

PROJECT SITE

VICINITY MAP 1"=2000'

SITE DATA
 Site zoning: NT (NEW TOWN) Employment Center - COMMERCIAL
 Gross site acreage: 6.237 acres (271,683.72 S.F.)

Structure & Parking Setback Requirements
 1. From principal or intermediate arterial highways: 50' to structure.
 2. From any other public street R/W: 30' to structure.
 3. Parking setback from property line: 12' to face of curb (10' to front bumper overhang)

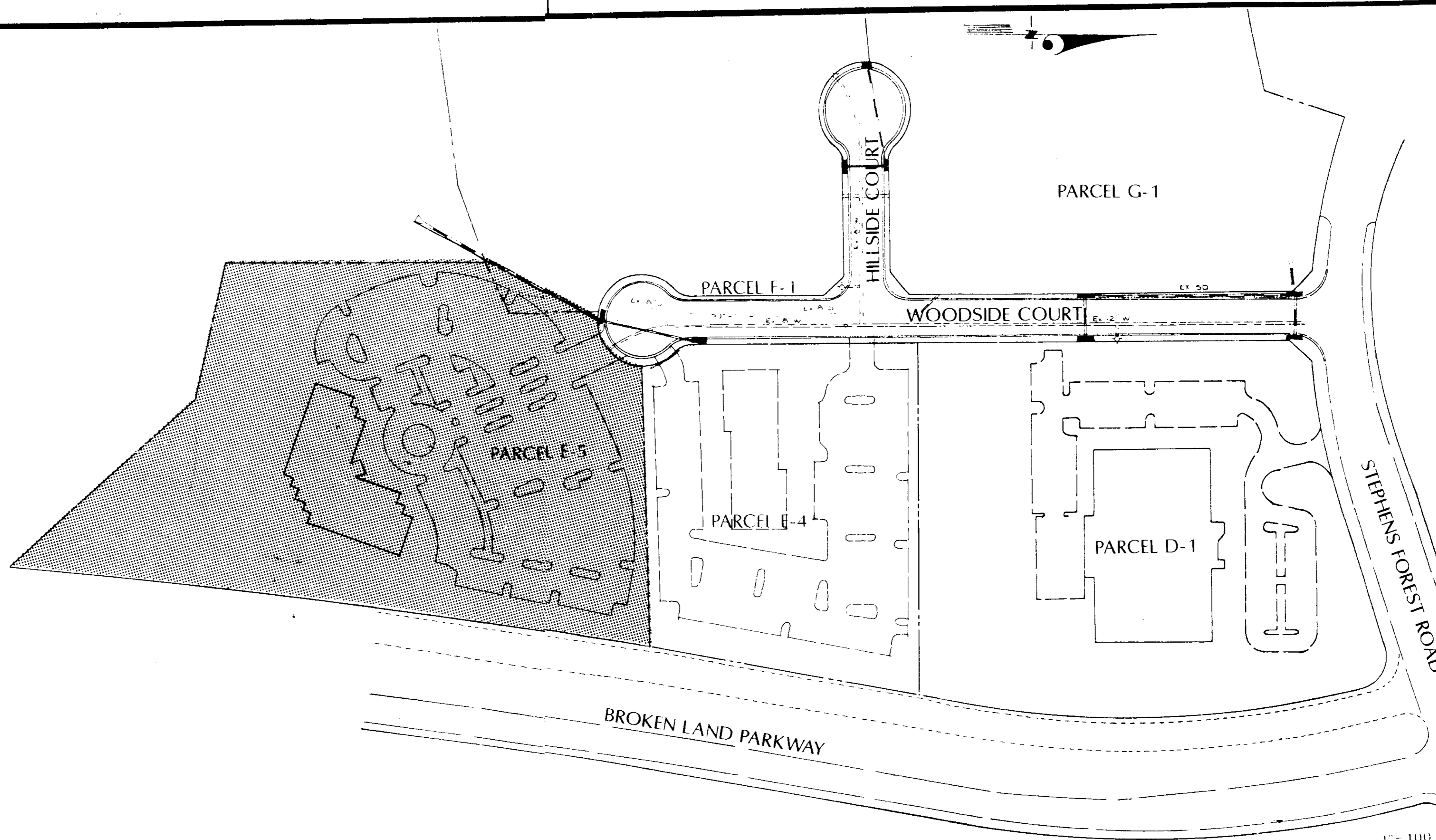
Building Data
 1. Building Use Breakdown:
 a. Office: 44,264 S.F.
 b. Day Care: 9,500 S.F. - 120 CHILD CAPACITY (6,800 sq. ft. - 515 sq. ft. PER CHILD)
 c. Non leasable space: 2,353 S.F.
 2. Building gross floor area: 56,117 S.F.
 3. Building footprint coverage: 18,705 S.F.
 4. Building net leasable floor area: 53,764 S.F.
 5. Percent of actual building coverage: 6.81
 6. Building height: 38'

Parking Data
 1. Required parking ratio (OFFICE): 5 spaces/1,000 S.F. of net leasable building floor area
 2. Required parking (OFFICE): 44,264 x 5.0 = 222 spaces
 3. Required parking ratio (DAY CARE): 1 space/400 S.F. of useable floor area
 4. Required parking (DAY CARE): 23.75 x 1.0 = 24 spaces
 5. Total parking required: 246 spaces
 6. Parking provided: 257 spaces
 7. Handicapped spaces required: 7 spaces
 8. Handicapped spaces provided: 7 spaces
 9. Area of paving devoted to parking: 94,059 S.F.
 10. Area of paving devoted to driveways: 17,118 S.F.
 11. Total paved area on site: 111,177 S.F.

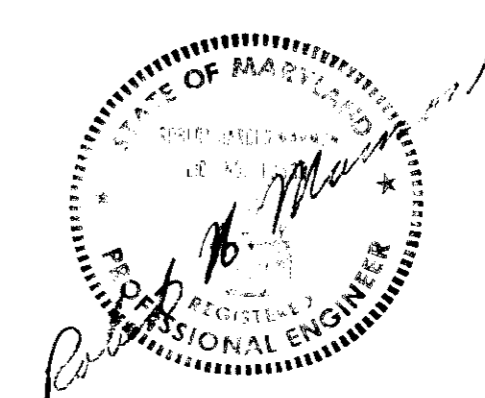
Open Space Data
 1. Overall site open space provided: 572 or 141,366 S.F.
 2. Landscaped parking islands required (5% of parking pavement area): 51 x 94,059 S.F. = 4,703 S.F.
 3. Landscaped parking islands provided: 12,816 S.F. (13.61)

SHEET INDEX

No.	SHEET TITLE
1	COVER SHEET
2	SITE PLAN
3	ENTRANCE DETAILS
4	SITE DETAILS
5	SITE DETAILS
6	LANDSCAPE PLAN
7	LANDSCAPE PLAN
8	PLANTING DETAILS
9	STORM DRAIN PROFILE
10	SEDIMENT CONTROL/S.W.M. PLAN
11	S.W.M. DETAILS
12	SEDIMENT CONTROL DETAILS
13	SEDIMENT CONTROL/S.W.M. DETAILS
14	DRAINAGE AREA MAP



HILLCROFT OFFICE BUILDING II



APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 [Signature] 2/27/90
 COUNTY HEALTH OFFICER DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE,
 STORM DRAINAGE SYSTEMS & PUBLIC WORKS
 HOWARD CO. DEPT. OF PUBLIC WORKS
 [Signature] 2/22/90
 DIRECTOR DATE
 CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF
 PLANNING & ZONING
 [Signature] 3.15.90
 PLANNING DIRECTOR DATE
 CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE LS

SEDIMENT CONTROL

BY THE DEVELOPER:
 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
 I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER _____ DATE _____

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR 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.

SIGNATURE OF ENGINEER _____ DATE _____
 REVIEWED FOR HOWARD S.C.D.
 AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE _____ DATE _____

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

HOWARD S.C.D. _____ DATE _____

OWNER/DEVELOPER:
 CRYSTAL HILL INVESTMENTS INCORPORATED
 10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
 113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
 (301) 296-4100
 ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • GREENBELT, MD
 LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

HILLCROFT OFFICE BUILDING II
 PLAT 2783 TAX MAP 36 PART OF PARCEL 433
 SEP 29 1988 VILLAGE OF OWEN BROWN SECTION 5-1 PARCEL E-5
 NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
 6TH ELECTION DISTRICT HOWARD CO., MARYLAND

DESIGN SCALE
 DRAWN 1 OF 14
 CHECKED SHEET
 DATE JOB No FILE No

F-87-02 F-88-172
 FDP-149-A-1

LOT NO.	STREET ADDRESS	SUBDIVISION NAME	SECTION	PARCEL
E-5	345 WOODSIDE COURT	VILLAGE OF OWEN BROWN	5-1	E-5
		PLANNED OR E	BLOCK NO. ZONE TAX ZONE MAP DIST. TENS. SUR.	
		7783	14	36 6111 606 10.2
		WATER CODE	E-13	TSPARK 5410000

BEFORE BEGINNING CONSTRUCTION, CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

LEGEND

- Proposed Building Setbacks
- Existing Contour
- Proposed Contour
- Proposed Sanitary Line
- Proposed Storm Drainage Line
- Proposed Water Line
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Proposed Inlet
- Proposed Dumpster and Dumpster Pad
- Transformer Pad
- Number of Parking Spaces in Aisle
- Reverse Curb and Gutter
- Overhead Lighting
- DAY CARE PARKING
- DAY CARE AREA

GENERAL NOTES

The owner shall provide a separate and independent sewer connection for each tenant or occupant of this building, shown on this site development plan, who will discharge non-domestic waste to the public sewerage system if this waste is regulated under Section 18.122A of the Howard County Code. Each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above requirements shall apply to all initial and future occupants or tenants.

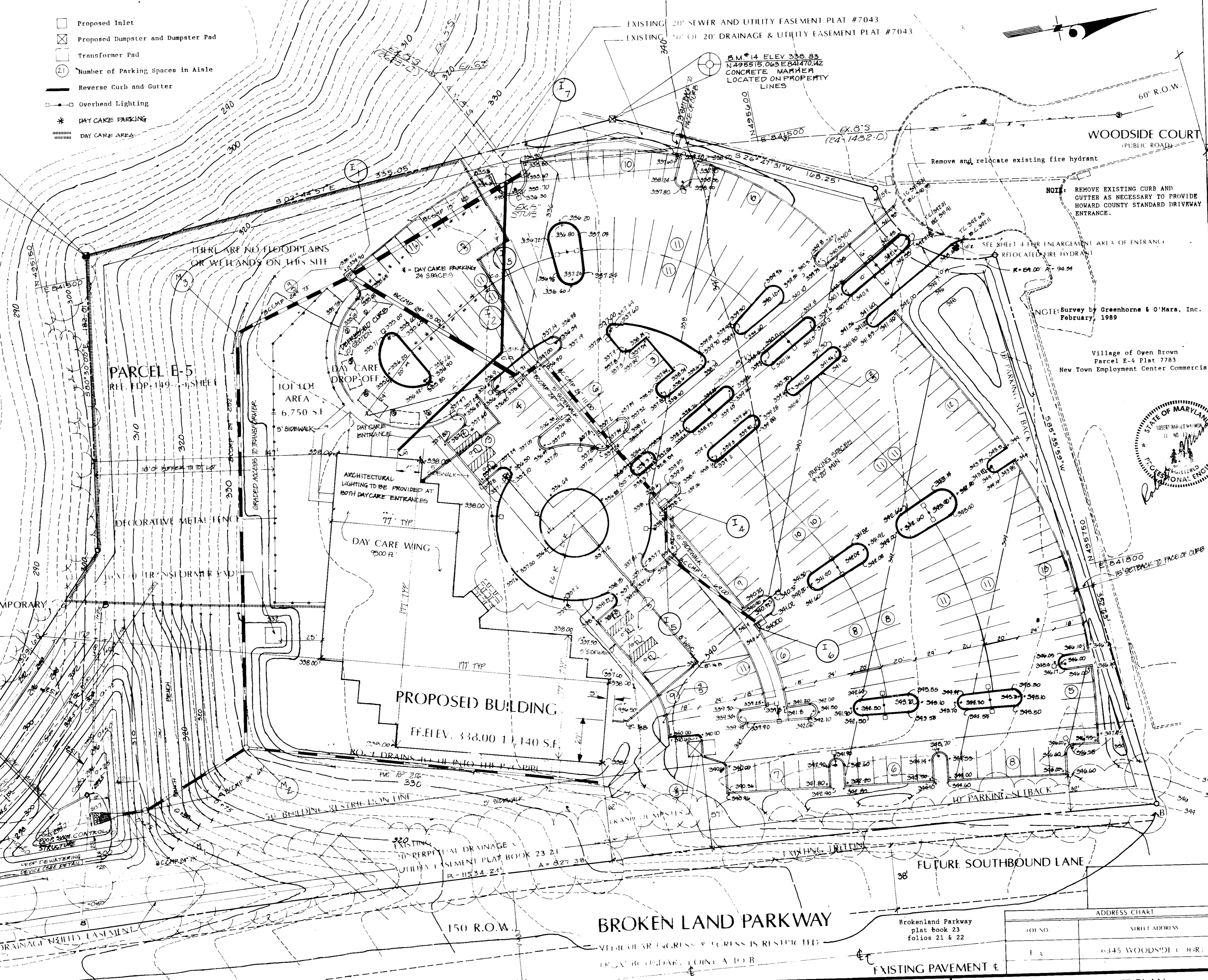
A waiver for stormwater management was granted to this site at time of subdivision. The one site basin provided controls the first flush of runoff for water quality control.

Village of Owen Brown
Section 5, Area 2
Plat Book 30, Folio 72
New Town Employment Center Commercial
(Open Space)

PERMANENT WATER MANAGEMENT BASIN/TEMPORARY
SEDIMENT CONTROL BASIN
PROVIDING 2YR & 10YR MANAGEMENT

GABION OUTFALL PROTECTION
(SEE SHEET 17)

NO WETLANDS
ON SITE



APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
James M. Boyd 2/27/90
COUNTY HEALTH OFFICER DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS
James M. Boyd 2/27/90
DIRECTOR DATE
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF
PLANNING & ZONING
W. J. Boyd 3/5/90
PLANNING DIRECTOR DATE
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT

BY THE DEVELOPER:
I, WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION 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 AND EROSION BEFORE BEGINNING THE PROJECT.
* I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR 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.

SIGNATURE OF ENGINEER DATE
REVIEWED FOR HOWARD S.C.D.
AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
HOWARD S.C.D. DATE

BEFORE BEGINNING CONSTRUCTION CONTACT MISS
UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR
TO CONSTRUCTION

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10065 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

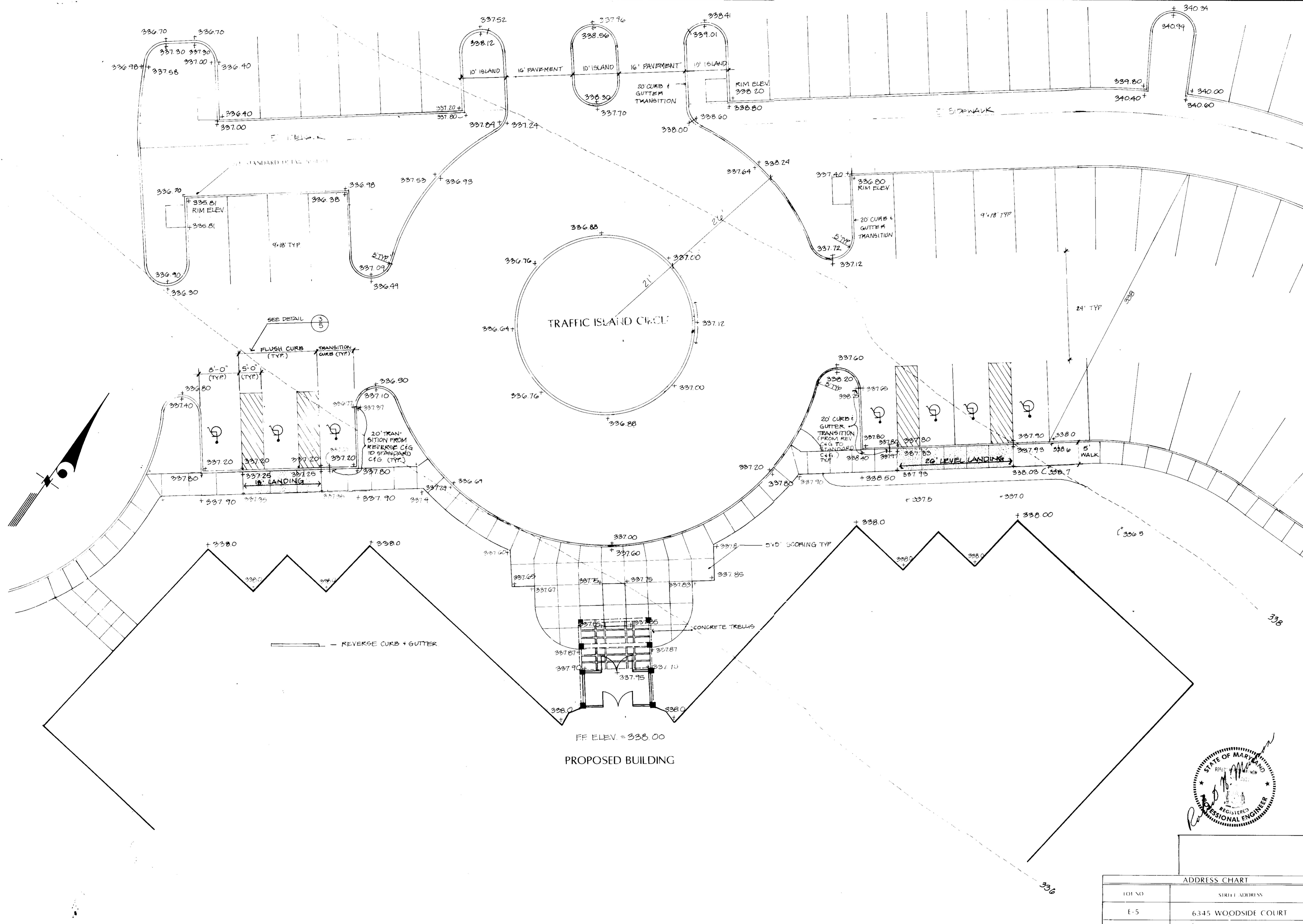
No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
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LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

SITE PLAN
HILLCROFT OFFICE BUILDING II
PART OF PARCEL 433
SDP 89 198 VILLAGE OF OWEN BROWN SECTION 5 PLAT 7044
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6th ELECTION DISTRICT HOWARD COUNTY MARYLAND

SDP-89-198
DLM DESIGN
SCALE 1" = 30'
J.L.G. DRAWN
R.H.M. CHECKED
DATE 4-13-89
SHEET 2 OF 14
JOB No. FILE No.
SDP-89-198

LOT NO.	STREET ADDRESS	SECTION	PLAT	FOLIO	AREA
1A	6345 WOODSIDE COURT	E	7044	36	3410000



APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. Bond 2/27/90
COUNTY HEALTH OFFICER DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS

James P. [Signature] 2/22/90
DIRECTOR DATE

[Signature] DATE
CHIEF, BUREAU OF ENGINEERING

APPROVED HOWARD COUNTY DEPARTMENT OF
PLANNING & ZONING

[Signature] 2/18/90
PLANNING DIRECTOR DATE

[Signature] 2/18/90
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE

BY THE DEVELOPER:

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

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SIGNATURE OF DEVELOPER _____ DATE _____

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SIGNATURE OF ENGINEER _____ DATE _____

REVIEWED FOR HOWARD S.C.D.

AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE _____ DATE _____

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

HOWARD S.C.D. _____ DATE _____

BEFORE BEGINNING CONSTRUCTION, CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

ADDRESS CHART		SUBDIVISION NAME			
LOT NO.	STREET ADDRESS	VILLAGE OF OWEN BROWN			
E-5	6345 WOODSIDE COURT	PLAT NO. OR FILE	BLOCK NO. / ZONING	TAX / ZONE MAP	FILE NO. / PLANS & SPEC.
		7783	14 / N7	36	G-7
		WATER CODE		SEWER CODE	
		E-13		541000	

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
(301) 296-4100

ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • GREENBELT, MD
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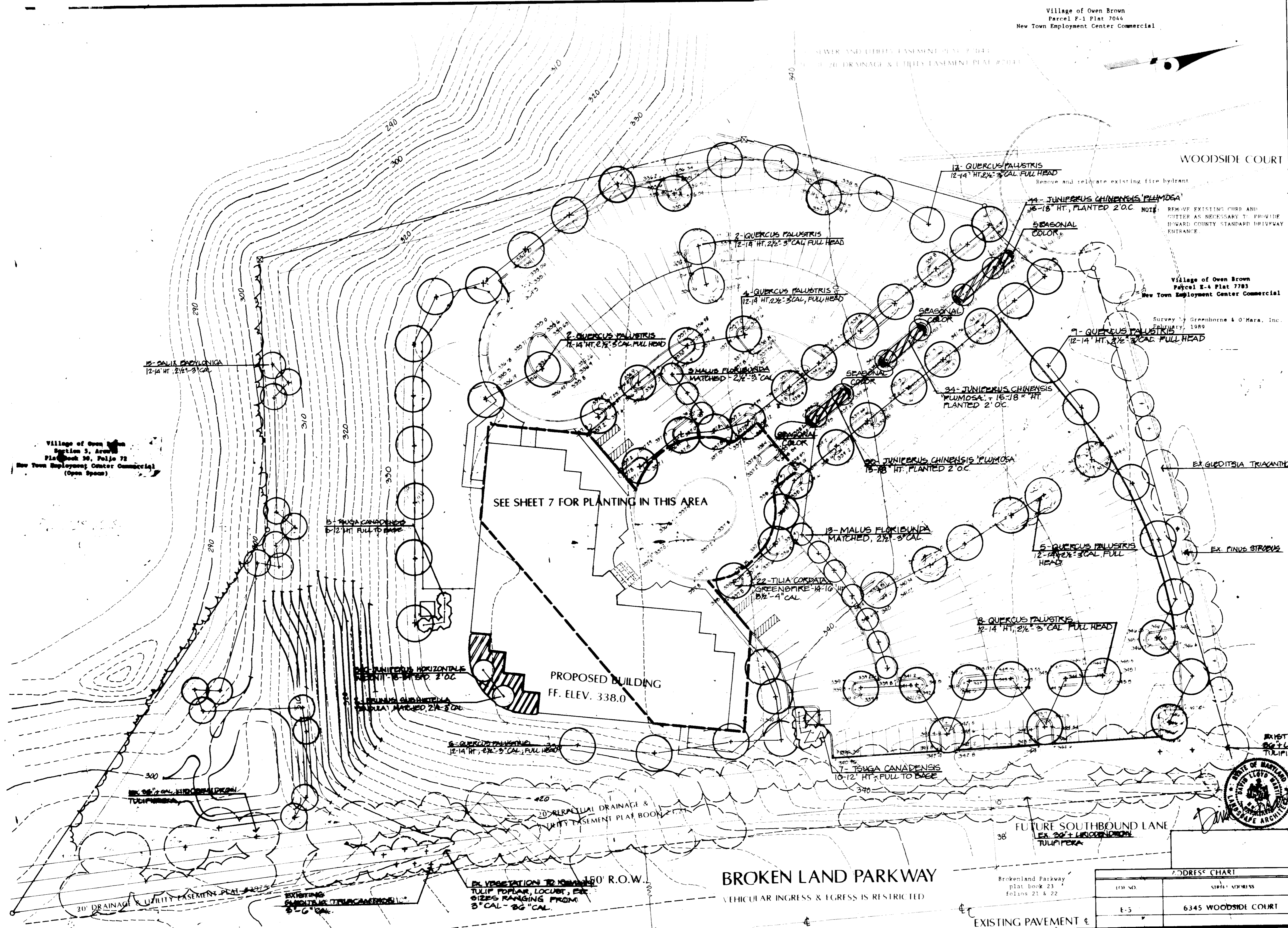
ENTRANCE DETAILS

HILLCROFT OFFICE BUILDING II
PLAT 7783 JAX MAP 36 PART OF PARCEL 433
SDP-89-198, VILLAGE OF OWEN BROWN SECTION 5.1, PARCEL E-5
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN	SCALE	1" = 10' 0"
DRAWN	3 OF 14	
CHECKED	SHEET	
DATE	JOB No.	FILE No.

SEWER AND UTILITY EASEMENT PLAT #7044
20' DRAINAGE & UTILITY EASEMENT PLAT #7044

WOODSIDE COURT



Village of Owen Brown
Section 5, Area
Platbook 30, Folio 72
New Town Employment Center Commercial
(Open Space)

Village of Owen Brown
Parcel P-1 Plat 7783
New Town Employment Center Commercial

Survey by Greenhorne & O'Mara, Inc.
February, 1989

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
Jayme M. Boyd for *John* 2/27/90
COUNTY HEALTH OFFICER DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS & PUBLIC WORKS
HOWARD CO. DEPT. OF PUBLIC WORKS
John 2/22/90
DIRECTOR DATE
John 2/22/90
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED HOWARD COUNTY DEPARTMENT OF
PLANNING & ZONING
John 3/15/90
PLANNING DIRECTOR DATE
John 3/15/90
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE LS

BY THE DEVELOPER:
I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION
WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ALL
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DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING
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I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY
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SIGNATURE OF DEVELOPER DATE
BY THE ENGINEER: I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT
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THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND
SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
HOWARD S.C.D. DATE

EXISTING 36" LINDSEY DENDRON
TULIPIFERA
10-11-89
LS

BEFORE BEGINNING CONSTRUCTION, CONTACT MISS
UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR
TO CONSTRUCTION

ADDRESS CHART

LOT NO.	STREET ADDRESS	LOT NO.	STREET ADDRESS
E-5	6345 WOODSIDE COURT	E-13	

VILLAGE OF OWEN BROWN	5-1	E-5
PLAT 7783	14	NT
WATER COLOR	E-13	5410000

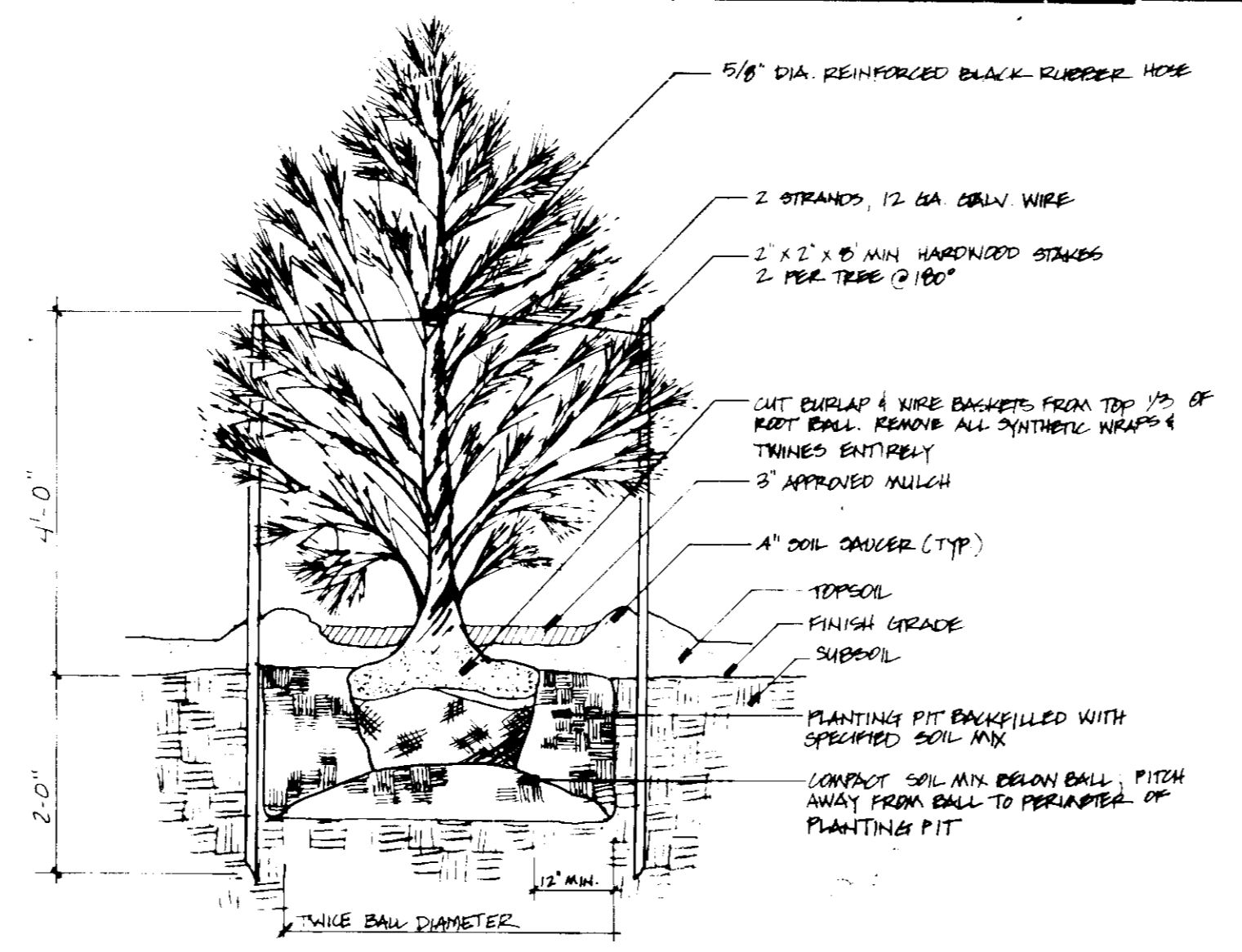
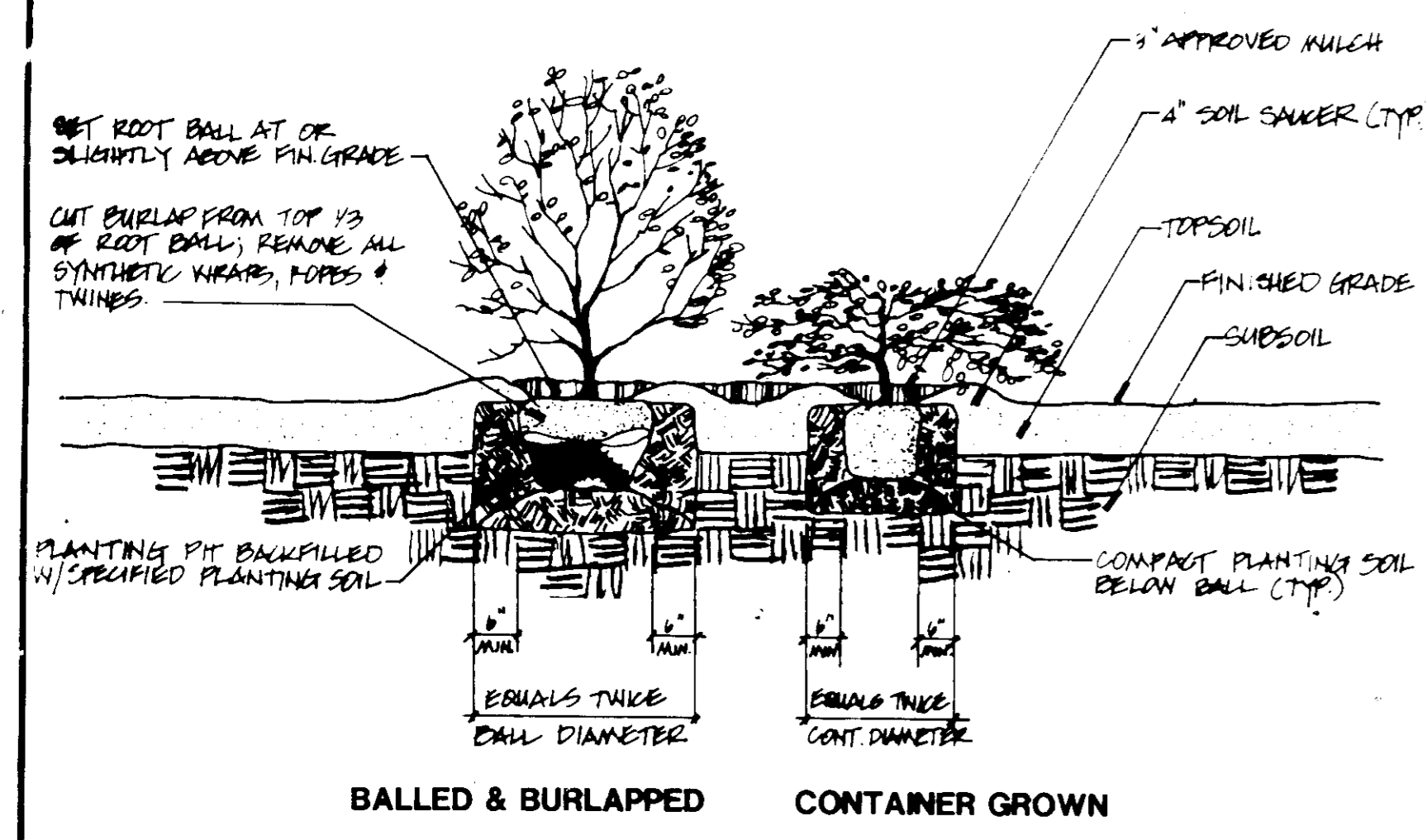
OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

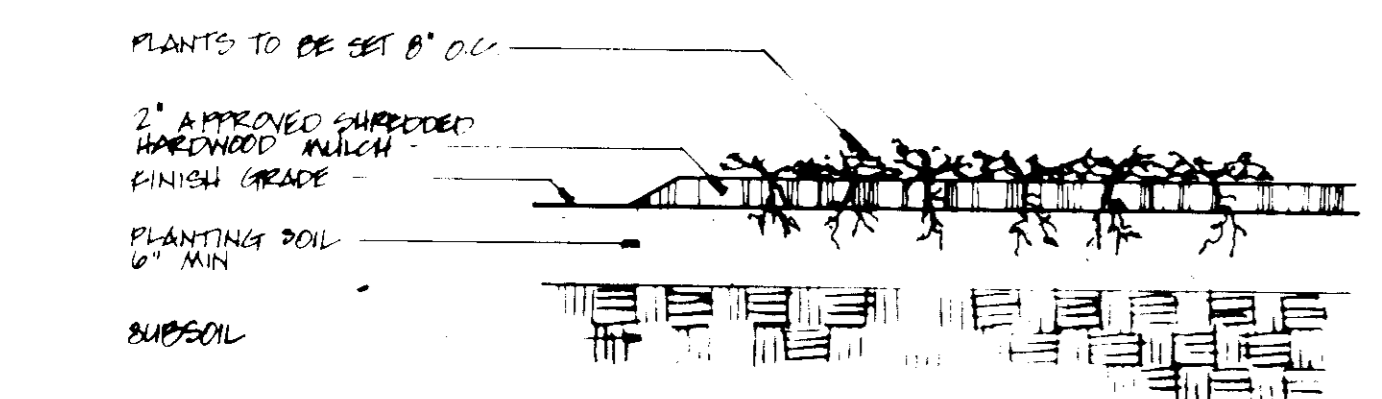
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LANDSCAPE PLAN
HILLCROFT OFFICE BUILDING II
PLAT 7783 TAX MAP 36 PART OF PARCEL 433
SDP-89-146 V. AGE OF OWEN BROWN, SECTION 5/1, PARCEL E-5
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6TH ELECTION DISTRICT HOWARD CO., MARYLAND

DESIGN	SCALE 1"=30'
DRAWN	8 OF 14
CHECKED	SHEET
DATE	JOB No. FILE No.



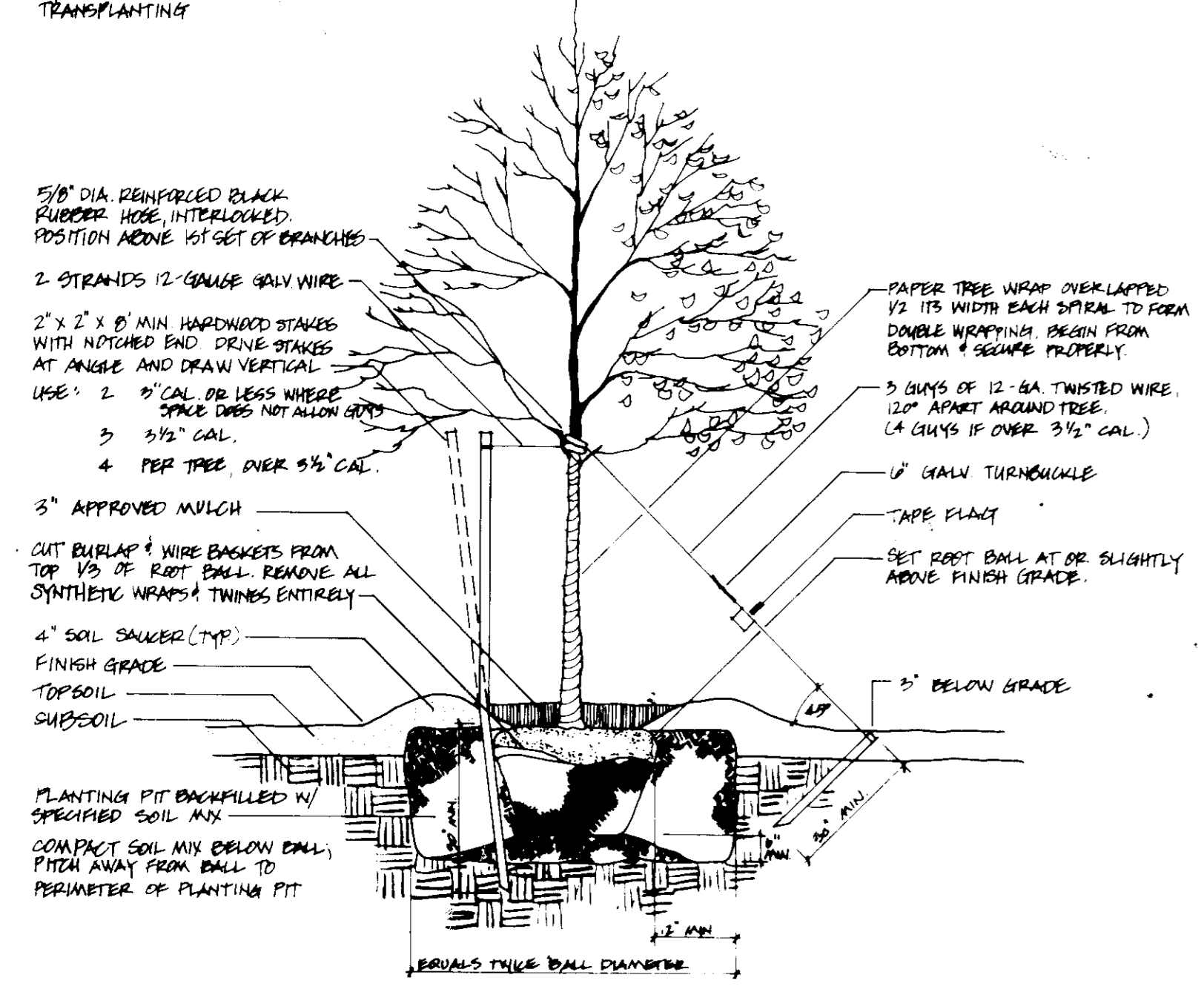
Shrub Planting
NO SCALE



Groundcover Planting
NO SCALE

PLANTING SHALL BE IN ACCORDANCE WITH APPROVED HORTICULTURAL STANDARDS IN ORDER TO PRESERVE THE NATURAL FORM OF THE SPECIFIC PLANT IF APPLICABLE AND APPROVED BY THE LANDSCAPE ARCHITECT. ONE FOURTH TO ONE THIRD OF THE WOOD SHALL BE REMOVED BY THINNING OUT TO BALANCE ROOT LOSS DUE TO TRANSPLANTING.

NOTE: WHERE PLANT PITS ARE DEEP WITH HARDENING DEVICES, GLAZED SIDES OR HARDENED SURFACES SHALL BE SCARIFIED PRIOR TO PLANTING.



STAKING DECIDUOUS TREES 3\"/>

GUYING DECIDUOUS TREES OVER 3\"/>

Tree Planting
NO SCALE

- PLANTING NOTES**
- Botanical names shall prevail over common names.
 - No plant substitutions shall be made without prior written approval of the Landscape Architect.
 - All plant material shall be nursery grown, no collected materials shall be accepted, unless specifically indicated.
 - Plants shall conform with the American Association of Nurserymen standards in all ways including dimensions.
 - All plants are to be approved and/or tagged by the Landscape Architect. The Landscape Architect has the right to reject any plant materials upon delivery to the project. Selection by the Landscape Architect does not waive the right of rejection.
 - All replacements shall be plants of the same kind and size as specified in the plant list, or as is necessary to match surviving plants of the same planting group. All costs shall be borne by the Landscape Contractor except for replacements resulting from loss or damage due to vandalism or acts of neglect on the part of others, physical damage by animals, vehicles, fire, etc., as may be determined by the Landscape Architect.
 - Quantities shown on the Contract Drawings take precedence over plant materials list. Plant materials shall be furnished and planted as specified. Any deviation from these specifications will be rejected.
 - All plant materials shall be placed, or locations staked, on the site as shown on the planting plan prior to commencement of plant excavation for the Landscape Architect's approval. The Contractor must notify the Landscape Architect of all planting operations a minimum of 48 hours in advance.
 - All plant materials shall be balled and burlapped or container grown or as otherwise specified. No constructed balls shall be accepted. Remove synthetic "burlap" and synthetic twine and ropes. Remove top 1/3 of metal baskets from root balls when the root ball has been positioned in the planting pit; provide support as necessary to protect the root ball from injury during this operation.
 - All plant materials are to be set with the top of root ball even with or slightly above the finished grade.
 - Planting soil shall consist of 5 parts topsoil (or excavated soil if approved by the Landscape Architect), one part sphagnum moss, one part dehydrated cow manure.
 - All plant beds except as specifically noted, are to be topped with a 3\"/>

TYPE I	I BY WT.	TYPE II	I BY WT.
Perennial Rye	25%	F-31 Tall Fescue	80%
Kentucky Bluegrass	50%	Annual Ryegrass	20%
(approved hybrid varieties)			
Creeping Red or Pennlawn Fescue	25%		

- Seeding of lawn areas shall be at the rate of at least 5 lbs. per 1000 square feet. All lawn areas shall be Type I seed mix unless otherwise designated.
- All lawn areas shall be fertilized with a complete fertilizer, at least half of the nitrogen of which is derived from a natural organic source. It shall be of a 1:1:1 ratio in the spring using a minimum analysis of 10:10:10 and a 1:2:1 ratio in the fall using a minimum analysis of 8:10:8.
- All lawn areas shall be mulched with salt hay or equal as approved by the Landscape Architect. Straw hay is not permitted.
- Report any discrepancies to the Landscape Architect immediately for decision.
- Maintenance shall begin immediately after each plant is planted, and shall continue until acceptance. Plants shall be watered, mulched, weeded, pruned, sprayed, fertilized, cultivated, and otherwise maintained and protected until acceptance of work. Settled plants shall be reset to a proper grade and position, planting saucer restored, and dead material removed. Guys shall be tightened and repaired. Defective work shall be corrected as soon as possible after it becomes apparent, when weather and season permit. Upon completion of planting and prior to acceptance the Landscape Contractor shall remove from the site excess soil and debris and repair disturbed lawn areas and any other damage resulting from planting operations. Dangerous conditions shall be repaired immediately.
- Upon completion of all landscaping operations, an inspection will be made to determine the acceptability of the job. At this time, a one year guarantee period shall begin, to be culminated by a final inspection. Immediately prior to final inspection, unless otherwise directed, the Contractor shall remove soil saucers, hose, guy wires, wrapping material and stakes. Only those materials found to be alive and in a vigorous, healthy condition at that time will be granted final acceptance. All other material shall be replaced at the Contractor's expense. A sum to cover potential replacements may be withheld if so desired by the owner. The Landscape Architect will be the sole judge of plant material acceptability.

* Planting after Nov. 21 to be guaranteed thru 2nd spring's leafing.

PLANT LIST

Qty.	Botanical/Common Name	Height	Spread	Caliper	Trunk	Remarks
I. Major Deciduous Trees						
50	Quercus palustris Pin Oak	12-14'		2 1/2" - 3"	6'	B & B full head
20	Tilia cordata "Greenspire" Greenspire Linden	14-16'		3 1/2" - 4"	6'	B & B full head
II. Minor Deciduous Trees						
1	Cornus Florida Flowering Dogwood	8-10'		3/8" - 1"	3-4'	B & B matched
1	Malus floribunda Flowering Crabapple	6-8'		2 1/2" - 3"	3-4'	B & B matched
4	Prunus subhirtella pendula, Weeping Cherry	8-10'		3/8" - 1"	3-4'	B & B matched
8	Prunus yedoensis Yoshino Cherry	8-10'		2 1/2" - 3"	3-4'	B & B matched
10	Saxa Babybona, Weeping Willow	12-14'		2 1/2" - 3"	3-4'	B & B matched
III. Evergreen Trees						
15	Tsuga canadensis Canadian Hemlock	10-12'	4'			B & B full to base
27	Pinus strobus/White Pine	10-12'	6'			B & B full to base
IV. Shrubs & Groundcover						
280	Juniperus chinensis "Plumosa", Andorra Juniper	15-18"				planted 2" o.c. full heavy plants
430	Junipers horizontalis "Wilton", Blue Rug Juniper	15-18"				planted 2" o.c. full heavy plants
210	Leurothoe axillaries Coast Leucothoe	12-18"	18-24"			planted 2" o.c. full plant bed
34	Pieris japonica Japanese Pieris	2-3'	30-36"			planted 3" o.c. full heavy plants
36	Rhododendron obtusum Red hybrid azalea	12-18"	18-24"			planted 2" o.c. full heavy plants
124	Taxus baccata "Repandens" Spreading English Yew	12-18"	18-24"			planted 2" o.c. full heavy plants
183	Taxus cuspidata Japanese Yew	18-24"	24-30"			planted 2" o.c. hedge planting
	Seasonal color					red, pink or white varieties
183	Ilex crenata "Hetzli" HETZ JAPANESE HOLLY	18-24"	24-30"			PLANTED 2" O.C. HEDGE PLANTING

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

James M. Boyd 2/27/90
DIRECTOR

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS

James J. ... 2/22/90
DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF
PLANNING & ZONING

... 2/15/90
PLANNING DIRECTOR

... 2/15/90
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT

BY THE DEVELOPER

I, *...* CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT MY 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 AND EROSION BEFORE BEGINNING THE PROJECT.

I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER _____ DATE _____

BY THE ENGINEER

I CERTIFY THAT THIS PLAN FOR 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.

SIGNATURE OF ENGINEER _____ DATE _____

REVIEWED FOR: HOWARD S.C.D. _____ DATE _____

AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE _____ DATE _____

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

HOWARD S.C.D. _____ DATE _____

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
(301) 296-4100

ANNAPOLIS MD • ATLANTA GA • AURORA CO • CULPEPER VA • DUBLIN GA • EXPORT PA • FAIRFAX VA • GREENBELT MD
LEESBURG VA • MANASSAS VA • ORLANDO FL • RALEIGH NC • ROCKVILLE MD • TAMPA FL • WEST PALM BEACH FL

FD-149-A-1

BEFORE BEGINNING CONSTRUCTION CONTACT MISS. UTILITY AT 1-800-251-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

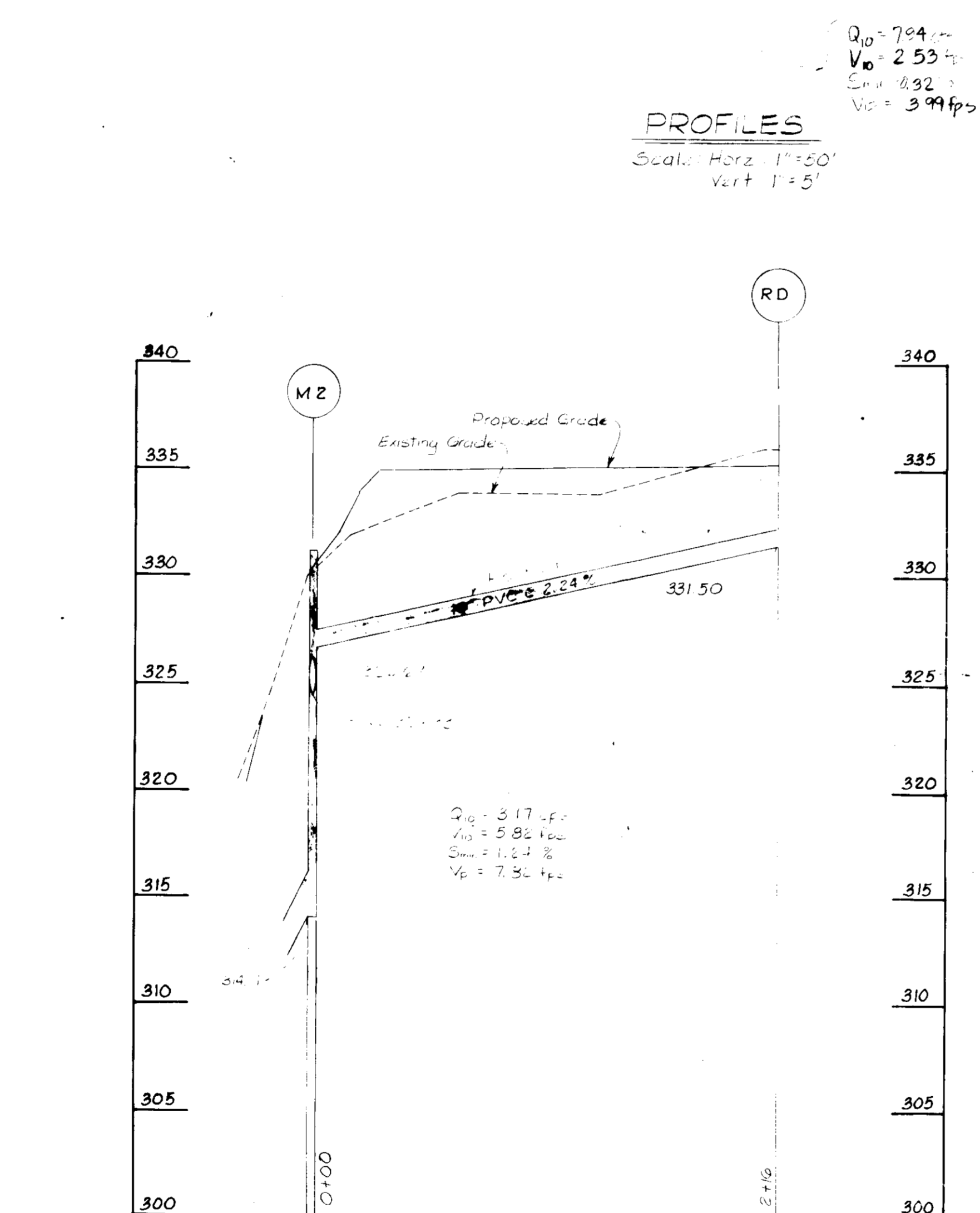
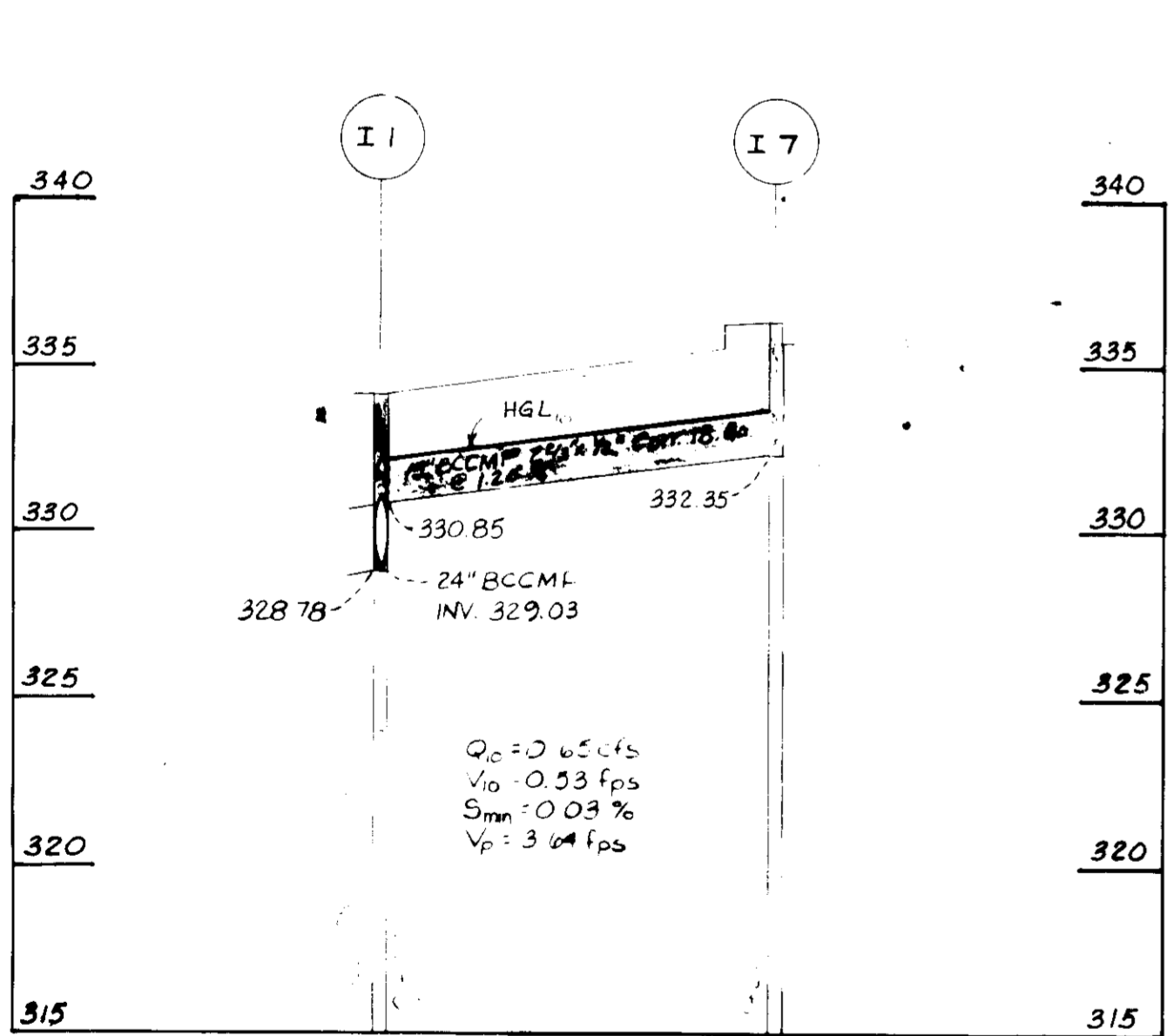
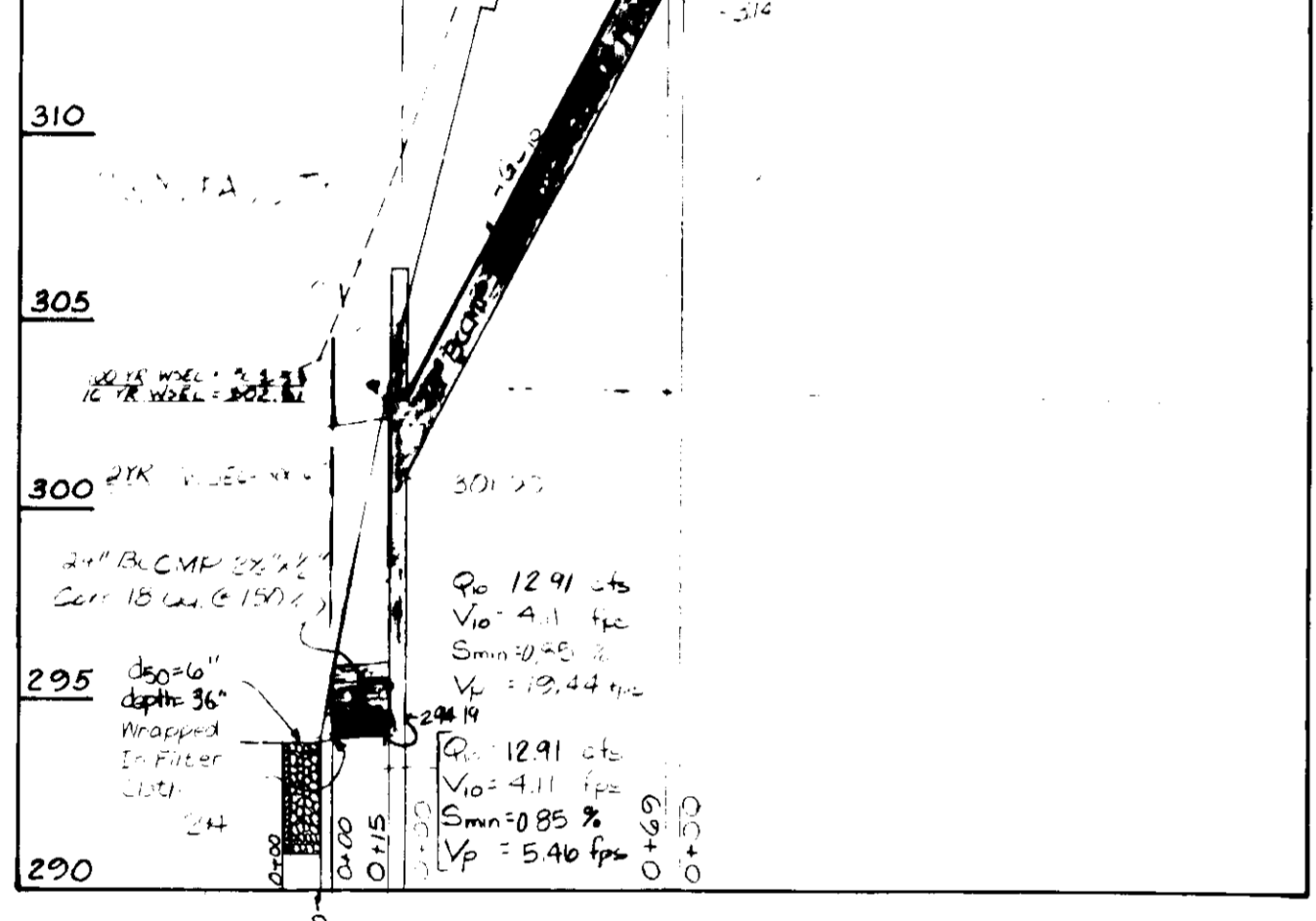
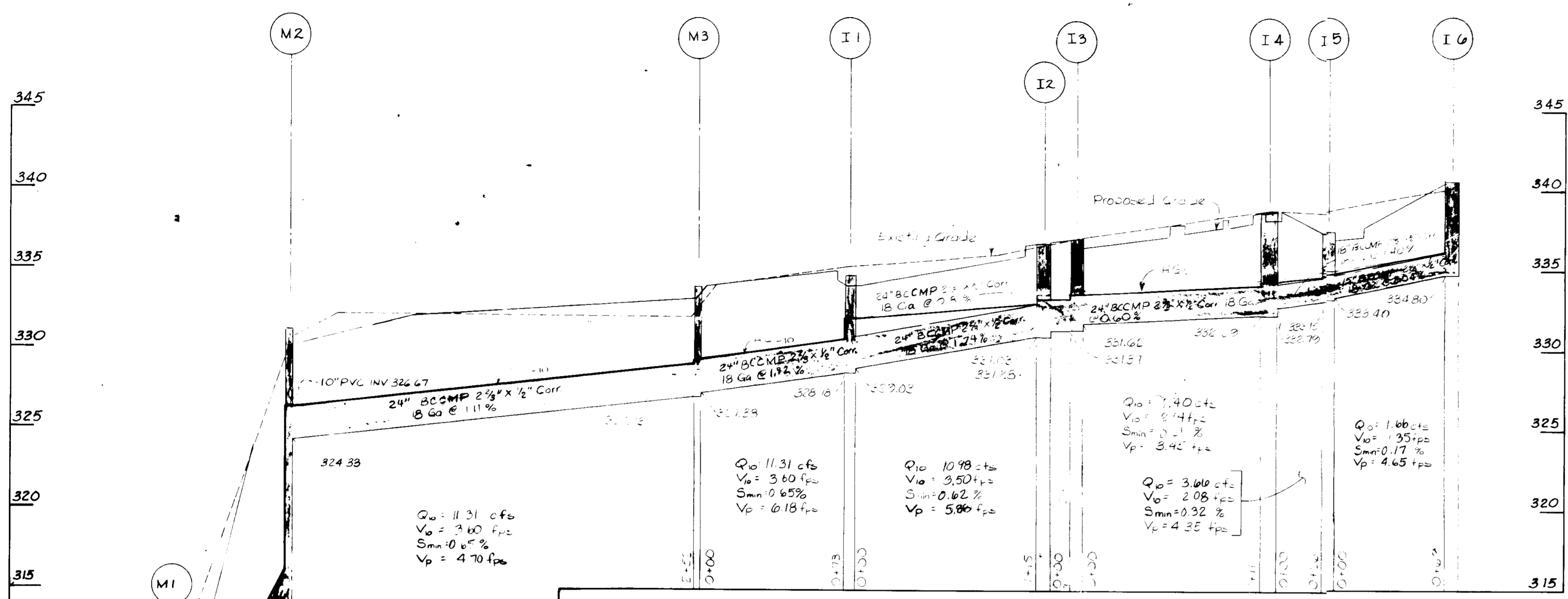
OWNER'S NAME: VILLAGE OF OWEN BROWN

ADDRESS: 6345 WOODSIDE COURT

SECTION: 5-1

FILE NO: 8 OF 14

DATE: _____ JOB NO: _____ FILE NO: _____



STRUCTURE SCHEDULE			
NO.	TYPE	TOP ELEVATION	REMARKS
I 1	S' Comb Inlet	334.90	Howard Co. Standard Sd. 4.32
I 2	A-5 Inlet Depressed	336.71	Howard Co. Standard Sd. 4.01
I 3	A-5 Inlet	337.00	Howard Co. Standard Sd. 4.01
I 4	A-5 Inlet	338.80	Howard Co. Standard Sd. 4.01
I 5	A-5 Inlet	337.40	Howard Co. Standard Sd. 4.01
I 6	A-5 Inlet	340.60	Howard Co. Standard Sd. 4.01
I 7	A-5 Inlet	336.20	Howard Co. Standard Sd. 4.01
M 3	Std Precast	333.93	Howard Co. Standard G 5.11
M 2	Std Precast	331.13	Howard Co. Standard G 5.11
M 1	Std Precast	306.50	Howard Co. Standard G 5.11
S 1	Metal End Section	296.00	Howard Co. Standard SD 5.61

PIPE SCHEDULE		
DIAMETER	TYPE	LENGTH
15"	BCCMP 2 1/2" x 1/2" corr. 18 ga.	189'
18"	" "	26'
24"	" "	646'
10"	PVC	216'

- GENERAL NOTES
STORM DRAIN NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
 - ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION.
 - ALL INLETS SHALL BE HOWARD COUNTY STANDARD UNLESS OTHERWISE SHOWN.
 - ALL STREET CURB RETURNS SHALL HAVE A 30' RADIUS UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
 - TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DICES SHALL BE CONSTRUCTED ABOUT THE TOES OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOIL AREAS AT THE END OF EACH DAY.
 - CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
 - DISTURBED SLOPE AREA TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
 - ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 1500 P.S.I.
 - ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 2.
 - TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1981 REVISED EDITION.
 - POLY-FILTER-X OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP (FULL WIDTH AND LENGTH OF STONE).
 - STONE FOR RIP RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP RAP SHALL BE UNPAVED UNLESS OTHERWISE NOTED.
 - STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
STATE HIGHWAY ADMINISTRATION - 531-5533
BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE - 685-0123
BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE - 685-0123
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 992-2366
CHESAPEAKE & POTOMAC TELEPHONE COMPANY - 725-9976
AMERICAN TELEPHONE & TELEGRAPHY - CABLE LOCATION DIVISION 393-3553
MISS UTILITY 785-1300

Note: For storm drainage in plan view see sheet 2.

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

Joyce M. Boyd
COUNTY HEALTH OFFICER
DATE: 2/27/90

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS

James G. ...
DIRECTOR
DATE: 2/22/90
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

...
PLANNING DIRECTOR
DATE: 2/15/90
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT

SEDIMENT CONTROL

BY THE DEVELOPER:
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 FOR THE CONTROL OF SEDIMENT AND EROSION PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER _____ DATE _____

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR 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.

SIGNATURE OF ENGINEER _____ DATE _____

REVIEWED FOR: HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE _____ DATE _____

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD S.C.D. _____ DATE _____

10-11-89
LS

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
(301) 296-4100
ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • GREENBELT, MD
LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

ADDRESS CHART		SUBDIVISION NAME		SECT./AREA	LOT/PARCEL
LOT NO	STREET ADDRESS	VILLAGE OF OWEN BROWN		5-1	1-5
E-5	6345 WOODSIDE COURT	PLAT NO OR L/F	BLOCK	ZONE	TAX ZONE
		7783	14	NT	2G
				ELEC. PAT.	CENSUS
					6TH 606 L.O.

STORM DRAIN PROFILE
HILLCROFT OFFICE BUILDING II
PLAT 7783 TAX MAP 36 PART OF PARCEL 433
SDP-89-198, VILLAGE OF OWEN BROWN, SECTION 5 1 PARCEL E
EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6th ELECTION DISTRICT HOWARD CO., MARYLAND

TJW DESIGN	SCALE	Horz: 1"=50'	Vert: 1"=5'
DTW DRAWN		9 OF 14	
RHM CHECKED	SHEET		
DATE	JOB No.	FILE No.	

STORMWATER MANAGEMENT LEGEND

- EXISTING D.A.
- PROPOSED D.A.
- EXISTING TC
- PROPOSED TC

SEDIMENT CONTROL LEGEND

- SCE
- LIMIT OF DISTURBANCE
- EARTH DIKE
- SILT FENCE
- INLET PROTECTION

INLET SEDIMENT TRAP
 Drainage Area = 2.73 Ac.±
 Required Storage = 4914 C.F.
 Bottom Elev. = 331.74
 Crest Elev. = 339.74
 Top of Embankment = 336.34
 Avg. Bottom Dimension = 5'x5'
 Storage Depth = 4 FT.
 Approx. Storage Provided = 4964 C.F.
 Maximum Side Slope = 1:1
 Cleanout Elev. = 335.74

EXISTING D.A. TO TRAP
 PROPOSED D.A. TO TRAP
 B.M. #15 ELEV. = 304.40'
 N 49°51'00" E 8414.8±220'
 CONCRETE MARKER
 LOCATED ON PROPERTY
 LINE

**THIS PLAN IS
 FOR SEDIMENT
 CONTROL USE ONLY**

TEMPORARY SEDIMENT CONTROL BASIN
 Drainage Area To Basin = 5.97 Ac.±
 Basin Class : A
 Height of Dam: 11 FT.
 Top width of Dam: 8'
 Side Slopes: 2:1 NORTH/EAST BANK, 2.5:1 DAM
 Volume Required: 10,762 C.F.
 Volume Provided: 43,381 C.F.
 Top of Dam Elev.: 304.50
 Bottom of pond Elev.: 293.50
 Sediment Trap Size (bottom dimension): 10'x14'
 Trap Depth: 10.5' Ft.
 Sediment Trap Cleanout Elev.: 293.5

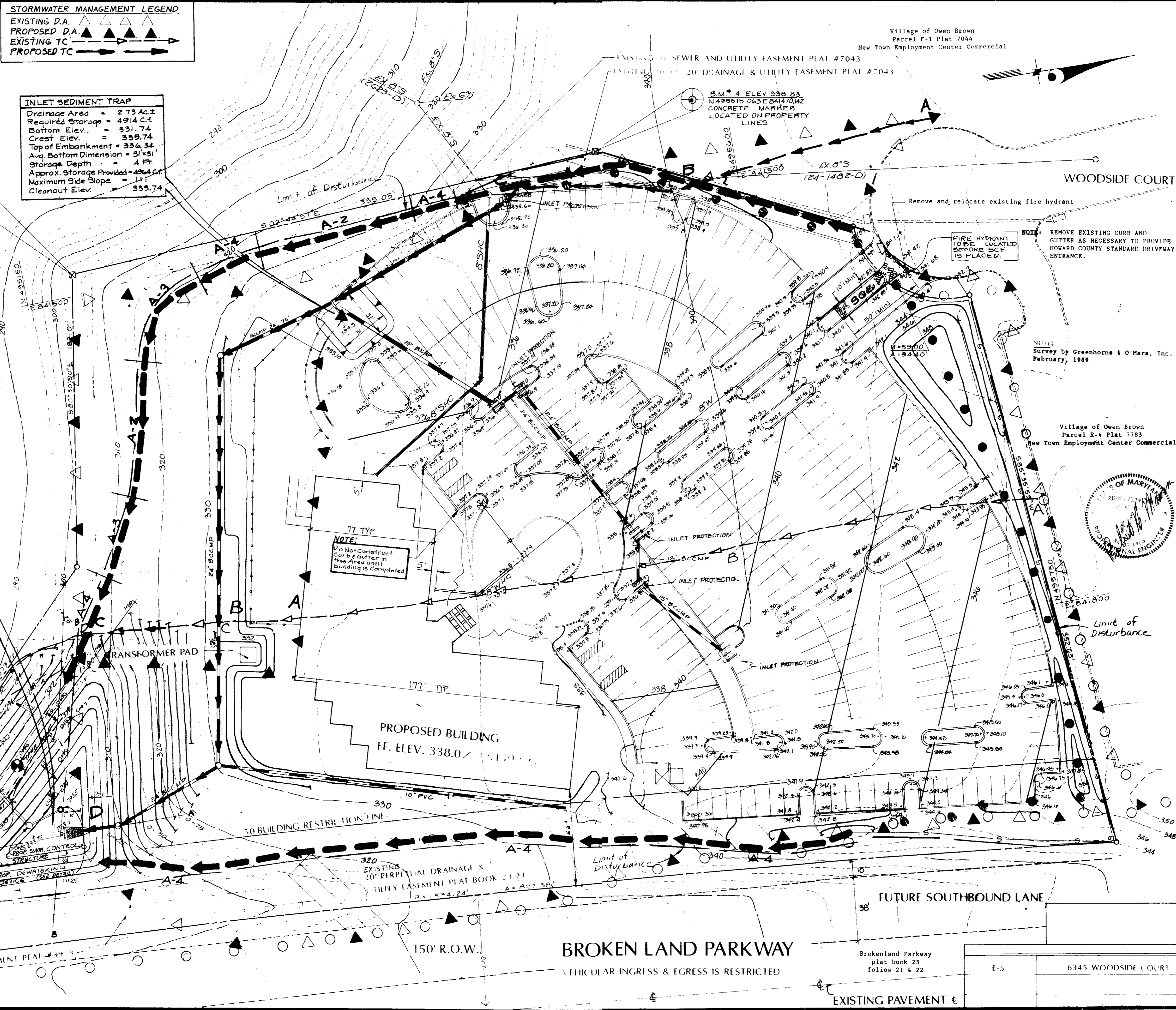
*SEE SHEET 10 FOR PERMANENT SWM DATA

Village of Owen Brown
 Section 5, Area 2
 Plat Book 30, Folio 72
 New Town Employment Center Commercial
 (Open Space)

PROPOSED SEDIMENT BASIN
 PERMANENT S.W.M. BASIN
 PROVIDING 2YR & 10YR MANAGEMENT
 (SEE CONSTRUCTION DRAWING #11
 FOR CONSTRUCTION OF POND.)

GABION OUTFALL PROTECTION
 (SEE SHEET 11)

**NO WETLANDS
 ON SITE**



Village of Owen Brown
 Parcel F-1 Plat 7044
 New Town Employment Center Commercial

EXISTING SEWER AND UTILITY EASEMENT PLAT #7043
 EXISTING 20" DRAINAGE & UTILITY EASEMENT PLAT #7044

B.M. #14 ELEV. 338.83
 N 49°51'00" E 8414.70±42'
 CONCRETE MARKER
 LOCATED ON PROPERTY
 LINE

WOODSIDE COURT

Village of Owen Brown
 Parcel E-4 Plat 7783
 New Town Employment Center Commercial



APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyer *Joyce M. Boyer* 2/27/90
 COUNTY HEALTH OFFICER DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE,
 STORM DRAINAGE SYSTEMS & PUBLIC WORKS
 HOWARD CO. DEPT. OF PUBLIC WORKS

James P. ... 2/22/90
 DIRECTOR DATE
 CHIEF, BUREAU OF ENGINEERING 2/22/90 DATE

APPROVED HOWARD COUNTY DEPARTMENT OF
 PLANNING & ZONING

W. J. ... 3/15/90
 PLANNING DIRECTOR DATE
 CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT 3/15/90 DATE

SEDIMENT CONTROL

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION
 WILL BE DONE ACCORDING TO THIS PLAN AND THAT MANY
 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 AND EROSION
 BEFORE BEGINNING THE PROJECT.

I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY
 THE HOWARD SOIL CONSERVATION DISTRICT.

10/17/89 DATE

SIGNATURE OF DEVELOPER

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR 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.

10-17-89 DATE

SIGNATURE OF ENGINEER

REVIEWED FOR HOWARD S.C.D.

AND MEETS TECHNICAL REQUIREMENTS.

James M. ... 10/24/89
 S.C.D. DATE

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

Robert W. Ziehm *Robert W. Ziehm* 10/24/89
 HOWARD S.C.D. DATE

BEFORE BEGINNING CONSTRUCTION, CONTACT MISS UTILITY
 AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR
 TO CONSTRUCTION.

SUBDIVISION NAME	SECTION	LOT/PARCEL
VILLAGE OF OWEN BROWN	5-1	E-5
PLAT NO. OR L.I.F.	BLOCK NO./ZONE	TAX/ZONE MAP
7783	14 NT	30
ELEC. DIST.	GENCLAS. TR.	
611	606.1.02	
WATER CODE	SEWER	
E-13		5410000

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
 10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

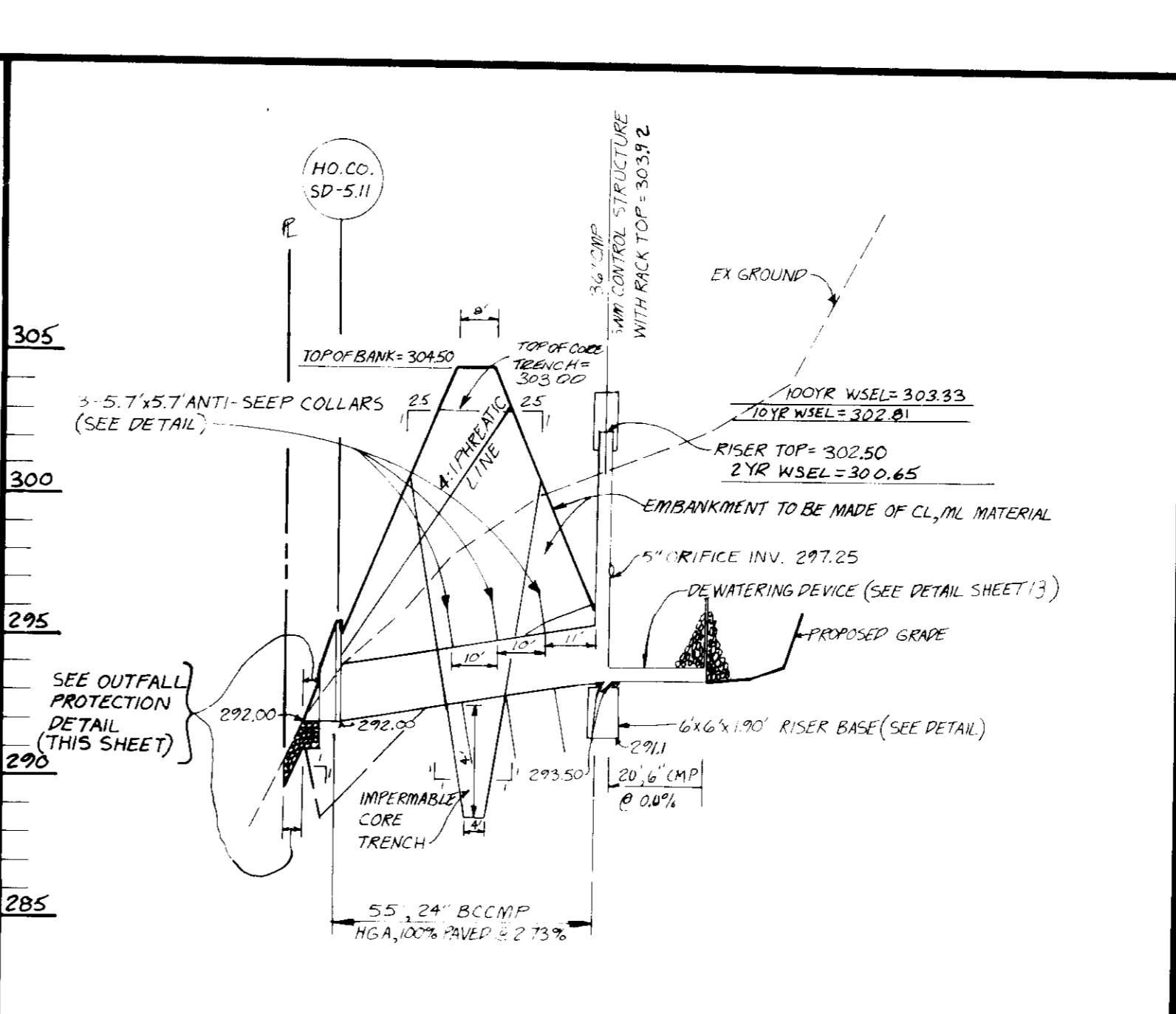
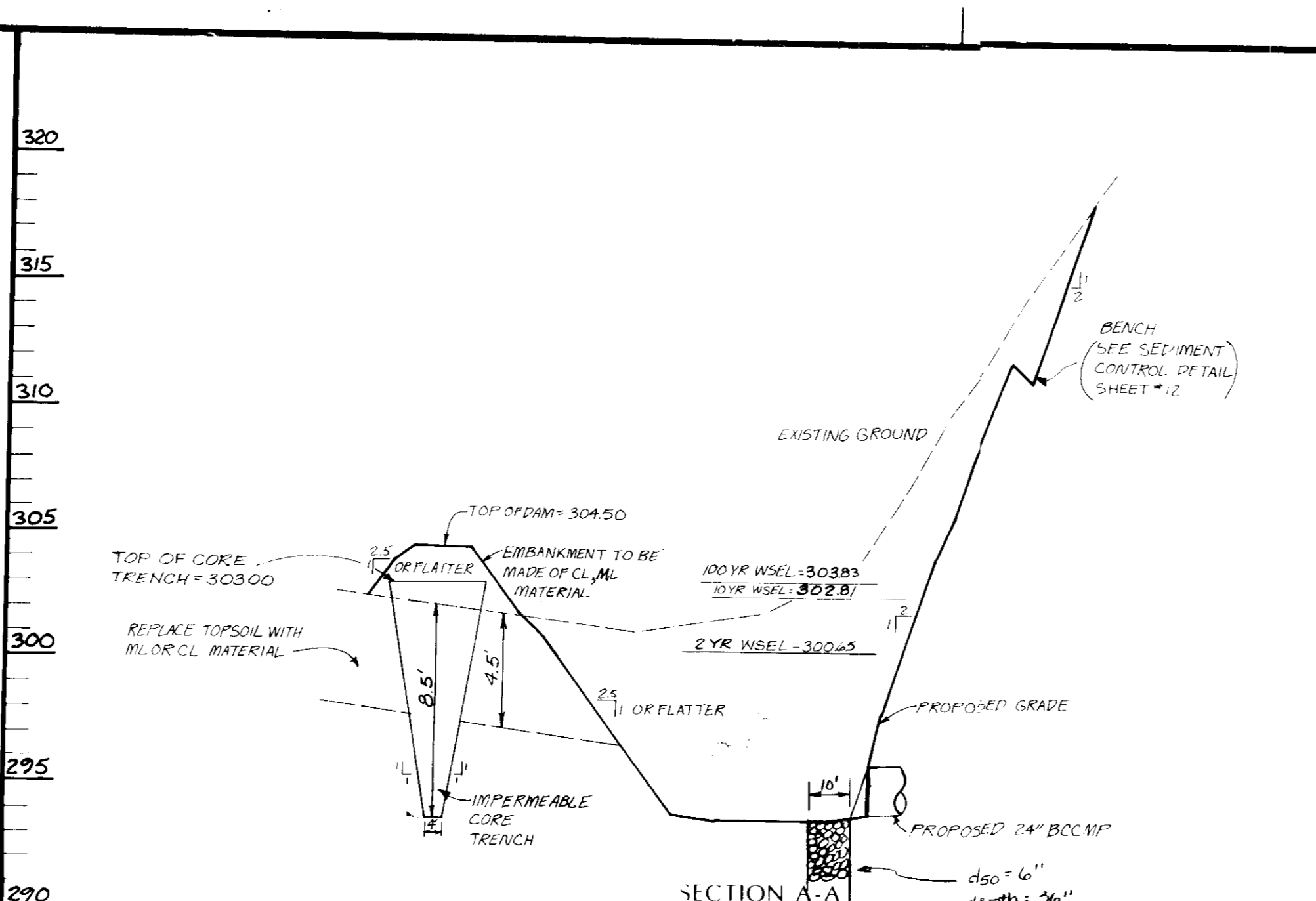
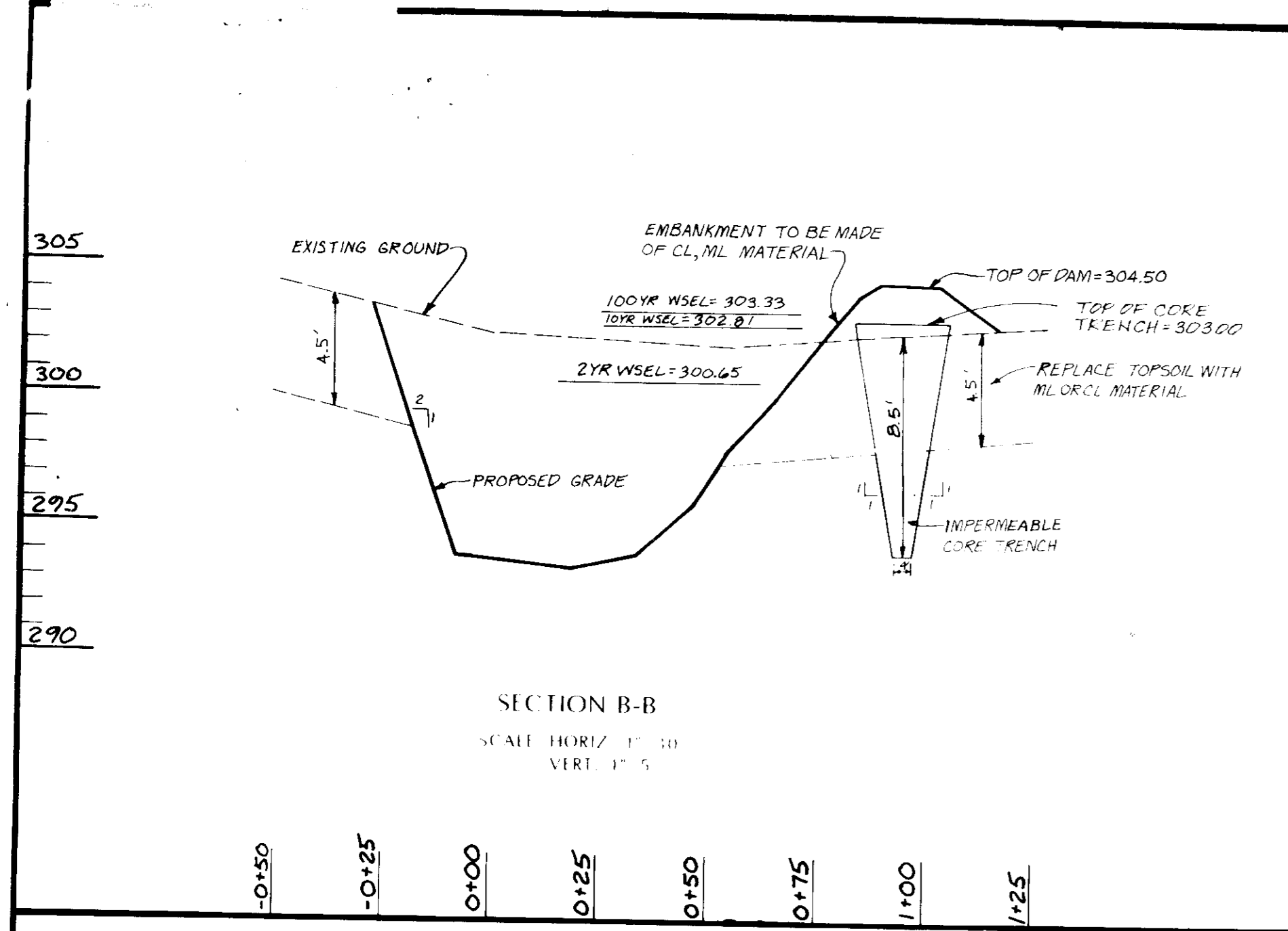
No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
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 LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

S.W.M. AND SEDIMENT CONTROL PLAN
 FOR
HILLCROFT OFFICE BUILDING II
 PLAT 7783 IAX MAP 36 PART OF PARCEL 111
 SDP 99 148. VILLAGE OF OWEN BROWN, SECTION 5-1 PARCEL 1
 NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
 6th ELECTION DISTRICT HOWARD CO., MARYLAND

TJW/MFF DESIGN	SCALE	1" = 30'
KRM DRAWN	10 OF 14	SHEET
RHM CHECKED		
APRIL 1989 DATE	JOB No.	FILE No.



SEDIMENT CONTROL AND POND CONSTRUCTION

By the Developer:
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 certification of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with my "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 10/17/89

By the Engineer:
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

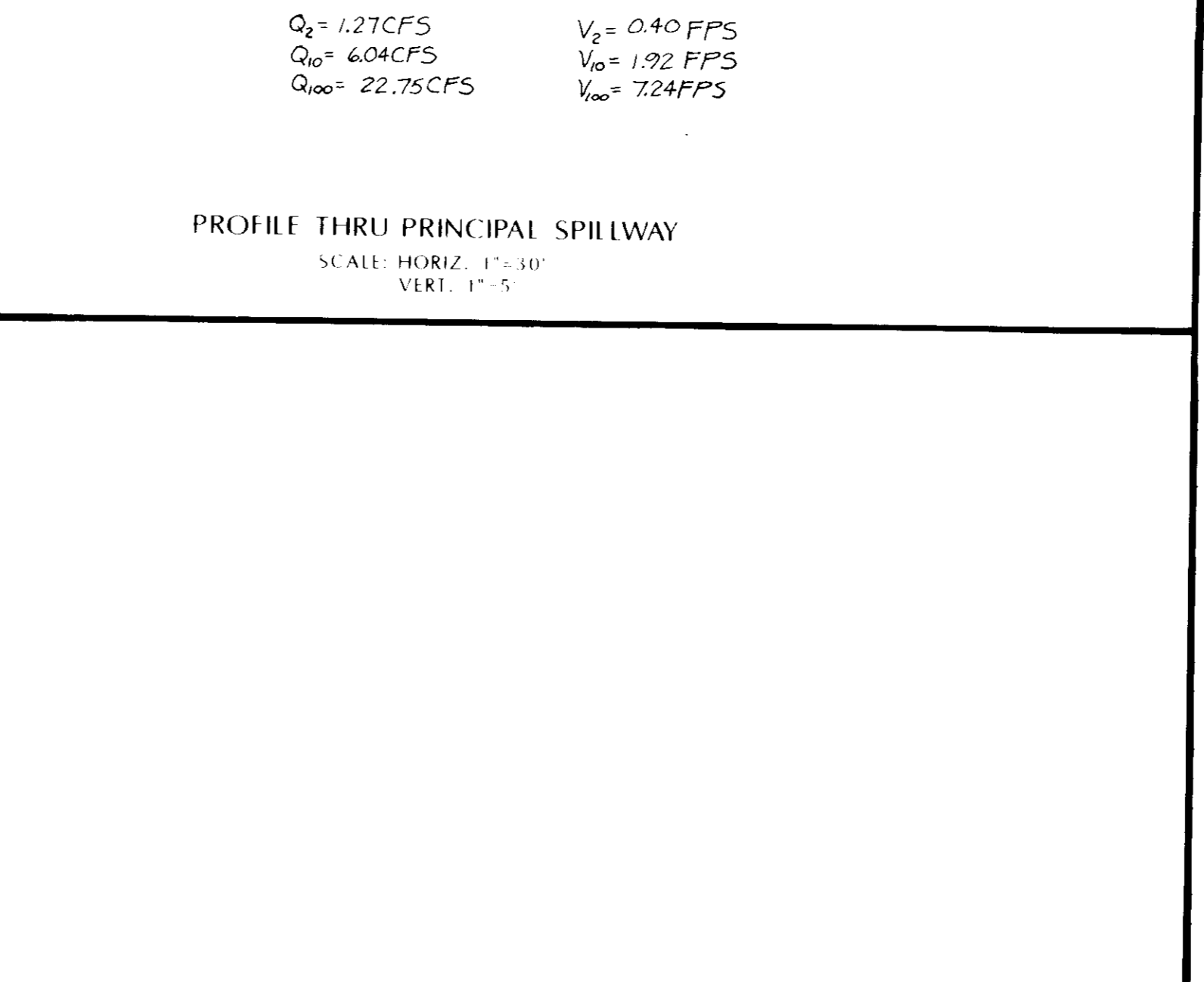
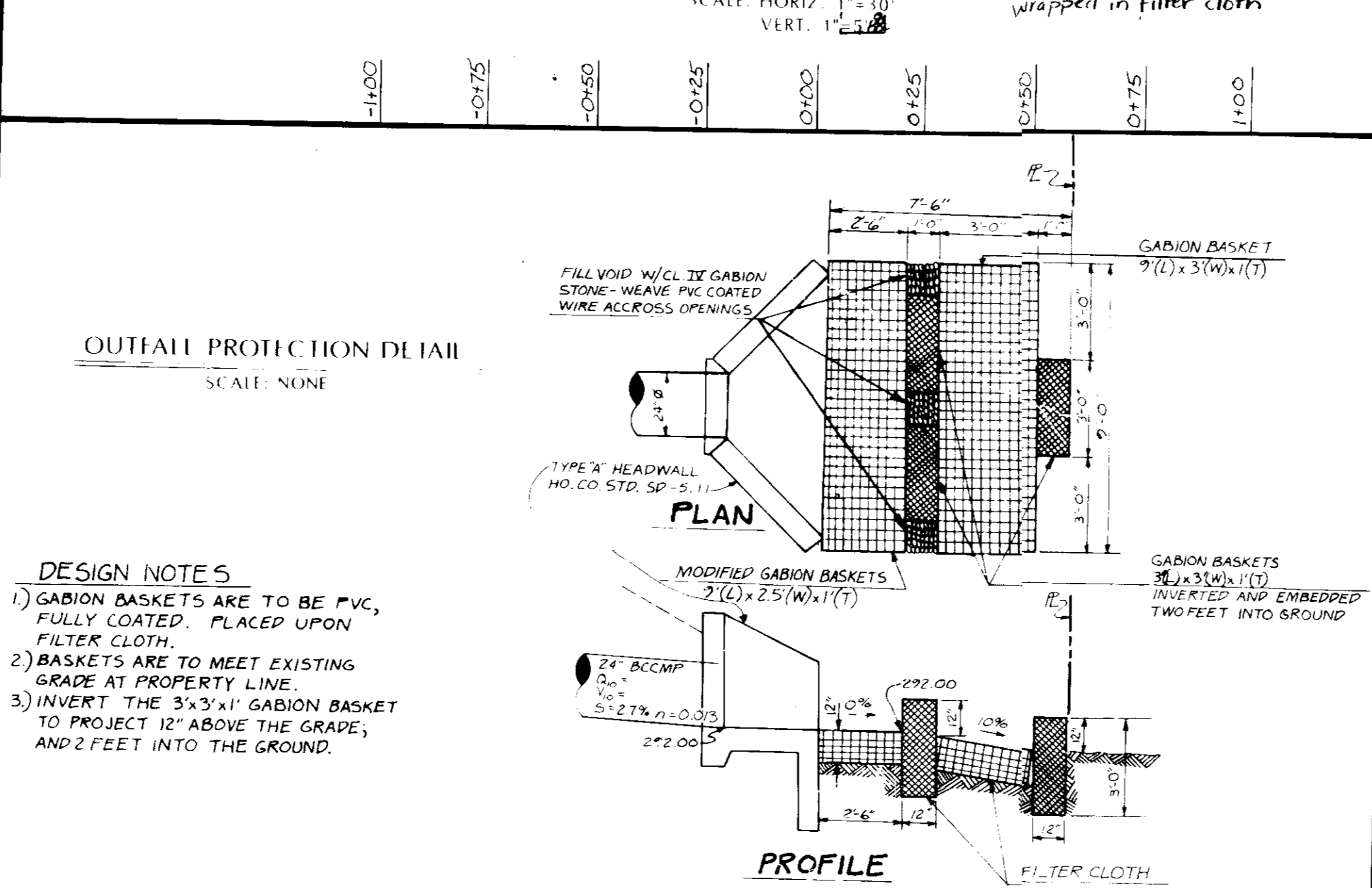
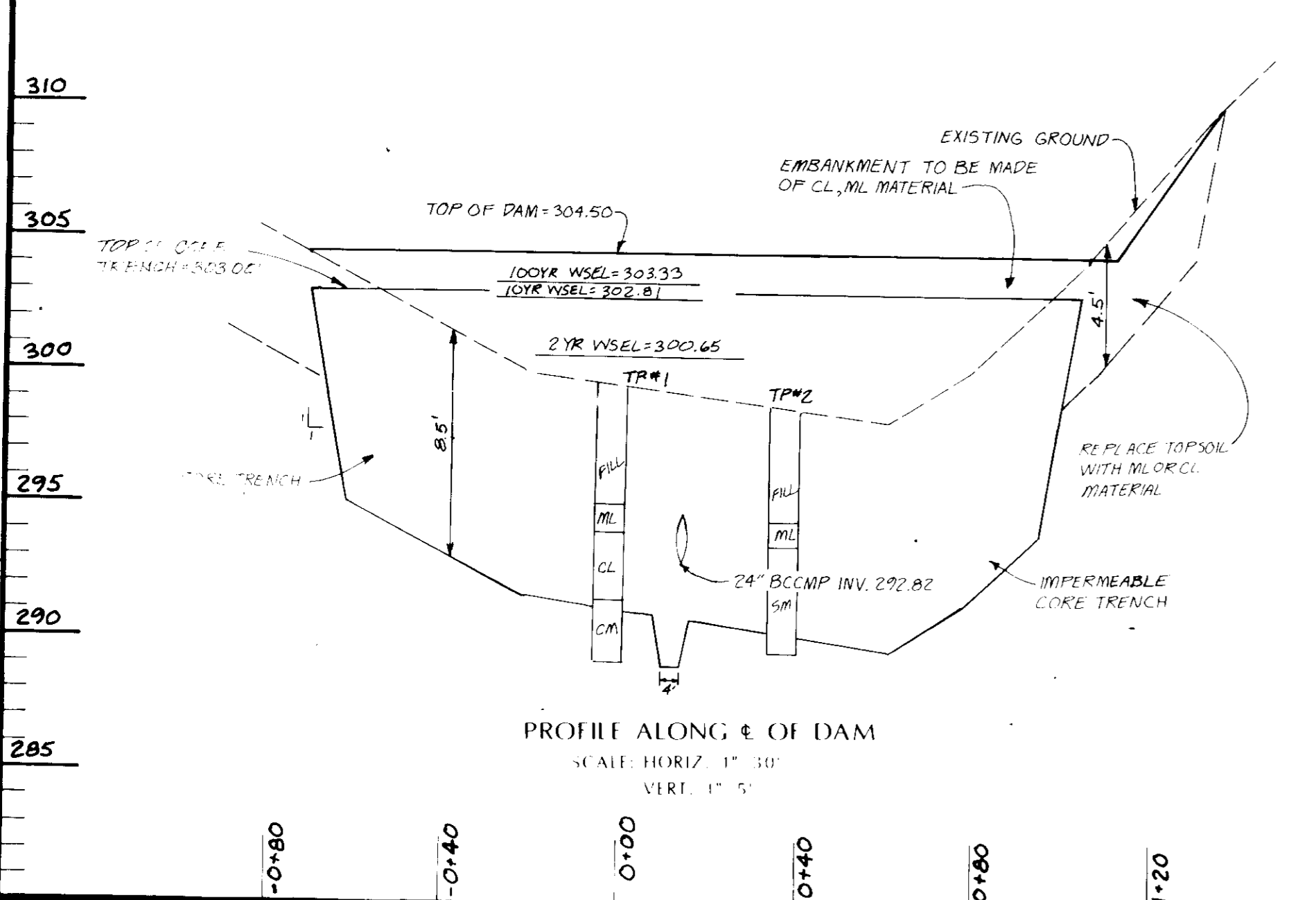
Signature of Engineer: *[Signature]* Date: 10-17-89

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Signature of S.C.D. Soil Conservation District: *[Signature]* Date: 10/24/89

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

Signature of S.C.D. Soil Conservation District: *[Signature]* Date: 10/24/89



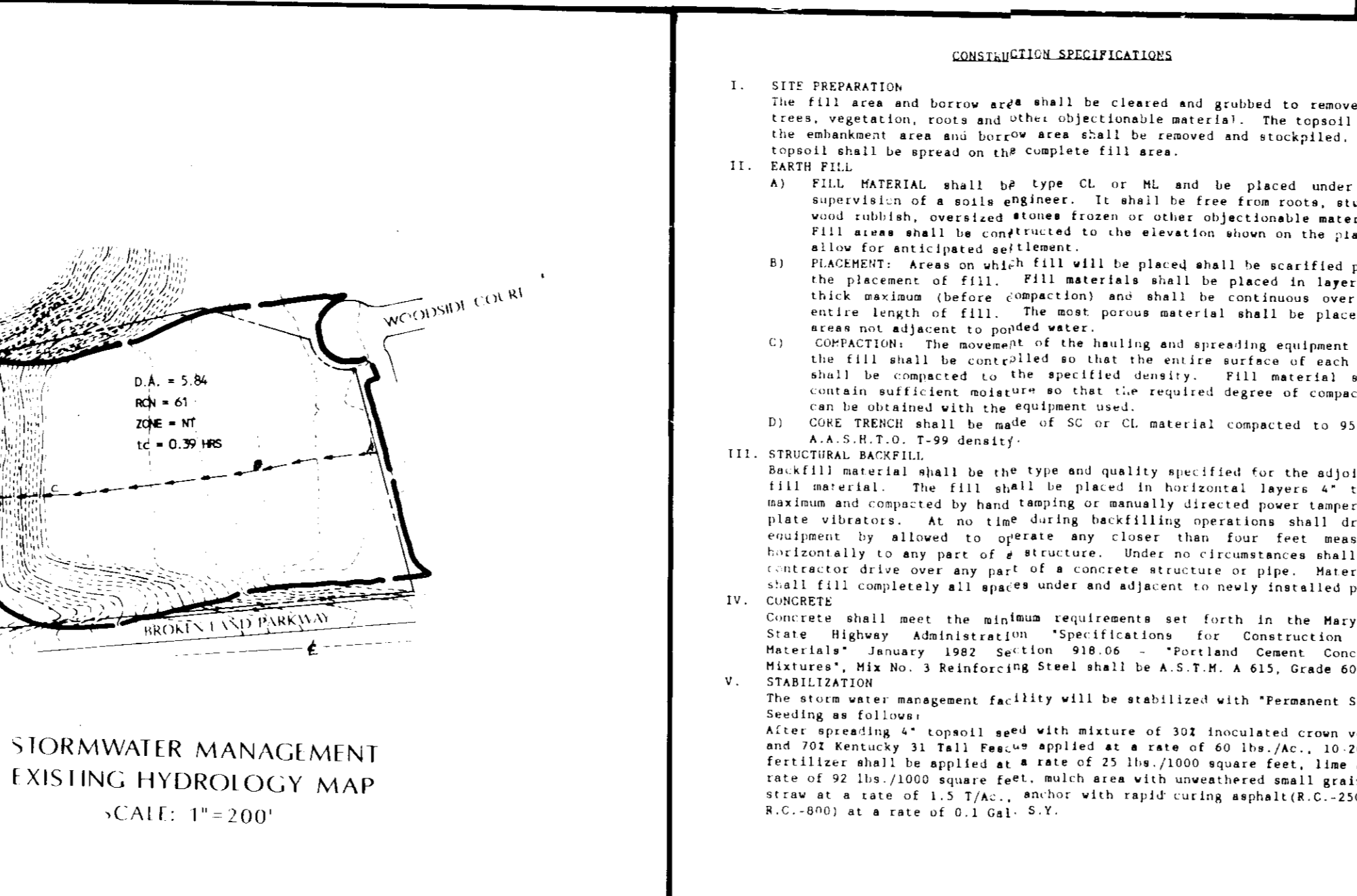
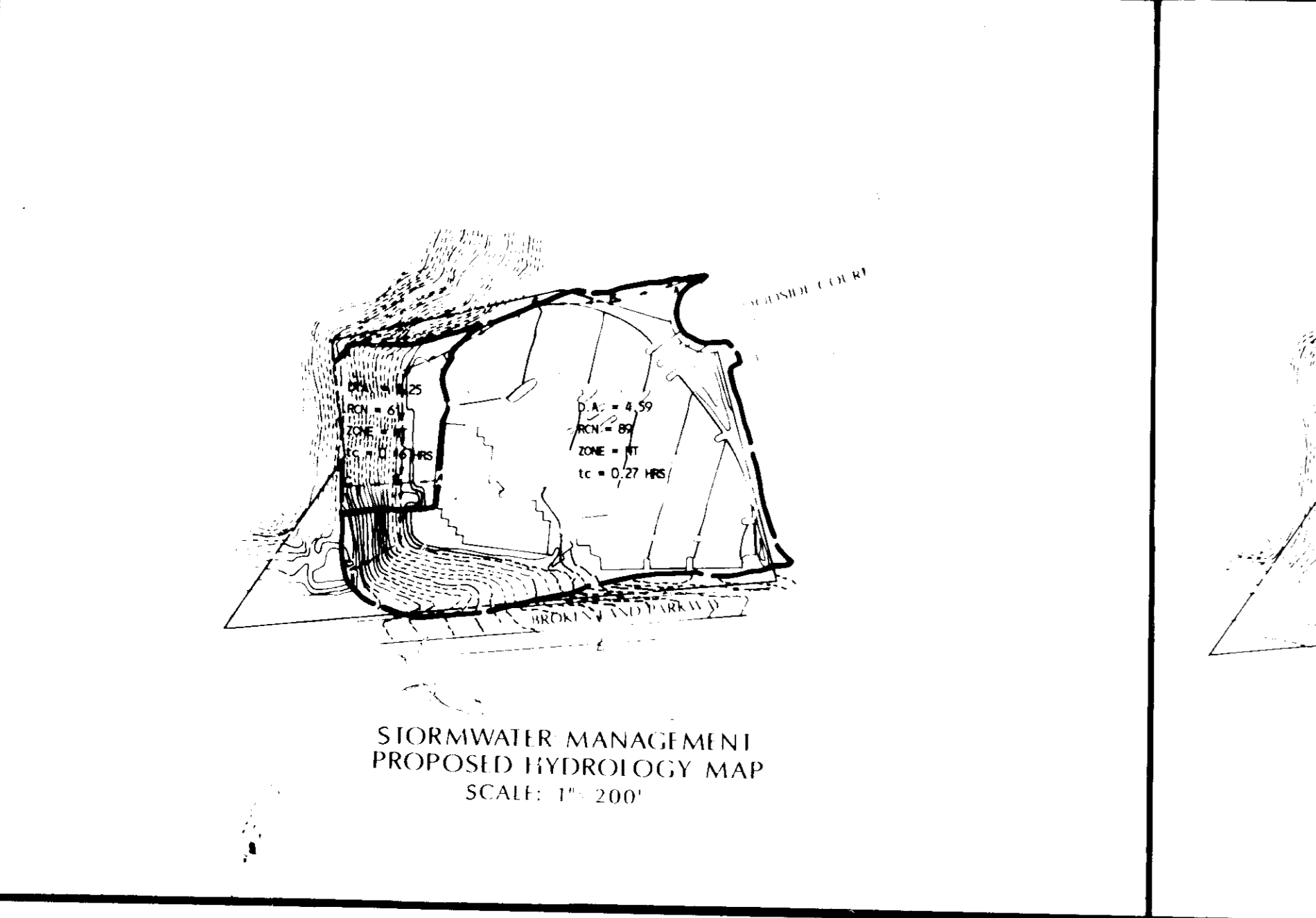
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Signature: *[Signature]* Date: 3.15.90

Signature: *[Signature]* Date: 10/24/89

Signature: *[Signature]* Date: 10/24/89

Signature: *[Signature]* Date: 10/24/89



CONSTRUCTION SPECIFICATIONS

- SITE PREPARATION:** The fill area and borrow area shall be cleared and grubbed to remove all trees, vegetation, stumps and other objectionable material. The topsoil from the embankment area and borrow area shall be removed and stockpiled. The topsoil shall be spread on the complete fill area.
- EARTH FILL:**
 - FILL MATERIAL:** shall be Type CL or ML and be placed under the supervision of a soils engineer. It shall be free from roots, stumps, wood rubbish, overcast stones frozen or other objectionable material. Fill areas shall be constructed to the elevation shown on the plan to allow for anticipated settlement.
 - PLACEMENT:** Areas on which fill will be placed shall be scarified prior to the placement of fill. Fill materials shall be placed in layers 6" thick maximum (before compaction) and shall be continuous over the entire length of fill. The most porous material shall be placed in areas not adjacent to ponded water.
 - 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 compacted to the specified density. Fill material shall contain sufficient moisture so that the required degree of compaction can be obtained with the equipment used.
 - CORE TRENCH:** shall be made of SC or CL material compacted to 92% of A.A.S.H.T.O. T-99 density.
- STRUCTURAL BACKFILL:** Backfill material shall be the type and quality specified for the adjoining fill material. The fill shall be placed in horizontal layers 4" thick maximum and compacted by hand tamping or manually directed power tampers or plate vibrators. At no time during backfilling operations shall driven equipment be allowed to operate any closer than four feet measured horizontally to any part of a structure. Under no circumstances shall the contractor drive over any part of a concrete structure or pipe. Materials shall fill completely all spaces under and adjacent to newly installed pipe.
- CONCRETE:** Concrete shall meet the minimum requirements set forth in the Maryland State Highway Administration "Specifications for Construction and Materials" January 1982 Section 918.06 "Portland Cement Concrete Mixtures", Mix No. 3 Reinforcing Steel shall be A.S.T.M. A 615, Grade 60.
- STABILIZATION:** The storm water management facility will be stabilized with "Permanent Slope Seeding" as follows:
After spreading 4" topsoil seed with mixture of 30% inoculated crown vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs./Ac., 10-20-20 fertilizer shall be applied at a rate of 25 lbs./1000 square feet, lime at a rate of 92 lbs./1000 square feet, mulch area with unwashed small grain straw at a rate of 1.5 T/Ac., anchor with rapid curing asphalt (R.C.-250 or R.C.-500) at a rate of 0.1 gal. S-Y.

- PIPE CONDUITS:**
 - Corrugated Metal Pipe:** Type C-1, 1002 Lined.
 - Materials:** (Steel Pipe) - This pipe and its appurtenances shall galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-90 with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.
 - Connections:** All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints as to be completely watertight. Dipole bands are not considered to be watertight.
 - Bedding:** The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, sandy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 - Laying pipe:** The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the side.
 - Backfilling:** shall conform to structural backfill as shown above.
 - Other details:** (anti-seep collars, valves, etc.) shall be as shown on the drawings.
- FILTER CLOTH:** MIRAFIL 1605 or equivalent shall be used.
- SEDIMENT CONTROL:** Construction to be in accordance with "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control". In release structure (outlet) dewatering device by connecting 25 L.P. of 12" perforated underdrain to the low flow pipe. The 12" underdrain shall be wrapped in filter cloth and covered with minimum 12" thick #2 stone.

NOTE: 1.) REMOVE TOP 4 1/2 FEET OF EXISTING EARTH IN THE AREA WHERE THE TEMPORARY SEDIMENT CONTROL BASIN/STORMWATER MANAGEMENT BASIN IS TO BE LOCATED PRIOR TO CONSTRUCTION OF BASIN. FILL MATERIAL IN THIS AREA SHALL BE TYPE CL OR ML.

2.) FILL TO BE COMPACTED TO A MINIMUM DEGREE OF COMPACTION OF 95% OF THE DRY UNIT WEIGHT AS DETERMINED BY A.A.S.H.T.O. T-99. CONSTRUCTION OF S.W.M. POND SHALL BE MONITORED UNDER STRICT SUPERVISION OF THE SOILS ENGINEER.

3.) WHEN CONSTRUCTING DAM IN FILL SECTION CONTRACTOR SHALL ADD 15% FOR COMPACTION AND SETTLEMENT.

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO DEPT. OF PUBLIC WORKS
Signature: *[Signature]* Date: 2/22/90
Signature: *[Signature]* Date: 10-11-89
Signature: *[Signature]* Date: 10-11-89

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS
Signature: *[Signature]* Date: 2/27/90

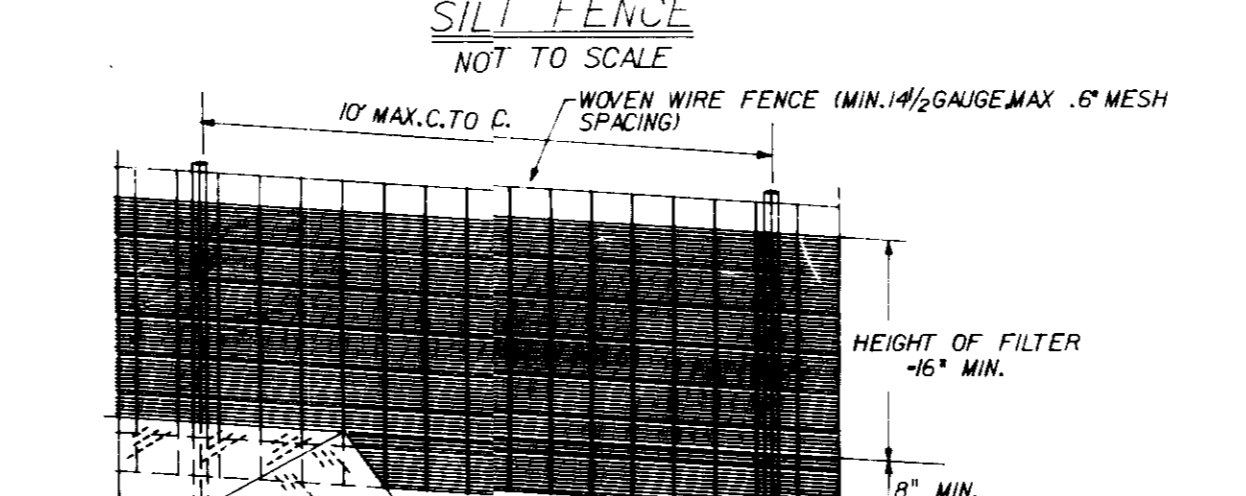
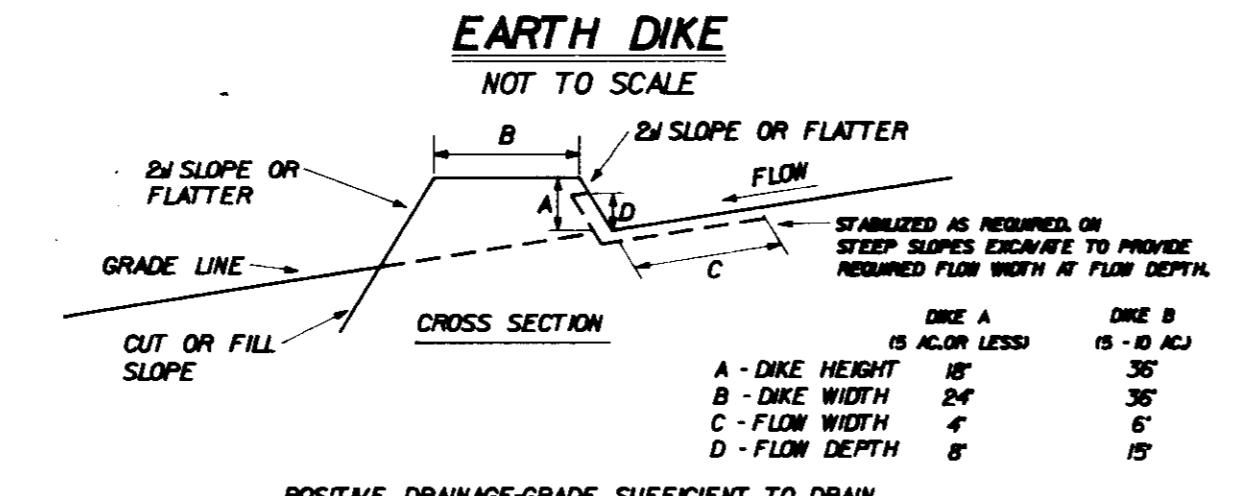
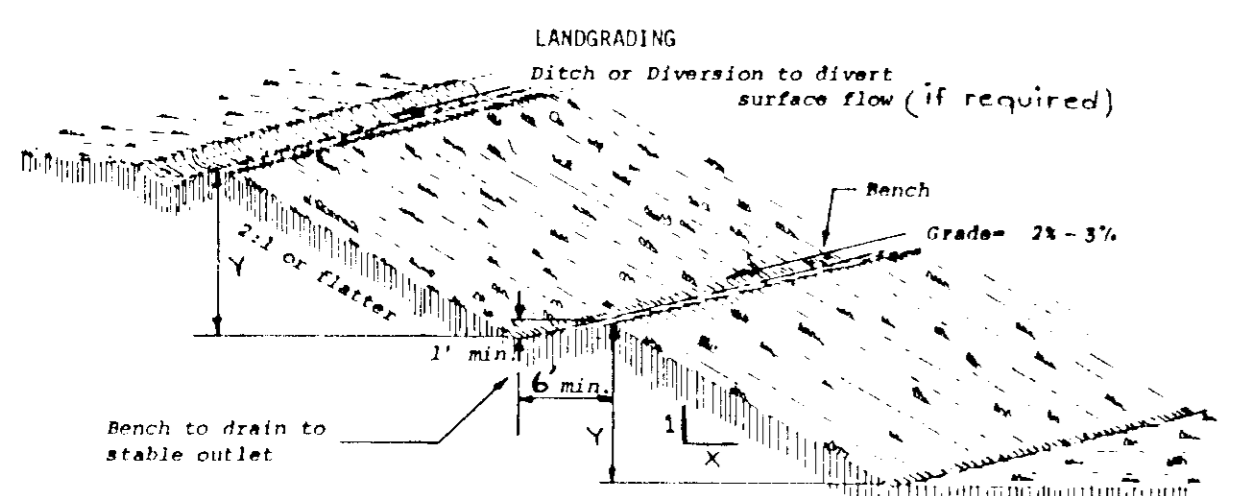
OWNER DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
(301) 296-4100
ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • GREENBELT, MD
LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

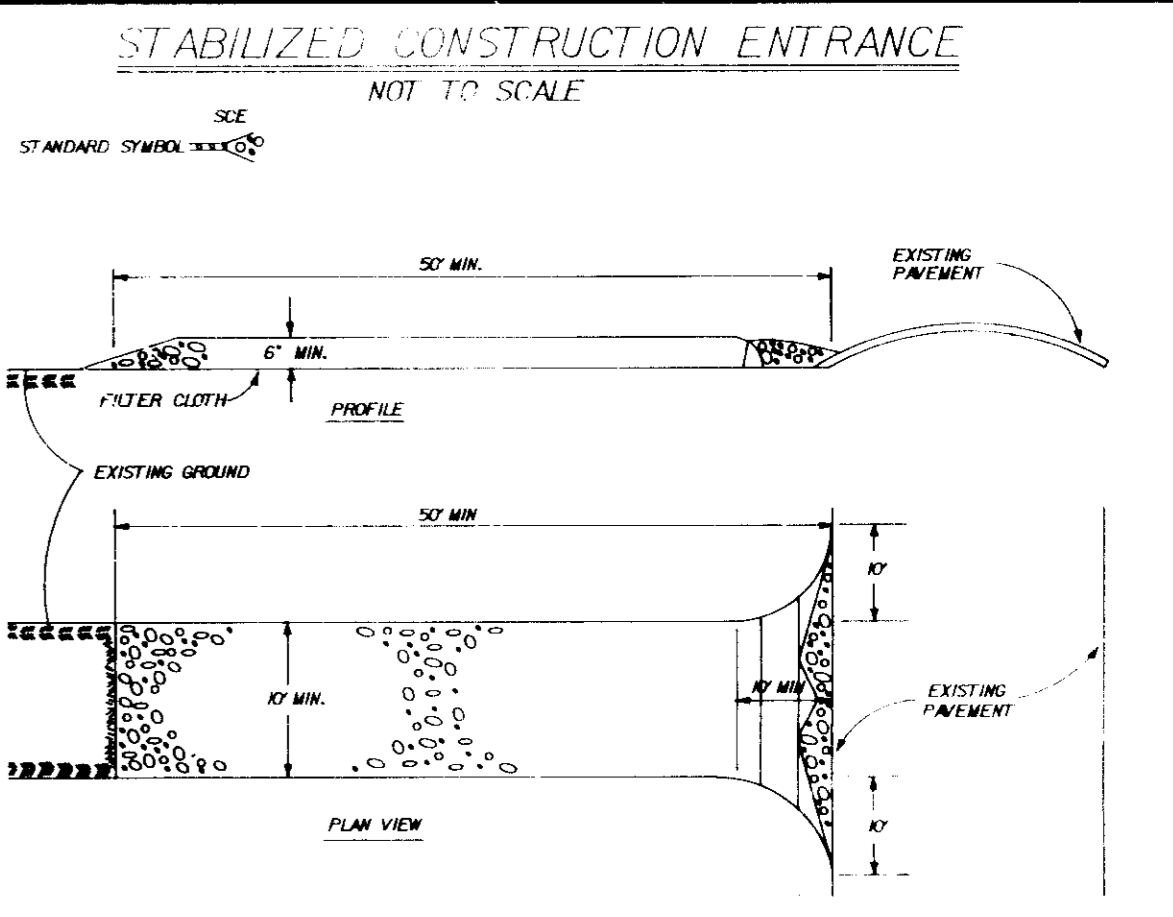
S.W.M. DETAILS
HILLCROFT OFFICE BUILDING II
PLAT 7783 TAX MAP 36 PART OF PARCEL 433
SDP-89-198, VILLAGE OF OWEN BROWN, SECTION 5.1, PARCEL E-5
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6th ELECTION DISTRICT HOWARD CO., MARYLAND

T.J.W. DESIGN	SCALE	AS SHOWN
R.L.G. DRAWN		11 OF 14
R.H.M. CHECKED	SHEET	
8-2-89 DATE	JOB No.	FILE No.



SEDIMENT CONTROL NOTES

- 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.
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A) 7 CALENDAR DAYS FOR ALL PERMANENT SEDIMENT CONTROL STRUCTURES, DIKES, PERMANENT SLOPES AND ALL SLOPES GREATER THAN 3:1 (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 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. 511 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.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**
TOTAL AREA OF SITE 633 ACRES
AREAS DISTURBED 5.32 ACRES
AREA TO BE ROOFED OR PAVED 3.17 ACRES
AREA TO BE VEGETATIVELY STABILIZED 2.15 ACRES
TOTAL CUT 40059 CU. YDS.
TOTAL FILL 3559 CU. YDS.
OFFSITE WASTE/ AREA LOCATION: MONTGOMERY COUNTY
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS 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 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 BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.



CONSTRUCTION SPECIFICATIONS

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERGED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY 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 OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

X	Y (ft)
2	20
3	30
4	40

- Construction Specifications**
- All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved sediment control plan until they are permanently stabilized.
 - All sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved sediment control plan and the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas".
 - Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.
 - Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.
 - Areas which are to be topsoiled shall be scarified to a minimum depth of three inches prior to placement of topsoil.
 - All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements of codes, specifications for Soil Erosion and Sediment Control in Developing Areas.
 - All fill to be placed and compacted in layers not to exceed 8 inches in thickness.
 - Except for approved landfills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory fills.
 - Frozen materials or soft, sticky or highly compressible materials shall not be incorporated into fills.
 - Fill shall not be placed on a frozen foundation.
 - All benches shall be kept free of sediment during all phases of development.
 - Seeps or aprons encountered during construction shall be handled in accordance with the Standard and Specifications for Subsurface Drain or other approved method.
 - All graded areas shall be permanently stabilized immediately following finished grading. Stockpiles, borrow areas and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

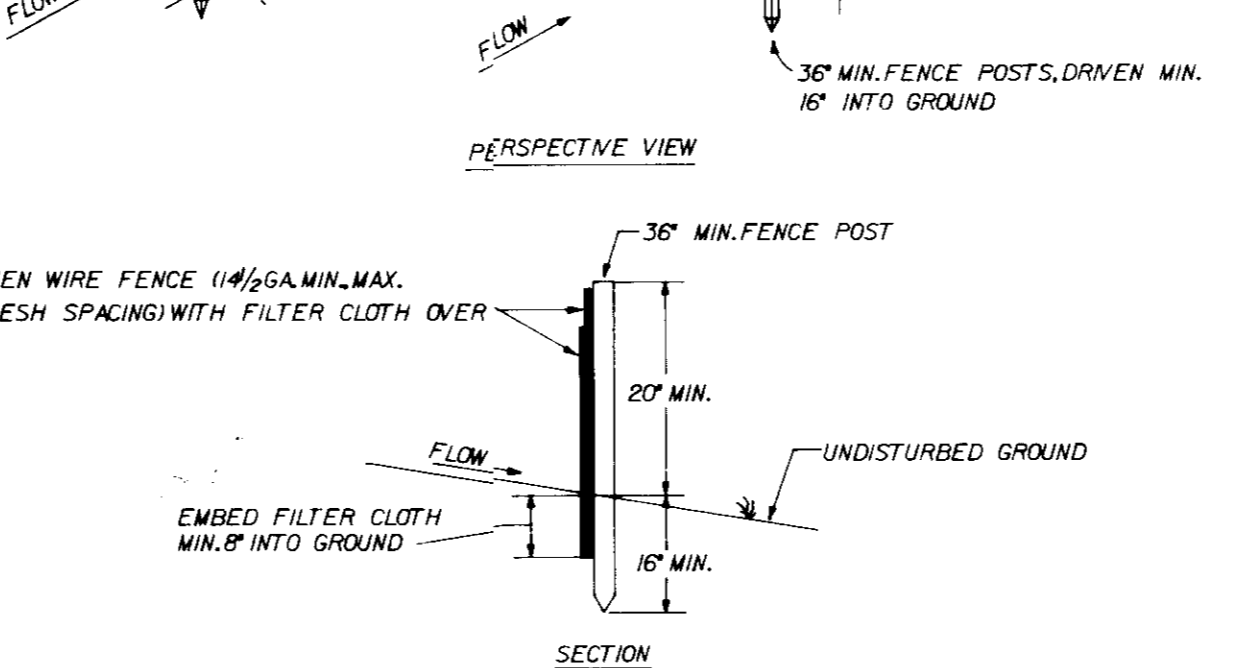
DIKE A	DIKE B
IS - 15' AC	IS - 15' AC
IS - 15' AC	IS - 15' AC
IS - 15' AC	IS - 15' AC
IS - 15' AC	IS - 15' AC

CONSTRUCTION SPECIFICATIONS

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

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-30%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	31-50%	SEED AND STRAW MULCH	SEED USING JUTE, OR 2" STONE
3	51-80%	SEED WITH JUTE, OR 2" STONE	LINED RIP-RAP 4'-8"
4	81-90%	LINED RIP-RAP 4'-8"	ENGINEERING DESIGN

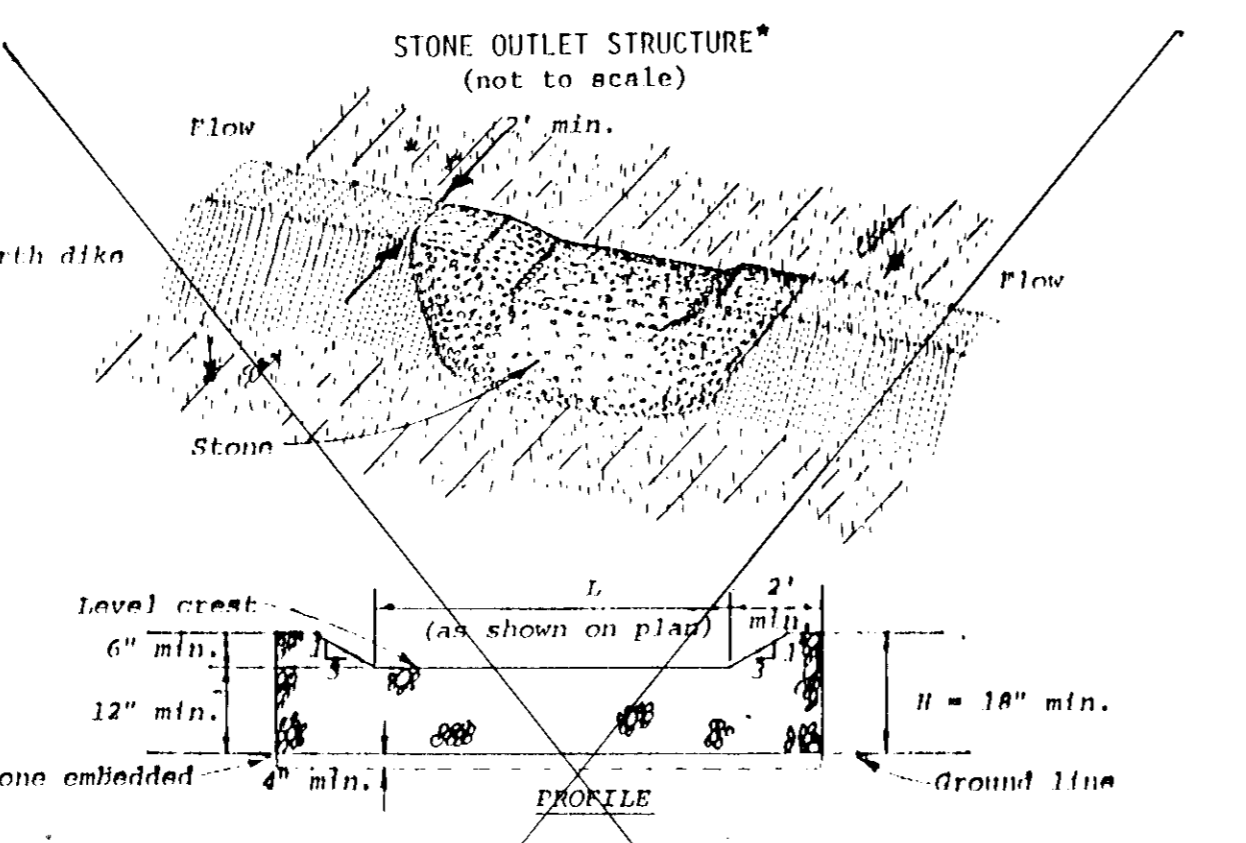
A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- 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, 1/4 GA. 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILUNKA THIN OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, EKI/PROFENCE, OR APPROVED EQUAL



CONSTRUCTION SPECIFICATIONS

- The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSMA Size No. 2 or AASHTO designation M3 Size No. 2 or 24.
- The crest of the stone dike shall be at least six inches lower than the lowest portion of the top of the earth dike and shall be level.
- The stone outlet structure shall be embedded into the wall a minimum of four inches.
- The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
- The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, without construction traffic damage, etc.

* Drainage area less than 5 acres



PERMANENT SEEDING NOTES

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq 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/1000sq ft) before seeding. Harrow or disc into upper three inches of soil.
- 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 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 1 1/2 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 of 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal per acre (18 gal/1000 sq ft) for anchoring. Maintenance - 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.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 60 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

Seeding: For period March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushels 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 1 1/2 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 of 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal per acre (18 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.

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
2-22-90
DATE

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
2-27-90
DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
3-15-90
DATE

10-18-89
LS

SEDIMENT CONTROL

By the Developer:
I/We certify that all development and construction will be done according to this plan, and that my/our responsibility is to the protection of the project. I/We will have a Certificate of Attendance at a Department of Natural Resources Training Program for the control of Sediment Erosion before beginning the project.
Signature of Developer: [Signature] Date: 10/17/89

By the Engineer:
I certify that this plan for 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 County Department of Planning & Zoning.
Signature of Engineer: [Signature] Date: 10-17-89

Reviewed for HOWARD S.C.D.
Name: [Signature]
on meets Technical Requirements.
Name: [Signature] Date: 10/24/89
A.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING.
Name: [Signature] Date: 10/24/89
Howard S.C.D.

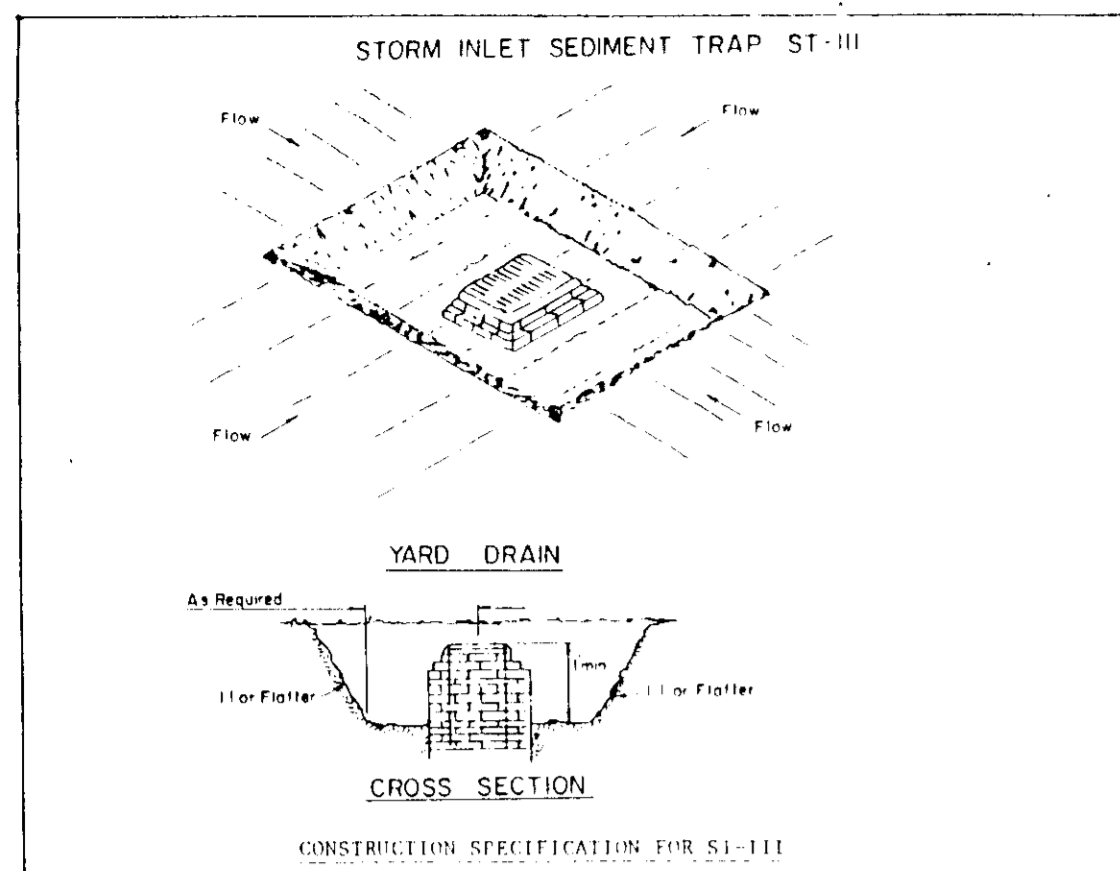
OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

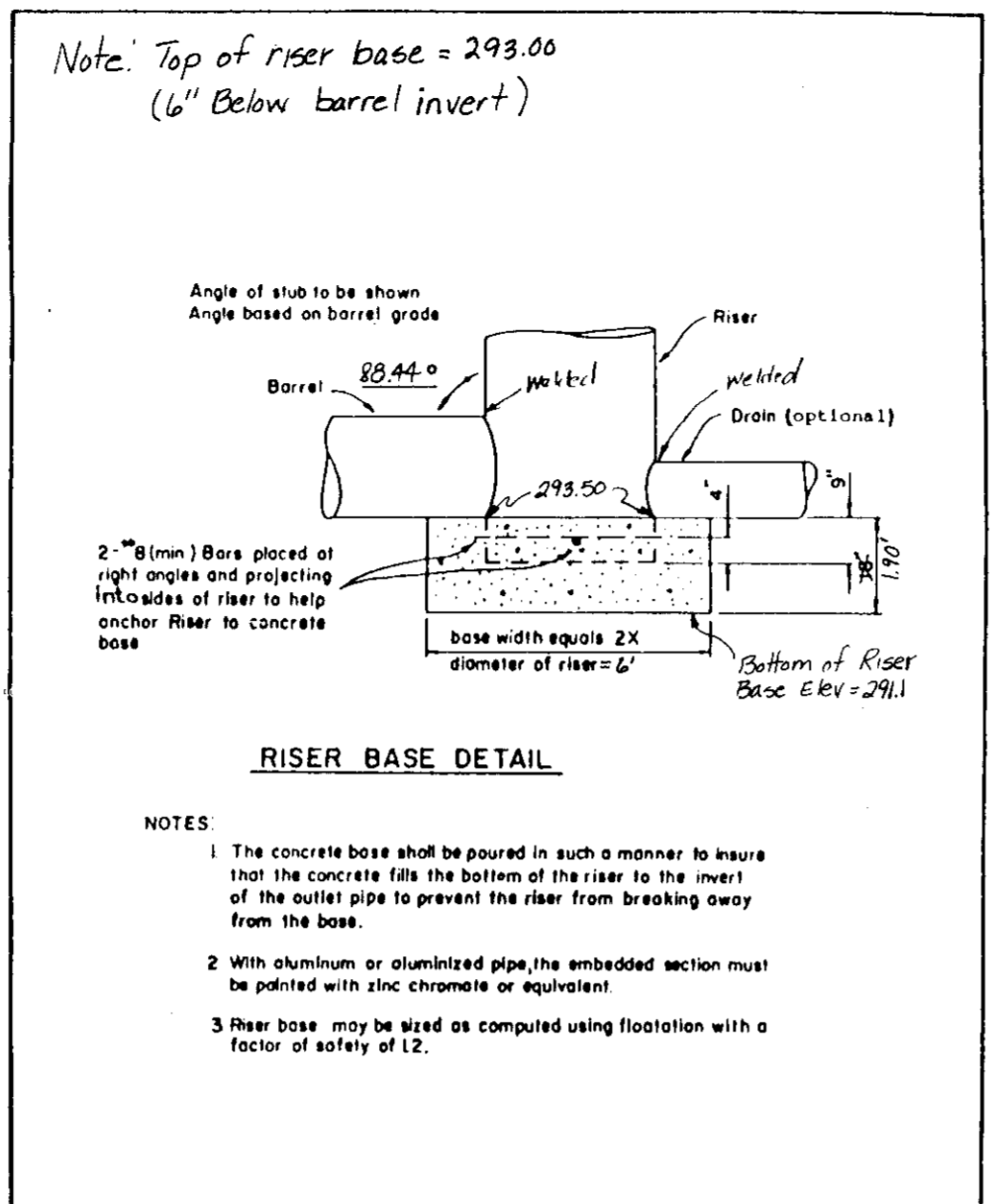
ENGINEERS ARCHITECTS PLANNERS SCIENTISTS SURVEYORS PHOTOGRAMMETRISTS
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SEDIMENT CONTROL DETAILS
HILLCROFT OFFICE BUILDING II
PLAT 7783 TAX MAP 36 PART OF PARCEL 433
SDP-89-198, VILLAGE OF OWEN BROWN, SECTION 5.1, PARCEL 1-5
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

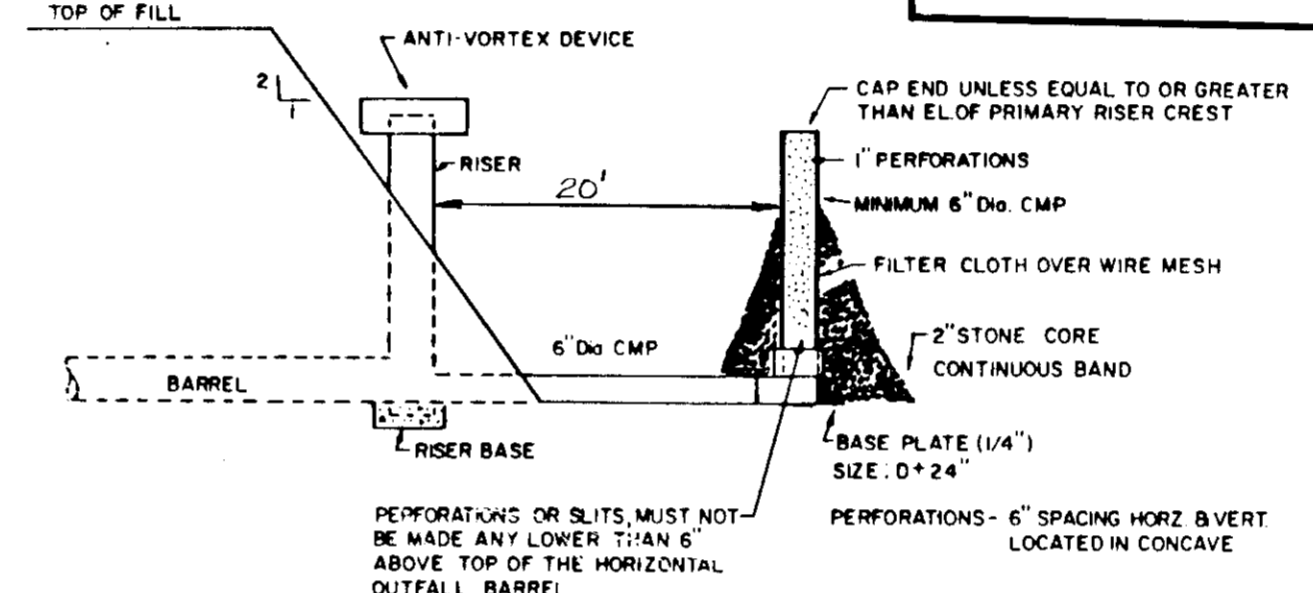
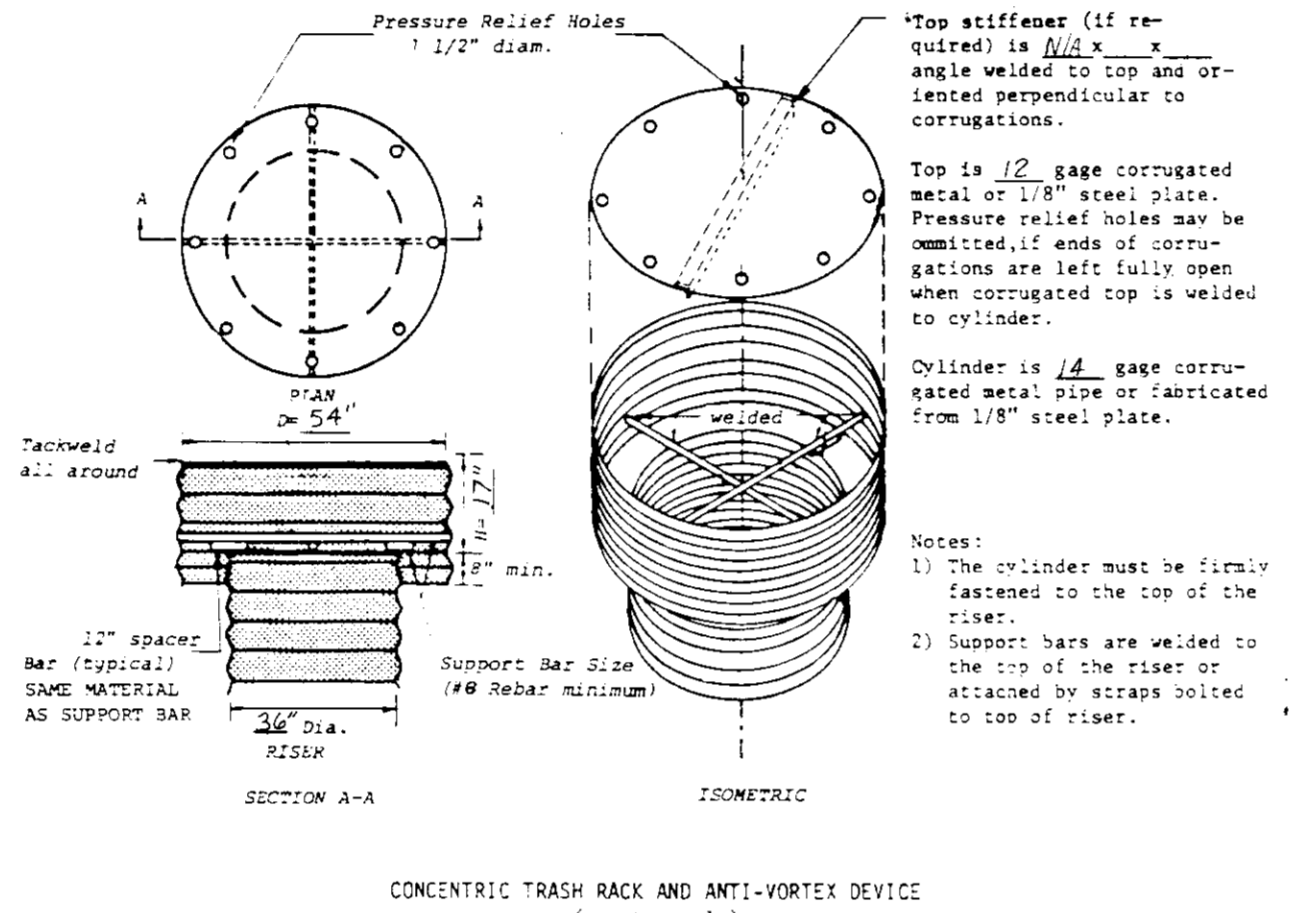
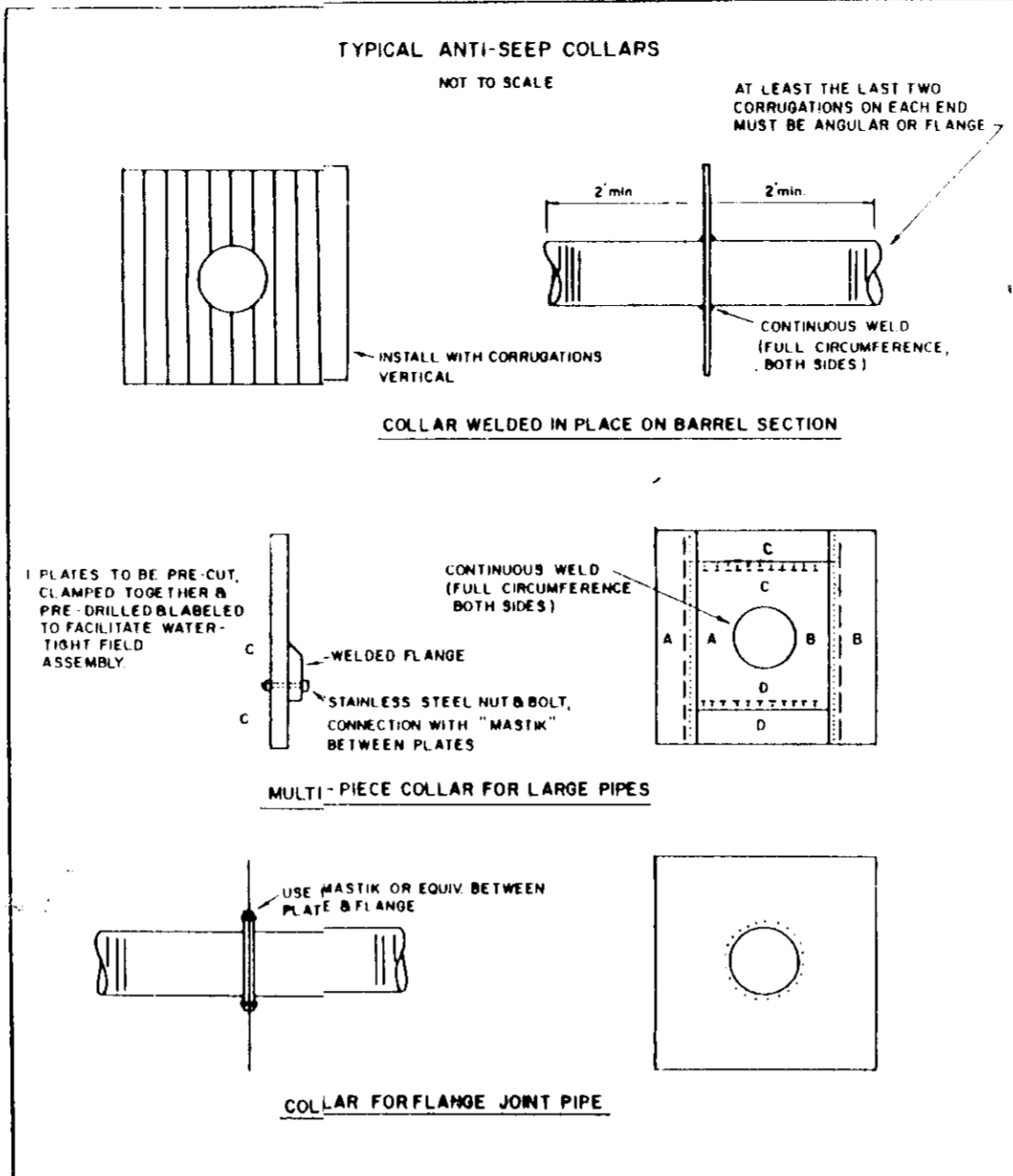
TJW/MFF
DESIGN SCALE N/A
KRM
DRAWN
12 OF 14
CHECKED SHEET
APRIL 1989
DATE JOB No. FILE No.
SDP-89-198



- CONSTRUCTION SPECIFICATION FOR SI-III**
- Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The volume of sediment storage shall be 1800 cubic feet per acre of contributory drainage.
 - The structure shall be inspected after each rain and repairs made as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
 - The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
 - All cut slopes shall be 1:1 or flatter.
- Maximum Drainage Area: 3 Acres



- NOTES**
- The concrete base shall be poured in such a manner to ensure that the concrete fills the bottom of the riser to the invert of the outlet pipe to prevent the riser from breaking away from the base.
 - With aluminum or aluminum pipe, the embedded section must be painted with zinc chromate or equivalent.
 - Riser base may be sized as computed using flotation with a factor of safety of 1.2.



- SEQUENCE OF CONSTRUCTION**
- Obtain necessary permits.
 - Remove existing curb and gutter (Woodside Court) to construct stabilized construction entrance as shown on plan.
 - Clear and grub site for sediment control measures only.
 - Construct temporary sediment basin/permanent stormwater management pond placing silt fence below the basin. Remove top 4.5 feet of existing earth in area where the temporary sediment control basin/stormwater management basin is to be located. Fill material in this area shall be type CL or ML. Do not cut 5' orifice in riser until site stabilization is complete.
 - Upon completion of sediment basin/stormwater management basin, install remaining sediment controls, excluding the inlet sediment trap.
 - Building construction may begin simultaneously with utility construction (i.e. sanitary sewer will be first, water main construction second and storm drain last).
 - Upon completion of all utilities and placement of inlet protection on inlets 12 to 17', curb and gutter shall be constructed on the outside perimeter of the parking areas only excluding the small access area to the building.
 - After curb and gutter construction is completed on the outside perimeter only, construct inlet sediment trap as shown on plans providing positive drainage to the trap from the parking area.
 - The inside curb and gutter islands will be constructed upon completion of the outside perimeter curb and gutter. Maintain positive drainage to the inlet trap.
 - Upon completion of the curb and gutter and the proposed building, start paving operations in the parking area.
 - Construct the curb and gutter in the area that was left opened for building construction.
 - Stabilize all remaining disturbed areas.
 - When stabilization is complete, remove all sediment from sediment basin and storm drains. Clean dewatering device, replacing the stone, filter cloth and perforated pipe as necessary. Grade and stabilize the pond to final dimension. Construct 5' orifice (invert 297.25) in riser.
 - With the approval of Howard County Sediment Control Inspector remove sediment control measures.

SEDIMENT CONTROL AND POND CONSTRUCTION

By the Developer:

"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 Certification of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an on-site plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *[Signature]* Date: 10/17/89

By the Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an on-site plan of the pond within 30 days of completion."

Signature of Engineer: *[Signature]* Date: 10-17-89

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Signature of Engineer: *[Signature]* Date: 10/24/89

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

Signature of Engineer: *[Signature]* Date: 10/24/89

TEMPORARY SWALE

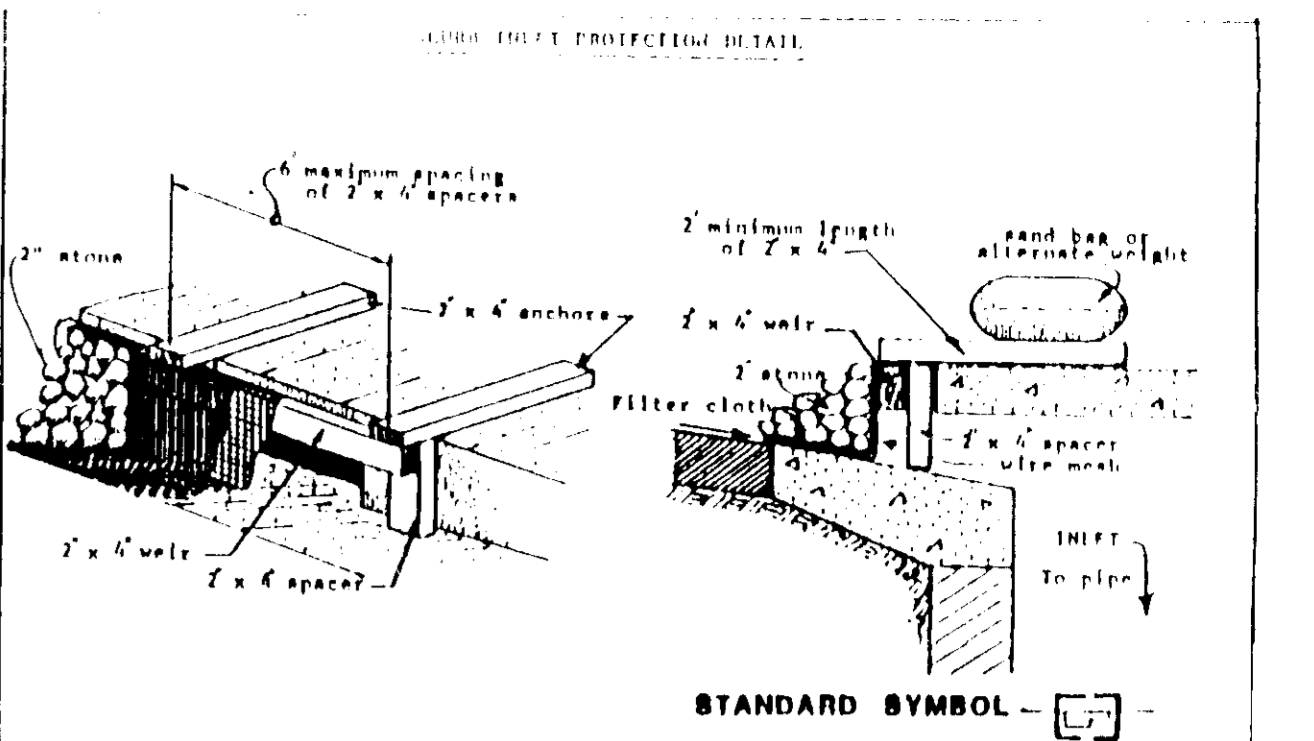
CONSTRUCTION SPECIFICATIONS

- All temporary swales shall have uninterrupted positive grade to an outlet.
- Diversed runoff from a disturbed area shall be conveyed to a permanent trapping device.
- Diversed runoff from an undisturbed area shall outlet directly into an undisturbed stabilized area at non-erosive velocity.
- All trees, bushes, shrubs, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
- The swale shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- Fills shall be compacted by earth moving equipment.
- All earth removed and not needed on construction shall be placed so that it will not interfere with the functioning of the swale.
- Stabilization shall be as per the chart below:

TYPE OF TREATMENT	CURB/CHANNEL STABILIZATION	A (5 AC OR LESS)	B (5 AC - 10 AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSTOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSTOR SOIL	LINED REP-PAP 4" 8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4" 8" REP-PAP	EXCELSTOR DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

- Construction Specifications**
- Materials
 - Window frame is to be constructed of 2" x 4" construction grade lumber.
 - Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
 - Filter cloth must be of a type approved for this purpose; resistant to sunlight with a minimum life of 10% in 8% to allow sufficient passage of water and removal of sediment.
 - Stone is to be 2" in size and clean, since fines would plug the cloth.
 - Procedure
 - A swale, ditchline or yard inlet protection.
 - Excavate completely around inlet to a depth of 18" below notch elevation.
 - Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (center) must be 6" below edge of roadway adjacent to inlet.
 - Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
 - Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Hole must meet at post, be overlapped and folded, then fastened down.
 - Backfill around inlet in compacted 6" layers until lower of notch is even with notch elevation on ends and top elevation on side.
 - If the inlet is not in a low point, construct a compacted notch also in the situation below it. The top of this disk is to be at least 6" higher than the top of frame (posts).
 - This structure must be inspected frequently and the filter fabric replaced when clogged.
 - Curb Inlet Protection.
 - Attach a continuous piece of wire mesh (40' min. width by throat length plus 4') in the 2" x 4" wire (measuring throat length plus 2") as shown on the standard drawing.
 - Place a piece of approved filter cloth (60-85 stone) of the same dimensions as the wire mesh over the wire mesh and secure attachment to the 2" x 4" wire.
 - Securely nail the 2" x 4" wire to 4" long vertical stakes to be located between the wire and inlet face (max. 6" apart).
 - Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" in the top of the wire at space locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.



APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE
STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS

Signature: *[Signature]* Date: 2/27/89
 Director
 Chief, Bureau of Engineering

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

Signature: *[Signature]* Date: 2/27/89
 Health Officer

APPROVED FOR HOWARD COUNTY DEPT. OF PLANNING & ZONING

Signature: *[Signature]* Date: 2/15/89
 Planning Director

SEDIMENT CONTROL

By the Developer:

"I/We certify that all development and construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certification of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

Signature of Developer: _____ Date: _____

By the Engineer:

"I certify that this plan for 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."

Signature of Engineer: _____ Date: _____

Reviewed for: _____ S.C.D.
 on meets Technical Requirements.

U.S. Soil Conservation Service

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

Signature: _____ Date: _____
 Howard S.C.D.

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
 10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
 113 WEST ROAD, SUITE 208, BALTIMORE, MARYLAND 21204
 (301) 296-4100

ANNAPOLIS, MD • ATLANTA, GA • AURORA, CO • CULPEPER, VA • DULUTH, GA • EXPORT, PA • FAIRFAX, VA • GREENBELT, MD
 LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

SEDIMENT CONTROL/S.W.M. DETAILS
HILLCROFT OFFICE BUILDING II

PLAT 7783 TAX MAP 36 PART OF PARCEL 433
 SDP-89-198, VILLAGE OF OWEN BROWN, SECTION 5.1, PARCEL E-5

NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 36
 6th ELECTION DISTRICT HOWARD CO., MARYLAND

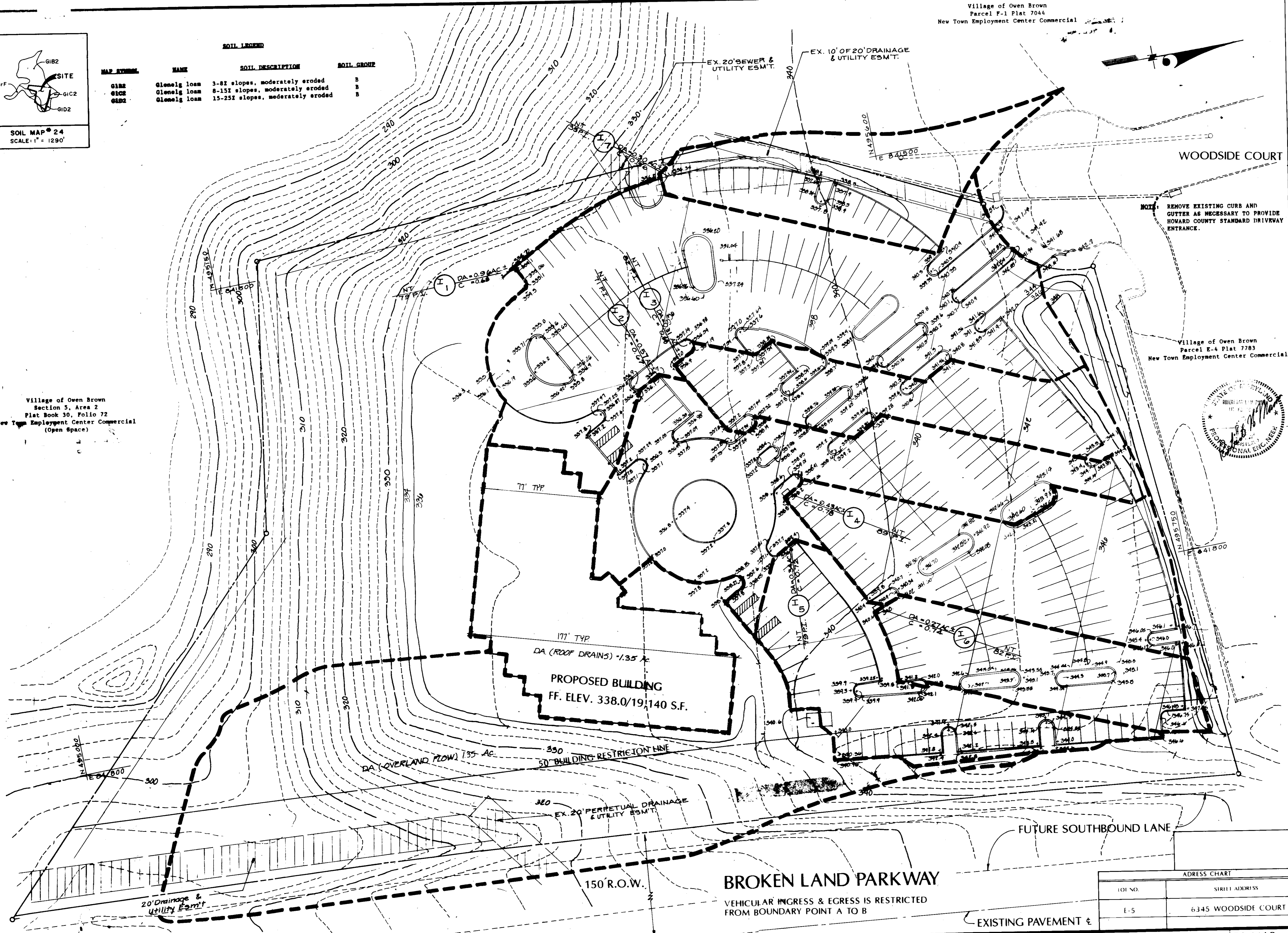
TJK/MFF DESIGN	SCALE N/A
KRM DRAWN	13 OF 14
RHM CHECKED	SHEET
APRILLISS DATE	JOB No. FILE No.

SDP 89-198

SOIL MAP # 24
SCALE: 1" = 1290'

MAP SYMBOL	NAME	SOIL DESCRIPTION	SOIL GROUP
G1B2	Glenelg loam	3-8% slopes, moderately eroded	B
G1C2	Glenelg loam	8-15% slopes, moderately eroded	B
G1D2	Glenelg loam	15-25% slopes, moderately eroded	B

Village of Owen Brown
Section 5, Area 2
Plat Book 30, Folio 72
New Town Employment Center Commercial
(Open Space)



Village of Owen Brown
Parcel F-1 Plat 7044
New Town Employment Center Commercial

WOODSIDE COURT

Village of Owen Brown
Parcel E-4 Plat 7783
New Town Employment Center Commercial

BROKEN LAND PARKWAY

FUTURE SOUTHBOUND LANE

150' R.O.W.

VEHICULAR INGRESS & EGRESS IS RESTRICTED FROM BOUNDARY POINT A TO B

EXISTING PAVEMENT

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. Beard 2/27/90
COUNTY HEALTH OFFICER DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS & PUBLIC ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS

James M. Beard 2/22/90
DIRECTOR DATE
Robert W. Ziem 11-16-89
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark J. Langley 3/15/90
PLANNING DIRECTOR DATE
Mark J. Langley 2/6/90
CHIEF, DIV. OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE

SEDIMENT CONTROL
BY THE DEVELOPER:
I, WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT MANY 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 AND EROSION BEFORE BEGINNING THE PROJECT.
I ALSO AUTHORIZE THE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Ziem 10/17/89
SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR 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.
Robert W. Ziem 10-17-89
SIGNATURE OF ENGINEER DATE

REVIEWED FOR HOWARD S.C.D.
AND MEETS TECHNICAL REQUIREMENTS.
James M. Nelson 10/24/89
U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Ziem 10/24/89
HOWARD S.C.D. DATE

APPROVED
DATE: 10-11-89
L.S.

BEFORE BEGINNING CONSTRUCTION, CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

ADDRESS CHART		SUBDIVISION NAME		SICL AREA		LOT PARCEL	
LOT NO.	STREET ADDRESS	VILLAGE OF OWEN BROWN		5-1		E-5	
E-5	6345 WOODSIDE COURT	PLAT NO. OR L	BLOCK NO./ZON	TRAC NO./ZON	SEC. NO.	6TH	6051.02
		7783	14 NT	36			
		WATER CORP	E-13				5410000

OWNER/DEVELOPER
CRYSTAL HILL INVESTMENTS INCORPORATED
10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046

No.	REVISION	DATE	BY

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LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WEST PALM BEACH, FL

DRAINAGE AREA MAP FOR
HILLCROFT OFFICE BUILDING II
PLAT 7783 TAX MAP 16 PART OF PARCEL 433
SDP-89-198, VILLAGE OF OWEN BROWN SECTION 5, PARCEL E-5
NEW TOWN EMPLOYMENT CENTER COMMERCIAL ZONING MAP 16
6th ELECTION DISTRICT HOWARD CO., MARYLAND

DATE	1989	JOB NO.		FILE NO.	
DESIGN	WFF/TJW	SCALE	1" = 311'		
DRAWN	KFM				
CHECKED	PHM				
DATE	APRIL				
					14 OF 14
					SHEET