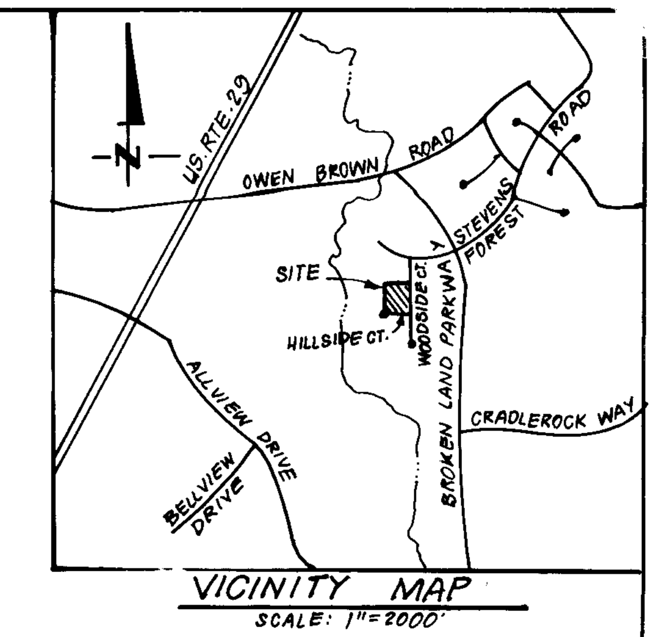
LEGEND

Existing Contour	340
Proposed Contour	340
Spot Elevation	+40.5
Direction of Drainage	→
Existing Storm Drain	Ex. 15" RCP
Proposed Storm Drain	15" RCP
Ex. 8" Sewer	Ex. 8" S
Ex. Water	Ex. 12" W
Infiltration Trench	▭



VICINITY MAP
SCALE: 1"=2000'

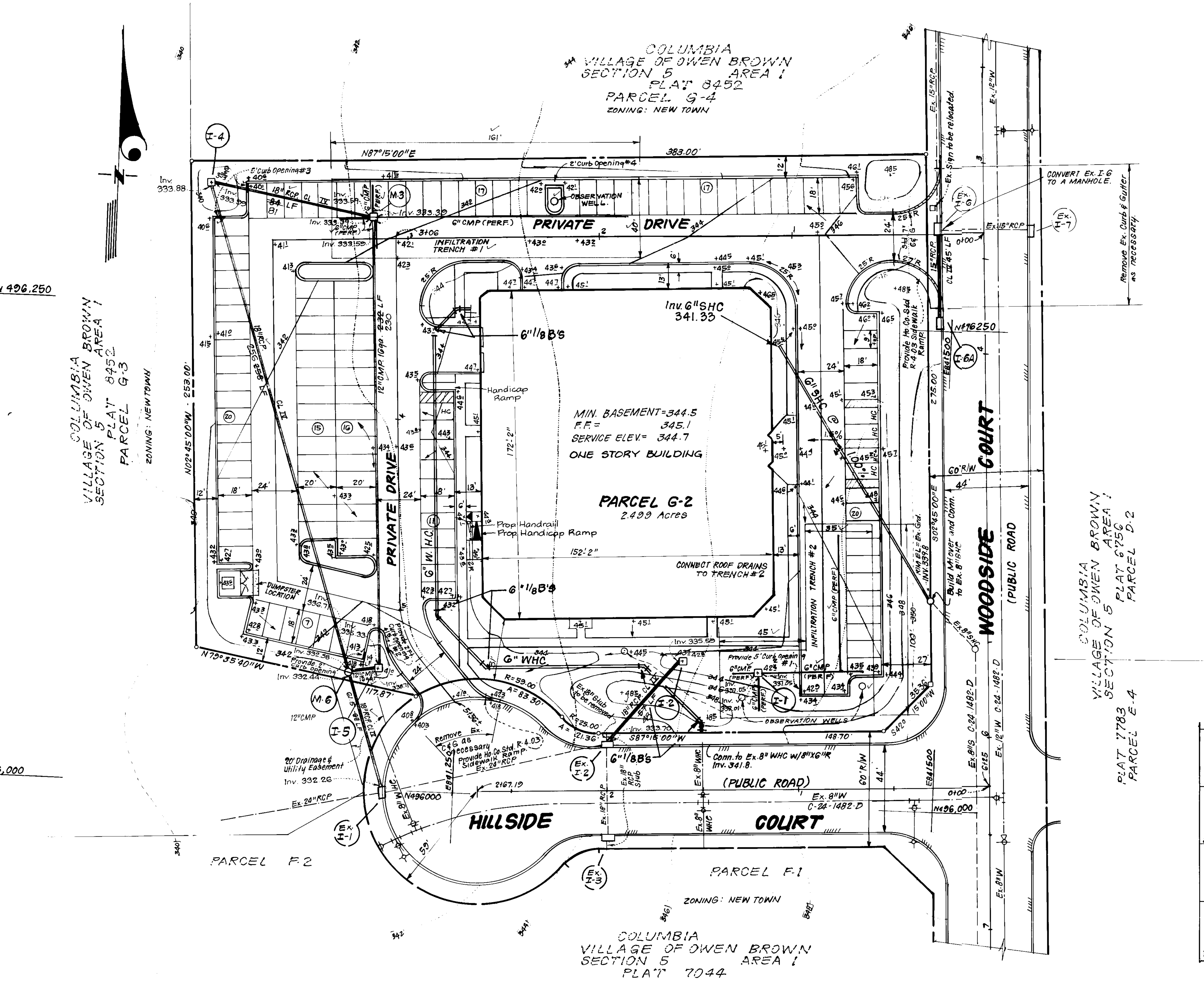
SITE ANALYSIS

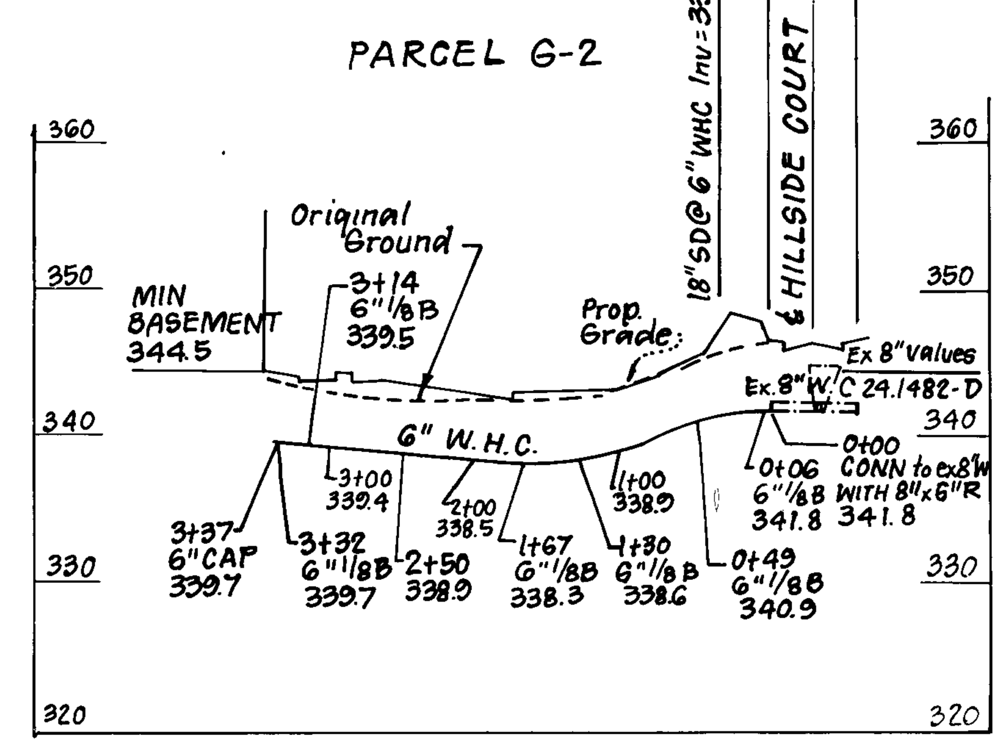
1. Zoning: New Town – Employment Center/ Commercial (FDP. 149A-I)
2. Type of Unit Proposed: Office Building - One Story
3. Area Tabulation:
   - Total Area of Parcel: 2.499 Acres
   - Net Leaseable Area: 23,525 sf or 0.5400 Acres
   - Parking & Drives: 1.033 Acres or 41%
4. Parking Spaces Required: 118
5. Parking Spaces Provided: 123
6. Building Coverage Proposed: 26,179 sf or 0.601 Ac or 24%
7. Greenspace Provided: 37,679 sf or 0.865 Ac or 34.6%
8. Handicap Spaces: Req'd: 5 ; Proposed: 5

GENERAL NOTES

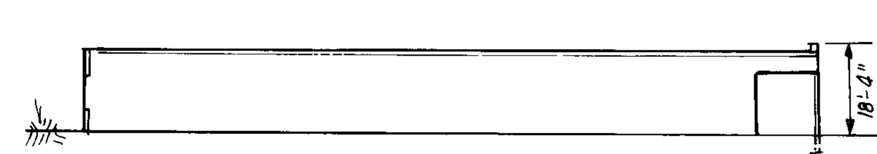
1. All materials and construction to be in accordance with Howard County Road Construction Code & Specifications.
2. Coordinates are based on Ho. Co. Geodetic Control Traverse which is based on the Maryland State Plane Coordinate system.
3. All driveways are privately owned and maintained.
4. Any damage to county owned rights of way to be corrected at the developer's expense.
5. Installation of traffic control devices shall be in accordance with the latest edition of the "Manual of Uniform Traffic Control."
6. Topography was compiled from actual field survey.
7. The area shown is located on Tax Map #36.
8. Trench bedding for storm drainage shall be in accordance with Howard County Std. SD G.2.01. See det. sht. 2.
9. Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location by digging test pits, by hand, at all crossings well in advance of construction.
10. The contractor or developer shall contact the Construction Inspection Survey Division 24 hrs. in advance of work at 992-2417 or 792-7272.
11. The developer agrees to work with the Dept. of Licenses and Inspection to resolve any problem with roof water discharge.
12. Handicap parking details shall be in accordance with the "Maryland Building Code for the Handicapped," Sect. 5.01-7.05 and dets sht. 2.
13. Deed Reference: L.1535 F.193.
14. Notify all Utility Companies 24 hrs. in advance of construction.
15. All construction methods and materials for the on-site private W.&S. system shall follow the current edition of the Howard County Plumbing Code, supplemented by the Howard County Std. Details and Specs. where necessary.
18. All water pipes shall be D.I.P. Class 52.
19. Areas where water house connection is to be built shall be at final grade and conn. shall be laid with a min. 3.5' of cover.
20. Water and Sewer House Connections shall be built to within 5 Ft. of Building.
21. See O.P.Z. Files F-87-02, F-89-110.

AS-BUILT FOR STORM DRAINAGE AND INFILTRATION TRENCHES 12-3-91





PROFILE SCALE
HORIZONTAL 1"=100'
VERTICAL: 1"=10'



BUILDING ELEVATION
NO SCALE

Jeffrey L. Schwab 12/4/91 For AS-BUILT of Storm Drainage and infiltration Trenches

NOTE: All "As-Built" Infiltration Trench dimensions are based on Information provided by Howard County Dept. of Public Works, Bureau of Construction Inspection.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT	
Joyce M. Boyd (signature) — COUNTY HEALTH OFFICER	5-22-89 — DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	
(signature) — PLANNING DIRECTOR	(date) — DATE
(signature) — CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	5/24/89 — DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
(signature) — DIRECTOR	(date) — DATE
(signature) — CHIEF BUREAU OF ENGINEERING	5-16-89 — DATE

4-26-89

№	REVISION	Date
2	Handicap Ramp & H.C. Parking Addition.	3-14-90
1	Rev. loc. 6" SHC, 6" WHC, coordinate values	8-9-89

1-13-89

OWNER: The Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia Md 21043

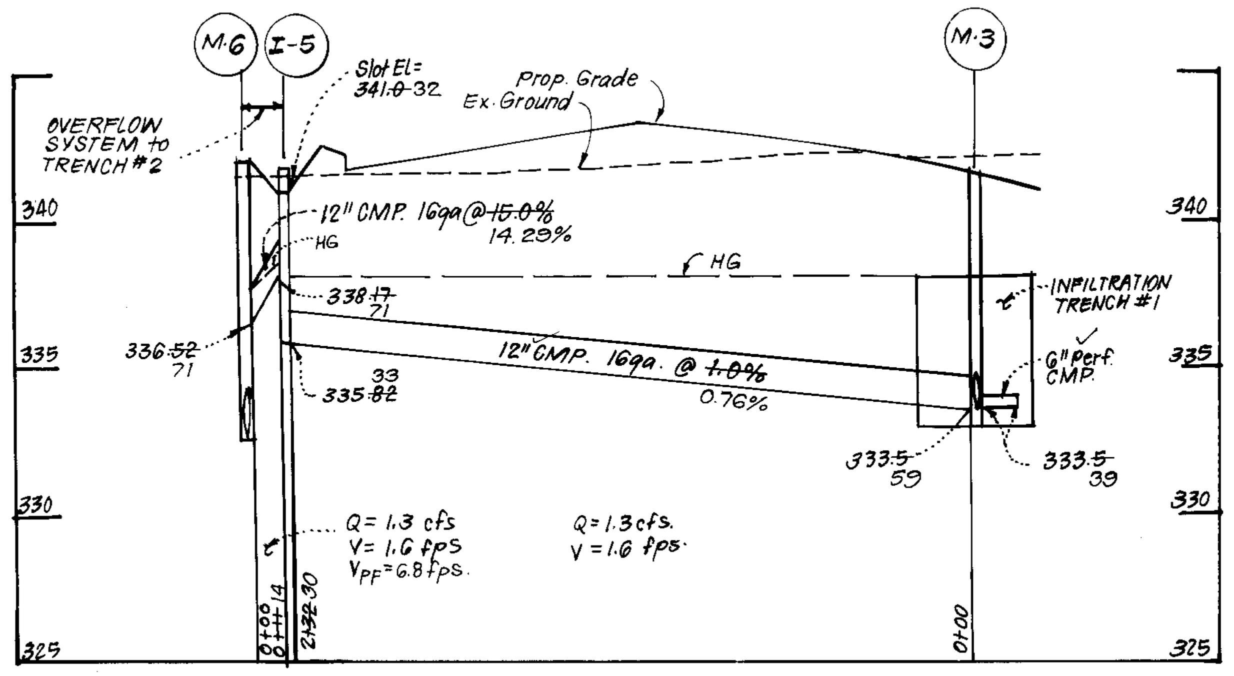
PARCEL №.	STREET ADDRESS
G-2	6304 Woodside Court

SUBDIVISION NAME: COLUMBIA VILLAGE OF OWEN BROWN			SECTION/AREA 5 / 1		PARCEL G-2
PLAT №. 8452	BLOCK №.	ZONE N.T.	TAX/ZONE MAP 36	ELEC DIST. 6th	CENSUS TR. 6061.03
WATER CODE E-13			SEWER CODE 541-0000		

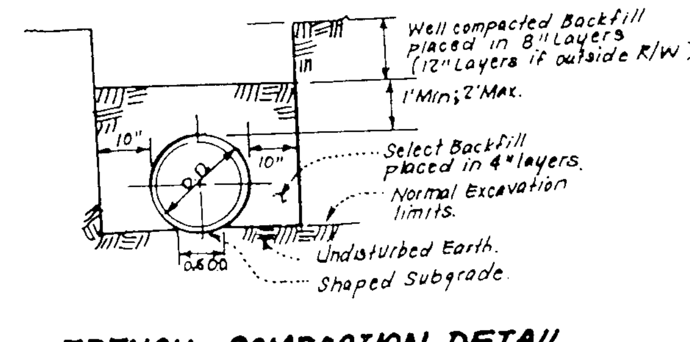
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7200 – BALTO. • (301) 621-8100 – WASH

DESIGNED MP JLS	SITE DEVELOPMENT PLAN PARCEL G-2	SCALE 1"=30'
DRAWN KIW	COLUMBIA	DRAWING 1 OF 6
CHECKED MP JLS	VILLAGE OF OWEN BROWN SECTION 5 AREA I 6TH ELECTION DISTRICT, HOWARD COUNTY, MD.	JOB NO. 88-154
DATE 1-13-89	FOR: C.D.C. COLUMBIA ASSOCIATION LTD. PARTNERSHIP 8280 Greensboro Drive. Suite 790 McLean Va. 22102	FILE NO. 88-154-X

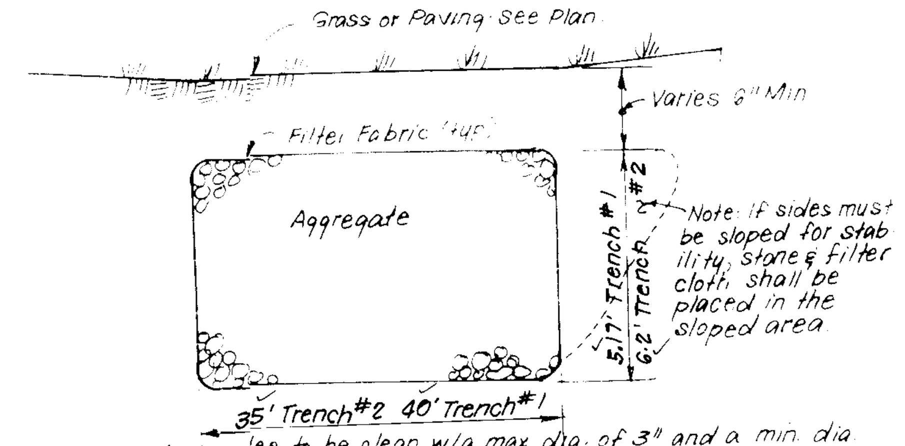
AS-BUILT SDP-89-138



Notes:
1. For O.D. of pipe see manufacturors specs. or field measure circumference of pipe and divide by 3.14.
2. Within road R/W, trench compaction density shall be 95% as determined A.A.SH.T.O. T-180-A.
3. For conditions requiring solid sheeting or trench shields 'A' shall not exceed 30."

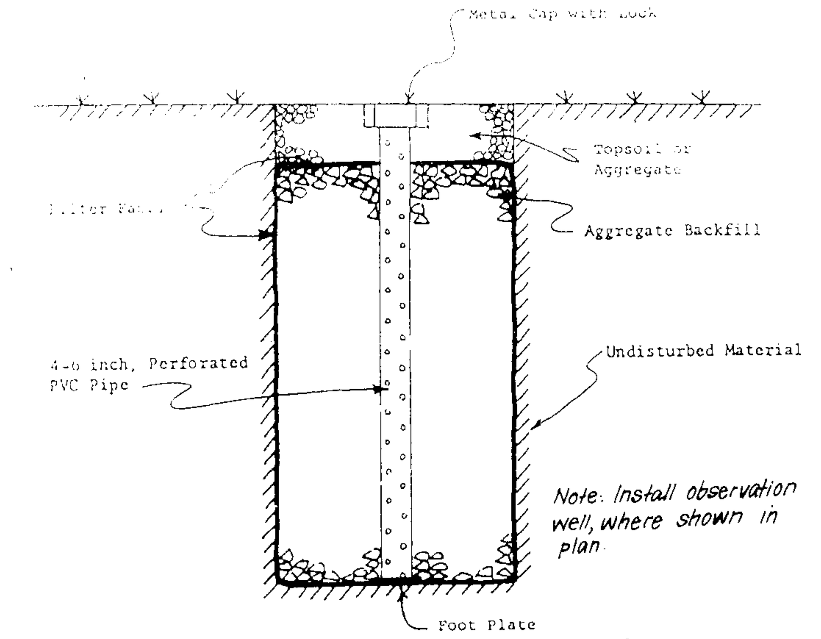


TRENCH COMPACTION DETAIL
NO SCALE



Note: Aggregates to be clean w/a max. dia. of 3" and a min. dia of 1 1/2". Filter fabric shall completely surround aggregate. Stone surface shall be 2" washed stones. Contractor shall observe all requirements of State Safety Regulations in constructing the trenches

TYPICAL SECTION- INFILTRATION TRENCH
NO SCALE



OBSERVATION WELL
NO SCALE

[illegible]

3.3.6.1. Timing

An infiltration trench shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible inspector.

3.3.6.2. Trench Preparation

Excavate the trench to the design dimensions. Excavated materials shall be placed away from the trench sides to enhance trench wall stability. Large tree roots must be trimmed flush with the trench sides in order to prevent fabric puncturing or tearing during subsequent installation [illegible] side walls of the trench shall be roughened where sheared [illegible] equipment.

3.3.6.3. Fabric Laydown

The filter fabric roll must be cut [illegible] installation. The cut width must include [illegible] trench perimeter irregularities and for a 6-inch [illegible] the fabric roll over the trench and unroll a sufficient length [illegible] placement of the fabric down into the trench. Stones or other anchoring objects should be placed on the fabric at the edge of the trench to keep the lined trench open during windy periods. When overlaps are required between rolls, the upstream roll should lap a minimum of 2 feet over the downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or to ensure that the fabric conforms to the excavation surface during aggregate placement and compaction.

3.3.6.4. Stone Aggregate Placement and Compaction

The stone aggregate should be placed in lifts and compacted using plate compactors. As a rule of thumb, a maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides, thereby reducing the potential for soil piping, fabric clogging, and settlement problems.

3.3.6.5. Overlapping and Covering

Following the stone aggregate placement, the filter fabric shall be folded over the stone aggregate to form a 6" minimum longitudinal lap. The desired fill soil or stone aggregate shall be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.

3.3.6.6. Contamination

Care shall be exercised to prevent natural or fill soils from intermixing with the stone aggregate. All contaminated stone aggregate shall be removed and replaced with uncontaminated stone aggregate.

3.3.6.7. Voids Behind Fabric

Voids can be created between the fabric and excavation sides and shall be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric conformity to the excavation sides. Soil piping, fabric clogging, and possible surface subsidence will be avoided by this remedial process.

3.3.6.8. Unstable Excavation Sides

Vertically excavated walls may be difficult to maintain in areas where the soil moisture is high or where soft cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability; trapezoidal rather than rectangular cross sections may result.

3.3.6.9. Vegetative Buffer

A vegetative buffer of at least 20 feet (wider, if possible) shall be used to intercept surface runoff from all impervious areas.

3.3.6.10. Traffic Control

Heavy equipment and traffic shall be restricted from travelling over the infiltration areas to minimize compaction of the soil.

3.3.6.11. Observation Well

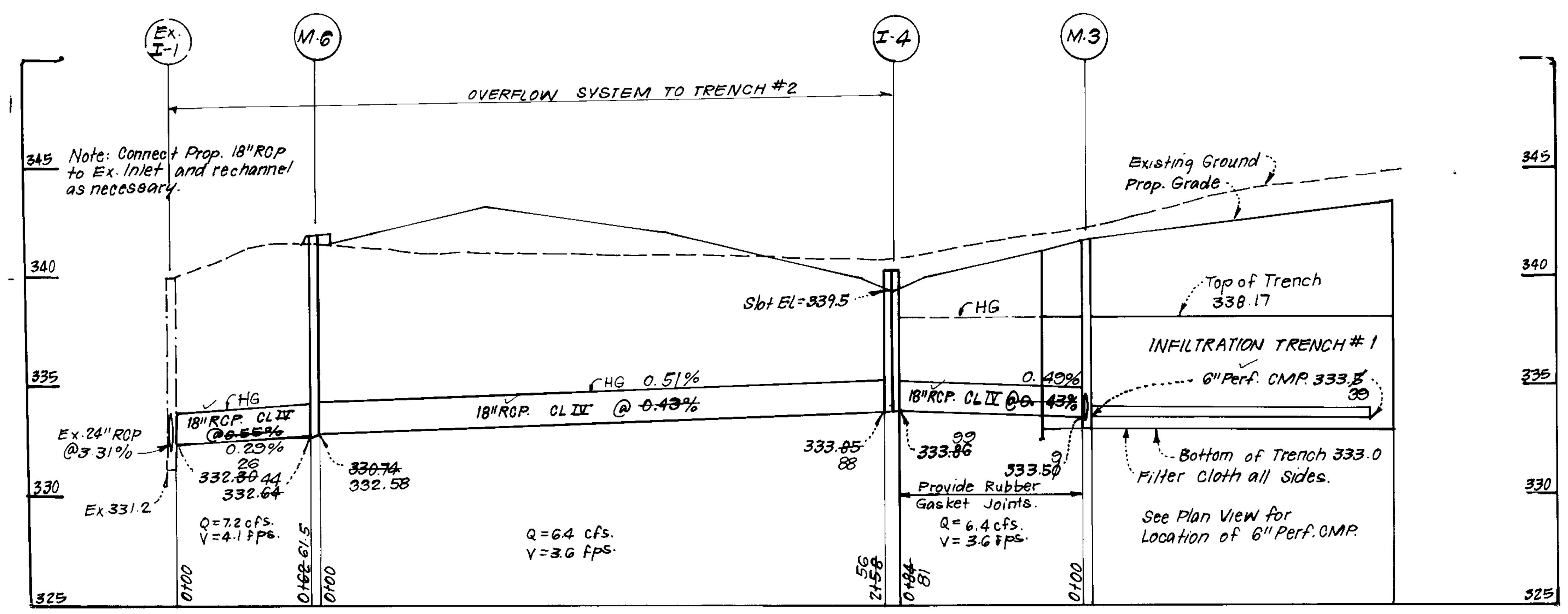
An observation well, as described in subsection 3.3.4.F and figure [illegible] shall be provided. The depth of the well at the time of installation will be clearly marked on the well cap.

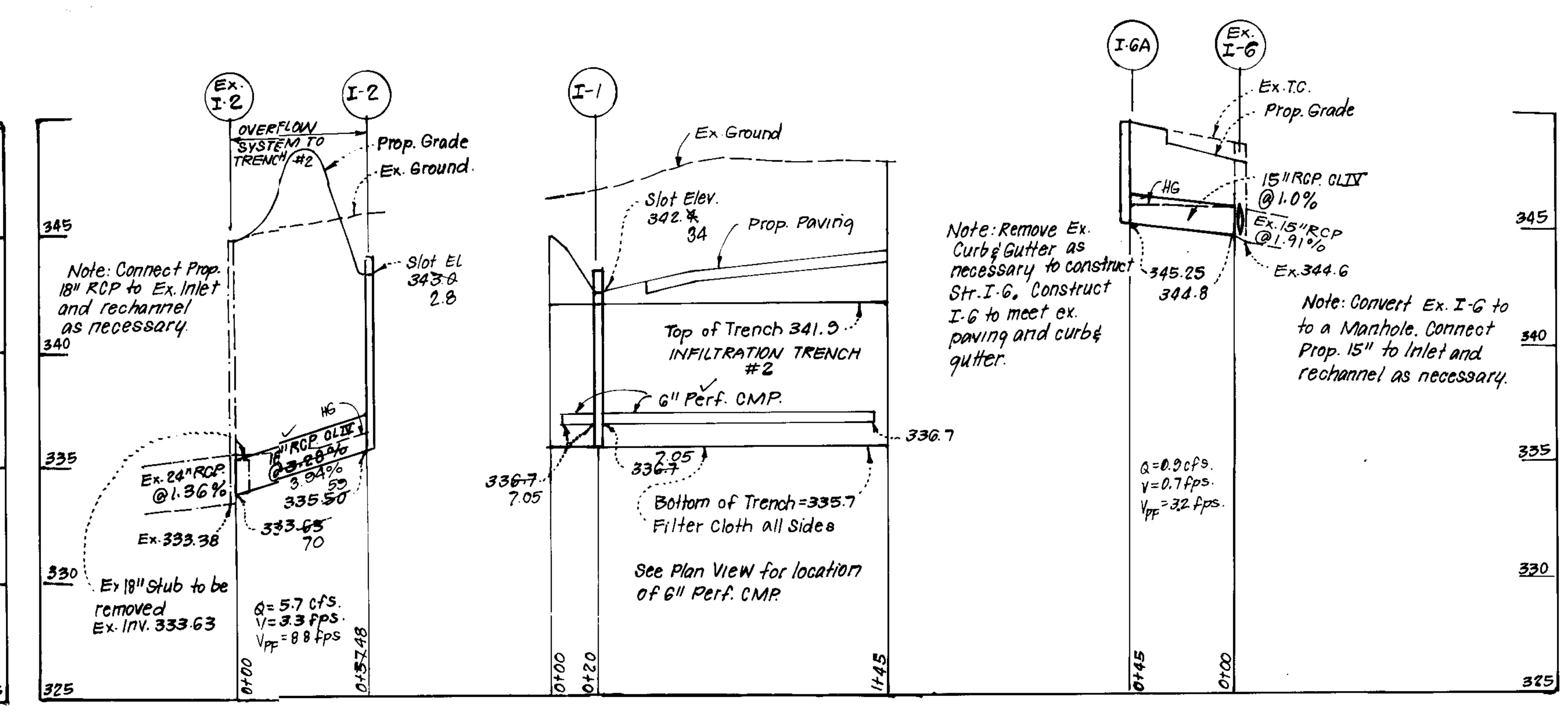
3.3.7. Maintenance

Infiltration trenches shall be designed to minimize maintenance. However, it is recognized that all infiltration facilities are subject to clogging by sediment, oil, grease, grit and other debris. In addition, the performance and longevity of these structures is not well documented. Consequently, a monitoring observation well is required for all infiltration structures.

The observation well shall be monitored periodically. For the first year after completion of construction, the well should be monitored on a quarterly basis and after every large storm. It is recommended that a log book be maintained indicating the rate at which the facility dewaters after large storms and the depth of the well for each observation. Once the performance characteristics of the structure have been verified, the monitoring schedule can be reduced to an annual basis, unless the performance data indicate that a more frequent schedule is required.

Sediment build-up in the top foot of stone aggregates or the surface inlet should be monitored on the same schedule as the observation well. A monitoring well in the top foot of stone aggregate will be required when the trench has a stone surface. Sediment deposited shall not be allowed to build up to the point where it will reduce the rate of infiltration into the trench.





PROFILES
SCALES HORIZ. 1"=50'
VERT. 1"=5

STRUCTURE SCHEDULE

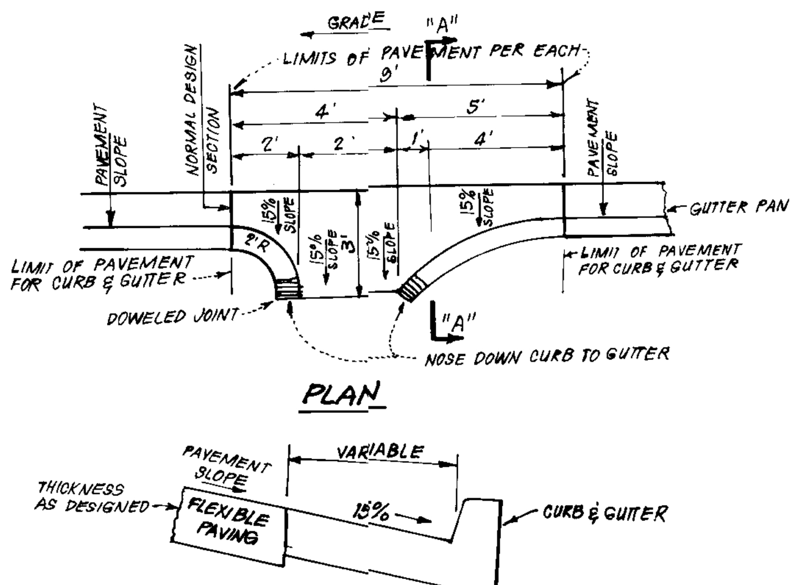
	No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION UPPER	TOP ELEVATION LOWER	REMARKS		LOCATION
#	I-1	D-Inlet	–	~~336.7~~ 7.05	~~343.23~~ 16		Ho.Co. Std. SD. 4.11	2'-6" Sq.	See Plan
o	I-2	D-Inlet	59	~~335.55~~ 59	~~343.85~~ 69		Ho.Co. Std. SD. 4.11	2'-6" Sq.	" "
	M-3	Std. Precast Manhole	333.5/333.5 59	~~333.5~~ 39	~~341.68~~ 1		Ho Co. Std. G 5.12	4' Rd.	" "
Δ	I-4	Mod. D-Inlet	–	333.85 88 / 333.86 99	~~340.33~~ 48		See detail this sht		" "
#	I-5	D-Inlet	–	335.82 33 / 338.17 71	~~341.83~~ 2.17		Ho. Co. Std. SD. 4.11	2'-6" Sq.	" "
□	I-6A	A-5 Inlet	58	345.25	349.7±	349.6±	Ho. Co. Std. SD-4.01	W=2'-6"	" "
+	M-6	Std. Precast Manhole	332.74/336.52 71	332.~~64~~ 44	342.00 16		Ho. Co. Std. G 5.12	4' Rd	" "

o Provide Slot in N.S. & E. Side.
Provide Slots in All Sides
Δ Provide Slots in N.E. & W. Side.
□ Inlet top to meet ex. curb & gutter.
+ Invert to be fully developed.

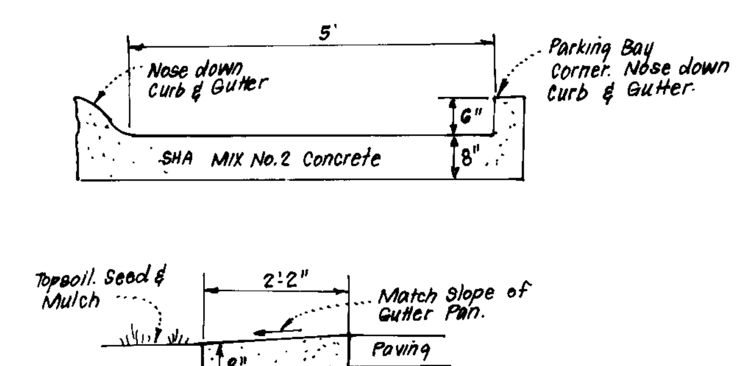
PIPE SCHEDULE

	SIZE	TYPE	LENGTH
*	12"	CMP. 16ga.	243 LF
	15"	RCP CL IV	41 LF
	18"	RCP CL IV	461 LF

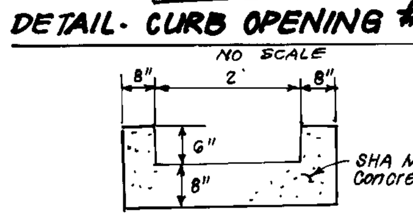
* 2 2/3" X 1/2" Corrugations.



DETAIL- CURB OPENING #2
NO SCALE

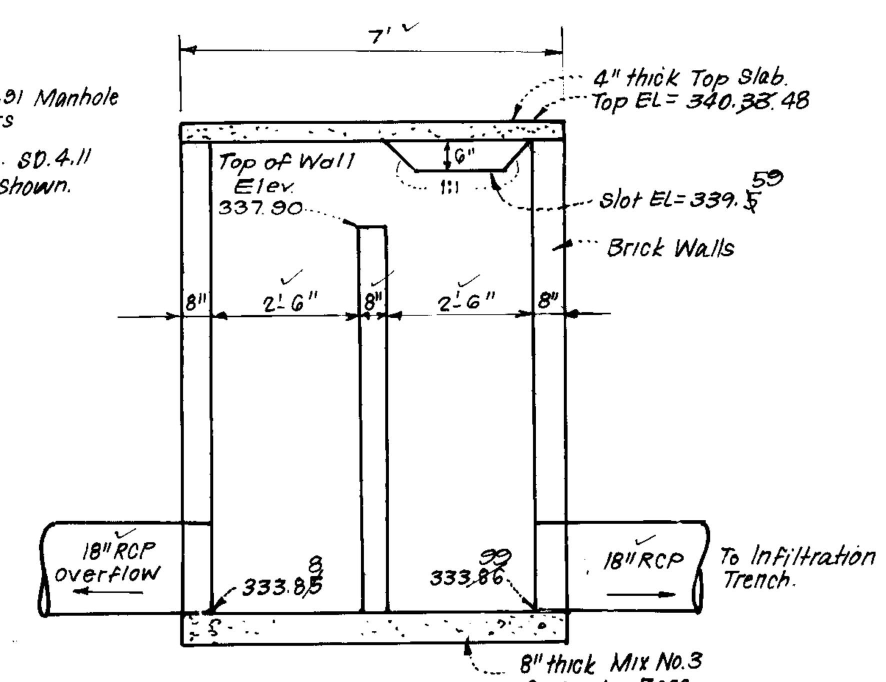


DETAIL- CURB OPENING #1 & #3
NO SCALE



DETAIL- CURB OPENING #4
NO SCALE

Notes:
1. Provide 2- SD.3.31 Manhole Frame and Covers
2. See Ho. Co. Std. SD.4.11 For Detail Not Shown.



DETAIL- SPECIAL STRUCTURE I-4
NO SCALE

4-26-89

Jeffrey L. Schwab 12/4/91 For AS BUILT of Infiltration Trenches and storm drainage

AS-BUILT FOR STORM DRAINAGE AND INFILTRATION TRENCHES 12-3-91

NOTE: "AS-BUILT" Infiltration Trench dimensions are based on information provided by Howard County Dept. of Public Works, Bureau of Construction Inspection Division.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — 5-22-89 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
PLANNING DIRECTOR — DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/24/89 DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE
CHIEF BUREAU OF ENGINEERING — 5-16-89 DATE

STATE OF MARYLAND — G. NELSON — NO 7149 — REGISTERED PROFESSIONAL ENGINEER — 1-13-89

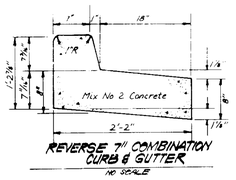
OWNER: The Howard Research and Development Corp
10275 Little Patuxent Parkway
Columbia Md. 21043

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 • BALTO •

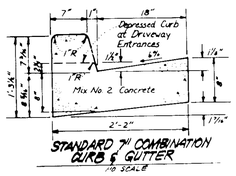
DESIGNED MP	SITE DEVELOPMENT PLAN PARCEL G-2 STORM DRAINAGE DETAILS	SCALE 1"=30'
DRAWN KIW	**COLUMBIA** VILLAGE OF OWEN BROWN SECTION 5 AREA 1	DRAWING 2 OF 6
CHECKED MP	6TH ELECTION DISTRICT, HOWARD COUNTY, MD.	JOB NO. 88-154
DATE 1-13-89	FOR: CDC COLUMBIA ASSOCIATION LTD. PARTNERSHIP 1280 Greensboro Drive Suite 790 McLean Va. 22102	FILE NO. 88-154-X

AS-BUILT SDP-89-138

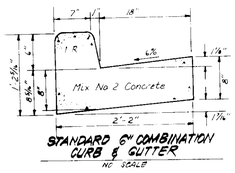
SIGNS
Colors and Finish: Green White Symbol and Border Reflectorized Background White



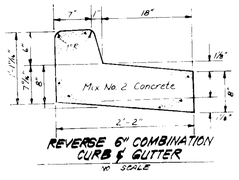
REVERSE 7" COMBINATION CURB & GUTTER
NO SCALE



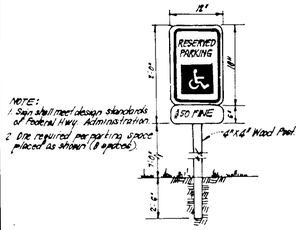
STANDARD 7" COMBINATION CURB & GUTTER
NO SCALE



STANDARD 6" COMBINATION CURB & GUTTER
NO SCALE

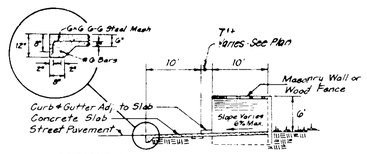


REVERSE 6" COMBINATION CURB & GUTTER
NO SCALE

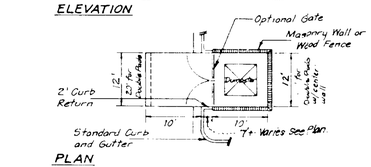


NOTE:
1 Sign shall meet design standards of Federal Hwy. Administration.
2 One required per parking space placed as shown (8 spaces).

HANDICAP PARKING SIGN DETAIL
NO SCALE



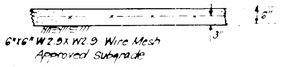
ELEVATION



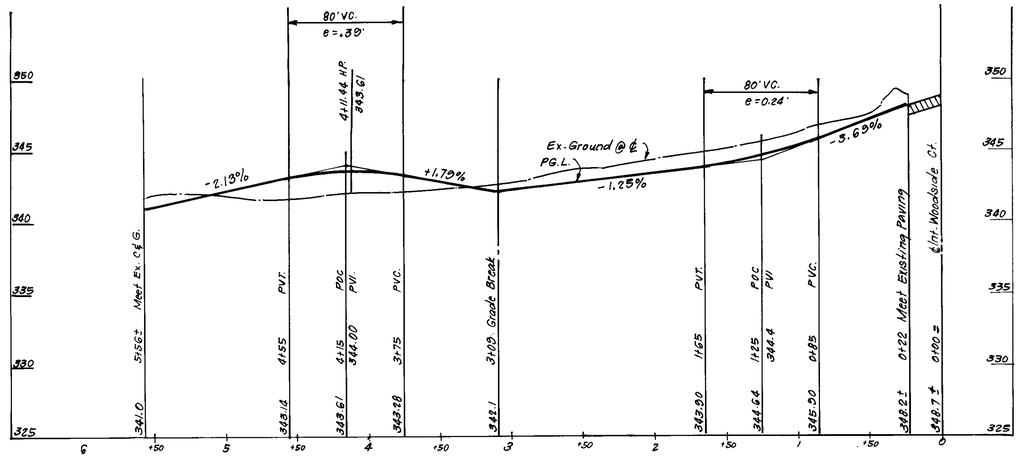
PLAN

DUMPSTER PAD & ENCLOSURE
No Scale

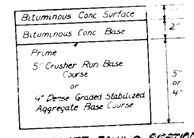
Notes:
1 Materials and Construction to be in accordance with the Co. Stds & Specs.
2 See plan view for limits of concrete paving, shown thus:



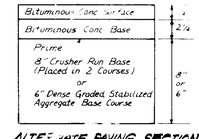
CONCRETE PAVING DETAIL - DUMPSTER AREA
NO SCALE



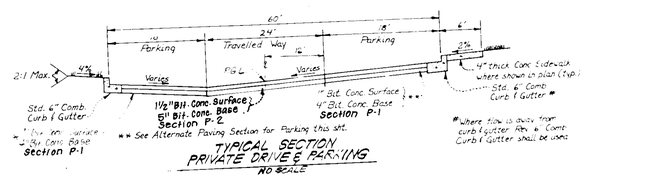
PROFILE - PRIVATE DRIVE
SCALES: HORIZ. 1"=50'
VERT. 1"=5'



ALTERNATE PAVING SECTION FOR PARKING AREAS
NO SCALE
(SECTION P-1)

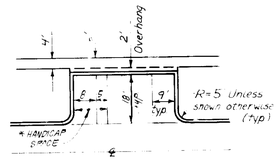


ALTERNATE PAVING SECTION FOR PUBLIC ROADS
NO SCALE
(SECTION P-2)



* Bit. Conc. Surface
** Bit. Conc. Base Section P-1
** See Alternate Paving Section for Parking this sht.
# Where slope is away from curb & gutter Rev. 6" Comb. Curb & Gutter shall be used

TYPICAL SECTION
PRIVATE DRIVE & PARKING
NO SCALE



TYPICAL PARKING
NO SCALE

* Two 8' Handicap spaces may share one 5' Aisle

Jeffrey D. Schenck 10/4/91
For AS-BUILT of Infiltration Trenches and storm drainage

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-22-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
PLANNING DIRECTOR — DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5-24-89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE
CHIEF BUREAU OF ENGINEERING — DATE 5-16-89

APPROVED
4-26-89

1-13-89

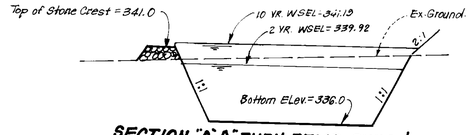
OWNER: The Howard Research and Development Corp
10275 Little Patuxent Parkway
Columbia Md 21043

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA MD 21045 • (301) 997-7500

DESIGNED MP JLS	SITE DEVELOPMENT PLAN
DRAWN KIW	PARCEL G-2
CHECKED MP JES	PAVING DETAILS
DATE 1-13-89	COLUMBIA
	VILLAGE OF OWEN BROWN AREA 1
	SECTION 5
	6TH ELECTION DISTRICT, HOWARD COUNTY, MD.
	FOR: CDC - COLUMBIA ASSOCIATION LTD PARTNERSHIP

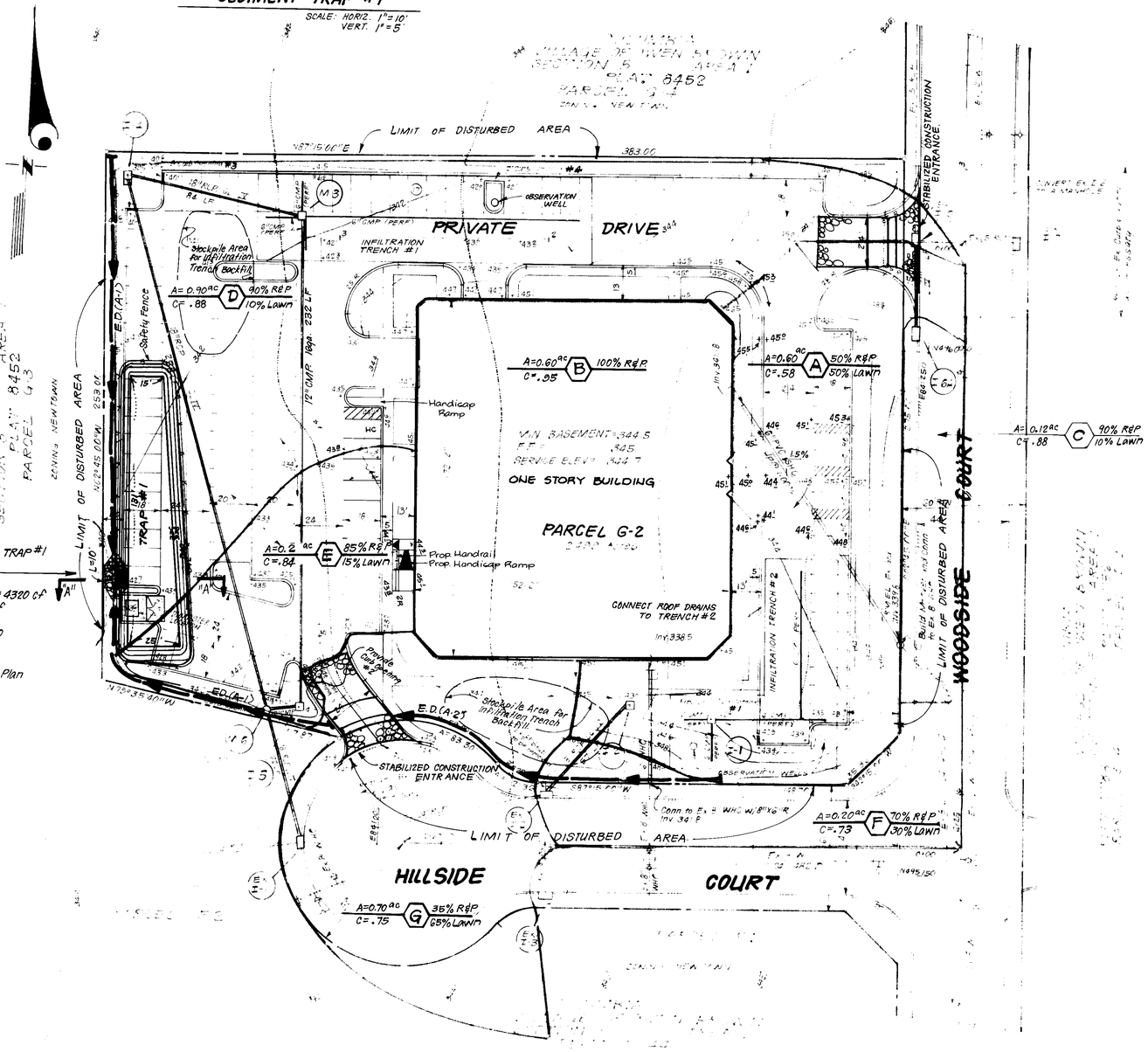
3 OF 6
BR 154
98

AS-BUILT
SDP-89-135



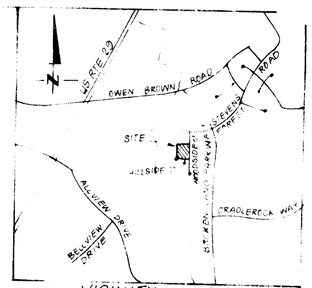
SECTION "A-A" THRU TEMP. SWM & SEDIMENT TRAP #1

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'



TEMP. SWM & SEDIMENT TRAP #1
TRAP #1 SOST. (ST V)
D.A. = 2.4 Acres
Storage Req'd. = 2.4(1800) = 4320 cf
Storage Provided = 12960 cf
Depth = 4'
Top of Stone Crest = 341.0
Bottom Elev. = 336.0
Clean Out Elev. = 338.0
Bottom Dimensions = See Plan
1:1 Side Slopes in Cut

LEGEND



VICINITY MAP
SCALE 1" = 1000'

BUILDING ELEVATION
NO SCALE

No.	Revisions	Date
1	Handicap Ramp & H.C. Parking Addition.	3-14-90

Approved for H.C.D. Technical requirements Service
Stephen E. Kuhn 5-12-89 Date
Approved 5/16/89 Date

1-13-89

For AS BUILT of Infiltration Trenches and Storm Drainage

G. Nelson Clark 1-13-89 Date

JLS
KIW
JLS
1.13.89

DESIGNED
DRAWN
CHECKED
TRACED
QUANTITIES
DATE

"I/We certify that all clearing, grading, construction and development will be done according to this plan of Erosion and Sediment Control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved training program for the control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Signature of Developer/Builder 1-13-89 Date

OWNER: The Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia Md. 21043

CLARK ENGINEERING-SCHLEIDER-JACKETT, INC.

1500

SEDIMENT & EROSION CONTROL PLAN
PARCEL G-2

1" = 30'

COLUMBIA
VILLAGE OF OWEN BROWN
SECTION 5 AREA 1
6TH ELECTION DISTRICT, HOWARD COUNTY, MD.

4 OF 6

FOR: C.D.C - COLUMBIA ASSOCIATION LTD PARTNERSHIP

8R 154

SE

AS-BUILT

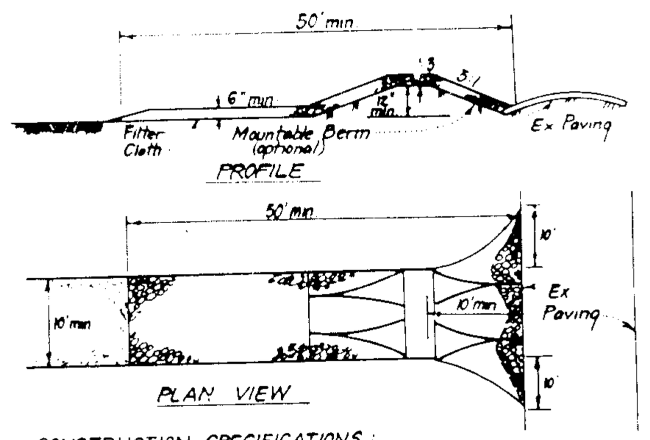
SDP-89-138

Joyce M. Lloyd Mayor Pro Tem 5-22-89

Marsha S. McLaughlin COMMUNITY PLANNING & LAND DEVELOPMENT 5/24/89

4-26-89

W. Lee Ann & Reilly 5-16-89

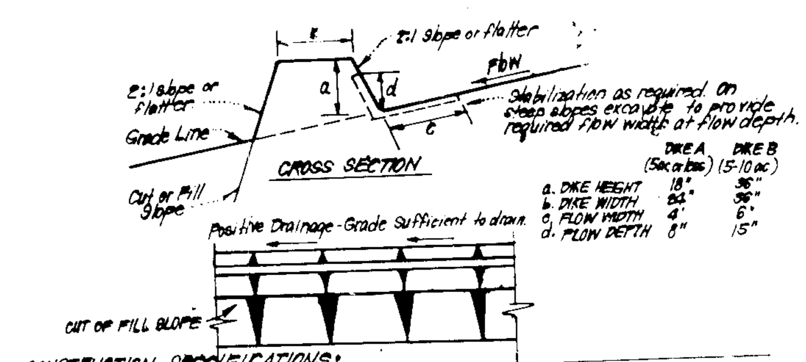


CONSTRUCTION SPECIFICATIONS:

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 stone. 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 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, washed or tracked onto public rights-of-way must be removed immediately.
8. 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.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO 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 facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
5. 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.
6. 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 chart below.

FLOW CHANNEL STABILIZATION

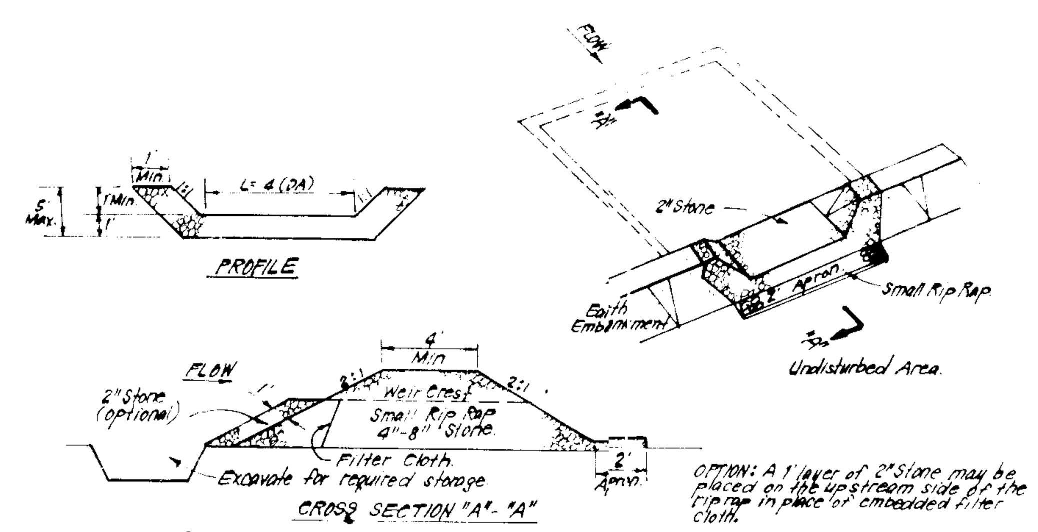
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1.	0.5-3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2.	3.1-5.0%	Seed & Straw Mulch	Seed w/Jute, or Excelsior; Sod; 2" Stone
3	5.1-8.0%	Seed w/Jute or Sod; 2" Stone	Lined Rip Rap 4"-8" Stone
4	8.1-20.0%	Lined Rip Rap 4-8" Stone	Engineering Design

A. Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B. Rip Rap to be 4"-8" in a layer at least 8" thick, pressed into 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.

EARTH DIKE DETAIL (E.D.)

NO SCALE



OPTION: A 1' layer of 2" Stone may be placed on the upstream side of the rip rap in place of embedded filter cloth.

CONSTRUCTION SPECIFICATIONS:

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 rip rap 4"-8" along with 1' thickness of 2" aggregate placed on the up-grade side on the small rip rap or embedded filter cloth in the rip rap.
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.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) ST-V

NO SCALE

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

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

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

TEMPORARY SEEDING NOTES

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

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

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

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

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

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

SEDIMENT CONTROL NOTES

1) A ... 24 ... Permit ...

2) All ... SECTION ...

3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within ... for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, ... 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. I, 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 seeding (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	2.499	Acres
Area Disturbed	2.55	Acres
Area to be roofed or paved	1.95	Acres
Area to be vegetatively stabilized	0.60	Acres
Total Cut	5730	Cu. Yds.
Total Fill	2170	Cu. Yds.
Offsite waste/borrow area location	Undetermined	

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

9) Additional sediment control 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.

11) If houses are to be constructed on an "As-Sold" basis or random, Single Lot Sediment Control as shown below is to be implemented. N/A

12) All pipes to be blocked at the end of each day (see below).

13) The total amount of straw bale dikes silt fence etc. None L.F.

CONSTRUCTION SEQUENCE:

	Nº OF DAYS
1. Obtain Grading Permit.	7
2. Install Sediment & Erosion Control Measures.	7
3. Clear & Rough Grade Site.	14
4. Construct Storm Drainage & Brick Shut Slots on Yard Inlets I-1, I-2, I-4 & I-5.	30
5. Construct Utilities.	30
6. Fine Grade and Construct Building and Paving except paving over Infiltration Trenches and around Trap #1.	90
7. Upon approval of the sediment control inspector, remove trap #1 and construct paving in that area.	14
8. Construct Infiltration Trenches and remainder of paving and unblock yard inlets.	30

Note: Contractor to prevent sediment from entering the infiltration facility by providing diversion berms and covering stone with filter fabric.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

A. Ralph Burnell 1-13-89
Signature of Developer/Builder Date

Jeffrey L. Schmit 12/4/91
For AS BUILT of Infiltration Trenches and Storm Drainage

OWNER: The Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia Md. 21043

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

Joyce M. Boyd MD per Ed.	5-22-89
COUNTY HEALTH OFFICER	DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

	5-24-89
PLANNING DIRECTOR	DATE
Marsha S. McLaughlin	5/24/89
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE

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

	5-18-89
DIRECTOR	DATE
William E. Riley	5-16-89
CHIEF BUREAU OF ENGINEERING	DATE

APPROVED
4-26-89

Reviewed for Howard S.C.D.
and Meets Technical Requirements
James M. ... 5-12-89
Signature Date
U.S. Soil Conservation Service

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

Stephen L. ... 5/10/89
Approved Date

STATE OF MARYLAND
G. NELSON CLARK
NO. 7136
REGISTERED PROFESSIONAL ENGINEER
1-13-89

ENGINEER'S CERTIFICATE

"I hereby 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."

G. Nelson Clark	1-13-89
G. Nelson Clark	Date

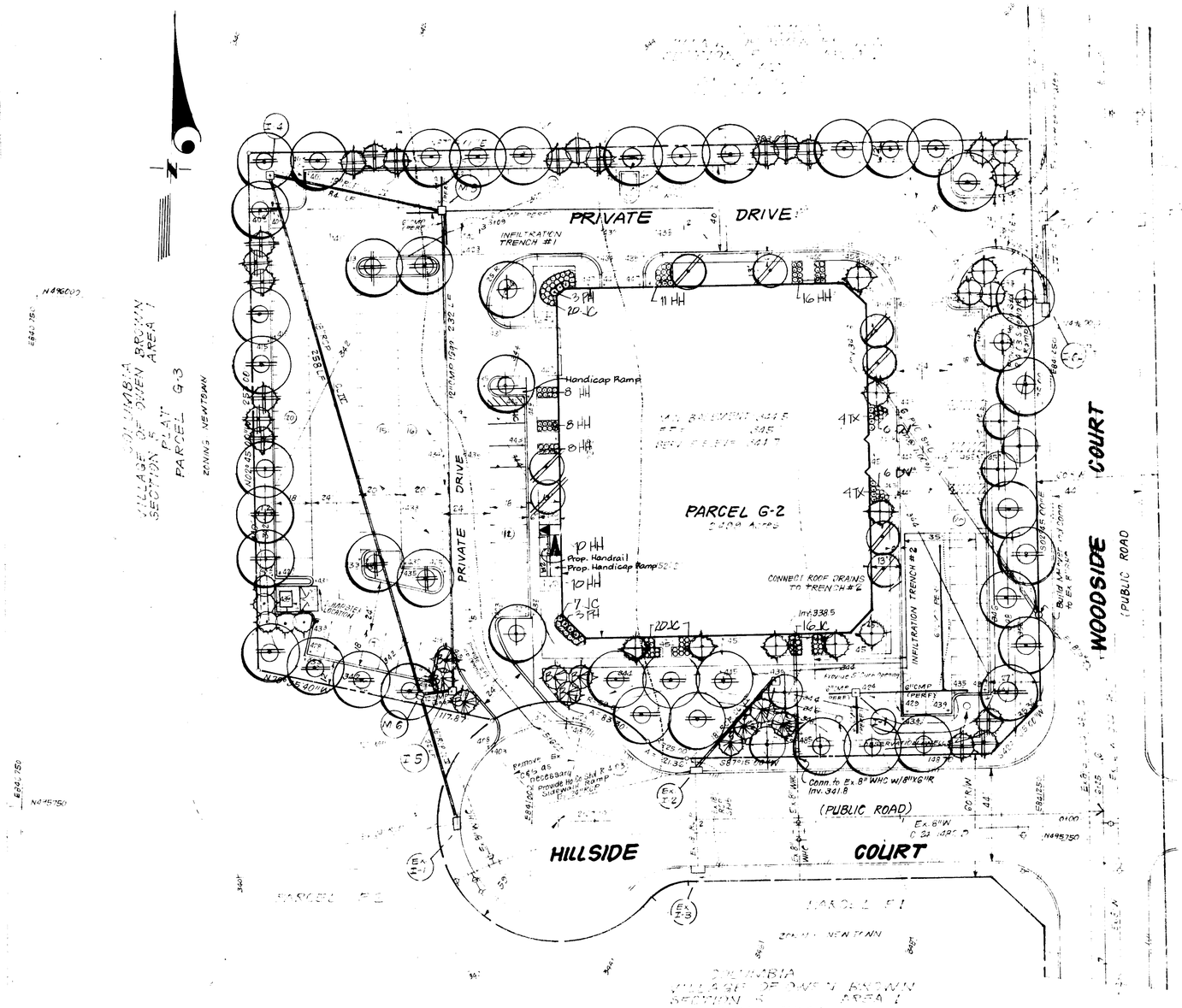
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA MD 21045 • (301) ... 7500

DESIGNED JLS	SEDIMENT & EROSION CONTROL DETAILS PARCEL G-2
DRAWN KJW	COLUMBIA VILLAGE OF OWEN BROWN SECTION 5 AREA I 6TH ELECTION DISTRICT, HOWARD COUNTY, MD.
CHECKED JLS	
DATE 1-13-89	FOR: CDC - COLUMBIA ASSOCIATION LTD PARTNERSHIP 5130 Greensboro Drive ... McLean Va. ...

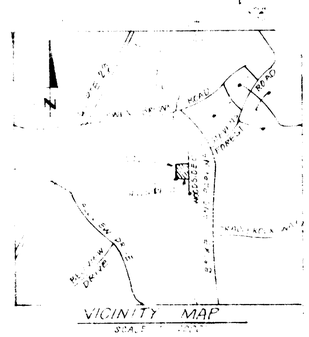
5 of 6

SE

AS-BUILT SDP-89-138



LEGEND



SITE ANALYSIS

123

PLANT SCHEDULE

KEY	SHADE TREES	SIZE	QTY.	REMARKS
	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2½-3" CAL. 12-14' HT.	9	B & B HEAVY HEAVY
	ACER SACCHARUM 'GREEN MOUNTAIN' GREEN MOUNTAIN SUGAR MAPLE	↓	4	
	QUERCUS PALUSTRIS PIN OAK	↓	32	
	FLOWERING/EVERGREEN TREES			
	CORNUS FLORIDA WHITE FLOWERING DOGWOOD	2-2½" CAL. 8-10' HT.	8	
	PRUNUS 'KWANZAN' KWANZAN CHERRY	↓	5	
	PICEA ABIES NORWAY SPRUCE	6-8' HT.	18	
	PINUS NIGRA AUSTRIAN PINE		14	
	PINUS STROBUS WHITE PINE		4	
	PINUS THUNBERGII JAPANESE BLACK PINE		6	
	CUPRESSOCYPARIS x LEYLANDII LEYLAND CYPRESS	↓	5	
	SHRUBS			
HH	ILEX CRENATA 'HELLERI' HELLERI HOLLY	15-18" SPR.	71	
FH	PHOTINIA x FRAZERI FRAZER PHOTINIA	24-30"	6	
JC	JUNIPERUS CONFERTA BLUE PACIFIC SHORE JUNIPER	15-18	63	
RV	AZELEA HYBRID DELAWARE VALLEY WHITE	↓	12	
TX	TAXUS x MEDIA DENSIFORMIS DENSE YEW	18-24"	8	

NOTES:
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH H.C.D. PLANTING SPECIFICATIONS.

Joyce M. Lloyd MD for S.E. 5-22-89
Community Planning Area
5/16/89
LAND DEVELOPMENT
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE ST. PM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
5/16/89
DIRECTOR DATE
5-16-89
CHIEF BUREAU DATE

APPROVED
PLANNING BOARD
4-26-89

BUILDING ELEVATION
NO SCALE

For AS-BUILT of Infiltration Trenches and Storm Drainage
12/9/91

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

DESIGN	MLP
DRAWN	MLP
CHECK	MLP
SCALE	1"=30'
DRAWING NO.	6 OF 6
JOB NO.	88154
FILE NO.	88152 LSD

LANDSCAPE PLANTING PLAN
PARCEL G-2

COLUMBIA
VILLAGE OF OWEN BROWN
SECTION 5 AREA 1
6TH ELECTION DISTRICT, HOWARD COUNTY, MD.

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD 21043
2-13-89

FOR: THE COLUMBIA ASSOCIATION, LTD. PARTNERSHIP
8280 GREENSBORO DRIVE, SUITE 400
MCLEAN, VA 22102

AS-BUILT

SDP-89-138