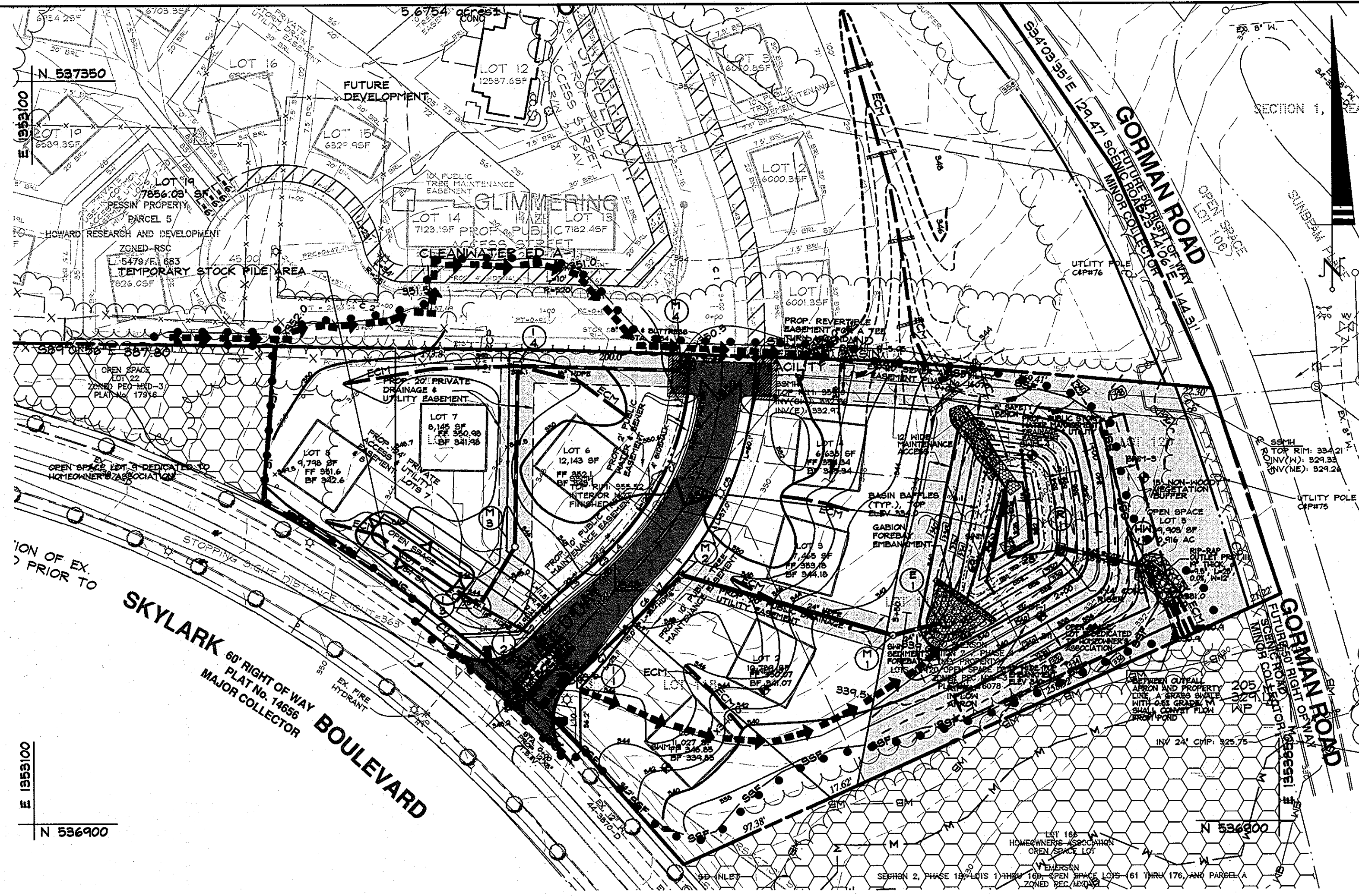


STRIPING PLAN
SCALE: 1"=30'



PLAN VIEW
SCALE: 1"=50'

DRAWING LEGEND	
---	EXISTING MINOR CONTOUR (2' INTERVAL)
---	EXISTING MAJOR CONTOUR (10' INTERVAL)
---	ADJACENT PROPERTY LINE
---	EXISTING PROPERTY BOUNDARY
---	EX. ROAD / EDGE OF PAVING
---	EX. SEWER LINE & MANHOLES, CLEAN-OUTS
---	EX. OVERHEAD ELECTRIC & UTILITY POLES
---	PROPOSED MINOR CONTOUR (2' INTERVAL)
---	PROPOSED MAJOR CONTOUR (10' INTERVAL)
---	PROP. STANDARD CURB & GUTTER /
---	PROP. REVERSE CURB & GUTTER
---	PROP. REVERSE/MOUNTABLE CURB & GUTTER
---	PROPOSED PRIVATE ROAD/DRIVE CENTERLINE
---	EX. BUILDING
---	PROPOSED HOUSE
---	PROPOSED SPOT ELEVATION & FLOW ARROW
---	EXISTING TREES
---	PROPOSED ORNAMENTAL TREE
---	PROPOSED EVERGREEN TREE
---	EXISTING TREELINE
---	EXISTING SHRUB/BUSH LINE
---	PROPOSED STORM DRAIN W/ INLETS & MANHOLE
---	PROPOSED INLET PROTECTION MEASURES
---	PROPOSED WATER LINE & HYDRANT
---	RIP-RAP
---	SILT FENCE
---	SUPER SILT FENCE
---	STABILIZED CONSTRUCTION ENTRANCE
---	PROPOSED TREELINE
---	PROPOSED LIMIT OF DISTURBANCE
---	EARTH DIKE
---	OFFSITE FUTURE CONTOURS
---	EROSION CONTROL MATTING

AS-BUILT

Paul G. Cavanaugh
SURVEY DATES: 10/24, 11/12/2012, 10/7/2013

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS.

Paul G. Cavanaugh
PAUL G. CAVANAUGH
PROFESSIONAL ENGINEER #27026
LICENSE EXPIRATION DATE: 1/25/16

BY THE DEVELOPER:
I ME 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.

Paul G. Cavanaugh 9/25/07
DEVELOPER DATE

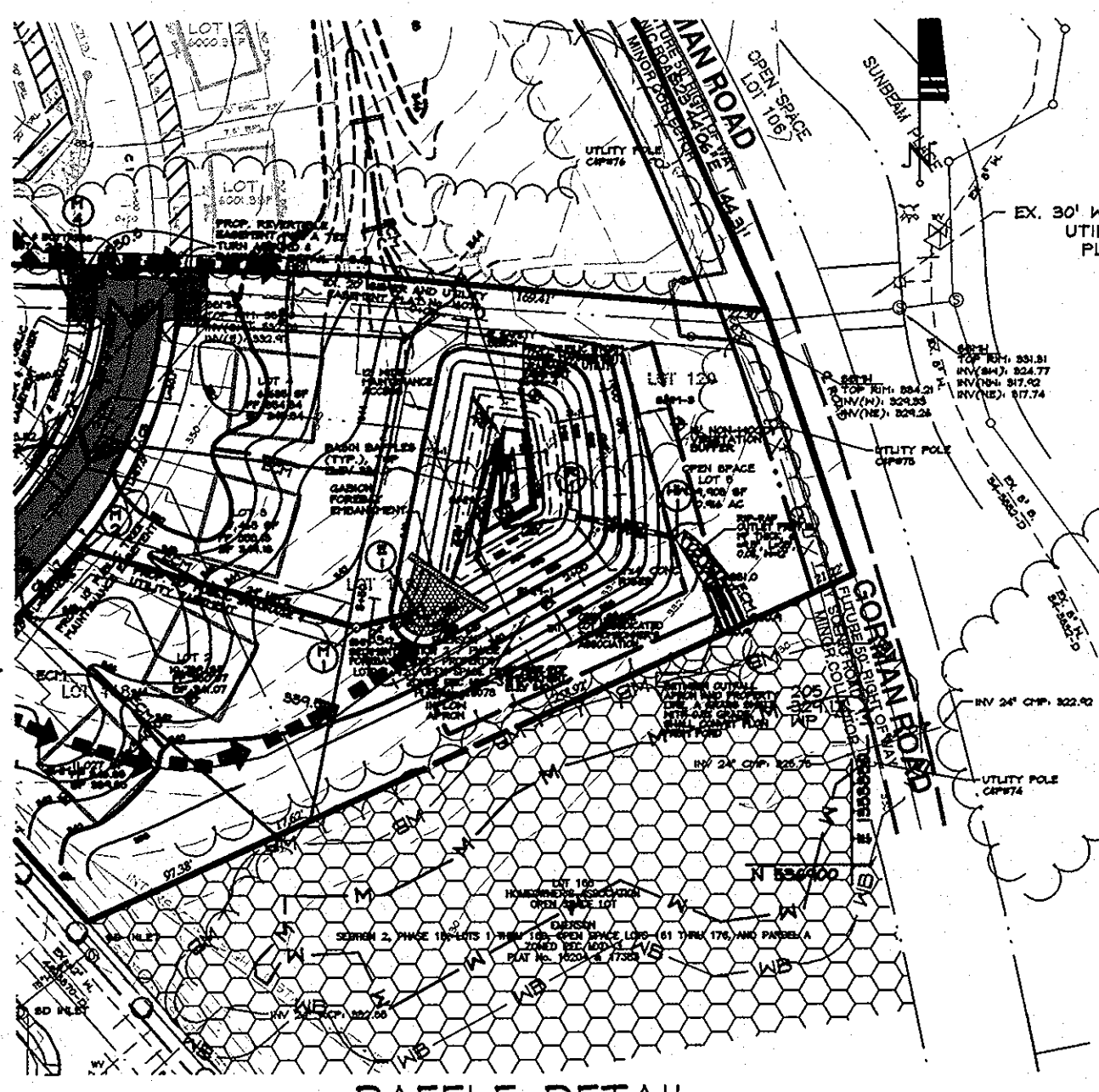
ENGINEER
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE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

Paul G. Cavanaugh 9/25/07
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.

Paul G. Cavanaugh 10/9/07
DATE

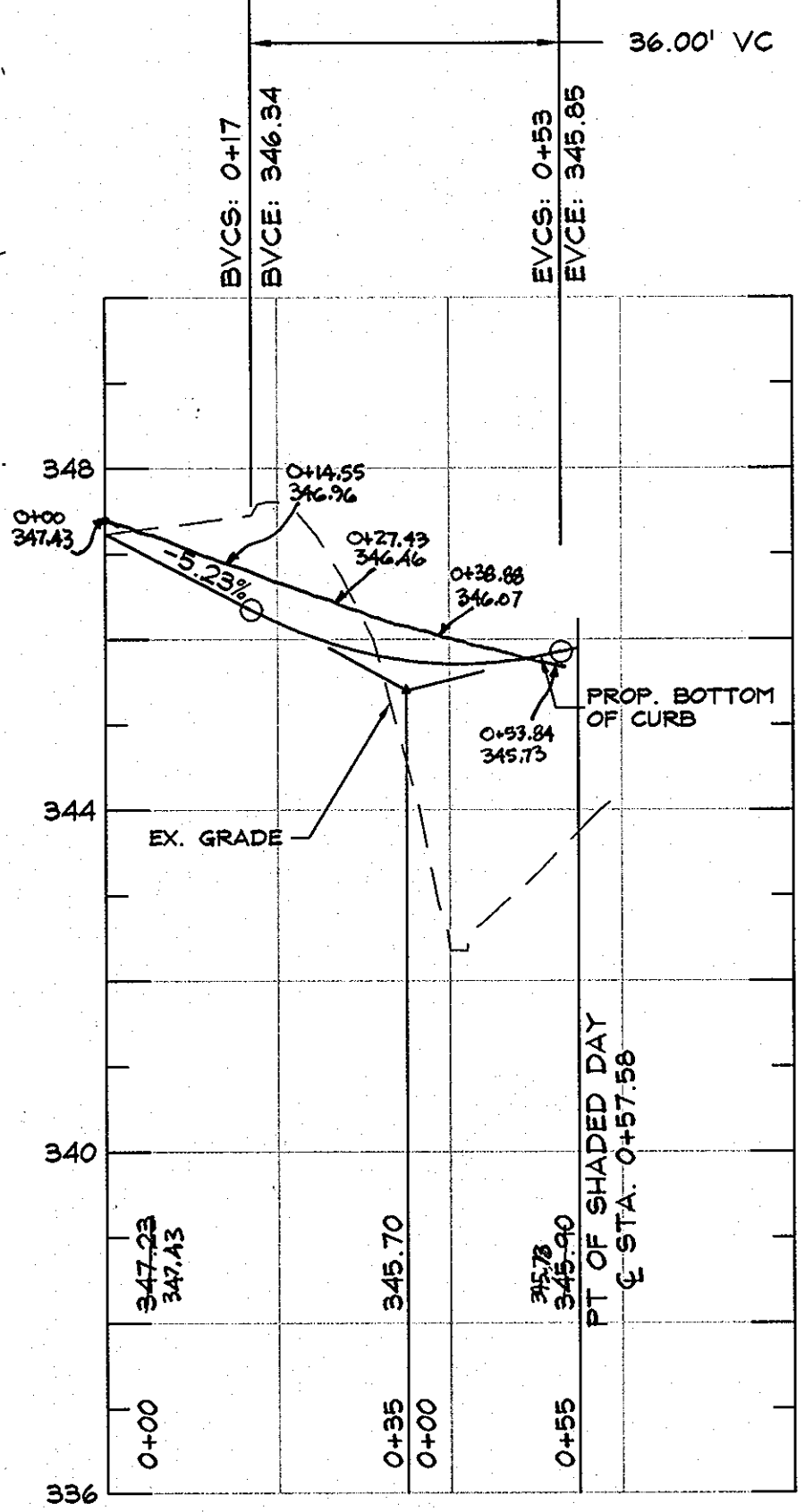
HOWARD SOIL CONSERVATION DISTRICT



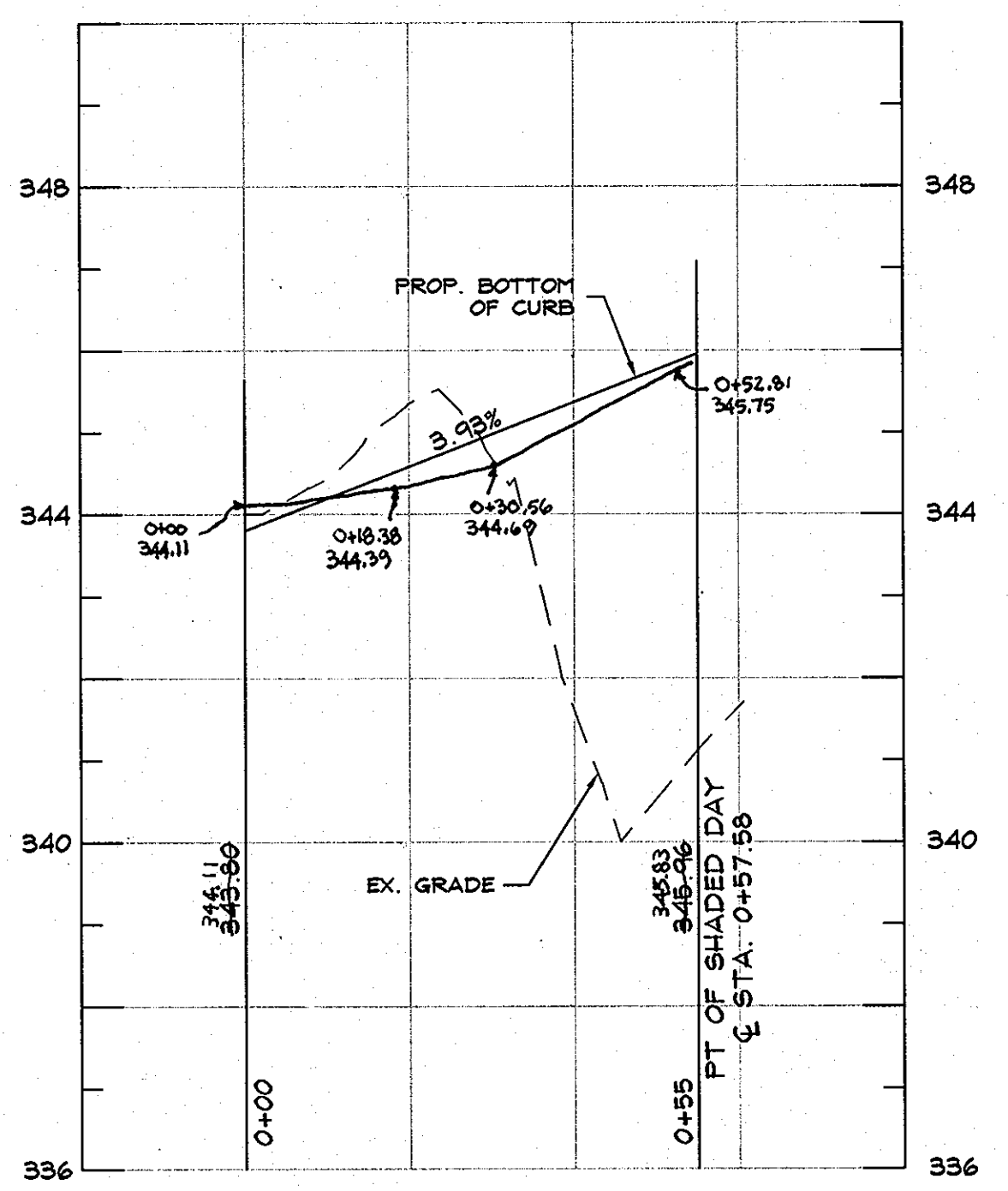
BAFFLE DETAIL
SCALE: 1"=30'

SWM POND FACILITY SUMMARY TABLE	
SWM FACILITY TYPE USED: DETENTION POND	
OWNERSHIP	PRIVATE
STRUCTURE TYPE	WET DETENTION POND
STRUCTURE CLASS	MD-378
DRAIN AREA (WQV) (Ac)	5.85
HT TO EMBANKMENT (ft)	8.5
STREAM USE	I-P
WATERSHED	MIDDLE PATUXENT R.
WQV REQUIRED (Ac-ft)	0.191
WQ PROVIDED IN WET POOL (Ac-ft)	0.193
Rev REQUIRED (Ac-ft)	0.048
Rev PROVIDED IN GRASS SHALE WITH CHECK DAMS	0.057
Cpv REQUIRED (Ac-ft)	0.226
Cpv PROVIDED AFTER CREDITS (Ac-ft)	0.226
Cpv PROVIDED IN POND (Ac-ft)	0.226
Cpv WSE (1-yr FROM TR20) (ft)	336.0
1-yr PROP. INFLOW (cfs)	0.20
1-yr PROP. OUTFLOW (cfs)	0.20
10-yr WATER SURFACE ELEVATION (ft) CLOGGED	337.32
100-yr WATER SURFACE ELEVATION (ft) CLOGGED	337.69
10-yr WATER SURFACE ELEVATION (SEC) (ft) CLOGGED	337.24
FREEBOARD REQUIRED (ft)	2.0
FREEBOARD PROVIDED (ft)	2.31
STORAGE-HEIGHT PRODUCT (Ac-ft-ft)	4.3
NORTH COORDINATE	N 537,000
EAST COORDINATE	E 1,953,500

LOW POINT ELEV = 345.70
LOW POINT STA = 0+41.35
PVI STA = 0+35
PVI ELEV = 345.40
A.D. = 7.73
K = 4.66



INTERSECTION FILLET PROFILE
WEST OF G SHADED DAY
SCALE - HORIZONTAL - 1"=20"
VERTICAL - 1"=2"



INTERSECTION FILLET PROFILE
EAST OF G SHADED DAY
SCALE - HORIZONTAL - 1"=20"
VERTICAL - 1"=2"

BASIN TABLE	
BASIN TYPE	BASIN
EXISTING DRAINAGE AREA: ARCS	0.66
INTERIM DRAINAGE AREA: ACRES	2.45
PROPOSED DRAINAGE AREA: ACRES	2.45
	CO 2,205
STORAGE REQUIRED (CUBIC FEET):	WET 4,410
	DRY 4,410
	TOTAL 8,820
	CO 753
STORAGE PROVIDED (CUBIC FEET):	WET 8,157
	DRY 9,164
	TOTAL 17,321
EXISTING GROUND ELEVATION	334.0
TOP EMBANKMENT ELEVATION	342.0
WEIR CREST ELEVATION	336.33
DRY STORAGE ELEVATION	336.33
WET STORAGE ELEVATION	334.0
CLEANOUT ELEVATION	330.0
BOTTOM ELEVATION	328.0
DEPTH OF CHANNEL (d)	N/A
OUTLET WIDTH (b)	N/A
BOTTOM DIMENSION	55x15
BASIN SIDE SLOPES	3:1
BASIN DEPTH	C/O 2.0
	WET 6.0
	DRY 8.33
BARREL DIAMETER	24"
RISER DIMENSIONS (PER SIDE)	4"
WET STORAGE ZONE ELEVATION	328.0-334.0
DRY STORAGE ZONE ELEVATION	334.0-336.33

THIS SWM POND FACILITY WILL HAVE A DAM HAZARD CLASSIFICATION OF 'A'

THIS SITE IS LOCATED WITHIN THE MIDDLE PATUXENT RIVER, AND IS STREAM USE I-P

THIS POND SHALL BE OWNED AND MAINTAINED BY THE HOME OWNER'S ASSOCIATION (HOA)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Walter M. Hill 11-5-07
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Chris Hantz 11/21/07
CHIEF DIVISION OF LAND DEVELOPMENT DATE

Paul G. Cavanaugh 11/14/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 265429. Expiration Date: 07/26/09.

Paul G. Cavanaugh
PAUL G. CAVANAUGH
PROFESSIONAL ENGINEER #27026

DATA SOURCES:
TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

DeMario Design Consultants, Inc.
192 East Main Street
Westminster, MD 21157
Phone: (410) 385-0560
Fax: (410) 385-0564
eMail: ddc@demariodesign.com

OWNER: EMERSON LAND BUSINESS TRUST
10275 LITTLE PATUXENT PKWY
COLUMBIA, MD 21044
410-292-0000

DEVELOPER: GENERAL GROWTH PARTNERS
10275 LITTLE PATUXENT PKWY
COLUMBIA, MD 21044
410-992-0000

SITE ADDRESS: SKYLARK BOULEVARD

FINAL ROAD CONSTRUCTION PLANS
EMERSON SECTION 2, PHASE 8A
LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

GRADING & SEDIMENT CONTROL PLAN

6TH ELECTION DISTRICT HOWARD COUNTY, MD

REVISIONS			
NO.	DESCRIPTION OF CHANGES	DRN.	REV. DATE
CO. FILE #	F-07-128	DES. BY:	WRD/JCO
TAX ACC. #		DRN. BY:	JCO
TAX MAP:	47	CHK. BY:	RBW/MRT
BLOCK/GRID:	8	DATE:	09.25.07
PARCEL #:	P/O 1053	DDC JOB#:	05122.2
ZONE/USE:	PECMXD3	SHEET NUMBER:	
DWG. SCALE:	AS SHOWN		3 of 9

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the 2000 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 objectionable material shall be removed...

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...

Structure Backfill

Structure backfill may be flowable fill meeting the specifications of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified.

Earth Fill

The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, rocks, rubbish, stones greater than 6 inches in diameter...

Materials

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.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a wheel loader, roller or vibratory roller.

Compaction

The cutoff trench shall be excavated into the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED IN ACCORDANCE WITH THE PLAN AND THE CURRENT APPLICABLE SPECIFICATIONS.

PAUL G. CAVANAUGH PROFESSIONAL ENGINEER #27302

LICENSE EXPIRATION DATE: 11/25/14

BY THE DEVELOPER: I ME CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT I AM THE 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 EROSION 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 PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

PAUL G. CAVANAUGH 9/25/07 DATE

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PAUL G. CAVANAUGH 9/25/07 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.

NATURAL RESOURCES CONSERVATION SERVICE DATE: 10/9/07

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

DATE: 10/9/07

HOWARD SOIL CONSERVATION DISTRICT

Embankment Core

The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation 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.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers...

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PAUL G. CAVANAUGH 9/25/07 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.

NATURAL RESOURCES CONSERVATION SERVICE DATE: 10/9/07

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

DATE: 10/9/07

HOWARD SOIL CONSERVATION DISTRICT

Coupling bands, anti-seep collars, and 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 with at least 24 mils in thickness.

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. Driveline bands are not considered to be watertight.

Bedding

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

Backfilling shall conform to "Structure Backfill"

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

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 dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works.

Reinforced Concrete Pipe

All of the following criteria shall apply for reinforced concrete pipe installed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment.

Materials

Materials - Reinforced concrete pipe shall be equal or exceed ASTM C-361.

Bedding

Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 90% of the outside diameter with a minimum thickness of 6 inches.

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 line, 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.

Backfilling shall conform to "Structure Backfill"

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

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, utility, spoil or 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 soil pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

Plastic Pipe

The following criteria shall apply for plastic pipe: 1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch pipe shall meet the requirements of AASHTO M254 Type S.

Joints and connections to anti-seep collars shall be completely watertight.

Bedding

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PAUL G. CAVANAUGH PROFESSIONAL ENGINEER #27302

LICENSE EXPIRATION DATE: 11/25/14

BY THE DEVELOPER: I ME CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT I AM THE 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 EROSION 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 PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

PAUL G. CAVANAUGH 9/25/07 DATE

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.

PAUL G. CAVANAUGH 9/25/07 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.

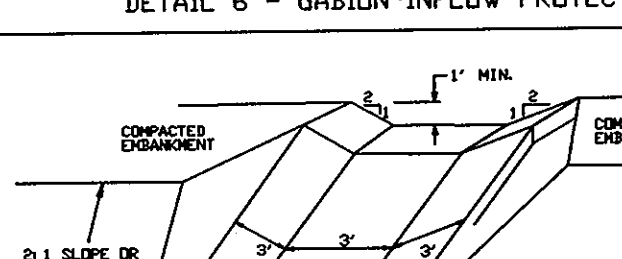
NATURAL RESOURCES CONSERVATION SERVICE DATE: 10/9/07

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

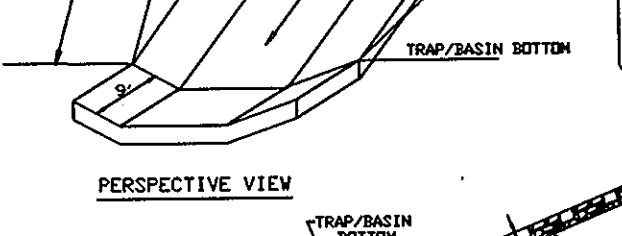
DATE: 10/9/07

HOWARD SOIL CONSERVATION DISTRICT

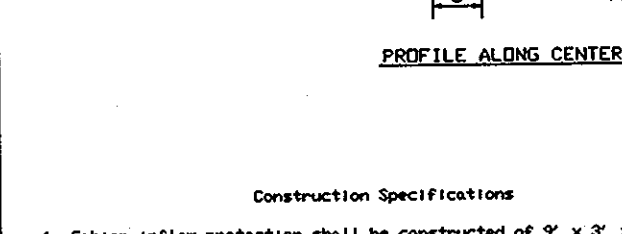
DETAIL 6 - GABION INFLOW PROTECTION



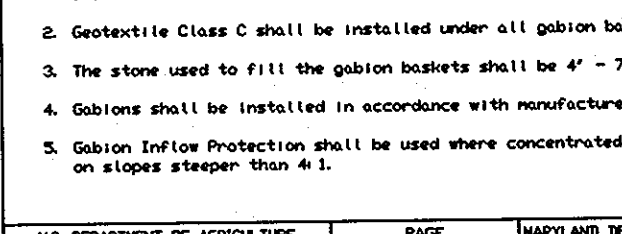
DETAIL 20A - REMOVABLE PUMPING STATION



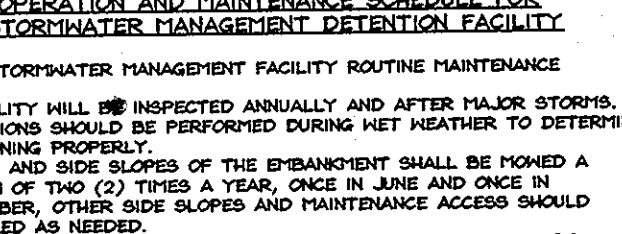
DETAIL 1 - EARTH DIKE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



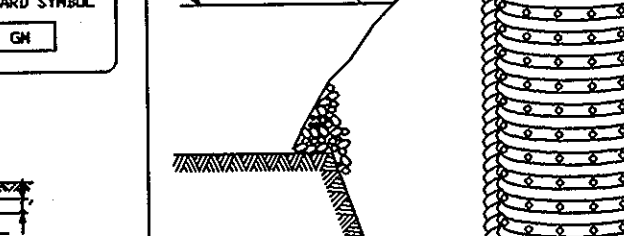
DETAIL 33 - SUPER SILT FENCE



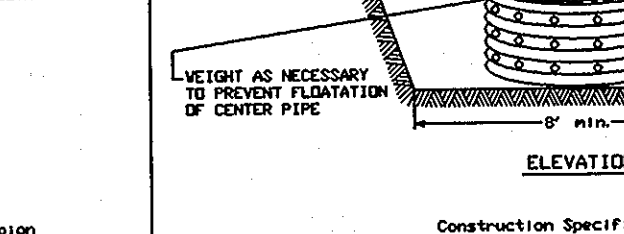
DETAIL 27 - ROCK OUTLET PROTECTION III



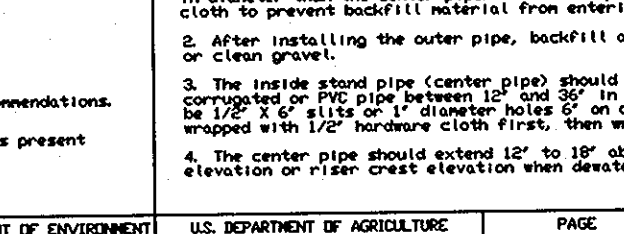
DETAIL 22 - SILT FENCE



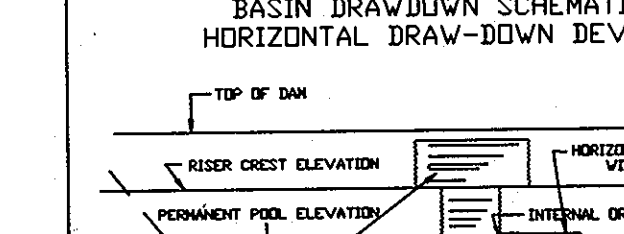
DETAIL 30 - EROSION CONTROL MATTING



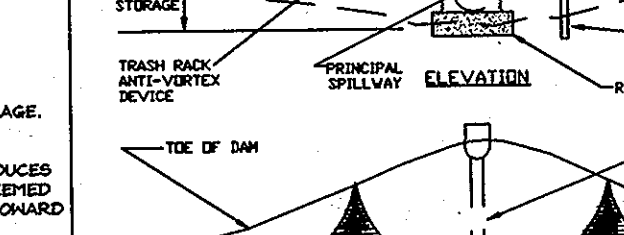
DETAIL 10 - SEDIMENT BASIN BAFFLES



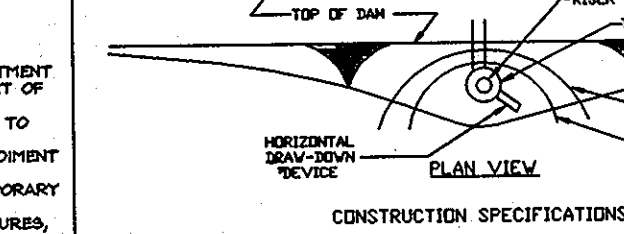
DETAIL 11 - GABION INFLOW PROTECTION



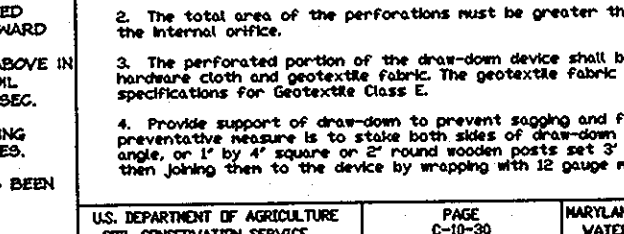
DETAIL 12 - GABION INFLOW PROTECTION



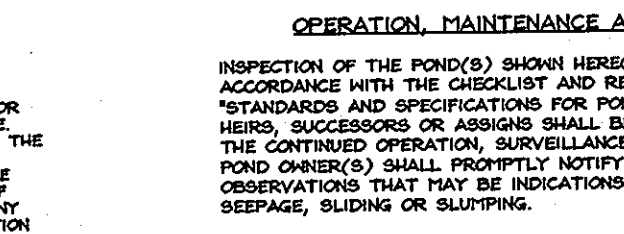
DETAIL 13 - GABION INFLOW PROTECTION



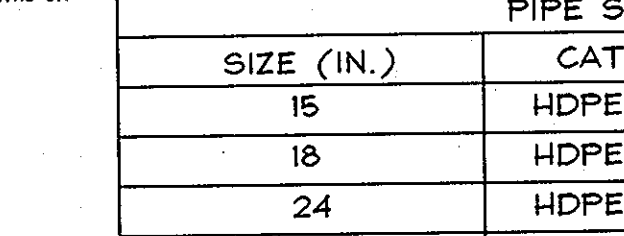
DETAIL 14 - GABION INFLOW PROTECTION



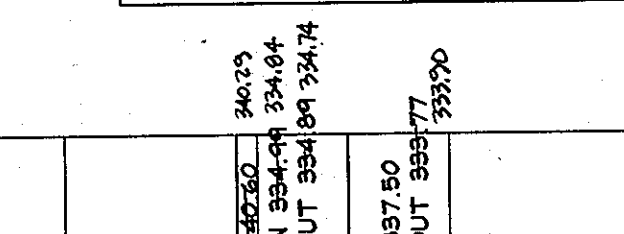
DETAIL 15 - GABION INFLOW PROTECTION



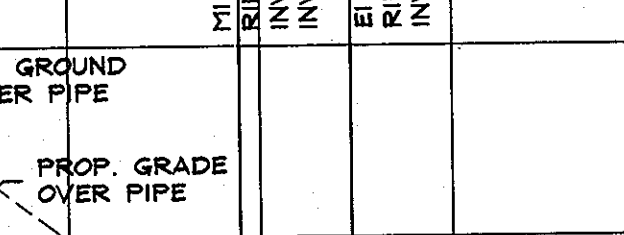
DETAIL 16 - GABION INFLOW PROTECTION



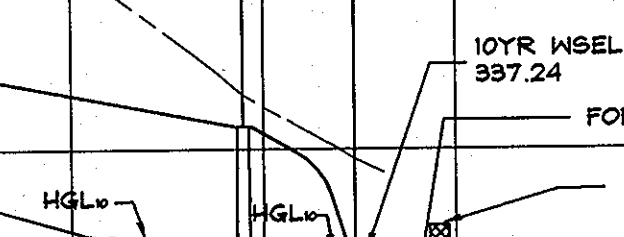
DETAIL 17 - GABION INFLOW PROTECTION



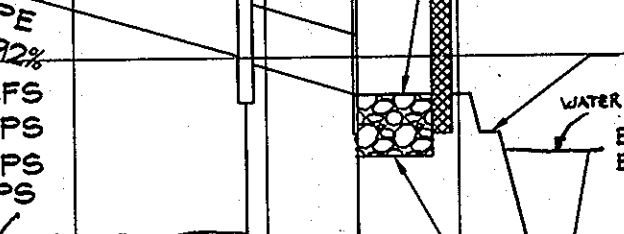
DETAIL 18 - GABION INFLOW PROTECTION



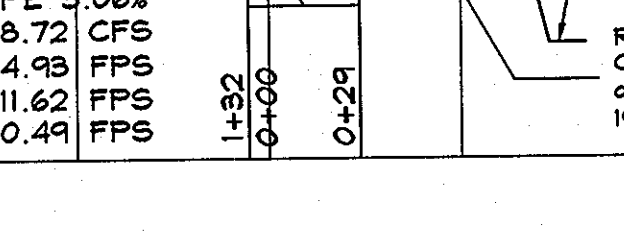
DETAIL 19 - GABION INFLOW PROTECTION



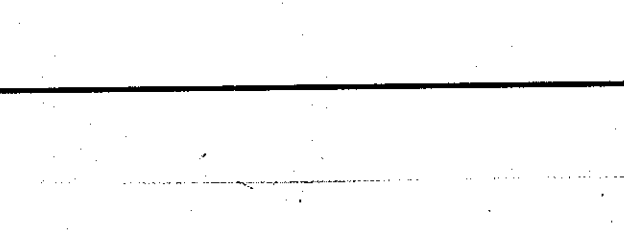
DETAIL 20 - GABION INFLOW PROTECTION



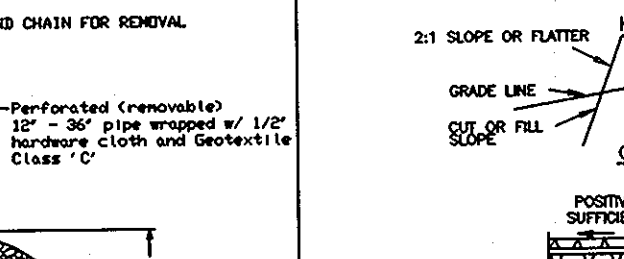
DETAIL 21 - GABION INFLOW PROTECTION



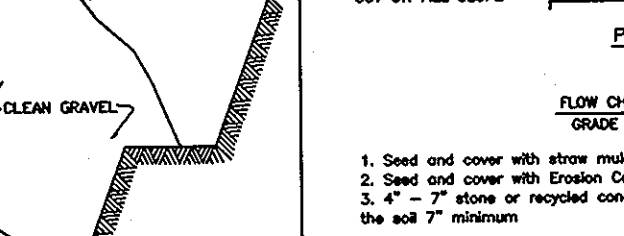
DETAIL 23 - GABION INFLOW PROTECTION



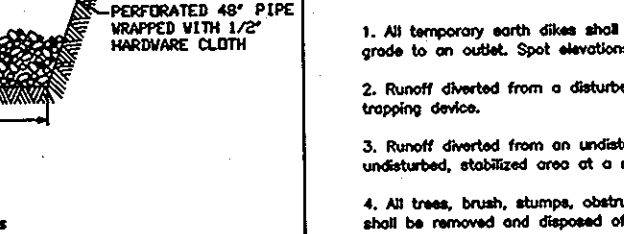
DETAIL 25 - GABION INFLOW PROTECTION



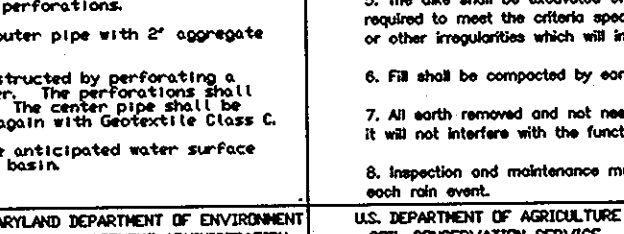
DETAIL 26 - GABION INFLOW PROTECTION



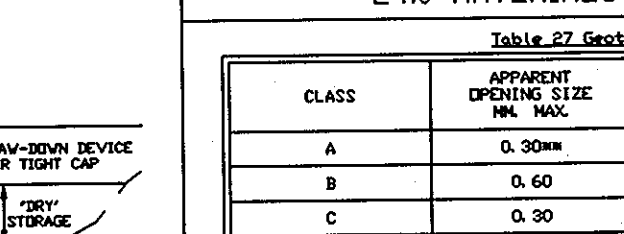
DETAIL 28 - GABION INFLOW PROTECTION



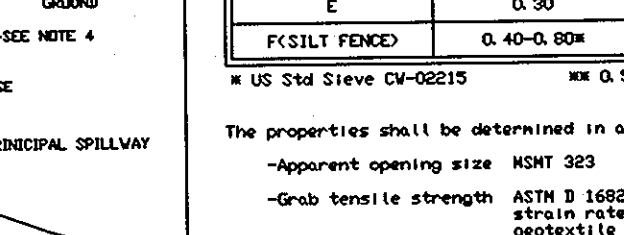
DETAIL 29 - GABION INFLOW PROTECTION



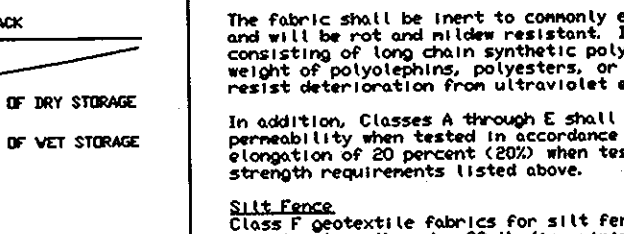
DETAIL 31 - GABION INFLOW PROTECTION



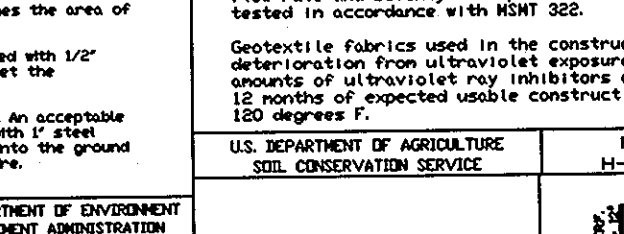
DETAIL 32 - GABION INFLOW PROTECTION



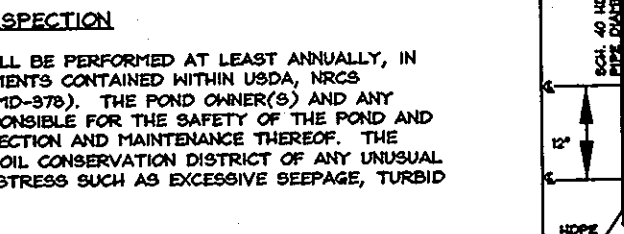
DETAIL 34 - GABION INFLOW PROTECTION



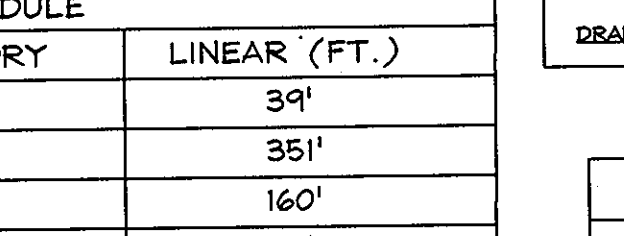
DETAIL 35 - GABION INFLOW PROTECTION



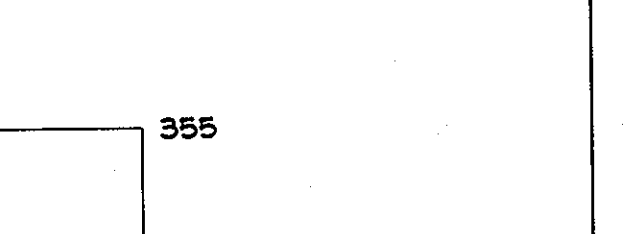
DETAIL 36 - GABION INFLOW PROTECTION



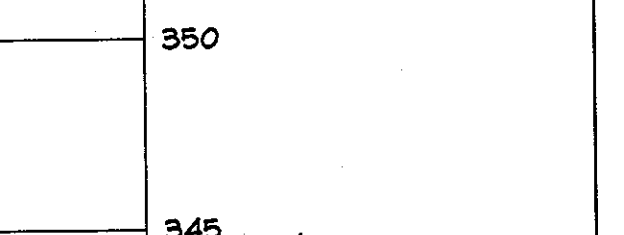
DETAIL 37 - GABION INFLOW PROTECTION



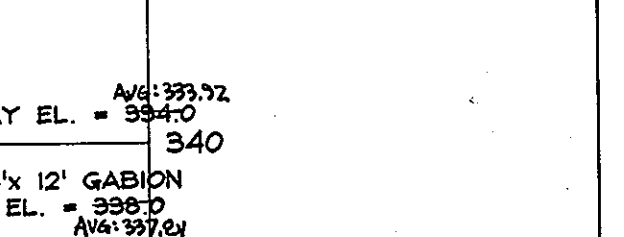
DETAIL 38 - GABION INFLOW PROTECTION



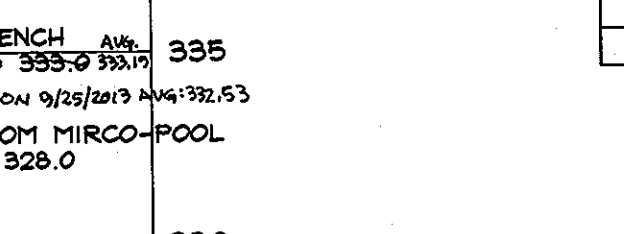
DETAIL 39 - GABION INFLOW PROTECTION



DETAIL 40 - GABION INFLOW PROTECTION



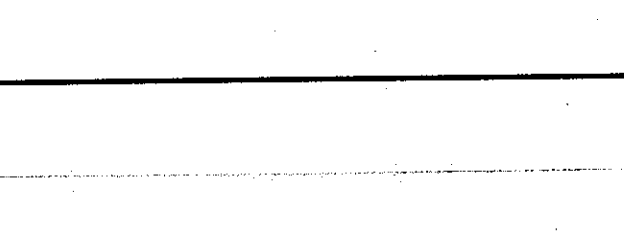
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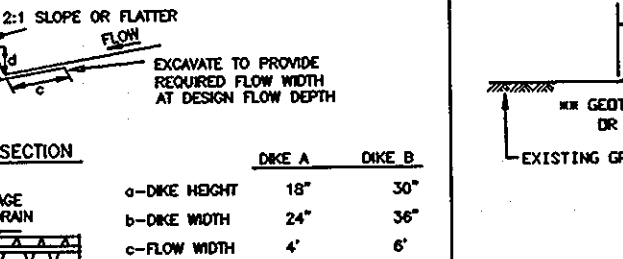
DETAIL 42 - GABION INFLOW PROTECTION



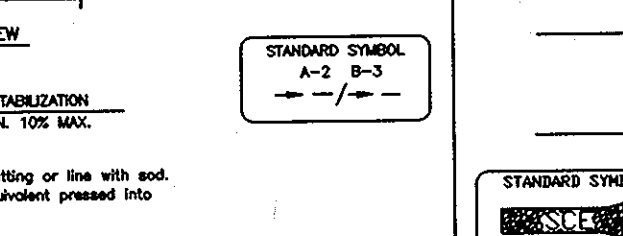
DETAIL 43 - GABION INFLOW PROTECTION



DETAIL 44 - GABION INFLOW PROTECTION



DETAIL 45 - GABION INFLOW PROTECTION



STREET TREE TABULATION

STREET	TREE TYPE	QUANTITY	REMARKS
N 537950	1 TREE/40 L.F.	237/40=	
	1 TREE/40 L.F.	147/40=	
	1 TREE/40 L.F.	480/40=	

STREET TREES REQUIRED: 22 TOTAL
STREET TREES PROVIDED: 21 TOTAL

NOTE: ALL STREET TREES PROVIDED SHALL BE MAJOR/SHADE TREES.
* SEEKING CREDIT FOR 5 EXISTING SHADE TREES ALONG SKYLARK BOULEVARD
** 8 ORNAMENTAL TREES PROVIDED FOR THE 4 SHADE TREES BECAUSE OF THE
BGE TREE HEIGHT REQUIREMENT WHEN TREES ARE PLANTED BENEATH
OVERHEAD POWER LINES.

PESSIN PROPERTY
PARCEL 5
HOWARD RESEARCH AND DEVELOPMENT
ZONED RSC
L. 5478/F. 683

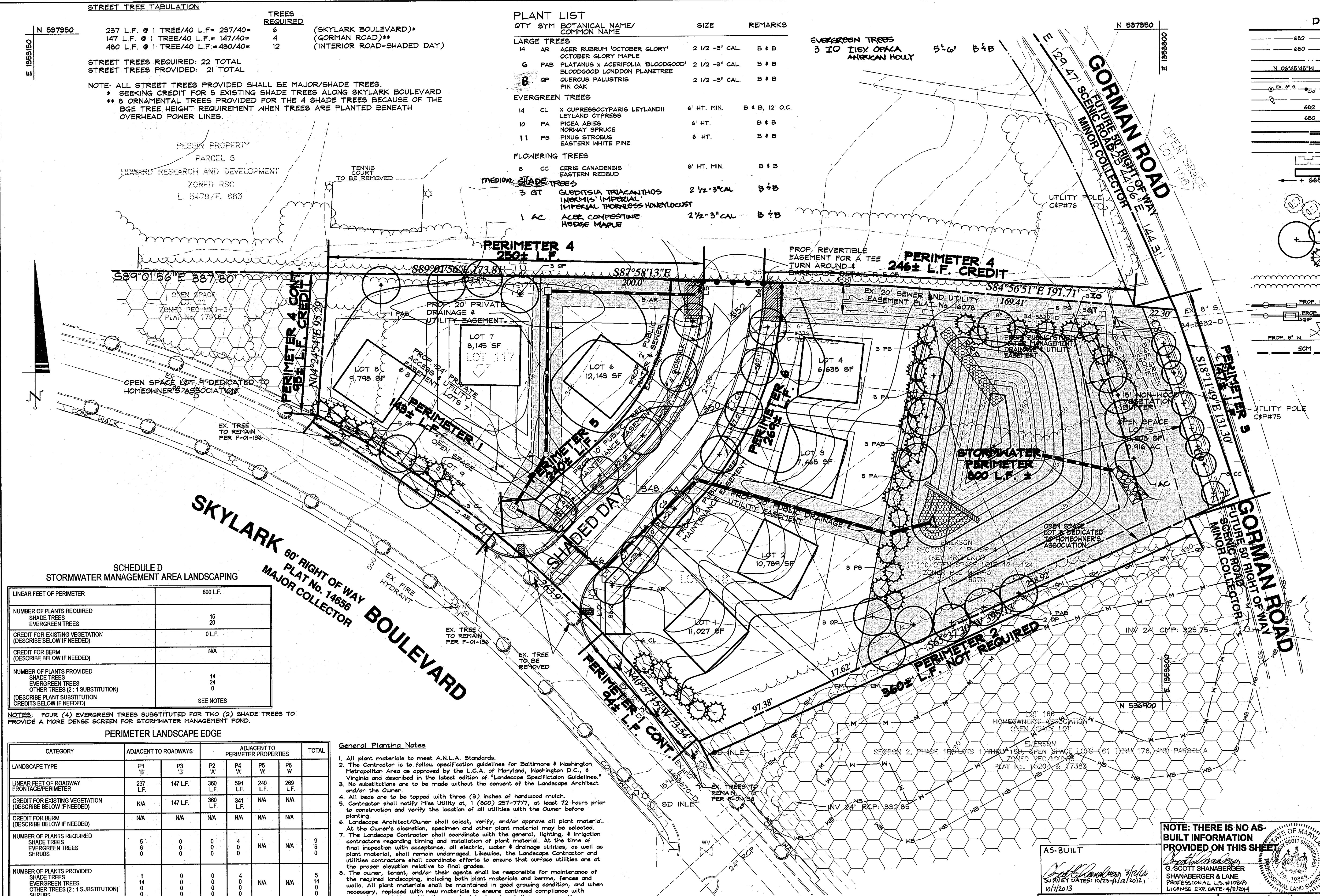
PLANT LIST

QTY	SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMARKS
LARGE TREES				
14	AR	ACER RUBRUM 'OCTOBER GLORY'	2 1/2 - 3" CAL.	B # B
		OCTOBER GLORY MAPLE		
6	PAB	PLATANUS X ACERIFOLIA 'BLOODGOOD'	2 1/2 - 3" CAL.	B # B
		BLOODGOOD LONDON PLANETREE		
8	QP	QUERCUS PALUSTRIS	2 1/2 - 3" CAL.	B # B
		PIN OAK		
EVERGREEN TREES				
14	CL	X CUPRESSOCYPARIS LEYLANDII	6' HT. MIN.	B # B, 12' O.C.
		LEYLAND CYPRESS		
10	PA	PICEA ABIES	6' HT.	B # B
		NORWAY SPRUCE		
11	PS	PINUS STROBUS	6' HT.	B # B
		EASTERN WHITE PINE		
FLOWERING TREES				
8	CC	CERIS CANADENSIS	8' HT. MIN.	B # B
		EASTERN REDBUD		
MEDIUM SHADE TREES				
3	GT	GLEDITSIA TRIACANTHOS	2 1/2 - 3" CAL	B # B
		IMPERIAL THORNLESS HONEYLOCUST		
1	AC	ACER COMPESTRIS	2 1/2 - 3" CAL	B # B
		HEDGE MAPLE		

EVERGREEN TREES
3 TO 10' TALL
5'6" B+B

DRAWING LEGEND

682	EXISTING MINOR CONTOUR (2' INTERVAL)
680	EXISTING MAJOR CONTOUR (10' INTERVAL)
	ADJACENT PROPERTY LINE
	EXISTING PROPERTY BOUNDARY
	EX. ROAD / EDGE OF PAVING
	EX. SEWER LINE & MANHOLES, CLEAN-OUTS
	EX. OVERHEAD ELECTRIC & UTILITY POLES
682	PROPOSED MINOR CONTOUR (2' INTERVAL)
680	PROPOSED MAJOR CONTOUR (10' INTERVAL)
	PROP. STANDARD CURB & GUTTER /
	PROP. REVERSE CURB & GUTTER
	PROP. MOUNTABLE CURB & GUTTER /
	PROP. REVERSE/MOUNTABLE CURB & GUTTER
	PROPOSED PRIVATE ROAD/DRIVE CENTERLINE
	EX. BUILDING
	PROPOSED HOUSE
	PROPOSED SPOT ELEVATION & FLOW ARROW
	EXISTING TREES
	PROPOSED ORNAMENTAL TREE
	PROPOSED SHADE TREE
	PROPOSED EVERGREEN TREE
	EXISTING TREELINE
	EXISTING SHRUB/BUSH LINE
	PROPOSED STORM DRAIN W/
	INLETS & MANHOLE
	PROPOSED INLET PROTECTION MEASURES
	PROPOSED WATER LINE & HYDRANT
	ECM
	EROSION CONTROL MATTING



SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	800 L.F.
NUMBER OF PLANTS REQUIRED	16
SHADE TREES	20
EVERGREEN TREES	0 L.F.
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A
NUMBER OF PLANTS PROVIDED	14
SHADE TREES	24
EVERGREEN TREES	0
OTHER TREES (2: 1 SUBSTITUTION)	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	SEE NOTES

NOTES: FOUR (4) EVERGREEN TREES SUBSTITUTED FOR TWO (2) SHADE TREES TO
PROVIDE A MORE DENSE SCREEN FOR STORMWATER MANAGEMENT POND.

PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES				TOTAL
	P1 'B'	P3 'B'	P2 'A'	P4 'A'	P5 'A'	P6 'A'	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	237 L.F.	147 L.F.	360 L.F.	591 L.F.	240 L.F.	269 L.F.	
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	147 L.F.	360 L.F.	341 L.F.	N/A	N/A	
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	
NUMBER OF PLANTS REQUIRED							
SHADE TREES	5	0	0	4	N/A	N/A	9
EVERGREEN TREES	0	0	0	0			0
SHRUBS	0	0	0	0			0
NUMBER OF PLANTS PROVIDED							
SHADE TREES	14	0	0	4	N/A	N/A	18
EVERGREEN TREES	0	0	0	0			0
OTHER TREES (2: 1 SUBSTITUTION)	0	0	0	0			0
SHRUBS	0	0	0	0			0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)							

General Planting Notes

- All plant materials to meet A.N.L.A. Standards.
- The Contractor is to follow specification guidelines for Baltimore & Washington Metropolitan Area as approved by the L.C.A. of Maryland, Washington D.C., & Virginia and described in the latest edition of "Landscape Specification Guidelines."
- No substitutions are to be made without the consent of the Landscape Architect and/or the Owner.
- All beds are to be topped with three (3) inches of hardwood mulch.
- Contractor shall notify Miss Utility at 1 (800) 257-7777, at least 72 hours prior to construction and verify the location of all utilities with the Owner before planting.
- Landscape Architect/Owner shall select, verify, and/or approve all plant material. At the Owner's discretion, specimen and other plant material may be selected.
- The Landscape Contractor shall coordinate with the general, lighting, & irrigation contractors regarding timing and installation of plant material. At the time of final inspection with acceptance, all electric, water & drainage utilities, as well as plant material, shall remain undamaged. Likewise, the Landscape Contractor and utilities contractors shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho. Co. Code. Financial surety for the required landscaping in the amount of \$11,400.00 must be posted as part of the Developer's Agreement (25 shade trees, 26 evergreen trees).
- Developer/Builder'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, the Howard County Landscape Manual and the Emerson Landscape Design Criteria. I/We further certify that, upon completion, a letter of landscape installation, accompanied by an executed one-year guarantee of the plant materials, will be submitted to the Department of Planning and Zoning.

Yusef G. Cavaniugh 9/25/07
NAME DATE

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

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

AS-BUILT
3/25/2007
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DATE: 3/25/2007
LANDSCAPE ARCHITECT NO. 3222
ANDREW J. STINE

DATA SOURCES:
TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

DeMario Design Consultants, Inc.
192 East Main Street
Westminster, MD 21157
Phone: (410) 386-0550
Fax: (410) 386-0564
eMail: ddc@demariodesign.com

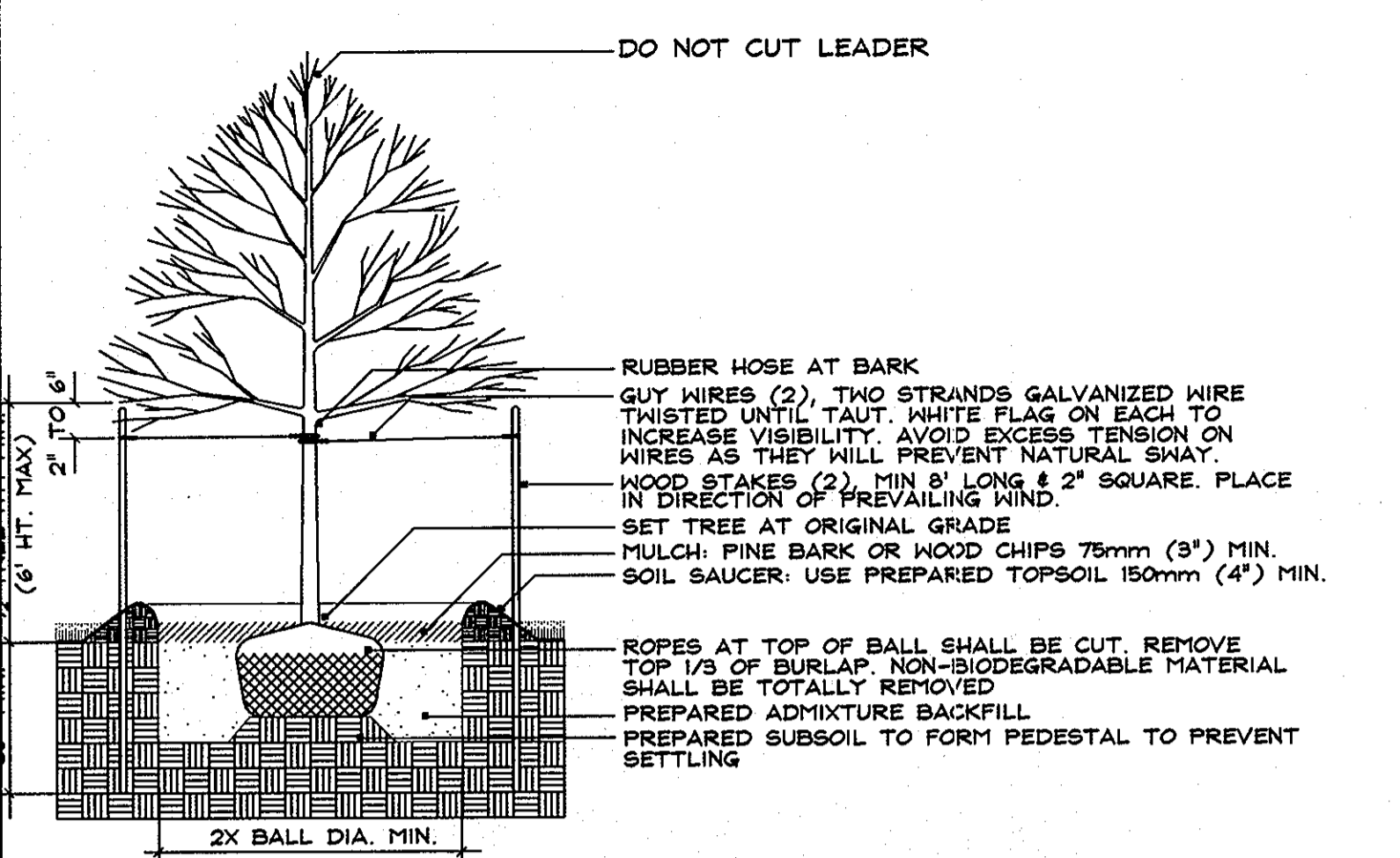
OWNER: EMERSON LAND BUSINESS TRUST
DEVELOPER: GENERAL GROWTH PROPERTIES
10275 LITTLE PATUXENT PKWY
COLUMBIA, MD 21044
410-992-6000

SITE ADDRESS: SKYLARK BOULEVARD

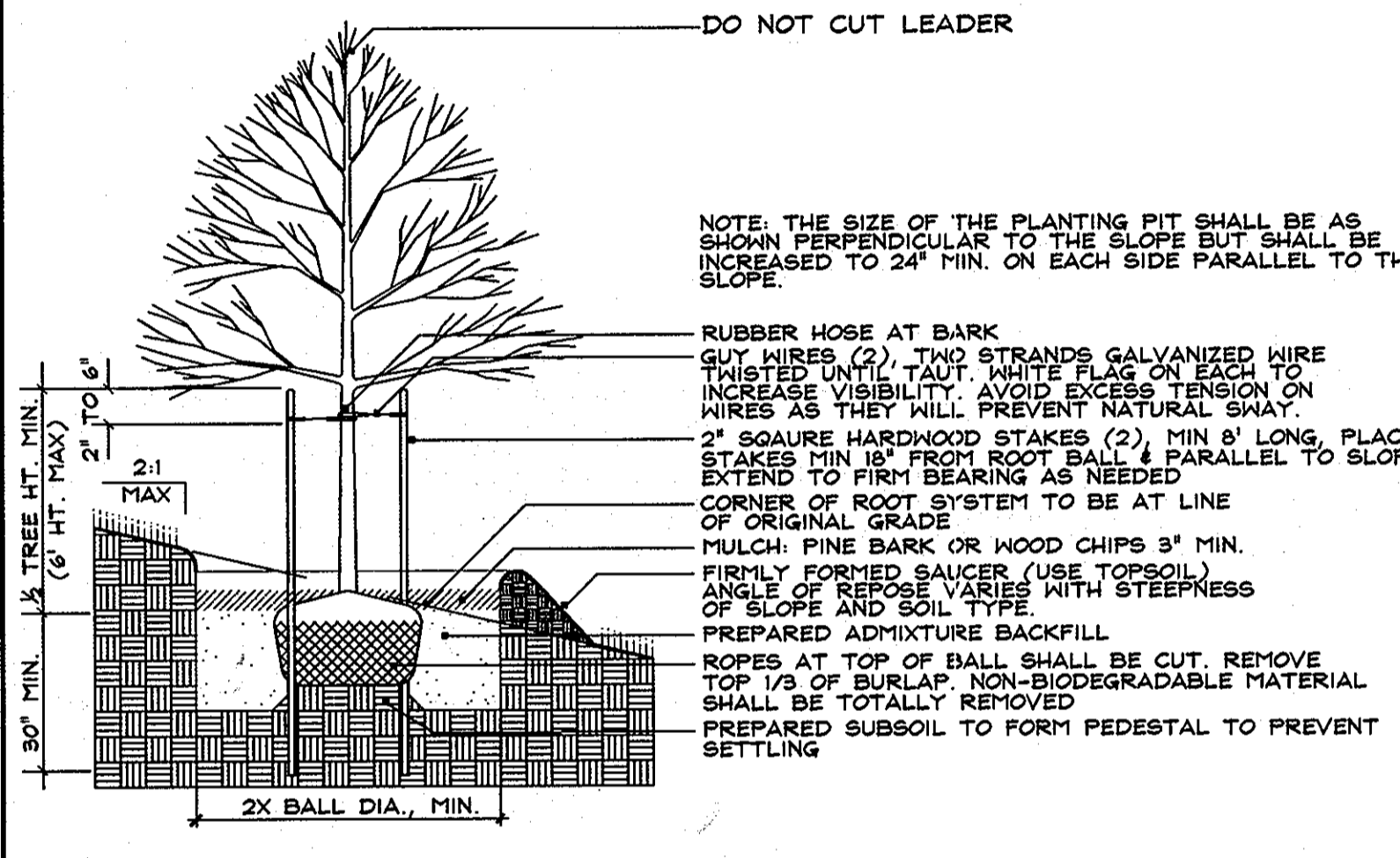
EMERSON SECTION 2, PHASE 8A
LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

LANDSCAPE PLAN

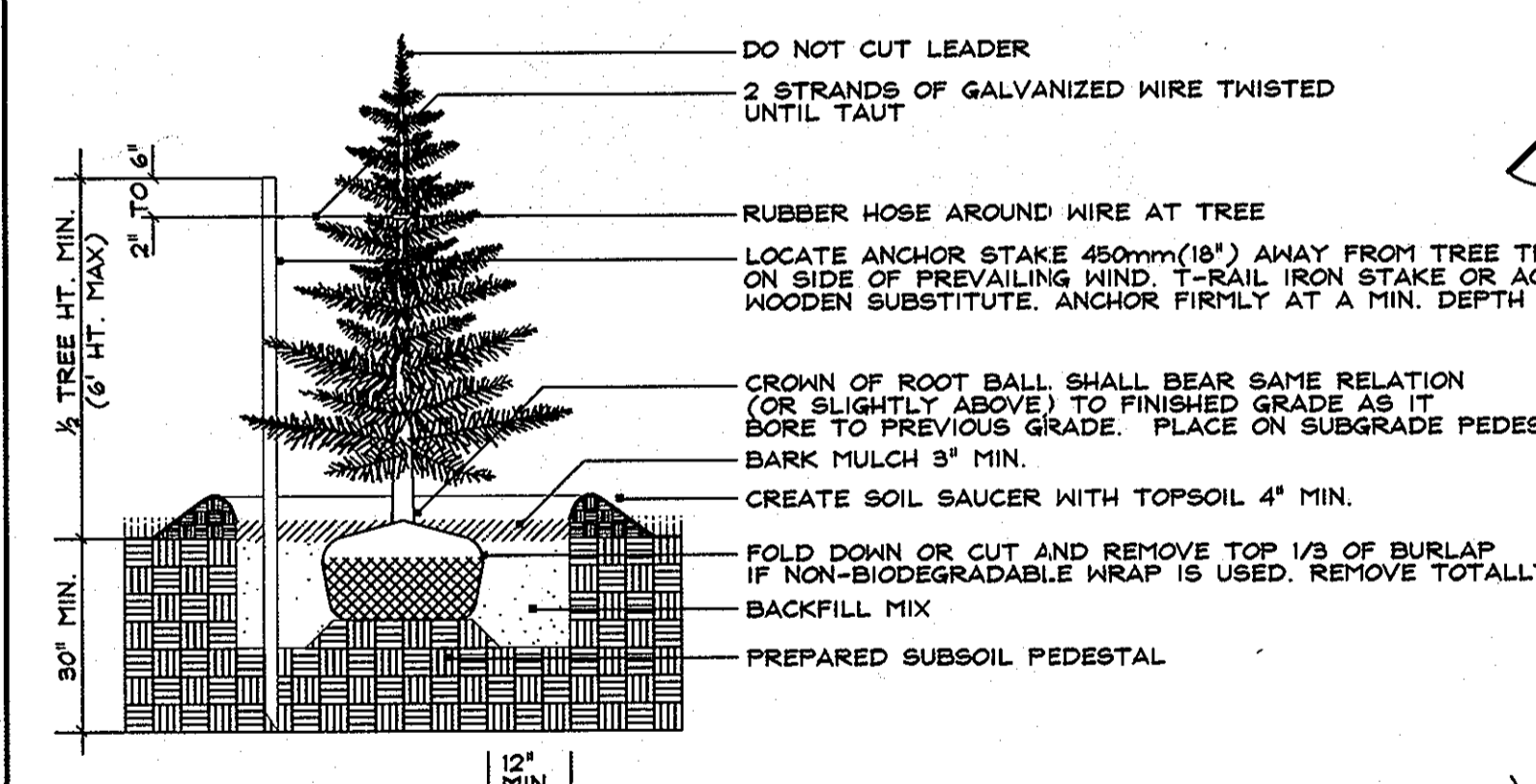
NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
CO. FILE #	F-07-128	DES. BY:	CVL	
TAX ACC. #	47	DRN. BY:	CVL	
TAX MAP:	47	CHK. BY:	AJS	
BLOCK/GRID:	8	DATE:	09.25.07	
PARCEL #:	P/O 1053	DDC JOB#:	05122.2	
ZONE/USE:	PECMX03	SHEET NUMBER:	8 of 9	
DWG. SCALE:	1"=30'			



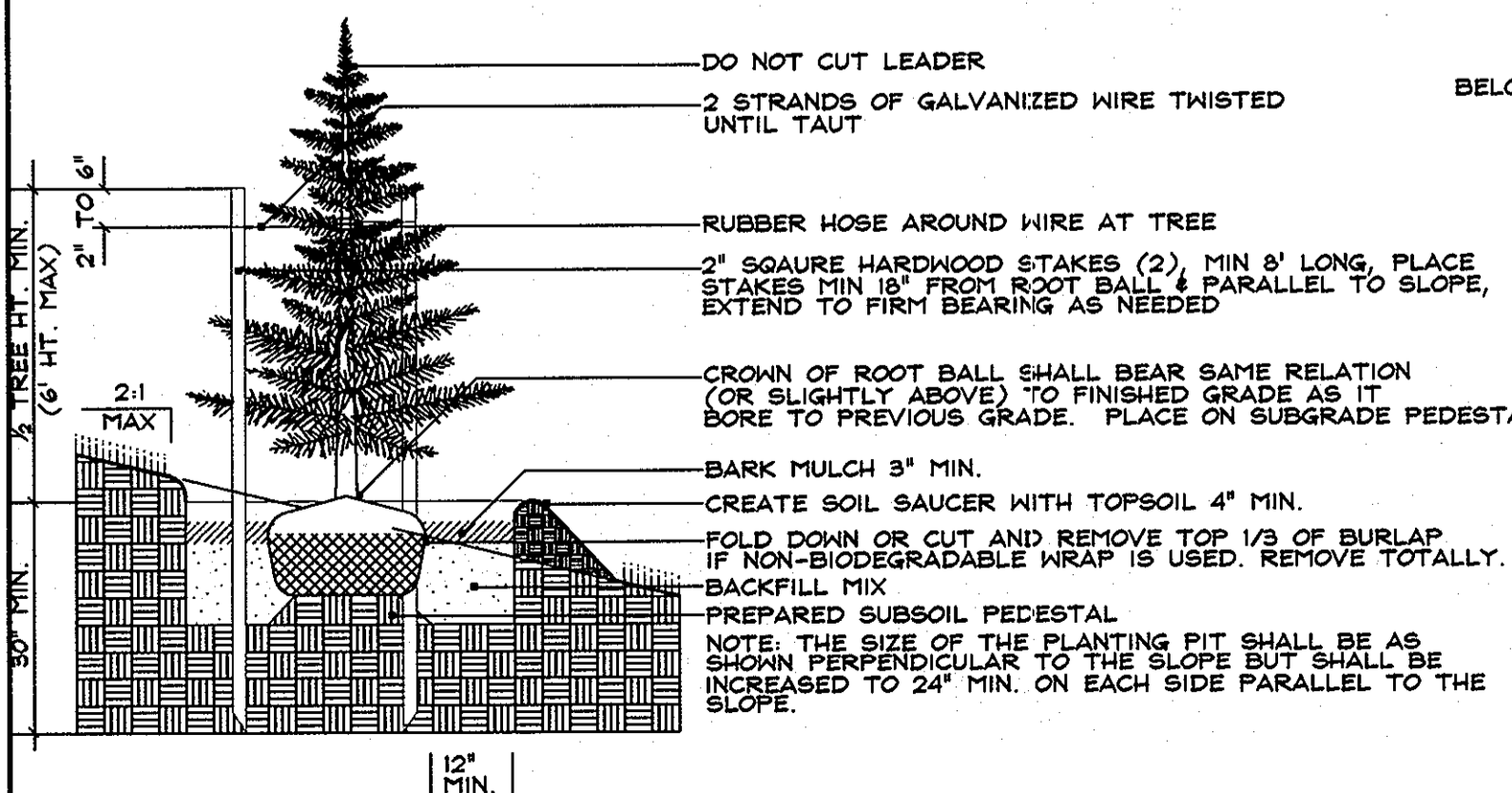
DECIDUOUS TREE PLANTING (LESS THAN 3" CAL.)
N.T.S.



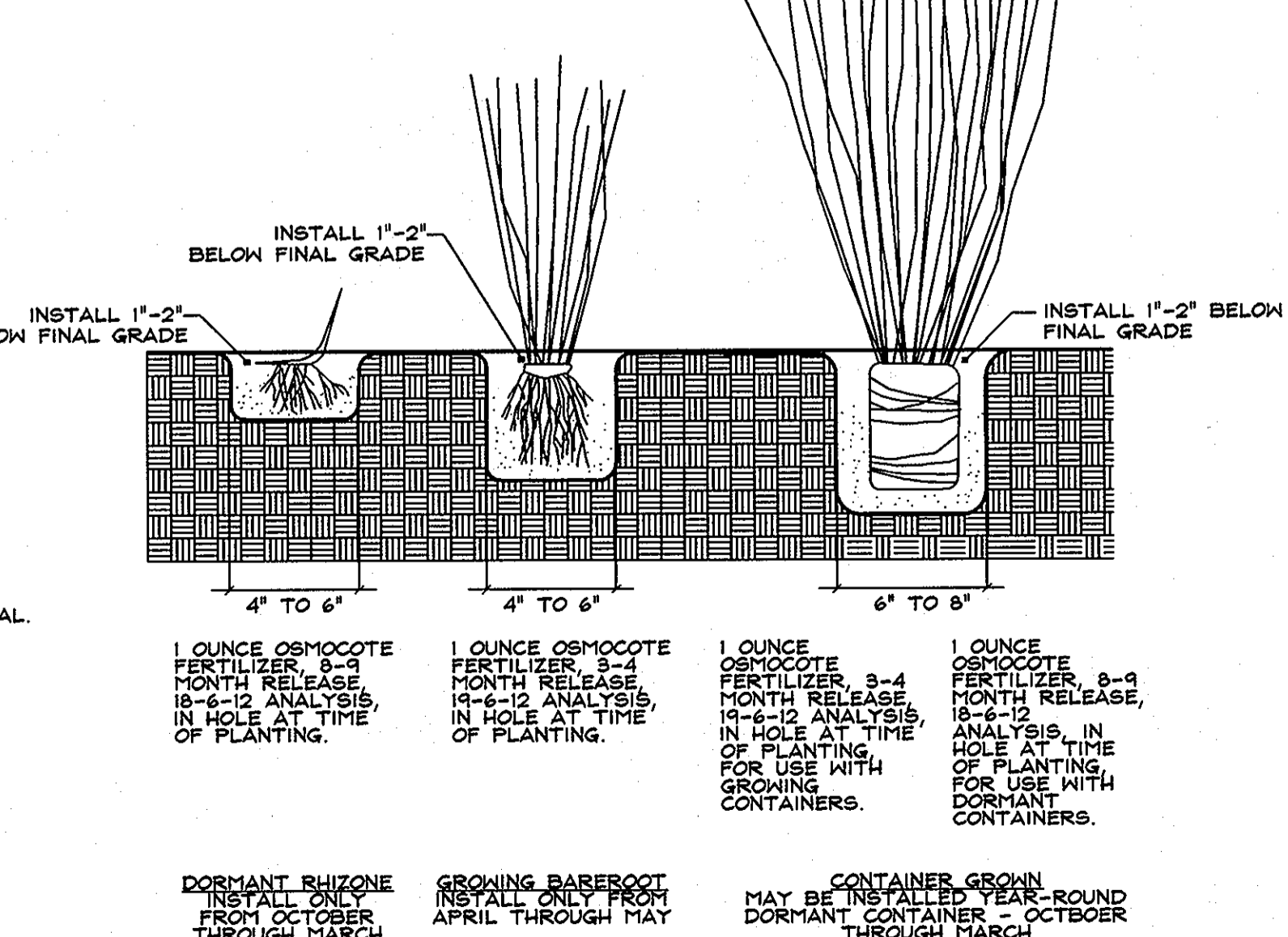
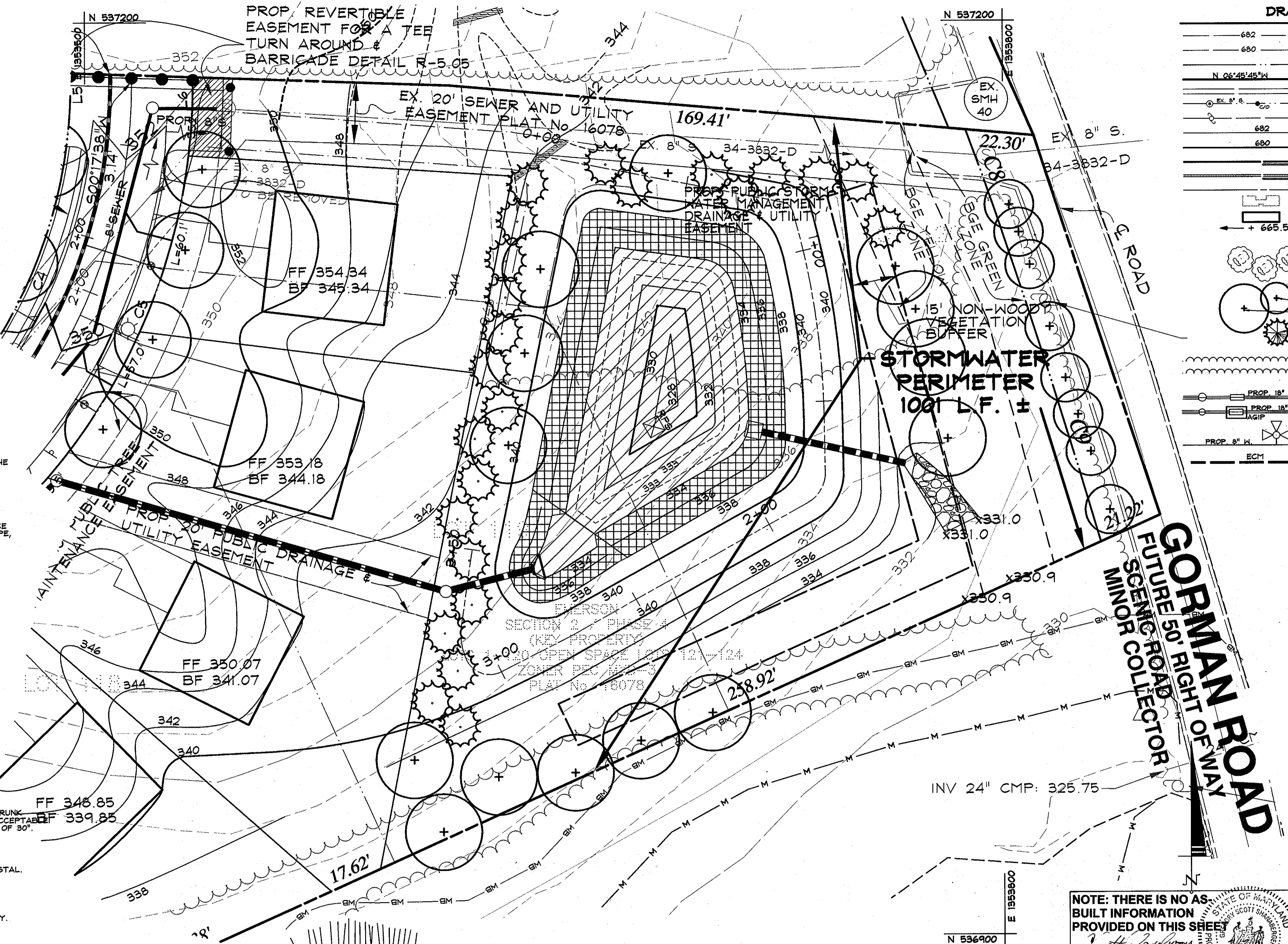
DECIDUOUS TREE PLANTING ON SLOPE (LESS THAN 3" CAL.)
N.T.S.



EVERGREEN TREE PLANTING
N.T.S.



EVERGREEN TREE PLANTING ON SLOPE
N.T.S.



HERBACEOUS PLANTING
N.T.S.

DRAWING LEGEND

- 682 EXISTING MINOR CONTOUR (2' INTERVAL)
- 680 EXISTING MAJOR CONTOUR (10' INTERVAL)
- ADJACENT PROPERTY LINE
- N 06°45'45"W 120.00' EXISTING PROPERTY BOUNDARY
- EX. ROAD / EDGE OF PAVING
- EX. SEWER LINE & MANHOLES, CLEAN-OUTS
- EX. OVERHEAD ELECTRIC & UTILITY POLES
- 682 EXISTING MINOR CONTOUR (2' INTERVAL)
- 680 EXISTING MAJOR CONTOUR (10' INTERVAL)
- PROF. STANDARD CURB & GUTTER / PROP. REVERSE CURB & GUTTER
- PROF. MOUNTABLE CURB & GUTTER / PROP. REVERSE/MOUNTABLE CURB & GUTTER
- PROF. PRIVATE ROAD/DRIVE CENTERLINE
- EX. BUILDING
- PROPOSED HOUSE
- PROPOSED SPOT ELEVATION & FLOW ARROW
- EXISTING TREES
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- EXISTING TREELINE
- EXISTING SHRUB/BUSH LINE
- PROPOSED 18" D. STORM DRAIN W/ INLETS & MANHOLE
- PROPOSED INLET PROTECTION MEASURES
- PROPOSED WATER LINE & HYDRANT
- ECM1 EROSION CONTROL MATTING

AS-BUILT
DATE: 3/12/14
CORRECTED DATE: 10/23-11/12/14, 10/11/2013

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
W. H. HALL, JR. 11-5-07
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
C. H. HARRIS 11/21/14
CHIEF, DIVISION OF LAND DEVELOPMENT
D. J. QUINN 11/14/17
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATA SOURCES:
TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

DeMario Design Consultants, Inc.
192 East Main Street
Westminster, MD 21157
Phone: (410) 386-0560
Fax: (410) 386-0564
eMail: ddc@demariodesign.com

OWNER: EMERSON LAND BUSINESS TRUST
DEVELOPER: GENERAL GROWTH PROPERTIES
10275 LITTLE PATUXENT PKWY
COLUMBIA, MD 21044
410-992-6000

SITE ADDRESS:
SKYLARK BOULEVARD

FINAL ROAD CONSTRUCTION PLANS
EMERSON SECTION 2, PHASE 8A
LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

LANDSCAPE DETAILS AND NOTES

6TH ELECTION DISTRICT HOWARD COUNTY, MD

NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE

CO. FILE # F-07-128 DES. BY: CVL

TAX ACC. # TAX MAP: 47 BLOCK/GRID: 8 PARCEL # P/O 1053

DDC JOB#: 051222 ZONE/USE: PECM03 SHEET NUMBER: 9 of 9

WATER QUALITY PLANTING PLAN **

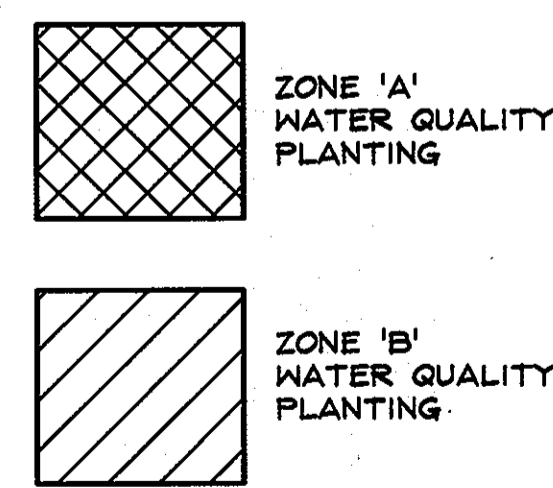
ZONE "A" (3,703 ± S.F.)

SPECIES	SIZE	SPACING	QUANTITY	REMARKS
SCIRPUS TABERNAEMONTANI	QUART CONTAINER #	36"	80	OBL
IRIS PSEUDACORIS	QUART CONTAINER #	36"	80	OBL
LOBELIA CARDINALIS	QUART CONTAINER #	36"	80	FACH
IRIS VERSICOLOR	QUART CONTAINER #	36"	80	OBL
PANICUM VIRGATUM	QUART CONTAINER #	36"	80	FAC
SAURURUS CERNUUS	QUART CONTAINER #	36"	80	OBL
TOTALS			480	

ZONE "B" (4150 ± S.F.)

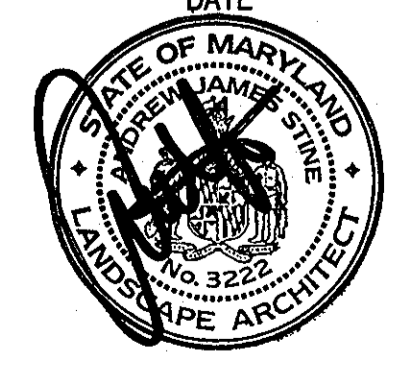
SPECIES	SIZE	SPACING	QUANTITY	REMARKS
SAGITTARIA LATIFOLIA	QUART CONTAINER #	36"	266	OBL
PELTANDRA VIRGINICA	QUART CONTAINER #	36"	266	OBL
TOTALS			532	

WATER QUALITY PLANTING LEGEND



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
PROFESSIONAL L.S. #102849
LICENSURE EXPIRES: 4/2/2014

9/25/2007 DATE



ANDREW J. STINE
LANDSCAPE ARCHITECT NO. 3222

** ALTERNATE SPECIES AND INSTALL IN RANDOM PATTERN, DISTRIBUTING EACH SPECIES ACROSS THE HYDROLOGIC GRADIENT OF EACH PLANTING ZONE. SINGLE SPECIES MASSINGS ARE TO BE AVOIDED.