

General Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-315-1800 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.

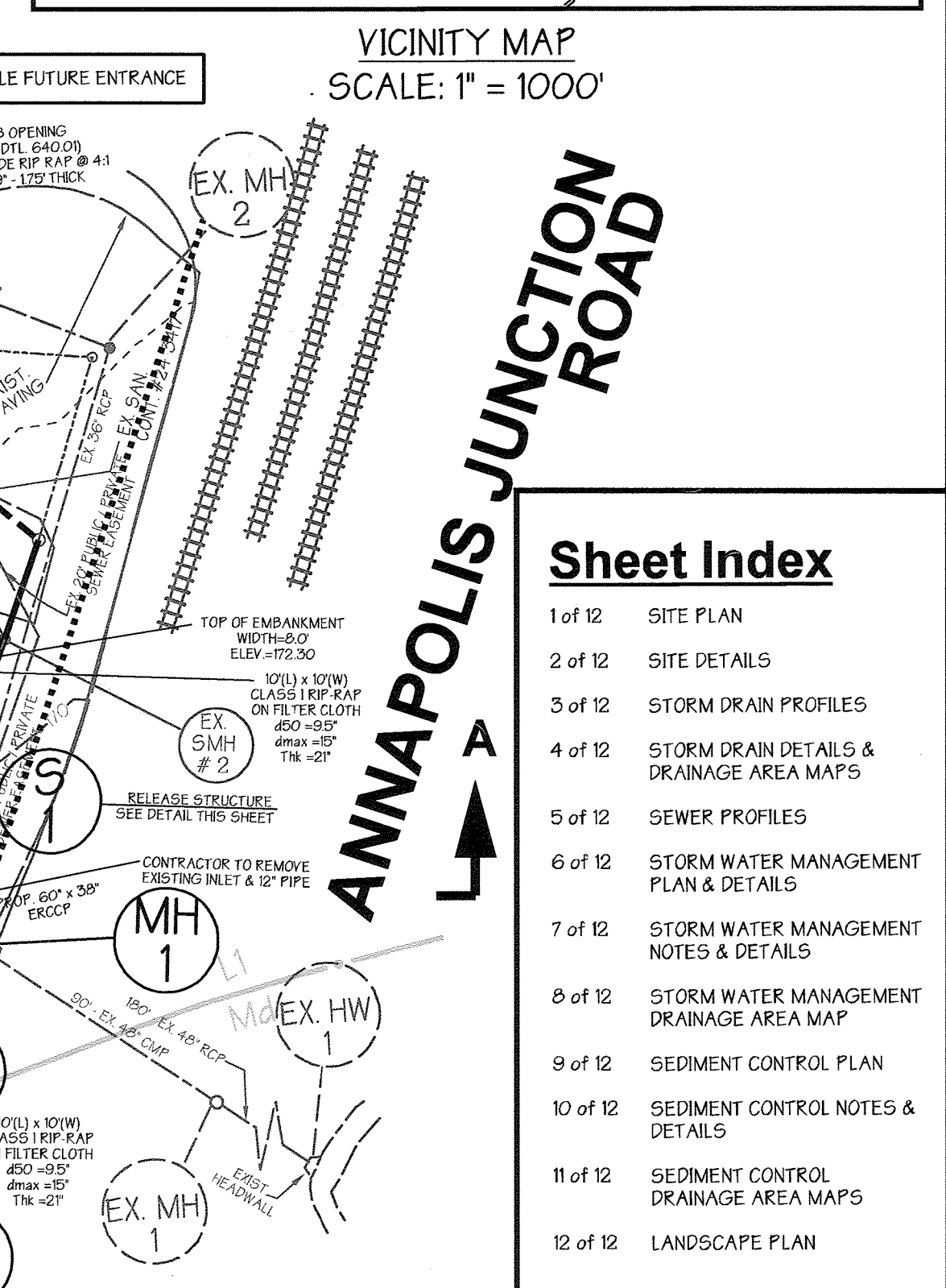
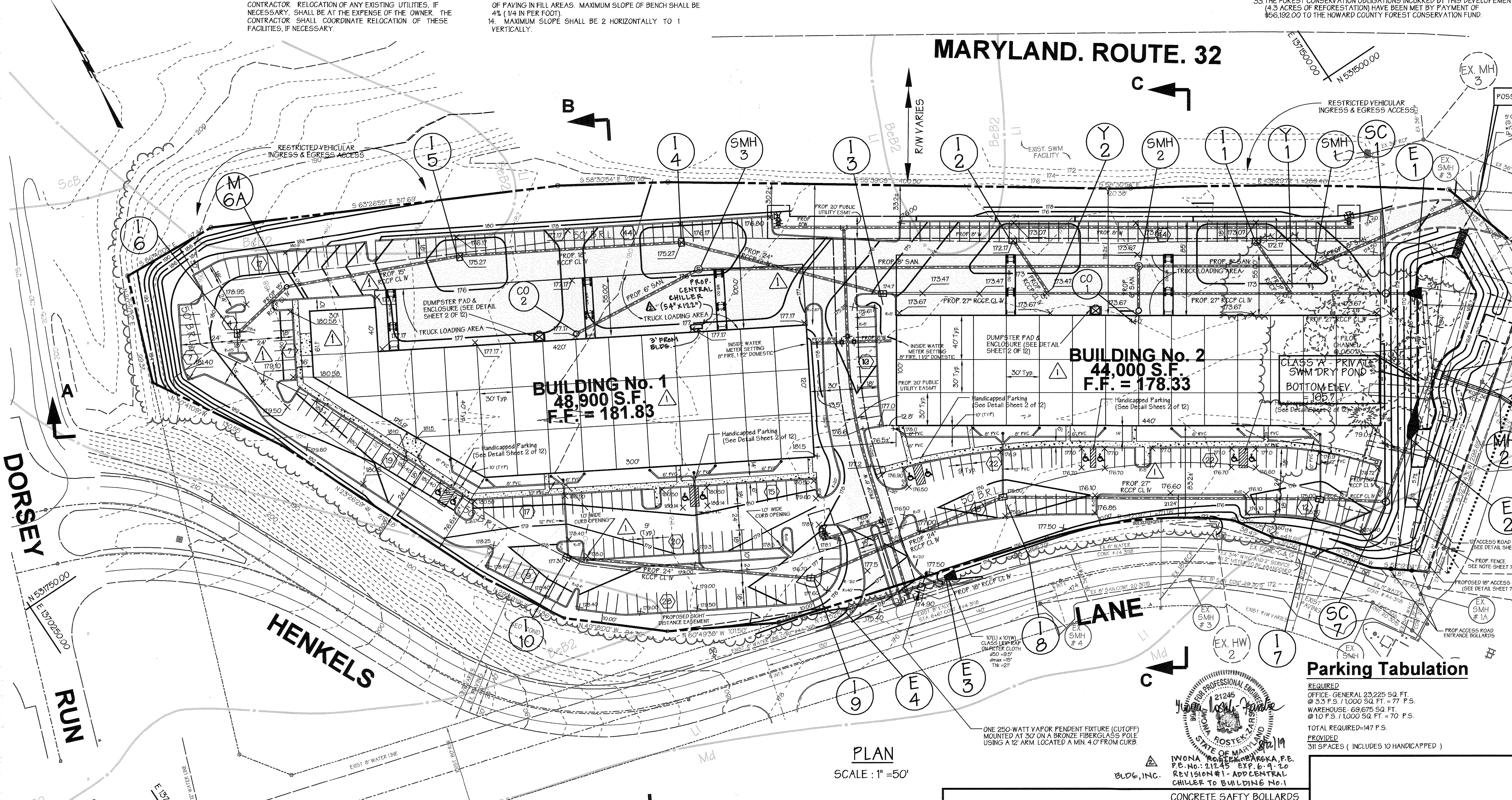
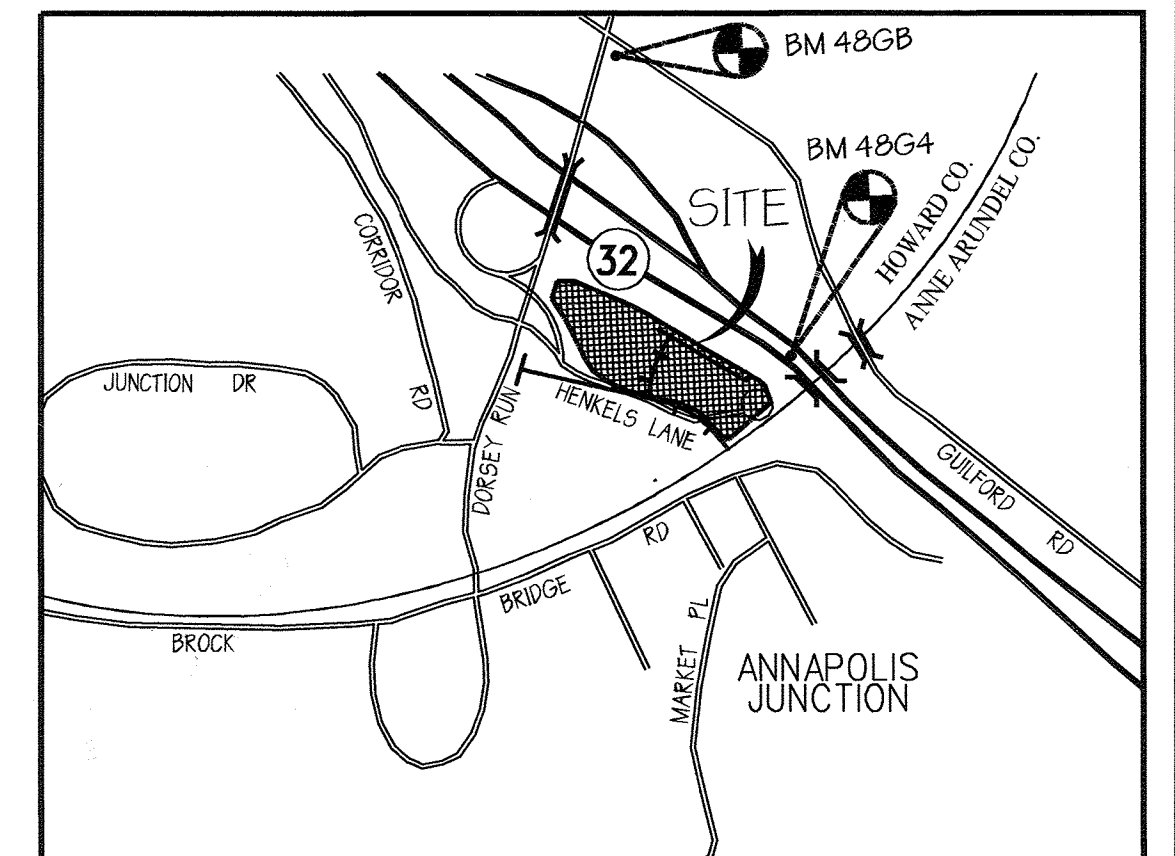
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MGS AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.

9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OPPOSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 21 SLOPES SHOWN HEREON, EXCEPT THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTON SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN PER FOOT).
14. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.

15. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
16. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
17. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
18. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
19. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED, AND AGED, LATEST EDITION.
20. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.

21. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
22. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
23. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
24. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY G.W. STEPHENS AND ASSOCIATES DATED AUGUST 1998.

25. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 48GB; NS32530.284; E1370623.786; EL: 228.582; NO. 48G4; NS31519.248; E1370623.762; EL: 206.756 WERE USED FOR 26. WATER IS PUBLIC. CONTRACT NO. IS 44-3103.
27. SEWER IS PUBLIC. CONTRACT NO. IS 24-3417.
28. STORMWATER MANAGEMENT QUALITY IS PROVIDED BY A STORMWATER MANAGEMENT PLAN IS PROVIDED BY A DETENTION POND; BOTH FACILITIES ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER.
29. THERE IS NO FLOODPLAIN ON THIS SITE.
30. FOR HANDICAPPED DETAILS SEE SHEET 2 OF 12.
31. STORMWATER MANAGEMENT POND IS AN EXTENDED DETENTION CLASS - A PRIVATE POND.
32. A WAIVER REQUEST HAS BEEN APPROVED BY THE HOWARD CO. DEPT. OF PLANNING & ZONING FOR SECTION 52.6 OF THE HO. CO. DESIGN MANUAL VOLUME THAT REQUIRES A MIN. 20 FEET DISTANCE FROM TOE OF THE EMBANKMENT OR CUT SLOPE TO THE PROPERTY LINES, RIGHT-OF-WAY AND STRUCTURE.
33. ALL LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 154 OF THE HOWARD COUNTY ZONING REGULATIONS.
34. THE FOREST CONSERVATION OBLIGATIONS INCURRED BY THIS DEVELOPMENT (4.3 ACRES OF REFORESTATION) HAVE BEEN MET BY PAYMENT OF \$65,192.00 TO THE HOWARD COUNTY FOREST CONSERVATION FUND.



These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

John Blanton
APPROVED HOWARD SOIL CONSERVATION DISTRICT 3/17/00

PLAN NUMBER N/A DATE 3/17/00

Reviewed for the Howard Conservation District and meets technical requirements.

Carol Simmons
NATURAL RESOURCES CONSERVATION SERVICE 3/17/00

APPROVED Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/20/00

Wanda Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/23/00

John Blanton
DIRECTOR DATE 3/24/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
BUILDING No. 1	8955 HENKELS LANE
BUILDING No. 2	8975 HENKELS LANE

SUBDIVISION NAME N/A SECTION NAME N/A PARCEL # 45

PLAT # N/A BLOCK # 20 ZONE M2 MAP # 48 ELECT. DIST. 6 CENSUS TRACT 6069.01

WATER CODE B-02 SEWER CODE 4020000

Legend

Property
 Ex. 2' Contours -394
 Ex. 10' Contours -395
 Prop. 2' Contours -394
 Prop. 10' Contours -395
 Ex. Curb & Gutter -395
 Prop. Curb & Gutter
 Bld. Restriction Line
 Ex. Sanitary
 Ex. Storm Drain
 Ex. Water
 Prop. Sanitary
 Prop. Storm Drain
 Prop. Water
 Fire Hydrant
 Water Valve

Light Duty Paving P-2
 Heavy Duty Paving P-3

Site Data

TOTAL AREA OF SITE: 392,040 SQ. FT. OR 9.00 AC.+/-
 EXISTING ZONING: M-2
 PROPERTY REFERENCE: L 1031 F. 62 L 4664 F. 497
 EXISTING USE: VACANT RESTAURANT
 PROPOSED USE: OFFICE/WAREHOUSE
 BUILDING COVERAGE: 92,800 SQ. FT. 23.65 AC.+/-
 % BUILDING COVERAGE: 23.7%
 FLOOR AREA RATIO: 0.24
 AREA TO BE PAVED PLUS BUILDING AREA: 263,300 SQ. FT. 66.04 AC.+/-
 OPEN SPACE: 128,800 SQ. FT. 2.96 AC.+/-
 TOTAL AREA OF PARKING LOT: 174,240 SQ. FT. 4.00 AC.+/-
 % PARKING LOT COVERAGE: 44.4%
 AREA TO BE DISTURBED: 392,040 SQ. FT. 9.00 AC.+/-
 AREA TO BE VEGETATIVELY STABILIZED: 128,800 SQ. FT. 2.96 AC.+/-

PREPARED BY: **GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120

PLAN SCALE: 1" = 50'

THIS SHEET SUPERCEDES SHEET 1 OF 12 SIGNED ON 6-9-99.

TYPICAL REAR DOOR PROTECTION
 NOT TO SCALE

CONCRETE SAFETY BOLLARDS TO BE PROVIDED AT ALL REAR ENTRIES

REAR ENTRANCE DOOR

ONE 250-WATT VAPOR PENDENT FIXTURE (CUTOFF) MOUNTED AT 30" ON A BRONZE FIBERGLASS POLE USING A 12' ARM LOCATED A MIN. 4.0' FROM CURB.

ROAD NAME CLASSIFICATION

MD RTE 32	PRINCIPAL ARTERIAL
HENKELS LANE	INTERNAL RIGHT-OF-WAY
ANNAP. JUNCTION RD.	INTERNAL RIGHT-OF-WAY
DORSEY RUN ROAD	MAJOR COLLECTOR

OWNER / DEVELOPER / CONTRACT / PURCHASER
MERRITT - HK, LLC
 2066 LORD BALTIMORE DR.
 BALTIMORE, MD 21207
 (410) 298-2600

DESIGNED BY H.P.P.
DRAWN BY J.N.L.
CHECKED BY H.P.P.

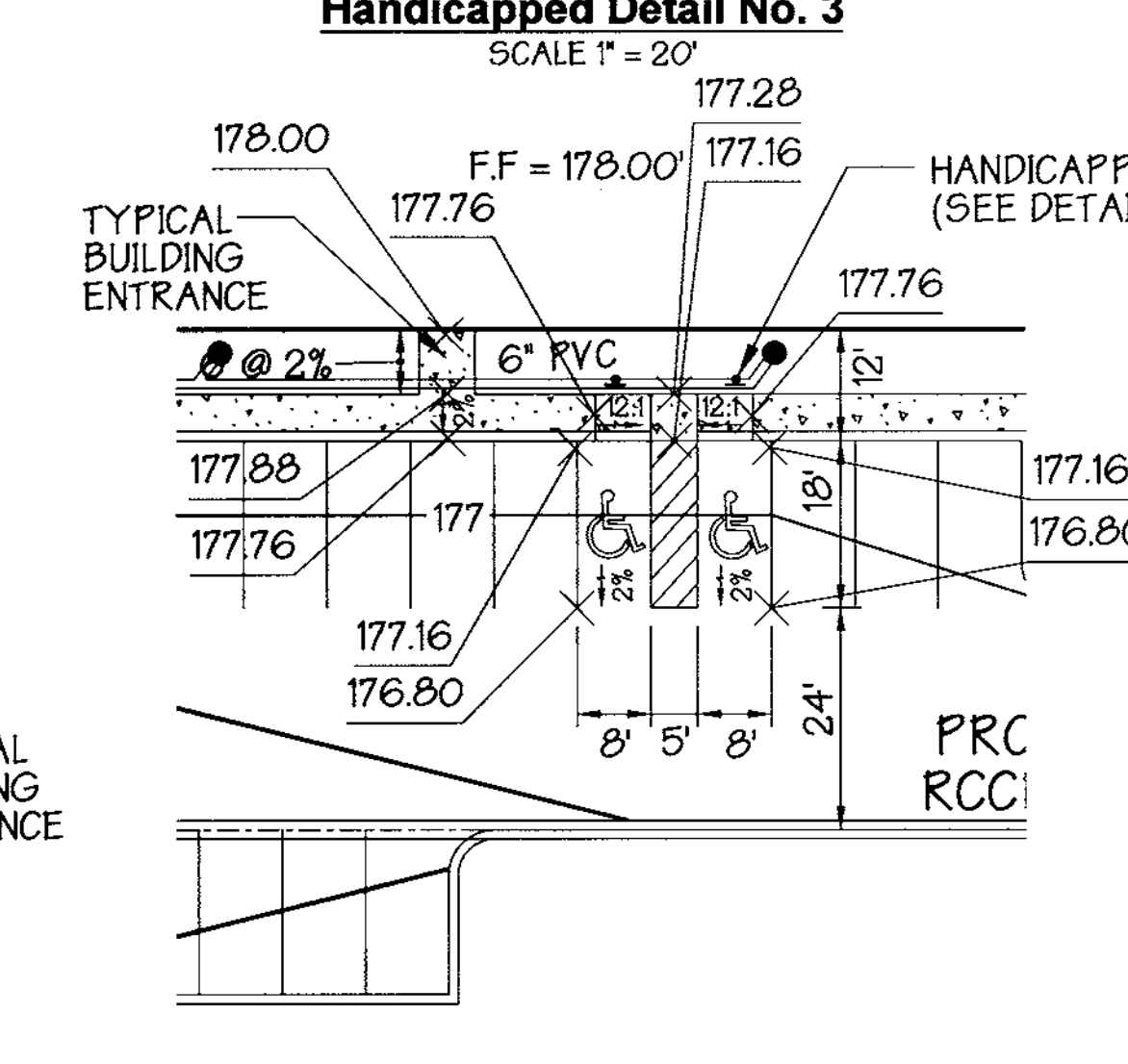
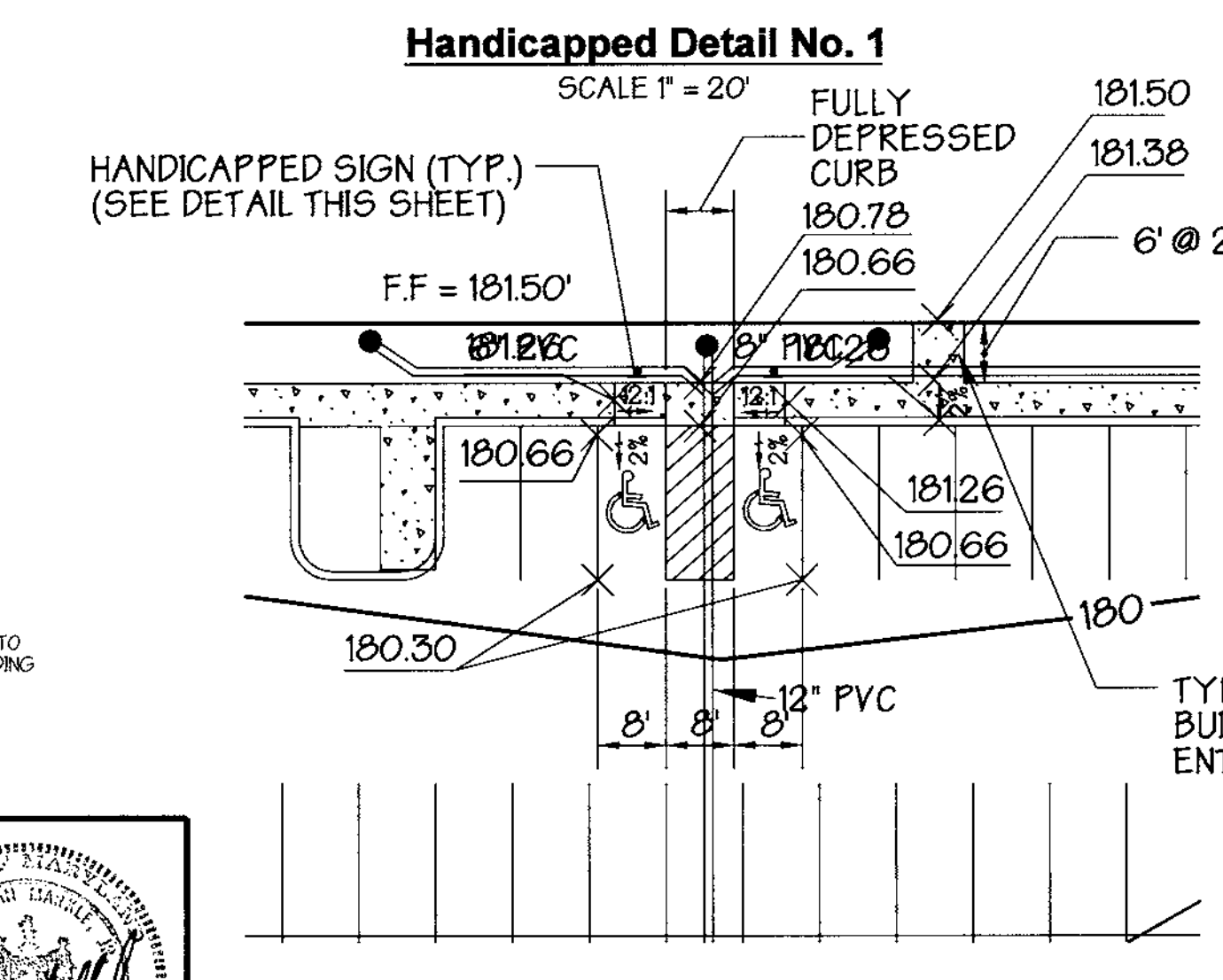
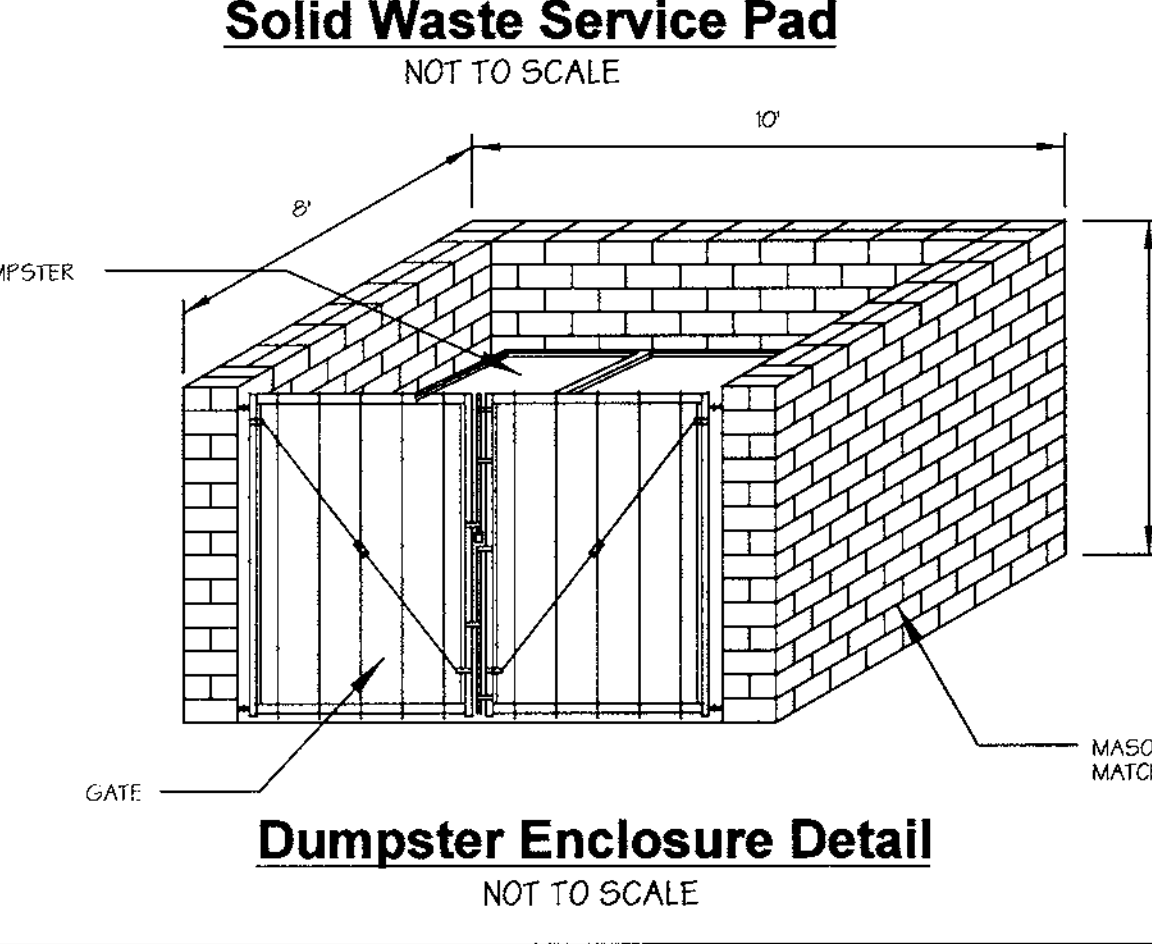
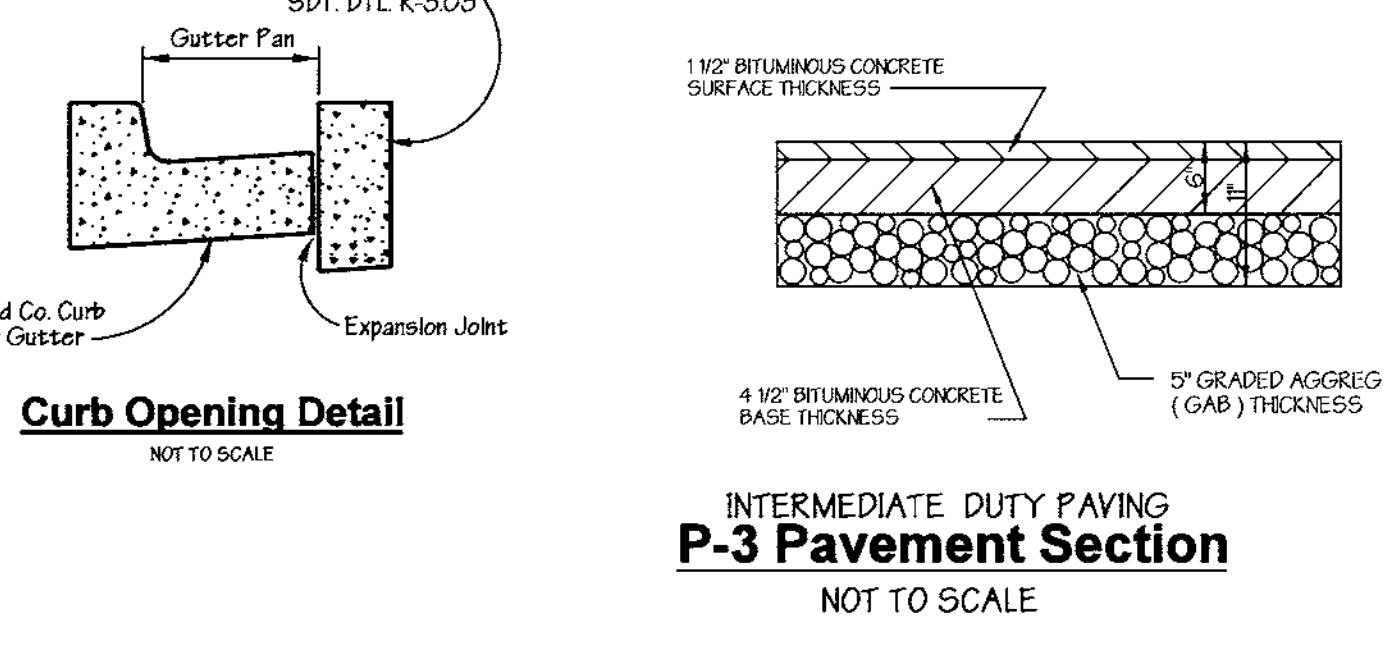
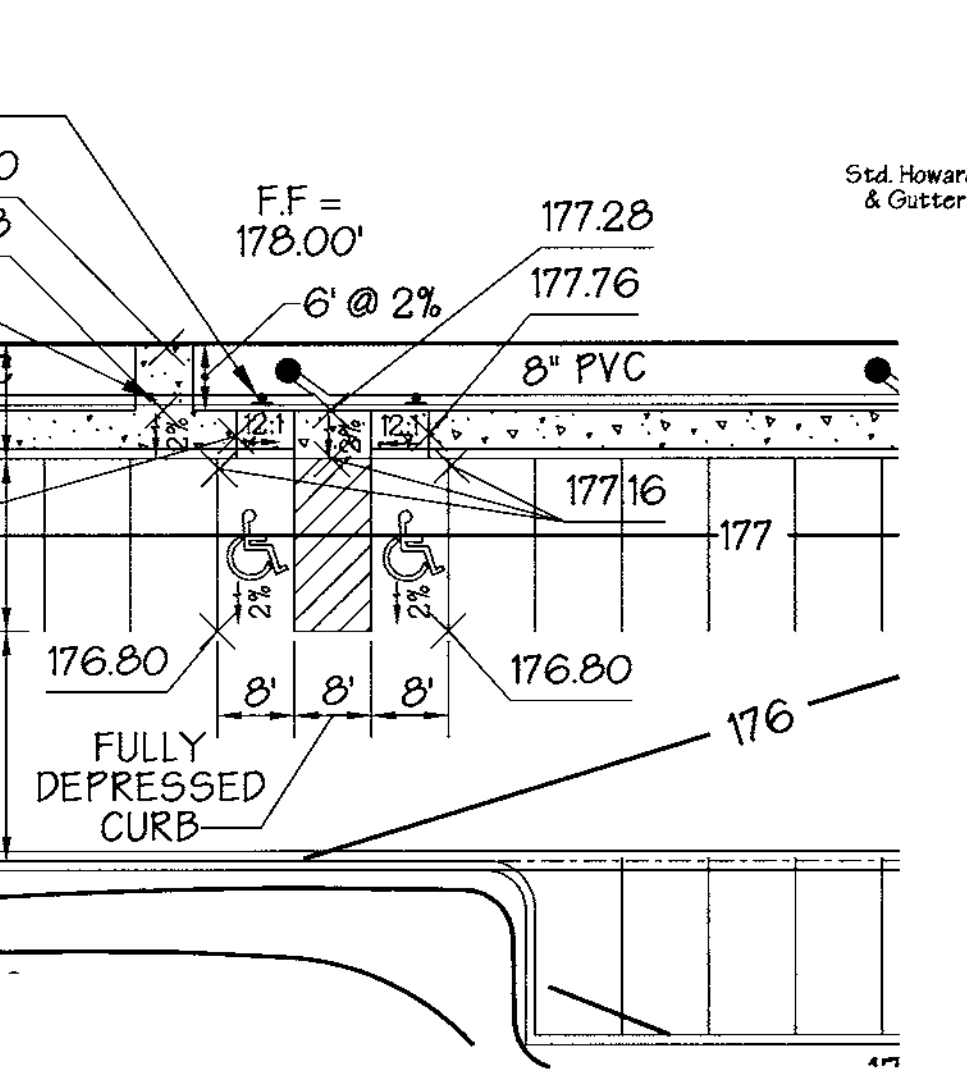
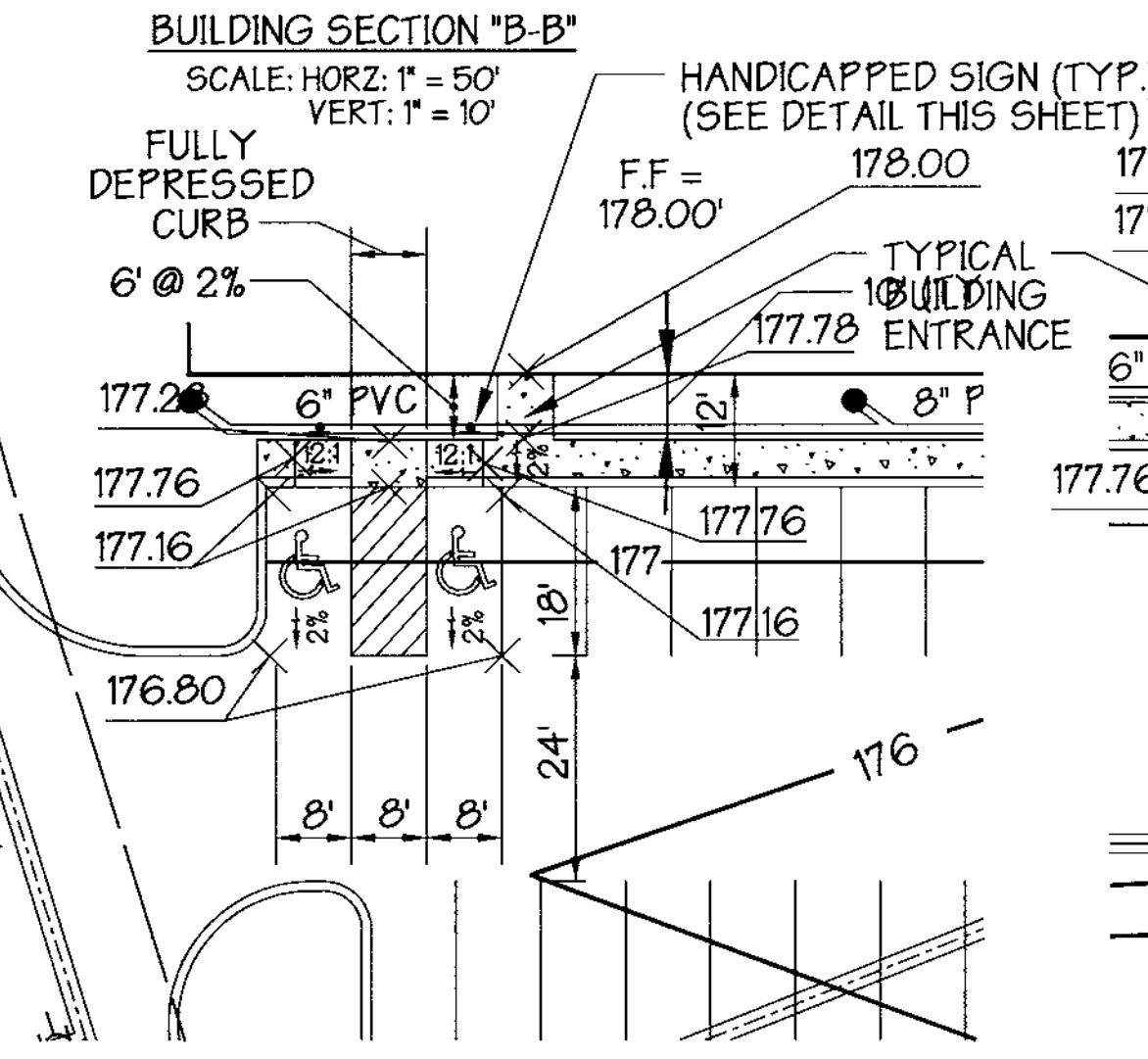
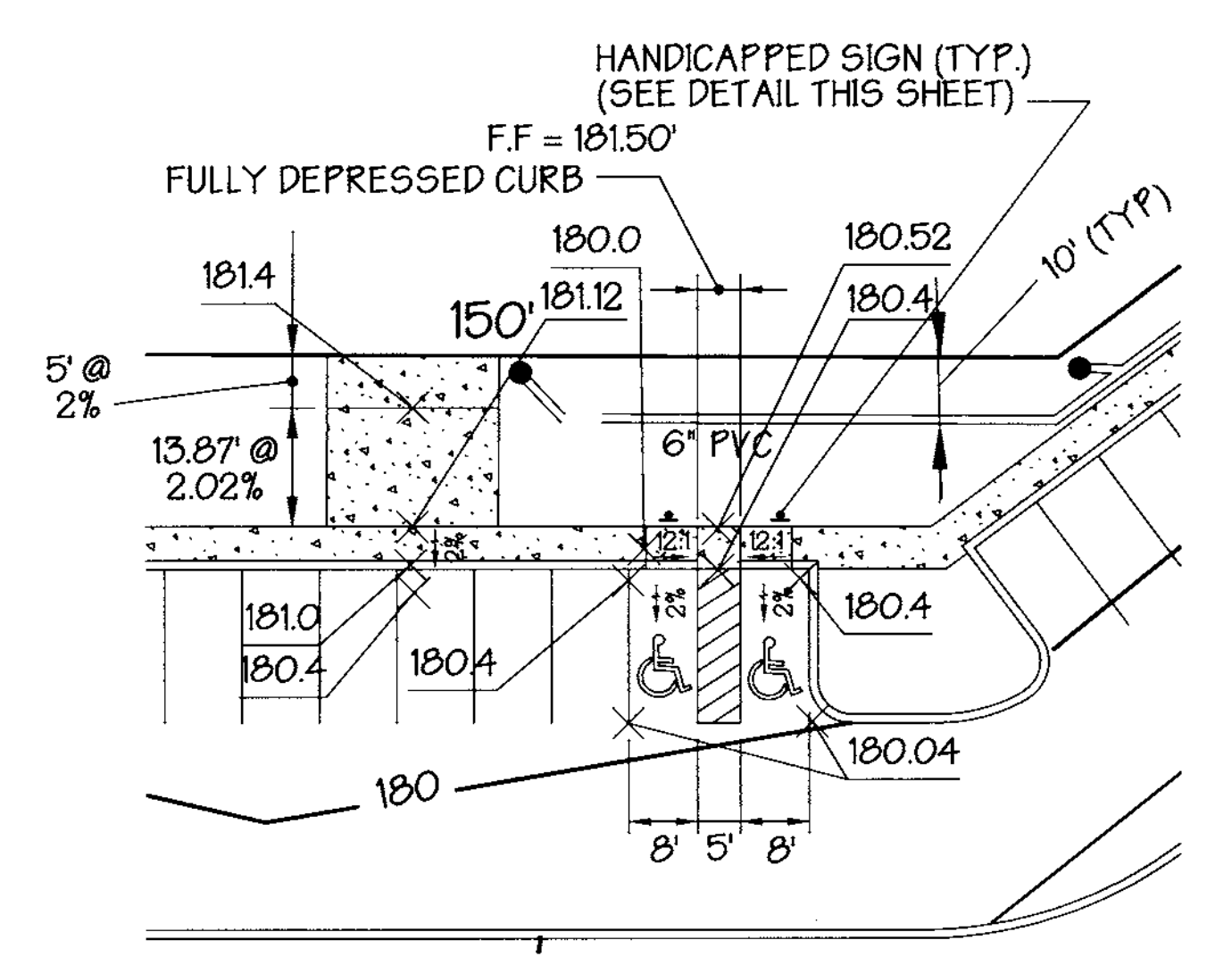
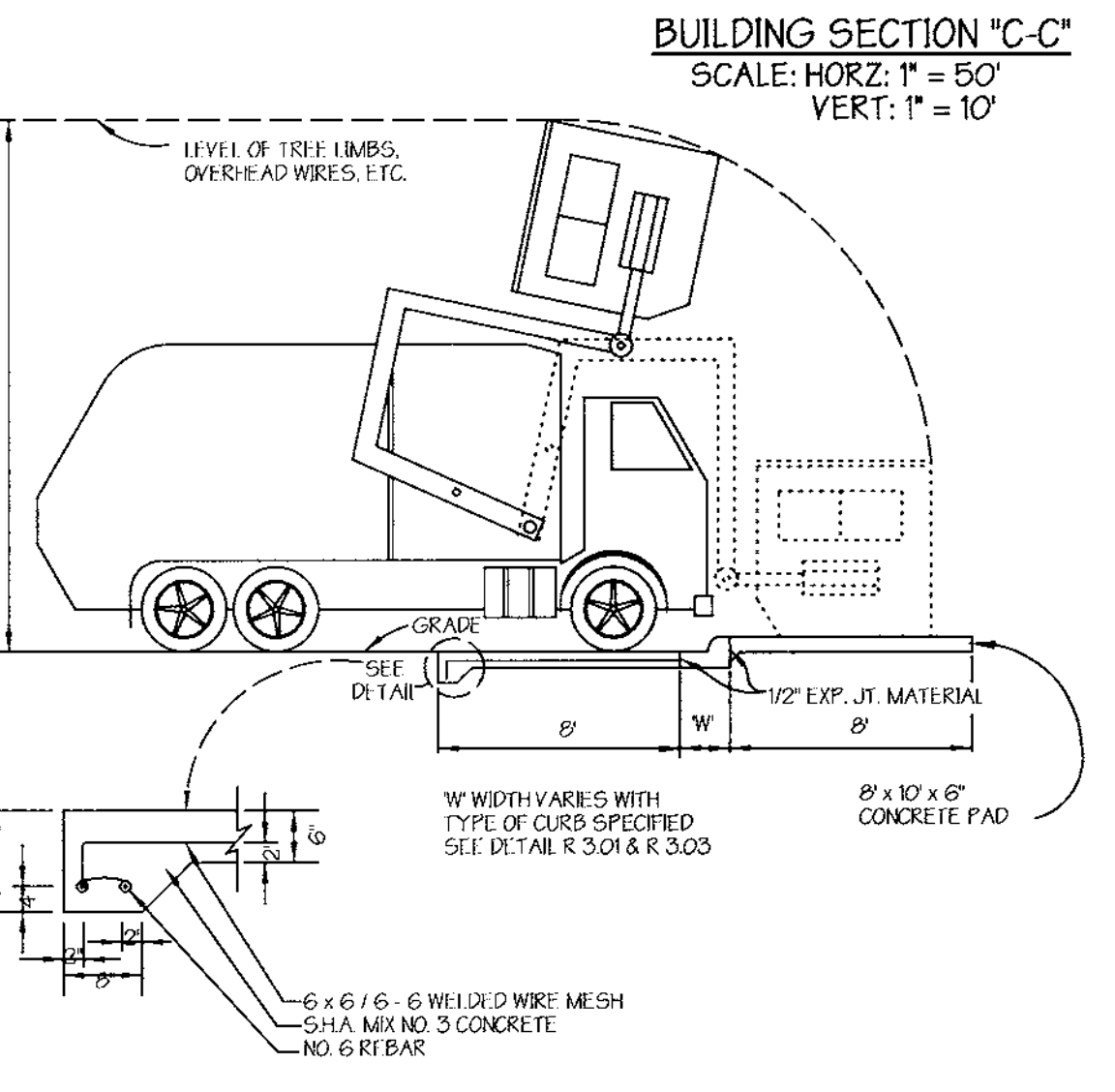
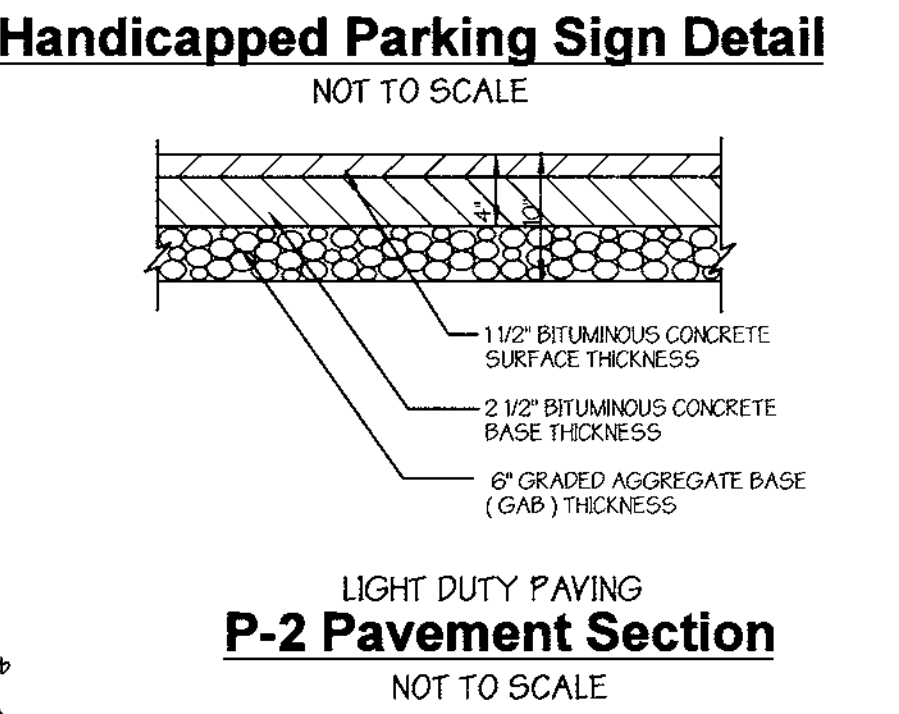
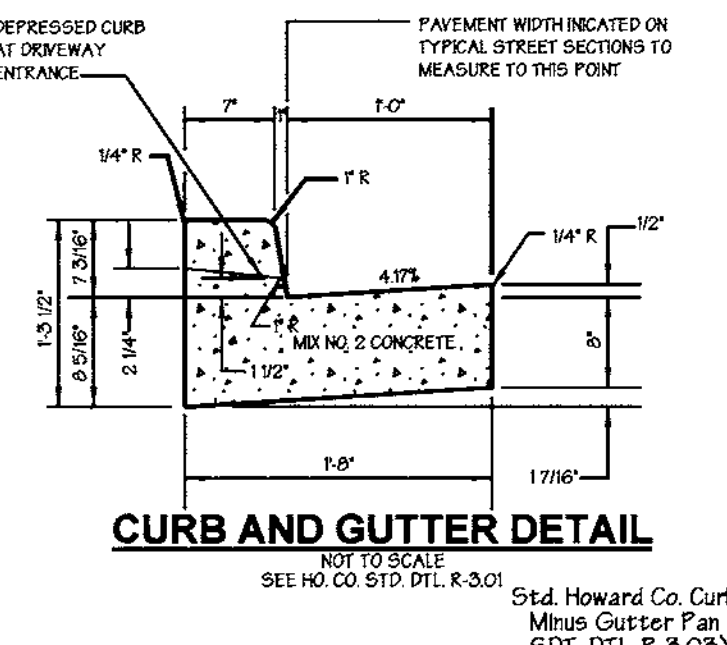
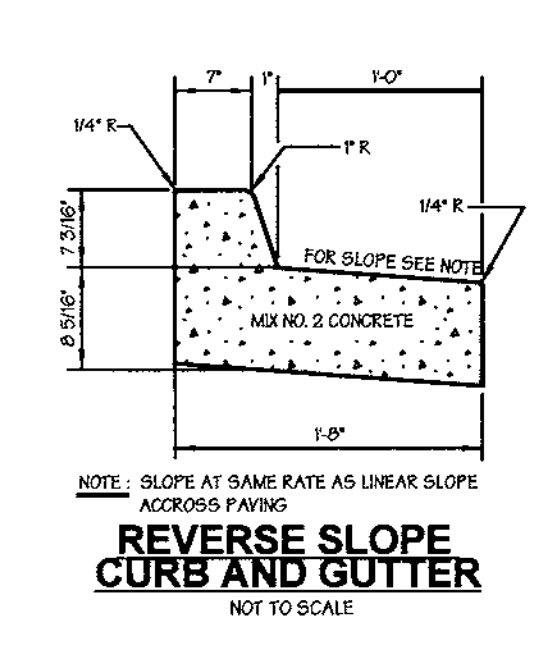
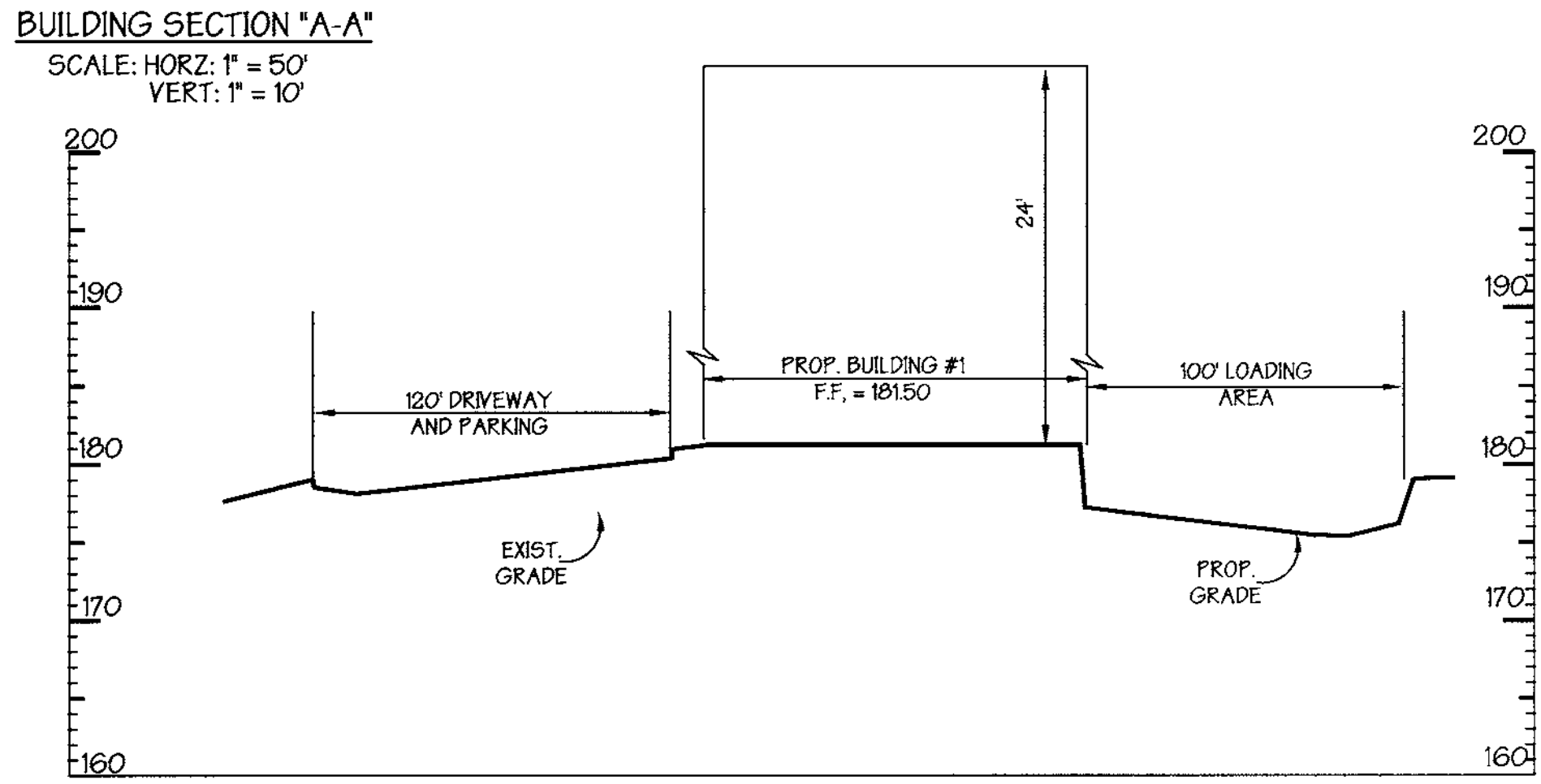
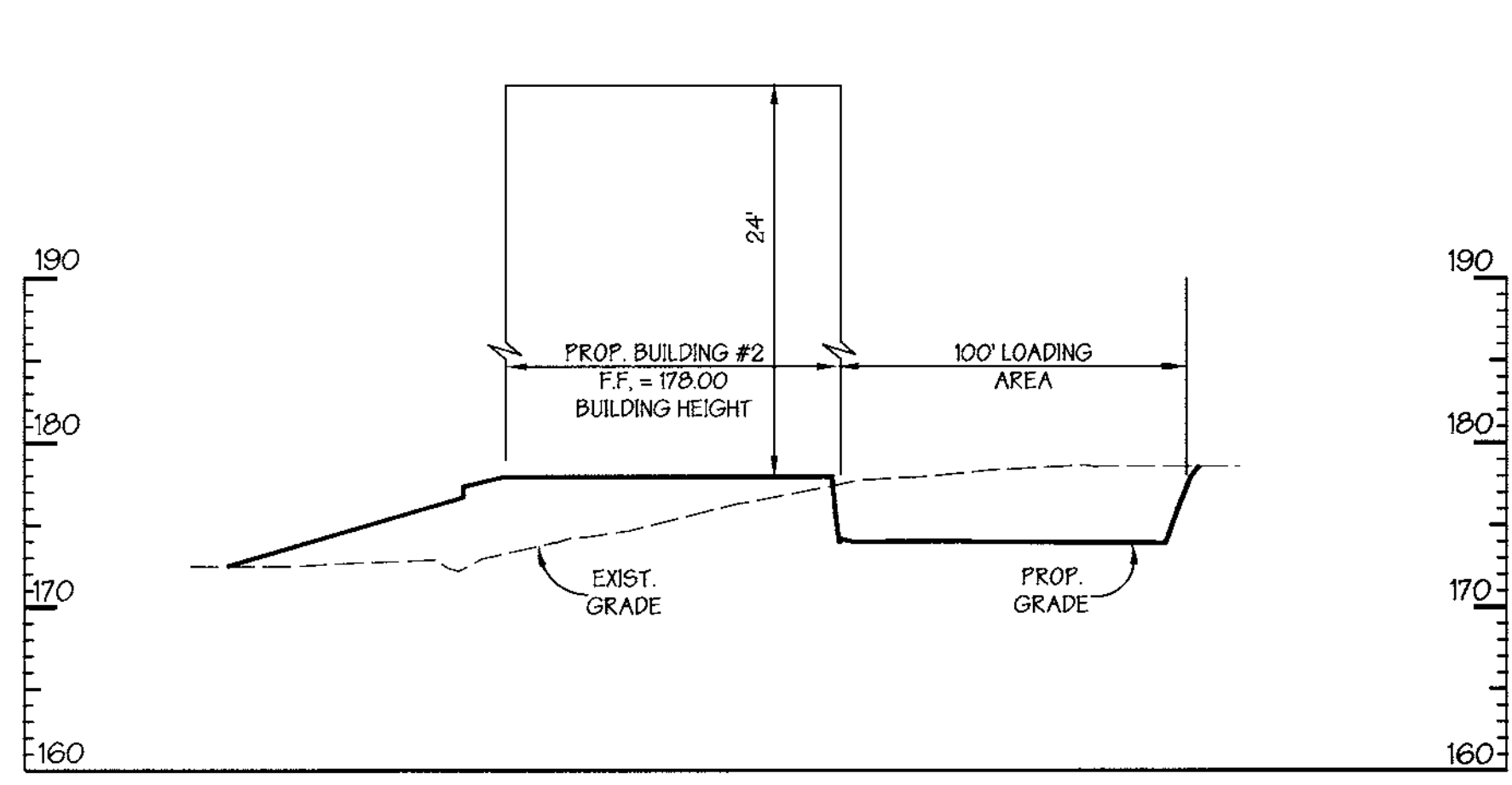
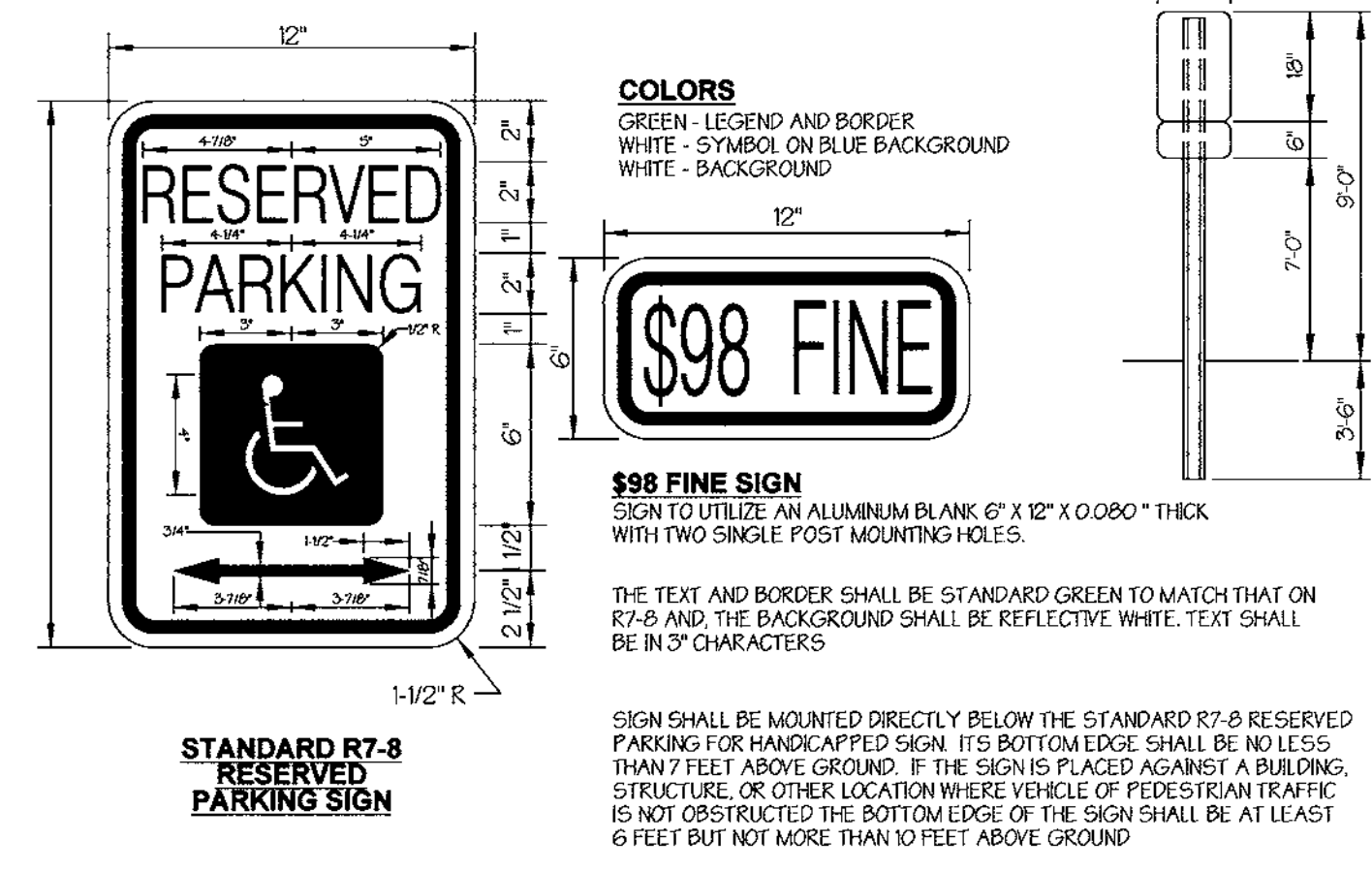
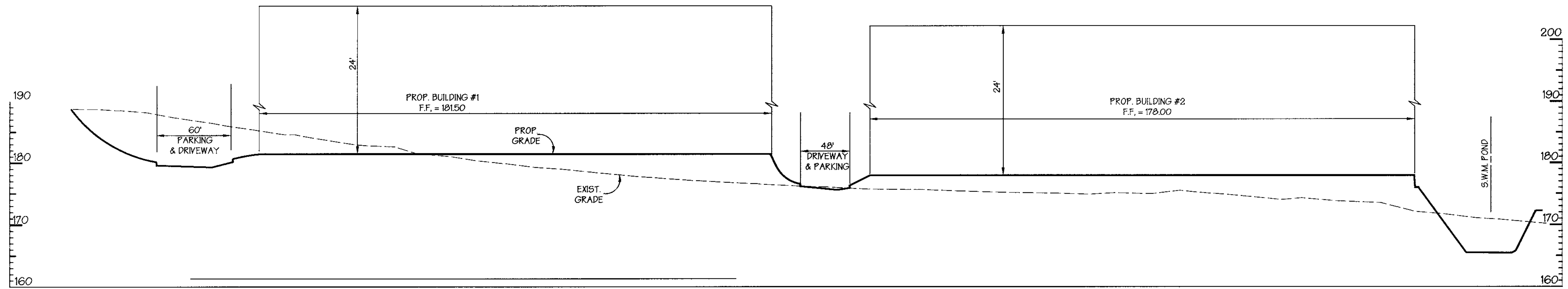
REVISIONS

NO.	DATE	DESCRIPTION
1	8/16/99	GW.S. C.W.S. REV. CONTOURS & STORM DRAINAGE BLDG. NO. 1, BLDG. NO. 2 RELOC. BLDG. 2 DRAINAGE REVISIONS TO CONTOURS & PARKING

THE HENKEL PROPERTY
 SCALE: As Shown
 SHEET 1 OF 12

ELECTION DISTRICT: 6
 HOWARD CO., MARYLAND

SDP 99-94 P/N: 8976



These plans for S.W.M. construction soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John R. Colauter* HOWARD SOIL CONSERVATION DISTRICT 6/7/99 DATE

PLAN NUMBER DATE

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: *Cheryl Simmons* NATURAL RESOURCES CONSERVATION SERVICE 6/7/99 DATE

APPROVED: *Howard County Department of Planning and Zoning*

CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/7/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 6/9/99 DATE

DIRECTOR 6/14/99 DATE

ADDRESS CHART					
PARCEL NO.	STREET ADDRESS				
BUILDING No. 1	8955 HENKELS LANE				
BUILDING No. 2	8975 HENKELS LANE				
SUBDIVISION NAME	SECTION NAME	PARCEL #			
N/A	N/A	45			
PLAT #	BLOCK #	ZONE	ZONE MAP	ELECT. DIST.	CENSUS TRACT
N/A	20	M2	48	6	6069.01
WATER CODE B-02		SEWER CODE 4020000			

PREPARED BY:

GWS GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



OWNER / DEVELOPER / CONTRACT / PURCHASER

MERRITT - HK, LLC
2066 LORD BALTIMORE DR.
BALTIMORE, MD 21207
(410) 298-2600

DESIGNED BY: H.P.P.
DRAWN BY: J.N.L.
CHECKED BY: H.P.P.
REVISIONS

SITE PLAN DETAILS

THE HENKEL PROPERTY

SCALE: As Shown
DATE: FEB. 02, 1999
SHEET 2 OF 12

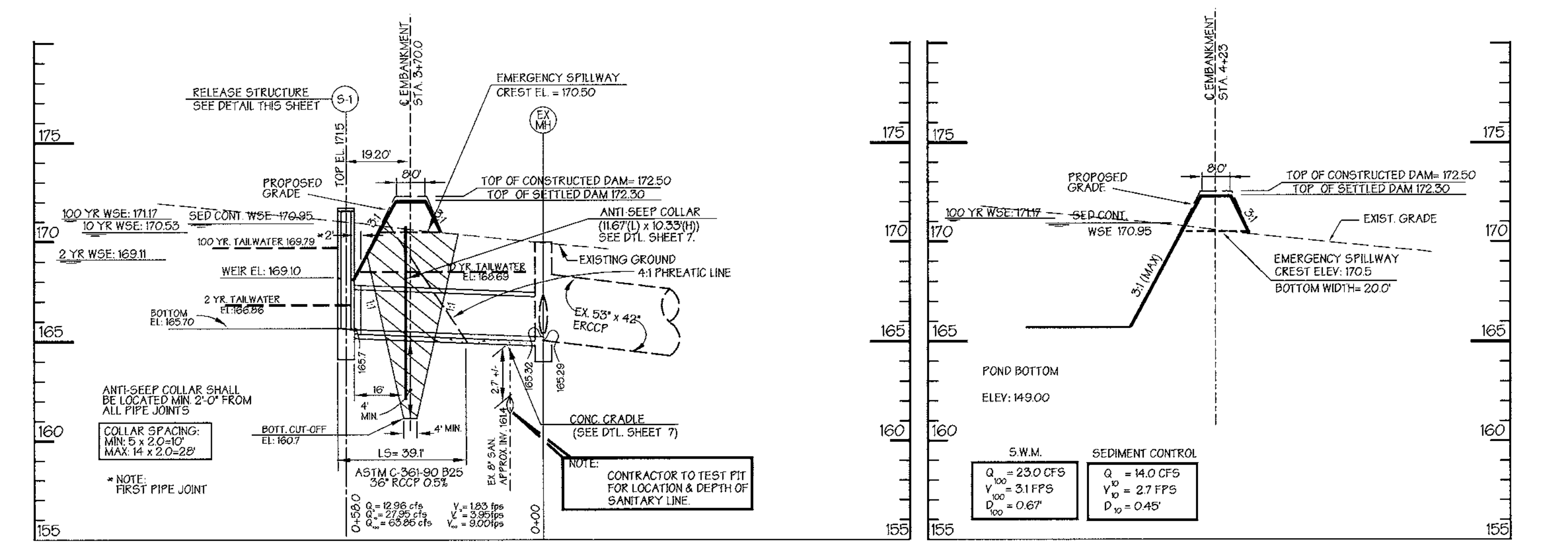
ELECTION DISTRICT: 6
HOWARD CO., MARYLAND

Legend

Ex. 2' Contours	..... 394
Ex. 10' Contours	..... 395
Prop. 2' Contours	..... 394
Prop. 10' Contours	..... 395
Ex. Curb & Gutter	.....
Prop. Curb & Gutter	.....
Bldg. Restriction Line	.....
Ex. Storm Drain	.....
Ex. Water	.....
Prop. Sanitary	.....
Prop. Storm Drain	.....
Prop. Water	.....

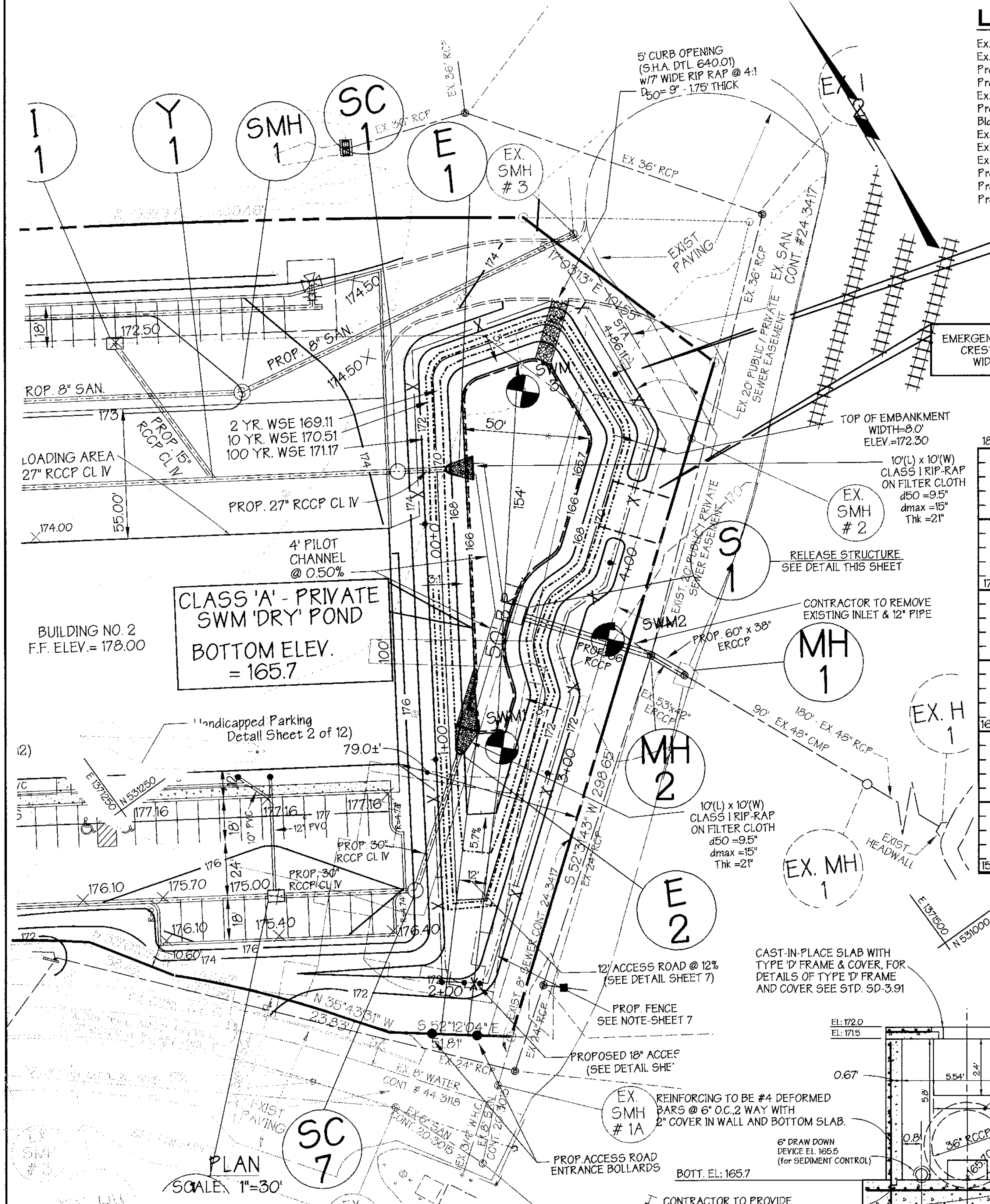
WATER QUALITY IS PROVIDED FOR BY: STORMCEPTOR.

EMERGENCY SPILLWAY
CREST EL. 170.51
WIDTH = 20'



PROFILE PRINCIPAL SPILLWAY
SCALE: HORZ: 1"=30'
VERT: 1"=5'

PROFILE - EMERGENCY SPILLWAY
SCALE: HORZ: 1"=30'
VERT: 1"=5'



CLASS 'A' - PRIVATE SWM DRY POND
BOTTOM ELEV. = 165.7

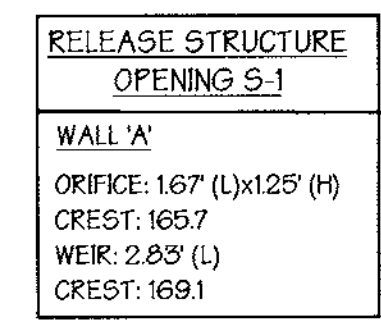
PLAN
SCALE: 1"=30'

DESIGN STORM	ALLOWABLE RELEASE (CF5)	FACILITY INFLOW (CF5)	FACILITY DISCHARGE (CF5)	BYPASS DISCHARGE (CF5)	TOTAL DISCHARGE (CF5)	WATER SURFACE ELEVATION (FT)	STORAGE VOL W/OUT WATER QUALITY (AC FT)
2 YR	15.43	30.73	12.96	0.94	15.36	168.1	0.99
10 YR	30.02	61.64	27.95	1.75	28.77	170.53	0.99
100 YR	148.61	297.22	118.95	7.62	118.95	172.30	1.00

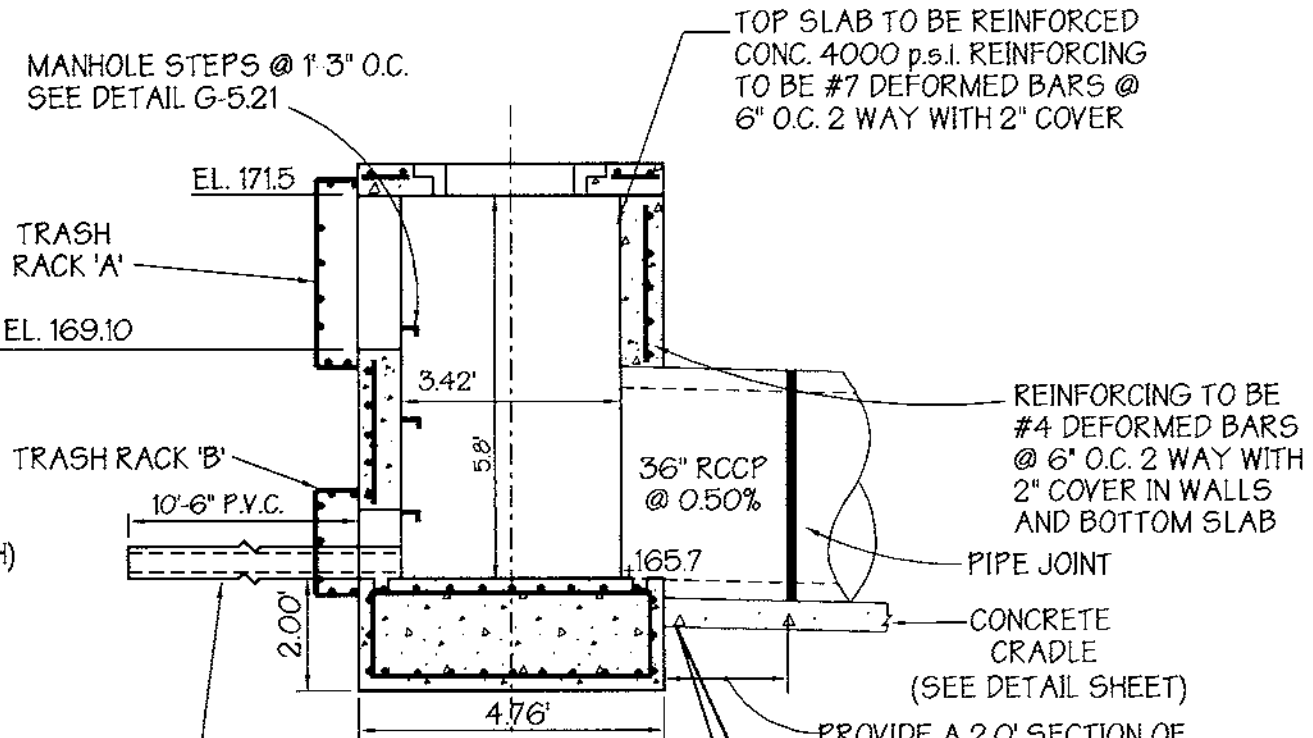
DESCRIPTION	DATA
STRUCTURE CLASSIFICATION	A
STORAGE (HIGH PRODUCT)	(108 AC FT) @ 4.7' = 508 AC FT
WATERSHED AREA TO THE POND	0.65 AC (AREA DEVELOPED) 0.80 AC OFF SITE
HEIGHT TO EMERGENCY SPILLWAY	4.50'
NORMAL SURFACE AREA	0.15 AC
PRINCIPLE SPILLWAY CAPACITY	35.42 CF5
EMERGENCY SPILLWAY CAPACITY	28.12 CF5
POND TYPE	DRY POND
FREEDOM	100% / 100%
IMPERVIOUS AREA (AREA SERVED)	0.04 AC
WATER QUALITY STORAGE REQUIRED	NA
WATER QUALITY STORAGE PROVIDED	NA
WATER QUALITY PROVIDED BY	STORMCEPTOR
TOP OF EMBANKMENT WATERSEAL	172.30
	DORSEY RUN

CONTROL STRUCTURE NOTES

- STRUCTURE SHALL BE CAST-IN-PLACE REINFORCED CONCRETE WITH 3,500 P.S.I. (MIN) STRENGTH @ 28 DAYS.
- ALL REINFORCING TO BE CONTINUOUS THROUGHOUT STRUCTURE.
- ALL REINFORCING TO HAVE 1-6" MIN. OVERLAPS.
- PROVIDE ADDITIONAL #4 REBARS ALONG THE PERIMETER OF ALL OPENINGS WITH THE AREA OF STEEL EQUAL TO OR GREATER THAN AREA OF STEEL REMOVED DUE TO OPENINGS.
- THREE (3) INCH COVER MINIMUM FOR ALL REBARS.
- UNLESS OTHERWISE NOTED STRUCTURE SHALL BE BUILT IN ACCORDANCE WITH HOWARD COUNTY STANDARD PRACTICE SD-4.32. STRUCTURE SHALL NOT BE BRICK.



STRUCTURE S-1
SCALE: 1"=3'



SECTION B-B

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

HAZARD CLASSIFICATION:
THE PROPOSED SWM POND IS AN ECYATED FACILITY IN WHICH THE 100 YR W.S.E. IS 1717. ANNAPOJIS JUNCTION ROAD AND CIS RAILROAD TRACKS SERVE AS THE EMBANKMENT. THE EXIST. ELEVATION AT THE SWM POND IS 170.0. THERE IS NO POSSIBILITY OF FAILURE BELOW THIS ELEVATION (170.0). FAILURE AT THE 100 YEAR W.S.E. 1717 PRODUCES A DISCHARGE OF 148.61 CF5. THE FLOW WOULD DISCHARGE ACROSS ANNAPOJIS JUNCTION ROAD TO THE DITCH BETWEEN THE CIS RAILROAD TRACKS AND A.J.R. AND WOULD BE CARRIED EASTWARD ALONG THE TRACKS. THEREFORE, THE SWM POND IS CLASSIFIED AS "HAZARD CLASS 'A'" AND WOULD NOT PRESENT A HAZARD TO DOWNSTREAM LIFE OR PROPERTY.

OWNER / DEVELOPER / CONTRACT / PURCHASER
MERRITT - HK, LLC
2066 LORD BALTIMORE DR.
BALTIMORE, MD 21207
(410) 298-2600

DESIGNED BY: H.P.P.
DRAWN BY: J.N.L.
CHECKED BY: H.P.P.
REVISIONS

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
BUILDING No.1	8955 HENKELS LANE
BUILDING No.2	8975 HENKELS LANE

SUBDIVISION NAME: N/A
SECTION NAME: N/A
PARCEL #: 45

PLAT: N/A
BLOCK: 20
ZONE: M-2
ELECT. DIST.: 6
CENSUS TRACT: 6069.01

WATER CODE: B-02
SEWER CODE: 4020000

These plans for SWM construction soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

Chief, Howard Soil Conservation District
APPROVED: *John R. Robinson* 6/17/99
DATE: 6/17/99

Reviewed for the Howard Conservation District and meets technical requirements:
NATURAL RESOURCES CONSERVATION SERVICE
APPROVED: *John R. Robinson* 6/17/99
DATE: 6/17/99

APPROVED: Howard County Department of Planning and Zoning
CHIEF, DEVELOPMENT ENGINEERING DIVISION
APPROVED: *Wendy Hamilton* 6/19/99
DATE: 6/19/99

CHIEF, DIVISION OF LAND DEVELOPMENT
APPROVED: *Wendy Hamilton* 6/19/99
DATE: 6/19/99

DIRECTOR
APPROVED: *John R. Robinson* 6/10/99
DATE: 6/10/99

SCALE: As Shown
DATE: FEB. 02, 1999
SHEET: 6 OF 12

POND CONSTRUCTION SPECIFICATIONS

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

SITE PREPARATION

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

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fence mounds, 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 50 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 out-of-trench shall conform to Unified Soil Classification GC, SC, CH or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

PLACEMENT - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in a maximum 24" 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 portion 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 track tread of the 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 the water can be squeezed out.

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

Note: See additional compaction requirements per geotechnical engineer. (Sheet 10 of 13)

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.

PIPE CONDUITS All pipes shall be circular in cross section.

REINFORCED CONCRETE PIPE - All pipe to be circular in cross section

All the following criteria shall apply for reinforced concrete pipe:

- Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
- Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
- 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 2 feet from the riser.
- Backfilling shall conform to "Structure Backfill".
- Other details (anti-seep collars, valves, etc) shall be as shown on the drawings.

PERFORATED PIPE

Bituminous coated corrugated metal pipe (BCCMP) shall conform to the requirements of AASHTO M56 (pipe shall be specified to be fully bituminous coated in accordance with AASHTO M56). Perforated pipe is TYPE III. Pipe shall have CLASS 2 perforations 3/8" in diameter.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919 (Portland Cement Concrete Mixture), Mix No. 3.

REINFORCING STEEL CONCRETE STRUCTURES

Reinforcing steel shall be ASTM A 615, Grade 60. Steel angles and anchor bars shall be ASTM 136.

ROCK RIP RAP

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth 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 919.12.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the 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 of 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 to sumps from which 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, mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Stormwater management facility will be stabilized with permanent slope seeding as follows:

- Seeded Preparation - loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.
- Soil Amendments - apply 2 tons per acre Dolomitic Limestone (92 lbs/1000sq. ft.), 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.), and 400 lbs per acre of 30-0-0 Ureaform Fertilizer (92 lbs/1000 sq. ft.). Harrow or disc lime and fertilizer into upper 3 inches of soil. At time of seeding, apply 400 lbs (92 lbs/1000 sq. ft.) of 30-0-0 Ureaform Fertilizer and 500 lbs per acre (115 lbs/1000 sq. ft.) of 10-0-0 fertilizer.
- Seeding - for the period March 1 through April 30 seed with 40 lbs. per acre Kentucky 31 Tall Fescue, and 15 lbs per acre inoculated Crown Vetch. For the period May 1 through July 31 seed with 60 lbs. per acre Kentucky 31 Tall Fescue and 2 lbs. per acre Inoculated Velvetleaf. For the period August 1 through October 15 seed with 40 lbs. per acre Kentucky 31 Tall Fescue, and 20 lbs. per acre inoculated Interstate Sericea Lespedeza. For the period October 16 through February 28 protect the site by Option (I); 2 tons per acre of well anchored straw. For the period May 1 through February 28 inoculated Crown Vetch shall be applied during the subsequent period of March 1 through April 30 at the rate of 15 lbs. per acre.
- Mulching - apply 15 to 2 tons per acre of un-rotted small grain straw immediately after seeding. Anchor mulch immediately after application using 210 gallons per acre of emulsified asphalt. On flat areas of slope 8 feet or higher, use 340 gallons per acre of anchoring.
- Maintenance - inspect all seeded areas and make needed repairs, replacements and re-seeding.

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 to be employed during the construction process.

PERMANENT SLOPE SEEDING

After spreading 4" topsoil, seed with a mixture of 30% inoculated Crown Vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs/acre; 10-20-20 fertilizer shall be applied at a rate of 25 lbs/1000 sq. ft.; lime at a rate of 92 lbs/1000 sq. ft.; mulch area with unweathered small grain straw at a rate of 15 Tons/acre; anchor with a rapid curing asphalt (RC-70, R-250 or RC-800 at a rate of 0.1 gal/sy.

FILTER CLOTH

Filter cloth shall meet or exceed the requirements in Section 2025.5 of the Howard County Standard Specifications and Details for Construction. Durable filter fabrics for drainage purposes are not limited to Mifral 1405, DuPont TYPAC No. 3341 or 3401.

Filter cloth shall be protected from puncturing or tearing. Any damage other than an occasional small hole shall be repaired by placing another small piece of filter cloth over the damaged area or by replacing the cloth section. All overlaps shall be a minimum of one foot.

GABIONS

Gabions shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 312 and must be G I V, PVC coated.

OUTFALL PROTECTION

Subgrade for riprap or gabion outfalls shall be prepared to the required line and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material. All rock or gravel shall conform to the specified grading limits when installed in the riprap or gabion. All stone shall be delivered and placed in a manner that will insure the stone in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another, with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outlets shall be constructed to full course thickness in one operation and in such a manner as to avoid any displacement of underlying materials. The contractor shall avoid damage to the filter blanket or cloth during placement of riprap. Hand placement shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

FENCE

CONSTRUCT FENCING IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATION STANDARD DETAILS 6900A AND 6900D. USE SPECIFICATIONS FOR A 6 FENCE. SUBSTITUTING 42" FABRIC AND 6" LINE POSTS. CONSTRUCT THE GATE IN ACCORDANCE WITH THE S.H.A. STANDARD DETAIL 6900I WITH 42" FABRIC. THE FABRIC USED FOR THE FENCE AND GATE MUST CONFORM TO AASHTO DESIGNATION M-1817A. DARK VINYL COATING IS REQUIRED FOR THE FENCE POSTS AND WIRE FABRIC IN ACCORDANCE WITH THE LANDSCAPE MANUAL ADOPTED BY RESOLUTION 56-90, OCTOBER 1, 1990. * 3' SPLIT RAIL (WOOD) FENCE IS OPTIONAL.

CUT-OFF TRENCH - THE CUT-OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE 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 1:1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

ANTI-SEEP COLLAR NOTES

- LOCATE COLLARS A MINIMUM OF 2' FROM ALL PIPE JOINTS.
- THE SEAL BETWEEN THE PIPE AND COLLAR SHALL BE WATER TIGHT.
- COLLAR SHALL PROJECT A MINIMUM OF TWO FEET FROM THE EXTERIOR OF THE CONCRETE CRADLE AND THE PIPE FOUR SIDES.
- COLLAR SHALL BE CAST-IN-PLACE REINFORCED CONCRETE WITH 3,500 PSI (MIN) STRENGTH @ 28 DAYS.
- ALL REINFORCING TO BE CONTINUOUS THROUGHOUT COLLAR.
- ALL REINFORCING TO HAVE 1'-0" MIN. OVERLAP.
- PROVIDE ADDITIONAL #4 REBARS ALONG THE PERIMETER OF ALL OPENINGS WITH THE AREA OF STEEL EQUAL TO OR GREATER THAN AREA OF STEEL REMOVED DUE TO OPENINGS.
- TWO (2) INCH COVER MINIMUM FOR ALL REBARS.
- UNLESS OTHERWISE NOTED COLLAR SHALL BE BUILT IN ACCORDANCE WITH HOWARD COUNTY CONSTRUCTION MATERIAL SPECIFICATIONS. COLLAR SHALL NOT BE BRICK.
- WATER TIGHT SEAL TO BE SIKAPUR 32, H-MOL, CONFORMING TO ASTM C-881, TYPE I & B; GRADE 2; CLASS B & C. EPOXY BONDING/GROUTING ADHESIVE.

CONTROL STRUCTURE NOTES

- STRUCTURE SHALL BE CAST-IN-PLACE REINFORCED CONCRETE WITH 3,500 PSI (MIN) STRENGTH @ 28 DAYS.
- ALL REINFORCING TO BE CONTINUOUS THROUGHOUT STRUCTURE.
- ALL REINFORCING TO HAVE 1'-0" MIN. OVERLAPS.
- PROVIDE ADDITIONAL #4 REBARS ALONG THE PERIMETER OF ALL OPENINGS WITH THE AREA OF STEEL EQUAL TO OR GREATER THAN AREA OF STEEL REMOVED DUE TO OPENINGS.
- TWO (2) INCH COVER MINIMUM FOR ALL REBARS.
- UNLESS OTHERWISE NOTED STRUCTURE SHALL BE BUILT IN ACCORDANCE WITH HOWARD COUNTY CONSTRUCTION MATERIAL SPECIFICATIONS AND HOWARD COUNTY STANDARD PLATE SD-423. STRUCTURE SHALL NOT BE BRICK.
- STRUCTURE TO CONFORM TO THE STRUCTURAL DETAILS REFERRED TO IN HOWARD COUNTY PLATE SD-423.

POND NOTES

- NO TREES, SHRUBS OR OTHER WOODY VEGETATION WILL BE ALLOWED WITHIN 50' OF THE INLET STRUCTURE IN THE POOL AREA, AND NOT ALLOWED WITHIN 15' OF THE TOE OF THE EMBANKMENT.
- IF REQUIRED BY THE SEDIMENT CONTROL INSPECTOR FENCING SHALL BE INSTALLED TO PREVENT ACCESS TO THE BASIN BY CHILDREN.
- THIS STORMWATER MANAGEMENT FACILITY IS DESIGNED TO MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE SOIL CONSERVATION DISTRICT. MAINTENANCE OF THIS PRIVATE FACILITY WILL BE THE RESPONSIBILITY OF OWNER.
- IF UNSUITABLE (PREVIOUS) MATERIAL IS ENCOUNTERED AT TIME OF CUT-OFF TRENCH INSTALLATION DEEPER THAN 4" IT WILL BE NECESSARY TO EXTEND THE CUT-OFF TRENCH DOWN UNTIL SUITABLE MATERIAL IS ENCOUNTERED AS DETERMINED BY A GEOTECHNICAL ENGINEER. AT TIME OF CONSTRUCTION EXISTING SOIL ADJACENT TO CUT-OFF TRENCH SHALL BE EVALUATED FOR SEEPAGE BY A GEOTECHNICAL ENGINEER AND ADDRESSED PER RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- SOILS TO BE USED FOR CUT-OFF TRENCH SHALL CONFORM TO UNIFIED CLASSES CL, SC, CH OR GC.

GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH:
- HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1976, ERRATA AND APPENDIX.
 - SOIL CONSERVATION SERVICE MARYLAND STANDARDS AND SPECIFICATIONS POND CODE 378, NOVEMBER, 1992.
 - MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION JANUARY 1992, STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIAL.
 - STORMWATER MANAGEMENT APPROVED UNDER BILL 105-84.

AS-BUILT NOTES

- AS-BUILT PLANS AND CERTIFICATION ARE REQUIRED FOR THIS STORMWATER MANAGEMENT FACILITY. THESE MUST BE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. HOWARD COUNTY WILL NOT PERFORM THE INSPECTION OR PREPARE THE AS-BUILT PLANS OR CERTIFICATION. THE STORMWATER MANAGEMENT PERMIT SECURITY WILL NOT BE RELEASED UNTIL THE AS-BUILT PLANS AND CERTIFICATION ARE APPROVED BY HOWARD COUNTY.
- IN ORDER TO PREPARE THE REQUIRED AS-BUILT PLANS AND CERTIFICATION, THIS STORMWATER MANAGEMENT FACILITY MUST BE INSPECTED BY THE ENGINEER AT THE SPECIFIC LOCATIONS DURING CONSTRUCTION AS REQUIRED BY THE CURRENT HOWARD COUNTY STORMWATER MANAGEMENT POLICY AND DESIGN MANUAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE PLANS.

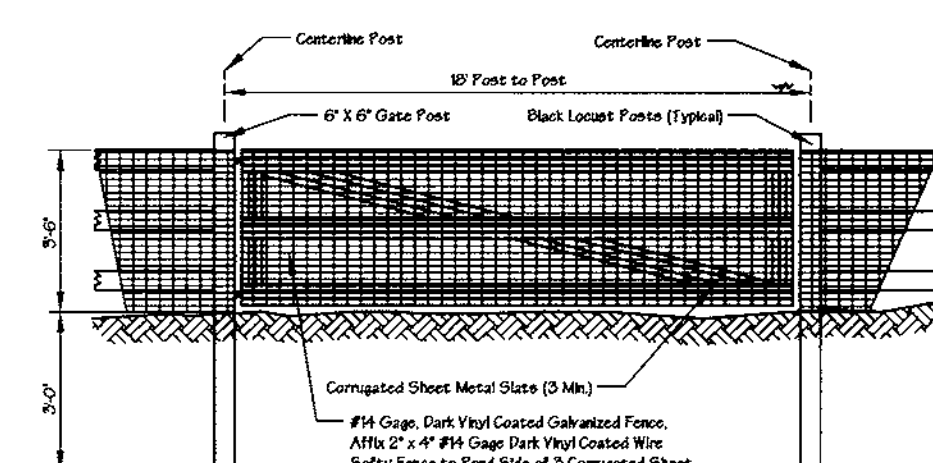
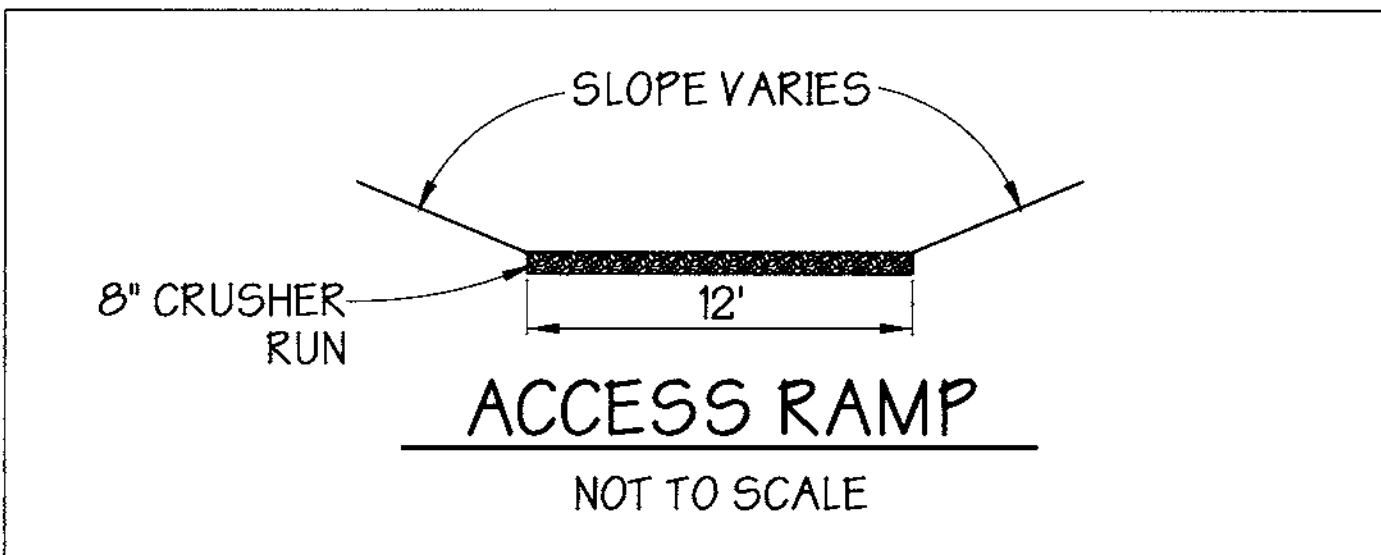
STOCKPILE/SPOIL AREA NOTES

ANY AREA NEEDED FOR TEMPORARY STOCKPILE AND SEDIMENT BASIN SPOIL WILL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE AND UPSTREAM FROM A SEDIMENT CONTROL MEASURE, BUT LOCATED SUCH AS NOT TO IMPEDED UPON THE MEASURE.

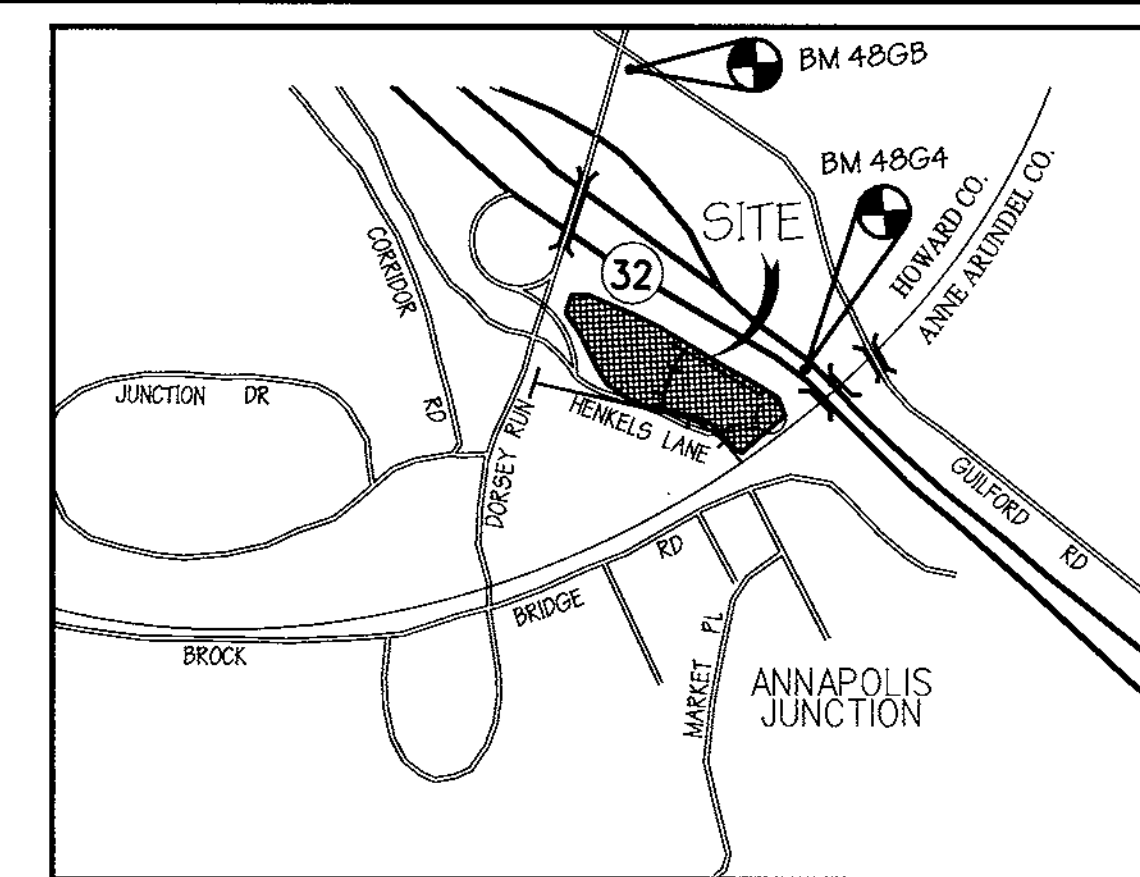
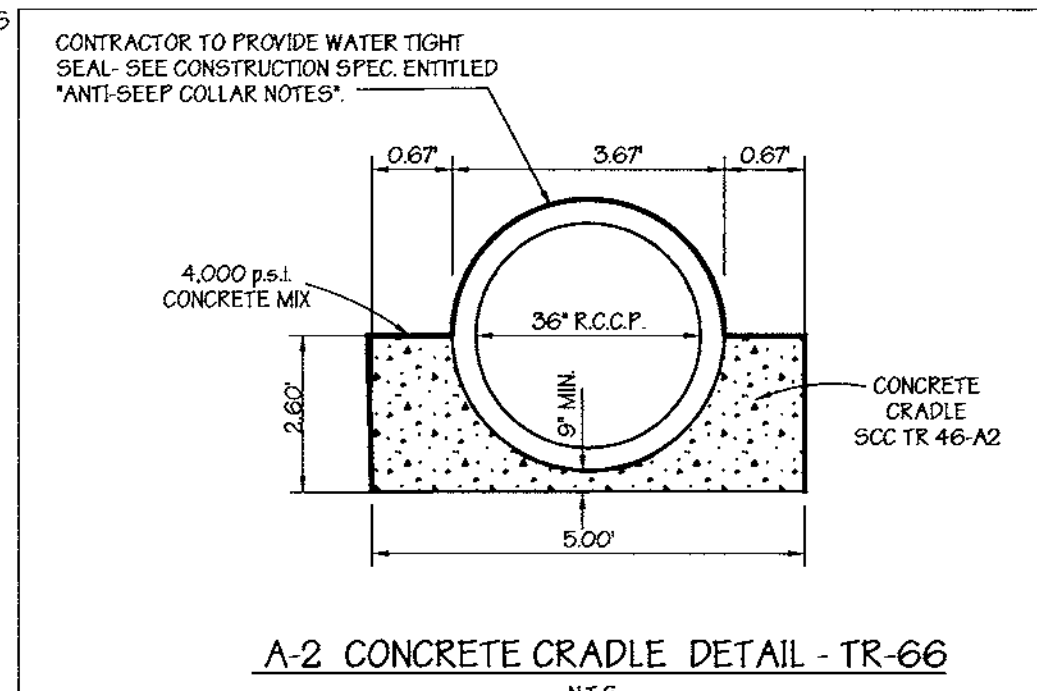
OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY DETENTION POND

ROUTINE MAINTENANCE

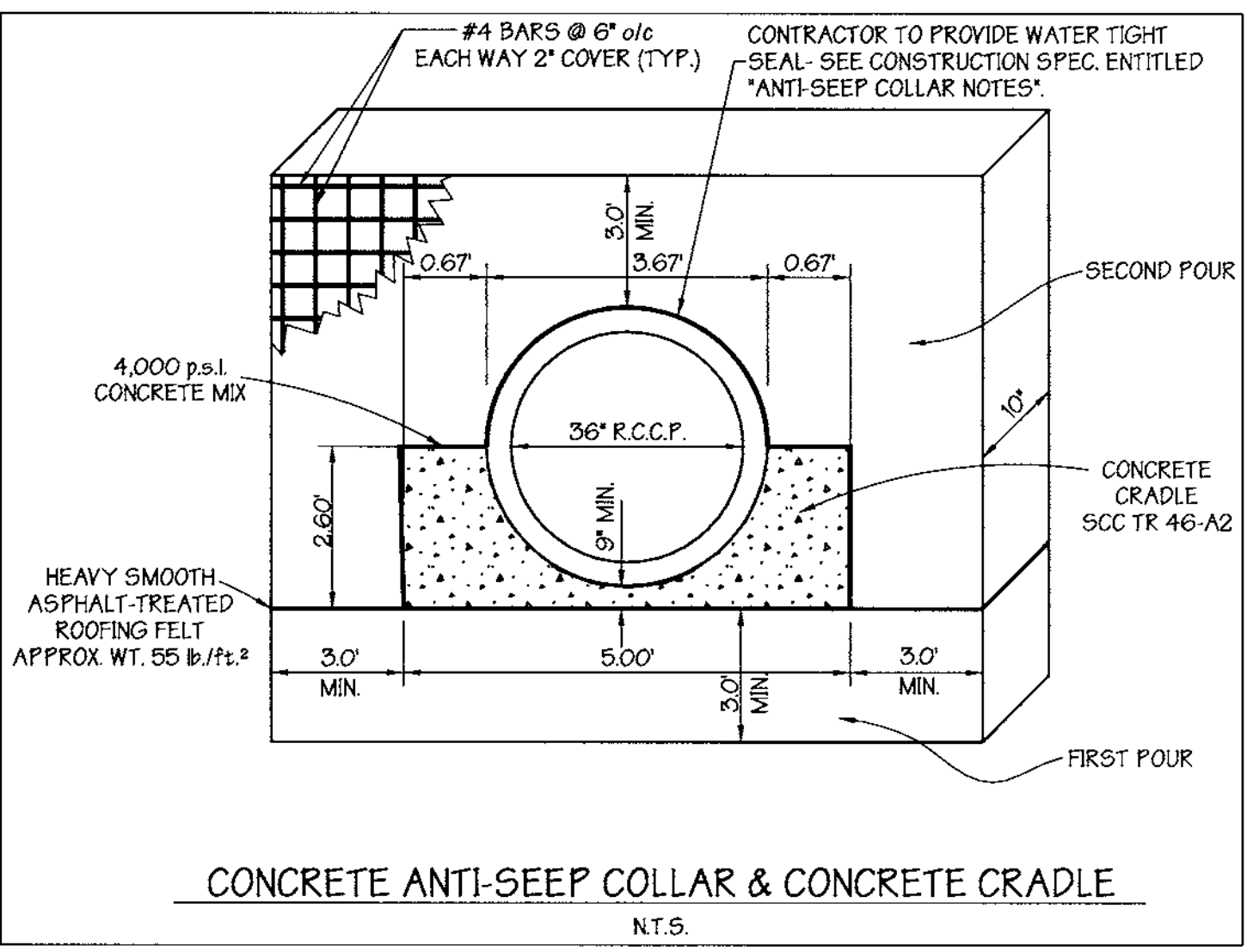
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
 - TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
 - DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIP-RAP OUTLET SHALL BE REPAIRED AS SOON AS IT IS NOTICED. NON-ROUTINE MAINTENANCE
- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 - 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.



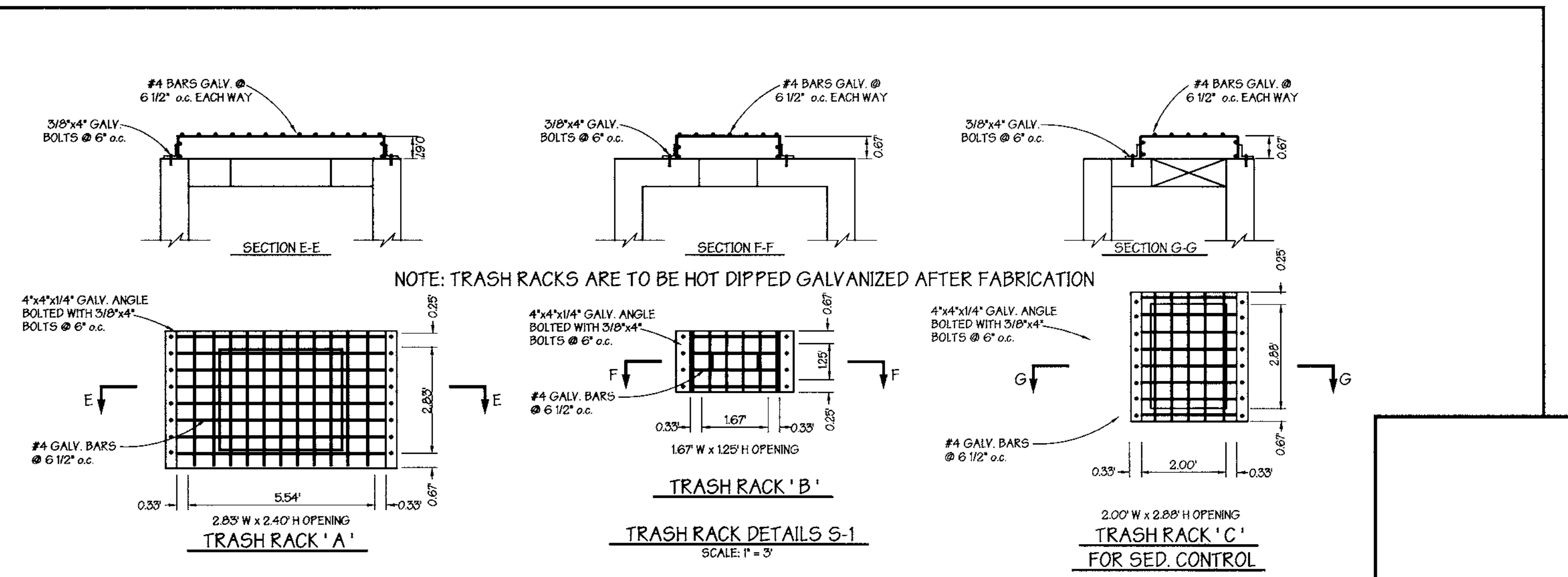
Corrugated Sheet Metal Gate With Safety Wire Fence



VICINITY MAP SCALE: 1" = 1000'



CONCRETE ANTI-SEEP COLLAR & CONCRETE CRADLE N.T.S.



NOTE: TRASH RACKS ARE TO BE HOT DIPPED GALVANIZED AFTER FABRICATION

AS-BUILT CERTIFICATION:
I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meet the approved plans and specifications.
Signature: _____ Date: _____
Name: James A. Mackie Jr. PE # 11005

CONSULTANT'S HAZARD CLASS CERTIFICATION:
I certify that this pond meets all requirements for hazard class B or C. (Requirements as stated in the Soil Conservation Service - Maryland Standards and Specifications for Pond, Code 378, November 1992). All necessary investigations and computations have been performed to verify this finding. A copy of said information has been supplied to Howard County Soil Conservation District.
Signature: _____ Date: 5/27/99
Name: James A. Mackie Jr. PE # 11005

DEVELOPER CERTIFICATION:
"I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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 inspection by the Howard Soil Conservation District."
Developer: Genal L. Scaggs Date: 5/25/09
Name: Genal L. Scaggs

These plans for S.W.M. construction soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
John R. Robertson
DATE: 6/7/99

PLAN NUMBER: _____ DATE: 6/7/99

Reviewed for the Howard Conservation District and meets technical requirements.
Chief, Development Engineering Division
DATE: 6/17/99

APPROVED: Howard County Department of Planning and Zoning
Chief, Division of Land Development
DATE: 6/10/99

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
BUILDING No. 1	8955 HENKELS LANE
BUILDING No. 2	8975 HENKELS LANE

SUBDIVISION NAME	SECTION NAME	PARCEL #
N/A	N/A	45

PLAT	BLOCK	ZONE	TAX MAP	ELECT. DIST.	CENSUS TRACT
N/A	20	M2		6	6069.01

WATER CODE: B-02 SEWER CODE: 4020000

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

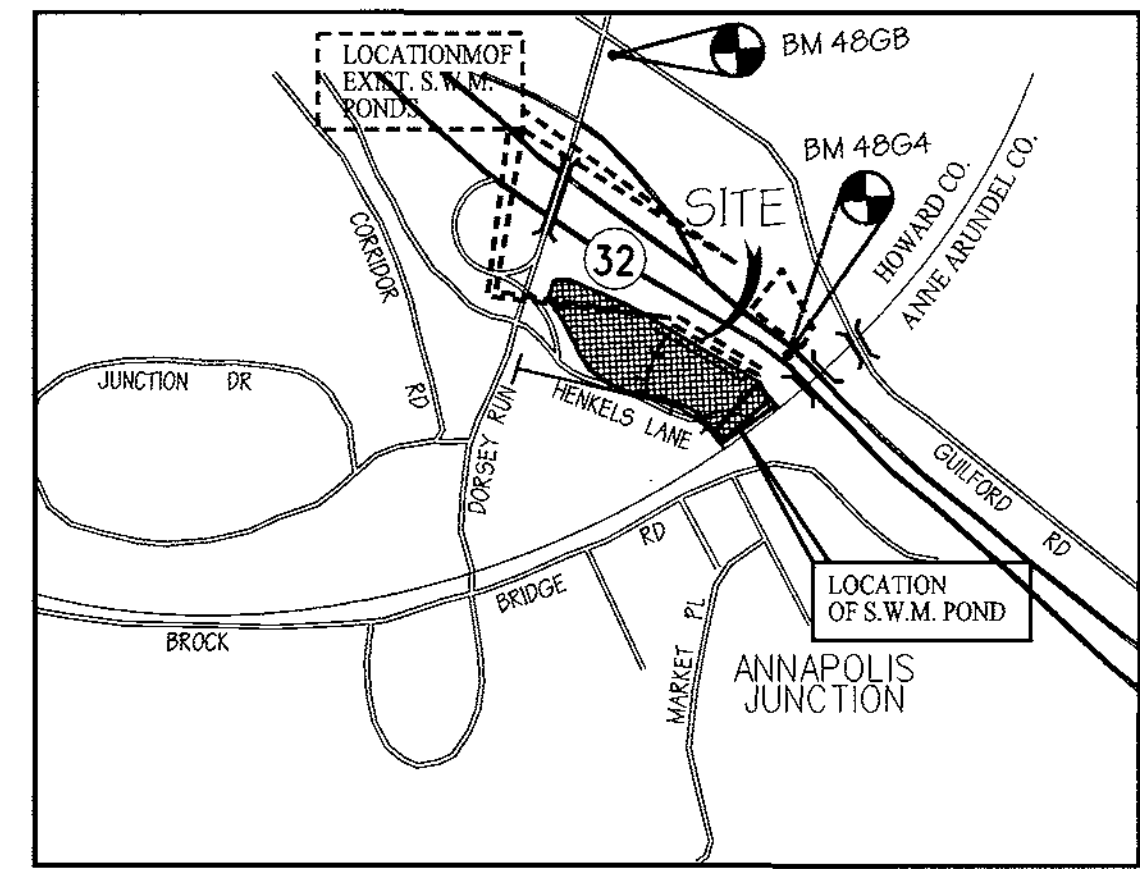
ENGINEER CERTIFICATION:
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Engineer: James A. Mackie Jr. Date: 5/27/99
Name: James A. Mackie Jr. PE # 11005

OWNER / DEVELOPER / CONTRACT / PURCHASER
MERRITT - HK, LLC
2066 LORD BALTIMORE DR.
BALTIMORE, MD 21207
(410) 298-2600

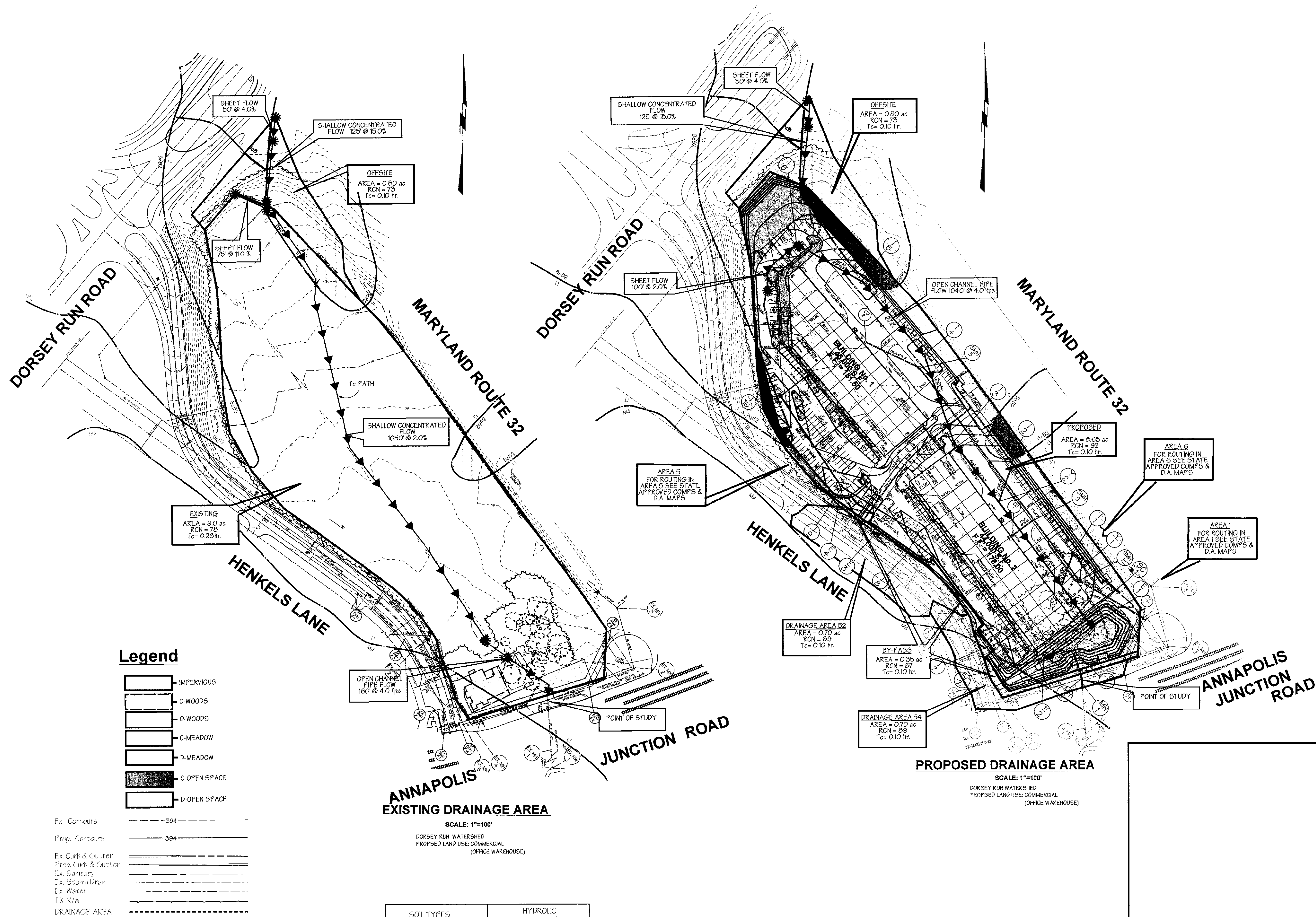
DESIGNED BY: H.P.F.
DRAWN BY: J.N.L.
CHECKED BY: H.P.F.
REVISIONS:

SWM NOTES & DETAILS
THE HENKEL PROPERTY
ELECTION DISTRICT: 6
HOWARD CO., MARYLAND
SCALE: As Shown
DATE: FEB. 02, 1999
SHEET 7 OF 12

SDP 99 - 94 P/N: 8976



VICINITY MAP
SCALE: 1" = 1000'



Legend

- IMPERVIOUS
- C-WOODS
- D-WOODS
- C-MEADOW
- D-MEADOW
- C-OPEN SPACE
- D-OPEN SPACE

- Fix. Contours --- 394
- Prop. Contours --- 394
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Ex. Sanitars
- Ex. Storm Drain
- Ex. Water
- EX. SW
- DRAINAGE AREA

SCALE: 1"=100'
DORSEY RUN WATERSHED
PROPOSED LAND USE: COMMERCIAL
(OFFICE WAREHOUSE)

SOIL TYPES	HYDROLOGIC SOIL GROUPS
C	BcB2
D	Li
D	Md
C	ScB

These plans for S.W.M., construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
DATE: 6/7/99

PLAN NUMBER: _____

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: NATURAL RESOURCES CONSERVATION SERVICE
DATE: 6/7/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 6/9/99

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 6/9/99

DIRECTOR
DATE: 6/10/99

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
BUILDING No. 1	8955 HENKELS LANE
BUILDING No. 2	8975 HENKELS LANE

SUBDIVISION NAME	SECTION NAME	PARCEL #
N/A	N/A	45

PLAT #	BLOCK #	ZONE	ZONE MAP	ELECT. DIST.	CENSUS TRACT
N/A	20	M-2	4B	6	6069.01

WATER CODE B-02 SEWER CODE 4020000

PREPARED BY:

GWS GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



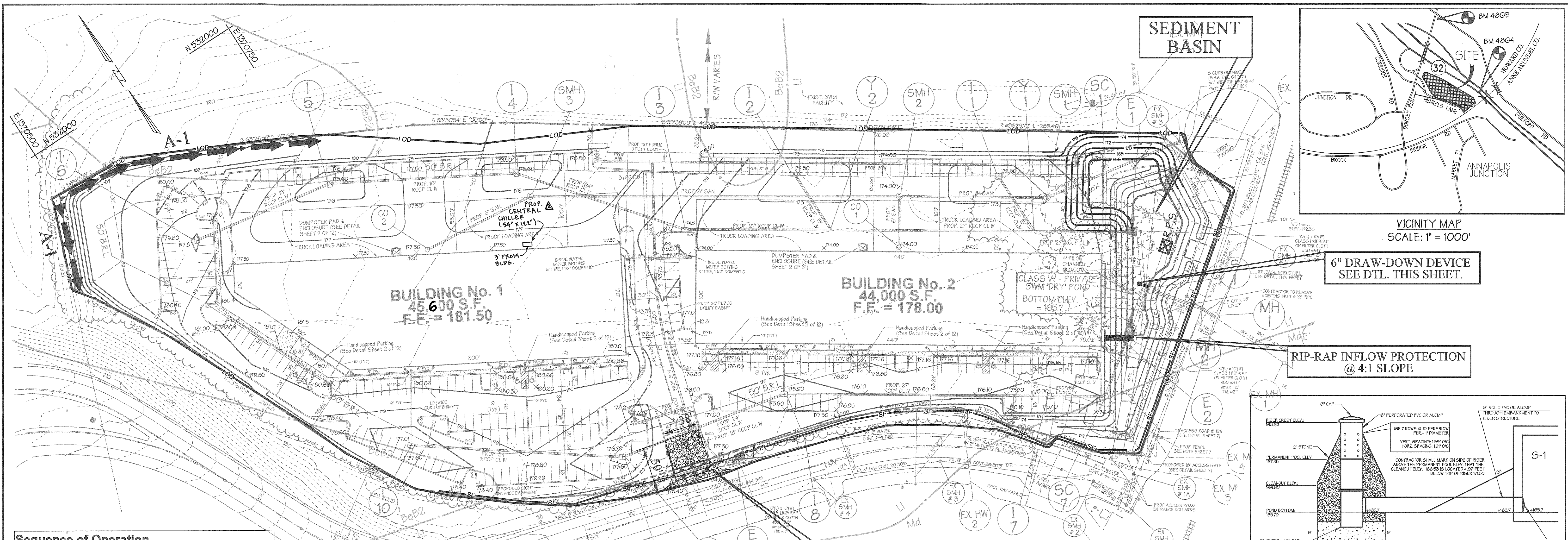
OWNER / DEVELOPER / CONTRACT / PURCHASER
MERRITT - HK, LLC
2066 LORD BALTIMORE DR.
BALTIMORE, MD 21207
(410) 298-2600

DESIGNED BY: H.P.P.
DRAWN BY: J.N.L.
CHECKED BY: H.P.P.
REVISIONS

STORM WATER MANAGEMENT DRAINAGE AREA MAPS
THE HENKEL PROPERTY

ELECTION DISTRICT: 6
HOWARD CO., MARYLAND

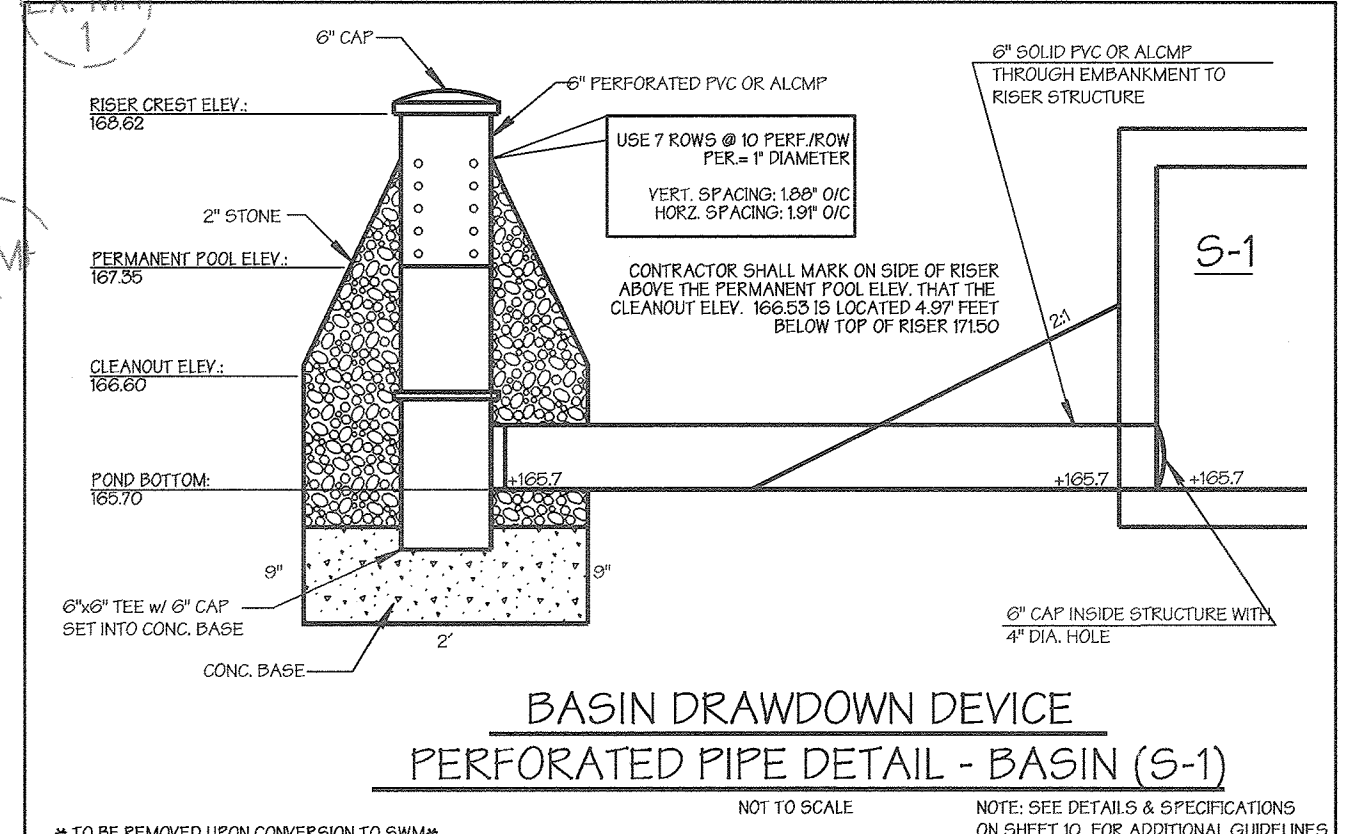
SCALE: As Shown
DATE: FEB 02, 1999
SHEET 8 OF 12



VICINITY MAP
SCALE: 1" = 1000'

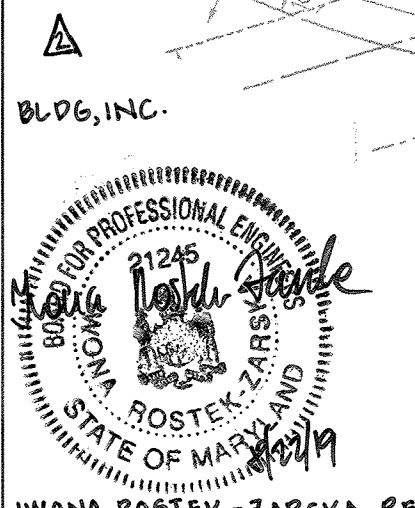
6" DRAW-DOWN DEVICE
SEE DTL. THIS SHEET.

RIP-RAP INFLOW PROTECTION
@ 4:1 SLOPE



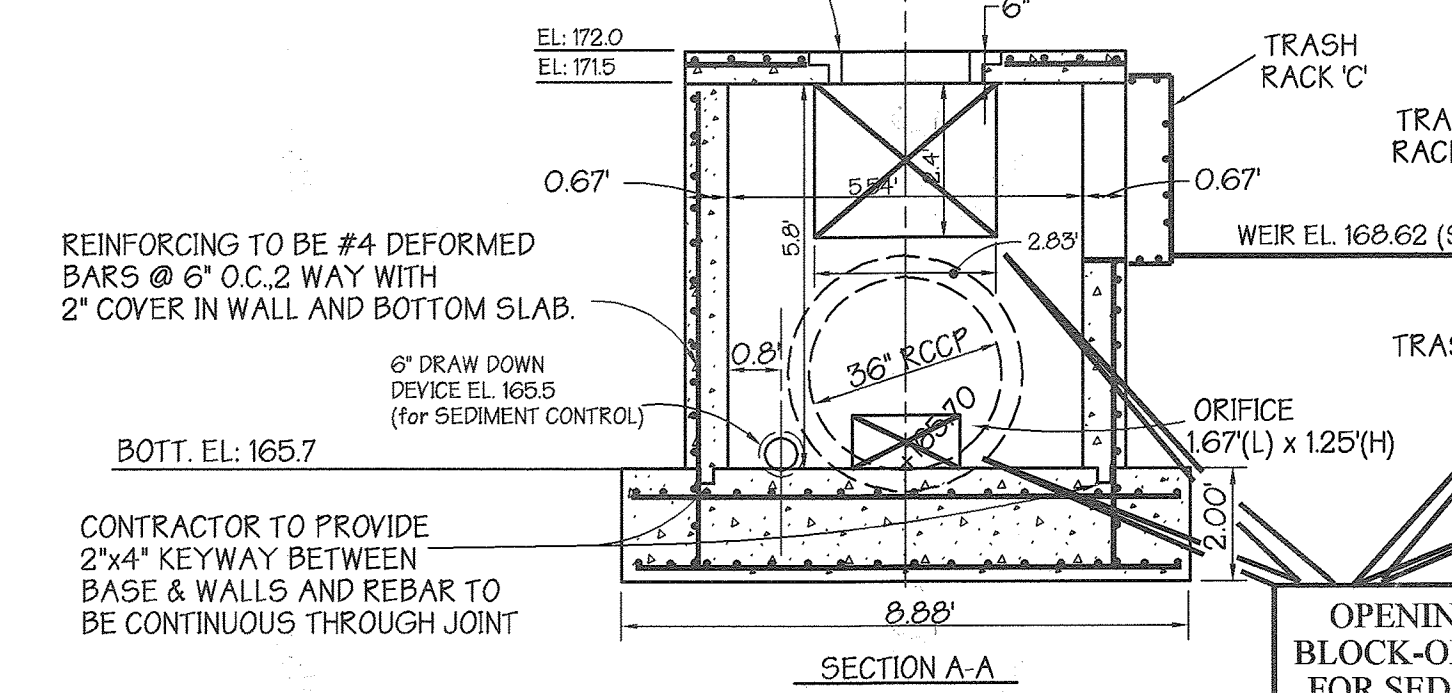
Sequence of Operation

- OBTAIN GRADING PERMIT.
 - NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS BEFORE BEGINNING WORK. (10 DAY)
 - WITH THE PERMISSION OF SEDIMENT CONTROL INSPECTOR INSTALL STORM DRAIN AT ENTRANCE OF SITE (BETWEEN E3 AND E4). ONCE PIPE IS CONSTRUCTED, INSTALL STABILIZER CONSTRUCTION ENTRANCE, PROVIDING ADEQUATE COVER FOR PROTECTION OF PIPE. (5 DAYS)
 - CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY. INSTALL SILT FENCE AND EARTH DIKES. (5 DAYS)
 - INSTALL SEDIMENT BASIN. CONTRACTOR TO REMOVE EXIST. INLET AND 10" RCP (AS SHOWN ON SEDIMENT CONTROL PLAN). INSTALL MH1 AND MH2 AND 60" X 48" RCP TO REPLACE THE EXISTING MH1 AND EXISTING 30" X 24" RCP (SEE STORM DRAIN PLAN AND PROFILES). INSTALL RISER, BARREL AND DEWATERING DEVICE. (DRY STORAGE EL. 169.2; PERMANENT POOL EL. 167.3; CLEANOUT EL. 166.5) (10 DAYS)
 - THE SEDIMENT BASIN IS TO BE CONVERTED TO A STORM WATER MANAGEMENT POND AFTER THE SITE IS STABILIZED AND APPROVED BY THE INSPECTOR, AND SHALL BE CONSTRUCTED TO MEET 579 SPECIFICATIONS. CONSTRUCTION OF THE BASIN SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER WHO SHALL BE RESPONSIBLE FOR PROVIDING THE DEVELOPER A COMPLETE REPORT TO INCLUDE THE FOLLOWING:
 - VERIFICATION OF CUTOFF TRENCH MATERIAL AND COMPACTION.
 - PRINCIPAL SPILLWAY, ANTI SEEP COLLAR AND RISER INSTALLATION.
 - G.W. STEPHENS, JR. & ASSOCIATES, INC. SHALL BE KEPT INFORMED AT ALL STAGES OF CONSTRUCTION SO KEY ASPECTS OF THE BASIN CONSTRUCTION MAY BE OBSERVED AND DOCUMENTED.
 - A REMOVABLE PUMPING STATION SHALL BE USED TO DEWATER BASINS. THE LOCATION OF SPOILS AREA DURING CONSTRUCTION AND FOR FINAL BASIN DREDGE IS TO BE WITHIN THE LIMIT OF DISTURBANCE AND UP STREAM FROM A SEDIMENT CONTROL MEASURE OR HAILED TO A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN, AND AN OPEN GRADING PERMIT.
 - BEGIN GRADING OPERATIONS, AND INSTALL UTILITIES. (30 DAYS)
 - SANITARY SEWER BETWEEN EXISTING SMH AND PROP. SMH1 TO BE CONSTRUCTED AFTER SEDIMENT BASIN HAS BEEN CONVERTED TO SWM FUND WITH THE APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. ANY AREA NEEDED FOR A TEMPORARY STOCKPILE WILL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE AND UPSTREAM FROM A SEDIMENT CONTROL MEASURE, BUT NOT LOCATED SO AS TO INFILTRATE THAT MEASURE. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASIN DURING ALL PHASES OF CONSTRUCTION. REPAIR ANY SEDIMENT CONTROL DEVICE DAMAGED BY UTILITY CONSTRUCTION AT THE END OF EACH DAY.
 - BEGIN BUILDING CONSTRUCTION
 - INSTALL CURB & GUTTER AND PAVEMENT SUB-BASE. FINE GRADE AND SEED LAWN AREAS. (14 DAYS)
 - COMPLETE PAVING OPERATIONS.
 - FINE GRADE AND STABILIZE ANY REMAINING AREAS. FLUSH STORM DRAINS WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR REMOVE THE REMAINING SEDIMENT CONTROL MEASURES AND STABILIZE. CONVERT THE SEDIMENT BASINS ACCORDING TO THE APPROVED STORM WATER MANAGEMENT PLANS AND FILE AS BUILTS WHEN COMPLETED.
- * ALL WORK IN EXISTING PAVED AREAS IS TO BE STABILIZED WITH STONE AT THE END OF EACH WORK DAY.



IWONA RÓBERTEK-ZAROWSKA, P.E.
P.E. NO. 11445 EXP. 6-9-22
REVISION #1 - ADD CENTRAL CHILLER TO BUILDING NO. 1

CAST-IN-PLACE SLAB WITH TYPE 'D' FRAME & COVER, FOR DETAILS OF TYPE 'D' FRAME AND COVER SEE STD. SD-3.91



- CONTROL STRUCTURE NOTES**
- STRUCTURE SHALL BE CAST-IN-PLACE REINFORCED CONCRETE WITH 3,500 P.S.I. (MIN) STRENGTH @ 28 DAYS.
 - ALL REINFORCING TO BE CONTINUOUS THROUGHOUT STRUCTURE.
 - ALL REINFORCING TO HAVE 1-6" MIN. OVERLAPS.
 - PROVIDE ADDITIONAL #4 REBARS ALONG THE PERIMETER OF ALL OPENINGS WITH THE AREA OF STEEL EQUAL TO OR GREATER THAN AREA OF STEEL REMOVED DUE TO OPENINGS.
 - THREE (3) INCH COVER MINIMUM FOR ALL REBARS.
 - UNLESS OTHERWISE NOTED STRUCTURE SHALL BE BUILT IN ACCORDANCE WITH HOWARD COUNTY STANDARD PLATE SD-4.32. STRUCTURE SHALL NOT BE BRICK.
- RELEASE STRUCTURE OPENING S-1**
- WALL 'A'
ORIFICE: 167" (L) X 125" (H)
CREST: 165.7
WEIR: 2.23 (L)
CREST: 169.1
- 6" DRAW DOWN DEVICE EL. 165.5 (FOR SEDIMENT CONTROL) SEE THIS SHEET
- 6" DRAW DOWN DEVICE EL. 165.5 (FOR SEDIMENT CONTROL) SEE THIS SHEET
- CONTRACTOR TO PROVIDE 2'x4" KEYWAY BETWEEN BASE & WALLS AND REBAR TO BE CONTINUOUS THROUGH JOINT
- REINFORCING TO BE #4 DEFORMED BARS @ 6" O.C. 2 WAY WITH 2" COVER IN WALL AND BOTTOM SLAB.
- OPENINGS TO BE BLOCK-OFF W/BRICK FOR SED. CONTROL
- MANHOLE STEPS @ 1-3" O.C. SEE DETAIL G-521
- TOP SLAB TO BE REINFORCED CONC. 4000 p.s.i. REINFORCING TO BE #7 DEFORMED BARS @ 6" O.C. 2 WAY WITH 2" COVER
- OPENING FOR SEDIMENT CONTROL CONTRACTOR TO MODIFY SIDE OPENING OF RISER AS SHOWN. REBAR TO REMAIN IN PLACE WHEN CONVERTING FROM SED. BASIN TO SWM POND. CONTRACTOR TO REFORM WALLS AS PER SWM DWGS.
- REINFORCING TO BE #4 DEFORMED BARS @ 6" O.C. 2 WAY WITH 2" COVER IN WALLS AND BOTTOM SLAB
- CONCRETE CRADLE (SEE DETAIL SHEET)
- PRINCIPLE SPILLWAY PIPE SHALL BE WATER TIGHT IN ACCORDANCE W/ ASTM C 361 HYDROSTATIC TESTING SPECIFICATION.
- CONCRETE CRADLE (SEE DETAIL SHEET)
- AREA OF DISTURBANCE 397,070 S.F. / 9.12 AC.

STABILIZED CONSTRUCTION ENTRANCE W/ MOUNTABLE BERM

PLAN SCALE: 1" = 50'

Legend

- Ex. 2' Contours 394
 - Ex. 10' Contours 395
 - Prop. 2' Contours 394
 - Prop. 10' Contours 395
 - Ex. Curb & Gutter
 - Prop. Curb & Gutter
 - Blgd. Restriction Line
 - Ex. Sanitary
 - Ex. Storm Drain
 - Ex. Water
 - Prop. Sanitary
 - Prop. Storm Drain
 - Prop. Water
- LOD — LIMIT OF DISTURBANCE
- SF — SILT FENCE
- ED — EARTH DIKE
- R.P.S. — REMOVABLE PUMPING STATION

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

DEVELOPER CERTIFICATION:

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I/We 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/We authorize periodic on-site inspections by the Howard Soil Conservation District.

Developer: *John A. Scaggs* Date: 5/26/99
Name: *John A. Scaggs*

ENGINEER CERTIFICATION:

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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Engineer: *JAMES A. MAHONEY JR.* Date: 5/27/99
Name: *JAMES A. MAHONEY JR.* PE #: 11005

OWNER / DEVELOPER / CONTRACT / PURCHASER

MERRITT - HK, LLC
2066 LORD BALTIMORE DR.
BALTIMORE, MD 21207
(410) 298-2600

DESIGNED BY: H.P.P.
DRAWN BY: J.N.L.
CHECKED BY: H.P.P.

REVISIONS
#1 - ADD CENTRAL CHILLER TO BLDG. NO. 1

SEDIMENT CONTROL PLAN AND DETAILS
THE HENKEL PROPERTY

ELECTION DISTRICT: 6
HOWARD CO., MARYLAND

SCALE: As Shown
DATE: FEB. 02, 1999
SHEET 9 OF 12

