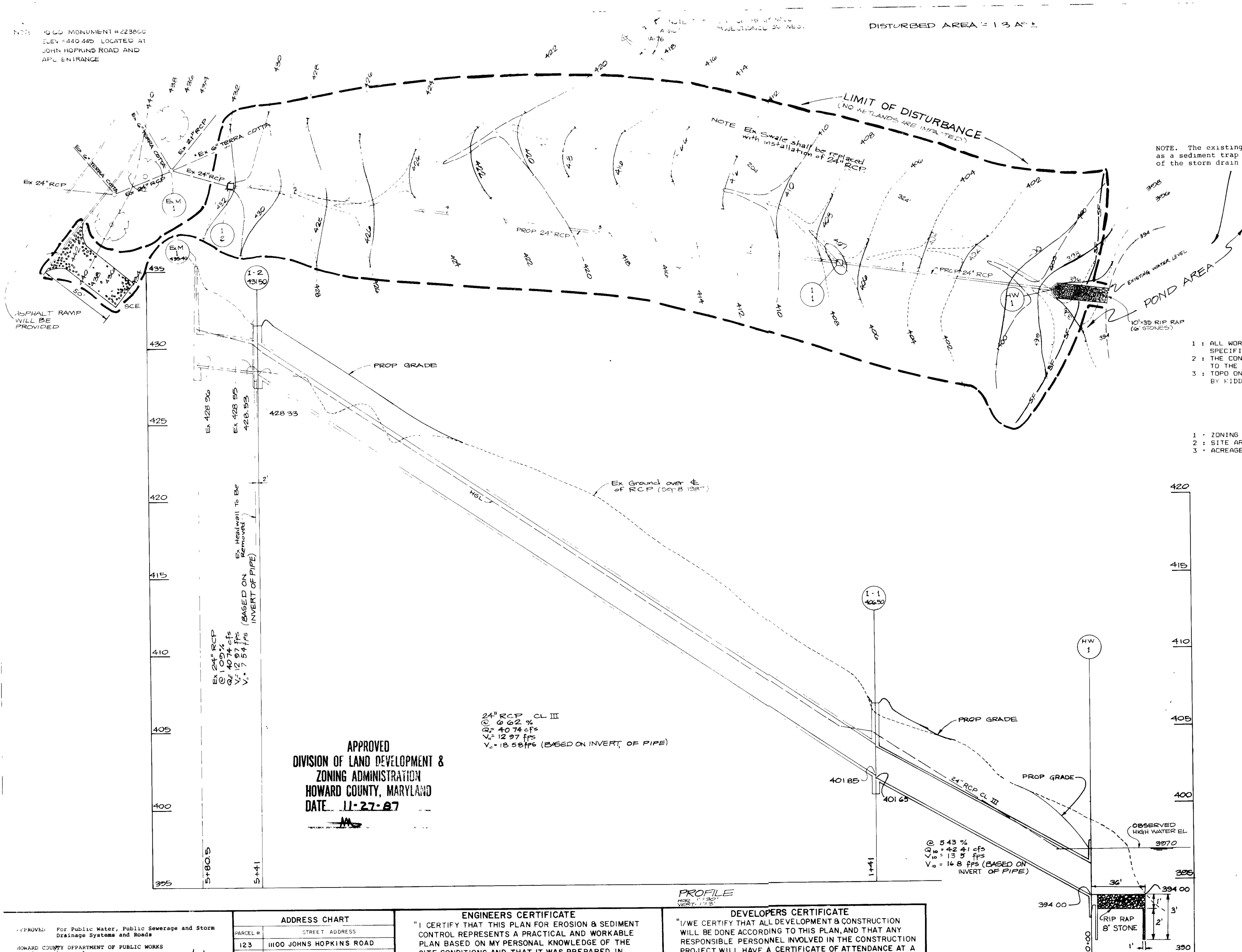
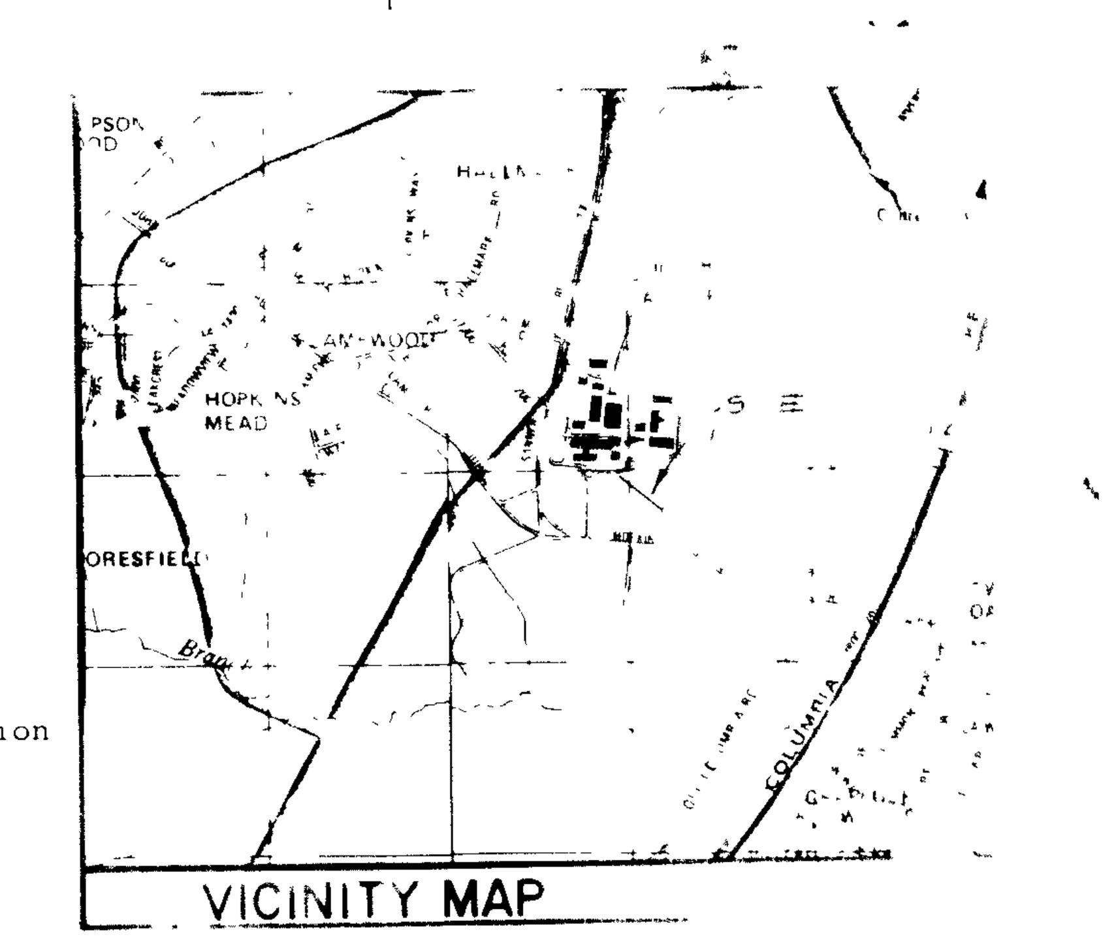


APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-27-87

NOTE. The existing pond shall act as a sediment trap during construction of the storm drain extension.



GENERAL NOTES

1 : ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD CO SPECIFICATIONS & DETAILS FOR CONSTRUCTION.
2 : THE CONTRACTOR SHALL CALL MISS UTILITY (301) 559-0100 FIVE ... TO THE START OF CONSTRUCTION
3 : TOPO ON SHEET 1 OF 2 TAKEN FROM FIELD RUN SURVEY DATED SEP ... BY KIDDE CONSULTANTS, INC

SITE ANALYSIS

1	ZONING	RURAL,R
2	SITE AREA, ACRES	1.3
3	ACREAGE OF ENTIRE PROPERTY, ACRES	366

APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
11100 JOHNS HOPKINS ROAD
LAUREL, MARYLAND 20707

APPROVED. Howard County Office of Planning and Zoning
PLANNING DIRECTOR — DATE 12.20.87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 12/28/87

SUBDIVISION NAME					PARCEL
JHU APPLIED PHYSICS LAB					123
PLAT NO	BLOCK	ZONE	TAX MAP	ELEC. DIST.	
—	16	R	41	5th	60
WATER CODE			SEWER		
E21			6480000		

JOHNS HOPKINS APL

SITE DEVELOPMENT PLAN

STORM DRAIN ADDITION TO SDP-88-06 AND SD...

TAX MAP 41 PARCEL 123
5th ELECTION DISTRICT HOWARD COUNTY, MD

KIDDE CONSULTANTS
ENGINEERS ...
DATE OCT, 1987
SCALE 1"=30'
SHEET NO 1 OF 2
KCI # 1687098
SDP-88-83

APPROVED For Public Water, Public Sewerage and Storm Drainage Systems and Roads
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 12/21/87
CHIEF, BUREAU OF ENGINEERING — DATE 12-18-87

APPROVED For Public/[redacted] Water and Public/[redacted] Sewerage Systems
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 12-24-87

ADDRESS CHART

PARCEL #	STREET ADDRESS
123	11100 JOHNS HOPKINS ROAD

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION & 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"

ENGINEERS SIGNATURE — DATE DEC. 8 87

DEVELOPERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT & 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & EROSION BEFORE BEGINING THE PROJECT I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT"

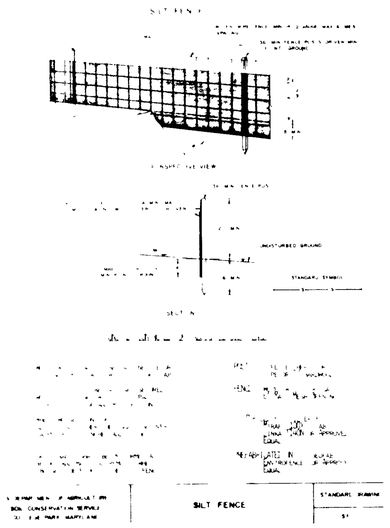
DEVELOPERS SIGNATURE — DATE 12/4/87

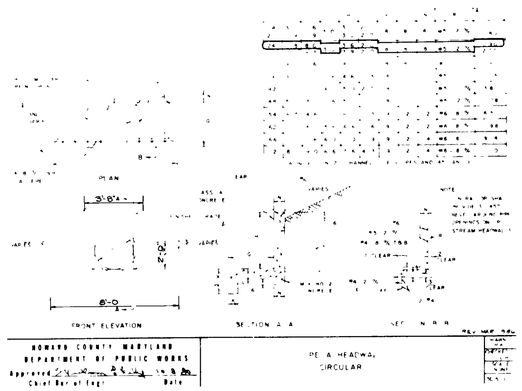
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/11/87

REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE — DATE 12/11/87





SEQUENCE OF CONSTRUCTION

1) OBTAIN GRADING PERMIT	1 DAY
2) REMOVE EXISTING HEADWALL, INSTALL SILT FENCE (THE POND WILL SERVE AS A SEDIMENT TRAP DURING CONSTRUCTION)	1 DAY
2A) DIVERT THE FLOW FROM THE EXISTING S D SYSTEM USING A PLASTIC DIVERSION PIPE	
3) EXCAVATE FOR STORM DRAIN INSTALLATION	1 DAY
4) INSTALL I-1, I-2 AND 341 FEET OF 24 INCH RCP PIPE AS PER THE PLAN	1 DAY
5) FILL AND GRADE OVER THE NEWLY INSTALLED STORM DRAIN SYSTEM AS PER SHEET 1 OF 2 ALSO, GRADE OUT THE EXISTING SWALE AS PER THE PLAN	1 DAY
6) WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SILT FENCE AND IMMEDIATELY STABILIZE THE ENTIRE DISTURBED AREA	1 DAY

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2½ bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance or to a permanent long-lived vegetative cover is needed

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened

Soil Amendments: In lieu of soil test recommendations, use one of the following:

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 time of seeding apply 1 per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft)

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding Harrow or disc into upper three inches of soil

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15 seed w/ 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue For the period May thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring Option (2) Use sod Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw

Mulching - Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft for anchoring

Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseedings

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits pror to the start of any construction (992-2437)

2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site

4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage

5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector

7) Site Analysis:

Total Area of Site	366 Acres
Area Disturbed	13 Acres
Area to be roofed or paved	00 Acres
Area to be vegetatively stabilized	13 Acres
Total Cut	112 Cu. yds
Total Fill	829 Cu. yds
Offsite waste/borrow area location	N/A

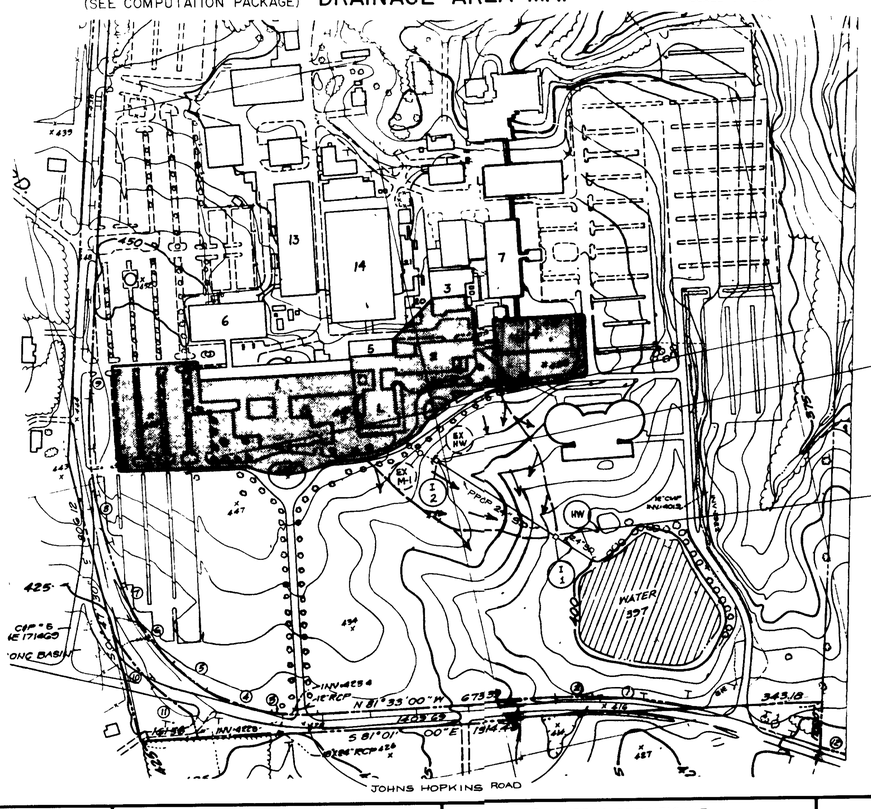
8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

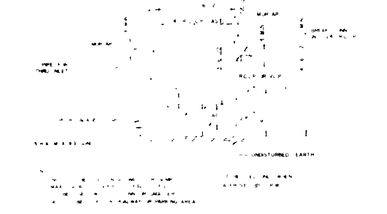
9) Additional sediment control's must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

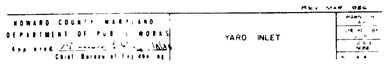
On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon comoletion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

NOTE: FOR SEQUENCE OF CONSTRUCTIONS, SEE SHEET 2 OF 2

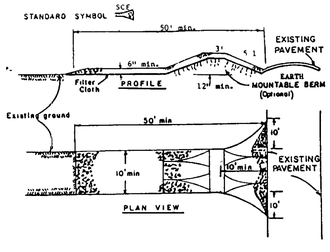
(SEE COMPUTATION PACKAGE) DRAINAGE AREA MAP SCALE 1"= 200'







STABILIZED CONSTRUCTION ENTRANCE
not to scale



APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY 11100 JOHNS HOPKINS ROAD LAUREL, MARYLAND 20707	REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS US SOIL CONSERVATION SERVICE — DATE 12/11/87
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 12/11/87	ENGINEERS CERTIFICATE "I CERTIFY THAT THIS PLAN FOR EROSION & 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" ENGINEERS SIGNATURE — DATE DEC '87
	DEVELOPERS CERTIFICATE "I/WE CERTIFY THAT ALL DEVELOPMENT & 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & EROSION BEFORE BEGINING THE PROJECT I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT" DEVELOPERS SIGNATURE — DATE 12/4/87

JOHNS HOPKINS APL
SEDIMENT, CONSTRUCTION DETAILS AND DRAINAGE AREA MAP

STORM DRAIN ADDITION TO SDP-88-06 AND SDP-87-168
TAX MAP 41 PARCEL 123
5th ELECTION DISTRICT HOWARD COUNTY, MD

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS
8100 WEST STREET
WARFIELD

DATE	REVISION	BY

SURVEYED BY
COMPUTED BY
DRAWN BY
CHECKED BY

DATE OCT, 1987 SCALE AS SHOWN
KCI # 1687098
Drwg No 2 OF 2

SDP-88-83