

JESSUP READY MIX CONCRETE

SITE DEVELOPMENT PLAN

PARCEL 'A'

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 MISS UTILITY: 1-800-257-7777
 VERIZON: 410-754-6281
 HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 AT&T CABLE LOCATION DIVISION: 393-3553
 D.C.S.E. CO. CONTRACTOR SERVICES: 500 4620
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 531-5533
 STATE HIGHWAY ADMINISTRATION: 531-5533
- SITE ANALYSIS DATA SHEET:
 AREA OF PARCEL 253: 2.25 AC.
 AREA OF PARCEL 510: 1.08 AC.
 TOTAL AREA OF PARCELS 253 & 510: 3.33 AC.
 AREA RESERVED FOR MSHA: 0.50 AC.
 AREA OF PARCEL 253 TO HOWARD COUNTY: 0.21 AC.
 AREA OF PARCEL A: 2.56 AC.
 PRESENT ZONING: M-2
 USE OF STRUCTURE:
 CONCRETE PLANT 2075 SF
 DISTURBED AREA: 121,940 SF (2.80 AC)
 BUILDING COVERAGE ON SITE: 0.05 AC OR 150% OF GROSS AREA
 PAVED DRIVEWAY: 1.11 AC OR 12.34% OF GROSS AREA
 AREA OF LANDSCAPE ISLAND: 0.02 AC, OR 0.60% OF GROSS AREA
 CUT: 5,795 CY FILL: 2,703 CY
- PROJECT BACKGROUND:
 LOCATION: JESSUP, MD.; TAX MAP 43, BLOCK 21, PARCEL 253, 510
 ZONING: M-2
 SUBDIVISION: N/A
 SECTION/AREA: N/A
 SITE AREA: 3.33 AC.
 DPT REFERENCES: BA 02-16V, SDP-03-116, SDP-03-116, SDP-03-116, SDP-03-116
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 4,500 P.S.I.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST PRIOR TO CONSTRUCTION. REFER TO REPORT BY CTA, DATED MARCH 20, 2008.
- ALL STORM DRAIN PIPE BEDDING TO BE IN ACCORDANCE WITH THE CURRENT HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED OCTOBER 2001 AND APRIL 2008. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- ALL PAVING TO BE CONCRETE, PER THE GEOTECH RECOMMENDATIONS. (DETAIL SHEET 2)
 GEOTECHNICAL ENGINEER TO CONFIRM SUITABILITY OF PAVING SECTION PRIOR TO CONSTRUCTION.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE DETAIL R-3.01 UNLESS OTHERWISE NOTED.
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- PUBLIC WATER AVAILABLE ALONG OLD JESSUP ROAD (12" WATER) CONTRACT #792-W.
 PUBLIC SEWER AVAILABLE ALONG OLD JESSUP ROAD (18" SEWER) CONTRACT #612-S.
- STORMWATER MANAGEMENT QUANTITY IS PROVIDED BY THE PROPOSED EXTENDED DETENTION POCKET POND (CpV). WATER QUALITY IS PROVIDED WITH IN THE EXTENDED DETENTION POCKET POND (WDV). RECHARGE (REV) NOT PROVIDED DUE TO "HOT SPOT" DESIGNATION. THE PROPOSED SWM FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- ALL EXTERIOR LIGHTING SHALL CONFORM TO ZONING REGULATIONS SECTION 134, AND DETAIL ON SHEET 2.
- BUILDING TO HAVE INSIDE WATER METER SETTING.
- TRAFFIC IMPACT STUDY PREPARED BY THE TRAFFIC GROUP, DATED AUGUST 19, 2008.
- GEOTECHNICAL REPORT PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC. DATED MARCH 20, 2008.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THERE ARE NO WETLANDS, STREAMS, OR 100YR FLOODPLAIN LOCATED ON-SITE.
- REFERENCE BA-02-16V; PARCEL 253, SDP-03-116; A VARIANCE PETITION TO SECTION 123.D.2.(A) AND SECTION 123.D.2.(C) OF THE ZONING REGULATIONS, APPROVED JULY 19, 2002, TO REDUCE THE STRUCTURE AND USE SETBACK FROM MARYLAND ROUTE 175 RIGHT-OF-WAY FROM 50 FEET TO 11.1 FEET FOR A FUEL TANK, 5.9 FEET FOR A BUILDING, AND 5 FEET FOR AN OUTDOOR INSPECTIONS AREA, AND A VARIANCE TO REDUCE THE PARKING SETBACK FROM OLD JESSUP ROAD FROM 30 FEET TO 0.0 FEET; PROVIDED, HOWEVER, THAT THE VARIANCES WILL APPLY ONLY TO THE USES AND STRUCTURES AS DESCRIBED IN THE PETITION SUBMITTED, AND NOT TO ANY OTHER ACTIVITIES, USES, STRUCTURES, OR ADDITIONS ON THE PROPERTY.
- DEBRIS IS TO BE KEPT OUT OF ALL STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.
- WITH THE EXCEPTION OF THE 0.36 ACRE AREA OF MSHA PUBLIC ROAD R/W THAT WAS INCORRECTLY "EXEMPT" FROM THE FOREST CONSERVATION OBLIGATION FOR PARCEL 253 HAS BEEN FULFILLED THROUGH A FEE-IN-LIEU PAYMENT OF \$6,000.40 TO THE FOREST CONSERVATION FUND PER SDP-03-116. THE TOTAL NET TRACT AREA IS COMPRISED OF THE 1.08 ACRE AREA OF PARCEL 510 AND THE 0.36 ACRE AREA INCORRECTLY "EXEMPTED" FROM PARCEL 253. TOTALING 1.44 ACRES. THE FOREST CONSERVATION OBLIGATION OF 0.22 AC (OR 9,585.20 SF) HAS BEEN FULFILLED THROUGH A FEE-IN-LIEU PAYMENT OF \$1,197.40 TO THE FOREST CONSERVATION FUND.
- THERE ARE NO CEMETERIES OR GRAVE SITES ON THIS PROPERTY.
- SIGNAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS, AND EACH SUITE SEPARATED BY LETTER.
- LANDSCAPING NOT PERMITTED WITHIN 7'-1/2' OF EACH SIDE OF THE FIRE DEPARTMENT CONNECTION. PROVIDE A CLEAR UNOBSTRUCTED ACCESS PATH TO THE FIRE DEPARTMENT CONNECTION. NFPA-1 13.1.4
- THE SUBJECT PROPERTY IS ZONED M-2 PER THE 02/02/2004 COMPREHENSIVE ZONING PLAN.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL SQUARE TUBE POST (12 GAUGE) - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- A KNOX BOX IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A HEIGHT OF 4'-5" IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. ITS LOCATION IS SHOWN ON THESE PLANS. THE BOX SHALL BE ELECTRICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED (INTEGRATED WITH THE FIRE ALARM SYSTEM).
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND SPACING SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (1993) AND AS MODIFIED BY GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993). A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,650.00 FOR THE REQUIRED 41 SHADE TREES, 28 EVERGREEN TREES AND 115 SHRUBS.
- IN ACCORDANCE TO THE REQUIREMENTS OF SECTION 16.156(1)(1) OF THE SUBDIVISION LAND DEVELOPMENT REGULATIONS, THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THAT SDP-03-116 HAS MET THE DEADLINE DATE OF JULY 1, 2005 TO APPLY FOR BUILDING PERMIT. THE PLAN IS NOW NULL AND VOID.
- THIS PROJECT REQUIRES AN NPDES PERMIT PRIOR TO CONSTRUCTION.

PARKING TABULATION

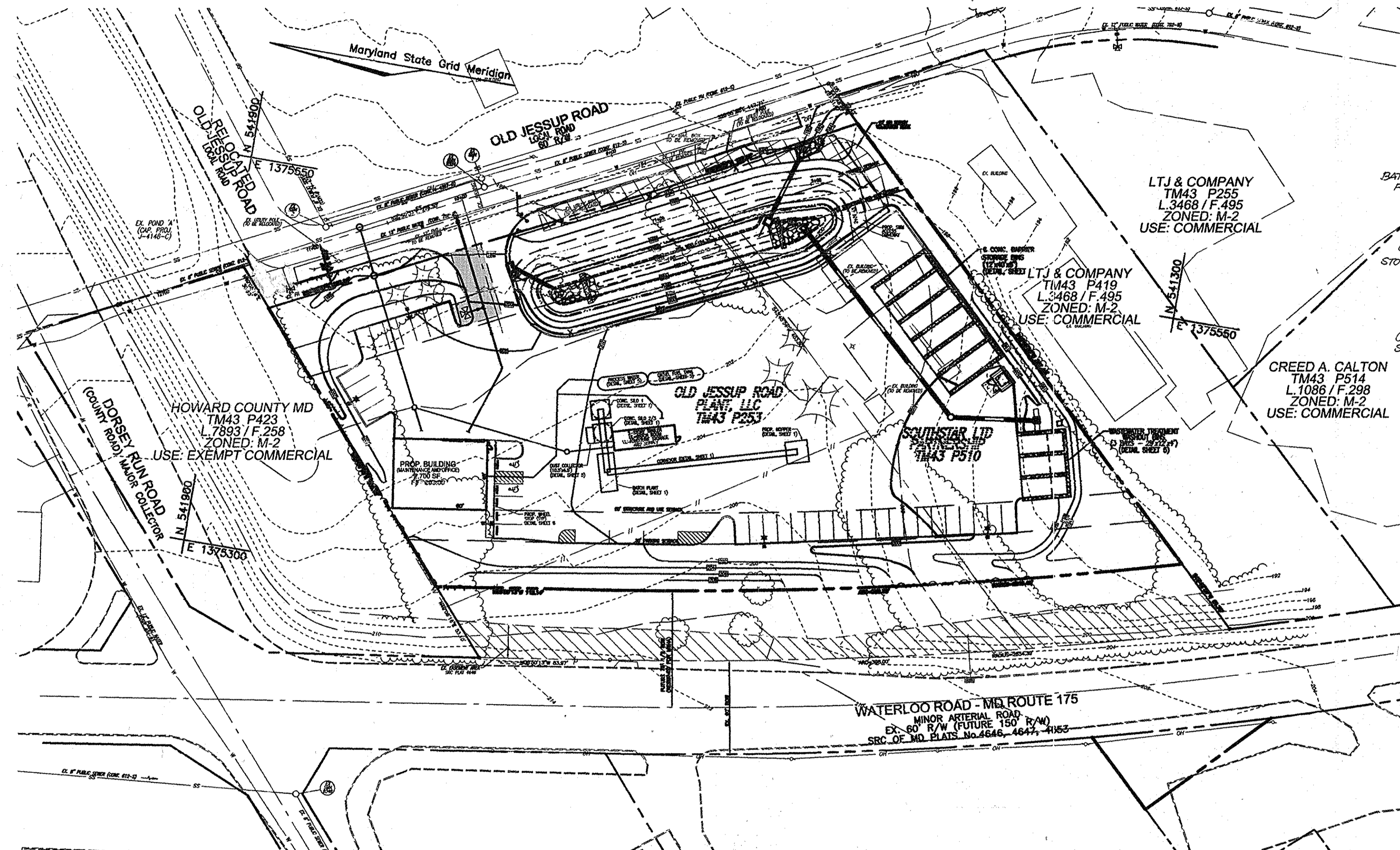
CONCRETE PLANT (2,700 SF)	REQUIRED
1.0 SPACE / EMPLOYEE (20 TOTAL EMPLOYEES)	28 SPACES
10 TRUCK DRIVER, 2 SERVICE MECHANICS, 6 BATCH PLANT TECH, 2 OFFICE	28 SPACES
TOTAL SPACES: REQUIRED	28 SPACES
TOTAL SPACES: PROVIDED	34 SPACES (INCLUDING 2 HANDICAP)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael D. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/21/09

Cathy ...
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 6/11/09

Thomas ...
 DIRECTOR, DEP.
 DATE: 6/16/09

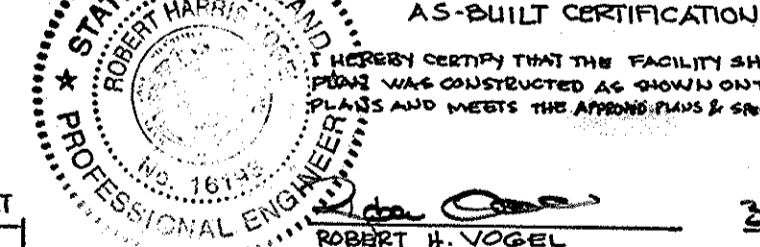


LOCATION MAP

SCALE: 1"=50'

GENERAL NOTES CONT.

- 10/11/01 APPROVED MAY 2, 2011 TO WAIVE:
- 1.16.156(2)(2) TO REACTIVATE SITE DEVELOPMENT PLAN, SDP-02-117
- 2.16.156(2)(1)(1) TO GRANT ONE YEAR EXTENSION TO APPLY FOR BUILDING PERMIT ON OR BEFORE MAY 2, 2012
- 3.16.156(2)(1)(2) TO GRANT TWO YEAR EXTENSION TO APPLY FOR ALL BUILDING PERMITS FOR ALL CONSTRUCTION AUTHORIZED BY SDP-02-117, BEFORE MAY 2, 2013



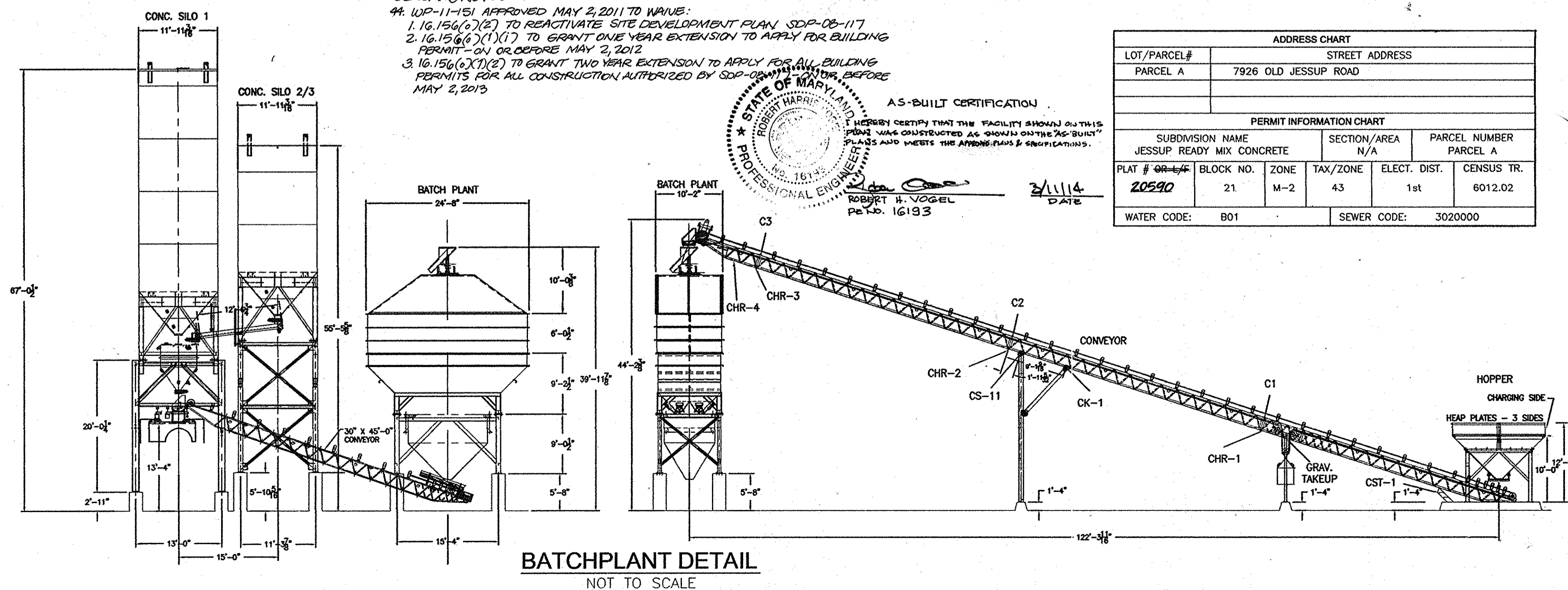
AS-BUILT CERTIFICATION

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

ROBERT H. VOGEL
 PE No. 16193
 DATE: 3/11/14

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
PARCEL A	7926 OLD JESSUP ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER	PARCEL A
JESSUP READY MIX CONCRETE	N/A		
PLAT # 20590	BLOCK NO. 21	TAX/ZONE	ELECT. DIST.
		M-2	43
			1st
			6012.02
WATER CODE:	B01	SEWER CODE:	3020000



BATCHPLANT DETAIL

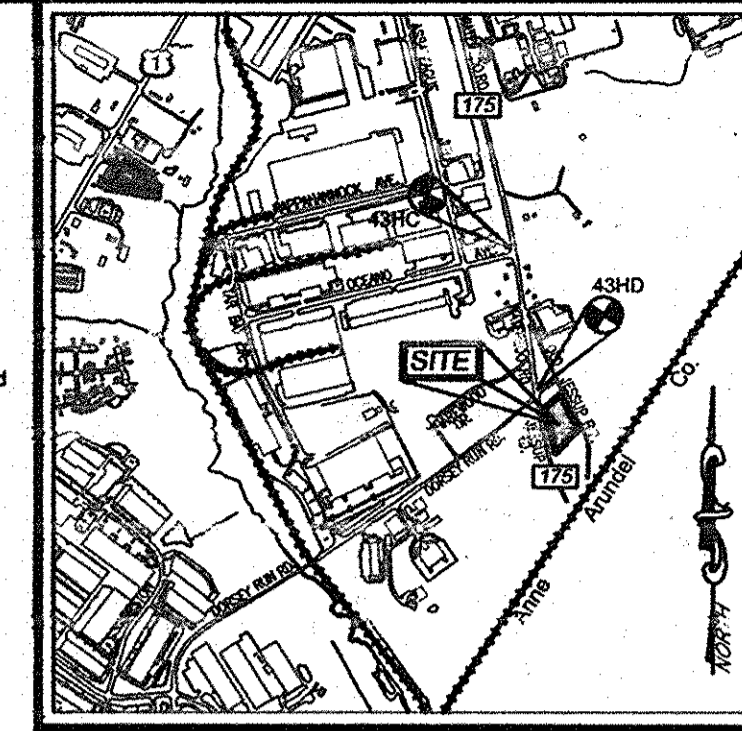
NOT TO SCALE

LEGEND

- Existing Contour
- Proposed Contour
- Existing Spot Elevation
- Proposed Spot Elevation
- Direction of Flow
- Existing Trees to Remain
- Light Poles
- Concrete

BENCHMARKS

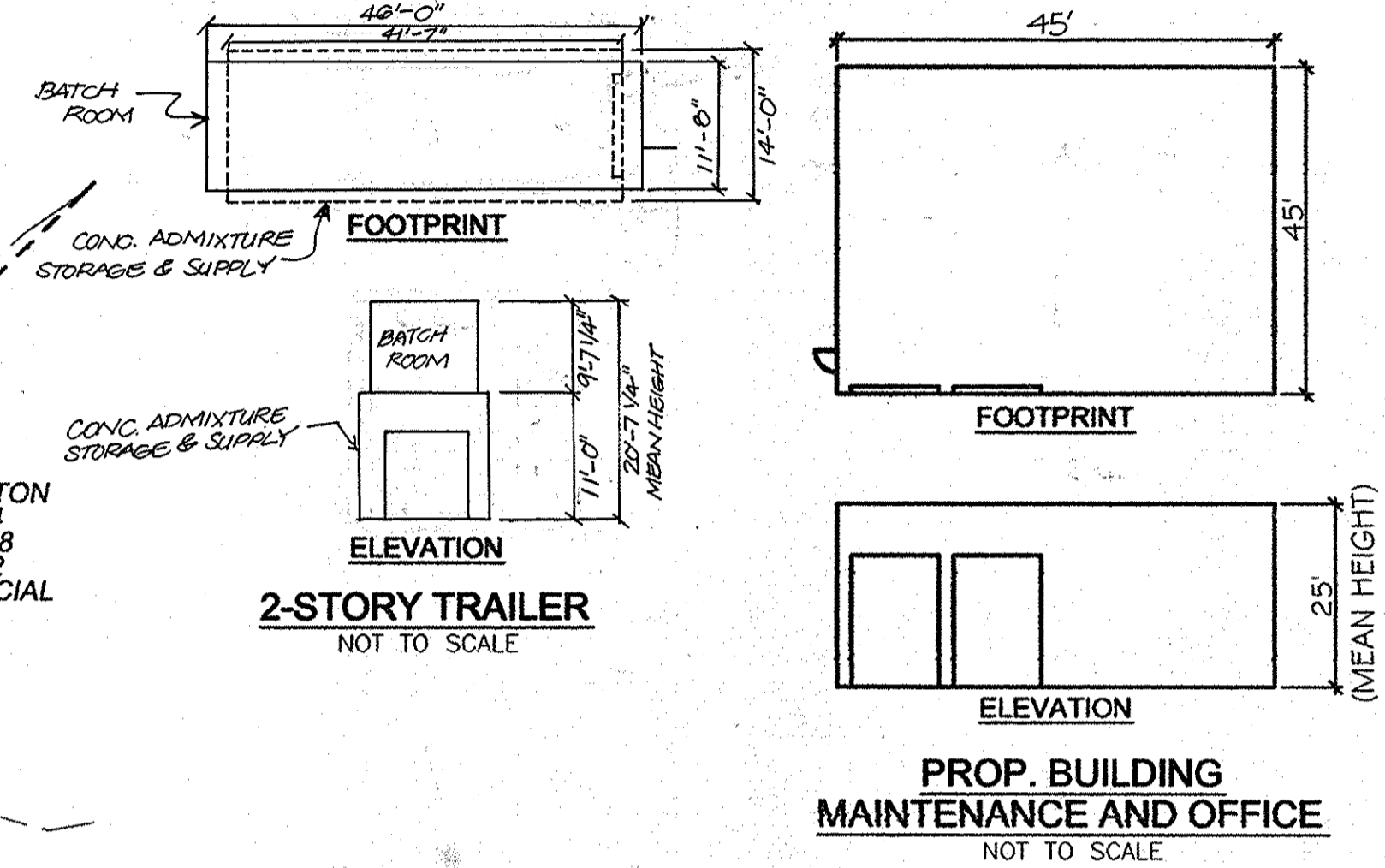
- HOWARD COUNTY BENCHMARK 43HC
 N 543366.1639 E 1374935.8379 ELEV. 253.920
- HOWARD COUNTY BENCHMARK 43HD
 N 541036.9712 F 1375215.7877 ELEV. 219.252



VICINITY MAP

SCALE: 1"=2000'

ADC COORDINATE: 20 G9



SHEET INDEX

DESCRIPTION	SHEET NO.
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STORMWATER MANAGEMENT NOTES AND DETAILS	6 OF 8
STORMWATER MANAGEMENT NOTES AND DETAILS	7 OF 8
LANDSCAPE AND FOREST CONSERVATION PLAN	8 OF 8

OWNER/DEVELOPER

SOUTHSTAR LTD PARTNERSHIP, AND
 OLD JESSUP ROAD PLANT LLC
 PO BOX 548
 WALDORF, MD 20604
 301-374-9625

NO.	REVISION	DATE
6	REVISE TRAILER SIZE	12/1/12
5	REVISE THE LENGTH OF ROAD WIDENING DUE TO EXISTING FIRE HYDRANT	11/7/11
4	REVISE SEWER HOUSE CONNECTION	9/7/11
2	REVISE 8'x4' REDUCER AND ADD VALUE	3/24/10
1	REVISE PLAN TO MIRROR BATCH PLANT AND RELOCATE BUILDING	11/5/09

SITE DEVELOPMENT PLAN

COVER SHEET

JESSUP READY MIX CONCRETE

PARCEL A

TAX MAP 43 GRID 21
 1st ELECTION DISTRICT

PARCELS 253 & 510
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193.

DESIGN BY: RHV
 DRAWN BY: DJ
 CHECKED BY: RHV
 DATE: MAY 2009
 SCALE: AS SHOWN
 W.O. NO.: 06-54

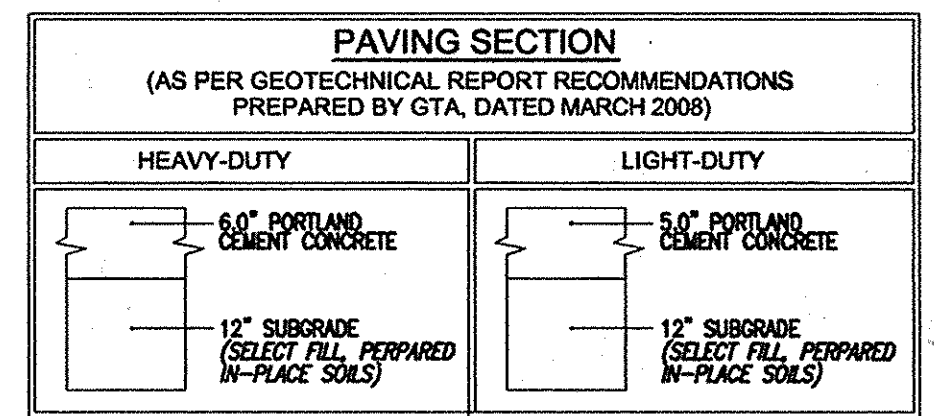
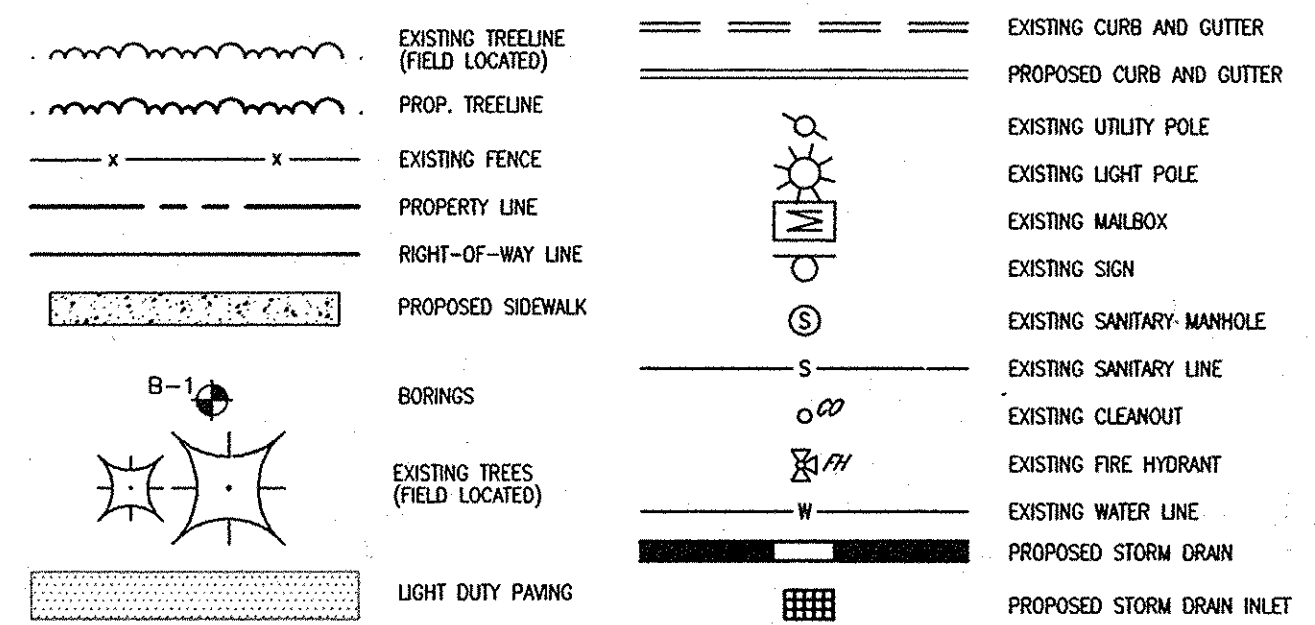
1 SHEET OF 8

AS-BUILT 03-11-2014

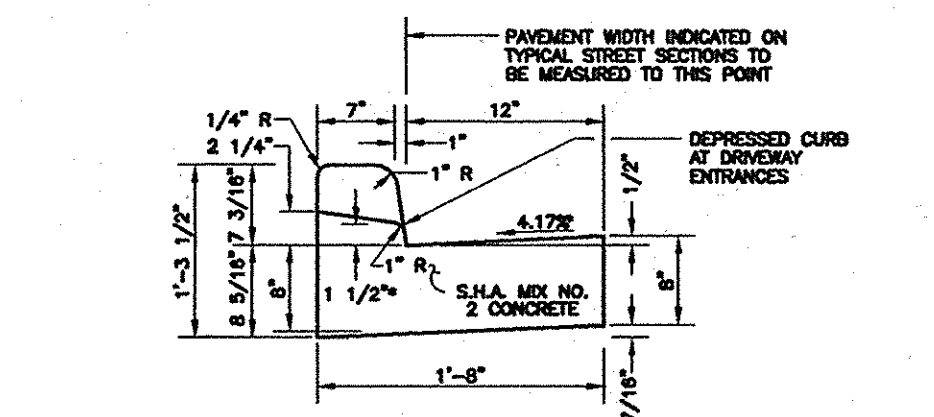
SDP-08-117

NOTE:
FOR AS-BUILT ROAD GRADING
SEE SHEET 3 OF 8

LEGEND:



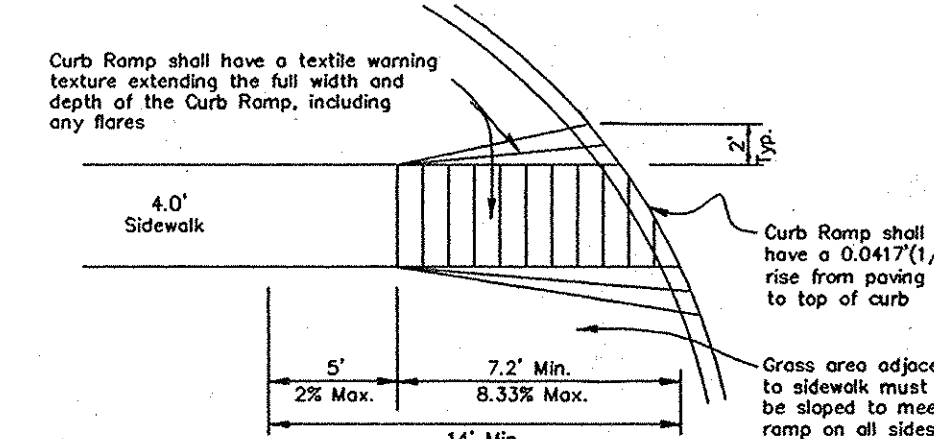
NOTE: PAVING SECTIONS ARE TO BE VERIFIED AND APPROVED BY THE GEOTECH PRIOR TO CONSTRUCTION.



NOTE: DERESSED CURB IN HANDICAP ACCESSIBLE AREAS SHALL HAVE A 0.0417(1/24) RISE FROM PAVING TO TOP OF CURB.

* CUTTER PAV AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIAL OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT AT THE HIGH SIDE OF SUPERELEVATED SECTIONS.

STANDARD COMBINATION CURB AND GUTTER
HOWARD COUNTY STANDARD R-3.01
(NOT TO SCALE)



HANDICAP RAMP
NOT TO SCALE

OWNER/DEVELOPER
SOUTHSTAR LTD PARTNERSHIP, AND
OLD JESSUP ROAD PLANT LLC
PO BOX 548
WALDORF, MD 20604
301-374-9825

NO.	REVISION	DATE
6	REVISE TRAILER SIZE	2/17/12
5	REVISE LENGTH OF ROAD WIDENING DUE TO EXISTING FIRE HYDRANT	1/17/11
4	REVISE SEWER HOUSE CONNECTION	9/17/11
3	PROVIDE OUTSIDE WATER METER SETTING AND RELOCATE	5/19/11
	EXISTING FIRE HYDRANT ALONG OLD JESSUP ROAD	
2	REVISE 8"x4" REDUCER AND ADD VALVE	3/24/10
1	REVISE PLAN TO MIRROR BATCH PLANT AND RELOCATE BUILDING	11/5/09
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
REVISED

SITE LAYOUT PLAN
JESSUP READY MIX CONCRETE
PARCEL A

TAX MAP 43 GRID 21
1st ELECTION DISTRICT

PARCELS 253 & 510
HOWARD COUNTY, MARYLAND

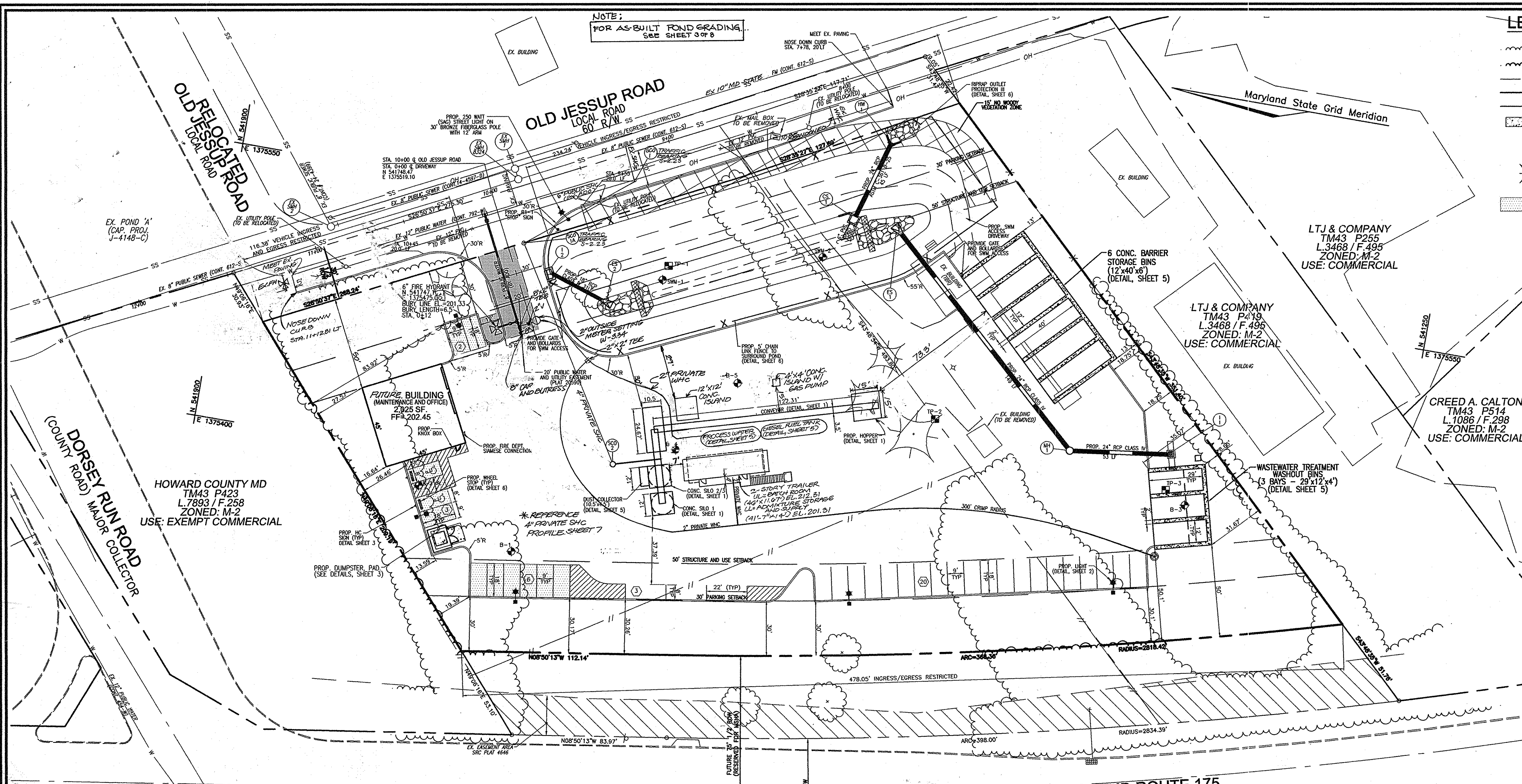
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: RZ
CHECKED BY: RHV
DATE: SEPT. 2009
SCALE: 1"=30'
W.O. NO.: 06-54

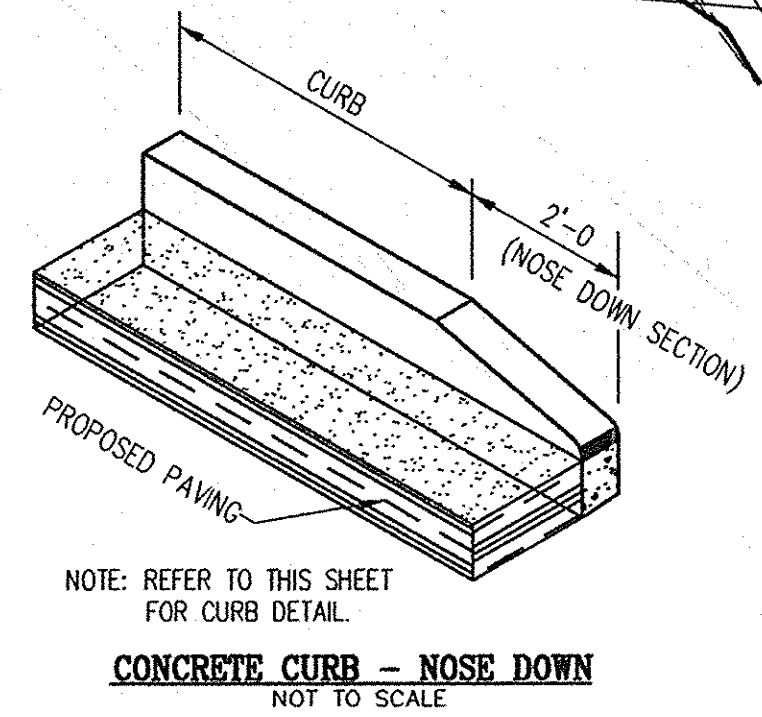
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 17143 EXPIRATION DATE 06-27-2010

2 SHEET OF 8

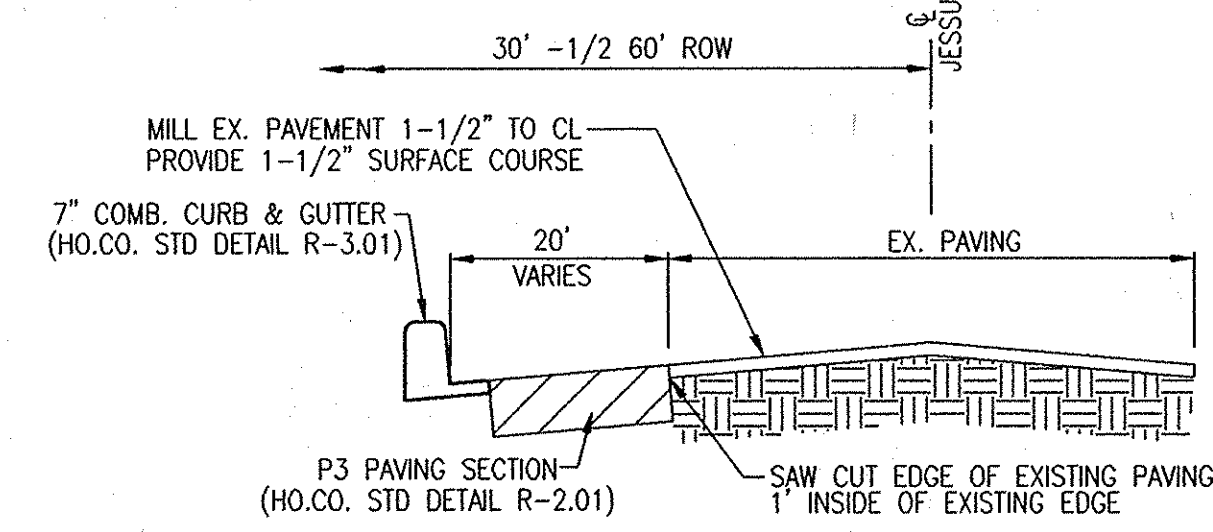


WATERLOO ROAD - MD ROUTE 175
MINOR ARTERIAL ROAD
EX. 60' R/W (FUTURE 150' R/W)
SRC OF MD. PLATS No 4646, 4647, 4653

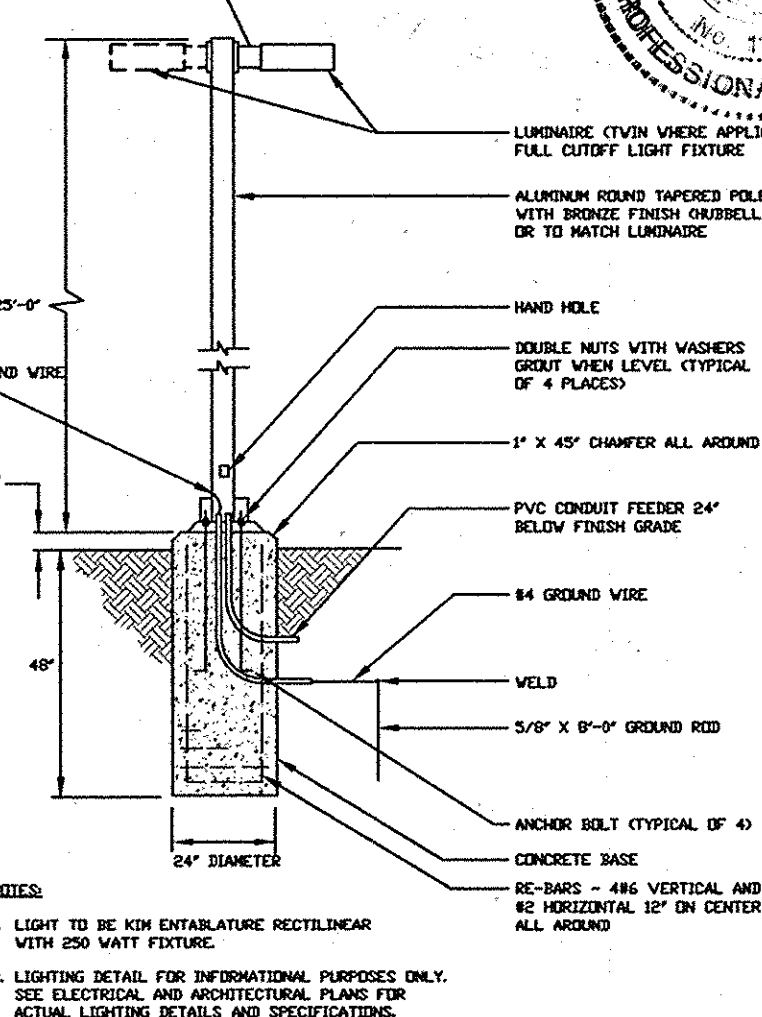
STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL
PE NO. 16183
DATE: 3/1/14



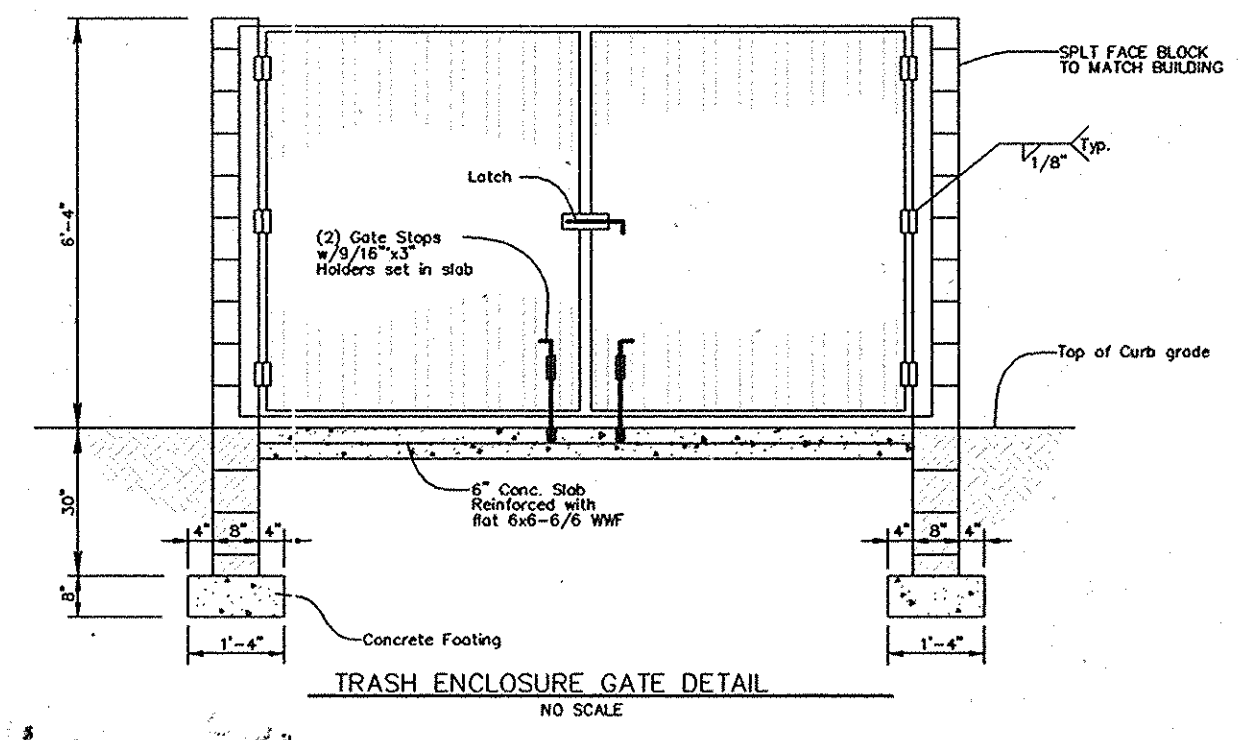
NOTE: REFER TO THIS SHEET FOR CURB DETAIL.
CONCRETE CURB - NOSE DOWN
NOT TO SCALE



OLD JESSUP ROAD WIDENING
DETAIL STA 7+78 TO STA 11+37
(REF HO.CO. STD DETAIL R-1.02)
NOT TO SCALE



POLE BASE DETAIL
(NOT TO SCALE)



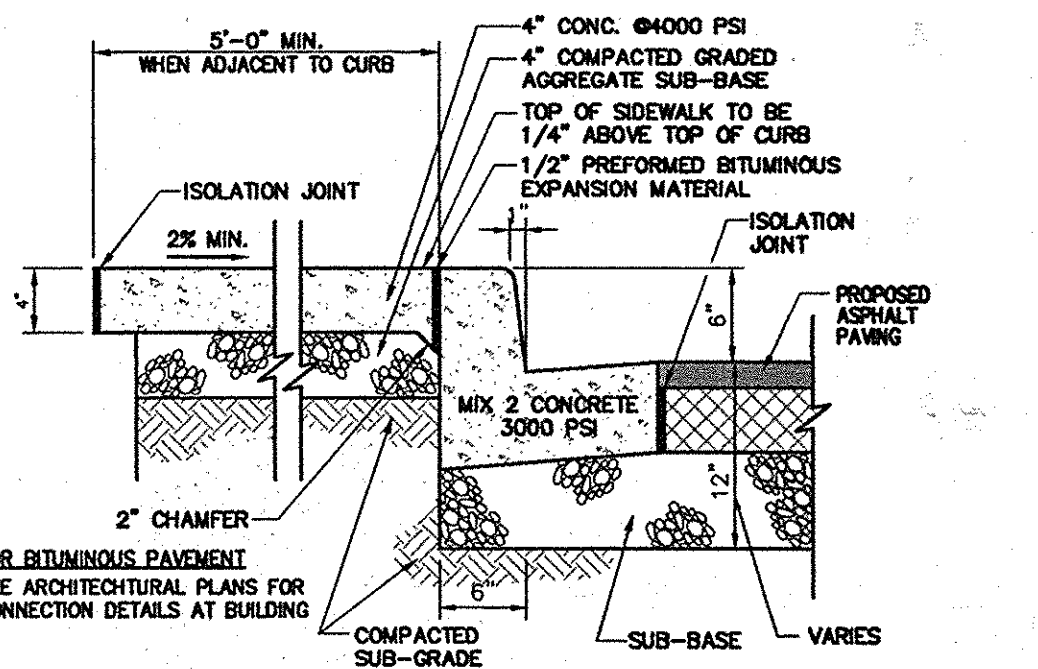
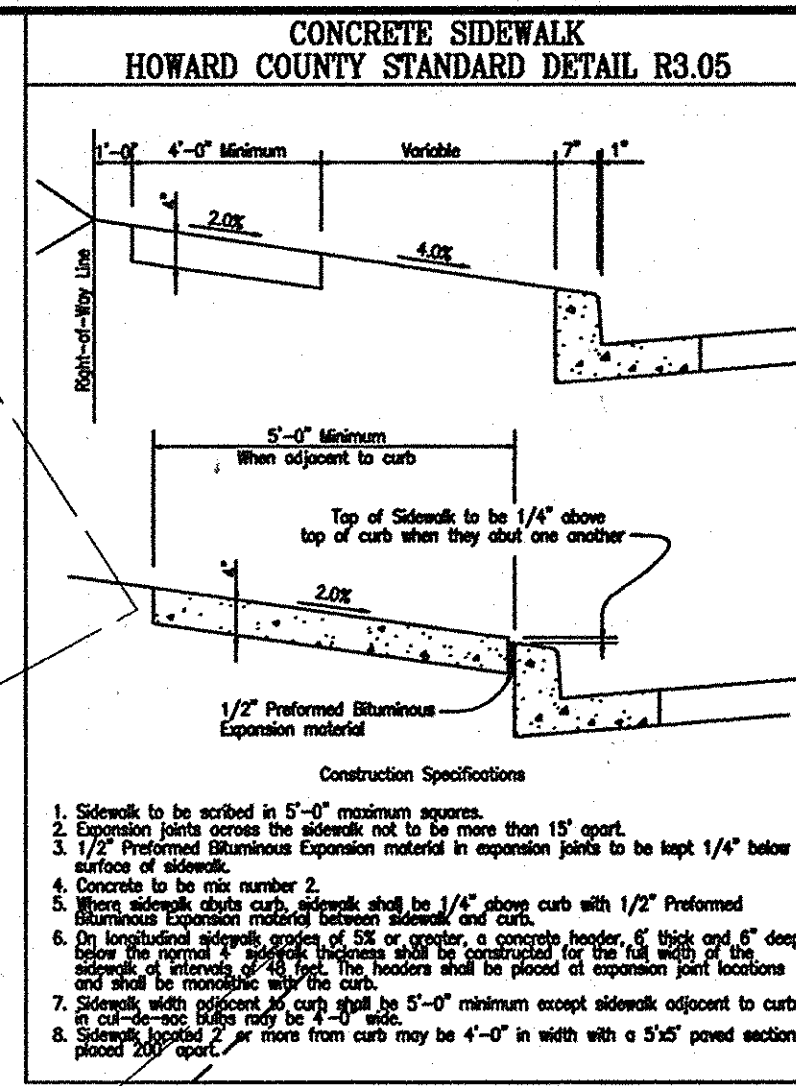
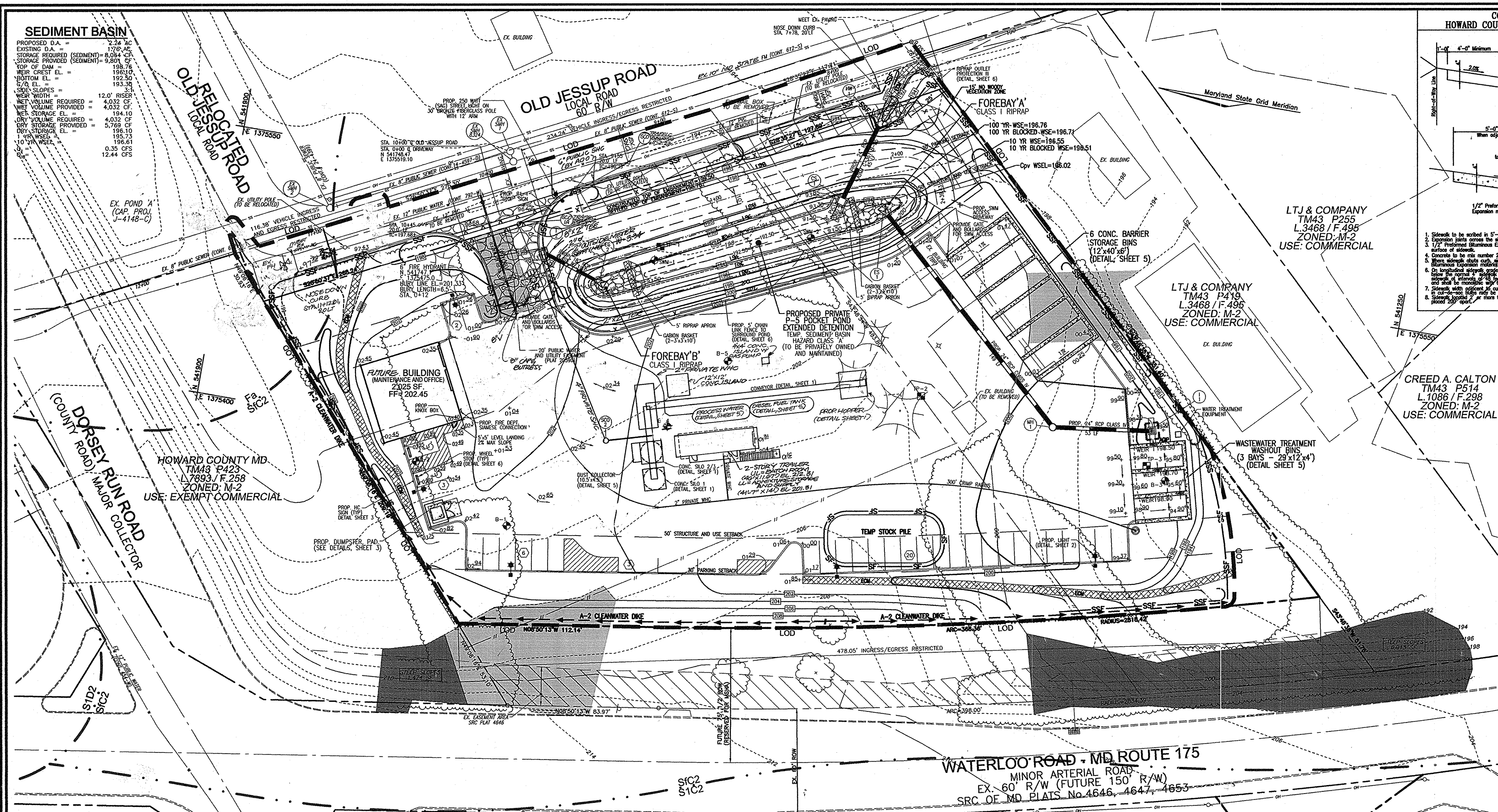
TRASH ENCLOSURE GATE DETAIL
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 1/6/10
Chief, Division of Land Development: *[Signature]* 1/15/10
Director, DEP: *[Signature]* 1/15/10

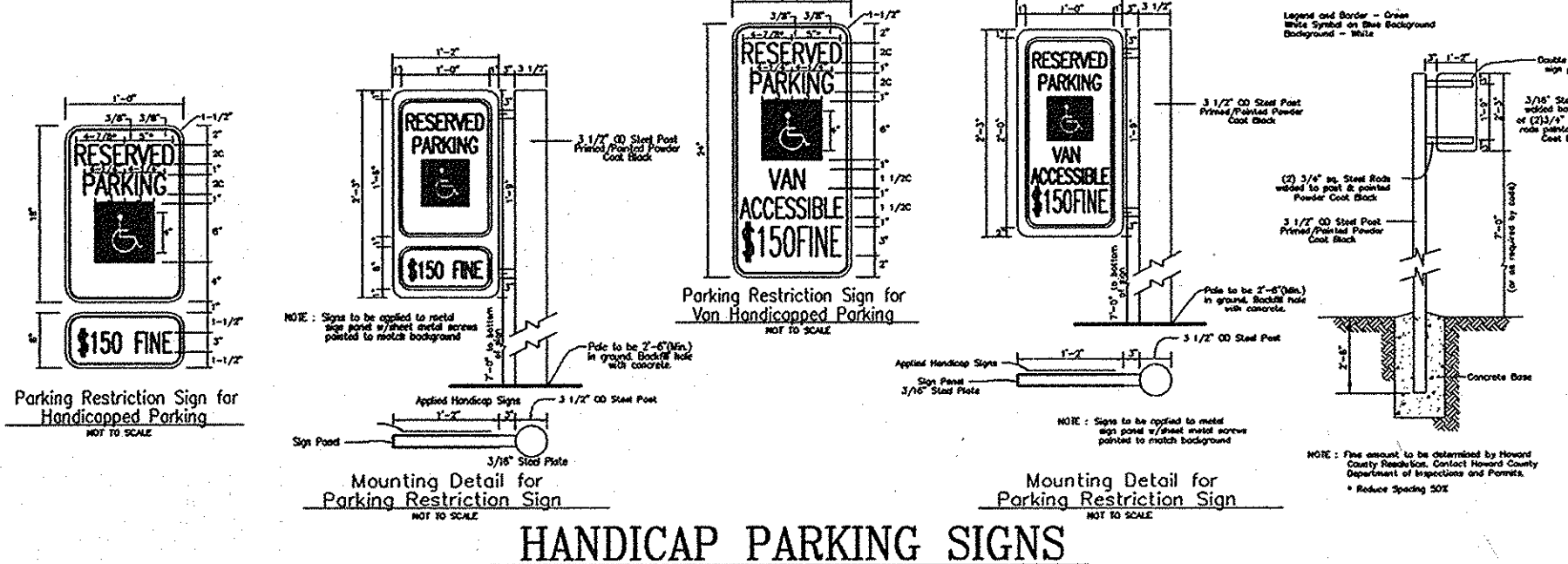
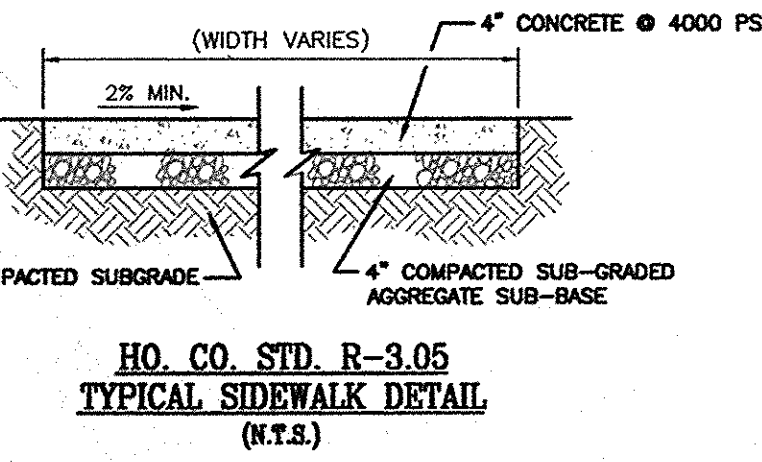
SEDIMENT BASIN

PROPOSED D.A.	2.24 AC
EXISTING D.A.	1700 AC
STORAGE REQUIRED (SEDIMENT)	8,084 CF
STORAGE PROVIDED	9,801 CF
TOP OF DAM	192.50
WEIR CREST EL.	196.10
WEIR CREST	192.50
WEIR WIDTH	12.0' RISER
WEIR SLOPE	4:1
WEIR VOLUME REQUIRED	4,032 CF
WEIR VOLUME PROVIDED	4,032 CF
NET STORAGE EL.	194.10
NET STORAGE	4,032 CF
DRY STORAGE EL.	196.10
DRY STORAGE PROVIDED	5,769 CF
DRY STORAGE	195.73
10 YR WSEL	196.61
10 YR WSEL	0.35 CFS
10 YR WSEL	12.44 CFS



OWNER/DEVELOPER
SOUTHSTAR LTD PARTNERSHIP, AND
OLD JESSUP ROAD PLANT LLC
PO BOX 548
WALDORF, MD 20604
301-374-9625

6	REVISE TRAILER SIZE	2/7/12
5	REVISE LENGTH OF ROAD WIDENING DUE TO EXISTING FIRE HYDRANT	11/7/11
4	REVISE SEWER HOUSE CONNECTION	9/7/11
3	PROVIDE OUTSIDE WATER METER SETTING AND RELOCATE	6/19/11
2	EXISTING FIRE HYDRANT ALONG OLD JESSUP ROAD	
1	REVISE BY 'M' REDUCER AND ADD VALVE	3/24/10
1	REVISE PLAN TO MIRROR BATCH PLANT AND RELOCATE BUILDING	11/5/09
NO.	REVISION	DATE

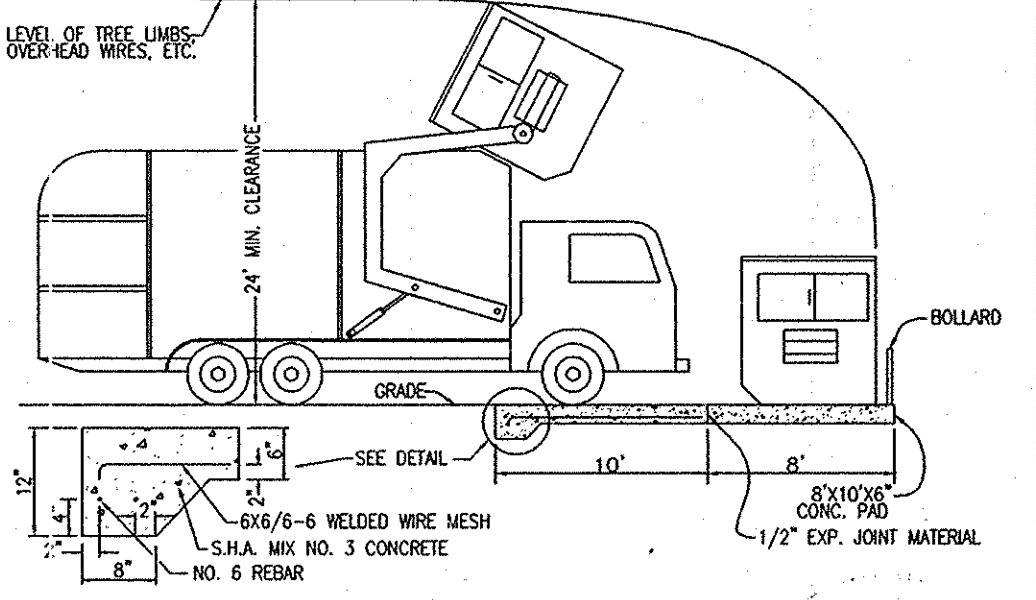
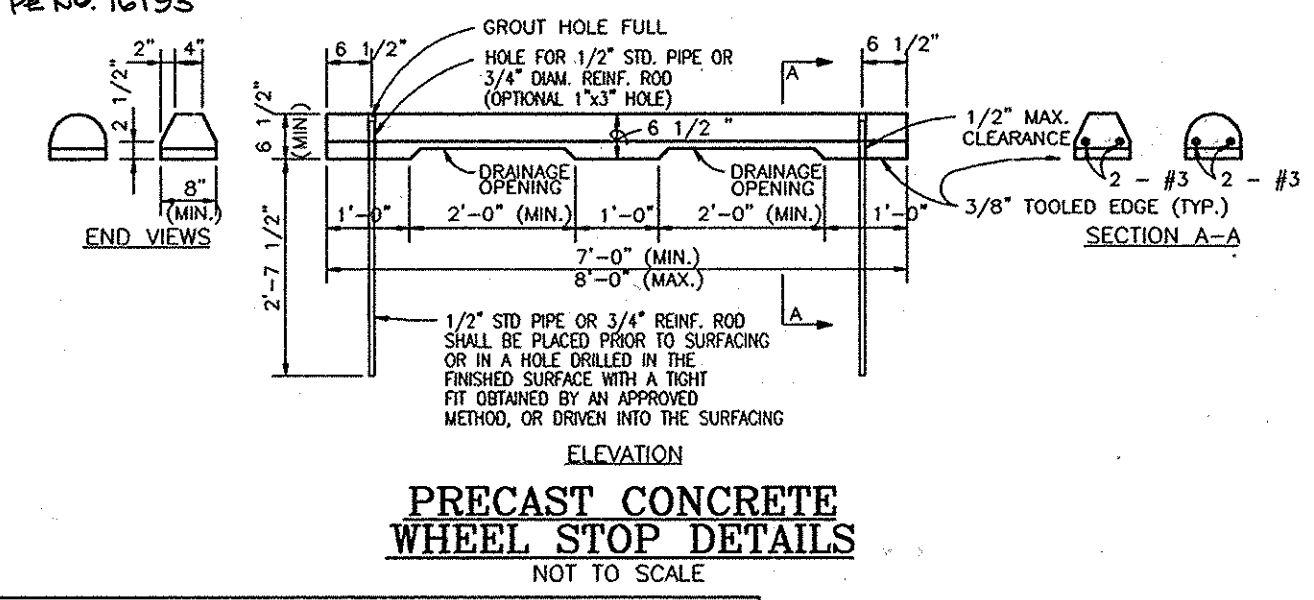


AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL
PE NO. 16193

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
Fo	FALLSINGTON LOAM	D
SC2	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11/5/10

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 11/5/10

DIRECTOR, DEP.

BY THE DEVELOPER:

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

U. F. Ocho
SIGNATURE OF DEVELOPER
DATE: 11/5/10

BY THE ENGINEER:

I HEREBY 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.

HOWARD S.C.D.
SIGNATURE OF ENGINEER
DATE: 12/15/09

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

HOWARD S.C.D.
DATE: 1/5/10

SITE DEVELOPMENT PLAN
REVISED

SEDIMENT AND EROSION CONTROL PLAN; SOIL MAP

JESSUP READY MIX CONCRETE
PARCEL A

TAX MAP 43 GRID 21
1st ELECTION DISTRICT

PARCELS 253 & 510
HOWARD COUNTY, MARYLAND

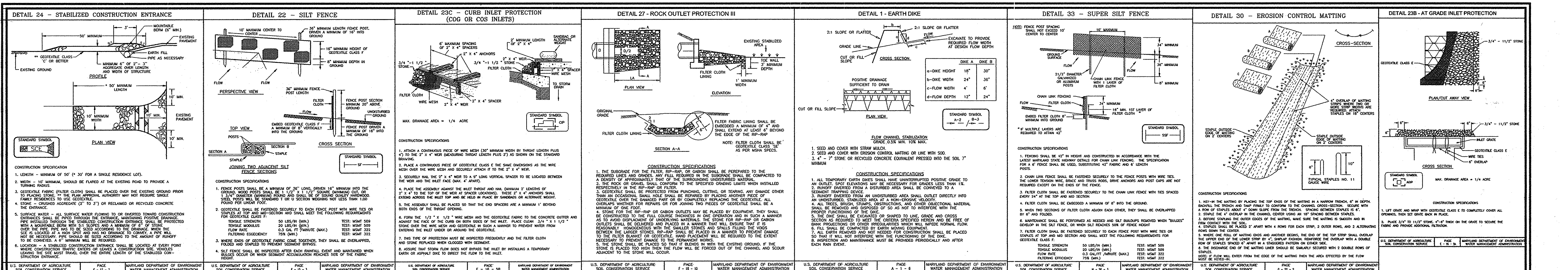
ROBERT H. VOGEL, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8966

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: SEPT. 2009
SCALE: 1"=30'
W.O. NO.: 06-54

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. MY EXPIRATION DATE IS 06-27-2010.

3 SHEET OF 8



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 1 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION PAGE 1-10-13

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding. If not previously SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer...

PERMANENT SEEDING NOTES

FURTHER DISTURBANCE: WHERE A PERMANENT LIVE-VEGETATIVE SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding. If not previously SOIL AMENDMENTS: In lieu of soil test recommendations, use one of 1. 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 disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureamiform fertilizer (9 lbs./1000 sq.ft.)...

LOG OF BORING NO. B-1	LOG OF BORING NO. B-2	LOG OF BORING NO. B-3	LOG OF BORING NO. B-4
<p>PROJECT: Jessup Ready Mix Plant</p> <p>DATE: February 21, 2009</p> <p>DATE STARTED: February 21, 2009</p> <p>DATE COMPLETED: February 21, 2009</p> <p>DRILLING CONTRACTOR: Geo-Technology Associates, Inc.</p> <p>DRILLER: J. P. Stephens, Jr.</p> <p>LOGGED BY: J. P. Stephens, Jr.</p> <p>CHECKED BY: J. P. Stephens, Jr.</p>	<p>PROJECT: Jessup Ready Mix Plant</p> <p>DATE: February 21, 2009</p> <p>DATE STARTED: February 21, 2009</p> <p>DATE COMPLETED: February 21, 2009</p> <p>DRILLING CONTRACTOR: Geo-Technology Associates, Inc.</p> <p>DRILLER: J. P. Stephens, Jr.</p> <p>LOGGED BY: J. P. Stephens, Jr.</p> <p>CHECKED BY: J. P. Stephens, Jr.</p>	<p>PROJECT: Jessup Ready Mix Plant</p> <p>DATE: February 21, 2009</p> <p>DATE STARTED: February 21, 2009</p> <p>DATE COMPLETED: February 21, 2009</p> <p>DRILLING CONTRACTOR: Geo-Technology Associates, Inc.</p> <p>DRILLER: J. P. Stephens, Jr.</p> <p>LOGGED BY: J. P. Stephens, Jr.</p> <p>CHECKED BY: J. P. Stephens, Jr.</p>	<p>PROJECT: Jessup Ready Mix Plant</p> <p>DATE: February 21, 2009</p> <p>DATE STARTED: February 21, 2009</p> <p>DATE COMPLETED: February 21, 2009</p> <p>DRILLING CONTRACTOR: Geo-Technology Associates, Inc.</p> <p>DRILLER: J. P. Stephens, Jr.</p> <p>LOGGED BY: J. P. Stephens, Jr.</p> <p>CHECKED BY: J. P. Stephens, Jr.</p>

SEQUENCE OF CONSTRUCTION

- OBTAIN HOWARD COUNTY GRADING PERMIT. (1 WEEK)
- NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. (1 WEEK)
- CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 WEEK)
- WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB FOR SEDIMENT BASIN. CONSTRUCT SEDIMENT BASIN. (1 WEEK)
- FURNISH CONSTRUCTION OF SEDIMENT BASIN (2 WEEKS)
- MEASURE AND INSTALL TEMPORARY STABILIZATION OF SLOPES, PROOF ROLLING, AND COMPACTION.
- UPON INSPECTOR'S APPROVAL, CLEAR AND GRUB REMAINDER OF SITE. (1 WEEK)
- MASS GRADE SITE AND INSTALL UTILITIES FOR SEDIMENT BASIN. (2 WEEKS)
- BEGIN UTILITY CONSTRUCTION. (2 WEEKS)
- BEGIN BUILDING CONSTRUCTION. (12 WEEKS)
- INSTALL ON-SITE CURB & CUTTER & PAVING BASE COURSE. (2 WEEKS)
- COMPLETE BUILDING AND UTILITY CONSTRUCTION. (2 WEEKS)
- INSTALL ALL PAVING SURFACE COURSE. (1 DAY)
- FINE GRADE AND STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOG. REMOVE ALL TRASH JUNK AND DEBRIS FROM ENTIRE PARCEL. (2 WEEKS)
- INSTALL LANDSCAPING. (1 WEEK)
- INSTALL SEDIMENT CONTROL MEASURES AND CONVERT BASIN TO INSPECTOR. (1 WEEK)

NOTES:

- DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.
- FOLLOWING INITIAL SOIL DISTURBANCES OR RESTORATION PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL.
 - 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 5/21/09

BY THE DEVELOPER: [Signature] DATE: 6/11/09

BY THE ENGINEER: [Signature] DATE: 5/10/09

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

OWNER/DEVELOPER

SOUTHWEST LTD PARTNERSHIP, AND
OLD JESSUP ROAD PLANT LLC
PO BOX 548
WALDORF, MD 20604
301-374-9625

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

AS-BUILT CERTIFICATION

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

DATE: 3/11/14

ROBERT H. VOGEL, PE, No. 016193

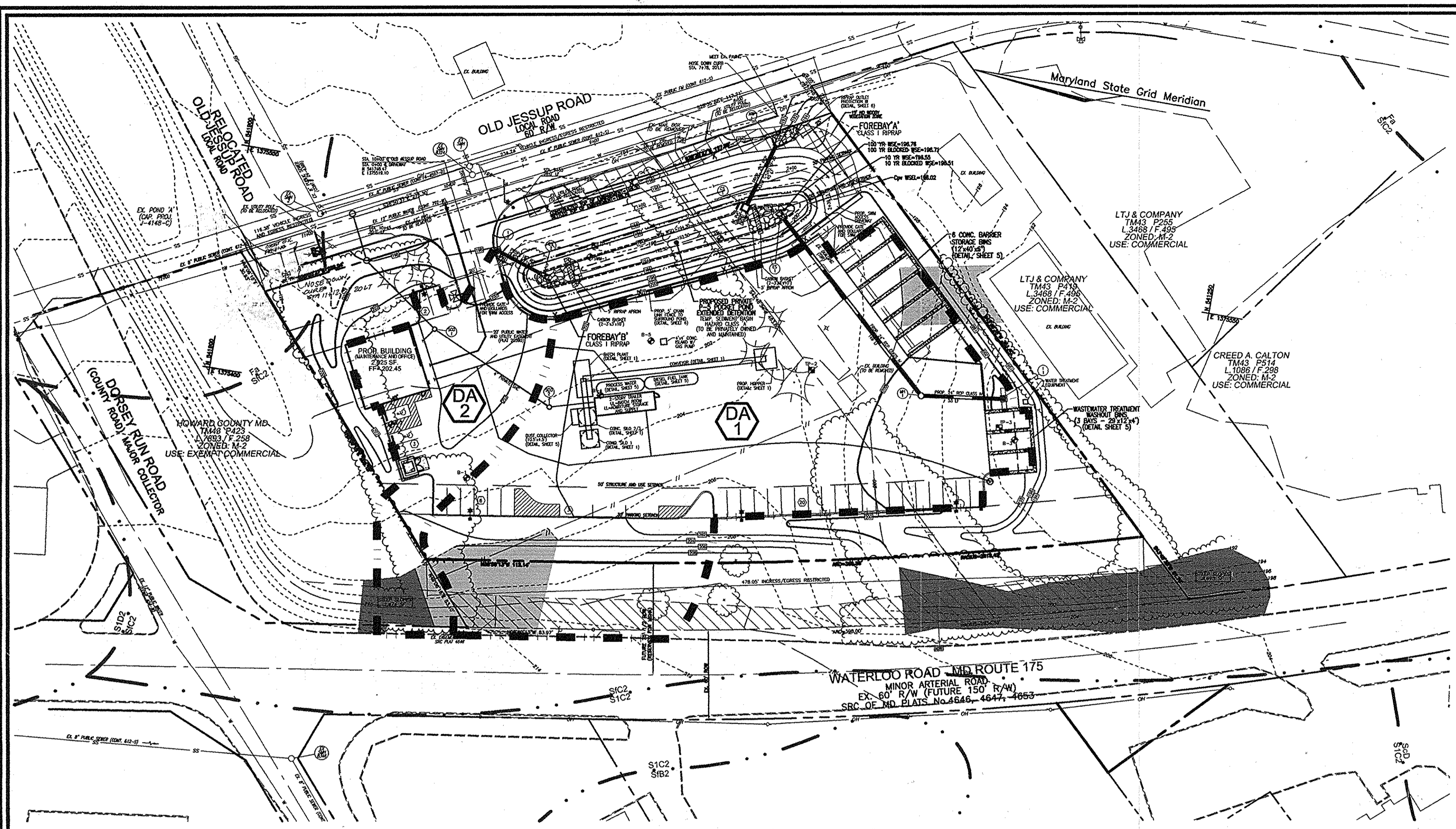
PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 06-30-2010

DESIGN BY: RHV
DRAWN BY: RZ
CHECKED BY: DV
DATE: MAY 2009
SCALE: AS SHOWN
W.O. NO.: 06-54

4 SHEET OF 8

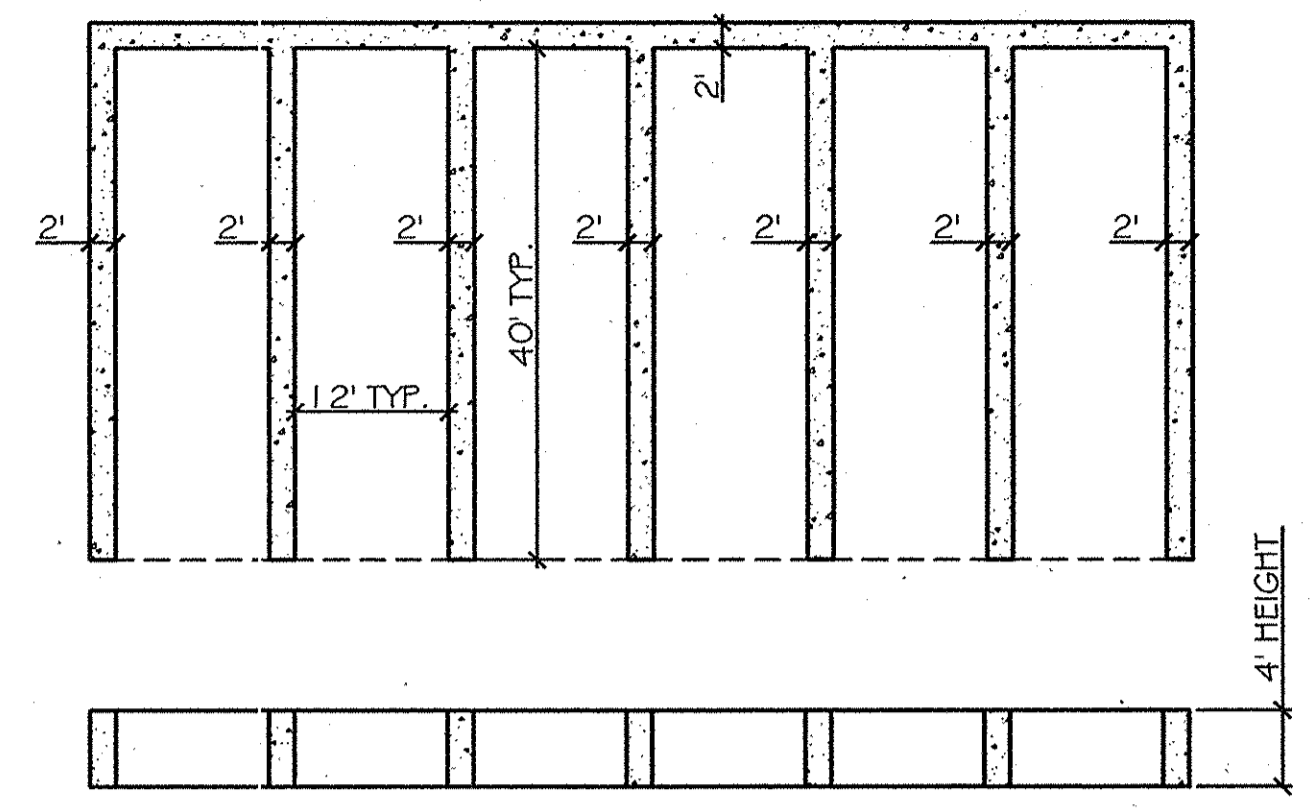
AS-BUILT 03-11-2014



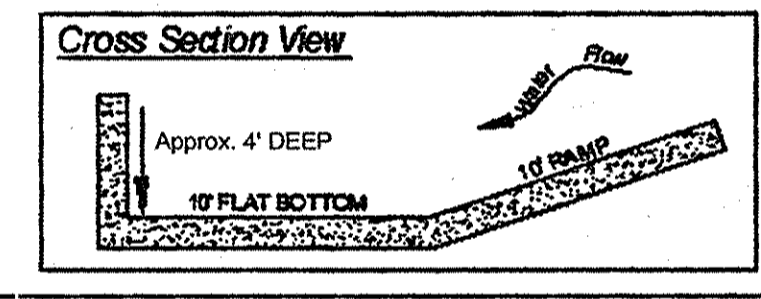
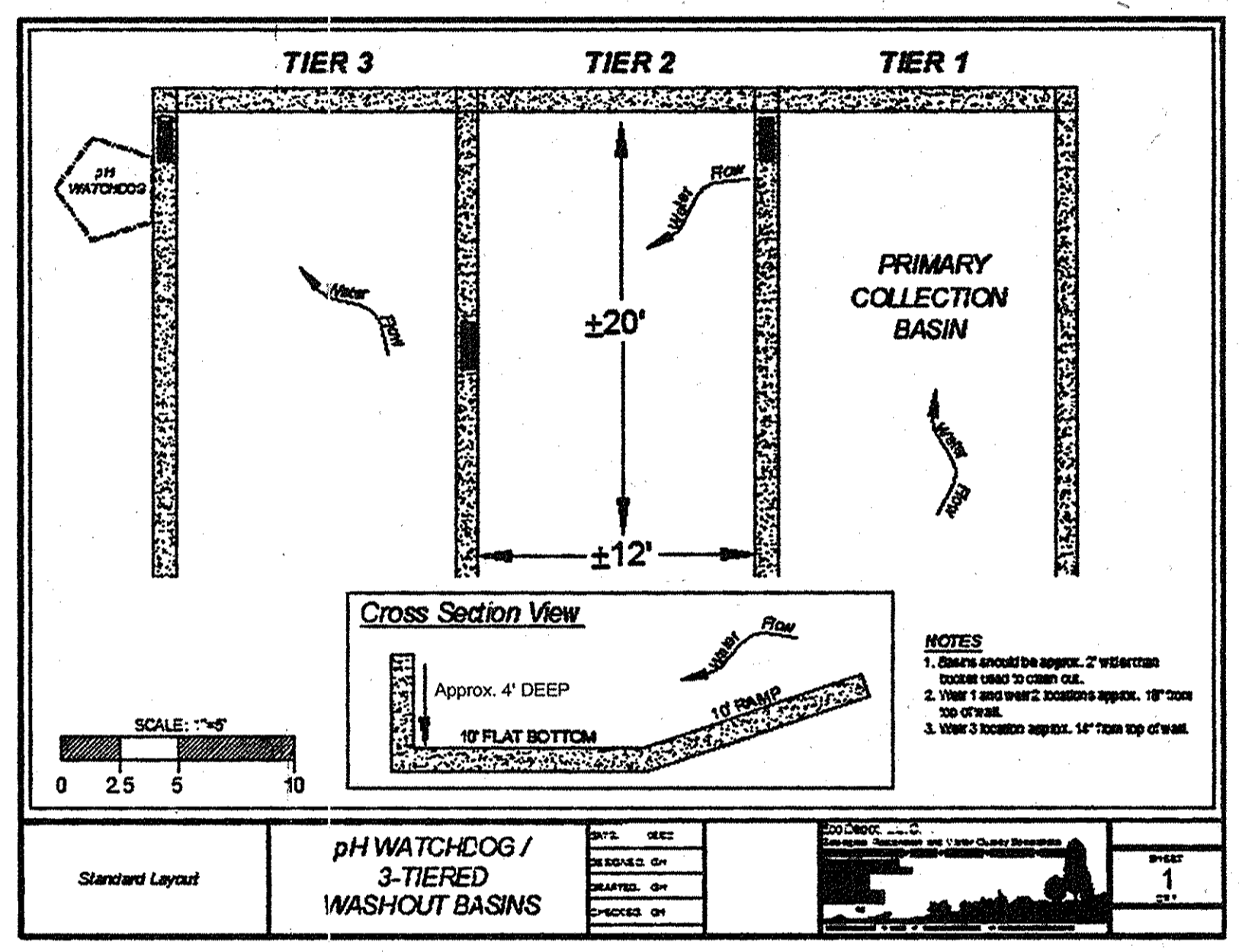
STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=50'

AREA AND "C" FACTOR TABULATION

DRAINAGE AREA	AREA (AC)	"C" FACTOR	% IMPERVIOUS
DA-1	1.48	0.70	77%
DA-2	0.38	0.69	75%



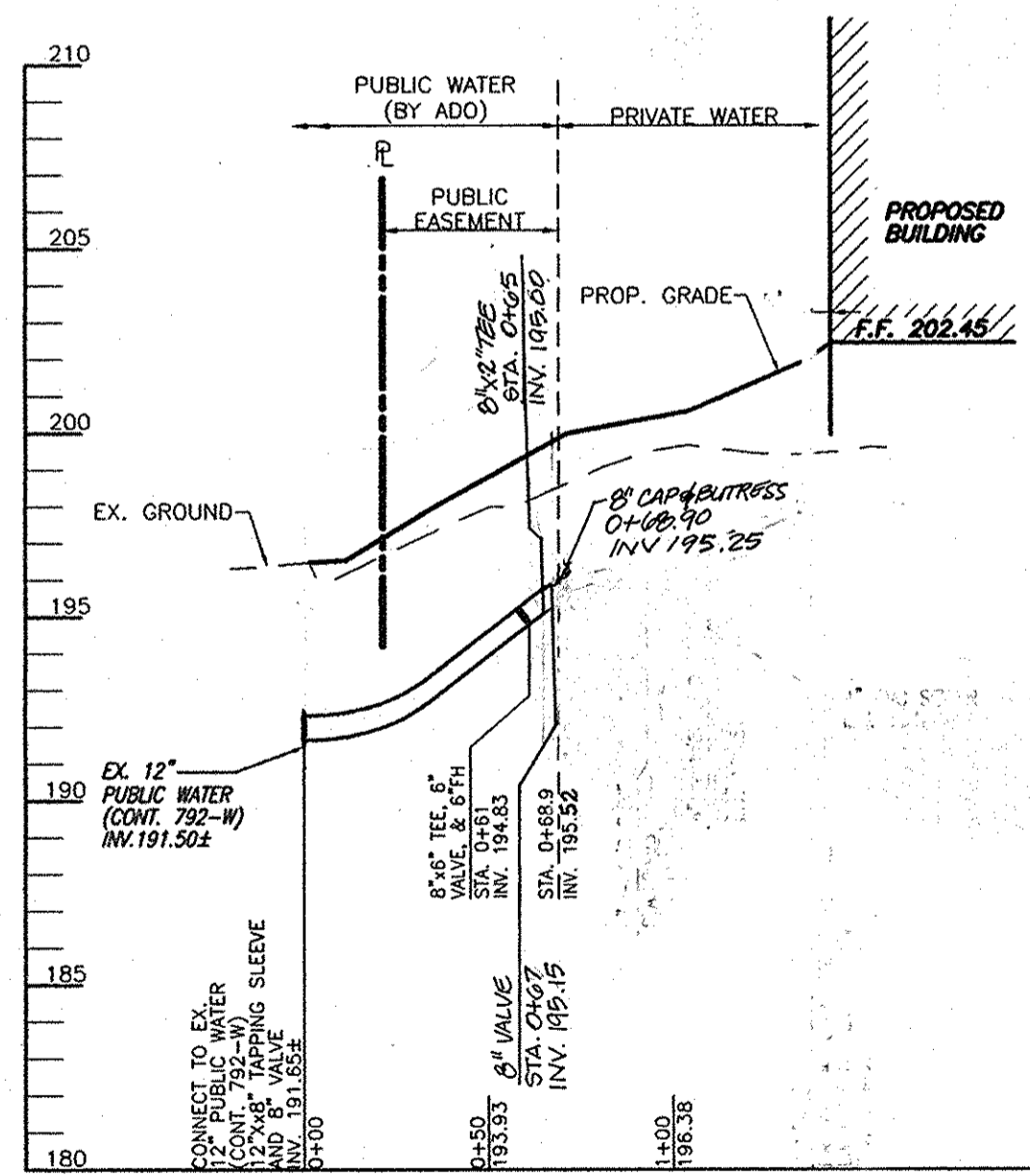
CONCRETE BARRIER STORAGE BINS
NOT TO SCALE



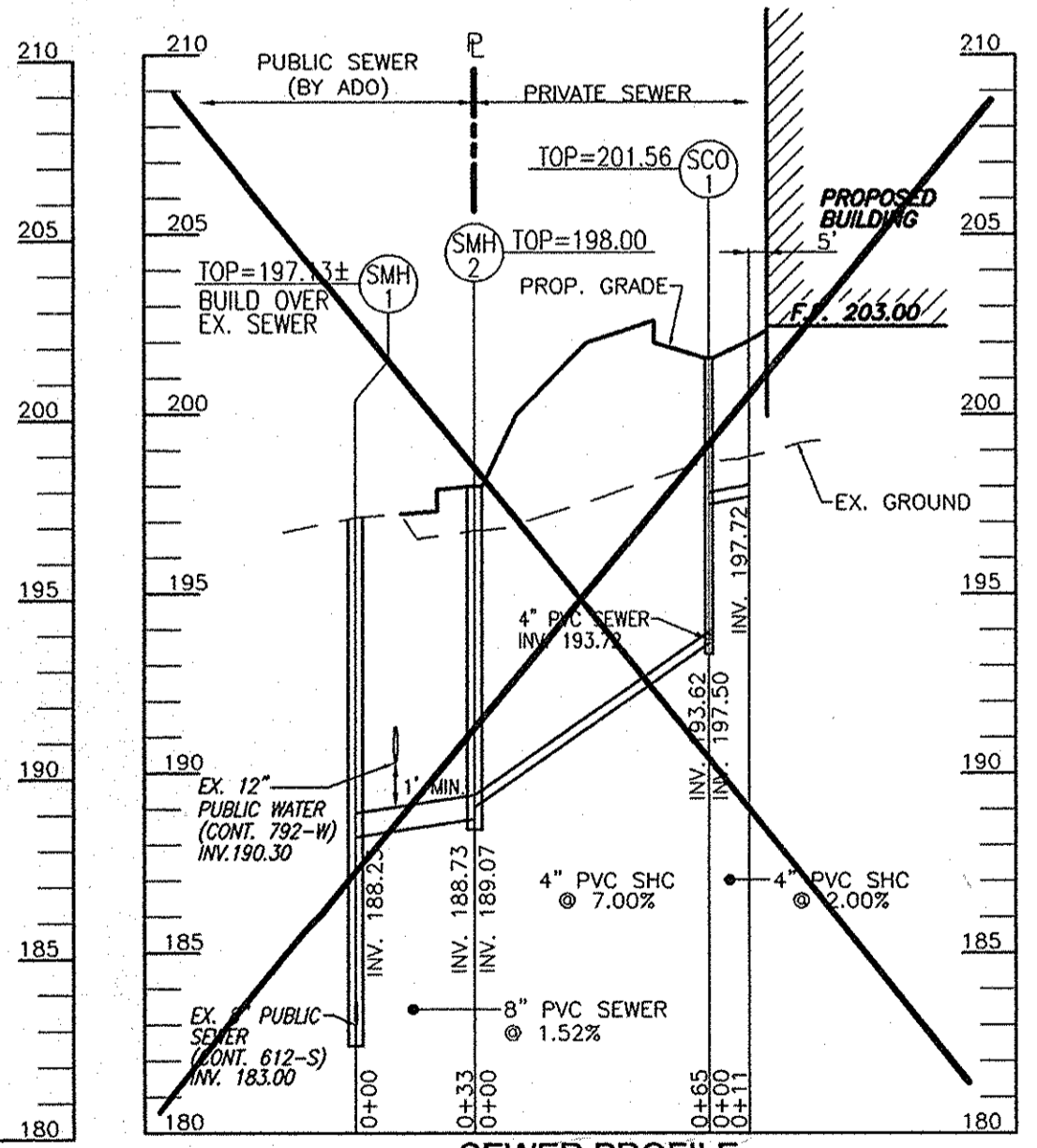
DUST COLLECTOR
NOT TO SCALE

- LEGEND:
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED SPOT ELEVATION
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - EXISTING TREES (FIELD LOCATED)
 - EXISTING TREELINE (FIELD LOCATED)
 - PROPOSED TREELINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - MODERATE SLOPES 15%
 - STEEP SLOPES 20%
 - BORINGS

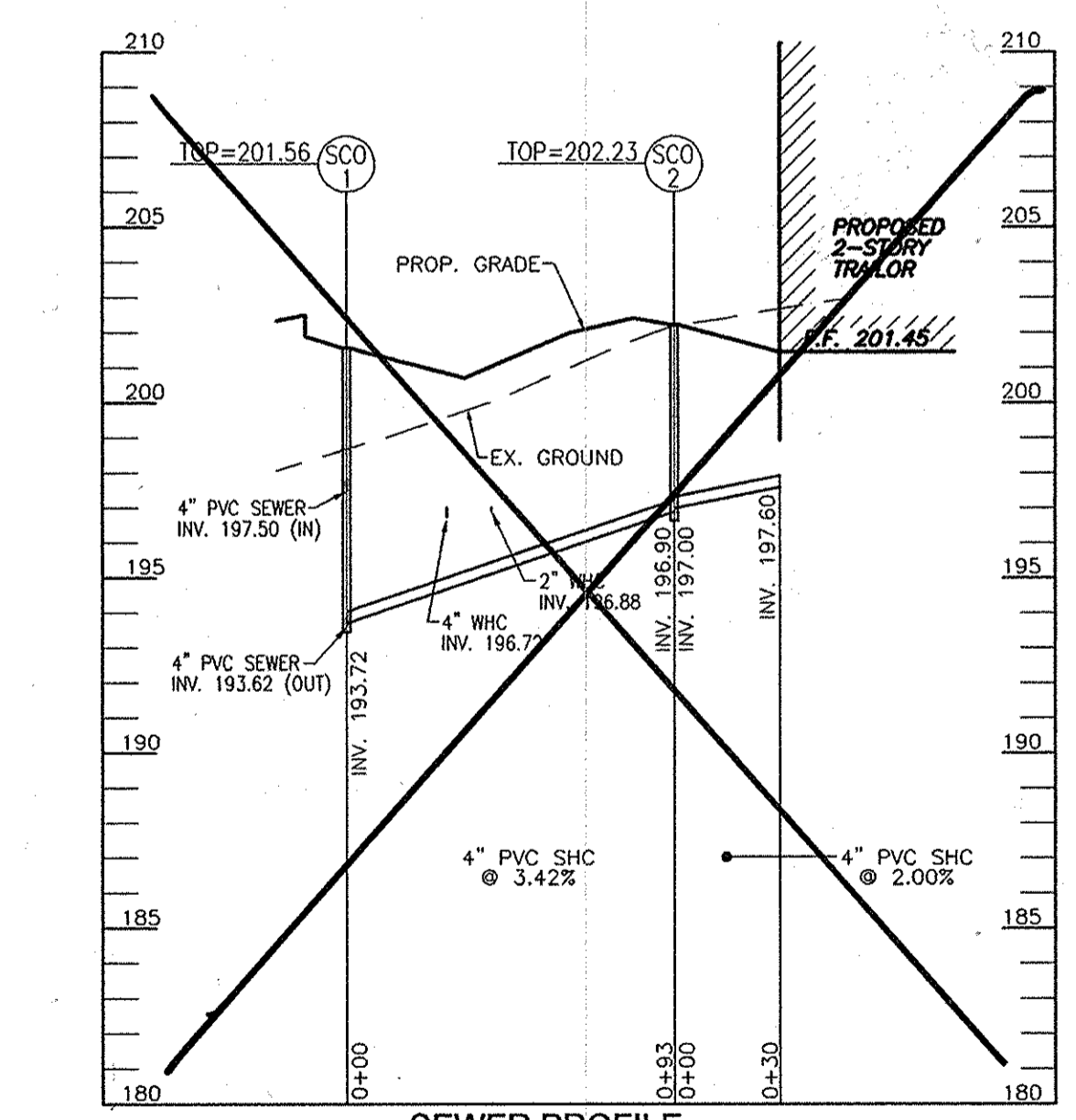
NOTE:
FOR AS-BUILT POND GRADING
SEE SHEET 308.



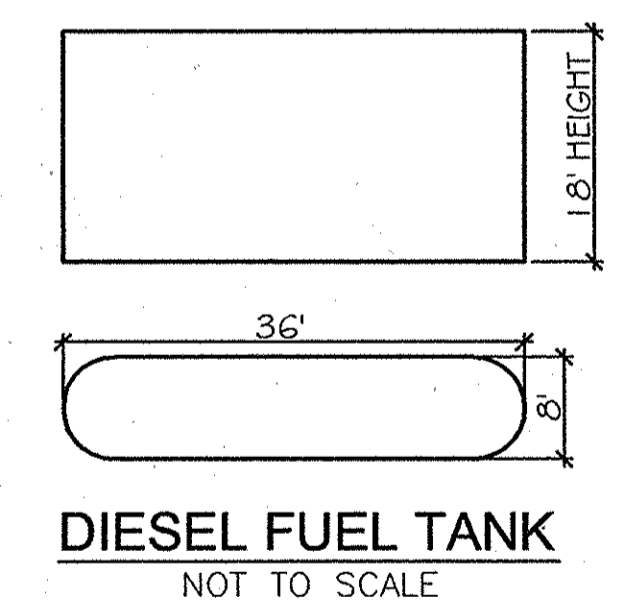
WATER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



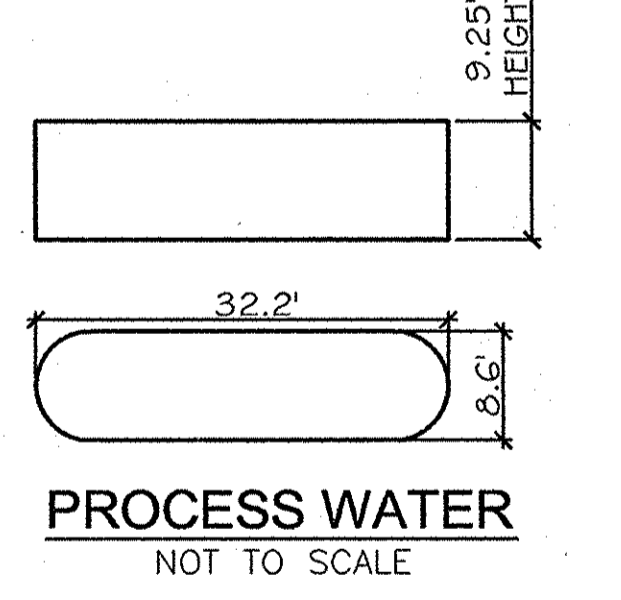
SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

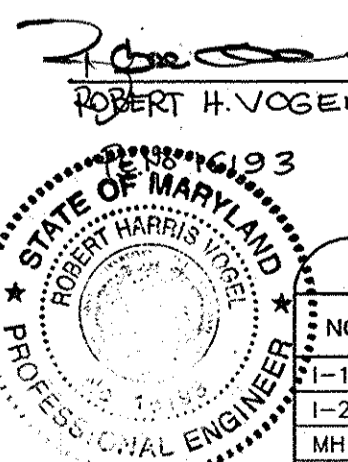


DIESEL FUEL TANK
NOT TO SCALE



PROCESS WATER
NOT TO SCALE

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



PIPE SCHEDULE

SIZE	TYPE	LENGTH
8"	PVC SEWER	33 LF
4"	PVC SEWER	199 LF
8"	DIP WATER	79 LF
4"	DIP WATER	59 LF
2"	DIP WATER	552 LF
18"	RCP, CLASS IV	31 LF
24"	RCP, CLASS IV	202 LF
24"	RCP, ASTM C-361 B-25	45 LF

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
I-1	SHA TYPE 'K' INLET (DOUBLE OPENING)	N 541375 E 1375470	198.30	-	195.50	HO. CO. STD. D-4-12
I-2	TYPE 'A-5' INLET	N 541723 E 1375509	198.93	-	193.70	HO. CO. STD. SD-4-02
MH-1	STD 4'-0" MANHOLE	N 541429 E 1375463	199.71	194.97	194.87	HO. CO. STD. G-5-12
ES-1	CONC. END SECTION	N 541541 E 1375565	195.00	193.00	-	HO. CO. STD. D-5-51
ES-2	CONC. END SECTION	N 541692 E 1375498	195.00	193.00	-	HO. CO. STD. D-5-51
HW-1	TYPE 'A' HEADWALL	N 541545 E 1375612	195.30	-	191.80	HO. CO. STD. D-5-11
CS-1	CONTROL STRUCTURE	N 541557 E 1375569	SEE DETAIL SHEET 6	-	-	-
SMH-1	STD 4'-0" MANHOLE	N 541824 E 1375517	196.13	188.23	-	HO. CO. STD. G-5-12
SMH-2	STD 4'-0" MANHOLE	N 541809 E 1375488	198.00	189.07	188.73	HO. CO. STD. G-5-12
SCO-1	CLEANOUT	N 541769 E 1375409	201.56	193.62	193.62	HO. CO. STD. S-2-22
SCO-2	CLEANOUT	N 541668 E 1375398	202.23	197.00	196.90	HO. CO. STD. S-2-22

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/15/10

BY THE DEVELOPER:
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

BY THE ENGINEER:
 I HEREBY 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.

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

OWNER/DEVELOPER
 SOUTHSTAR LTD PARTNERSHIP, AND
 OLD JESSUP ROAD PLANT LLC
 PO BOX 548
 WALDORF, MD 20604
 301-374-9625

NO.	REVISION	DATE
5	REVIS LENGTH OF ROAD WIDENING DUE TO EX. FIRE HYDRANT	9/7/11
4	REVISE SEWER HOUSE CONNECTION	5/16/11
3	PROVIDE OUTSIDE WATER METER SETTINGS AND	5/16/11
2	RELOCATE EXISTING FIRE HYDRANT ALONG OLD JESSUP ROAD	3/24/10
1	ADD 8" x 4" REDUCER AND ADD VALVE	11/5/09
	REVISE BATCH PLANT AND RELOCATE BUILDING	

SITE DEVELOPMENT PLAN
 REVISED
 STORM DRAIN DRAINAGE AREA MAP;
 AND UTILITY PROFILES
 JESSUP READY MIX CONCRETE
 PARCEL A
 TAX MAP 43 GRID 21
 1st ELECTION DISTRICT
 PARCELS 253 & 510
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
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 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 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.
 EXPIRATION DATE: 06-27-2015

DESIGN BY: RHV
 DRAWN BY: RZ
 CHECKED BY: RHV
 DATE: SEPT. 2009
 SCALE: AS SHOWN
 W.O. NO.: 06-54

5 SHEET OF 8

**MARYLAND 378
STORMWATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS**

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 tops. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp berms shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

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

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

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

When required by the reviewing agency the minimum required density shall not be less than 95% maximum dry density with a moisture content within +1/-2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, 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 the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

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

Structure Backfill
Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi, 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be over (bedding), over, and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of the structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits
All pipes shall be circular in cross section.
Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

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

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

OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT EXTENDED DETENTION FACILITY

- ROUTINE MAINTENANCE**
1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
 2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER.
 3. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
 3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE**
1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5/21/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION J.P. BATE
 [Signature] 6/11/09
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 6/16/09
 DIRECTOR, DEP

POND BOTTOM SOIL CONDITIONS

If broken rock fragments are encountered at finished pond bottom, under cut a minimum of 12" below basin grade and to a horizontal distance of at least 18" beyond each edge of the broken rock and backfill with fine-grained ML or CL soils compacted to a firm condition. This procedure should be performed under the supervision of the project Geotechnical Engineer.

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 HIS/HERS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

BY THE DEVELOPER:
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.
 [Signature] 5/26/09
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
 I HEREBY 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 THAT THE DEVELOPER HAS ENGAGED 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] 5/26/09
 SIGNATURE OF ENGINEER DATE

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

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-190 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.
 2. Coupling, bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
 3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner so as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be rolled on an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches diameter: flanges on both ends of the pipe with a circular 3/8 inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4(four) rods and nuts, 2 on each connecting 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.

1. 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.
2. Backfilling shall conform to "Structure Backfill."
3. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

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

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.
2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.
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 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. 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 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 shall meet the requirements of AASHTO M294 Type S.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. 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.
4. Backfilling 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 Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet 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 to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil 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 AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES

1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY 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.

DEWATERING STRATEGY

Dewatering refers to the act of removing and discharging water from excavated areas on construction sites or from sediment traps or basins on construction sites. Standards and specifications for dewatering practices follow:

These standards apply to removal and discharge of water from any excavated area or sediment trap or basin at any construction site. Given the unique conditions of any particular construction site, any or all of the practices may apply. Regardless of the applicability of the practices listed herein, operators are required to use acceptable procedures for maintenance and dewatering. In all cases, every effort shall be made to eliminate sediment pollution associated with dewatering.

Designers shall specify the preferred practices for dewatering on plans. In particular, designers should identify procedures for dewatering sediment traps and basins prior to installation of the final sediment control facility on the site or prior to conversion of sediment control facilities to stormwater management facilities. Recommended procedures shall be consistent with these standards. Applied site conditions may require innovative dewatering designs. Dewatering measures not referenced in this standard may be used with the consent of the approval authority.

- Dewatering of Excavated Areas**
- A. Designers shall specify on plans, and in sequences of construction included on plans, practices for dewatering of excavated areas. Plan reviewers shall check to see that procedures for dewatering are included on plans.
 - B. In all cases, water removed from excavated areas shall be discharged such that it shall pass through a sediment control device prior to entering receiving waters. Sediment control devices include sediment traps and basins, in addition to the practices in this section.

- Approved Practices for Dewatering of Excavated Areas**
1. Pumping of water to an existing sediment basin or trap in which the entire volume of water from the area to be dewatered can be contained without discharge to receiving waters.
 2. Pumping of water to an existing sediment basin or trap such that the entire volume of water from the area to be dewatered can be managed without exceeding the design outflow from the sediment control structure.
 3. Removable Pumping Station? Standards and specifications for Removable Pumping Station are on Detail 30A.
 4. Use of a Sump Pit? Standards and specifications for a sump pit are on Detail 30B.
 5. Sediment Trap? Standards and specifications for a sump pit are on Detail 21.

Dewatering of Sediment Traps and Basins
Designers shall specify on plans, and in sequences of construction included on plans, the practices for dewatering of traps and basins. Plan reviewers shall check to see that procedures for dewatering to be used are included on plans. In all cases, water removed from traps and basins shall be discharged so that it passes through a sediment control device prior to entering receiving waters.

- Approved Practices for Dewatering of Traps and Basins**
1. Removable pumping station.
 2. Use of a Sump Pit.
 3. Use of a floating suction hose to pump the cleaner water from the top of the pond. As the cleaner water is pumped the suction hose will lower and eventually encounter sediment laden water. When this happens the pumping operation will cease. Provisions shall be made to filter water.

GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS FOR STORMWATER MANAGEMENT

Stormwater Management
Based upon the results of this exploration, it is GEA's opinion that construction of the stormwater management pond is feasible in the areas explored, yet infiltration is not feasible because of relatively shallow groundwater observed across the site and the presence of clay within the infiltration zone. GTA understands that Vogel plans to design the SWM facility as extended detention. Due to the water perched in the sand layers during the wet seasons, the SWM pond will likely hold water during the wet seasons. Because storage is required in the pond at a detention facility, GTA recommends placing a trench drain at the lowest portion of the pond, with a positive gravity slope to the outfall structure to maintain the pond's storage capacity. GTA's preliminary recommendations regarding SWM facilities are provided in the following paragraphs.

1. **Material Requirements**
GTA understands that the Soil Conservation Service of Maryland (SCS), Specification 378 (MD 378) governs design and construction of the ponds. MD 378 specifies that soils for use in cutoff trench construction meet USCS Classification CL (low plasticity clay), CH (high plasticity clay), SC (sandy clay), or GC (sandy gravel). Furthermore, GTA recommends that similar materials be used for backfill adjacent to the outfall structure. The use of the fine-grained or plastic material adjacent to the pipe should decrease the potential for "piping" or erosion failures.

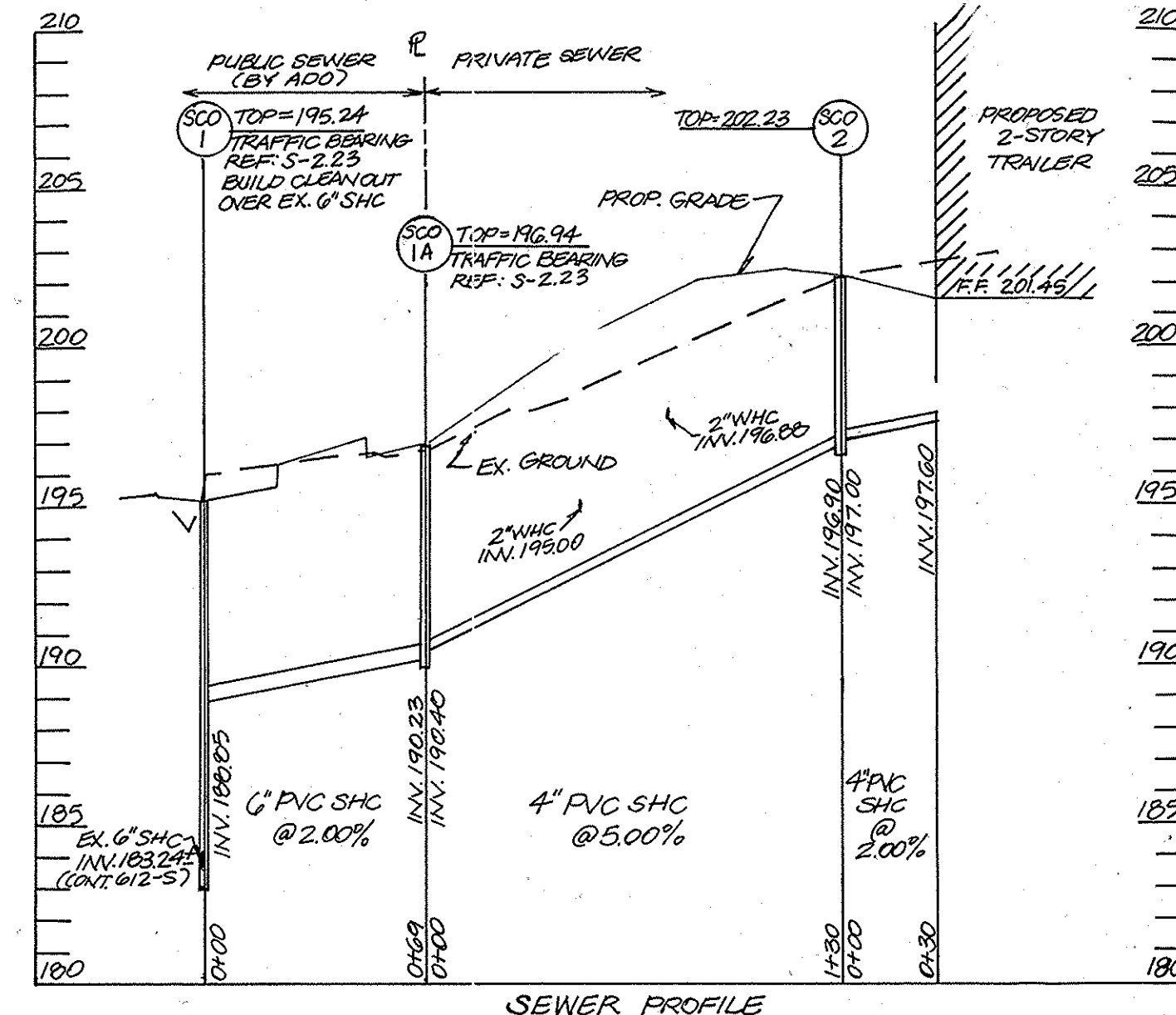
The majority of the on-site soils encountered near the existing ground surface in the vicinity of the SWM ponds are generally classified as USCS SM or SP, with ML classified soils found at depths of 7 to 12 feet below existing grade. Borrow materials will likely be required. Borrow materials should meet the classifications required by MD 378, and be approved by GTA prior to placement as cutoff trench fill.

MD 378 specifies that all of the referenced classifications suitable for cutoff trench construction are suitable for embankment construction as well. Furthermore, it is GTA's opinion that select USCS ML soils, low plasticity silt, are also suitable for embankment construction. Sand and gravel are not recommended as embankment material.

2. **Basin Excavation and Embankment Construction**
Based on the results of the test borings, it is likely that the majority of the excavations required for the ponds can be performed by standard excavation methods. The groundwater levels observed within the vicinity of the proposed SWM Pond generally correspond to levels above the approximate basin elevations (see soil profiles in Appendix A). In addition, due to the granular nature of the surficial soils and potential for interbedded clay and silt layers in this area, perched water may be encountered during pond construction. If groundwater is encountered, then temporary dewatering of the basin and the outfall structure and subgrade will be required during the construction phase to facilitate excavation and construction. Due to the potential for high water conditions, water seepage may occur along

SUMMARY TABLE AREA A (SITE)

SP#1	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME WAV	0.1745 AC	0	0.1745 AC	MICROPOND EXTENDED DETENTION POCKET POND
2	RECHARGE VOLUME REV	0.0454 AC	0	0.0454	REV NOT PROVIDED DUE TO "HOT SPOT" DESIGNATION
3	CHANNEL PROTECTION VOLUME CPV	0.1929 AC	N/A	0.1929 AC	MICROPOND EXTENDED DETENTION POCKET POND
4	OVERHEAD FLOOD PROTECTION, Q10P	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, Q100P	N/A	N/A	N/A	

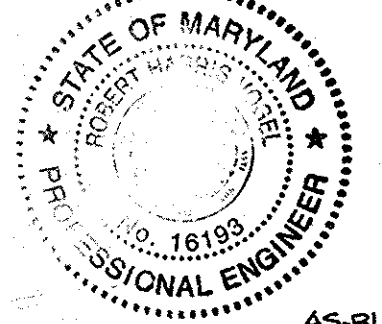
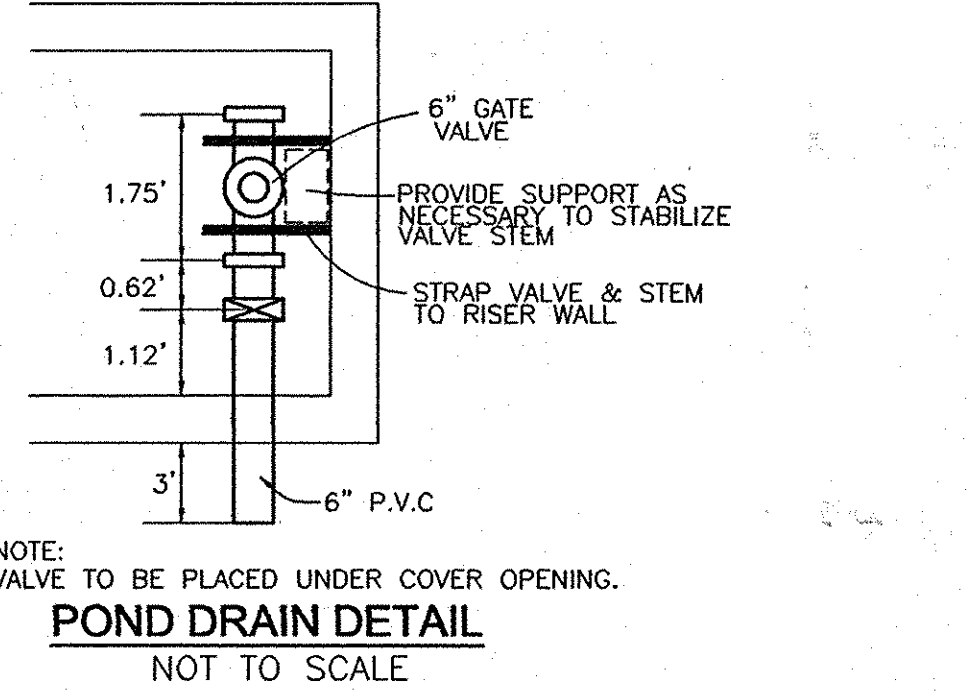


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The majority of the on-site soils encountered near the existing ground surface in the vicinity of the SWM ponds are generally classified as USCS SM or SP, with ML classified soils found at depths of 7 to 12 feet below existing grade. Borrow materials will likely be required. Borrow materials should meet the classifications required by MD 378, and be approved by GTA prior to placement as cutoff trench fill.

MD 378 specifies that all of the referenced classifications suitable for cutoff trench construction are suitable for embankment construction as well. Furthermore, it is GTA's opinion that select USCS ML soils, low plasticity silt, are also suitable for embankment construction. Sand and gravel are not recommended as embankment material.

Fills for cutoff trench and embankment construction should be constructed in eight-inch loose lifts, and compacted to within 95 percent of the maximum dry density in accordance with the Standard Proctor, ASTM D-698. Fills around the outfall works should be placed in 4-inch lifts and compacted to the same standard with hand equipment. Compactive effort should be monitored with in-place density testing as performed by a qualified representative under the direction of a professional engineer. Fills should generally be placed within 2 to 4% of the optimum moisture content. However, more restrictive moisture control may be required by the County specifications. Earthwork should be monitored by engineering technicians under the direct supervision of a registered professional engineer and all compactive effort should be verified by in-place density testing. The majority of the on-site soils are likely to be wet of their optimum moisture contents and significant moisture conditioning may be required prior to using on-site materials as fill. GTA recommends that a contingency be established for drying and/or over-excavating and replacing wet on-site soils.



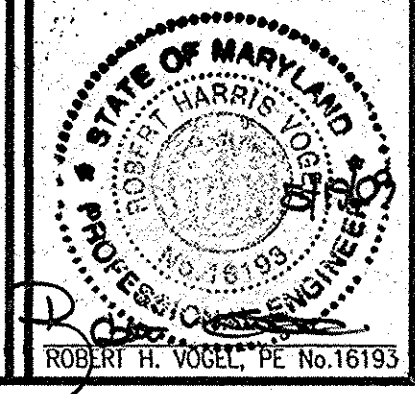
AS-BUILT CERTIFICATION
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.
 [Signature] 3/11/14
 ROBERT H. VOGEL
 PE No. 16193

OWNER/DEVELOPER
 SOUTHSTAR LTD PARTNERSHIP, AND
 OLD JESSUP ROAD PLANT LLC
 PO BOX 548
 WALDORF, MD 20604
 301-374-9625

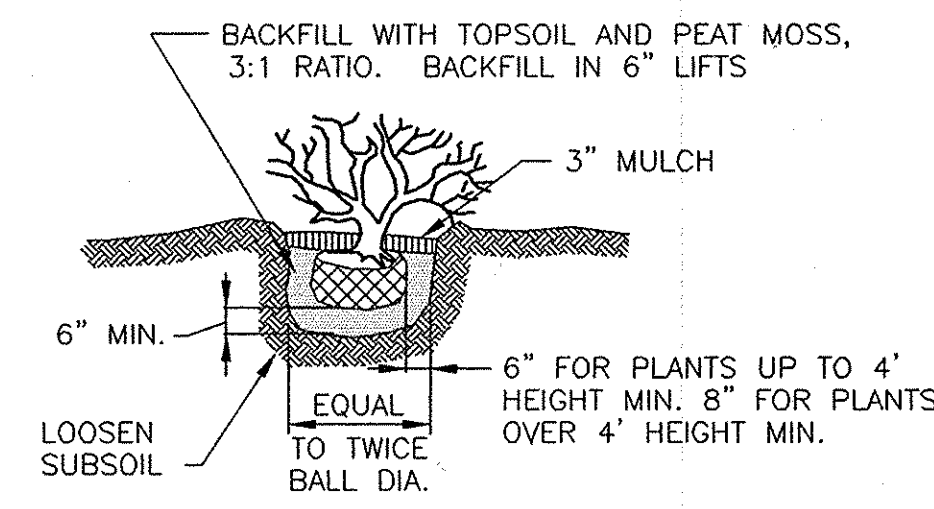
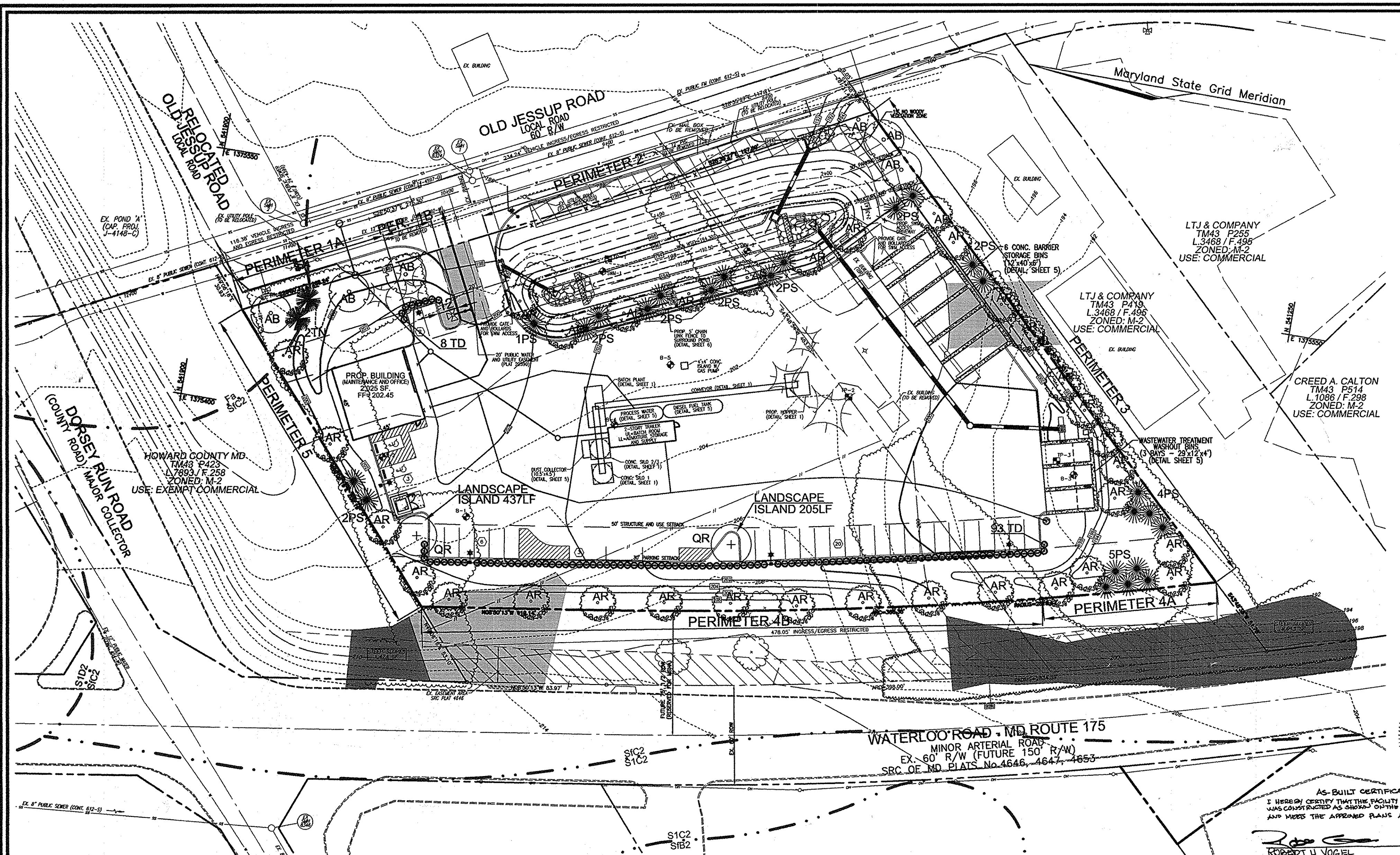
NO.	REVISION	DATE
4	REVISE SEWER HOUSE CONNECTION	9/7/2011

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT NOTES
JESSUP READY MIX CONCRETE
 PARCEL A
 TAX MAP 43 GRID 21
 1st ELECTION DISTRICT
 PARCELS 253 & 510
 HOWARD COUNTY, MARYLAND

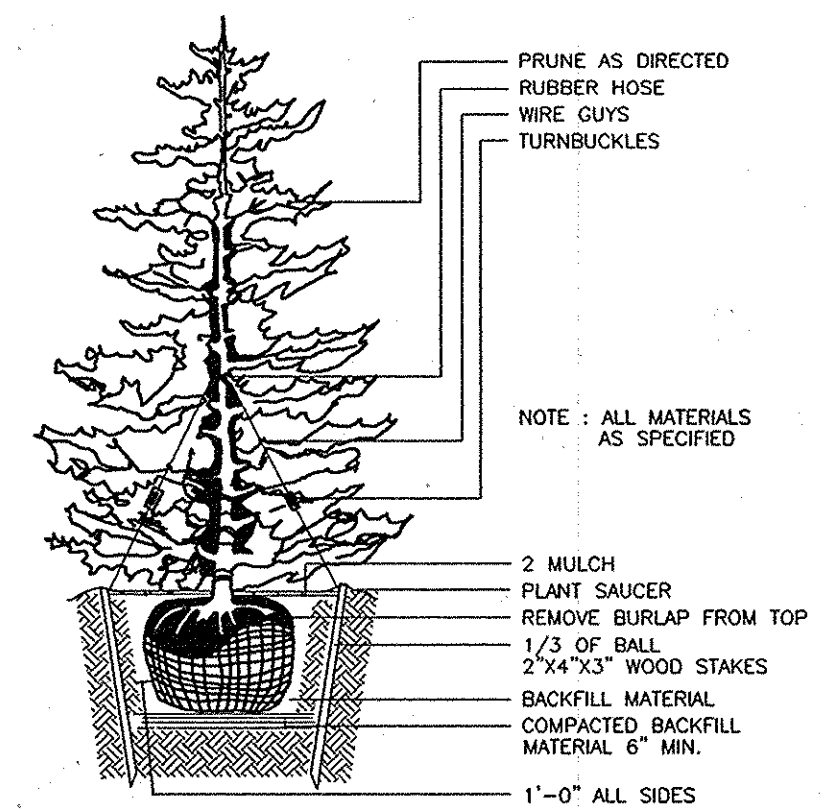
ROBERT H. VOGEL, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961



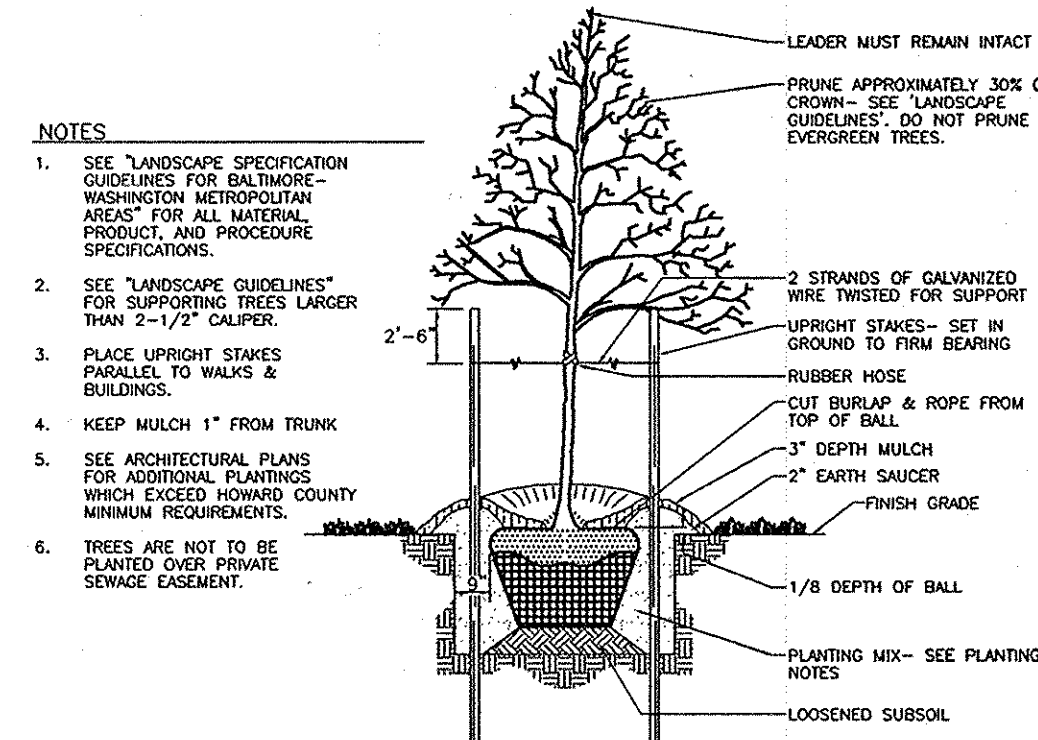
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 06-30-2010
 DESIGN BY: RHV
 DRAWN BY: DZ
 CHECKED BY: RHV
 DATE: MAY 2009
 SCALE: 1"=30'
 S.W.O. NO.: 06-54
 7 SHEET OF 8



SHRUB PLANTING DETAIL
NOT TO SCALE



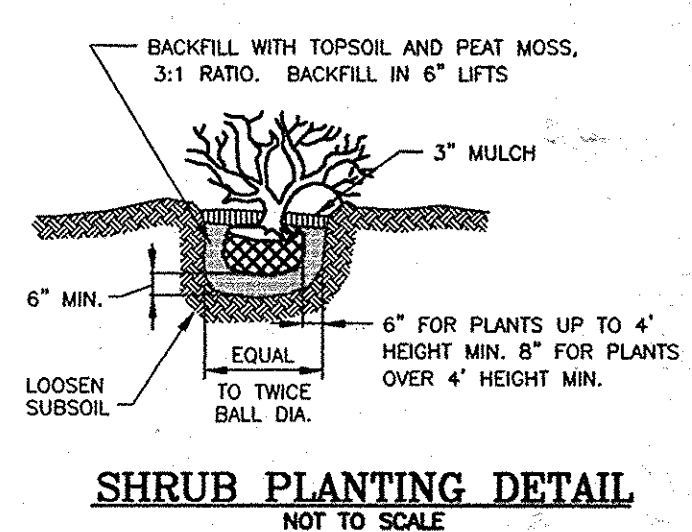
TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2\"/>

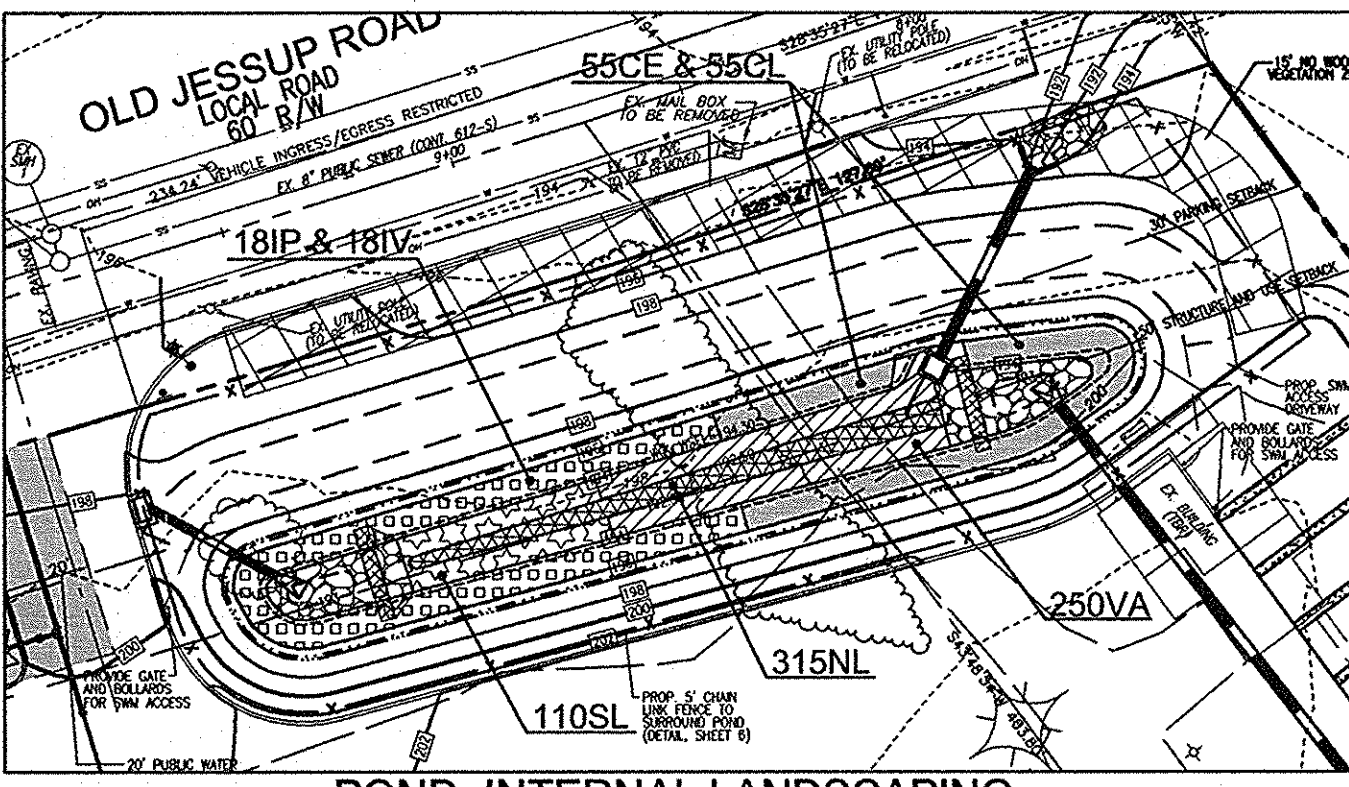
LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING FENCE
	EXISTING TREES (FIELD LOCATED)
	EXISTING TREE LINE (FIELD LOCATED)
	PROP. TREE LINE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED SIDEWALK
	PROPOSED SHADE TREE
	PROPOSED EVERGREEN TREE
	PROPOSED SHRUBS
	LANDSCAPE PERIMETER
	LIMIT OF DISTURBANCE
	MODERATE SLOPES 15%
	STEEP SLOPES 20%
	BORINGS



SHRUB PLANTING DETAIL
NOT TO SCALE

PLAN VIEW
SCALE: 1"=40'



POND INTERNAL LANDSCAPING
SCALE: 1"=40'

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of parking spaces	34
Number of trees required	2
Number of trees provided	2
Shade Trees	2
Other Trees (2:1 Substitution)	-

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	33	ACER RUBRUM	2 1/2"-3" CAL.	B & B
OR	2	OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
AB	6	QUERCUS PHellos	2 1/2"-3" CAL.	B & B
PS	26	ACER PALMATUM 'BLOODGOOD'	4"-6" HI.	B & B
TD	115	BLOODGOOD JAPANESE RED MAPLE	(MAX. HEIGHT=20')	B & B
TN	2	PINUS STROBUS	6"-8" HI.	B & B
		EASTERN WHITE PINE	6"-8" HI.	B & B
		TAXUS MEDIA 'VENSIFORMIS'	2 1/2"-3" HI.	B & B
		DENSIFORMIS YEW	2 1/2"-3" HI.	B & B
		THUJA OCCIDENTALIS 'NIGRA'	4"-5" HI.	B & B
		NIGRA ARBORESCENS	(MAX. HEIGHT=20')	B & B

**SCHEDULE D - POND 'B'
STORMWATER MANAGEMENT AREA LANDSCAPING**

Linear feet of perimeter	431
Number of trees required	9
Shade Trees (1:50)	9
Evergreen Trees (1:40)	11
Credit for existing vegetation	NO
Credit for other landscaping	NO
Number of trees provided	9
Shade Trees	9
Evergreen Trees	11

**POND 'B' - 2' DEEP STORMWATER POND
HERBACEOUS LANDSCAPE SCHEDULE**

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
IP	18	IRIS PSEUDOCORNIS	PLUG	1.5' OC
IV	18	IRIS VERSICOLOR	PLUG	1.5' OC
CE	55	BLUE FLAG (WEAR GLOVES)	PLUG	2' OC
CL	55	YELLOW NUT SEDGE	PLUG	2' OC
CL	55	CAREX LACINSTRIS	PLUG	2' OC
SV	110	SAGITTARIA LATIFOLIA	PLUG	4' OC
VA	250	QUICK POTATO (DO NOT PLANT TUBERS)	PLUG	2' OC
NL	315	VALLISNERIA AMERICANA WILD CELERY	PLUG	1.5' OC
		RUPIS LUTEUM SHATTERDOCK	PLUG	1.5' OC

**SCHEDULE A
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER AND ROADWAYS						ADJACENT TO DUMPSTER
	1A	1B	2*	3*	4A	4B	
PERIMETER FRONTAGE DESIGNATION							
LANDSCAPE TYPE							
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	94	30	240	351	105	378	209
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	1:50 2	1:40 1	1:50 5	1:60 6	1:40 3	1:40 9	1:40 1
SHADE TREES	1:40 2	-	1:40 6	-	1:20 5	-	1:20 2
EVERGREEN TREES	-	1:4 8	-	-	1:4 93	-	-
NUMBER OF PLANTS PROVIDED							
SHADE TREES	2	1	0*	11*	3	9	3
EVERGREEN TREES	2	1	0*	6*	3	9	1
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED							

BGE NOTES:

- THE PROPOSED LANDSCAPING ON WIREZONE (45' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS, AS SHOWN ON THIS PLAN.
- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,650.00 FOR THE REQUIRED 41 SHADE TREES, 26 EVERGREEN TREES AND 115 SHRUBS.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

DEVELOPER'S/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 AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

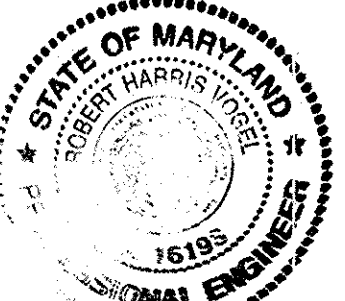
William F. Allen
SIGNATURE OF DEVELOPER DATE: 11/15/10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John J. Sullivan
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 11/15/10

Monica G. Sullivan
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 11/15/10

Monica G. Sullivan
DIRECTOR, DEP. DATE: 11/15/10



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 APPROPRIATE PLANS AND SPECIFICATIONS.

Robert H. Vogel
PE NO 16193

FOREST CONSERVATION WORKSHEET

ZONE: M2

NET TRACT AREA:
A. TOTAL TRACT AREA (1.08 AC. + 0.36 AC.) = 1.44 AC
B. AREA WITHIN 100 YARD FLOODPLAIN = 0.00 AC
C. NET TRACT AREA = 1.44 AC

LAND USE CATEGORY:
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.

ARA MDR IDA HDR MPD CIA
0 0 0 0 0 0 1

D. AFFORESTATION THRESHOLD = 15% X D = 0.22 AC
E. CONSERVATION THRESHOLD = 15% X D = 0.22 AC

EXISTING FOREST COVER:
F. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 0.00 AC
G. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 0.00 AC
H. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.22 AC

BREAK EVEN POINT:
I. BREAK EVEN POINT = 0.00 AC
J. CLEARING PERMITTED WITHOUT MITIGATION = 0.00 AC

PROPOSED FOREST CLEARING:
K. TOTAL AREA OF FOREST TO BE CLEARED = 0.00 AC
L. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:
M. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.00 AC
N. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.00 AC
P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
Q. TOTAL REFORESTATION REQUIRED = 0.00 AC
R. TOTAL AFFORESTATION REQUIRED = 0.22 AC
S. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 0.22 AC

WITH THE EXCEPTION OF THE 0.36 ACRE AREA OF MSHA PUBLIC ROAD R/W THAT WAS INCORRECTLY "EXEMPT" THE FOREST CONSERVATION OBLIGATION FOR PARCEL 253 HAS BEEN FULLY FULFILLED THROUGH A FEE-IN-LIEU PAYMENT OF \$6,098.40 TO THE FOREST CONSERVATION FUND PER SDP-03-116.

THE TOTAL NET TRACT AREA HAS IS COMPROMISED OF THE 1.08 ACRE AREA OF PARCEL 510 AND THE 0.36 ACRE AREA INCORRECTLY EXEMPTED FROM PARCEL 253, TOTALING 1.44 ACRES.

THE FOREST CONSERVATION OBLIGATION OF 0.22 AC (OR 9,583.20 SF) HAS BEEN FULLY FULFILLED THROUGH A FEE-IN-LIEU PAYMENT OF \$7,187.40 TO THE FOREST CONSERVATION FUND.

Robert H. Vogel
CHRIS VOGEL
DNR QUALIFIED PROFESSIONAL

OWNER/DEVELOPER
SOUTHWEST LTD PARTNERSHIP, AND
OLD JESSUP ROAD PLANT LLC
PO BOX 548
WALDORF, MD 20604
301-374-9625

NO.	REVISION	DATE
1	REVISE PLAN TO MIRROR BATCH PLANT AND RELOCATE BUILDING	11/15/10

**SITE DEVELOPMENT PLAN
REVISED**

**LANDSCAPE AND FOREST
CONSERVATION PLAN**

**JESSUP READY MIX CONCRETE
PARCEL A**

TAX MAP 43 GRID 21
1st ELECTION DISTRICT

PARCELS 253 & 510
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
ELICOTT CITY, MD 21043

TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

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. EXPIRES DATE 06-27-2010

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: SEPT. 2009
SCALE: 1"=40'
W.O. NO.: 06-54

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