

SHEET INDEX

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ADDRESS CHART

UNIT #	ADDRESS
1	7231 PEBBLE CREEK DRIVE
2	7235 PEBBLE CREEK DRIVE
3	7239 PEBBLE CREEK DRIVE
4	7247 PEBBLE CREEK DRIVE
5	7251 PEBBLE CREEK DRIVE
6	7259 PEBBLE CREEK DRIVE
7	7263 PEBBLE CREEK DRIVE
8	7267 PEBBLE CREEK DRIVE
9	7275 PEBBLE CREEK DRIVE
10	7279 PEBBLE CREEK DRIVE
11	7283 PEBBLE CREEK DRIVE
12	7291 PEBBLE CREEK DRIVE
13	7295 PEBBLE CREEK DRIVE
14	7299 PEBBLE CREEK DRIVE
15	7298 PEBBLE CREEK DRIVE
16	7294 PEBBLE CREEK DRIVE
17	7290 PEBBLE CREEK DRIVE
18	7282 PEBBLE CREEK DRIVE
19	7278 PEBBLE CREEK DRIVE
20	7274 PEBBLE CREEK DRIVE
21	7266 PEBBLE CREEK DRIVE
22	7262 PEBBLE CREEK DRIVE
23	7258 PEBBLE CREEK DRIVE
24	7250 PEBBLE CREEK DRIVE
25	7246 PEBBLE CREEK DRIVE

PERMIT INFORMATION BLOCK

SUBDIVISION NAME FAIRWAY OVERLOOK	SECTION/AREA 8.3 AC ±	PARCEL: 591 (BUILDABLE BULK PARCEL "A")
PLAT NO. 16075, 16116	BLOCK(S) 11	ZONING R-20
TAX MAP NO. 37	ELECTION DISTRICT 1ST	CENSUS TRACT 6011D1
WATER CODE D-04	SEWER CODE 2152700	

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO.: _____
DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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 POUD 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: *M. L. Levy* DATE: *7/15/09*
PRINTED NAME OF DEVELOPER: *M. L. Levy*

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 AND THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT AND CONSIDERED THEM IN THE DESIGN AND PREPARED THIS PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE: *[Signature]* DATE: *7/15/09*
PRINTED NAME OF ENGINEER: _____

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATIONAL RESOURCES CONSERVATION SERVICE DATE: *7/21/09*

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: *7/21/09*

APPROVED - DEPARTMENT OF PLANNING AND ZONING DATE: *8/12/09*

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: *8/12/09*

CHIEF, DIVISION OF LAND DEVELOPMENT DATE: *8/25/09*

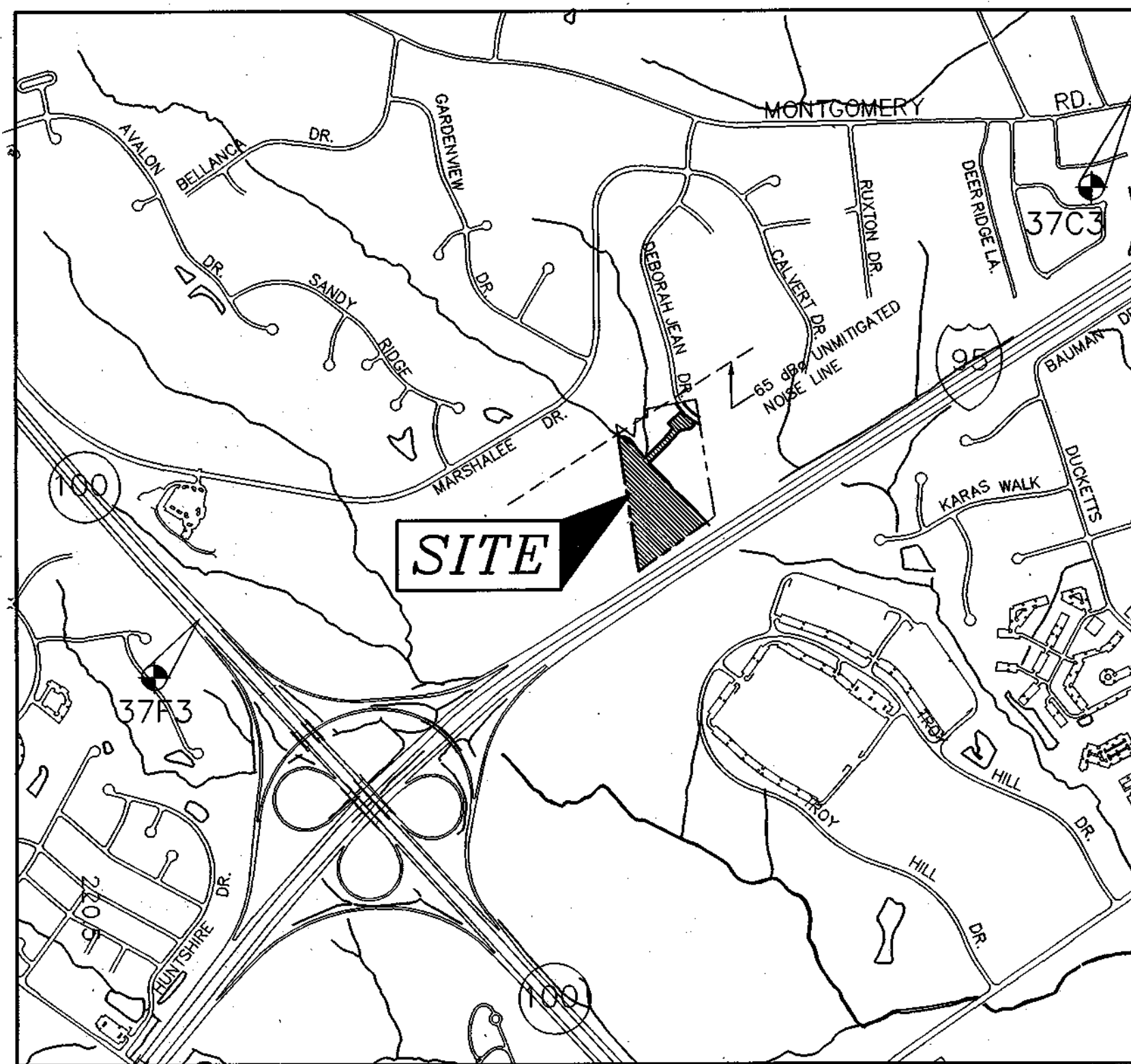
DIRECTOR DATE: _____

SITE DEVELOPMENT PLAN

FAIRWAY OVERLOOK

1st ELECTION DISTRICT

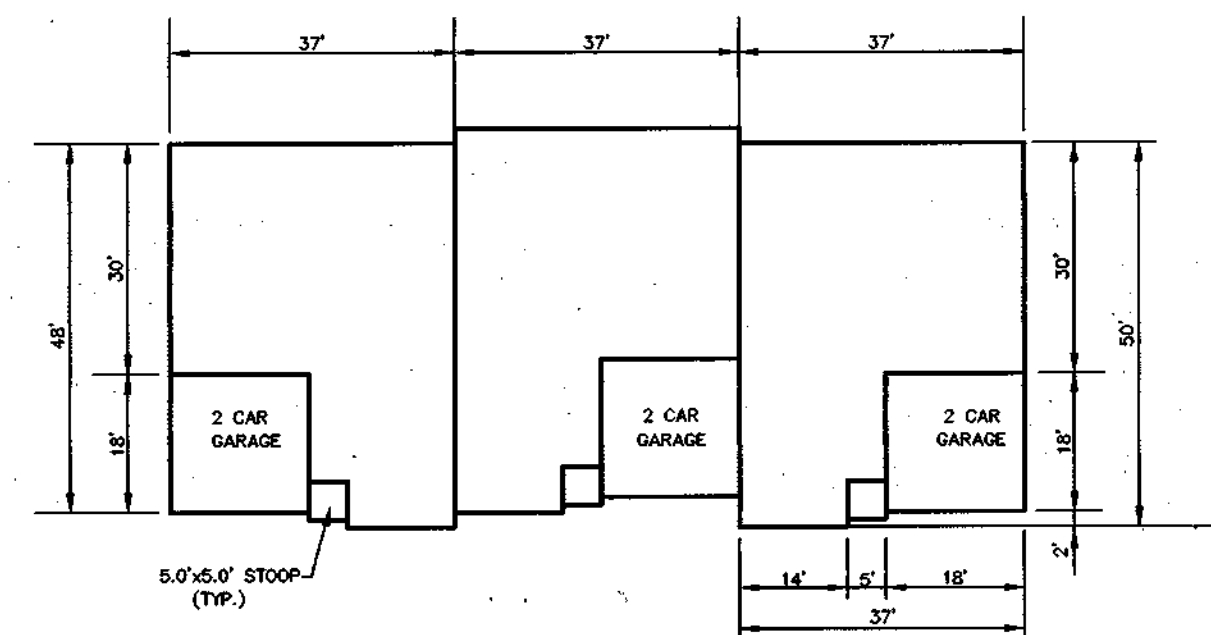
HOWARD COUNTY, MARYLAND



VICINITY MAP

SCALE: 1"=1000'

39. THE FOREST CONSERVATION REQUIREMENTS FOR SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE PROVIDED BY REFORESTATION OF 89 ACRES OF FOREST. FINANCIAL SURETY FOR THE ON-SITE REFORESTATION (71 ACRES OR 3,093,450 FT²) HAS BEEN POSTED AS PART OF THE POND DEVELOPMENT AGREEMENT IN THE AMOUNT OF \$150,000. (FOREST CONSERVATION CREDIT FOR 71 ACRES OF REFORESTATION HAS BEEN THRU FOR 15 MONTHS). 11 ENGINEERS AS SHOWN ON THIS PLAN TO BE PLANTED AS PART OF THE LANDSCAPE REQUIREMENTS. PLAN RECORDS AS PLAT NOS. 16,015 AND 16,016. SEE SHEET 14 FOR FOREST CONSERVATION PLAN. P-05-59.



TYP. BUILDING FOOTPRINT

SCALE: 1"=25'



ELEVATION

SCALE: 1"=25'

LEGEND

- TREE PROTECTIVE FENCING
- WETLANDS
- FOREST CONSERVATION EASEMENT
- 100-YEAR FLOODPLAIN EASEMENT
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE DIVERSION
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- EXTERIOR LIGHT FIXTURE

DEVELOPER

ROCK REALTY INC.
25 MAIN STREET
REISTERSTOWN, MD, 21136
(410) 526-4030

OWNER

5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELICOTT CITY, MARYLAND 21042

GENERAL NOTES:

- SUBJECT PROPERTY ZONED R-20 AS PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT (410)-313-1880 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.
- PROJECT BACKGROUND:
TAX MAP: 37, PARCEL: 591,
ELECTION DISTRICT: FIRST
ZONING: R-20
DEED REFERENCE: 699/308
- SITE ANALYSIS DATA:
A. TOTAL PROJECT AREA: 8.3 AC ±
B. AREA OF PLAIN SUBMISSION: 8.3 AC ±
C. LIMIT OF DISTURBANCE: 5.60 AC ±
D. PROPOSED USE: SFA, HOUSING FOR ELDERLY
E. TOTAL NO. OF UNITS ALLOWED: 5 UNITS PER ACRE = 41
F. TOTAL NO. OF UNITS PROPOSED: 25
G. REQUIRED PARKING SPACES: 2 PER UNIT = 50 SPACES (IN GARAGES)
H. PROVIDED PARKING SPACES: 2 PER UNIT = 50 SPACES (IN GARAGES)
ON-STREET = 15 SPACES
TOTAL PARKING SPACES PROVIDED = 65 SPACES
DRIVEWAY AREAS ARE NOT CONSIDERED PARKING SPACES
- OPEN SPACE REQUIRED: 50% OF GROSS AREA = 4.15 AC ±
J. OPEN SPACE PROVIDED: 69% OF GROSS AREA = 5.75 AC ±
K. REC. OPEN SPACE REQUIRED: 400 SQ. FT. PER UNIT = 10,000 SQ. FT. TOTAL
L. REC. OPEN SPACE PROVIDED: 10,000 SQ. FT.
M. DPZ FILES: BA-00-055E, BA-02-46V, WP-03-045, F-03-059
N. BUILDING COVERAGE OF SITE: 61,250 SQ. FT. = 16.9% OF GROSS AREA
O. IMPERVIOUS PAVED AREA OF SITE: 1,154 AC. = 14.1% OF GROSS AREA
- TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN TOPOGRAPHIC SURVEY BY MILDENBERG, BOENDER & ASSOCIATES, INC. ON OR ABOUT JANUARY 2001.
- BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN & MONUMENTED SURVEY BY MILDENBERG, BOENDER & ASSOCIATES, INC. ON OR ABOUT JANUARY 2001.
- COORDINATES BASED ON NAD '83 (HORIZONTAL) AND NGVD '29 (VERTICAL) MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 37C3 AND 37F3
STATION 37C3 STATION 37F3
NORTHING 562916.003 NORTHING 557289.193
EASTING 1384856.679 EASTING 1379631.096
ELEVATION 258.488 ELEVATION 248.036
- WATER AND SEWER TO BE PUBLIC. CONNECTION TO CONTRACT NO. 657-S AND 14-3517-D.
- FLOODPLAIN STUDY PREPARED BY MILDENBERG, BOENDER & ASSOCIATES, INC. ON OR ABOUT MAY 2002.
- NOISE STUDY PREPARED BY WILDMAN ENVIRONMENTAL SERVICES DATED MAY 2002
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND SWM DESIGN MANUAL. SWM WILL BE PRIVATE. SWM WILL INCLUDE GRASS SWALE CREDIT, SAND FILTER, AND EXTENDED DETENTION. SWM FACILITY IS PRIVATELY OWNED AND MAINTAINED.
- NO STEEP SLOPES EXIST ON-SITE.
- EXISTING STRUCTURES TO BE REMOVED UNLESS OTHERWISE NOTED.
- WETLAND STUDY AND FOREST STAND DELINEATION PREPARED BY WILDMAN ENVIRONMENTAL SERVICES DATED MAY 2002.
- NO HISTORIC STRUCTURES, CEMETERIES, OR GRAVE SITES EXIST ON-SITE. SITE IS NOT ADJACENT TO A DESIGNATED SCENIC ROAD.
- RESIDENTIAL DRIVEWAY ENTRANCE HO.CO.STD. R-6.06 TO BE USED UNLESS OTHERWISE NOTED.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, STREAMS AND THEIR BUFFERS OR FOREST CONSERVATION EASEMENT EXCEPT AS SHOWN ON APPROVED PLANS.
- WATER AND SEWER SERVICE TO THESE UNITS WILL BE GRANTED UNDER THE PROVISION OF SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND PUBLIC SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF THE ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- HOWARD COUNTY STANDARD R-3.01-MODIFIED COMBINATION CURB AND GUTTER WILL BE USED, UNLESS OTHERWISE NOTED.
- THIS PROJECT IS SUBJECT TO BOARD OF APPEALS CASE 00-55-E GRANTED APRIL 23, 2002 SUBJECT TO FOLLOWING CONDITIONS:
1. THE SPECIAL EXCEPTION SHALL APPLY ONLY TO THE PROPOSED ELDERLY HOUSING DEVELOPMENT WITH 25 SFA DWELLINGS AS DESCRIBED IN THE PETITION AND AS DEPICTED ON THE AMENDED PLAN FOR ZELMAN PROPERTY SUBMITTED TO THE BOARD ON MARCH 12, 2002 AS EXHIBIT #1, AND NOT TO ANY OTHER ACTIVITIES, USES OR STRUCTURES ON THE PROPERTY.
2. THE PETITIONER SHALL RETAIN THE EXISTING VEGETATION ALONG THE WEST SIDE LOT LINES TO BE PART OF THE REQUIRED LANDSCAPE DESIGN.
3. THE PETITIONER SHALL OBTAIN A VARIANCE FROM SECTION 108.D.4.C.(2) TO REDUCE 20' USE SETBACK FROM LOT LINE TO PRIVATE ROAD EXTENDING THROUGH THE PIPESTEM.
4. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND COUNTY LAWS AND REGULATIONS.
- THIS PROJECT IS SUBJECT TO BA-02-46V VARIANCE REQUEST TO REDUCE THE 20' USE SETBACK TO 16' FOR A PRIVATE ROAD AND TO 7' FOR A SIDEWALK ALONG THE SOUTH SIDE OF THE PRIVATE ROAD APPROVED ON DECEMBER 13, 2002.
- EXISTING VEGETATION ALONG THE WEST SIDE OF THE PROPERTY TO BE RETAINED TO THE EXTENT POSSIBLE.
- TRASH PICK-UP TO BE PROVIDED BY A PRIVATE CONTRACTOR. THERE WILL BE NO COMMUNITY TRASH DUMPSTERS FOR THIS PROJECT.
- TRANSPORTATION TO MEDICAL SERVICE, SHOPPING AREAS, RECREATIONAL AND OTHER COMMUNITY SERVICES WILL BE PROVIDED TO RESIDENTS THROUGH CONTRACT WITH AN OFF-SITE COMPANY.
- FLOODPLAIN DISTURBANCE FOR SWM OUTFALL HAS BEEN DETERMINED TO BE A NECESSARY DISTURBANCE IN ACCORDANCE WITH SECTION 16.116(c) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. FLOODPLAIN AND STREAM DISTURBANCES ASSOCIATED WITH THE PROPOSED STREAM CROSSING AND SEWER CROSSING ARE CONSIDERED IN ACCORDANCE WITH SECTION 16.116(c) OF THE REGULATIONS. ALL CONSTRUCTION AND GRADING DISTURBANCES FOR THE PROPOSED PRIVATE ROAD AND SEWER LINE CROSSING WITHIN THE FLOODPLAIN AND STREAM ARE SUBJECT TO APPROVAL FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE TRACKING NO. 200268585).
- ALL EXTERIOR LIGHT FIXTURE SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING RESIDENTIAL PROPERTIES AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF HOWARD COUNTY ZONING REGULATIONS.
LOCATION FIXTURE/POLE TYPE
STA.0+22 OFFSET 22' RIGHT 150-WATT HPS VAPOR "PREMIER" FIXTURE (CUTOFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING 12" ARM.
STA.4+95 OFFSET 20' RIGHT 150-WATT HPS VAPOR "TRADITIONAIRE" POST TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE.
STA.7+58 OFFSET 12' RIGHT 150-WATT HPS VAPOR "TRADITIONAIRE" POST TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE.
STA.13+50 OFFSET 12' LEFT 150-WATT HPS VAPOR "TRADITIONAIRE" POST TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE.
- GARAGES SHALL BE USED FOR REQUIRED PARKING PURPOSES ONLY AND ARE NOT PERMITTED TO BE CONVERTED TO OTHER USES IN ACCORDANCE WITH SECTION 133.D.2.G OF THE HOWARD COUNTY ZONING REGULATIONS.
- THIS PROJECT IS SUBJECT TO FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- PROVIDE ROOF LEADERS FOR REAR OF UNITS 1 THRU 8 TO CONNECT TO STORM DRAIN. PROVIDE MIN. COVER OF 1.5" OVER THE 6" HDPE PIPES. MINIMUM SLOPE = 0.05%.
- SPECIFICATION AND INSTALLATION OF HDPE PIPE HAVE TO MEET AASHTO-252 TYPE S, M294 TYPE S AND ASTM D2321, RESPECTIVELY.
- THE 65 dBA NOISE LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL CHAPTER 5. REVISIONS TO EXISTING FLOODPLAIN EASEMENT. IT IS LOCATED TO EXACTLY LOCATE THE 65 dBA NOISE LINE. THE 65 dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- PATHWAY INDICATED IS FOR INFORMATIONAL PURPOSES ONLY. PATHWAY IS A GRASSED STRIP ON EXISTING GRADE, WITH NO IMPERVIOUS SURFACES. EXACT ROUTE OF PATHWAY WILL BE DETERMINED BY THE HOMEOWNER'S ASSOCIATION.
- WP-03-45 TO HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SECTION 16.134(a)(1), WHICH REQUIRES SIDEWALK ON BOTH SIDES OF ALL STREETS IN A RESIDENTIAL PROJECT, APPROVED NOVEMBER 26, 2002.
- THE REQUIRED NOISE BARRIER OR NOISE WALLS ARE NOT CONSIDERED STRUCTURES FOR BULK REGULATION PURPOSES IN ACCORDANCE WITH SECTION 103.A.150 OF HOWARD COUNTY ZONING REGULATIONS.
- THE OWNER RESERVES TO ITSELF AND/OR ASSIGNEES THE RIGHT TO MITIGATE FOREST, AND WETLANDS, AND/OR ANY OTHER NATURALLY RELATING WORK WITHIN THE DESIGNATED FLOODPLAIN EASEMENT. IT IS UNDERSTOOD THAT A PROJECT TO CREATE WETLANDS AND PLANT FOREST IN THE STREAM BUFFER IS CURRENTLY BEING PLANNED BY HOWARD COUNTY GOVERNMENT IN COOPERATION WITH THE ARMY CORPS OF ENGINEERS.
- THE FRIENDLY OVERLOOK AGE RESTRICTION COVENANTS WERE RECORDED IN THE HOWARD COUNTY LAND RECORDS ON AUGUST 19, 2003 ON RECEIPT # 25385, REP # 500.

date	APRIL 03
project	00-065
illustration	engineering
scale	MMP
approval	MMP
NTS	

date	
description	
revisions	
no.	

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL A)
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Elicott City, Maryland, 21042
 (410) 987-0236 Fax (410) 987-0236 Res. (301) 621-6521 Wash. (410) 987-0236 Fax

WETLAND TABLE

LINE	LENGTH	BEARING
V1	43.00	S82°07'21"E
V2	50.00	S56°11'04"E
V3	85.67	N59°38'08"W
V4	58.00	N37°53'57"W
V5	74.65	N48°19'05"W
V6	67.30	N39°06'57"W
V7	80.48	N48°32'00"W
V8	143.60	N37°44'56"W
V9	33.11	S01°15'14"W
V10	54.42	S21°21'30"E
V11	69.23	S63°34'17"E
V12	71.79	S69°10'54"E

FLOODPLAIN

LINE	BEARING & DISTANCE
F9	N22°07'55"W 61.09'
F10	N00°02'33"W 58.74'
F11	N25°04'20"W 50.27'
F12	N72°20'08"W 18.27'
F13	S60°39'56"W 20.12'
F14	N40°57'58"W 76.04'
F15	N30°50'13"W 73.33'
F16	N48°02'11"W 27.33'
F17	N44°55'07"W 83.29'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ann L. Leary 7/15/03
DEVELOPER'S SIGNATURE DATE

Ann L. Leary
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

Donna M. McCreary 7/16/03
ENGINEER'S SIGNATURE DATE

Donna M. McCreary
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Hays 7/21/03
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

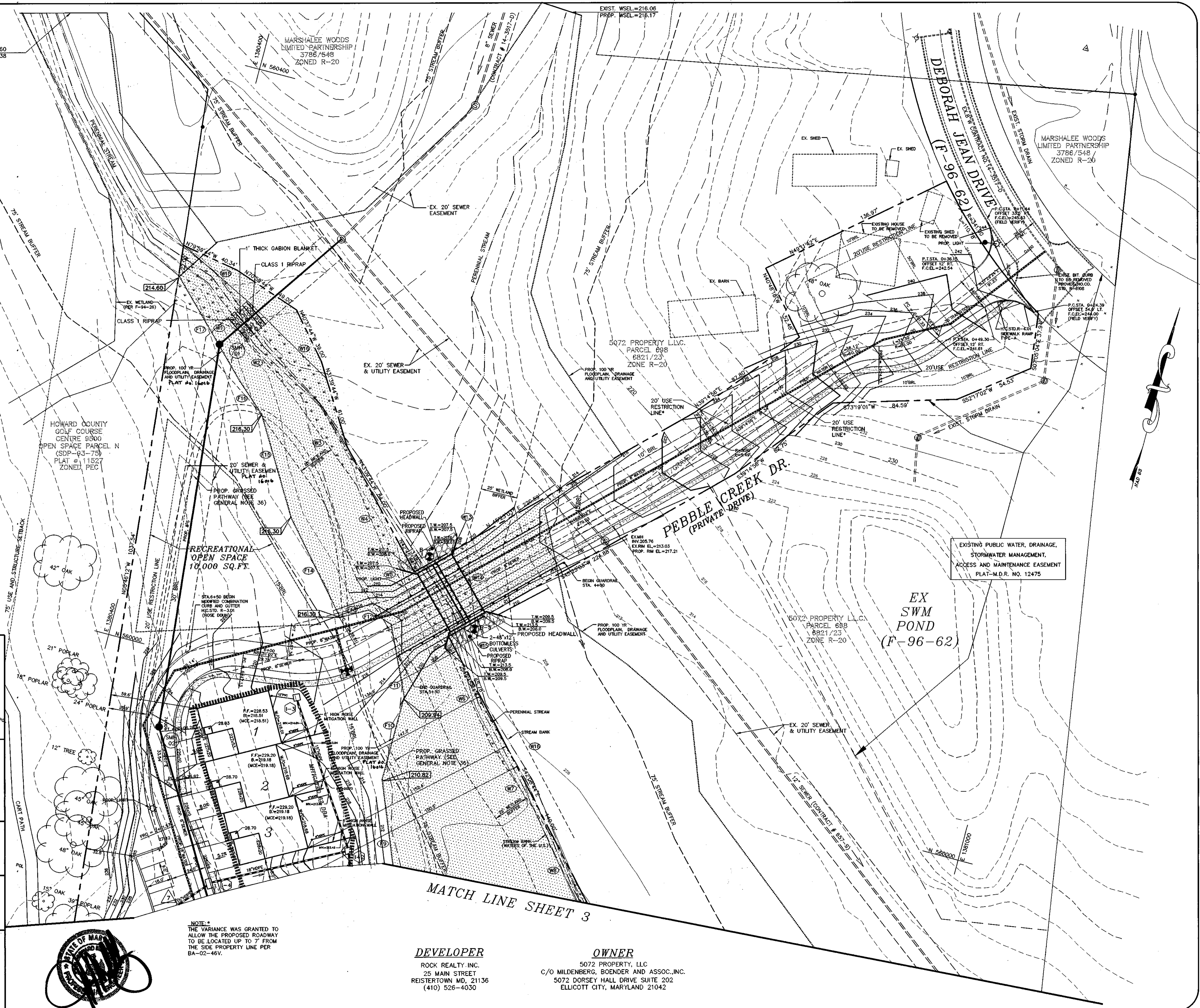
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

Julia Selig 7/21/03
HOWARD SCD DATE

APPROVED DEPARTMENT OF PLANNING AND ZONING
Cheryl K. Hensley 8/14/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Janice D. Layton 8/27/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Janice D. Layton
DIRECTOR



NOTE: THE VARIANCE WAS GRANTED TO ALLOW THE PROPOSED ROADWAY TO BE LOCATED UP TO 7' FROM THE SIDE PROPERTY LINE PER BA-02-46V.

DEVELOPER
ROCK REALTY, INC.
25 MAIN STREET
REISTERTOWN MD, 21136
(410) 526-4030

OWNER
5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

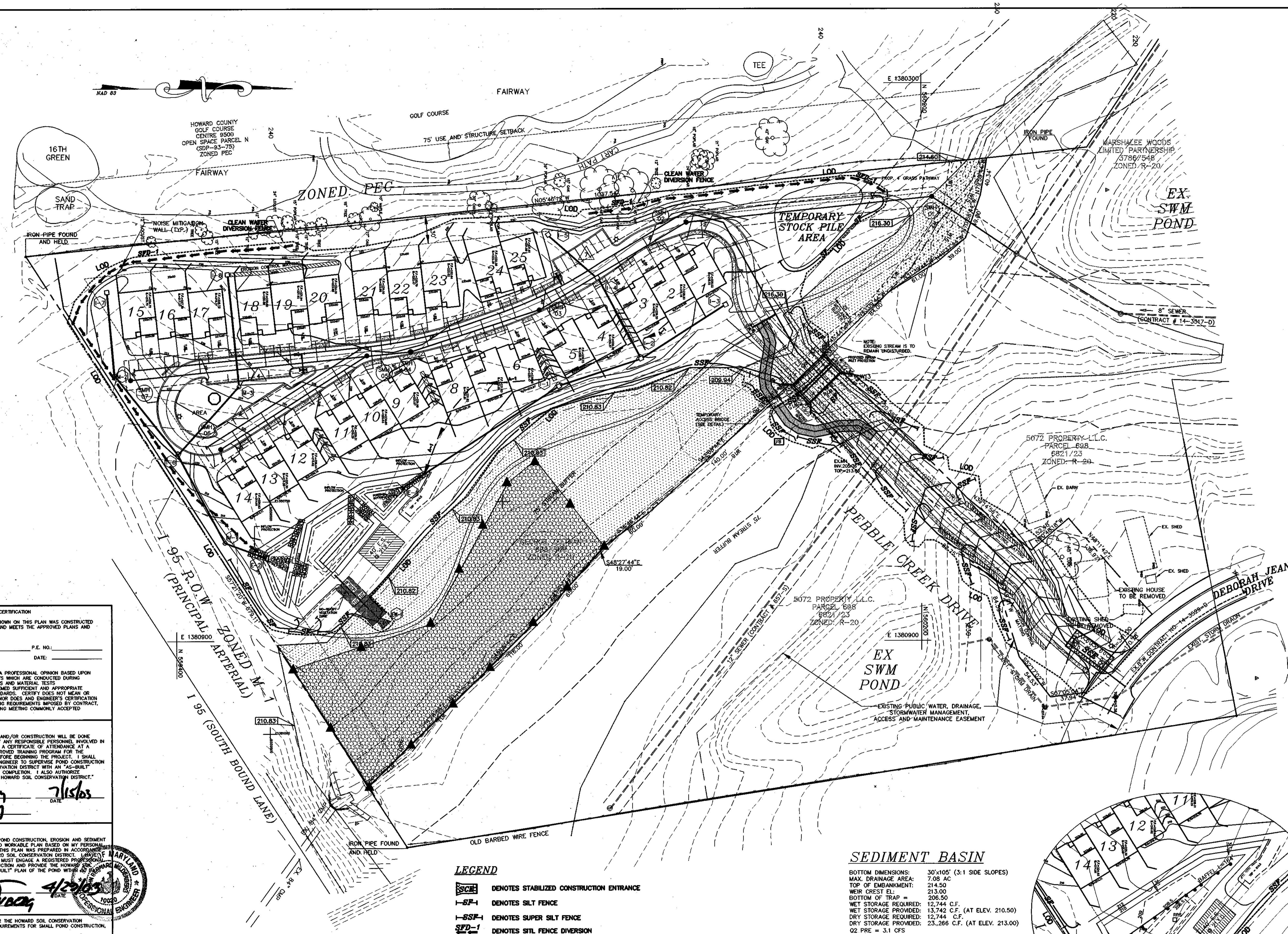
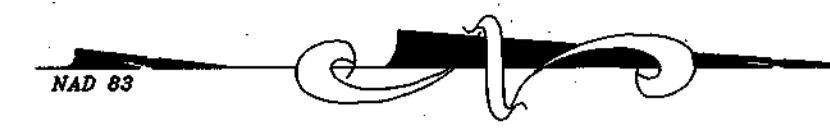
project	00-065	date	APRIL 03
illustration	MMP	engineering	MMP
scale	1"=30'	approval	

no.	description	date
	revisions	

FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 997-0286 Fax: (301) 521-5621 Wash. (410) 997-0286 Fax.



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

P.E. NO.: _____
 SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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 of Developer: *[Signature]* Date: *7/15/03*
 Printed Name of Developer: *Anna L. Comy*

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 NOTICED 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 of Engineer: *[Signature]* Date: *4/21/03*
 Printed Name of Engineer: *Tom Milogrovan*

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCE CONSERVATION SERVICE Date: *7/21/03*

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

Signature: *[Signature]* Date: *7/21/03*
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* Date: *8/16/03*
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Signature: *[Signature]* Date: *8/21/02*
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* Date: *4/28/02*
 DIRECTOR

NOTE
 CURL ALL SILT FENCES AND SUPER SILT FENCES 2' UPHILL IN ELEVATION

LEGEND

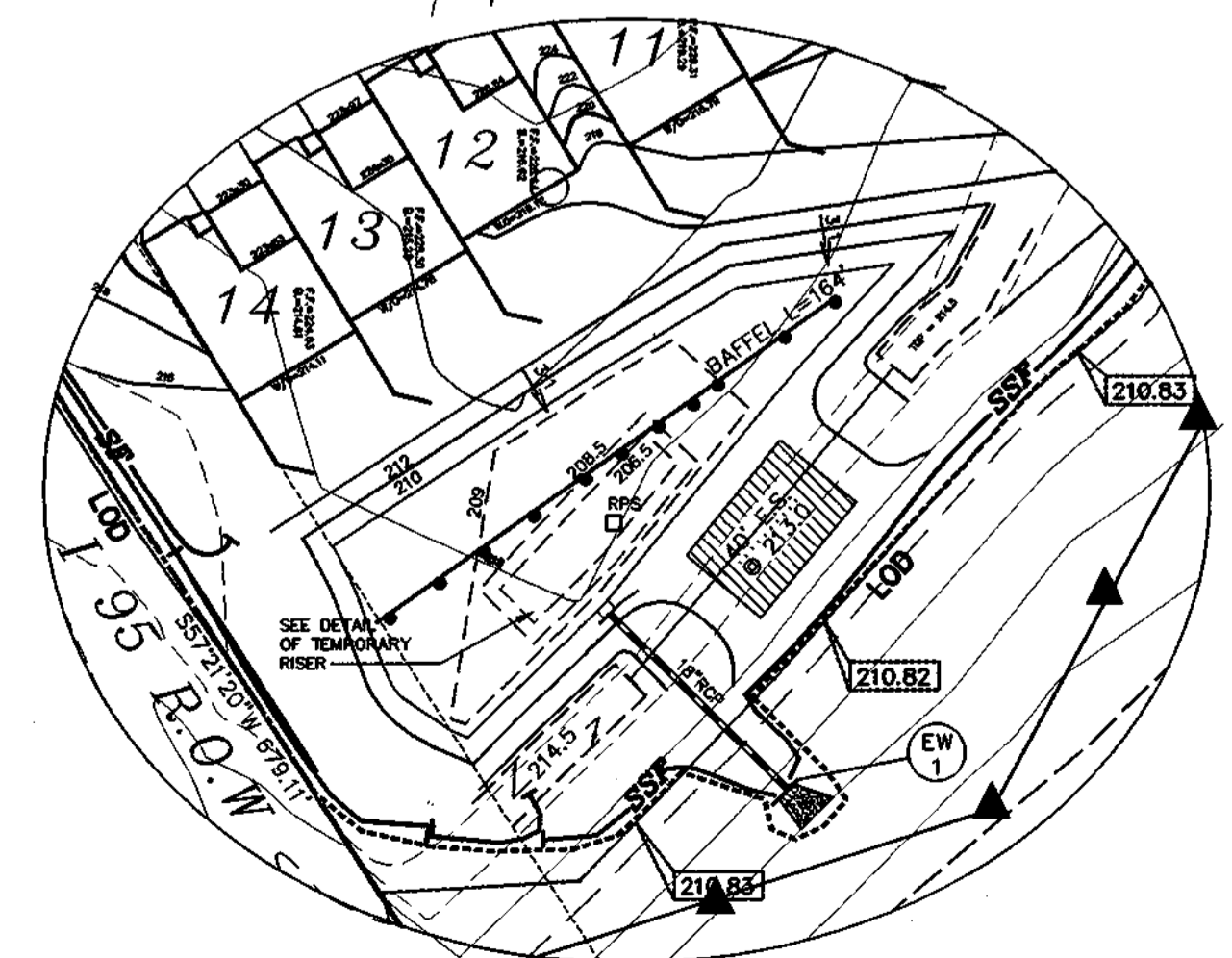
- DENOTES STABILIZED CONSTRUCTION ENTRANCE
- DENOTES SILT FENCE
- DENOTES SUPER SILT FENCE
- DENOTES SILT FENCE DIVERSION
- DENOTES LIMIT OF DISTURBANCE
- REMOVABLE PUMP STATION
- FILTER BAG
- WETLANDS
- 100 YEAR FLOODPLAIN
- EROSION CONTROL MATTING
- INFLOW PROTECTION
- NO-WOODY VEGETATION ZONE

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER & ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

SEDIMENT BASIN

BOTTOM DIMENSIONS: 30'x105' (3:1 SIDE SLOPES)
 MAX. DRAINAGE AREA: 7.08 AC
 TOP OF EMBANKMENT: 214.50
 WEIR CREST EL.: 213.00
 BOTTOM OF TRAP = 206.50
 WET STORAGE REQUIRED: 12,744 C.F.
 WET STORAGE PROVIDED: 13,742 C.F. (AT ELEV. 210.50)
 DRY STORAGE REQUIRED: 12,744 C.F.
 DRY STORAGE PROVIDED: 23,266 C.F. (AT ELEV. 213.00)
 Q2 PRE = 3.1 CFS
 Q2 DURING CONSTRUCTION = 0.6 CFS @ 212.6
 Q10 DURING CONSTRUCTION = 2.44 CFS @ 213.3
 E.S. ELEV. = 213.0
 E.S. WIDTH = 40.0'
 CLEANOUT ELEV. = 209.7'
 4' RISER WEIR ELEV. = 213.0'



PLAN - TEMPORARY SEDIMENT BASIN

project	00-065	date	APRIL 03
illustration	MMP	engineering	MMP
scale	1"=50'	approval	

no.	description	revisions	date

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0286 Fax: (301) 821-5521 Wash. (410) 997-0286 Fax

**HOWARD SOIL CONSERVATION DISTRICT
PERMANENT SEEDING NOTES**

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING 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./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA FORM FERTILIZER (8 LBS./1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, SEED WITH 3 BUSHES PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 15 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR NOT PREVIOUSLY LOOSENED.

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHES PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 BUSHES PER ACRE OF WEEPING LOVEGRASS (07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 15 THRU NOVEMBER 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./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING. REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

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, (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER 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 THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC. 54), TEMPORARY SEEDING (SEC.52), AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN 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:	8.3	ACRES
AREA DISTURBED:	5.6	ACRES
AREA TO BE ROOFED OR PAVED:	2.0	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	2.0	ACRES
TOTAL CUT:	5,000	CU. YDS.
TOTAL FILL:	5,000	CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	N/A	

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.
- 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 CONTROL 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 CONTROL STRUCTURES, 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 OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
- ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH.
- EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY.
- IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS SHEET.
- THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES AND PROVIDE ALL NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION.
- ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - 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.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- 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

- 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 EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - 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 TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACKGRASS, JOHNSON-SOON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE THE 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.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOILS 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.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - 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 OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION
 - 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.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - 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.
 - 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:
 - 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 SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - 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.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - 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.

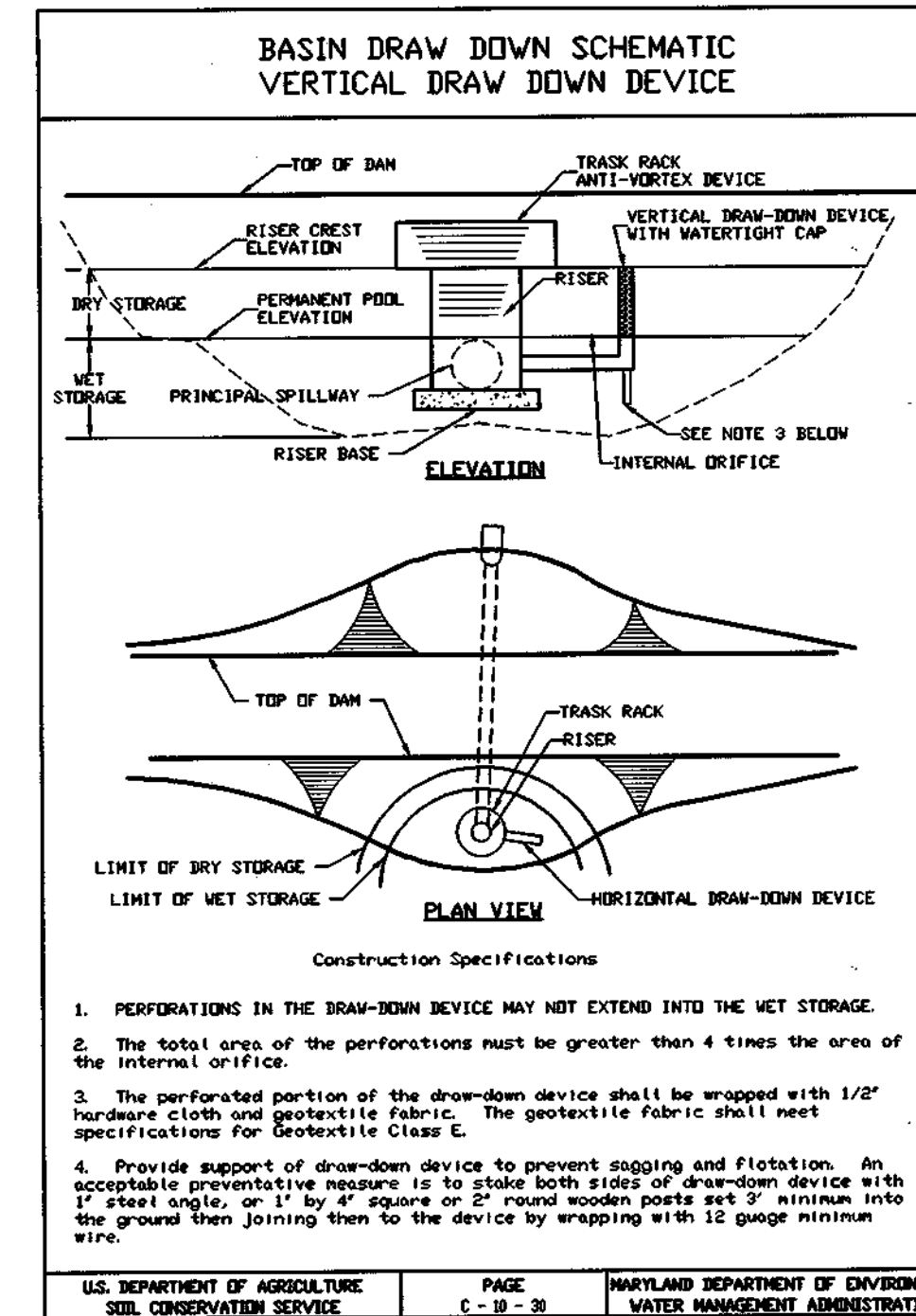
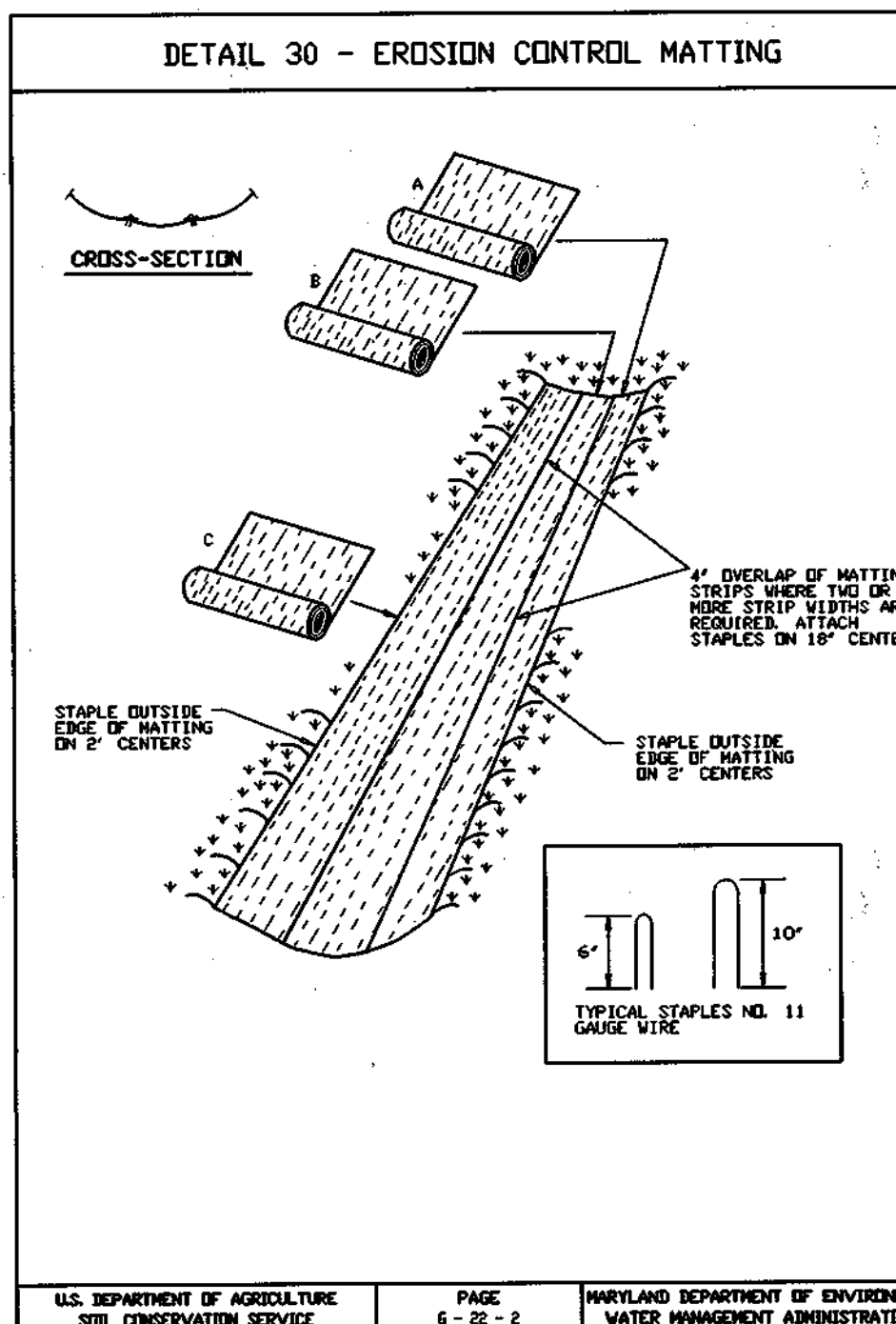
REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING AND MDE PERMIT (1 DAY)
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1 DAY)
- CONSTRUCT SILT FENCES AND SUPER SILT FENCES FROM 0+00 TO 5+50 ALONG DRIVEWAY (2 DAYS)
- CONSTRUCT TEMPORARY ACCESS ROAD PER DETAIL (1 DAY)
- CONSTRUCT TEMPORARY ACCESS BRIDGE PER DETAIL (1 DAY)
- CONSTRUCT REMAINING SILT FENCES AND EARTH DIKES (2 DAYS)
- CONSTRUCT SEDIMENT BASIN TO TEMPORARY GRADES SHOWN (3 DAYS)
 - CONSTRUCT TEMPORARY 8" PVC DEWATERING STAND PIPE, WITH 4" ORIFICE, PER DETAIL AND OUTFALL TO EW-1, PER PLAN
 - CONSTRUCT 40' EMERGENCY SPILLWAY TO ELEV. 213.0
 - CONSTRUCT PERMANENT PRINCIPLE SPILLWAY AND BRICK SHUT TO ELEV. 213.0
 - DO NOT PLACE TOP SLAB ON RISER STRUCTURE UNTIL CONVERSION TO PERMANENT SWM.
- UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, BRING SITE TO GRADE, INCLUDING CONSTRUCTION OF PERMANENT STREAM CROSSING (30 DAYS)
 - CONSTRUCT SUPER SILT FENCE ALONG BANKS OF EXISTING STREAM, WITHIN LIMITS OF DISTURBANCE INDICATED.
 - CONSTRUCT FOOTERS FOR PERMANENT STREAM CROSSING CULVERTS, INCLUDING REMOVABLE PUMP STATION AND FILTER BAG.
 - DEWATER FOOTER EXCAVATION AS NECESSARY PER FILTER BAG DETAIL, MAINTAIN STREAM FLOW THROUGH CULVERT NUMBER ONE DURING CONSTRUCTION.
 - CONSTRUCT 12"x4" CULVERTS AND MSHA STD. HEADWALLS
 - WHEN CULVERTS AND HEADWALLS ARE COMPLETE, BACKFILL CULVERTS. BACKFILL TO BE PLACED EVENLY ON ALL SIDES OF HEADWALLS.
 - WHEN CULVERTS AND HEADWALLS HAVE BEEN BACKFILLED AND WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY ACCESS ROAD AND ACCESS BRIDGE AND STABILIZE DISTURBED AREAS.
- CONSTRUCT STORM DRAIN SYSTEM, CURB AND GUTTER AND PAVEMENT, WHEN STORM DRAIN SYSTEM FROM I-2 TO E-1 IS COMPLETE, AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, EARTH DIKE ALONG REAR OF UNITS 3 TO 10 MAY BE REMOVED. (28 DAYS)
- COMPLETE CONSTRUCTION OF SITE PER PLAN (25 DAYS)
- WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED, AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS.
 - CONVERT SEDIMENT BASIN TO PERMANENT STORM WATER MANAGEMENT FACILITY. (2 DAYS)
 - REMOVE ACCUMULATED SEDIMENTS
 - REMOVE TEMPORARY DEWATERING STANDPIPE AND CONSTRUCT SAND FILTER AND 8" PERFORATED PVC PER PLAN
 - PLACE TOP SLAB ON RISER.
 - CONSTRUCT 40' EMERGENCY SPILLWAY TO ELEVATION 212.5
 - REMOVE BRICK AT 4' WEIR
 - INSTALL LOW FLOW ORIFICE PLATE AND PERFORATED TRASH RACK AT EW-2
 - STABILIZE DISTURBED AREAS.

**BEST MANAGEMENT PRACTICES FOR
WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS,
WATERWAYS, AND 100-YEAR FLOODPLAINS**

- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
- PLACE MATERIALS IN A LOCATION AND MANNER THAT DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NON-TIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
- DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
- PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
- REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
- RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
- ALL STABILIZATION IN THE NONTIDAL WETLANDS AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (Avena SP.), AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THESE SITES WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS & WATERWAYS DIVISION, KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
- TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
 - USE 1 WATER: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- STORMWATER MANAGEMENT RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
- CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

P.E. NO. _____
DATE _____

SIGNATURE _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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.

Mark L. Long 7/2/03
SIGNATURE OF DEVELOPER DATE

PRINTED NAME OF DEVELOPER

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 ADVISED 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.

John M. Long 7/2/03
SIGNATURE OF ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATIONAL RESOURCES CONSERVATION SERVICE DATE 7/2/03

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

John M. Long 7/2/03
SIGNATURE OF HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John M. Long 8/16/03
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
John M. Long 8/16/03
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
John M. Long 8/16/03
DATE

DIRECTOR

DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERTOWN MD, 21136
(410) 526-4030

OWNER
5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELICOTT CITY, MARYLAND 21042

project: 00-065 illustration: MPP scale: MPP date: APRIL 03 engineering: MPP approval: NTS

description: revisions: no.

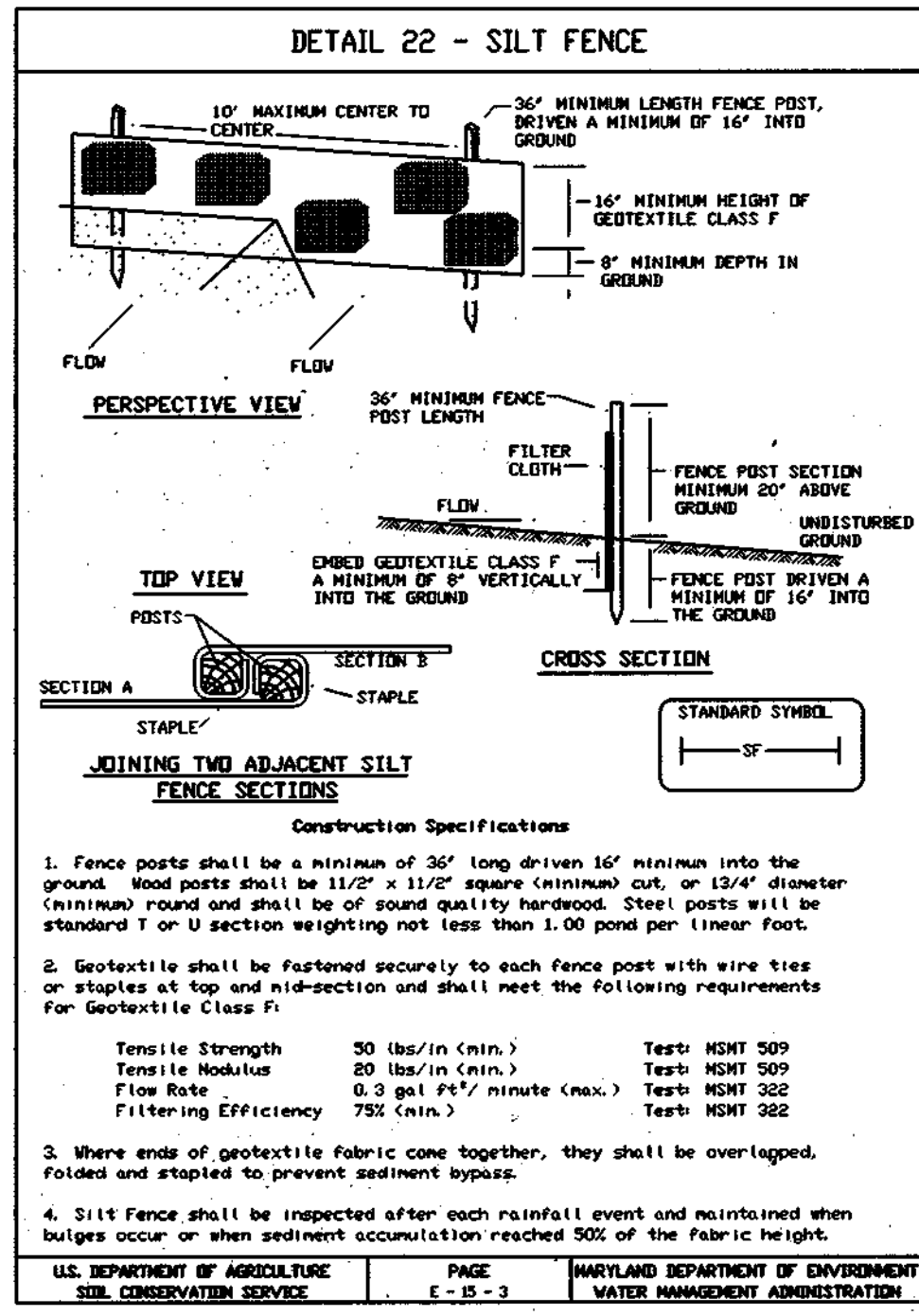
FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 691 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL NOTES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Elicott City, Maryland 21042
(410) 997-0296 Fax: (410) 997-0298 Fax

5 OF 15

SDP-02-138



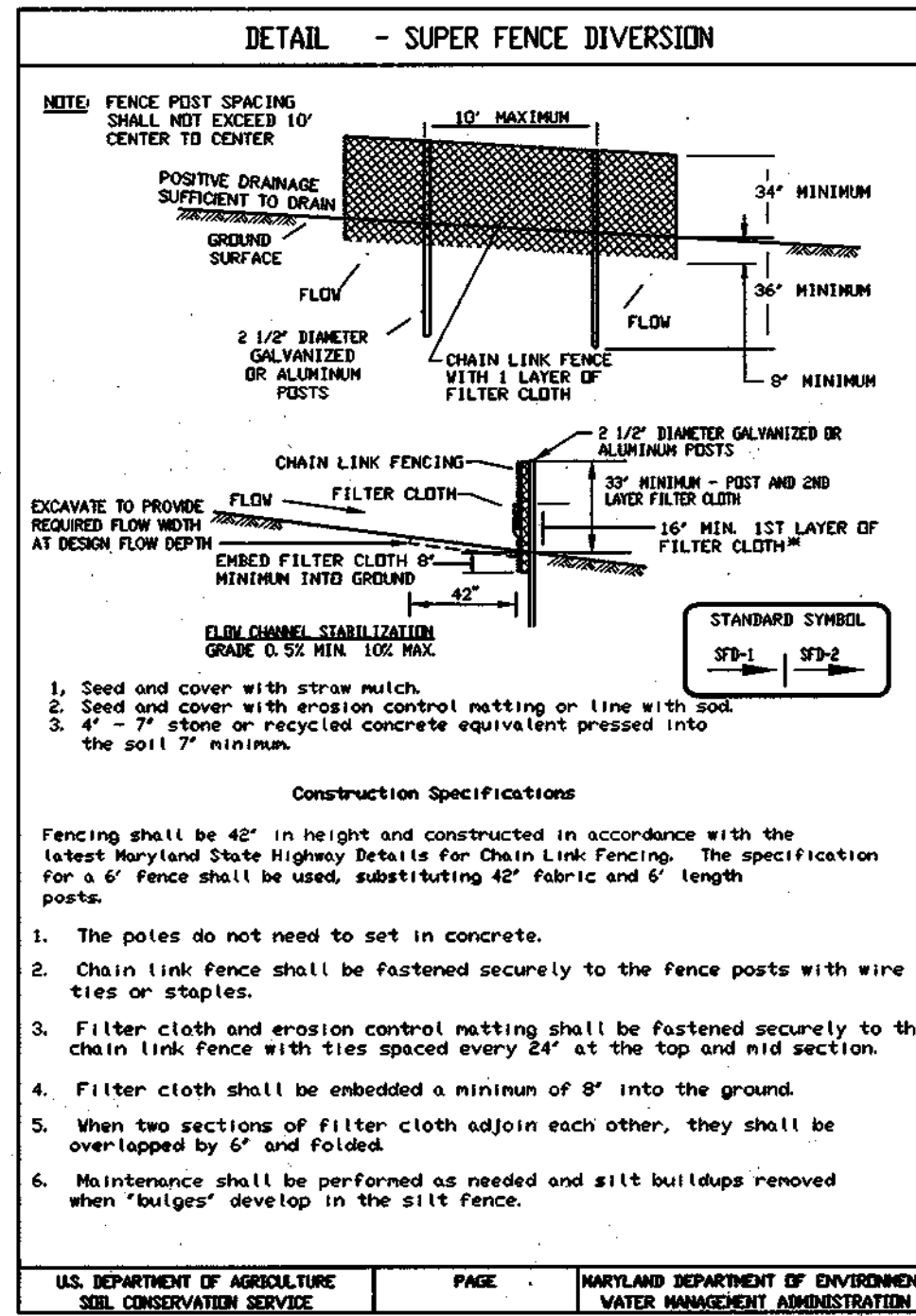
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-3 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

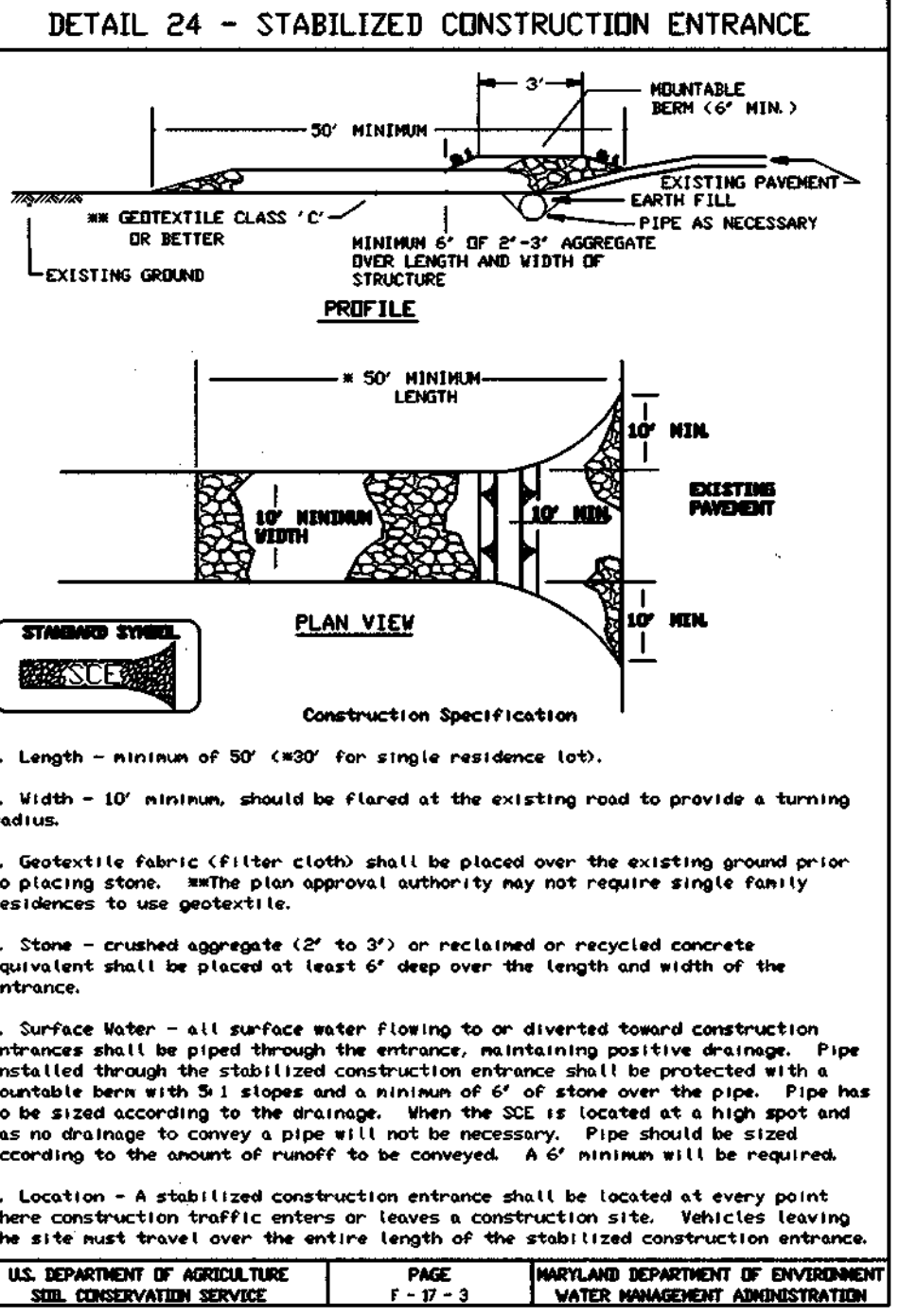


SUPER FENCE DIVERSION

Construction Specifications (Continued)

- All temporary SFD dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grade less than 1%.
- Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
- All trees, brush, stumps, obstructions and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- Fill shall be compacted by earth moving equipment.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-3 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



MGWC 4.8 TEMPORARY ACCESS BRIDGE

DESCRIPTION

A TEMPORARY ACCESS BRIDGE IS A STREAM CROSSING MADE OF WOOD, METAL, OR OTHER MATERIALS DESIGNED TO LIMIT THE AMOUNT OF DISTURBANCE TO THE STREAM BANKS AND BED.

EFFECTIVE USES & LIMITATIONS

TEMPORARY ACCESS BRIDGES ARE THE PREFERRED METHOD OF WATERWAY CROSSING SINCE THEY TYPICALLY CAUSE THE LEAST DISTURBANCE TO THE WATERWAY BED AND BANKS, POSE THE LEAST CHANCE FOR INTERFERENCE WITH FISH MIGRATION, AND CAN BE QUICKLY REMOVED AND REUSED.

MATERIAL SPECIFICATIONS

- STRINGERS: STRINGERS SHOULD EITHER BE LOGS, SAWN TIMBER, PRESTRESSED CONCRETE BEAMS, METAL BEAMS, OR OTHER APPROVED MATERIALS.
- DECK MATERIALS: DECK MATERIALS SHOULD BE OF SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOAD.

CONSTRUCTION SEQUENCE

ALL EROSION AND SEDIMENT CONTROL DEVICES, INCLUDING STREAM DIVERSIONS, SHOULD BE IMPLEMENTED AS THE FIRST ORDER OF BUSINESS ACCORDING TO A PLAN APPROVED BY THE MWA OR LOCAL AUTHORITY. DEWATERING BASINS SHOULD BE BUILT AS NEEDED AND SWALES OR DITCHES SHOULD BE USED TO PREVENT SURFACE DRAINAGE FROM ENTERING THE STREAM VIA THE BRIDGE CROSSING (SEE THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL). THE PROPOSED CONSTRUCTION, MAINTENANCE AND REMOVAL SEQUENCE IS AS FOLLOWS:

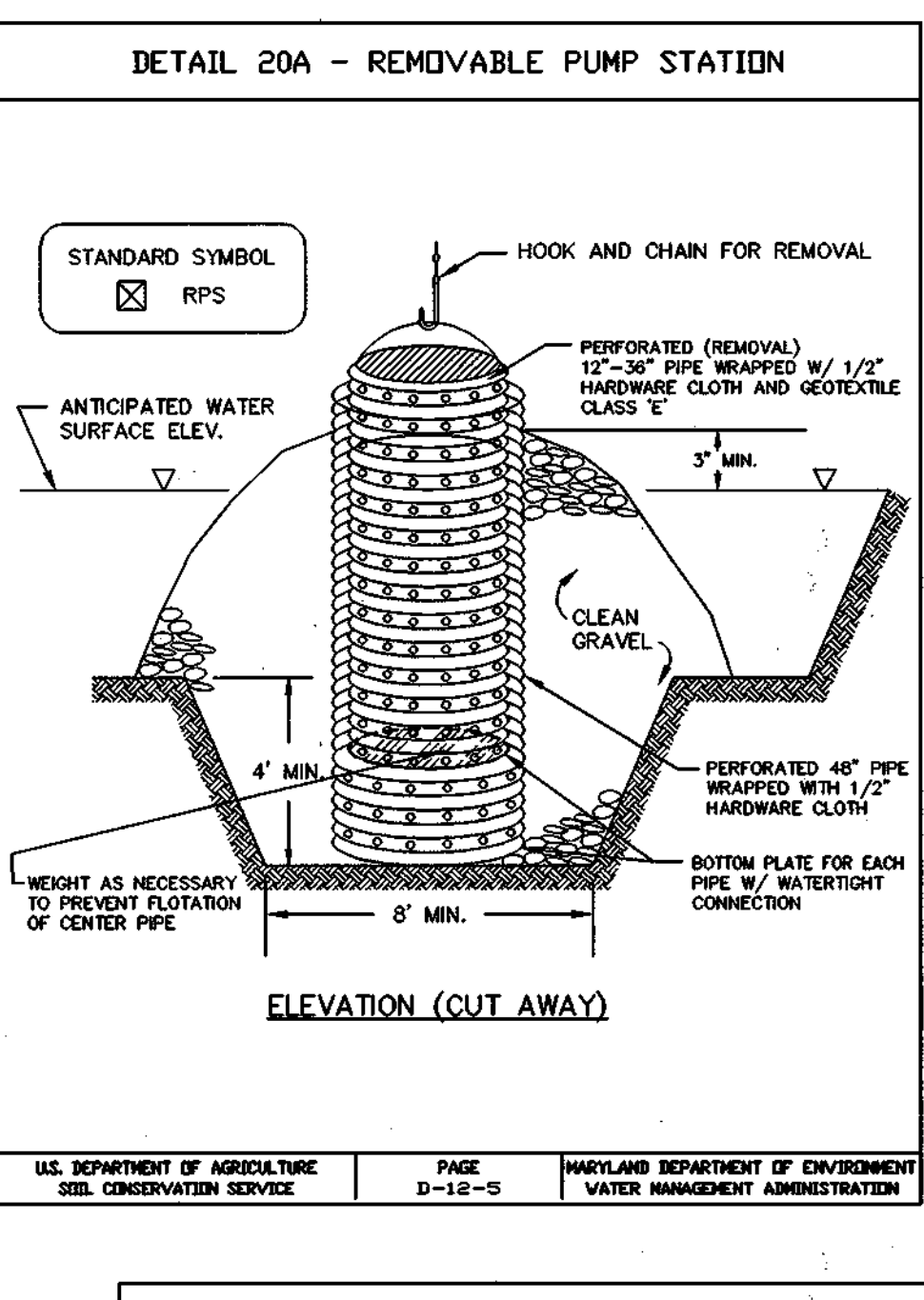
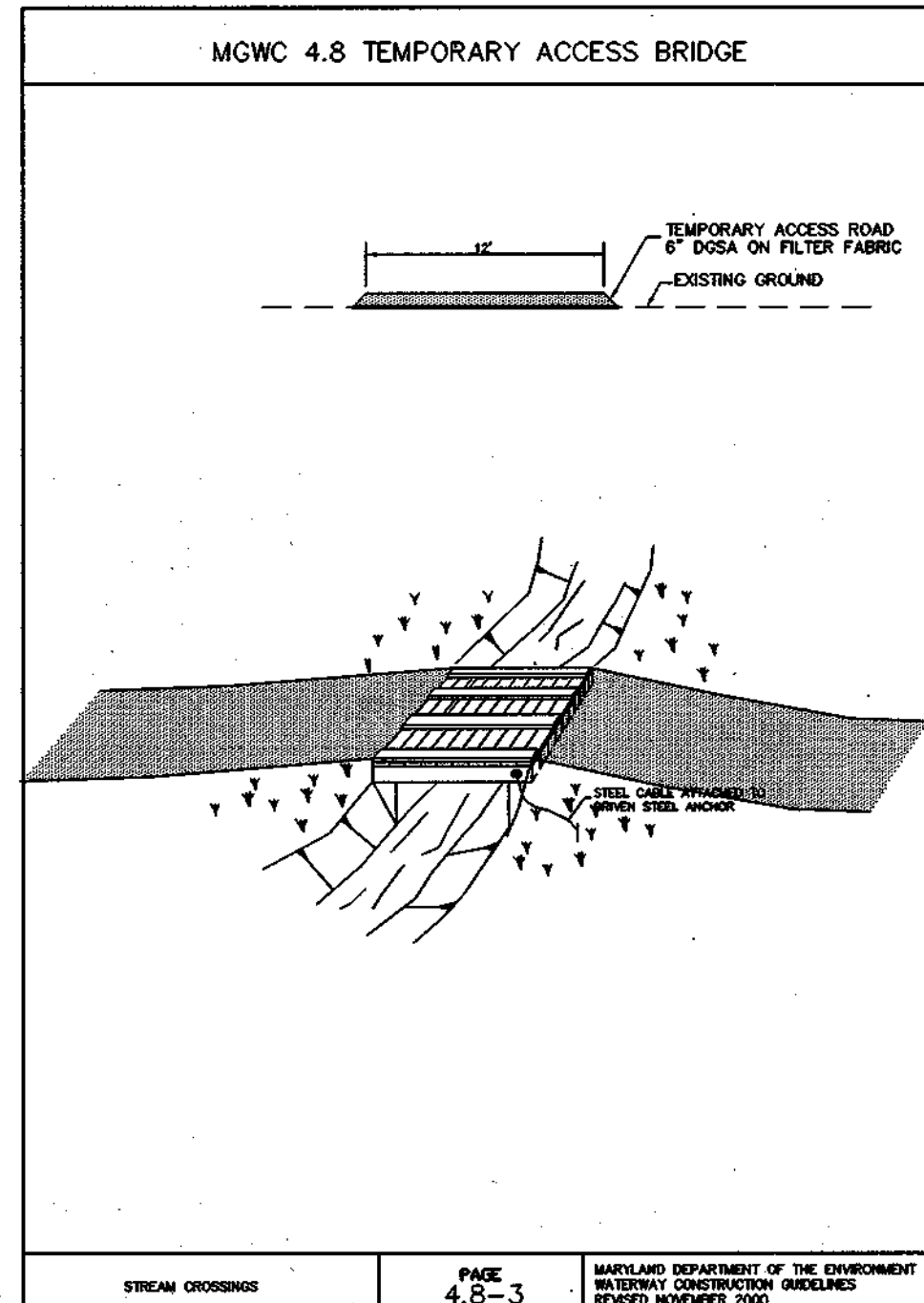
- ABUTMENTS SHOULD BE PLACED PARALLEL TO, AND ON, STABLE BANKS SUCH THAT THE STRUCTURE IS AT OR ABOVE BANKFULL DEPTH TO PREVENT THE ENTRAPMENT OF FLOATING MATERIALS AND DEBRIS.
- TEMPORARY ACCESS BRIDGES SHOULD BE CONSTRUCTED TO SPAN THE ENTIRE CHANNEL. IF THE BANKFULL CHANNEL WIDTH EXCEEDS 8 FEET (2.5 METERS) THEN A FOOTING, PIER, OR OTHER BRIDGE SUPPORT SHALL BE CONSTRUCTED WITHIN THE WATERWAY. NO SUPPORT WILL BE PERMITTED WITHIN THE CHANNEL FOR WATERWAYS LESS THAN 8 FEET WIDE. ONE ADDITIONAL BRIDGE SUPPORT WILL BE PERMITTED FOR EACH ADDITIONAL 8 FOOT WIDTH OF THE CHANNEL.
- ALL BEAM MEMBERS SHOULD BE PLACED PERPENDICULARLY TO THE STRINGERS, BUTTED TIGHTLY, AND SECURELY FASTENED TO THE STRINGERS. DECKING MATERIALS MUST BE BUTTED TIGHTLY TO PREVENT ANY SOIL MATERIAL TRACKED ONTO THE BRIDGE FROM FALLING INTO THE WATERWAY.
- ALTHOUGH RUN PLANKS ARE OPTIONAL, THEY MAY BE NECESSARY TO PROPERLY DISTRIBUTE LOADS. ONE RUN PLANK SHOULD BE PROVIDED FOR EACH TRACK OF THE EQUIPMENT WHEELS AND SHOULD BE SECURELY FASTENED TO THE LENGTH OF THE SPAN.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-1 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

MGWC 4.8 TEMPORARY ACCESS BRIDGE

- ALL AREAS DISTURBED DURING INSTALLATION SHOULD BE STABILIZED WITHIN 14 CALENDAR DAYS IN ACCORDANCE WITH A REVEGETATION PLAN APPROVED BY THE MWA.
- PERIODIC INSPECTION SHOULD BE PERFORMED BY THE USER TO ENSURE THAT THE BRIDGE, STREAMBED, AND STREAM BANKS ARE MAINTAINED AND NOT DAMAGED.
- MAINTENANCE SHOULD BE PERFORMED AS NEEDED TO ENSURE THAT THE STRUCTURE COMPLIES WITH ALL STANDARDS AND SPECIFICATIONS. THIS SHOULD INCLUDE THE REMOVAL OF TRAPPED SEDIMENT AND DEBRIS WHICH SHOULD THEN BE DISPOSED OF AND STABILIZED OUTSIDE THE FLOODPLAIN.
- WHEN THE TEMPORARY BRIDGE IS NO LONGER NEEDED, ALL STRUCTURES INCLUDING ABUTMENTS AND OTHER BRIDGING MATERIALS SHOULD BE REMOVED WITHIN 14 CALENDAR DAYS. IN ALL CASES, THE BRIDGE MATERIALS SHOULD BE REMOVED WITHIN 1 YEAR OF INSTALLATION. REMOVAL OF THE BRIDGE AND CLEAN-UP OF THE AREA, INCLUDING PROTECTION AND STABILIZATION OF DISTURBED STREAM BANKS, SHOULD BE ACCOMPLISHED WITHOUT THE USE OF CONSTRUCTION EQUIPMENT IN THE WATERWAY.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-2 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



SPECIFICATIONS FOR REMOVABLE PUMP STATION

12.0 DETAILED SPECIFICATIONS FOR REMOVABLE PUMP STATION

Description of Practice

A temporary structure which is used to remove water from excavated areas, sediment basin or basins.

Conditions Where Practice Applies

The pump station will be used to dewater sediment traps and basins for maintenance of roads.

Design Criteria

A design is not required but construction must conform to the general criteria outlined on the next page.

A perforated vertical stand pipe is placed inside another pipe. The outside pipe is then surrounded by a core of washed 2" aggregate. Water is then pumped from the center of the inside pipe to a suitable discharge area.

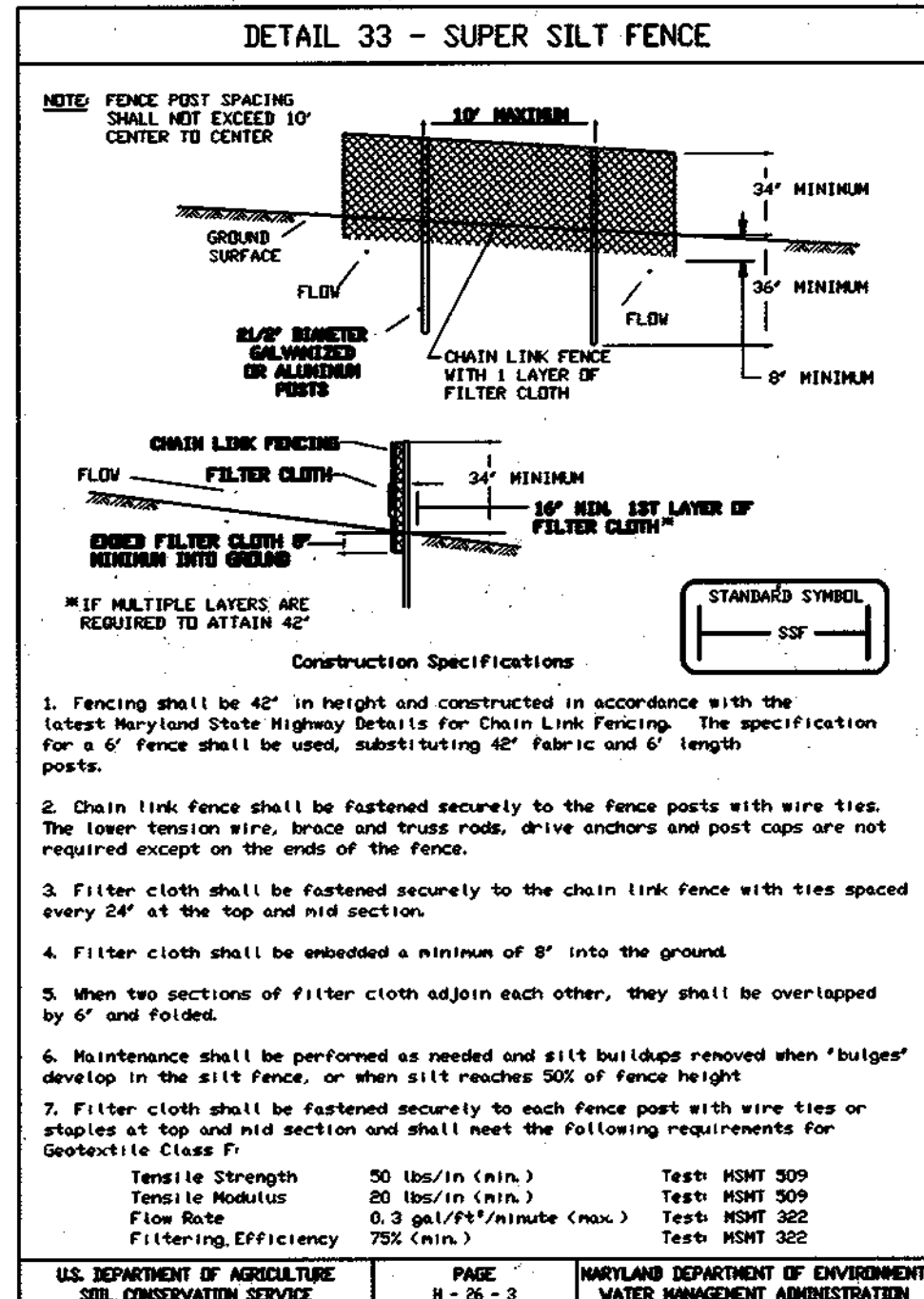
Water pumped from the standpipe should discharge into a sediment trap, sediment basin or stabilized area. If water from the pump pit will be pumped directly to a storm drainage system, geotextile fabric and wire mesh must be wrapped around the standpipe to ensure clean water discharge.

Water pumped from the standpipe should discharge into a sediment trap, sediment basin or stabilized area.

Construction Specifications

- The inner pipe shall be constructed by perforating a 12" to 36" diameter pipe with a water-tight cap on the bottom and wrapping it with 1/2" hardware cloth and geotextile Class C.
- The outer pipe shall be at least 4" larger in diameter than the inner pipe. Both the inner and outer pipes should extend 12" to 18" above the riser crest elevation, or anticipated high water elevation.
- Filter material ranging from clean gravel (minimum fines) to #57 stone (1/2" maximum diameter) should be bedded around the outer pipe.
- The section hose from the pump shall be placed inside the inner pipe to begin dewatering. The discharge hose shall be placed in a stabilized area downlope of unstabilized area to prevent erosion. Meadow or wooded areas are preferred discharge locations, but storm drains and paved areas are acceptable.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE D-12-5 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

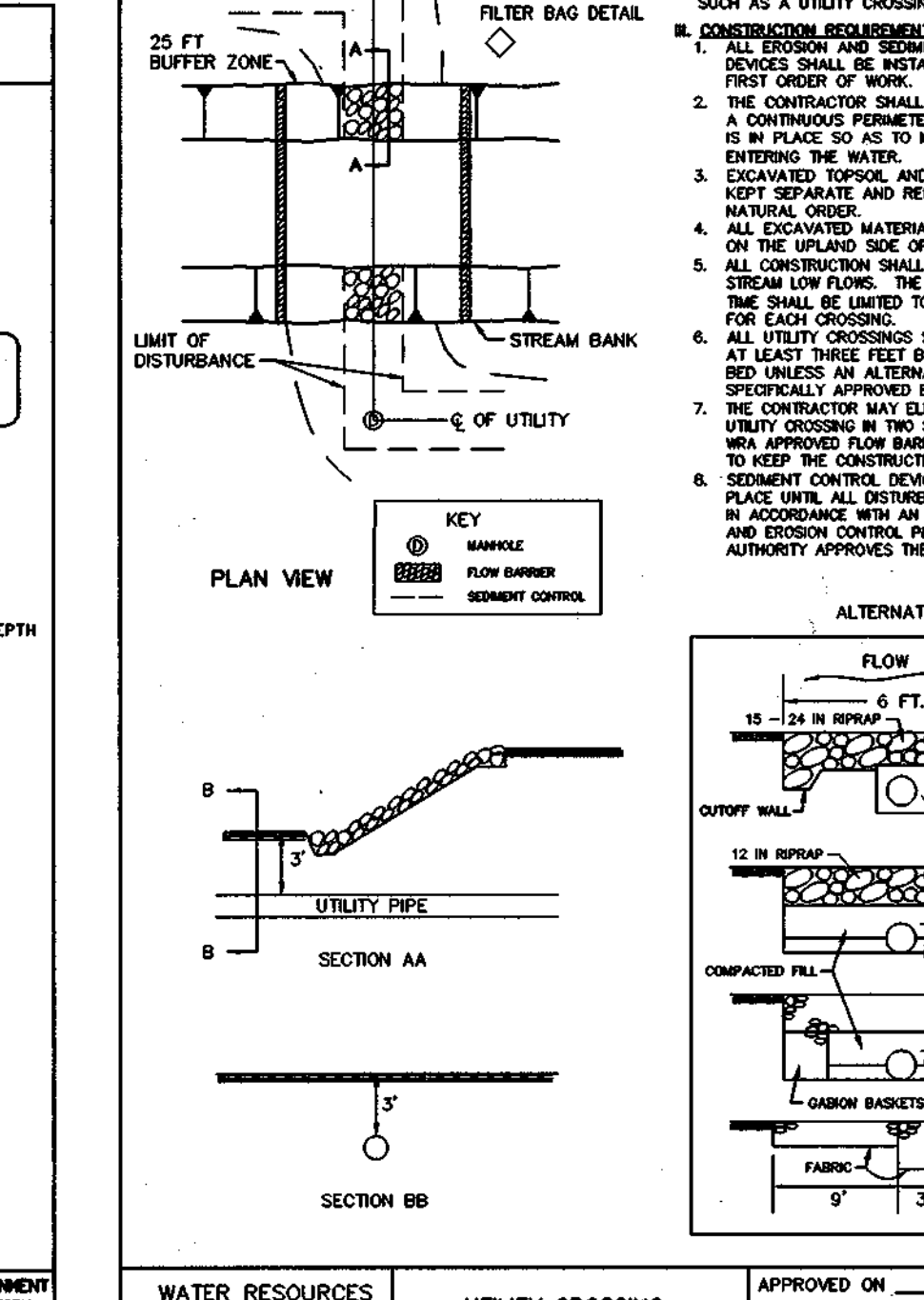
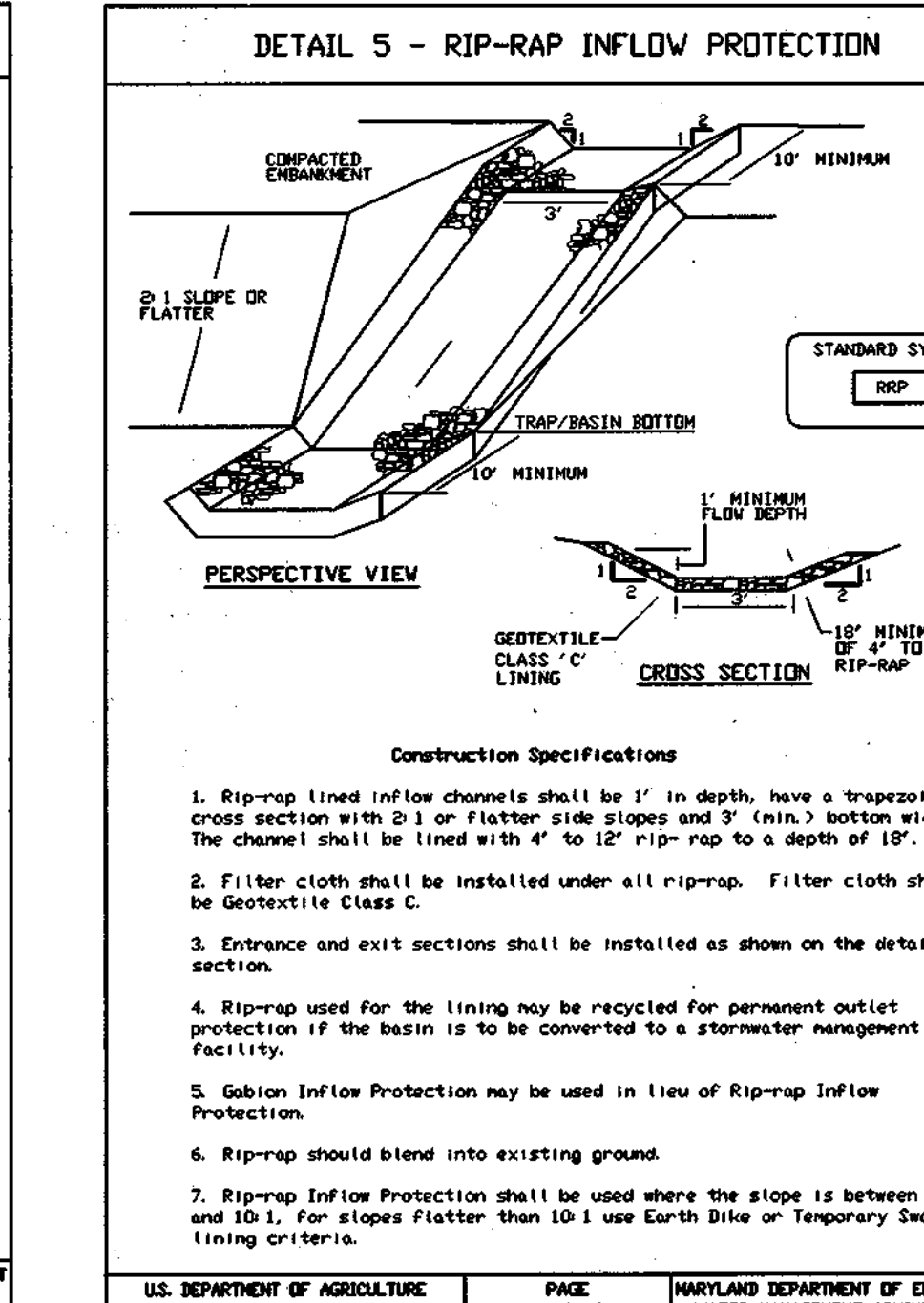


SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 1:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 Feet	1,500 feet
20 - 33%	5:1 - 3:1	100 Feet	1,000 feet
33 - 50%	3:1 - 2:1	100 Feet	500 feet
50% +	2:1 +	50 Feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-3 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



DEVELOPER

ROCK REALTY INC.
25 MAIN STREET
REISTERSTOWN MD, 21136
(410) 526-4030

OWNER

5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-2 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

DATE: _____ P.E. NO.: _____

SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE. COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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. ALSO AUTHORIZE PERSONS ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: *Ken L. Ken* DATE: *7/16/03*

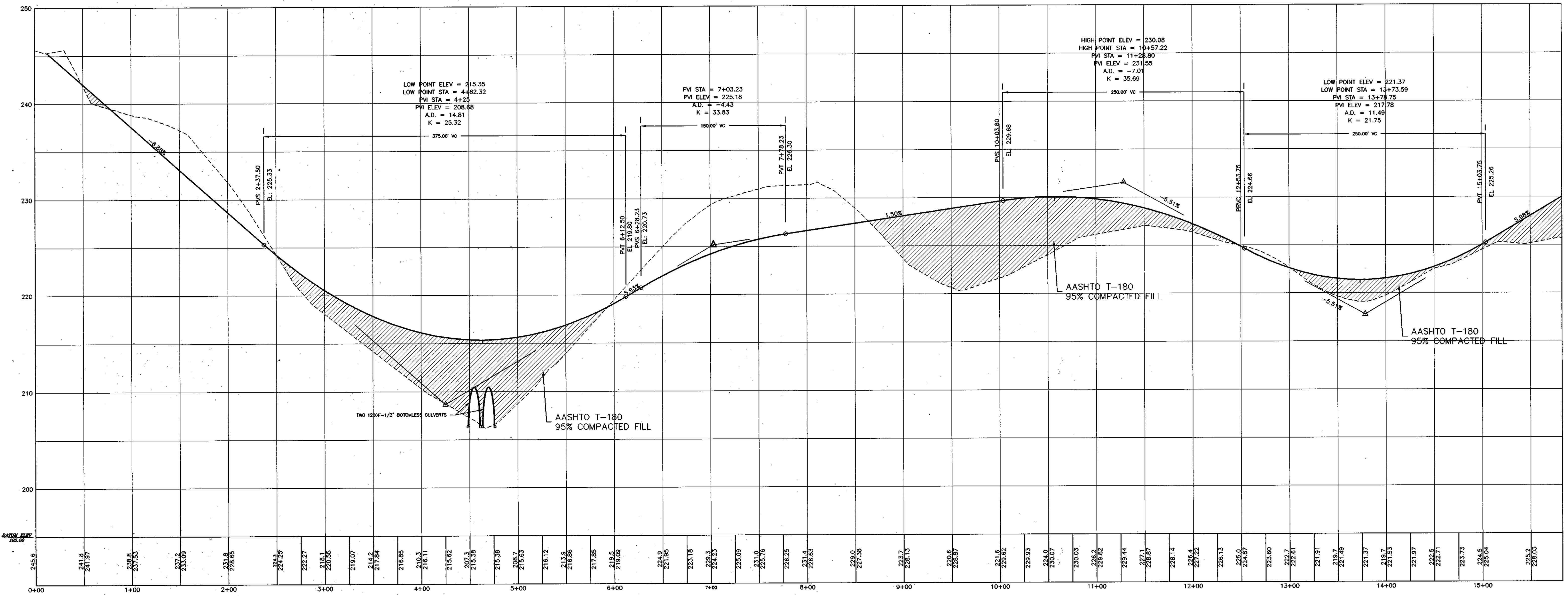
SIGNATURE OF OWNER: *Ken L. Ken* DATE: *7/16/03*

BY THE ENGINEER:

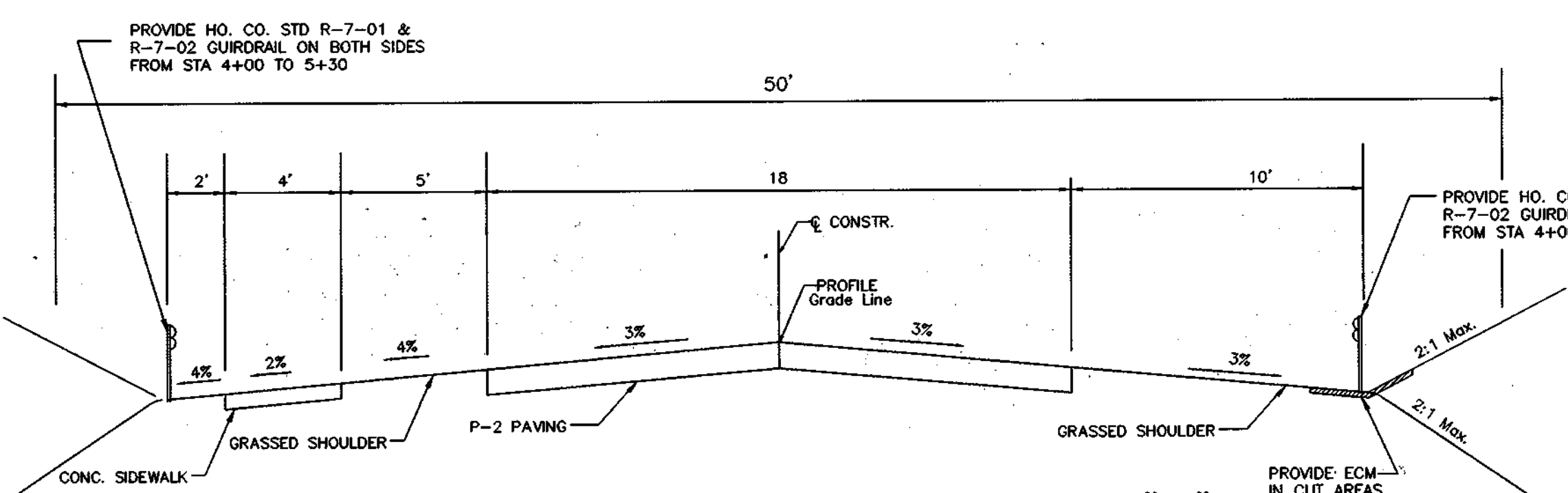
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER 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 OF ENGINEER: *John J. Boender* DATE: *7/16/03*

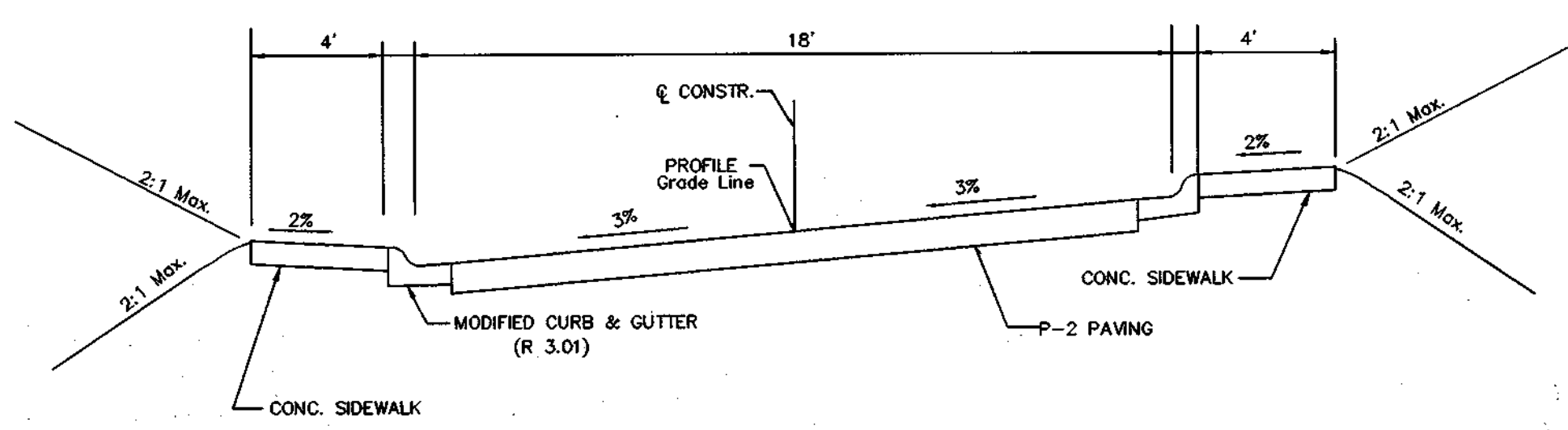
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE | PAGE 4-9-2 | MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



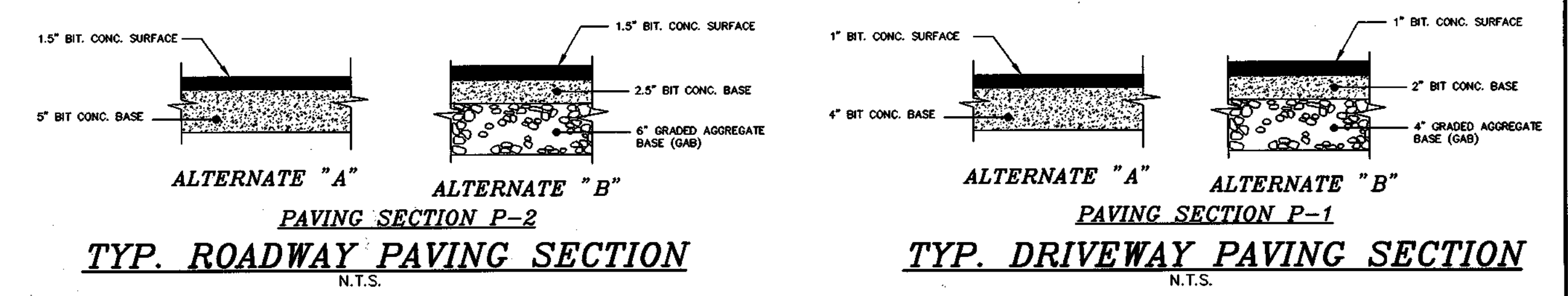
PEBBLE CREEK DRIVE PROFILE
 PRIVATE DRIVEWAY
 SCALE: HOR. 1"=50'
 VER. 1"=5'



PEBBLE CREEK DRIVE SECTION - "A"
 STA. 0+00 TO STA. 5+30
 SECTION NOT TO SCALE
 NOTE: STA. 5+30 TO STA. 6+50 IS A TRANSITION FROM TYP. SECTION "A" TO TYP. SECTION "B". CURB AND GUTTER BEGINS AT STA. 6+50.



PEBBLE CREEK DRIVE SECTION - "B"
 STA. 6+50 TO STA. 12+50
 SECTION NOT TO SCALE



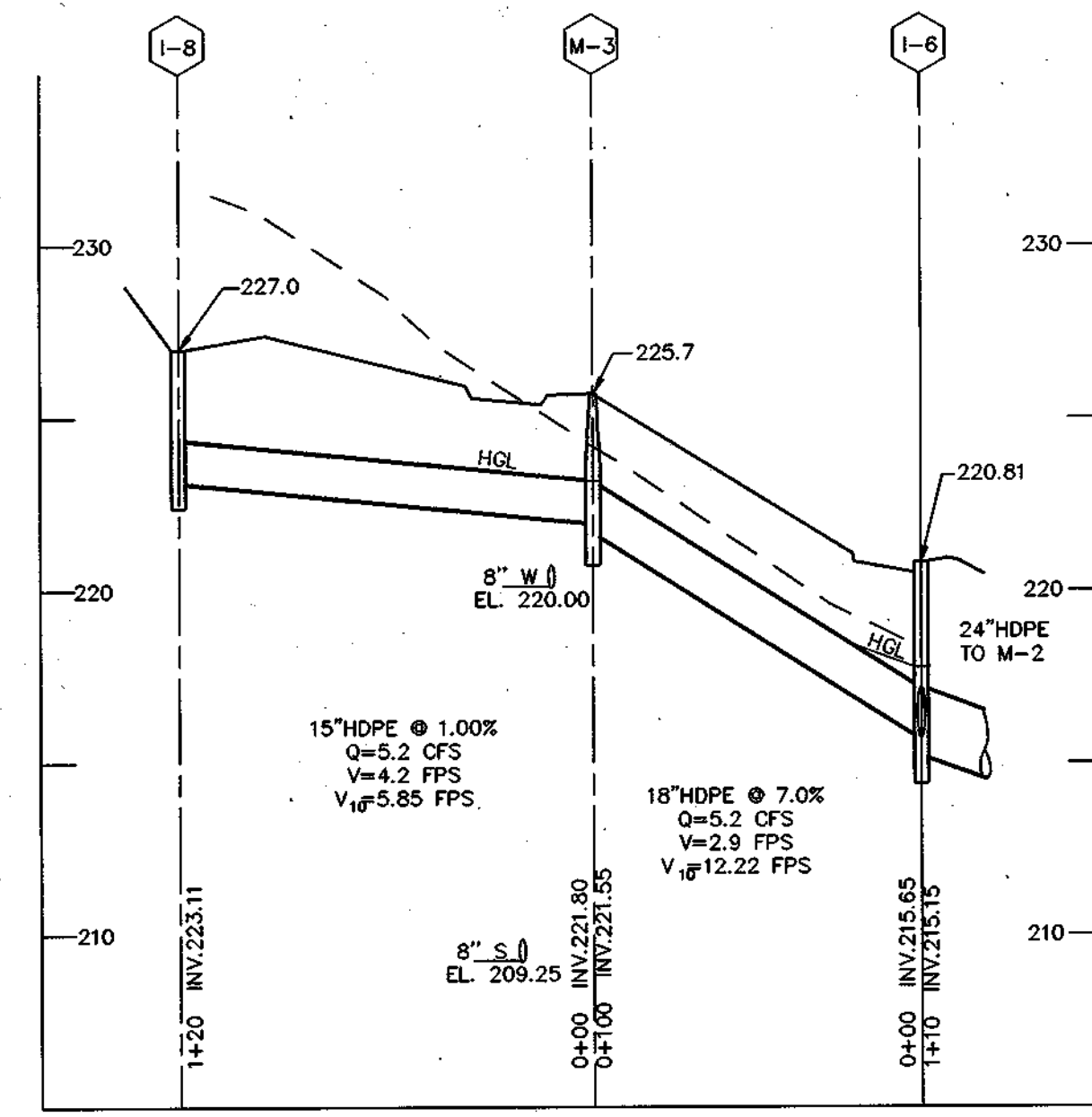
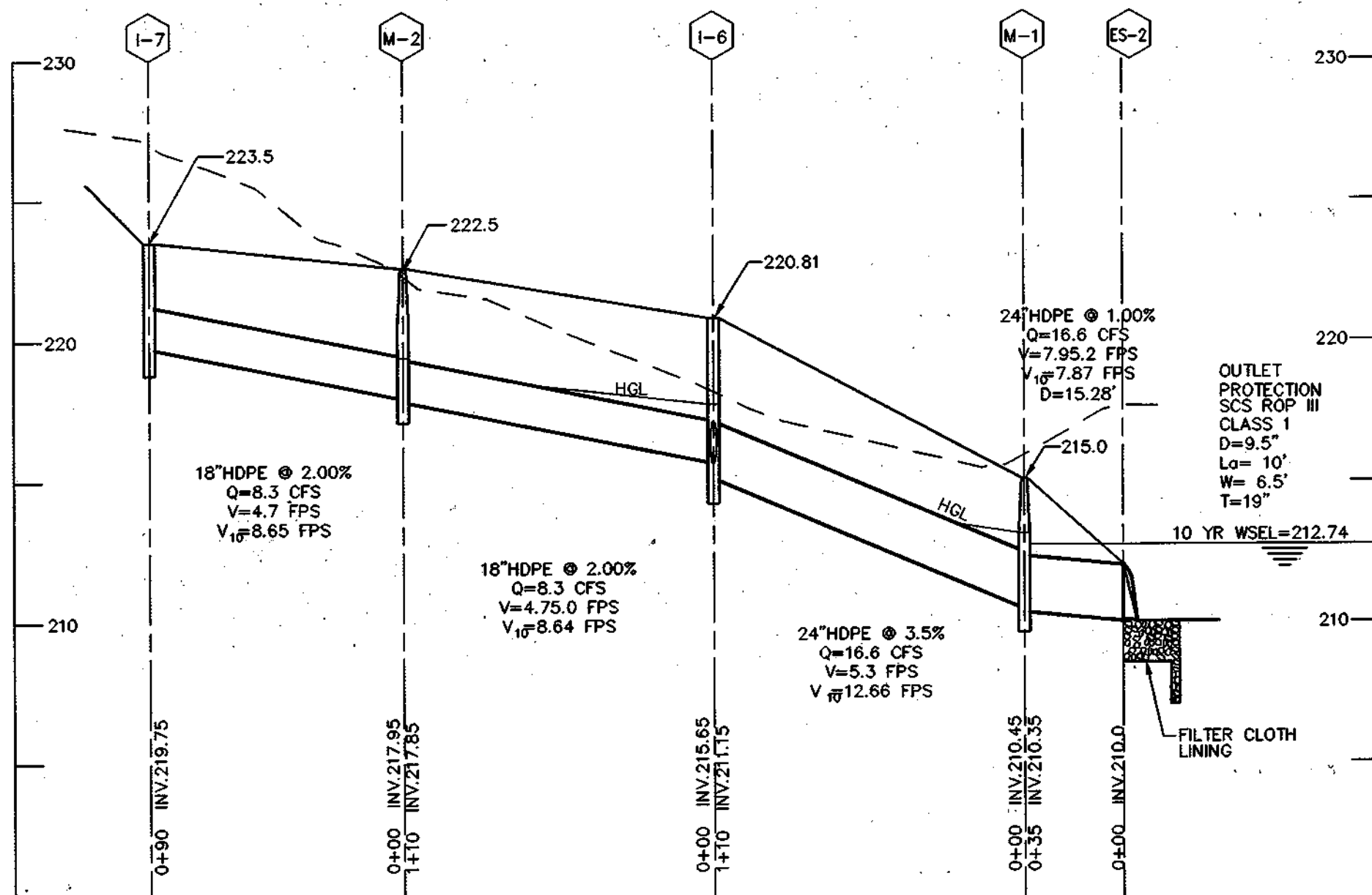
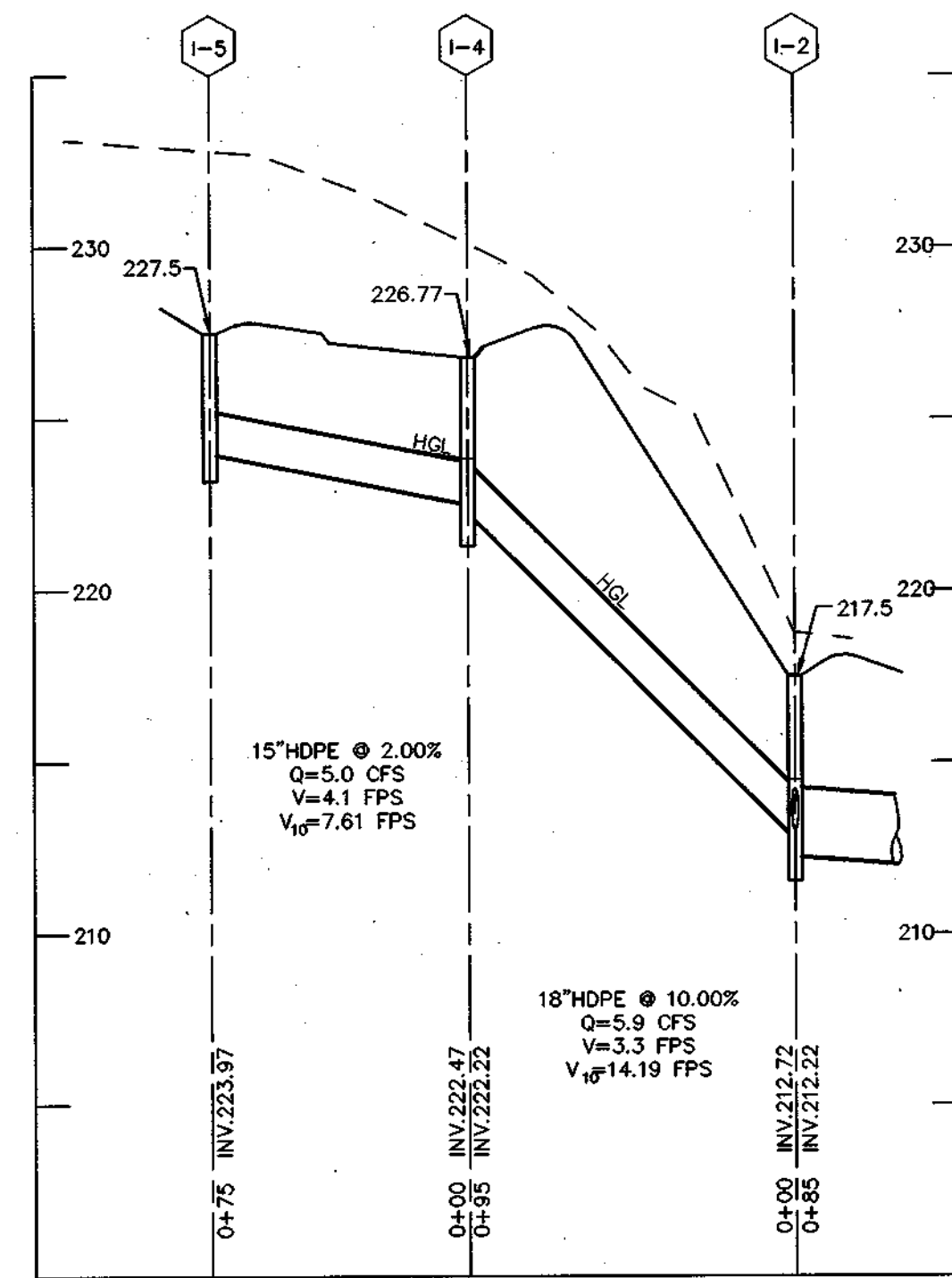
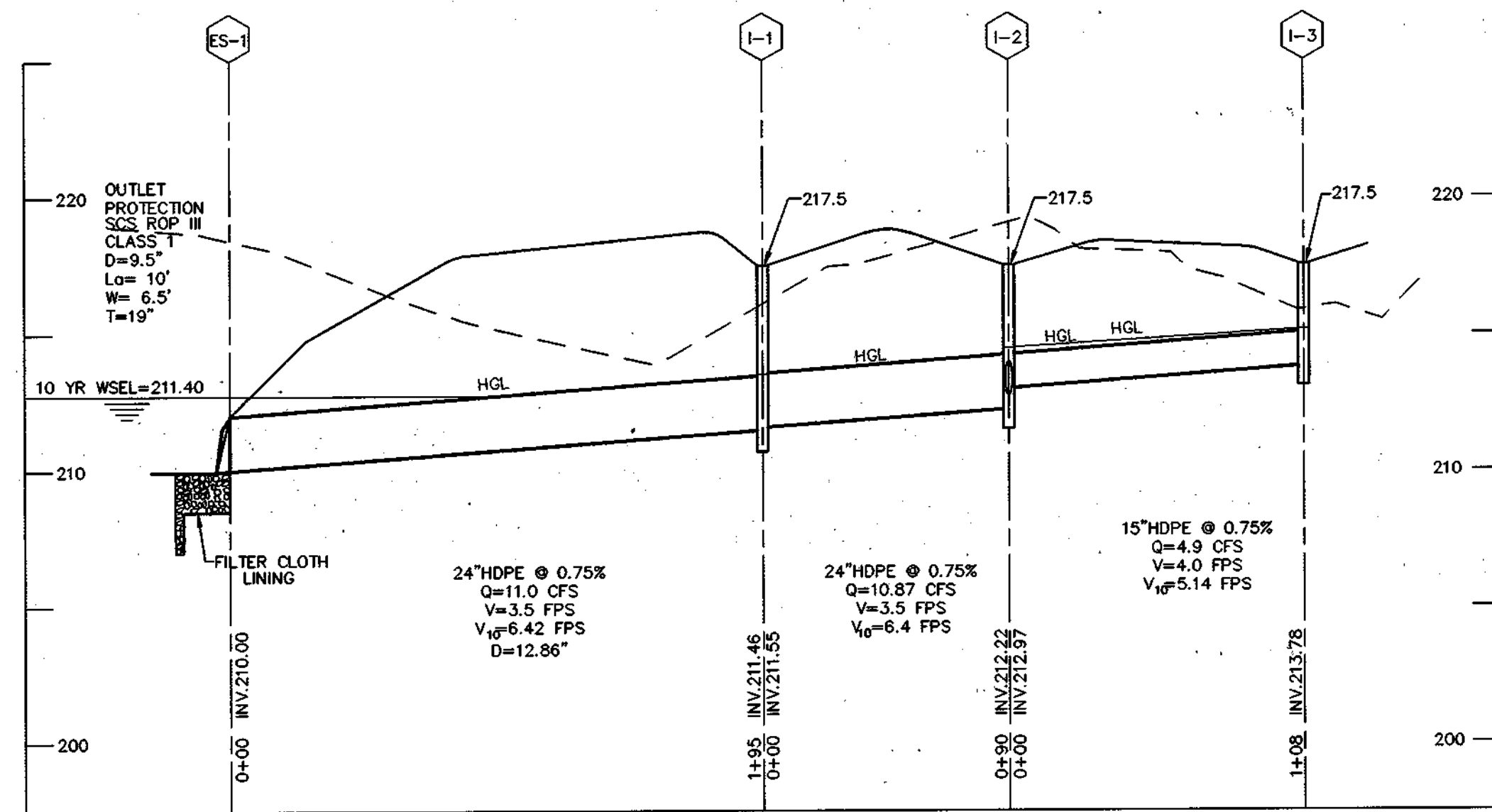
TYPICAL DRIVEWAY SECTION - "B"
 STA. 13+73 TO STA. 15+87.08
 SECTION NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 DATE 4/6/03
 [Signature]
 DATE 5/1/03
 [Signature]
 DATE 5/28/03

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD. 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0296 Fax



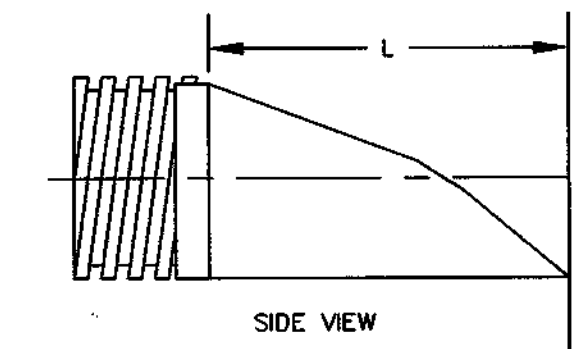
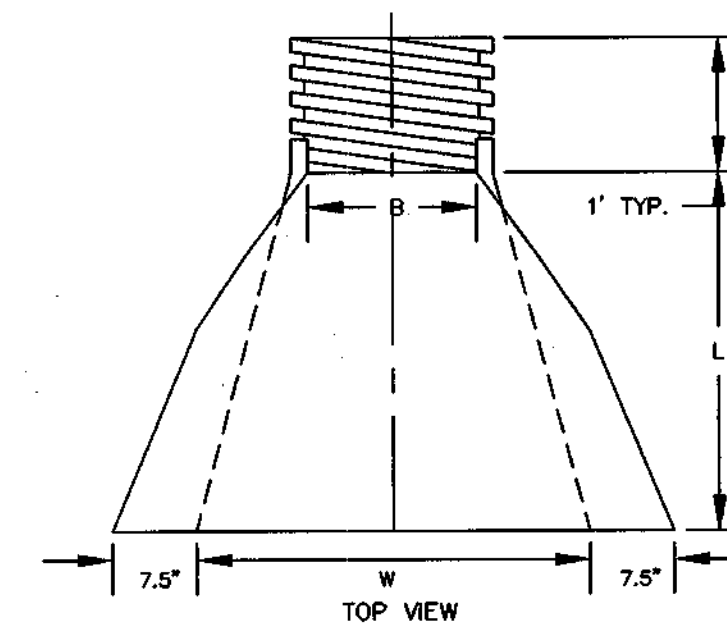
STRUCTURE SCHEDULE

NO.	LOCATION	TOP EL.	INV. IN	INV. OUT	COMMENTS
I-1	N 559810 E 1380626	217.50	211.55	211.45	TYPE S, H.C.STD. SD-4.39
I-2	N 559899 E 1380596	217.50	212.97, 212.72	212.22	TYPE S, H.C.STD. SD-4.39
I-3	N 559989 E 1380539	217.50	-	213.79	TYPE S, H.C.STD. SD-4.39
I-4	DRIVEWAY STA. 8+27 O/S 9.00' RT.	226.77	222.47	222.22	TYPE DOUBLE S, H.C.STD. SD-4.23 O/S & ELEV SHOWN TO UPSTREAM EDGE IF INLET TO BACK OF GRATE (FLOWLINE)
I-5	N 559799 E 1380463	227.50	-	223.97	TYPE S, H.C.STD. SD-4.39
I-6*	DRIVEWAY STA. 13+74.35 O/S 10.1 LT.	220.81	215.65	215.15	TYPE A-5, H.C.STD. SD-4.01 O/S IS SHOWN TO FACE OF CURB AT CENTER OF INLET
I-7	N 559325 E 1380524	223.50	-	219.75	TYPE S, H.C.STD. SD-4.39
I-8	N 559454 E 1380505	227.00	-	223.00	TYPE S, H.C.STD. SD-4.39
M-2	N 559452 E 1380794	215.00	210.45	210.35	H.C.STD. G-5.12
M-3	N 559333 E 1380613	222.50	217.95	217.85	H.C.STD. G-5.12
M-4	N 559467 E 1380626	225.70	222.80	222.55	H.C.STD. G-5.12
ES-1	N 559643 E 1381735	-	210.00	-	
ES-2	N 559494 E 1380810	-	210.00	-	
HW-1	N 560061 E 1380624 N 560081 E 1380645	N/A	206.40	N/A	MODIFIED MSHA STANDARD NO. MD-352.02 NOTE: LOCATION COORDINATES ARE FOR FACE OF HEADWALL AT ANGLE POINTS
HW-2	N 560094 E 1380592 N 560114 E 1380613	N/A	206.00	N/A	MODIFIED MSHA STANDARD NO. MD-352.02 NOTE: LOCATION COORDINATES ARE FOR FACE OF HEADWALL AT ANGLE POINTS

* DELETE GUTTER OF MODIFIED CURB AND GUTTER AT I-4 TO PLACE REAR OF INLET AT FLOW LINE.

PIPE SCHEDULE

QUANTITY	PIPE SIZE
344'	15" HDPE
327'	18" HDPE
414'	24" HDPE

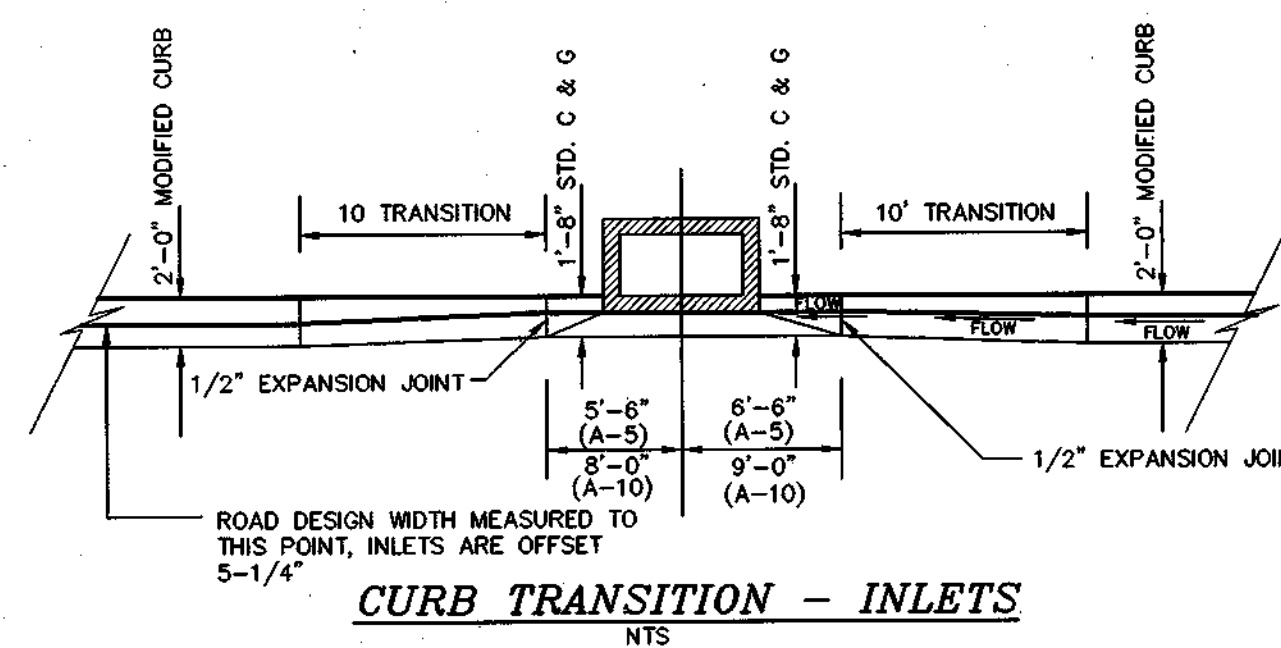
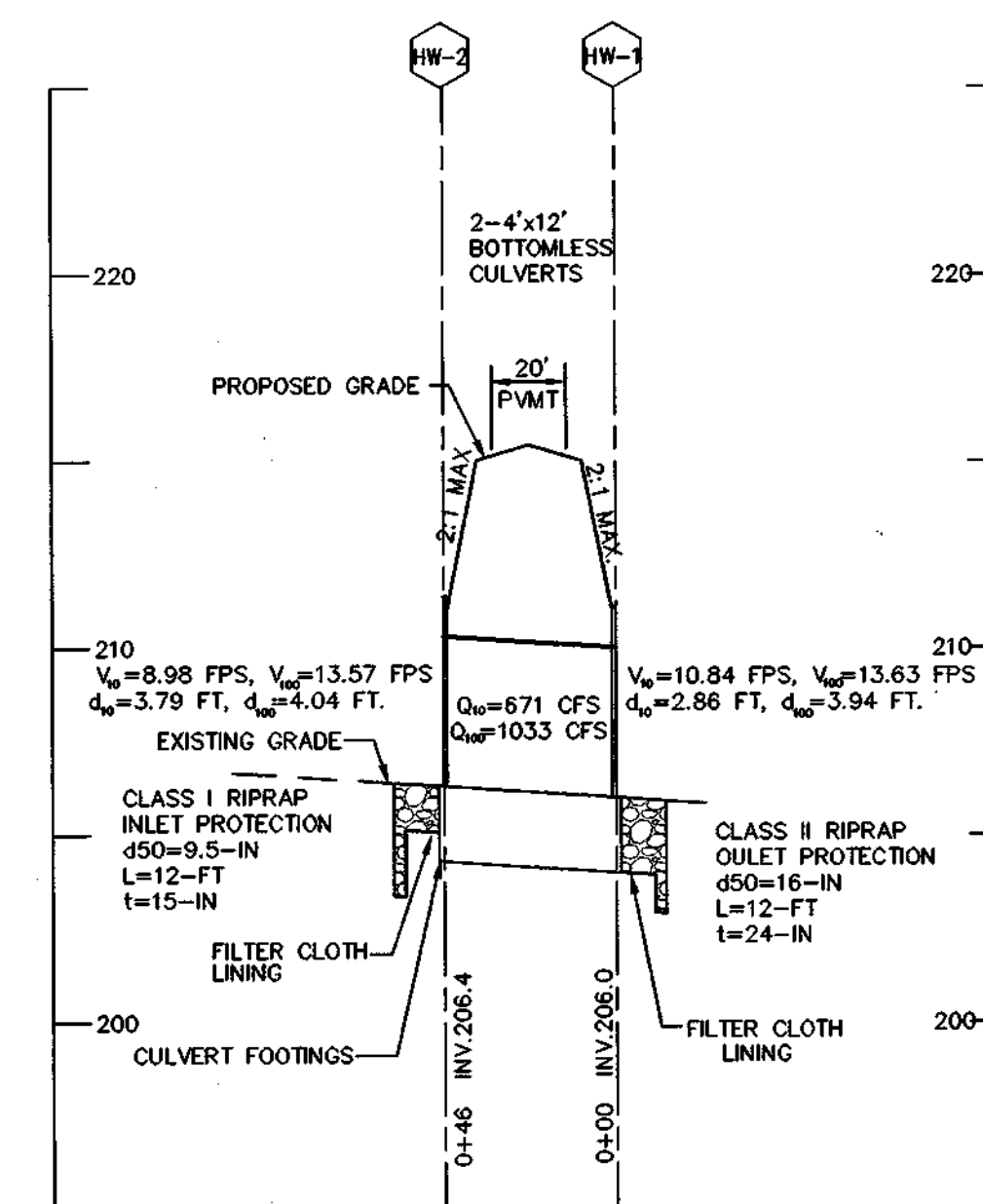


PIPE DIAMETER	PART NO.	B MAX	L, ±1/2	W, ±2
24" HDPE	2410 NP	18"	36"	45"

INSTALLATION INSTRUCTIONS

- SPREAD THE END SECTION COLLAR AND PLACE IT OVER THE LAST PIPE CORRUGATION. MAKE SURE THE COLLAR SEATS PROPERLY IN THE CORRUGATION VALLEY.
- INSERT THREADED ROD THROUGH THE PRE-DRILLED HOLES IN THE END SECTION COLLAR. TIGHTEN WING NUTS.
- PLACE BACKFILL AROUND THE END SECTION AND OVER THE TOE PLATE. USE CARE DURING COMPACTION ALONG THE SIDES TO PREVENT DISTORTION.

HDPE END SECTION (PART NO. 2410 NP)
NOT TO SCALE



N-12 FABRICATED REDUCING TEES
NTS

PART NO.	PIPE SIZE	A	B
1561AN	15" x 6"	25.30"	16.75"
2461AN	375 mm x 150 mm	643 mm	425 mm
	24" x 6"	34.21"	22.5"
	600 mm x 150 mm	869 mm	572 mm

NOTE:
HGL AT CROWN OF PIPE UNLESS SHOWN OTHERWISE.

OWNER
5072 PROPERTY, LLC
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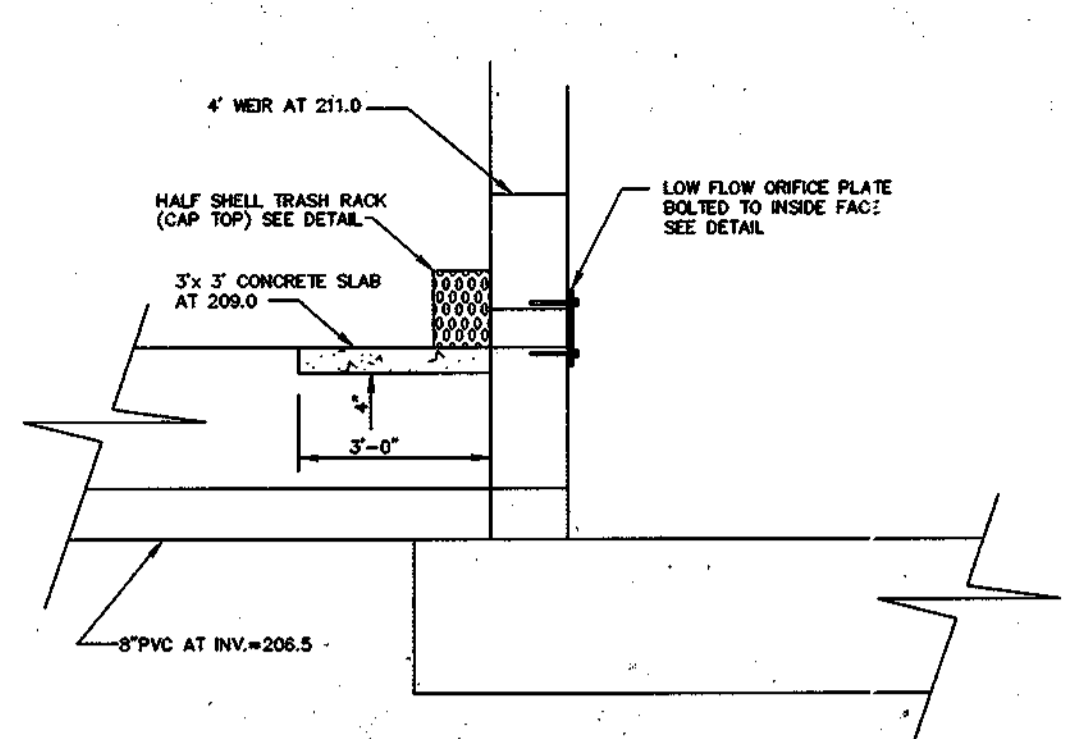
APPROVED: *[Signature]*
DEPARTMENT OF PLANNING AND ZONING
CHIEF DEVELOPMENT ENGINEERING DIVISION
DATE: 4/2/03
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 4/2/03
DIRECTOR

date: APRIL 03
project: 00-065
illustration: MNP
approval: MNP
scale: 1"=50'

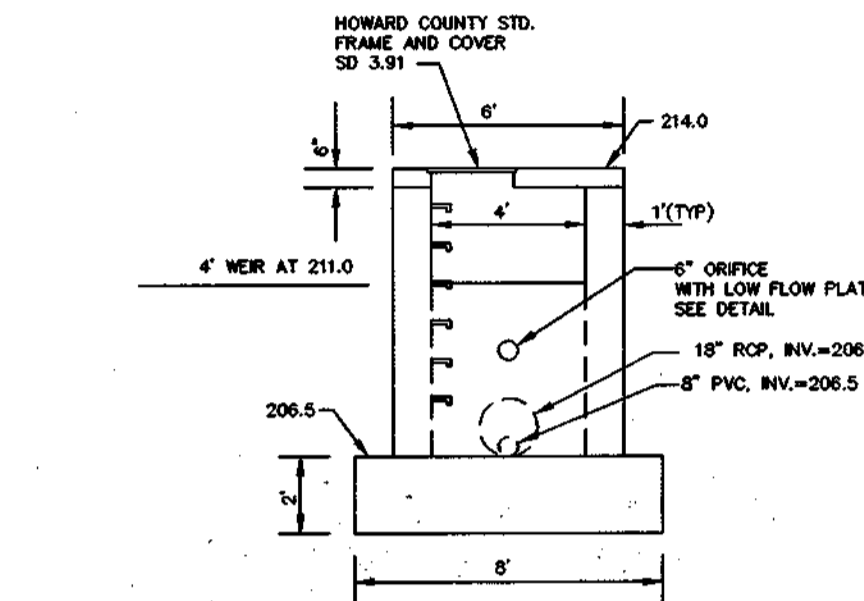
date:
description:
revisions:
no.:

FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORM DRAIN PROFILES

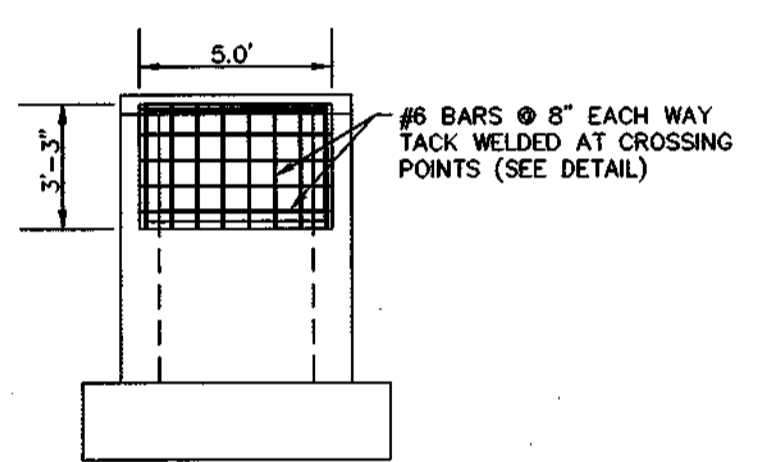
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 997-0286 Fax: (301) 621-5521 Wash. (410) 997-0288 Fax.



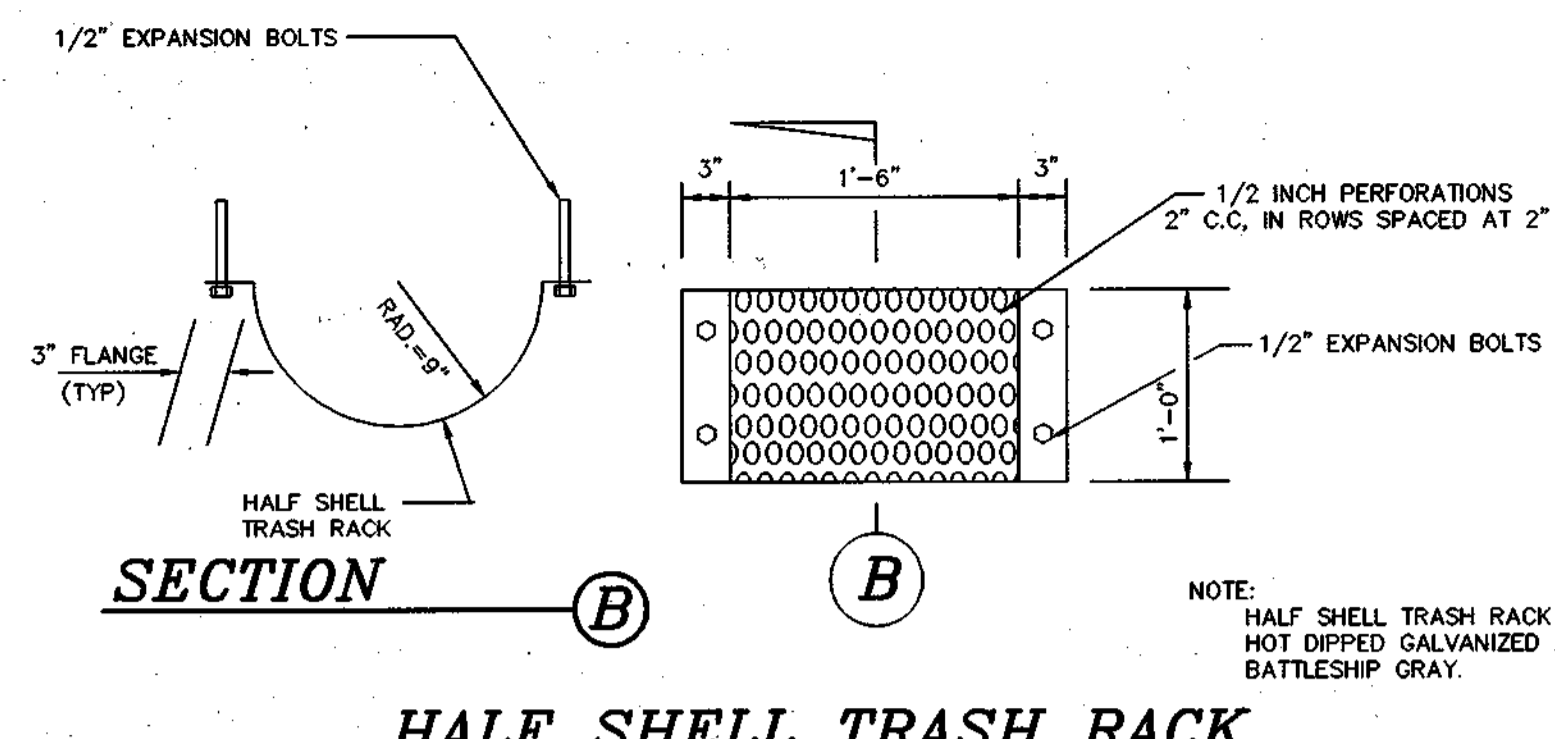
LOW FLOW DETAIL



FRONT WALL ELEVATION



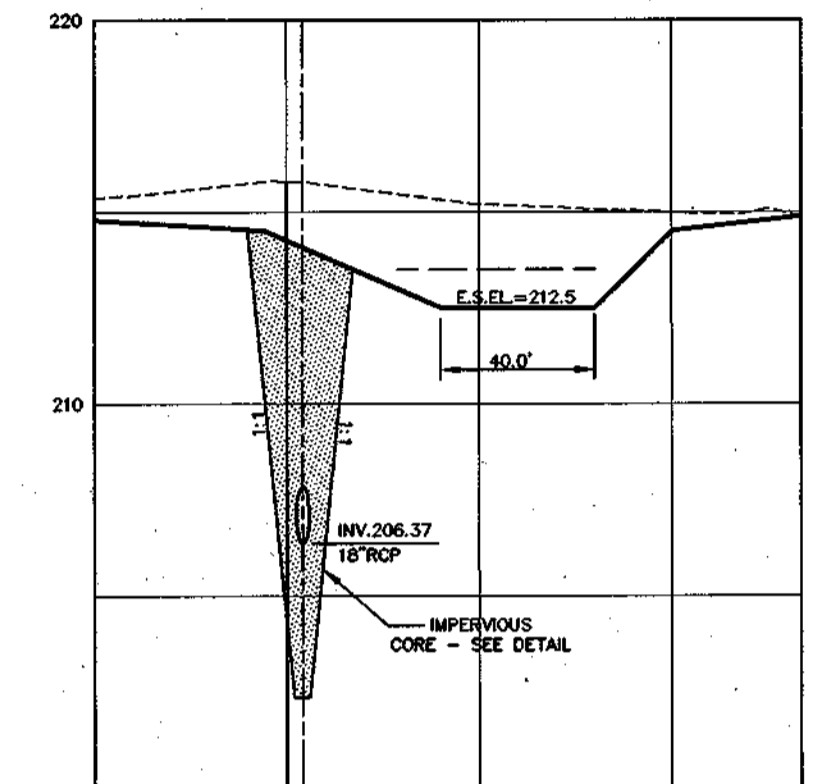
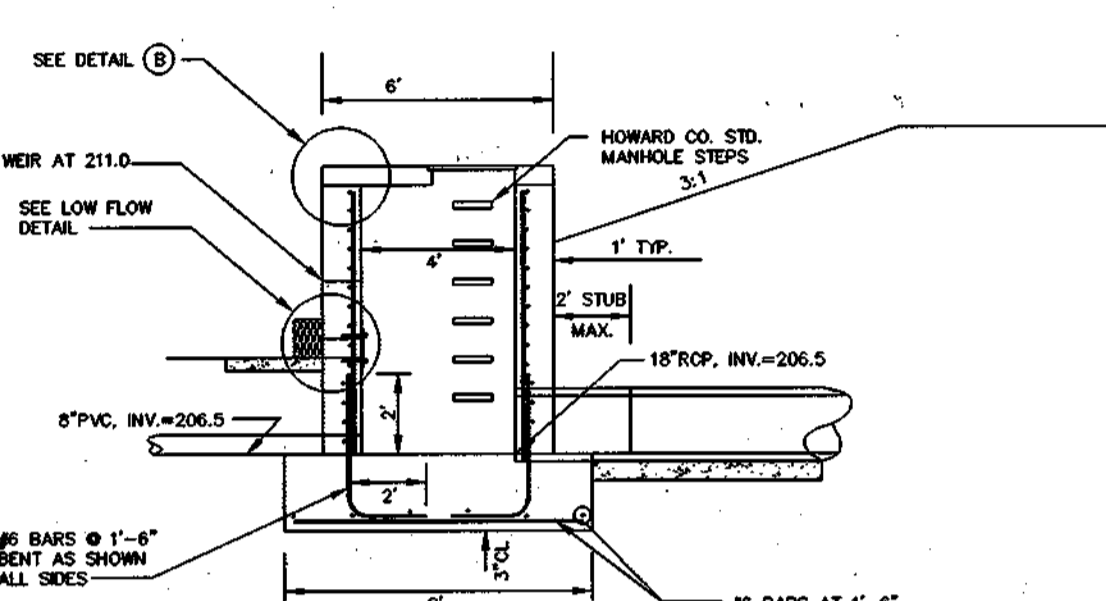
TRASH RACK



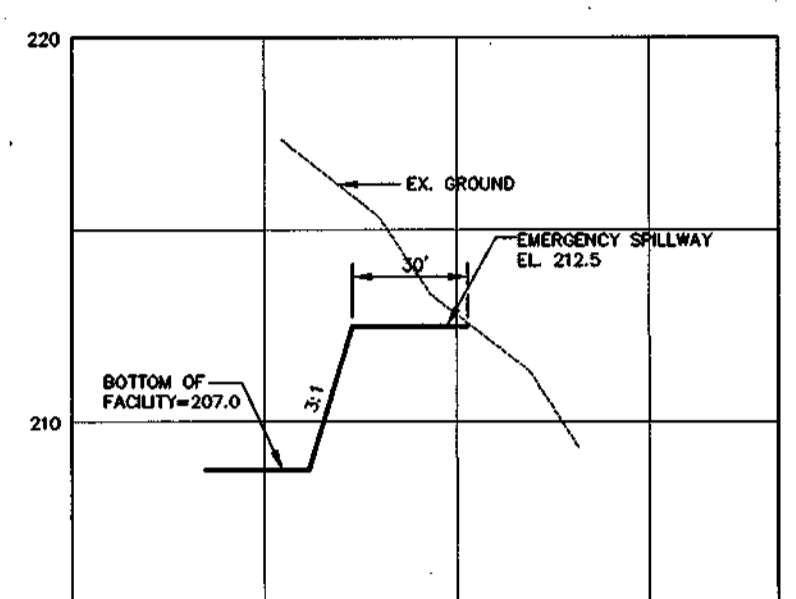
HALF SHELL TRASH RACK

LOW FLOW ORIFICE DETAIL

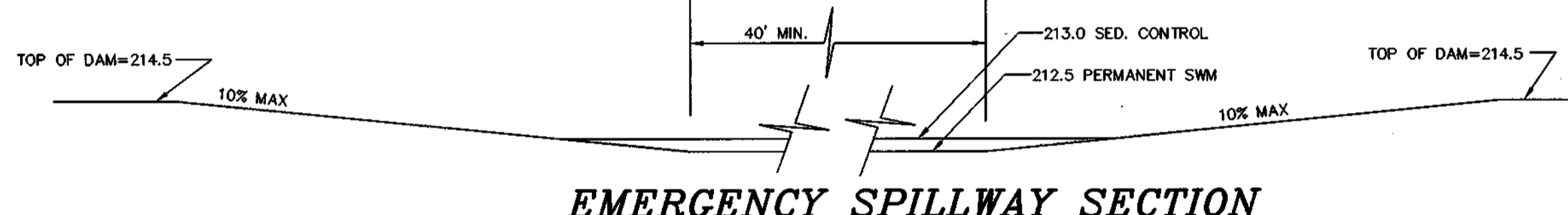
NOTE: HALF SHELL TRASH RACK TO BE HOT DIPPED GALVANIZED AND PAINTED BATTLESHIP GRAY.



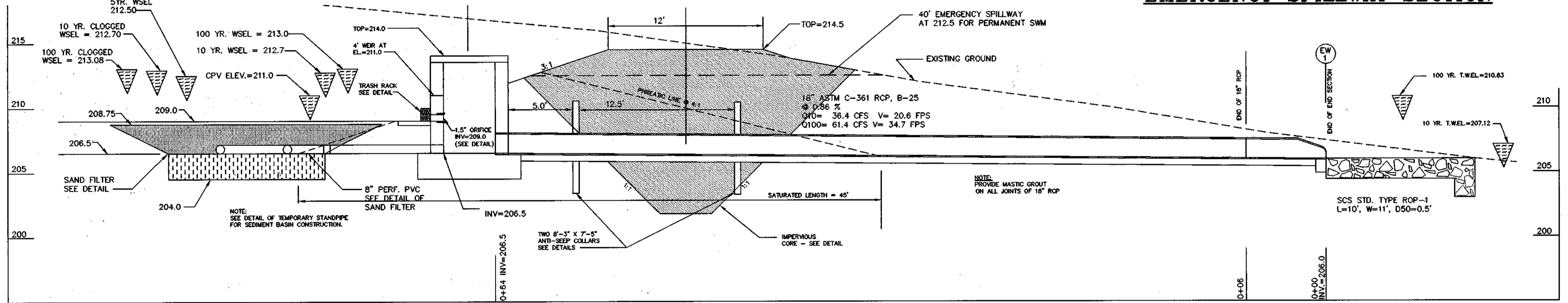
EMBANKMENT & EMERGENCY SPILLWAY PROFILE



EMERGENCY SPILLWAY SECTION A-A



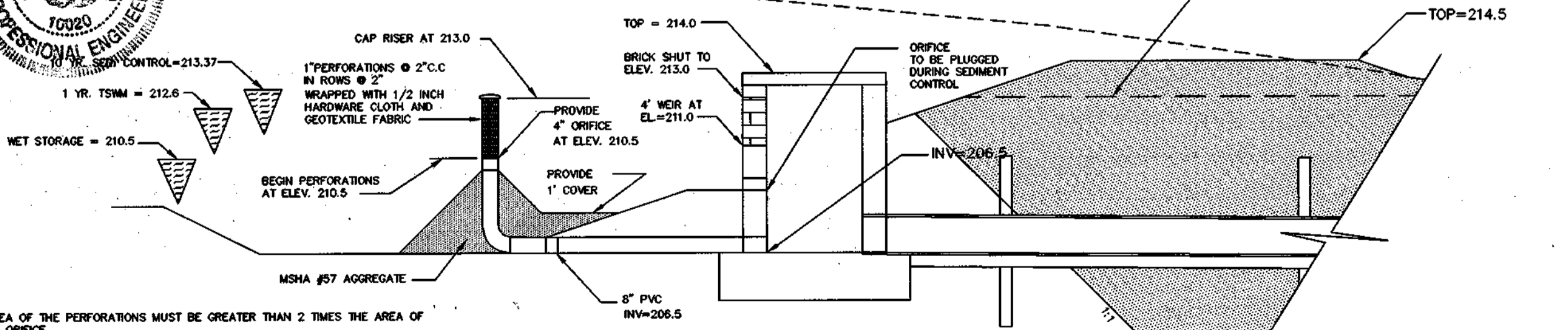
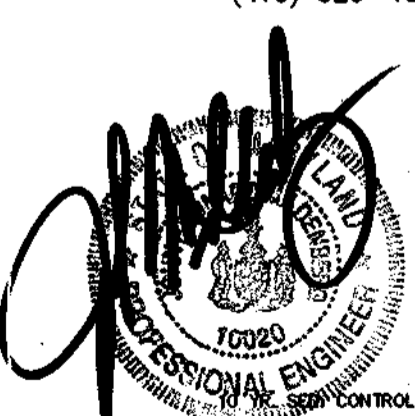
EMERGENCY SPILLWAY SECTION



PROFILE-PRINCIPLE SPILLWAY

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042



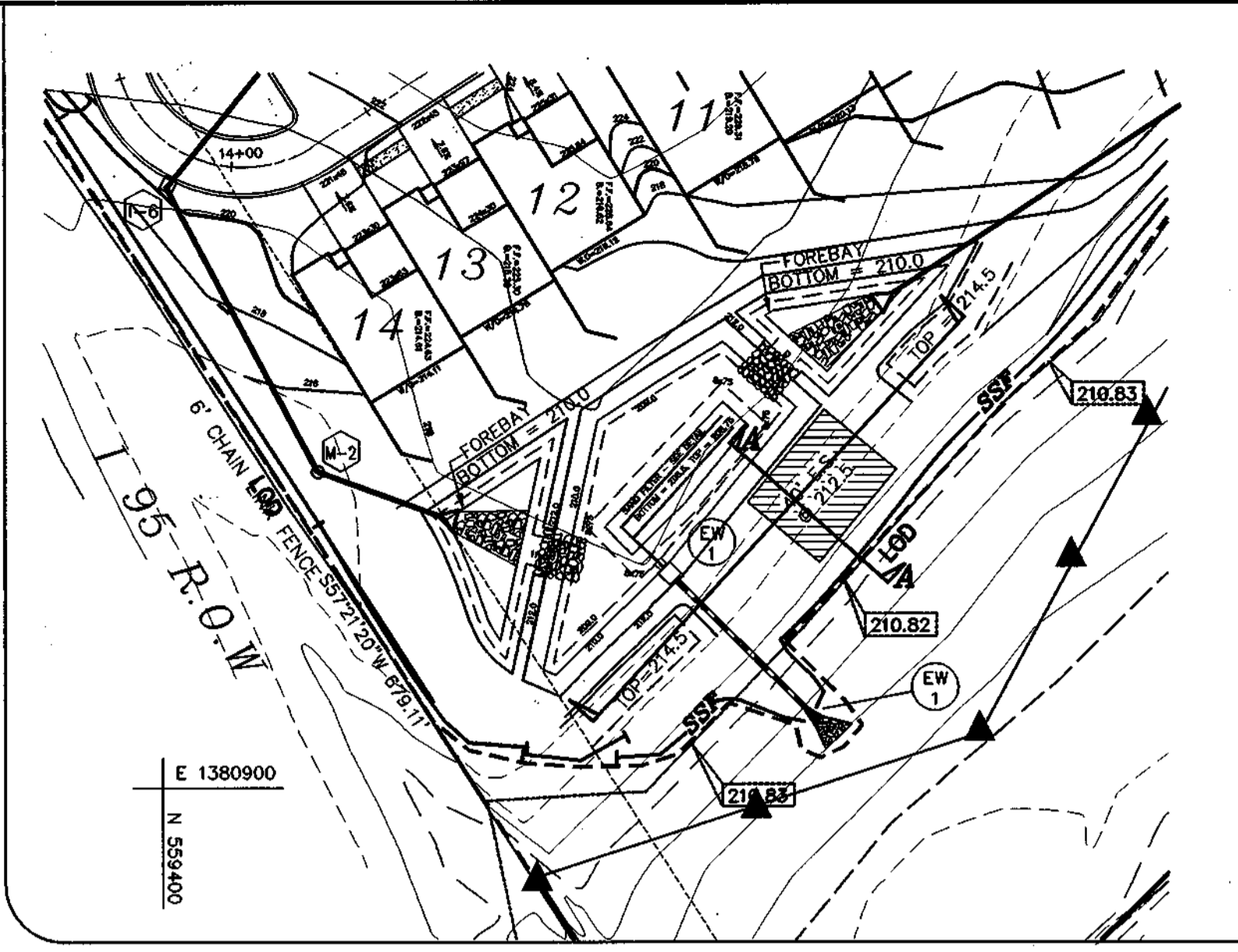
DETAIL-TEMPORARY RISER

- THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.
- THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2\"/>
- PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1\"/>

SWM POND DATA:

HAZARD CLASSIFICATION: "A"
 DRAINAGE AREA: = 12.9 AC
 PROPOSED R.O.: = 77 (ULTIMATE DEVELOPMENT OF WATERSHED)

PROPOSED TC: = 0.32 HRS.
 SAND FILTER AREA (Wq): = 696 SQ. FT.
 EXTENDED DETENTION WSEL: = 211.0
 10 YR. WSEL: = 212.74
 100 YR. WSEL: = 213.04
 MAX. VOLUME @ 10 YR.: = 12,996 CU. FT.
 Wqv REQUIRED: = 7,261 CU. FT.
 Wqv PROVIDED: = 8,136 CU. FT.
 Rev REQUIRED: = 1,300 CU. FT.
 Rev PROVIDED: = 1,300 CU. FT.
 CQV Peak (OUT OF SWMF) = 0.3 CFS @ EL. = 211.0
 10 YR. Q (OUT OF SWMF) = 36.5 CFS @ EL. = 212.7
 100 YR. Q (OUT OF SWMF) = 61.4 CFS @ 213.0
 OWNERSHIP: PRIVATE
 MAINTENANCE: PRIVATE



PLAN

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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 FURNISH 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 OF DEVELOPER: _____ DATE: _____

PRINTED NAME OF DEVELOPER: _____

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 OF ENGINEER: _____ DATE: _____

PRINTED NAME OF ENGINEER: _____

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA NATURAL RESOURCES CONSERVATION SERVICE: _____ 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: DEPARTMENT OF PLANNING AND ZONING

CHEF, DEVELOPMENT ENGINEERING DIVISION: _____ DATE: _____

CHEF, DIVISION OF LAND DEVELOPMENT: _____ DATE: _____

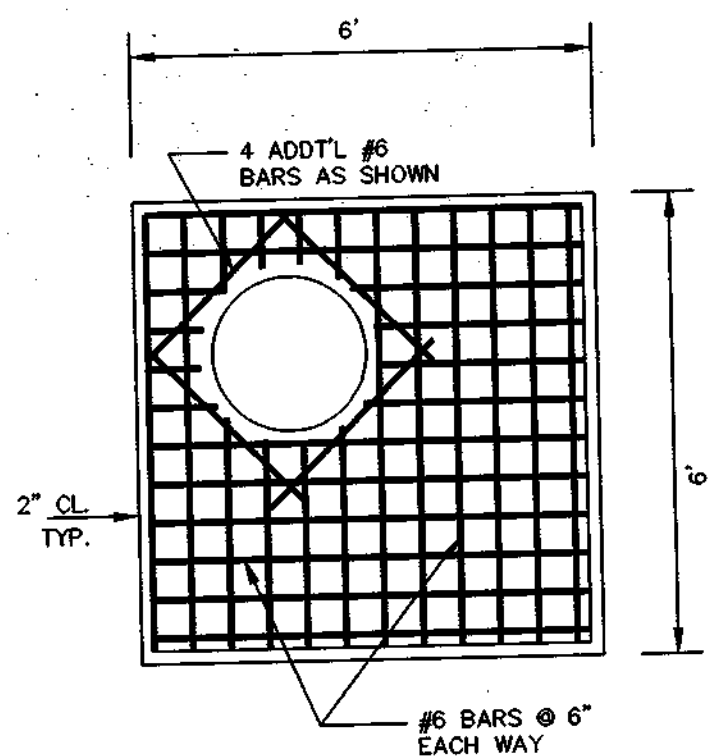
DIRECTOR: _____ DATE: _____

project	00-085	date	APRIL 03
illustration	JBM	engineering	MMP
scale	JBM	approval	JBM
revisions	AS-SHOW		

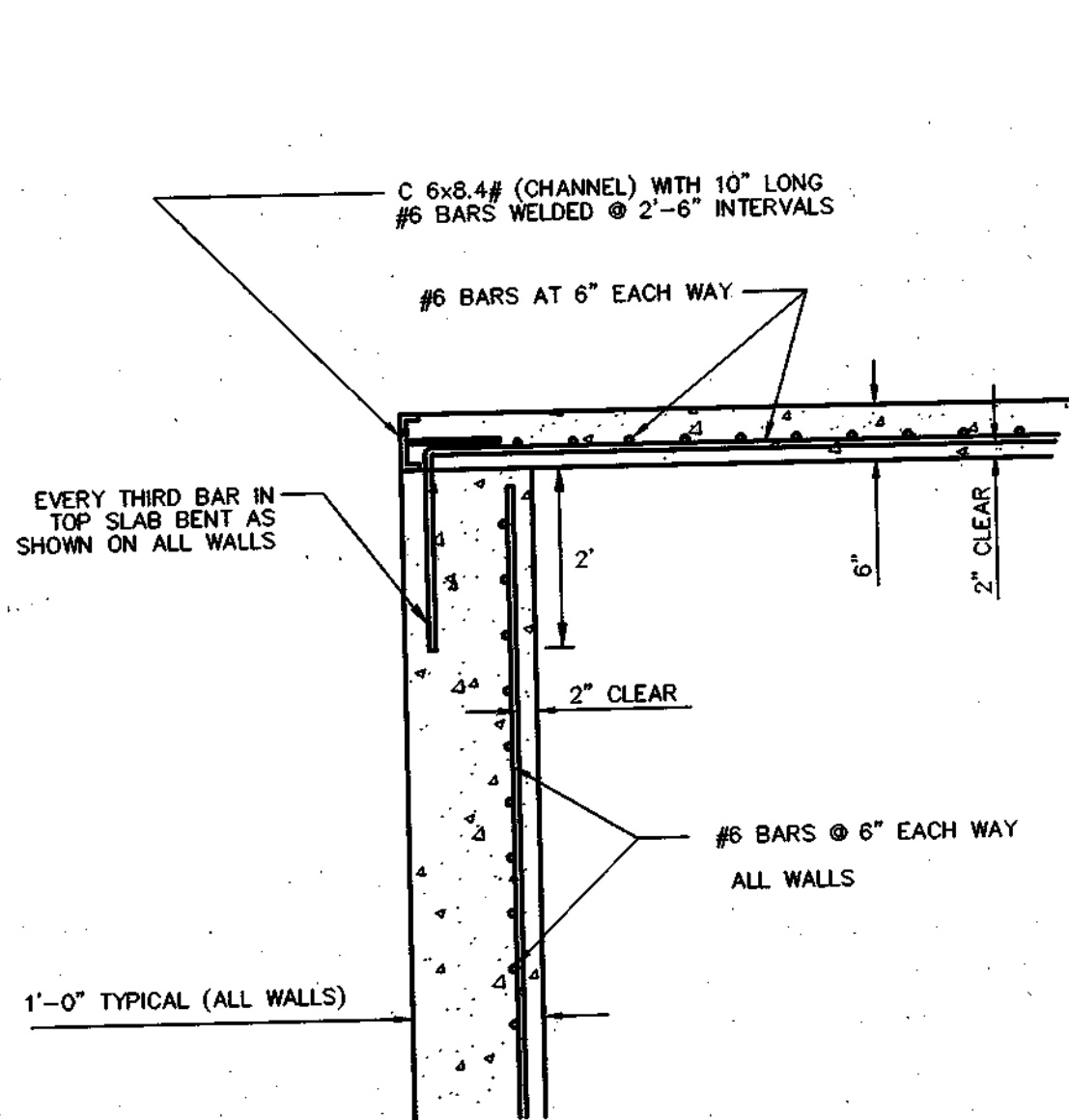
no.	description	date

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 STORMWATER MANAGEMENT DETAILS

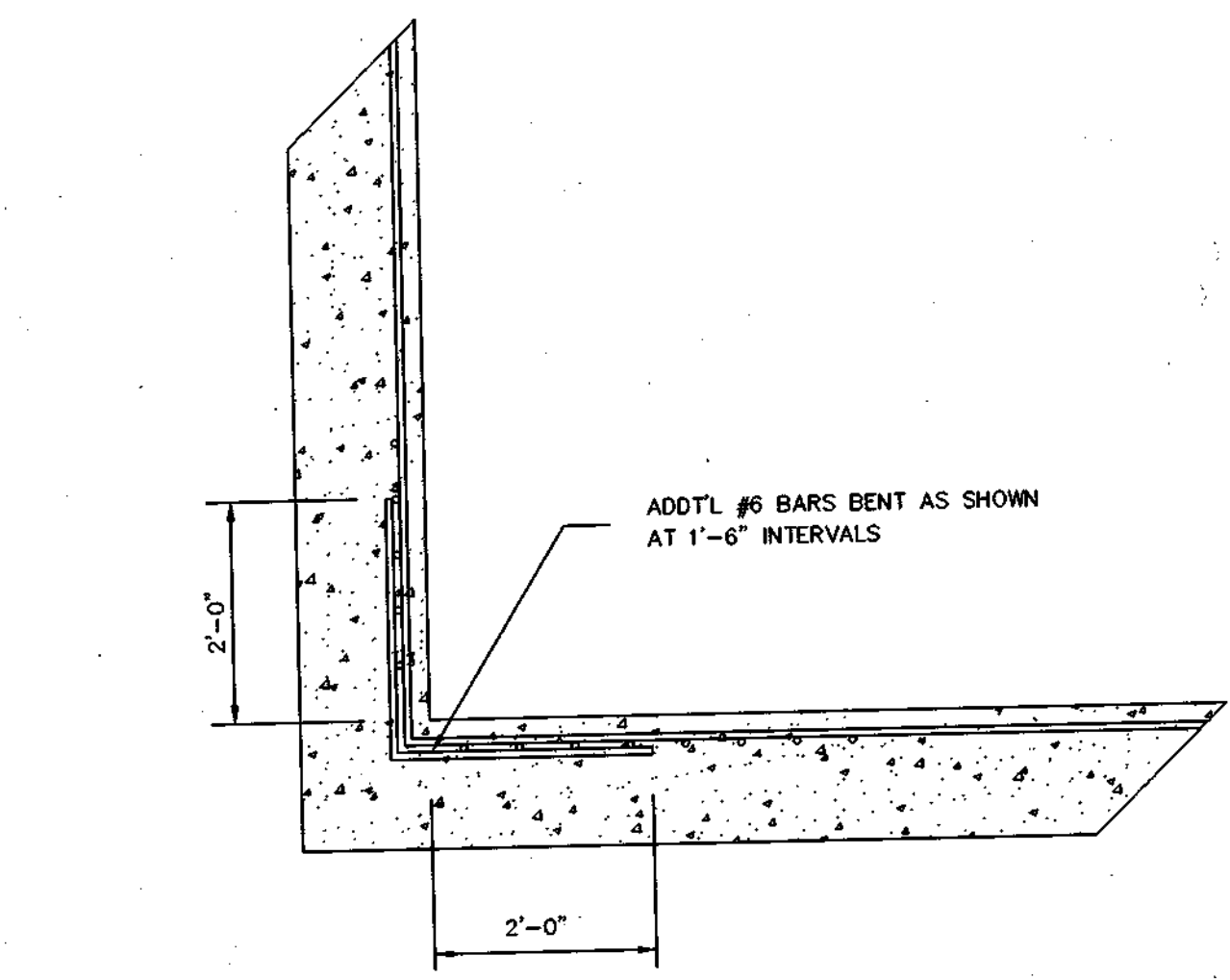
MILDENBERG, BOENDER & ASSOC., INC.
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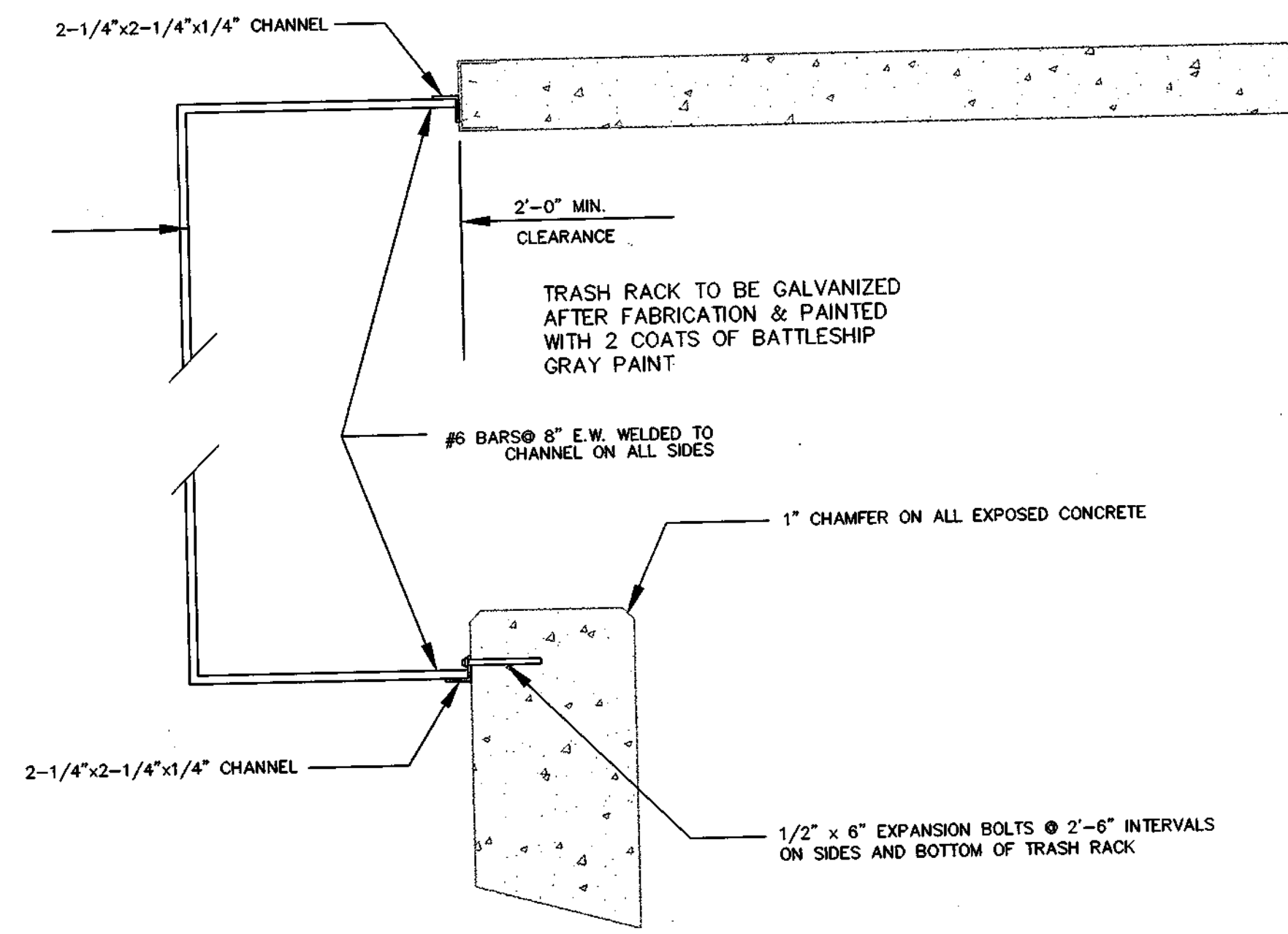
TOP SLAB DETAIL



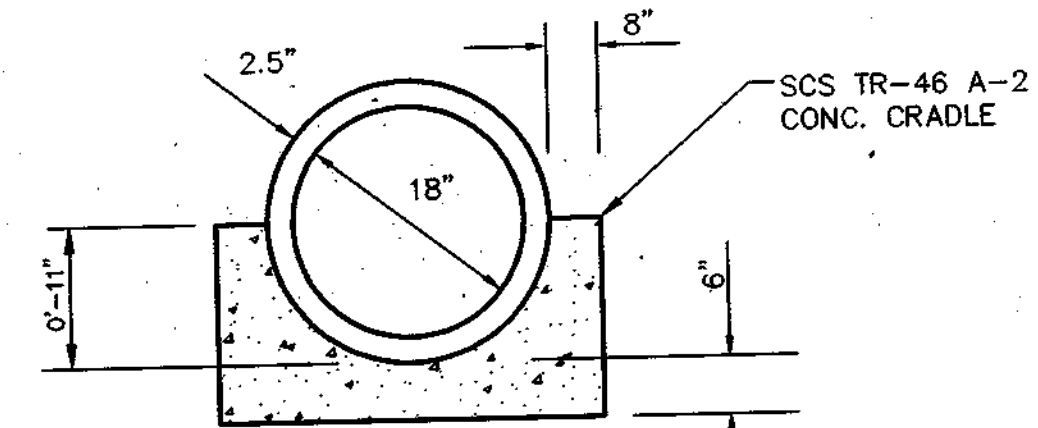
DETAIL B
N.T.S.



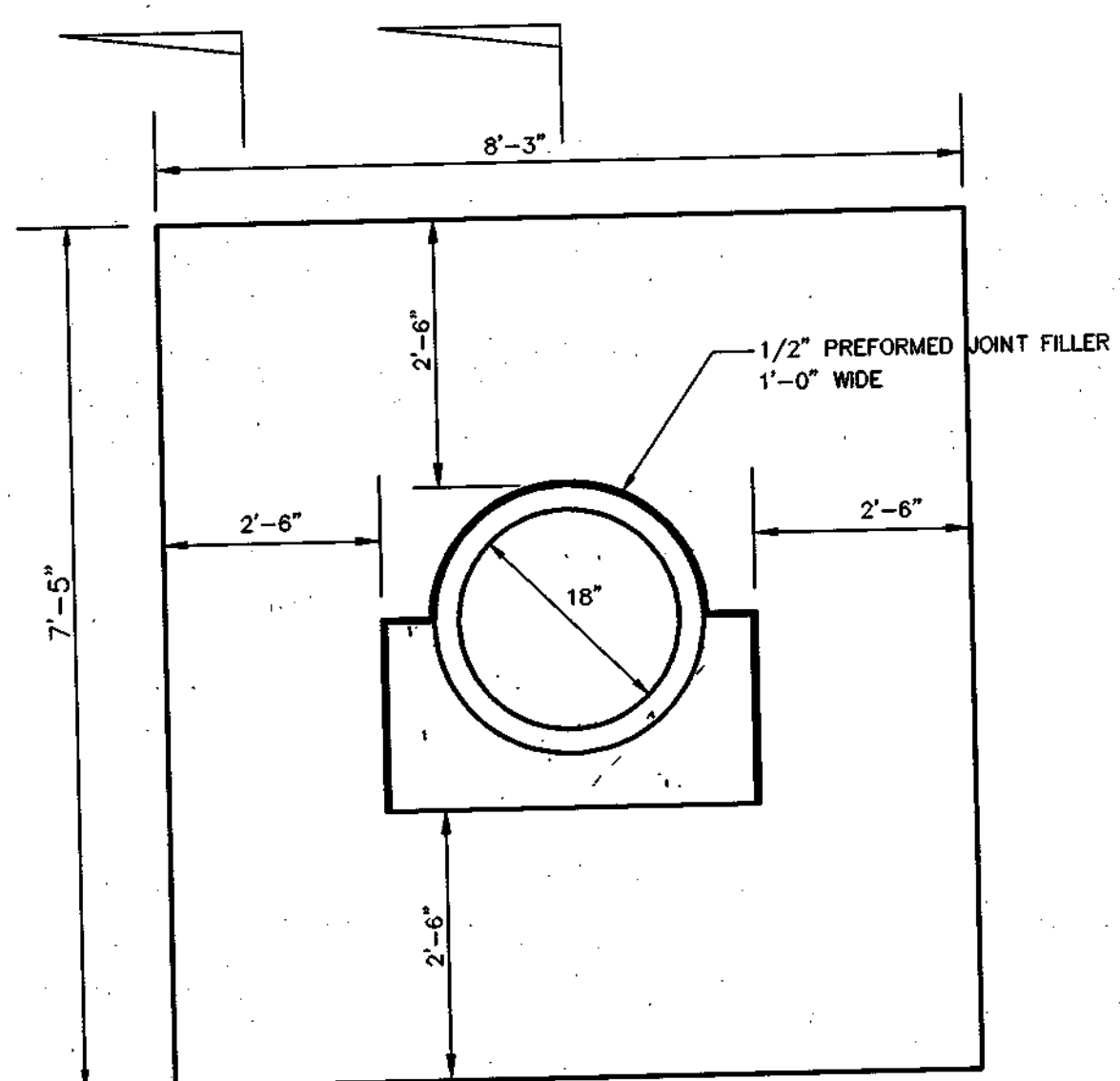
CORNER TREATMENT DETAIL C
N.T.S.



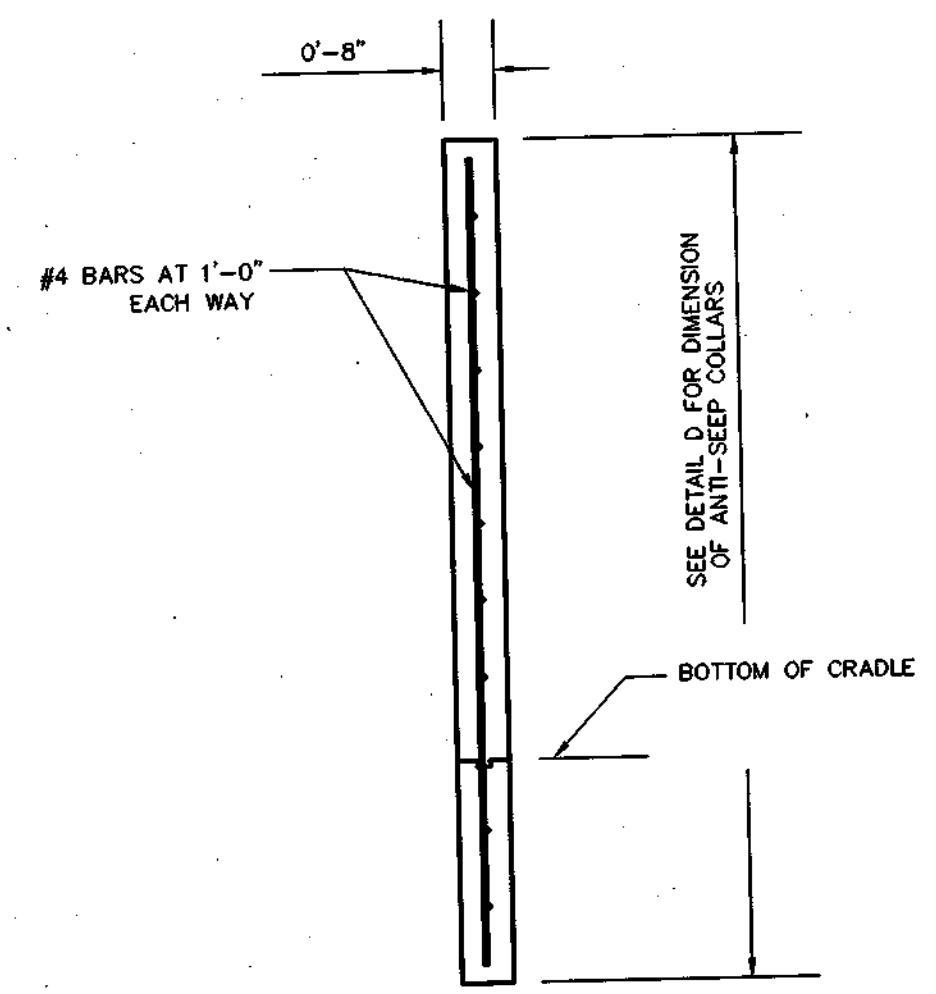
SECTION 3
N.T.S.



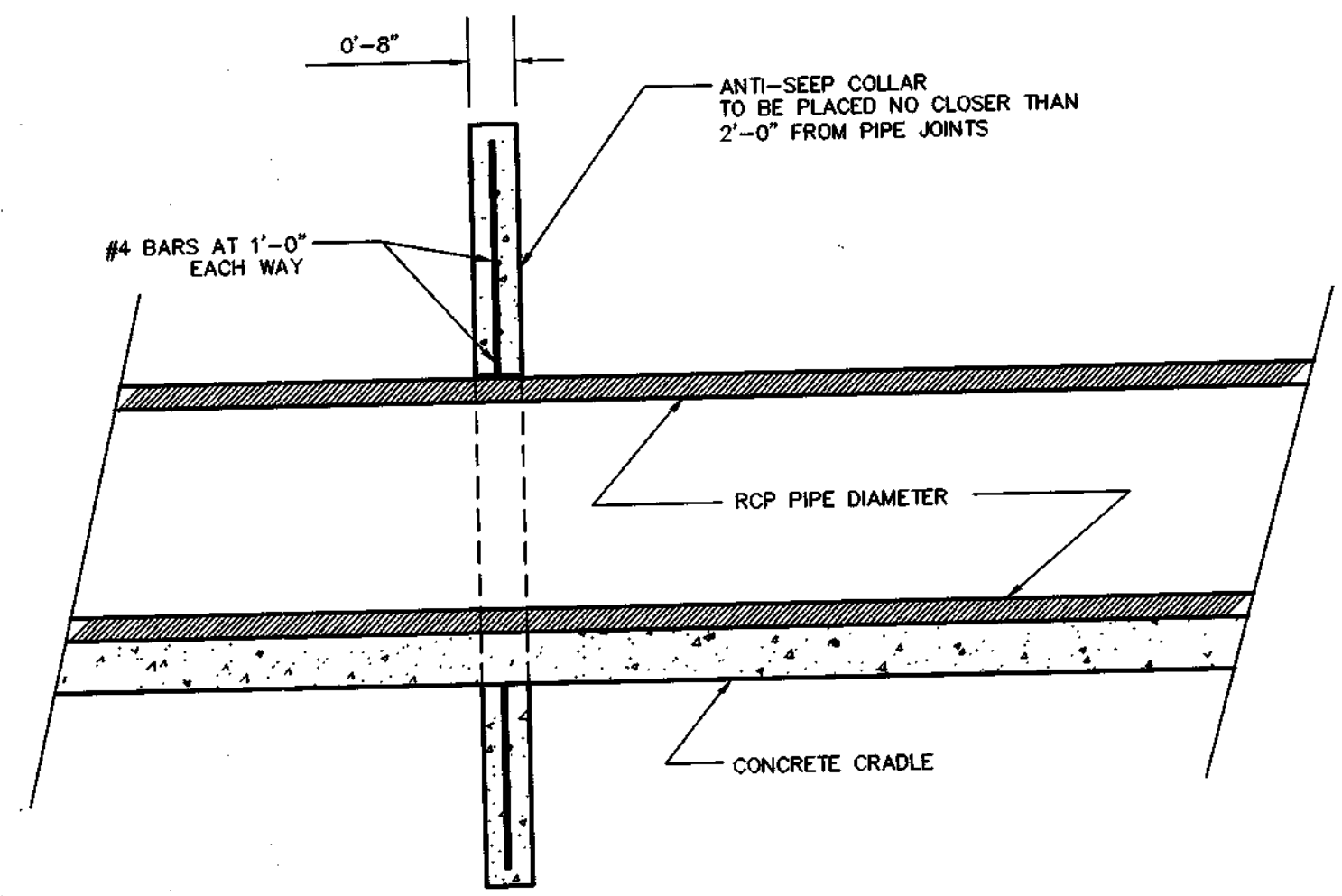
CONCRETE CRADLE



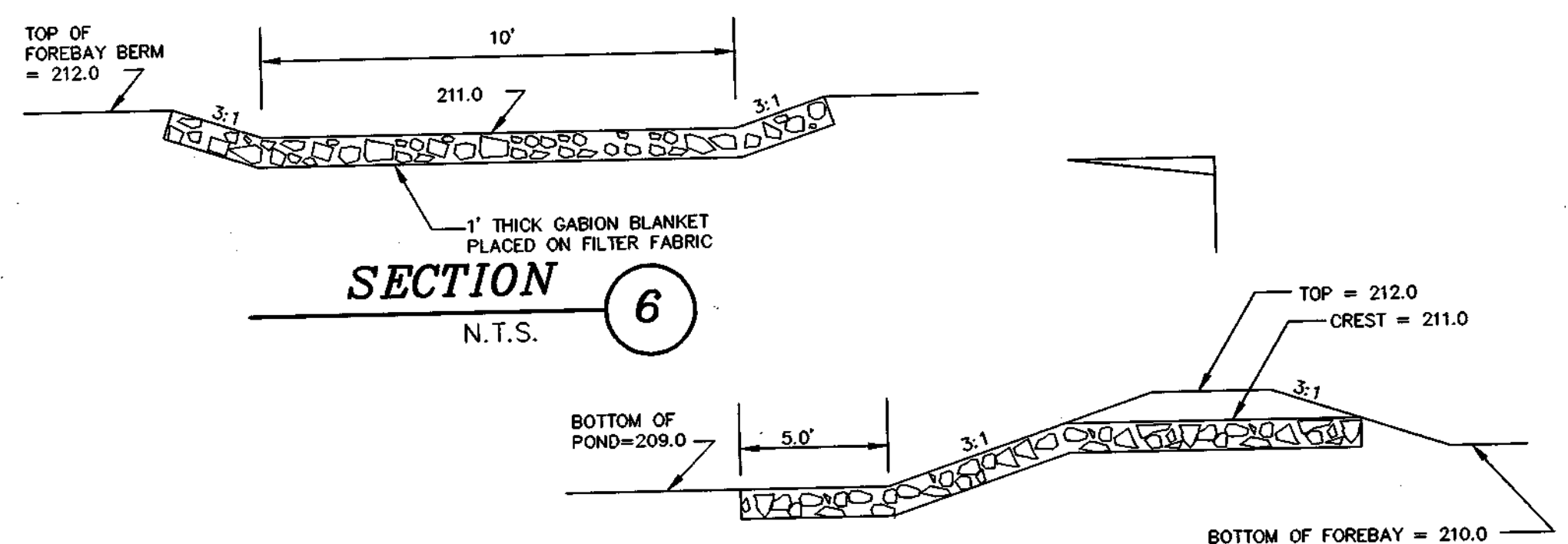
ANTI-SEEP COLLAR DETAIL D
N.T.S.



SECTION 4
N.T.S.

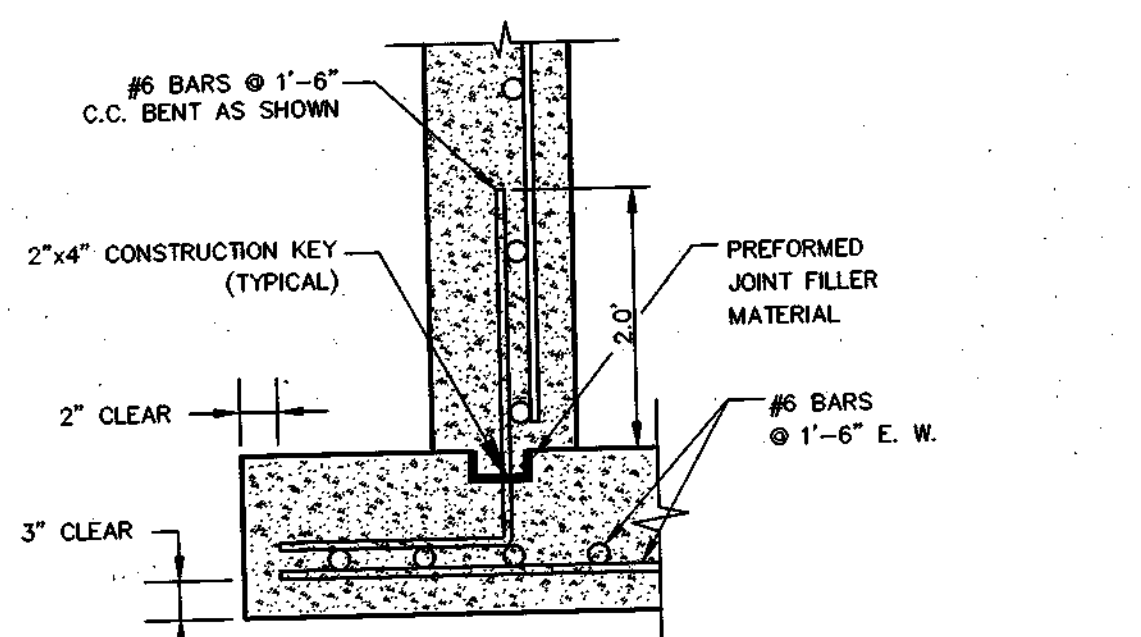


SECTION 5
N.T.S.

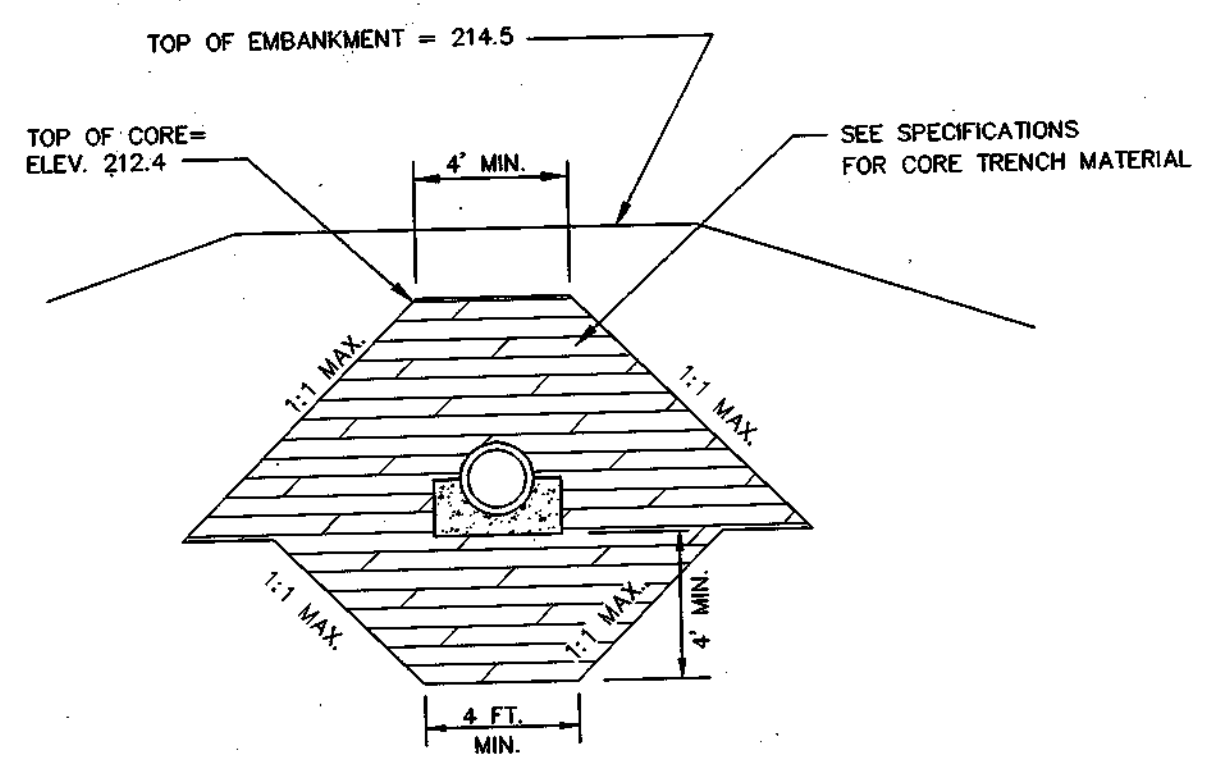


SECTION 6
N.T.S.

DETAIL OF FOREBAY WEIR
N.T.S.



WALL TO BOTTOM SLAB CONNECTION
DETAIL
N.T.S.



CORE TRENCH DETAIL
N.T.S.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.
SIGNATURE: _____ P.E. NO. _____
DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY THE ENGINEER. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THIS 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 FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Developer: *Mr. L. Lay* Date: *7/15/03*
Signature of Engineer: *John M. ...* Date: *7/15/03*

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL FOND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
USDA - NATURAL RESOURCES CONSERVATION SERVICE
DATE: *7/15/03*

THESE PLANS FOR SMALL FOND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
DATE: *7/21/03*

APPROVED: _____ DATE: *8/10/03*
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: *8/21/03*
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: *8/18/03*
DIRECTOR



DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERTOWN MD. 21136
(410) 526-4030

OWNER
5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

Project	00-066
Illustration	JBM
Scale	AS SHOWN
Date	APRIL 03
Engineering	MMP
Approval	JBM
Scale	AS SHOWN
Date	JBM

NO.	DESCRIPTION	DATE

FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 897-0288 Fax (410) 897-0288
3011 628-5621 Wash. (410) 897-0288 Fax

MD-378 POND SPECIFICATIONS (JANUARY 2000)

CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR 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 OBSTRUCTIONS ARE TO BE REMOVED. CHANNEL BANKS AND SHARP BENCHES SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TRENCHES 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 STORM WATER 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 DRAIN 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 CC, SC, CH, OR CL AND MUST HAVE AT LEAST 50% 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 SHEEPSFOOT, RUBBER TRED OR VIBRATORY ROLLERS. 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 MINIMUM OF 10% FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT 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 CUT-OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE MINIMUM 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, ROLLERS, 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 TO 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.

STRUCTURAL 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 4" IN THICKNESS. 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, 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.

PIPE CONDUIT

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 POLYMER 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.

2. MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-192 OR M-191 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. 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.

3. MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-192 OR M-191 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 SPECIFICATIONS M-192 OR M-191 WITH WATERTIGHT COUPLING BANDS OR FLANGES. 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.

4. 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.

5. 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. "DUMPLE" 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; PIPE-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 GASKET; AND A 12-INCH WIDE WEDGE TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2 INCH GREATER THAN THE ORBITATION. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNUULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LOGS, 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.

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

6. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSUITABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

7. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

8. 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-391.

2. BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF 2" THICK CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT REQUIRED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LENGTH, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D1785 OR ASTM D-2241 CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" HDPE PIPE SHALL MEET THE REQUIREMENTS TO AASHTO M252 TYPE S, AND 12" THROUGH 24" INCH SHALL MEET THE REQUIREMENTS OF AASHTO M294 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS TO PROVIDE ADEQUATE SUPPORT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSUITABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILL SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

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 414, 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.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C.

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 DICES, 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 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 DRAINAGE SHALL BE MAINTAINED UNTIL THE FULL COW 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. THE WORK SHALL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF CONCRETE IN READY MIX TRUCKS, 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 SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY OVERSLOPED CONDITION ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPILL 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.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378). THE POND OWNER(S) AND THE HERES 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 INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEM

1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID MUST BE FOLLOWED BY THE OWNER.
8. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

GEOTECHNICAL RECOMMENDATIONS:

THE AREA OF THE PROPOSED SWM FACILITY SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM AN EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE.

FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, THE EXPOSED MATERIALS SHOULD BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE USING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROFFERROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATIONS 378 SOILS CONSIDERED SUITABLE FOR CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE-GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH MDC SCS 178 SPECIFICATIONS.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

PROJECT NAME: ENCLAVE AT TIMBERS BORING # B-1
LOCATION: HOWARD COUNTY, MARYLAND, JOB # 02120A

DATE STARTED: 3-28-02 DATE COMPLETE: 3-28-02

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH	SCALE	CON	SAMPLE	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0						3" TOPSOIL
2.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		2.0		D	1-3-4	1	11"	
5.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		5.0		D	4-6-8	2	12"	
7.5	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		7.5		D	7-11-12	3	13"	
10.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		10.0		D	7-11-12	4	14"	COVERED AT 8' AT COMPLETION
12.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		12.0		D	7-13-15	5	15"	COVERED AT 8' AT COMPLETION
15.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		15.0		D	7-13-15	6	16"	COVERED AT 8' AT COMPLETION
18.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		18.0		D	7-13-15	7	17"	COVERED AT 8' AT COMPLETION
20.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		20.0		D	7-13-15	8	18"	COVERED AT 8' AT COMPLETION

SAMPLER TYPE: BRUSH SPIT SPOON UNLESS OTHERWISE NOTED
SAMPLER CONDITIONS: D-UNDISTURBED, L-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION 10.0 FT. AFTER 12.0 FT.
BORING METHOD: 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

PROJECT NAME: ZELMAN PROPERTY SWM BORING # B-3
LOCATION: HOWARD COUNTY, MARYLAND, JOB # 02120A

DATE STARTED: 8-12-02 DATE COMPLETE: 08-12-02

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH	SCALE	CON	SAMPLE	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0						3" TOPSOIL
2.5	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		2.5		D	2-2-3	1	11"	
5.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		5.0		D	3-4-6	2	16"	
8.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		8.0		D	6-14-20	3	15"	
10.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		10.0		D	14-23-50/5	4	15"	SPONTANEOUSLY ENCOUNTERED
15.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		15.0		D	16-25-50/2	5	15"	COVERED AT 12' AT COMPLETION
20.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		20.0		D	16-25-50/2	6	15"	COVERED AT 12' AT COMPLETION

SAMPLER TYPE: BRUSH SPIT SPOON UNLESS OTHERWISE NOTED
SAMPLER CONDITIONS: D-UNDISTURBED, L-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION 10.0 FT. AFTER 12.0 FT.
BORING METHOD: 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

PROJECT NAME: ENCLAVE AT TIMBERS BORING # B-2
LOCATION: HOWARD COUNTY, MARYLAND, JOB # 02120A

DATE STARTED: 3-28-02 DATE COMPLETE: 3-28-02

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH	SCALE	CON	SAMPLE	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0						3" TOPSOIL
2.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		2.0		D	1-3-4	1	11"	
5.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		5.0		D	4-6-8	2	12"	
7.5	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		7.5		D	7-11-12	3	13"	
10.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		10.0		D	7-11-12	4	14"	COVERED AT 8' AT COMPLETION
12.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		12.0		D	7-13-15	5	15"	COVERED AT 8' AT COMPLETION
15.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		15.0		D	7-13-15	6	16"	COVERED AT 8' AT COMPLETION
18.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		18.0		D	7-13-15	7	17"	COVERED AT 8' AT COMPLETION
20.0	BROWN, MOIST, MEDIUM STIFF CLAY (CL) WITH SAND TRACE ROOTS (R)		20.0		D	7-13-15	8	18"	COVERED AT 8' AT COMPLETION

SAMPLER TYPE: BRUSH SPIT SPOON UNLESS OTHERWISE NOTED
SAMPLER CONDITIONS: D-UNDISTURBED, L-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION 10.0 FT. AFTER 12.0 FT.
BORING METHOD: 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

PROJECT NAME: ZELMAN PROPERTY SWM BORING # B-5
LOCATION: HOWARD COUNTY, MARYLAND, JOB # 02120A

DATE STARTED: 8-12-02 DATE COMPLETE: 08-12-02

ELEV.	SOIL DESCRIPTION	STR. DEPTH	DEPTH	SCALE	CON	SAMPLE	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0						3" TOPSOIL
2.5	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		2.5		D	2-2-2	1	10"	
5.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		5.0		D	3-4-8	2	16"	
8.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		8.0		D	25-30-34	3	14"	
10.0	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		10.0		D	20-51/8'	4	12"	SPONTANEOUSLY ENCOUNTERED
13.2	BROWN AND GRAY MOIST LOOSE CLAYEY FINE SAND (SC)		13.2		D	51/2'	5		COVERED AT 12' AT COMPLETION

SAMPLER TYPE: BRUSH SPIT SPOON UNLESS OTHERWISE NOTED
SAMPLER CONDITIONS: D-UNDISTURBED, L-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION 10.0 FT. AFTER 12.0 FT.
BORING METHOD: 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

PROJECT NAME: ENCLAVE AT TIMBERS BORING # B-3
LOCATION: HOWARD COUNTY, MARYLAND, JOB # 02120A

DATE STARTED: 3-28-02 DATE COMPLETE: 3-28-02

ELEV.	SOIL DESCRIPTION	STR. DEPTH
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NOTES:

- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE PROVIDED BY AFForestation OF 0.89 ACRES OF FOREST. FINANCIAL SURETY FOR THE ON-SITE AFForestation (0.71 ACRES OR 31,093.4 SQ. FT.) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$15,546.70. (FOREST CONSERVATION CREDIT FOR 7,675 SQ. FT. OF LANDSCAPING HAS BEEN TAKEN FOR 15 SHADE TREES & 11 EVERGREENS AS SHOWN ON THIS PLAN TO BE PLANTED AS PART OF THE LANDSCAPING REQUIREMENTS.)
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. FOREST CONSERVATION ACT. 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (76 STREET TREES, 109 SHADE TREES, 134 EVERGREENS) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$75,000.00.
- TREE PROTECTIVE FENCING FOR THE AFForestation AREA IS NOT REQUIRED SINCE THE AFForestation AREA IS LOCATED IN A SECTION OF FLOODPLAIN WHERE NO GRADING IS REQUIRED.
- AT THE TIME OF 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 RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS.

SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	15
NUMBER OF PLANTING ISLANDS REQUIRED	2
NUMBER OF PLANTING ISLANDS PROVIDED	2
NUMBER OF TREES REQUIRED	2 SHADE TREES
NUMBER OF TREES PROVIDED	2 SHADE TREES
OTHER TREES (2:1 SUBSTITUTION)	0 SHADE TREES 0 TREES

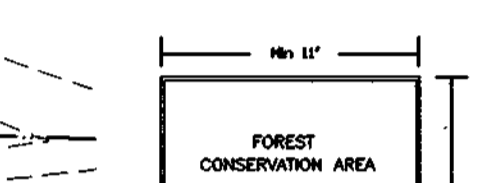
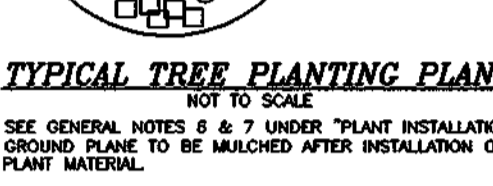
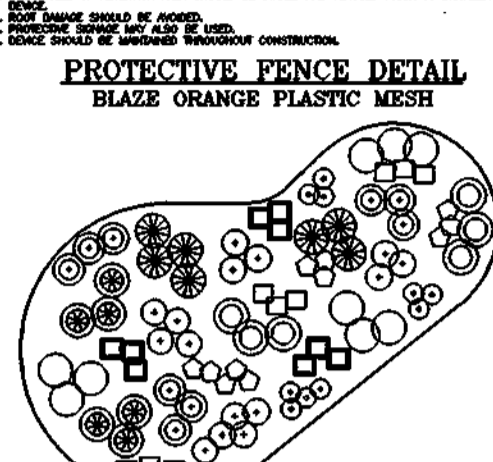
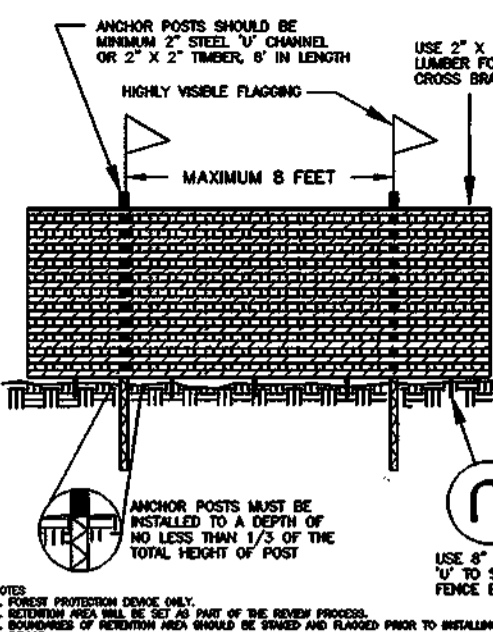
LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
56	●	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
55	●	PICEA ABIES	NORWAY SPRUCE	6" - 8" HT.
46	●	PIRUS RIGIDA	PITCH PINE	6" - 8" HT.
35	●	PIRUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
115	●	PIRUS CALLERYANA 'REDSPIRE'	REDSPIRE PEAR	2 1/2" - 3" CAL.
15	●	QUERCUS PHellos	WILLOW OAK	2 1/2" - 3" CAL.
TOTAL				
320 TREES (76 STREET TREES, 108 SHADE TREES & 136 EVERGREEN TREES)				

NOTE: THIS PLAN IS TO BE USED FOR LANDSCAPE & FOREST CONSERVATION PURPOSES ONLY.

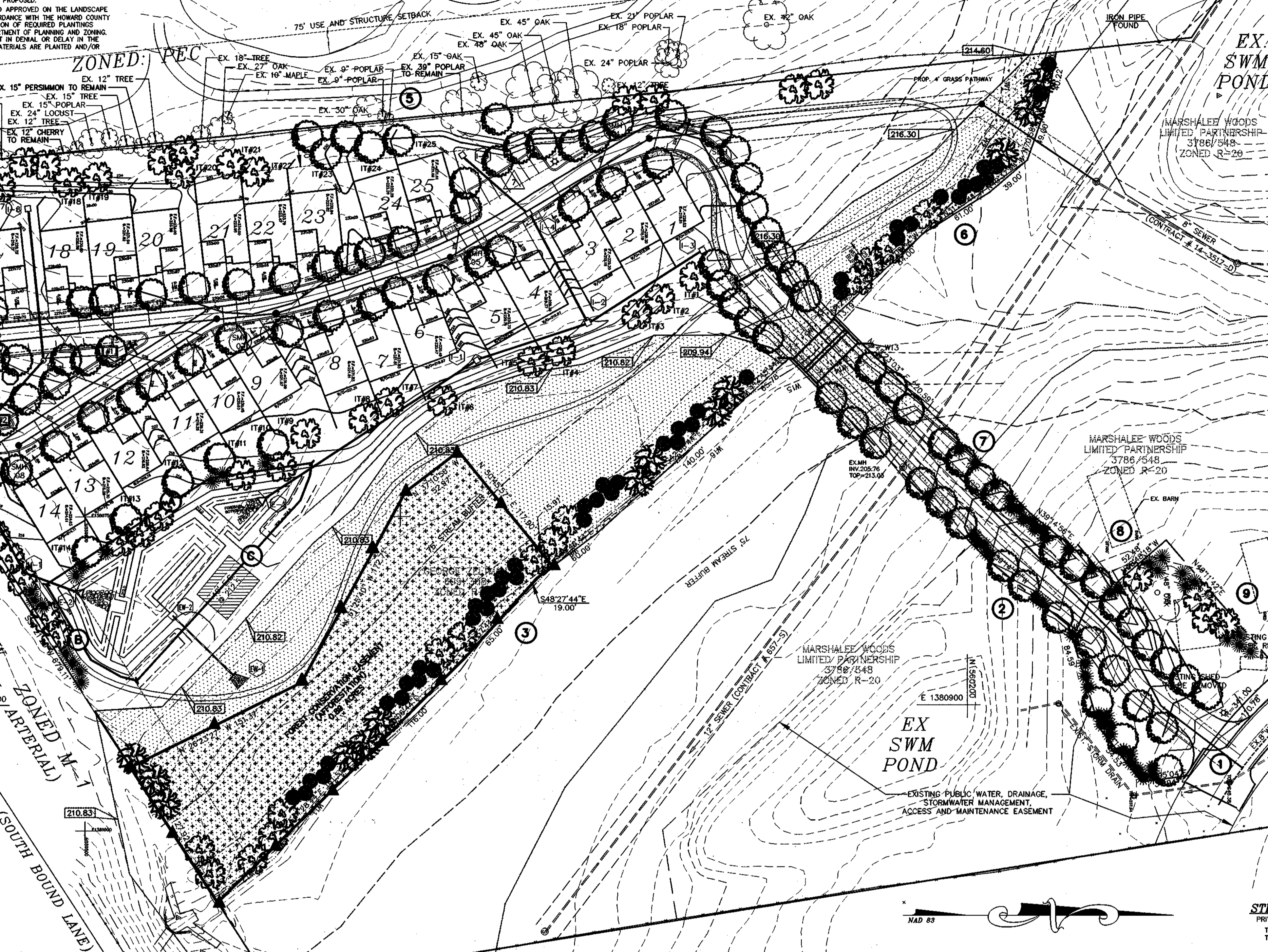
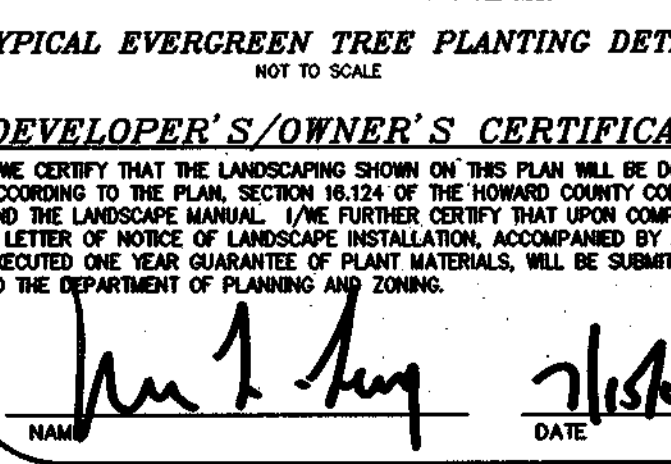
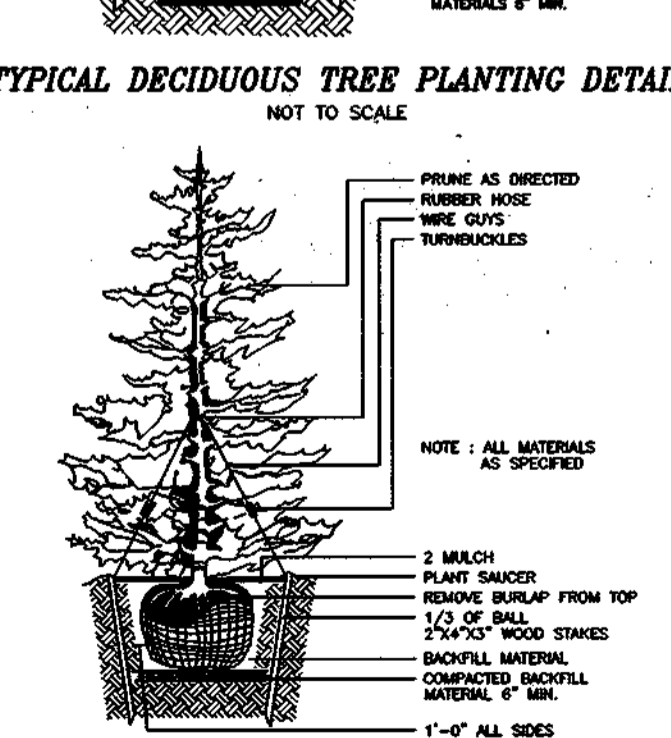
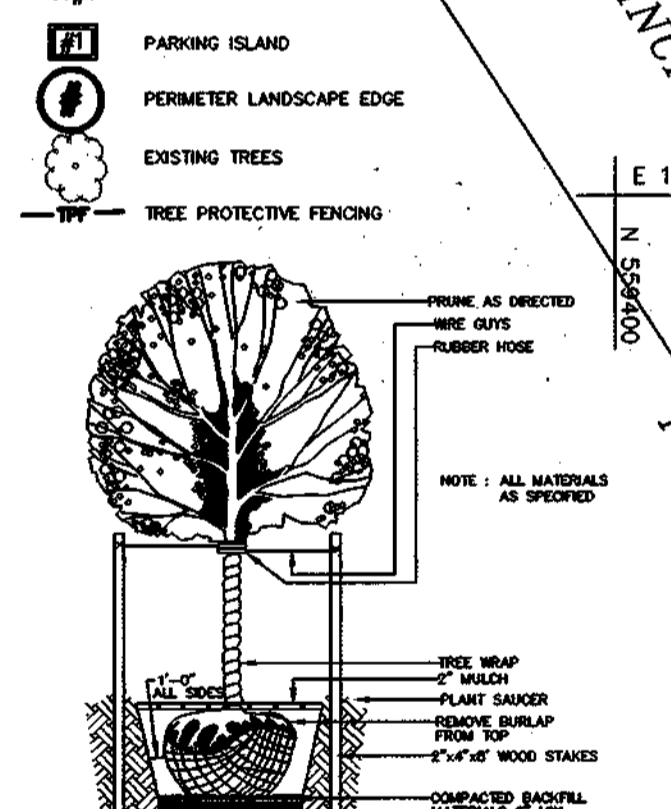
PLANTING SPECIFICATIONS AND NOTES

- SITE PREPARATION AND SOILS**
- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
 - DISBURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 2 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
 - SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL. SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMMERCE SLUDGE.
 - SOIL MIX FOR ERICACEOUS MATERIAL. SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
 - UNTIL PLANTED, ALL PLANT STOCK WILL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
- PLANT STORAGE AND INSPECTION**
- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
 - PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, WOUND, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
 - UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
- PLANT INSTALLATION**
- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING. AFTER PLANT INSTALLATION, PLANTING RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
 - PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DIAMETER OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
 - CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING TREES. IF ROOTS GREATER THAN 1 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE DAMAGE TO EXISTING TREES, WHERE HERE FIRST.
 - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS THOROUGHLY LOOSENED FROM THE ROOTS. THE ROOTS SHOULD BE SHAPED OR HANKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK MULCH TO BASE OF ROOT BALL AND COVER GENTLY WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENTLY.
 - FOR TREES PLANTED IN THE AFForestation AREA, CONTRACTOR SHALL ASSESS AND IDENTIFY SPECIES IN GROUPS OF TWO (2) TO FOUR (4) PER SPECIES. OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED SHALL MAINTAIN AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
 - AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LIST TO OBTAIN A MORE NATURAL APPEARANCE.
 - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- IRRIGATION**
- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
 - NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
 - IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.
- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
 - ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
 - VOLUNTARY SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
 - REACHES PLANTED MANUAL MEANS (WEEDING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED NURSERY STOCK.
 - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTED STOCK.
 - 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTS WILL BE REQUIRED TO ACHIEVE THIS GOAL.
- SUBMISSION**
- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.15.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.



- FOREST CONSERVATION DATA**
- | I. BASIC SITE DATA | ACRES |
|---|------------------------|
| GROSS SITE AREA | 8.30 |
| AREA WITHIN 100 YEAR FLOODPLAIN | 2.34 |
| AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL | 0.00 |
| NET TRACT AREA | 5.96 |
| LAND USE CATEGORY | RESIDENTIAL - SUBURBAN |
- II. FOREST CONSERVATION WORKSHEET DATA SUMMARY**
- | REFORESTATION THRESHOLD (30%) | 1.19 |
|-----------------------------------|------|
| AFForestation MINIMUM (15%) | 0.89 |
| EXISTING FOREST ON NET TRACT AREA | 0.00 |
| FOREST AREAS TO BE CLEARED | 0.00 |
| FOREST AREAS TO BE RETAINED | 0.00 |
- V. AFForestation CALCULATIONS**
- | TOTAL AFForestation PROVIDED | 0.89 |
|------------------------------|------|
| TOTAL AFForestation REQUIRED | 0.89 |

LEGEND



SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	PERIMETER A - 236 LF (TYPE B)	PERIMETER B - 110 LF (TYPE B)	PERIMETER C - 225 LF (TYPE B)	TOTAL
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A	N/A	N/A	
CREDIT FOR OTHER LANDSCAPING (NO, YES AND X)	N/A	YES, 110 LF OF PERIMETER 4 LANDSCAPING - TYPE C	YES, 202 LF OF PERIMETER 3 LANDSCAPING - TYPE C	
NUMBER OF TREES REQUIRED	5 SHADE TREES 6 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	5 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED	5 SHADE TREES 6 EVERGREEN TREES 0 TREES (2:1 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES 0 TREES (0 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES 0 TREES (0 SUBSTITUTION)	5 SHADE TREES 6 EVERGREEN TREES 0 TREES (0 SUBSTITUTION)

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	25
NUMBER OF TREES REQUIRED (1:DU SFA: 1:3 DU APTS)	25
NUMBER OF TREES PROVIDED	25
OTHER TREES (2:1 SUBSTITUTION)	0

SCHEDULE A: PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS				ADJACENT TO PERIMETER PROPERTIES				TOTAL
	A (PERIMETER 1)	C (PERIMETER 2)	C (PERIMETER 3)	C (PERIMETER 4)	A (PERIMETER 5)	C (PERIMETER 6)	C (PERIMETER 7)	C (PERIMETER 9)	
LANDSCAPE TYPE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
LINEAR FEET OF PERIMETER	110.78 LF	484.69 LF	627.29 LF	679.11 LF	1037.12 LF	286.41 LF	52.48 LF	136.97 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	YES, 3 EX. TREES TO REMAIN *	NO	NO	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS PROVIDED									
SHADE TREES	0	12	15	17	14	7	8	3	77
EVERGREEN TREES	0	24	31	34	14	14	15	7	128
SHRUBS	0	0	0	0	0	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0
TOTAL	0	36	46	51	28	21	23	7	130

REFORESTATION PLANT LIST

ALTERNATIVE 1	SHADE TOL.	MOIST. REGIME	WET. STATUS	MINO.C.	SIZE & SPACING	REMARKS
45 Acer rubrum	VT	D-W	FAC	15'	CONT/B & B 1" CALPER	
11 Red Maple	VT	D-W	FAC	15'	CONT/B & B 3"-5" HEIGHT	
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B 1" CALPER	
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B 1" CALPER	
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B 1" CALPER	
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B 1" CALPER	
12 Quercus alba	MT	D-M	FACU	15'	CONT/B & B 1" CALPER	
12 Quercus alba	MT	D-M	FACU	15'	CONT/B & B 1" CALPER	
11 Prunus serotina	I	D-M	FACU	15'	CONT/B & B 3"-5" HEIGHT	
15 Vaccinium corymbosum	MT	M-W	FACW	15'	CONT/B & B 3"-5" HEIGHT	
15 Vaccinium corymbosum	MT	M-W	FACW	15'	CONT/B & B 3"-5" HEIGHT	

DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN ACCURATE ONE YEAR QUANTITIES OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 1/29/03

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 1/29/03
 DEVELOPER: ROCK REALTY INC. 25 MAIN STREET REISTERTOWN MD, 21136 (410) 526-4030

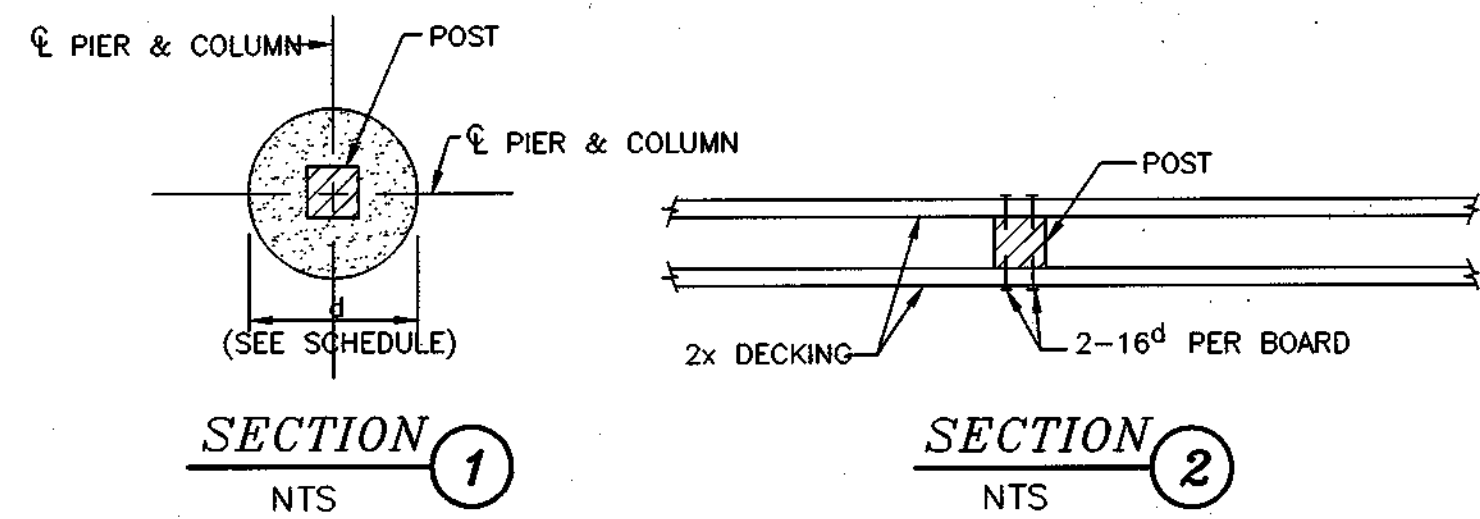
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 1/29/03
 DIRECTOR: [Signature]

MILDENBERG, BOENDER & ASSOC., INC.
 Planners Surveyors
 5072 Drossy Hill Drive, Suite 202, Beltsville, Maryland 21042
 (410) 987-0286 Fax: (301) 621-5521 Wash. (410) 987-0288 Fax

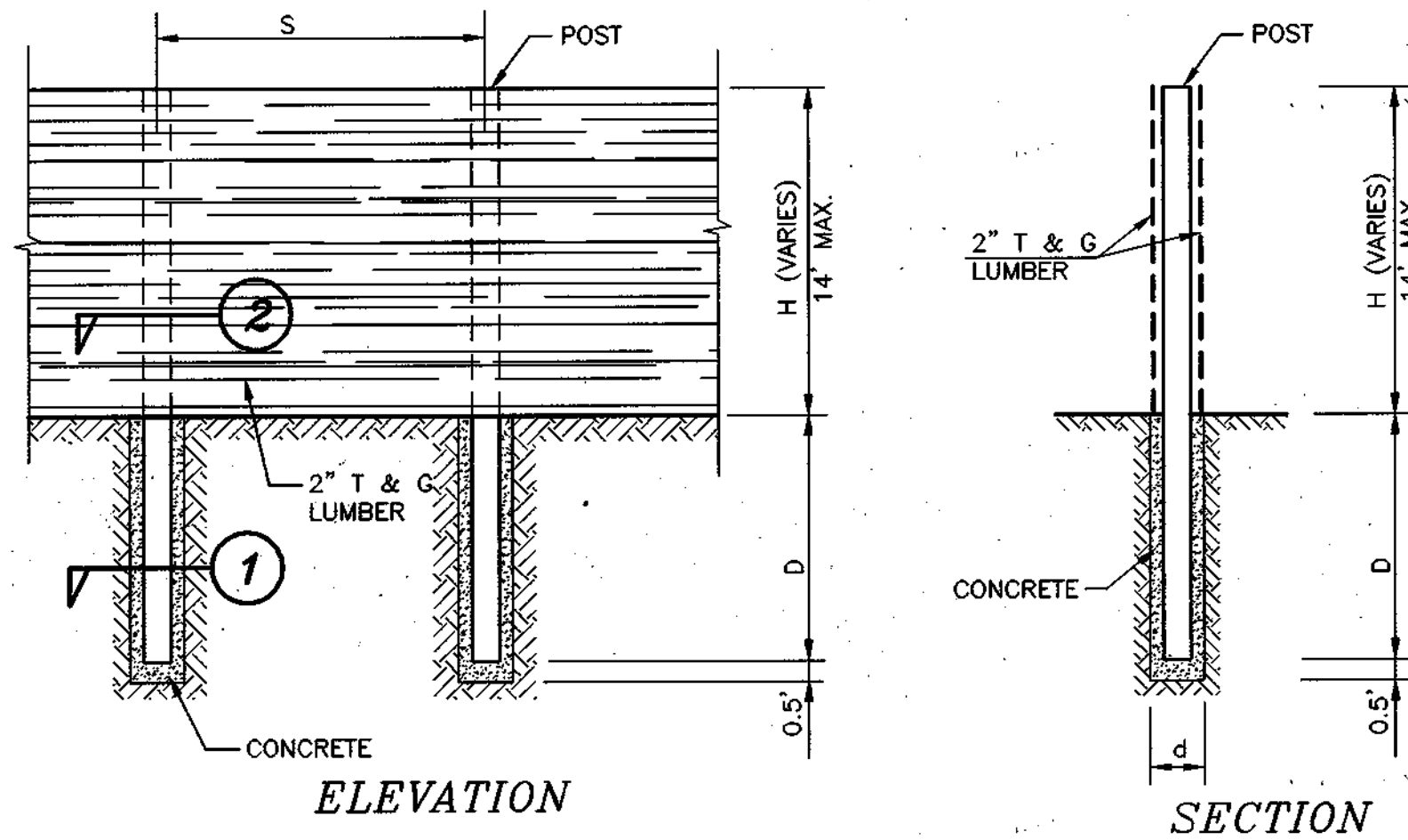
FAIRWAY OVERLOOK
 TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 LANDSCAPE AND FOREST CONSERVATION PLAN

Project: 00-065
 Date: APRIL 03
 Illustration: [Signature]
 Scale: MAP/SID
 M/SID: [Signature]
 Approval: [Signature]
 Date: 1/29/03

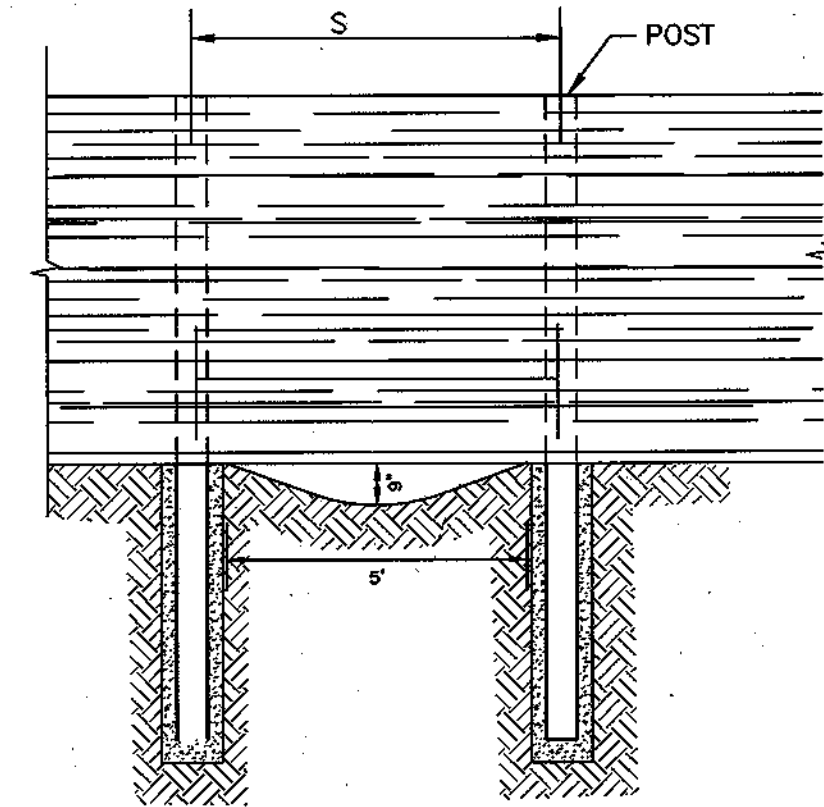
14 OF 15
 SDP-02-138



SCHEDULE				
H	S	D	d	POST SIZE
14	6'	6.5'	16"	10"x10"
12	6'	6.5'	16"	11"x10"
10 OR LESS	6'	6.0'	16"	8"x8"



NOISE WALL DETAIL
NTS



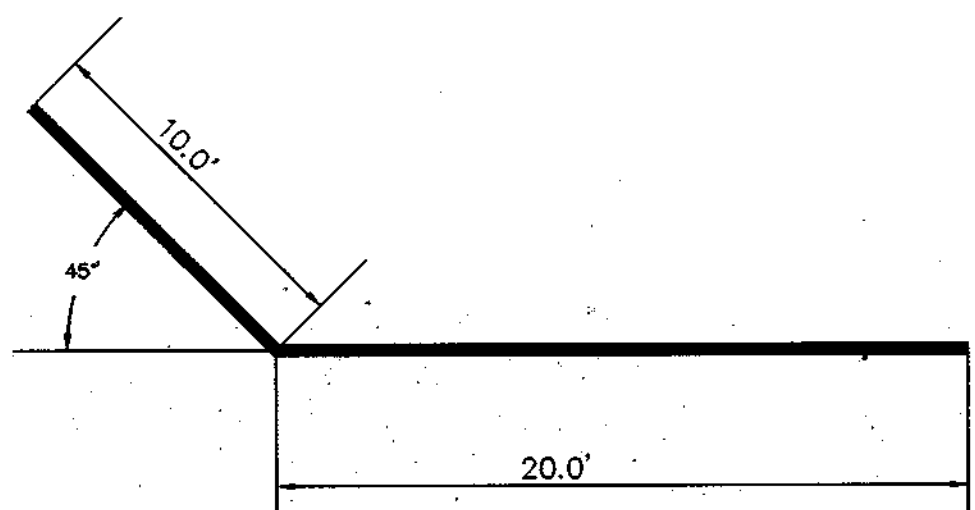
SWALE OPENING DETAIL

NOTES:

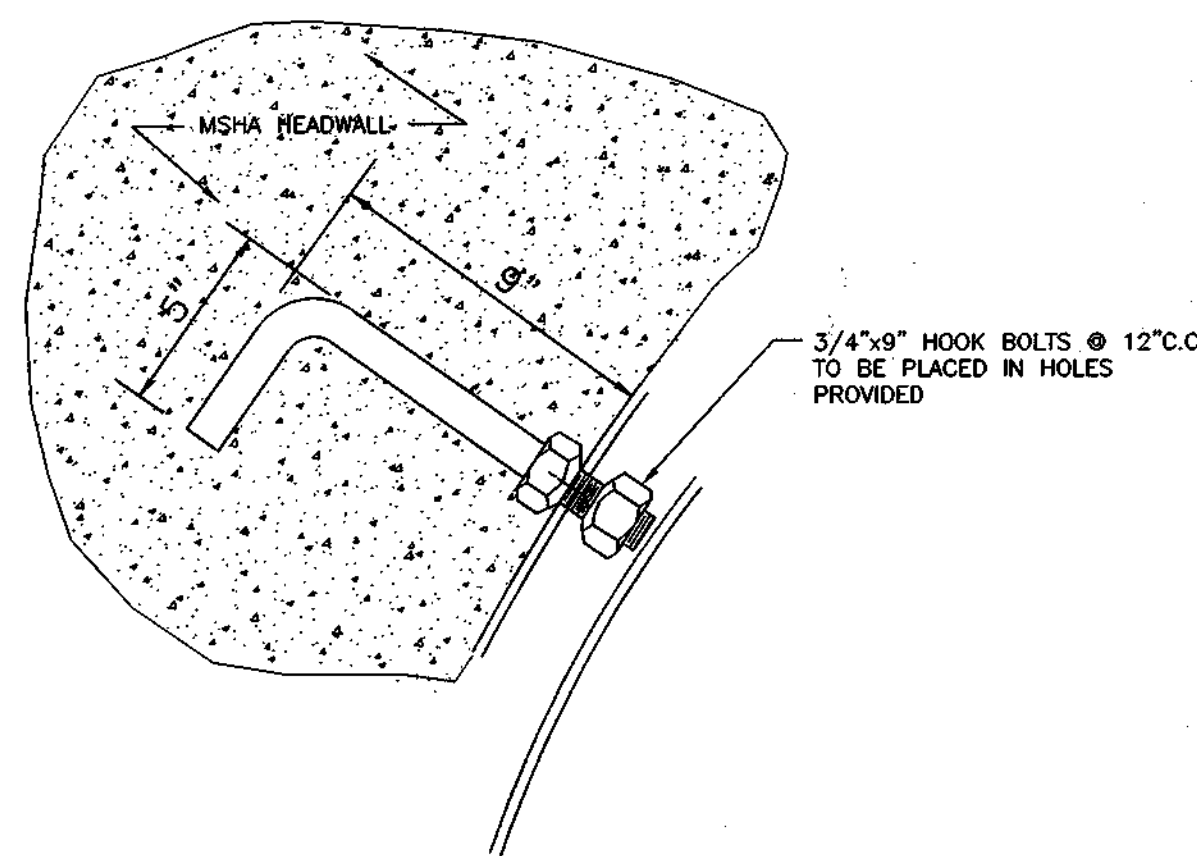
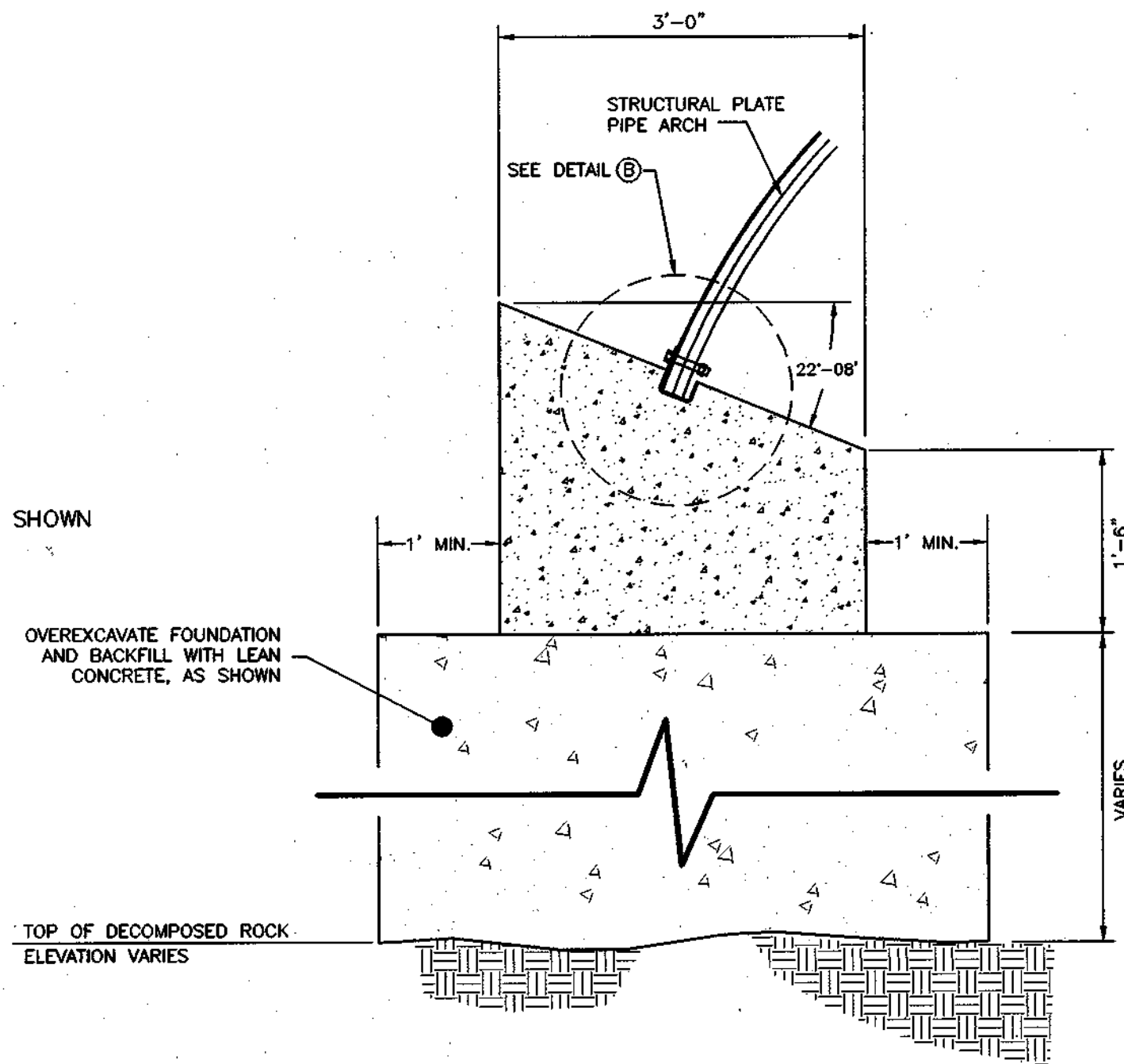
1. CONCRETE SHALL BE MSHA MIX. NO. 2 $f'c=3.500$ PSI
2. ALL WOODEN MEMBERS SHALL BE PRESSURE TREATED NO. 2 SELECT STRUCTURAL SOUTHERN PINE.
3. PRESSURE TREATMENT SHALL CONSIST OF CCA IN ACCORDANCE WITH AWPB LP-22.
4. PROVIDE 5"x0"-9" OPENING AT BOTTOM OF NOISE WALL IN CENTER OF SWALE.
5. WHERE NOISE WALL IS LOCATED OVER STORM DRAIN PLACE POST SUCH THAT STORM DRAIN IS CENTERED BETWEEN POSTS.

UNIT NO.	WALL HEIGHT	WALL LENGTH
1	6.0'	30.0'
2	6.0'	20.0'
3	6.0'	30.0'
4	7.0'	25.0'
5	8.0'	25.0'
6	8.0'	20.0'
7	8.0'	30.0'
8	8.0'	30.0'
9	10.0'	30.0'
10	10.0'	20.0'
11	10.0'	30.0'
12	12.0'	30.0'
13	12.0'	20.0'
14	12.0'	30.0'
15	12.0'	30.0'
16	12.0'	30.0'
17	12.0'	30.0'
18	10.0'	30.0'
19	10.0'	20.0'
20	10.0'	30.0'
21	8.0'	30.0'
22	8.0'	20.0'
23	8.0'	30.0'
25	7.0'	30.0'

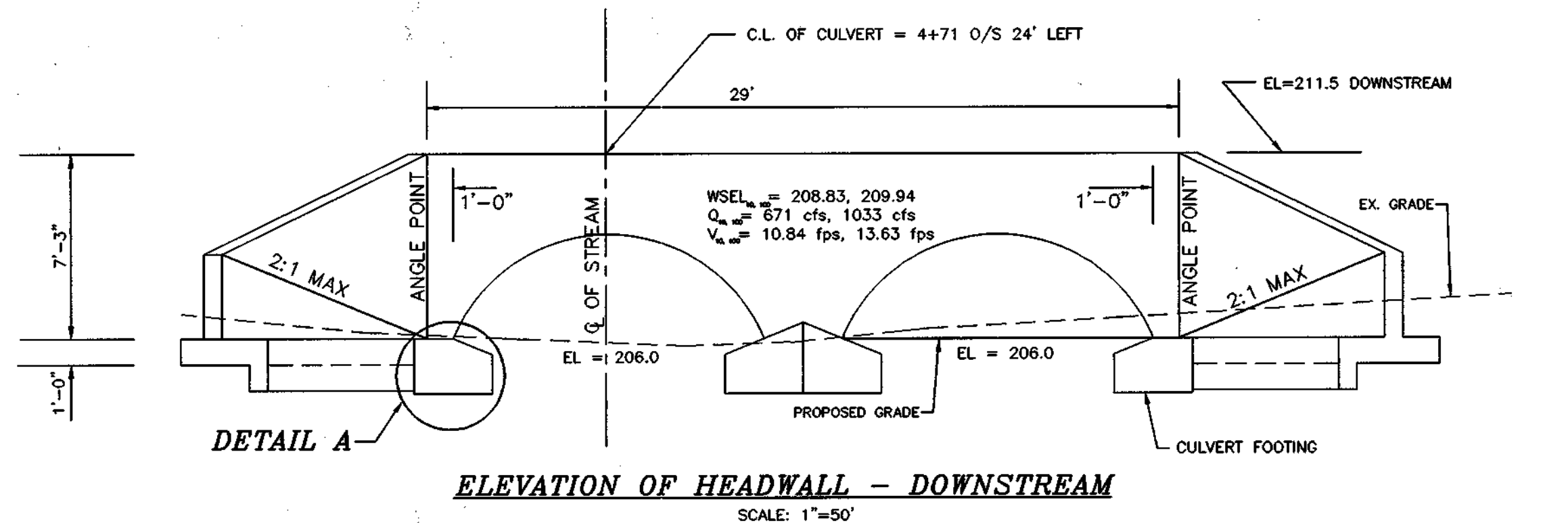
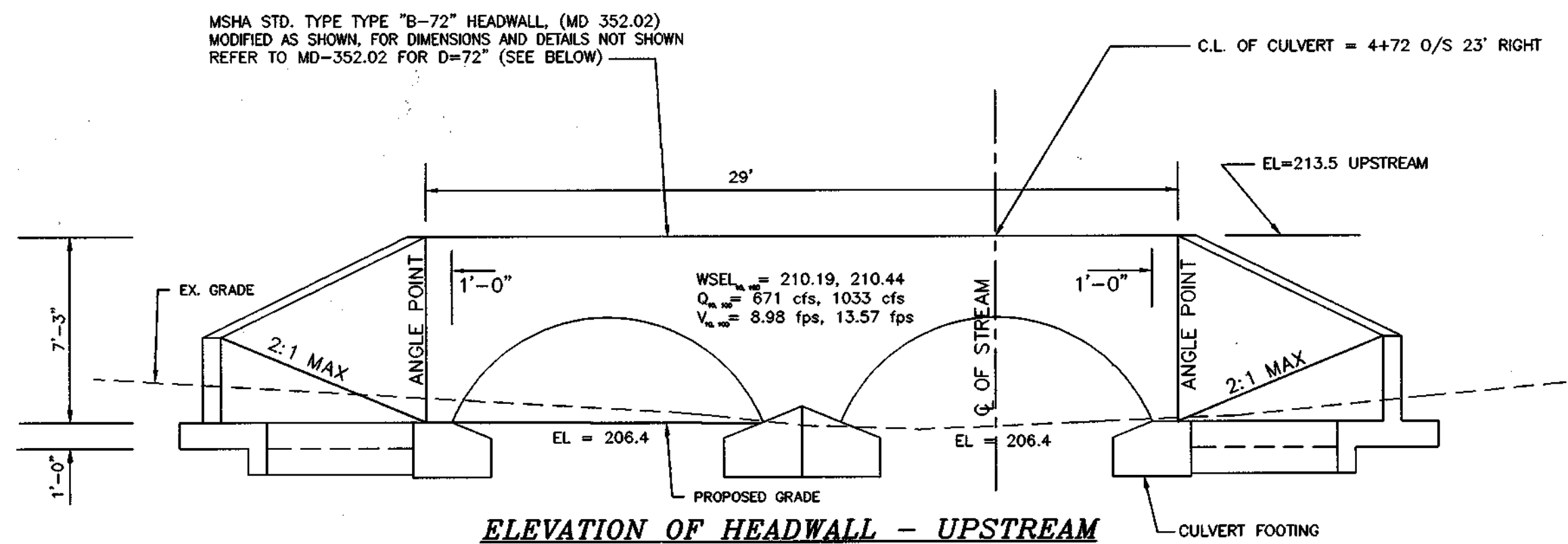
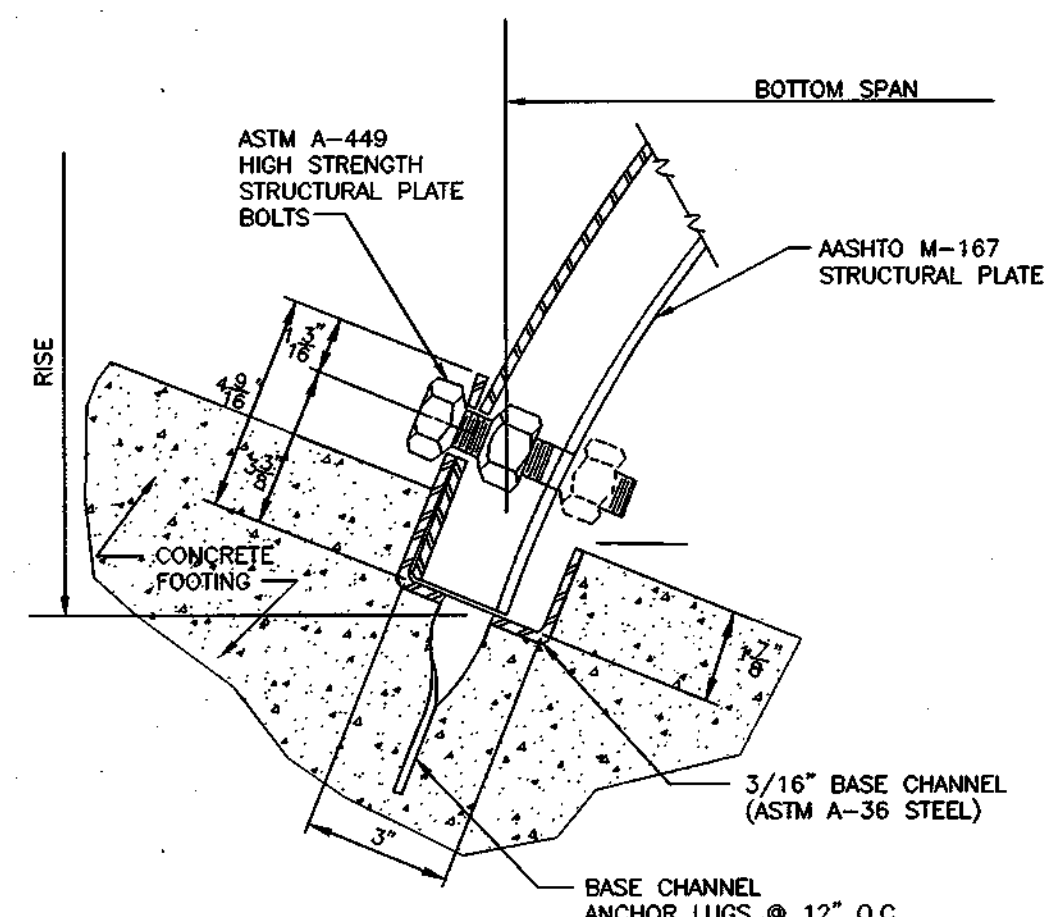
* INDICATES WALLS WITH 45° BEND AS SHOWN



TYP. NOISE WALL GEOMETRY
NTS



DETAIL OF HOOK BOLTS
NOT TO SCALE



NOTE: FOUNDATIONS FOR CULVERT AND HEADWALL FOOTINGS SHALL BE OVEREXCAVATED TO THE DEPTH OF WEATHERED ROCK (SEE BORING LOGS ON SHEET 13 OF 15). FOUNDATION SHALL BE BACKFILLED USING LEAN CONCRETE (MIN 1000 COMPRESSIVE STRENGTH) TO THE REQUIRED FOOTING ELEVATION. OVEREXCAVATION SHALL BE PERFORMED USING TRENCH BOXES OR OTHER SHORING AS NECESSARY TO MAINTAIN THE EXISTING STREAM CHANNEL DURING CONSTRUCTION. EXCAVATION SHALL BE CONTINUOUSLY DEWATERED PRIOR TO BACKFILLING WITH LEAN CONCRETE IN ORDER TO PREVENT SATURATION OF THE SUBSOIL.

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 397-0236 Fax: (301) 821-5521 Wash. (410) 397-0238 Fax

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD HEADWALLS
B-66 B-72 B-76 B-84
STANDARD NO. MD-352.02

OPENING	D	B	C	E	F	G	H	J	K	L	M	N	O	P	Q	R	STAIR	STEEL
NO. OF ARCHES	AREA	CONCRETE	CEMENT	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH
1	10.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
2	20.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	30.0	6.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
4	40.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
5	50.0	10.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
6	60.0	12.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
7	70.0	14.0	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
8	80.0	16.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
9	90.0	18.0	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
10	100.0	20.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

QUANTITIES IN TABLE TO BE USED FOR ESTIMATING ONLY.

00-065 (1/01) MISC - DET.DWG

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/21/03

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

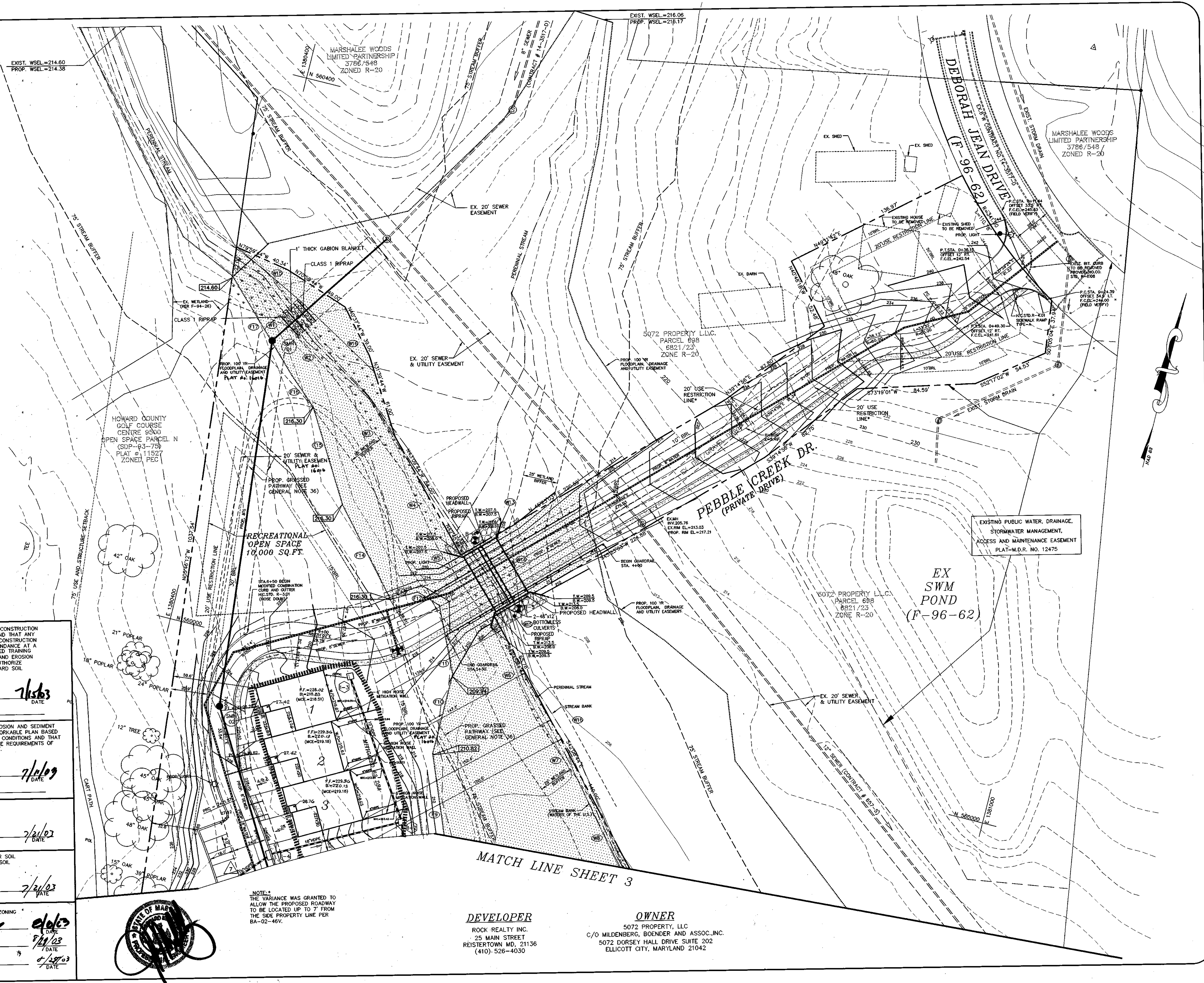
[Handwritten Signature]
 MILDENBERG, BOENDER & ASSOC., INC.
 ENGINEERS PLANNERS SURVEYORS

project	00-065	date	APRIL 03
illustration	MMP	engineering	MMP
scale	NTS	approval	NTS

description	revisions	date

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 MISCELLANEOUS DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 397-0236 Fax: (301) 821-5521 Wash. (410) 397-0238 Fax



WETLAND TABLE

LINE	LENGTH	BEARING
V1	45.00	S82°07'21"E
V2	30.00	S56°11'04"E
V3	85.67	N50°38'08"W
V4	58.00	N37°52'57"W
V5	74.65	N48°19'25"W
V6	67.30	N39°06'37"W
V7	86.48	N48°28'00"W
V8	143.50	N27°44'55"W
V9	33.11	S01°15'14"W
V10	54.42	S21°21'32"E
V11	60.23	S5°52'07"E
V12	71.78	S50°18'54"E

FLOODPLAIN

LINE	BEARING & DISTANCE
F9	N22°07'55"W 61.09'
F10	N00°02'33"W 58.74'
F11	N25°04'20"W 50.27'
F12	N72°03'08"W 18.27'
F13	S60°39'56"W 20.12'
F14	N40°57'58"W 76.04'
F15	N30°50'13"W 73.33'
F16	N48°02'11"W 27.33'
F17	N44°55'07"W 83.29'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S SIGNATURE: *Jim L. Lory* DATE: 7/15/03
 DEVELOPER'S NAME: *Jim L. Lory*

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S SIGNATURE: *Donna Milberg* DATE: 7/10/03
 ENGINEER'S NAME: *Donna Milberg*

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
 USDA-NATURAL RESOURCES CONSERVATION SERVICE
Jim Murray DATE: 7/21/03

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.
 HOWARD SCD
Julia Selig DATE: 7/21/03

APPROVED DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *eddc* DATE: 8/14/03
 CHIEF, DIVISION OF LAND DEVELOPMENT: *Carla Korman* DATE: 8/14/03
 DIRECTOR: *Charles de la Torre* DATE: 8/27/03



NOTE: THE VARIANCE WAS GRANTED TO ALLOW THE PROPOSED ROADWAY TO BE LOCATED UP TO 7' FROM THE SIDE PROPERTY LINE PER BA-02-46V.

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 RESTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

MATCH LINE SHEET 3

MATCH LINE SHEET 2

WETLAND TABLE

LINE	LENGTH	BEARING
V6	14.59	N57°44'55"W
V5	81.17	N51°09'54"W
V10	90.66	N43°36'32"W
V11	91.42	N49°42'57"W
V12	62.66	N38°23'57"W

FLOODPLAIN

LINE	BEARING & DISTANCE
F1	N031°18'50"W 53.02'
F2	N48°04'27"W 75.95'
F3	N48°20'54"W 100.08'
F4	N40°48'48"W 42.13'
F5	N54°44'50"W 58.73'
F6	N38°50'06"W 72.97'
F7	N17°02'34"W 46.40'
F8	N09°16'48"W 48.31'
F9	N22°07'55"W 61.09'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S SIGNATURE: *Mark L. Lewis* DATE: 7/15/03
 DEVELOPER'S NAME: Mark L. Lewis

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S SIGNATURE: *Luigi Milderberg* DATE: 7/15/03
 ENGINEER'S NAME: Luigi Milderberg
 REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE: *Jim Muen/ia* DATE: 7/2/03

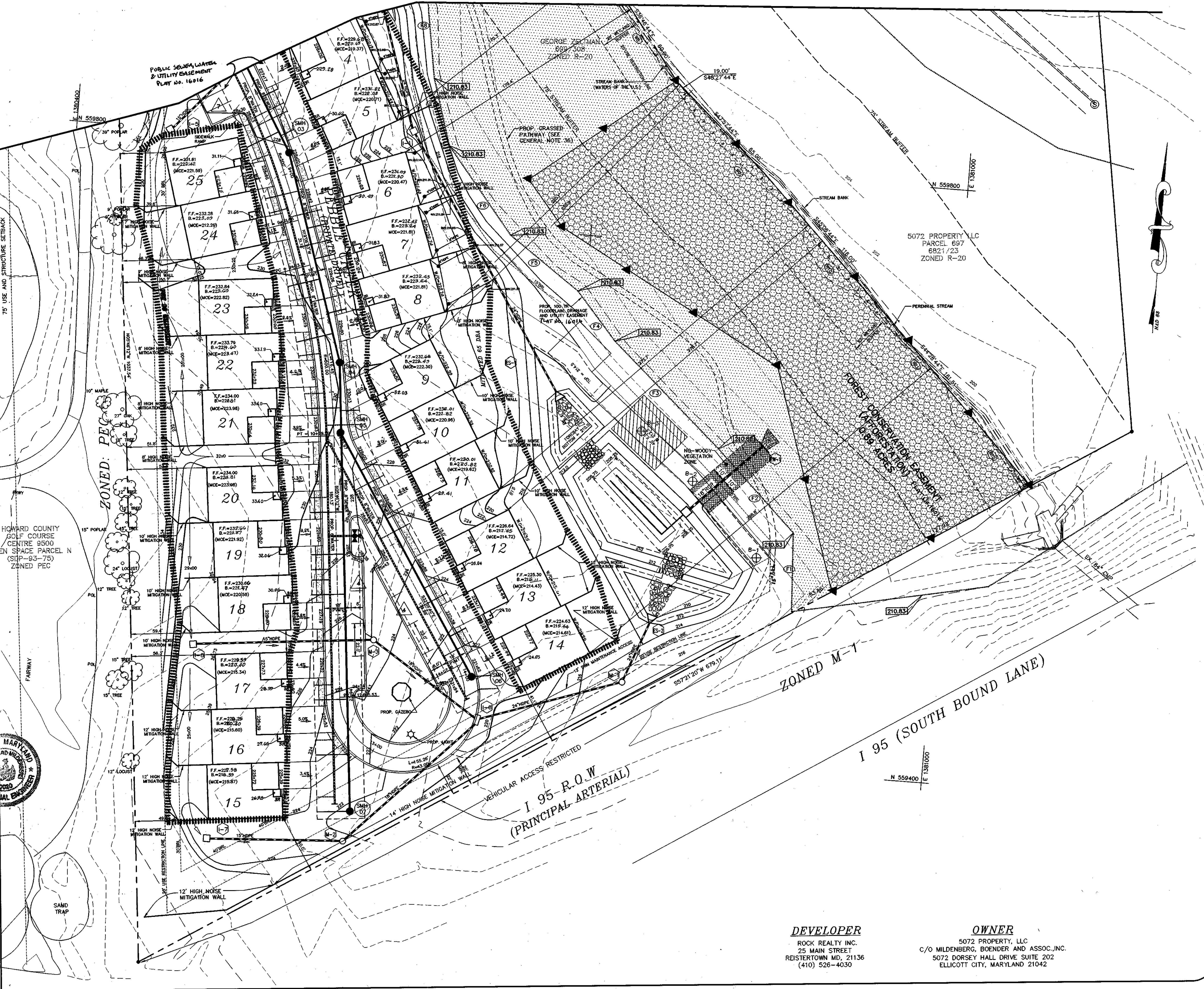
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

HOWARD SCD: *[Signature]* DATE: 7/2/03

APPROVED, DEPARTMENT OF PLANNING AND ZONING: *[Signature]* DATE: 6/16/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE: 6/21/02
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 6/21/02
 DIRECTOR



DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 RESTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

project	00-085	date	APRIL 03
illustration	MMP	engineering	MMP
scale	1"=30'	approval	

REVISIONS

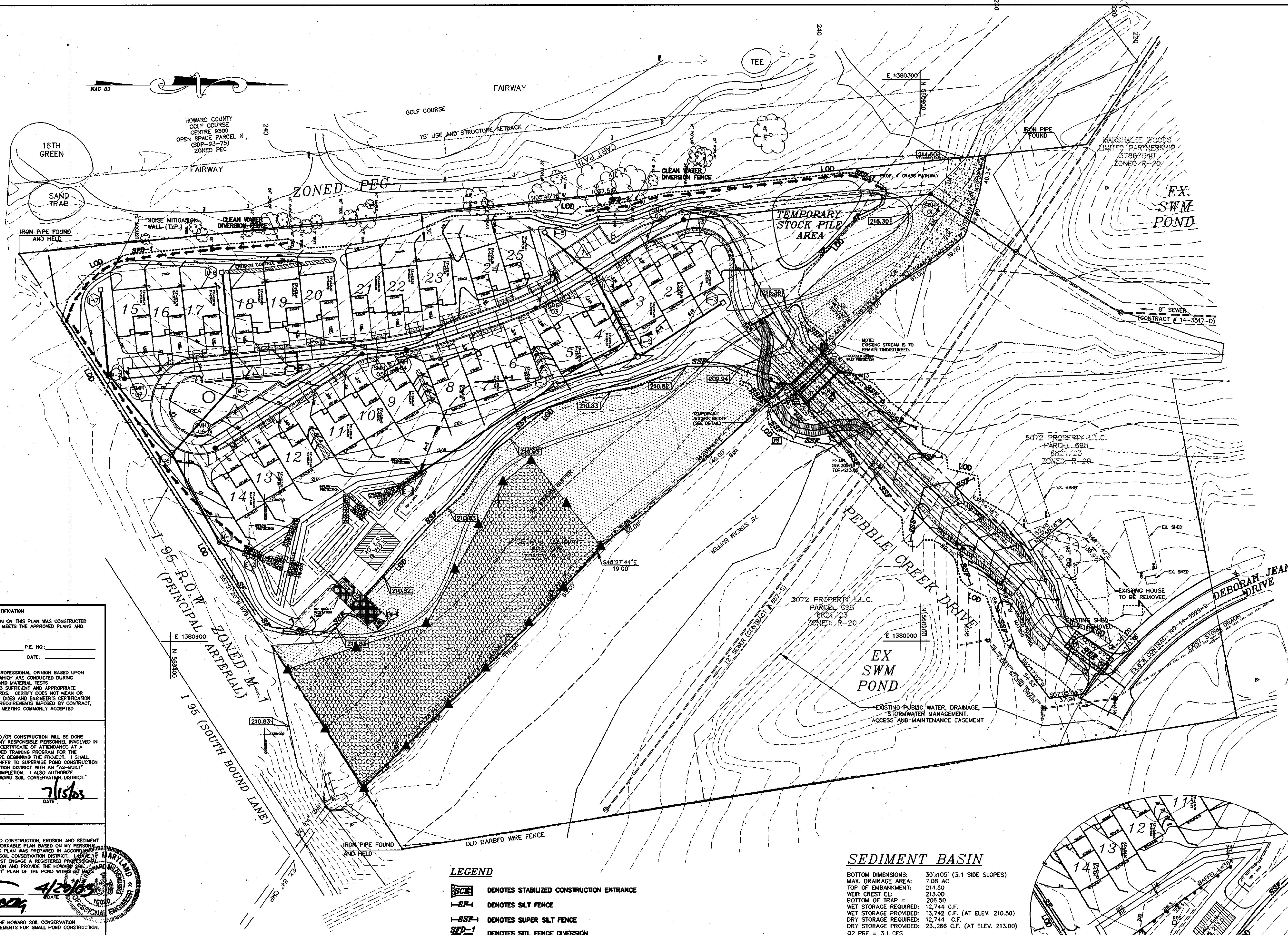
NO.	DESCRIPTION	DATE
1	REVISED GRADING AND UTILITIES FOR UNITS 4-25	6/11/02

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 691 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Bult. (301) 621-5521 Wash. (410) 997-0298 Fax.



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

P.E. NO.:
SIGNATURE: _____ DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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 of Developer: *Mark L. Terry* DATE: 7/15/03
Printed Name of Developer: *Mark L. Terry*

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 NOTICED 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 of Engineer: *John Milogrovan* DATE: 4/22/03
Printed Name of Engineer: *John Milogrovan*

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE: 7/21/03

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: 7/21/03

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: *John C. Hamilton* DATE: 8/16/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Signature: *Mark L. Terry* DATE: 7/15/03
CHIEF, DIVISION OF LAND DEVELOPMENT
Signature: _____ DATE: _____
DIRECTOR

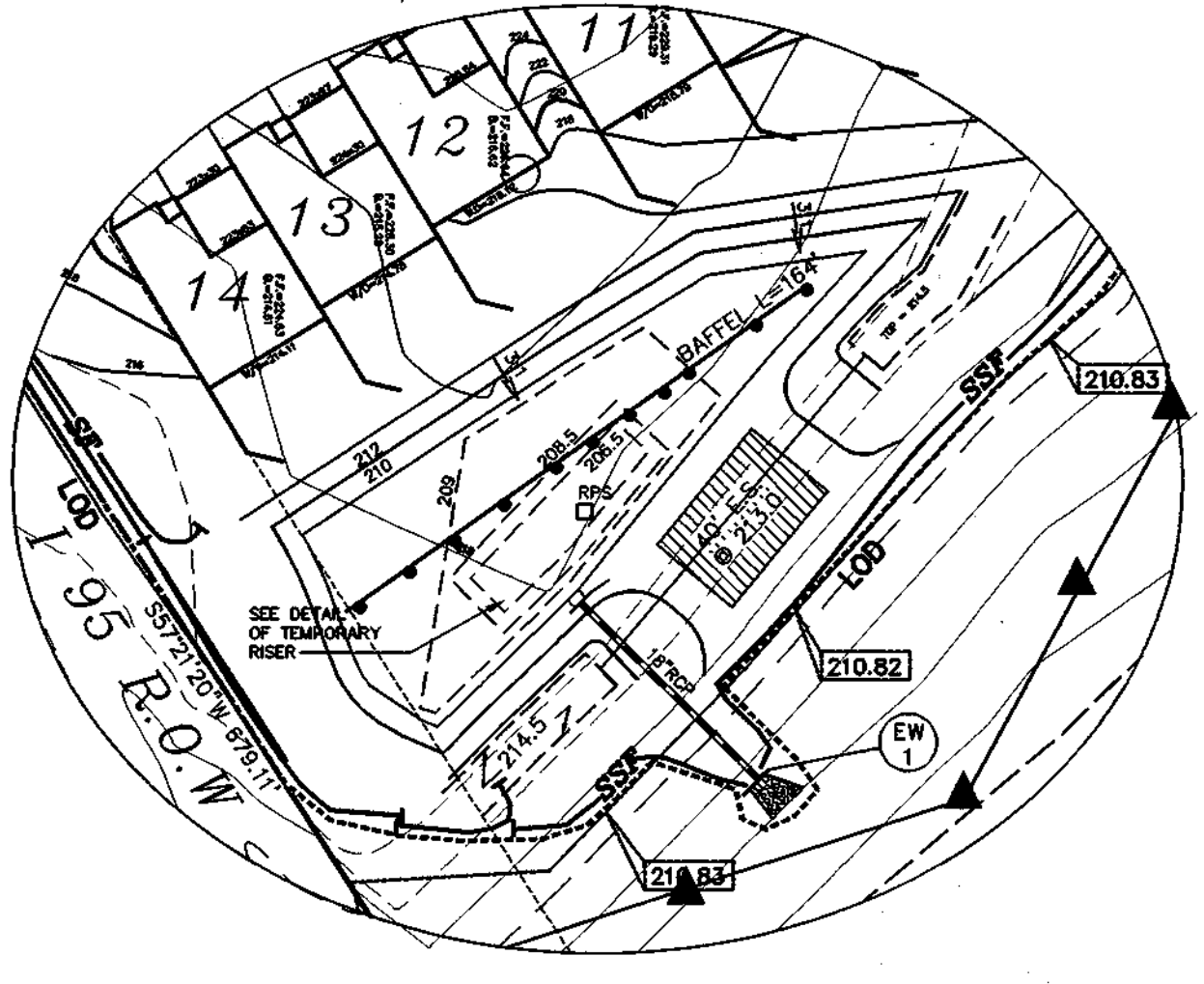
NOTE
CURB ALL SILT FENCES AND SUPER SILT FENCES 2' UPHILL IN ELEVATION

LEGEND

- DENOTES STABILIZED CONSTRUCTION ENTRANCE
- DENOTES SILT FENCE
- DENOTES SUPER SILT FENCE
- DENOTES SILT FENCE DIVERSION
- DENOTES LIMIT OF DISTURBANCE
- REMOVABLE PUMP STATION
- FILTER BAG
- WETLANDS
- 100 YEAR FLOODPLAIN
- EROSION CONTROL MATTING
- INFLOW PROTECTION
- NO-WOODY VEGETATION ZONE

SEDIMENT BASIN

BOTTOM DIMENSIONS: 30'x105' (3:1 SIDE SLOPES)
 MAX. DRAINAGE AREA: 7.08 AC
 TOP OF EMBANKMENT: 214.50
 WEIR CREST EL.: 213.00
 BOTTOM OF TRAP = 206.50
 WET STORAGE REQUIRED: 12,744 C.F.
 WET STORAGE PROVIDED: 13,742 C.F. (AT ELEV. 210.50)
 DRY STORAGE REQUIRED: 12,744 C.F.
 DRY STORAGE PROVIDED: 23,286 C.F. (AT ELEV. 213.00)
 Q2 PRE = 3.1 CFS
 Q2 DURING CONSTRUCTION = 0.6 CFS @ 212.6
 Q10 DURING CONSTRUCTION = 24.4 CFS @ 213.3
 E.S. ELEV. = 213.0
 E.S. WIDTH = 40.0'
 CLEANOUT ELEV. = 209.7
 4" RISER WEIR ELEV. = 213.0



DEVELOPER
 ROCK REALTY, INC.
 25 MAIN STREET
 REISTERTOWN, MD. 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

PLAN - TEMPORARY SEDIMENT BASIN

Project	00-065	Date	APRIL 03
Illustration	MMP	Engineering	MMP
Scale	1"=60'	Approval	MMP

REVISED	DATE	DESCRIPTION
1	2/16/04	REVISIONS

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 - PARCEL 581 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 587-0286 Fax: (301) 621-5621 Wash. (410) 587-0288 Fax.

NOTES:

- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE PROVIDED BY AFFORESTATION OF 0.89 ACRES OF FOREST. FINANCIAL SURETY FOR THE ON-SITE AFFORESTATION (40.71 ACRES OR 31,083.4 SQ. FT.) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$165,000.00. (FOREST CONSERVATION CREDIT FOR 7,675 SQ. FT. OF LANDSCAPING HAS BEEN TAKEN FOR 13 SHADE TREES & 11 EVERGREENS AS SHOWN ON THIS PLAN TO BE PLANTED AS PART OF THE LANDSCAPING REQUIREMENTS.)
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.1204 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (76 STREET TREES, 109 SHADE TREES, 134 EVERGREENS) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$75,000.00.
- TREE PROTECTIVE FENCING FOR THE AFFORESTATION AREA IS NOT REQUIRED SINCE THE AFFORESTATION AREA IS LOCATED IN A SECTION OF FLOODPLAIN WHERE NO GRADING IS PROPOSED.
- AT THE TIME OF 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 RELICATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNITS, SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS.

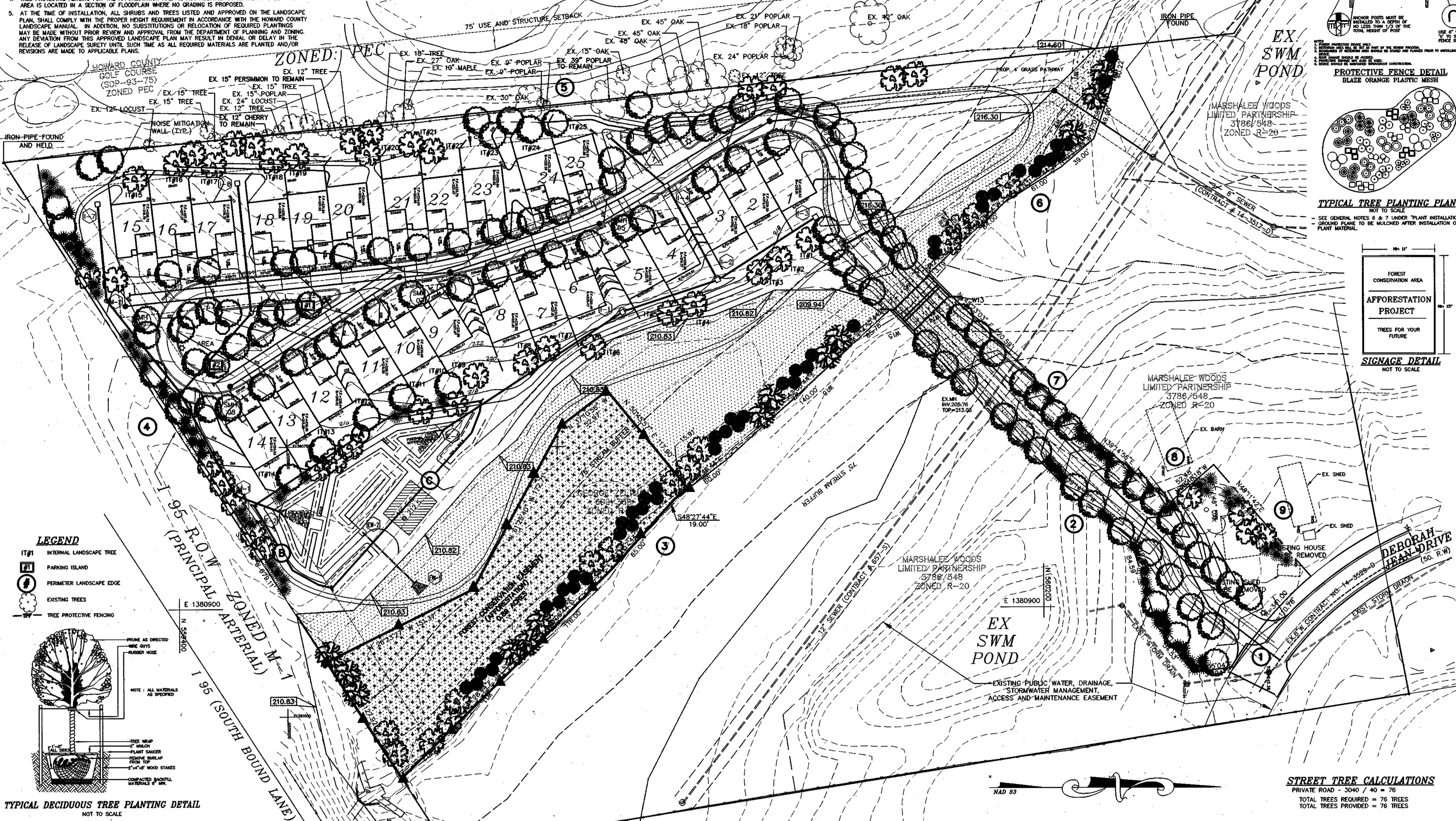
SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	15
NUMBER OF PLANTING ISLANDS REQUIRED	2
NUMBER OF PLANTING ISLANDS PROVIDED	2
NUMBER OF TREES REQUIRED	2 SHADE TREES
NUMBER OF TREES PROVIDED	2 SHADE TREES
SHADE TREES	2 SHADE TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

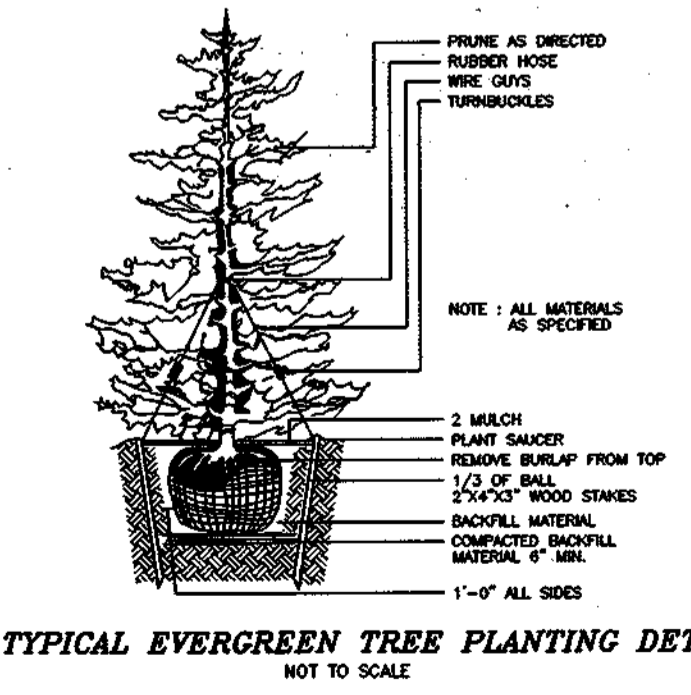
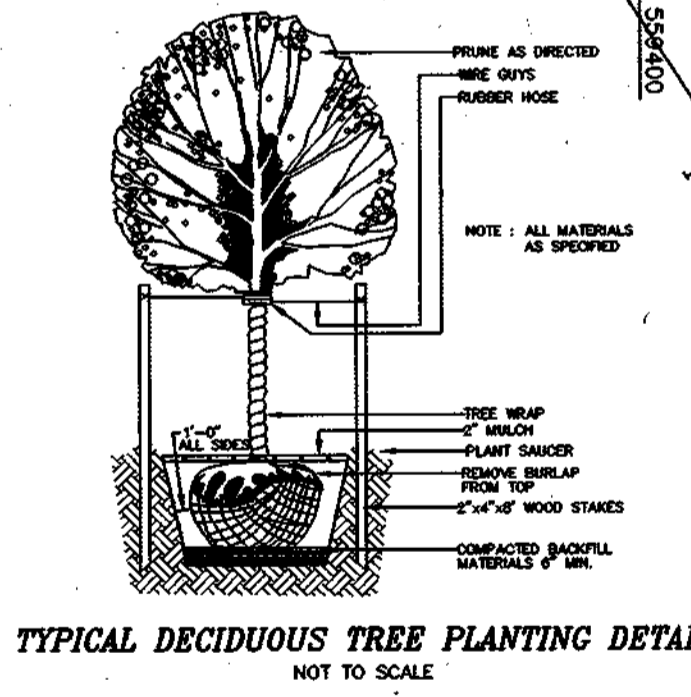
QUANTITY	SUBSTITUTION	BOTANICAL NAME	COMMON NAME	SIZE
56		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
55		PICEA ABIES	NORWAY SPRUCE	6" - 8" HT.
46		PINUS RIGIDA	PITCH PINE	6" - 8" HT.
35		PINUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
115		PIRUS CALLERYANA 'REDSPIRE'	REDSPIRE PEAR	2 1/2" - 3" CAL.
13		QUERCUS PHellos	WILLOW OAK	2 1/2" - 3" CAL.
TOTAL				
330				

330 TREES (76 STREET TREES, 109 SHADE TREES & 134 EVERGREEN TREES)



LEGEND

- INTERNAL LANDSCAPE TREE
- PARKING ISLAND
- PERIMETER LANDSCAPE EDGE
- EXISTING TREES
- TREE PROTECTIVE FENCING



DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED COPY OF THE LANDSCAPE PLAN, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 1/23/03

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	25
NUMBER OF TREES REQUIRED (1:DU SFA: 1:3 DU APTS)	25
NUMBER OF TREES PROVIDED	25
SHADE TREES	12 SHADE TREES
EVERGREEN TREES	13 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES

SCHEDULE A: PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS				ADJACENT TO PERIMETER PROPERTIES				TOTAL
	N/A (PERIMETER 1)	C (PERIMETER 2)	C (PERIMETER 3)	C (PERIMETER 4)	A (PERIMETER 5)	C (PERIMETER 6)	C (PERIMETER 7)	C (PERIMETER 8)	
LINEAR FEET OF PERIMETER	110.78 LF	484.69 LF	627.29 LF	679.11 LF	1037.12 LF	286.41 LF	308.39 LF	52.48 LF	136.97 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	YES, 3 EX. TREES TO REMAIN	NO	NO	NO	NO
GREAT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED									
SHADE TREES	0 SHADE TREES	12 SHADE TREES	15 SHADE TREES	17 SHADE TREES	14 SHADE TREES	7 SHADE TREES	8 SHADE TREES	1 SHADE TREE	77 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	24 EVERGREEN TREES	31 EVERGREEN TREES	34 EVERGREEN TREES	14 EVERGREEN TREES	14 EVERGREEN TREES	15 EVERGREEN TREES	7 EVERGREEN TREES	129 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED									
SHADE TREES	0 SHADE TREES	12 SHADE TREES	15 SHADE TREES	16 SHADE TREES	14 SHADE TREES	7 SHADE TREES	8 SHADE TREES	1 SHADE TREE	76 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	24 EVERGREEN TREES	31 EVERGREEN TREES	36 EVERGREEN TREES	14 EVERGREEN TREES	14 EVERGREEN TREES	15 EVERGREEN TREES	3 EVERGREEN TREES	130 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES
SHRUBS (10:1 SUBSTITUTION)	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS

* CREDIT ALONG PERIMETER 5 TAKEN FOR AN EXISTING 12" CHERRY, 15" PERSIMMON, AND 39" POPLAR.

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	PERIMETER A - 236 LF (TYPE B)	PERIMETER B - 110 LF (TYPE B)	PERIMETER C - 225 LF (TYPE B)	TOTAL
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A	N/A	N/A	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND 3)	N/A	YES, 110 LF OF PERIMETER 4 LANDSCAPING - TYPE C	YES, 202 LF OF PERIMETER 3 LANDSCAPING - TYPE C	
NUMBER OF TREES REQUIRED				
SHADE TREES	5 SHADE TREES	0 SHADE TREES	0 SHADE TREES	5 SHADE TREES
EVERGREEN TREES	6 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	6 EVERGREEN TREES
NUMBER OF TREES PROVIDED				
SHADE TREES	5 SHADE TREES	0 SHADE TREES	0 SHADE TREES	5 SHADE TREES
EVERGREEN TREES	6 EVERGREEN TREES	0 EVERGREEN TREES	0 EVERGREEN TREES	6 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES

REFORESTATION PLANT LIST

ALTERNATIVE 1	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C.	SIZE & SPACING	REMARKS	ALTERNATIVE 2	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C.	SIZE & SPACING	REMARKS
45 Acer rubrum 'Red Maple'	VT	D-W	FAC	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	76 Acer rubrum	VT	D-W	FAC	11'	SEDLING/WHP WITH TREE SHELTER	
11 Cornus florida 'Flowering Dogwood'	VT	D-M	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	16 Cornus florida	VT	D-M	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
12 Liquidambar styraciflua 'American Sweet Gum'	I	M-W	FAC	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	30 Liquidambar styraciflua	I	M-W	FAC	11'	SEDLING/WHP WITH TREE SHELTER	
12 Liriodendron tulipifera 'Tulip Tree'	MT	D-M	FAC	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	30 Liriodendron tulipifera	MT	D-M	FAC	11'	SEDLING/WHP WITH TREE SHELTER	
24 Nyssa sylvatica 'Black Gum'	T	M-W	FAC	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	40 Nyssa sylvatica	T	M-W	FAC	11'	SEDLING/WHP WITH TREE SHELTER	
12 Prunus serotina 'Wild Black Cherry'	I	M-W	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	16 Prunus serotina	I	M-W	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
12 Quercus alba 'White Oak'	MT	D-M	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	20 Quercus alba	MT	D-M	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
11 Sassafras albidum 'Common Sassafras'	I	D-M	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	16 Sassafras albidum	I	D-M	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
15 Viburnum dentatum 'Southern Arrowwood'	T	M-W	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	25 Viburnum dentatum	T	M-W	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
15 Vaccinium corymbosum 'Highbush Blueberry'	MT	M-W	FACU	15'	CONT/B & B	11' SEDLING/WHP WITH TREE SHELTER	25 Vaccinium corymbosum	MT	M-W	FACU	11'	SEDLING/WHP WITH TREE SHELTER	
TOTAL						169 TREES & SHRUBS (142 TREES REQUIRED)	TOTAL						234 SHRUBS & WHIPS WITH TREE SHELTERS (249 WHIPS WITH TREE SHELTERS REQUIRED)

STREET TREE CALCULATIONS

PRIVATE ROAD - 5000' / 40' = 76
 TOTAL TREES REQUIRED = 76 TREES
 TOTAL TREES PROVIDED = 76 TREES

NOTE: THIS PLAN IS TO BE USED FOR LANDSCAPE & FOREST CONSERVATION PURPOSES ONLY.

PLANTING SPECIFICATIONS AND NOTES

- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
 - DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 2 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
 - SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
 - SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
 - CONTAINER GROWN STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.
- PLANT STORAGE AND INSPECTION**
- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
 - FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
 - PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, NURSERY ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
 - UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.
- PLANT INSTALLATION**
- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AT CONSTRUCTION, INSTALL OR RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH, WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
 - PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD DELETED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST. CARE SHALL BE TAKEN WHEN LOCATING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING TREES. IF ROOTS GREATER THAN 1/2" IN DIAMETER ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
 - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCRUSTE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
 - CHOPPED OR INJURED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORN DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
 - TREES PLANTED IN THE AFFORESTATION AREA SHALL BE PLANTED EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
 - AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
 - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- FERTILIZERS**
- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADDITIONAL STRESS TO THE NEWLY PLANTED PLANT.
 - NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
 - IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE ALSO COMMERCIALY AVAILABLE AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.
- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
 - ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
 - WATERING SCHEDULING OF NATIVE, LOCAL AND ENDOGENIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY AFFECTING THE PLANTED STOCK.
 - REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS WEEDS WITHIN A 3-FOOT RADIUS SURROUNDING PLANTED WOODY NURSERY STOCK.
 - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN PLANTING STOCK. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS INTERFERING WITH PLANTING STOCK.
 - A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.
- SUPERVISION**
- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

FOREST CONSERVATION DATA

I. BASIC SITE DATA	ACRES
GROSS SITE AREA	8.30
AREA WITHIN 100 YEAR FLOODPLAIN	2.34
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.00
NET TRACT AREA	5.96
LAND USE CATEGORY	RESIDENTIAL - SUBURBAN
II. FOREST CONSERVATION WORKSHEET DATA SUMMARY	
B. REFORESTATION THRESHOLD (20%)	1.19
C. AFFORESTATION MINIMUM (15%)	0.89
D. EXISTING FOREST ON NET TRACT AREA	0.00
E. FOREST AREAS TO BE CLEARED	0.00
F. FOREST AREAS TO BE RETAINED	0.00
V. AFFORESTATION CALCULATIONS	
TOTAL AFFORESTATION REQUIRED	0.89
TOTAL AFFORESTATION PROVIDED	0.89

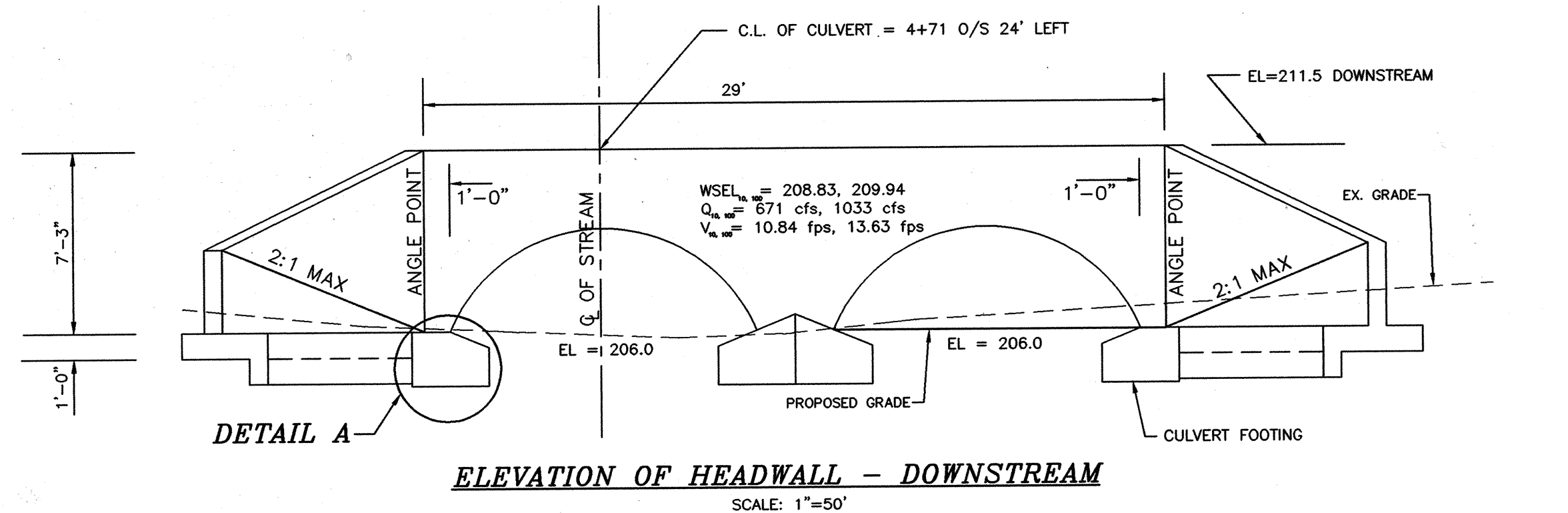
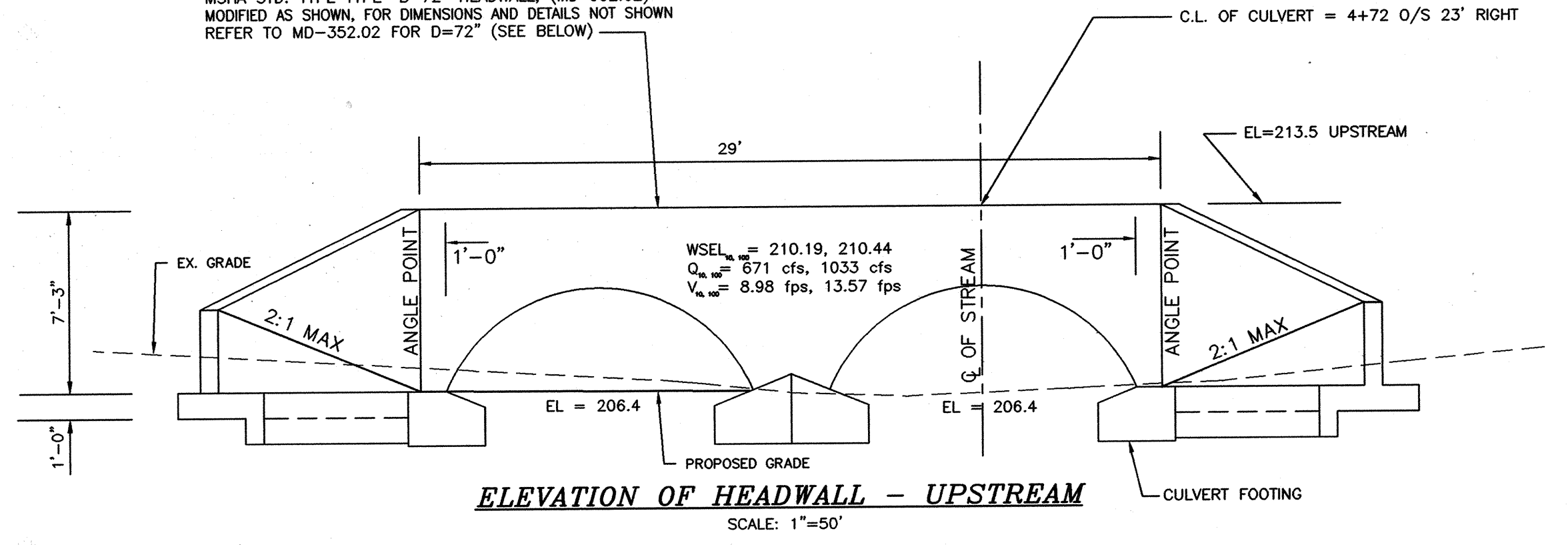
Project	00-065	date	APRIL 03
Illustration	MPP/SID	engineering	approval
Scale	1"=60'		

date	2/12/03
description	REVISED GRADING
revisions	

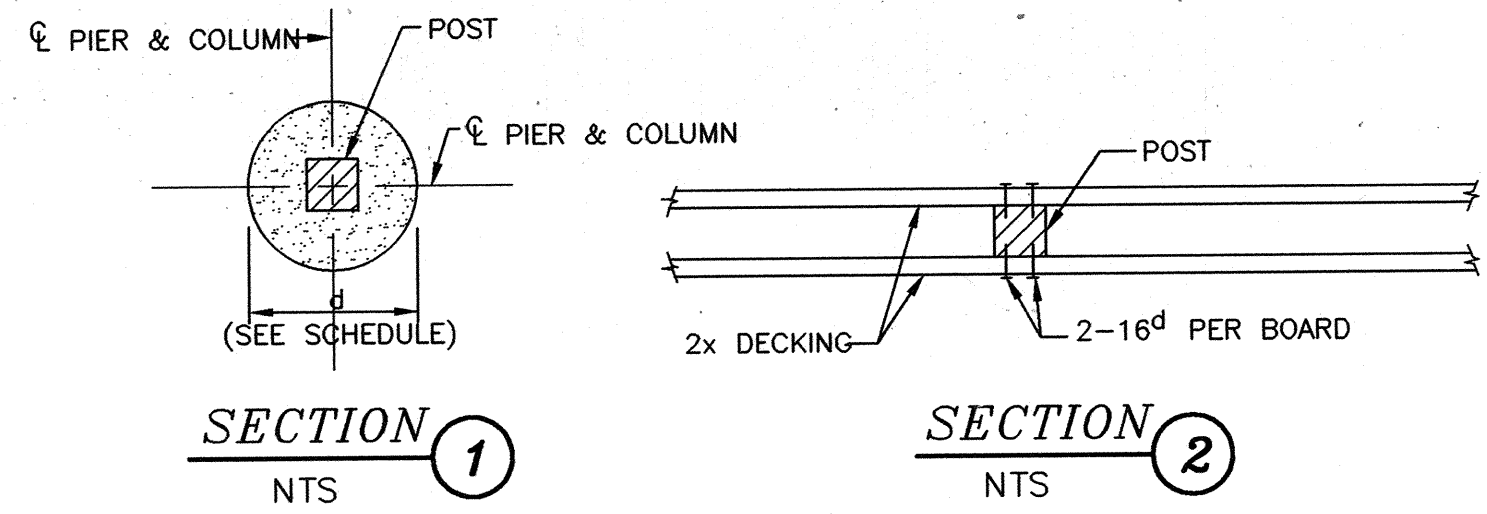
FAIRWAY OVERLOOK
 TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
LANDSCAPE AND FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0596 Fax

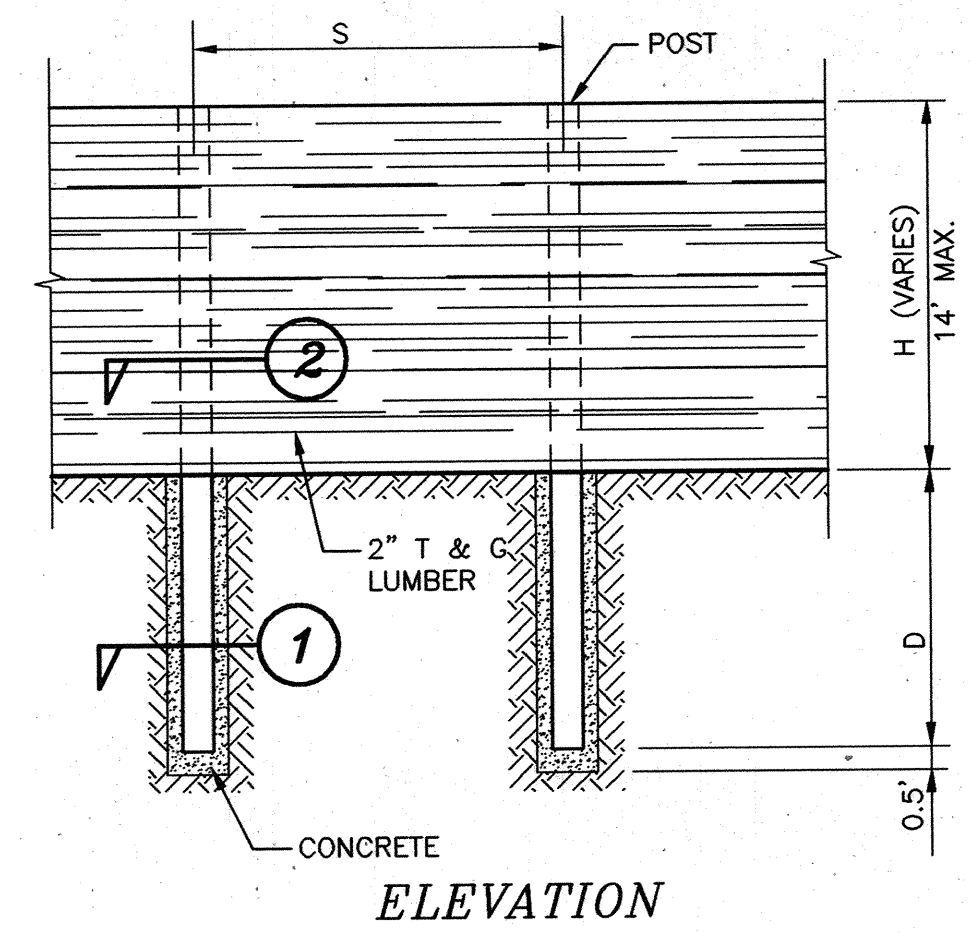
MSHA STD. TYPE TYPE "B-72" HEADWALL, (MD 352.02)
 MODIFIED AS SHOWN, FOR DIMENSIONS AND DETAILS NOT SHOWN
 REFER TO MD-352.02 FOR D=72" (SEE BELOW)



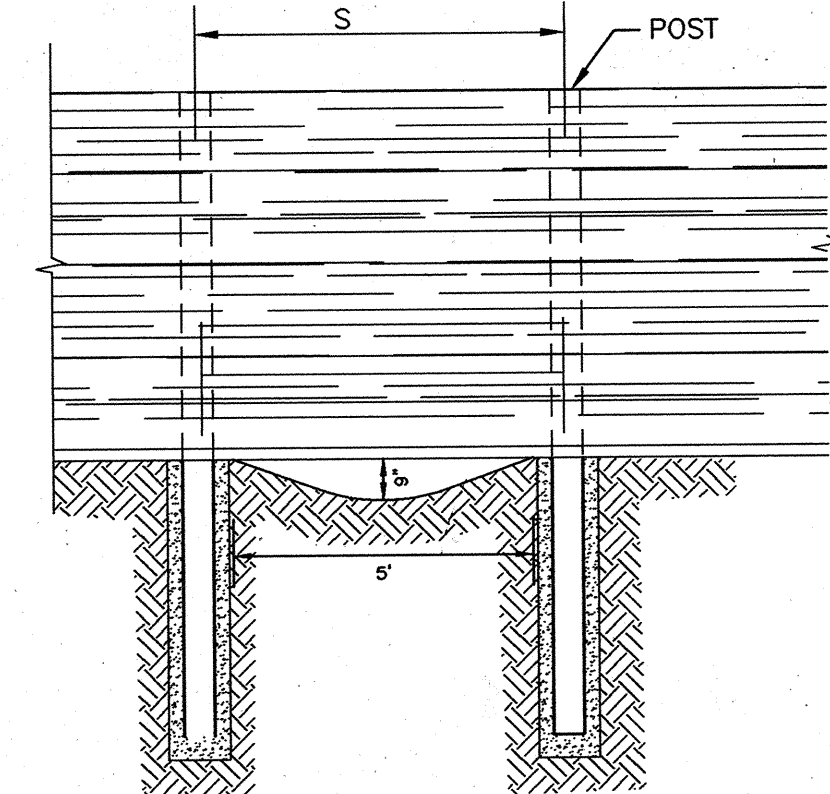
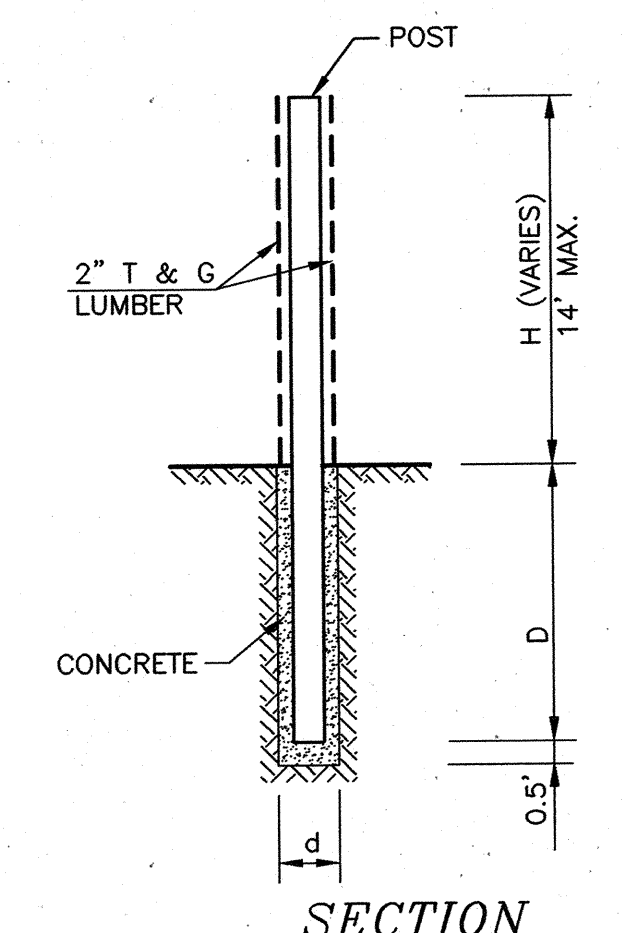
NOTE: FOUNDATIONS FOR CULVERT AND HEADWALL FOOTINGS SHALL BE OVEREXCAVATED TO THE DEPTH OF WEATHERED ROCK (SEE BORING LOGS ON SHEET 13 OF 15). FOUNDATION SHALL BE BACKFILLED USING LEAN CONCRETE (MIN 1000 COMPRESSIVE STRENGTH) TO THE REQUIRED FOOTING ELEVATION. OVEREXCAVATION SHALL BE PERFORMED USING TRENCH BOXES OR OTHER SHORING AS NECESSARY TO MAINTAIN THE EXISTING STREAM CHANNEL DURING CONSTRUCTION. EXCAVATION SHALL BE CONTINUOUSLY DEWATERED PRIOR TO BACKFILLING WITH LEAN CONCRETE IN ORDER TO PREVENT SATURATION OF THE SUBSOIL.



SCHEDULE				
H	S	D	d	POST SIZE
14	6'	6.5'	16"	10"x10"
12	6'	6.5'	16"	11"x10"
10 OR LESS	6'	6.0'	16"	8"x8"



NOISE WALL DETAIL
 NTS

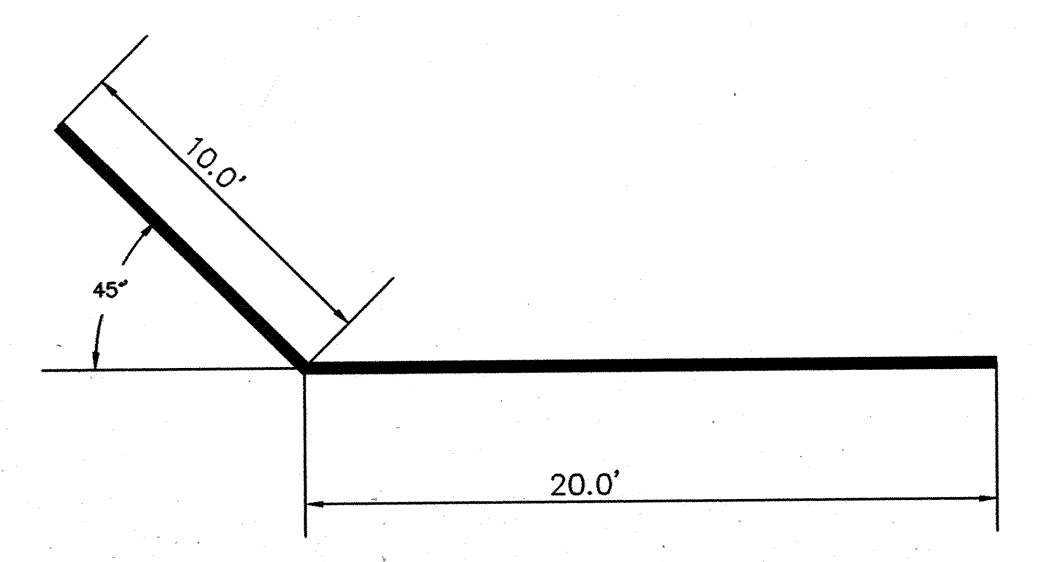


SWALE OPENING DETAIL

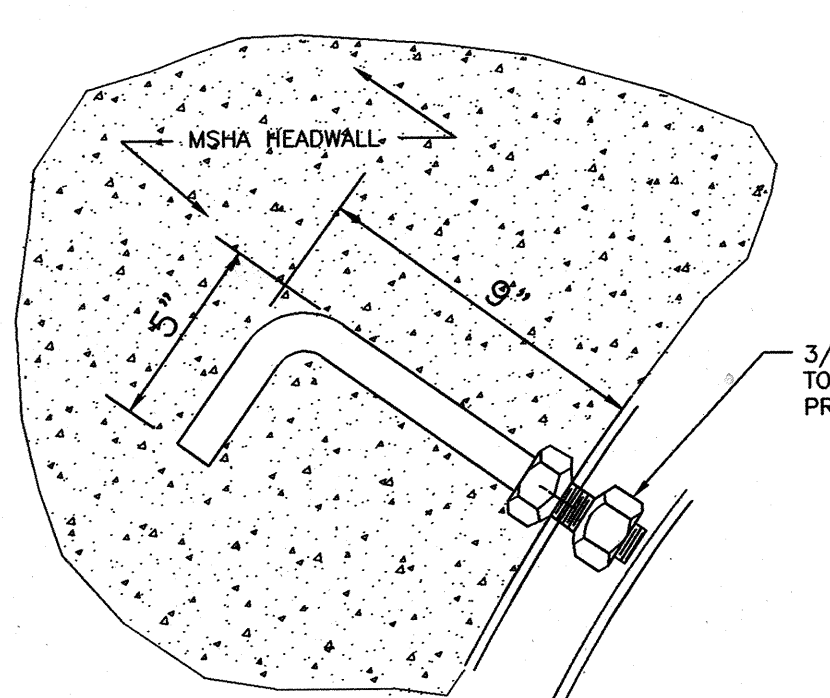
- NOTES:
- CONCRETE SHALL BE MSHA MIX. NO. 2 f'c=3,500 PSI
 - ALL WOODEN MEMBERS SHALL BE PRESSURE TREATED NO. 2 SELECT STRUCTURAL SOUTHERN PINE.
 - PRESSURE TREATMENT SHALL CONSIST OF CCA IN ACCORDANCE WITH AWPB LP-22.
 - PROVIDE 5"x0"-9" OPENING AT BOTTOM OF NOISE WALL IN CENTER OF SWALE.
 - WHERE NOISE WALL IS LOCATED OVER STORM DRAIN PLACE POST SUCH THAT STORM DRAIN IS CENTERED BETWEEN POSTS.

UNIT NO.	WALL HEIGHT	WALL LENGTH
1	6.0'	30.0'
2	6.0'	20.0'
3	6.0'	30.0'
5	7.0'	25.0'
6	8.0'	25.0'
7	8.0'	20.0'
8	8.0'	30.0'
9	10.0'	30.0'
10	10.0'	20.0'
11	10.0'	30.0'
12	12.0'	30.0'
13	12.0'	20.0'
14	12.0'	30.0'
15	12.0'	30.0'
16	12.0'	30.0'
17	12.0'	30.0'
18	10.0'	30.0'
19	10.0'	20.0'
20	10.0'	30.0'
21	8.0'	30.0'
22	8.0'	20.0'
23	8.0'	30.0'
25	7.0'	30.0'

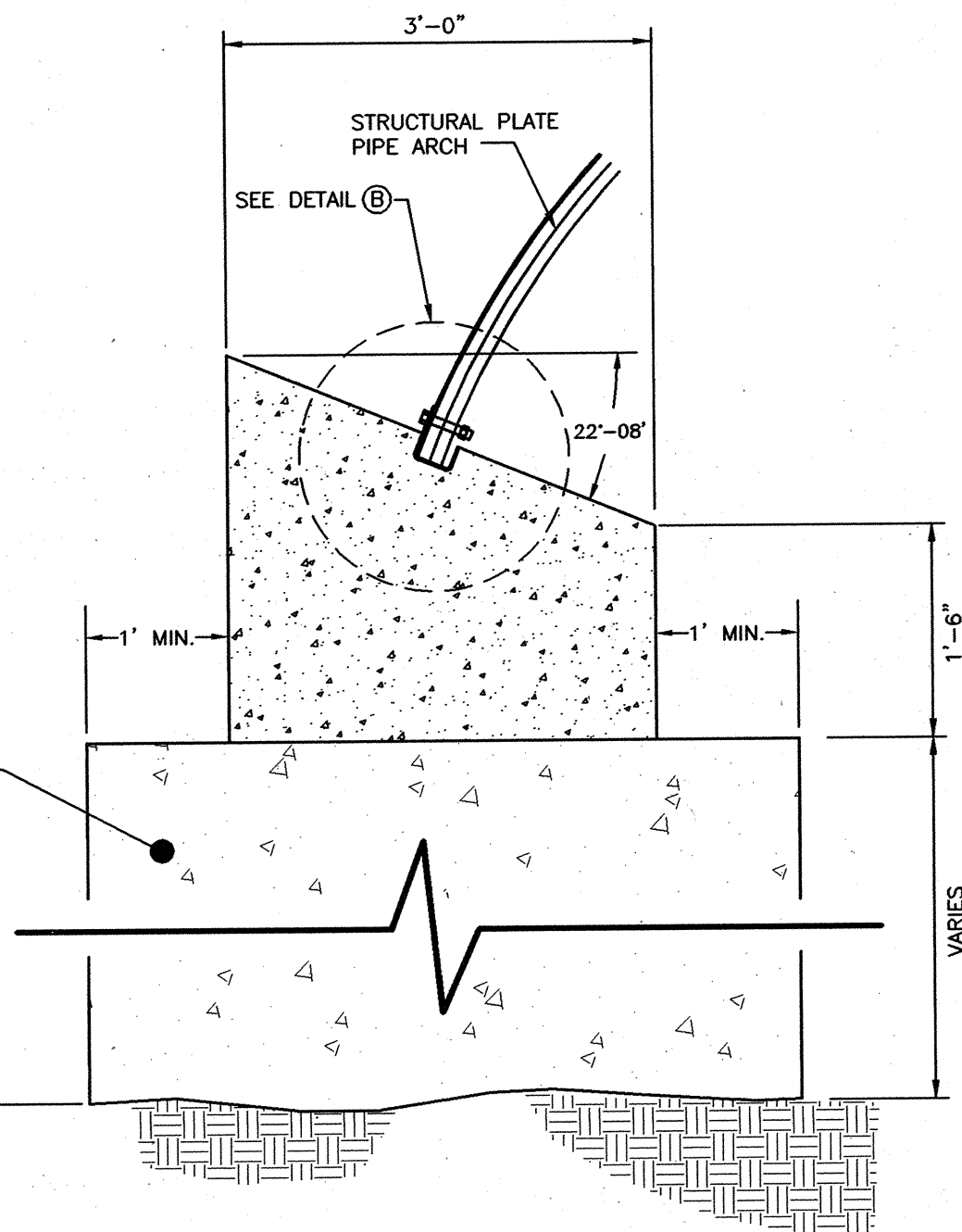
* INDICATES WALLS WITH 45° BEND AS SHOWN



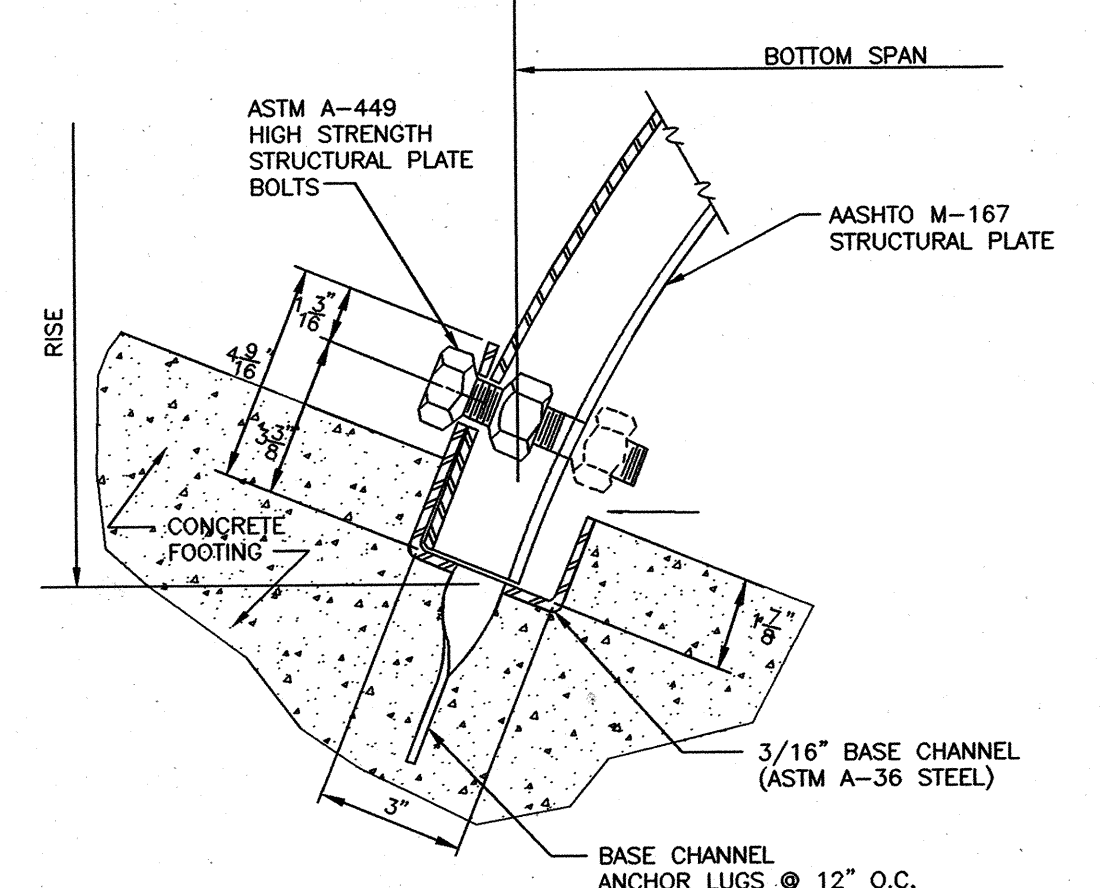
TYP. NOISE WALL GEOMETRY
 NTS



DETAIL OF HOOK BOLTS
 NOT TO SCALE



CULVERT FOOTING DETAIL
 NOT TO SCALE



DETAIL

OPENING NO.	AREA SQ. FT.	B	C	E	F	G	H	J	K	L	M	N	O	P	VOL. CONCR. CU. YD.	STEEL LBS.
66	25.00	2'-0"	1'-3"	4'-0"	3'-0"	11'-2"	4'-0"	6'-4"	10'-0"	10'-0"	9'-0"	3'-0"	7'-0"	2'-0"	9.7	568
72	28.57	2'-0"	1'-3"	4'-0"	3'-0"	11'-2"	4'-0"	6'-4"	11'-0"	10'-0"	9'-0"	3'-0"	7'-0"	2'-0"	10.9	646
78	35.20	3'-0"	1'-4"	4'-0"	3'-0"	12'-0"	4'-0"	7'-0"	11'-0"	10'-0"	9'-0"	3'-0"	8'-0"	2'-0"	13.3	806
84	38.48	3'-0"	1'-4"	4'-0"	3'-0"	12'-0"	4'-0"	7'-0"	11'-0"	10'-0"	9'-0"	3'-0"	8'-0"	2'-0"	14.7	904

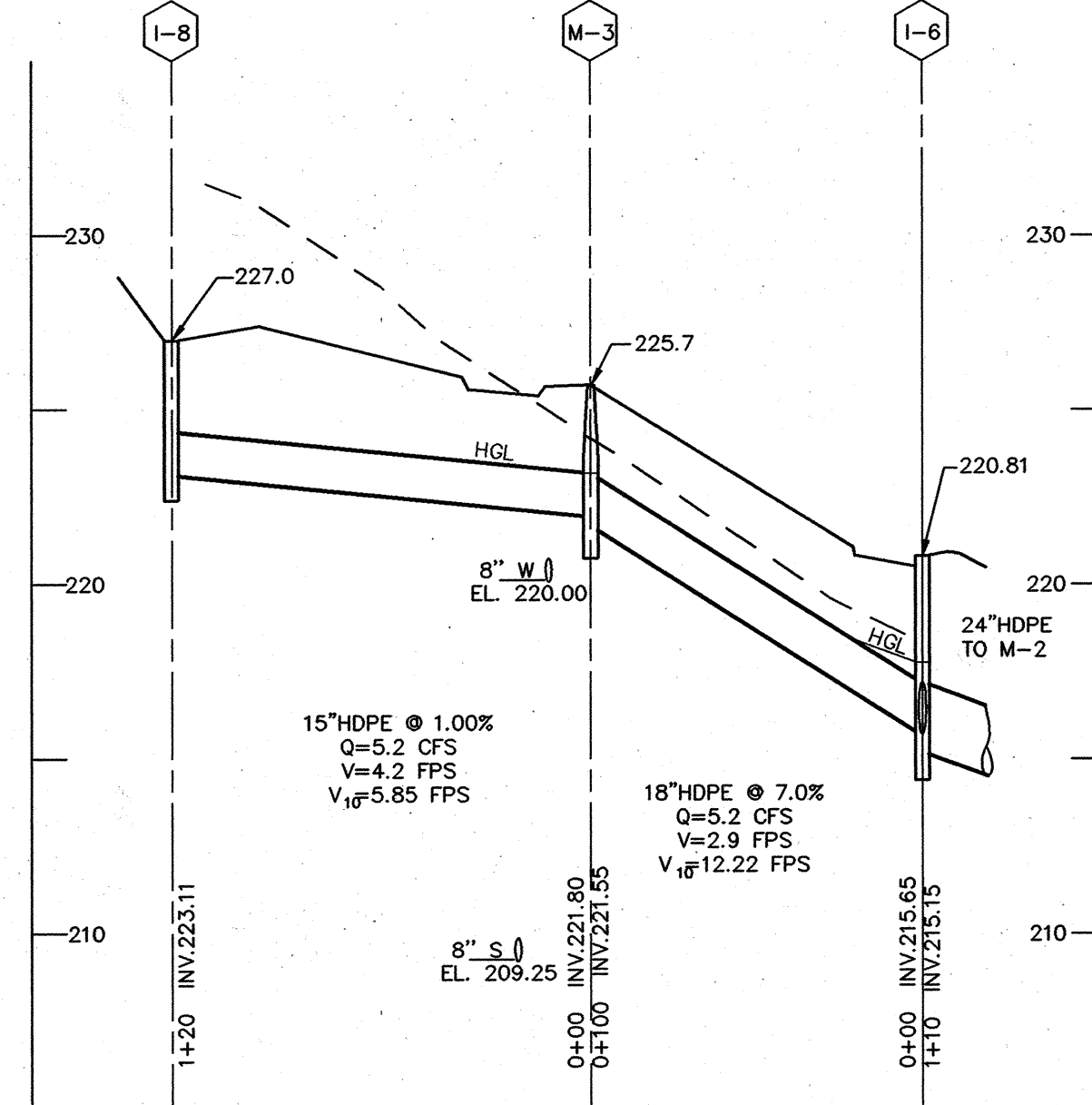
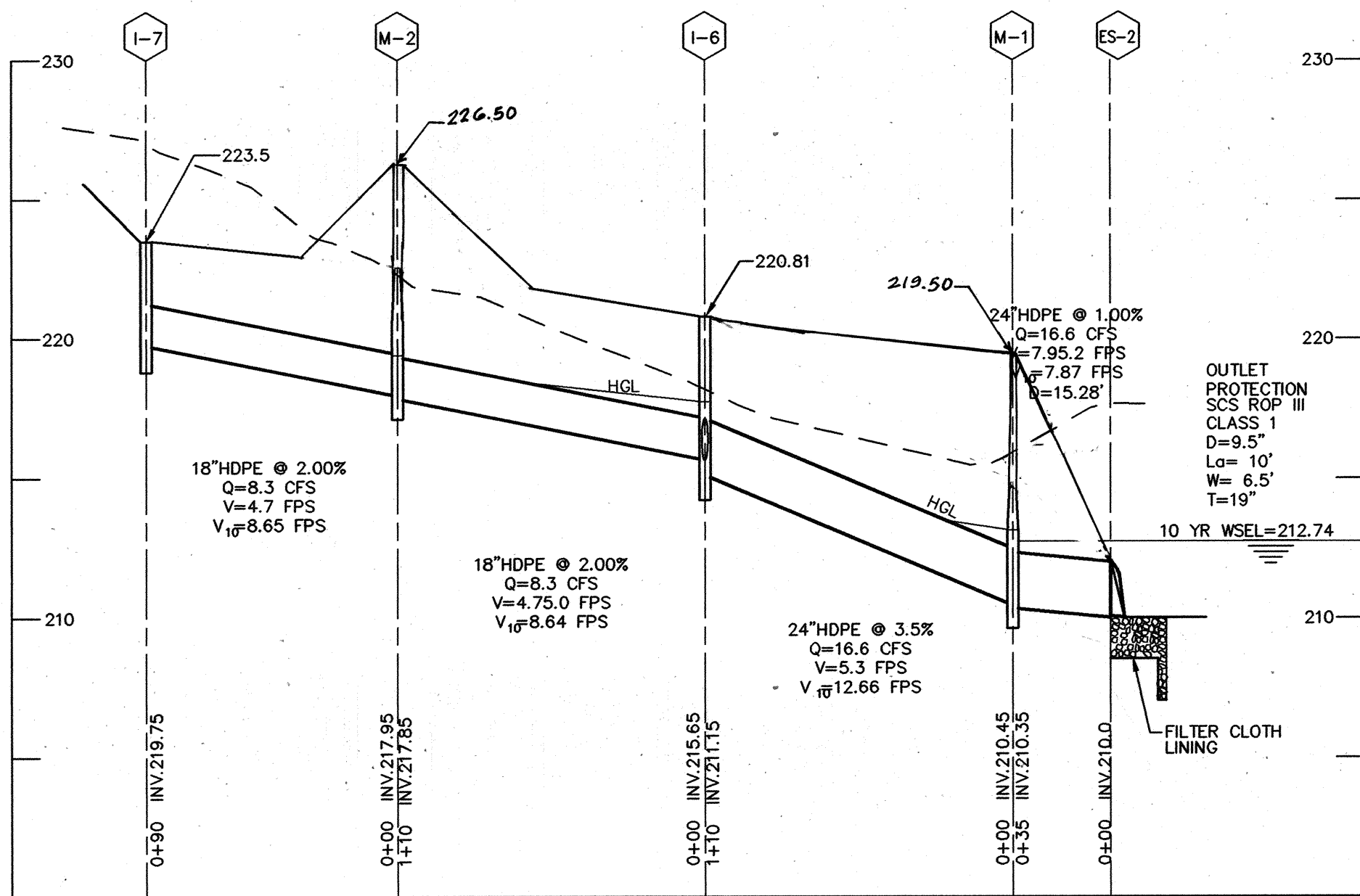
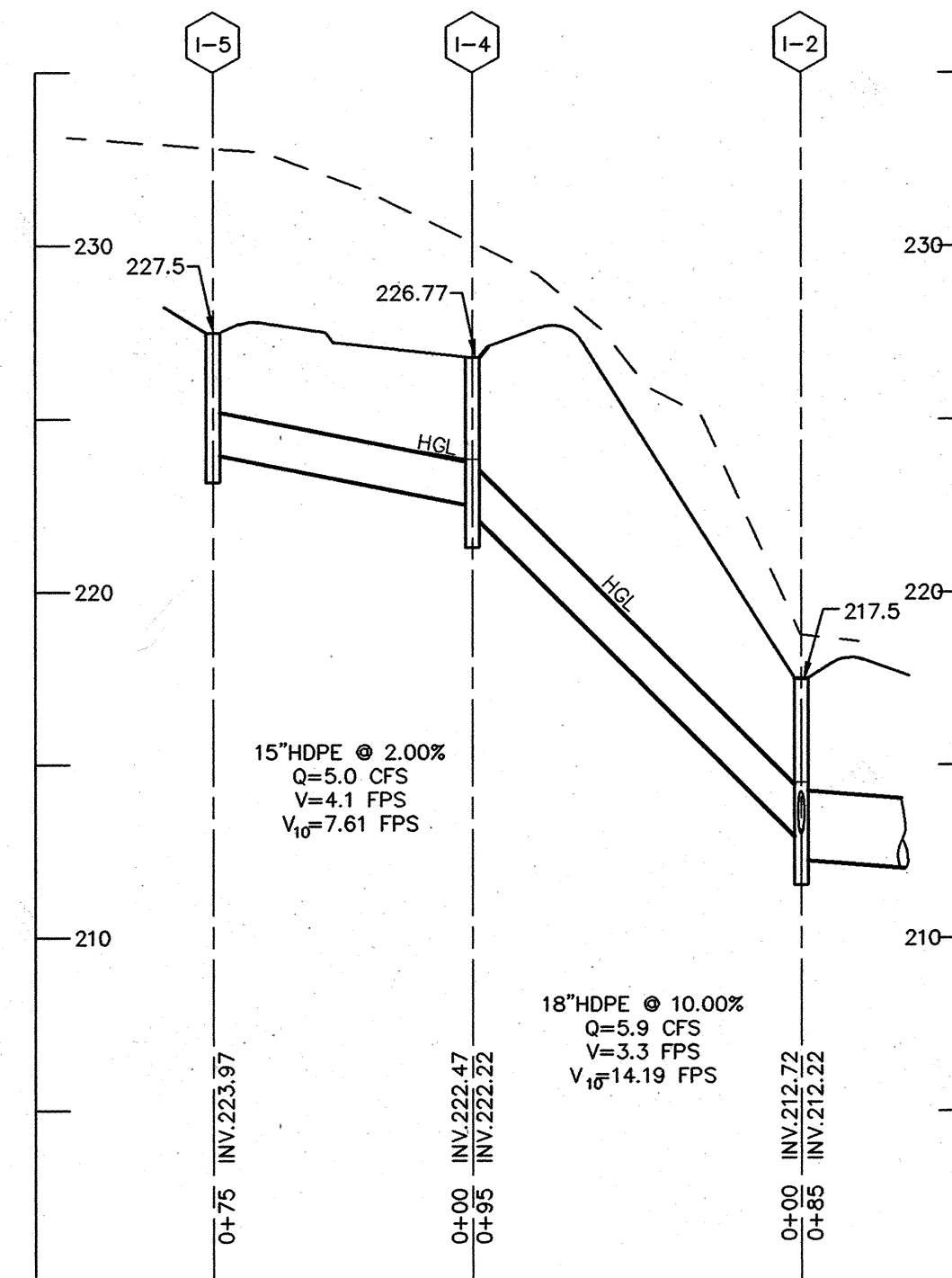
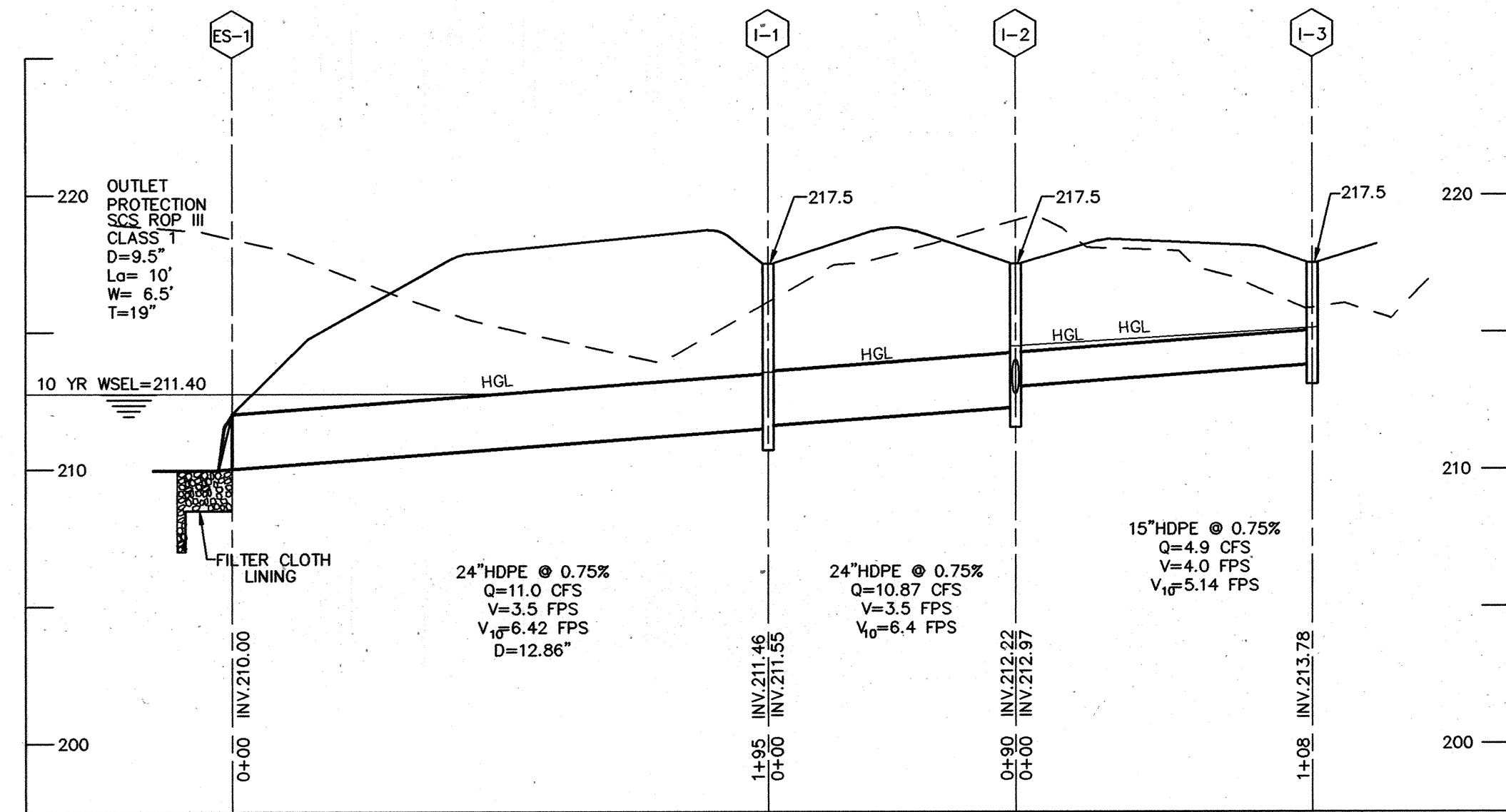
QUANTITIES IN TABLE TO BE USED FOR ESTIMATING ONLY

APPROVAL: FEDERAL HIGHWAY ADMINISTRATION REGION NO. 3
 STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
 STANDARD HEADWALLS
 B-66 B-72 B-78 B-84
 STANDARD NO. MD-352.02

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE 5/2/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE 5/2/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE 5/2/03

[Signature]
 DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

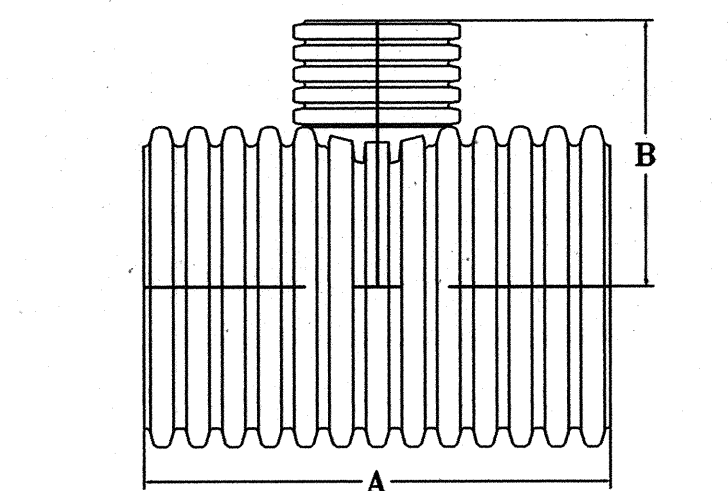
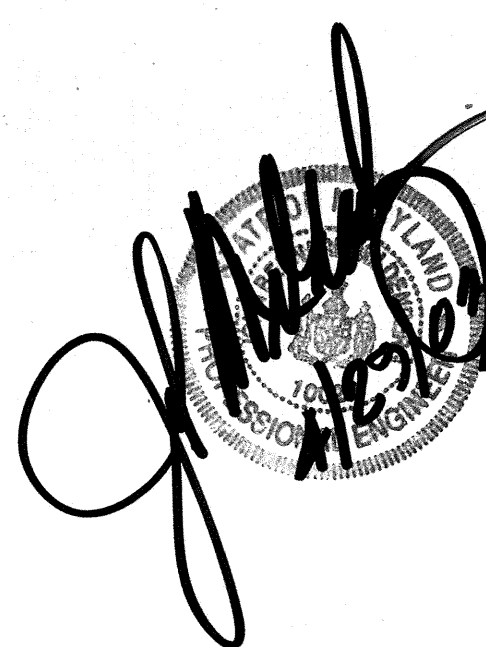
OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042



NOTE:
HGL AT CROWN OF PIPE UNLESS SHOWN OTHERWISE.

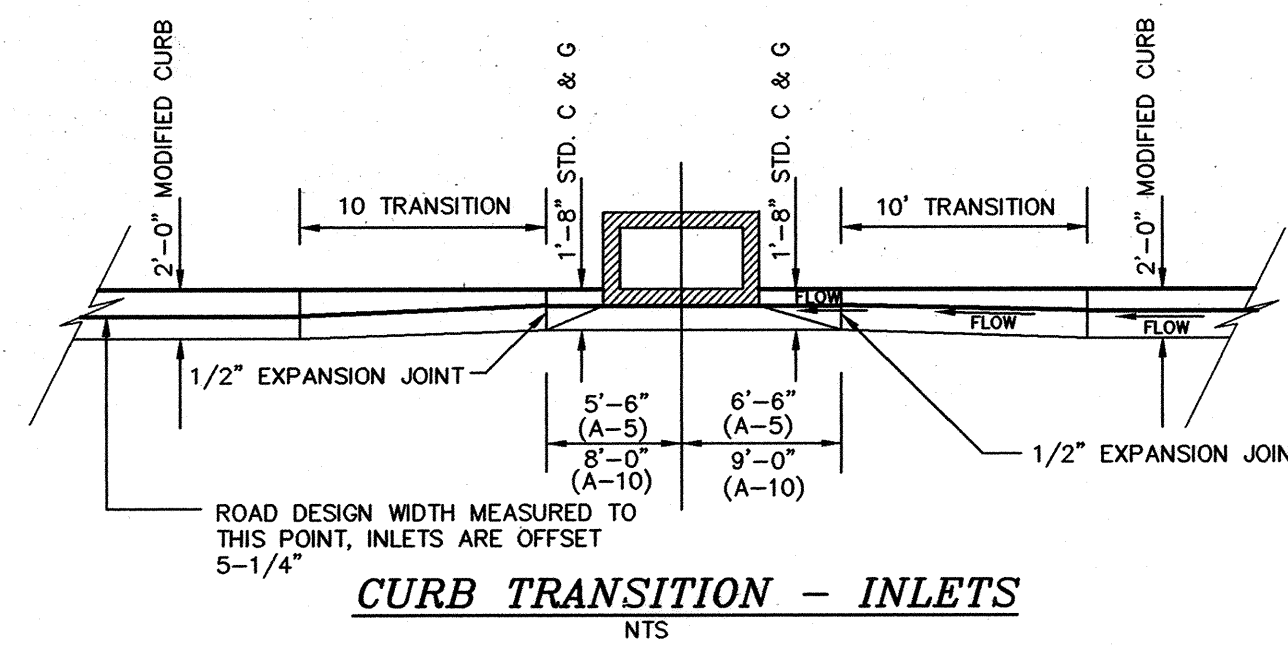
OWNER
5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERTOWN MD, 21136
(410) 526-4030



PART NO.	PIPE SIZE	A	B
1561AN	15" x 6"	25.30"	16.75"
2461AN	375 mm x 150 mm	643 mm	425 mm
	24" x 6"	34.21"	22.5"
	600 mm x 150 mm	869 mm	572 mm

N-12 FABRICATED REDUCING TEES
NTS



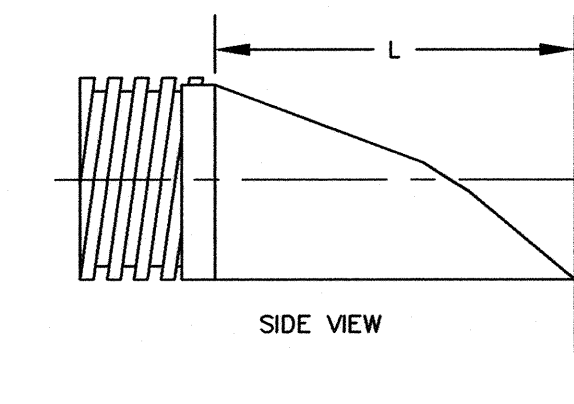
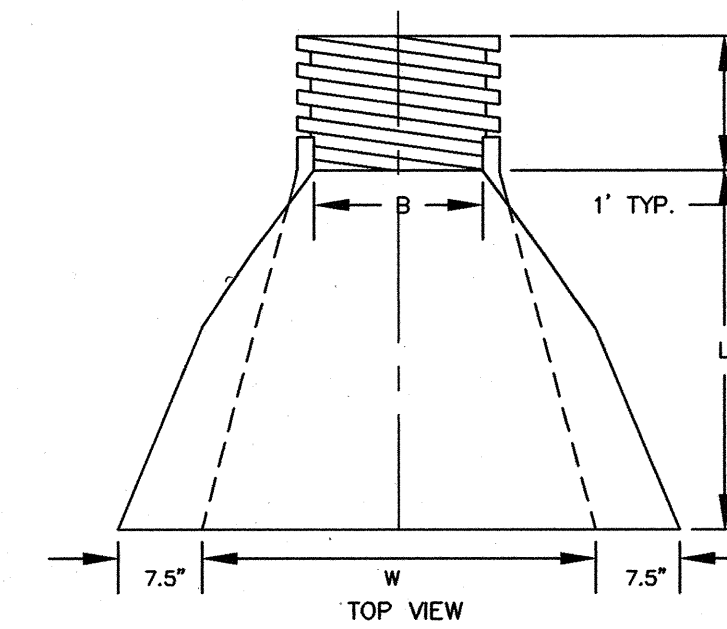
STRUCTURE SCHEDULE

NO.	LOCATION	TOP EL.	INV. IN	INV. OUT	COMMENTS
I-1	N 559810 E 1380626	217.50	211.55	211.45	TYPE S, H.C.STD. SD-4.39
I-2	N 559899 E 1380596	217.50	212.97, 212.72	212.22	TYPE S, H.C.STD. SD-4.39
I-3	N 559899 E 1380539	217.50	-	213.79	TYPE S, H.C.STD. SD-4.39
I-4	DRIVEWAY STA. 8+27 O/S 9.00' RT.	226.77	222.47	222.22	TYPE DOUBLE S, H.C.STD. SD-4.23 O/S & ELEV SHOWN TO UPSTREAM EDGE IF INLET TO BACK OF GRATE (FLOWLINE)
I-5	N 559799 E 1380463	227.50	-	223.97	TYPE S, H.C.STD. SD-4.39
I-6*	DRIVEWAY STA. 13+74.35 O/S 10.1 LT.	220.81	215.65	215.15	TYPE A-5, H.C.STD. SD-4.01 O/S IS SHOWN TO FACE OF CURB AT CENTER OF INLET
I-7	N 559325 E 1380524	223.50	-	219.75	TYPE S, H.C.STD. SD-4.39
I-8	N 559454 E 1380505	227.00	-	223.00	TYPE S, H.C.STD. SD-4.39
M-2	N 559452 E 1380794	215.00	210.45	210.35	H.C.STD. G-5.12
M-3	N 559333 E 1380613	222.50	217.95	217.85	H.C.STD. G-5.12
M-4	N 559467 E 1380626	225.70	222.80	222.55	H.C.STD. G-5.12
ES-1	N 559643 E 1381735	-	210.00	-	
ES-2	N 559494 E 1380810	-	210.00	-	
HW-1	N 560061 E 1380624 N 560081 E 1380645	N/A	206.40	N/A	MODIFIED MSHA STANDARD NO. MD-352.02 NOTE: LOCATION COORDINATES ARE FOR FACE OF HEADWALL AT ANGLE POINTS
HW-2	N 560094 E 1380592 N 560114 E 1380613	N/A	206.00	N/A	MODIFIED MSHA STANDARD NO. MD-352.02 NOTE: LOCATION COORDINATES ARE FOR FACE OF HEADWALL AT ANGLE POINTS

* DELETE GUTTER OF MODIFIED CURB AND GUTTER AT I-4 TO PLACE REAR OF INLET AT FLOW LINE.

PIPE SCHEDULE

QUANTITY	PIPE SIZE
344'	15" HDPE
327'	18" HDPE
414'	24" HDPE

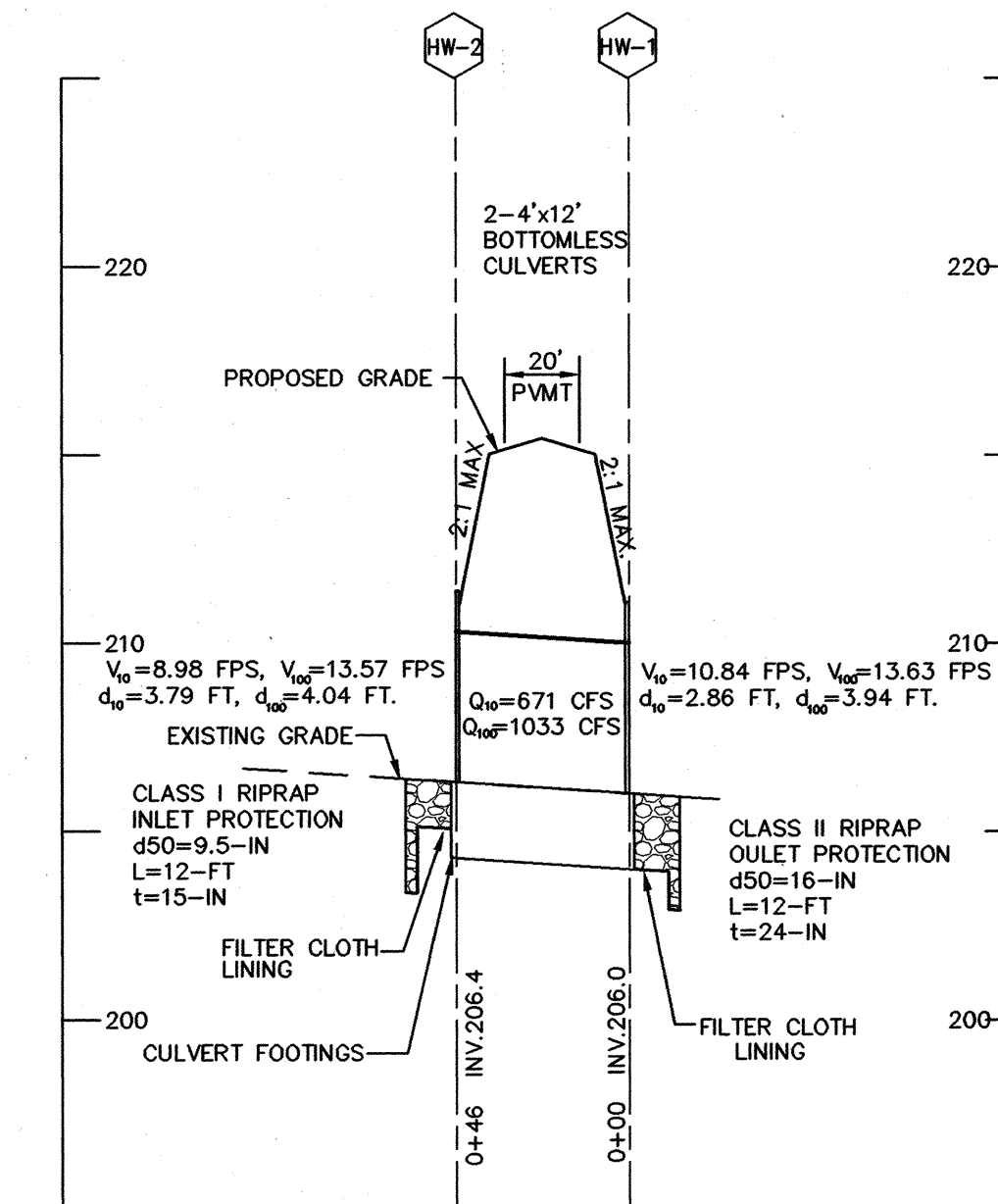


PIPE DIAMETER	PART NO.	B MAX	L, ±1/2	W, ±2
24" HDPE	2410 NP	18"	36"	45"

INSTALLATION INSTRUCTIONS

- SPREAD THE END SECTION COLLAR AND PLACE IT OVER THE LAST PIPE CORRUGATION. MAKE SURE THE COLLAR SEATS PROPERLY IN THE CORRUGATION VALLEY.
- INSERT THREADED ROD THROUGH THE PRE-DRILLED HOLES IN THE END SECTION COLLAR. TIGHTEN WING NUTS.
- PLACE BACKFILL AROUND THE END SECTION AND OVER THE TOE PLATE. USE CARE DURING COMPACTION ALONG THE SIDES TO PREVENT DISTORTION.

HDPE END SECTION
(PART NO. 2410 NP)
NOT TO SCALE



00-065(DWG)SDP-PROF

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 DATE: 4/15/04
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/15/04
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4/15/04
 DIRECTOR

project date APRIL 09
 illustration engineering
 MAMP
 scale 1"=50'
 approval

REVISED RIM ELEVATION ON MH-1 & MH-2
 5/15/04
 description
 revisions

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 691 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 STORM DRAIN PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax

WETLAND TABLE

LINE	LENGTH	BEARING
V1	45.00	S82°07'21"E
V2	50.00	S56°11'04"E
V3	85.67	N50°38'08"W
V4	58.00	N37°53'57"W
V5	74.65	N48°18'05"W
V6	67.30	N39°06'57"W
V7	80.48	N48°32'00"W
V8	143.50	N37°44'56"W
V9	33.11	S01°15'14"W
V10	54.42	S21°21'32"E
V11	60.23	S63°32'47"E
V12	71.78	S60°10'54"E

FLOODPLAIN

LINE	BEARING & DISTANCE
F9	N22°07'55"W 61.09'
F10	N00°02'33"W 58.74'
F11	N25°04'00"W 50.27'
F12	N72°20'08"W 18.27'
F13	S60°39'56"W 20.12'
F14	N40°57'58"W 76.04'
F15	N30°50'13"W 73.33'
F16	N48°02'11"W 27.33'
F17	N44°55'07"W 83.29'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT.

Mr. L. Leary 7/15/03
DEVELOPER'S SIGNATURE DATE

Mr. L. Leary
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD COUNTY CONSERVATION DISTRICT.

Donna M. DeWitt 7/16/03
ENGINEER'S SIGNATURE DATE

Donna M. DeWitt
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Hynes 7/21/03
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

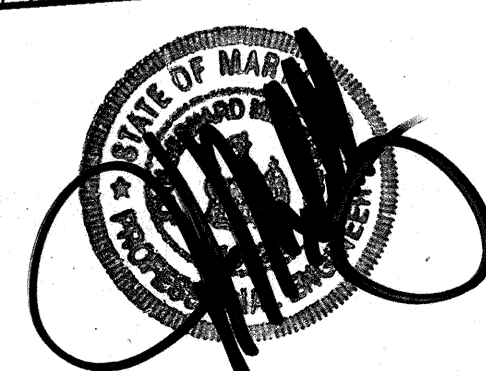
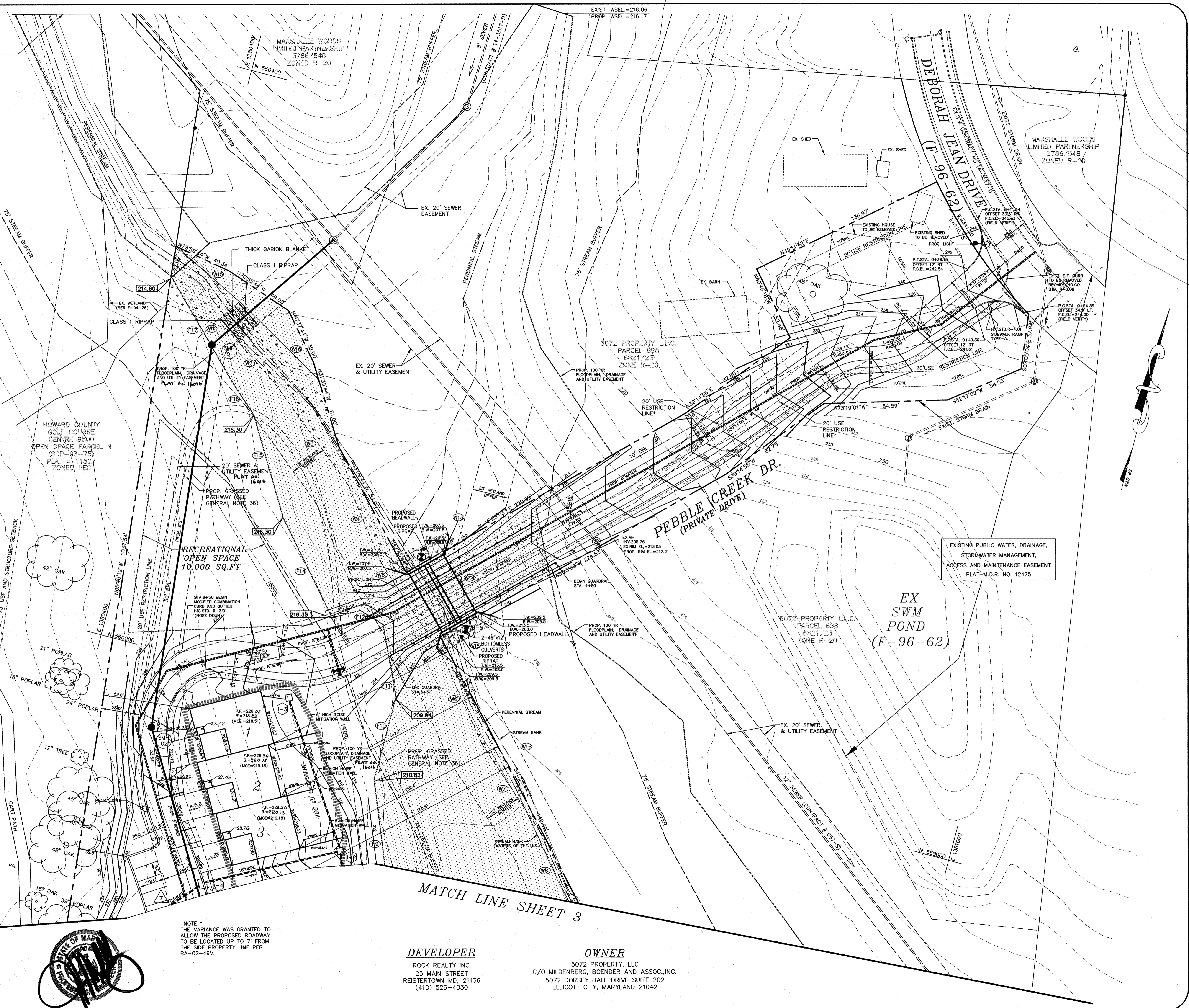
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

John Selig 7/21/03
HOWARD SCD DATE

APPROVED DEPARTMENT OF PLANNING AND ZONING
Cheryl K. Harnish 8/16/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cathy Harnish 8/16/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Janice D. Leight 8/27/03
DIRECTOR DATE



NOTE: THE VARIANCE WAS GRANTED TO ALLOW THE PROPOSED ROADWAY TO BE LOCATED UP TO 7' FROM THE SIDE PROPERTY LINE PER BA-02-46V.

DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERTOWN MD, 21136
(410) 526-4030

OWNER
5072 PROPERTY, LLC
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

Project: 00-065
date: APRIL 03
Illustration: engineering
MMP: MMP
scale: 1"=90'
approval: approval

REVISED ROOF LEADERS
REVISED GRADING AND ELEVATIONS FOR UNITS 1-3
9/10/04
2/12/04
no. description revisions

FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SITE DEVELOPMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax: (301) 621-5621 Wash. (410) 997-0298 Fax.

MATCH LINE SHEET 2

WETLAND TABLE

LINE	LENGTH	BEARING
V8	143.60	N37°44'56"W
V9	81.17	N51°09'04"W
V10	30.66	N43°36'52"W
V11	31.45	N49°42'15"W
V12	62.68	N36°25'37"W

FLOODPLAIN

LINE	BEARING & DISTANCE
F1	N03°18'50"W 53.02'
F2	N46°04'27"W 75.95'
F3	N48°20'54"W 100.08'
F4	N40°48'48"W 42.13'
F5	N54°44'50"W 58.73'
F6	N38°50'08"W 72.97'
F7	N17°02'34"W 46.40'
F8	N09°16'48"W 48.81'
F9	N22°07'55"W 61.09'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S SIGNATURE: *Max L. Levy* DATE: 7/15/03
 DEVELOPER'S NAME: Max L. Levy

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S SIGNATURE: *Chris Milender* DATE: 7/15/03
 ENGINEER'S NAME: Chris Milender

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 7/21/03

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

DATE: 7/21/03

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 DATE: 8/16/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 8/21/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 8/21/03
 DIRECTOR



NOTE: PROVIDE COMPACTION IN ACCORDANCE WITH AASHTO T-180 95% COMPACTED FILL FOR BERM ADJACENT TO I-95.

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDBERGER, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

date	APRIL 03
project	00-065
illustration	engineering
MMP	MMP
scale	1"=30'

date	5/14/04
description	PROVIDE NOISE BERRY, REVISED NOISE MITIGATION WALL, REVISED ROOF LEADERS
revisions	REVISED GRADING AND ELEVATIONS FOR LOTS 4-25
no.	2

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SITE DEVELOPMENT PLAN

MILDBERGER, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax: (410) 997-0298 Fax

NOTES:

- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE PROVIDED BY AFFORESTATION OF 0.89 ACRES OF FOREST. FINANCIAL SURETY FOR THE ON-SITE AFFORESTATION (40.71 ACRES OR 31,083.4 SQ. FT.) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$15,046.70. (FOREST CONSERVATION CREDIT FOR 7,675 SQ. FT. OF LANDSCAPING HAS BEEN TAKEN FOR 13 SHADE TREES & 11 EVERGREENS AS SHOWN ON THIS PLAN TO BE PLANTED AS PART OF THE LANDSCAPING REQUIREMENTS.)
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.1204 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING AREA IS LOCATED IN A SECTION OF FLOODPLAIN WHERE NO GRADING IS REQUIRED SINCE THE AFFORESTATION AREA IS LOCATED IN A SECTION OF FLOODPLAIN WHERE NO GRADING IS REQUIRED.
- AT THE TIME OF 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 RELICATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNITS, SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS.

SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	15
NUMBER OF PLANTING ISLANDS REQUIRED	2
NUMBER OF PLANTING ISLANDS PROVIDED	2
NUMBER OF TREES REQUIRED	2 SHADE TREES
NUMBER OF TREES PROVIDED	2 SHADE TREES
SHADE TREES	2 SHADE TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES

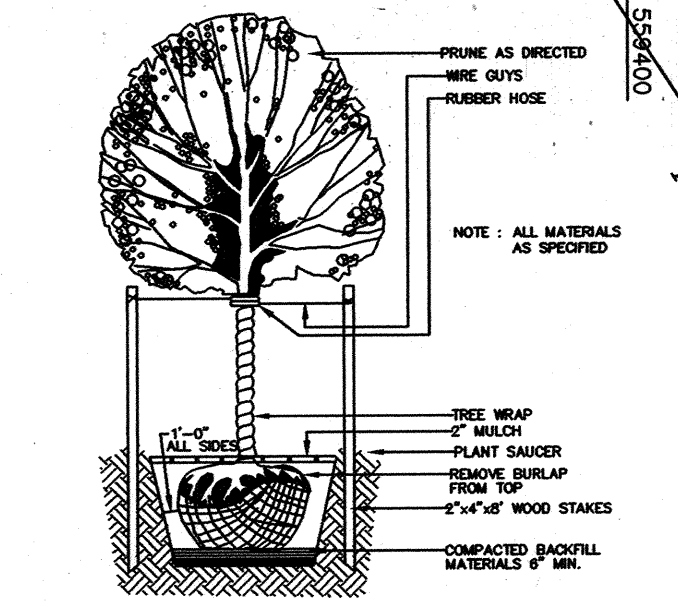
LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
56	●	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
56	●	PICEA ABIES	NORWAY SPRUCE	6" - 8" HT.
46	●	PINUS RIGIDA	PITCH PINE	6" - 8" HT.
36	●	PINUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
115	●	PYRUS CALLERYANA 'REDSPIRE'	REDSPIRE PEAR	2 1/2" - 3" CAL.
130	●	QUERCUS PHELLOS	WILLOW OAK	2 1/2" - 3" CAL.
TOTAL				
320				
TOTAL TREES (76 STREET TREES, 108 SHADE TREES & 136 EVERGREEN TREES)				

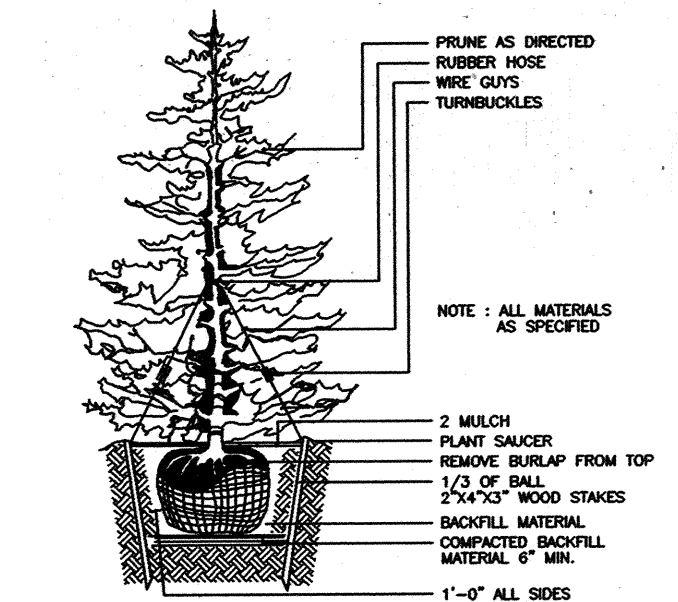


LEGEND

- INTERNAL LANDSCAPE TREE
- PARKING ISLAND
- PERIMETER LANDSCAPE EDGE
- EXISTING TREES
- TREE PROTECTIVE FENCING



TYPICAL DECIDUOUS TREE PLANTING DETAIL NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL NOT TO SCALE

DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.1204 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 7/15/03

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	25
NUMBER OF TREES REQUIRED (1:10 SFA: 1:3 DU APTS)	25
NUMBER OF TREES PROVIDED	25
SHADE TREES	25
OTHER TREES (2:1 SUBSTITUTION)	0

SCHEDULE A: PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO ROADWAYS				ADJACENT TO PERIMETER PROPERTIES				TOTAL
	N/A (PERIMETER 1)	C (PERIMETER 2)	C (PERIMETER 3)	C (PERIMETER 4)	A (PERIMETER 5)	C (PERIMETER 6)	C (PERIMETER 7)	C (PERIMETER 8)	
LINEAR FEET OF PERIMETER	110.78 LF	484.69 LF	627.29 LF	679.11 LF	1037.12 LF	286.41 LF	308.39 LF	52.48 LF	136.97 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	YES, 3 EX. TREES TO REMAIN *	NO	NO	NO	NO
GREET FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED									
SHADE TREES	0	12	15	17	14	7	8	1	77
EVERGREEN TREES	0	24	31	34	34	15	15	3	128
SHRUBS	0	0	0	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED									
SHADE TREES	0	12	15	16	14	7	8	1	76
EVERGREEN TREES	0	24	31	36	34	15	15	3	130
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	PERIMETER A - 236 LF (TYPE B)	PERIMETER B - 110 LF (TYPE B)	PERIMETER C - 225 LF (TYPE B)	TOTAL
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A	N/A	N/A	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND 2)	N/A	YES, 110 LF OF PERIMETER 4 LANDSCAPING - TYPE C	YES, 202 LF OF PERIMETER 3 LANDSCAPING - TYPE C	
NUMBER OF TREES REQUIRED	5 SHADE TREES 6 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	5 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED	5 SHADE TREES 6 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	5 SHADE TREES 6 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES (0 SUBSTITUTION)	0 TREES (0 SUBSTITUTION)	0 TREES (0 SUBSTITUTION)	0 TREES (0 SUBSTITUTION)

REFORESTATION PLANT LIST

ALTERNATIVE 1	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. O.A.C.	SIZE & SPACING	REMARKS	ALTERNATIVE 2	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN. O.A.C.	SIZE & SPACING	REMARKS
45 Acer rubrum	VT	D-W	FAC	15'	CONT/B & B	1" CALIPER	76 Acer rubrum	VT	D-W	FAC	11'	SEEDLING/WHP	WITH TREE SHELTER
11 Cornus florida	VT	D-M	FACU	15'	CONT/B & B	3'-5' HEIGHT	16 Cornus florida	VT	D-M	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B	1" CALIPER	30 Liquidambar styraciflua	I	M-W	FAC	11'	SEEDLING/WHP	WITH TREE SHELTER
12 Liriodendron tulipifera	MT	D-M	FAC	15'	CONT/B & B	1" CALIPER	30 Liriodendron tulipifera	MT	D-M	FAC	11'	SEEDLING/WHP	WITH TREE SHELTER
24 Nyssa sylvatica	T	M-W	FAC	15'	CONT/B & B	1" CALIPER	16 Nyssa sylvatica	T	M-W	FAC	11'	SEEDLING/WHP	WITH TREE SHELTER
12 Prunus serotina	I	M	FACU	15'	CONT/B & B	3'-5' HEIGHT	16 Prunus serotina	I	M	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER
12 Quercus alba	MT	D-M	FACU	15'	CONT/B & B	1" CALIPER	20 Quercus alba	MT	D-M	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER
11 Sassafras albidum	I	D-M	FACU	15'	CONT/B & B	3'-5' HEIGHT	16 Sassafras albidum	I	D-M	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER
15 Viburnum dentatum	T	M	FACU	15'	CONT/B & B	3'-5' HEIGHT	16 Viburnum dentatum	T	M	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER
15 Vaccinium corymbosum	MT	M-W	FACU	15'	CONT/B & B	3'-5' HEIGHT	25 Vaccinium corymbosum	MT	M-W	FACU	11'	SEEDLING/WHP	WITH TREE SHELTER

PLANTING SPECIFICATIONS AND NOTES

- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
 - DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL, THE PLANTING FIELD OF RADIUS = 2' MINUS THE DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
 - SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL. SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
 - SOIL MIX FOR ERICACEOUS MATERIAL. SOIL MIX SHALL CONSIST OF NATIVE TOPSOIL MIXTURE AT EACH PLANTING LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
 - ALL PLANTS SHALL BE PLANTED TO CONTAINER GROWING OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE AT THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.
- PLANT STORAGE AND INSPECTION**
- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
 - FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
 - PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, COLOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
 - UNPLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL AND MOISTENED ENVIRONMENT.
- PLANT INSTALLATION**
- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTER INSTALLATION. PLANTING SHOULD BE DONE EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST ONE INCH OF MULCH WATER GENEROUSLY. PLANTS SHOULD BE BACKFILLED AROUND TREES. PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2" INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
 - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCRUSTE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. ENCRUSTED ROOTS OR UNKIND ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
 - FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5) PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
 - AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
 - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP WELL ROOTING NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- FERTILIZING**
- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPIRIT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
 - NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
 - IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.
- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
 - ASSESS TREE MORTALITY OF PLANTING STOCK. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
 - VOLUNTARY SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
 - REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS PLANTS WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED STOCK.
 - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL, NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS INTERFERING PLANTING STOCK.
 - A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.
- SUPERVISION**
- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

FOREST CONSERVATION DATA

I. BASIC SITE DATA	ACRES
GROSS SITE AREA	8.30
AREA WITHIN 100 YEAR FLOODPLAIN	2.34
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.00
NET TRACT AREA	5.96
LAND USE CATEGORY	RESIDENTIAL - SUBURBAN
II. FOREST CONSERVATION WORKSHEET DATA SUMMARY	
B. REFORESTATION THRESHOLD (20%)	1.19
C. AFFORESTATION MINIMUM (15%)	0.89
D. EXISTING FOREST ON NET TRACT AREA	0.00
E. FOREST AREAS TO BE CLEARED	0.00
F. FOREST AREAS TO BE RETAINED	0.00
V. AFFORESTATION CALCULATIONS	
TOTAL AFFORESTATION REQUIRED	0.89
TOTAL AFFORESTATION PROVIDED	0.89

Project	00-085	date	APRIL 03
Illustration	MMP/SSD	approval	engineering
Scale	1"=50'	revision	

REVISED LOCATION OF PROPOSED PLANTING	5/17/06	date	2/16/04
REVISED GRADING		description	
NO.	1	revision	

FAIRWAY OVERLOOK
 TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
 HOWARD COUNTY, MARYLAND
LANDSCAPE AND FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0286 Fax: (301) 621-5521 Wash.

NOTES:

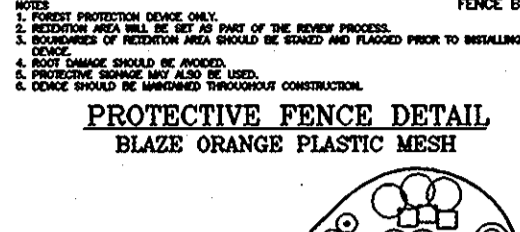
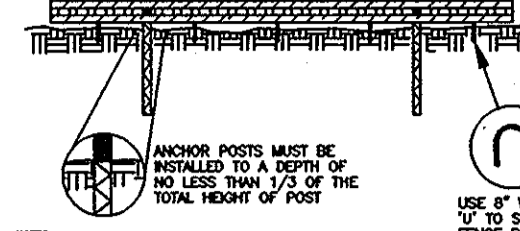
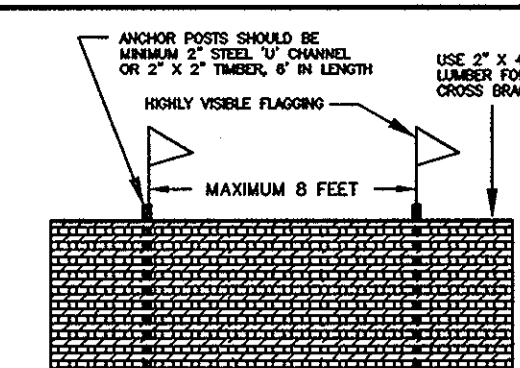
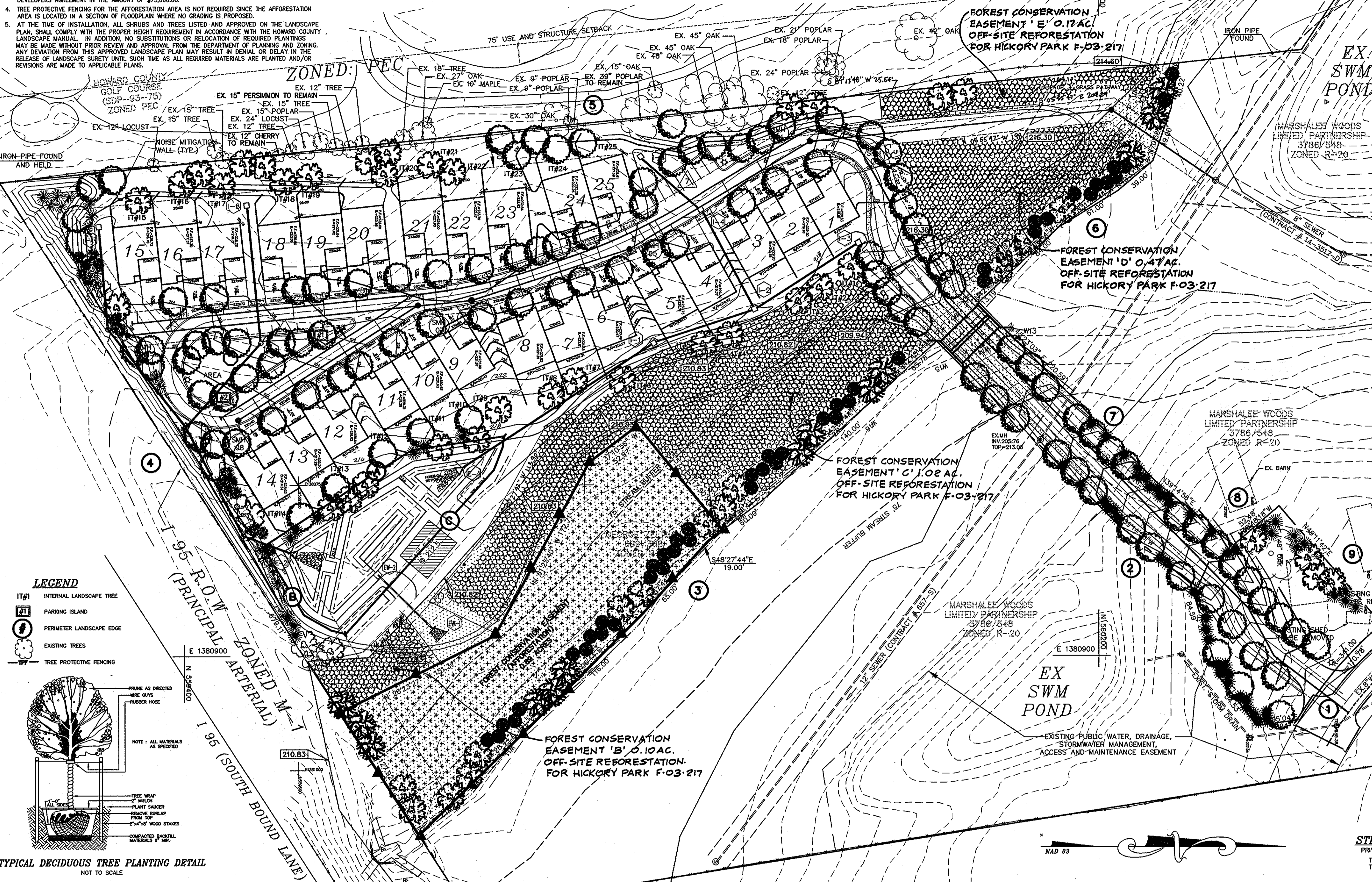
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE PROVIDED BY AFFORRESTATION OF 0.89 ACRES OF FOREST. FINANCIAL SURETY FOR THE ON-SITE AFFORRESTATION (0.71 ACRES OR 31,093.4 SQ. FT.) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$15,546.70. (*FOREST CONSERVATION CREDIT FOR 7,875 SQ. FT. OF LANDSCAPING HAS BEEN TAKEN FOR 13 SHADE TREES & 11 EVERGREENS AS SHOWN ON THIS PLAN TO BE PLANTED AS PART OF THE LANDSCAPING REQUIREMENTS.)
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. FOREST CONSERVATION ACT, 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (78 STREET TREES, 109 SHADE TREES, 134 EVERGREENS) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$75,000.00.
- TREE PROTECTIVE FENCING FOR THE AFFORRESTATION AREA IS NOT REQUIRED SINCE THE AFFORRESTATION AREA IS LOCATED IN A SECTION OF FLOODPLAIN WHERE NO GRADING IS PROPOSED.
- AT THE TIME OF 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 RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL, OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS.

SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	15
NUMBER OF PLANTING ISLANDS REQUIRED	2
NUMBER OF PLANTING ISLANDS PROVIDED	2
NUMBER OF TREES REQUIRED	2 SHADE TREES
NUMBER OF TREES PROVIDED	2 SHADE TREES
NUMBER OF TREES PROVIDED	2 SHADE TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
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56	●	PICEA ABIES	NORWAY SPRUCE	6" - 8" HT.
46	●	PIRUS RIGIDA	PITCH PINE	6" - 8" HT.
35	●	PIRUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
115	●	PIRUS CALLERYANA 'REDSPIRE'	REDSPIRE PEAR	2 1/2" - 3" CAL.
13	●	QUERCUS PHellos	WILLOW OAK	2 1/2" - 3" CAL.
TOTAL				
320 TREES				(76 STREET TREES, 108 SHADE TREES & 136 EVERGREEN TREES)



NOTE: THIS PLAN IS TO BE USED FOR LANDSCAPE & FOREST CONSERVATION PURPOSES ONLY.

PLANTING SPECIFICATIONS AND NOTES

- PROTECTION FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, PLANTING FIELD OF RADIUS = 2 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- CONTAINER GROWN STOCK SHOULD BE LIMITED TO CONTAINER GROWN FIELD AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

- PLANT STORAGE AND INSPECTION**
- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
 - FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
 - PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR FIELD FORM, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
 - UNLIFT PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL AND MOISTENED ENVIRONMENT.

- PLANT INSTALLATION**
- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH WATER, GENEROUSLY, TO SETTLE SOIL. BACKFILL FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
 - CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2" INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
 - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
 - SHAPED OR RANDED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORME DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
 - TREES PLANTED IN THE AFFORRESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
 - AVOID PLANTING IN A STRAIGHT PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LIST TO OBTAIN A MORE NATURAL APPEARANCE.
 - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL-DRAINING NATURE OF THE NATIVE SOILS FOUND ON THIS SITE. COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD, THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL STRESS TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

- MAINTENANCE SCHEDULE**
- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
 - TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
 - VOLUNTARY SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
 - REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS SPECIES WITHIN A 5-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
 - REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS INTERFERING PLANTING STOCK.
 - A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

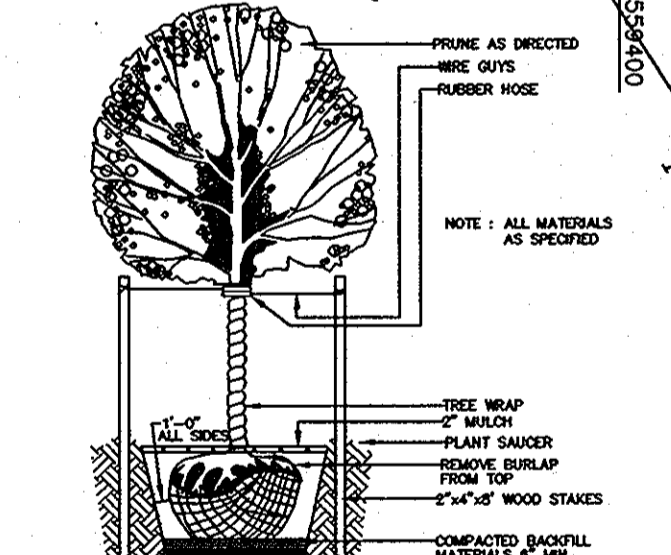
- SUPERVISION**
- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

FOREST CONSERVATION DATA

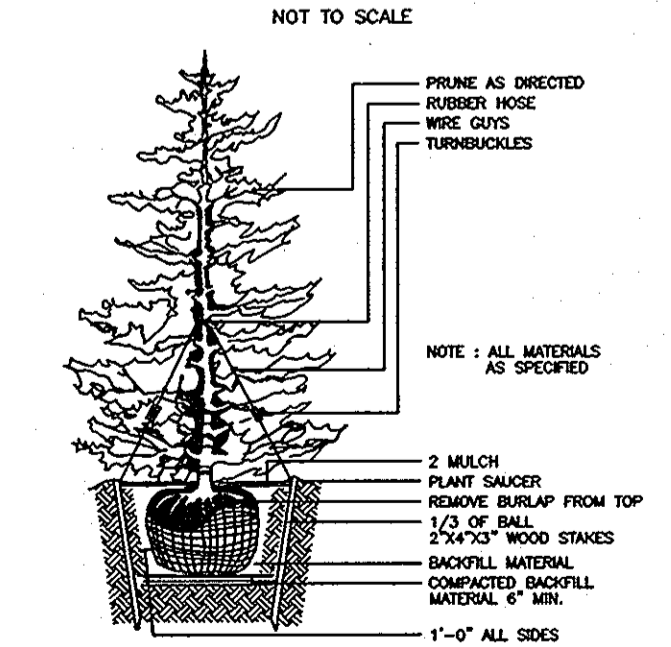
I. BASIC SITE DATA	ACRES
GROSS SITE AREA	8.30
AREA WITHIN 100 YEAR FLOODPLAIN	2.34
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.02
NET TRACT AREA	5.96
LAND USE CATEGORY	RESIDENTIAL - SUBURBAN
II. FOREST CONSERVATION WORKSHEET DATA SUMMARY	
B. REAFFORESTATION THRESHOLD (20%)	1.19
C. AFFORRESTATION MINIMUM (15%)	0.89
D. EXISTING FOREST ON NET TRACT AREA	0.00
E. FOREST AREAS TO BE CLEARED	0.00
F. FOREST AREAS TO BE RETAINED	0.00
V. AFFORRESTATION CALCULATIONS	
TOTAL AFFORRESTATION REQUIRED	0.89
TOTAL AFFORRESTATION PROVIDED	0.89

LEGEND

- IT#1 INTERNAL LANDSCAPE TREE
- PI PARKING ISLAND
- PE PERIMETER LANDSCAPE EDGE
- ET EXISTING TREES
- TF TREE PROTECTIVE FENCING



TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME: *Jim Aug* DATE: *7/15/03*

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	25
NUMBER OF TREES REQUIRED (1:DU SFA: 1:3 DU APTS)	25
NUMBER OF TREES PROVIDED	25
OTHER TREES (2:1 SUBSTITUTION)	0 TREES

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	PERIMETER A - 236 LF (TYPE B)	PERIMETER B - 110 LF (TYPE B)	PERIMETER C - 225 LF (TYPE B)	TOTAL
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A	N/A	N/A	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND 2)	N/A	YES, 110 LF OF PERIMETER 4 LANDSCAPING - TYPE C	YES, 202 LF OF PERIMETER 3 LANDSCAPING - TYPE C	
NUMBER OF TREES REQUIRED	5 SHADE TREES 6 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	5 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED	5 SHADE TREES 6 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	0 SHADE TREES 0 EVERGREEN TREES	5 SHADE TREES 6 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES (0 SUBSTITUTION TREES)	0 TREES (0 SUBSTITUTION TREES)	0 TREES (0 SUBSTITUTION TREES)	0 TREES (0 SUBSTITUTION TREES)

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	TOTAL
LANDSCAPE TYPE	N/A (PERIMETER 1)	C (PERIMETER 2)	C (PERIMETER 3)	C (PERIMETER 4)	A (PERIMETER 5)
LINEAR FEET OF PERIMETER	110.78 LF	484.09 LF	627.29 LF	679.11 LF	1037.12 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	NO	NO	YES, 3 EX. TREES TO REMAIN *
GREAT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED					
SHADE TREES	0 SHADE TREES	12 SHADE TREES	15 SHADE TREES	17 SHADE TREES	14 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	24 EVERGREEN TREES	34 EVERGREEN TREES	34 EVERGREEN TREES	14 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED					
SHADE TREES	0 SHADE TREES	12 SHADE TREES	15 SHADE TREES	16 SHADE TREES	14 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	24 EVERGREEN TREES	31 EVERGREEN TREES	34 EVERGREEN TREES	14 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES	0 OTHER TREES
SHRUBS (10:1 SUBSTITUTION)	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS

* CREDIT ALONG PERIMETER 5 TAKEN FOR AN EXISTING 12' CHERRY, 15' PERSIMMON, AND 39' POPLAR.

STREET TREE CALCULATIONS

PRIVATE ROAD - 3040 / 40 = 76 TREES
TOTAL TREES REQUIRED = 76 TREES
TOTAL TREES PROVIDED = 76 TREES

REFORESTATION PLANT LIST

ALTERNATIVE 1	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C.	SIZE & SPACING	REMARKS
45 Acer rubrum	VT	D-W	FAC	15'	CONT/B & B 1" CALIPER	
11 Cornus florida	VT	D-M	FACU	15'	CONT/B & B 3"-5" HEIGHT	
12 Liquidambar styraciflua	I	M-W	FAC	15'	CONT/B & B 1" CALIPER	
12 Liriodendron tulipifera	MT	D-M	FAC	15'	CONT/B & B 1" CALIPER	
24 Nyssa sylvatica	T	M-W	FAC	15'	CONT/B & B 1" CALIPER	
12 Prunus serotina	I	M-FACU	15'	CONT/B & B 3"-5" HEIGHT		
12 Quercus alba	MT	D-M	FACU	15'	CONT/B & B 1" CALIPER	
11 Sassafras albidum	I	D-M	FACU	15'	CONT/B & B 3"-5" HEIGHT	
15 Viburnum dentatum	T	M-FACU	15'	CONT/B & B 1" CALIPER		
15 Vaccinium corymbosum	MT	M-W	FACU	15'	CONT/B & B 3"-5" HEIGHT	
TOTAL					169 TREES & SHRUBS (142 TREES REQUIRED)	

APPROVED: DEPARTMENT OF PLANNING AND ZONING
STEPHANIE DEMCHIK, RLA NO. 3038
DATE: 7/29/03

DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERSTOWN MD, 21136
(410) 526-4030

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 7/29/03
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 7/29/03

date	APRIL 03
project	00-065
illustration	engineering
MPP/SID	SID
scale	1"=50'

date	8/16/04
description	REVISED NOISE MITIGATION WALL
revision	2
date	8/16/04
description	REVISED GRADIENT
revision	1

FAIRWAY OVERLOOK
TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
LANDSCAPE AND FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Surveyors
Engineers
Planners
5072 Dorsey Hill Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0296 Fax: (410) 987-0298 Fax

MATCH LINE SHEET 2

WETLAND TABLE

LINE	LENGTH	BEARING
V8	143.66	N37°44'56"W
V9	81.17	N51°09'04"W
V10	90.66	N43°36'32"W
V11	91.42	N49°42'15"W
V12	62.68	N36°25'57"W

FLOODPLAIN

LINE	BEARING & DISTANCE
F1	N03°18'50"W 53.02'
F2	N48°04'27"W 75.95'
F3	N48°20'54"W 100.08'
F4	N40°48'48"W 42.13'
F5	N54°44'50"W 58.73'
F6	N38°50'06"W 72.97'
F7	N17°02'34"W 46.40'
F8	N09°16'48"W 48.81'
F9	N22°07'55"W 61.09'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Max L. Levy 7/15/03
DEVELOPER'S SIGNATURE DATE
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris Milderberg 7/23/03
ENGINEER'S SIGNATURE DATE
ENGINEER'S NAME

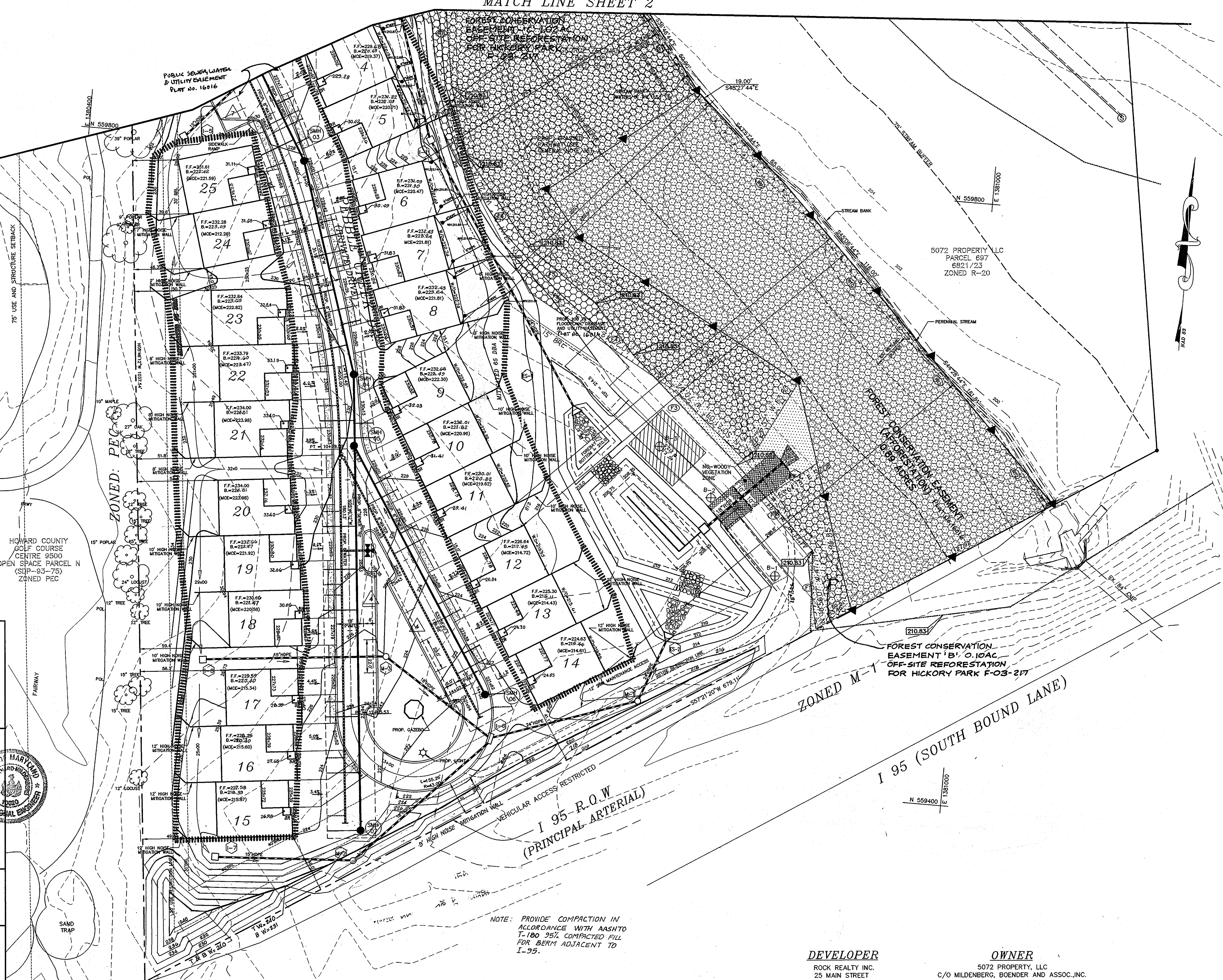
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Myers 7/21/03
USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

Shelly Saly 7/21/03
HOWARD SCD

APPROVED DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton 8/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Paul H. Layton 8/21/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
DIRECTOR



NOTE: PROVIDE COMPACTION IN ACCORDANCE WITH AASHTO T-180 95% COMPACTED FILL FOR BERM ADJACENT TO I-95.

DEVELOPER
ROCK REALTY INC.
25 MAIN STREET
REISTERTOWN MD, 21136
(410) 526-4030

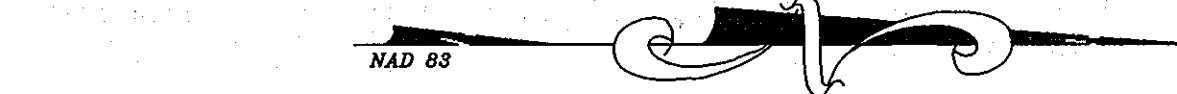
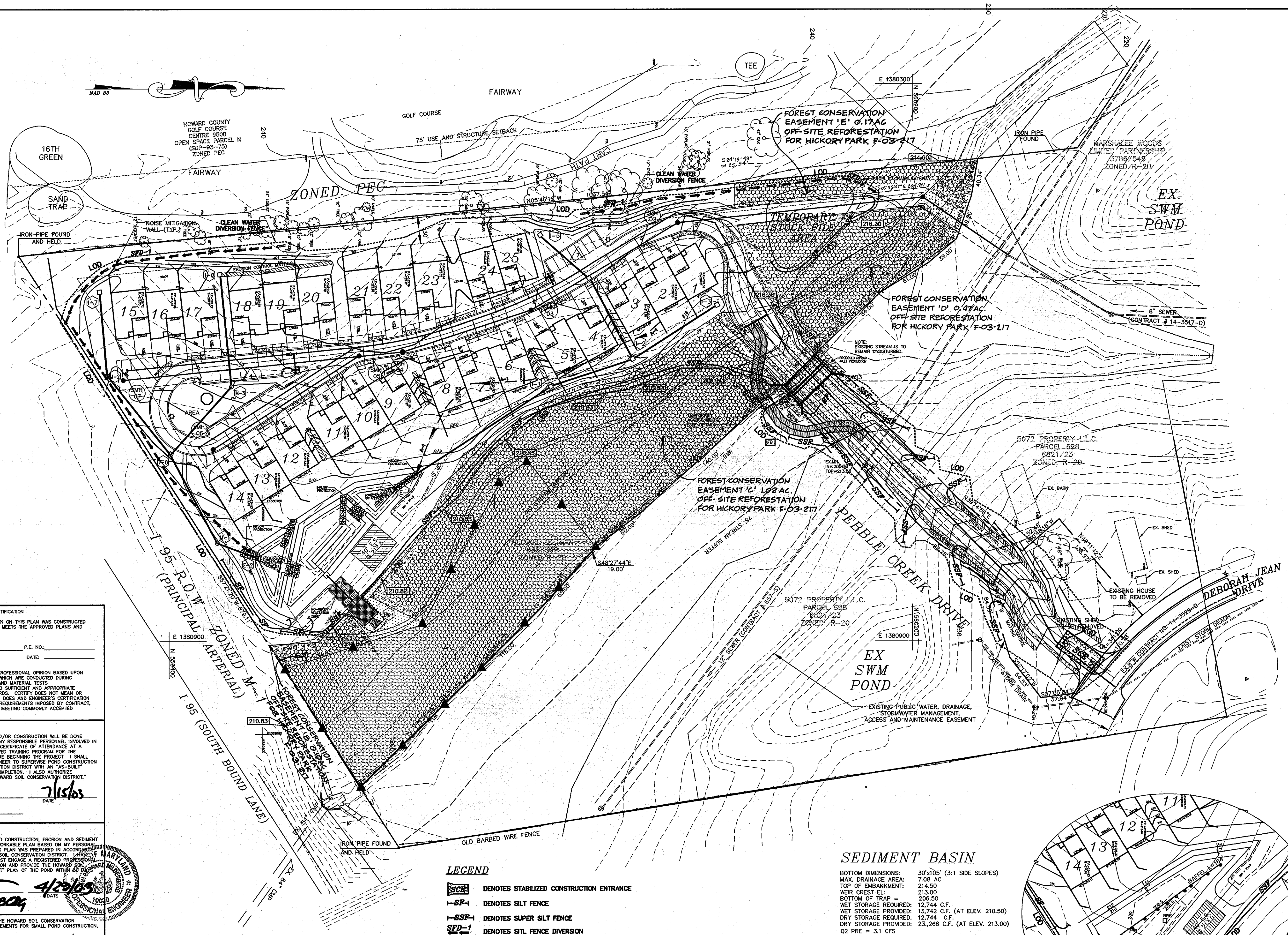
OWNER
5072 PROPERTY LLC
C/O MILDENBERG, BOENDER AND ASSOC. INC.
5072 DORSEY HALL DRIVE SUITE 202
ELLICOTT CITY, MARYLAND 21042

date	APRIL 03
project	00-065
illustration	engineering
MMP	MMP
scale	1"=30'
approval	

date	8/1/2003
description	ADD OFF-SITE FCE FOR HICKORY PARK (F-03-217)
revisions	PROVIDE NOISE BERRY, REVISED NOISE MITIGATION WALL, REVISED ROOF LEADERS
date	8/13/04
description	REVISED GRADING AND ELEVATIONS FOR UNITS 4-25
revisions	

FAIRWAY OVERLOOK
RESIDENTIAL HOUSING FOR ELDERLY
TAX MAP 37 PARCEL 591 (BUILDABLE BULK PARCEL "A")
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SITE DEVELOPMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0286 Fax: (410) 821-5521 Wash. (410) 987-0288 Fax



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO.: _____
 DATE: _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

"I 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 OF DEVELOPER: *Mark C. Cary* DATE: *7/15/03*
 PRINTED NAME OF DEVELOPER: *Mark C. Cary*

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 OF ENGINEER: *William J. Milberg* DATE: *4/29/03*
 PRINTED NAME OF ENGINEER: *William J. Milberg*

PROFESSIONAL ENGINEER
 LICENSE NO. 10000
 STATE OF MARYLAND

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE: *7/21/03*

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: *7/21/03*

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: *8/6/03*
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: *8/21/02*
 DIRECTOR DATE: *8/28/02*

NOTE
 CURL ALL SILT FENCES AND SUPER SILT FENCES 2' UPHILL IN ELEVATION

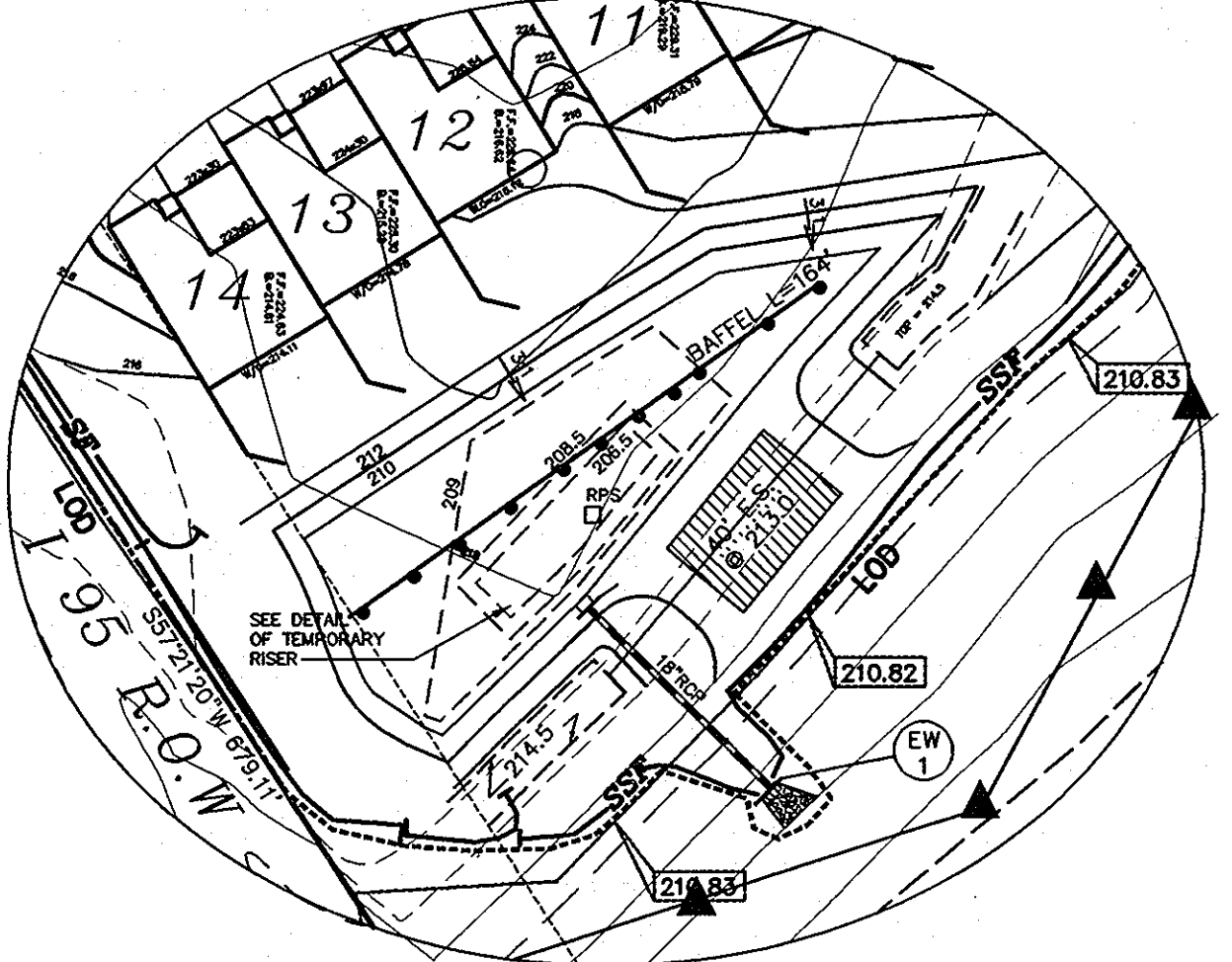
- LEGEND**
- DENOTES STABILIZED CONSTRUCTION ENTRANCE
 - DENOTES SILT FENCE
 - DENOTES SUPER SILT FENCE
 - DENOTES SILT FENCE DIVERSION
 - DENOTES LIMIT OF DISTURBANCE
 - REMOVABLE PUMP STATION
 - FILTER BAG
 - WETLANDS
 - 100 YEAR FLOODPLAIN
 - EROSION CONTROL MATTING
 - INFLOW PROTECTION
 - NO-WOODY VEGETATION ZONE

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042

SEDIMENT BASIN

BOTTOM DIMENSIONS: 30'x105' (3:1 SIDE SLOPES)
 MAX. DRAINAGE AREA: 7.08 AC
 TOP OF EMBANKMENT: 214.50
 WEIR CREST EL.: 213.00
 BOTTOM OF TRAP = 206.50
 WET STORAGE REQUIRED: 12,744 C.F.
 WET STORAGE PROVIDED: 13,742 C.F. (AT ELEV. 210.50)
 DRY STORAGE REQUIRED: 12,744 C.F.
 DRY STORAGE PROVIDED: 23,266 C.F. (AT ELEV. 213.00)
 Q2 PRE = 3.1 CFS
 Q2 DURING CONSTRUCTION = 0.6 CFS @ 212.6
 Q10 DURING CONSTRUCTION = 24.4 CFS @ 213.3
 E.S. ELEV. = 213.0
 E.S. WIDTH = 40.0'
 CLEANOUT ELEV. = 209.7
 4' RISER WEIR ELEV. = 213.0



PLAN - TEMPORARY SEDIMENT BASIN

project	00-065	date	APRIL 03
illustration	MMP	engineering	MMP
scale	1"=50'	approval	

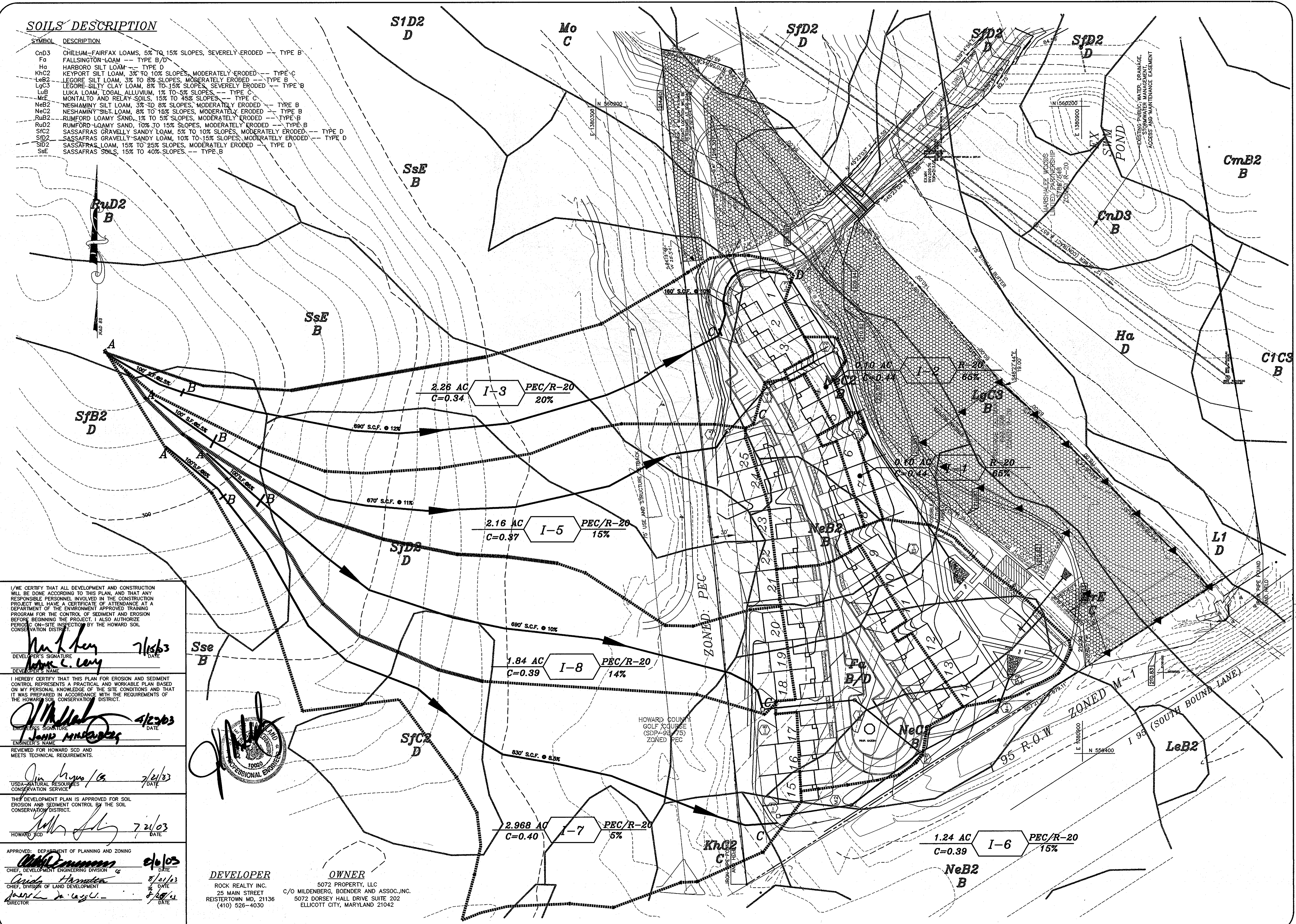
description	date
ADD OFF-SITE FCE FOR HICKORY PARK (F-03-217)	8/1/03
REVISED GRADING	8/16/04
REVISED GRADING	

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37 - PARCEL 591 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 997-0296 Ext. (301) 821-5551 Wash. (410) 997-0298 Fax

SOILS DESCRIPTION

SYMBOL	DESCRIPTION
CnD3	CHILLUM-FAIRFAX LOAMS, 5% TO 15% SLOPES, SEVERELY ERODED --- TYPE B
Fa	FALLSINGTON LOAM --- TYPE B/D
Ha	HARBORO SILT LOAM --- TYPE D
KhC2	KEYPORT SILT LOAM, 3% TO 10% SLOPES, MODERATELY ERODED --- TYPE C
LeB2	LEORE SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
LgC3	LEGORE SILTY CLAY LOAM, 8% TO 15% SLOPES, SEVERELY ERODED --- TYPE B
LuB	LUKA LOAM, LOCAL ALLUVIUM, 1% TO 5% SLOPES --- TYPE C
MeE	MONTALTO AND RELAY SOILS, 15% TO 45% SLOPES --- TYPE C
NeB2	NESHAMINY SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
NeC2	NESHAMINY SILT LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
RuB2	RUMFORD LOAMY SAND, 1% TO 5% SLOPES, MODERATELY ERODED --- TYPE B
RuD2	RUMFORD LOAMY SAND, 10% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
SfC2	SASSAFRAS GRAVELLY SANDY LOAM, 5% TO 10% SLOPES, MODERATELY ERODED --- TYPE D
SfD2	SASSAFRAS GRAVELLY SANDY LOAM, 10% TO 15% SLOPES, MODERATELY ERODED --- TYPE D
SfD2	SASSAFRAS LOAM, 15% TO 25% SLOPES, MODERATELY ERODED --- TYPE D
SsE	SASSAFRAS SOILS, 15% TO 40% SLOPES --- TYPE B



I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Am L. Long 7/15/03
DEVELOPER'S SIGNATURE DATE

Am L. Long
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. M. Hall 4/23/03
ENGINEER'S SIGNATURE DATE

J. M. Hall
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Hynes 7/21/03
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

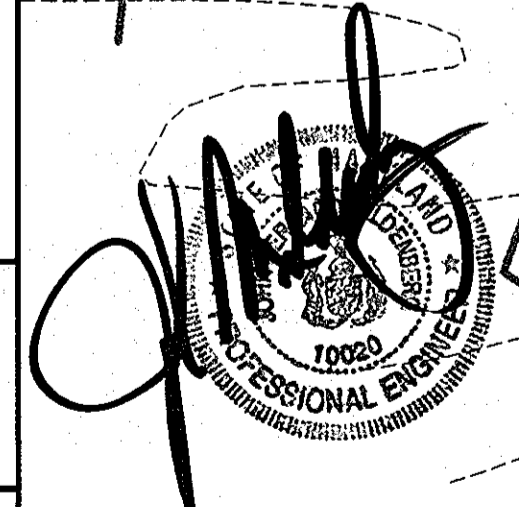
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

Guthrie 7/21/03
HOWARD SCD DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
David Henderson 8/01/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
David Henderson 8/01/03
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
James L. ... 8/05/03
 DIRECTOR DATE

DEVELOPER
 ROCK REALTY INC.
 25 MAIN STREET
 REISTERTOWN MD, 21136
 (410) 526-4030

OWNER
 5072 PROPERTY, LLC
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DRIVE SUITE 202
 ELLICOTT CITY, MARYLAND 21042



date	APRIL 03
project	00-065
illustration	MMP
scale	1" = 50'

date	8/1/03
description	REVISED PER COMMENTS
revision	1

FAIRWAY OVERLOOK
 RESIDENTIAL HOUSING FOR ELDERLY
 TAX MAP 37, PARCEL 591 (BUILDABLE BULK PARCEL "A")
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 STORM DRAIN DRAINAGE AREA MAP

MILDENBERG, BOENDER & ASSOC., INC.
 Planners Engineers Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 987-0288 Fax (301) 821-5521 Wash. (410) 987-0288 Fax