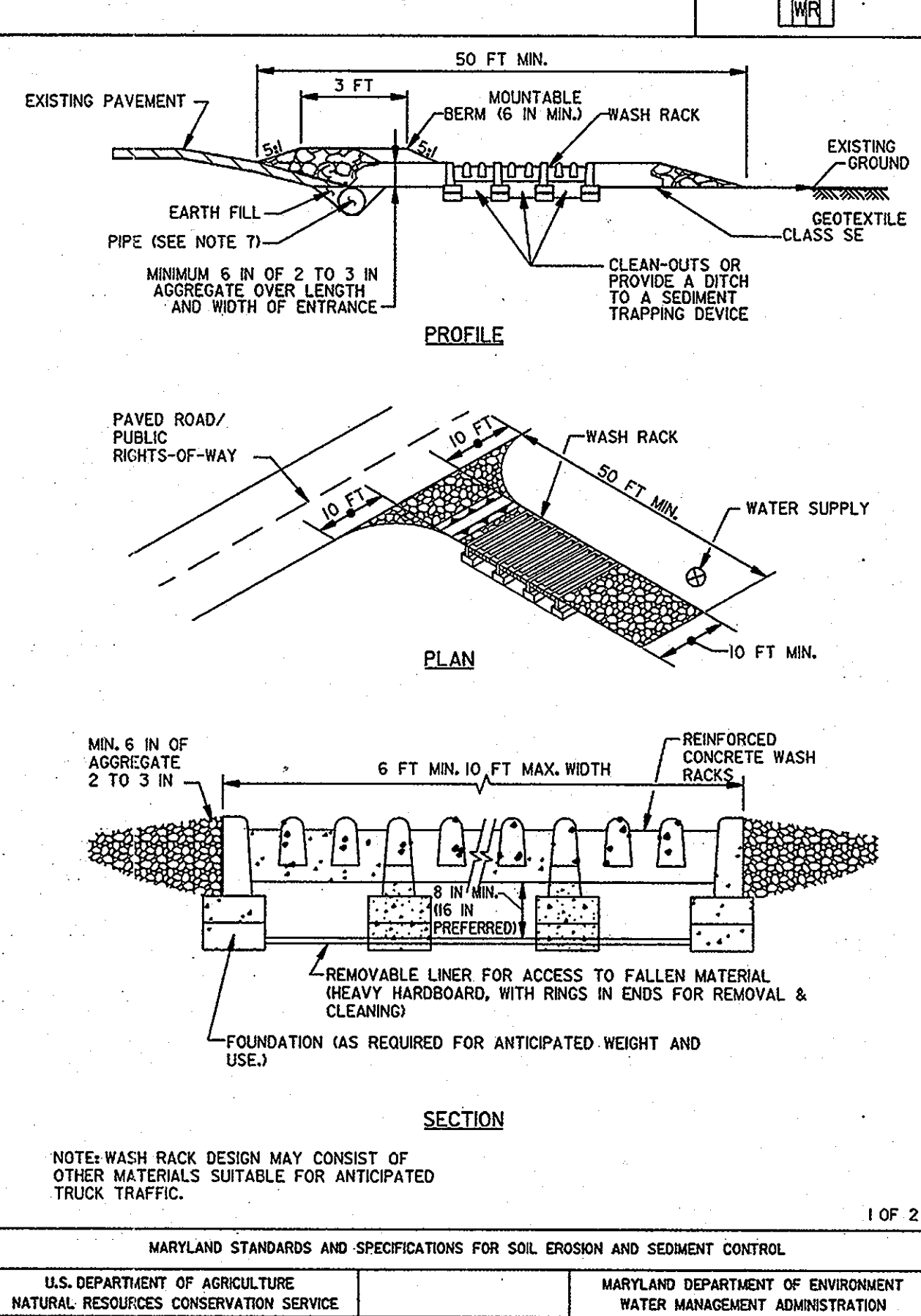
OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER PONDS (P-1 THROUGH P-5)

- ROUTINE MAINTENANCE:**
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
 - TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.
 - DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIPRAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE:**
- STRUCTURAL COMPONENTS OF THE UPON THE DETECTION OF ANY MAINTENANCE OPERATIONS.
 - SEDIMENT SHALL BE REMOVED FROM THE POND, AND FOREBAY, NO LATER THAN WHEN THE CAPACITY OF THE POND, OR FOREBAY, IS HALF FULL OF SEDIMENT, OR, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.



MOUNTABLE BERM
 (NOT TO SCALE)

DETAIL B-2 WASH RACK OPTION



WASH RACK DETAIL

SEQUENCE OF CONSTRUCTION

- PHASE 1**
- OBTAIN GRADING PERMIT AND ALL REQUIRED PERMITS. SCHEDULE AND ATTEND THE PRECONSTRUCTION MEETING. (1 DAY)
 - CLEAR AND GRUB FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH WASH RACK AT NORTH LAUREL ROAD. INSTALL SILT FENCE AROUND SCE. INSTALL CURB INLET PROTECTION ON EXISTING INLET. (1 DAY)
 - ALL BASIN STRUCTURES, PIPE AND MATERIALS MUST BE ON-SITE PRIOR TO PROCEEDING WITH STEP 3. OBTAIN PERMISSION FROM INSPECTOR AND BEGIN BASIN NO. 1 CONSTRUCTION. FOLLOW MD-378 SPECIFICATIONS ON SHEET 9.
 - INSTALL SUPER SILT FENCE ALONG DOWNSTREAM TOE OF EMBANKMENT. OBTAIN PERMISSION FROM INSPECTOR BEFORE PROCEEDING. (1 DAY)
 - CLEAR POND AREA AND STRIP TOPSOIL FOR POND AREA AND STOCKPILE OUTSIDE OF THE EMBANKMENT AREA. (2 DAYS)
 - GRADE A SMALL AREA TO BOTTOM ELEVATION OF 210.0 AND INSTALL REMOVABLE PUMPING STATION TO BE USED TO DEWATER THE WORK AREA DURING CONSTRUCTION. DIRECT FLOWS TO PUMPING STATION SUCH THAT WATER MAY BE PUMPED TO DEWATER THE WORK AREA. (1 DAY)
 - CONSTRUCT THE CUT-OFF TRENCH, OUTOFF AND CORE TRENCH BACKFILL MATERIAL IS TO MEET THE PROVISIONS OF MD-378 CRITERIA AS SUPERVISED BY THE GEOTECHNICAL ENGINEER. (2 DAYS)
 - CONSTRUCT RIP RAP OUTFALL, BARREL, CONCRETE CRADLE, ANTI-SLEEP COLLAR, AND RISER STRUCTURE. CONCRETE COLLARS ARE TO BE CAST IN-PLACE. INSTALL TRASH RACK. ALL INSTALLATION IS TO BE OBSERVED BY PHRA ENGINEER. (3 DAYS)
 - CONSTRUCT EMBANKMENT IN 8" LIFTS, USING 4" LIFTS WITHIN 5 FEET HORIZONTALLY OF BARREL OR RISER. CONSTRUCT CORE. (4 DAYS)
 - GRADE CHECK AND PERMANENTLY STABILIZE EMBANKMENT. (1 DAY)
 - INSTALL TEMPORARY DRAINAGE DEVICE. (1 DAY)
 - EXCAVATE SEDIMENT BASIN STORAGE AREA AS SHOWN ON SEDIMENT CONTROL PLAN SHEET 7. (3 DAYS)
 - UPON COMPLETION OF POND, STABILIZE WITH TEMPORARY SEEDING. (1 DAY)
 - OBTAIN PERMISSION FROM INSPECTOR BEFORE PROCEEDING FURTHER. (1 DAY)
 - INSTALL REMAINING PERIMETER CONTROLS AND EARTH DIKES AND PIPE SLOPE DRAINS WHICH CONVEY RUNOFF TO BASIN. (1 WEEK)
 - OBTAIN PERMISSION FROM INSPECTOR. BEGIN CLEARING AND GRADING. FOLLOW DUST CONTROL PRACTICES PER MDE DETAIL H-30-1 (SEE SHEET 6) THROUGHOUT THE GRADING AND CONSTRUCTION ACTIVITY ON THE SITE. (1 MONTH)
 - IMMEDIATELY STABILIZE SWALES WITH EROSION CONTROL MATTING. (1 DAY)
 - AS GRADING PROGRESSES REMOVE PHASE 1 EARTH DIKE AND INSTALL TEMPORARY SWALE. (2 DAYS)
 - UPON COMPLETION OF ALL CONSTRUCTION AND STABILIZATION OF ALL GRASSED AREAS WITH PERMANENT SEEDING, STABILIZE ANY REMAINING AREAS. (3 DAYS)
 - OBTAIN WRITTEN PERMISSION FROM SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING FURTHER. (1 DAY)
 - PROCEED WITH PHASE 2 PLAN ON SHEETS 23, 24, AND 25. SEE SHEET 23 FOR PHASE 2 SEQUENCE OF CONSTRUCTION.

HOWARD SOIL CONSERVATION DISTRICT OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SOCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Sheryl C. Pridemore 9-21-10
 ENGINEER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Sheryl C. Pridemore 9-21-10
 ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Sheryl C. Pridemore 11/1/10
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mona E. Buttle 12/3/10
 DIRECTOR DATE

John W. Wynn 11/10/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kurt Schuchman 12/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

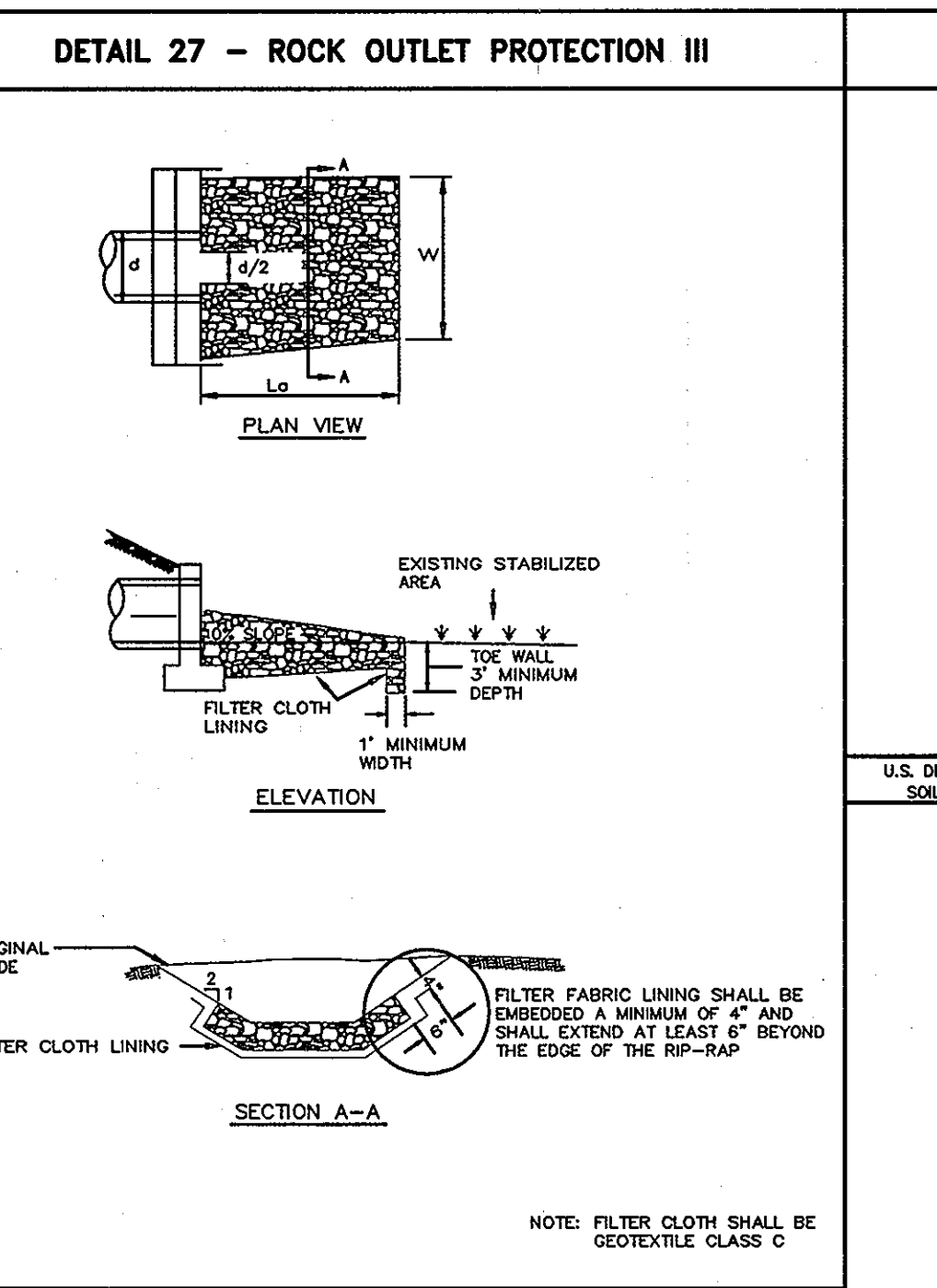
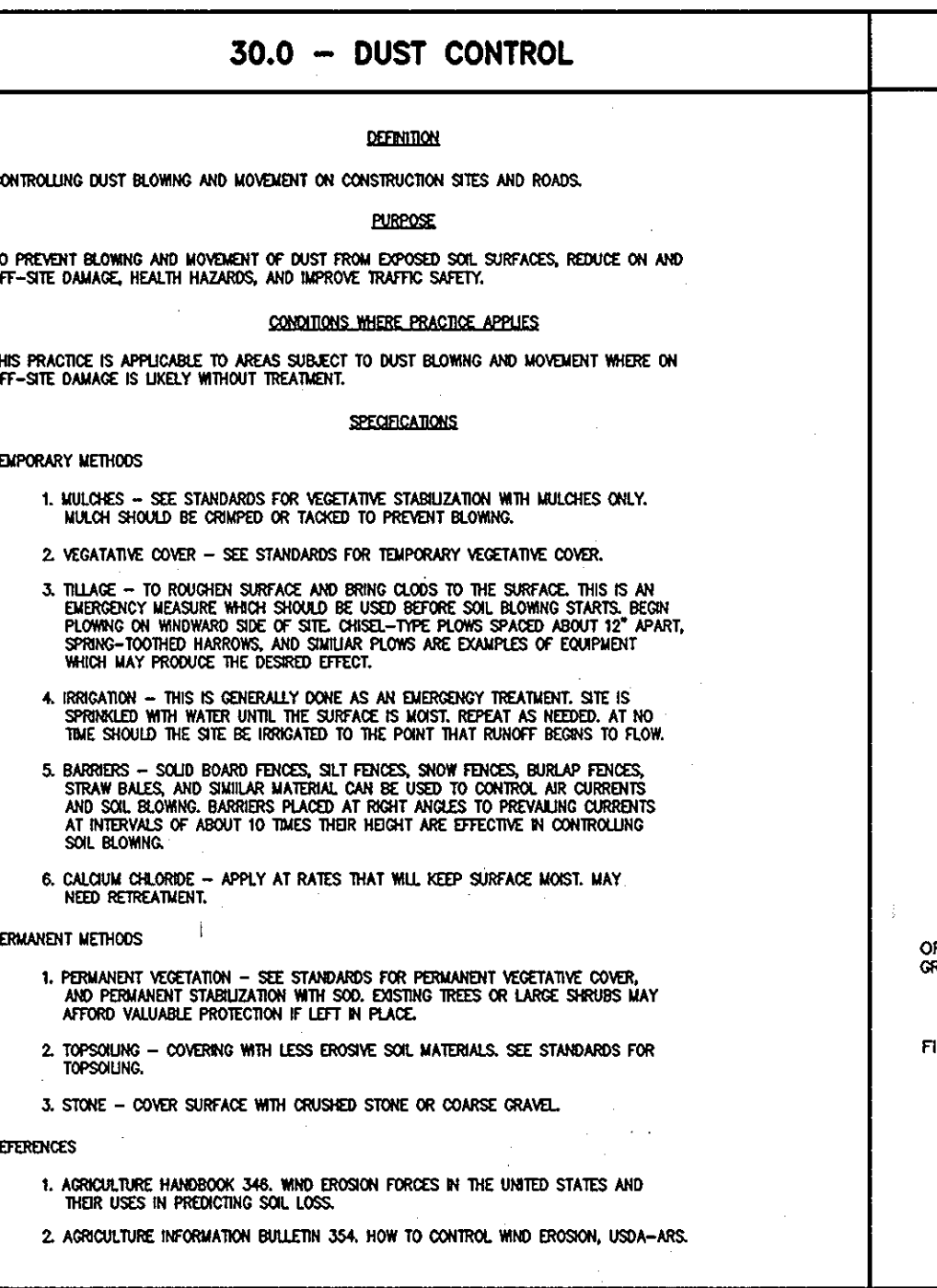
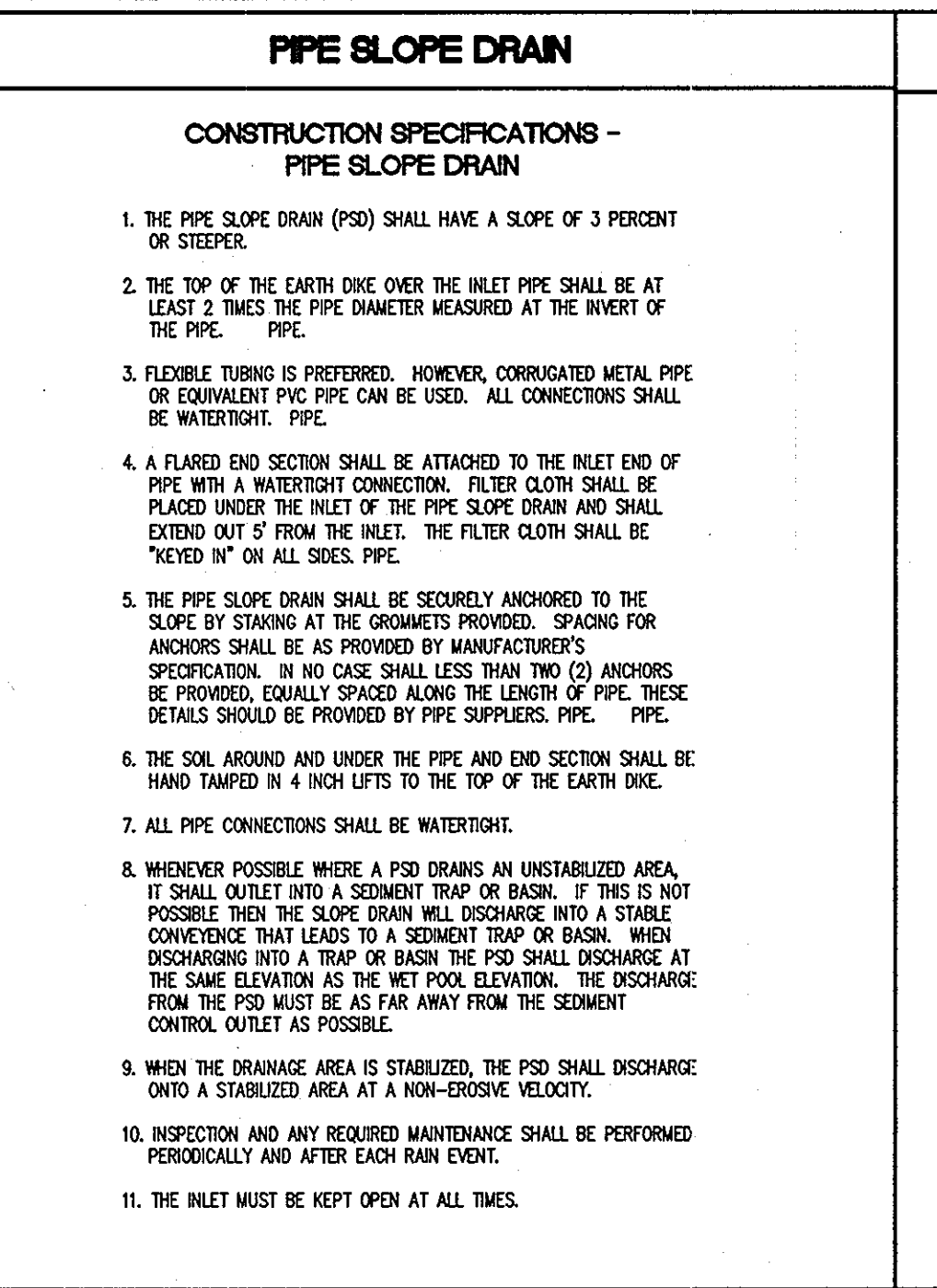
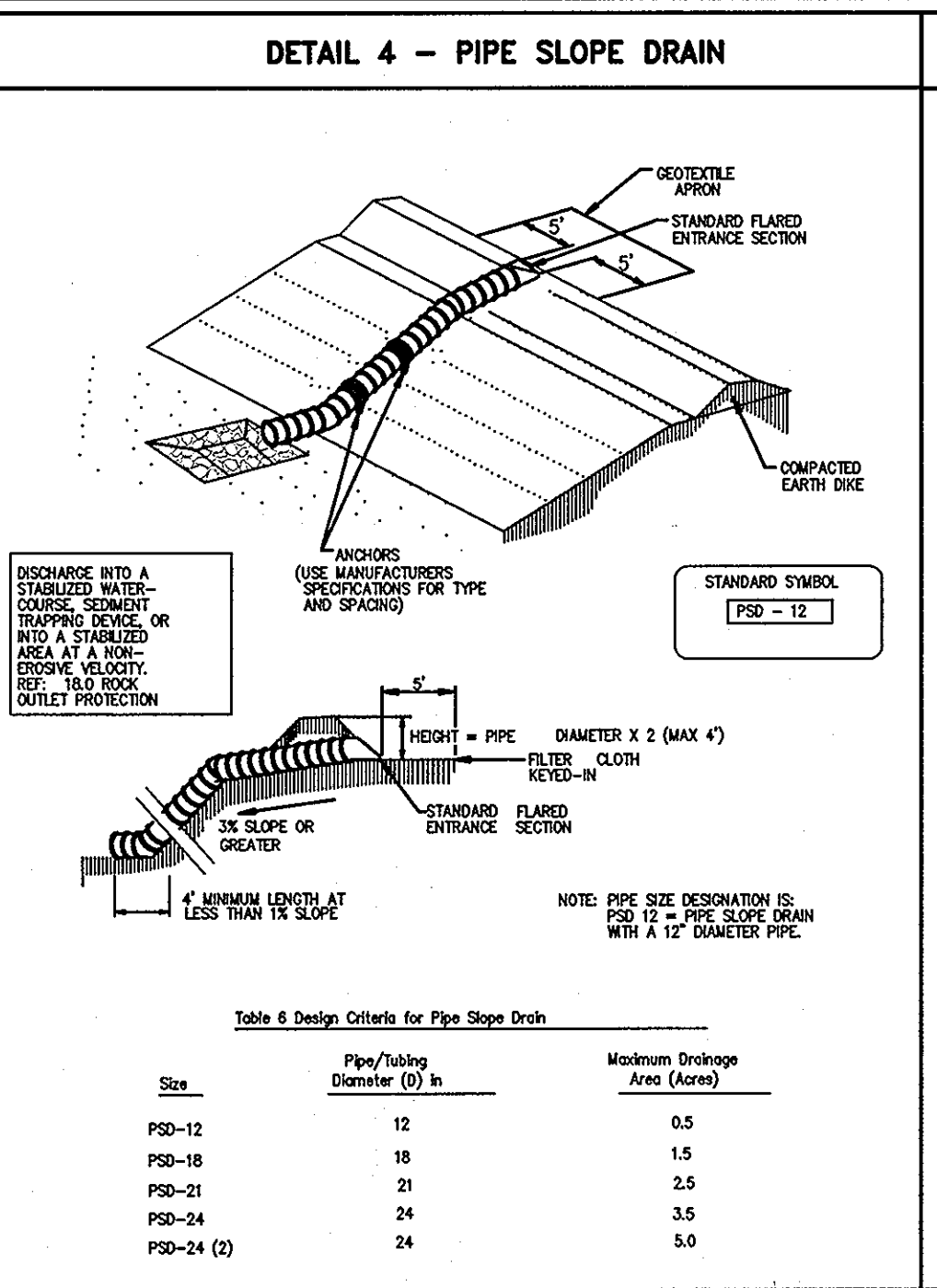
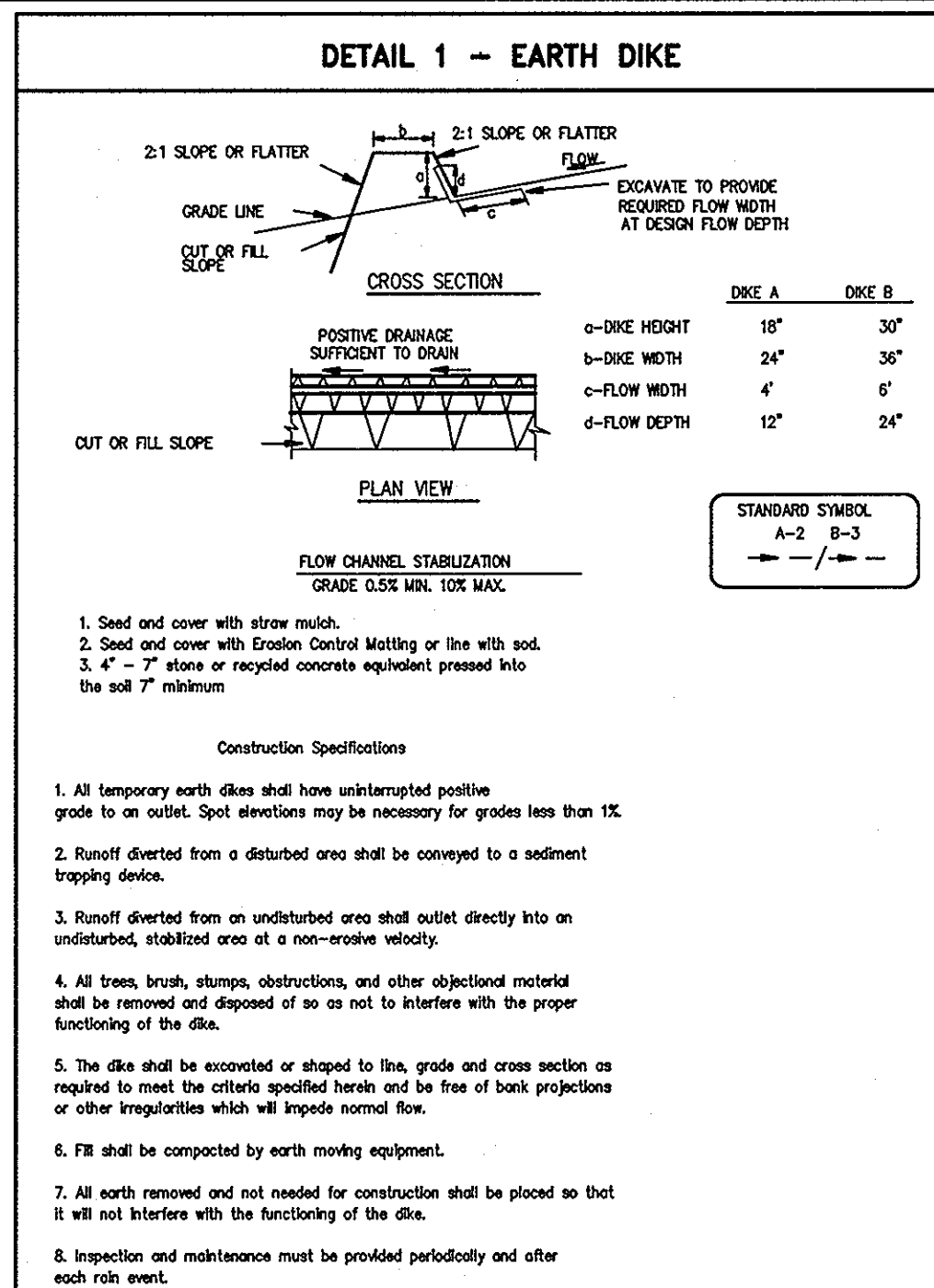
PROJECT
 NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE SEDIMENT CONTROL NOTES AND DETAILS

Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY : SCM
DRAWN BY : SGM
PROJECT NO : 14466-1-2
FILE NO : C400SDP05.DWG
DATE : SEPTEMBER 7, 2010
SCALE : AS SHOWN
DRAWING NO. : 5 OF 43



ROCK OUTLET PROTECTION III

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER _____ DATE _____

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

_____ 9-21-10
ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

_____ 11/1/10
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

_____ 12/3/10
DIRECTOR DATE

_____ 11/18/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

_____ 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045, P 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045, P 410 313 2414

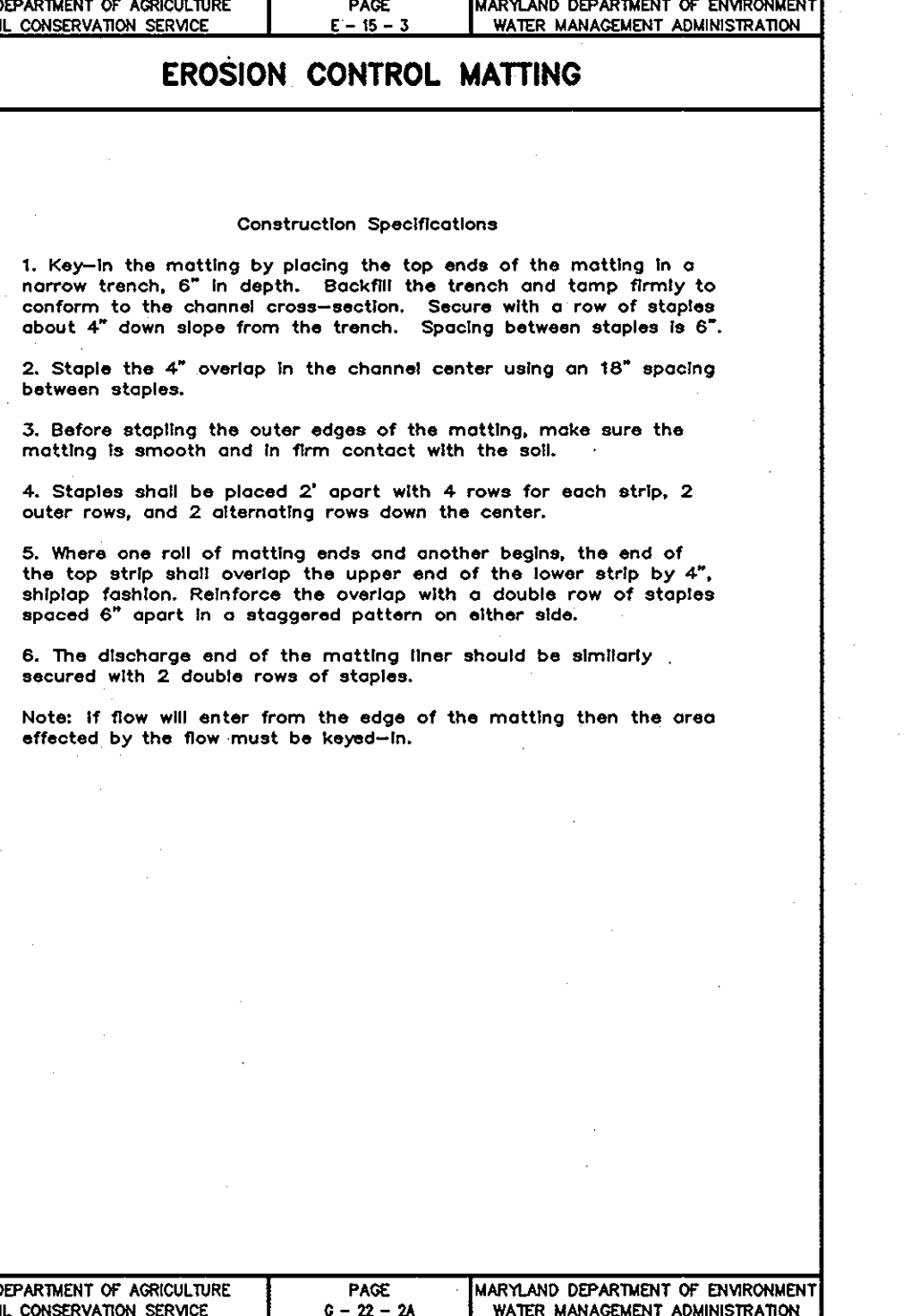
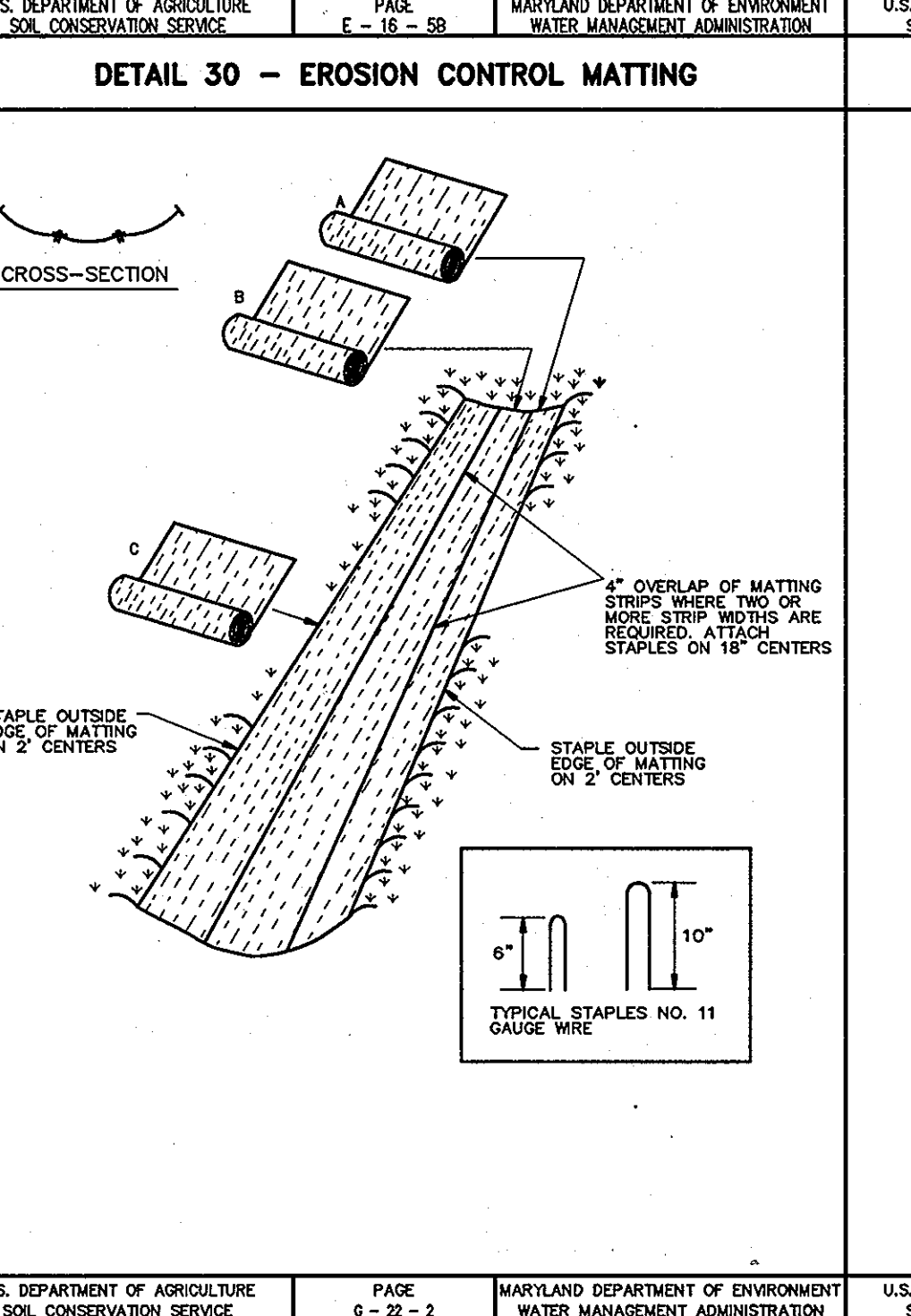
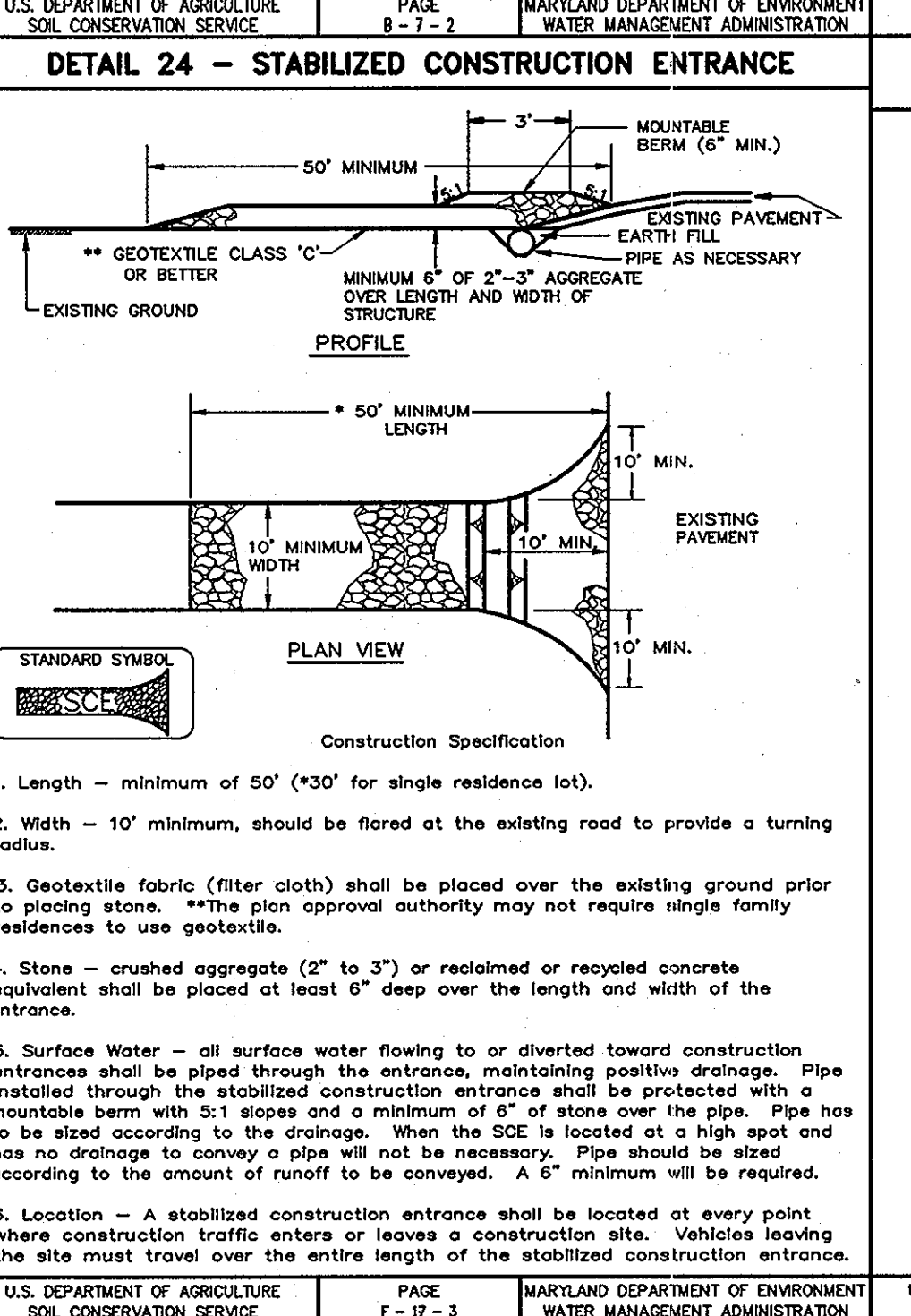
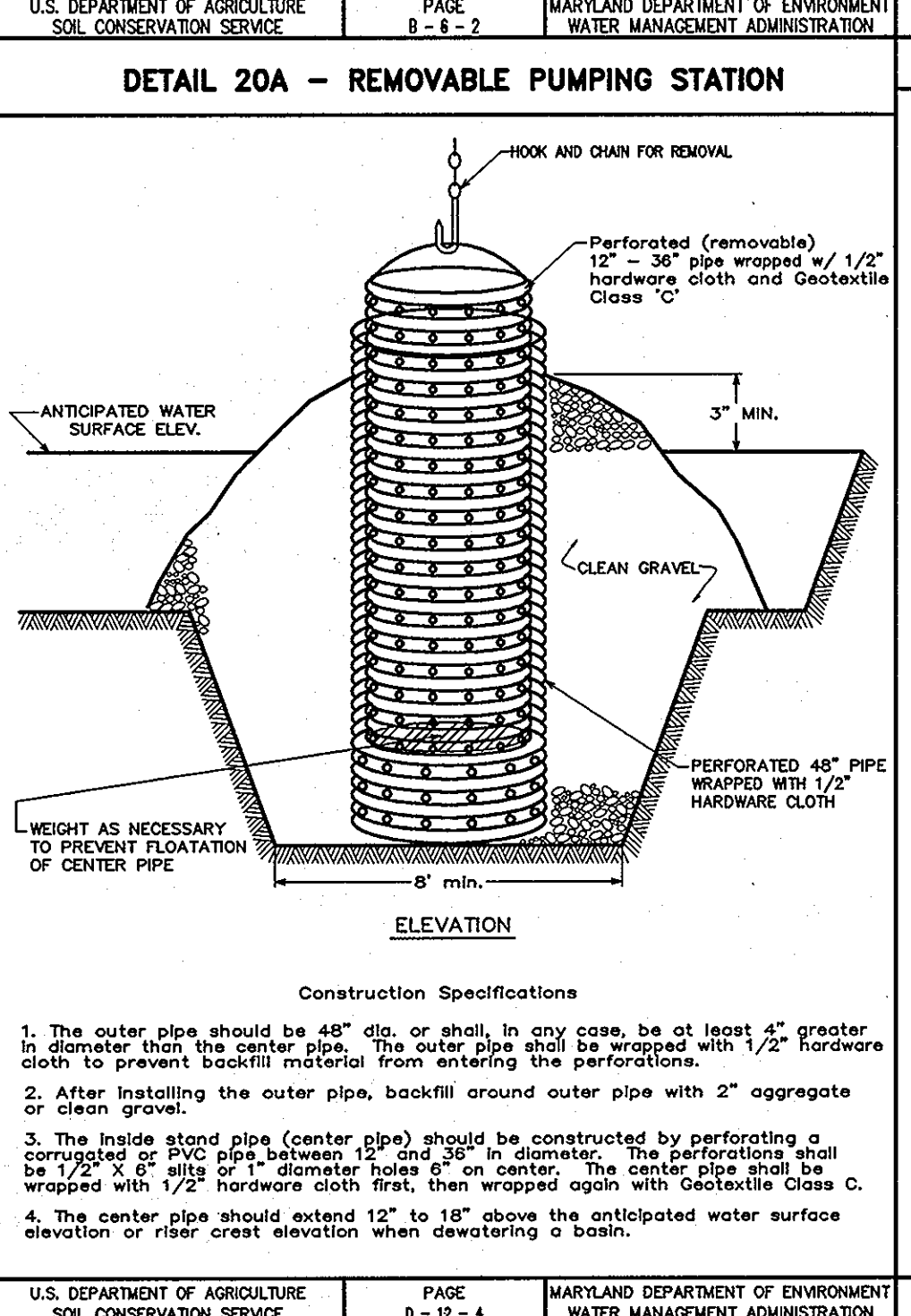
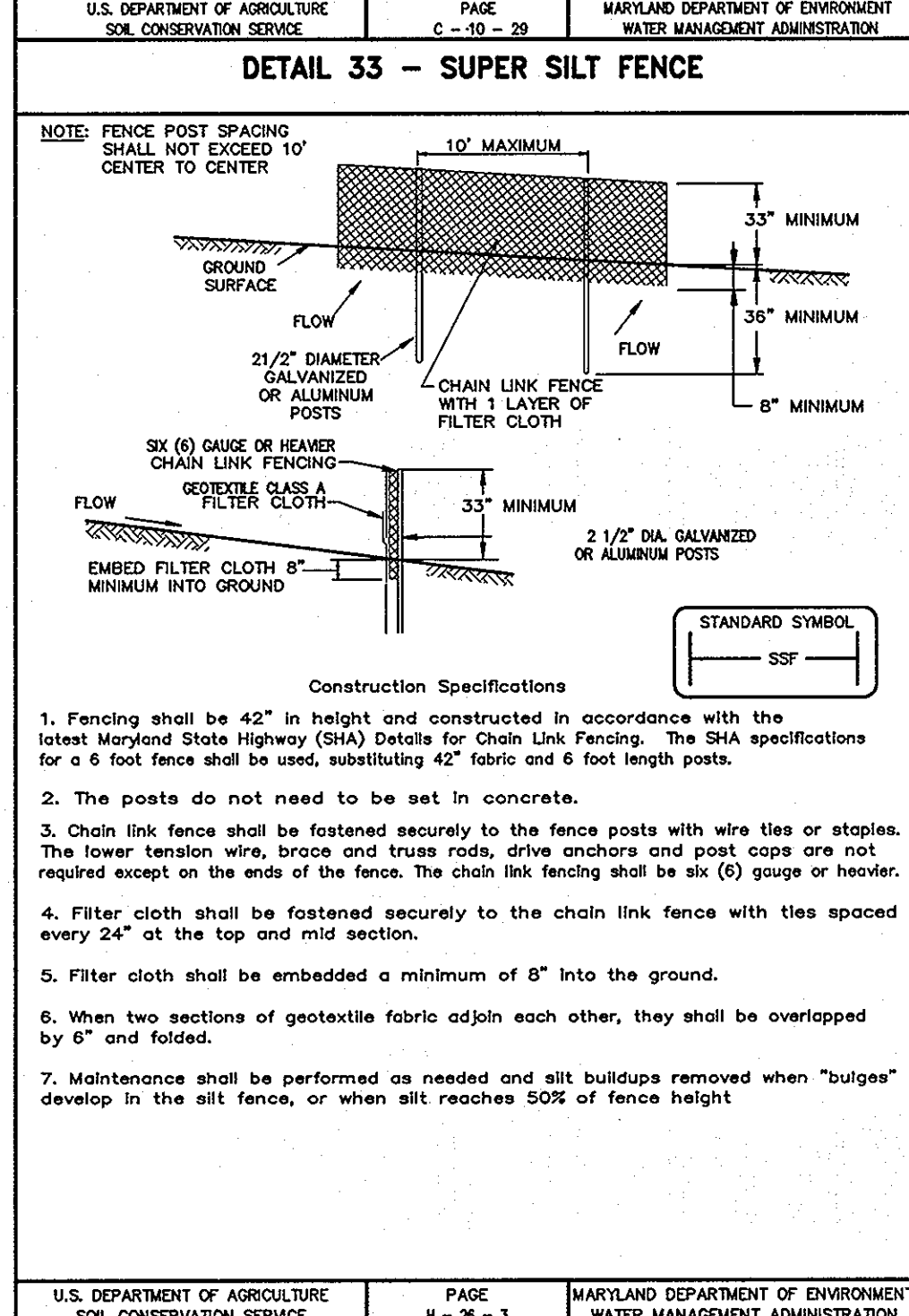
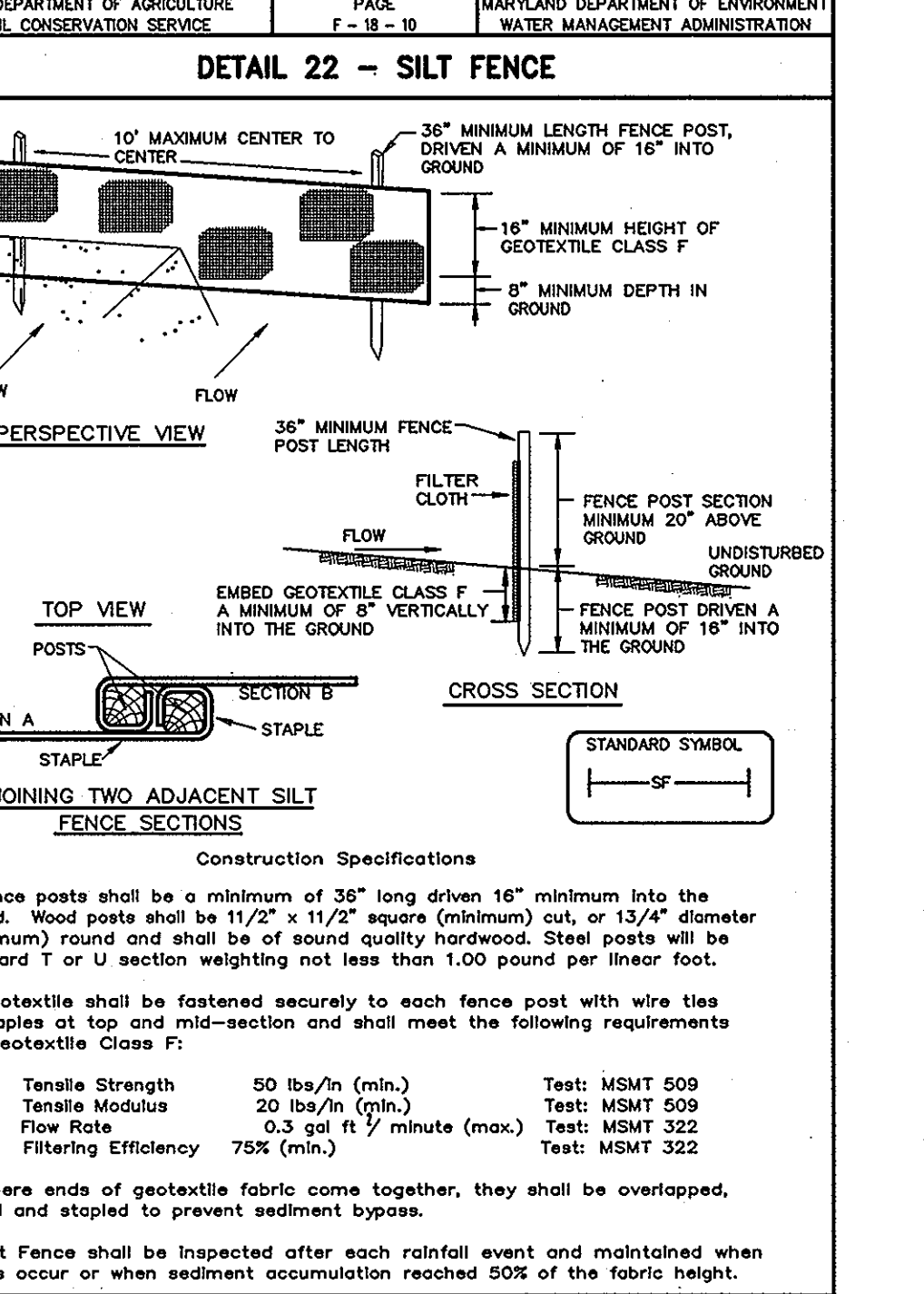
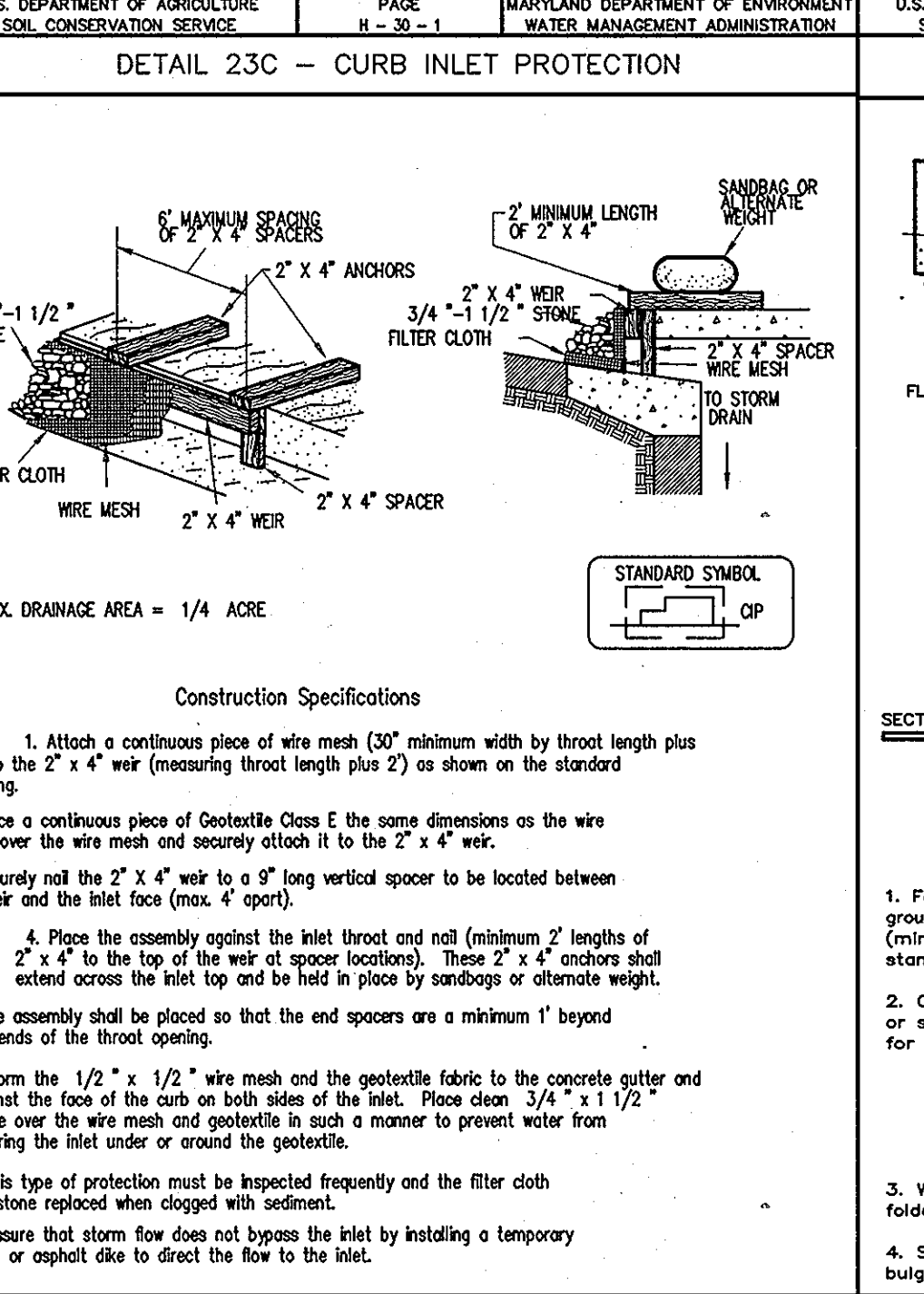
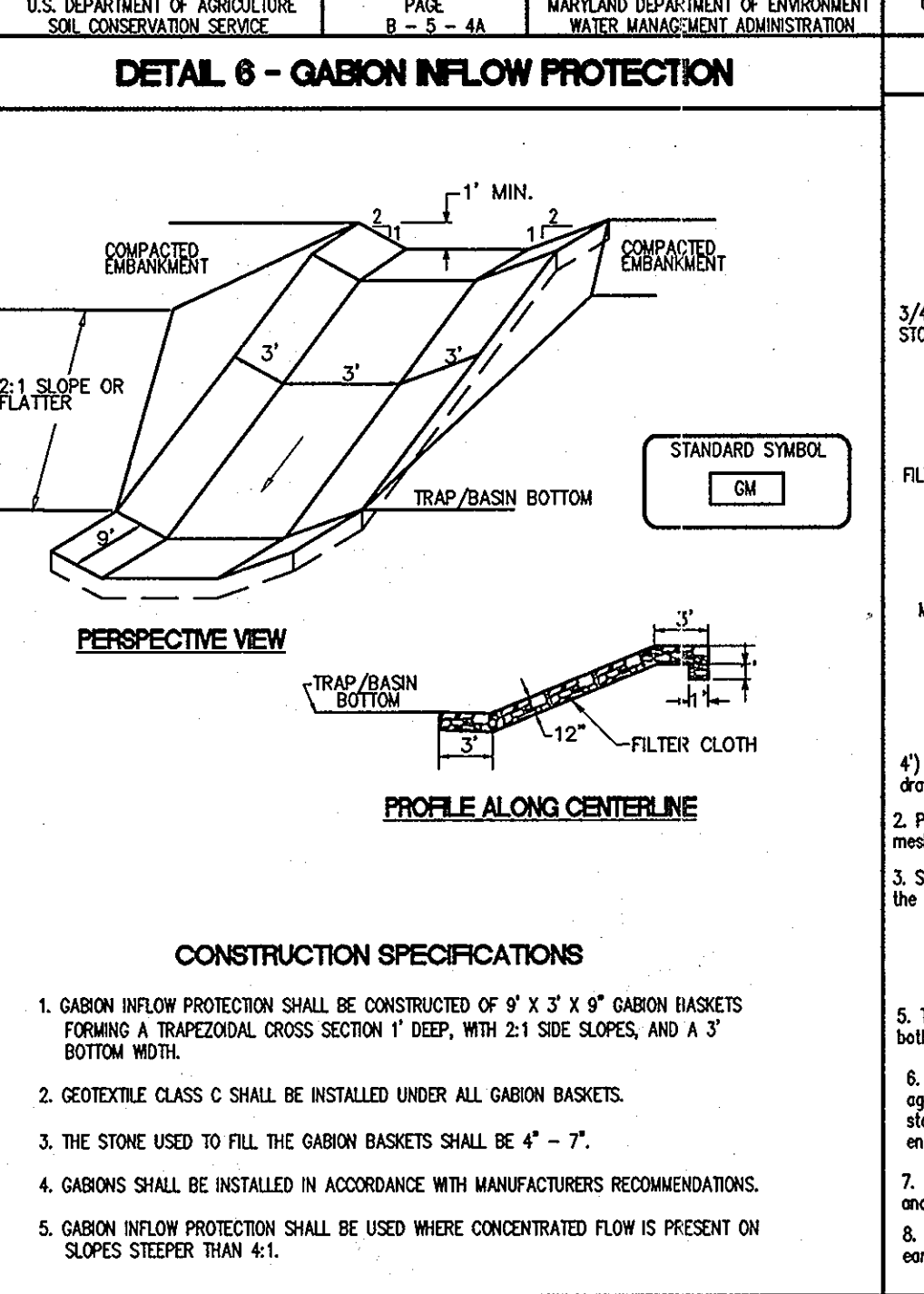
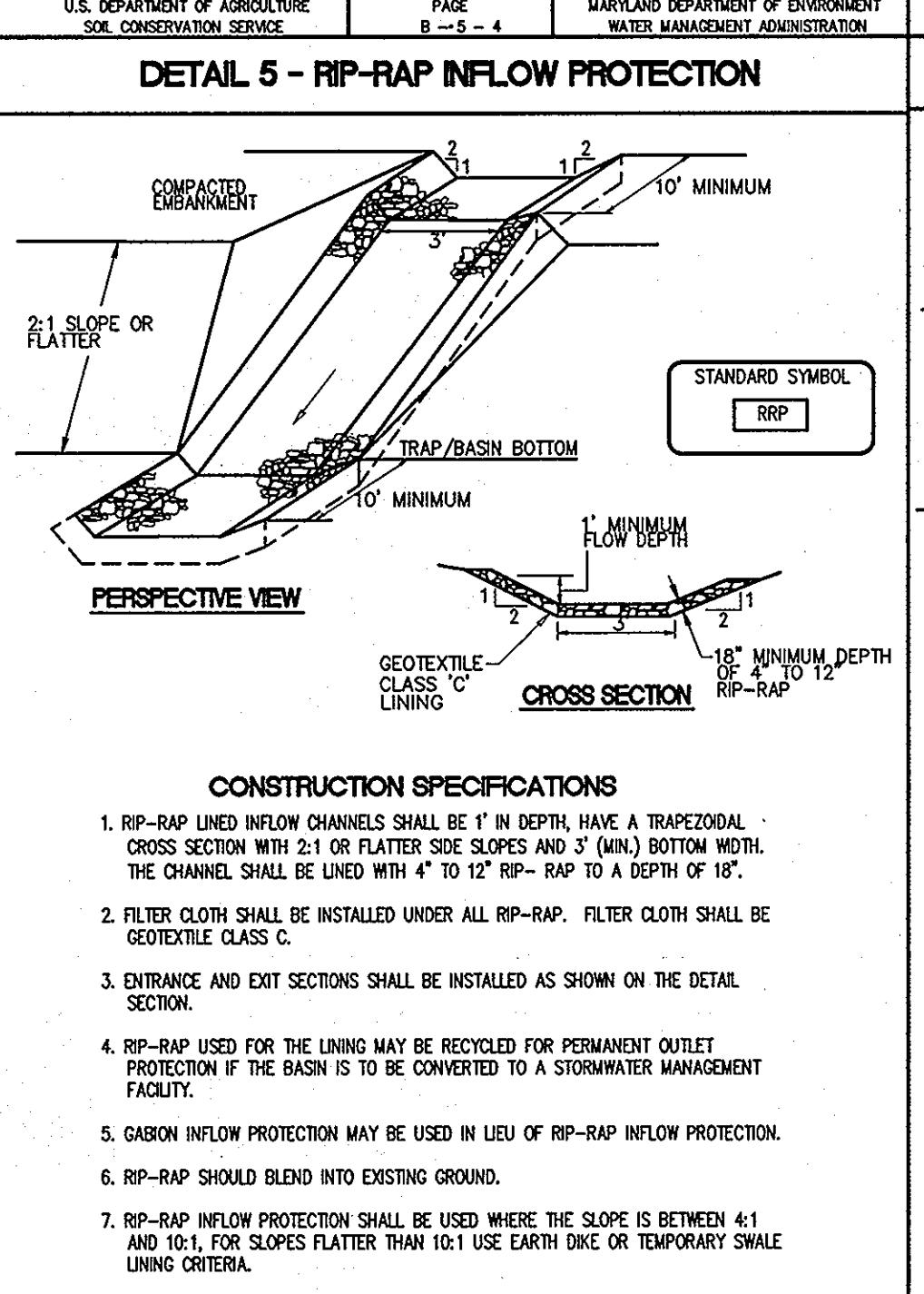
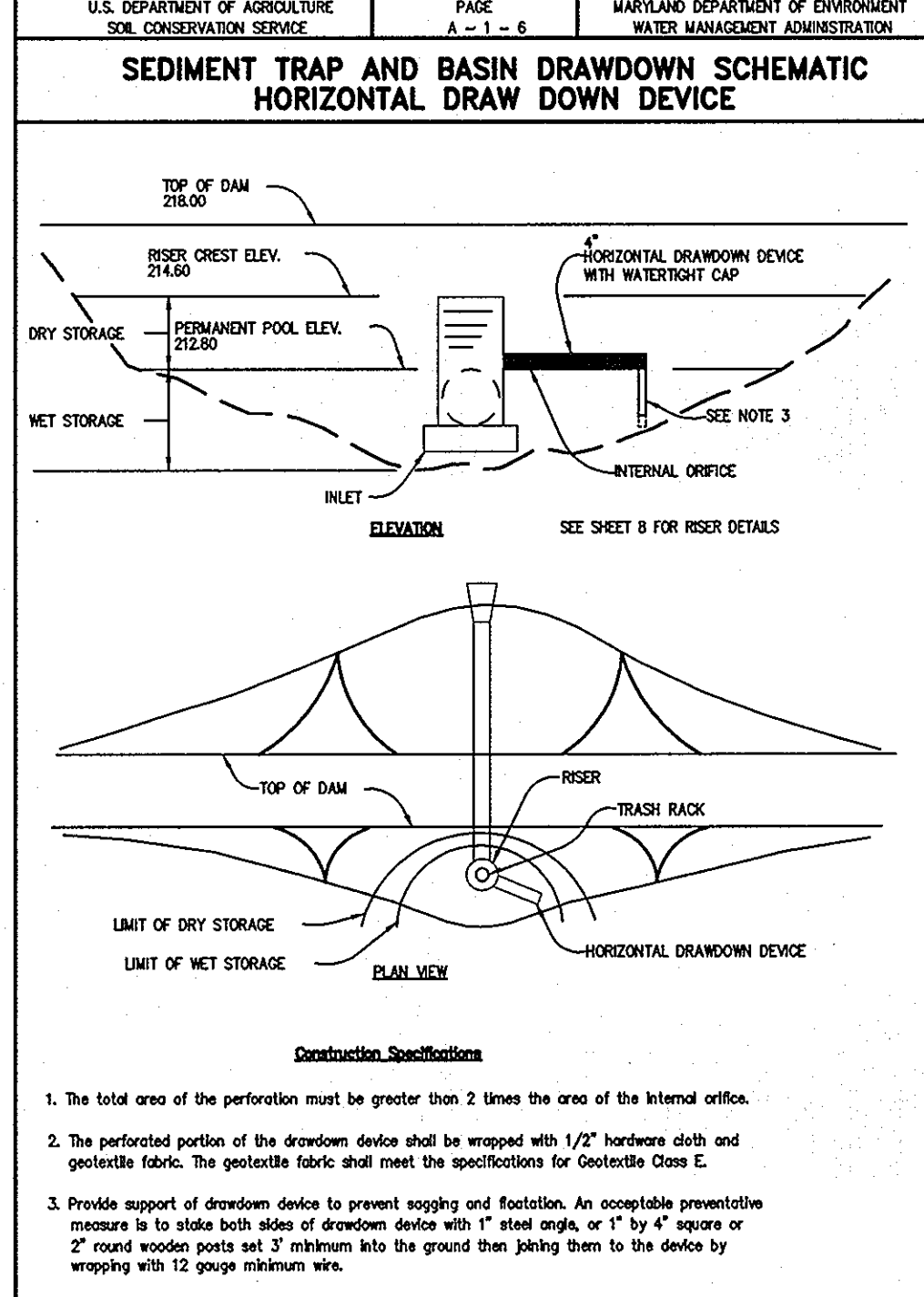
PROJECT: NORTH LAUREL COMMUNITY CENTER, CAPITAL PROJECT C-0304, PROJECT MGR: DAVE LOUDERMILK

AREA: TAX MAP 47 GRID 22 & TAX MAP 50, GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC, 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS

Patton Harris Rust & Associates, Engineers, Surveyors, Planners, Landscape Architects, 8818 Centre Park Drive, Columbia, MD 21045, T 410.997.8900, F 410.997.9282

DESIGNED BY: SCM
DRAWN BY: SGM
PROJECT NO: 14466-1-2, C400SDP06.DWG
DATE: SEPTEMBER 7, 2010
SCALE: AS SHOWN
DRAWING NO. 6 OF 43



OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045, P 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045, P 410 313 2414

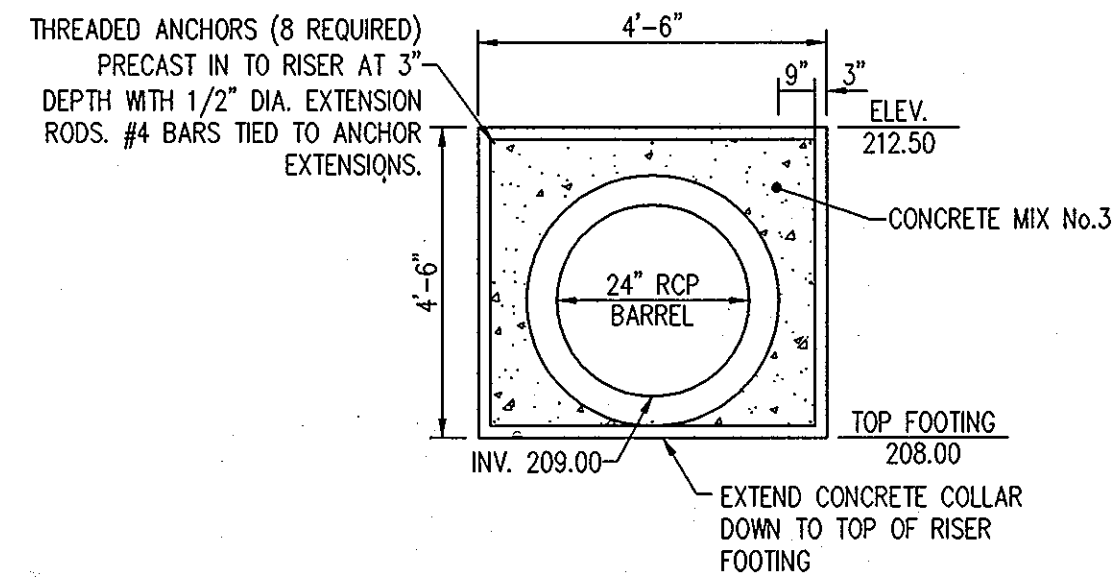
PROJECT: NORTH LAUREL COMMUNITY CENTER, CAPITAL PROJECT C-0304, PROJECT MGR: DAVE LOUDERMILK

AREA: TAX MAP 47 GRID 22 & TAX MAP 50, GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC, 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

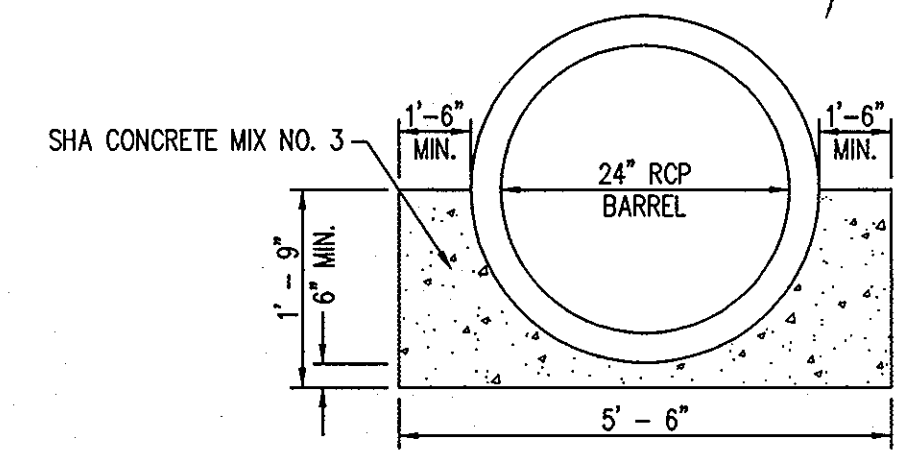
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Patton Harris Rust & Associates, Engineers, Surveyors, Planners, Landscape Architects, 8818 Centre Park Drive, Columbia, MD 21045, T 410.997.8900, F 410.997.9282

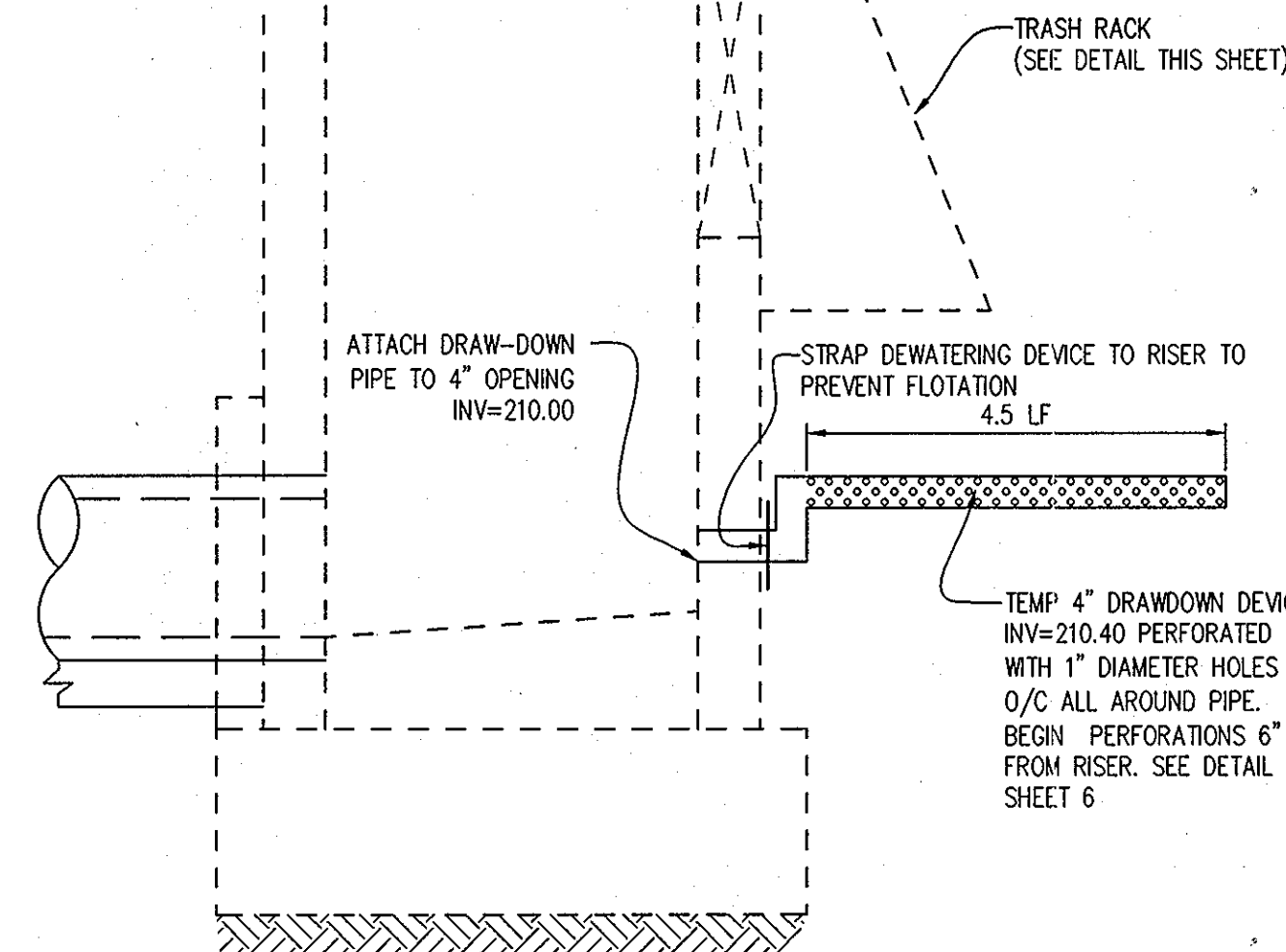
DESIGNED BY: SCM
DRAWN BY: SGM
PROJECT NO: 14466-1-2, C400SDP06.DWG
DATE: SEPTEMBER 7, 2010
SCALE: AS SHOWN
DRAWING NO. 6 OF 43



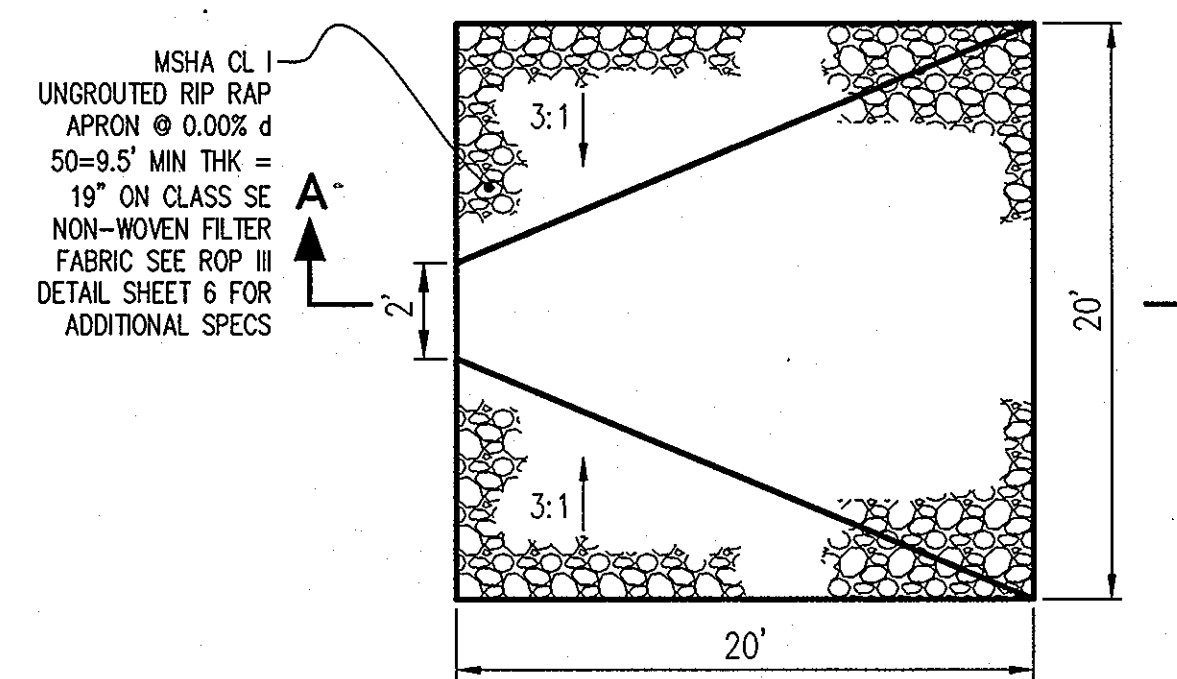
CONCRETE COLLAR DETAIL AT 24" RCP BARREL CONNECTION TO RISER
NOT TO SCALE



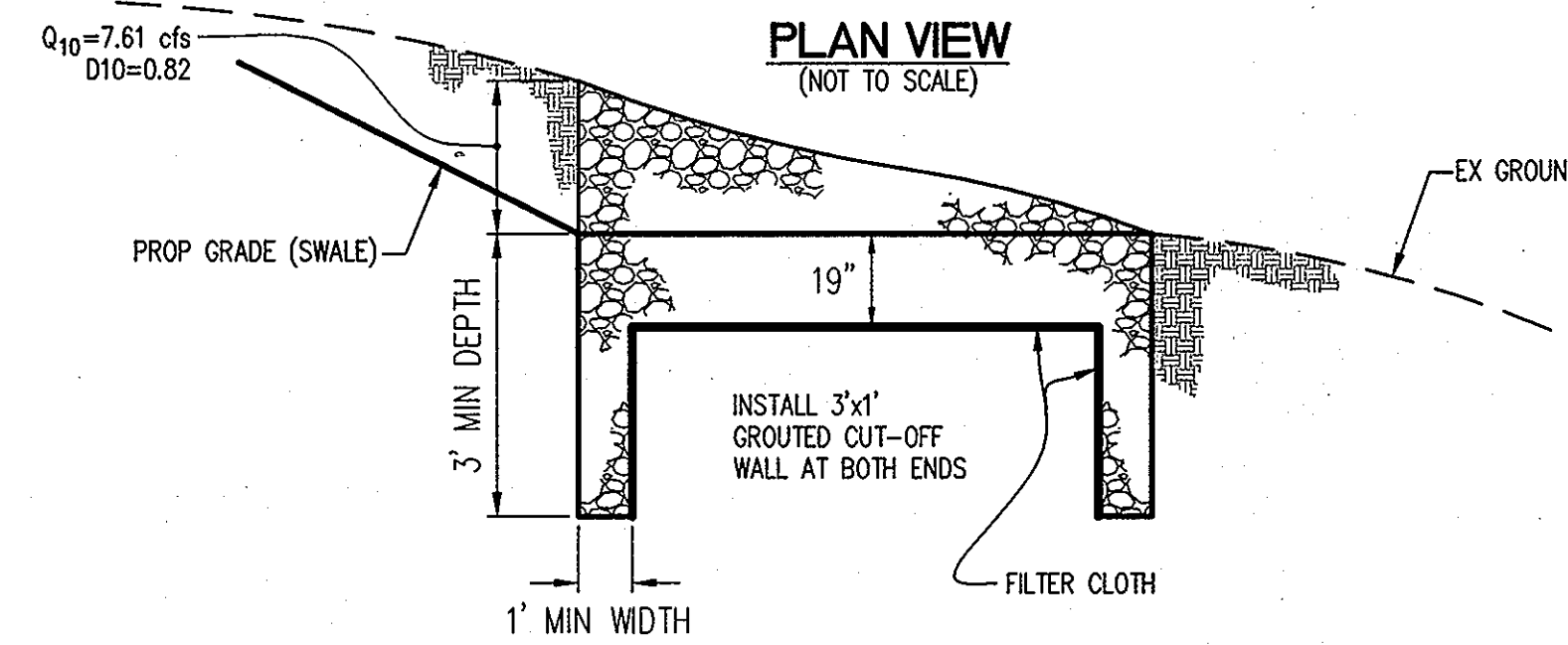
CONCRETE CRADLE DETAIL
NOT TO SCALE



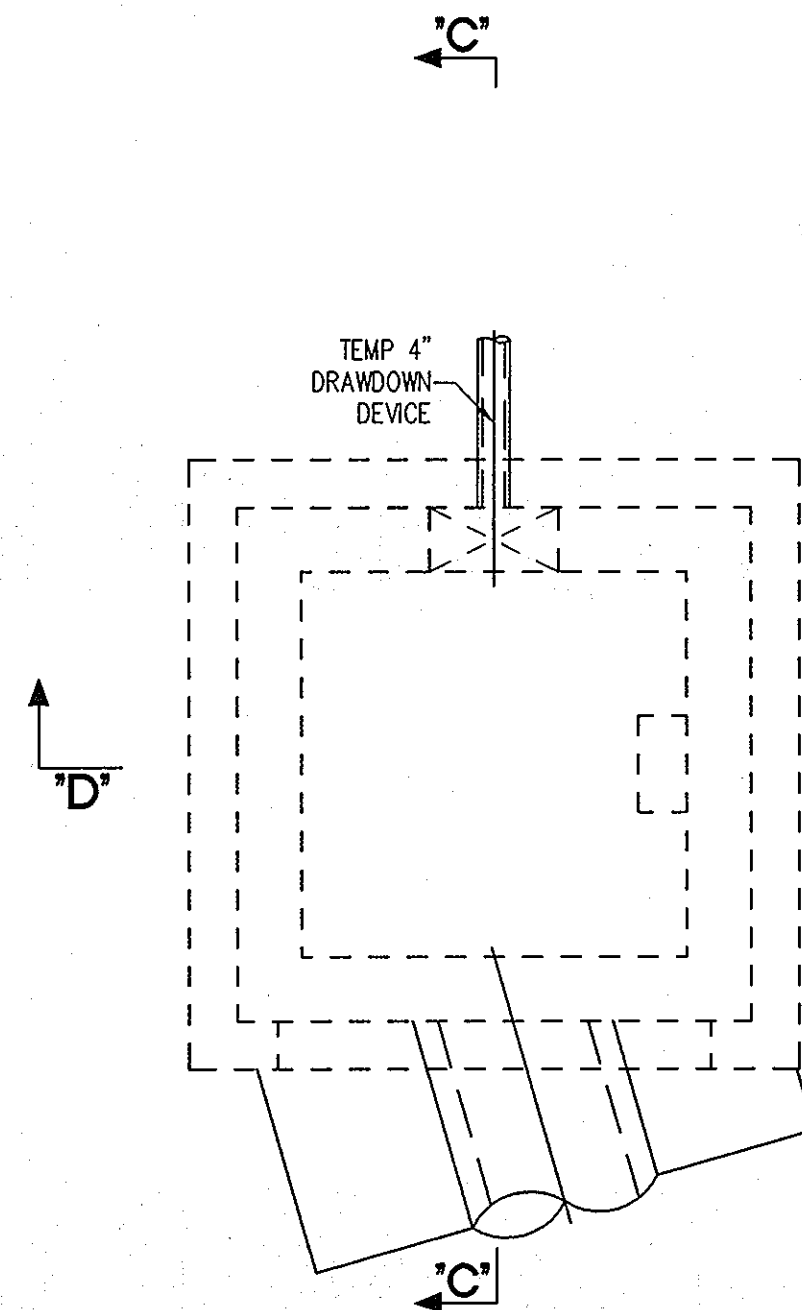
SECTION 'C-C'
SCALE: 1"=2'



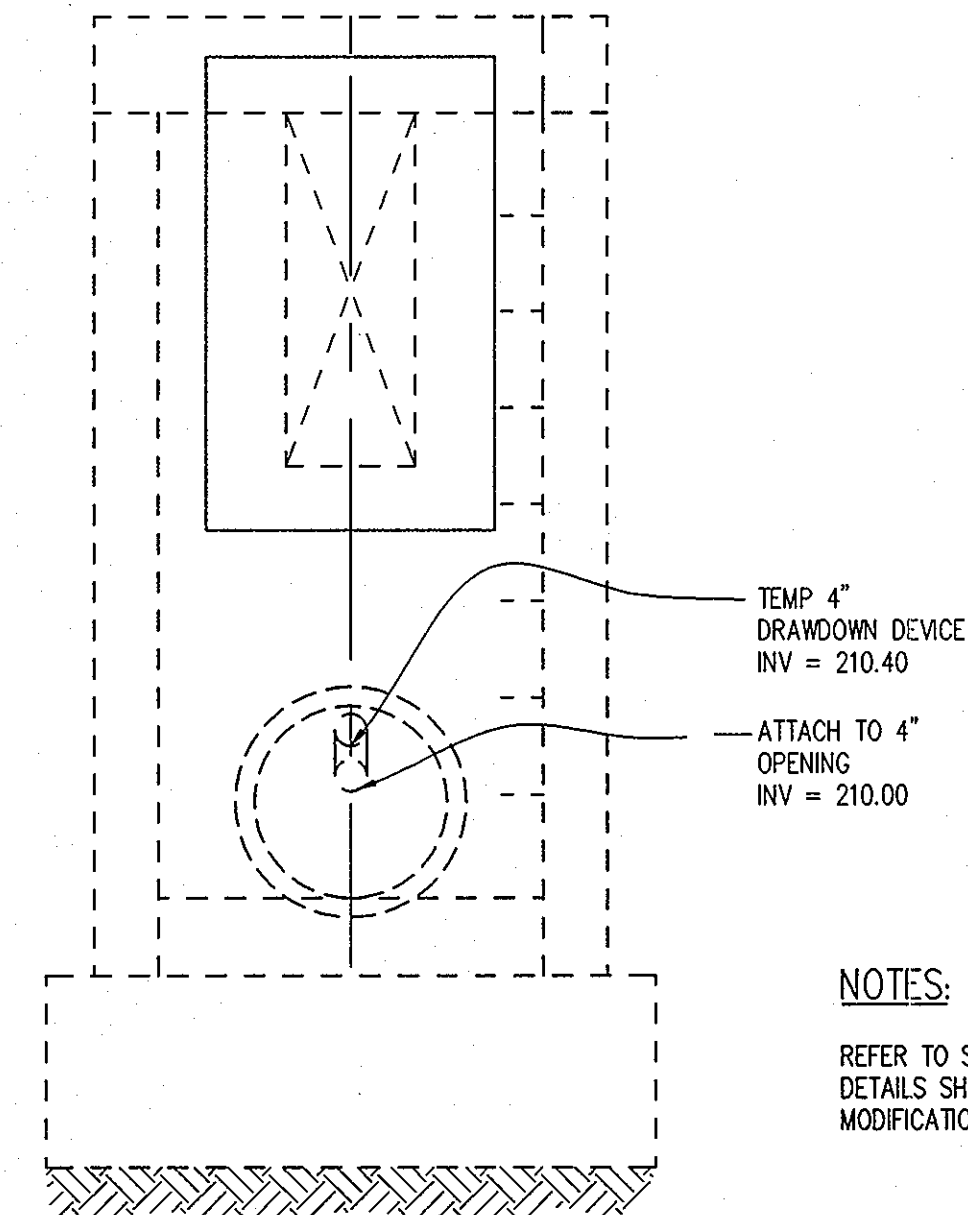
PLAN VIEW
(NOT TO SCALE)



**SECTION A-A
RIP RAP APRON DETAIL**
(NOT TO SCALE)



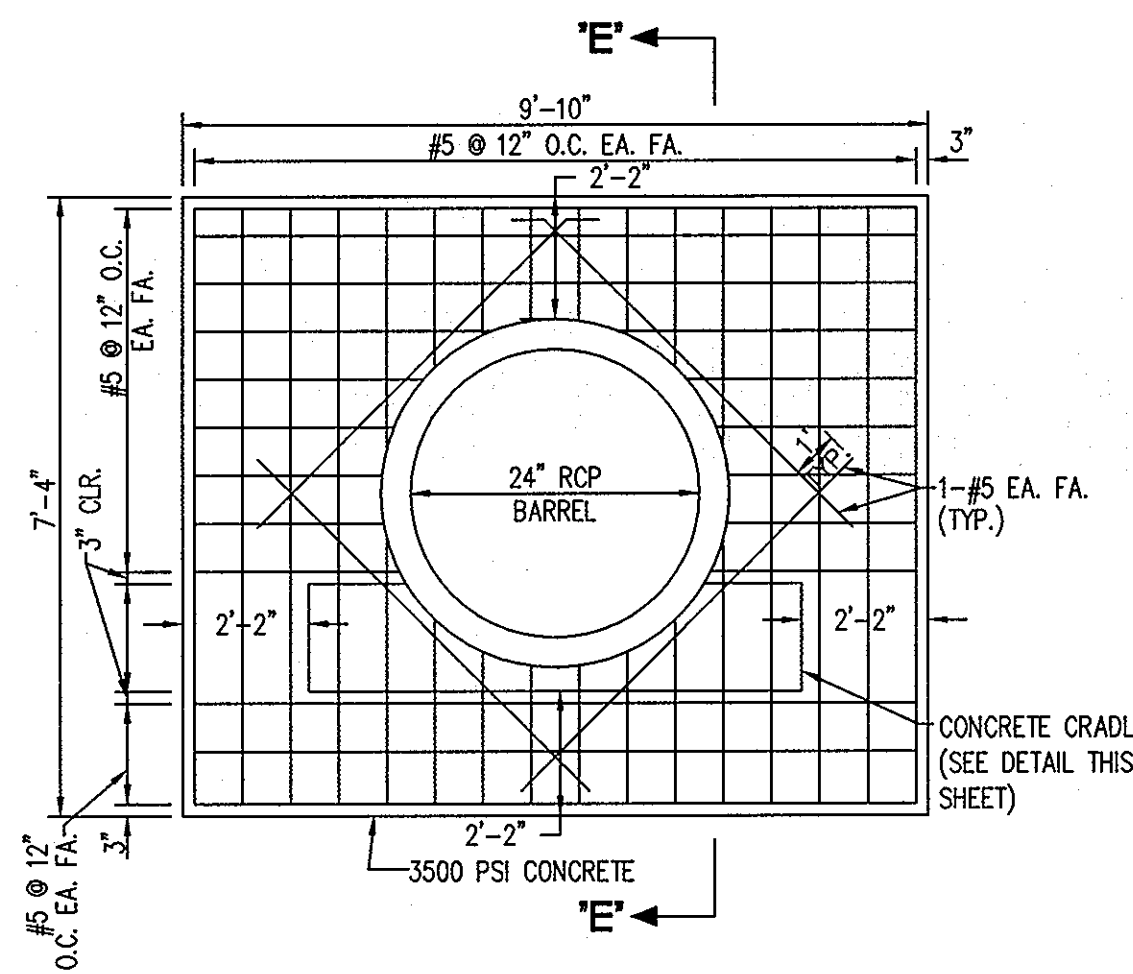
**PLAN SECTION
TOP SLAB REMOVED**
SCALE: 1"=2'



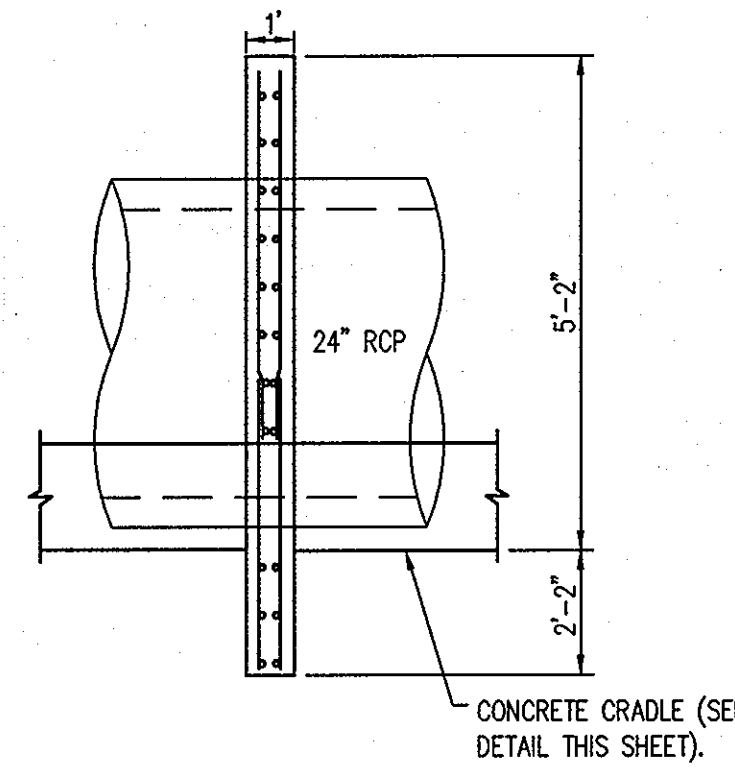
SECTION 'D-D'
SCALE: 1"=2'

**CONCRETE RISER DETAIL
STRUCTURE S3
SEDIMENT CONTROL ONLY**

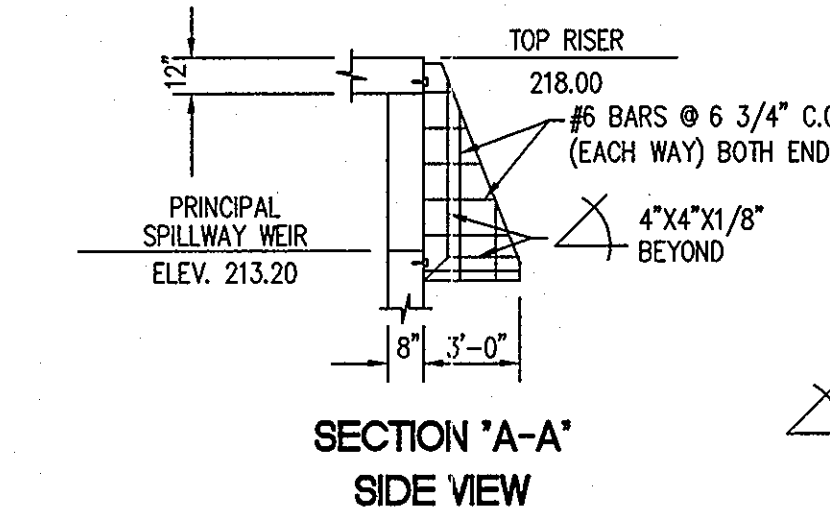
NOTES:
REFER TO SHEET 21 FOR CONSTRUCTION OF RISER
DETAILS SHOWN HERE ARE FOR TEMPORARY
MODIFICATION FOR SEDIMENT CONTROL ONLY.



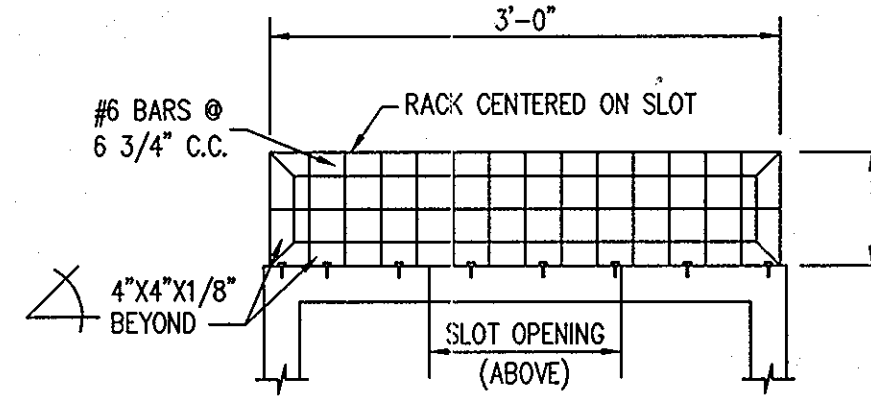
**CAST IN PLACE
ANTI-SEEP COLLAR DETAIL**
(2 REQUIRED)
NOT TO SCALE



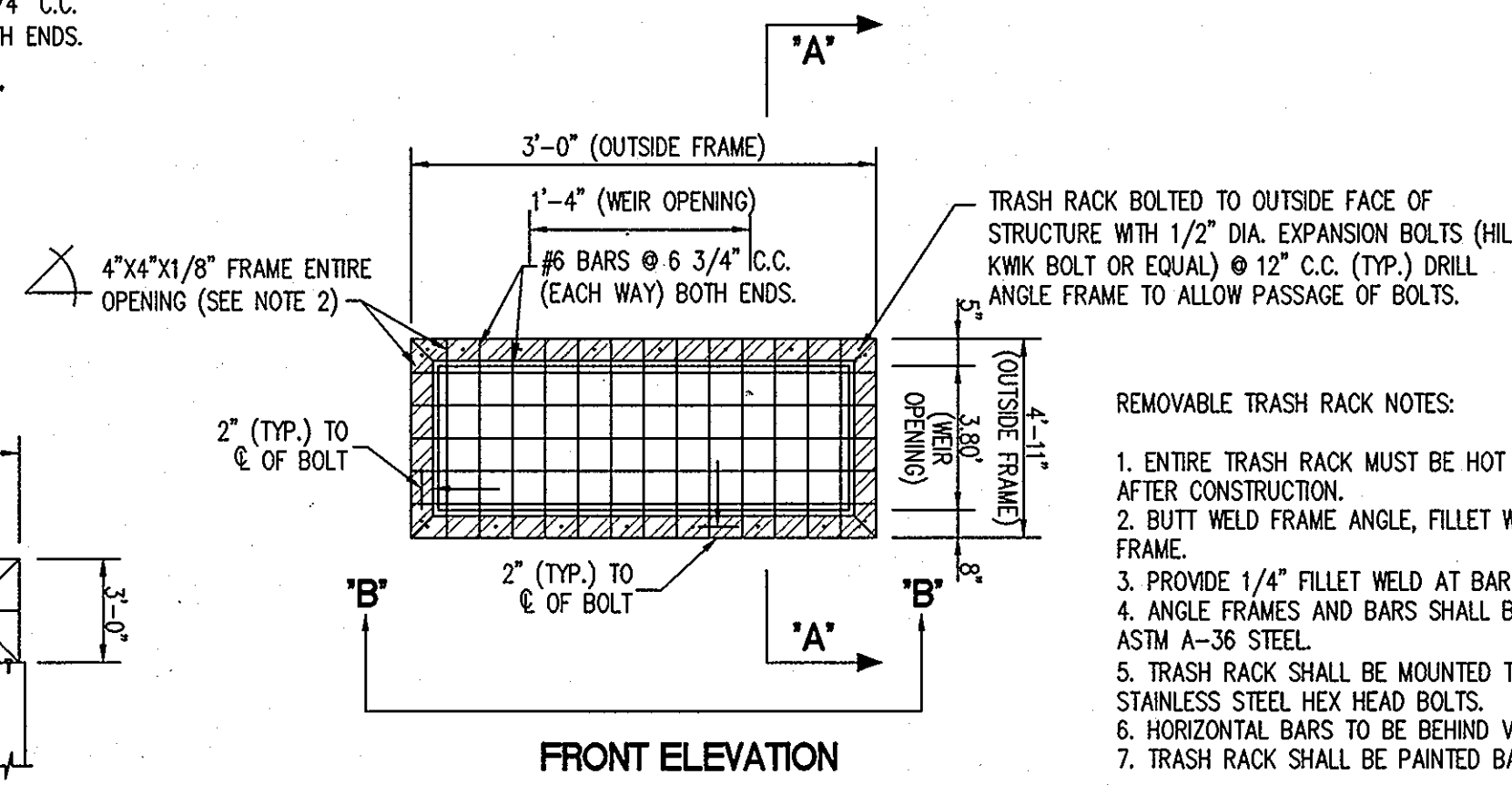
SECTION 'E-E'



**SECTION 'A-A'
SIDE VIEW**



**SECTION 'B-B'
BOTTOM VIEW**



FRONT ELEVATION
RISER TRASH RACK DETAILS
NOT TO SCALE

- REMOVABLE TRASH RACK NOTES:**
1. ENTIRE TRASH RACK MUST BE HOT DIPPED GALVANIZED AFTER CONSTRUCTION.
 2. BUTT WELD FRAME ANGLE, FILLET WELD BARS TO ANGLE FRAME.
 3. PROVIDE 1/4" FILLET WELD AT BAR CROSSINGS.
 4. ANGLE FRAMES AND BARS SHALL BE FABRICATED USING ASTM A-36 STEEL.
 5. TRASH RACK SHALL BE MOUNTED TO RISER WITH 1/2" DIA. STAINLESS STEEL HEX HEAD BOLTS.
 6. HORIZONTAL BARS TO BE BEHIND VERTICAL BARS.
 7. TRASH RACK SHALL BE PAINTED BATTLESHIP GREY.

BY THE DEVELOPER :
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
DEVELOPER _____ DATE _____

BY THE ENGINEER :
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature]
ENGINEER _____ DATE _____

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature]
DIRECTOR _____ DATE _____

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE _____

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P. 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P. 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
**POND AND
SEDIMENT BASIN DETAILS**

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

[Signature]
DESIGNED BY : SCM
DRAWN BY : SGM
PROJECT NO : 14466-1-2
C400SDP07.DWG
DATE : SEPTEMBER 7, 2010
SCALE : AS SHOWN
DRAWING NO. 7 OF 43

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard Practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, roller-

ers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags,

etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

- 1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted

with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

- 2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

- 3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gaskets and a 12-inch wide hanger type band with or without gaskets having a minimum diameter

of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

- 4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

- 5. Backfilling shall conform to "Structure Backfill".

- 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

- 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.
- 2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 30% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 902.10, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory per-

formance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water pumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, soil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 902.10, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory per-

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Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard Practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

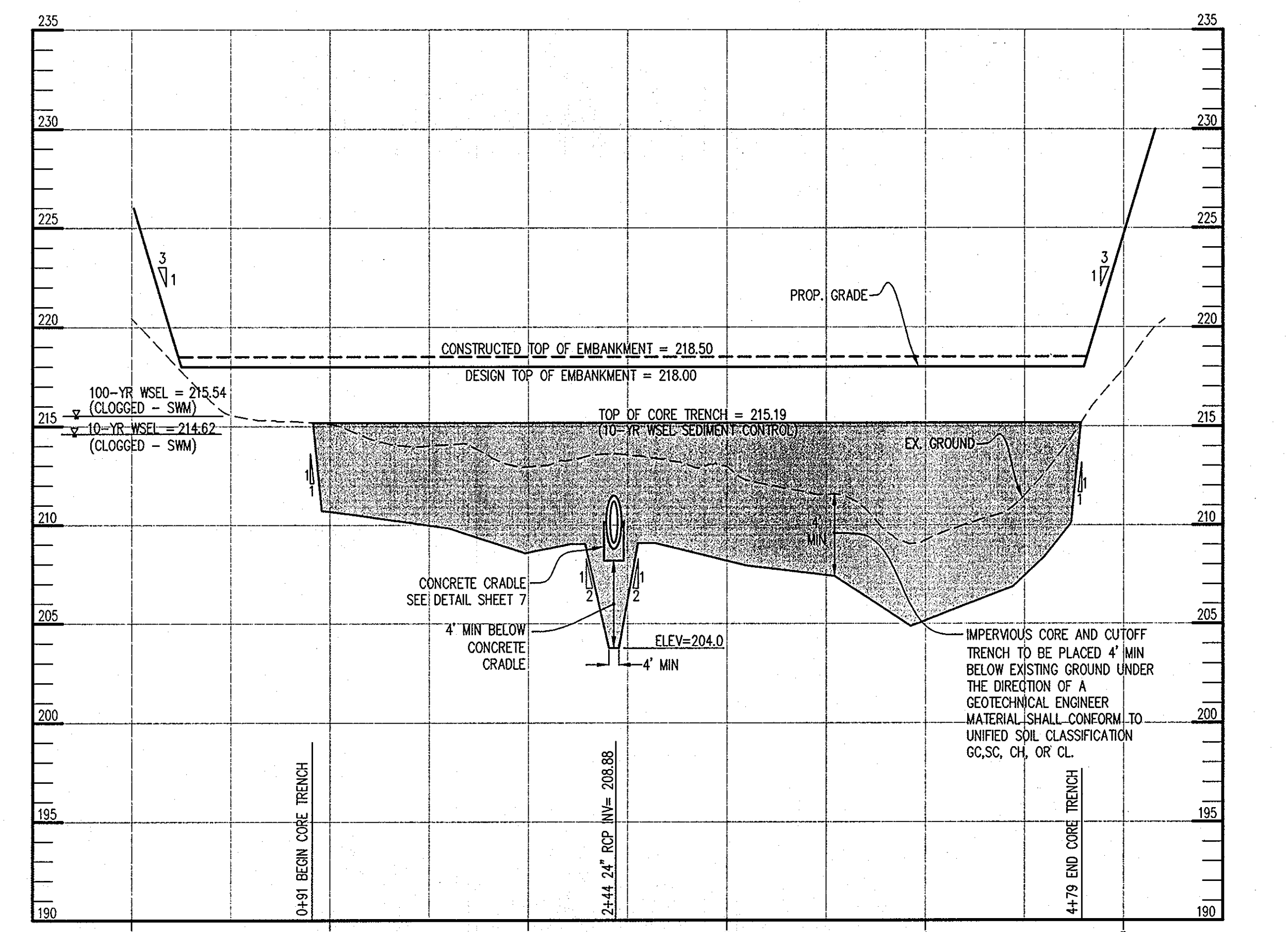
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

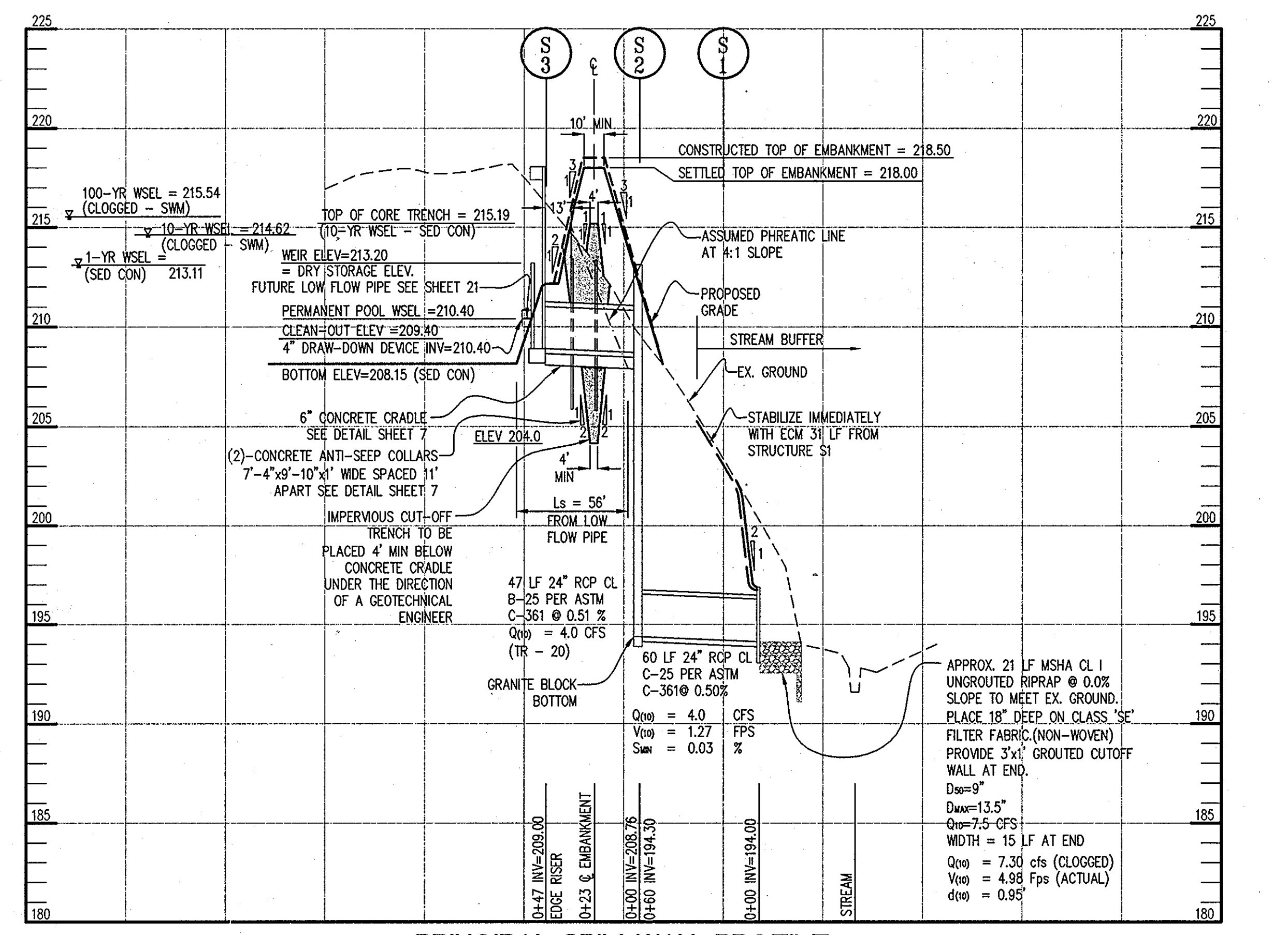
NRCS - MARYLAND JANUARY 2000

NRCS - MARYLAND JANUARY 2000



EMBAKMENT CENTERLINE PROFILE A-A

SCALE: HOR: 1"=50' VERT: 1"=5'



PRINCIPAL SPILLWAY PROFILE

SCALE: HOR: 1"=50' VERT: 1"=5'

SEDIMENT CONTROL ONLY

BY THE ENGINEER: I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Sheryl C. Mitchell 9-21-10 ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Howard Soil Conservation District 11/1/10 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director 12/13/10 DATE

Chief, Development Engineering Division 11/10/10 DATE

Chief, Division of Land Development 12/10/10 DATE

DATE NO. REVISION

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414

PROJECT: NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA: TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS 182 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: POND AND SEDIMENT BASIN SPECIFICATIONS AND PROFILES

Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282

DESIGNED BY: SGM DRAWN BY: SGM PROJECT NO: 14466-1-2 C400SDP08.DWG DATE: SEPTEMBER 7, 2010 SCALE: AS SHOWN DRAWING NO. 8 OF 43

PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-1	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	211.1'	DATE:	07-02-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-02-09	---	---
UPON COMPLETION:	07-02-09	7:33	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
210	0	14	Organic Surface - 4 inches. Medium dense, orange brown, moist, silty fine to coarse SAND (SM), little fine to medium gravel.
205	5	16	Very stiff, orange brown mottled gray, moist, fine sandy CLAY (CL), trace fine to medium gravel.
200	10	14	Medium dense, light gray, moist, micaceous silty fine SAND (SM).
190	20	11	Boring terminated at 10.0 feet.

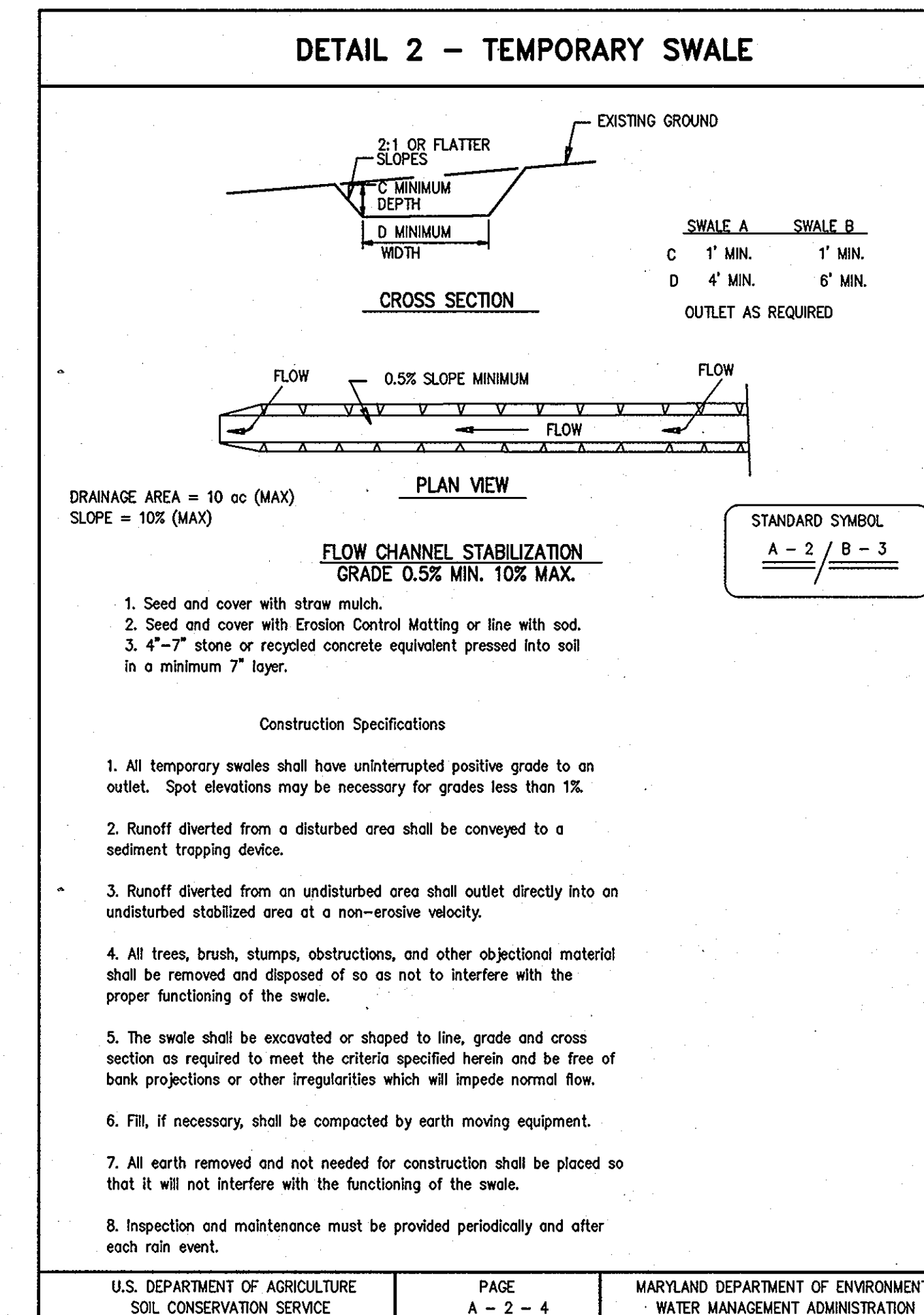
PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-2	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	213.7'	DATE:	07-02-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-02-09	---	---
UPON COMPLETION:	07-02-09	7:17	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
210	0	15	Organic Surface - 3 inches. Silty to firm, orange brown, moist, fine to coarse sandy SILT (ML), trace medium to coarse gravel.
205	5	14	Very stiff, red, moist, silty CLAY (CL), trace fine sand.
200	10	15	Very stiff, gray, moist, micaceous fine sandy SILT (ML).
190	20	19	Boring terminated at 10.0 feet.

PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-3	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	213.3'	DATE:	07-02-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-02-09	---	---
UPON COMPLETION:	07-02-09	7:00	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
210	0	15	Organic Surface - 2 inches. Silty, orange brown, moist, fine sandy SILT (ML), some clay.
205	5	14	Very stiff, moist, silty CLAY (CL), little fine sand.
200	10	15	Very stiff, gray, yellow brown, red, moist, clayey SILT (ML), little fine sand.
190	20	18	Boring terminated at 10.0 feet.

PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-4	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	212.2'	DATE:	07-02-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-02-09	---	---
UPON COMPLETION:	07-02-09	7:57	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
210	0	18	Organic Surface - 3 inches. Silty, dark red, gray, moist, CLAY (CL), some silt, trace rootlets and mica.
205	5	14	Very stiff, red, gray, moist, silty CLAY (CL), trace fine sand and mica.
200	10	14	...red.
190	20	13	Soft, gray, moist, fine sandy SILT (ML), little mica.
180	30	7	Boring terminated at 10.0 feet.

PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-5	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	226.9'	DATE:	07-06-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-06-09	---	---
UPON COMPLETION:	07-06-09	---	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
225	0	13	Organic Surface - 2 inches. Silty, gray, moist, fine sandy SILT (ML).
220	5	12	Medium dense, yellow brown, moist, silty fine to medium SAND (SM), trace fine gravel.
215	10	12	Very stiff, red, gray, moist, silty CLAY (CL), trace fine to medium gravel and fine sand.
210	15	13	...
205	20	17	Very stiff, red, moist, clayey SILT (ML), trace fine sand.
190	35	11	Boring terminated at 10.0 feet.

PARRA PATTON HARRIS RUST & ASSOCIATES, pc		BORING LOG	
PROJECT NAME:	NORTH LAUREL PARK	PROJECT NUMBER:	14466-1-2
BORING NUMBER:	SW-6	SHEET:	OF 1
LOCATION:	Laurel, Howard County, Maryland		
LOGGED BY:	I. Howard	DRILLER:	Hurd's Drilling Company
ELEVATION:	231.4'	DATE:	07-06-09
GROUNDWATER DATA	DATE	TIME	ELAPSED (H:M:S)
ENCOUNTERED:	07-06-09	---	---
UPON COMPLETION:	07-06-09	---	---
SHORT TERM:	---	---	---
LONG TERM:	---	---	---
DRILLING METHOD:	HSA		
EQUIPMENT:	CME-45 ATV		
Elevation (ft.)	Depth (ft.)	SPT (blows per foot)	Visual Description
230	0	18	Organic Surface - 3 inches. Loose, pale brown, moist, silty medium SAND (SM), some fine to coarse gravel.
225	5	15	Hard, gray mottled red, moist, clayey SILT (ML), trace fine sand.
220	10	21	Very stiff to hard, purple, dark red, moist, SILT (ML), trace fine sand.
210	20	13	Boring terminated at 10.0 feet.



BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: *[Signature]* DATE: 9/21/10

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER: *[Signature]* DATE: 9-21-10

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] DATE: 11/1/10
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] DATE: 12/3/10
DIRECTOR

[Signature] DATE: 11/18/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE: 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE	NO.	REVISION

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT: NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA: TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 1B7 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

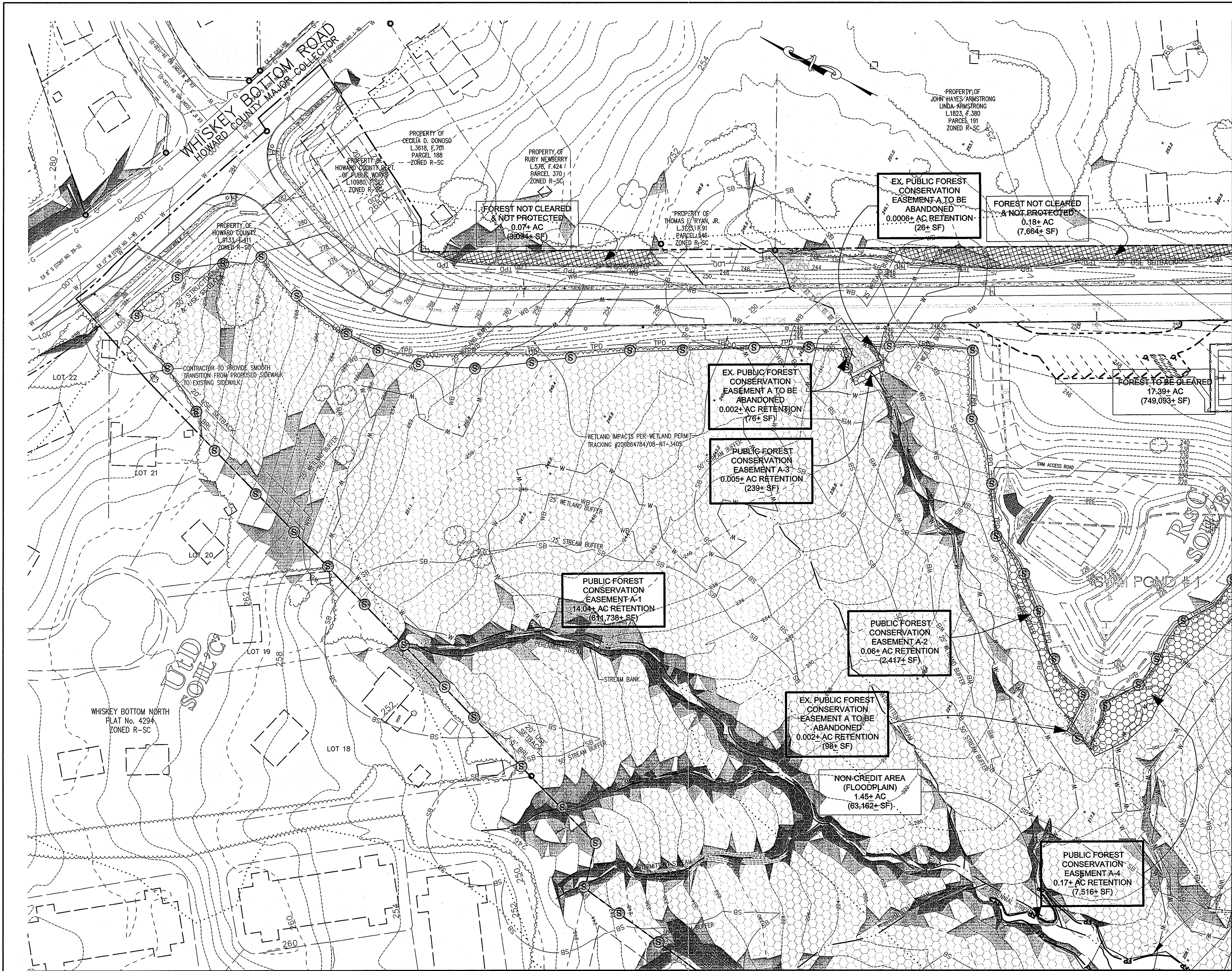
TITLE: SOIL BORING LOGS AND
SEDIMENT CONTROL DETAILS

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL: *[Professional Engineer Seal]*

DESIGNED BY: SGM
DRAWN BY: SGM
PROJECT NO: 14466-1-2
C400SDP09.DWG
DATE: SEPTEMBER 7, 2010
SCALE: AS SHOWN
DRAWING NO. 9 OF 43

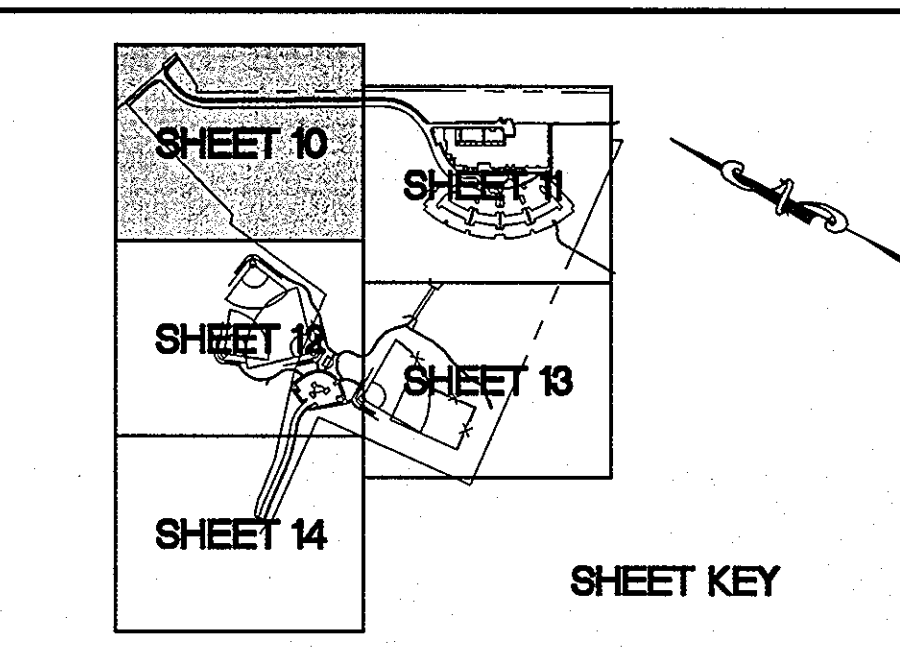
SDP-10-010



LEGEND

- LIMIT OF DISTURBANCE ——— LOD
- TREE PROTECTION FENCE ——— TPD
- PROPERTY LINE AND RIGHT OF WAY ———
- FLOODPLAIN ——— FP
- EX. TREELINE ———
- PROP. TREELINE ———
- EX. FOREST RETENTION AREA [Pattern]
- PROP. FOREST CONSERVATION ESMT [Pattern]
- FOREST NOT CLEARED OR PROTECTED [Pattern]
- EX. FOREST ESMT TO BE ABANDONED [Pattern]
- FOREST CONSERVATION EASEMENT SIGNAGE [Symbol]
- SOILS ——— MrE
- 15-25% SLOPES [Pattern]
- >25% SLOPES [Pattern]

NOTE:
1. SEE RED LINE REVISION OF SDP-08-118 FOR GRADING, TRAIL CONNECTIONS, AND IMPROVEMENTS TO THE EAST SIDE OF THE PROPERTY.



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Morgan G. Guller 12/13/10
DIRECTOR DATE

Willie Thomas 11/19/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kate Schuler 12/16/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

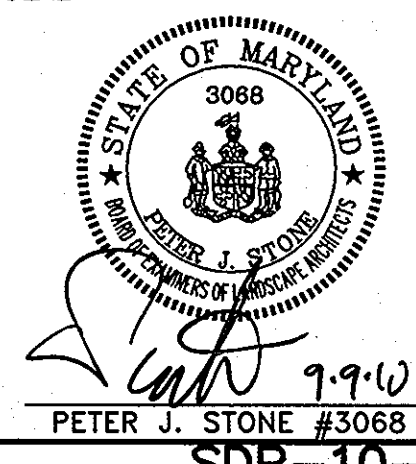
PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST CONSERVATION PLAN

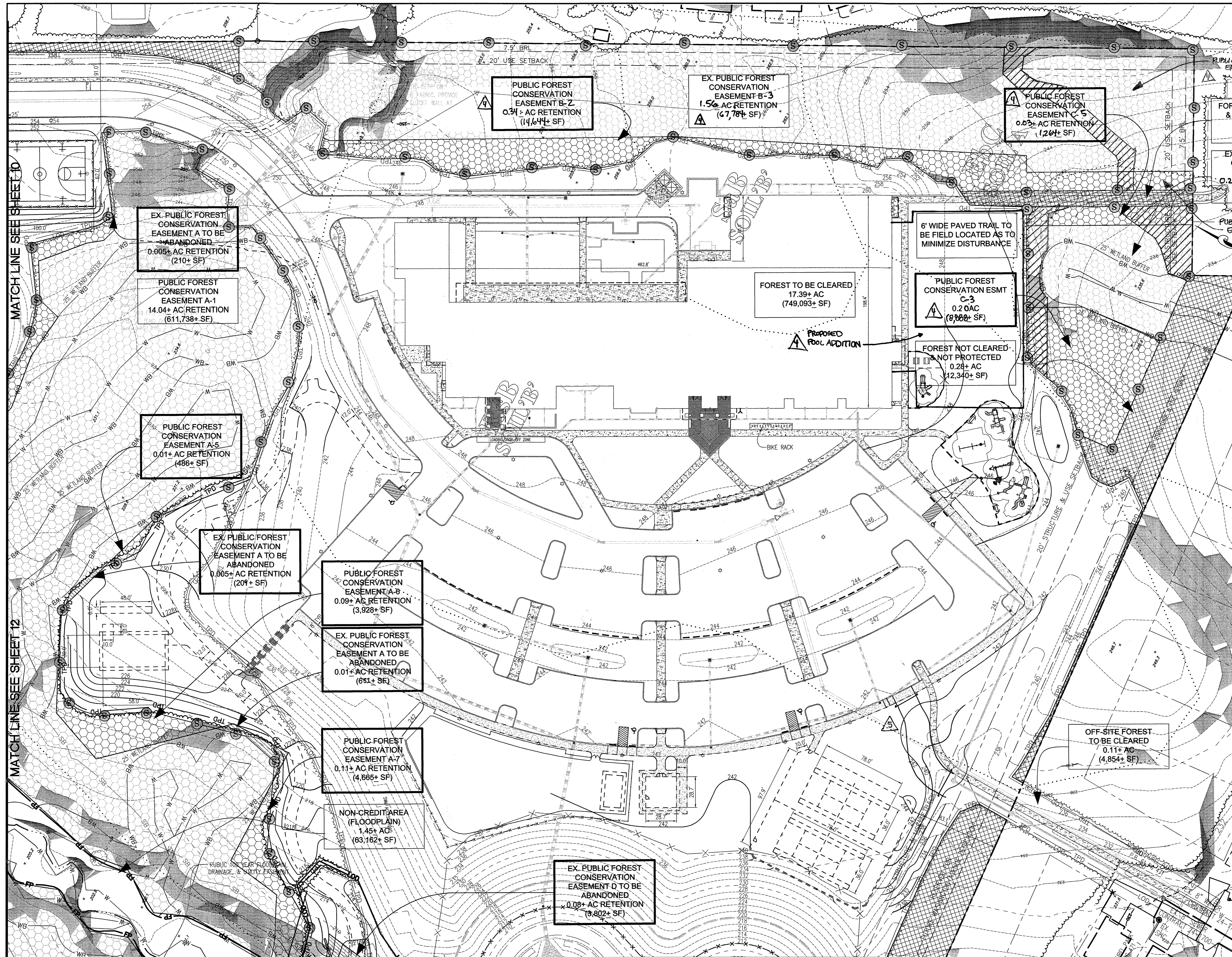
Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY : JSN
DRAWN BY : JSN
PROJECT NO : 14466-1-2
C400SDP10.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 10 OF 43



MATCH LINE SEE SHEET 12

MATCH LINE SEE SHEET 11

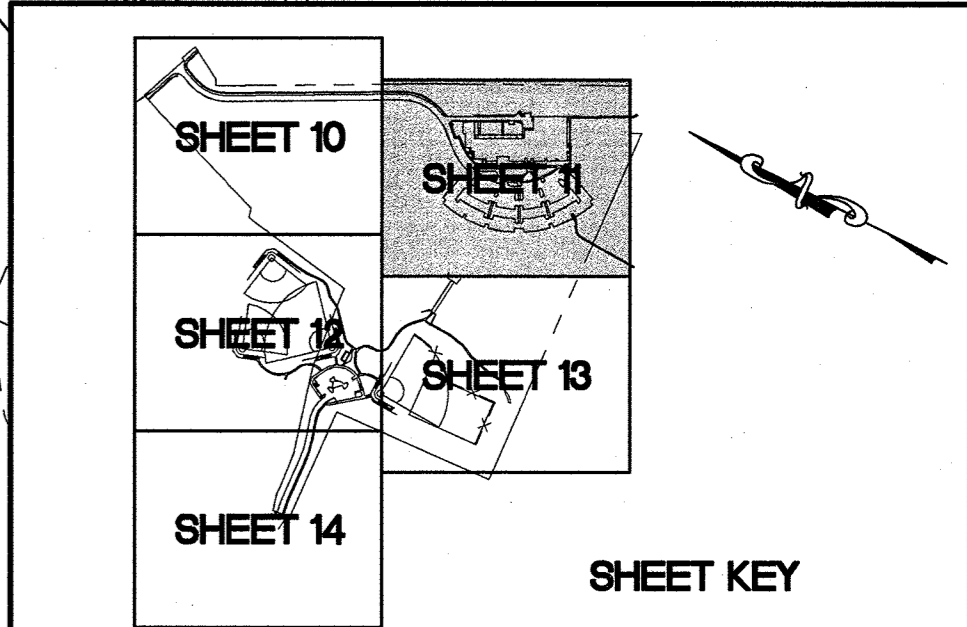


LEGEND

- LIMIT OF DISTURBANCE ——— LOD
- TREE PROTECTION FENCE ——— TPD
- PROPERTY LINE AND RIGHT OF WAY ———
- FLOODPLAIN ——— FP
- EX. TREELINE ———
- PROP. TREELINE ———
- EX. FOREST RETENTION AREA [Hatched Pattern]
- PROP. FOREST CONSERVATION ESMT [Hatched Pattern]
- FOREST NOT CLEARED OR PROTECTED [Cross-hatched Pattern]
- EX. FOREST ESMT TO BE ABANDONED [Diagonal Hatched Pattern]
- FOREST CONSERVATION EASEMENT SIGNAGE (S)
- SOILS ——— MrE
- 15-25% SLOPES [Shaded Area]
- >25% SLOPES [Dark Shaded Area]

NOTES:

- SEE RED LINE REVISION OF SDP-08-118 FOR GRADING, TRAIL CONNECTIONS, AND IMPROVEMENTS TO THE EAST SIDE OF THE PROPERTY.



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas J. Buttle 12/13/10
DIRECTOR DATE

John DeMunn 1/15/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Victor L. ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

3/10/20 5 ADDED DRIVEWAY FOR EMERGENCY ACCESS TO
11/12/19 4 ADDED POOL WITHIN PLAYGROUND EXPANSION AND ADDED FOREST CONSERVATION EASEMENTS

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, B-1, B-2 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
REVISED FOREST CONSERVATION PLAN

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY : JSN
DRAWN BY : JSN
PROJECT NO : 14466-1-2
C400SDP11.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 11 OF 43

SEAL
STATE OF MARYLAND
3068
PETER J. STONE #3068
19.0

MATCH LINE SEE SHEET 13

NOTE: SEE SDP-08-118 FOR DETAILED DESIGN OF EMERGENCY ACCESS.

MATCH LINE SEE SHEET 10

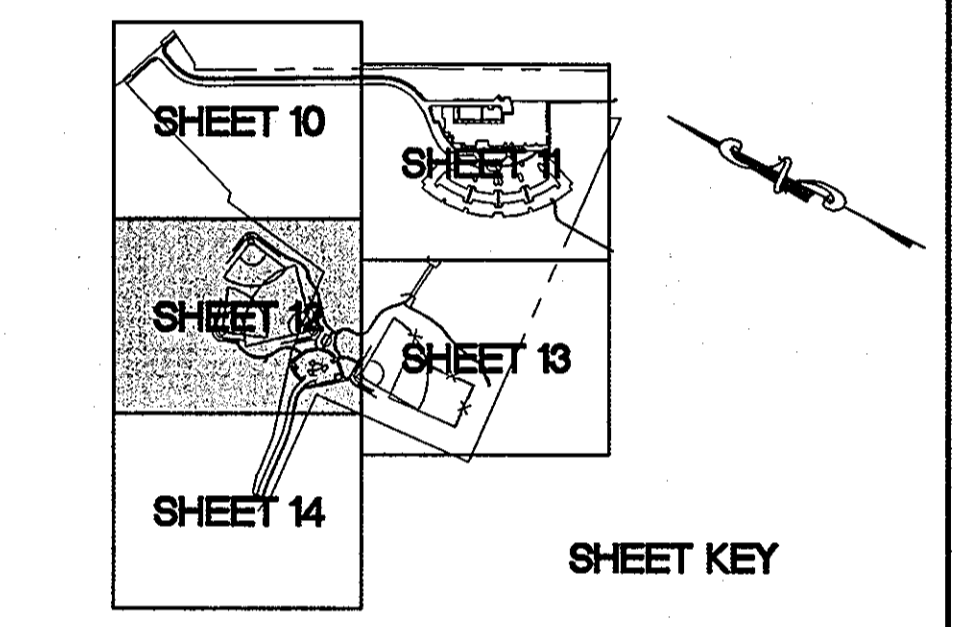


MATCH LINE SEE SHEET 11

MATCH LINE SEE SHEET 13

LEGEND

- PROP. BUILDING
- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- PROPERTY LINE AND RIGHT OF WAY
- FLOODPLAIN
- EX. TREELINE
- PROP. TREELINE
- EX. FOREST RETENTION AREA
- PROP. FOREST CONSERVATION ESMT
- FOREST NOT CLEARED OR PROTECTED
- EX. FOREST ESMT TO BE ABANDONED
- FOREST CONSERVATION EASEMENT SIGNAGE
- SOILS
- 15-25% SLOPES
- >25% SLOPES



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas G. Butler 12/13/10
DIRECTOR DATE

Chris Demaree 11/12/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kathleen Smith 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
FOREST CONSERVATION PLAN

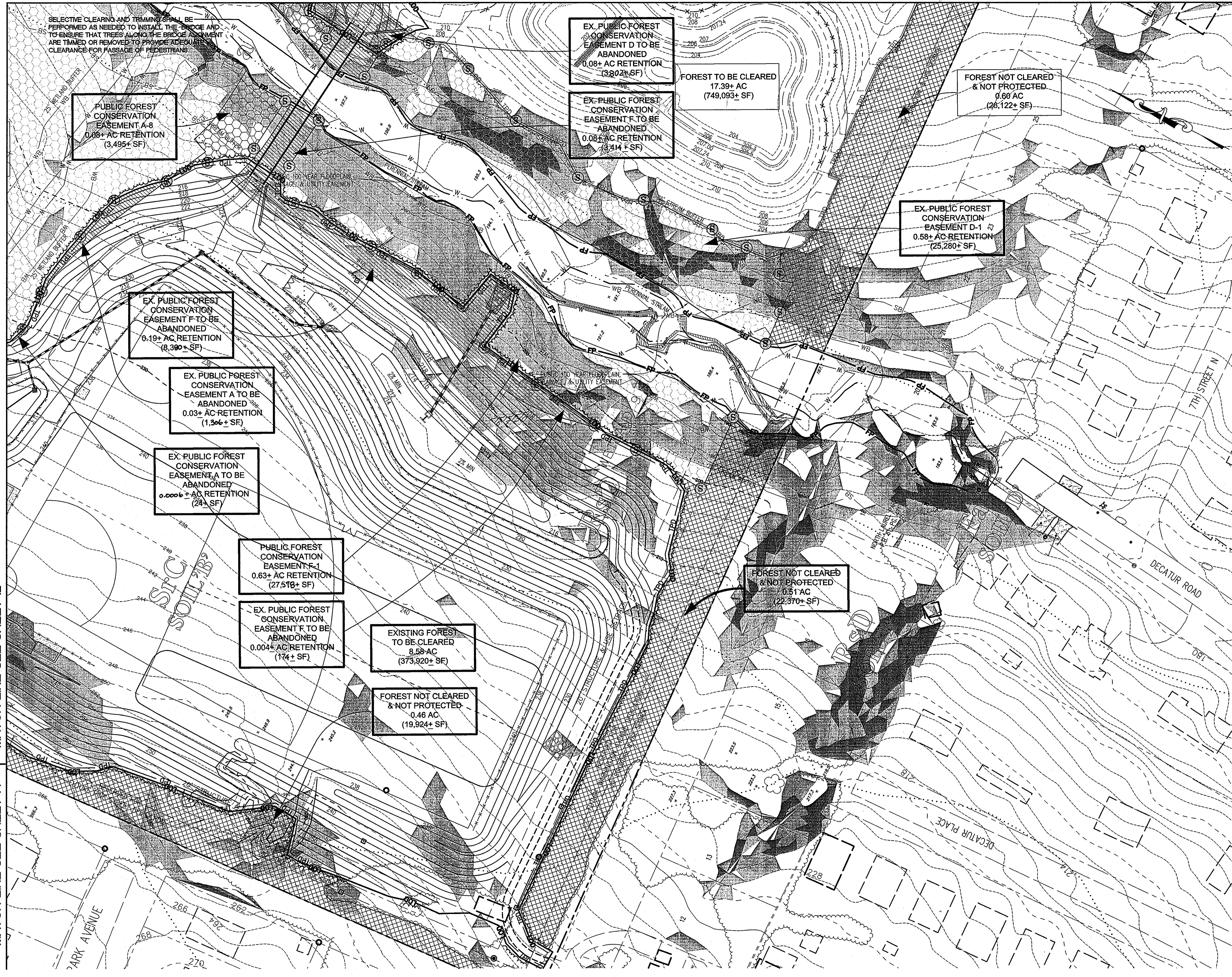
Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

DESIGNED BY : JSN
DRAWN BY : JSN
PROJECT NO : 14466-1-2
C400SDP12.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 12 OF 43

MATCH LINE SEE SHEET 14

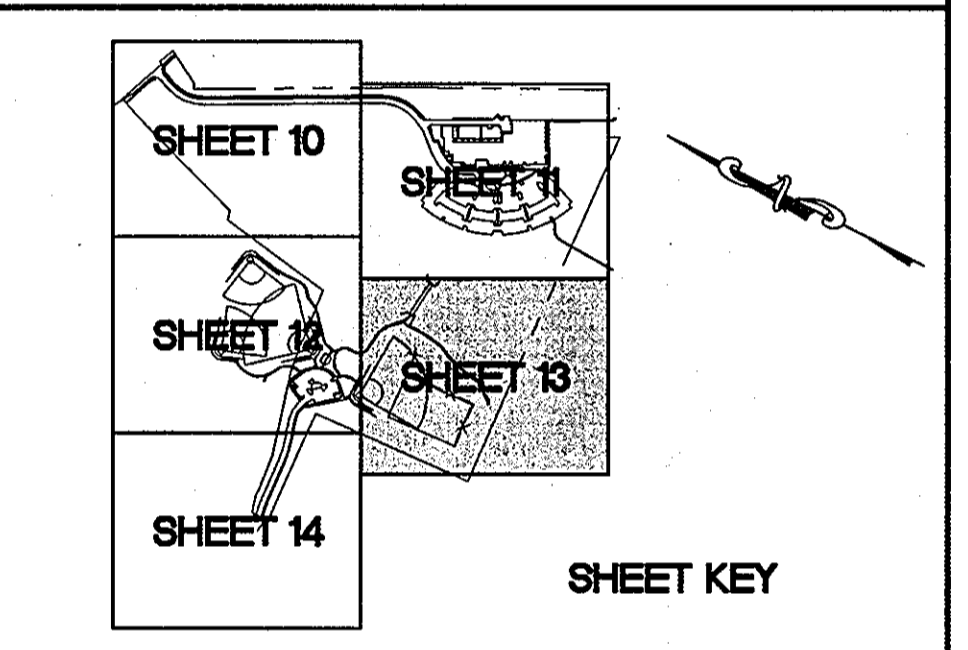
MATCH LINE SEE SHEET 11



LEGEND

LIMIT OF DISTURBANCE	— LD —
TREE PROTECTION FENCE	— TPD —
PROPERTY LINE AND RIGHT OF WAY	— —
FLOODPLAIN	— FP —
EX. TREELINE	— —
PROP. TREELINE	— —
EX. FOREST RETENTION AREA	[Pattern]
PROP. FOREST CONSERVATION ESMT	[Pattern]
FOREST NOT CLEARED OR PROTECTED	[Pattern]
EX. FOREST ESMT TO BE ABANDONED	[Pattern]
FOREST CONSERVATION EASEMENT SIGNAGE	[Symbol]
SOILS	MrE
15-25% SLOPES	[Pattern]
>25% SLOPES	[Pattern]

NOTES:
1. SEE RED LINE REVISION OF SDP-08-118 FOR GRADING AND TRAIL CONNECTIONS TO THE EAST SIDE OF THE PROPERTY.



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Morgan S. Ruttle 12/13/10
DIRECTOR DATE

John DeWitt 11/18/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kevin L. Smith 12/19/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

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PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA
TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
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TITLE
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SEAL

DESIGNED BY : JSN
DRAWN BY : JSN
PROJECT NO : 14466-1-2
C400SDP13.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 13 OF 43

Peter J. Stone 9.9.10
PETER J. STONE #3068

MATCH LINE SEE SHEET 14

SEQUENCE OF OPERATIONS

- PRE-CONSTRUCTION
- FIELD STAKE LIMITS OF DISTURBANCE (L.O.D.) AT 25' INTERVALS.
 - REVIEW L.O.D. IN FIELD AND ADJUST IF PRACTICAL.
 - INSTALL TREE PROTECTION FENCE AT THE L.O.D. AND IMPLEMENT TREE PROTECTION METHODS AS SHOWN.
 - CLEAR AND GRUB AS NECESSARY TO FACILITATE ROOT PRUNING TO A DEPTH OF 2-3 FEET WITHIN THE LIMITS OF THE PROPOSED FOREST RETENTION AREA AND AROUND SPECIMEN TREES TO BE SAVED. CLEAR REMAINING TREES IN A WAY THAT "SAVE TREES" ARE NOT DISTURBED. GRIND STUMPS 12" IN DIAMETER AND LARGER THAT ARE WITHIN 25' OF THE L.O.D.
 - DO NOT ATTEMPT TO SAVE TREES WITHIN 25' FROM THE L.O.D. UNLESS, IN THE OPINION OF THE CONSULTING ARBORIST, THEY HAVE A 75% CHANCE OR BETTER OF SURVIVAL.
 - PRUNE AND FERTILIZE DESIRABLE 'EDGE TREES' AS PER CONSULTING ARBORIST'S RECOMMENDATIONS AND DETAILS PROVIDED ON THIS SHEET.
 - THERE SHALL BE NO STAGING, STORAGE, OR STOCKPILING OF MATERIALS OUTSIDE OF THE L.O.D.
 - REMOVE OR TREAT WITH AN ACCEPTABLE METHOD, NOXIOUS PLANT MATERIAL SUCH AS MULTIFLORA ROSE, TEARthumb, AND JOHNSON GRASS BEFORE INSTALLING REFORESTATION PLANTS.
 - INSTALL TREE PROTECTION SIGNAGE.
 - STABILIZE ANY DISTURBED AREAS USING THE SPECIFIED STABILIZATION MIXTURE WHICH ALLOWS FOR NATURAL REVEGETATION OF FOREST COMMUNITIES.

FOREST CONSERVATION PROGRAM

I. OBJECTIVE:
IT IS THE OBJECTIVE OF THE FOREST CONSERVATION PLAN OF NORTH LAUREL PARK TO RETAIN ENVIRONMENTAL INTEGRITY BY PRESERVING EXISTING WOODED AREAS.

II. PRESERVATION:
FOREST PRESERVATION AREAS SHALL BE PERMANENTLY PROTECTED BY FOREST CONSERVATION EASEMENTS.

III. GENERAL CONSTRUCTION NOTE:
THERE WILL BE NO STAGING OR STORING OF EQUIPMENT OUTSIDE THE LIMIT OF DISTURBANCE.

IV. POST CONSTRUCTION MANAGEMENT PRACTICE:
A TWO-YEAR POSTED CONSTRUCTION AND MANAGEMENT PROGRAM TO ENSURE FOREST HEALTH IS REQUIRED AND INCLUDES THE FOLLOWING:

- MAINTENANCE OF SIGNS, FENCES, AND TREE PROTECTION DEVICES TO PREVENT UNWARRANTED INTRUSION AND DAMAGE.
- CAREFUL REMOVAL OF ALL TEMPORARY STRUCTURES AFTER CONSTRUCTION.
- ROUTINE INSPECTIONS OF FOREST CONSERVATION EASEMENTS.
- ROUTINE INSPECTIONS AND MAINTENANCE OF REFORESTATION AREAS.

GENERAL NOTES

- THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL TOPOGRAPHIC SURVEY PREPARED BY VIRGINIA RESOURCE MAPPING DATED MARCH 31, 2006, AND FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED APRIL 24, 2008. BOUNDARY SURVEY WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED DECEMBER 12, 2006.
- NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
- NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
- THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY.
- ONE EXISTING BUILDING IS PRESENT ON THE SITE.
- THE SOILS ON SITE ARE CHILLUM-RUSSETT LOAMS (2-5% SLOPES) - ChB, CODORUS AND HATBORO SOILS (0-2% SLOPES) - Cp, EVESBORO LOAMY SAND (2-10% SLOPES) - Ebc, FALLSINGTON SANDY LOAM (0-2% SLOPES) - Fc, LEGORE SILT LOAM (8-15% SLOPES) - LeC, RUSSETT FINE SANDY LOAM (2-5% SLOPES) - Rsb, RUSSETT FINE SANDY LOAM (5-10% SLOPES) - Rsc, RUSSETT FINE SANDY LOAM (10-15% SLOPES) - Rsd, RUSSETT AND BELTSVILLE SOILS (2-5% SLOPES) - RuB, SASSAFRAS LOAM (2-5% SLOPES) - SoB, SASSAFRAS AND CROOM SOILS (5-10% SLOPES) - SrC, SASSAFRAS AND CROOM SOILS (15-25% SLOPES) - Sre, URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (0-5% SLOPES) - Ucb, URBAN LAND-CHILLUM-BELTSVILLE COMPLEX (5-15% SLOPES) - Ucd, URBAN LAND-FALLSINGTON COMPLEX (0-2% SLOPES) - Ufa, URBAN LAND-SASSAFRAS-BELTSVILLE COMPLEX (0-5% SLOPES) - Ufb, URBAN LAND-UDORTHERTS COMPLEX (0-15% SLOPES) - Uld, URBAN LAND-WOODSTOWN-SASSAFRAS COMPLEX (5-10% SLOPES) - UlwC ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.
- THE FOREST STAND DELINEATION (FSD), DATED JUNE 2005 HAS BEEN PREPARED BY JOHNSON, MIRMIRAN, & THOMPSON.
- THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PRESERVING 18.85 ACRES OF ON-SITE RETENTION AND BY EXCEEDING THE BREAK-EVEN POINT OF 18.31 ACRES. NO FOREST CONSERVATION SURETY IS REQUIRED FOR THIS PROJECT AS IT IS A COUNTY PROJECT. 1.08 ACRES OF EXISTING FOREST RETENTION EASEMENT IS TO BE ABANDONED AND 0.34 ACRES OF NEW FOREST RETENTION EASEMENT IS TO BE ADDED.
- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE BOUNDARY OF THE PROPOSED FOREST CONSERVATION EASEMENTS ARE IDENTIFIED ON FINAL PLAT F-08-201 WITH BEARINGS AND DISTANCES UNDER PLAT NO.'S 20481-20486 AND F-10-97.
- ALL FOREST CONSERVATION SIGNS ARE TO BE PERMANENTLY INSTALLED.
- THERE ARE 0.77 ACRES (33,520 SF) OF STEEP SLOPE AREA WITHIN THE PROJECT SITE.
- WAIVER PETITION WP-10-133 WAS APPROVED ON MAY 3, 2010 TO ALLOW OFF SITE FOREST CLEARING OF 0.07 ACRES (3,114 SF) ON THE NEIGHBORING LAUREL WOODS ELEMENTARY SCHOOL SITE (PARCEL 782) BASED ON SECTION 16.1202.b.1.3. OF THE HOWARD COUNTY ZONING REGULATIONS.
- A FOREST STAND DELINEATION WAS SUBMITTED FOR THIS PROPERTY UNDER SDP-08-118.
- THE 0.19 ACRES OF FOREST CONSERVATION BEING REMOVED WITH REVISION #4 IS BEING MITIGATED BY THE FOREST BANK AT THE PRESERVE AT CLARKSVILLE, F-06-072.

FOREST CONSERVATION SEQUENCE OF OPERATIONS

- Prior to beginning any grading operations on this site or on a respective lot, there may be a preconstruction meeting held at the site which is to include the Contractor and representatives from Patton Harris Rust & Associates, Inc. (PHR+A). The Howard County Department of Planning and Zoning (DPZ) and the owner will be notified by the Contractor as to the time and place of the field meeting, should they wish to send a representative. The purpose of this meeting will be to review the approved FCP and to field verify the correct Limits of Disturbance (LOD).
- The Limits of Disturbance (LOD) pertinent to the preservation of wooded areas shall be staked in the field with final adjustments being made as necessary to insure adequate protection of the Critical Root Zone of trees designated for retention. Stakes to be used shall be those specified for the "TREE PROTECTION DEVICE" to which approved protective material will be attached. Alternate means of defining the LOD may be used if approved by the DPZ.
- All forest retention areas shall be protected by highly visible, well anchored temporary protection devices (see detail), which shall be securely in place prior to any clearing or grading operations.
- Grading operations or other construction operations which could dislodge or otherwise damage the protective devices shall be avoided along the edges of the LOD lines if possible. Any protective devices which are damaged during site construction operations shall be properly repaired immediately by the Contractor.
- After site grading, retaining wall, and parking lot have been completed, all trees adjacent to the LOD line shall be inspected for indications of crown die-back (summer indicator), damage within respective critical root zones or any dead wood or other conditions which might be hazardous to pedestrians, buildings, utility lines vehicular access ways or parked vehicles.
- Should there be evidence of any damage to tree trunks, branches or the critical root zone of trees within the protected areas, or to isolated specimen trees to be preserved, the damage shall be examined within a period of two (2) days from the date of observation by a licensed tree care professional. Exposed roots should be covered immediately to a depth of 6 - 8 inches with soil, preferably mixed with 50% peat moss or leaf mold.
- Remove damaged, dead or dying trees or limbs only if the trees or limbs pose an immediate safety hazard to buildings, utility lines, vehicles, or access and egress drives or pedestrian areas. Trees designated for pruning or removal shall be pruned or removed using equipment and methods which will not damage or destroy adjacent large trees or understory trees or shrubs designated for retention.
- All temporary forest protection devices will be carefully removed after all general construction, necessary tree surgery, removal of debris, etc. regrading and reseeding of sediment and erosion control disturbance have been completed and acceptance and approval of the work and site conditions have been given by the DPZ.

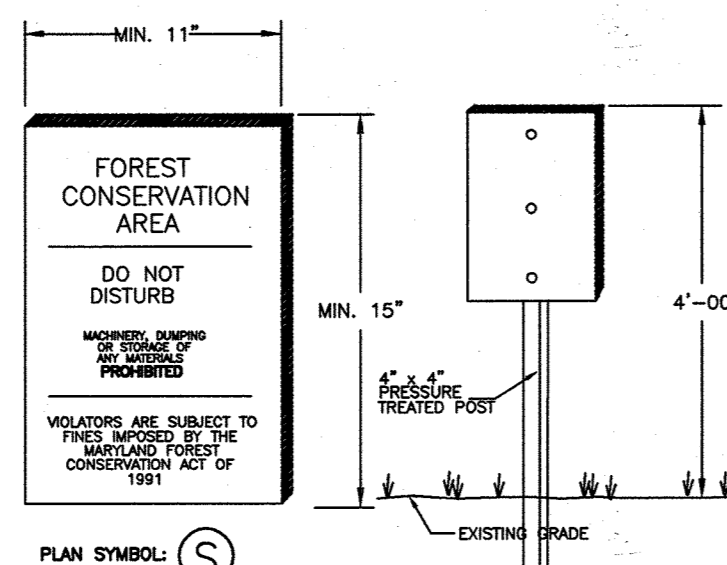
Howard County Forest Conservation Worksheet

Project Name: North Laurel Community Center - Updated Per SDP-10-010, Westside Mass Grading Plan
County File #: SDP-08-118
Date: February 25, 2010

Net Tract Area	Acres
A. Total Tract Area	52.36
B. Floodplain Area	1.45
C. Net Tract Area (A-B-C)	50.90
Land Use Category	
D. Afforestation Threshold (Net Tract Area X .15%)	7.64
E. Conservation Threshold (Net Tract Area X .20%)	10.18
Existing Forest Cover	
F. Existing Forest Cover within the Net Tract Area	55.81
G. Area of Forest Above Conservation Threshold	40.63
H. Break Even Point (Amount of forest that must be retained so that no mitigation is required)	18.31
I. Forest Clearing Permitted Without Mitigation	32.50
J. Total Area of Forest to be Cleared	31.96
K. Total Area of Forest to be Retained	18.85
Planting Requirements	
L. Reforestation for Clearing Above the Conservation Threshold	0.00
M. Reforestation for Clearing Below the Conservation Threshold	0.00
N. Credit for Retention Above the Conservation Threshold	8.67
P. Total Reforestation Required (L + M - N)	0.00
Q. Total Afforestation Required	0.00
R. Total Planting Requirement (P + Q)	0.00

*TOTAL TRACT AREA OF 52.36 ACRES REPRESENTS 52.17 ACRES ON-SITE, 0.11 ACRES OF OFF-SITE DISTURBANCE FOR THE MEREDITH AVENUE UTILITY CONNECTIONS (SEE SHEET 34 OF SDP-08-118), AND 0.07 ACRES OF OFF-SITE FOREST CLEARING FOR THE LAUREL WOODS ELEMENTARY SCHOOL BALL FIELDS.

**THE TOTAL FOREST AREA ALSO INCLUDES 0.11 ACRES OF OFF-SITE DISTURBANCE FOR THE MEREDITH AVENUE UTILITY CONNECTIONS (SEE SHEET 34 OF SDP-08-118) AND 0.07 ACRES FOR THE OFF-SITE DISTURBANCE FOR THE LAUREL WOODS ELEMENTARY SCHOOL BALL FIELDS.



FOREST CONSERVATION & REFORESTATION SIGN DETAIL
NOT TO SCALE

UPDATED FOREST CONSERVATION EASEMENT TABLE

CONSERVATION TYPE	AREA	NEW ACRES	NEW SF
1. ON-SITE RETENTION	A-1	14.04	611,738
	A-2	0.06	2,417
	A-3	0.005	239
	A-4	0.17	7,516
	A-5	0.01	486
	A-6	0.09	3,928
	A-7	0.11	4,665
	A-8	0.08	3,495
	A-9	0.21	9,124
	D-1	0.09	3,928
	D-1	0.30	13,067
	C-1	0.20	8,880
	C-1	0.23	9,980
	C-2	0.06	2,700
	D-1	0.58	25,280
	E-1	0.03	1,289
	F-1	0.63	27,516
TOTAL ON-SITE RETENTION		18.66	812,896

SDP-08-118 FOREST CONSERVATION EASEMENT TABLE

CONSERVATION TYPE	AREA	ACRES	SF
1. ON-SITE RETENTION	A	14.11	614,790
	B	1.89	82,281
	C	0.29	12,732
	D	0.67	29,086
	E	0.65	28,370
	F	0.90	39,376
TOTAL ON-SITE RETENTION		18.51	806,635

***** NOTE *****
THE FOREST CONSERVATION EASEMENTS SHOWN ON F-08-201 AND THE FOREST CONSERVATION PLANS INCORPORATED WITH SDP-10-010 SUPERSEDE THE FOREST CONSERVATION SHOWN ON SDP-08-118.

FOREST STAND SUMMARY TABLE

STAND NO.	SIZE (acres)	# LARGE TREES	SENSITIVE ENVIRONMENT (acres)	STRUCTURE DIVERSITY VALUE	STAND AGE (years)	BASAL AREA (sf/acre)
1	25.0	0	0.9	15-priority	35-40	126
2	4.0	1	2.0	16-priority	60-80	110
3	15.0	0	0.6	15-priority	60-80	120
4	9.0	4	2.0	14-good	60-80	120
5	4.0	6	4.3	14-good	40-60	70

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Suttle 12/13/10
DIRECTOR DATE

John W. ... 1/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walt ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

11/12/10 4 ADJUSTED FOREST CONSERVATION TABLES FOR POOL ADDITION, PLAYGROUND EXPANSION AND AMENDED FOREST CONSERVATION EASEMENTS.

DATE NO. REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
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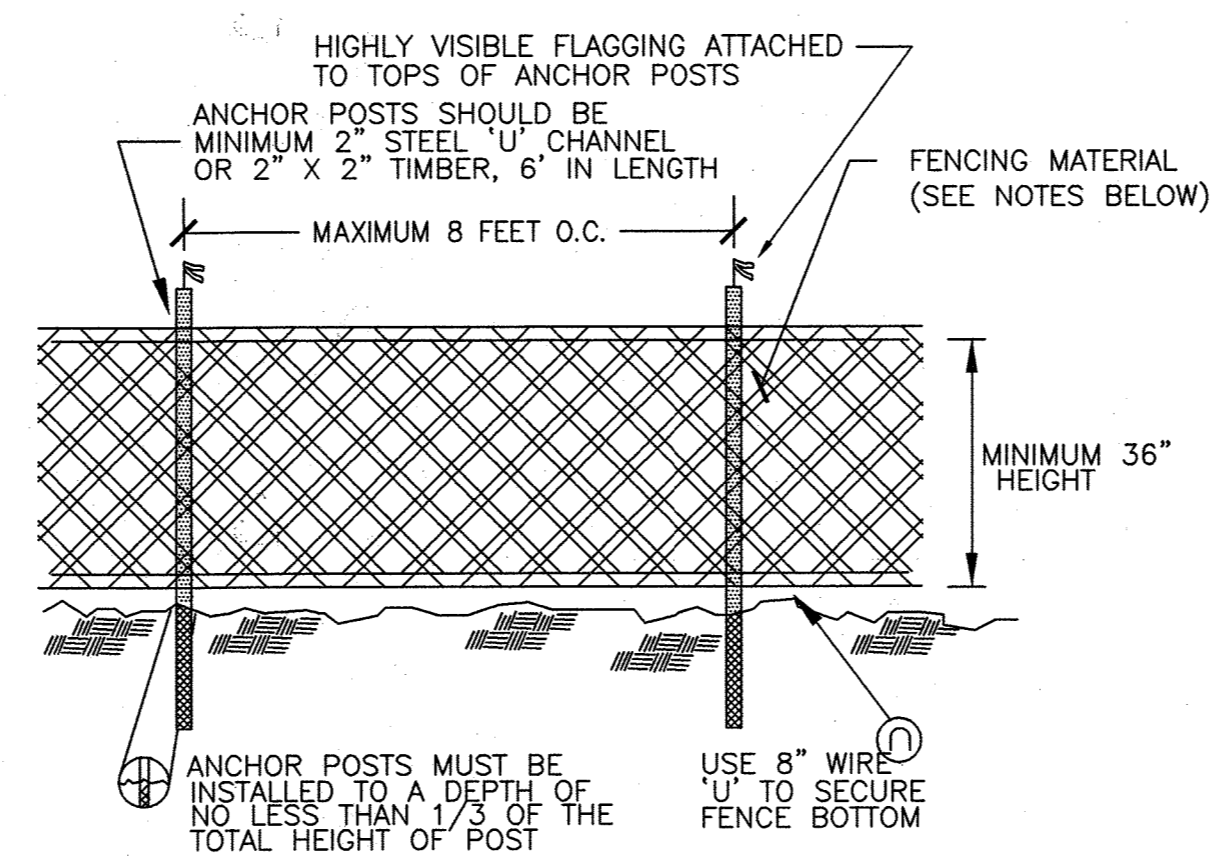
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CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE FOREST CONSERVATION NOTES & DETAILS

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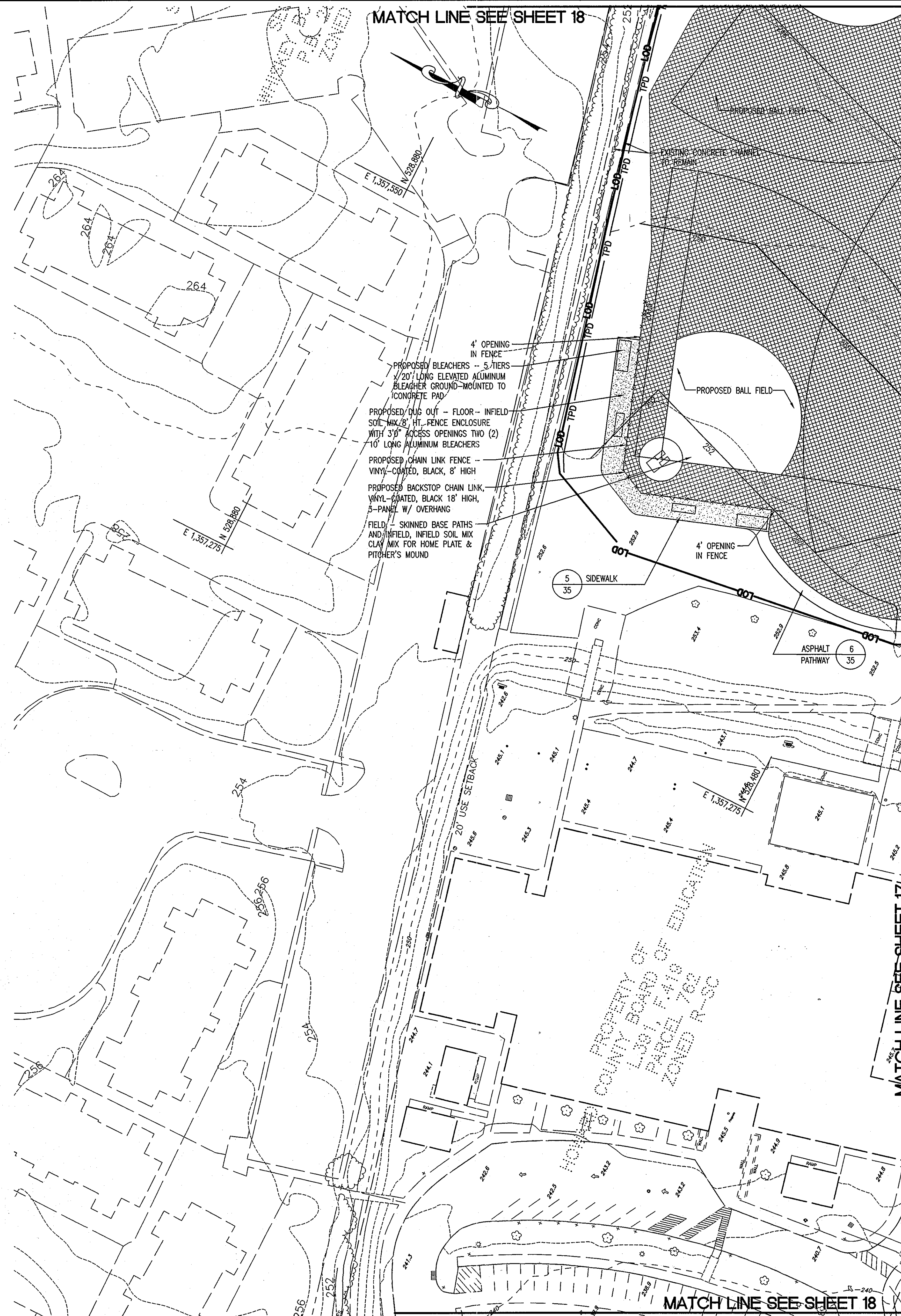
- NOTES:**
- BLAZE ORANGE MESH OR SUPER SILT FENCE FOR TREE PROTECTION DEVICE, ONLY.
 - BOUNDARIES OF PROTECTION AREA WILL BE ESTABLISHED PRIOR TO GRADING AND SEDIMENT CONTROL.
 - AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
 - FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCING
NOT TO SCALE

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS (Dwellings w/ Basements)	EROSION HAZARD	HYDRIC (Yes/No)	SLOPE (%)
ChB	Chillum-Russett Loams	Not limited	Low	No	2-5
Cp	Codorus and Hatboro Soils	Frequently flooded	Low	Yes	0-2
Ebc	Evesboro Loamy Sand	Somewhat limited	Moderate	No	2-10
Fa	Fallsington Sandy Loam	Very limited	Low	Yes	0-2
LeC	Legore Silt Loam	Very limited	Moderate	No	8-15
Rsb	Russett Fine Sandy Loam	Very limited	Low	No	2-5
Rsc	Russett Fine Sandy Loam	Very limited	Moderate	No	5-10
Rsd	Russett Fine Sandy Loam	Very limited	Moderate	No	10-15
RuB	Russett and Beltsville Soils	Very limited	Low	No	2-5
SoB	Sassafras Loam	Not limited	Low	No	2-5
SrC	Sassafras and Croom Soils	Somewhat limited	Moderate	No	5-10
Sre	Sassafras and Croom Soils	Somewhat limited	Severe	Yes	15-25
Ucb	Urban Land - Chillum - Beltsville Complex	Not rated	Low	No	0-5
Ucd	Urban Land - Chillum - Beltsville Complex	Not rated	Moderate	No	5-15
Ufa	Urban Land - Fallsington Complex	Not rated	Low	Yes	0-2
Ufb	Urban Land - Sassafras - Beltsville Complex	Not rated	Low	No	0-5
Uld	Urban Land - Udorthents Complex	Not rated	Moderate	No	0-15
UlwC	Urban Land - Woodstown - Sassafras Complex	Not rated	Moderate	No	5-10

SOURCE: SOIL INFORMATION TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.



LEGEND

- PROPERTY LINE
- 380 --- EXISTING 10' CONTOURS
- 378 --- EXISTING 2' CONTOURS
- 380 --- PROPOSED 10' CONTOURS
- 378 --- PROPOSED 2' CONTOURS
- ==== EXISTING CURB AND GUTTER
- ==== PROPOSED CURB & GUTTER
- EX. 48" RCP --- EXISTING STORM DRAIN
- 15'D --- PROPOSED STORM DRAIN
- SETBACK LINES
- ▨ PROPOSED P-3 PAVING (HO. CO. DETAIL R-2.01)
- ☆ PROPOSED LIGHT POLE
- ☆ EXISTING LIGHTING
- EX. TREELINE
- PROPOSED TREELINE
- FP --- FLOODPLAIN
- SB --- STREAM BUFFER
- W --- WETLANDS
- WB --- WETLAND BUFFER
- TPD --- TREE PROTECTION FENCE
- LOD --- LIMIT OF DISTURBANCE
- ▨ PROPOSED SOD (ALTERNATE)

NOTES:

1. SEE SHEET 2 FOR OVERALL SITE DEVELOPMENT PLAN.
2. SEE SEPARATE PLANS PREPARED BY MAHAN RYKIEL ASSOCIATES INC. FOR LAYOUT AND DETAILS OF BALL FIELDS.
3. SEEDING IS BASE BID. SOD IS BID ALTERNATE #3 FOR SCHOOL BALL FIELDS AND BID ALTERNATE #4 FOR COUNTY BALL FIELDS.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Thomas J. Butler</i>	12/13/10
DIRECTOR	DATE
<i>Chris Demme</i>	11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Kurt Schumacher</i>	12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DATE NO.	REVISION
OWNER	
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
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SITE DEVELOPMENT PLAN	
Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
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DRAWING NO. 16 OF 43	

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LEGEND

EX. GRND. AT CENTER LINE -----

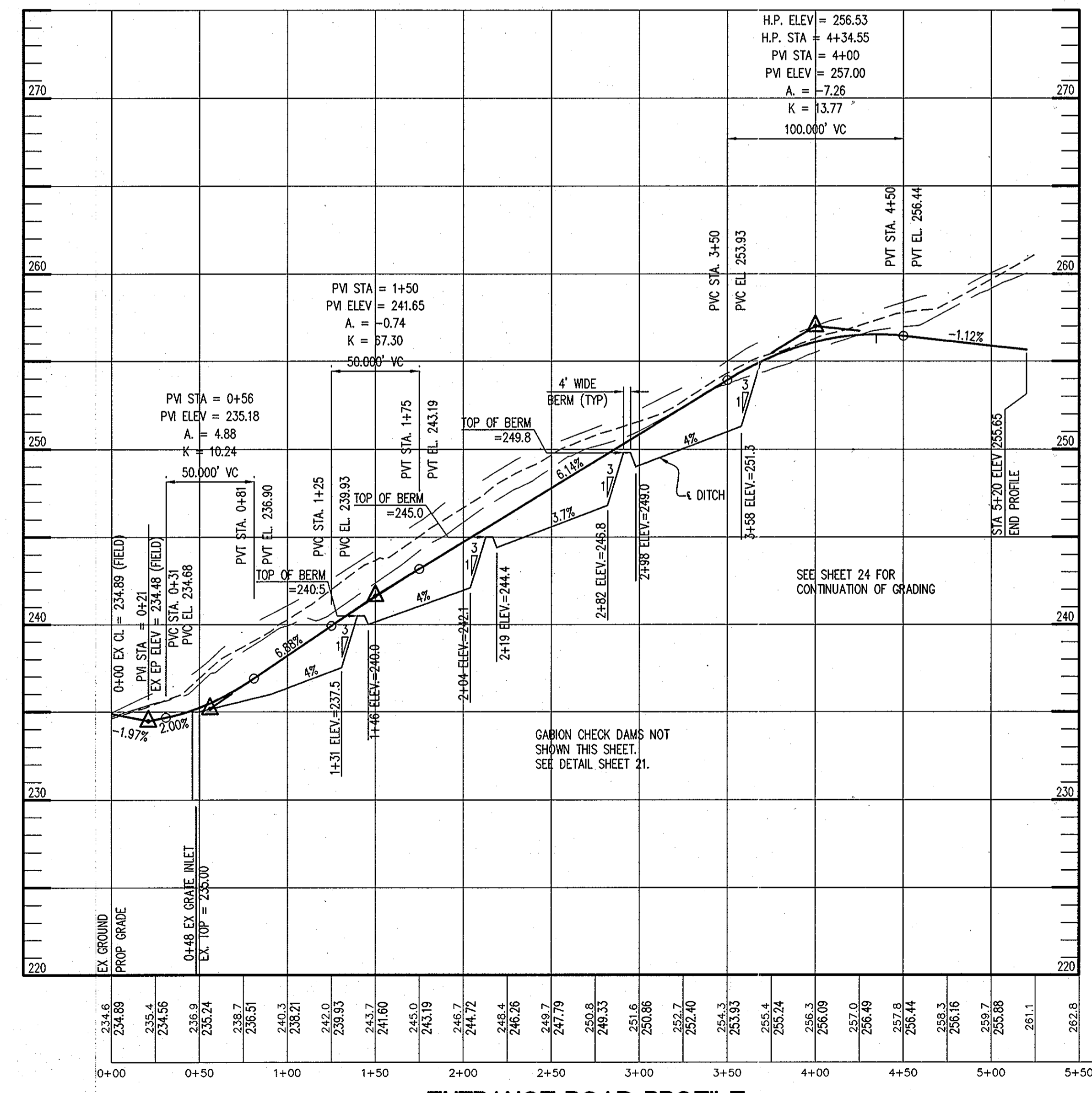
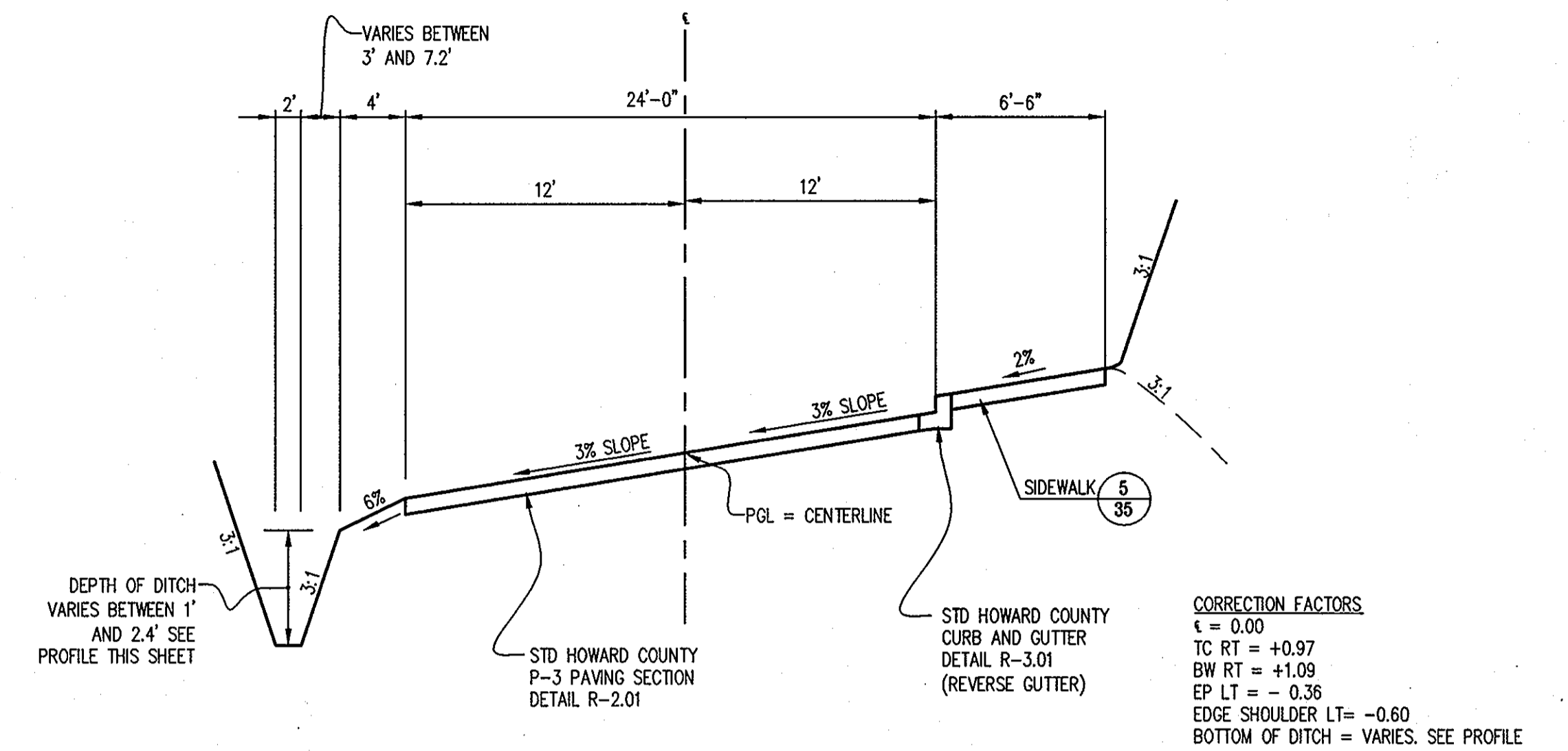
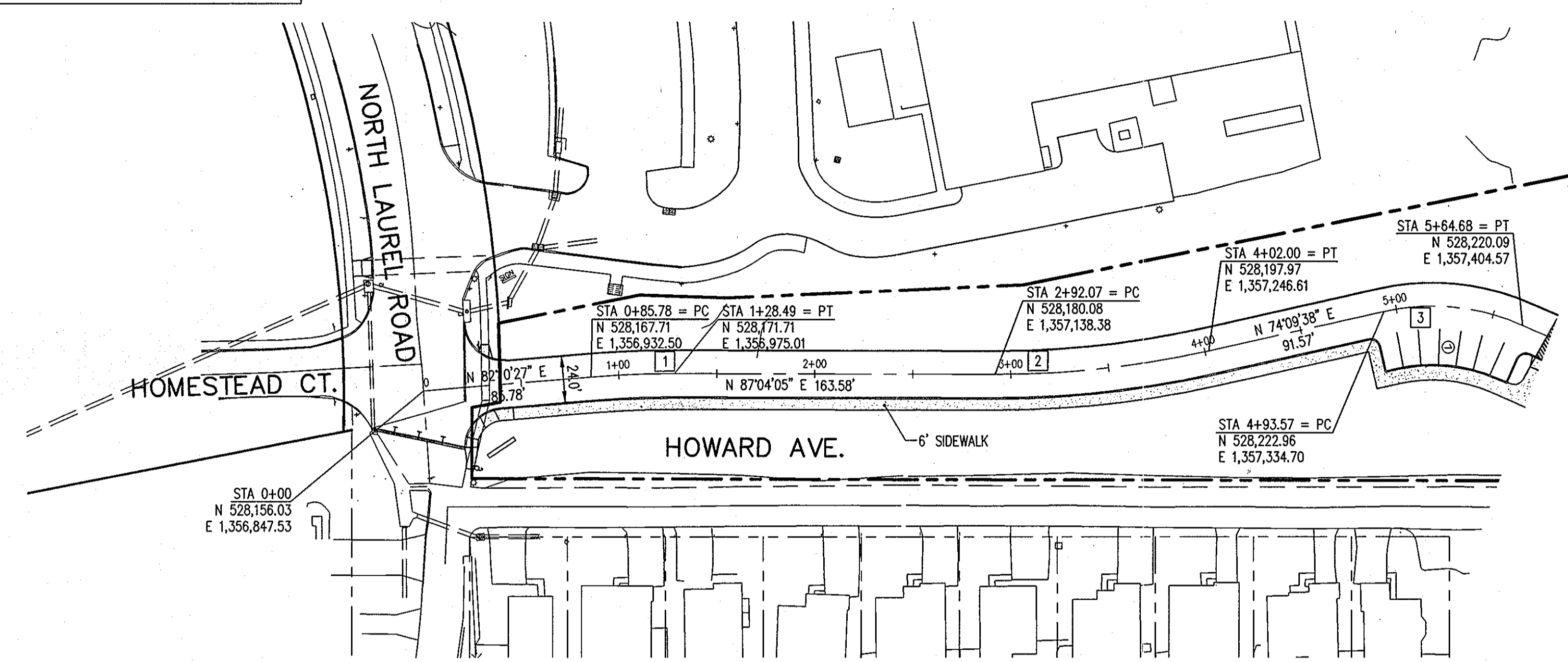
EX. GRND. 20' RIGHT -----

EX. GRND. 20' LEFT -----

PROP. GRADE AT CENTER LINE -----

CURVE DATA TABLE

CURVE NO.	DELTA	RADIUS	ARC	TAN	CHD. BRG.	CHD. LEN.
1	04°53'38"	500.00	42.71	21.37	N84°37'16"E	42.70
2	12°54'27"	488.00	109.94	55.20	N80°36'52"E	109.70
3	36°22'46"	112.00	71.11	36.80	S87°38'59"E	69.93



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Morgan S. Fiddle 12/13/10
DIRECTOR DATE

William J. ... 11/12/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Ken ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE GRADE ESTABLISHMENT PLAN
ENTRY ROAD FROM NORTH LAUREL ROAD

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL 9-21-10

DESIGNED BY: SCM

DRAWN BY: SGM

PROJECT NO: 14466-1-2
C400SDP19.DWG

DATE: SEPTEMBER 7, 2010

SCALE: AS SHOWN

DRAWING NO. 19 OF 43

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 18

SELECTIVE CLEARING AND TRIMMING SHALL BE PERFORMED AS NEEDED TO INSTALL THE BRIDGE AND TO ENSURE THAT TREES ALONG THE BRIDGE ALIGNMENT ARE TRIMMED OR REMOVED TO PROVIDE ADEQUATE CLEARANCE FOR PASSAGE OF PEDESTRIANS

INFILTRATION BERM (TYP OF 4) SEE DETAIL SHEET 22

FOREBAY BOTTOM ELEV=232.00 APPROX 6 LF MSHA CL. I UNGROUTED RIP RAP @ 0.0% SLOPE. PLACE 18" DEEP ON CLASS "SE" FILTER FABRIC (NON-WOVEN) PROVIDE 3'x1' GROUTED CUTOFF WALL AT END D₅₀=8" Q₁₀=1.85 cfs V₁₀=0.23 FPS WIDTH = 6 LF AT END SEE DETAIL SHEET 6

GABION WALL TOP OF WALL=232.70 SEE DETAIL SHEET 22

PROPOSED 12' WIDE SHM ACCESS ROAD

WATER QUALITY WSEL=233.00 APPROX 8 LF MSHA CL. I UNGROUTED RIP RAP @ 0.0% SLOPE. PLACE 18" DEEP ON CLASS "SE" FILTER FABRIC (NON-WOVEN) PROVIDE 3'x1' GROUTED CUTOFF WALL AT END. D₅₀=9" Q₁₀=7.5 cfs V₁₀=5.08 FPS WIDTH = 5 LF AT END SEE DETAIL SHEET 6

BIORETENTION FACILITY No. 1 TOP OF FILTER=232.00 SEE SHI 22 FOR DETAIL

6" PEK GRAVEL LAYER

1-YR WSEL=212.33 (CLOGGED)
10-YR WSEL=214.62 (CLOGGED)
100-YR WSEL=215.54 (CLOGGED)

SETTLED TOP OF 10' WIDE EMBANKMENT=218.00

STA 4+78 END CORE TRENCH

CHECK DAM NO. 3

CHECK DAM NO. 2

MATCH LINE SEE SHEET 18

LEGEND

- PROPERTY LINE
- - - - - EXISTING 10' CONTOURS
- - - - - EXISTING 2' CONTOURS
- 380 — PROPOSED 10' CONTOURS
- 378 — PROPOSED 2' CONTOURS
- EXISTING CURB AND GUTTER
- PROPOSED CURB & GUTTER
- EX. 48" RCP — EXISTING STORM DRAIN
- 15" HDPE — PROPOSED STORM DRAIN
- 6" S — PROPOSED SANITARY SEWER
- PROP. 8" W — PROPOSED PUBLIC WATER
- SETBACK LINES
- PROPOSED PUBLIC WATER AND UTILITY EASEMENT
- PROPOSED BIORETENTION FILTER MEDIA
- ☆ PROPOSED LIGHT POLE
- ☆ EXISTING LIGHTING
- EX. TREELINE
- PROPOSED LIMIT OF CLEARING
- FP — FLOODPLAIN
- SB — STREAM BUFFER
- W — WETLANDS
- WB — WETLAND BUFFER
- 15' NON-WOODY BUFFER

NOTE:

SEE SHEET 6 FOR INITIAL POND EMBANKMENT AND BARREL CONSTRUCTION

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Morgan & Sullivan 12/18/10
DIRECTOR DATE

John Danvers 11/18/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Vaughan 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **STORMWATER MANAGEMENT AND UTILITY PLAN**

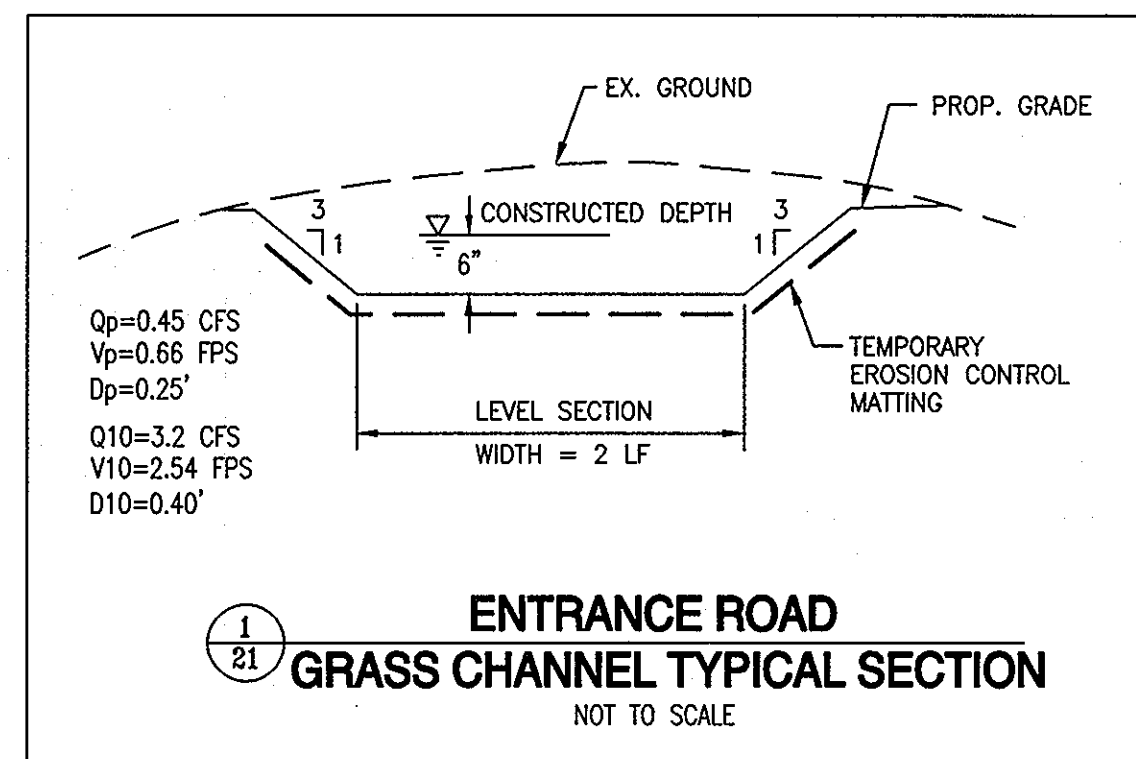
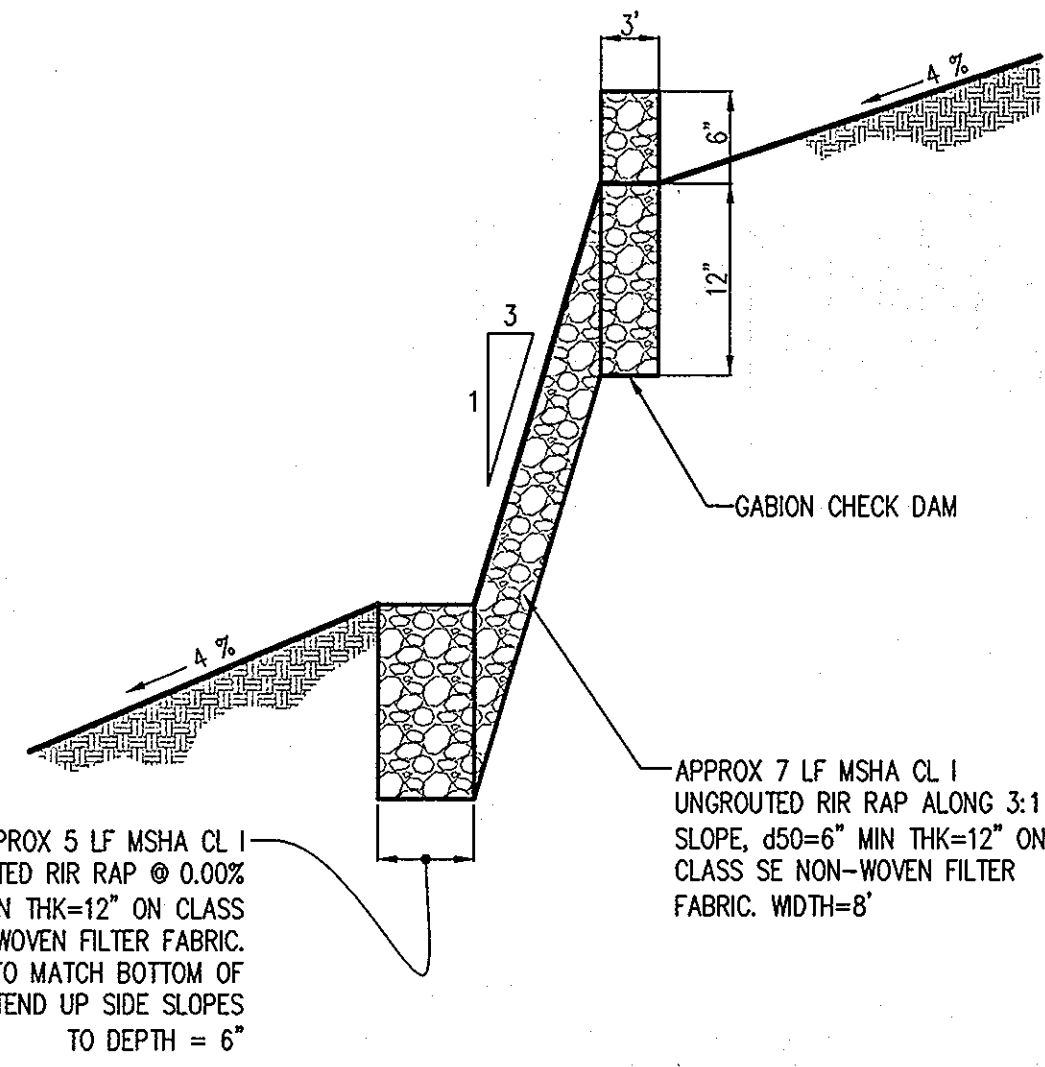
Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL 9-21-10

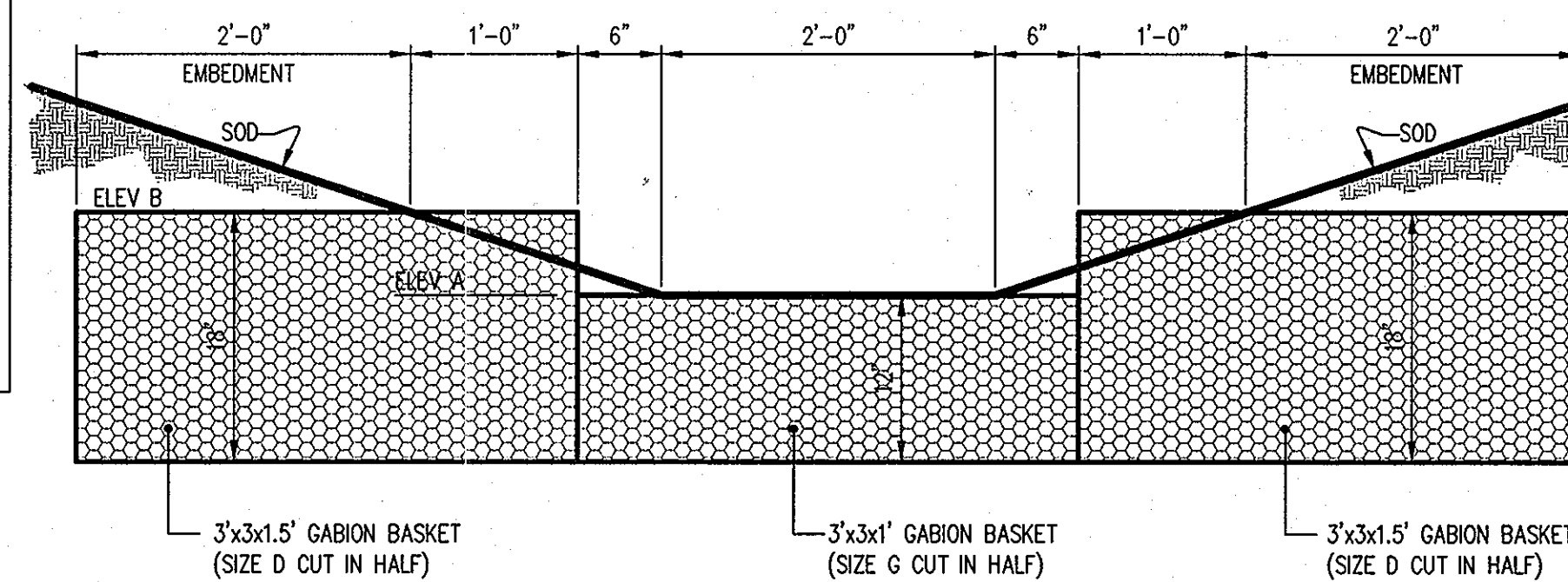
DESIGNED BY : SCM
DRAWN BY : JSN
PROJECT NO : 14466-1-2
C400SDP20.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 20 OF 43

BY: *David M. Rust*
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. 3384, EXPIRATION DATE: 01-24-11

P:\Project\14466\1-2\PLANS\C400SDP20.DWG



CHECK DAM	ELEV A	ELEV B
1	240.00	240.50
2	244.40	244.90
3	249.00	249.50

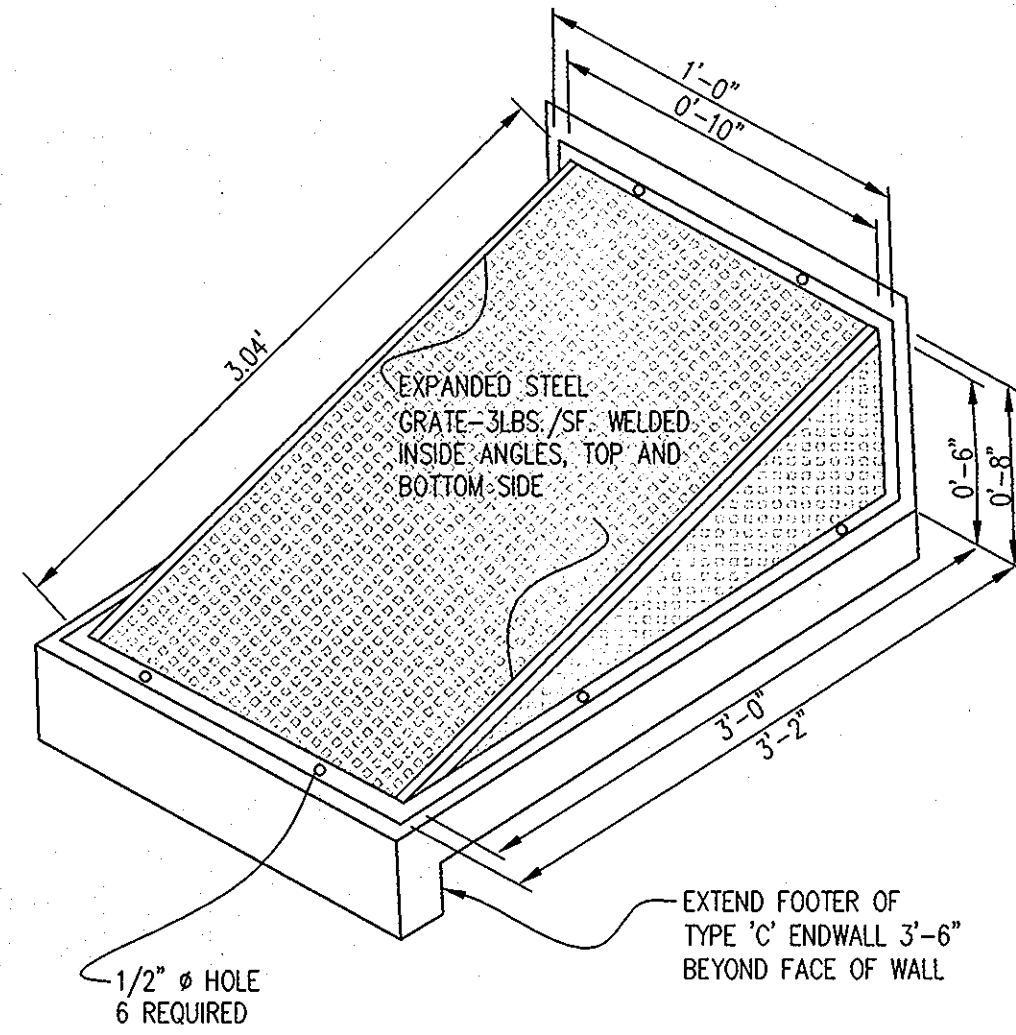


SWM STRUCTURE SCHEDULE							
NUMBER	TYPE	LOCATION		TOP ELEVATION		SIZE	REMARKS
		NORTHING	EASTING	UPPER	LOWER		
S-1	TYPE C ENDWALL	527,719.9327	1,357,980.0303	196.75	*	DIA = 24"	D-5.21
S-2	4'-0" MANHOLE	527,723.8415	1,357,919.8268	212.86	*	DIA = 4'-0"	G-5.12
S-3	CONTROL STRUCTURE	527,727.5629	1,357,871.0845	218.00	*	4' x 4'	SEE DETAIL THIS SHEET
S-4	TYPE C ENDWALL	527,730.2731	1,357,863.5375	211.08	*	DIA = 4"	D-5.21 USE SPEC FOR D-12" MODIFY H=13"

NOTES

- 1) ALL STRUCTURES ARE HOWARD COUNTY STANDARDS UNLESS NOTED OTHERWISE. CONTRACTOR MAY USE PRECAST STRUCTURE WHERE AVAILABLE TO MEET THE STANDARD STRUCTURE SPECIFIED.
- 2) STATIONS ARE GIVEN TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE.

SECTION THROUGH CHECK DAM
SCALE: HOR: 1" = 10'
VERT: 1" = 1'

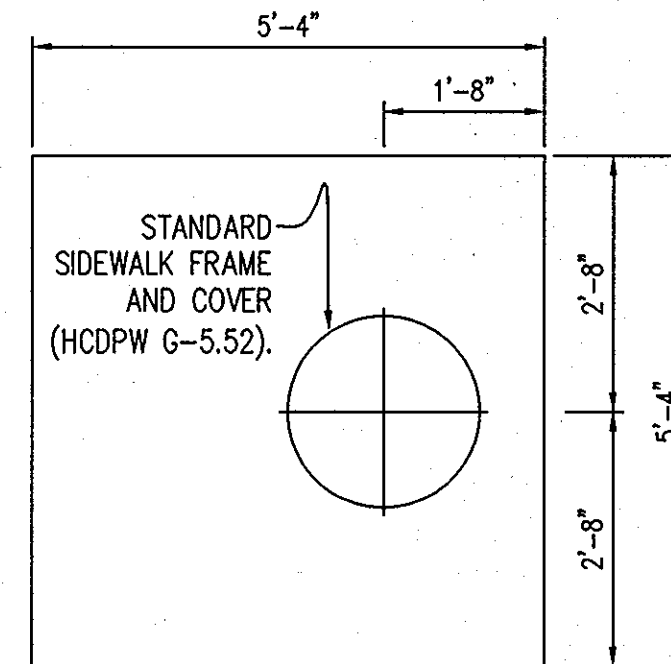


GENERAL NOTES FOR TRASH RACK

1. STEEL TO CONFORM TO ASTM A-36.
2. ALL SURFACES OF TRASH RACK MUST BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. TRASH RACK TO BE FASTENED TO WALL WITH 1/2" MASONRY ANCHORS TRASH RACK TO BE REMOVABLE.
4. TRASH RACK TO BE CENTERED OVER OPENING.
5. TRASH RACK SHALL BE PAINTED BATTLESHIP GREY.

LOW FLOW TRASH RACK DETAIL
(NOT TO SCALE)

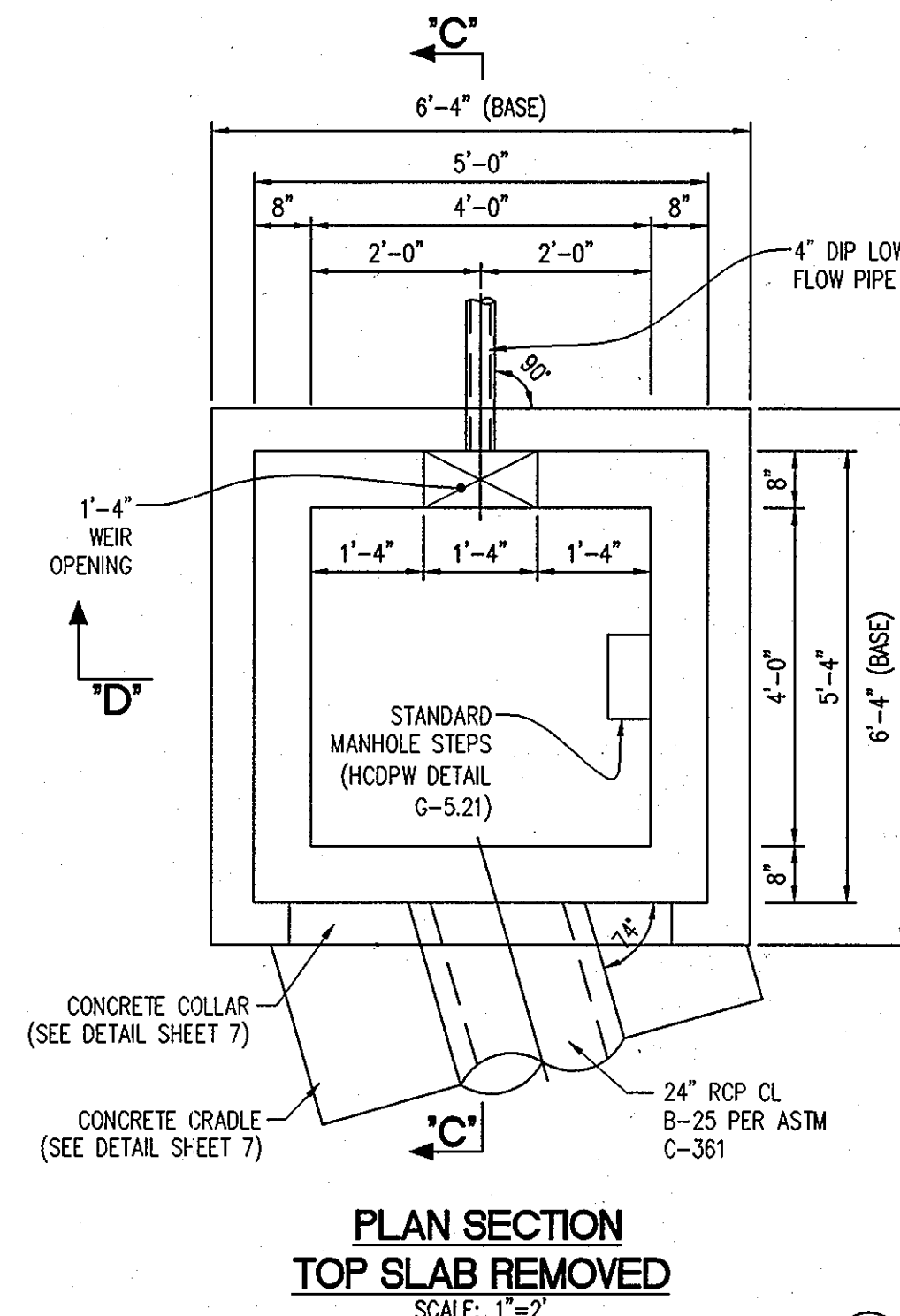
CHECK DAM DETAIL
SCALE: 1" = 1'



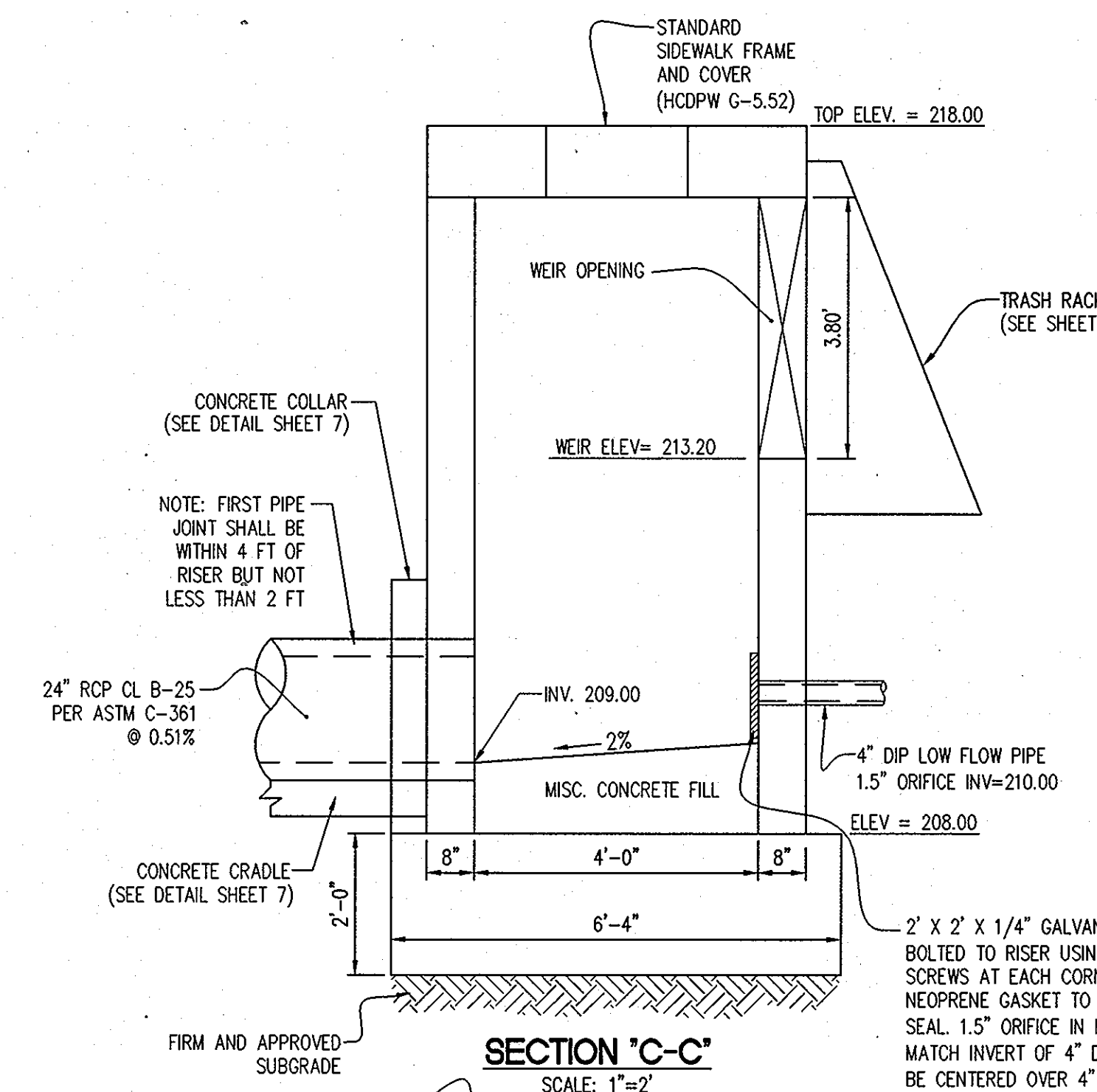
TOP SLAB
SCALE: 1" = 2'

RISER GENERAL NOTES:

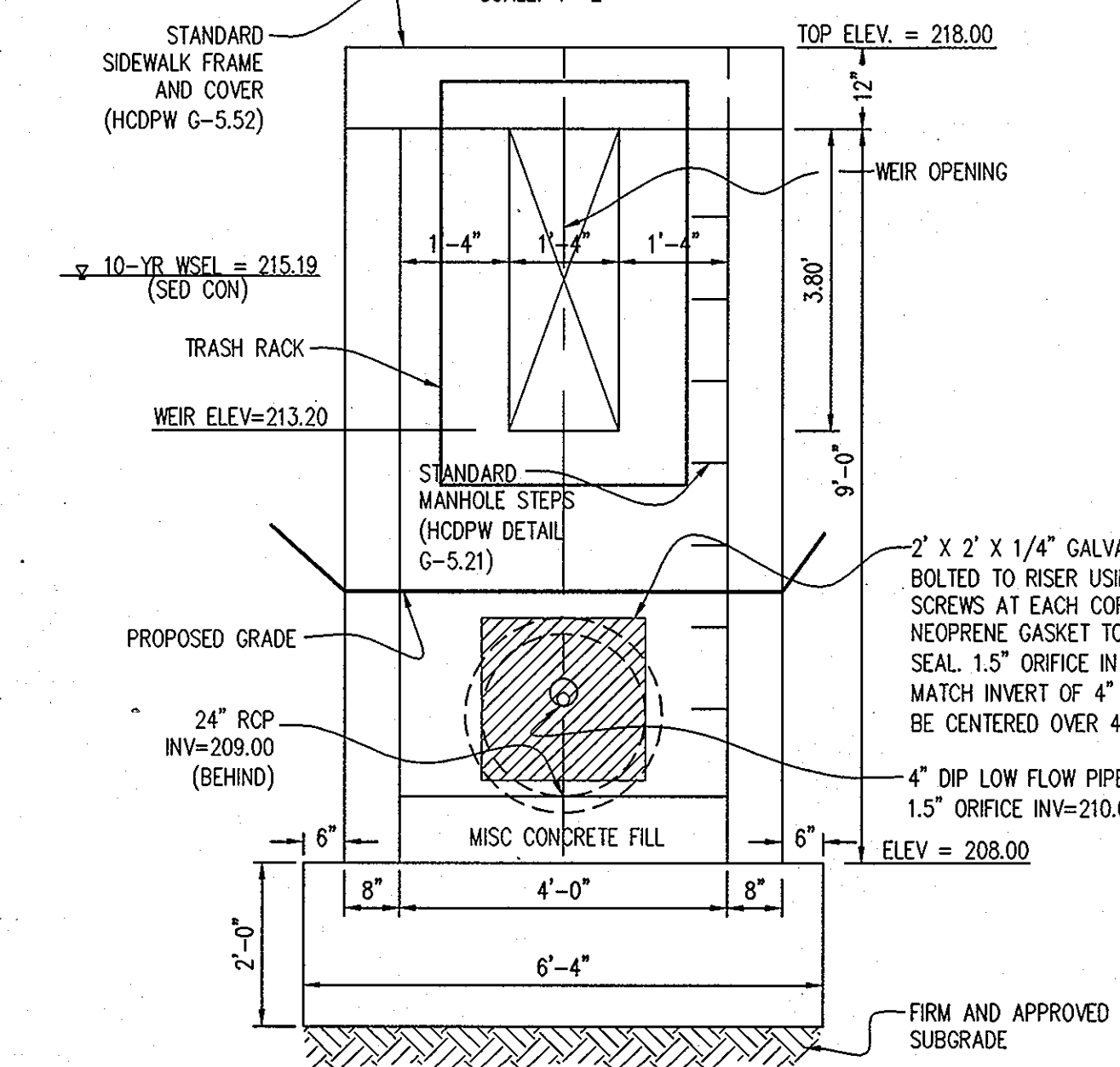
1. THIS DETAIL IS FOR A PRECAST RISER ONLY.
2. SHOP DRAWINGS MUST BE APPROVED BY THE DESIGN ENGINEER PRIOR TO FABRICATION.
3. RISER STRUCTURES MUST BE REINFORCED CONCRETE.
4. ALL CONNECTIONS SHALL BE WATERTIGHT.



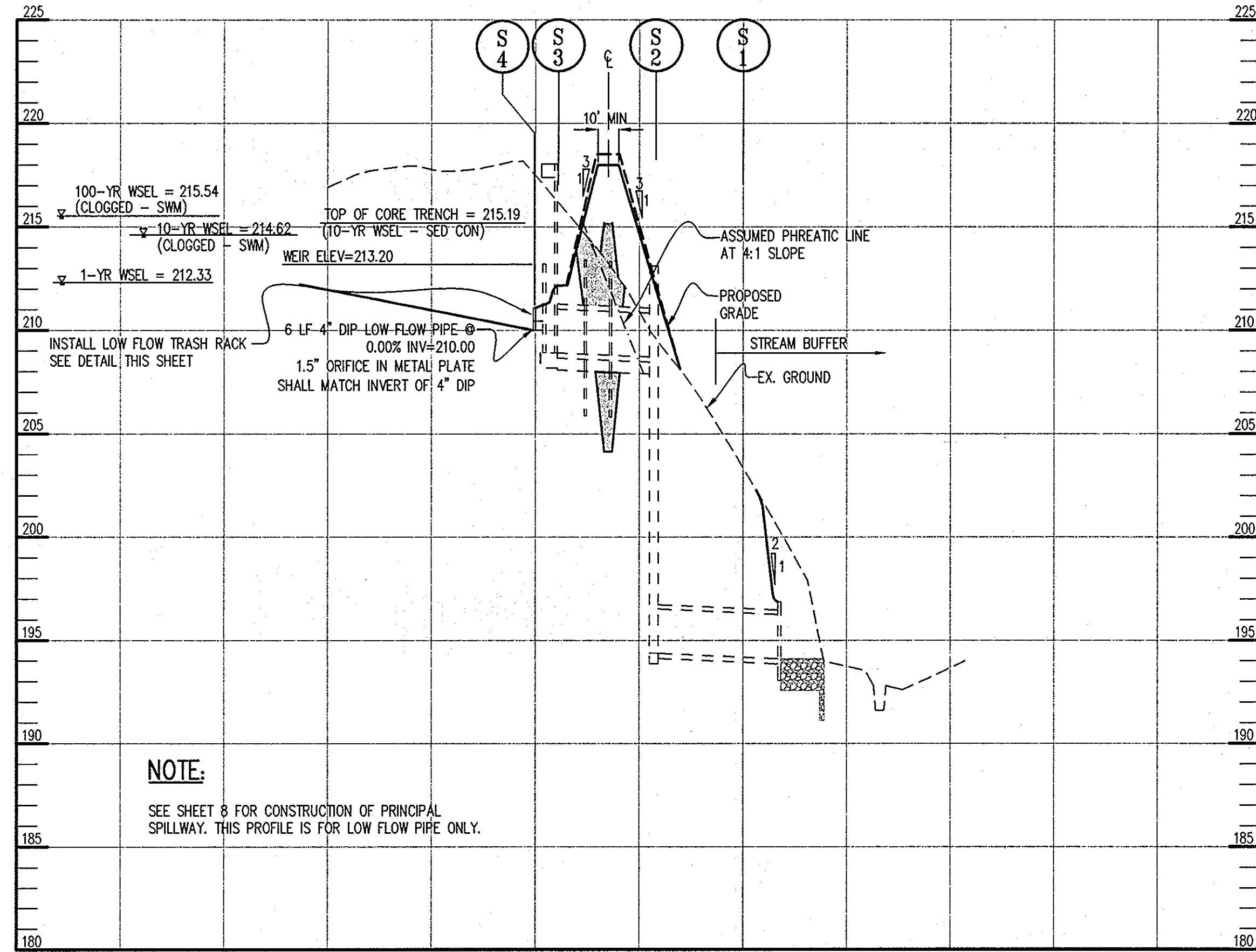
CONCRETE RISER DETAIL STRUCTURE S3
SCALE: 1" = 2'



SECTION 'C-C'
SCALE: 1" = 2'



SECTION 'D-D'
SCALE: 1" = 2'



PRINCIPAL SPILLWAY PROFILE - LOW FLOW PIPE
SCALE: HOR: 1" = 50'
VERT: 1" = 5'

NOTE:
SEE SHEET 8 FOR CONSTRUCTION OF PRINCIPAL SPILLWAY. THIS PROFILE IS FOR LOW FLOW PIPE ONLY.

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: [Signature] DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER: [Signature] DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT: [Signature] DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: [Signature] DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

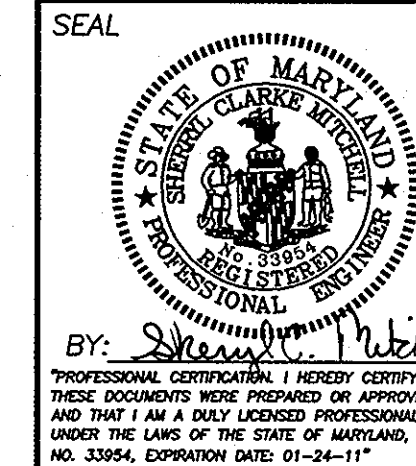
PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

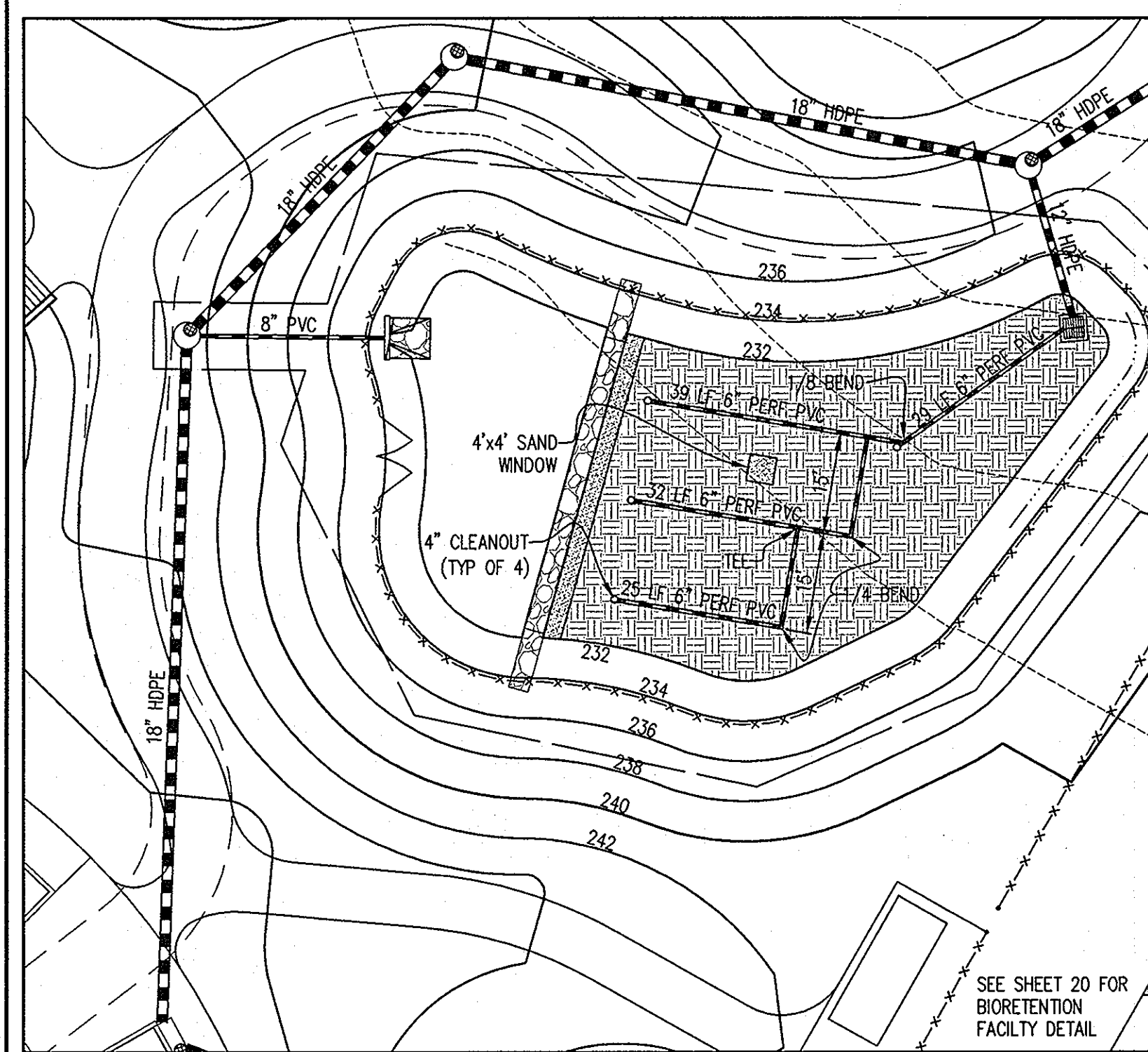
AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
STORMWATER MANAGEMENT
PROFILES AND DETAILS

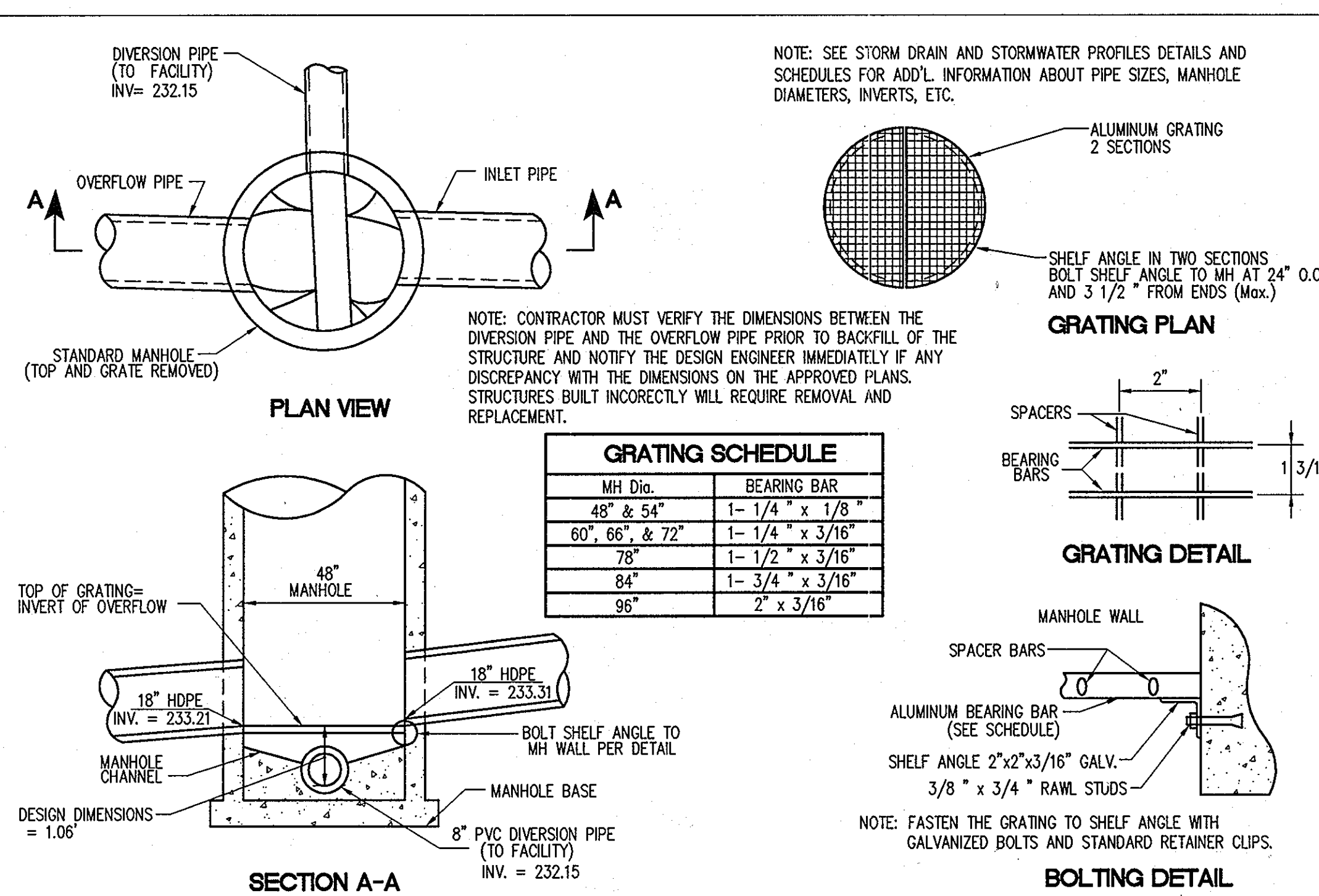
Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8515 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: SCM
DRAWN BY: SGM
PROJECT NO: 14466-1-2
DATE: SEPTEMBER 7, 2010
SCALE: AS SHOWN
DRAWING NO. 21 OF 43



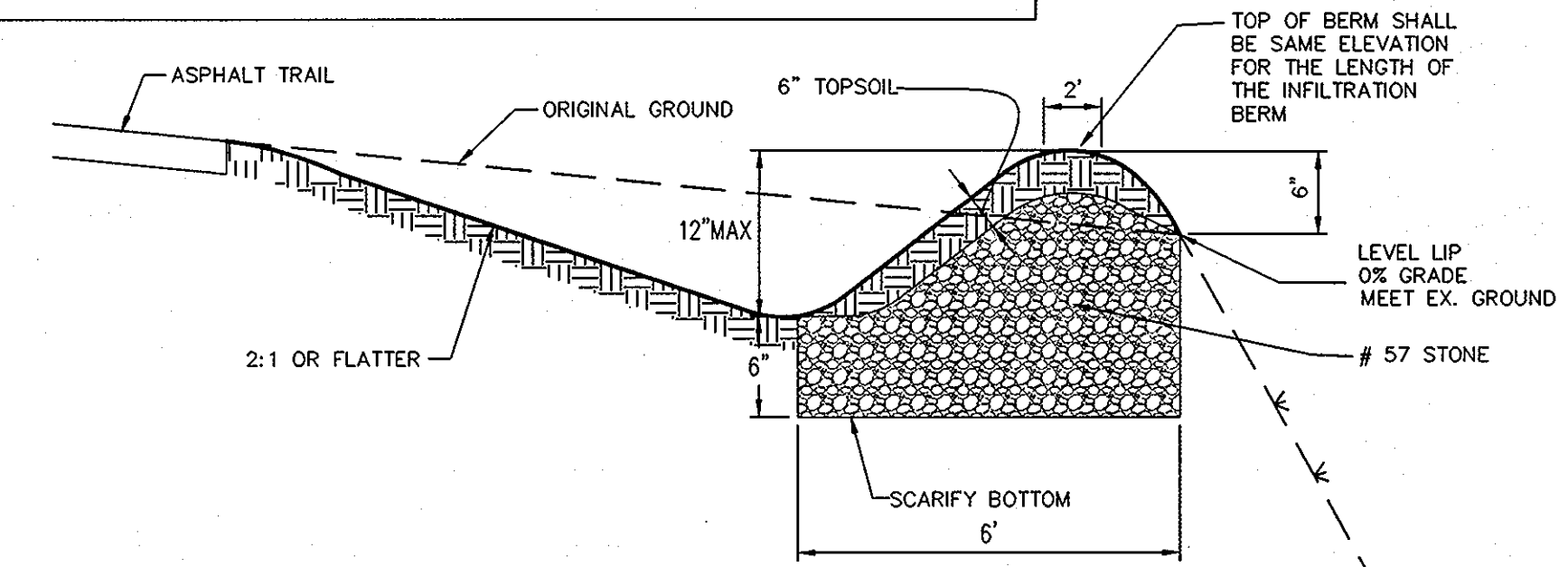


BIORETENTION UNDERDRAIN DETAIL
SCALE: 1"=20'

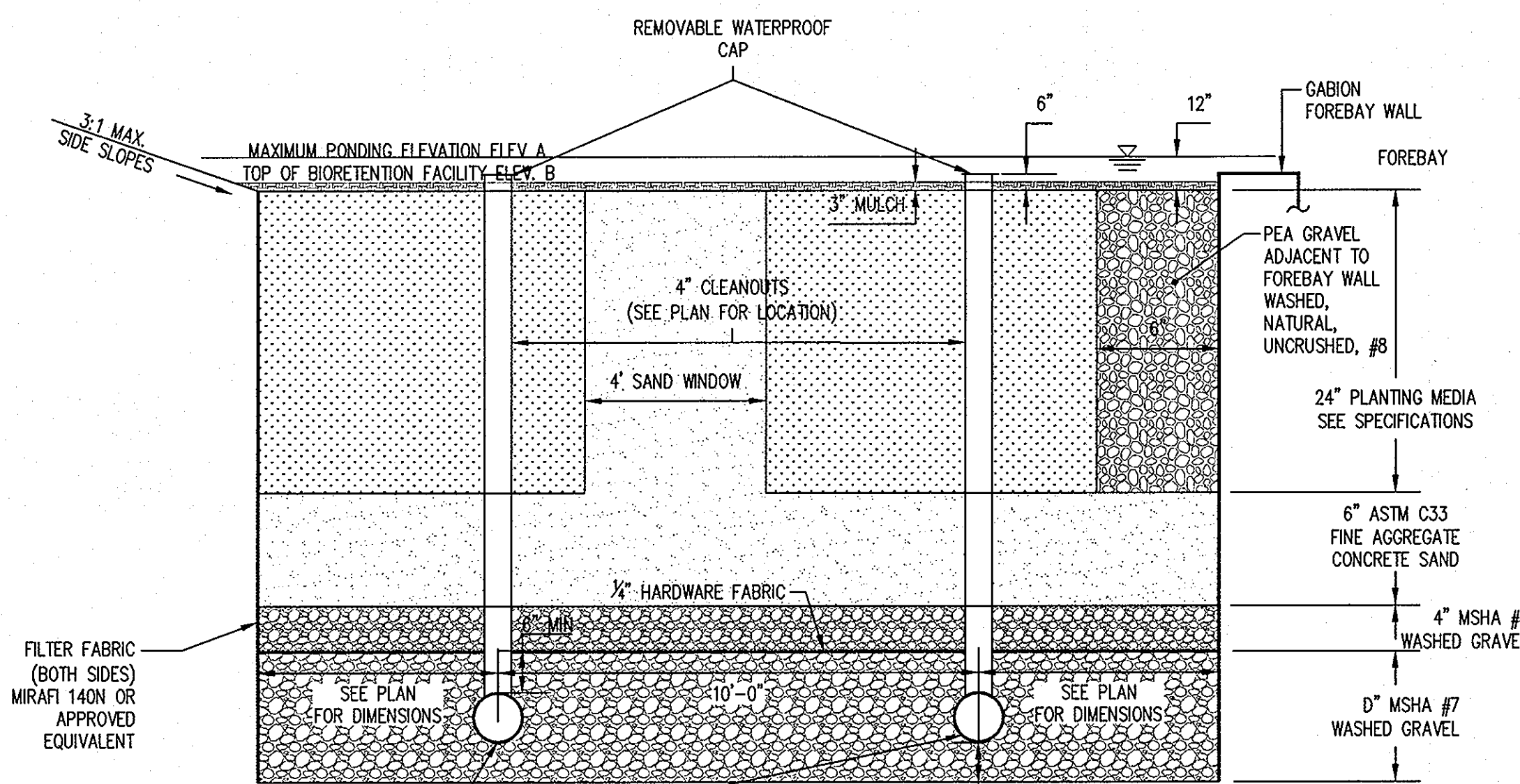


**STRUCTURE A11
DIVERSION STRUCTURE MANHOLE DETAIL**
NOT TO SCALE

BIO-RETENTION AREA PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHRUBS					
CO	41	CEPHALANTHUS OCCIDENTALIS BUTTONBUSH	#5	CONT	30" HT, FULL
IG	47	ILEX GLABRA 'SHAMROCK' SHAMROCK HOLLY	#5	CONT	30" HT, FULL
IV	18	ILEX VERTICILLATA WINTERBERRY HOLLY	#5	CONT	30" HT, FULL
VD	22	VIBURNUM DENTATUM ARROWWOOD VIBURNUM	#5	CONT	30" HT, FULL
HERBACEOUS					
EPU	397	ECHINACEA PURPUREA PURPLE CONEFLOWER	#1	CONT	24" O.C.
EPE	143	EUPATORIUM MACULATUM JOE PYE WEED	#1	CONT	36" O.C.
IVE	745	IRIS VERSICOLOR BLUEFLAG IRIS	#1	CONT	18" O.C.



INFILTRATION BERM
NOT TO SCALE



BIORETENTION TYPICAL SECTION
NOT TO SCALE

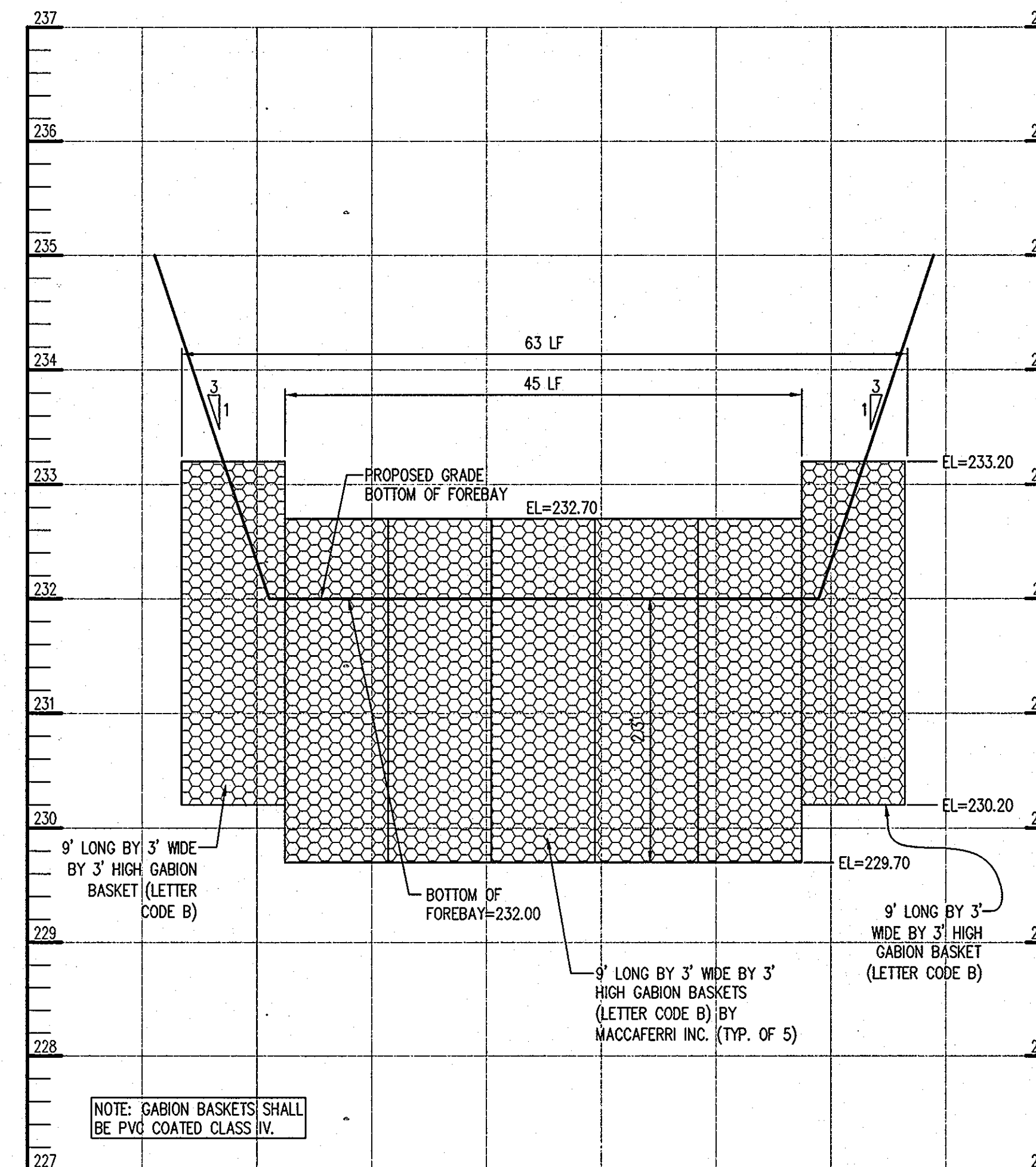
BIORETENTION DATA TABLE				
	A	B	C	D
BR1	233.00	232.00	9"	21"

BIORETENTION SPECIFICATIONS

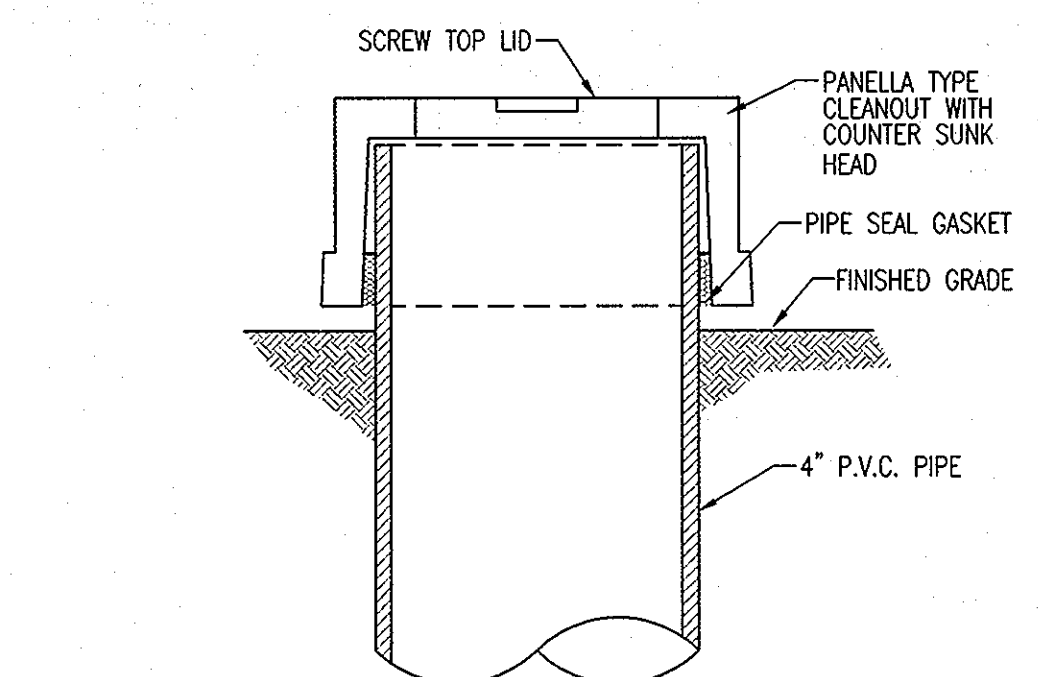
1. THE UNDERDRAIN PIPE MUST BE 6-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE. A MINIMUM OF THREE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGIN AT LEAST 5 FT. INSIDE THE FILTER MEDIA. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.
2. 4" INCH CLEAN-OUTS SHOULD BE USED. CLEANOUTS FOR EACH PIPE SHOULD EXTEND 6 INCHES ABOVE THE TOP OF THE PLANTING MEDIA AND HAVE A REMOVABLE CAP.
3. THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPES MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE, AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED ANYWHERE WITHIN THE FILTER MEDIA (STONE OR SAND).
4. A MINIMUM 6-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE SOIL FILTER/PLANTING MEDIA. A SAND WINDOW SHALL EXTEND FROM THE SAND FILTER TO THE SURFACE OF THE PLANTING MEDIA. THE SAND WINDOW MUST BE ASTM C33 FINE AGGREGATE CONCRETE SAND, MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE.
5. THE PLANTING MEDIA SHALL CONSIST OF 1/3 PERLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL. THE SOIL SHALL MEET THE FOLLOWING MINIMUM CRITERIA: CONTAIN NO MORE THAN 10% CLAY, 30-55% SILT AND 35-60% SAND. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. THE FIRST LAYER OF THE PLANTING MEDIA SHALL BE LIGHTLY TILLED TO MIX IT INTO THE SAND LAYER, SO NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
6. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE UNIFORMLY TO A DEPTH OF 2 TO 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE. COORDINATE WITH PLANTING SPECIFICATIONS ON SHEET 32.

BIORETENTION AREA OPERATION AND MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
2. SCHEDULE OF PLANTING INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE A MONTH AND AFTER HEAVY STORMS.



BIORETENTION GABION WALL DETAIL
SCALE: HOR: 1"=10'
VERT: 1"=1'



CLEANOUT / OBSERVATION WELL CAP
(NOT TO SCALE)

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Director: *Mona E. Suttle* 12/13/10 DATE
 Chief, Development Engineering Division: *John Dammann* 11/12/10 DATE
 Chief, Division of Land Development: *Kristen L. Linder* 12/10/10 DATE

DATE NO. REVISION
 OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P. 410.313.2414

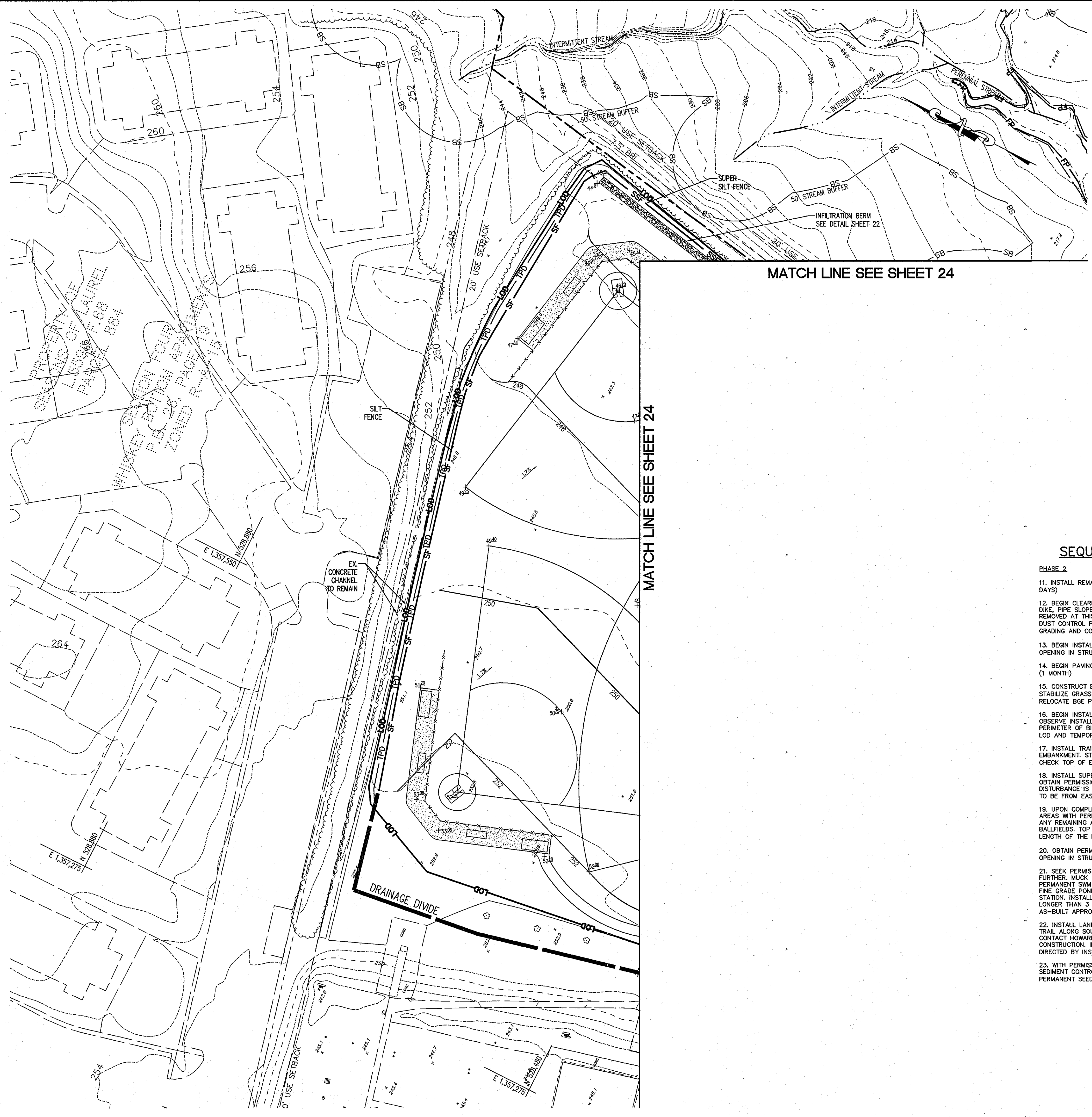
DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P. 410.313.2414

PROJECT: NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK
 AREA: TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

SEAL: 9-21-10
 DESIGNED BY: SCM
 DRAWN BY: SGM
 PROJECT NO: 14466-1-2
 C4005DP22.DWG
 DATE: SEPTEMBER 7, 2010
 SCALE: AS SHOWN
 DRAWING NO. 22 OF 43



LEGEND

---	PROPERTY LINE
---	EXISTING 10' CONTOURS
---	EXISTING 2' CONTOURS
---	PROPOSED 10' CONTOURS
---	PROPOSED 2' CONTOURS
---	EXISTING CURB AND GUTTER
---	PROPOSED CURB & GUTTER
---	EXISTING STORM DRAIN
---	PROPOSED STORM DRAIN
---	SETBACK LINES
---	EX. TREELINE
---	LIMIT OF CLEARING
---	FLOODPLAIN
---	STREAM BUFFER
---	WETLANDS
---	WETLAND BUFFER
---	TREE PROTECTION FENCE
---	LIMIT OF DISTURBANCE

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature]
 ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature]
 DIRECTOR DATE

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

PROJECT
 NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA
 TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 1B7 & 10B5 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
 GRADING & SEDIMENT CONTROL PLAN PHASE II

Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

SEAL

[Professional Seal]

DESIGNED BY : JSN
 DRAWN BY: JSN
 PROJECT NO : 14486-1-2
 C400SDP23.DWG
 DATE : SEPTEMBER 23, 2010
 SCALE : 1" = 40'
 DRAWING NO. 23 OF 43

MATCH LINE SEE SHEET 24

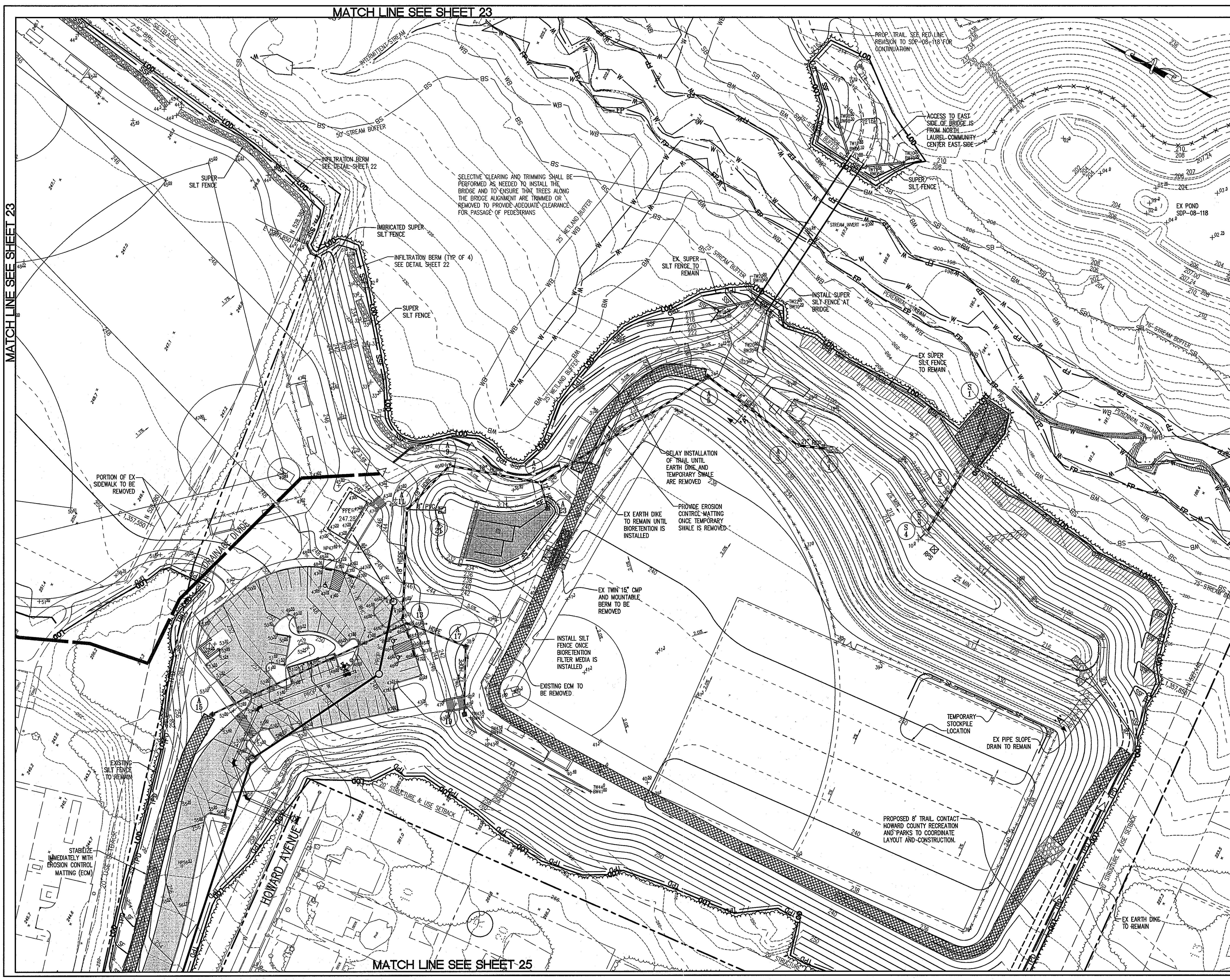
MATCH LINE SEE SHEET 24

SEQUENCE OF CONSTRUCTION

- PHASE 2**
11. INSTALL REMAINING PERIMETER CONTROLS AS SHOWN ON SHEETS 23 AND 24. (2 DAYS)
 12. BEGIN CLEARING AND GRADING FOR BALLFIELDS ON ELEMENTARY SCHOOL SITE. EARTH DIKE, PIPE SLOPE DRAIN, AND OUTFALL PROTECTION FROM PHASE I PLAN MAY BE REMOVED AT THIS TIME, FROM POINT A TO POINT B AS SHOWN ON SHEET 3. FOLLOW DUST CONTROL PRACTICES PER MDE DETAIL H-30-1 (SEE SHEET 6) THROUGHOUT THE GRADING AND CONSTRUCTION ACTIVITY ON THE SITE. (2 WEEKS)
 13. BEGIN INSTALLATION OF WATER, SEWER AND STORM DRAIN. TEMPORARILY BLOCK 6" OPENING IN STRUCTURE A11. (1 MONTH)
 14. BEGIN PAVING, CURB AND GUTTER, SIDEWALK, TRAILS AND BUILDING CONSTRUCTION. (1 MONTH)
 15. CONSTRUCT ENTRY ROAD ALONG WITH GRASS CHANNELS AND GABION CHECK DAMS. STABILIZE GRASS CHANNELS IMMEDIATELY WITH EROSION CONTROL MATTING (ECM). RELOCATE BGE POWER POLE AT ENTRANCE. (2 WEEKS)
 16. BEGIN INSTALLATION OF BIORETENTION FACILITY. CONTACT PHRA ENGINEER TO OBSERVE INSTALLATION OF BIORETENTION FACILITY. INSTALL SILT FENCE AROUND PERIMETER OF BIORETENTION FILTER MEDIA. AT THIS TIME EARTH DIKE ALONG EASTERN LOD AND TEMPORARY SWALE MAY BE REMOVED. (1 WEEK)
 17. INSTALL TRAIL DOWNHILL FROM BIORETENTION FACILITY AND ALONG TOP OF EMBANKMENT. STABILIZE SWALE ADJACENT TO TRAIL IMMEDIATELY WITH ECM. GRADE CHECK TOP OF EMBANKMENT ONCE TRAIL IS INSTALLED. (3 DAYS)
 18. INSTALL SUPER SILT FENCE ALONG STREAM BUFFER FOR BRIDGE CONSTRUCTION. OBTAIN PERMISSION FROM INSPECTOR AND BEGIN BRIDGE CONSTRUCTION. NO DISTURBANCE IS ALLOWED WITHIN WETLAND BUFFER. ACCESS TO EAST SIDE OF BRIDGE IS TO BE FROM EAST SIDE OF PARK. SEE SDP-08-118 (RED-LINE REVISION) (1 MONTH)
 19. UPON COMPLETION OF ALL CONSTRUCTION AND STABILIZATION OF ALL GRASSED AREAS WITH PERMANENT SEEDING, APPLY FINAL PAVING SURFACE COURSE AND STABILIZE ANY REMAINING AREAS. INSTALL INFILTRATION BERMS ADJACENT TO ELEMENTARY SCHOOL BALLFIELDS. TOP OF INFILTRATION BERMS SHALL BE THE SAME ELEVATION FOR THE LENGTH OF THE INFILTRATION BERM. (3 DAYS)
 20. OBTAIN PERMISSION FROM INSPECTOR AND FLUSH STORM DRAIN. THEN UNBLOCK 6" OPENING IN STRUCTURE A11. (1 DAY)
 21. SEEK PERMISSION FROM SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING FURTHER. MUCK OUT BASIN 1 AND BEGIN CONVERSION OF SEDIMENT BASIN TO PERMANENT SWM POND. PROVIDE FILL AND RE-GRADE ALL 2:1 SLOPES TO 3:1 SLOPES. FINE GRADE POND BOTTOM. REMOVE DRAINAGE DEVICE AND REMOVABLE PUMPING STATION. INSTALL LOW FLOW PIPE. INSTALL TRASH RACKS. BASIN MAY NOT REMAIN LONGER THAN 3 YEARS. CONTRACTOR IS TO PROVIDE INSPECTOR WITH COPY OF AS-BUILT APPROVAL LETTER FROM HOWARD SCD. (3 WEEKS)
 22. INSTALL LANDSCAPING. OBTAIN PERMISSION FROM INSPECTOR AND INSTALL ASPHALT TRAIL ALONG SOUTHERN LOD ONCE EARTH DIKE IS REMOVED. CONTRACTOR IS TO CONTACT HOWARD COUNTY RECREATION AND PARKS TO COORDINATE TRAIL LAYOUT AND CONSTRUCTION. INSTALL SEDIMENT CONTROL MEASURES FOR TRAIL CONSTRUCTION AS DIRECTED BY INSPECTOR. (1 WEEK)
 23. WITH PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

MATCH LINE SEE SHEET 23

MATCH LINE SEE SHEET 23



NOTES:

1. SEE RED LINE REVISION OF SDP-08-118 FOR GRADING AND TRAIL CONNECTIONS TO THE EAST SIDE OF THE PROPERTY.
2. SEE SHEET 25 FOR LEGEND.
3. THIS SHEET SHOWS GRADING FOR POND CONVERSION ONLY. SEE SHEET 3 FOR BASIN GRADING AND CONTINUE TO USE BASIN SCHEDULE SHOWN ON SHEET 3.
4. THIS SHEET IS FOR GRADING AND SEDIMENT CONTROL ONLY. SEE SHEETS 16, 17 AND 18 FOR CONSTRUCTION OF SITE AMENITIES.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 9-21-10
ENGINEER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/10
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 12/13/10
DIRECTOR DATE

[Signature] 11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

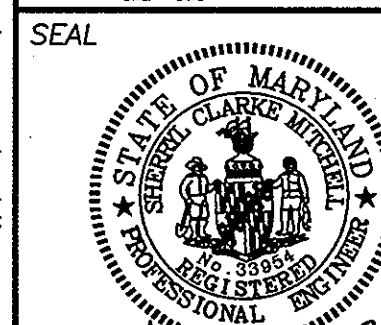
DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 1B7 & 10B5 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING & SEDIMENT CONTROL PLAN PHASE II

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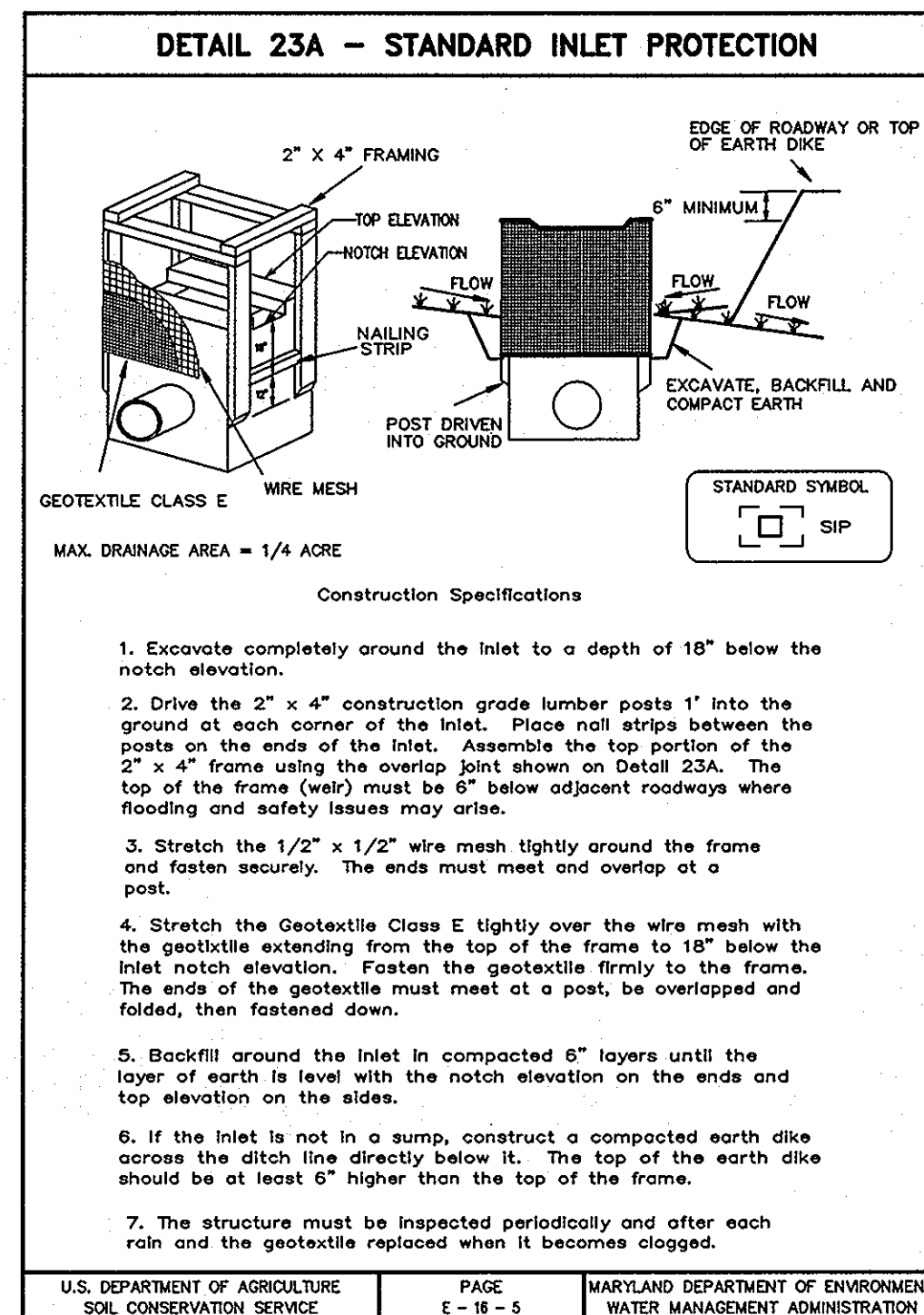
DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14466-1-2
C400SDP24.DWG
DATE : SEPTEMBER 7, 2010
SCALE : 1" = 40'
DRAWING NO. 24 OF 43

SDP-10-010

Project 14466-1-2 PLANS C400SDP24.DWG

MATCH LINE SEE SHEET 24

MATCH LINE SEE SHEET 24



LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	----
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	----
PROPERTY LINE AND RIGHT OF WAY	---
EXISTING WETLAND	W
EX. TREELINE	~ ~ ~ ~
LIMIT OF CLEARING	---
LIMIT OF DISTURBANCE	LOD
STORM DRAIN INLET	SSIF
SUPER SILT FENCE	SSIF
SILT FENCE	SF
EARTH DIKE	---
WETLAND BUFFER	WB
100-YEAR FLOOD PLAIN	FP
15-25% SLOPES	---
>25% SLOPES	---
DRAINAGE DIVIDE	---
STABILIZED CONSTRUCTION ENTRANCE	SCS
EROSION CONTROL MATTING	RRP
RIP RAP INFLOW PROTECTION	GM
GABION INFLOW PROTECTION	---

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: [Signature] DATE: 9/21/10

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER: Sherry C. Mitchell DATE: 9-21-10

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT: [Signature] DATE: 11/1/10

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR: Norman E. Butler DATE: 12/13/10

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 11/18/10

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 12/10/10

DATE	NO.	REVISION

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

PROJECT: NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA: TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING & SEDIMENT CONTROL PLAN PHASE II

Patton Harris Rust & Associates
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 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

SEAL: [Professional Engineer Seal] DATE: 9-21-10

DESIGNED BY: JSN
 DRAWN BY: JSN
 PROJECT NO: 14466-1-2
 C400SDP25.DWG
 DATE: SEPTEMBER 7, 2010
 SCALE: 1" = 40'
 DRAWING NO. 25 OF 43

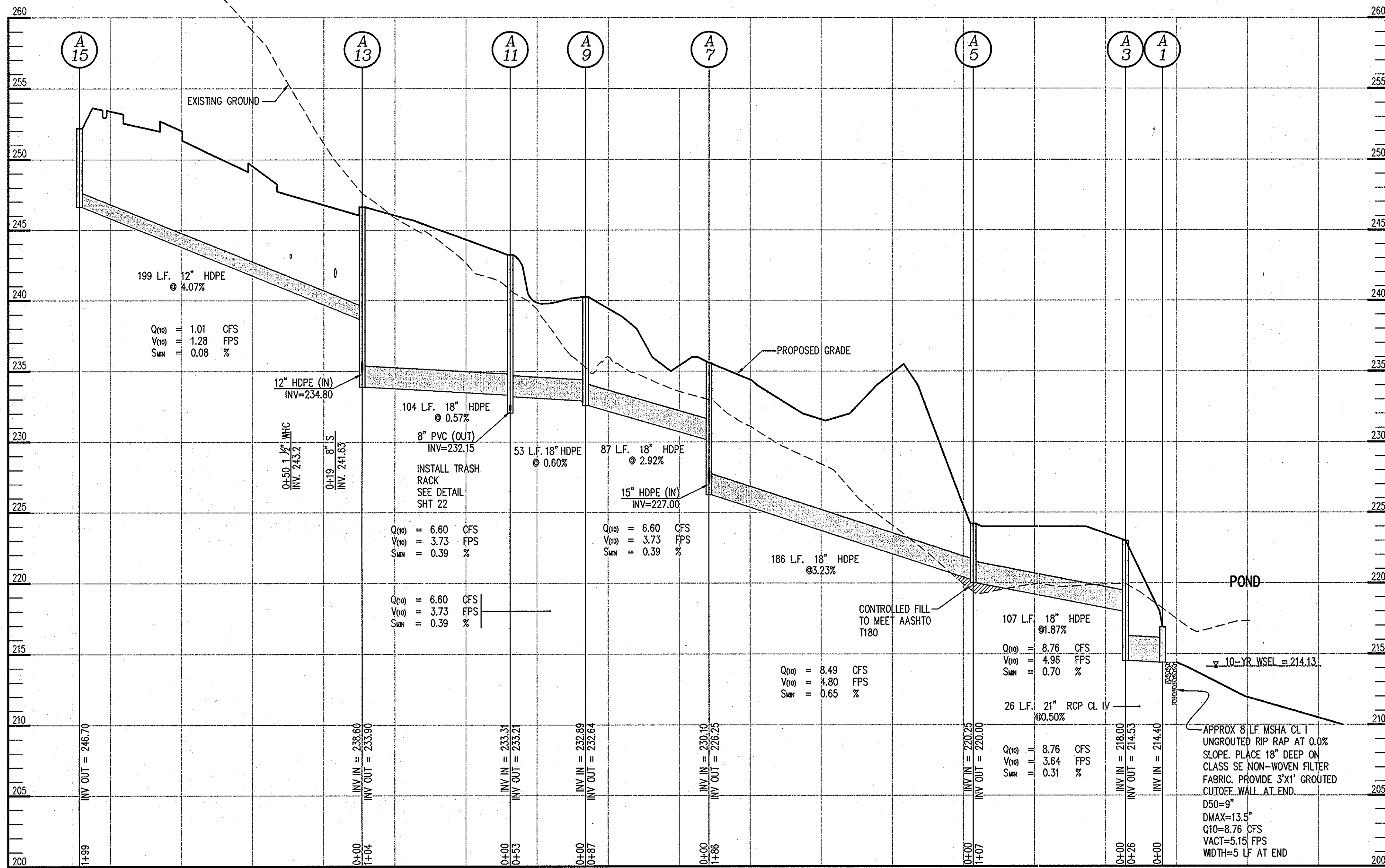
CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777



LEGEND:
 PROPOSED DRAINAGE DIVIDE
 DRAINAGE AREA DESIGNATION

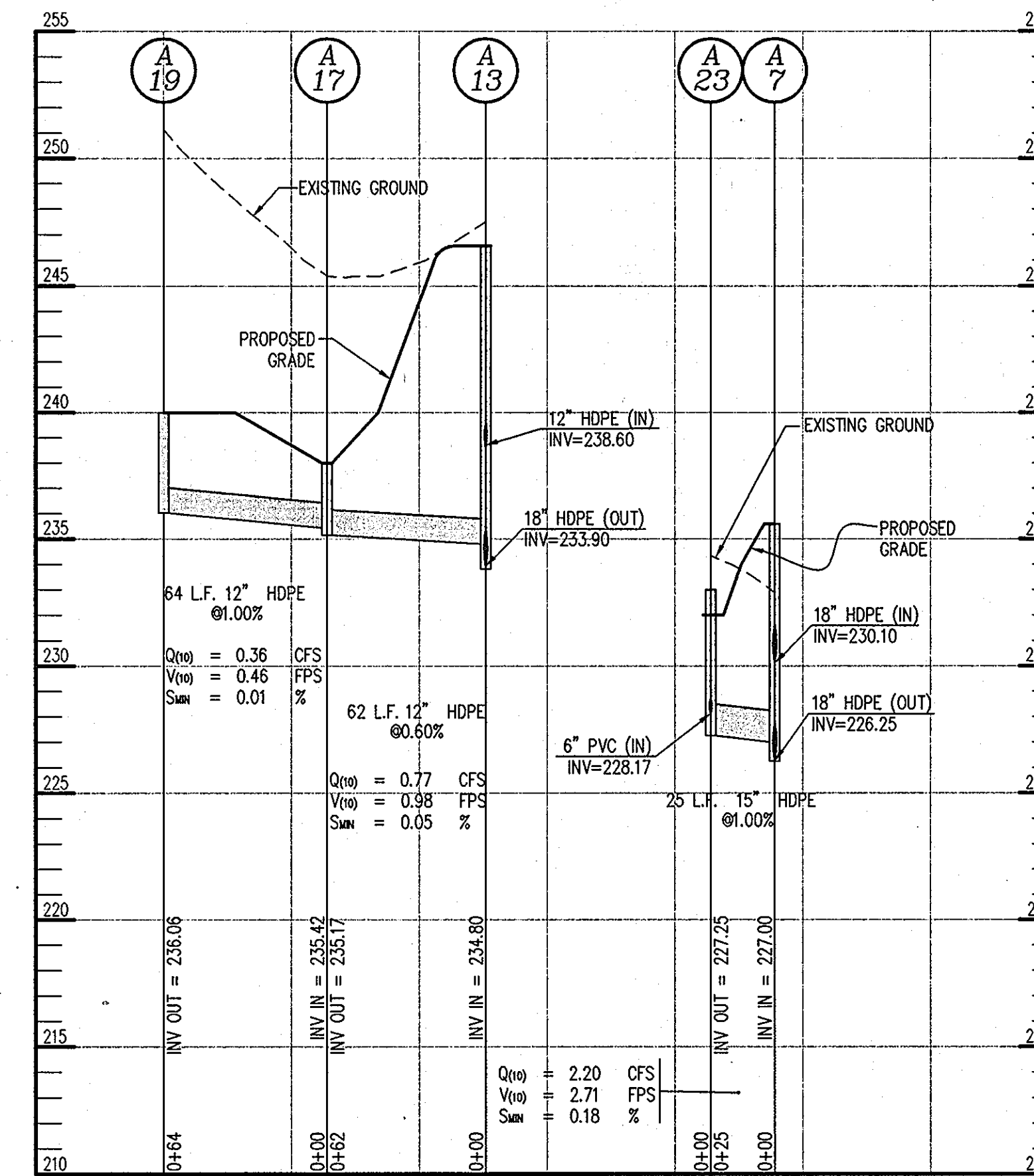
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Donna E. Butler</i>	12/13/10
DIRECTOR	DATE
<i>John D. Williams</i>	11/12/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Kevin Schuler</i>	12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DATE	REVISION
OWNER HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
DEVELOPER HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
PROJECT NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK	
AREA TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE STORM DRAIN DRAINAGE AREA MAP	
Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
SEAL	9-21-10
	DESIGNED BY : SCM
	DRAWN BY : SGM
	PROJECT NO : 14466-1-2 C400SDP28.DWG
	DATE : SEPTEMBER 7, 2010
	SCALE : 1" = 40'
	DRAWING NO. 26 OF 43

P:\Project\14466\1-2\PLANS\C400SDP28.DWG



STORM DRAIN PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'



STORM DRAIN PROFILES

SCALE: HOR: 1"=50'
VERT: 1"=5'

HDPE SPECIFICATIONS

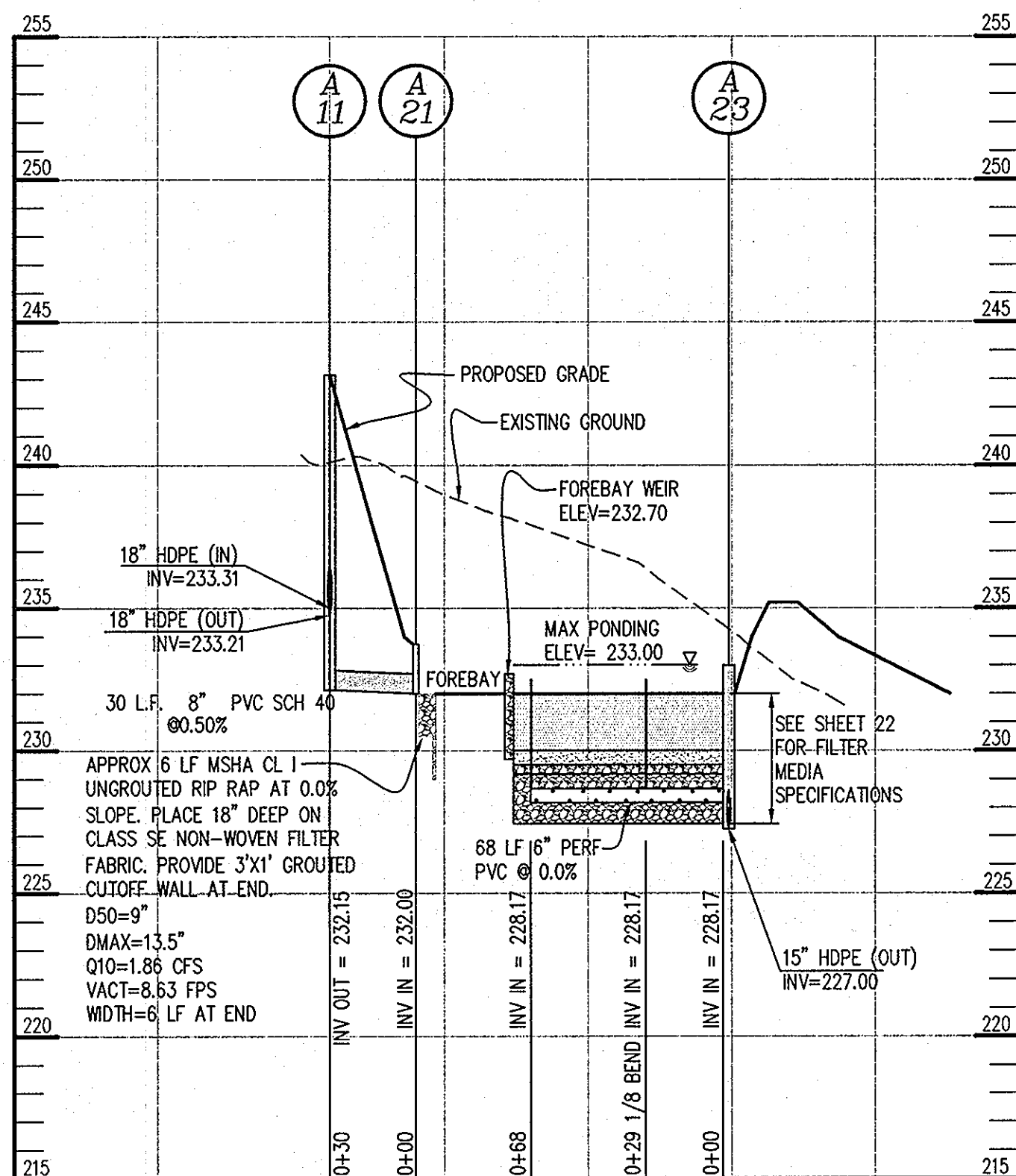
CORRUGATED HIGH-DENSITY POLYETHYLENE STORM DRAIN (HDPE) PIPE FOR ON-SITE DRAINAGE SHALL MEET THE REQUIREMENTS OF AASHTO M294. AASHTO WALL TYPE MAY BE TYPE "S" OR TYPE "D". PIPE AND FITTINGS SHALL BE MANUFACTURED FROM VIRGIN PE COMPOUNDS AND SHALL CONFORM TO THE APPLICABLE CURRENT EDITION OF THE AASHTO MATERIAL SPECIFICATIONS FOR CELL CLASSIFICATIONS AS DEFINED AND DESCRIBED IN ASTM D3350.

PIPES SHALL BE CONNECTED THROUGH A BELL AND SPIGOT CONNECTION. A RUBBER GASKET MEETING THE REQUIREMENTS OF ASTM F477 SHALL BE SUPPLIED ON THE SPIGOT END. THE PIPE MANUFACTURER SHALL PROVIDE CERTIFICATIONS ON JOINT INTEGRITY.

PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURER'S RECOMMENDATIONS.

ALL PIPES SHALL BE BEDDED ON 4" TO 6" OF (CLASS I FILL (UNDER THE PIPE) AND UP TO 1/2 THE PIPE DIAMETER COMPACTED AT OPTIMUM MOISTURE CONTENT (PLUS OR MINUS 2 PERCENTAGE POINTS), AND TO A MINIMUM OF 95% OF THE MAXIMUM DENSITY AS DETERMINED IN THE LABORATORY BY ASTM TEST METHOD D-1557-78. ALL ADDITIONAL BACKFILL SHALL MEET HOWARD COUNTY SPECIFICATIONS.

CORRUGATED HDPE STORM DRAIN SHALL BE N-12 PRO-LINK WT, AS MANUFACTURED BY ADS, INC., COLUMBUS, OH, OR APPROVED EQUAL.



DIVERSION PIPE PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'

NUMBER	TYPE	LOCATION		TOP ELEVATION		SIZE	REMARKS
		STATION	OFFSET	UPPER	LOWER		
A1	TYPE 'C' ENDWALL	SEE	PLAN	216.90	*	DIA = 21"	D-5.21
A3	4'-0" MANHOLE	SEE	PLAN	223.00	*	DIA = 4'-0"	G-5.12
A5	TYPE 'S' INLET	SEE	PLAN	224.20	*	2'-7" X 2'-7 1/2"	D-4.22
A7	4'-0" MANHOLE	SEE	PLAN	235.60	*	DIA = 4'-0"	G-5.12
A9	4'-0" MANHOLE	SEE	PLAN	240.25	*	DIA = 4'-0"	G-5.12
A11	4'-0" MANHOLE	SEE	PLAN	243.00	*	DIA = 4'-0"	G-5.12 MODIFIED PER DETAIL SHT 22
A13	A-10 INLET	SEE	PLAN	246.74	*	T = 10'	D-4.04
A15	TYPE 'S' INLET	SEE	PLAN	252.20	*	2'-7" X 2'-7 1/2"	D-4.22
A17	TYPE 'S' INLET	SEE	PLAN	238.00	*	2'-7" X 2'-7 1/2"	D-4.22
A19	TYPE 'S' INLET	SEE	PLAN	240.00	*	2'-7" X 2'-7 1/2"	D-4.22
A21	TYPE 'C' ENDWALL	SEE	PLAN	233.75	*	DIA = 8"	D-5.21 USE SPEC FOR D=12"
A23	TYPE 'S' INLET	SEE	PLAN	233.00	*	2'-7" X 2'-7 1/2"	D-4.22

NOTES

- ALL STRUCTURES ARE HOWARD COUNTY STANDARDS UNLESS NOTED OTHERWISE. CONTRACTOR MAY USE PRECAST STRUCTURE WHERE AVAILABLE TO MEET THE STANDARD STRUCTURE SPECIFIED.
- STATIONS ARE GIVEN TO CENTER OF STRUCTURE AT FACE OF CURB FOR CURB INLETS AND TO CENTER OF STRUCTURE FOR ALL OTHER STRUCTURES.
- ELEVATIONS ARE GIVEN TO TOP OF CURB FOR CURB INLETS, TOP OF GRATE FOR GRATE INLETS AND TOP OF LID FOR MANHOLES.
- PIPE LENGTHS ARE GIVEN TO THE CENTER OF THE STRUCTURE. CONTRACTOR SHALL ADJUST LENGTH TO OBTAIN ACTUAL PIPE LENGTHS.

SIZE	TYPE	LINEAR FOOTAGE
8"	PVC SCH 40	30
12"	HDPE ASTM F477	325
15"	HDPE ASTM F477	25
18"	HDPE ASTM F477	537
21"	RCP CL IV	26

ALL QUANTITIES TO BE VERIFIED BY CONTRACTOR. UNDERDRAIN PIPING NOT INCLUDED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Mona E. Butler 12/13/10
 DIRECTOR DATE
John D. ... 11/18/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Kevin ... 12/16/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

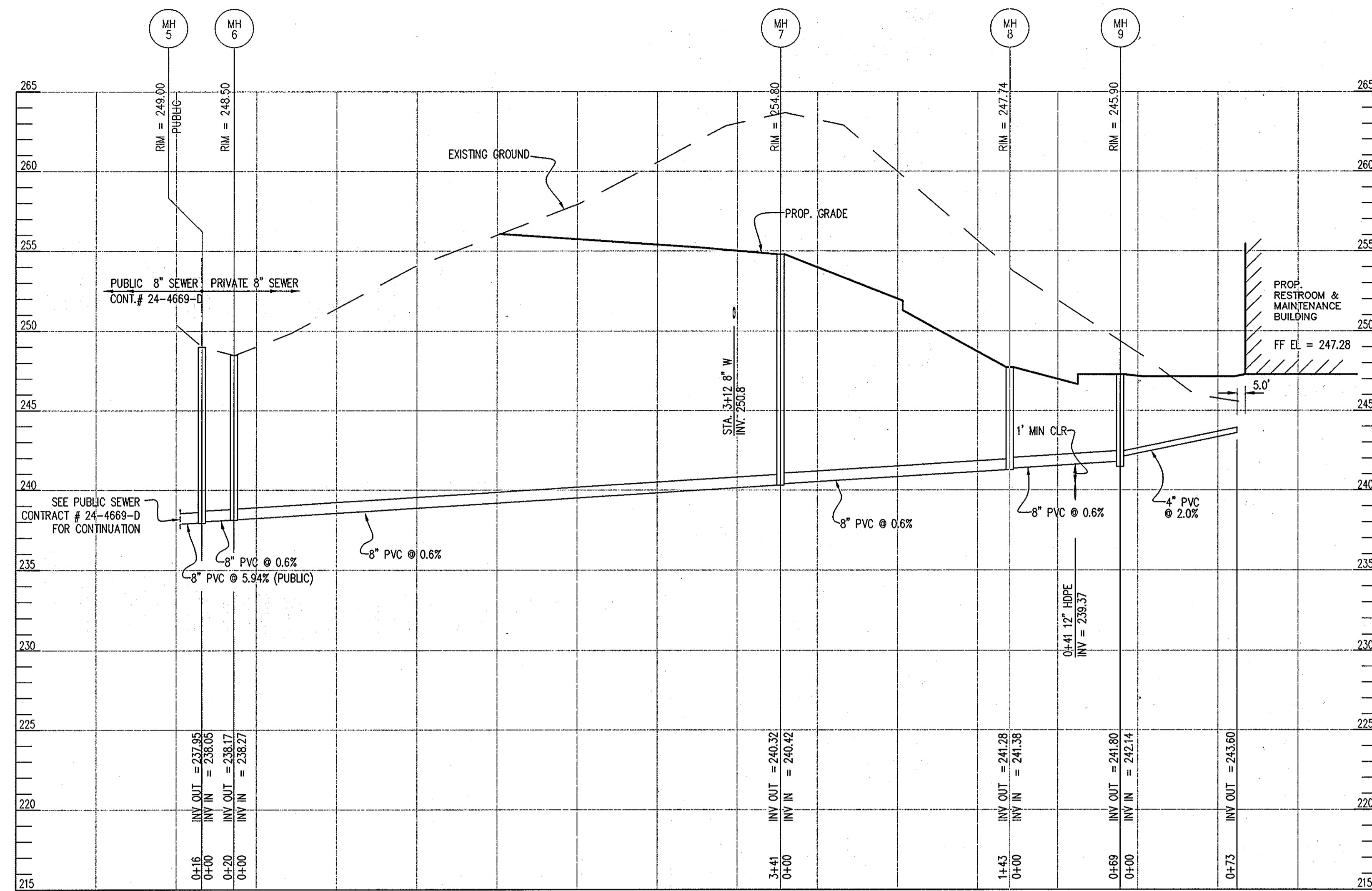
DATE NO. REVISION
 OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414
 DEVELOPER
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PROJECT
NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK
 AREA TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES AND SCHEDULES

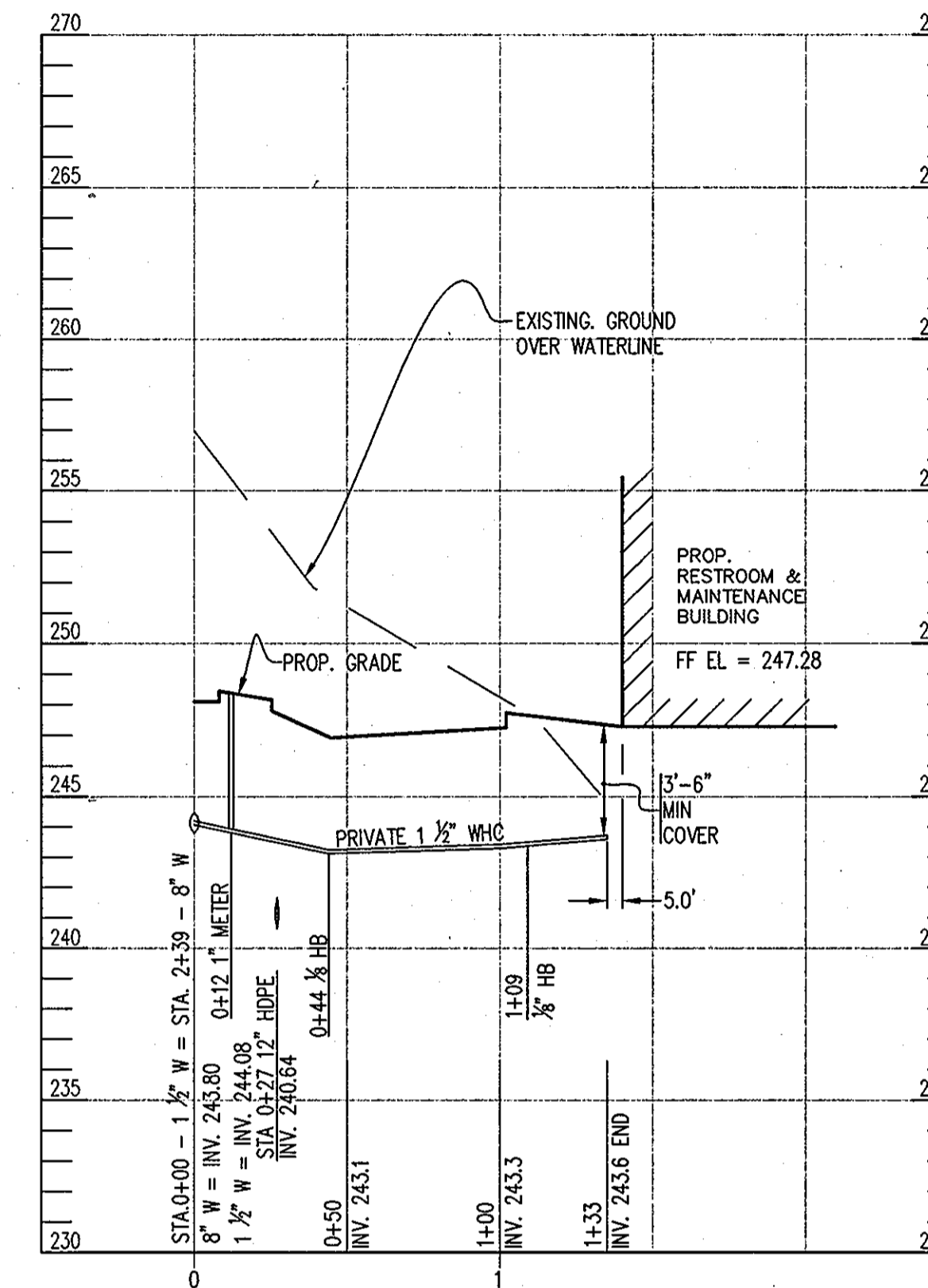
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SEAL
 DESIGNED BY: SCM
 DRAWN BY: SGM
 PROJECT NO: 14466-1-2
 C4005DP27.DWG
 DATE: SEPTEMBER 7, 2010
 SCALE: 1" = 40'
 DRAWING NO. 27 OF 43



PRIVATE SANITARY SEWER PROFILE

SCALE: HOR: 1"=50' - VERT: 1"=5'



PRIVATE WHC PROFILE

SCALE: HOR: 1"=50' - VERT: 1"=5'

SEWER PIPE SCHEDULE		
SIZE	TYPE	LINEAR FOOTAGE
8" S	PVC-SDR 35 ASTM D3034	573
4" S	PVC-SDR 35 ASTM D3034	73
1-1/2" WHC	AWWA C900 DR18	135

SEWER STRUCTURE SCHEDULE							
NUMBER	TYPE	LOCATION		TOP ELEVATION	INVERTS		REMARKS
		NORTHING	EASTING		IN	OUT	
MH-5	PRECAST MANHOLE	SEE	PLAN	249.00	238.05	237.95	G-5.11
MH-6	PRECAST MANHOLE	SEE	PLAN	248.50	238.27	238.17	G-5.11
MH-7	PRECAST MANHOLE	SEE	PLAN	254.08	240.42	240.32	G-5.11
MH-8	PRECAST MANHOLE	SEE	PLAN	247.74	241.38	241.28	G-5.11
MH-9	PRECAST MANHOLE	SEE	PLAN	247.24	242.14	241.80	G-5.11

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler 12/13/10
DIRECTOR DATE

John D. ... 11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

West ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
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PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

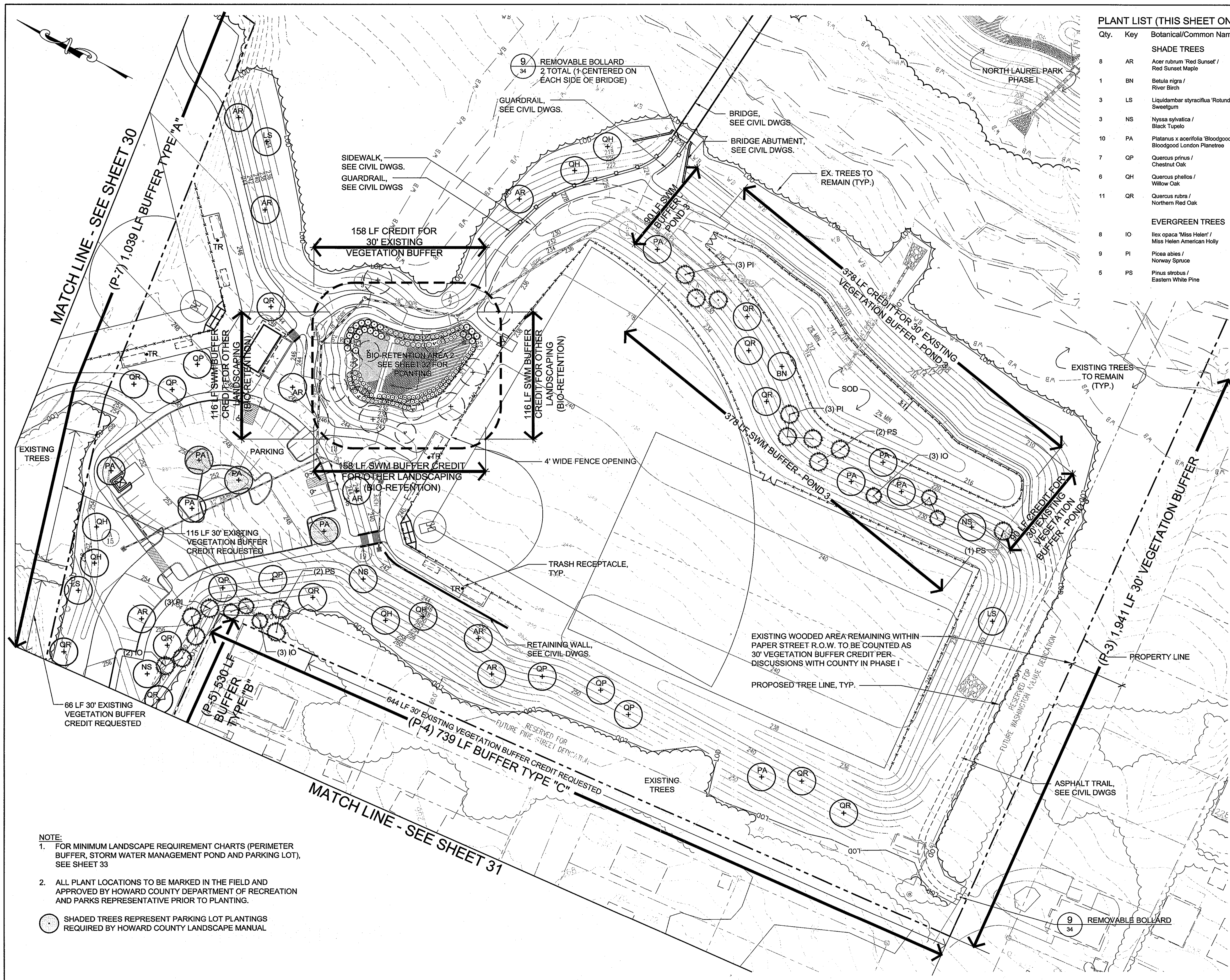
AREA
TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
**PRIVATE WATER
AND SEWER PROFILES**

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
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SEAL
9-21-10
DESIGNED BY: SCM
DRAWN BY: SGM
PROJECT NO: 14466-1-2
C400SDP28.DWG
DATE: SEPTEMBER 7, 2010
SCALE: 1" = 40'
DRAWING NO. 28 OF 43

BY: *Thomas E. Butler*
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. 33954, EXPIRATION DATE: 01-24-11



Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHADE TREES					
8	AR	Acer rubrum 'Red Sunset' / Red Sunset Maple	2-1/2" Cal.	B+B	Central Leader, Full Can.
1	BN	Betula nigra / River Birch	2-1/2" Cal.	B+B	Central Leader, Full Can.
3	LS	Liquidambar styraciflua 'Rotundiloba' / Sweetgum	2-1/2" Cal.	B+B	Central Leader, Full Can.
3	NS	Nyssa sylvatica / Black Tupelo	2-1/2" Cal.	B+B	Central Leader, Full Can.
10	PA	Platanus x acerifolia 'Bloodgood' / Bloodgood London Planetree	2-1/2" Cal.	B+B	Central Leader, Full Can.
7	QP	Quercus prinus / Chestnut Oak	2-1/2" Cal.	B+B	Central Leader, Full Can.
6	QH	Quercus phellos / Willow Oak	2-1/2" Cal.	B+B	Central Leader, Full Can.
11	QR	Quercus rubra / Northern Red Oak	2-1/2" Cal.	B+B	Central Leader, Full Can.
EVERGREEN TREES					
8	IO	Ilex opaca 'Miss Helen' / Miss Helen American Holly	6' Ht.	B+B	Central Leader, Full Provide 1 Male
9	PI	Picea abies / Norway Spruce	6' Ht.	B+B	Central Leader, Full
5	PS	Pinus strobus / Eastern White Pine	6' Ht.	B+B	Central Leader, Full

Architecture Planning Interior Design

The Lukmire Partnership

2700 South Quincey Street Suite 300 Arlington, VA 22206 703.598.0101 FAX 703.598.7798

MAHAN RYKIEL ASSOCIATES INC.

Landscape Architects
The Stieff Silver Building
800 Wyman Park Drive Suite 100
Baltimore, MD 21211 USA
Tel. 410.235.6001

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Suttler 12/13/10
DIRECTOR DATE

Alan Dunning 11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kurt Schuch 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P. 410 313 2414

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P. 410 313 2414

PROJECT: NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304

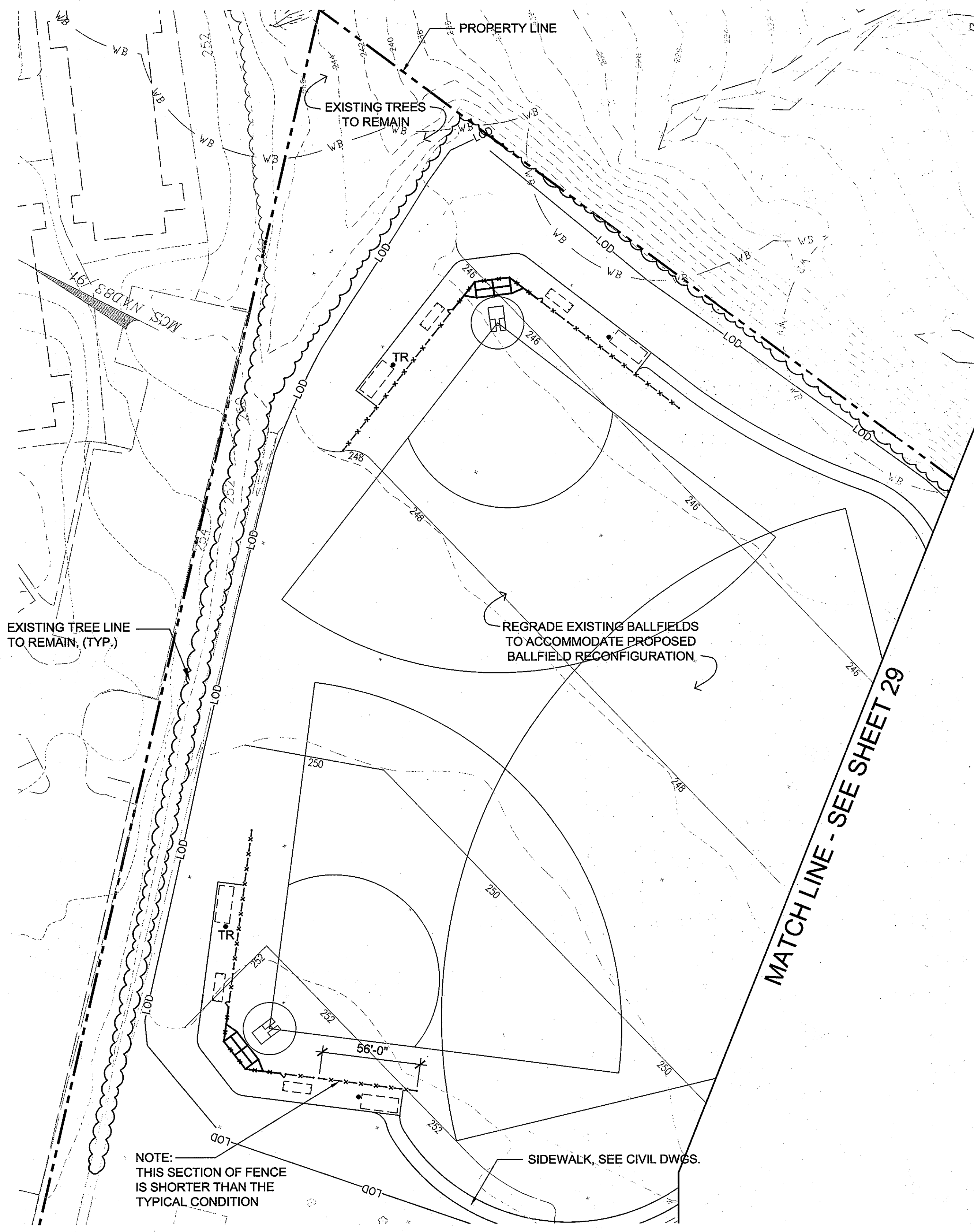
AREA: TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282

DESIGNED BY: CB
DRAWN BY: CD/ RC
PROJECT NO: 09102
DATE: SEPTEMBER 3, 2010
SCALE: 1" = 40'
DRAWING NO. 29 OF 37

- NOTE:**
- FOR MINIMUM LANDSCAPE REQUIREMENT CHARTS (PERIMETER BUFFER, STORM WATER MANAGEMENT POND AND PARKING LOT), SEE SHEET 33
 - ALL PLANT LOCATIONS TO BE MARKED IN THE FIELD AND APPROVED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS REPRESENTATIVE PRIOR TO PLANTING.
- SHADED TREES REPRESENT PARKING LOT PLANTINGS REQUIRED BY HOWARD COUNTY LANDSCAPE MANUAL



NO PLANTING THIS SHEET

The Lukmire Partnership
 Architecture
 Planning
 Interior Design
 2700 South Quincey Street
 Suite 300
 Arlington, VA 22206
 703.598.0101
 FAX 703.598.7798

MAHAN RYKIEL ASSOCIATES INC.
 Landscape Architects
 The Steiff Silver Building
 800 Wyman Park Drive
 Suite 100
 Baltimore, MD 21211 USA
 Tel. 410.236.6001

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Morgan E. Gutter 12/13/10
 DIRECTOR DATE
[Signature] 11/10/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Kathleen [Signature] 12/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

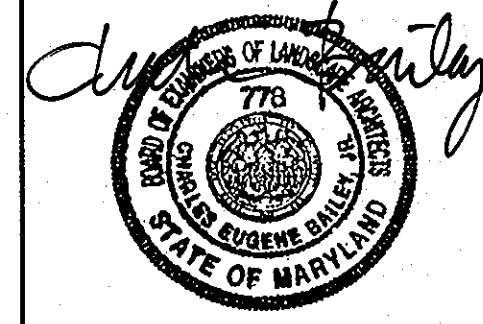
DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
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PROJECT
 NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304

AREA TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

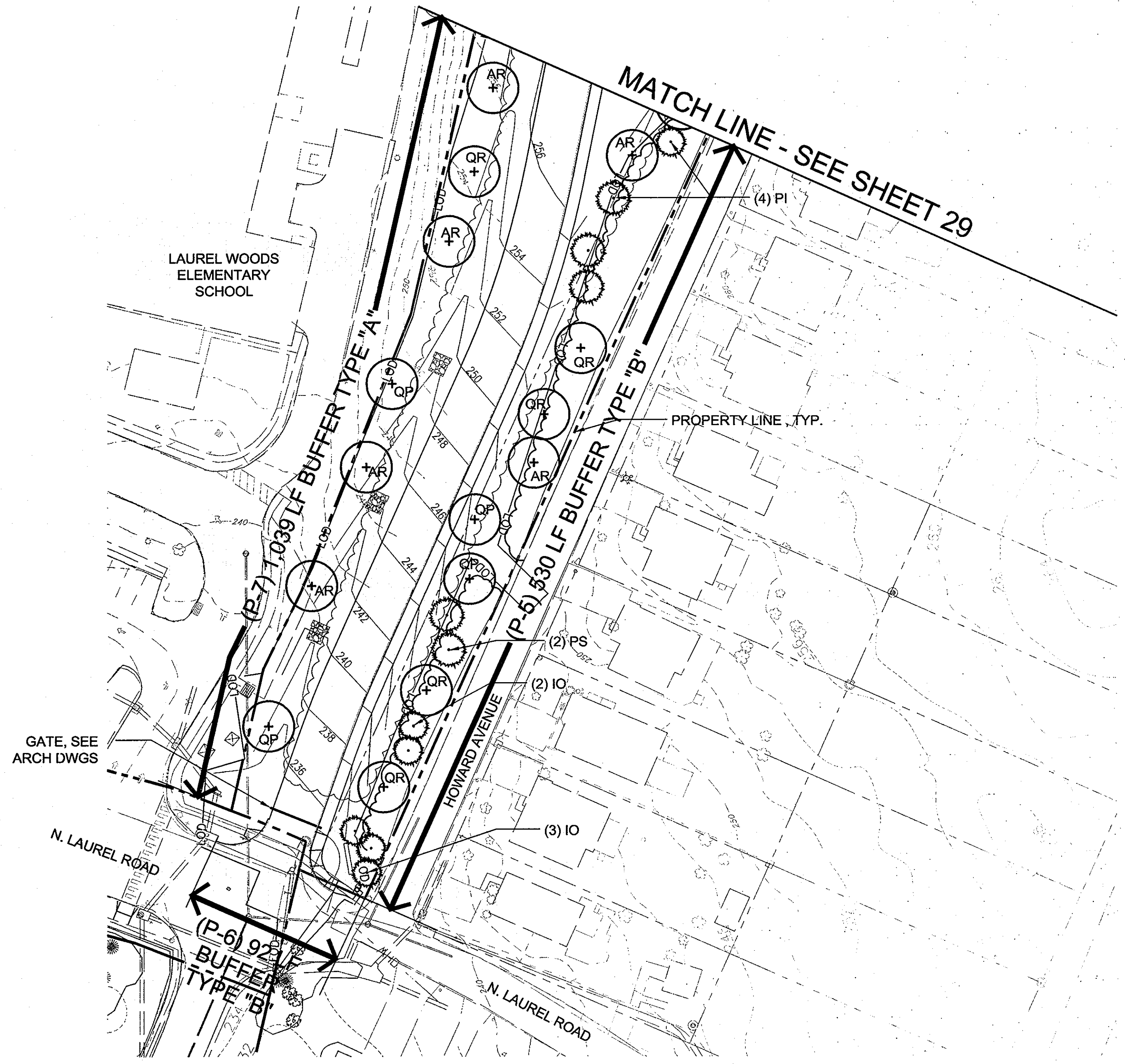
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DESIGNED BY : CB
 DRAWN BY : CD/ RC
 PROJECT NO : 09102
 DATE : SEPTEMBER 3, 2010
 SCALE : 1" = 40'
 DRAWING NO. 30 OF 37


PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.




PLANT LIST (THIS SHEET ONLY)

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHADE TREES					
6	AR	Acer rubrum 'Red Sunset' / Red Sunset Maple	2-1/2" Cal.	B+B	Central Leader, Full Can.
4	QP	Quercus prinus / Chestnut Oak	2-1/2" Cal.	B+B	Central Leader, Full Can.
5	QR	Quercus rubra / Northern Red Oak	2-1/2" Cal.	B+B	Central Leader, Full Can.
EVERGREEN TREES					
5	IO	Ilex opaca 'Miss Helen' / Miss Helen American Holly	6' HL	B+B	Central Leader, Full Provide 1 Male
4	PI	Picea abies / Norway Spruce	6' HL	B+B	Central Leader, Full
2	PS	Pinus strobus / Eastern White Pine	6' HL	B+B	Central Leader, Full

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APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Suttle 12/13/10
DIRECTOR DATE

William D. ... 11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kathleen ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

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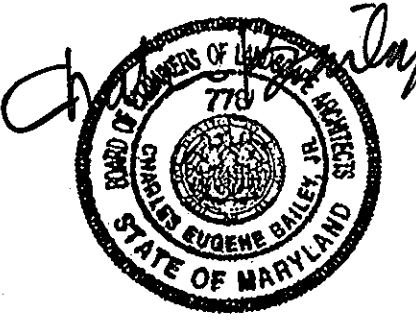
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PROJECT
NORTH LAUREL COMMUNITY CENTER
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AREA TAX MAP 47 GRID 22 & TAX MAP 50
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TITLE
LANDSCAPE PLAN

Patton Harris Rust & Associates
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DESIGNED BY : CB
DRAWN BY : CD/ RC
PROJECT NO : 09102
DATE : SEPTEMBER 3, 2010
SCALE : 1" = 40'
DRAWING NO. 31 OF 37

*PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.

SCHEDULE A PERIMETER LANDSCAPE EDGE					
CATEGORY	ADJACENT TO PERIMETER AND ROADWAYS				
	*P-3	P-4	P-5	P-6	P-7
Perimeter Number					
Perimeter/Frontage Designation/Landscape Type	C	C	B	B	A
Linear Feet of Roadway Frontage/Perimeter	1941 LF	739 LF	530 LF	92 LF	1039 LF
Credit for Existing Vegetation (Yes, No, Linear Feet Describe Below if Needed)	Yes 1941 LF	Yes 644 LF	No	No	Yes 181 LF
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe Below if Needed)	No	No	No	No	No
Subtotal (LF of Perimeter - Credits)	0 LF	95 LF	530 LF	92 LF	858 LF
Number of Plants Required					
Shade Trees	-	1:40 2	1:50 11	1:50 2	1:60 14
Evergreen Trees	-	1:20 5	1:40 13	1:40 2	-
Shrubs	-	-	-	-	-
Number of Plants Provided					
Shade Trees	-	2	11	2	15
Evergreen Trees	-	5	13	2	-
Other Trees (2:1 substitution)	-	-	-	-	-
Shrubs (10:1 substitution)	-	-	-	-	-
(Describe plant substitution credits below if needed)					

- NOTE:
- PLANT QUANTITIES PROVIDED REPRESENT MORE THAN IS REQUIRED PER SCHEDULES A, B & C.
 - SEE INDIVIDUAL SHEETS FOR PLANT QUANTITIES.
 - *PERIMETER P-3 PREVIOUSLY ACCOUNTED FOR ON PHASE I

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	56
Number of Trees Required (1:9)	6
Number of Trees Provided Shade Trees Other Trees (2:1 Substitution)	6

SCHEDULE C STORMWATER MANAGEMENT AREA LANDSCAPING		
Stormwater Management Area	Bio-Retention 2	Dry Pond 3
Linear feet of perimeter	548 LF	936 LF
Credit for existing vegetation	Yes 158 LF	Yes 378 LF
Credit for other landscaping (See *Note below)	Yes 390 LF	No
Subtotal (linear feet of perimeter - credits)	0 LF	468 LF
Number of Plants Required		
Shade Trees (1:50)	-	9
Evergreen Trees (1:40)	-	12
Number of Plants Provided		
Shade Trees	-	9
Other Trees (2:1 substitution)	-	12

- *NOTE:
- PLANTING DESIGN FOR BIO-RETENTION AREA 2 BASED ON "LANDSCAPING GUIDANCE FOR STORMWATER BMP'S" PROVIDED BY MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE). THE LANDSCAPING STRATEGY FOR THE AREA ATTEMPTS TO CREATE AN ENVIRONMENTAL AND AESTHETIC AMENITY THAT FITS WITHIN ITS PARKLAND CONTEXT INSTEAD OF SCREENING ITS VIEW FROM PARK USERS AS SUGGESTED IN THE COUNTY LANDSCAPE MANUAL. INCORPORATION OF NATIVE AND ADAPTED WETLAND SPECIES HELPS TREAT STANDING WATER AND CONTRIBUTES TO A SUSTAINABLE ENVIRONMENT FOR INSECTS, AQUATIC LIFE AND OTHER WILDLIFE. TREES AND SHRUBS ARE LOCATED TO PROMOTE SOIL STABILITY AND PROVIDE AN AESTHETICALLY-PLEASING VIEW TO THE POND.

At the time of plant installation, all shrubs and trees listed and approved on the Landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the approved Landscape Plan may result in denial or delay in the final release of the landscape plan until such time as all required materials are planted and/or revisions are made to the applicable plans.



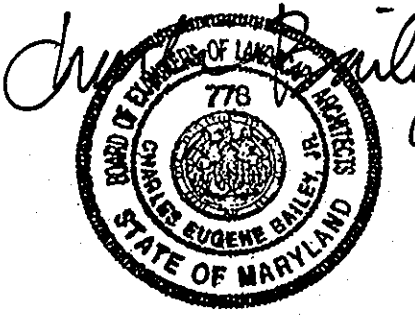
The owner, tenants, and/or their agents shall be responsible for maintenance of the required landscaping including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Landscape Manual with 10 shade trees, 5 ornamental trees, 33 evergreen trees and 128 shrubs.

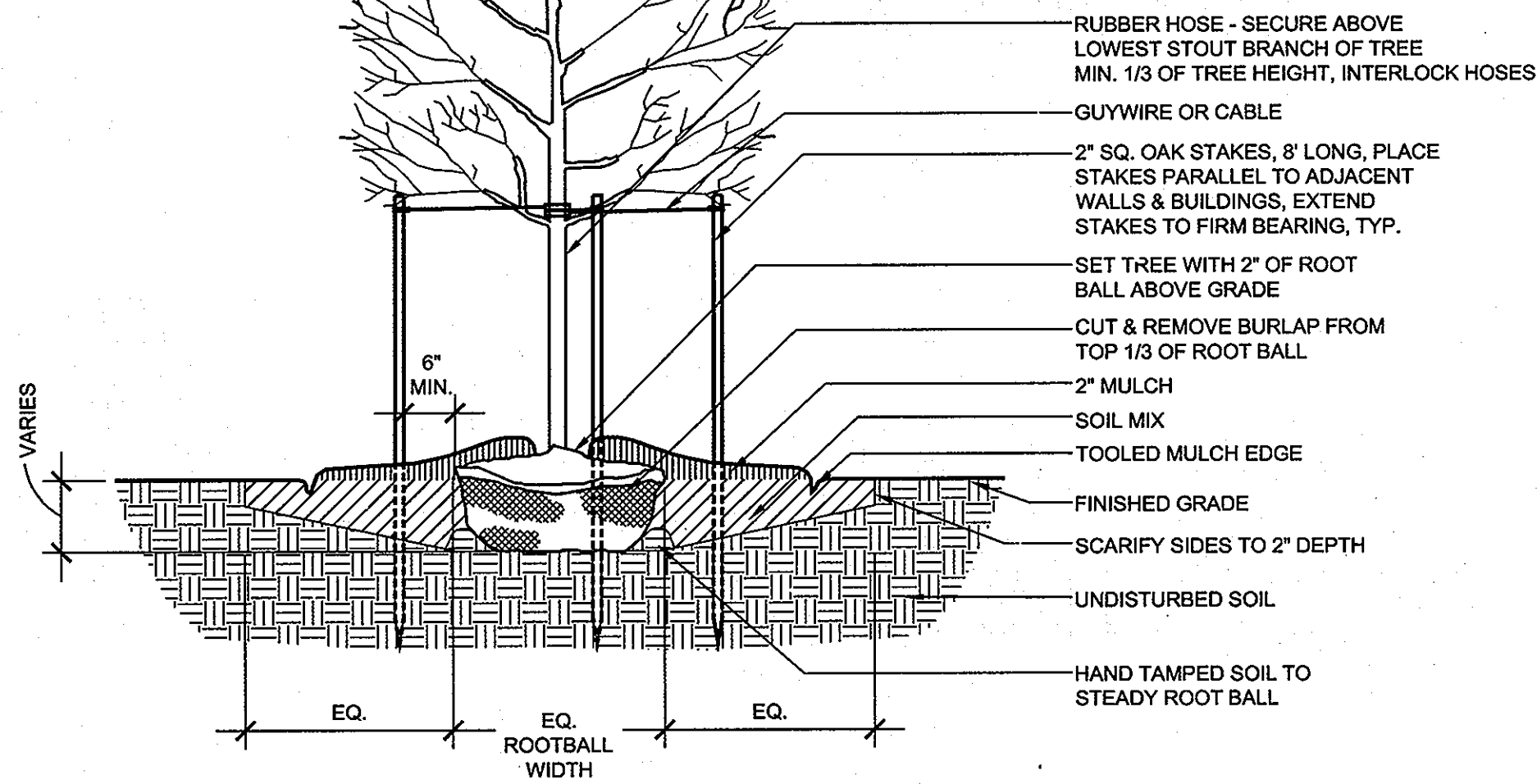
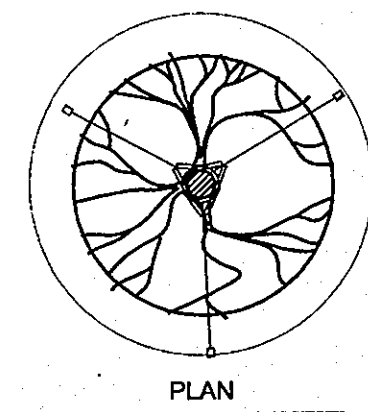
Developer's/Owner's Landscape Certificate

I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Landscape Manual. I/we further certify that upon completion a Letter of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

[Signature]
Developer's/Owner's Name

 <p>The Lukmire Partnership Architecture Planning Interior Design 2700 South Quincey Street Suite 500 Arlington, VA 22206 703.598.0101 FAX 703.598.7798</p>	
 <p>MAHANY RYKIEL ASSOCIATES INC. Landscape Architects The Steiff Silver Building 800 Wyman Park Drive Suite 100 Baltimore, MD 21211 USA Tel. 410.236.6001</p>	
<p>APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.</p> <p><i>[Signature]</i> 12/13/10 DIRECTOR DATE</p> <p><i>[Signature]</i> 11/18/10 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p> <p><i>[Signature]</i> 12/10/10 CHIEF, DIVISION OF LAND DEVELOPMENT DATE</p>	
DATE	NO. REVISION
OWNER	
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
DEVELOPER	
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
PROJECT	
NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304	
AREA TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
LANDSCAPE CALCULATIONS	
<p>Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282</p>	
 <p>DESIGNED BY : CB DRAWN BY : CD/ RC PROJECT NO : 09102 DATE : SEPTEMBER 3, 2010 SCALE : DRAWING NO. <u>33</u> OF <u>37</u></p>	
<p><small>*PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.</small></p>	

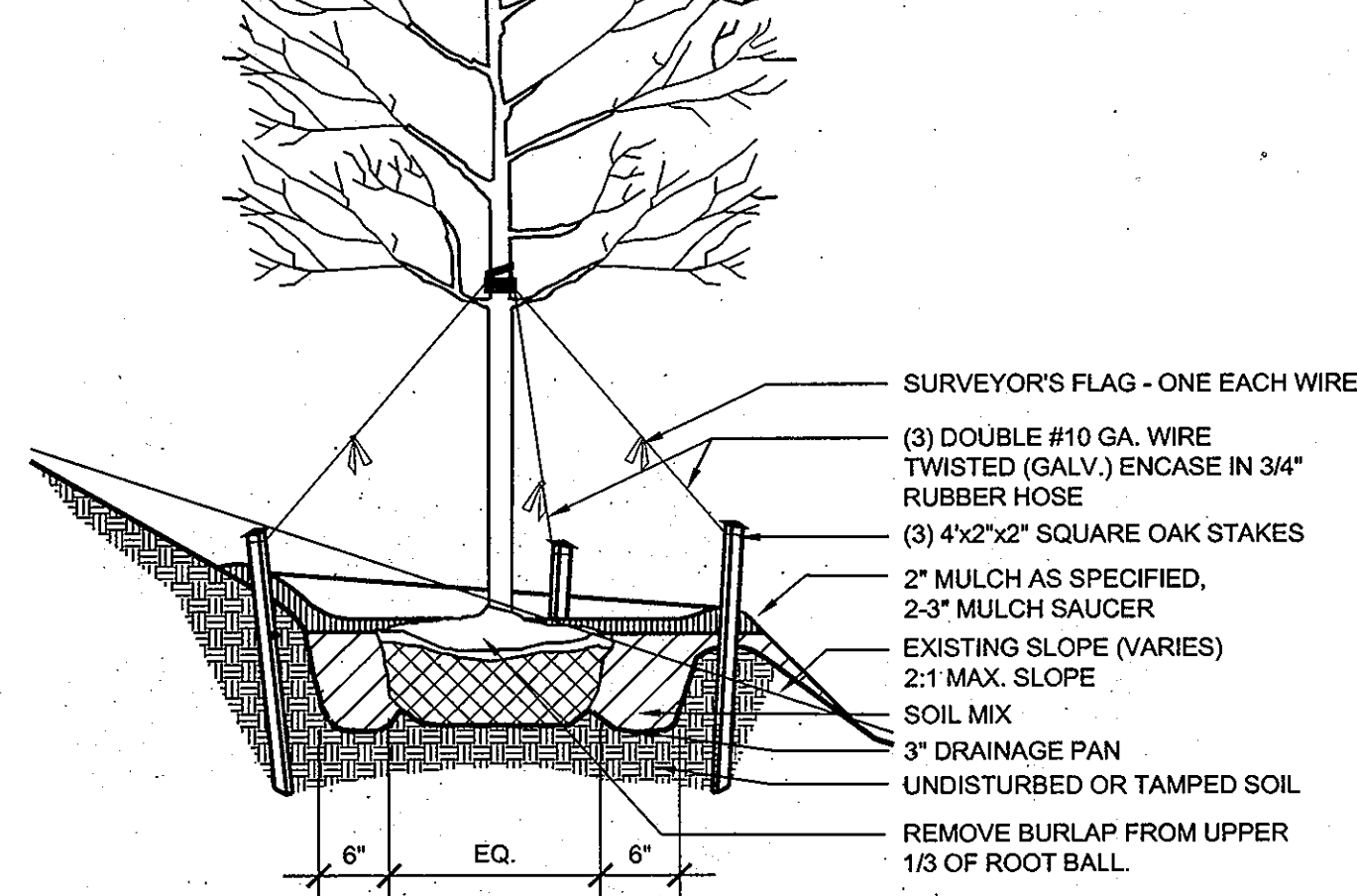
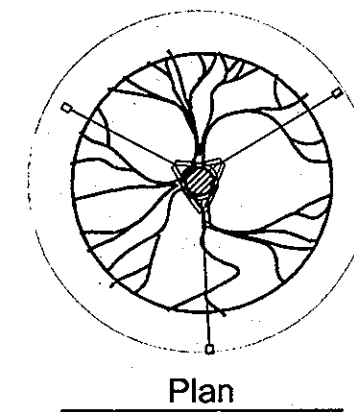
- NOTES:
- DO NOT CUT CENTRAL LEADER.
 - FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.
 - DO NOT PLACE MULCH AGAINST TRUNK.
 - TREES TO HAVE SINGLE LEADER.
 - CUT AND REMOVE TOP HALF OF WIRE BASKETS.



1 Typical Deciduous Tree Planting

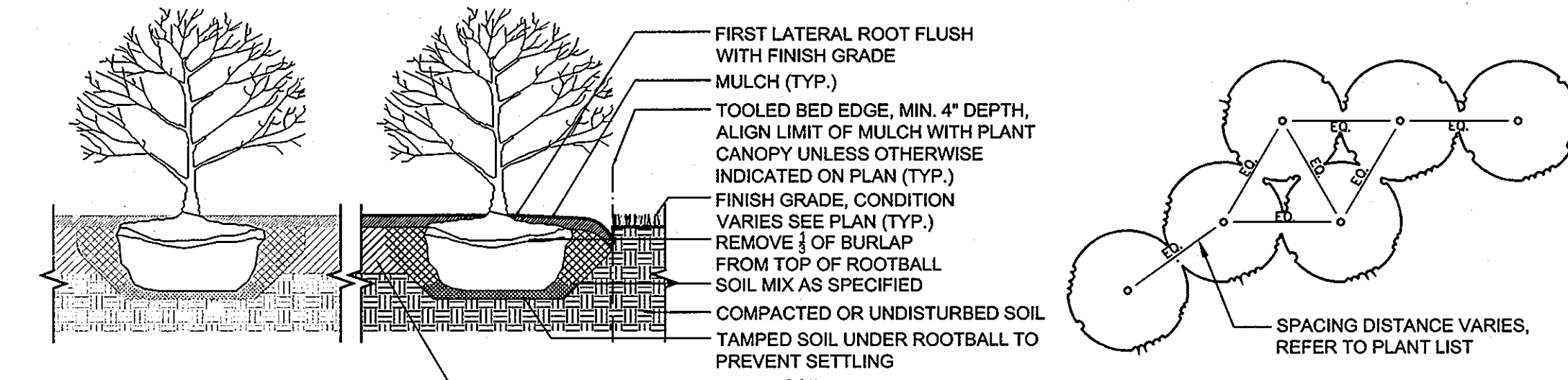
Scale: 1/2" = 1'-0"

- NOTES:
- DO NOT CUT CENTRAL LEADER.
 - DO NOT MULCH AGAINST TRUNK.
 - SET TREE WITH 1/8 OF ROOT BALL ABOVE GRADE. STAKES, WIRES, AND HOSES SHALL BE REMOVED AFTER ONE YEAR.
 - SCARIFY SUBSOIL AND SIDES OF TREE PIT TO A MIN. OF 4" DEPTH.
 - TREES UNDER 2-1/2" CAL.: 10" x 2" x 2" STAKES SET VERTICAL, MIN. 2" INTO COMPACTED SUBGRADE.



2 Typical Deciduous Tree Planting on Slope

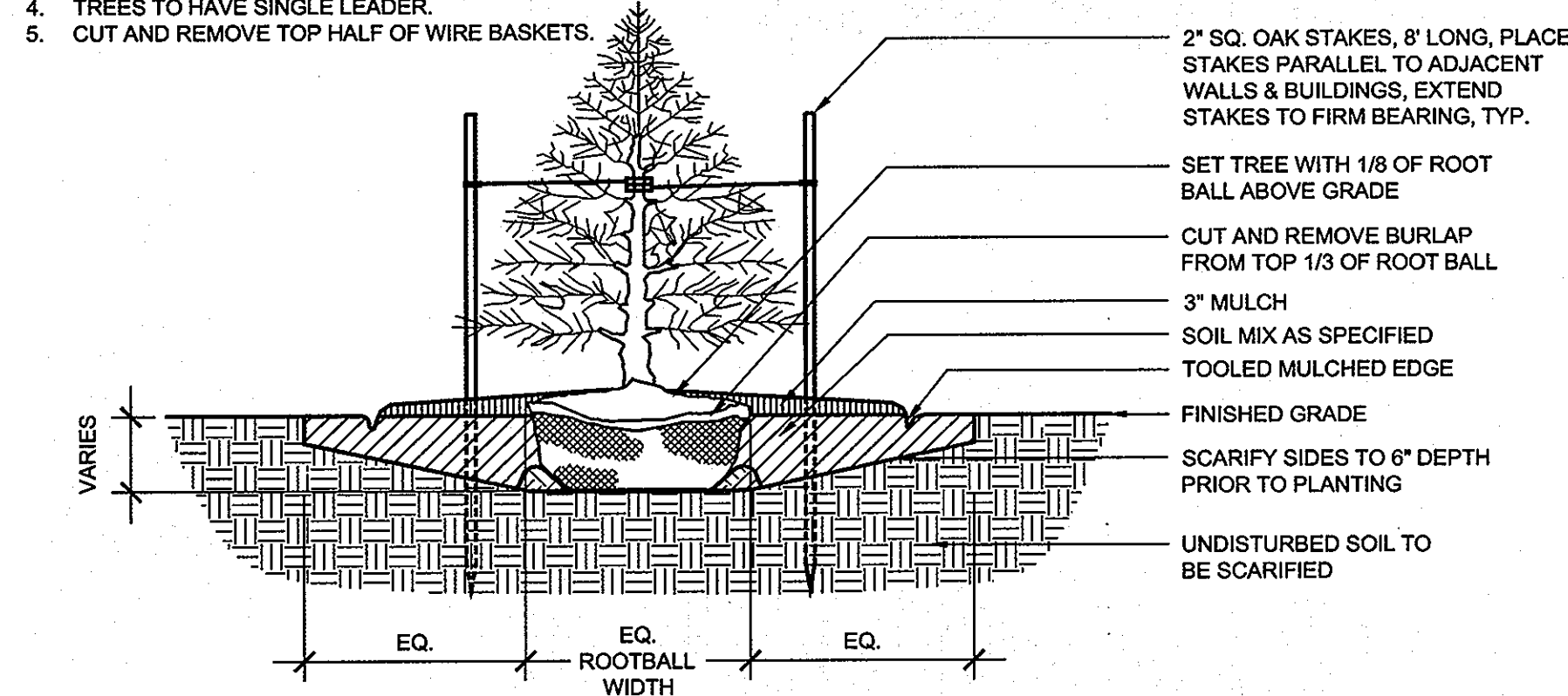
Scale: 1/2" = 1'-0"



3 Typical Shrub Tree Planting

NTS

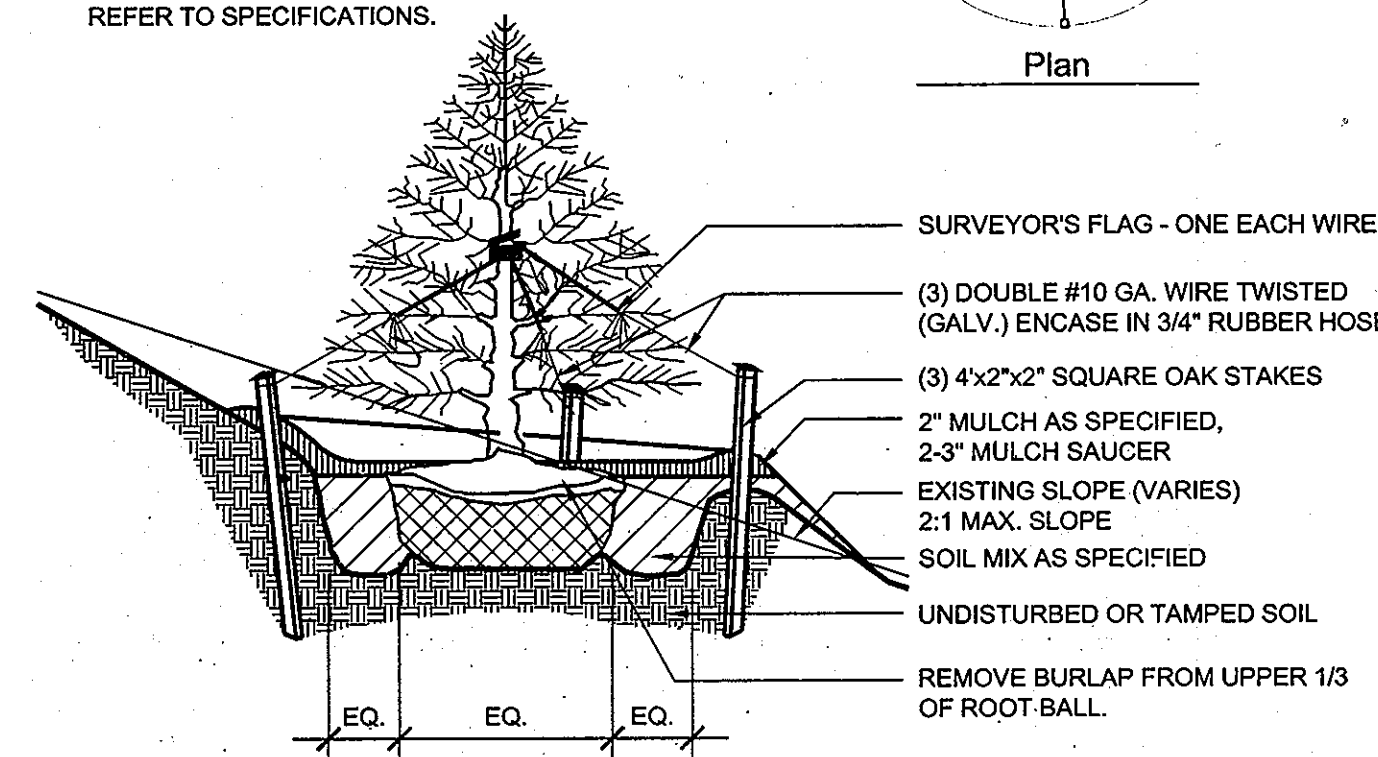
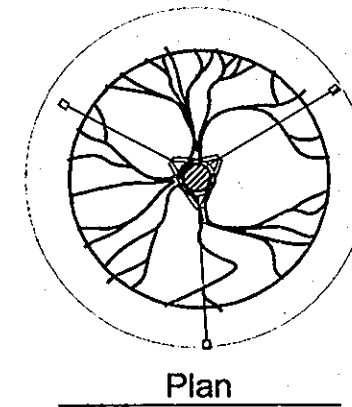
- NOTES:
- DO NOT CUT CENTRAL LEADER.
 - FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.
 - DO NOT PLACE MULCH AGAINST TRUNK.
 - TREES TO HAVE SINGLE LEADER.
 - CUT AND REMOVE TOP HALF OF WIRE BASKETS.



4 Typical Evergreen Tree Planting

Scale: 1/2" = 1'-0"

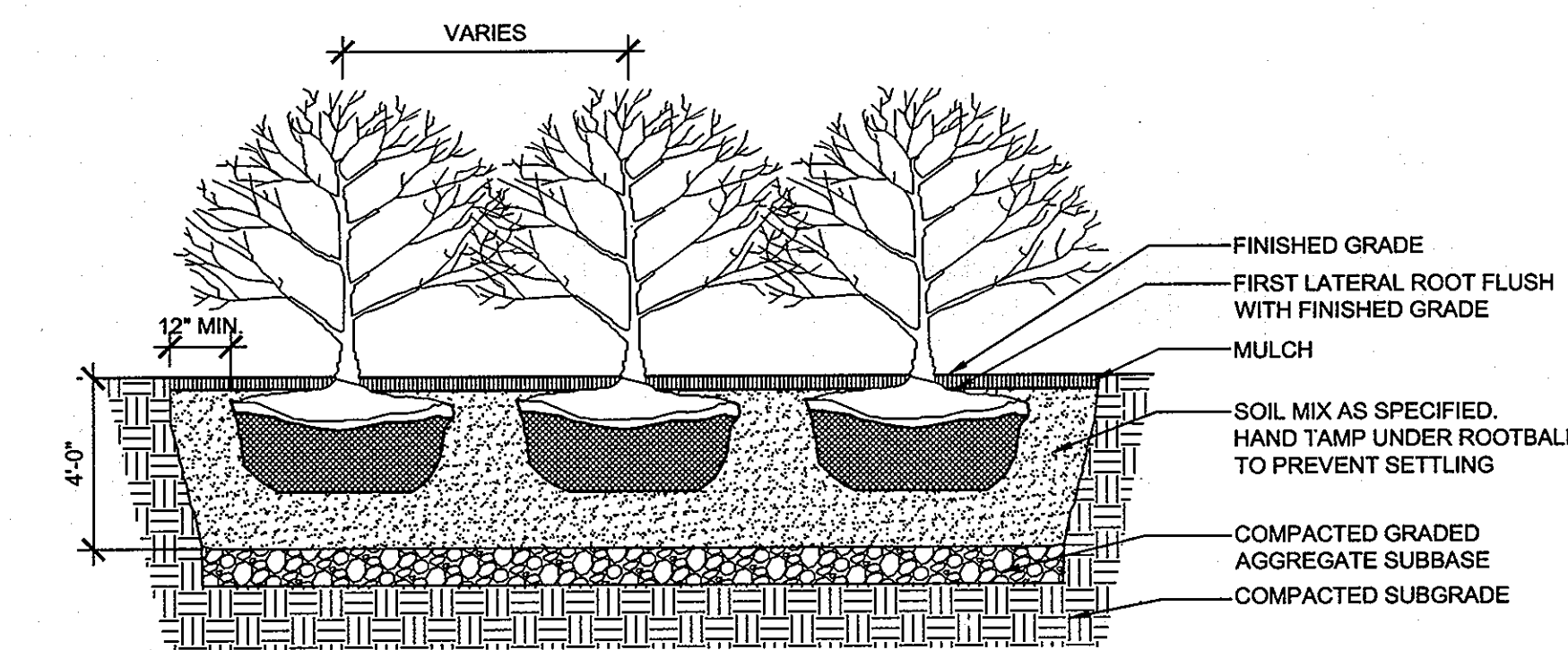
- NOTES:
- DO NOT CUT CENTRAL LEADER.
 - FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.



5 Typical Evergreen Tree Planting on Slope

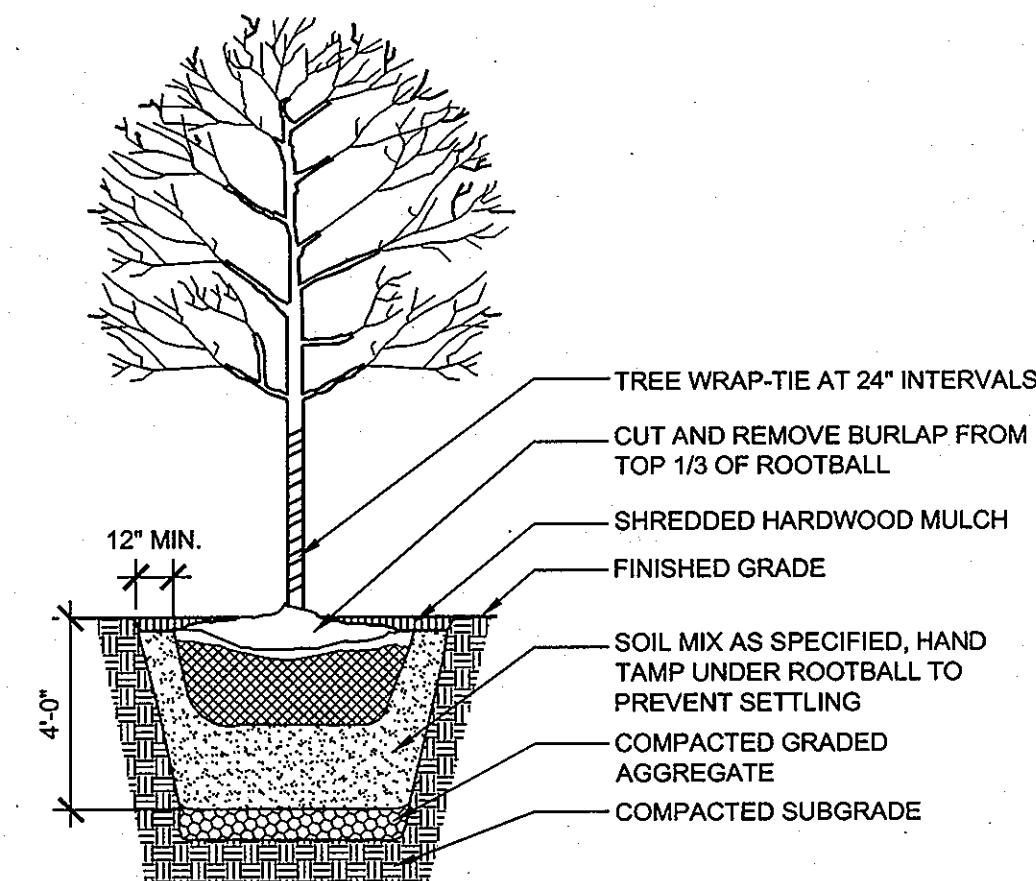
Scale: 1/2" = 1'-0"

- NOTE:
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL AS SHOWN.



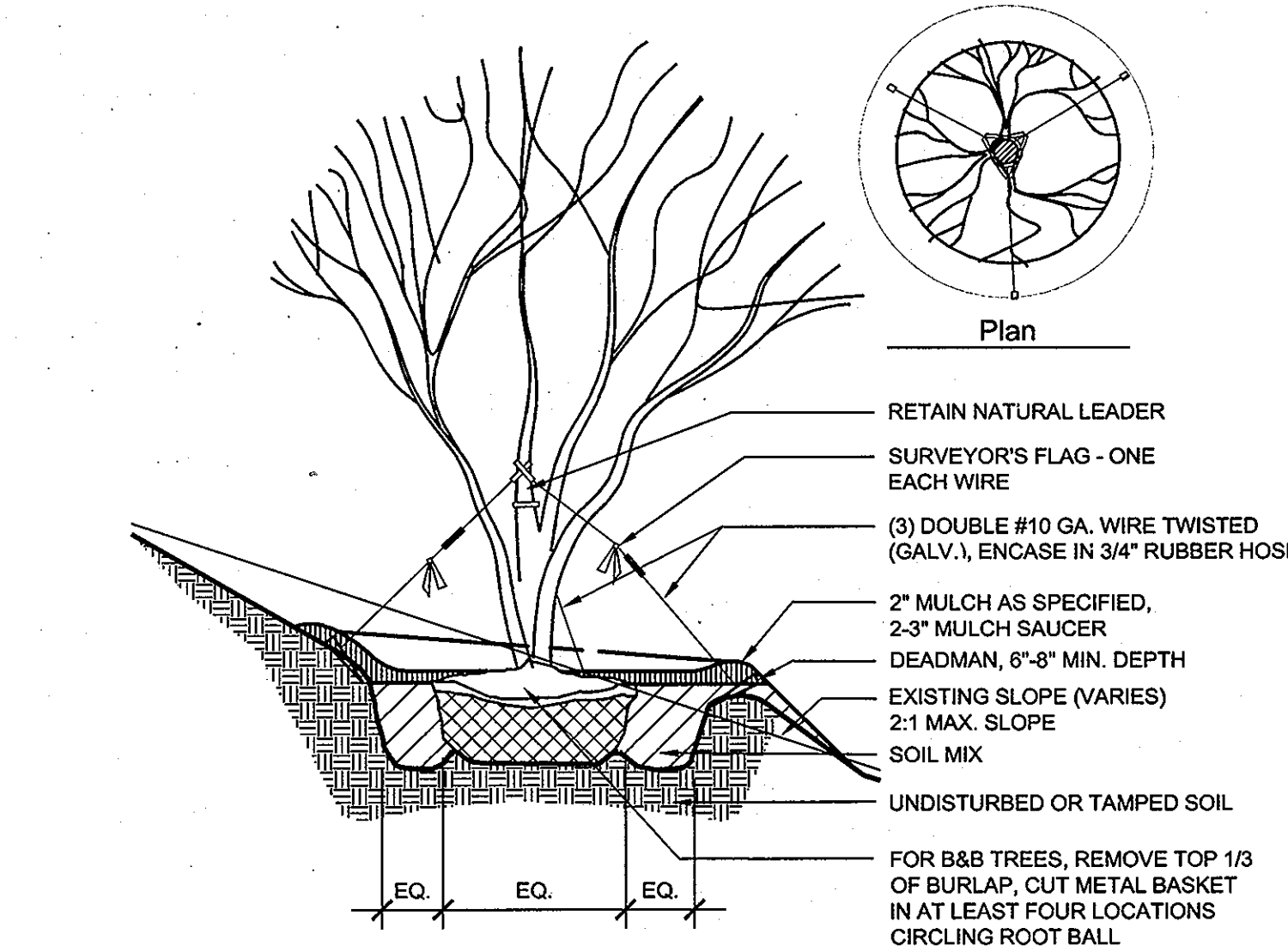
7 Typical Bio-Retention Shrub Planting

Scale: 1/4" = 1'-0"



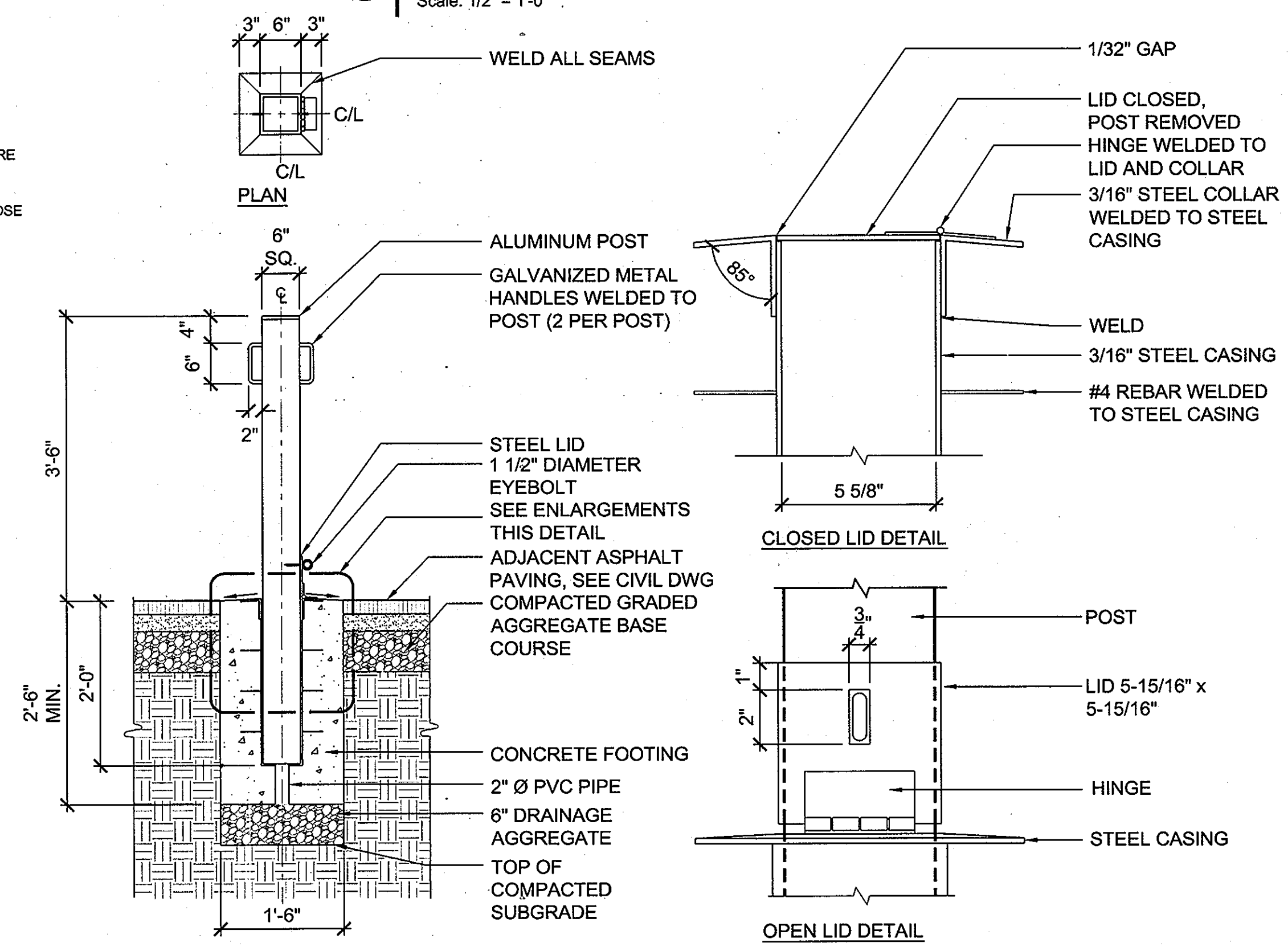
8 Typical Bio-Retention Tree Planting

Scale: 1/4" = 1'-0"



6 Typical Bio-Retention Multi-Stem Tree Planting

Scale: 1/2" = 1'-0"



SECTION

- NOTE:
- ORIENT HANDLES PARALLEL TO DIRECTION OF PATHWAY
 - GRIND ALL EXPOSED SURFACES SMOOTH AND FREE FROM BURRS. PAINT ALL EXPOSED SURFACES WITH 2 COATS 'GLIDDEN GLID GUARD' ALKYD INDUSTRIAL ENAMEL OR APPROVED EQUAL. COLOR TO MATCH BENCH FRAME (BROWN), PROVIDE A SAMPLE FOR APPROVAL.
 - CONTRACTOR TO SUBMIT SHOP DWGS. FOR REVIEW PRIOR TO FABRICATION.

9 Removable Bollard

Scale: 3/4" = 1'-0"

The Lukmire Partnership
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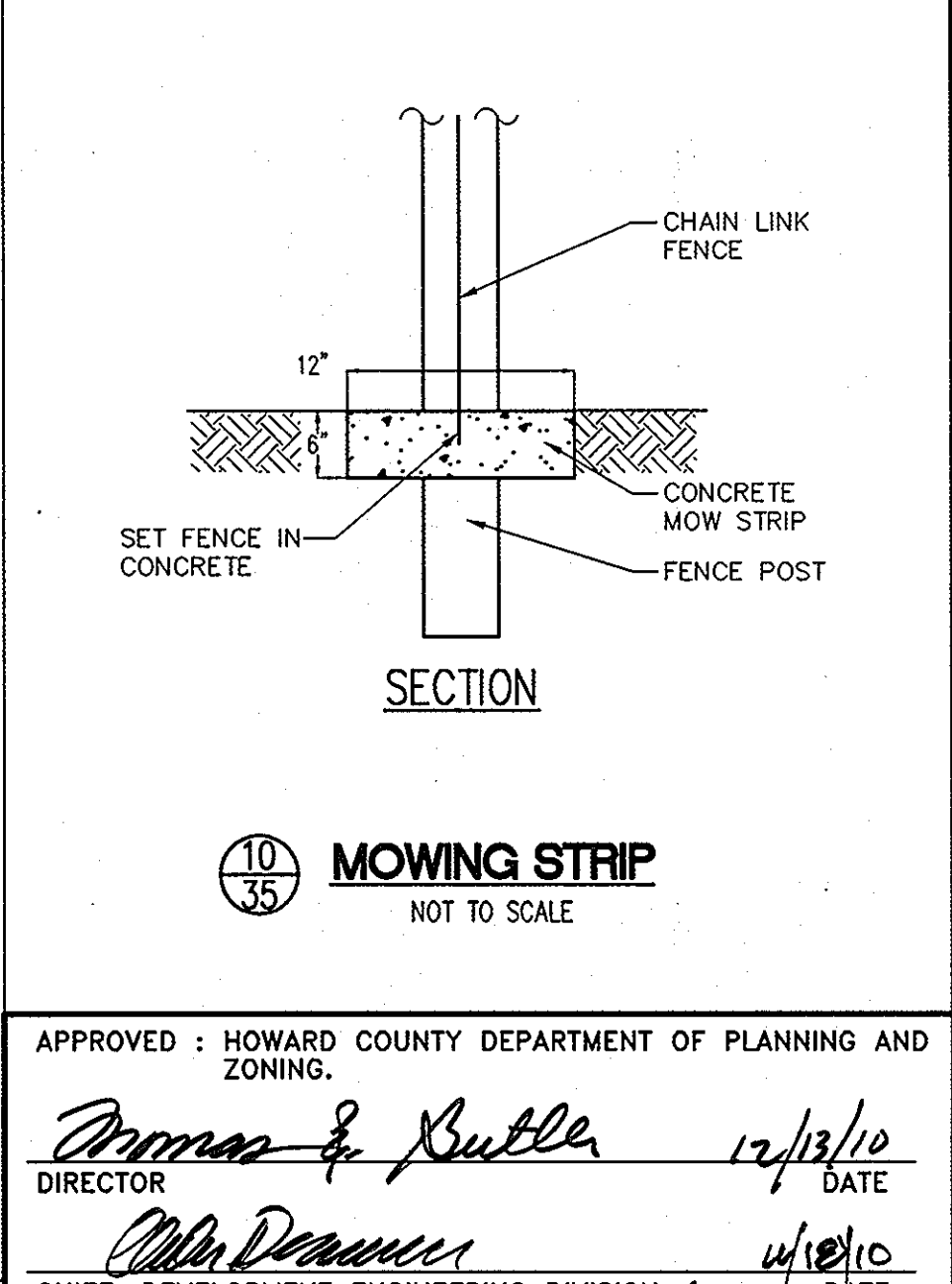
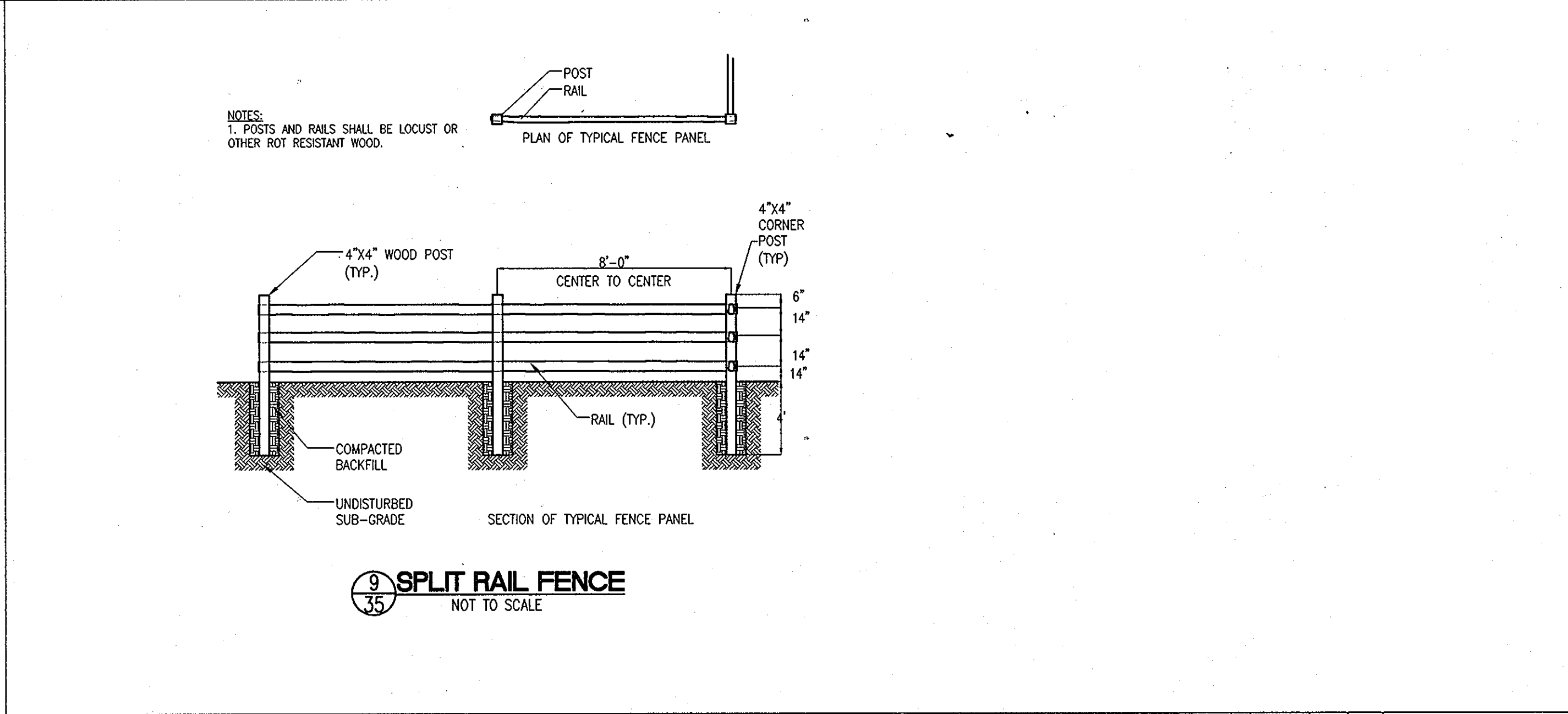
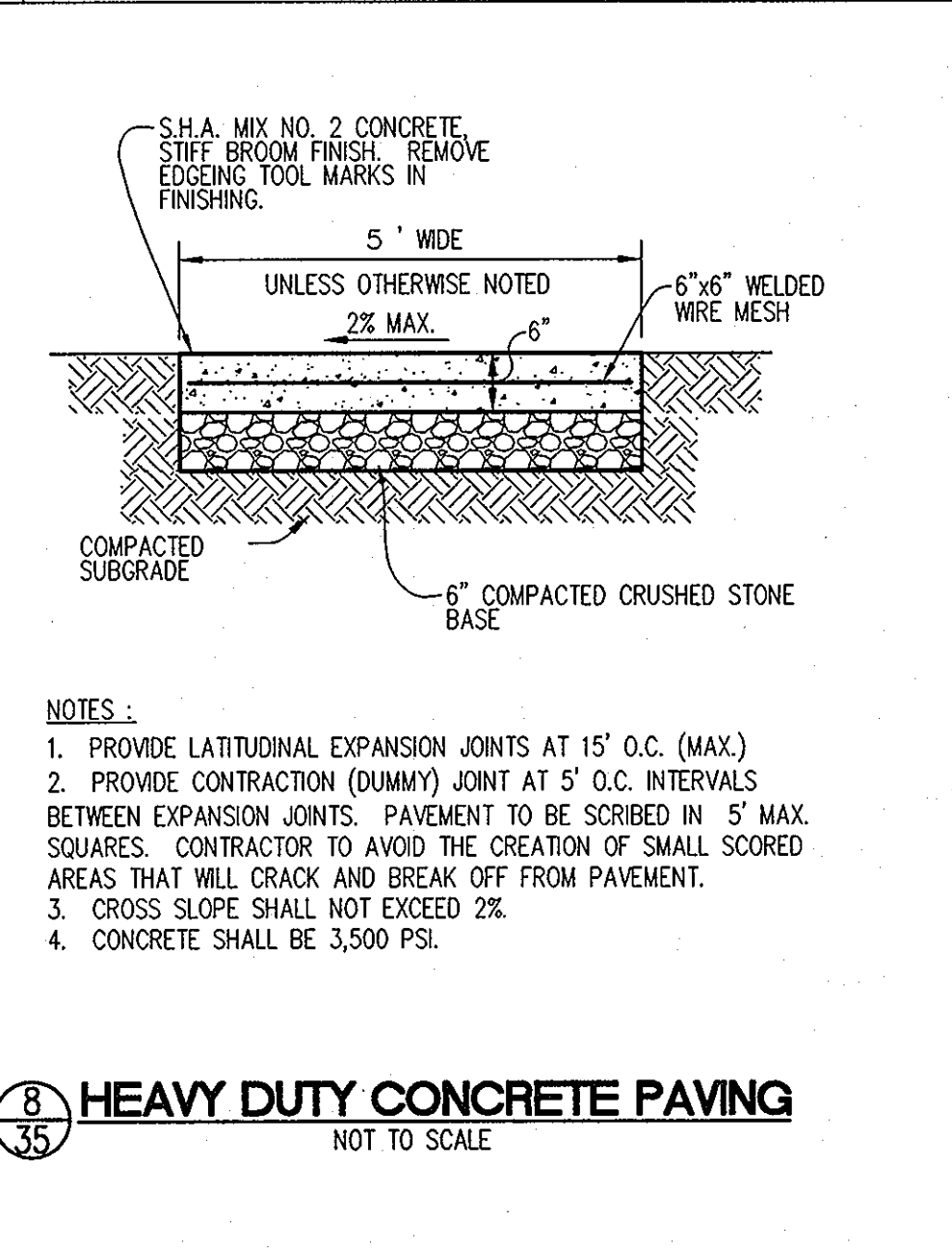
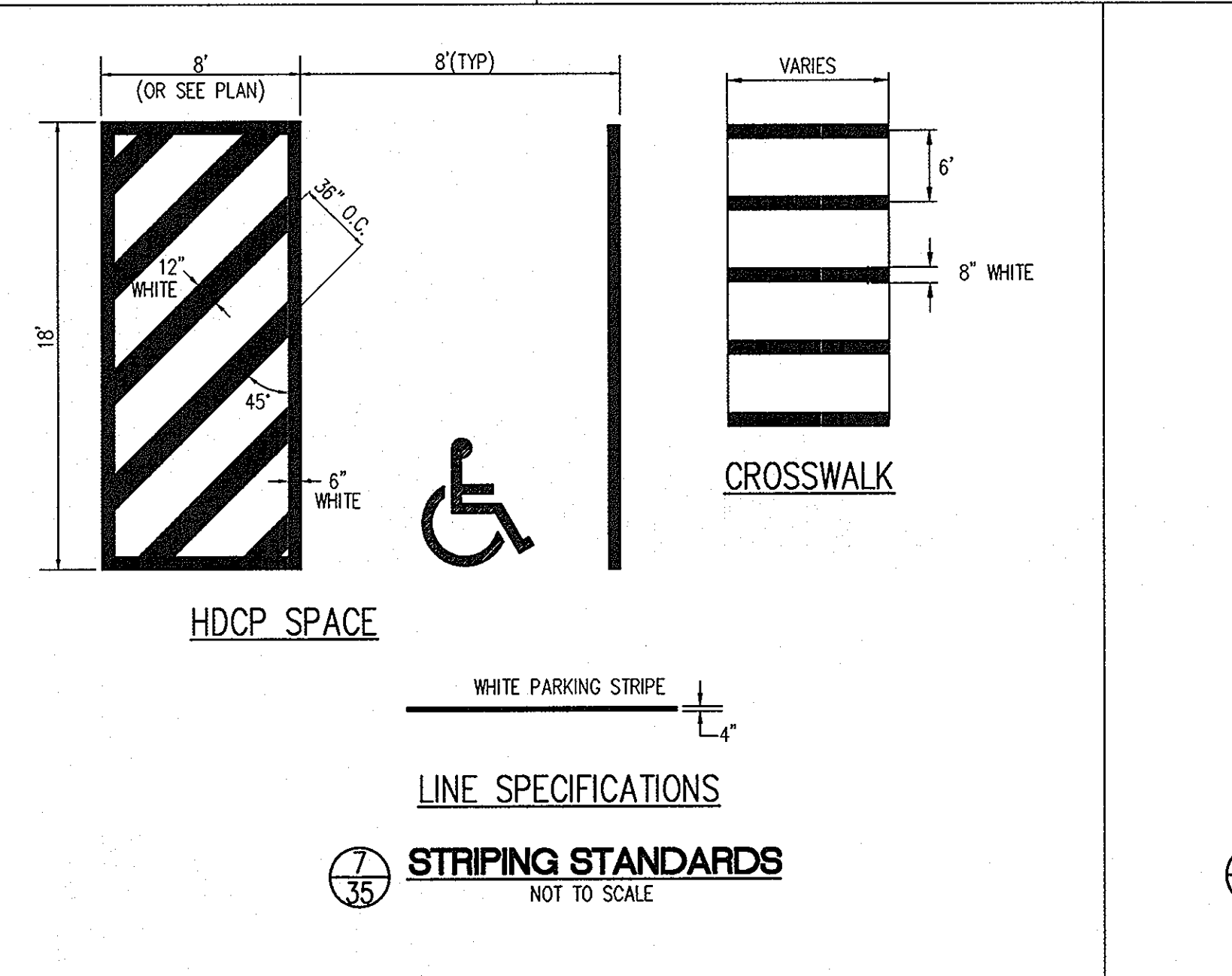
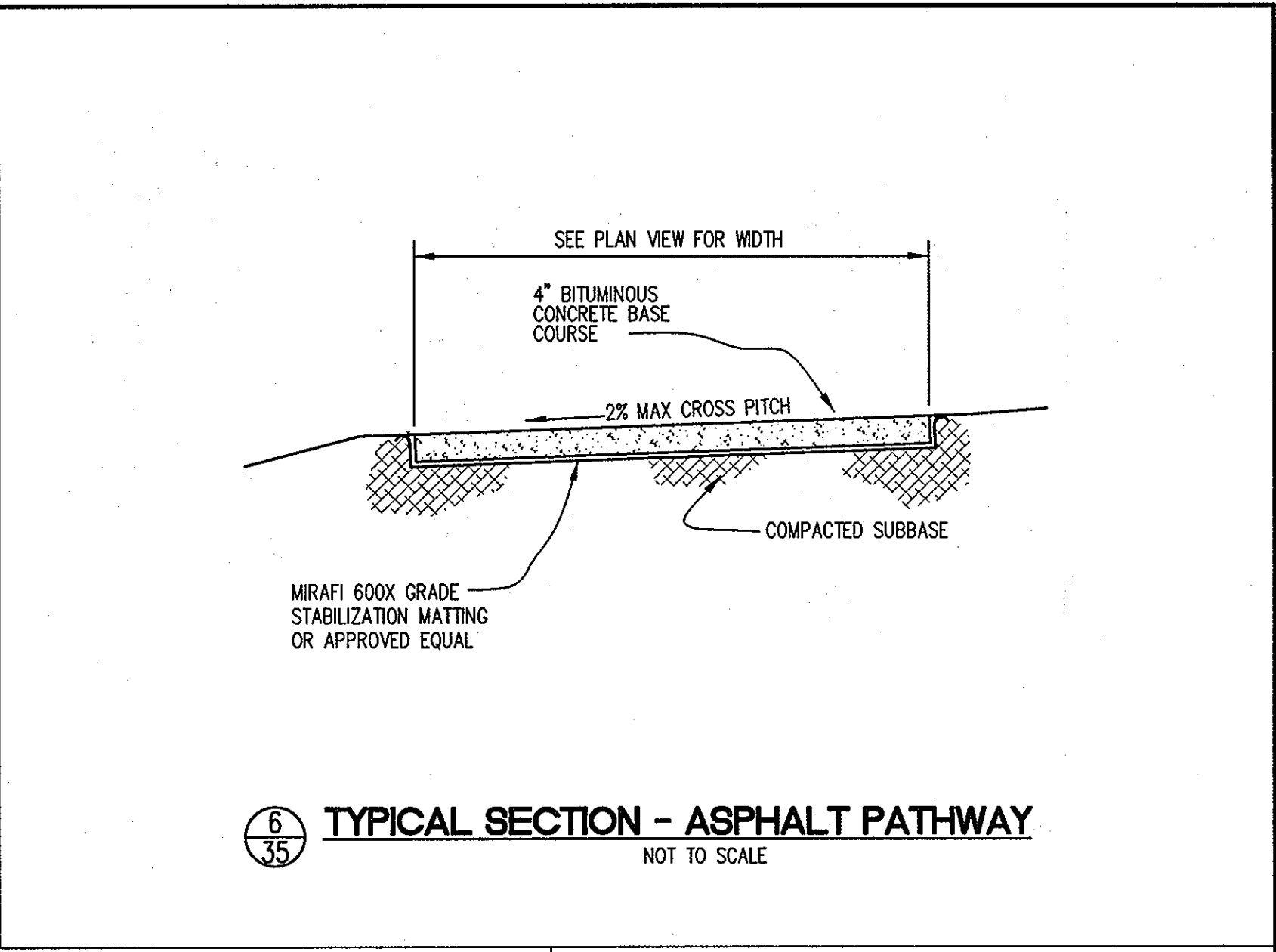
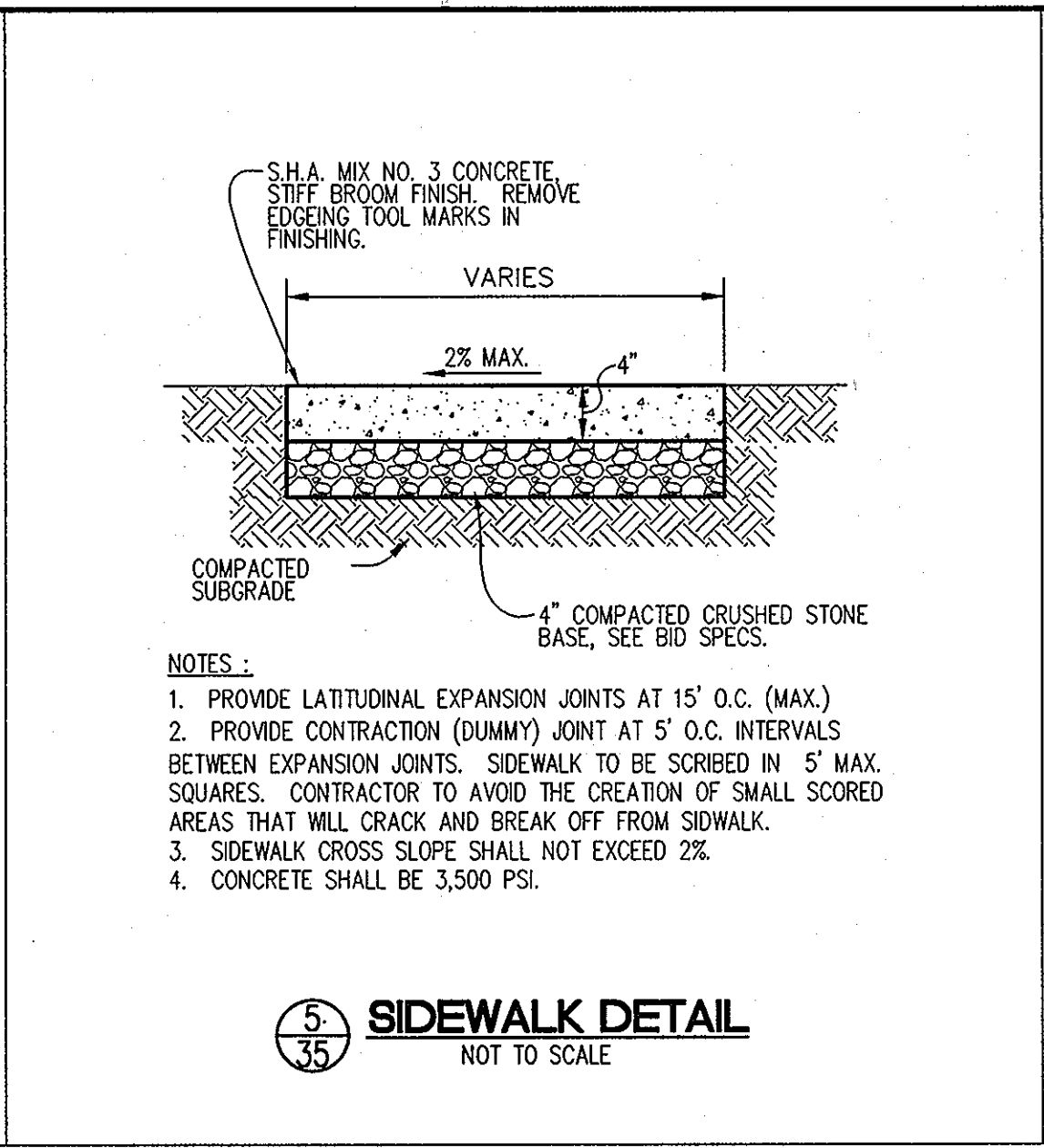
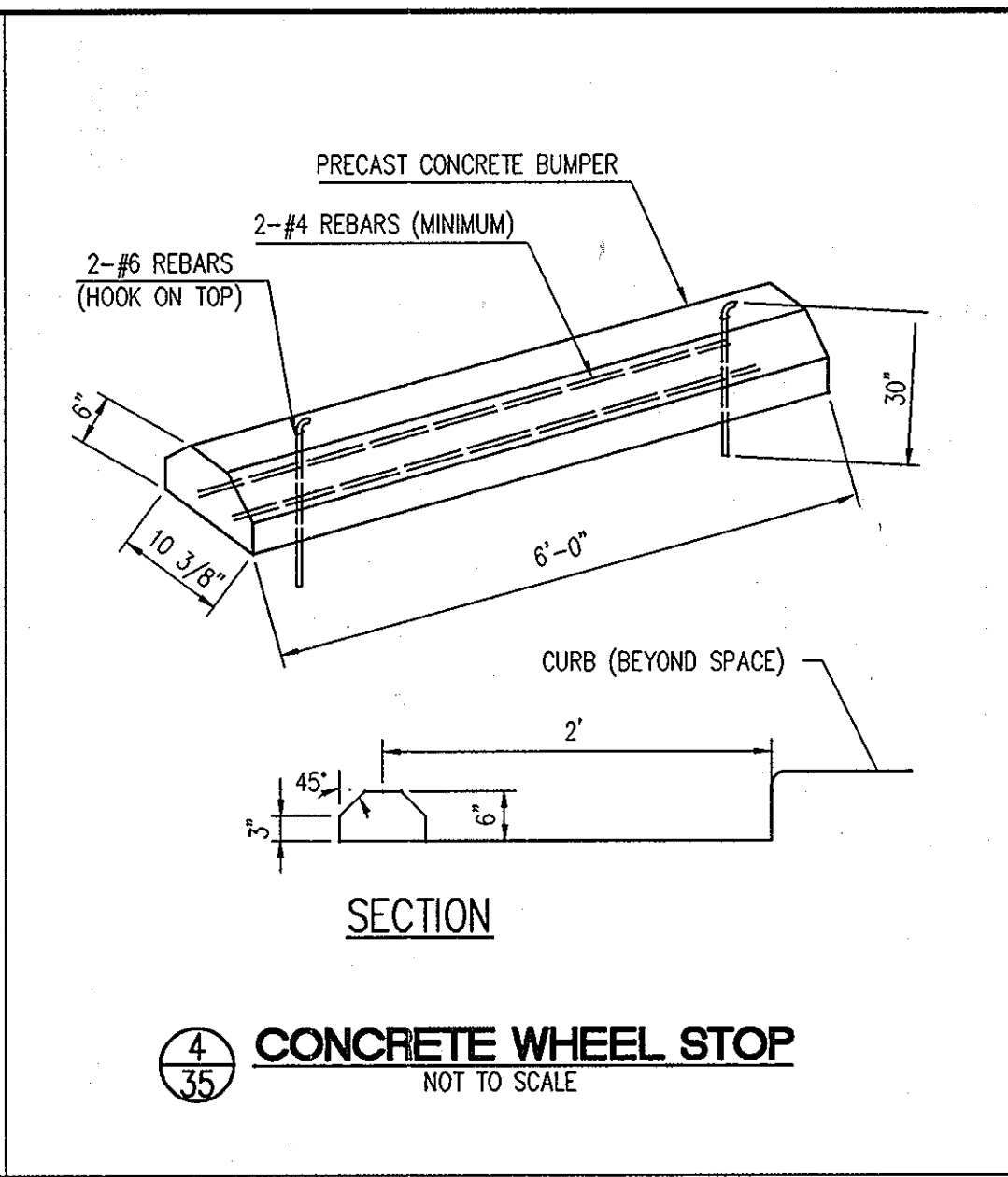
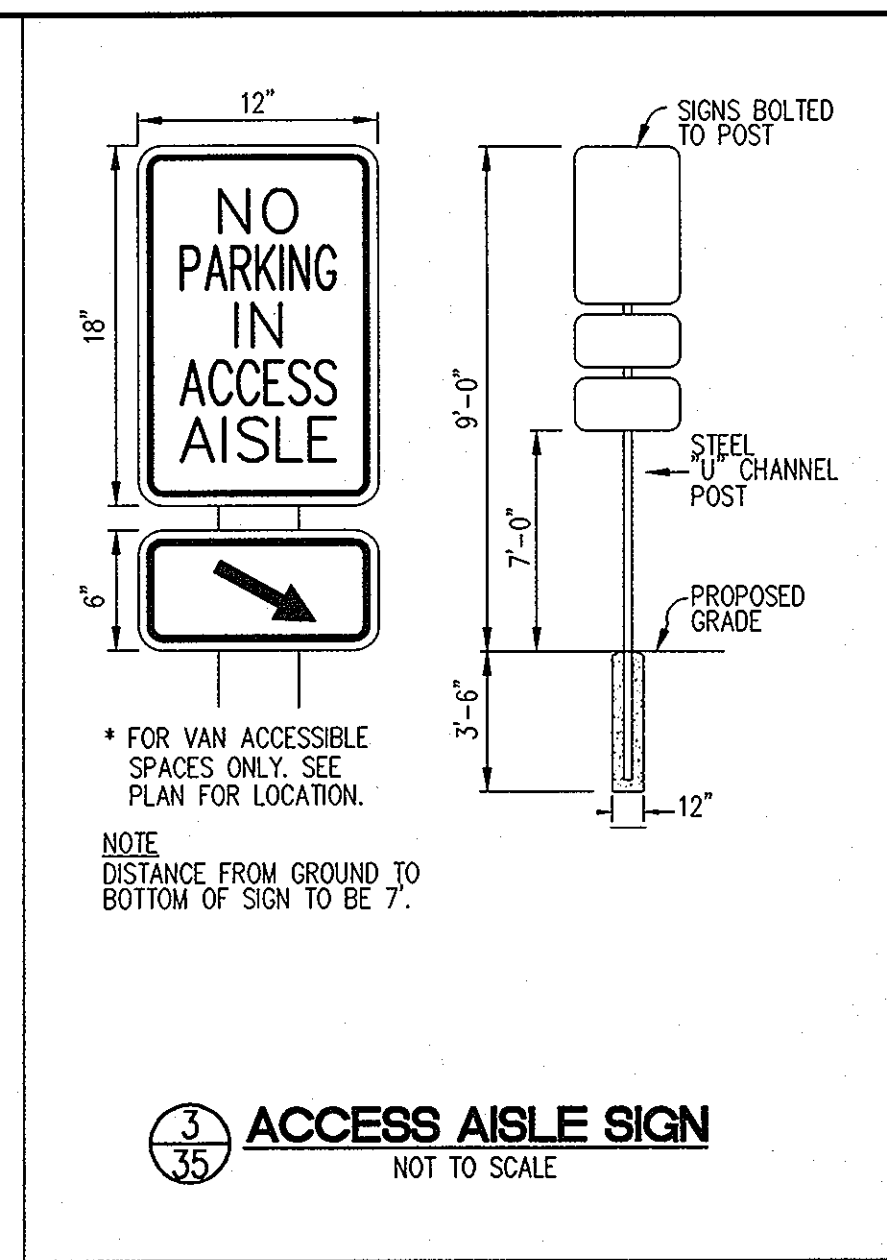
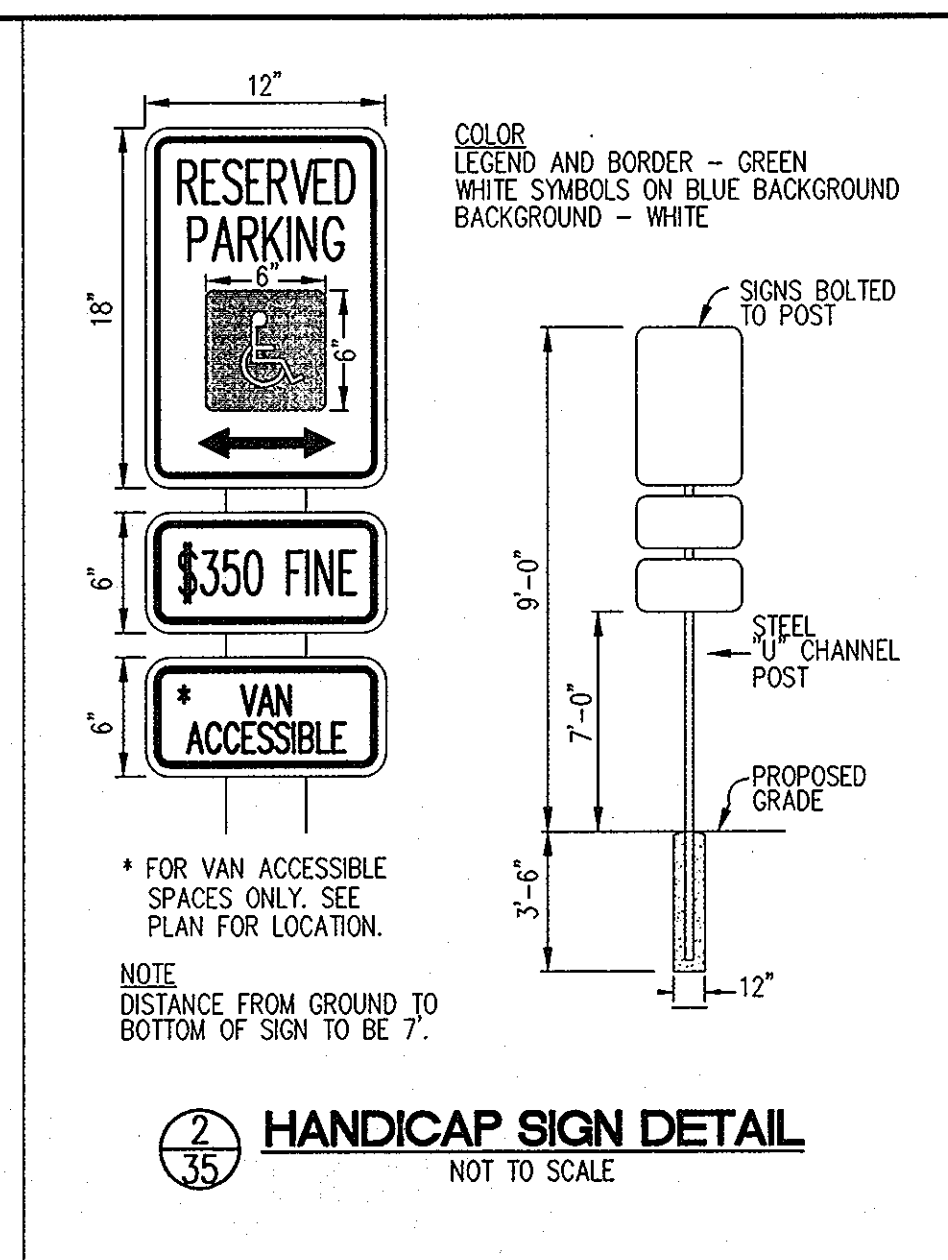
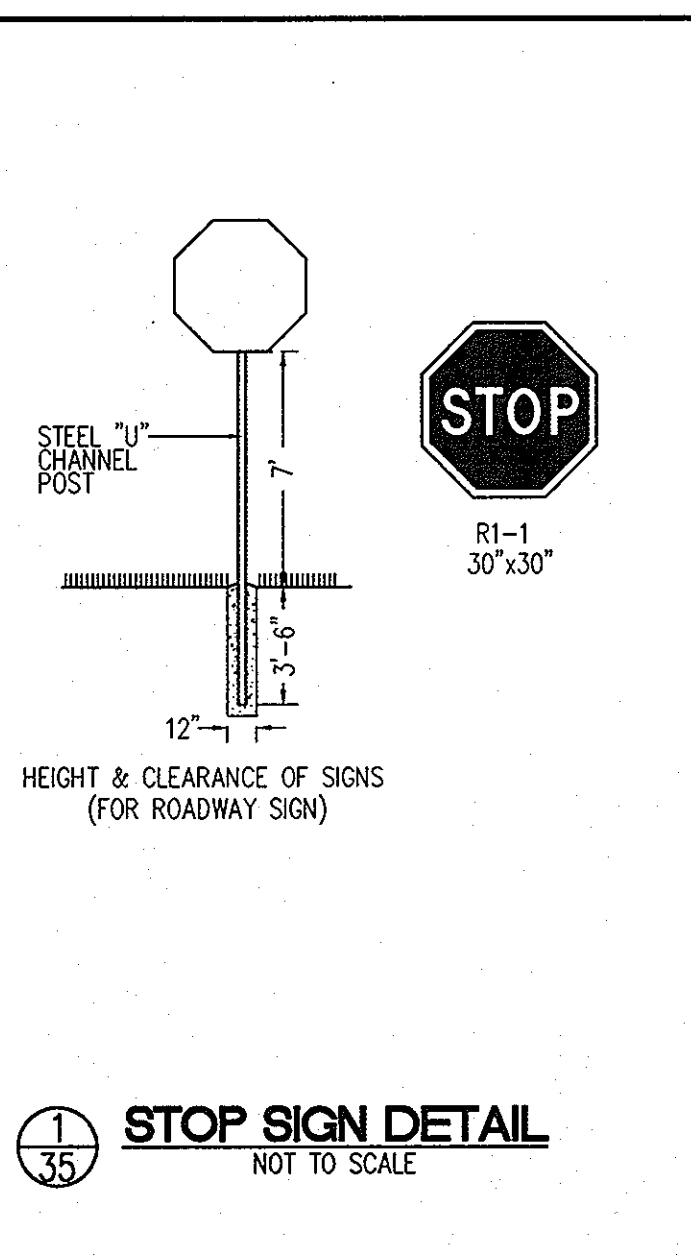
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Director: *William E. Sutler* 12/13/10
 Chief, Development Engineering Division
 Chief, Division of Land Development: *Michael Jones* 12/10/10

OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
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TITLE: LANDSCAPE DETAILS
 Patton Harris Rust & Associates
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DESIGNED BY: CB
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 PROJECT NO: 09102
 DATE: SEPTEMBER 3, 2010
 SCALE: AS NOTED
 DRAWING NO. 34 OF 37

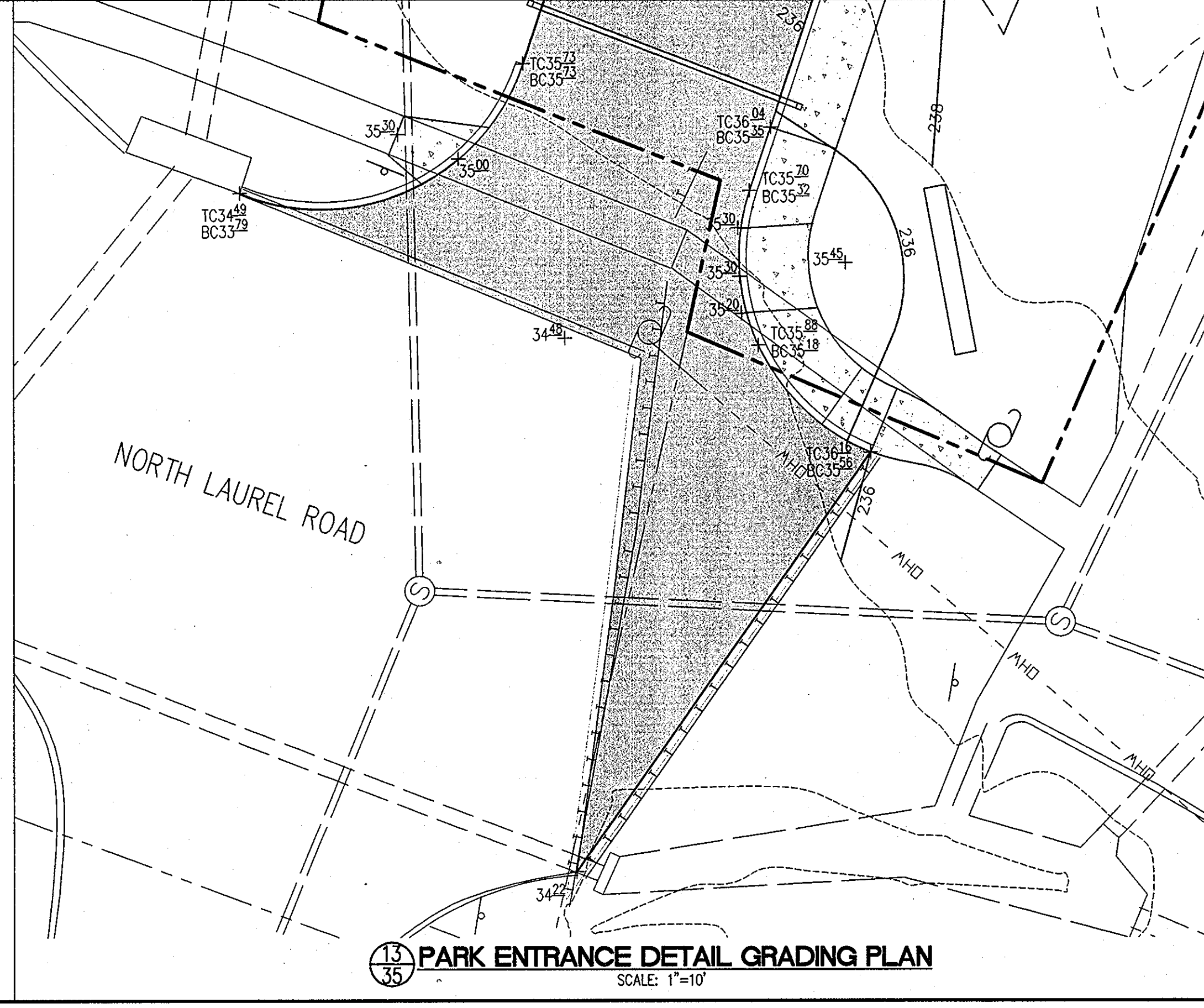
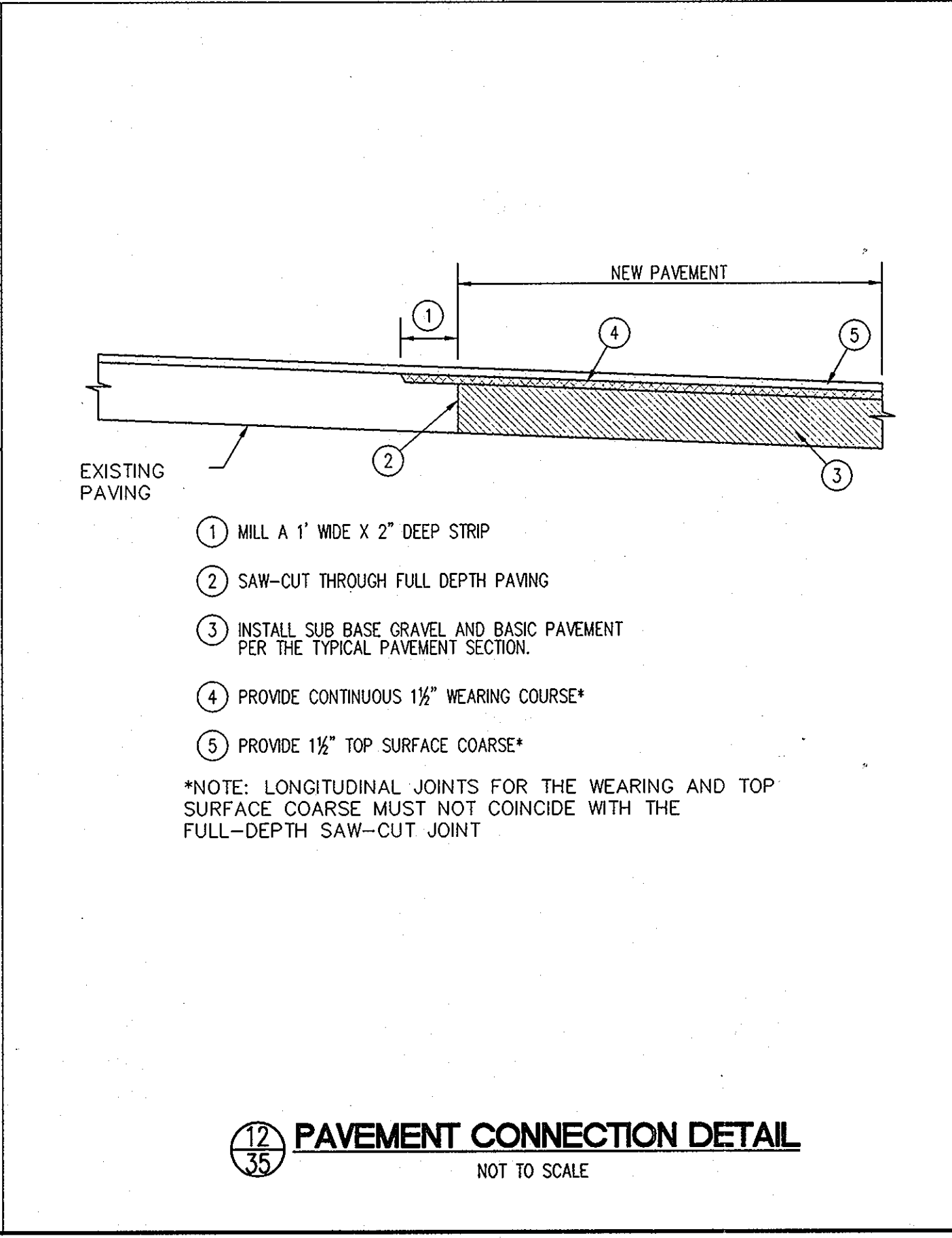
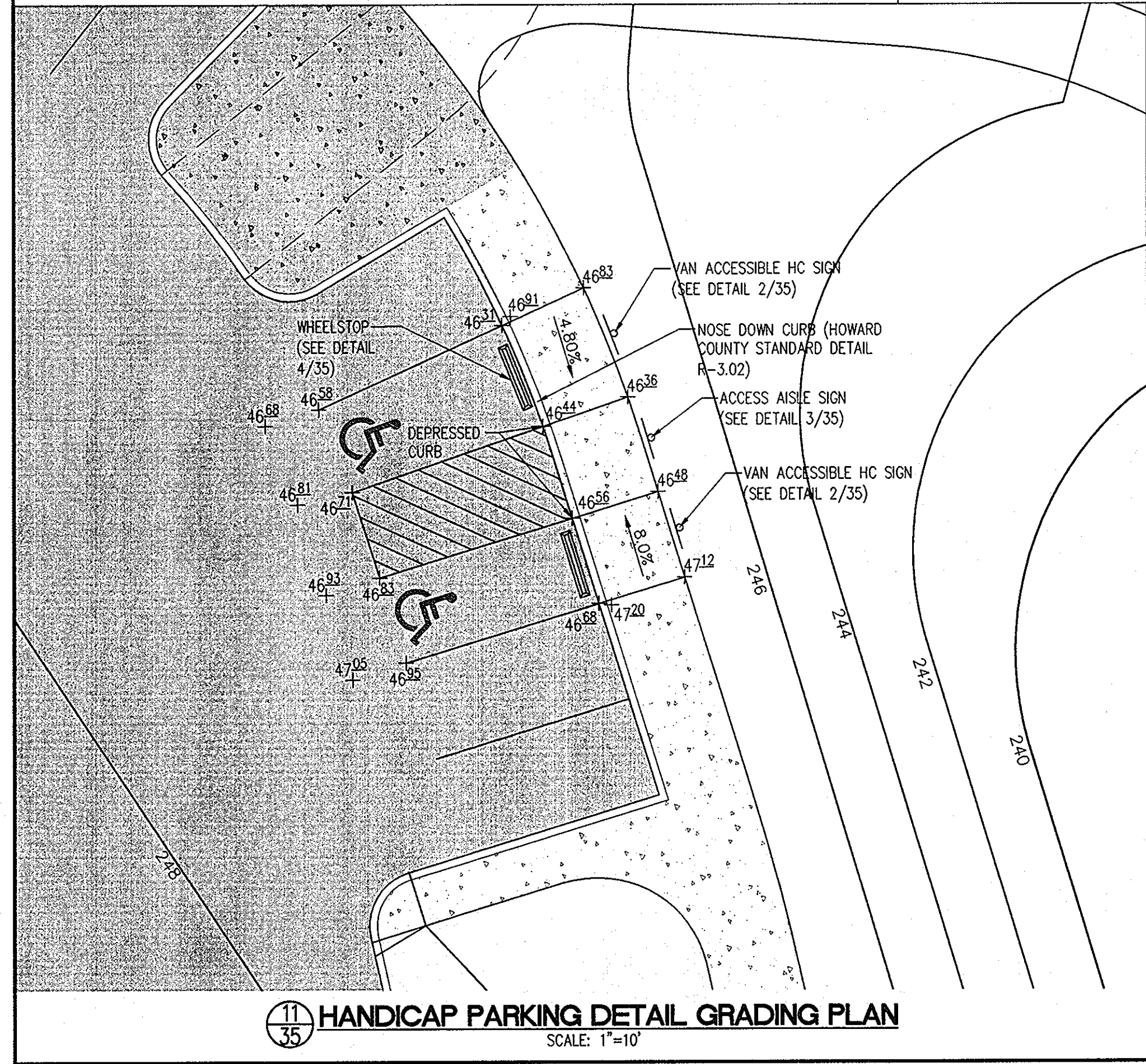


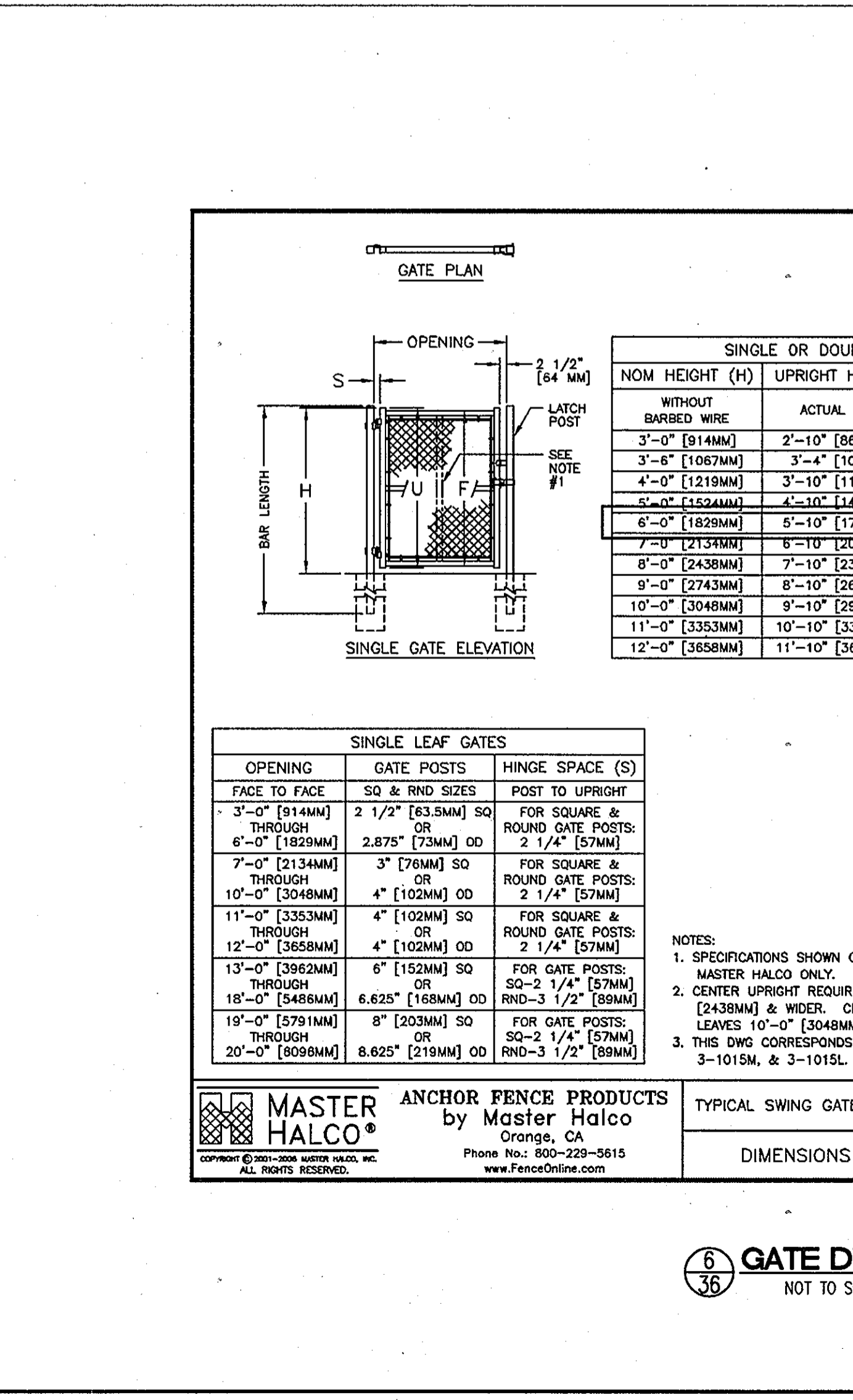
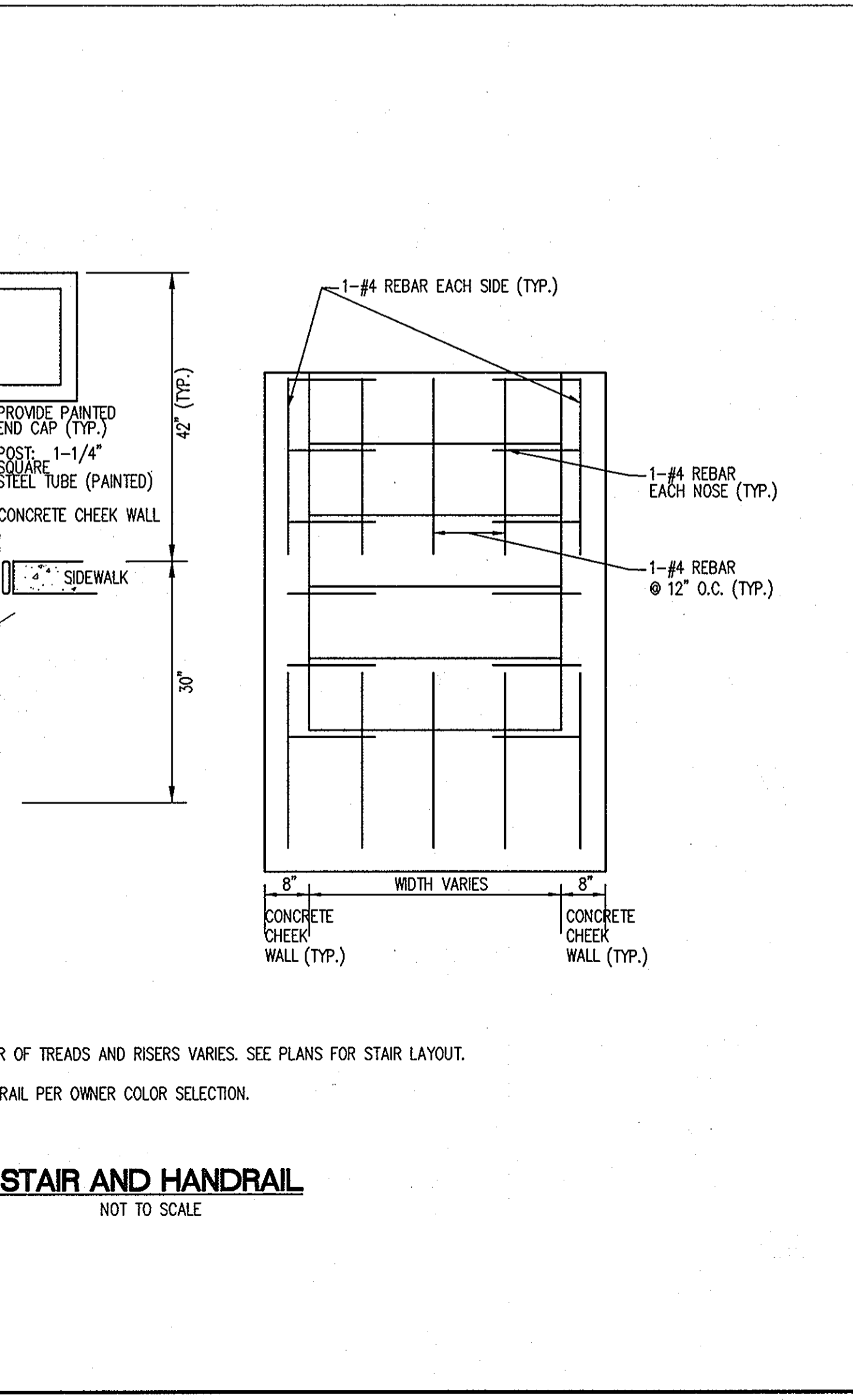
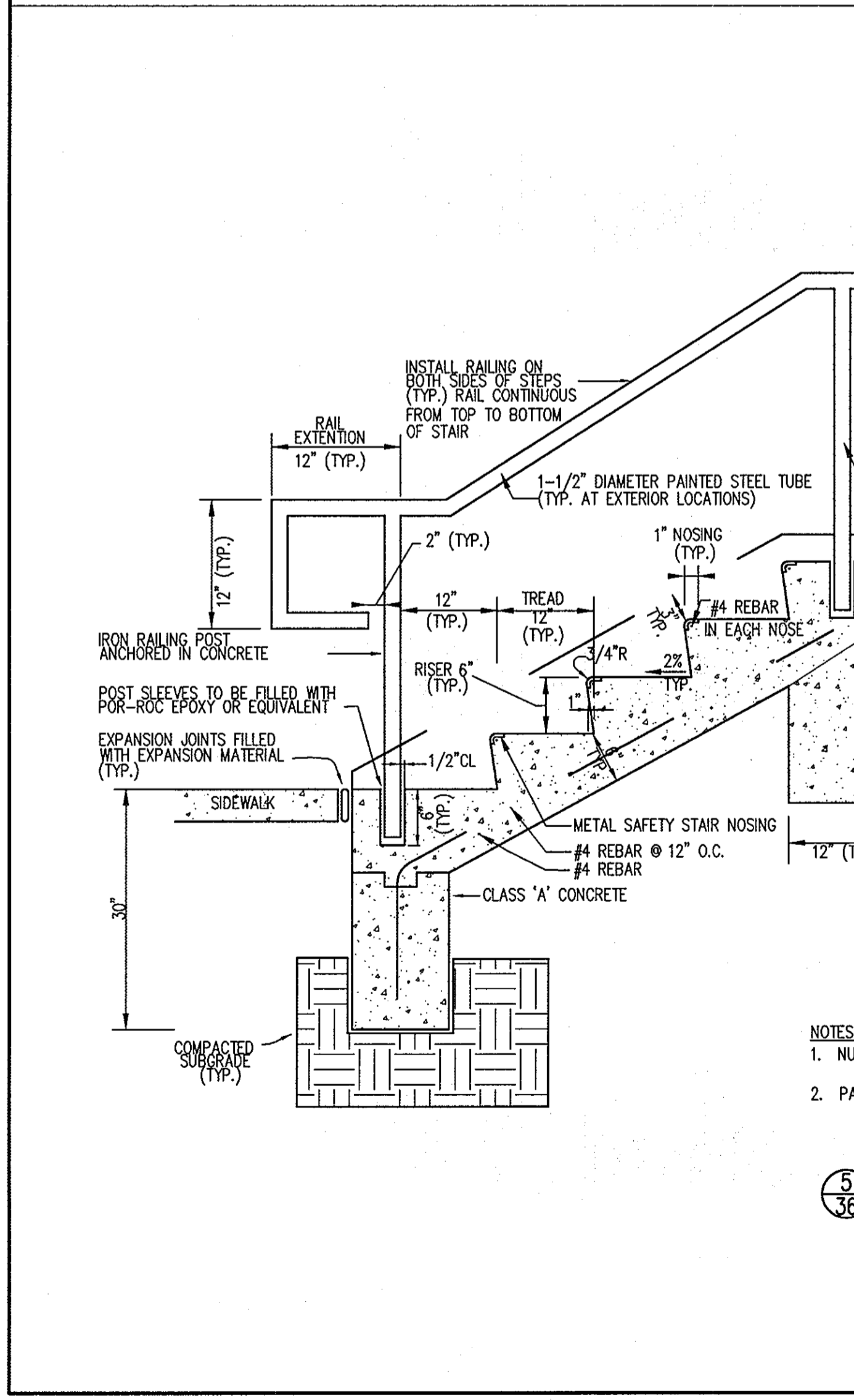
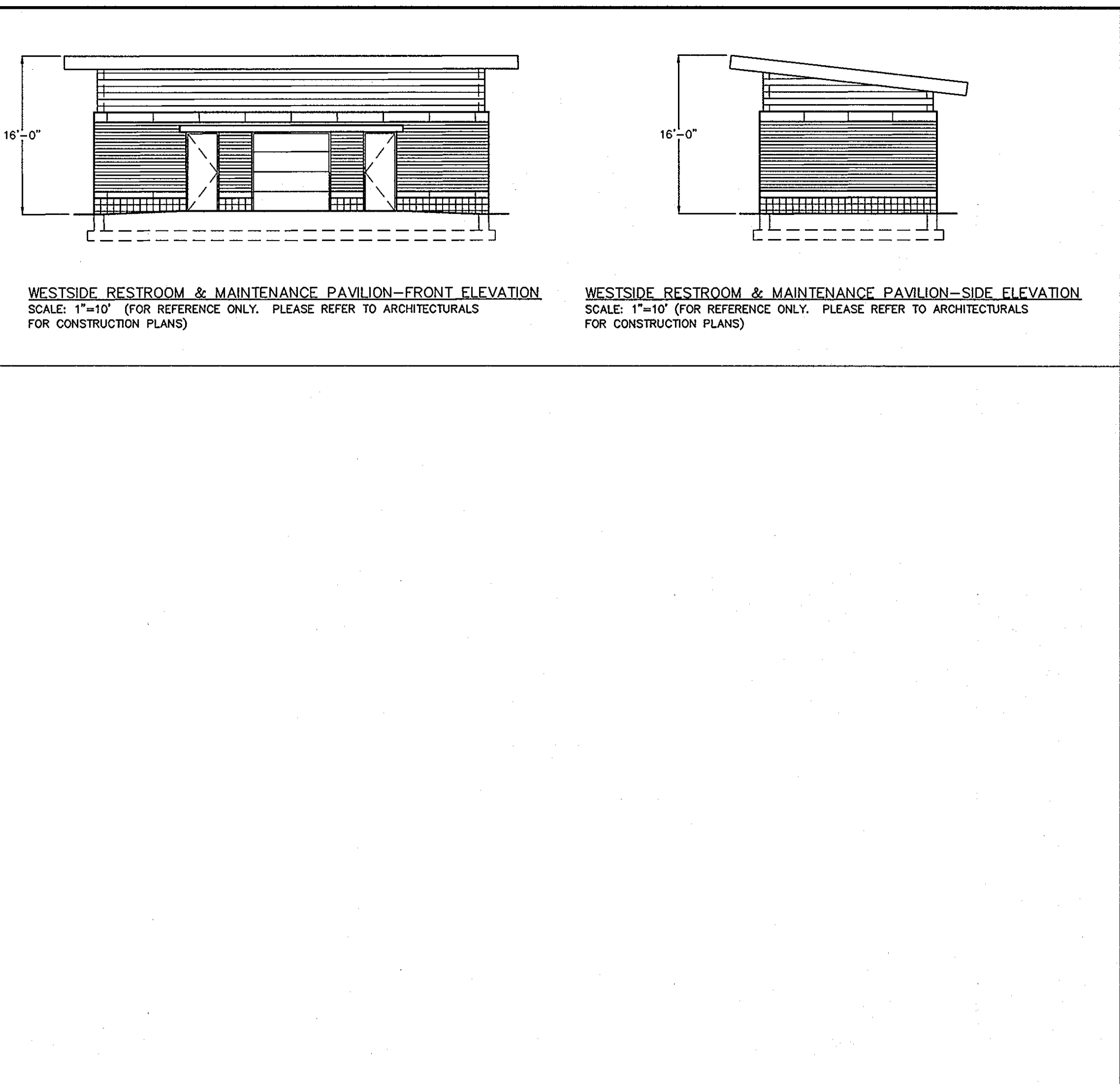
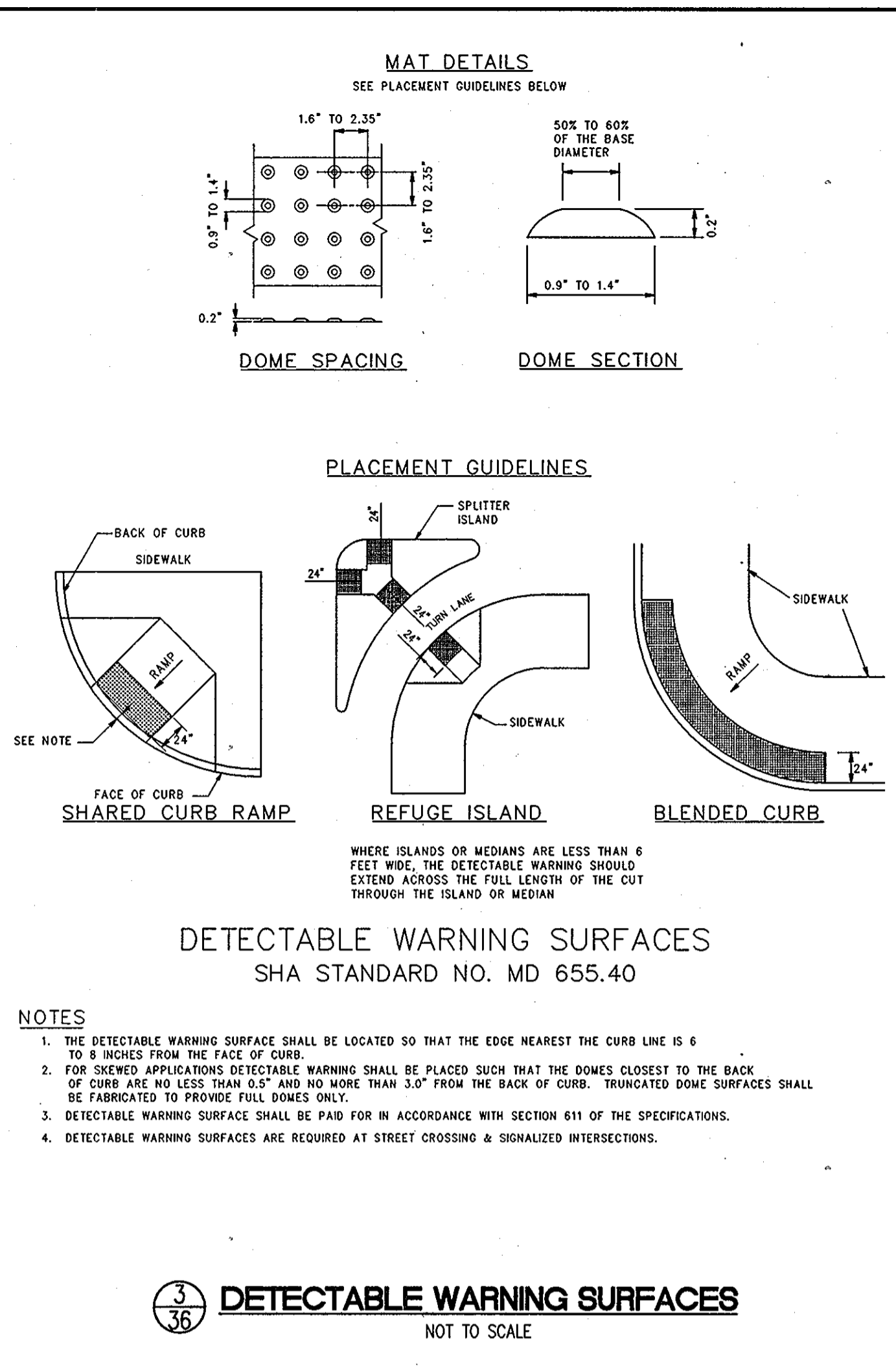
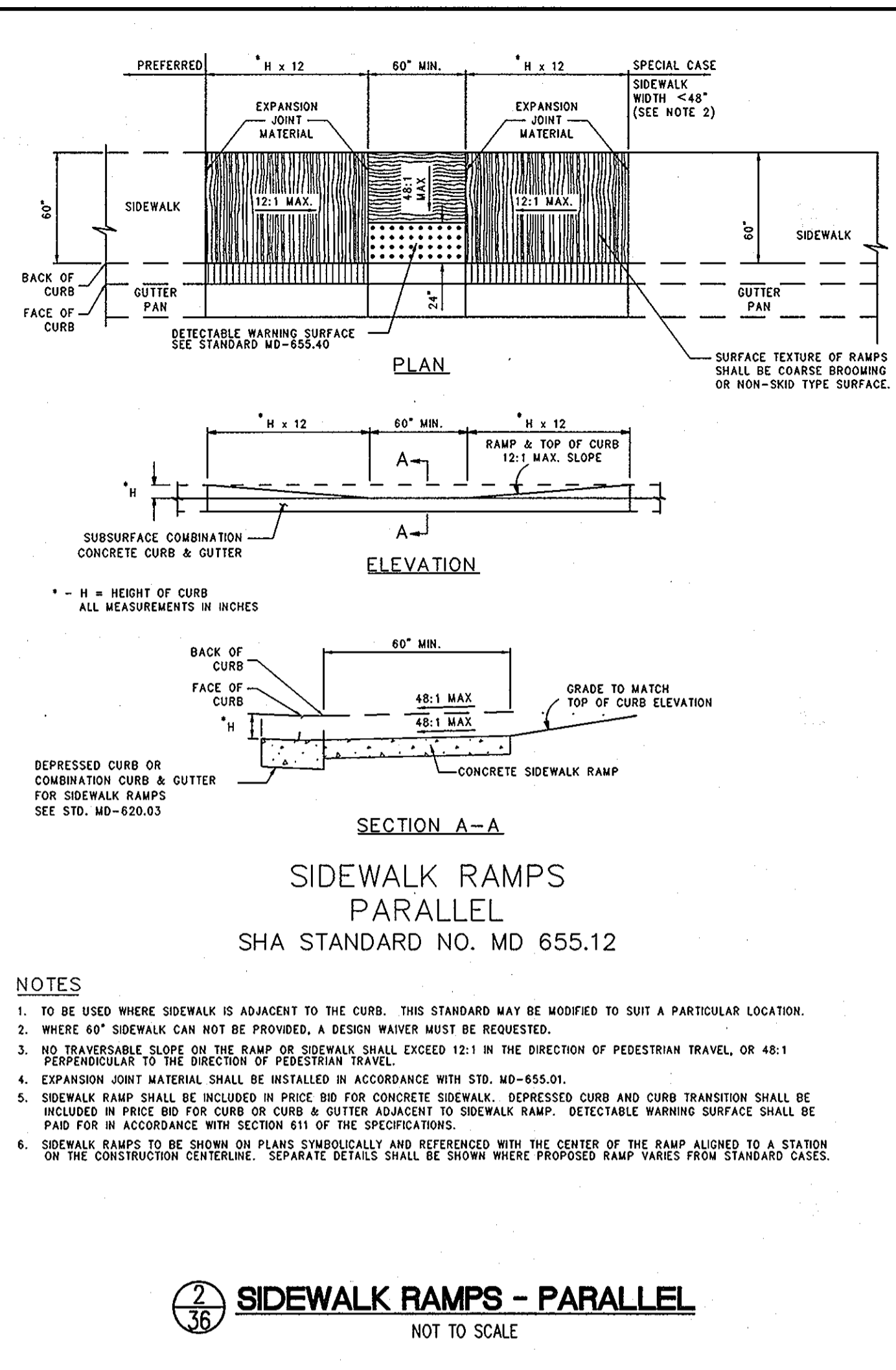
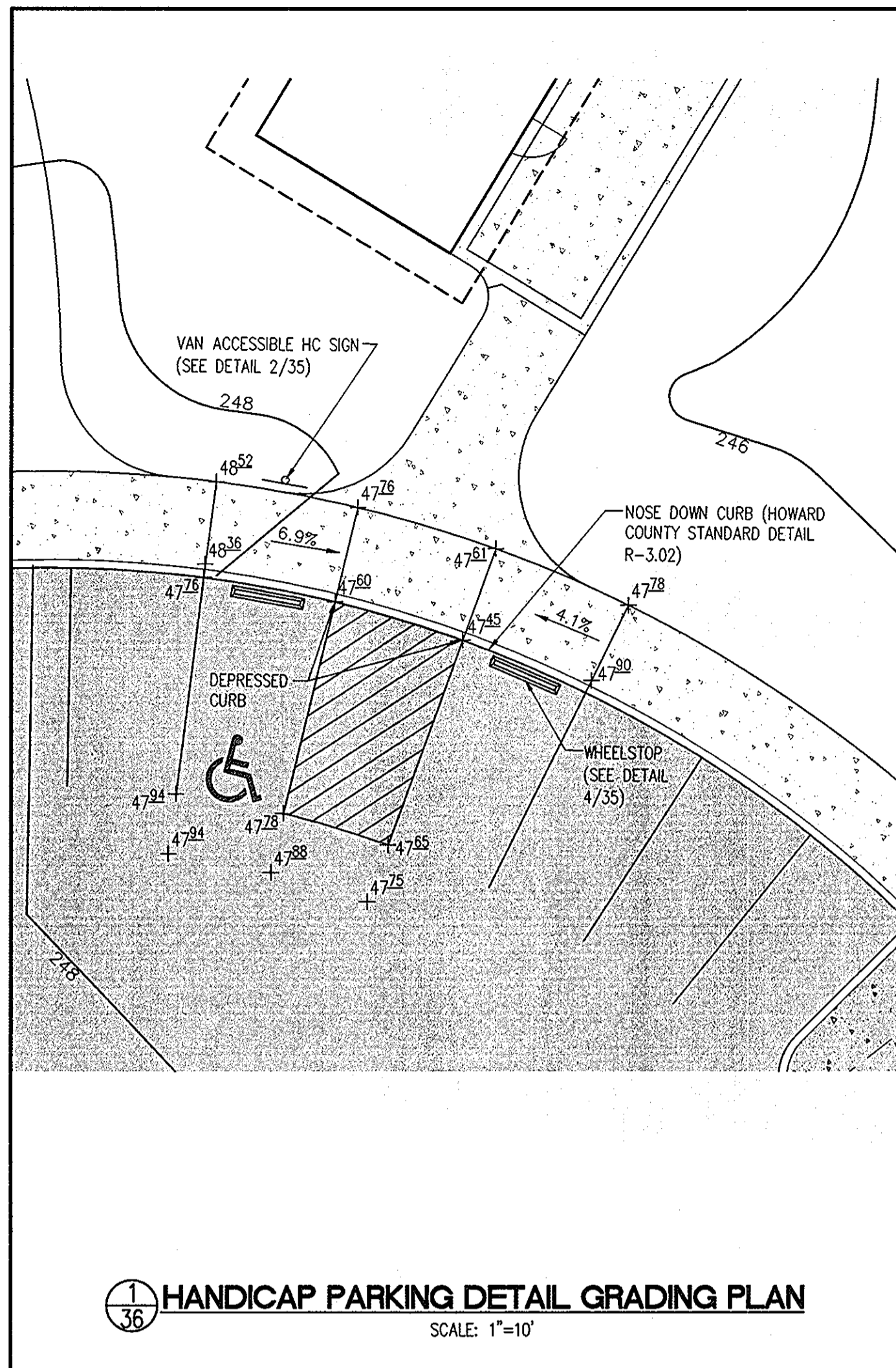
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Director: *Thomas G. Butler* 12/13/10
 Chief, Development Engineering Division: *Allen Danner* 4/10/10
 Chief, Division of Land Development: *K. Stedman* 12/10/10

DATE	NO.	REVISION
OWNER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414		
DEVELOPER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414		
PROJECT		
NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK		
AREA		
TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE		
SITE DETAILS		

Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY: JSN
 DRAWN BY: JSN
 PROJECT NO: 14466-1-2
 C400SDP35.DWG
 DATE: SEPTEMBER 7, 2010
 SCALE: AS SHOWN
 DRAWING NO. 35 OF 43





APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler 12/13/10
DIRECTOR DATE

John P. ... 11/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kevin ... 12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

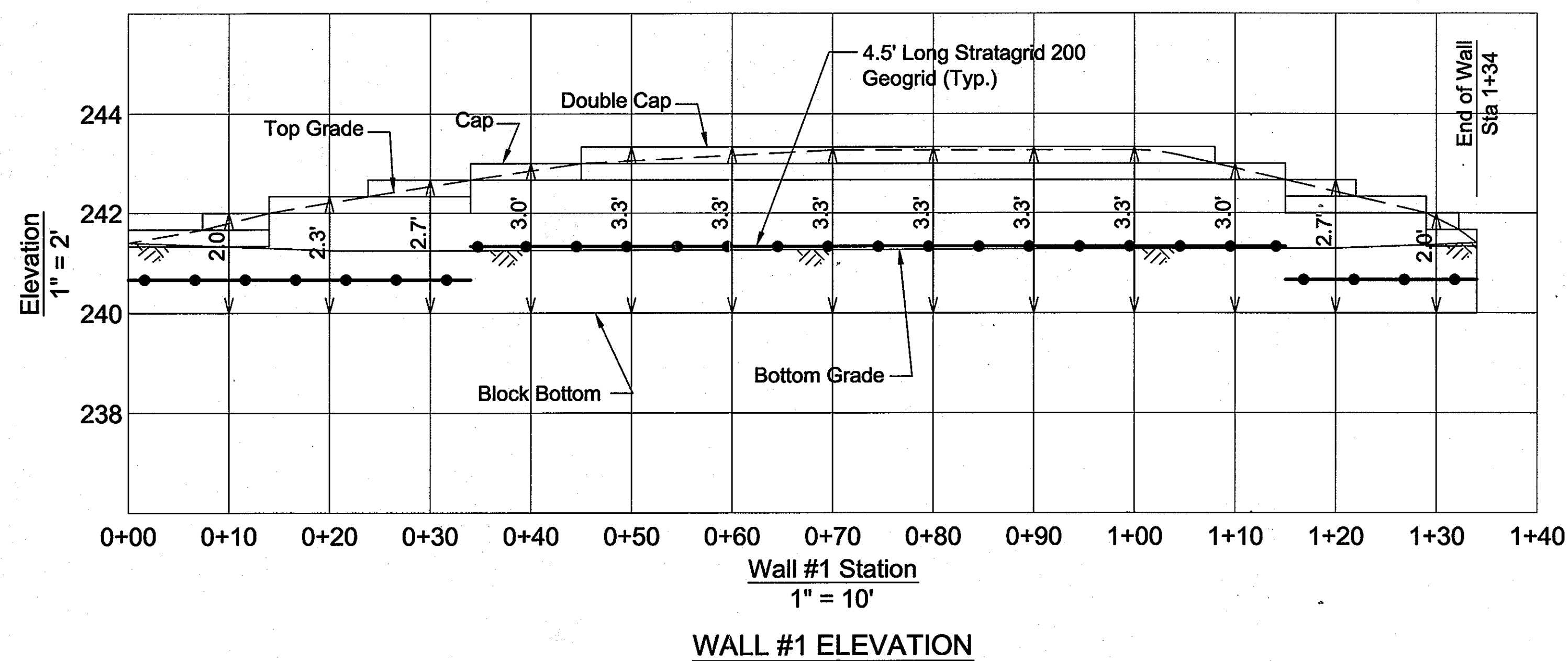
AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SITE DETAILS

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL 9-21-10
DESIGNED BY: JSN
DRAWN BY: JSN
PROJECT NO: 14466-1-2
C400SDP36.DWG
DATE: SEPTEMBER 7, 2010
SCALE: AS SHOWN
DRAWING NO. 36 OF 43

SDP-10-010



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Buttle 12/13/10
 DIRECTOR DATE

John Drummond 11/10/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION CE DATE

Kutshelost 12/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 PHONE: 410 313 2414

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 PHONE: 410 313 2414

PROJECT
 NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304

AREA TAX MAP 47, GRID 22 & TAX MAP 50
 GRIDS 3 & 4. PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

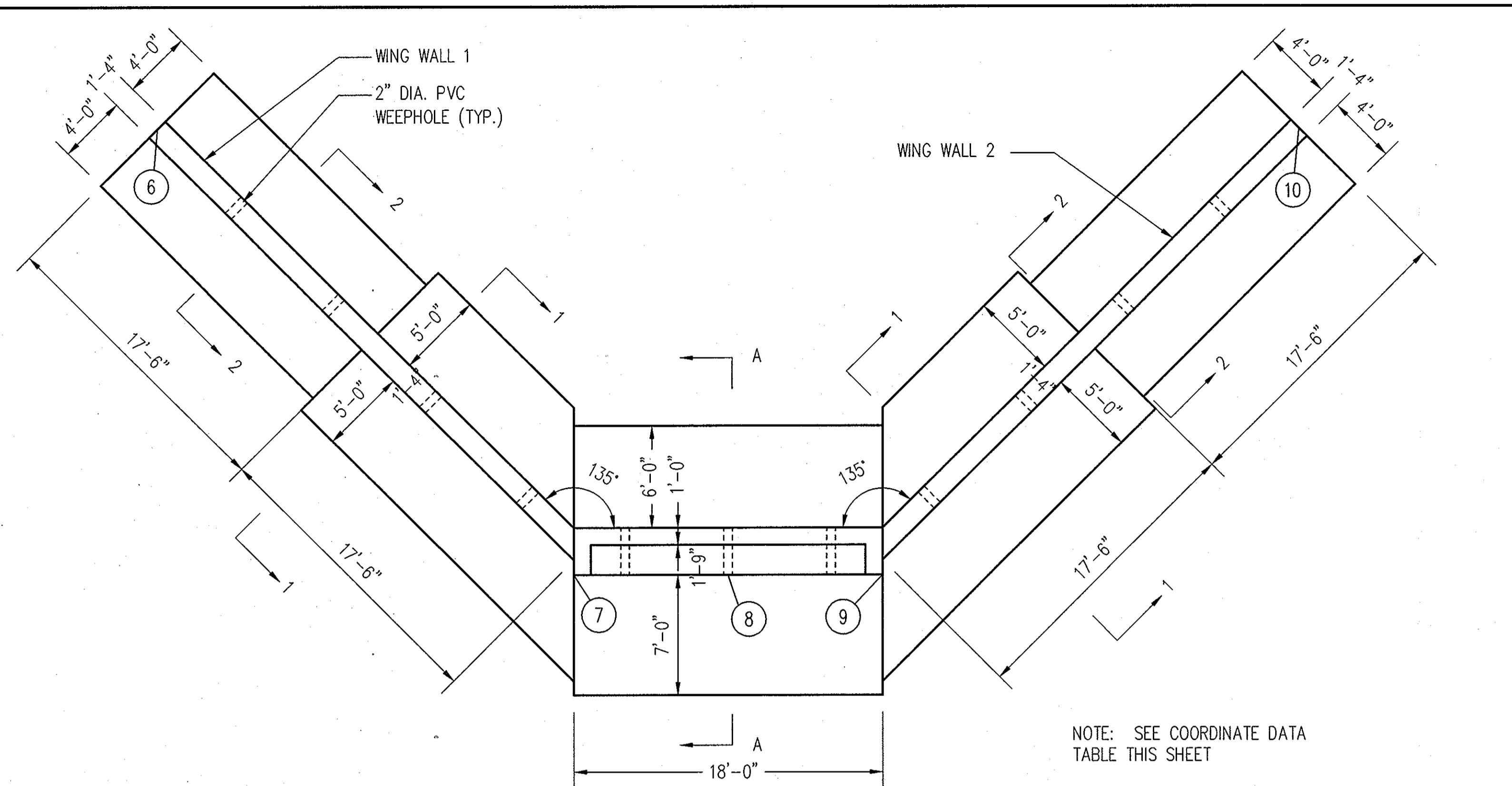
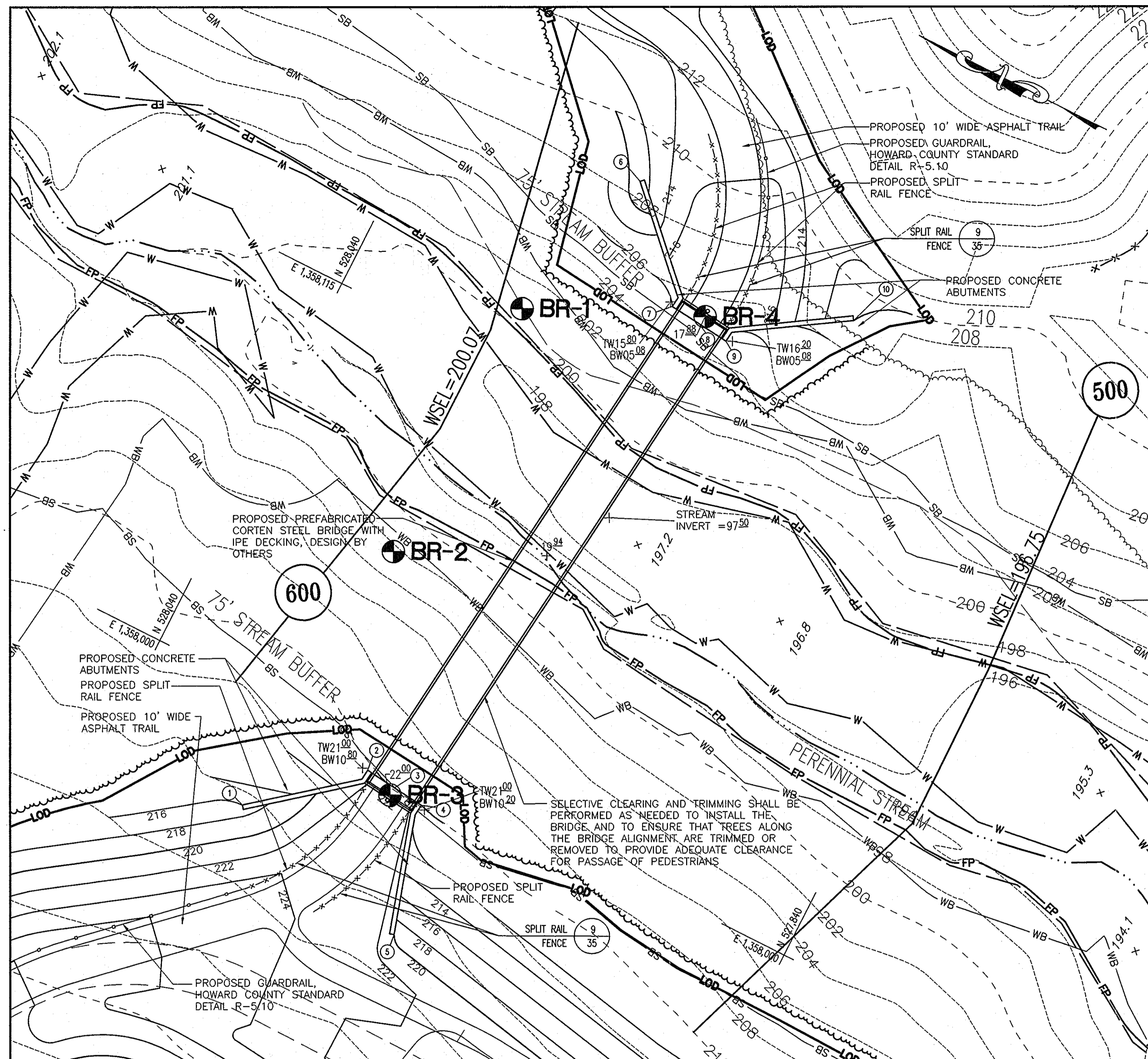
TITLE RETAINING WALL #1
 ELEVATION

HILLIS-CARNES
ENGINEERING ASSOCIATES
 10975 Guilford Road, Suite A Annapolis Junction, MD
 (410) 880-4788 Fax: (410) 880-4098

SEAL

DESIGNED BY : RWS
 DRAWN BY: AM
 PROJECT NO : 09059-B
 DATE : AUGUST 19, 2010
 SCALE : AS SHOWN
 DRAWING NO. 33 OF 45

BY:
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. 14424, EXPIRATION DATE: 05/13/2011.



EAST ABUTMENT AND WING WALL PLAN

SCALE : 3/16" = 1'-0"

- BRIDGE NOTES:**
- ALL CONCRETE SHALL BE SHA MIX NO. 6.
 - REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60
 - ALL KEYS ARE NOMINAL SIZE.
 - MINIMUM COVER OF ANY STEEL BAR SHALL BE 3 INCH FOR ABUTMENT WALLS AND 2 INCH FOR WING WALLS.
 - ALL PVC PIPES FOR WEEP HOLES SHALL BE SDR 35.
 - ANTI-GRAFFITI COATING FOR CONCRETE SHALL BE FX-441 ANTI-GRAFFITI SYSTEM BY FOX INDUSTRIES, INC., BALTIMORE, MD. PHONE 888-760-0369. INSTALL PER MANUFACTURER'S SPECIFICATIONS. <http://www.foxind.com/product.asp?sheet=6>. COLOR TO BE A DARK COLOR, SELECTED BY OWNER.
 - FORMS FOR ABUTMENTS AND WING WALLS SHALL HAVE A WOOD SURFACE.
 - SUBGRADE SHALL BE INSPECTED BY THE ENGINEER PRIOR TO PLACING MUDMAT OR CONCRETE FOOTER.
 - CONTRACTOR SHALL OBTAIN THE SPACING AND LOCATION OF ANCHOR BOLTS FROM THE PEDESTRIAN BRIDGE SUPPLIER.

BRIDGE DETAIL PLAN

SCALE: 1" = 20'

LEGEND

- PROPERTY LINE
- - - - - EXISTING 10' CONTOURS
- - - - - EXISTING 2' CONTOURS
- - - - - PROPOSED 10' CONTOURS
- - - - - PROPOSED 2' CONTOURS
- EXISTING CURB AND GUTTER
- PROPOSED CURB & GUTTER
- EX. 48" RCP
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- SETBACK LINES
- PROPOSED P-3 PAVING (HO. CO. DETAIL R-2.01)
- ☆ PROPOSED LIGHT POLE
- ☆ EXISTING LIGHTING
- EX. TREELINE
- PROPOSED TREELINE
- FP FLOODPLAIN
- SB STREAM BUFFER
- W WETLANDS
- WB WETLAND BUFFER
- TPD TREE PROTECTION FENCE

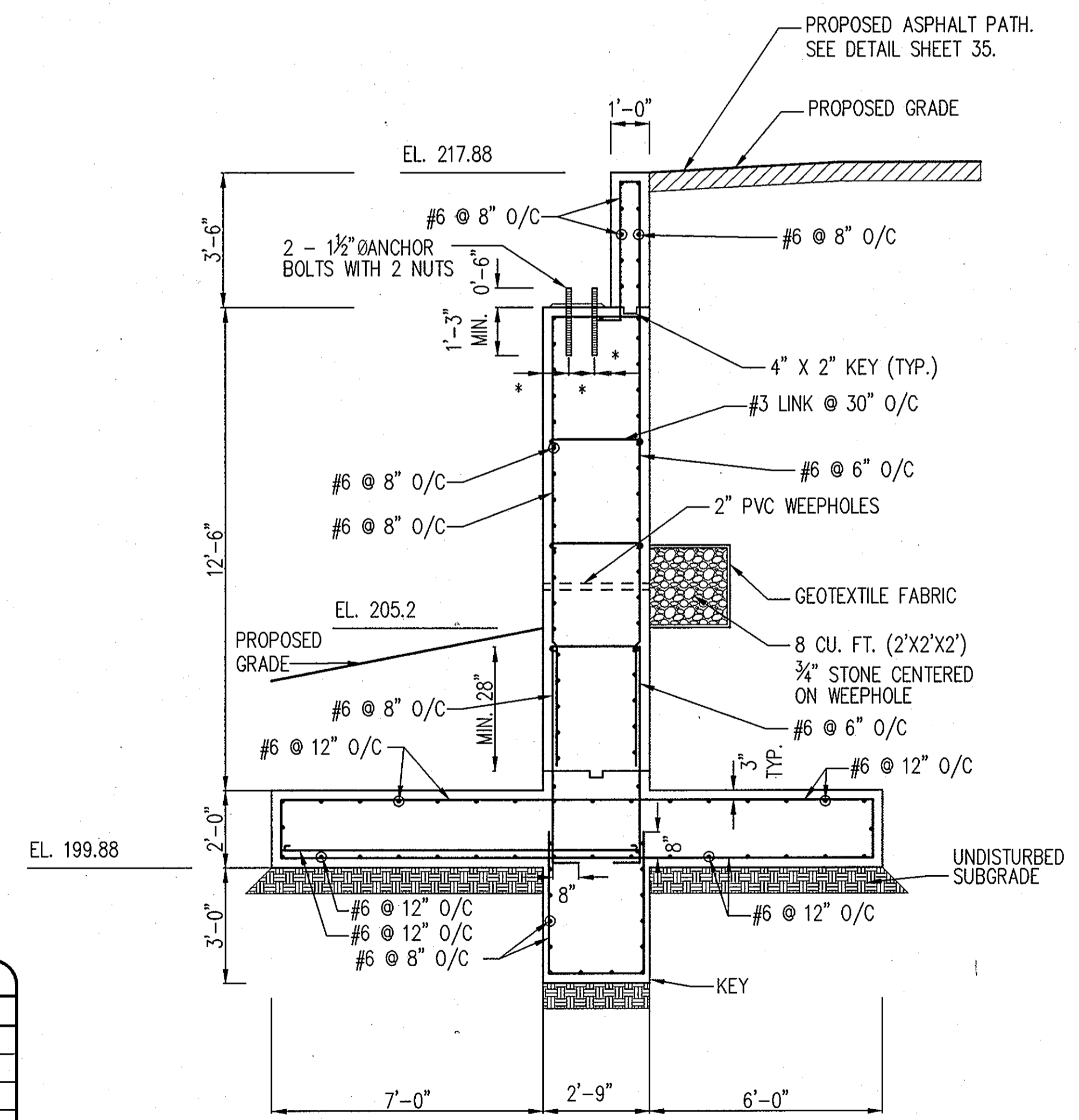
- LOD LIMIT OF DISTURBANCE
- BR-1 SOIL BORINGS

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

COORDINATE DATA TABLE

POINT NO.	NORTHING	EASTING	REMARKS
1	527997.5279	1357968.6363	MIDPOINT OF TOP OF WING WALL 3
2	527970.1792	1357993.6840	NORTH CORNER OF WEST ABUTMENT
3	527961.0684	1357992.6802	MIDPOINT OF WEST ABUTMENT
4	527951.9575	1357991.6764	SOUTH CORNER OF WEST ABUTMENT
5	527942.0824	1357954.9532	MIDPOINT OF TOP OF WING WALL 4
6	527977.1870	1358179.4584	MIDPOINT OF TOP OF WING WALL 1
7	527952.7668	1358151.7277	NORTH CORNER OF EAST ABUTMENT
8	527943.6559	1358150.7239	MIDPOINT OF EAST ABUTMENT
9	527934.5450	1358149.7201	SOUTH CORNER OF EAST ABUTMENT
10	527904.6734	1358171.4692	MIDPOINT OF TOP OF WING WALL 2

- GENERAL NOTES:**
- SEE RED LINE REVISION OF SDP-08-118 FOR GRADING AND TRAIL CONNECTIONS TO THE EAST SIDE OF THE PROPERTY.



SECTION A-A

SCALE : 3/8" = 1'-0"

NOTE: SEE COORDINATE DATA TABLE THIS SHEET

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Thomas E. Buttle 12/13/10
 DIRECTOR DATE
John P. ... 11/10/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Kathleen ... 12/16/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION
 OWNER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

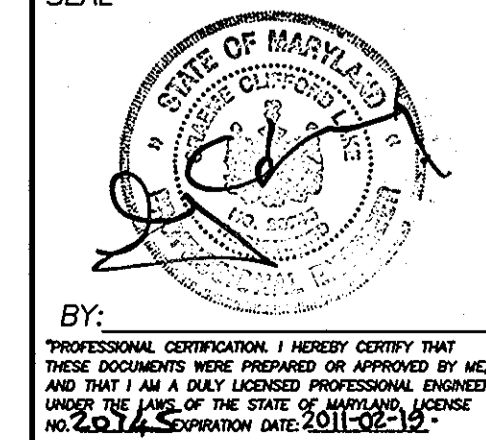
DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
 P 410 313 2414

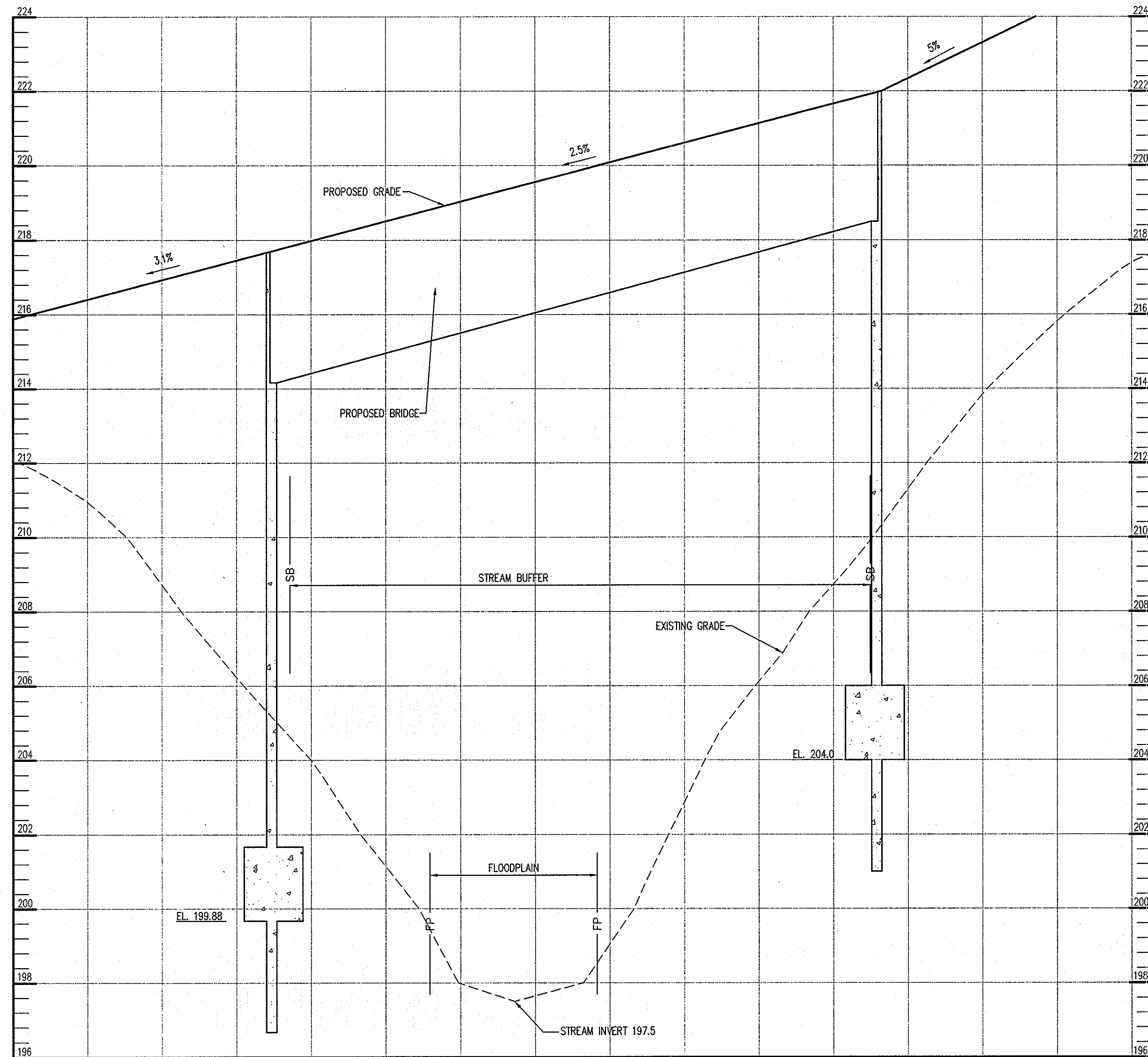
PROJECT
NORTH LAUREL COMMUNITY CENTER
 CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
**BRIDGE ABUTMENT
 PLAN & DETAILS**
Patton Harris Rust & Associates
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

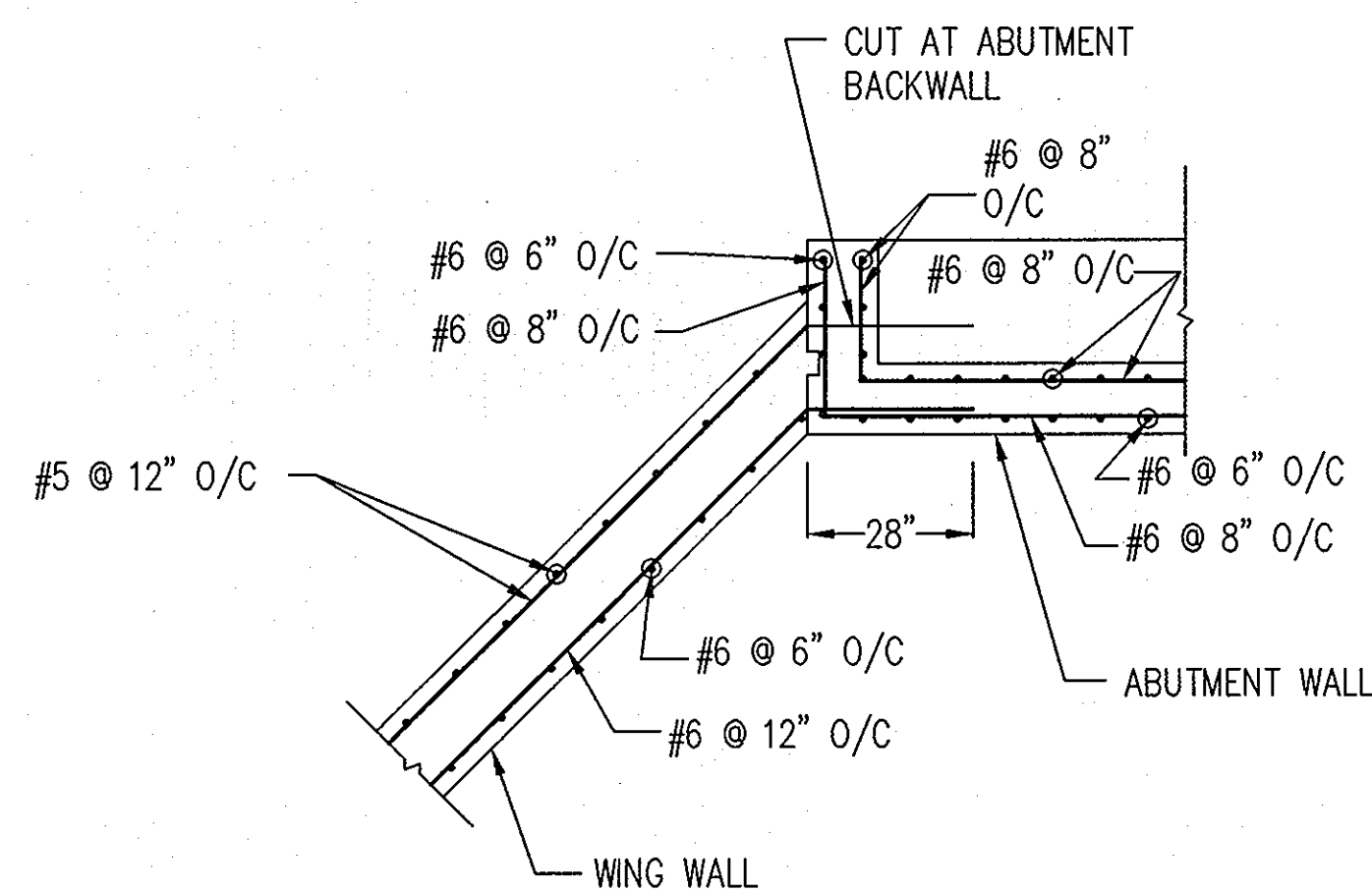
DESIGNED BY : RA/JSN
 DRAWN BY : JSN
 PROJECT NO : 14466-1-2
 C:\400SDP39.DWG
 DATE : SEPTEMBER 7, 2010
 SCALE : AS SHOWN
 DRAWING NO. 39 OF 43





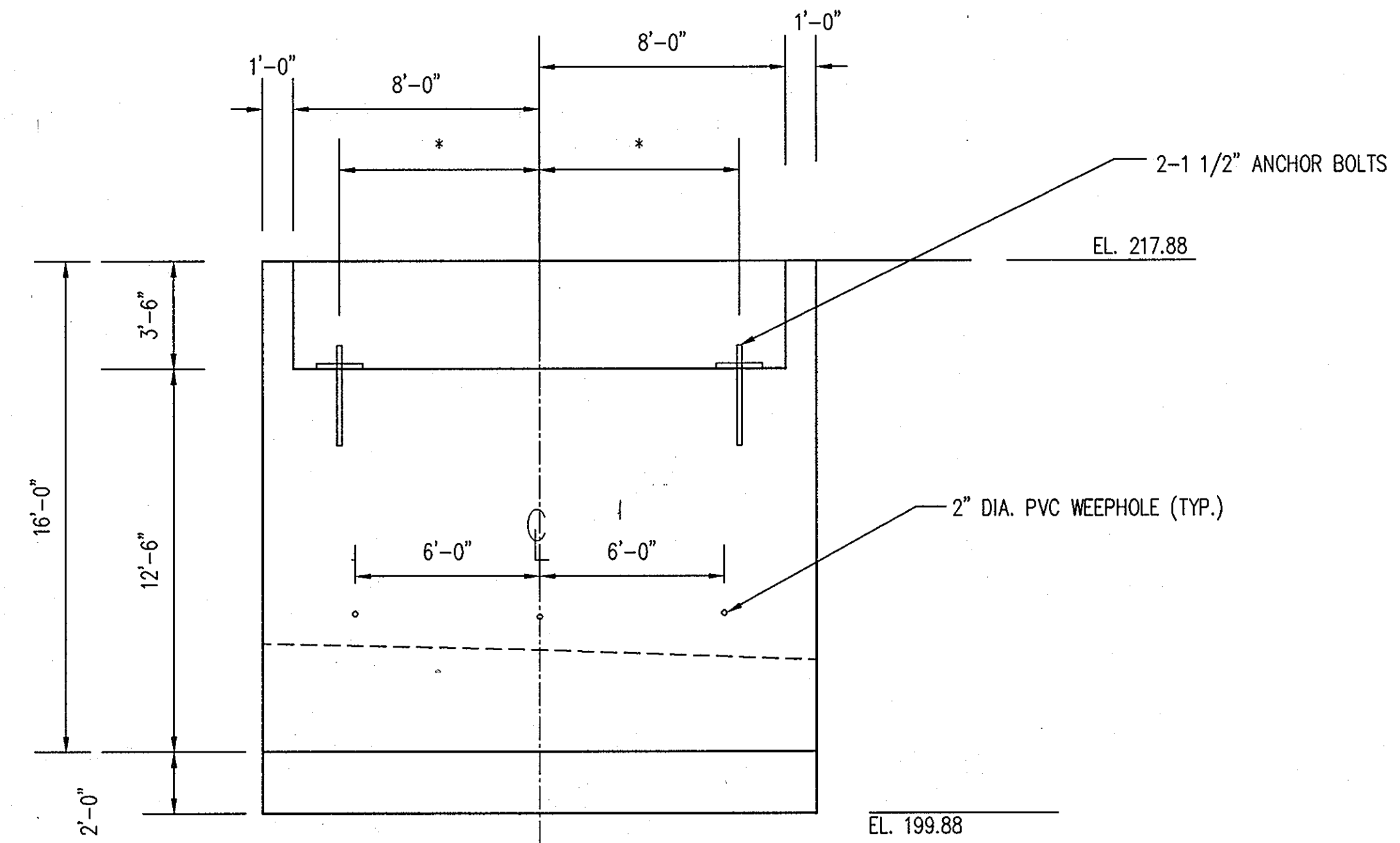
BRIDGE PROFILE

SCALE : HOR: 1"=20'
VERT: 1"=2'



ABUTMENT/WING WALL CONNECTION DETAIL

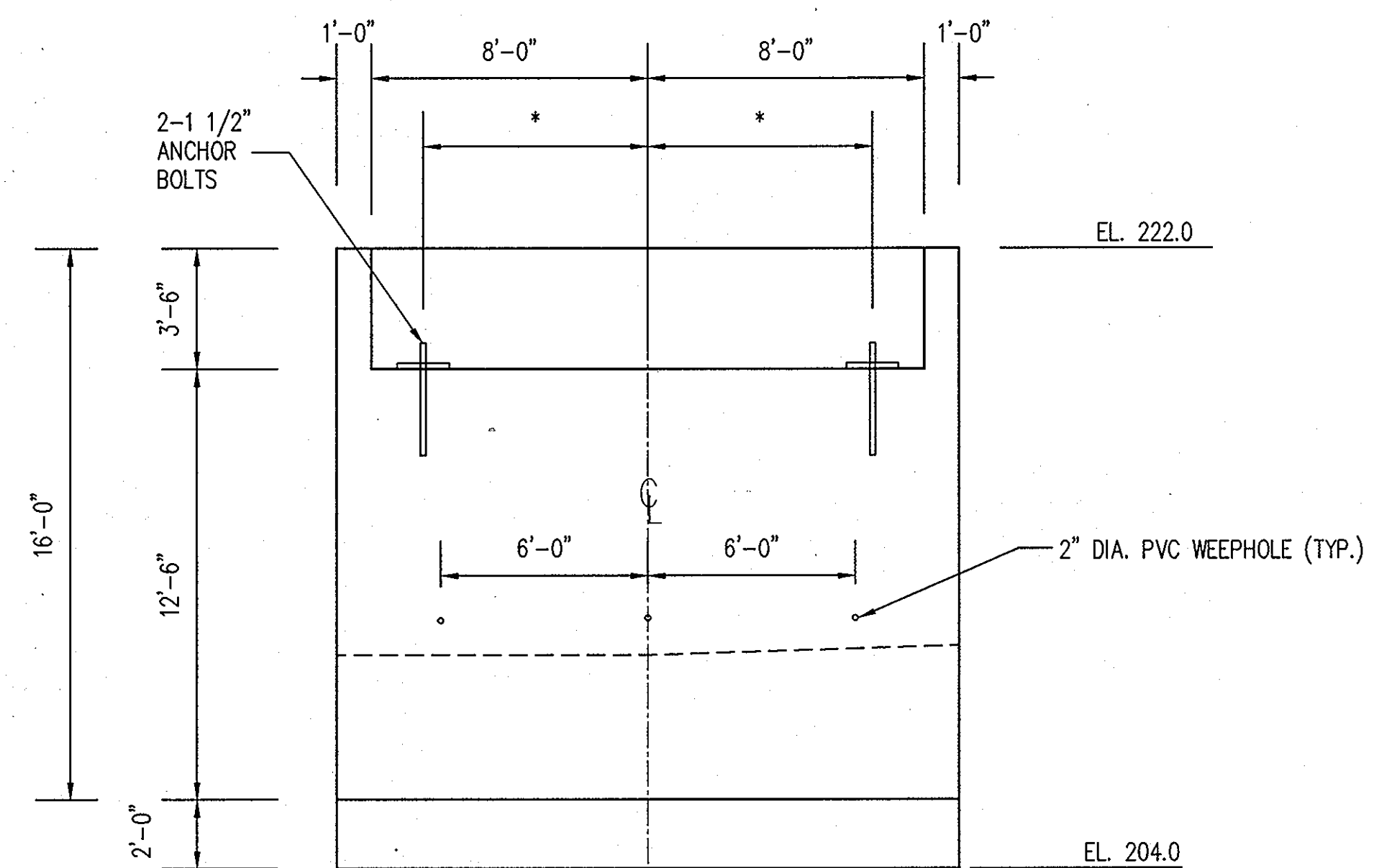
SCALE : 3/8" = 1'-0"



*SEE NOTE 1.

EAST ABUTMENT ELEVATION

SCALE : 1/4" = 1'-0"



*SEE NOTE 1.

WEST ABUTMENT ELEVATION

SCALE : 1/4" = 1'-0"

NOTE:

- CONTRACTOR SHALL OBTAIN THE SPACING AND LOCATION OF ANCHOR BOLTS FROM THE PEDESTRIAN BRIDGE SUPPLIER.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director: *Thomas G. Butler* 12/13/10
 Chief, Development Engineering Division: *John Williams* 11/18/10
 Chief, Division of Land Development: *Walter DeLoach* 12/16/10

DATE NO. REVISION

OWNER

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT

NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

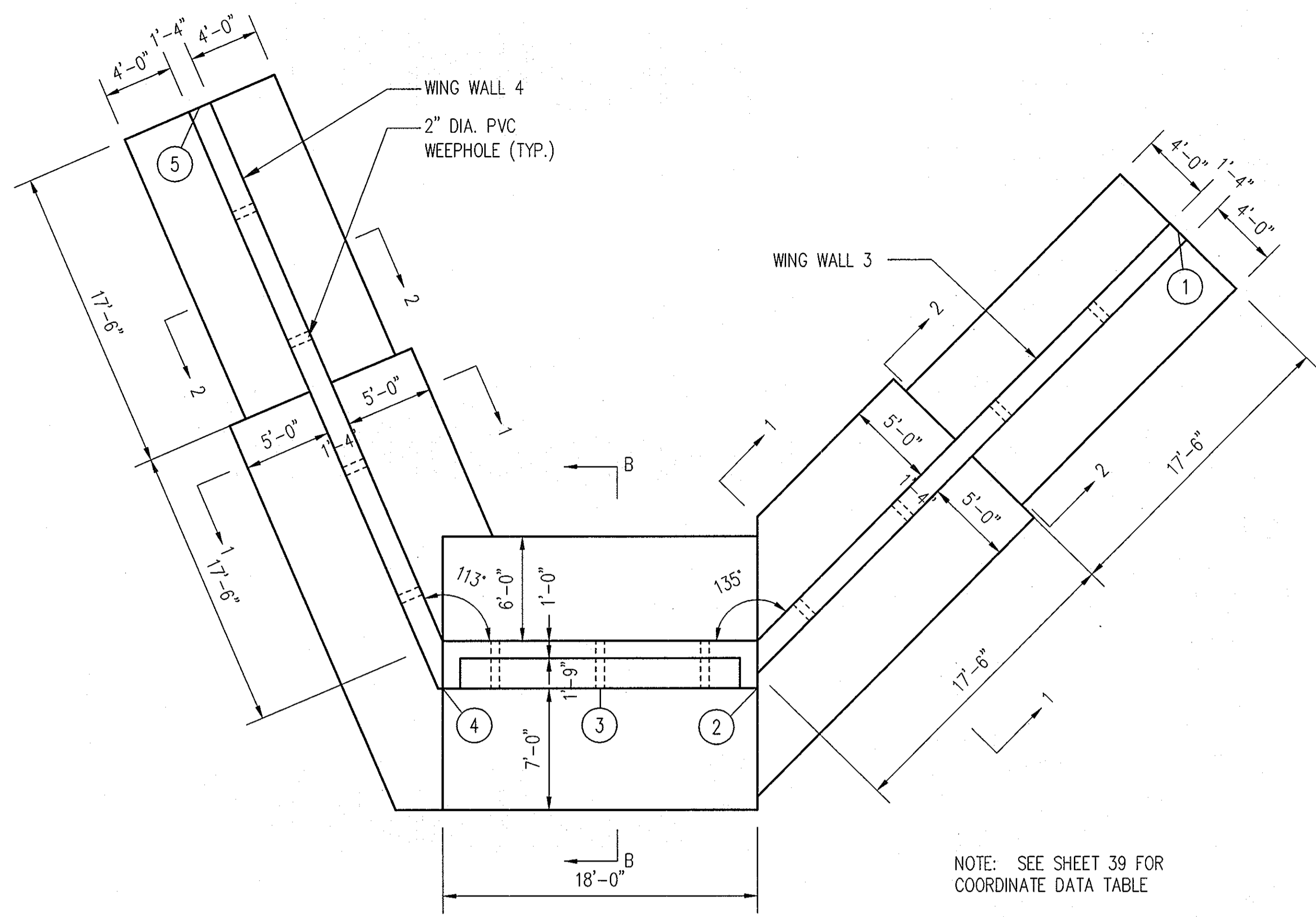
TITLE
BRIDGE PROFILE & ABUTMENT DETAILS

Patton Harris Rust & Associates
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

DESIGNED BY : RA/JSN
 DRAWN BY : JSN
 PROJECT NO : 14466-1-2
 DATE : SEPTEMBER 7, 2010
 SCALE : AS SHOWN
 DRAWING NO. 40 OF 43

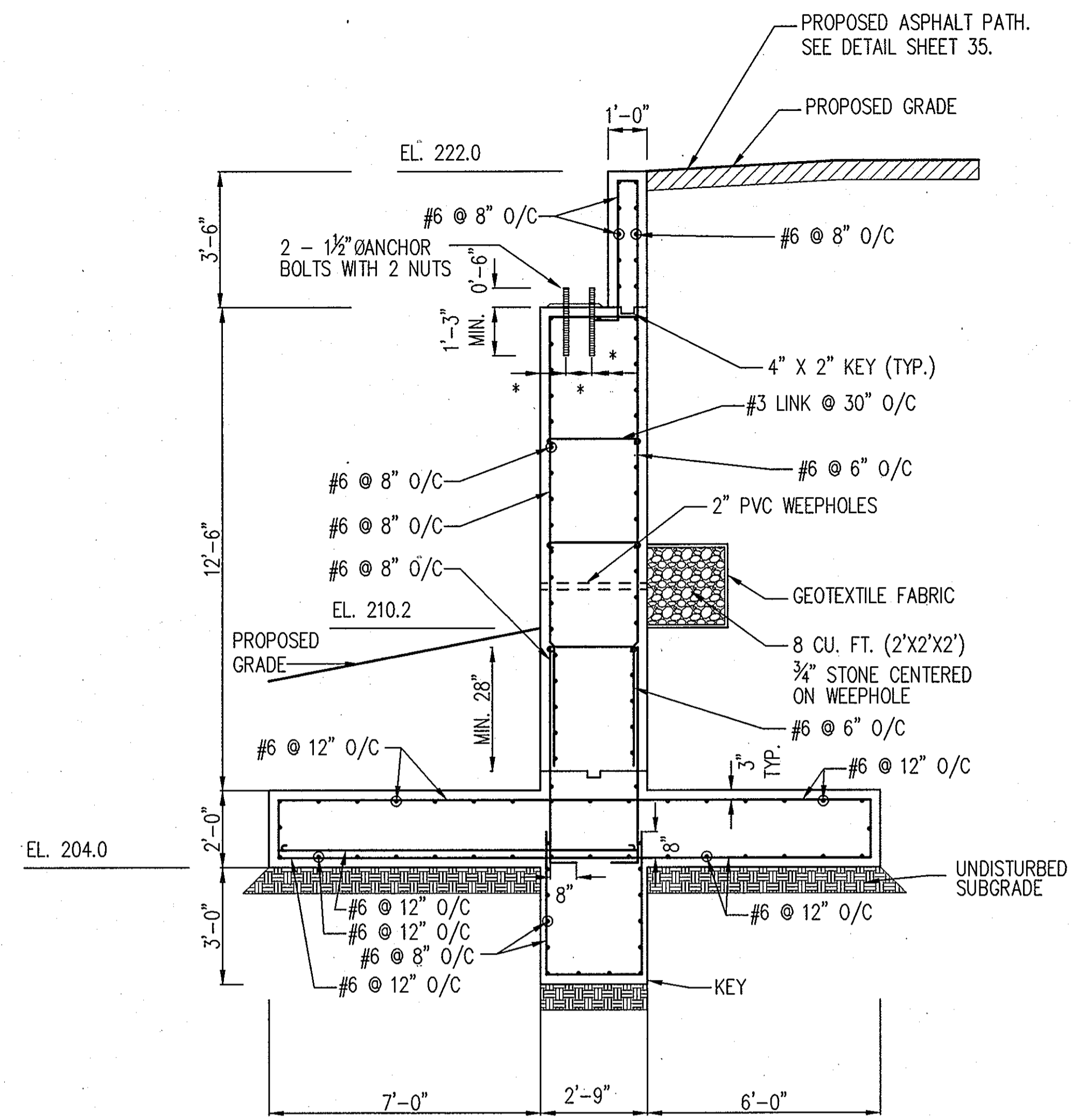
By: [Professional Seal] PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22245, EXPIRATION DATE 08/31/12.



WEST ABUTMENT AND WING WALL PLAN

SCALE : 3/16" = 1'-0"

NOTE: SEE SHEET 39 FOR COORDINATE DATA TABLE



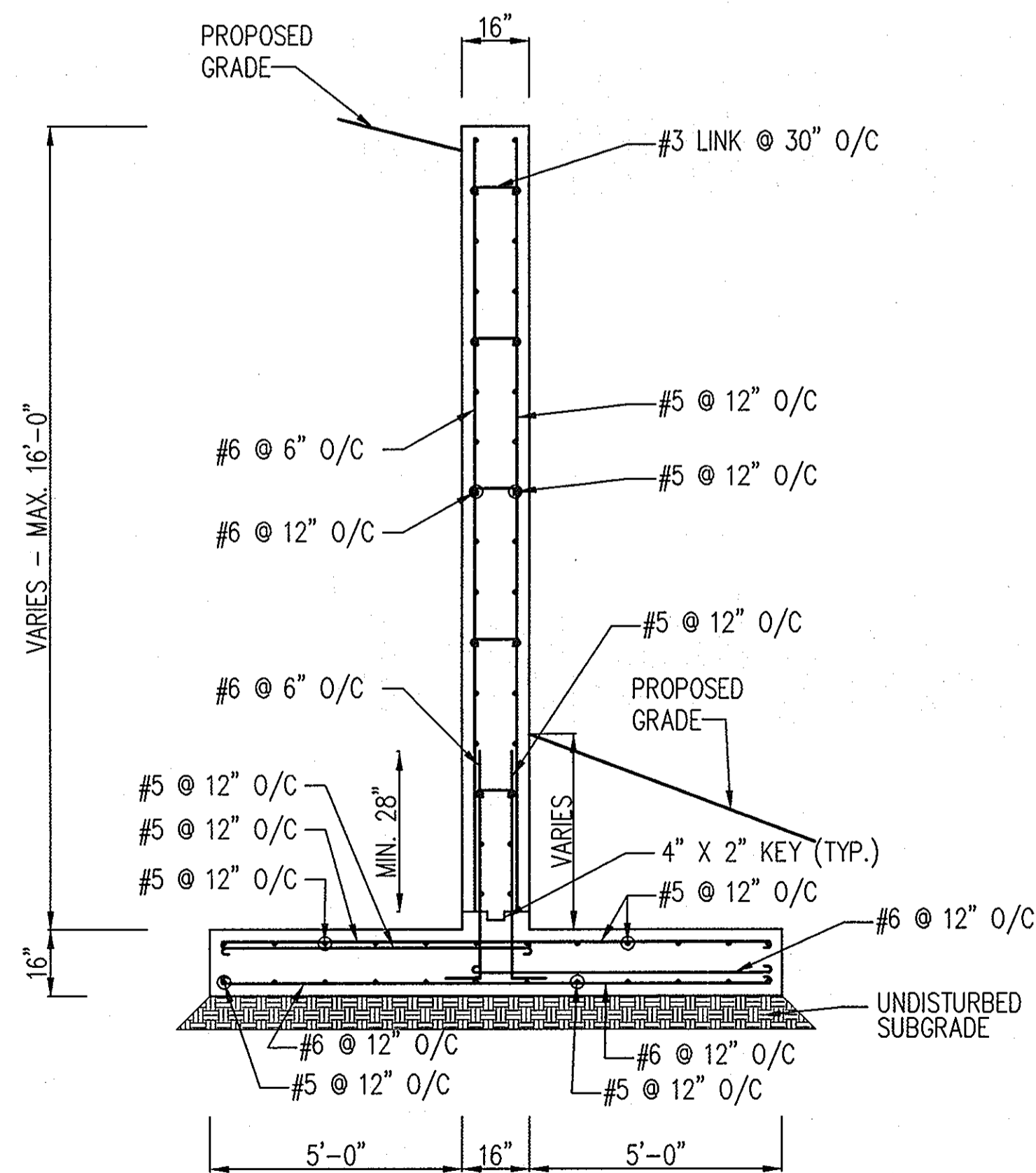
SECTION B-B

SCALE : 3/8" = 1'-0"

*SEE NOTE 1.

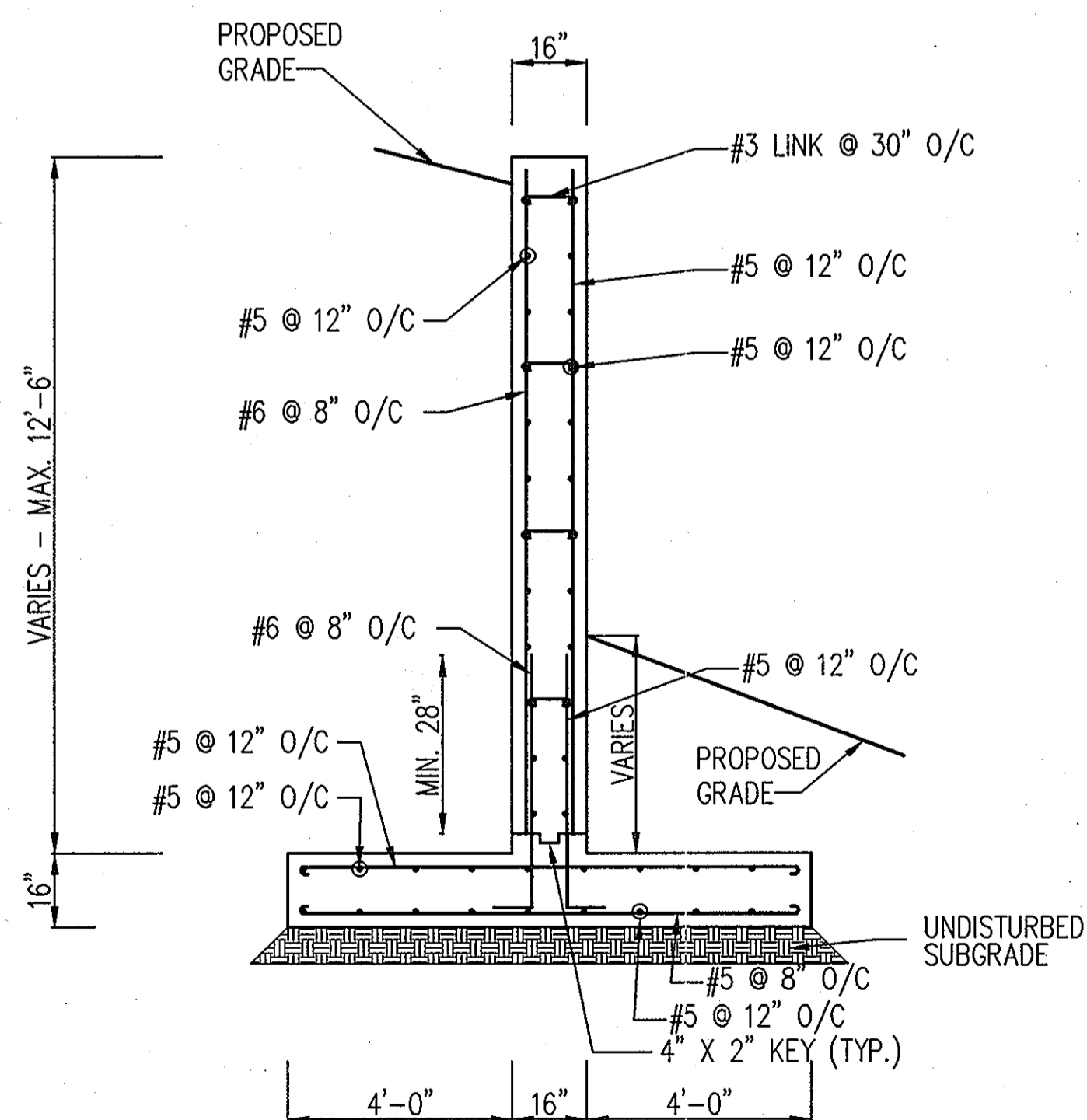
NOTE:

- CONTRACTOR SHALL OBTAIN THE SPACING AND LOCATION OF ANCHOR BOLTS FROM THE PEDESTRIAN BRIDGE SUPPLIER.



WING WALL SECTION 1-1

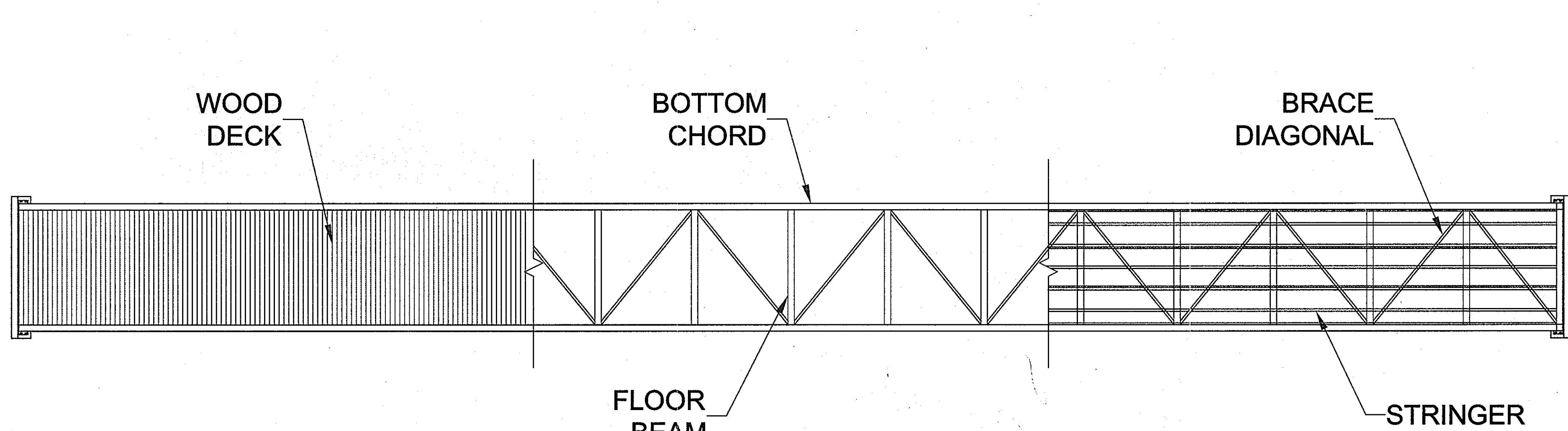
SCALE : 3/8" = 1'-0"



WING WALL SECTION 2-2

SCALE : 3/8" = 1'-0"

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Thomas & Butler</i>	12/13/10 DATE
DIRECTOR	
<i>John P. ...</i>	11/12/10 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
<i>Kathleen ...</i>	12/10/10 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	
DATE NO.	REVISION
OWNER HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
DEVELOPER HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING 9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045 P 410 313 2414	
PROJECT NORTH LAUREL COMMUNITY CENTER CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK	
AREA TAX MAP 47 GRID 22 & TAX MAP 50 GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE BRIDGE ABUTMENT DETAILS	
Patton Harris Rust & Associates Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
SEAL	DESIGNED BY : RA/JSN
	DRAWN BY: JSN
	PROJECT NO : 14466-1-2 C400SDP41.DWG
	DATE : SEPTEMBER 7, 2010
	SCALE : AS SHOWN
BY:	DRAWING NO. 41 OF 43



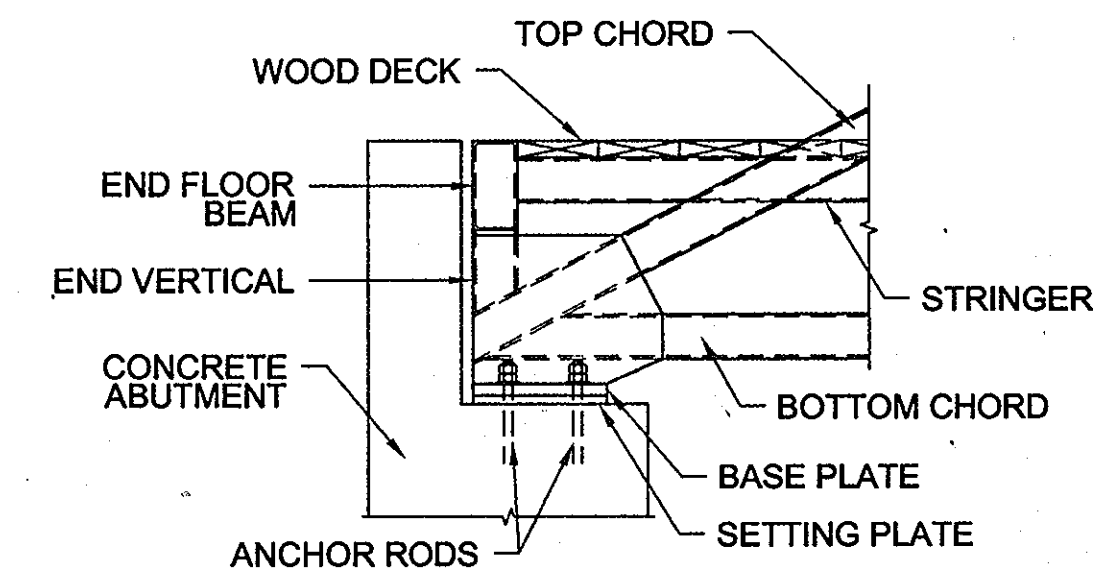
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BRACING

FRAMING

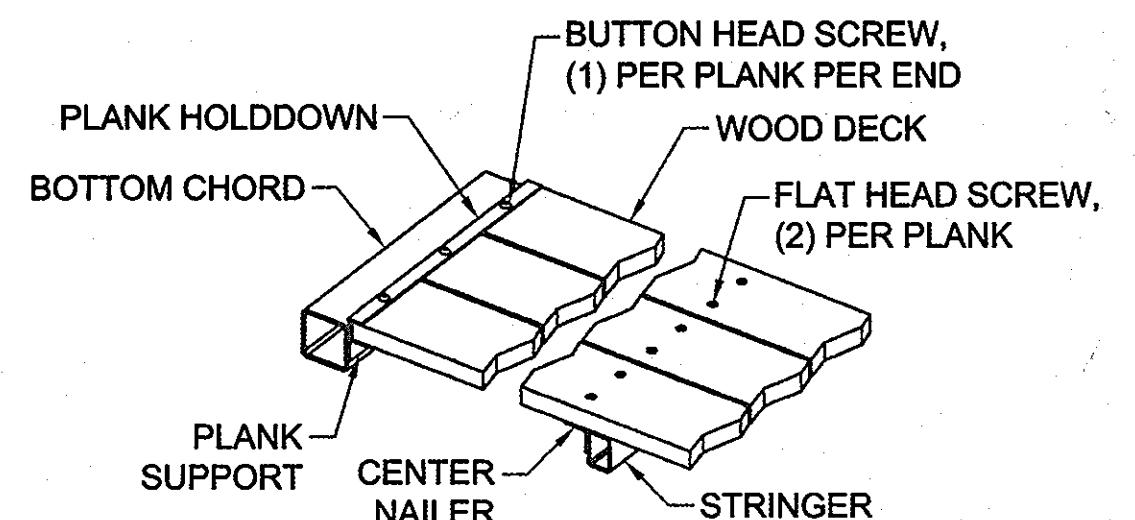
SCHMATIC BRIDGE PLAN

NOT TO SCALE



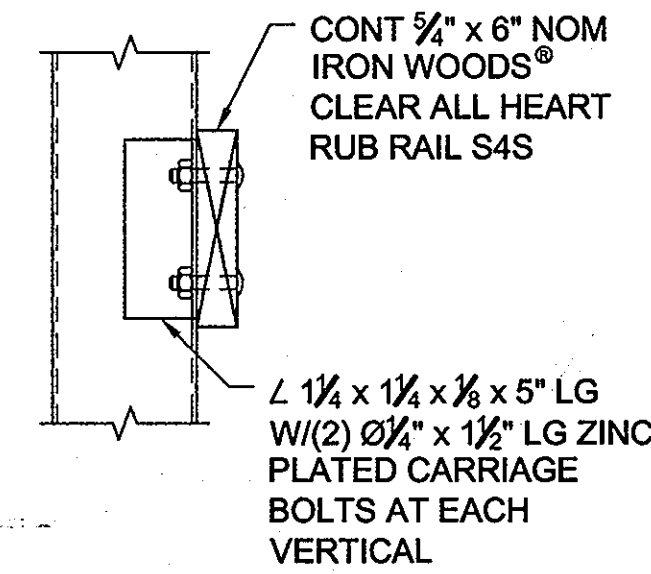
BEARING SIDE VIEW

INFORMATION PROVIDED FOR REPRESENTATION ONLY.
ACTUAL BEARING DIAGRAMS TO BE BASED ON FINAL DESIGN.
NOT TO SCALE



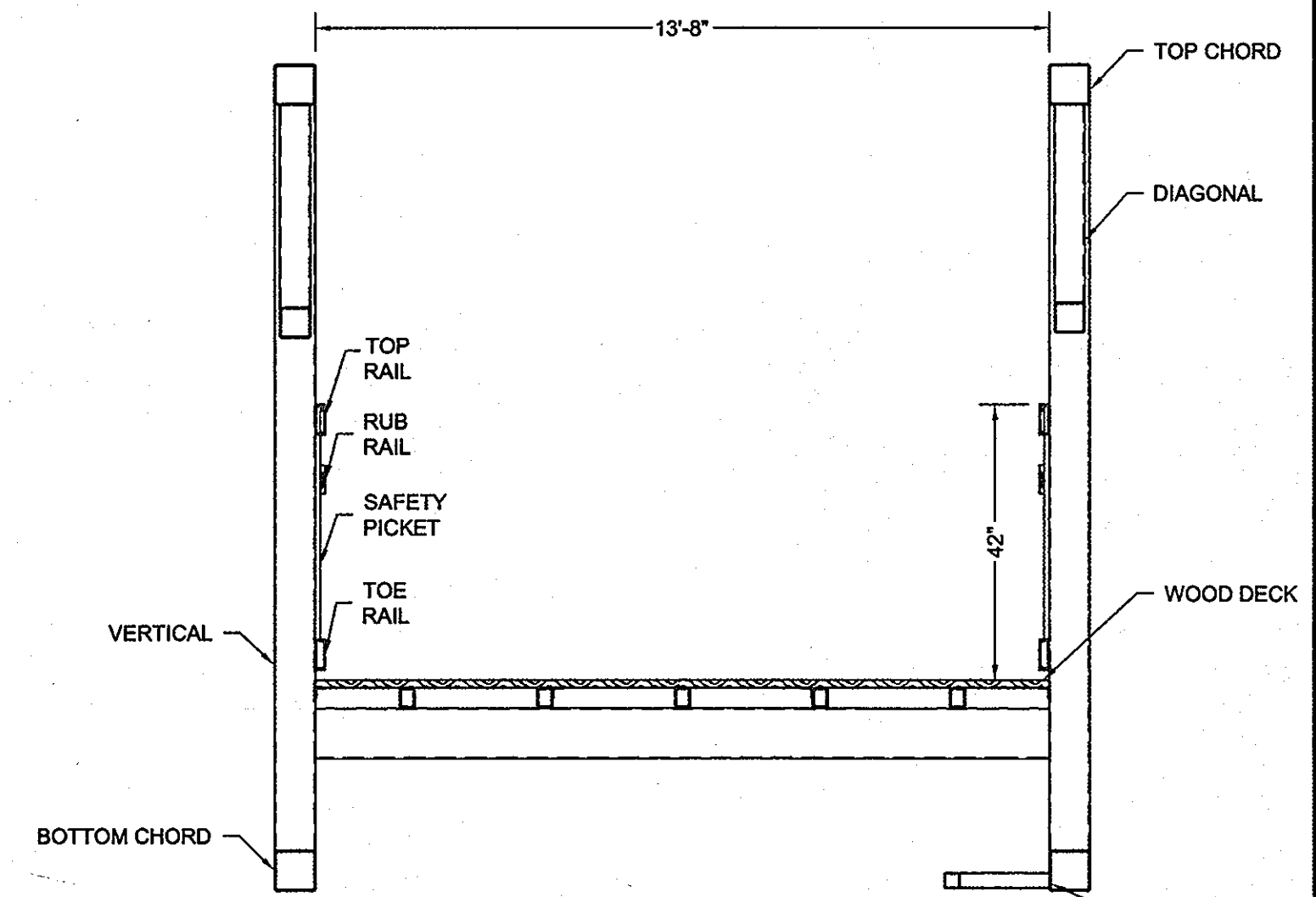
WOOD DECK DETAIL

NOT TO SCALE



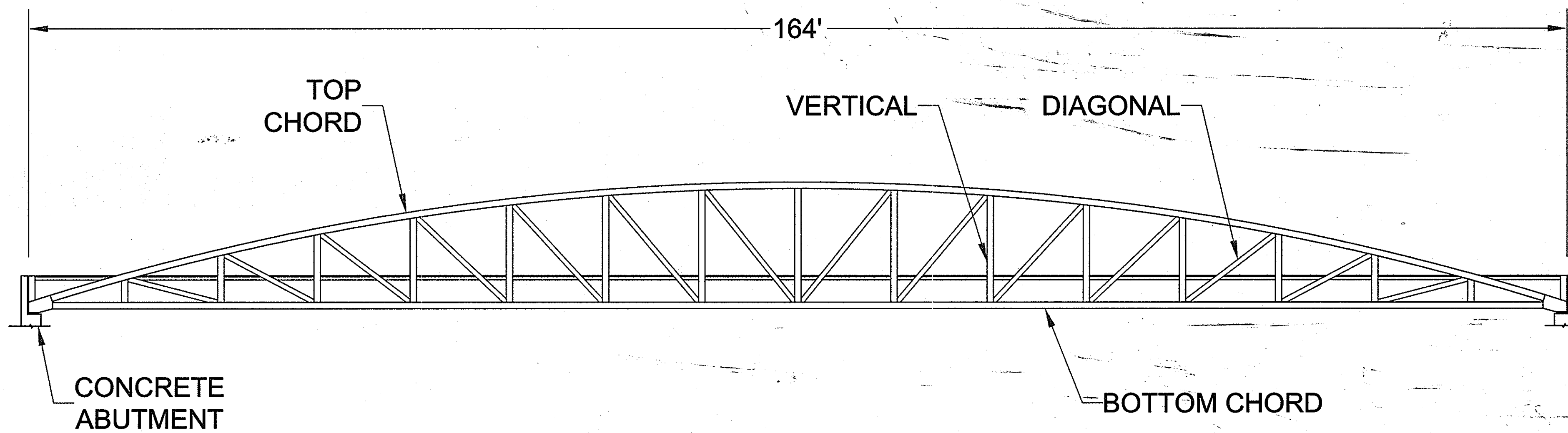
RUB RAIL DETAIL

NOT TO SCALE



SECTION

NOT TO SCALE



SCHMATIC BRIDGE ELEVATION

NOT TO SCALE

NOTE: BRIDGE DETAILS AND PLANS SHOWN ARE SCHEMATIC FOR INFORMATIONAL PURPOSES ONLY AND WILL VARY WITH FINAL ENGINEERING. CONTRACTOR SHALL CONTRACT WITH AN APPROVED PEDESTRIAN BRIDGE SUPPLIER TO PREPARE ALL FINAL DRAWINGS AND COMPUTATIONS FOR CONSTRUCTION.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Thomas G. Butler</i>	12/13/10
DIRECTOR	DATE
<i>Mr. Deane</i>	11/12/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Neil S. Deane</i>	12/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION

OWNER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
9250 BENDIX ROAD, COLUMBIA, MARYLAND 21045
P 410 313 2414

PROJECT
NORTH LAUREL COMMUNITY CENTER
CAPITAL PROJECT C-0304 PROJECT MGR: DAVE LOUDERMILK

AREA TAX MAP 47 GRID 22 & TAX MAP 50
GRIDS 3 & 4, PARCELS A-1, 187 & 1065 ZONED R-SC
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SCHMATIC BRIDGE DETAILS

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

	DESIGNED BY : RA/JSN
	DRAWN BY: JSN
	PROJECT NO : 14466-1-2 C400SDP43.DWG
	DATE : SEPTEMBER 7, 2010
	SCALE : AS SHOWN
BY:	DRAWING NO. 43 OF 43