

# Site Development Plans

for

## Building Nos. 3 & 4

# Baltimore - Washington Commerce Park

## Howard County, Maryland



### Hill Management Services, Inc.

9640 Deereco Road

Timonium, Maryland 21093

410-666-1000



## GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

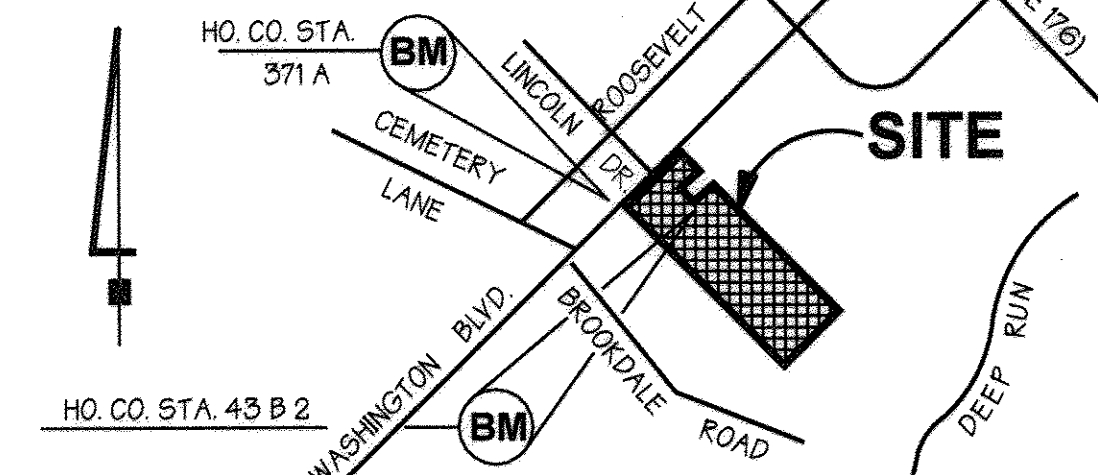
Civil Engineers and Land Surveyors

658 Kenilworth Drive, Suite 100  
Towson, Maryland 21204  
(410) 825-8120



### Vicinity Map

SCALE: 1" = 500'



### Benchmark :

☉ INLET (I-5) AT FACE OF CURB NORTHEAST SIDE OF ENTRANCE ROAD.

N 90924.25  
E 66830.12

ELEVATION = 193.67

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### Note on S.D.P. Approval :

OVERALL SITE WAS PREVIOUSLY APPROVED AS SDP-88-205. SDP-88-205 BECAME NULL & VOID 5/17/90. BLDG. NO 1 WAS APPROVED AS S.D.P. 96-45. THIS SITE DEVELOPMENT PLAN HAS BEEN PREPARED TO ACQUIRE SITE DEVELOPMENT APPROVAL FOR PROPOSED BUILDING NUMBERS 3 & 4. PRIMARY CHANGES ON 98-47 FROM SDP 88-205 ARE NEW BUILDING LOCATION, ENLARGED LOADING AREA AND RELOCATION OF STORM DRAINS.

APPROVED: Howard County Department of Planning and Zoning

*[Signature]* 10/17/90  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6/29/98  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 7/3/98  
DIRECTOR DATE

BUILDING NO.	STREET ADDRESS
3	7381 BALTIMORE WASHINGTON BOULEVARD
4	7383 BALTIMORE WASHINGTON BOULEVARD

PROJECT NAME	SECTION NAME	PARCEL #
BALTO. WASH. COMM. PARK	BUILDING NOS. 3 & 4	62
DEED # 1700 /137	BLOCK # 5 ZONE M-2 /ZONING MAP 43	ELECT. DIST. 1 CENSUS TRACT 6012
WATER CODE B01	SEWER CODE 2153000	

DATE	REVISION	BY

COVER SHEET  
BUILDING NOS. 3 & 4  
BALTIMORE - WASHINGTON  
COMMERCE PARK

ELECTION DISTRICT : 1  
HOWARD COUNTY, MARYLAND

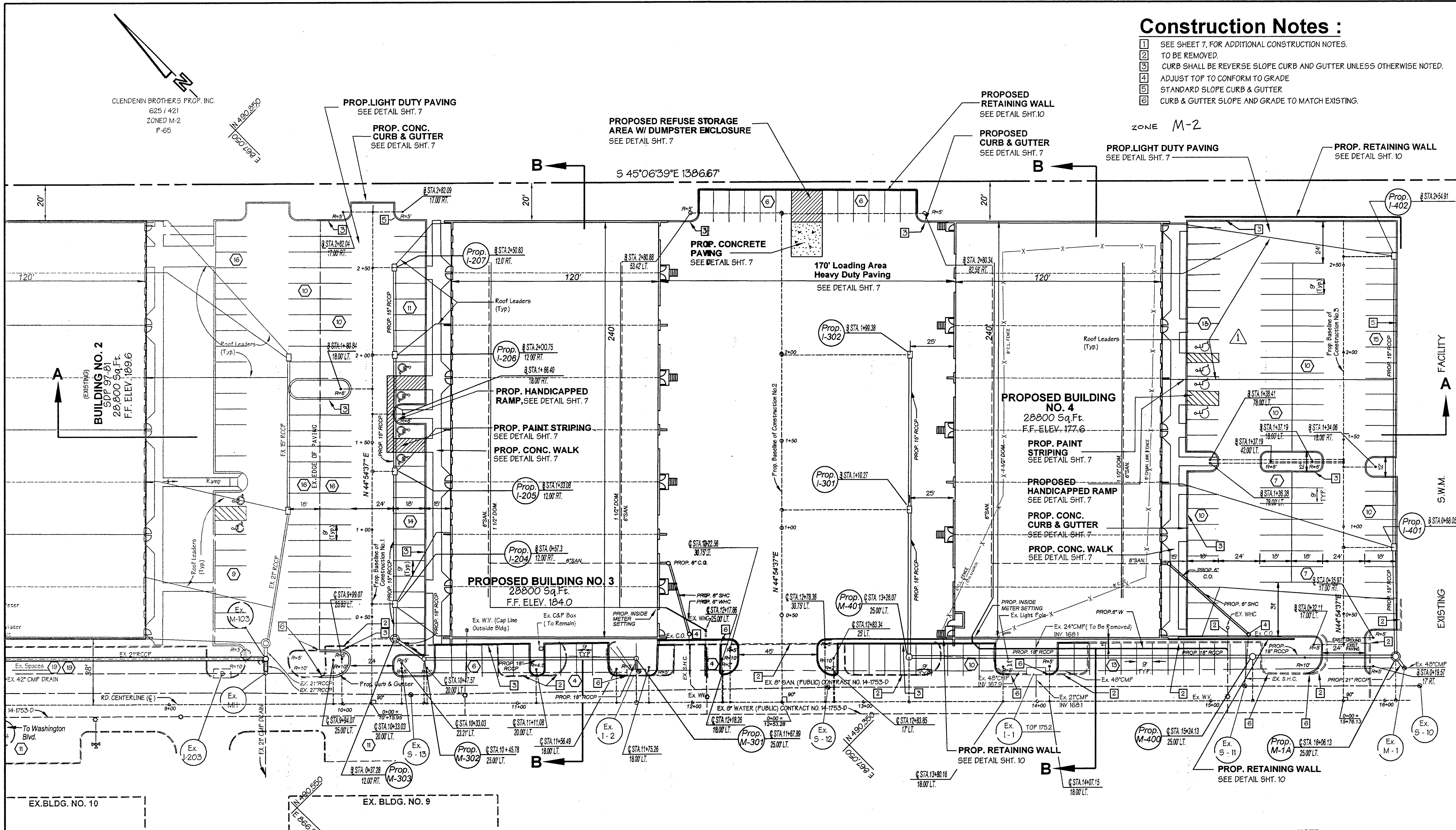
SCALE : N / A  
DATE : OCT. 06, 1997

DESIGNED : E.A.S. DRAWN : E.M.T. CHECKED : J.A.M. SHEET 1 OF 10

SDP-98-47

NOTE: The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building shown on this site. Developments plan who will discharge non-domestic waste to the public sewerage system if 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 required 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 statement shall apply to all initial and future occupants or tenants.





**Construction Notes :**

- 1 SEE SHEET 7, FOR ADDITIONAL CONSTRUCTION NOTES.
- 2 TO BE REMOVED.
- 3 CURB SHALL BE REVERSE SLOPE CURB AND GUTTER UNLESS OTHERWISE NOTED.
- 4 ADJUST TOP TO CONFORM TO GRADE.
- 5 STANDARD SLOPE CURB & GUTTER
- 6 CURB & GUTTER SLOPE AND GRADE TO MATCH EXISTING.

**Site Data :**

AREA OF PARCEL :	23.16 Ac. +/-
LIMIT OF SUBMISSION AREA :	167 Ac. +/-
EXISTING ZONING :	M-2
PROPERTY REFERENCE :	1700 / 137
EXISTING USE :	VACANT + WAREHOUSE / OFFICE - 1 STORY (NO MEZZ., ETC.)
PROPOSED USE :	WAREHOUSE / OFFICE - 1 STORY (NO MEZZANINE OR 2ND LEVEL)
FLOOR AREA :	BLDG. 3 & 4 EACH - 28,800 Sq.Ft.
AREA TO BE PAVED :	EXISTING PAVING 6.61 Ac. PROPOSED PAVING 1.90 Ac. TOTAL PAVED AREA 8.51 Ac.
% BUILDING COVERAGE :	28,800 Sq.Ft. Each x 10 = 288,000 Sq.Ft. = (25%)
% BUILDING COVERAGE W/PAVING :	834,142 Sq.Ft. 19.1 Ac. (73%)(TOTAL SITE)
TOTAL AREA OF PARKING :	EXIST. 2.15Ac. (6%)(TOTAL SITE) PROP. 0.63 Ac. (3.5%)(TOTAL SITE) TOTAL 2.3 Ac. (8%)(TOTAL SITE)
AREA OF LANDSCAPED ISLANDS :	EXISTING 0.7 Ac. PROPOSED 0.2 Ac. TOTAL 0.9 Ac.
AREA TO BE DISTURBED: (BLDG. 3 & 4)	4.1 Ac. (15.6%)(TOTAL SITE)
AREA TO BE VEGETATIVELY STABILIZED: (BLDG. 3 & 4)	0.4 Ac. (2%)(TOTAL SITE)
PARKING :	8 EX. BLDGS @ 28,800 SF EA. = 230,400 SF
PARKING REQUIRED :	EX. BLDGS. NO. 8-11 = 230,400 SF
EX. BUILDING NOS. 1 & 2 :	OFFICE = 34,580 S.F. @ 3.3/1,000 = 114 SPACES WAREHOUSE = 120,960 S.F. @ 0.5/1,000 = 61 SPACES LT. MANUF./ASSEMBLY = 17,280 S.F. @ 1/500 = 35 SPACES PARKING SPACES REQUIRED BLDGS. 6-11 = 210 SPACES
PROP. BUILDING NO. 3 :	LT. MANUF./ASSEMBLY: 28,800 S.F. @ 2.5 / 1,000 S.F. = 72 SPACES PARKING SPACES REQUIRED BLDG. NO.3 = 72 SPACES
PROP. BUILDING NO. 4 :	LT. MANUF./ASSEMBLY: 28,800 S.F. @ 2.5 / 1,000 S.F. = 72 SPACES PARKING SPACES REQUIRED BLDG. NO.4 = 72 SPACES
TOTAL :	539 SPACES
PARKING PROVIDED :	EX. BLDGS. NO. 6-11 = 253 SPACES EX. BLDGS. NO. 1-2 = 205 SPACES PROP. BLDG. NOS. 3 & 4 = 151 SPACES TOTAL PARKING PROVIDED = 559 SPACES TOTAL PARKING PROPOSED = 609 SPACES
STORMWATER MANAGEMENT IS PROVIDED IN EXISTING FACILITY OVERALL SITE WAS PREVIOUSLY APPROVED AS SDP 88-205 BLDG. NO.1 WAS PREVIOUSLY APPROVED AS SDP 96-45 BLDG. NO.2 WAS PREVIOUSLY APPROVED AS SDP 97-21	

**Benchmark :**  
FOR BENCHMARK LOCATION SEE VICINITY MAP ON COVER SHEET.  
INLET (I-5) AT FACE OF CURB NORTHEAST SIDE ENTRANCE ROAD.  
N 90924.25 ELEVATION 193.61  
E 66630.12

**Legend**

PAINT STRIPING	CONSTRUCTION NOTE
PROPERTY LINE	SPOT ELEVATION
EXISTING CURB AND GUTTER	DIRECTION OF SURFACE FLOW
PROPOSED CURB AND GUTTER	CENTERLINE OF ROAD
EXISTING WATER LINE	SECTION LINE
EXISTING STORM DRAIN	PARKING COUNT
EXISTING SANITARY	PROPOSED 2' CONTOURS
EXISTING 2' CONTOURS	PROPOSED 10' CONTOURS
EXISTING 10' CONTOURS	PROPOSED RETAINING WALL
EXISTING FENCE LINE	

APPROVED: Howard County Department of Planning and Zoning

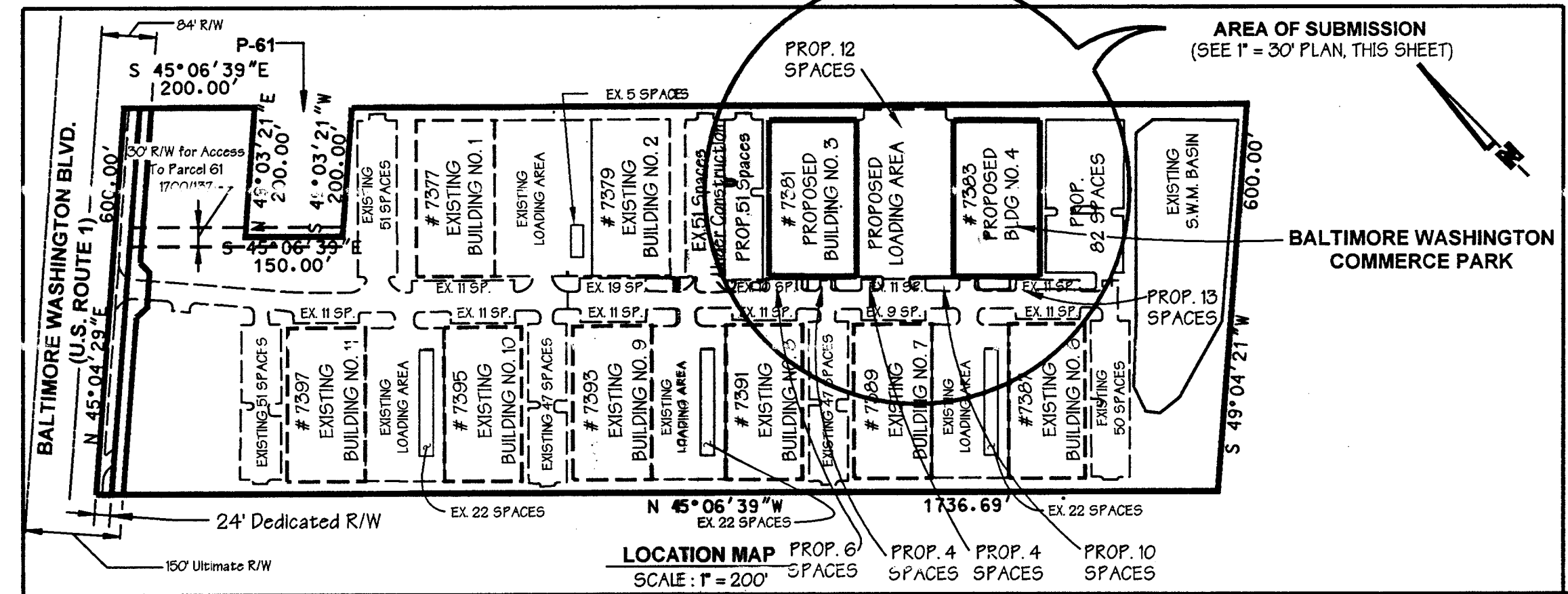
CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 6/17/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 6/29/98 DATE

DIRECTOR *[Signature]* 7/6/98 DATE

BUILDING NO.	STREET ADDRESS
3	7381 BALTIMORE WASHINGTON BOULEVARD
4	7383 BALTIMORE WASHINGTON BOULEVARD

PROJECT NAME	SECTION NAME	PARCEL #
BALTO. WASH. COMM. PARK	BUILDING NOS. 3 & 4	62
DEED # 1700/137	BLOCK # 5	ZONE M-2
ELECTION DIST. 1		CENSUS TRACT 6012
WATER CODE B01		SEWER CODE 2153000



**NOTE:**  
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building shown on this site development plan who will discharge non-domestic waste to the public sewerage system if such 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 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 statement shall apply to initial and future occupants or tenants.

PREPARED BY:

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
Civil Engineers and Land Surveyors  
658 Kenilworth Drive, Suite 100  
Towson Maryland 21284  
(410) 825-8120

OWNER/DEVELOPER

**HILL MANAGEMENT SERVICES, INC.**  
9640 Deerco Road  
Timonium, Maryland 21093  
410-666-1000

DATE	REVISION	BY
6/14/98	REV. H.C.	G.W.S.
	PARKING	
	BLDG. NO. 4	

**SITE DEVELOPMENT PLAN**  
**BUILDING NOS. 3 & 4**  
**BALTIMORE - WASHINGTON COMMERCE PARK**

ELECTION DISTRICT: 1  
HOWARD COUNTY, MARYLAND  
DESIGNED: E.A.S. DRAWN: E.A.S. CHECKED: T.N.W. SHEET 2 OF 10

SCALE: 1" = 30'  
DATE: Oct. 17, 1997



NOTE: ALL ENTRANCES MAY BE UTILIZED BY HANDICAPPED PERSONS

### Construction Notes :

- 1 SEE SHEET 7, FOR ADDITIONAL CONSTRUCTION NOTES.
- 2 TO BE REMOVED.
- 3 CURB SHALL BE REVERSE SLOPE CURB AND GUTTER UNLESS OTHERWISE NOTED.
- 4 ADJUST TO CONFORM TO PROPOSED GRADE
- 5 STANDARD SLOPE CURB & GUTTER
- 6 CURB & GUTTER SLOPE AND GRADE TO MATCH EXISTING

### Benchmark :

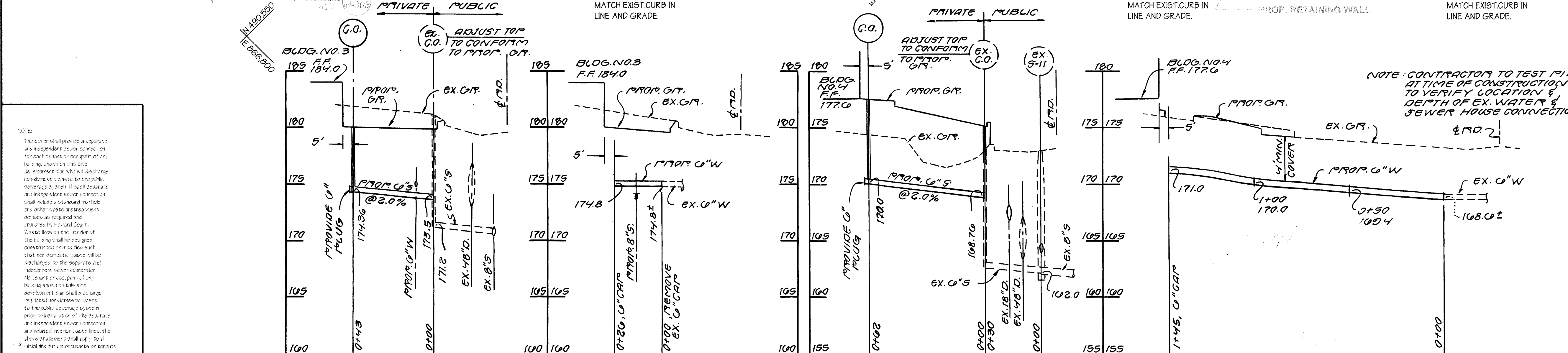
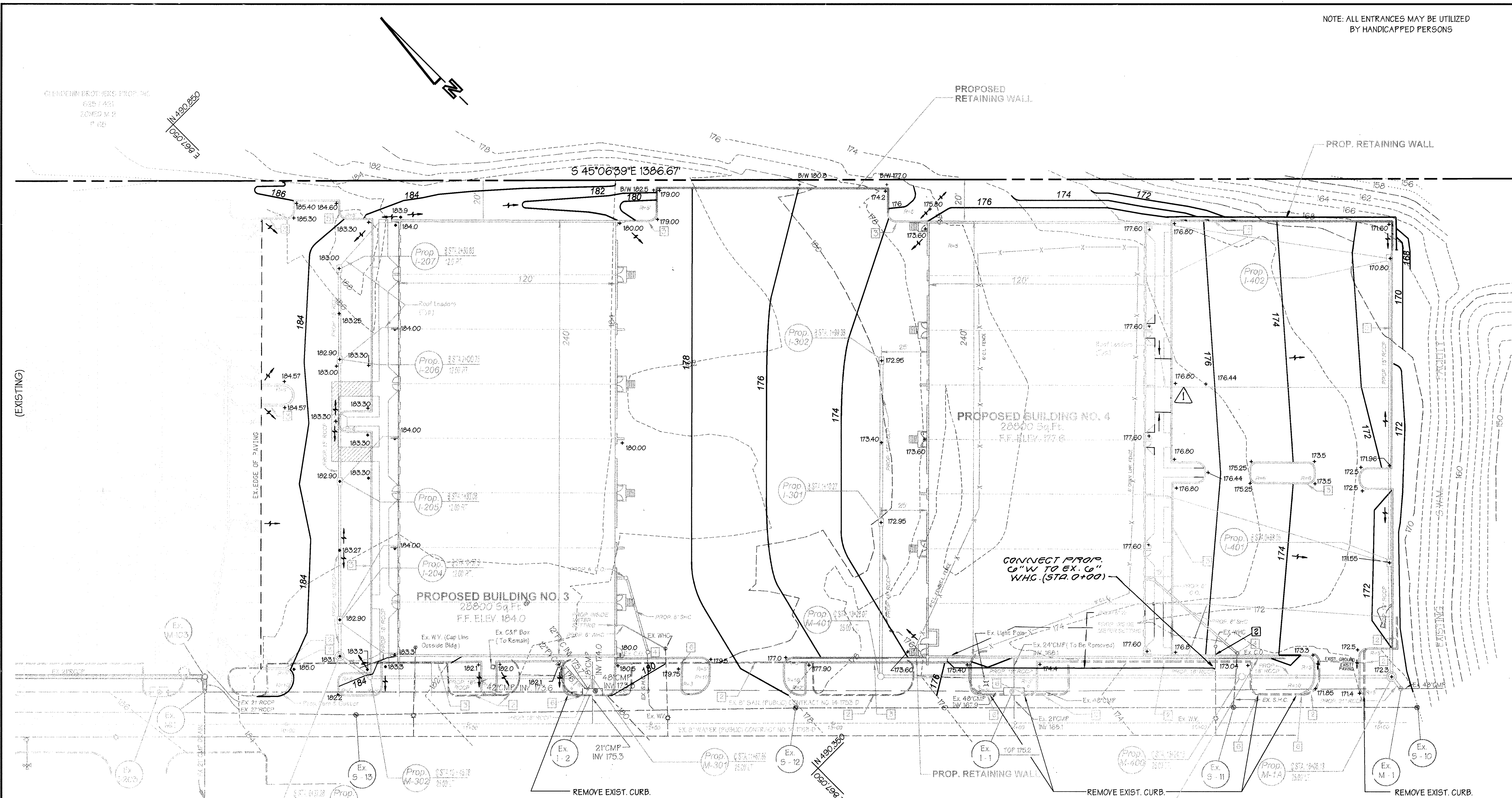
FOR BENCHMARK LOCATION SEE VICINITY MAP ON COVER SHEET.  
 @ INLET (I-5) AT FACE OF CURB NORTHEAST SIDE ENTRANCE ROAD.  
 N 90924.25 ELEVATION 193.61  
 E 66530.12

### Legend

PROPERTY LINE	---	CONSTRUCTION NOTE	□
EXISTING CURB AND GUTTER	---	SPOT ELEVATION	+ 85.0
PROPOSED CURB AND GUTTER	---	DIRECTION OF SURFACE FLOW	→
EXISTING WATER LINE	---	CENTERLINE OF ROAD	—
EXISTING STORM DRAIN	---	PARKING COUNT	Ⓟ
EXISTING SANITARY	---	PROPOSED 2' CONTOURS	— 78 —
EXISTING 2' CONTOURS	---	PROPOSED 10' CONTOURS	— 100 —
EXISTING 10' CONTOURS	---	PROPOSED RETAINING WALL	—
EXISTING FENCE LINE	---		

APPROVED: Howard County Department of Planning and Zoning  
*[Signature]* 6/17/98  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE  
*[Signature]* 6/29/98  
 CHIEF, DIVISION OF LAND DEVELOPMENT TC DATE  
*[Signature]* 7/8/98  
 DIRECTOR DATE

ADDRESS CHART	
BUILDING NO.	STREET ADDRESS
3	7381 BALTIMORE WASHINGTON BOULEVARD
4	7383 BALTIMORE WASHINGTON BOULEVARD
PROJECT NAME: BALTO. WASH. COMM. PARK SECTION NAME: BUILDING NO. 3 PARCEL #: 62	
DEED #: 1700/137	BLOCK #: 5 ZONE: M-2 / ELEC. DIST.: 1 CENSUS TRACT #: 6012
WATER CODE: B01	SEWER CODE: 2153000



NOTE: The owner shall provide a separate independent sewer connection for each tenant or occupant of any building shown on this site. The development plan shall discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard multiple and other waste pretreatment devices as required and approved by Howard County. Inverse 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 shall discharge required non-domestic waste to the public sewerage system or to any lot on or of the separate and independent sewer connection and related sewer utility lines, the above statements shall apply to all small and future occupants or tenants.

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

PROFILES  
 SCALE: HORIZ. 1" = 30'  
 VERT. 1" = 5'

OWNER/DEVELOPER  
**HILL MANAGEMENT SERVICES, INC.**  
 9640 Deereco Road  
 Timonium, Maryland 21093  
 410-666-1000

DATE	REVISION	BY
6/14/98	REV. H.C. RAMP @ BLDG. NO. 4	GWG

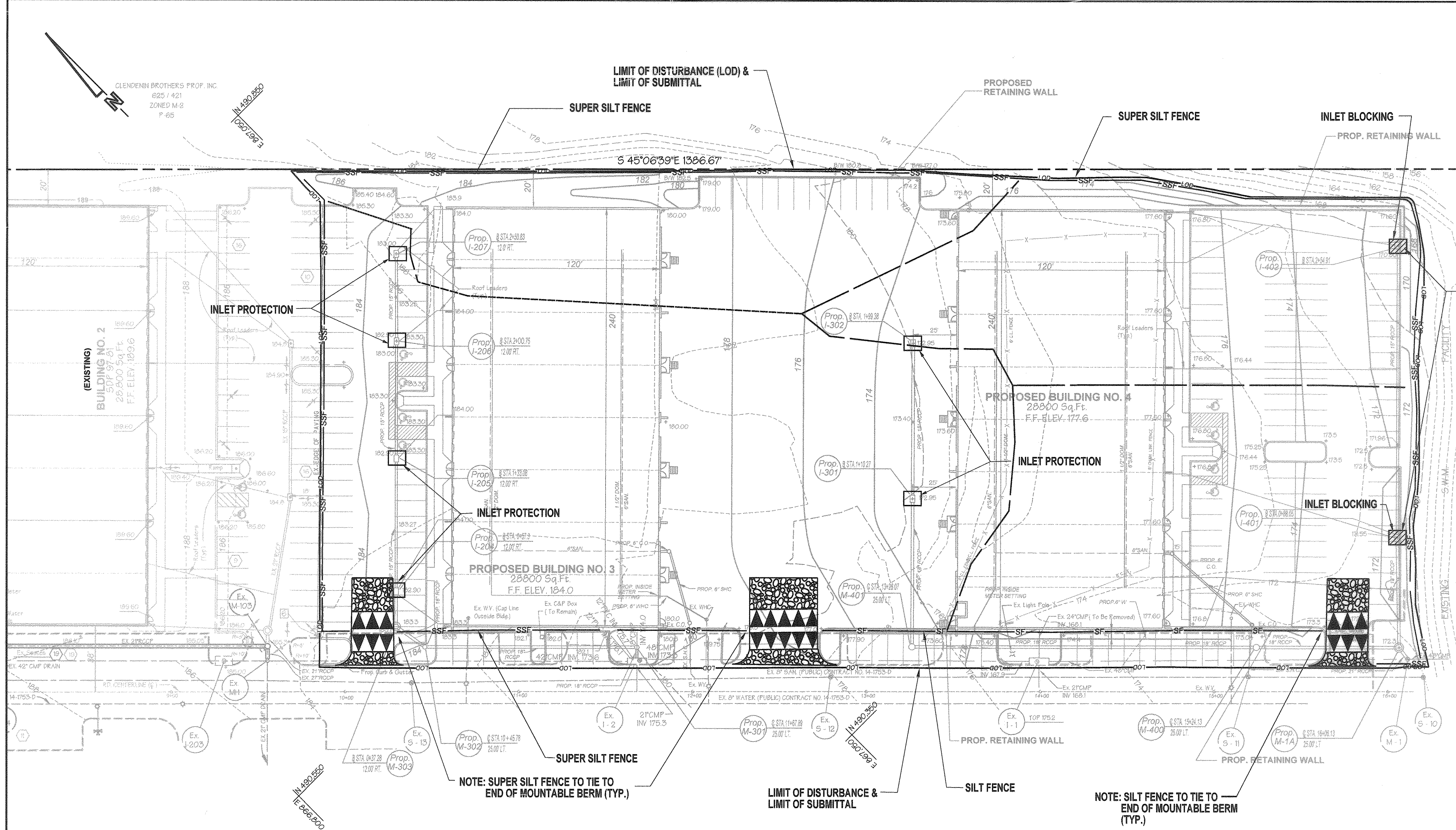
GRADING PLAN  
**BUILDING NOS. 3 & 4**  
**BALTIMORE - WASHINGTON COMMERCE PARK**  
 ELECTION DISTRICT: 1 SCALE: 1" = 30'  
 HOWARD COUNTY, MARYLAND DATE: Oct. 17, 1997  
 DESIGNED: E.A.S. DRAWN: E.M.T. CHECKED: T.N.W. SHEET 3 OF 10



### Sequence Of Operations:

- OBTAIN GRADING PERMIT.
- NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES, SEDIMENT CONTROL INSPECTOR, 48 HOURS BEFORE BEGINNING WORK.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES AS SHOWN (1 DAY)
- CLEAR AND GRUB FOR AND INSTALL SILT FENCE AND SUPER SILT FENCE (2 DAYS)
- AFTER NOTIFYING AND OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN ROUGH GRADING. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL MEASURES AND DEVICES (21 DAYS)
- INSTALL ALL UTILITIES, STORM DRAINS, AND STORMCEPTOR DEVICES AND PROVIDE INLET BLOCKING AND INLET PROTECTION IMMEDIATELY UPON INSTALLATION OF EACH INLET. CONTINUE GRADING (10 DAYS)
- INSTALL FOOTINGS AND FOUNDATION WALL. CONTINUE BUILDING CONSTRUCTION (90 DAYS)
- FINE GRADE THE ENTIRE SITE. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL MEASURES AND DEVICES. INSTALL STONE SUBBASE, CONCRETE CURB AND GUTTER, WALKS. STABILIZE ALL REMAINING AREAS. REMOVE INLET PROTECTION AND INLET BLOCKING (10 DAYS)
- AFTER NOTIFYING AND OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND DEVICES (3 DAYS)
- FINE GRADE THOSE AREAS. INSTALL REMAINDER OF STONE SUBBASE (5 DAYS)
- COMPLETE PAVING AND LANDSCAPING OPERATIONS (5 DAYS)

PROVIDE TEMP. CURB OPENING AT INLETS UNTIL STORM DRAINS ARE FUNCTIONING.



### Legend

LIMIT OF DISTURBANCE	LOD	INLET BLOCKING	[Symbol]
SUPER SILT FENCE	SSF	CONSTRUCTION NOTE	[Symbol]
SILT FENCE	SF	SPOT ELEVATION	[Symbol]
INLET PROTECTION	[Symbol]	DIRECTION OF SURFACE FLOW	[Symbol]
STABILIZED CONSTRUCTION ENTRANCE	[Symbol]	CENTERLINE OF ROAD	[Symbol]
EX. D.A. TO SEDIMENT CONTROL DEVICE	[Symbol]	PARKING COUNT	[Symbol]
PROPERTY LINE	[Symbol]	HEAVY DUTY PAVING	[Symbol]
EXISTING CURB AND GUTTER	[Symbol]	LIGHT DUTY PAVING	[Symbol]
PROPOSED CURB AND GUTTER	[Symbol]	PROPOSED 2' CONTOURS	[Symbol]
EXISTING WATER LINE	[Symbol]	PROPOSED 10' CONTOURS	[Symbol]
EXISTING STORM DRAIN	[Symbol]	EXISTING 2' CONTOURS	[Symbol]
EXISTING SANITARY	[Symbol]	EXISTING 10' CONTOURS	[Symbol]
EXISTING FENCE LINE	[Symbol]		

### Sediment Control Notes

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE '1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
  - 14 DAYS FOR 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 7, OF THE 'HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE'.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE '1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
  - TOTAL AREA OF SITE 26.17 ACRES
  - AREA DISTURBED 4.1 ACRES - 178,596 S.F.
  - AREA TO BE ROOFED OR PAVED 3.7 ACRES - 161,172 S.F.
  - AREA TO BE VEGETATIVELY STABILIZED 0.4 ACRES - 17,424 S.F.
  - TOTAL CUT 12,093 C.Y.
  - TOTAL FILL 2760 C.Y.
  - OFFSITE WASTE/BORROW AREA LOCATION: EXCESS CUT SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
- 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 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 NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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

*John R. Blanton* 6/15/99  
 APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER \_\_\_\_\_ DATE \_\_\_\_\_

Reviewed for the Howard Conservation District and meets technical requirements.  
*David Simmons* 6/15/99  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning	DATE
<i>John R. Blanton</i>	6/15/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
<i>Cathy Hamilton</i>	6/29/99
CHIEF, DIVISION OF LAND DEVELOPMENT	
<i>John R. Blanton</i>	7/6/98
DIRECTOR	
ADDRESS CHART	
BUILDING NO. 3	7381 BALTIMORE WASHINGTON BOULEVARD
BUILDING NO. 4	7383 BALTIMORE WASHINGTON BOULEVARD
PROJECT NAME	SECTION NAME
BALTO. WASH. COMM. PARK	BUILDING NOS. 3 & 4
DEED # 1700/137	BLOCK # 5
ZONE M-2	MAP 43
ELECT. DIST. 1	CENSUS TRACT 6012
WATER CODE B01	SEWER CODE 2163000

PREPARED BY:

**GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.**  
 Civil Engineers and Land Surveyors  
 658 Kenilworth Drive, Suite 100  
 Towson Maryland 21284  
 (410) 825-8120

DEVELOPER CERTIFICATION:

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

Developer Name: *David Simmons* Date: 6/15/99

OWNER/DEVELOPER

**HILL MANAGEMENT SERVICES, INC.**  
 9640 Deereco Road  
 Timonium, Maryland 21093  
 410-666-1000

ENGINEER CERTIFICATION:

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.

Signed: *James A. Beck* Date: 6/15/99  
 Name: James A. Beck PE # \_\_\_\_\_

DATE	REVISION	BY

SEDIMENT CONTROL PLAN  
 BUILDING NOS. 3 & 4  
 BALTIMORE - WASHINGTON  
 COMMERCE PARK

ELECTION DISTRICT: 1  
 HOWARD COUNTY, MARYLAND  
 DESIGNED: E.A.S. DRAWN: E.M.T. CHECKED: T.N.W. SHEET 4 OF 10

SCALE: 1" = 30'  
 DATE: Oct. 17, 1997



Stabilization Specifications

Section I - Vegetative Stabilization Methods and Materials

- A. Site Preparation
1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
3. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples may be taken for engineering purposes as well as for chemical analysis.
2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate authority. Fertilizer shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name, or trademark and verbatim of the producer.

C. Seeded Preparation

- i. Temporary Seeding
1. Seeded preparation shall consist of loosening soil to a depth of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers, before and on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas greater than 3:1 should not be broken through the surface in an irregular condition with ridges running parallel to the contour of the slope.
2. Applying fertilizer and lime as prescribed on the plans.
3. Incorporate lime and fertilizer into the top 3 - 5' of soil by disking or other suitable means.

- ii. Permanent Seeding
1. Minimum soil conditions required for permanent vegetative establishments
a. Soil pH shall be between 6.0 and 7.0.
b. Soluble salts shall be less than 2000 parts per million (ppm).
c. The soil shall contain less than 40% clay but enough fine grained material D 200, silt plus clay to provide the cohesive forces to hold a moderate amount of moisture. In exception if leucopods or spermacopods is to be planted, then a sandy soil (60% silt plus clay) will be acceptable.
d. Soil shall contain 1.5% minimum organic matter by weight.
e. Soil must contain sufficient pore space to permit adequate root penetration.
f. If these conditions cannot be met by soils on site, adequate topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

- iii. For sites having disturbed areas over 5 acres, the rates shown this table shall be deleted and the rates recommended by the testing agency shall be written in.
1. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/60) in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

- iv. Dry Seedings This includes use of conventional drop or broadcast spreaders.
1. Seed spread dry shall be incorporated into the soil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
2. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

- v. Mulch Specifications (In order of preference)
1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
2. Wood Cellulose Fiber Mulch (WCFM)
a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

- vi. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application having moisture absorption and permeation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
vii. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
viii. WCFM must conform to the following physical requirements: fiber length to approximately 18 mm, diameter approximately 1 mm, pH range of 4.8 to 8.5, ash content of 1.6% maximum and water holding capacity of 30% minimum.

- ix. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
1. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

- x. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth between 1' and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
xi. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
xii. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application. Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (by preference), depending upon site area and erosion hazards:
1. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can be operated safely. If used on sloping land, this practice should be used on the contour if possible.
2. Wood cellulose fiber may be used for anchoring straw. The fiber should be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Application of liquid binders should be recommended at the edges where ends and outcrops mulch, such as in valleys and on the crests of banks. The binder should appear uniform on the surface. Synthetic binders - such as Acrylic 1.0-1.5 (Super-locks) 1.0-1.5, Pavecoat, Terra Top II, Terra Top 40 or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
4. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3000 feet long.

Section II - Temporary Seeding

- 1. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardness Zone (from figure 5) and enter in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special low maintenance areas, see Sections IV and V Turfgrass.
2. For sites having disturbed areas over 5 acres, the rates shown this table shall be deleted and the rates recommended by the testing agency shall be written in.

Section III - Permanent Seeding

- 1. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardness Zone (from figure 5) and enter in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special low maintenance areas, see Sections IV and V Turfgrass.
2. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/60) in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

- iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/60) in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

- iv. Site Preparation: Fertilizer and Lime application rates will be determined by soil test. Under unusual circumstances where there is insufficient time for a complete soil test, fertilizer and lime may be applied in amounts shown under with the following conditions:
a. Prior to seeding, the surface will be cleared of all trash, debris, and of all rocks, bricks, wire, grade stakes and other objects that would interfere with planting, fertilization or maintenance operations.
b. Where soil is acid or composed of heavy clay, ground limestone will be spread at the rate of 2 tons per acre (1000 lbs./1000 sq. ft.) in all soils 1000 lbs. per acre (2 lbs./1000 sq. ft.) of 10-10-10 fertilizer or equivalent will be uniformly applied and mixed into the top three inches of soil with the required trowel.

- v. Sod Installation
1. During periods of excessively high temperature or in areas having dry ground, the subsoil shall be lightly irrigated immediately prior to laying the sod.
2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other to provide one uniform surface. Strength should be added by stretching and overlapping and that all joints are butted tight in order to prevent voids which would cause drying of the roots.
3. Wherever possible, sod shall be laid with the long edge parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
4. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.
5. Sod Maintenance
1. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain sod depth to a depth of 4". Watering should be done during the heat of the day to prevent wilting.
2. After the first week, sod watering is required as necessary to maintain adequate moisture content.
3. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified.

- vi. Turfgrass Establishment
Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed should be silted and surface other approved methods to a depth of 2 to 4 inches, leveled and rolled to prepare a proper seedbed. Stones and debris over 1/2" inches in diameter shall be removed. The resulting seedbed shall be in such condition that future growth of grass will pose no difficulty.
NOTE: Choose certified material. Certified material is the best guarantee of seed purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and ensures a pure genetic line.

Table 25 - Permanent Seeding for Low Maintenance Areas. Columns include Species, Planting Rate, Site Conditions, and Hardness Zones.

Table 26 - Temporary Seeding Rates, Depths, and Dates. Columns include Species, Minimum Seeding Rates, Planting Depth, and Hardness Zones.

- xiii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended cultivars include: certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate 5 to 8 lbs./1000 square feet. One or more cultivars may be blended.
xiv. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas. Mixture includes certified Kentucky Bluegrass Cultivars 30 - 40% and certified Fine Fescue and 0 - 70%. Seeding rate 1/2 - 3 lbs./1000 square feet. A minimum of 3 Kentucky bluegrass cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

- NOTE: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland."
B. Ideal times of seeding
Western MD: March 15-June 1, August 1-October 1 (Hardiness Zones - 5b, 6a)
Central MD: March 1-May 15, August 15-October 15 (Hardiness Zones - 6b)
Southern MD, Eastern Shore: March 1-May 15, August 15-October 15 (Hardiness Zones - 7a, 7b)
C. Irrigation
If soil moisture is deficient, apply new seedlings with adequate water for plant growth 1/2" - 1" every 3 to 4 days depending on soil turf until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.
D. Repairs and Maintenance
Inspect all seeded areas for failures and make necessary repairs, replacements, and reseeding within the planting season.
1. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.
2. If the stand provides less than 40% ground cover, reestablish following original line, fertilizer, seeded preparation and seeding recommendations.
3. If the stand provides between 40% and 94% ground cover, overseeding and fertilizing using half of the rates originally applied may be necessary.
4. Maintenance fertilizers for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication Lawn Care in Maryland Bulletin No. 171.

Fertilizer Rates

Table with columns for Temporary Seeding and Permanent Seeding, and rows for Fertilizer Rate and Lime Rate.

Table 25 - Permanent Seeding for Low Maintenance Areas

Table 25 - Permanent Seeding for Low Maintenance Areas. Detailed table with columns for M, N, I, F, G, H, J, K, L and rows for species like TALL FESCUE, KENTUCKY BLUEGRASS, etc.

Table 26 - Temporary Seeding Rates, Depths, and Dates

Table 26 - Temporary Seeding Rates, Depths, and Dates. Table with columns for Species, Minimum Seeding Rates, Planting Depth, and Hardness Zones.

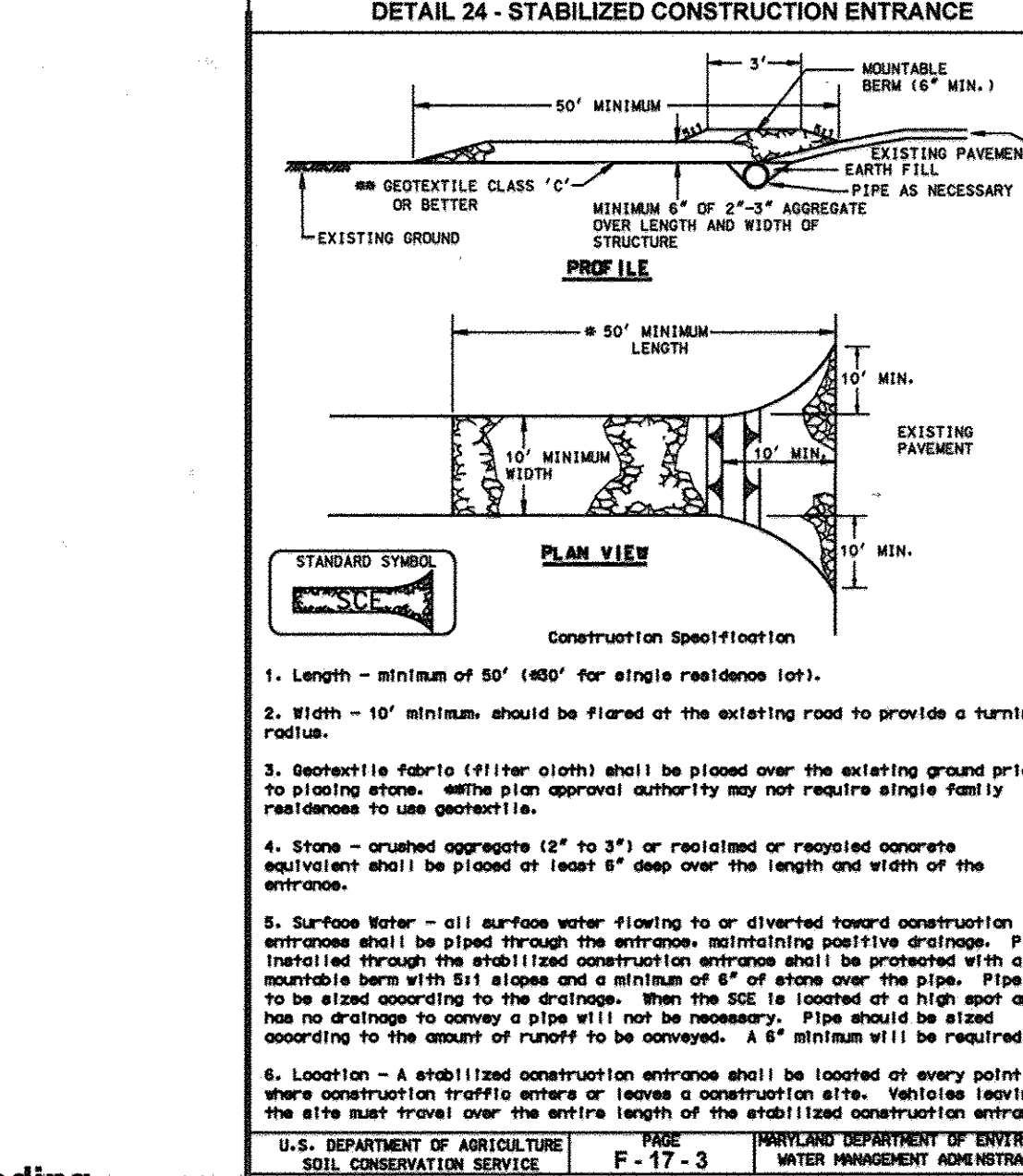


Table with 3 columns: CLASS, APPARENT OPENING SIZE, and STRENGTH. Includes notes on geotextile fabric specifications and application requirements.

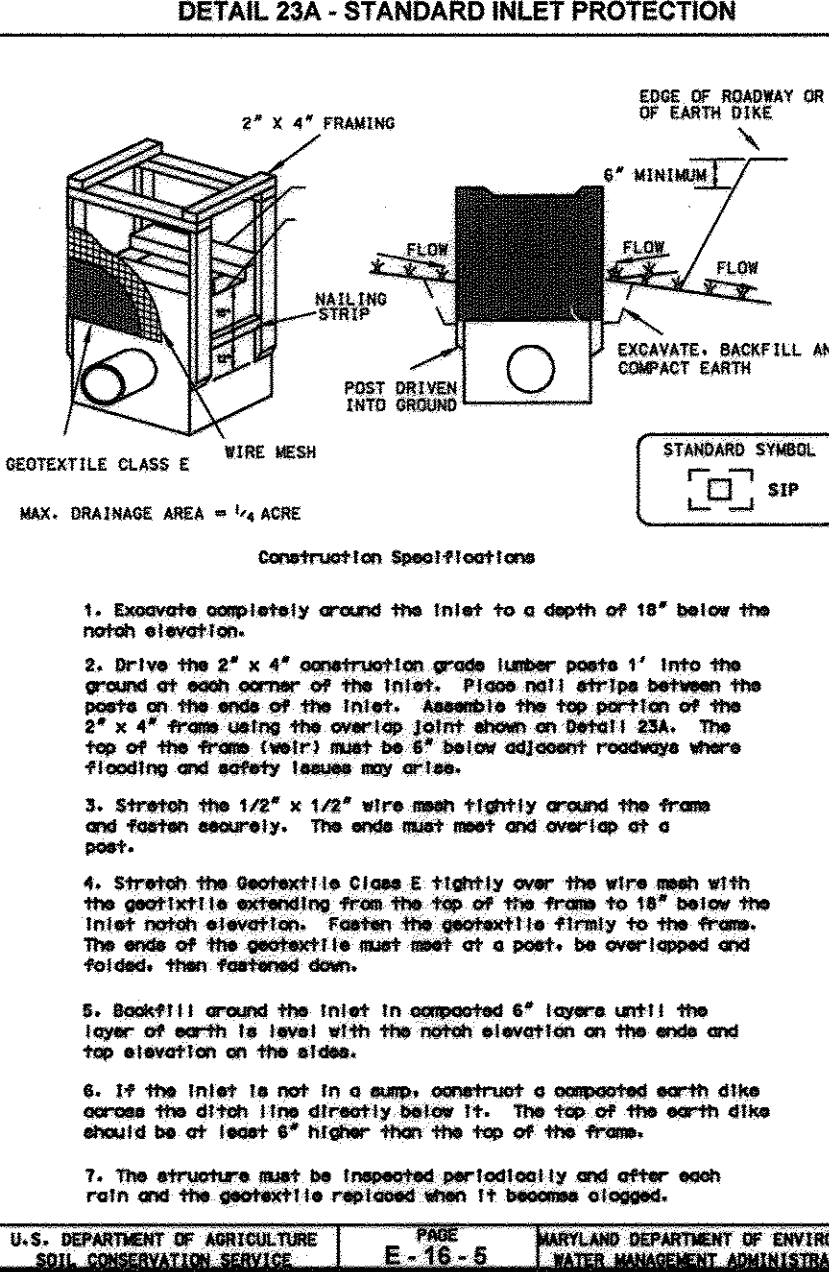
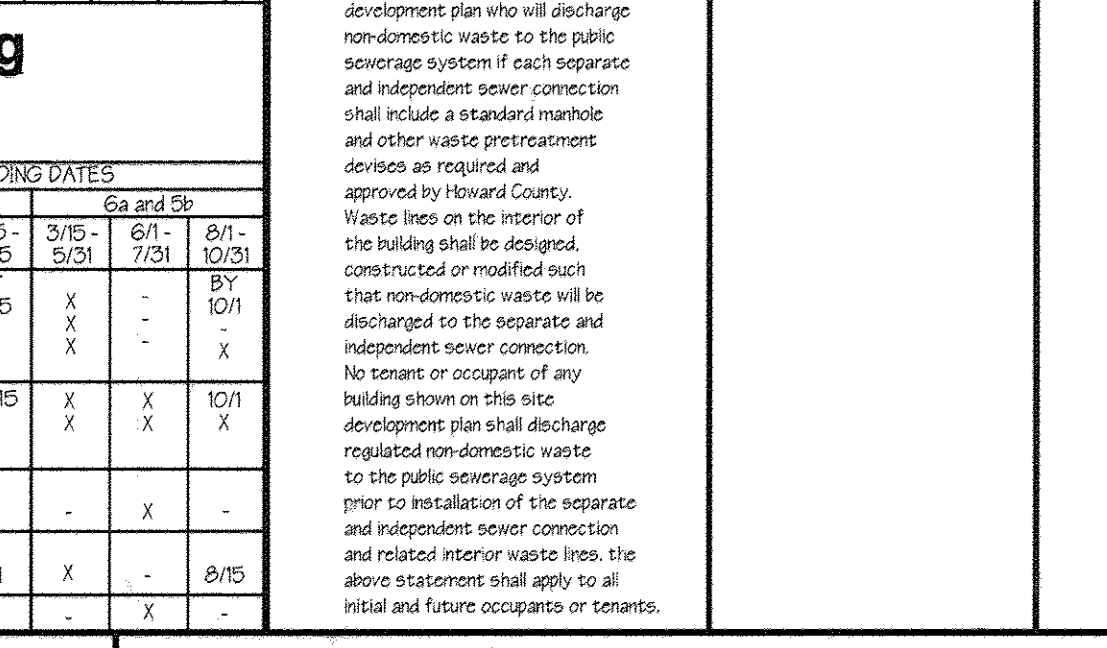
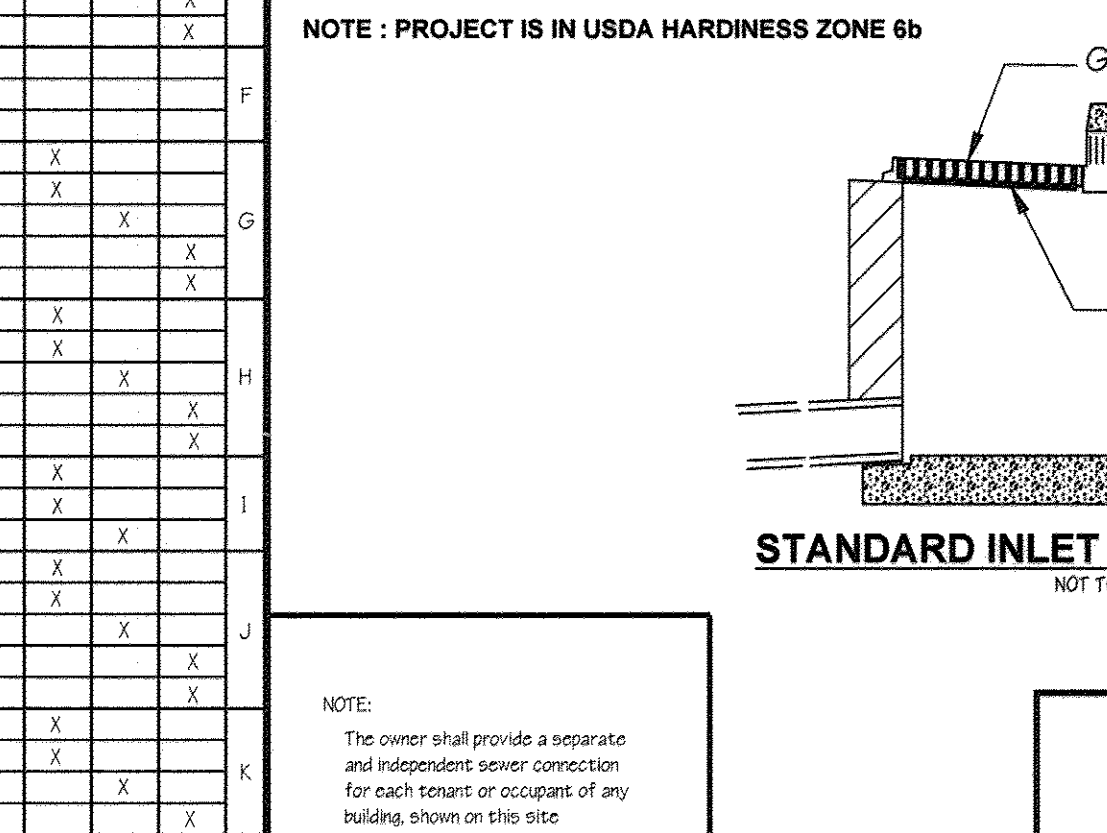


Table with 3 columns: CLASS, APPARENT OPENING SIZE, and STRENGTH. Includes notes on geotextile fabric specifications and application requirements.

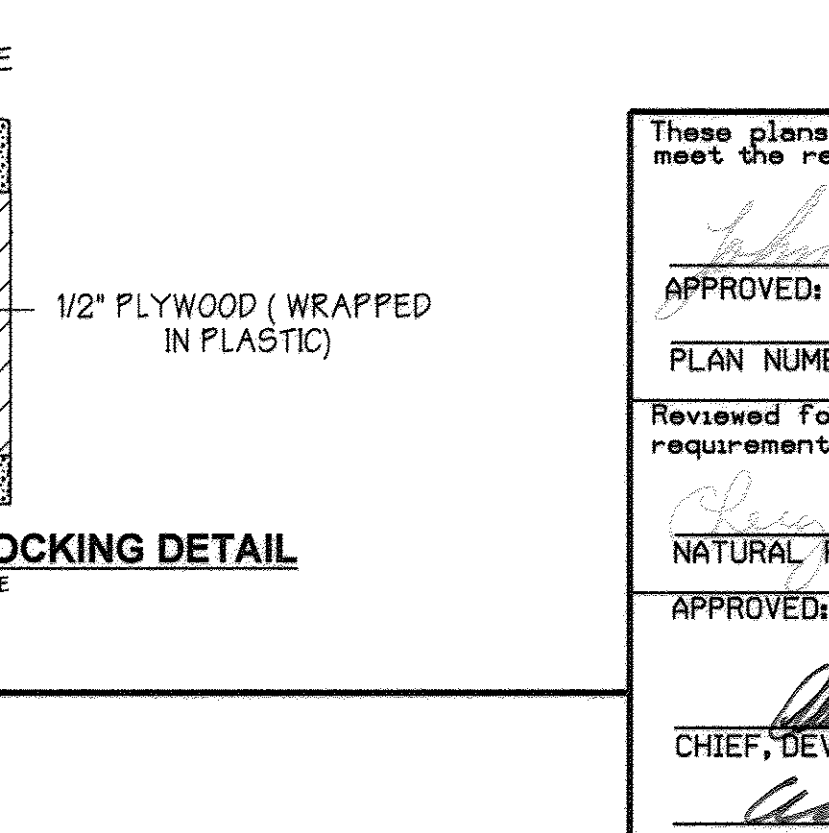


Table with 3 columns: CLASS, APPARENT OPENING SIZE, and STRENGTH. Includes notes on geotextile fabric specifications and application requirements.

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Approval and signature section. Includes 'APPROVED: HOWARD SOIL CONSERVATION DISTRICT', 'APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING', and 'CHIEF, DEVELOPMENT ENGINEERING DIVISION'. Includes dates and signatures.

PREPARED BY: GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC. Civil Engineers and Land Surveyors. 858 Kenilworth Drive, Suite 100, Towson, Maryland 21204. (410) 825-8120.

DEVELOPER CERTIFICATION: I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance of a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. Also authorize periodic on-site inspection by the Howard Soil Conservation District. Developer Name: [Signature], Date: 10/2/97.

OWNER/DEVELOPER: HILL MANAGEMENT SERVICES, INC. 9640 Deereco Road, Timonium, Maryland 21093. 410-666-1080.

ENGINEER CERTIFICATION: 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. Engineer: [Signature], Date: 10/2/97.

Table with columns: DATE, REVISION, BY. Includes project details: BALTO. WASH. COMM. PARK, BUILDING NOS. 3 & 4, PARCEL # 62, PLAT # 1700/137, BLOCK # 5, ZONE M-2, ELECT. DIST. 1, CENSUS TRACT 6012, WATER CODE B01, SEWER CODE 2153000.

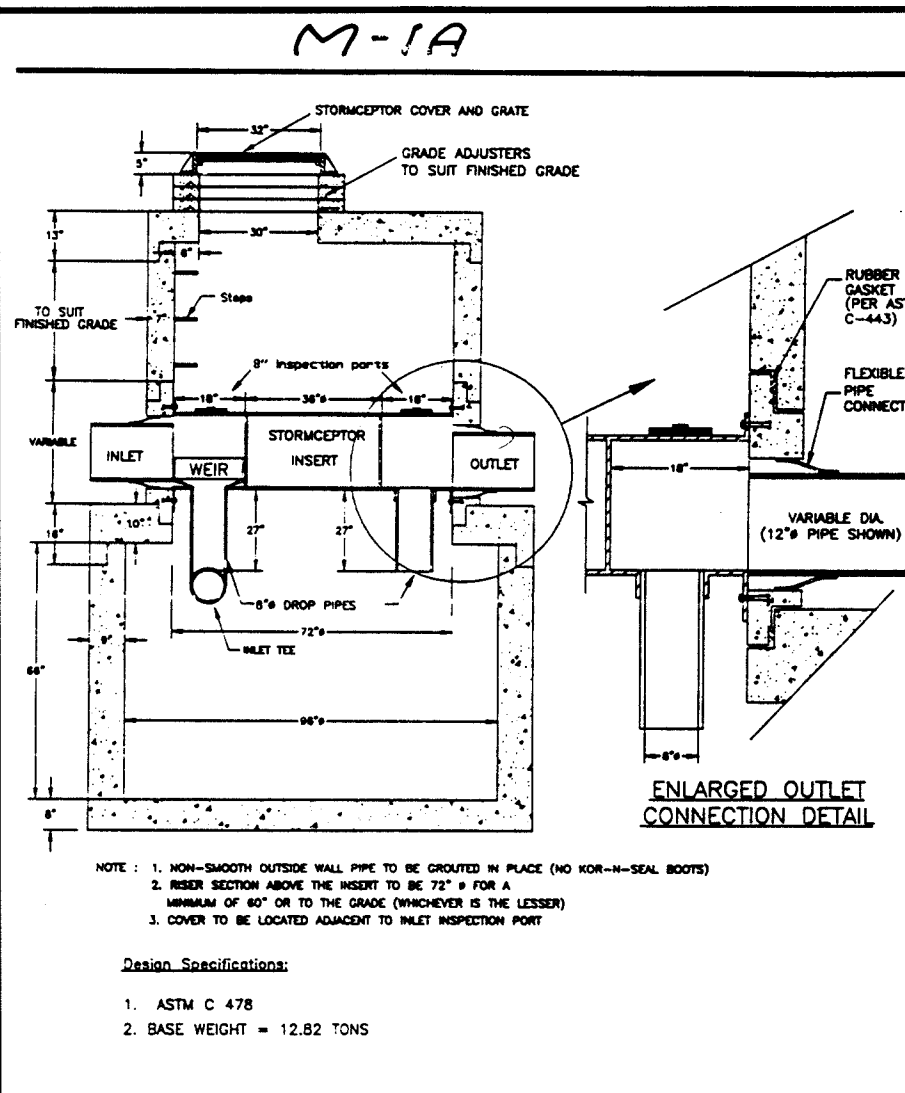




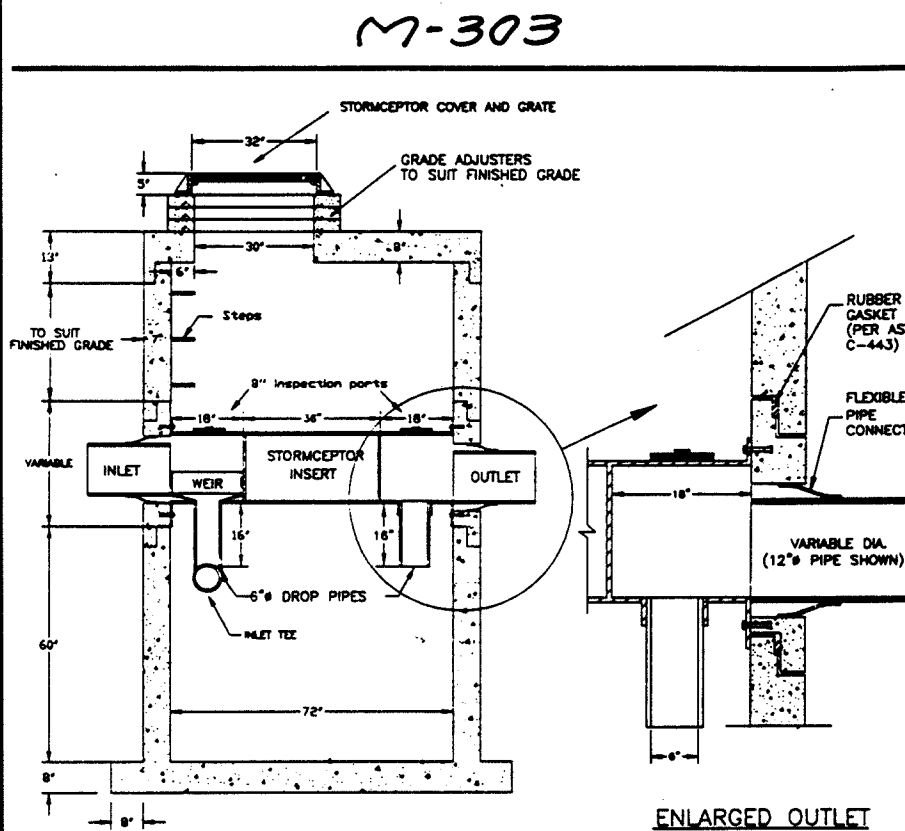


**Construction Notes**

- TOPOGRAPHY AND BOUNDARY INFORMATION SHOWN HEREON IS BASED ON SURVEY PREPARED BY DUAL & ASSOCIATES 7/90.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-315-1800 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
- ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
- THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
- ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
- THE CONTRACTOR SHALL INSURE THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
- THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY G. W. STEPHENS OF ANY DEVIATION FROM THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM G. W. STEPHENS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL CONFORM TO ALL GRADES AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1 FOOT.
- THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
- ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 21 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN PER FOOT).
- MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
- CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS. TOPSOIL SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
- ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 371A AND 43B2 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC (CONTRACT NO. 14-1753-D)
- SEWER IS PUBLIC (CONTRACT NO. 14-1753-D)
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE IS NO WETLANDS ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- CONTRACTOR SHALL MAINTAIN TRAFFIC ON ADJACENT ROAD AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
- ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
- ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
- THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REILLED AND COMPACTED.
- THE CONTRACTOR SHALL PLACE PROPOSED SURFACE COURSE OVERLAY 5 FEET BEYOND LIMITS OF REPLACEMENT PAVING, UNLESS DIRECTED OTHERWISE BY THE ENGINEER IN THE FIELD. ALL OVERLAYS SHALL HAVE SMOOTH, STRAIGHT EDGES. STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION.
- ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- SIDEWALK SHALL CONFORM TO DETAIL R-305 OF THE AFOREMENTIONED HOWARD COUNTY STANDARDS. SLOPE, WIDTH, AND ALIGNMENT AS SHOWN HEREON. SIDEWALK SHALL BE PLACED ON A 4" CRUSHED STONE BASE AND IS SHALL BE REINFORCED WITH WIRE MESH.
- PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
- STORMCEPTORS SHALL BE AS MANUFACTURED BY: THE STORMCEPTOR CORPORATION 600 E. JEFFERSON STREET, SUITE 304 ROCKVILLE, MARYLAND 20852 TELEPHONE: 301-762-8361
- ALL STORMCEPTORS SHALL BE CONCRETE (TYPE STC-1200 & STC-12400) WATER QUALITY STRUCTURE, PRIVATELY OWNED SEE MAINTENANCE SCHEDULE SHEET 6.

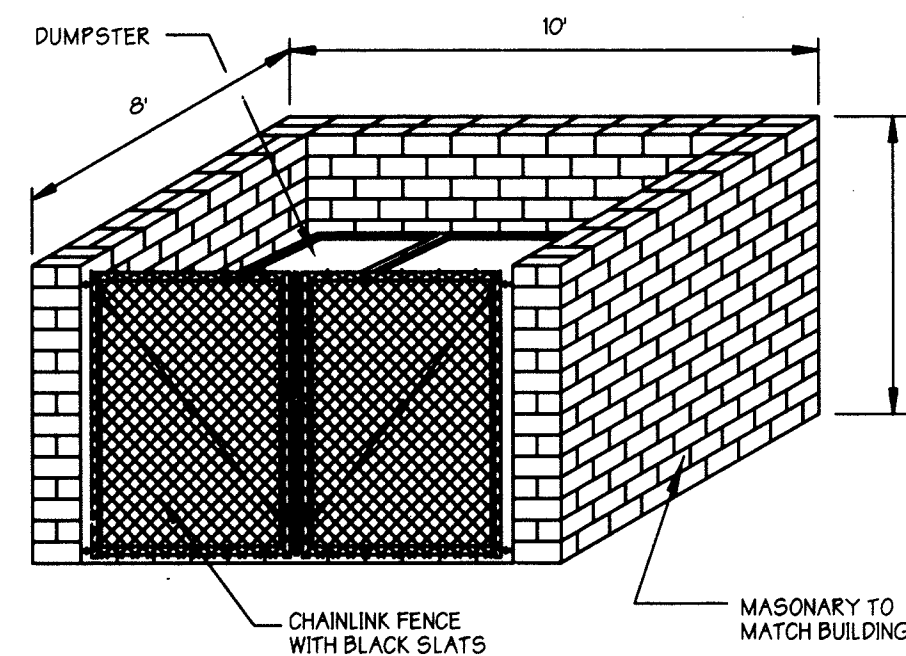


**M-1A**  
STC 2400 PRECAST CONCRETE STORMCEPTOR  
2400 US GALLON CAPACITY

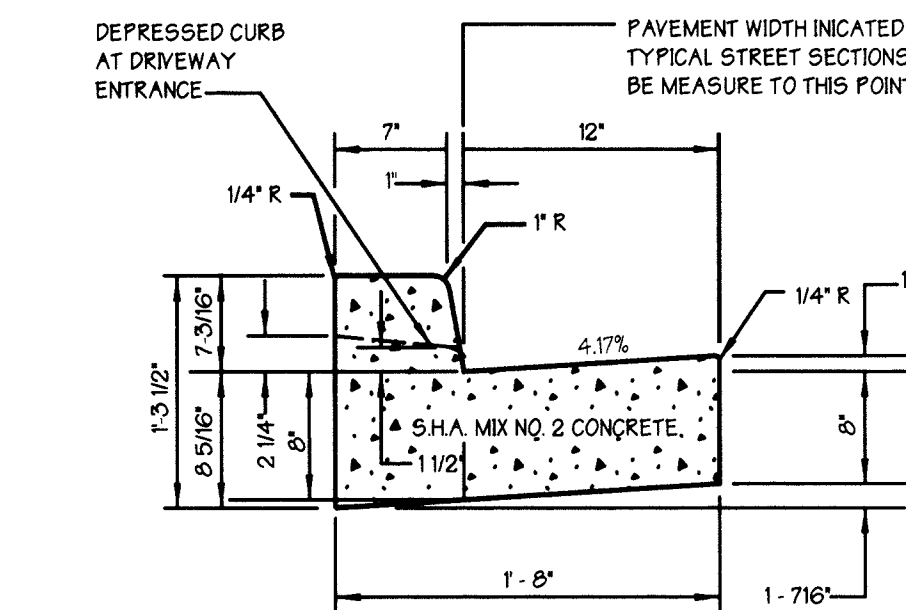


**M-303**  
STC 1200 PRECAST CONCRETE STORMCEPTOR  
1200 US GALLON CAPACITY

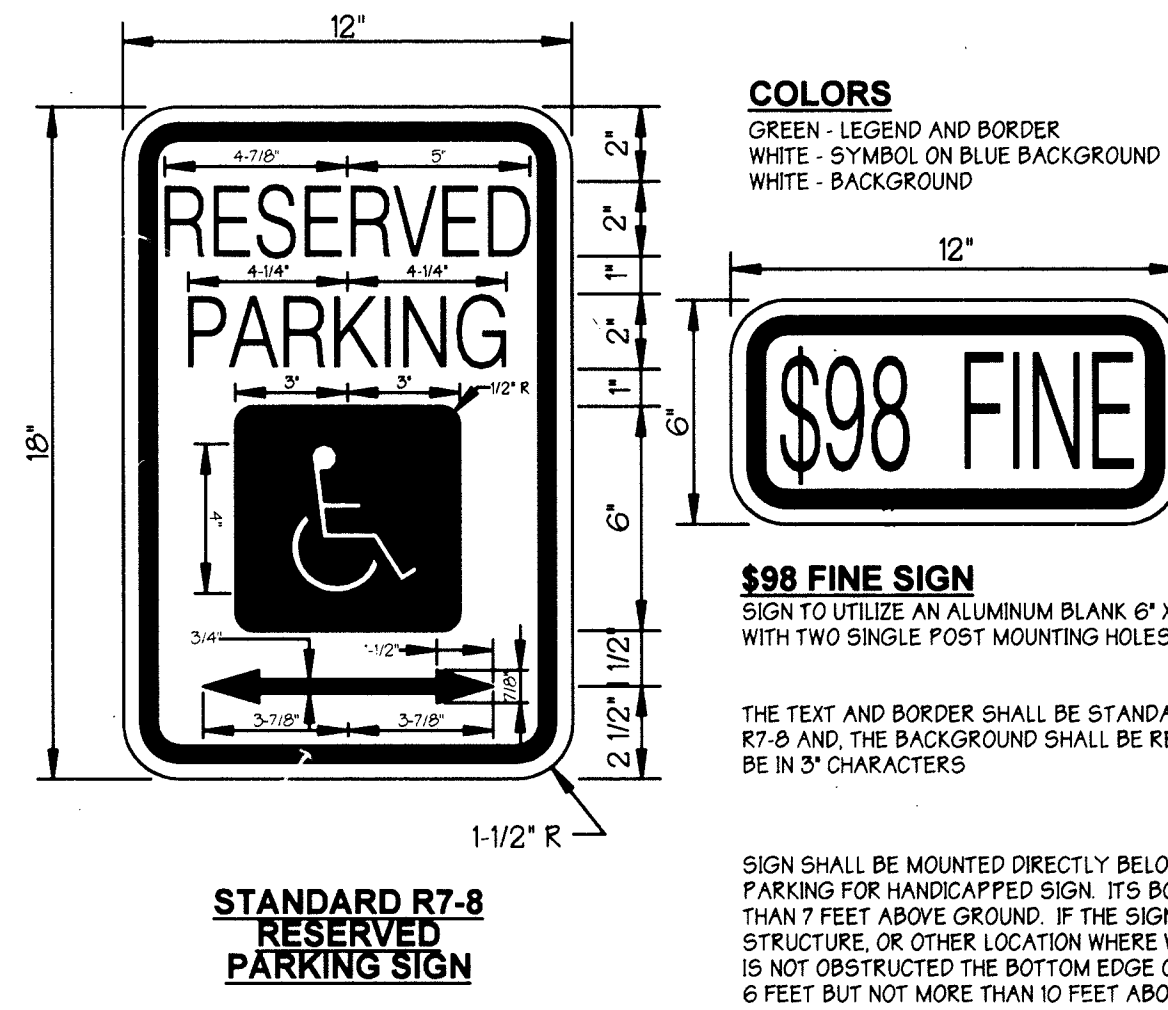
\* SEE STORMCEPTOR ORDER REQUEST FORM, SHEET 0 OF B.



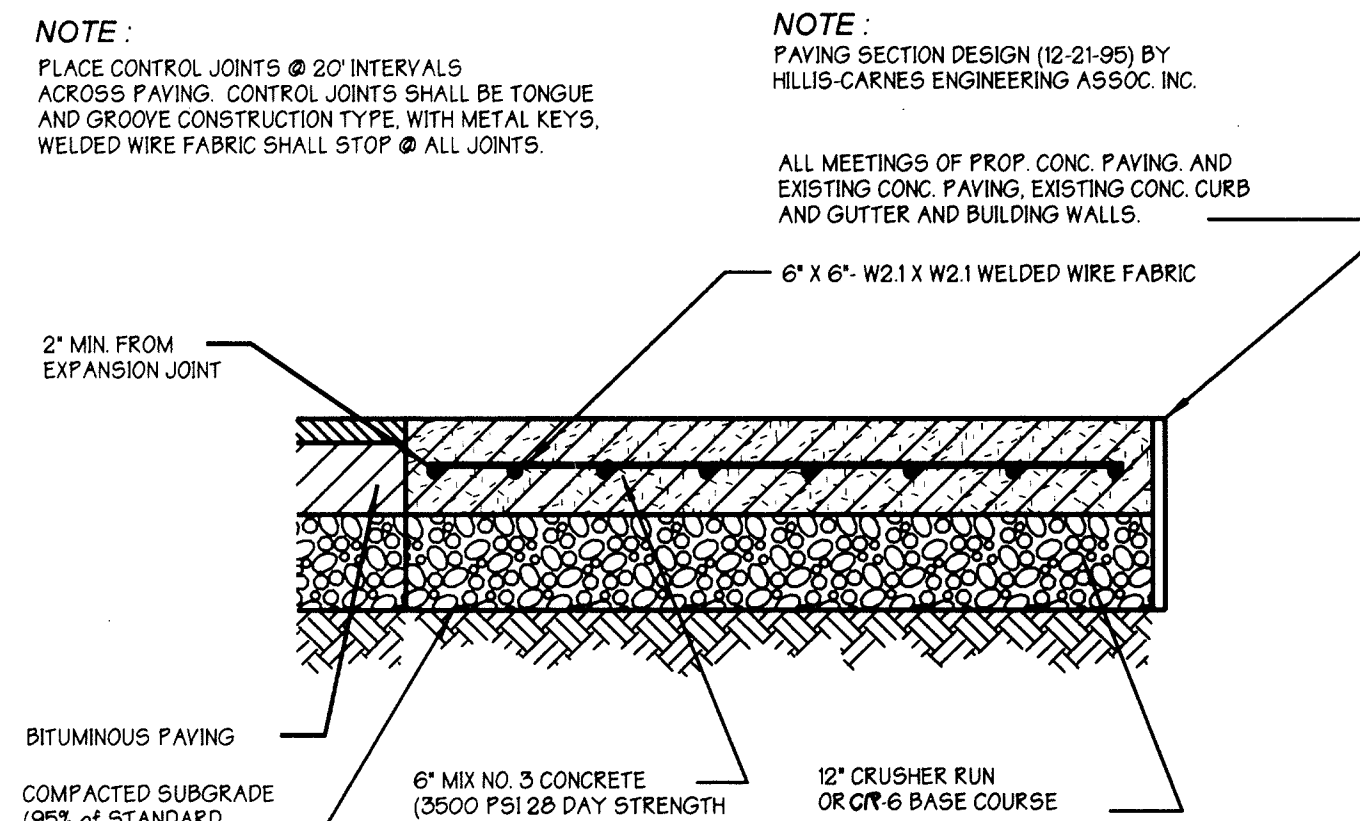
**Dumpster Enclosure Detail**  
NOT TO SCALE



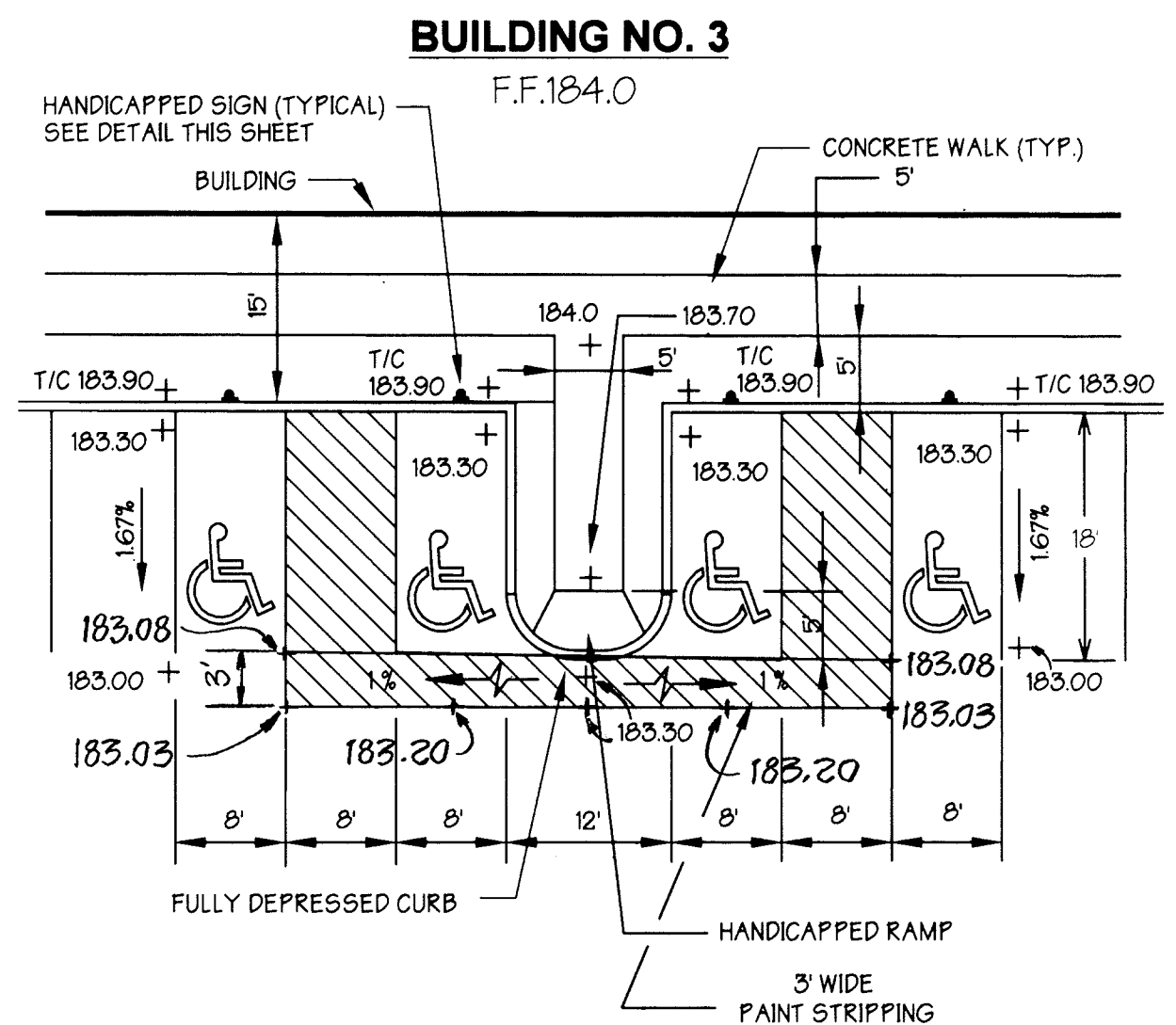
**Howard County Curb and Gutter Detail**  
NOT TO SCALE



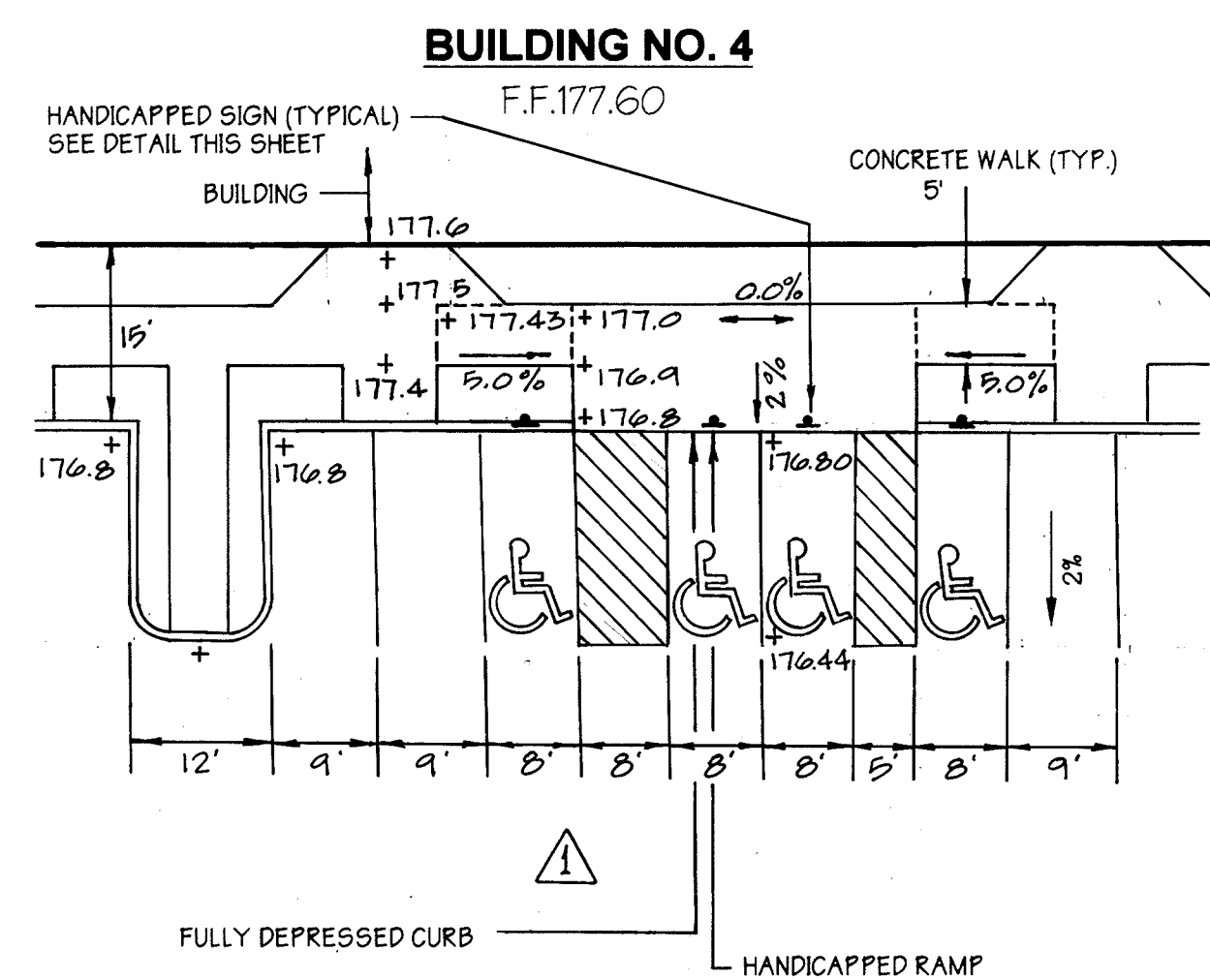
**Standard R7-8 Reserved Parking Sign Detail**  
NOT TO SCALE



**Concrete Paving Section**  
NOT TO SCALE



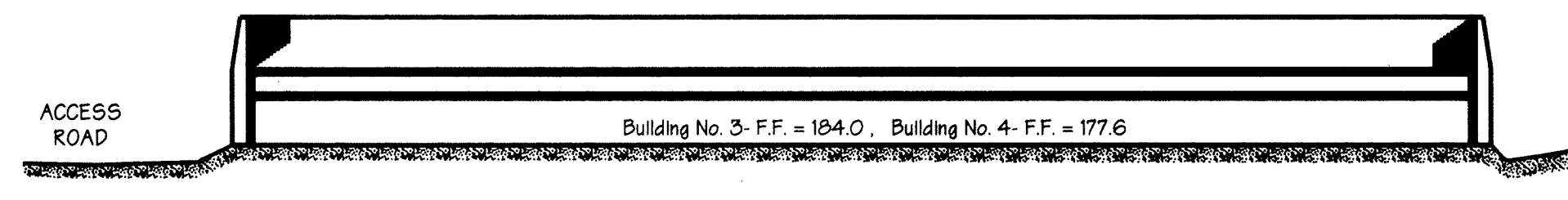
**Handicapped Parking Detail**  
NOT TO SCALE



**Handicapped Parking Detail**  
NOT TO SCALE

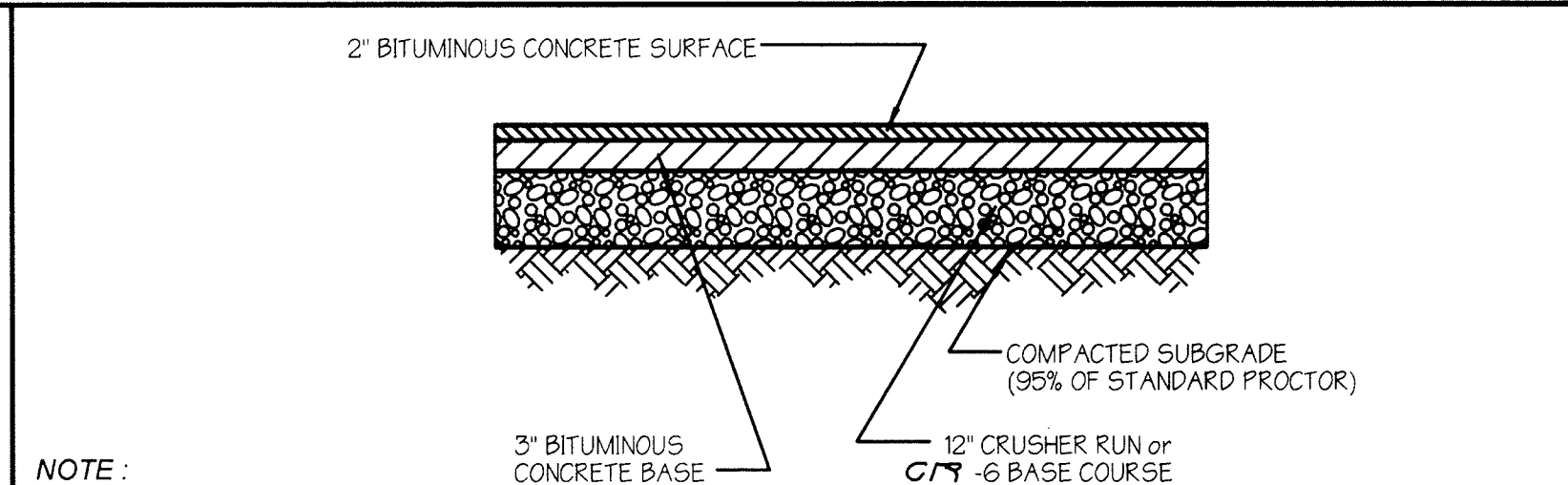


**Section A - A**  
NOT TO SCALE

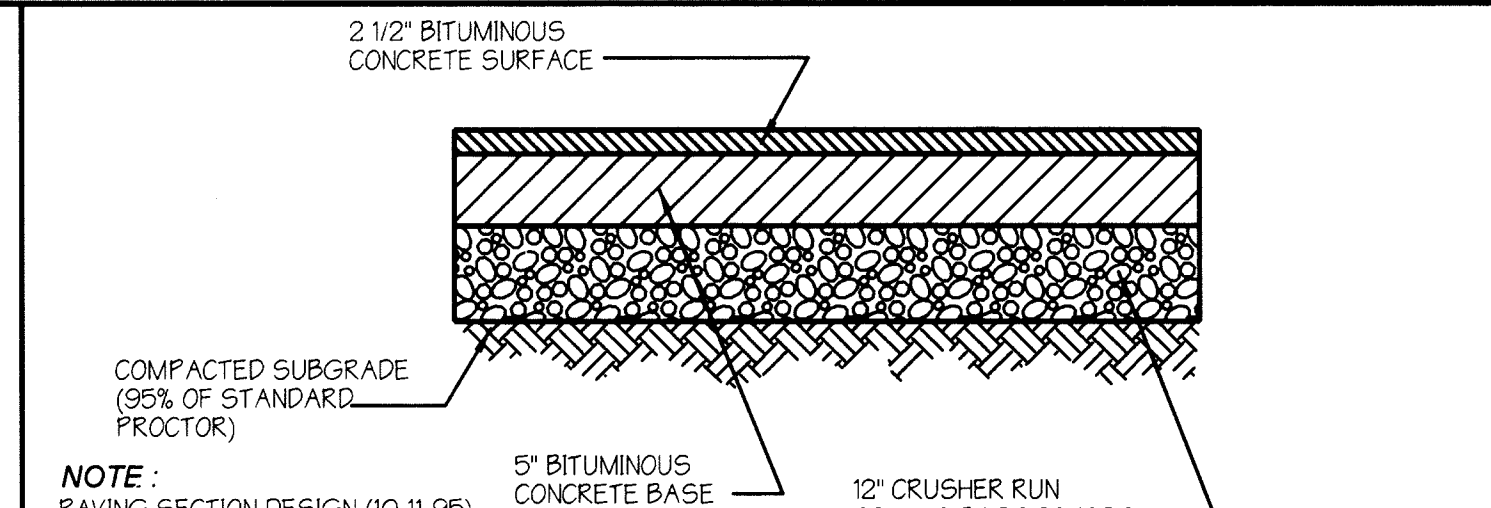


**Section B - B**  
SCALE: 1" = 30'

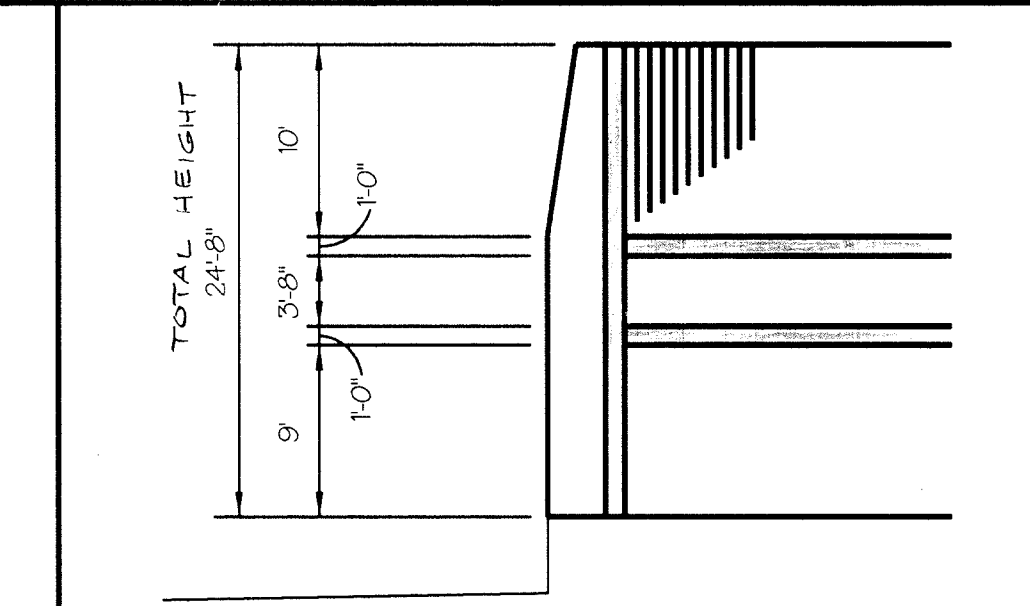
NOTE: The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building shown on this site. Development plan shall not discharge non-domestic waste to the public sewerage system. Each separate and independent sewer connection shall include a standard manhole and other waste treatment 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 statement shall apply to all retro and future occupants or tenants.



**Light Duty Paving Section**  
NOT TO SCALE

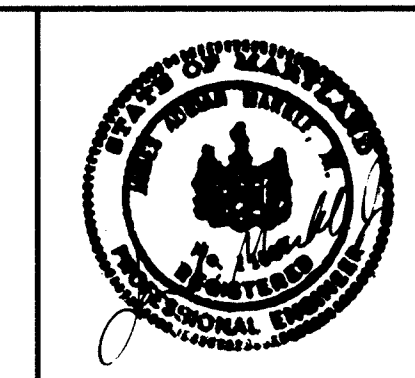


**Heavy Duty Paving Section**  
NOT TO SCALE



**Proposed Building Height Detail**  
NOT TO SCALE

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



OWNER / DEVELOPER  
**HILL MANAGEMENT SERVICES, INC.**  
9540 Deerco Road  
Timonium, Maryland 21093  
410-666-1000

DATE	REVISION	BY
6/14/98	REV. H.C.	G.W.S.
	RAMP DETAIL	
	BLDG. NO. 4	

APPROVED: Howard County Department of Planning and Zoning

*John P. ...* 6/17/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Andy Hamilton* 6/29/98  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*...* 7/2/98  
DIRECTOR DATE

BUILDING NO.	STREET ADDRESS
3	7381 BALTIMORE WASHINGTON BOULEVARD
4	7383 BALTIMORE WASHINGTON BOULEVARD

PROJECT NAME	SECTION NAME	PARCEL #
BALTO. WASH. COMM. PARK	BUILDING NOS. 3 & 4	62

DEED #	BLOCK #	ZONE	FAX / ZONE MAP	ELECT. DIST.	CENSUS TRACT
1700/137	5	M-2	43	1	6012

WATER CODE: 801 SEWER CODE: 2153000

**SITE DETAILS / SECTIONS / CONSTRUCTION NOTES**  
**BUILDING NOS. 3 & 4**  
**BALTIMORE - WASHINGTON**  
**COMMERCE PARK**

ELECTION DISTRICT: 1 SCALE: AS SHOWN  
HOWARD COUNTY, MARYLAND DATE: OCT. 17, 1997  
DESIGNED: E.A.S. DRAWN: E.M.T. CHECKED: T.N.W. SHEET 7 OF 10









### Specification Guidelines: Allan Block Modular Retaining Wall Systems

#### SECTION 1

##### PART 1: GENERAL

###### 1.1 Scope

Work includes furnishing and installing modular concrete block retaining wall units to the lines and grades designated on the construction drawings and as specified herein.

###### 1.2 Applicable Sections of Related Work

A. Geogrid Wall Reinforcement (see section 2)

###### 1.3 Reference Standards

A. ASTM C90/S2 Hollow Load Bearing Masonry Units.

B. ASTM C140/S1 Sampling and Testing Concrete Masonry Units.

###### 1.4 Delivery, Storage, and Handling

- A. Contractor shall check the materials upon delivery to assure proper material has been received.
- B. Contractor shall prevent excessive mud, wet cement, and like materials from coming in contact with the materials.
- C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project.

##### PART 2: MATERIALS

###### 2.1 Modular Wall Units

- A. Wall units shall be ALLAN BLOCK Retaining Wall units as produced by a licensed Manufacturer.
- B. Wall units shall have minimum 28 day compressive strength of 2000 psi (20.67MPa) in accordance with ASTM C90. The concrete units shall have adequate freeze/thaw protection with an average absorption rate of 7.5 lb/ft<sup>3</sup> (120 kg/m<sup>3</sup>) for northern climates and 10 lb/ft<sup>3</sup> (160 kg/m<sup>3</sup>) for southern climates.
- C. Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations shall be .125 inch, (3mm) not including textured face.
- D. Wall units shall provide a minimum of 110 pounds total weight per square foot of wall face area (1,764g/m<sup>2</sup>). Fill contained within the units may be considered 80% effective weight.
- E. Exterior face shall be textured. Color as specified by owner.

###### 2.2 Wall Back

- A. Base material shall be well graded compatible aggregate, 2 1/2 inch to 1.5 inch, (6.35mm - 38mm) with no more than 10% passing the #200 sieve.
- B. Drainage material shall be the same as base material.
- C. Backfill material shall be site excavated soils when approved by the engineer unless otherwise specified in the drawings. Unsuitable soils for backfill (heavy clays or organic soils) shall not be used in the reinforced soil mass.
- D. Where additional fill is required, contractor shall submit sample and specifications to the Engineer for approval.

##### PART 3: WALL CONSTRUCTION

###### 3.1 Excavation

- A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall use caution not to over-excavate beyond the lines shown, or to disturb the base elevations beyond those shown.

###### 3.2 Foundation Soil Preparation

- A. Foundation soil shall be excavated as dimensioned on the plans and compacted to a min. 90% compaction prior to placement of the base material.
- B. Foundation soil shall be examined by the Engineer to insure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable material.

###### 3.3 Base

- A. Base material shall be placed as shown on construction drawing. Top of base shall be located to allow bottom wall units to be buried to proper depths as per wall heights and specifications.
- B. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted to 90% standard proctor.
- C. Base shall be compacted at 90% standard proctor to provide a level hard surface on which to place the first course of blocks. The base shall be constructed to insure proper wall embedment and the final elevation shown on the plans. Well graded sand can be used to smooth the top 1/2 inch (12.5mm) on the leveling pad.
- D. Base material shall be 3 inch (75mm) depth minimum for walls under 4 feet and 6 inch (150mm) minimum depth for walls over 4 feet (1.2m).

###### 3.4 Unit Installation

- A. The first course of wall units shall be placed on the prepared base with the raised lip facing out and the front edges tight together. The units shall be checked for level and alignment as they are placed.
- B. Leave that units are in full contact with base. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.
- C. All cavities in and around the base row shall be filled with base materials and compacted. Backfill front and back of entire base row to firmly lock in place. Check again for level and alignment. All excess material shall be swept from top of all units.
- D. Install next course of wall units on top of base row. Position blocks to be offset from seams of blocks below. Perfect "running bond" is not essential, but a 3 inch (75mm) minimum offset is recommended. Check each block for proper alignment and level. Fill all cavities in and around wall units and to a 12 inch (300mm) depth behind block with drainage material. Spread backfill in uniform lifts not exceeding 8 inches (200mm). Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Hand-operated plate compaction equipment shall be used on the block and within 3 feet (9m) of wall to achieve consolidation. Compact to 90% S.P. in backfill beyond consolidation zone.
- E. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
- F. Allowable construction tolerance of the wall face is 2 degrees vertically and 1 inch (25mm) in 10 feet (3m) horizontally.

### Specification Guidelines: Geogrid Reinforcement Systems

#### SECTION 2

##### PART 1: GENERAL

###### 1.1 Scope

Work includes furnishing and installing geogrid reinforcement, wall fill, and backfill to the lines and grades designated on the construction drawings and as specified herein.

###### 1.2 Applicable Section of Related Work

Section 1: ALLAN BLOCK Modular Retaining Wall Systems.

###### 1.3 Reference Standards

See specific geogrid manufacturers reference standards.

###### 1.4 Delivery, Storage, and Handling

- A. Contractor shall check the geogrid upon delivery to assure that the proper material has been received.
- B. Geogrid shall be stored above 20° F (29° C).
- C. Contractor shall prevent excessive mud, wet cement, or other foreign materials from coming in contact with the geogrid material.

##### PART 2: GRID MATERIALS

###### 2.1 Definitions

- A. Geogrid products shall be of high density polyethylene or polyester yarns encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material.
- B. Concrete retaining wall units are as detailed on the drawings and shall be ALLAN BLOCK Retaining Wall Units.
- C. Drainage material is free draining granular material as defined in section: Modular Concrete Retaining Wall systems as "Drainage Material".
- D. Backfill is the soil used as fill for the reinforced soil mass.
- E. Foundation soil is the in-situ soil.

###### 2.2 Products

- A. Geogrid shall be the type as shown on the drawings having the property requirements as described within the manufacturers specifications.

###### 2.3 Acceptable Manufacturers

- A. A manufacturer's product shall be approved by the engineer.

##### PART 3: WALL CONSTRUCTION

###### 3.1 Foundation Soil Preparation

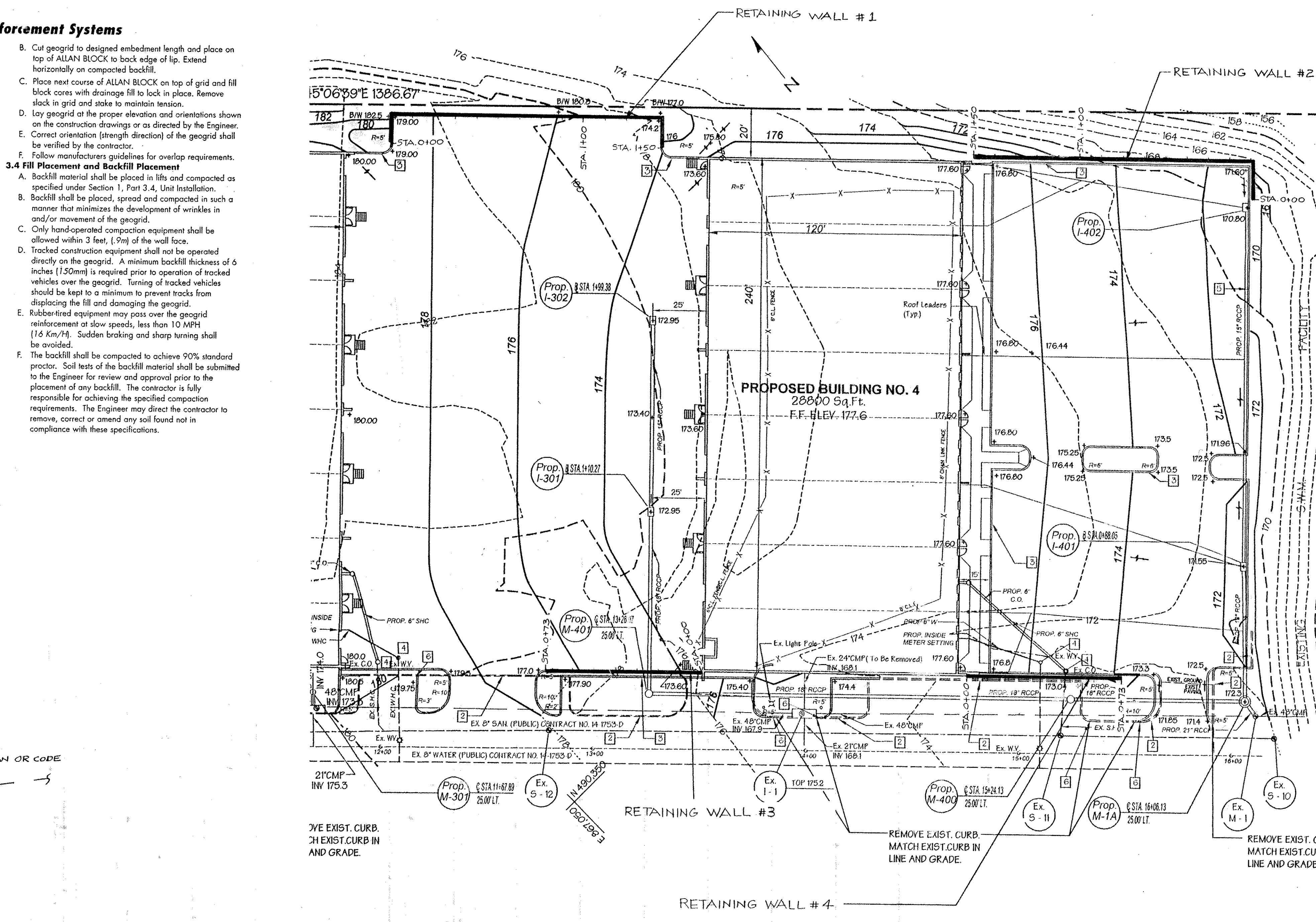
- A. Foundation soil shall be excavated to the lines and grades as shown on the construction drawings, or as directed by the Engineer.
- B. Foundation soil shall be examined by the Engineer to insure that the actual foundation soil strength meets or exceeds assumed design strength.
- C. Over-excavated areas shall be filled with approved compacted backfill material.
- D. Foundation soil shall be proof rolled prior to fill and geogrid placement.

###### 3.2 Wall Construction

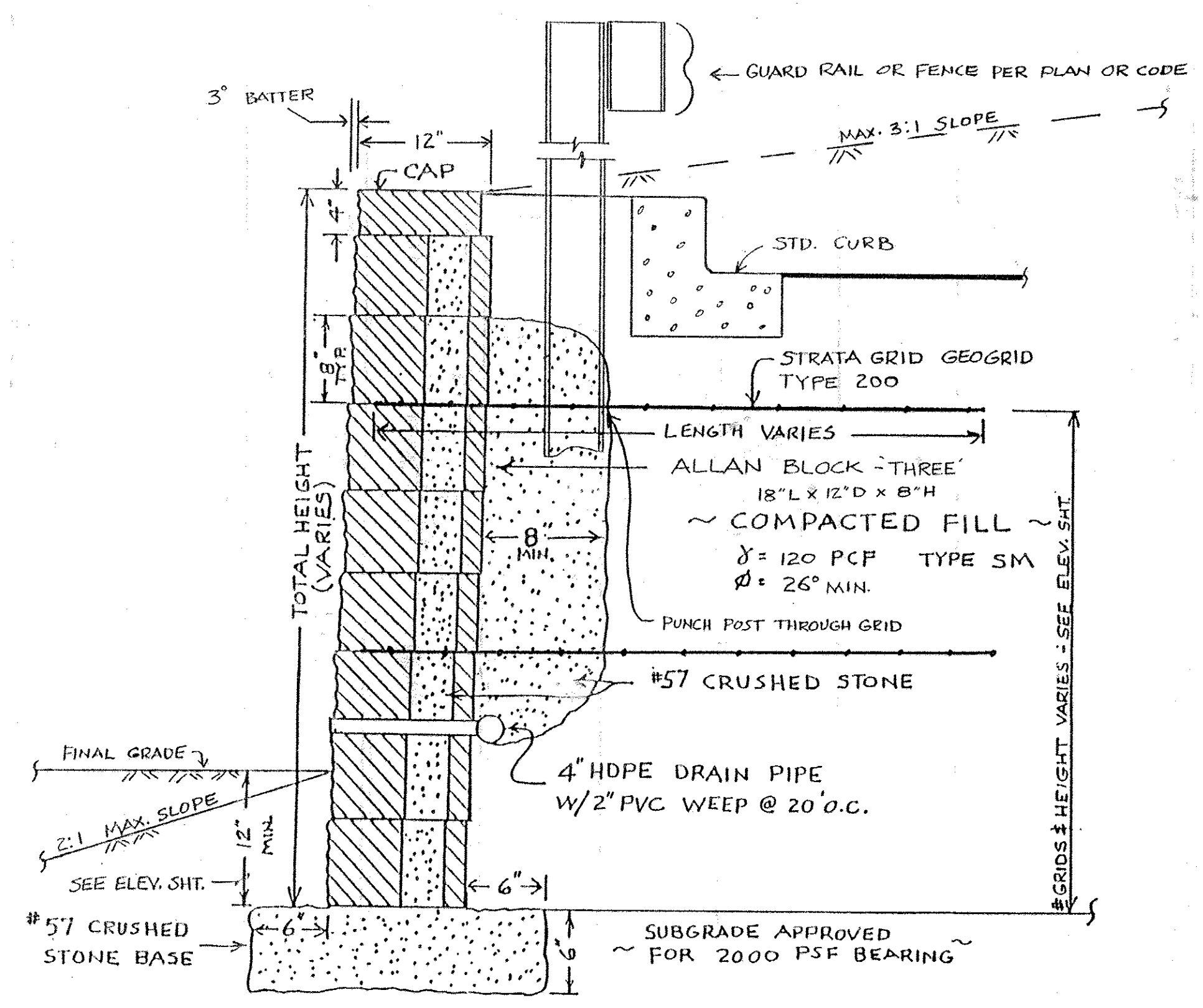
- A. Wall construction shall be as specified under Section 1, Part 3, Wall Construction.

###### 3.3 Geogrid Installation

- A. Install ALLAN BLOCK wall to designated height of first geogrid layer, backfill and compact behind wall to depth equal to designed grid length.

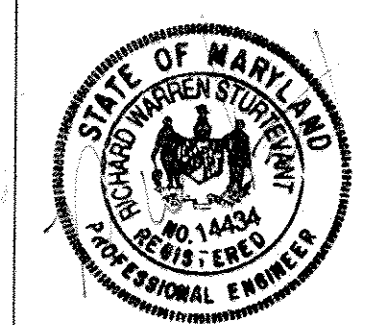


WALL LOCATION PLAN  
1" = 30'



TYPICAL WALL PROFILE  
N.T.S.

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



Owner/Developer  
**HILL**  
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410-666-1000

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.  
12011 Guilford Road, Suite 106  
Annapolis Junction, MD 20701  
(410) 880-4788

DATE	REVISION	BY

APPROVED: Howard County Department of Planning and Zoning  
 Chief, Development Engineering Division: *[Signature]* 6/17/98  
 Chief, Division of Land Development: *[Signature]* 6/29/98  
 Director: *[Signature]* 7/8/98

ADDRESS CHART	
BUILDING NO. 3	STREET ADDRESS 7381 BALTIMORE WASHINGTON BOULEVARD
BUILDING NO. 4	STREET ADDRESS 7383 BALTIMORE WASHINGTON BOULEVARD

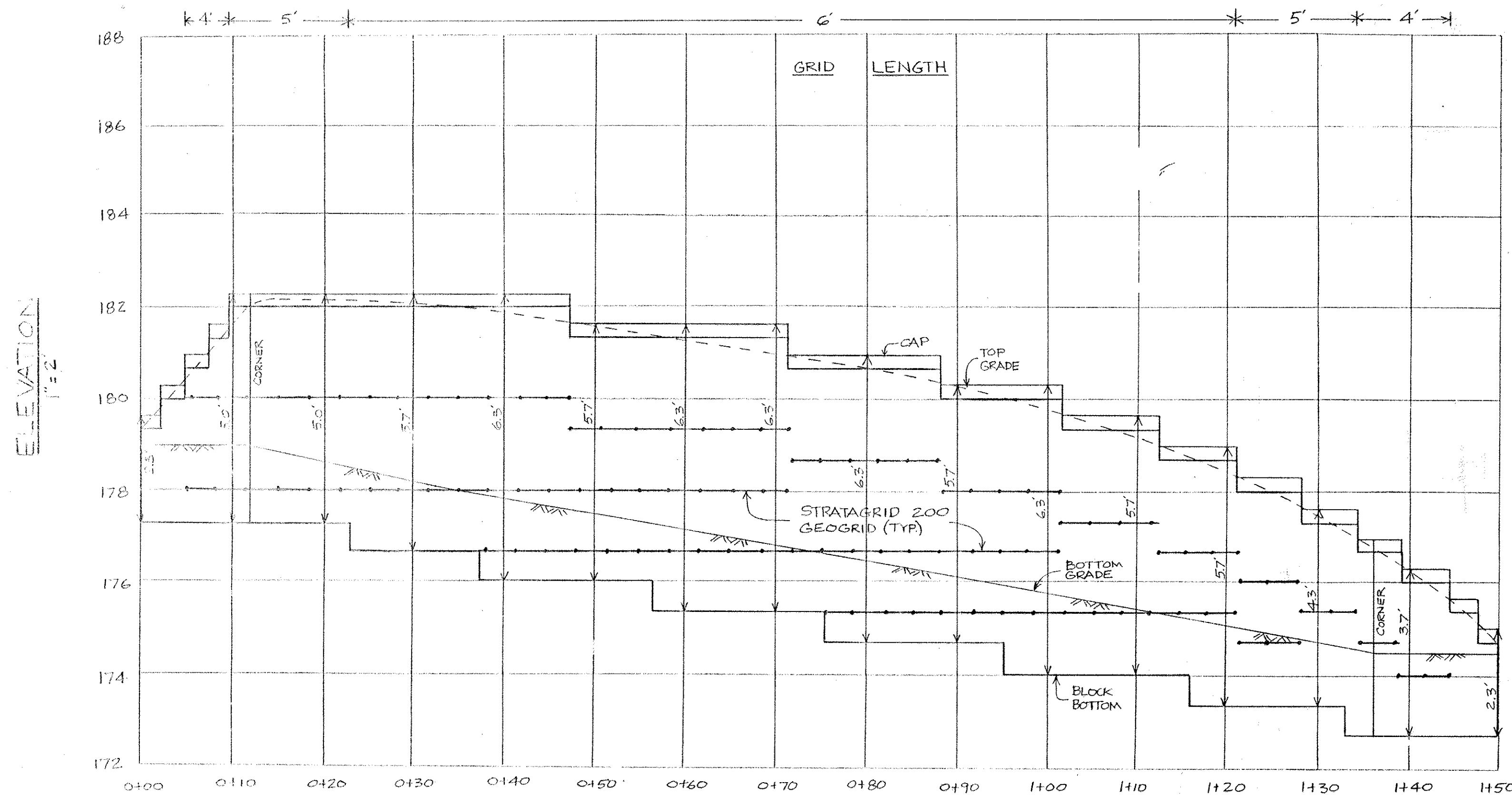
SUBDIVISION NAME	SECTION NAME	PARCEL #
BALTO. WASH. COMM. PARK	BUILDING NO. 3 AND 4	62

DEED #	BLOCK #	ZONE	TAX MAP	ELECT. DIST.	CENSUS TRAC
1700 /137	5	M-2	43	1	6012

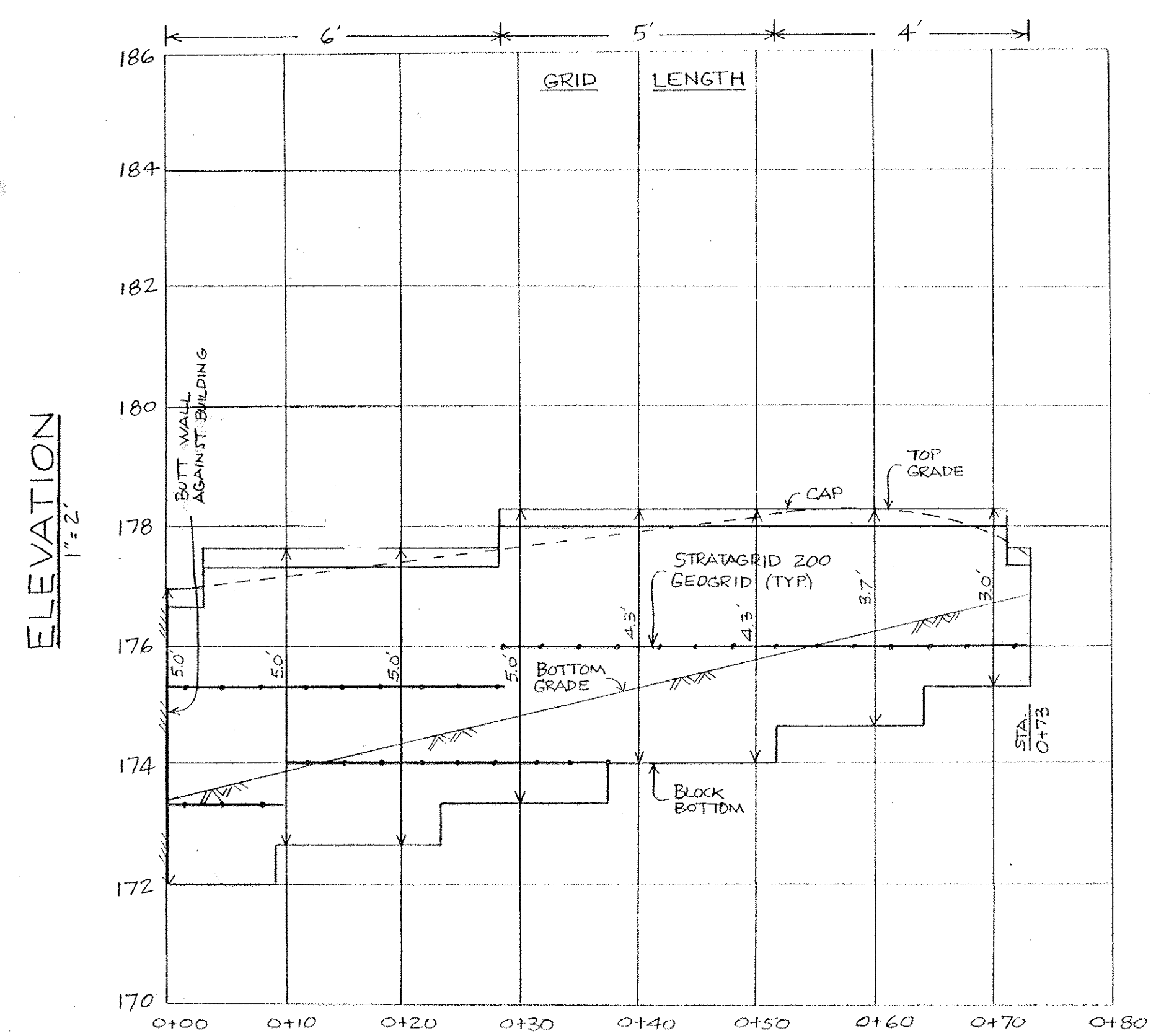
WATER CODE: B01 SEWER CODE: 2153000

RETAINING WALL DESIGN DETAILS  
BUILDING NO. 3 AND 4  
BALTIMORE - WASHINGTON  
COMMERCE PARK  
ELECTION DISTRICT: 1 SCALE: AS SHOWN  
HOWARD COUNTY, MARYLAND DATE: FEB. 2, 1998  
DESIGNED: RWS DRAWN: RTS CHECKED: RWS SHEET: 9 OF 10  
SDP.9847

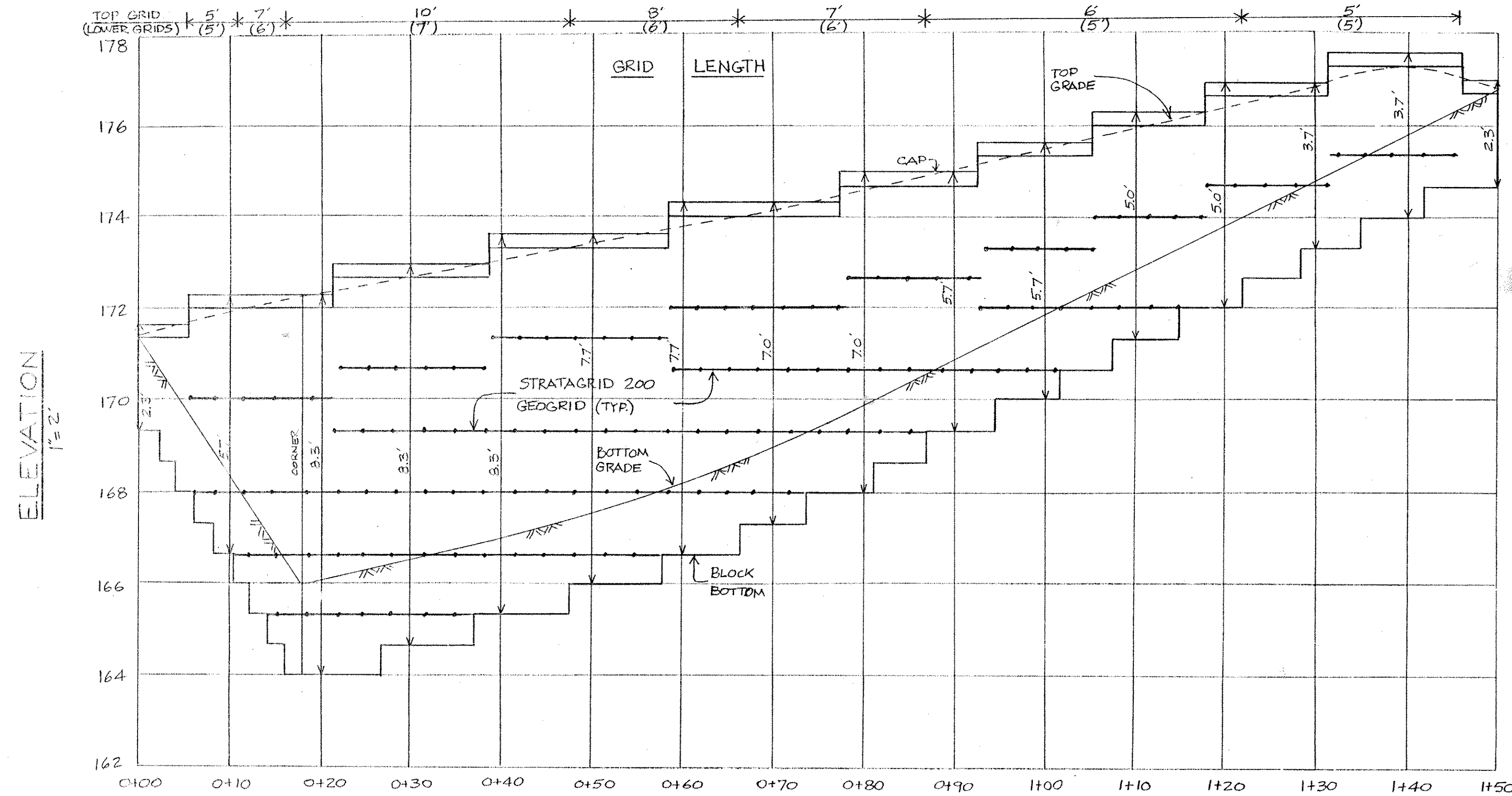




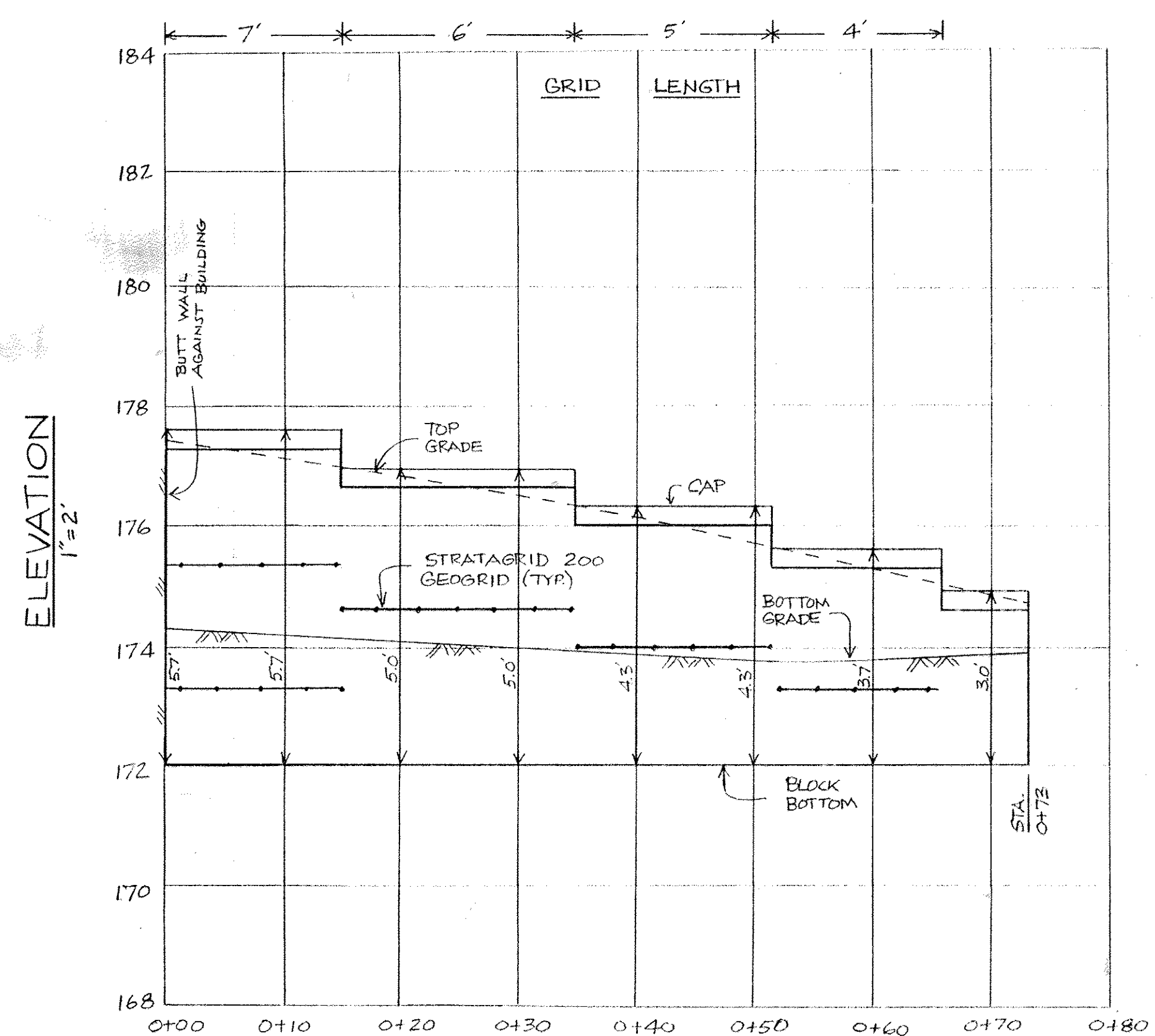
WALL #1 STATION  
1" = 10'



WALL #3 STATION  
1" = 10'



WALL #2 STATION  
1" = 10'



WALL #4 STATION  
1" = 10'

APPROVED: Howard County Department of Planning and Zoning

*Robert Dammann* 6/21/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

*Andy Hamble* 6/21/98  
CHIEF, DIVISION OF LAND DEVELOPMENT & DATE

*Robert K. Kutt* 7/8/98  
DIRECTOR DATE

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BUILDING NO.	STREET ADDRESS
3	7381 BALTIMORE WASHINGTON BOULEVARD
4	7383 BALTIMORE WASHINGTON BOULEVARD

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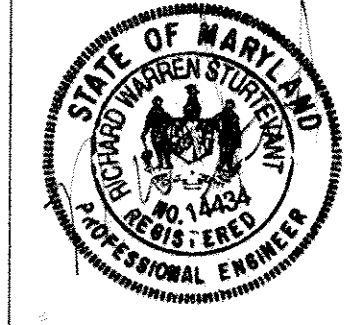
WATER CODE	SEWER CODE
B01	2153000

DATE	REVISION	BY

RETAINING WALL DESIGN DETAILS  
BUILDING NO. 3 AND 4  
BALTIMORE - WASHINGTON  
COMMERCE PARK

ELECTION DISTRICT: 1 SCALE: AS SHOWN  
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SDP-98.47