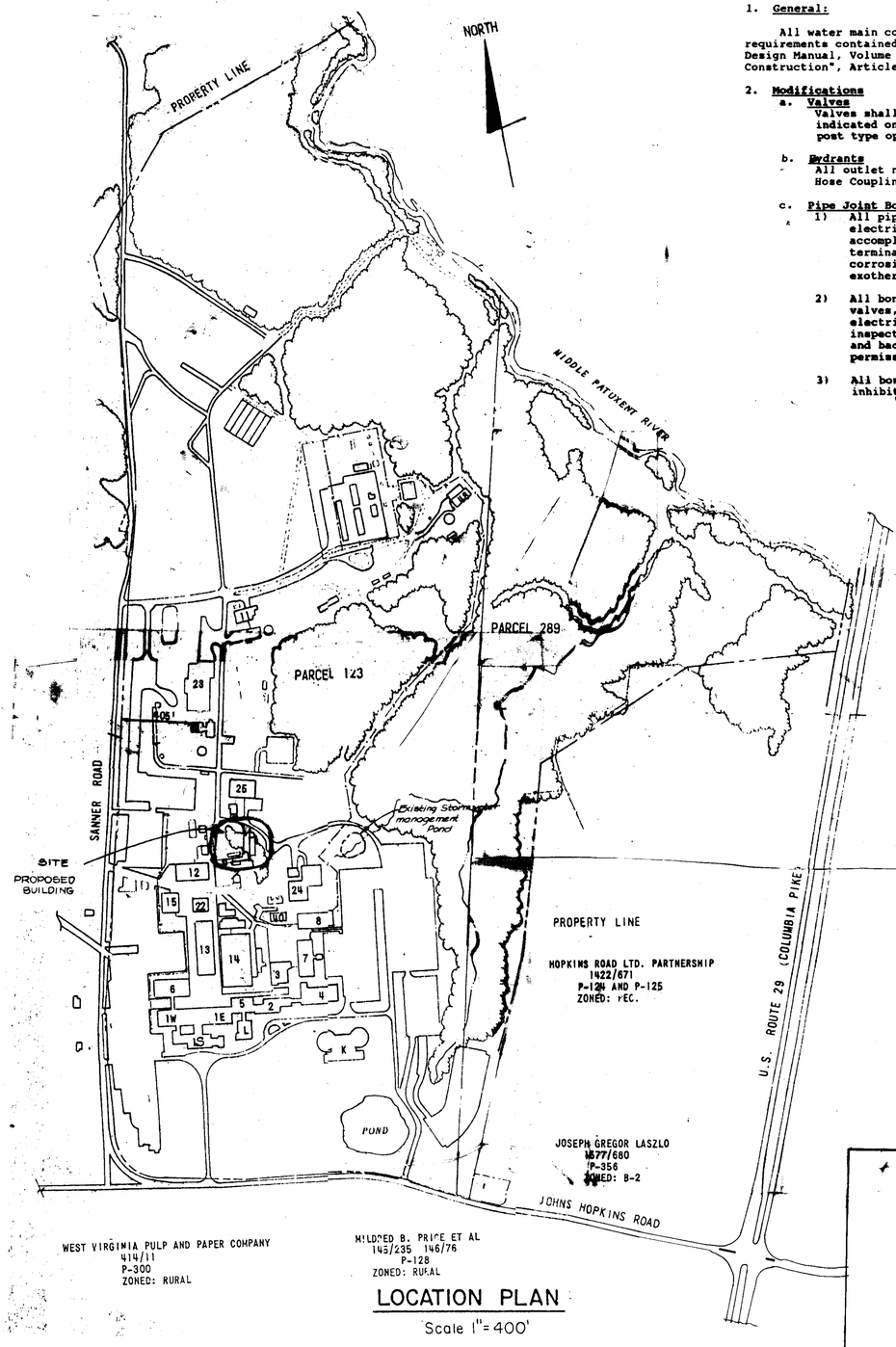
GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS.
2. ELEVATIONS SHOWN ARE BASED ON THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY DATUM. JHU-APL DATUM-.94' = HOWARD COUNTY DATUM. TOPOGRAPHIC SURVEY WAS DONE IN NOVEMBER 1989.
3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY (301) 559-0100 FIVE DAYS PRIOR TO START OF CONSTRUCTION.
4. POLYFILTER X FILTER CLOTH BLANKET OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP.
5. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN AN UNINTERRUPTED SERVICE.
   ANY DAMAGE BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
6. ACCESS TO THE CONSTRUCTION AREA THROUGH THE SECURE AREA OF THE APPLIED PHYSICS LABORATORY (WITHIN THE FENCED ENCLOSURE) MUST BE ARRANGED IN ADVANCE BY CONTACTING THE PLANT ENGINEERING OFFICE (301) 792-5134.
7. SECURITY MUST BE MAINTAINED WITHIN THE EXISTING FENCED AREA. ALL REQUIRED FENCE CONSTRUCTION AND RELOCATIION SHALL BE BY THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY.. HOWEVER THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH JHU APL AS TO WHEN SUCH WORK IS REQUIRED.
8. THE CONTRACTOR SHALL CONTACT MR. ARTHUR STUCKL PLANT ENGINEER (301) 792-5133 AT LEAST FIVE DAYS BEFORE STARTING WORK OR SHUTTING DOWN ANY UTILITIES.
9. THE CONTRACTOR SHALL SHUTDOWN AND TIE-IN TO THE EXISTING UTILITIES ONLY AFTER NORMAL WORKING HOURS AT JHU-APL. WORK MUST BE SCHEDULED ACCORDINGLY. NORMAL WOEKING HOURS ARE 8:30 AM TO 5:00 PM.
10. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
11. ALL WATER MAINS SHALL BE DUCTILE IRON CLASS 52.
12. ALL SANITARY SEWER MAINS SHALL BE HOWARD COUNTY SCHEDULE 35 PVC UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION, 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK, AT 992-2417 OR 2418.
14. TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3 1/2 FT. OF COVER UNLESS OTHERWISE NOTED.
15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWING.
16. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEMS.
18. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
19. THE CONTRACTOR SHALL PERMANENTLY SEED AND STABILIZE ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED.
20. THE BUILDINGS PROPOSED ARE FOR RESEARCH AND DEVELOPMENT.
21. THERE ARE NO WETLANDS WITHIN THE LIMIT OF DISTURBANCE SHOWN. THEREFORE SECTION 404 AND SECTION 401 DO NOT APPLY AND PERMITS ARE NOT REQUIRED.
22. ALL ON-SITE WATER AND SEWER SYSTEMS ARE PRIVATE.

SITE ANALYSIS

PRESENT ZONING	RURAL -R
AREA OF PROPERTY	366 ACRES.
AREA OF SUBMISSION	.60 ACRES.
BUILDING FLOOR SPACE:	
EXISTING	1,419,078 S.F.
PROPOSED	7,190
TOTAL	1,426,268 S.F.
NUMBER OF EMPLOYEES	
EXISTING	3,100
PROPOSED	0
TOTAL	3,100
NUMBER OF PARKING SPACES	
EXISTING	3,180
REQUIRED - - - - 3,100 X 0.7	2,170
PROVIDED	3,180
GREEN AREA	
EXISTING	304.5 AC. 83.2%
PROPOSED	304.2 AC.
BUILDING COVERAGE	
EXISTING	13.99 Ac. 3.82 %
PROPOSED	14.154 Ac. 3.86%
PAVING AREA	
EXISTING	46.8 AC. 12.8%
PROPOSED	46.97AC. 12.83%

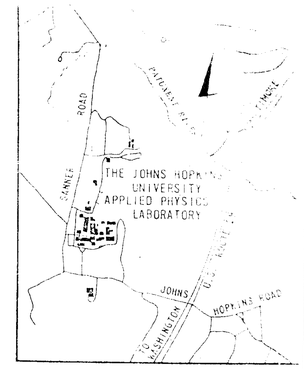
NOTE: THERE IS NO ADDITIONAL PARKING PROPOSED BY THIS SUBMITTAL.



LOCATION PLAN
Scale 1"=400'

Water Main Notes

1. **General:**
   All water main construction shall conform to the requirements contained in the current issue of the "Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction", Article 10 except as modified herein.
2. **Modifications**
   a. **Valves**
      Valves shall open left - counterclockwise. Where indicated on the plans they shall be furnished with post type operators.
   b. **Hydrants**
      All outlet nozzles shall have National Standard Fire Hose Coupling Screw Threads.
   c. **Pipe Joint Bonding**
      1) All pipe joints shall be bonded to insure electrical continuity. Bonding may be accomplished either with shop welded copper terminal straps and copper jumper straps with corrosion resistant bolts or with copper wire exothermic welded in the field.
      2) All bonding between joints for pipe, fittings, valves, and specials shall be tested for electrical continuity. Each joint shall be inspected and resistance tested prior to coating and backfilling. No resistance will be permissible across any joint,
      3) All bonded joints shall be coated with a rust-inhibitive paint.



VICINITY MAP
SCALE: 1" = 2000'

ADDRESS CHART					
PARCEL NUMBER	STREET ADDRESS				
P. 123/129	11100 JOHNS HOPKINS ROAD				
SUBDIVISION NAME: J.H.U. APPLIED PHYSICS LAB.			SECT./AREA	LOT/PARCEL P.123/289	
PLAT# OR L/F 234/304 400/625	BLOCK# 16	ZONE R	TAX/ZONE MAP 41	ELEC DIST 5th.	CENSUS TR 6051
WATER CODE E-21		SEWER CODE 6480000			

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — DATE 7-10-90

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

PLANNING DIRECTOR — DATE 8.2.90

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — DATE 7/18/90

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 8/22/90

CHIEF, BUREAU OF ENGINEERING — DATE 6/21/90

oria engineering inc.
Consulting Engineers • Land Planners • Surveyors
9300 Bethany Lane, Suite 4, Ellicott City, Maryland
301-465-0400

APPLIED PHYSICS LABORATORY
THE JOHN HOPKINS UNIVERSITY
JOHNS HOPKINS ROAD HOWARD COUNTY MARYLAND
APPROVED FOR THE UNIVERSITY BY:
DATE: 5/25/90 TITLE: Asst Engineer

GROUNDSKEEPING FACILITY

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

COVER SHEET

2-26-90 County Comments

REVISIONS

SCALE: AS SHOWN

DATE: 1-2-90

SITE LT
OF
6

SDP-90-119

N

EXISTING 24' ACCESS ROAD

EX TIMBER RETAINING WALL

EXISTING PAVING

RELOCATED EQPT STORAGE 44A
FL. EL. 418

CONDUIT MANHOLE

N 485000
E 828750

N 485250
E 828750

EX. BLDG. 39

OFFICE AND MAINTENANCE AREA 45
FL. EL. 411.60

EX BLDG 44

PROPOSED 8" SEWER

EXISTING INLET
TOP EL. 408.10

EXISTING 15" R.C.P.

UTILITY POLE

STONE CHECK DAM FOR WATER QUALITY
SEE DETAIL SHEET 3 OF 6

EXISTING 18" PIPE

EXISTING PAVING R=25'

8"X6" TEE
& 6" VALVE
FIRE HYDRANT
BURY LINE EL. 406
BURY LENGTH = 4'

HIGH TENSION POLE

EXISTING 8" WATER

EQUIPMENT STORAGE 45A
FL. EL. 404-407

TELEPHONE POLE

TOP EL. 405.67

EX. 6" SEWER

SUB - STATION

SECURE CONDUIT

BLF. 24" RCCP. CLASS

Limit OF Proposed paving

INV. EL. 397.78
P EL. 406.11

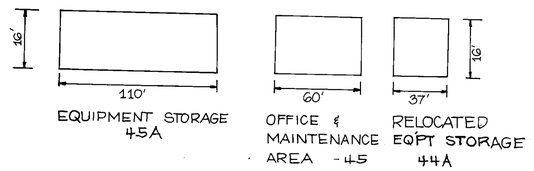
EXISTING 6" SEWER

EX. 24' ACCESS ROAD

50'X10'X1' STONE FILTER
SEE DETAIL SHEET 3 OF 6

TOP 396.34
INV. 388.94

EXISTING 24" RCCP



BUILDING PROFILE

NOTE: STORM WATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED UNDER SDP 85-100.

LEGEND :

	EXISTING	PROPOSED
PAVING		
DRAINAGE		
SEWER		
WATER		
GRADES	--100--	100

7-10-90

8.2.90

7/11/90

6/21/90

APPROVED: PHYSICS LABORATORY
THE JOHN HOPKINS UNIVERSITY
JOHN HOPKINS ROAD HOWARD COUNTY MARYLAND
FOR THE UNIVERSITY BY: J.E. Fosche
DATE: 12/29/89 TITLE: Group Supv.

GROUNDSKEEPING FACILITY

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

SITE DEVELOPMENT PLAN

GRADING PLAN

2-26-90 County Comments

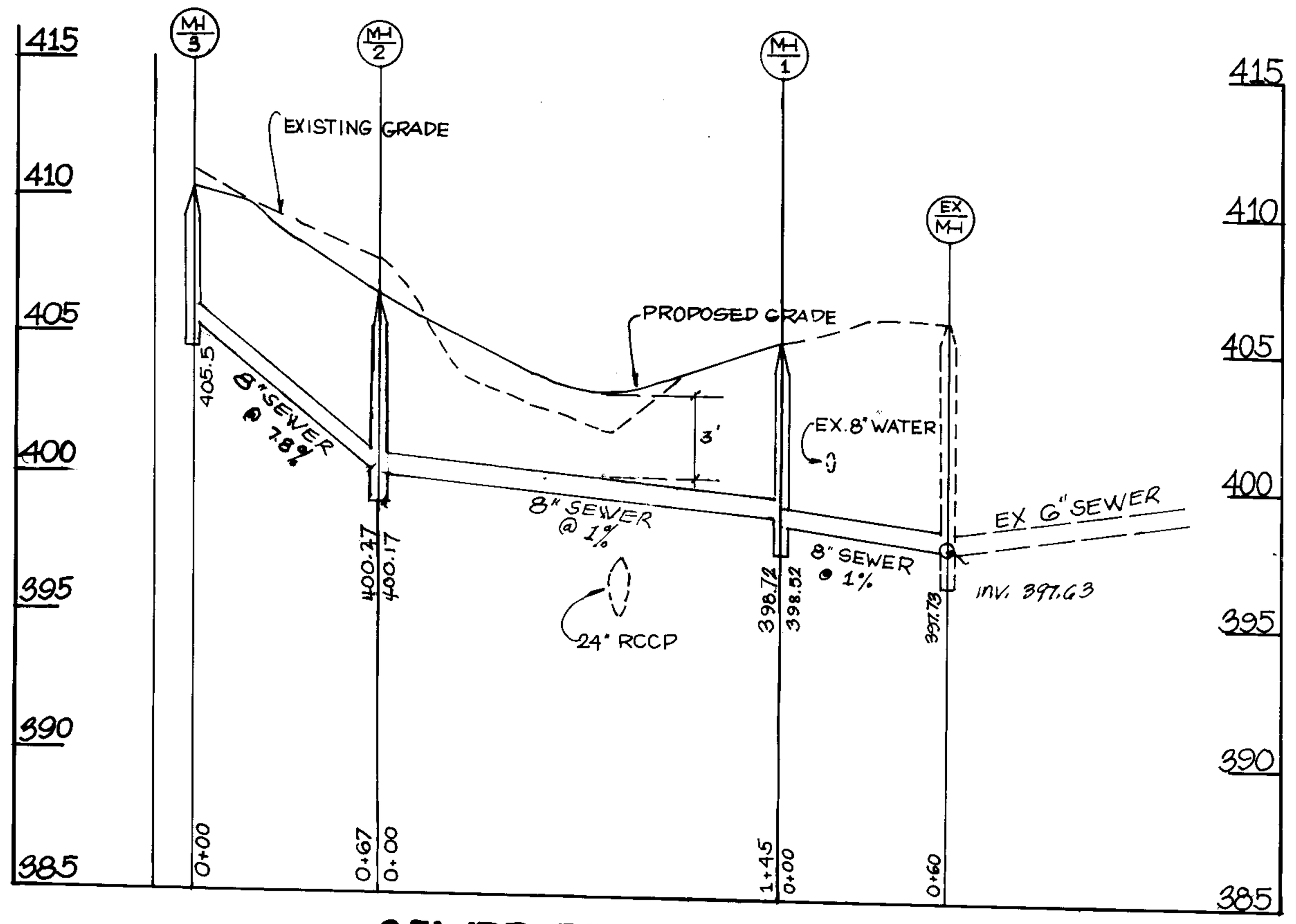
REVISION

SCALE: 1" - 20'

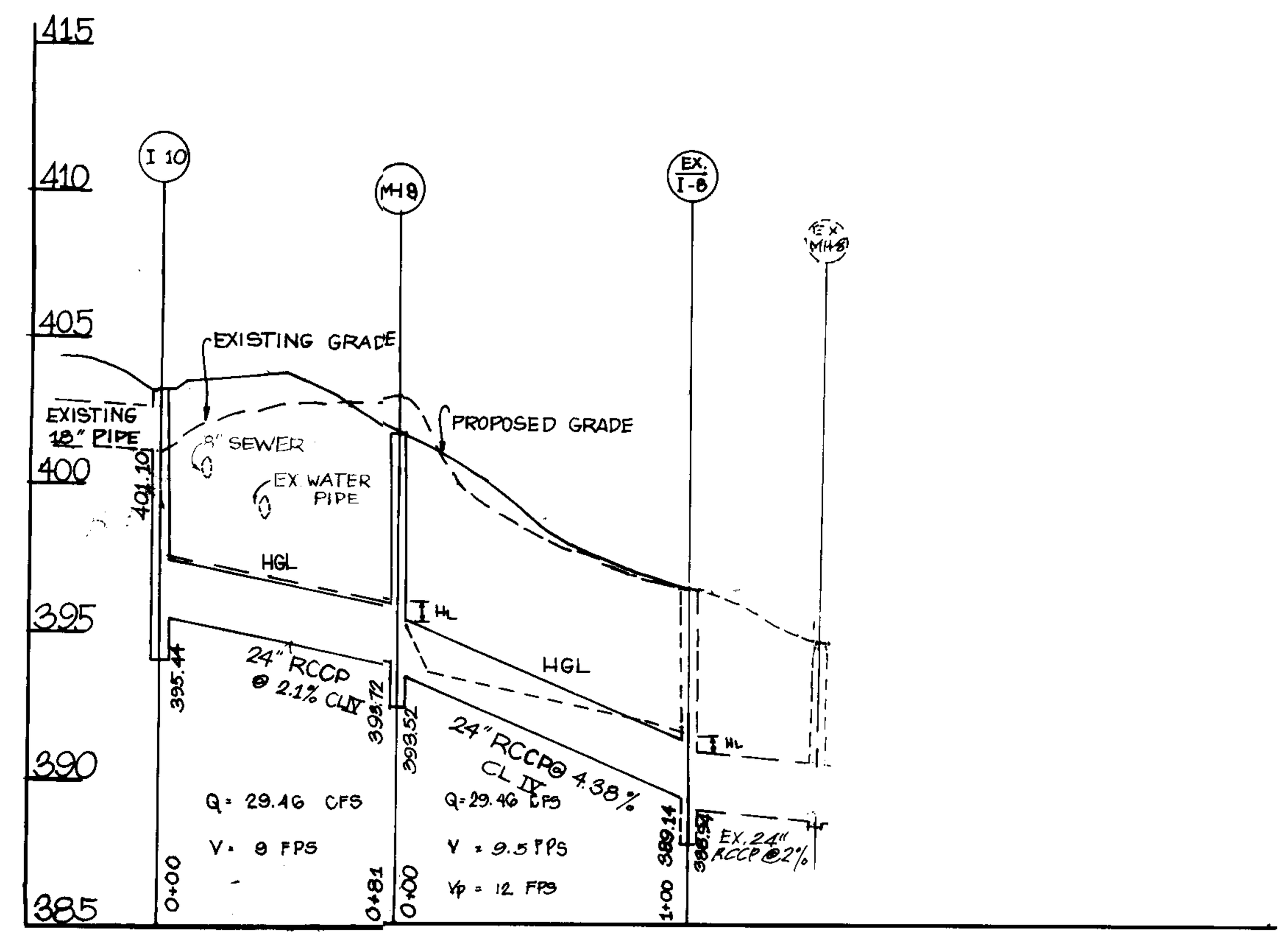
DATE: 1 - 2 - 90

SHEET: 2 OF 6

SDP-90-119



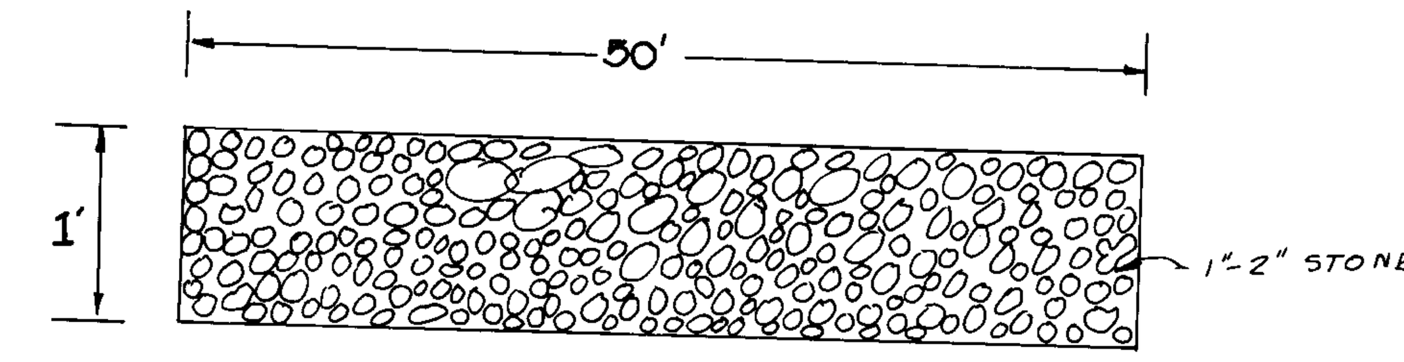
SEWER PROFILE
Scale : 1" - 5' Vertical
1" - 50' Horizontal



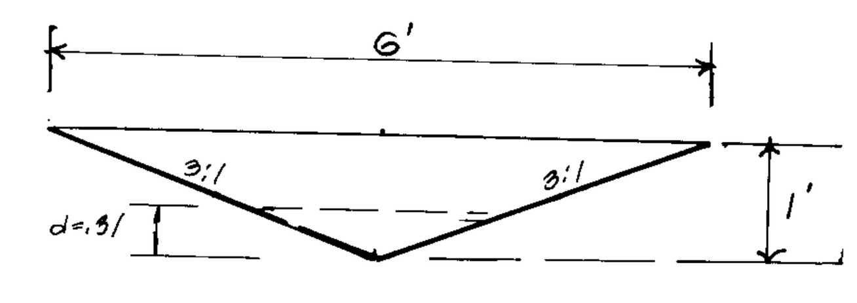
STORM DRAIN PROFILE
Scale : 1" - 5' Vertical
1" - 50' Horizontal

STORM DRAIN STRUCTURE SCHEDULE

No.	Type	Top	Inv. In	Inv. out	Remarks
I-10	K	403.30	401.10	395.44	DETAIL S.D. 412
MH9	STD. PRECAST	401.60	393.72	393.52	DETAIL G 512

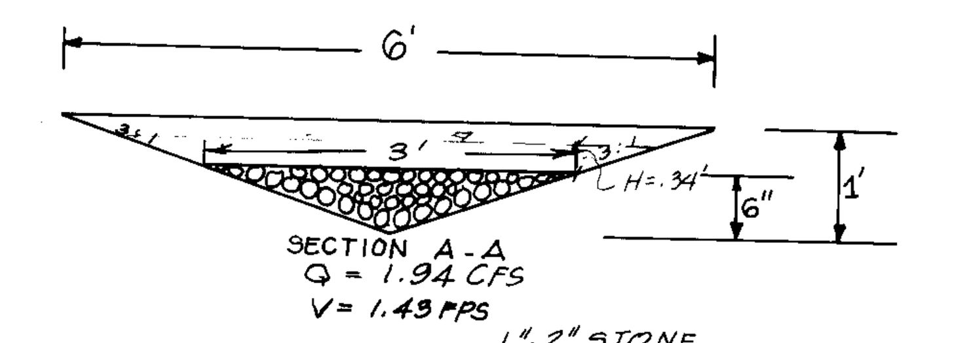


SECTION OF FILTER STONE
Scale : 1" - 10' Horizontal
1" - 1' Vertical

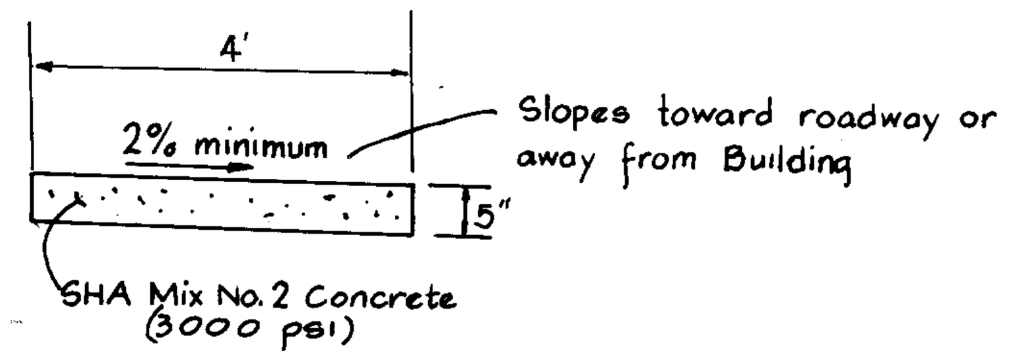


SWALE DETAIL
Not to Scale

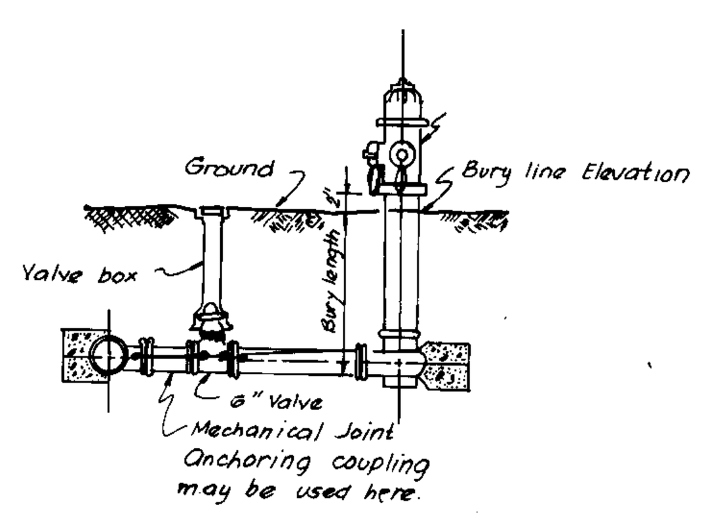
Q = 1.94 CFS
V = .80 FPS
S = 1 %



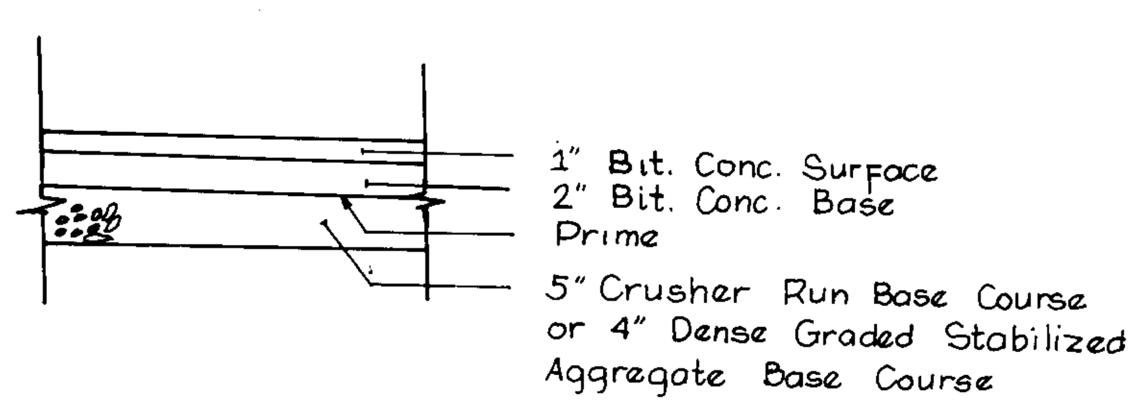
DETAIL OF STONE CHECK DAMS
Not to Scale



SIDEWALK SECTION
Not to Scale



FIRE HYDRANT DETAIL
Not to Scale



PAVING SECTION
Not to Scale

7-10-90
8.2.90
7/12/9.
6/22/90
Elizabeth la Calce
6/21/9.

12/29/89
J E Losch
Group Sup.

GROUNDSKEEPING FACILITY
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY

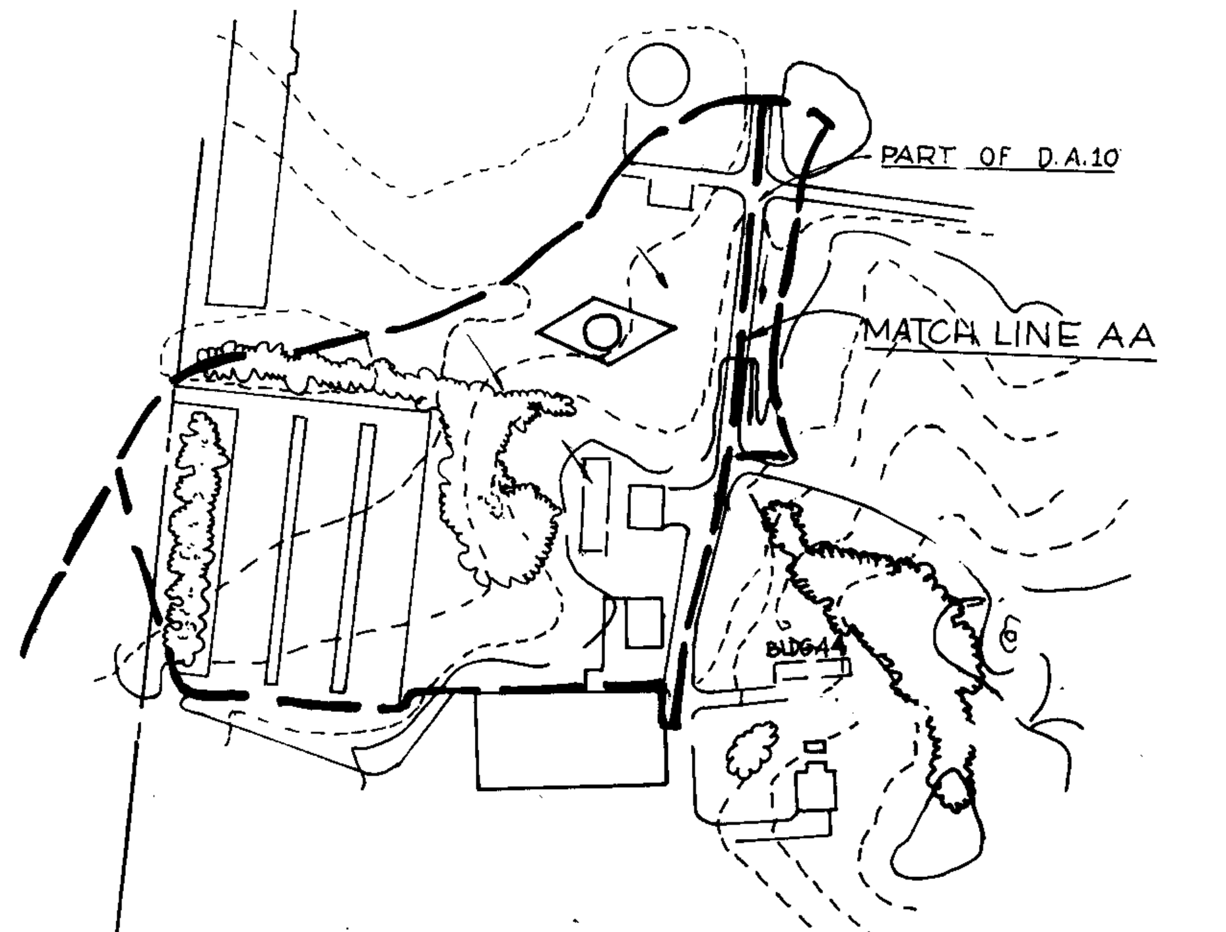
UTILITY PROFILE DETAILS

2-26-90 COUNTY COMMENTS
REVISIONS

SCALE: AS SHOWN
DATE: 1-2-90

SHEET 3 OF 6

SDP 90-119

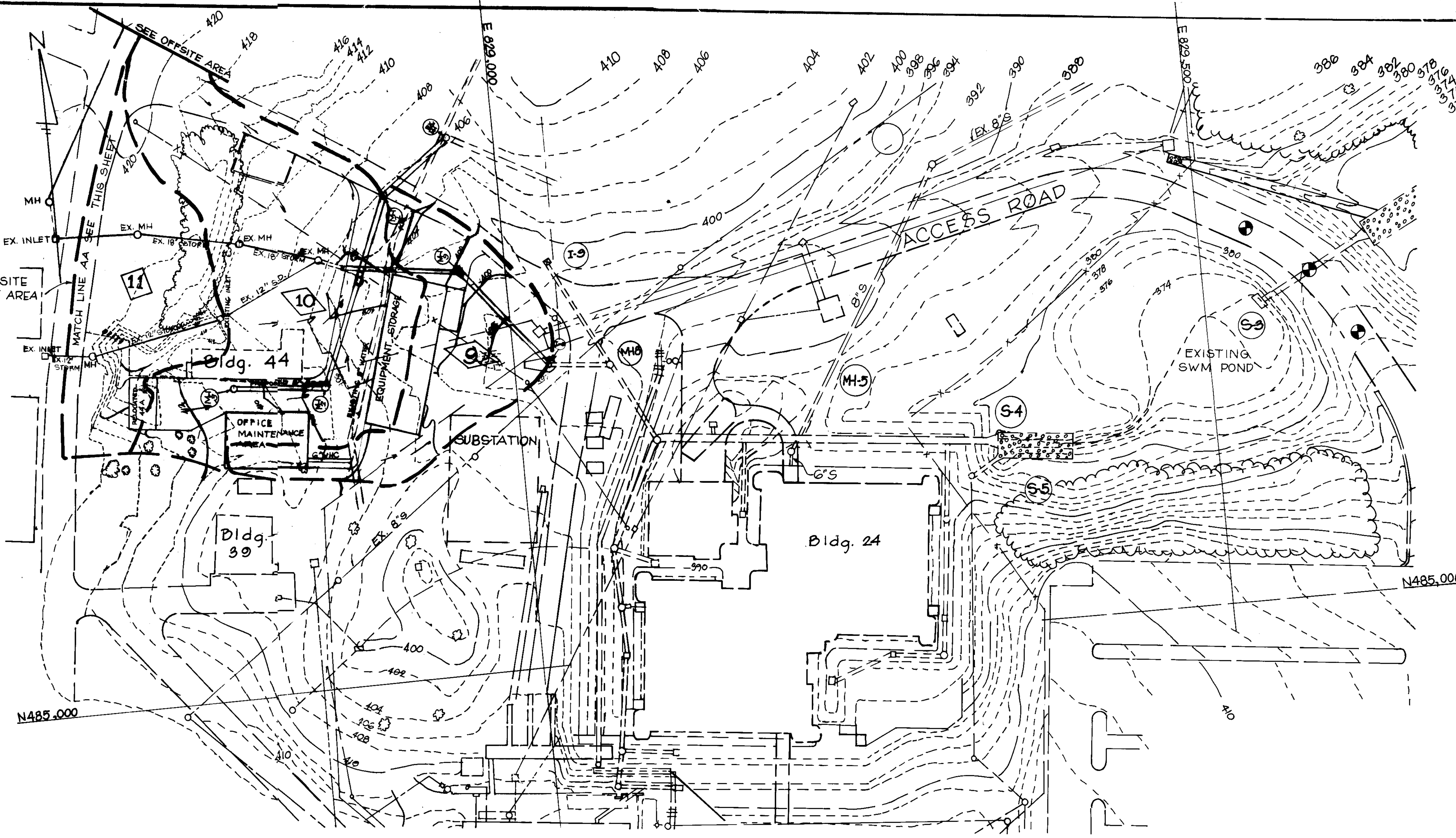


OFFSITE DRAINAGE AREA MAP

Scale : 1" - 200"

DRAINAGE AREA TABULATIONS

AREA DESIGNATION	INLET NO.	AREA (ACRES)	C	% IMPERVIOUS
O (OFFSITE)	OFFSITE	6.08	.60	54
11	EX. INLET	.41	.55	47
10	I-10	1.36	.69	65
9	EX. I-8	.41	.60	54



DRAINAGE AREA MAP

Scale : 1" - 50'

Joyce M. Boyle	7-10-90
[signature]	8.2.90
[signature] CDM	7/10/90
James [signature]	6/22/90
Elizabeth [signature] MK CMF	6/21/90

GROUNDSKEEPING FACILITY

12/29/89 J E Loesch Group Sup.

DRAINAGE AREA MAP

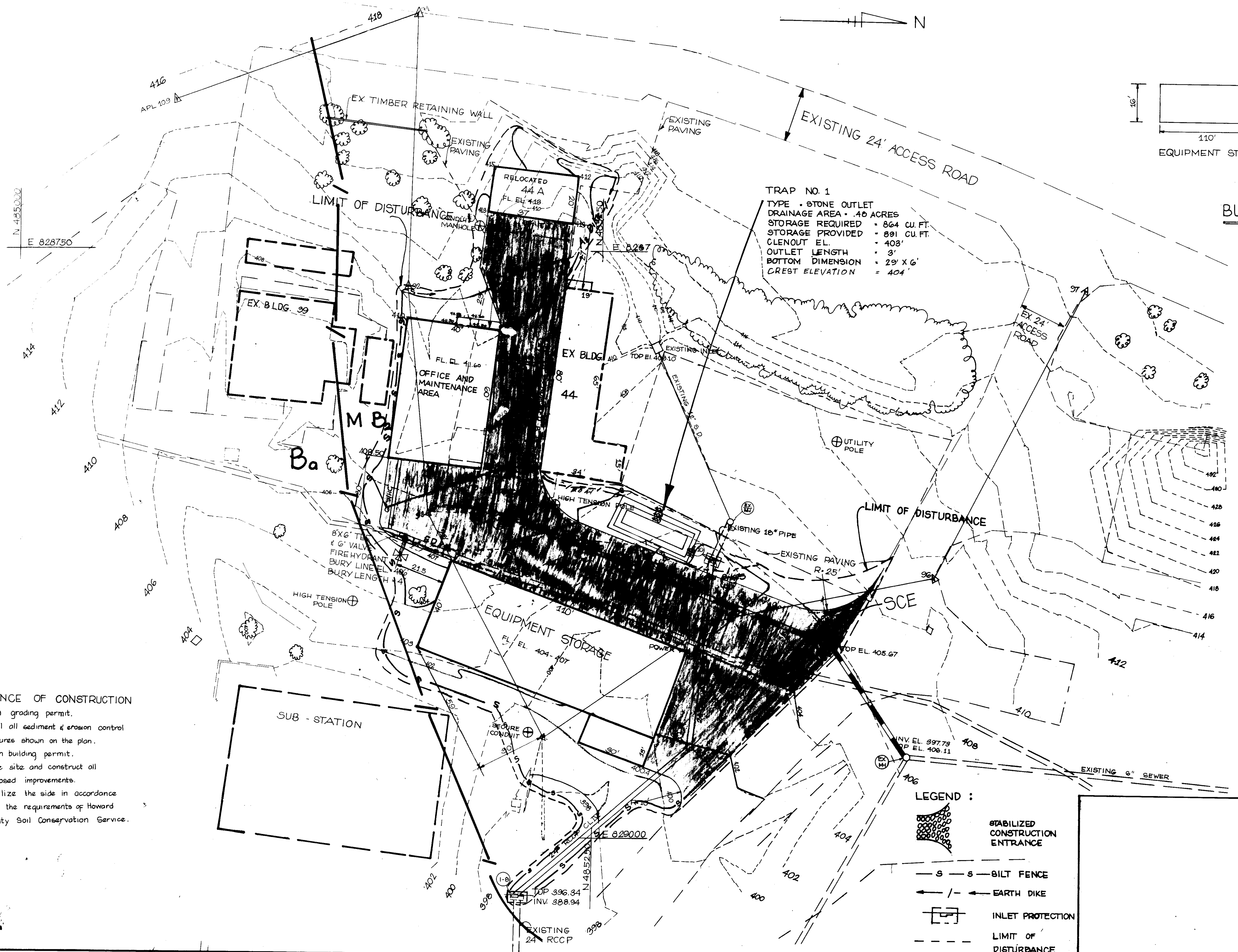
EXISTING UTILITY PLAN

2-26-90 County Comments

REVISIONS

SCALE: AS SHOWN

DATE: 1-2-90



SEQUENCE OF CONSTRUCTION

1. Obtain grading permit.
2. Install all sediment & erosion control measures shown on the plan.
3. Obtain building permit.
4. Grade site and construct all proposed improvements.
5. Stabilize the side in accordance with the requirements of Howard County Soil Conservation Service.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for soil and sediment control.

James M. Nelson [signature] 6/6/90
U. S. Soil Conservation Service — Date

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

[signature] 6/6/90
Howard Soil Conservation District — Date

ENGINEER'S CERTIFICATE

I certify that this plan erosion and sediment control represents a practical and workable plan based on my personal knowledge ofthe site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District.

[signature] 1-2-90
Signature of Engineer — Date

DEVELOPER'S CERTIFICATE

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

James E. Loesch [signature] 12/29/89
Signature of Developer — Date

APPROVED: [signature] 7-10-90

APPROVED: HOWARD COUNTY
[signature] 8.2.90
PLANNING DIRECTOR

[signature] 7/10/5
CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER AND STORM DRAINAGE SYSTEMS, HOWARD COUNTY DEPARTMENT
[signature] 6/22/90
DIRECTOR

Elizabeth A. Calen [signature] 6/21/90
CHIEF, BUREAU OF ENGINEERING, acting

APPLIED PHYSICS LABORATORY
THE JOHN HOPKINS UNIVERSITY
JOHNS HOPKINS ROAD HOWARD COUNTY MARYLAND
APPROVED FOR THE UNIVERSITY BY: J E Loesch
DATE: 12/29/89 TITLE: Group Sup.

GROUNDSKEEPING FACILITY

THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
LAUREL MARYLAND 20707

SEDIMENT CONTROL PLAN
SOIL MAP

2-26-90 COUNTY COMMENTS

REVISIONS

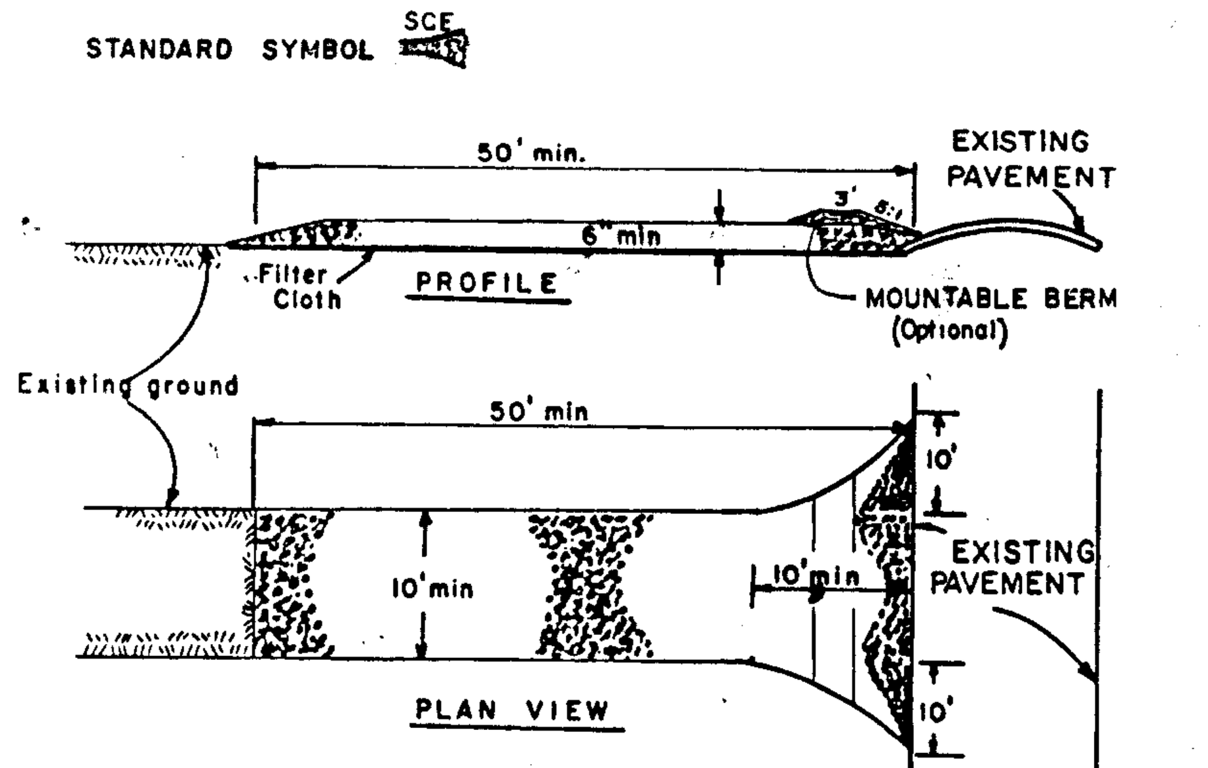
SCALE: 1"- 20'

DATE: 1-2-90

SHEET 5 OF 6

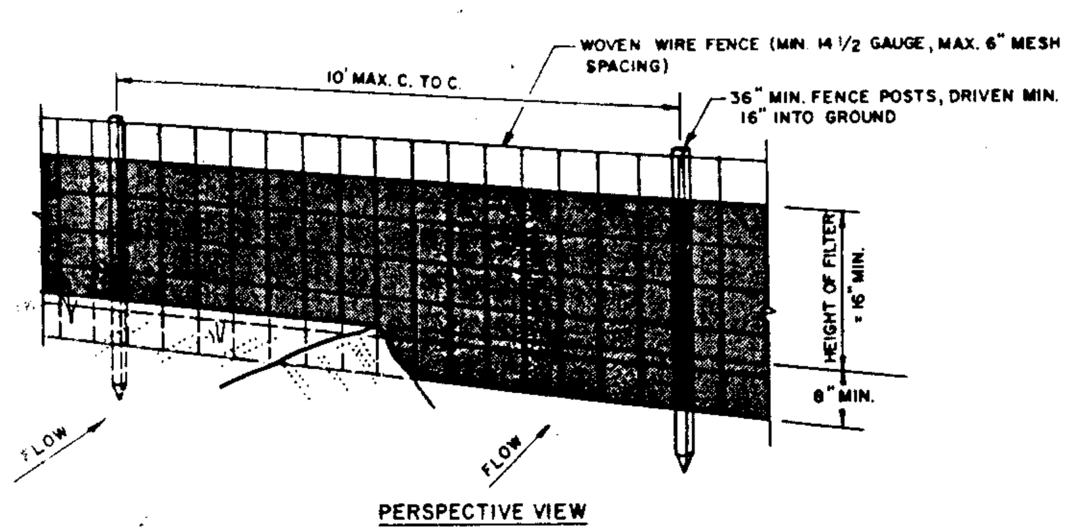
SDP-90-119

STABILIZED CONSTRUCTION ENTRANCE
not to scale

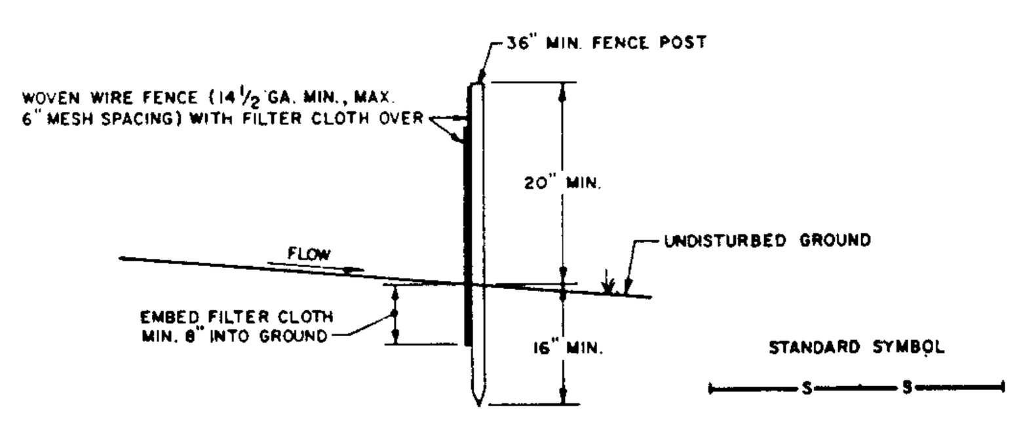


CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of sto[ne]. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This m[ay] require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way mu[st] be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance ont[o] public rights-of-way. When washing is required, it shall be done on an are[a] stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where 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 schedules:

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square 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 400 lbs 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 with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thre 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.

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

TEMPORARY SEEDING NOTES

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

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

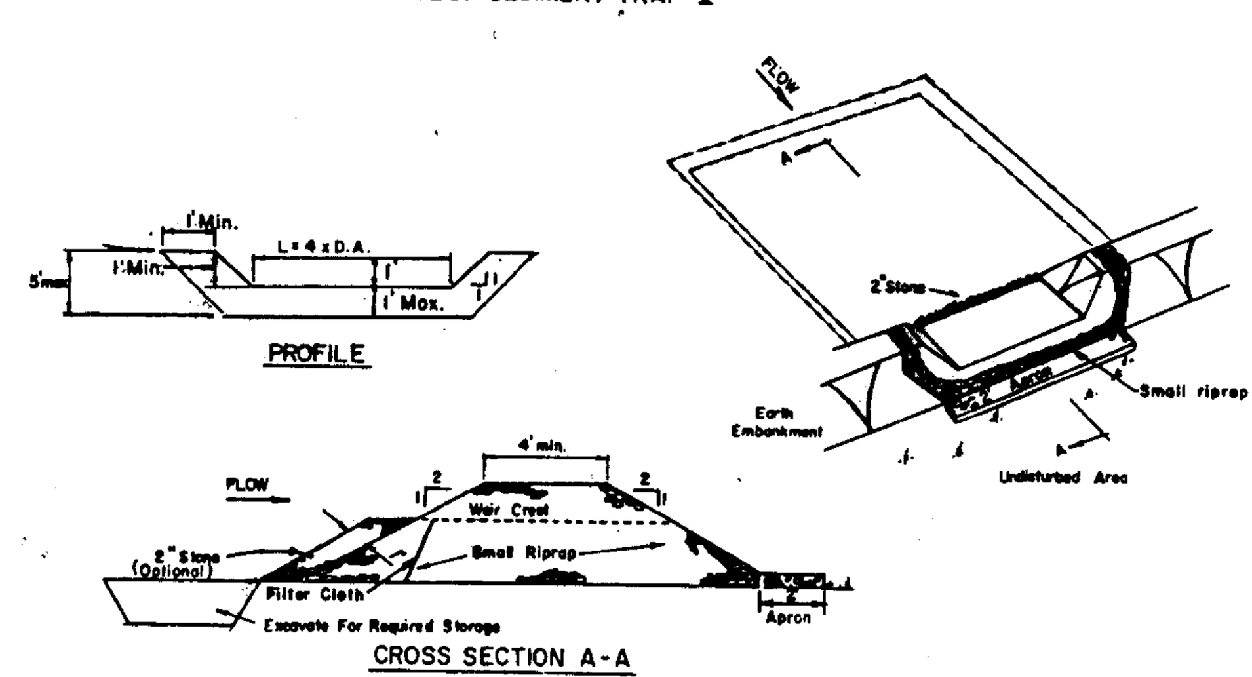
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

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 ther 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.

STONE OUTLET SEDIMENT TRAP V



CROSS SECTION A-A

OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-V

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap OR embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior 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, Chapter 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	.60	Acres
Area Disturbed	.60	Acres
Area to be roofed or paved	.48	Acres
Area to be vegetatively stabilized	.12	Acres
Total Cut	240	Cu. yds
Total Fill	150	Cu. yds
Offsite waste/borrow area location	—	

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 controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment 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.

GENERAL NOTES

1) Refer to "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control for standard details and detailed specifications of each practice specified herein.

2) With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. Changes in sediment control practices require prior approval of the sediment control inspector and the County Soil Conservation District.

3) At the end of each working day, all sediment control practices will be inspected and left in operational condition.

4) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a.) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and b.) fourteen days as to all other disturbed or graded areas on the project site.

5) Any change to the grading proposed on this plan requires re-submission to County Soil Conservation District for approval.

6) Dust control will be provided for all disturbed areas. Refer to 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, pp 6801 and 62.02 for acceptable methods and specifications for dust control.

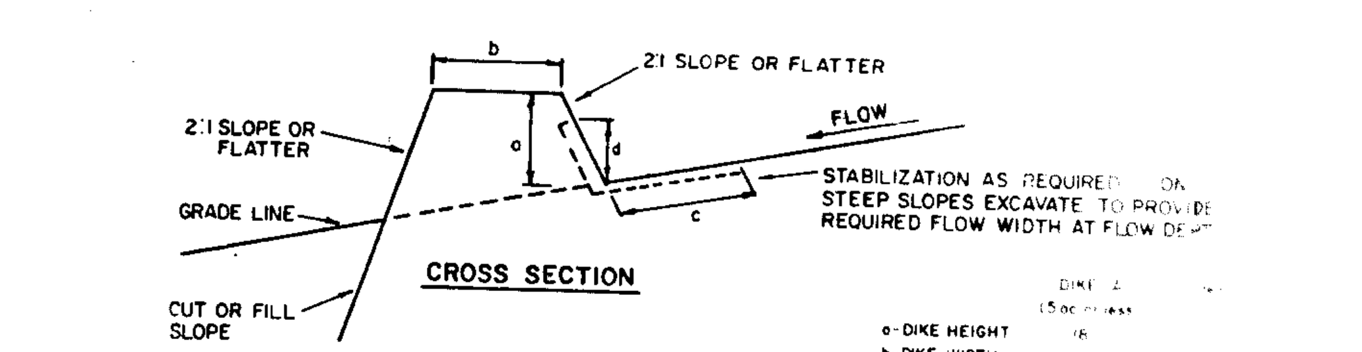
7) Any variation from the sequence of operations stated on this plan requires the approval of the sediment control inspector and the County Soil Conservation District prior to the initiation of the change.

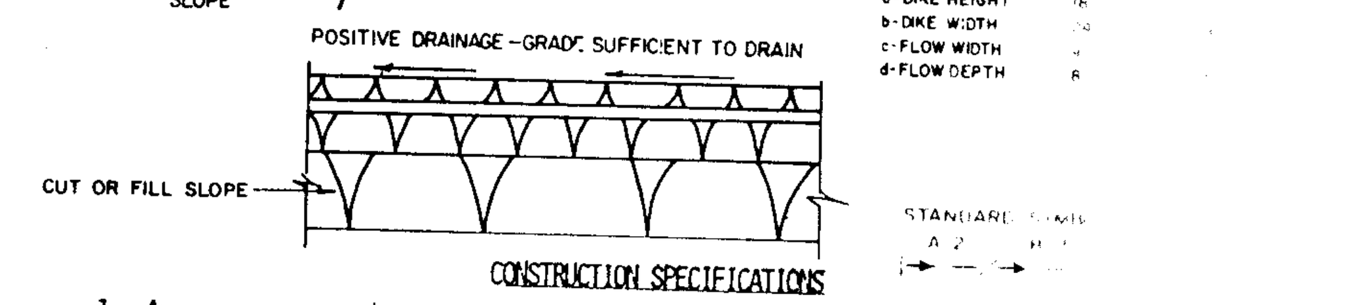
8) Excess cut or borrow material shall go to or come from, respectively, a site with an approved sediment control plan.

The following item may be used as applicable:

9) Refer to "Maryland's Guidelines to Waterway Construction" by the Water Resources Administration (WRA), dated January, 1986 for standard details and detailed specifications of each practice specified herein for waterway construction.

EARTH DIKE
not to scale





CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACI[LITATE] CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE [illegible]
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION [illegible] SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR [illegible] BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE [illegible] ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR [illegible] AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNE[L] [illegible] THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW [illegible]
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE [illegible] EXCELSIOR; SOD; 2" [illegible]
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP [illegible]
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING [illegible]

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT [illegible] INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMEN[T].
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSE[D] [illegible] THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAI[N] [illegible]

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for soil and sediment control.

[signature] 6/6/90
U.S. Soil Conservation Service — Date

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

[signature] 6/6/90
Howard Soil Conservation District — Date

ENGINEER'S CERTIFICATE

I certify that this plan 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.

[signature] 1-2-90
Signature of Engineer — Date

DEVELOPER'S CERTIFICATE

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

[signature] 12/29/89
Signature of Developer — Date

APPROVED; FOR PUBLIC WATER AND PUBLIC [SEWERAGE]
HOWARD COUNTY HEALTH DEPARTMENT

[signature] 7-10-90
COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPARTMENT OF [PLANNING] [illegible]

[signature] 8.2.90
PLANNING DIRECTOR

[signature] 7/18/9[illegible]
CHIED, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 6/22/90
DIRECTOR — DATE

[signature] 6/21/[illegible]
CHIEF, BUREAU OF ENGINEERING acting — DATE

[illegible] engineering inc.

APPLIED PHYSICS LABORATORY
THE JOHN HOPKINS UNIVERSITY
JOHNS HOPKINS ROAD HOWARD COUNTY MARYLAND
APPROVED FOR THE UNIVERSITY BY: J.E. Loesch
DATE: 12/29/89 TITLE: Group Sup.

GROUNDSKEEPING FACILITY

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

SEDIMENT CONTROL NOTES

2-26-90 COUNTY COMMENTS

REVISION

SCALE:

DATE: 1-2-90

SHEET 6 OF 6

SDP 90-119