

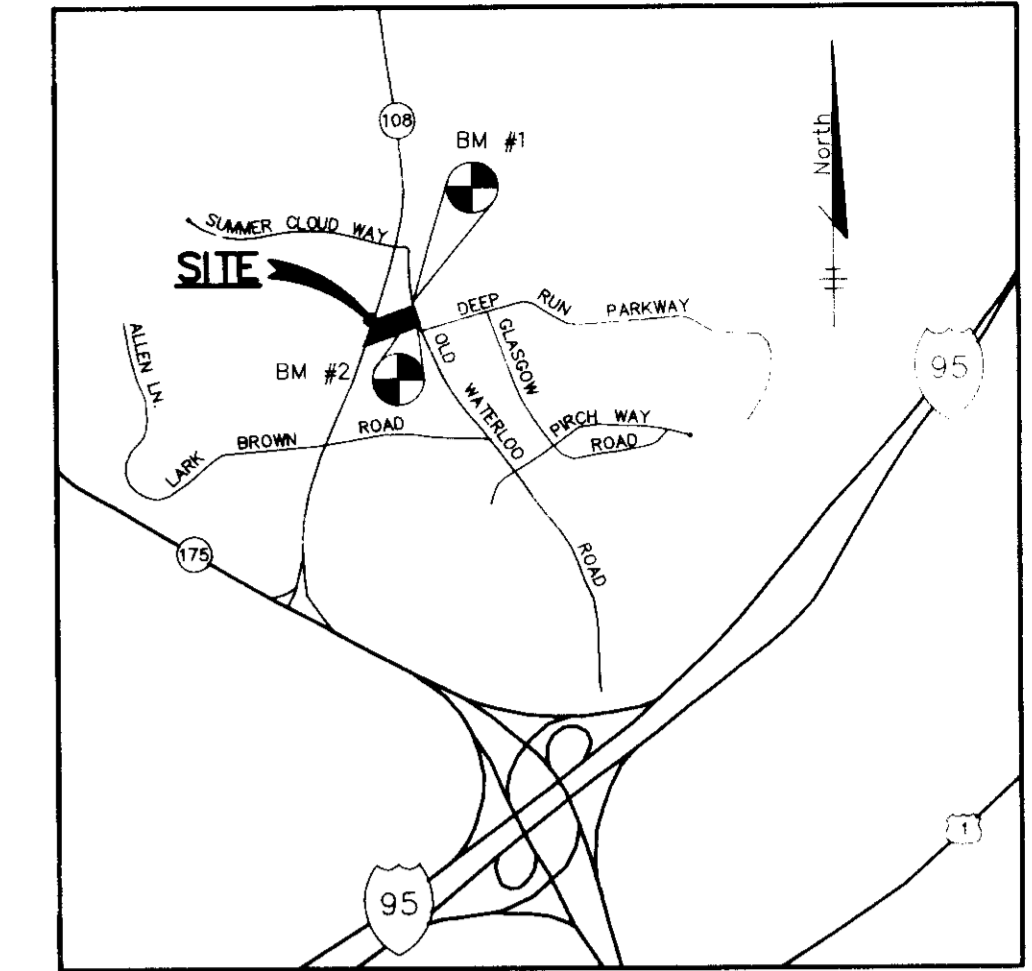
SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	CONSTRUCTION DETAILS
4	OIL/GRI T SEPARATOR DETAILS & STORM DRAIN/S.W.M. PROFILE
5	SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP
6	SEDIMENT CONTROL NOTES & DETAILS
7	LANDSCAPE PLAN & ENVIRONMENTAL ANALYSIS

SITE DEVELOPMENT PLAN

108-WATERLOO PROPERTY

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

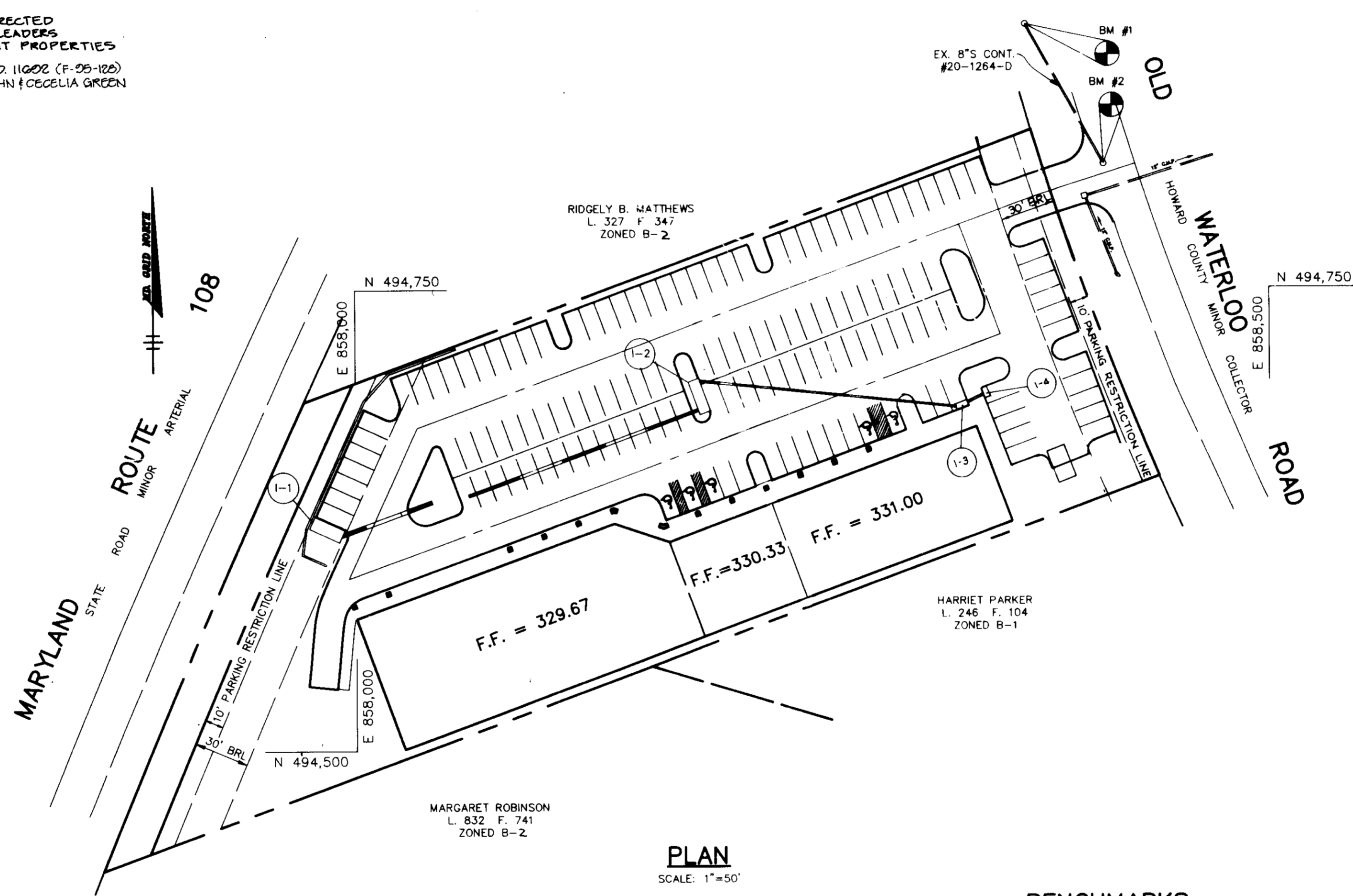


VICINITY MAP
SCALE: 1"=2000'

GENERAL NOTES

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAY BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 - MISS UTILITY 1-800-257-7777
 - C&P TELEPHONE COMPANY 725-8976
 - HOWARD COUNTY BUREAU OF UTILITIES 313-4900
 - AT&T CABLE LOCATION DIVISION 393-3553
 - BALTIMORE GAS & ELECTRIC COMPANY 885-0123
 - STATE HIGHWAY ADMINISTRATION 531-5533
 - HOWARD COUNTY CONSTRUCTION INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK) 792-7272
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED JUNE, 1991 BY RIEMER MUEGGE AND ASSOCIATES, INC.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL G2.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- 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 THIS WASTE IS REGULATED UNDER SECTION 18.122A OF THE HOWARD COUNTY CODE. EACH SEPARATE AND INDEPENDENT SEWER CONNECTION SHALL INCLUDE A STANDARD MANHOLE AND OTHER WATER 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 PLAN SHALL DISCHARGE REGULATED NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM PRIOR TO INSTALLATION OF THE SEPARATE AND INDEPENDENT SEWER CONNECTION AND RELATED INTERIOR WASTE LINES. THE ABOVE REQUIREMENTS SHALL APPLY TO ALL INITIAL AND FUTURE OCCUPANTS OR TENANTS.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED BY AN UNDERGROUND INFILTRATION FACILITY.
- THE PAVEMENT DETAILS SHOWN ON THESE PLANS REFLECT THE HOWARD COUNTY MINIMUM STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE FURNISHED BY THE OWNER. IF THE PAVING SECTION REQUIRED IS LESS THAN THE COUNTY MINIMUM, APPROVAL FROM THE COUNTY WILL BE NECESSARY.
- THERE ARE NO NOTIONAL WETLANDS OR 100 YR. FLOODPLAIN ON SITE.

- ZONING BOARD CASE #870M WAS A REQUEST TO REZONE PROPERTY FROM R-12 TO B-1, DATED 2/6/91. ZONED B-2 PER THE 10/10/93 COMPREHENSIVE ZONING PLAN.
- WP-94-57 WAS GRANTED ON APRIL 20, 1994 FOR REQUEST TO WAIVE SECTION 16.15G (K) TO PERMIT A 180 DAY EXTENSION TO SUBMIT THE ORIGINAL DRAWINGS FOR SIGNATURE APPROVAL.
- ALL RUNOFF FROM THE ROOF IS TO BE DIRECTED TOWARDS THE PARKING LOT. NO ROOF LEADERS SHALL BE DIRECTED TOWARD ADJACENT PROPERTIES.
- SUBJECT PROPERTY IS RECORDED ON PLAT NO. 11602 (F.05-102) WHICH IS A REDIVISION OF LOTS 1 & 2, JOHN & CELIA GREEN PROPERTY AS SHOWN ON PLAT NO. 4018.



PLAN
SCALE: 1"=50'

SITE ANALYSIS

PARCEL A	2.271 Ac. (98,925 sq. ft.)
PRESENT ZONING	B-2
PROPOSED USE OF STRUCTURE	COMMERCIAL/RETAIL
FLOOR SPACE:	
RETAIL FOOD STORE:	12,875 sq. ft.
RETAIL:	9,900 sq. ft.
TOTAL:	22,775 sq. ft.
PARKING REQUIRED	
RETAIL FOOD STORE:	● 2 SPACE/ 200 sq. ft. AVAILABLE TO PUBLIC 10,945 sq. ft. /200 55
RETAIL:	● 1 SPACE/200 sq. ft. 9,900 sq. ft. /200 50
TOTAL:	105
PARKING PROVIDED	139 SPACES (INCLUDES 5 HANDICAP SPACES)

BENCHMARKS

BM #1 ELEV. 334.89
SEWER MANHOLE COVER 55'± NORTH OF NORTHEASTERN MOST PROPERTY CORNER, 15'± NORTH OF E OF PROPOSED DRIVEWAY ENTRANCE.

BM #2 ELEV. 334.65
SEWER MANHOLE COVER 32'± EAST OF SITE, IN PAVING ON OLD WATERLOO ROAD AND 5'± NORTH OF E OF PROPOSED DRIVEWAY ENTRANCE.

ADDRESS CHART

PARCEL	STREET ADDRESS
A	6816 OLD WATERLOO ROAD

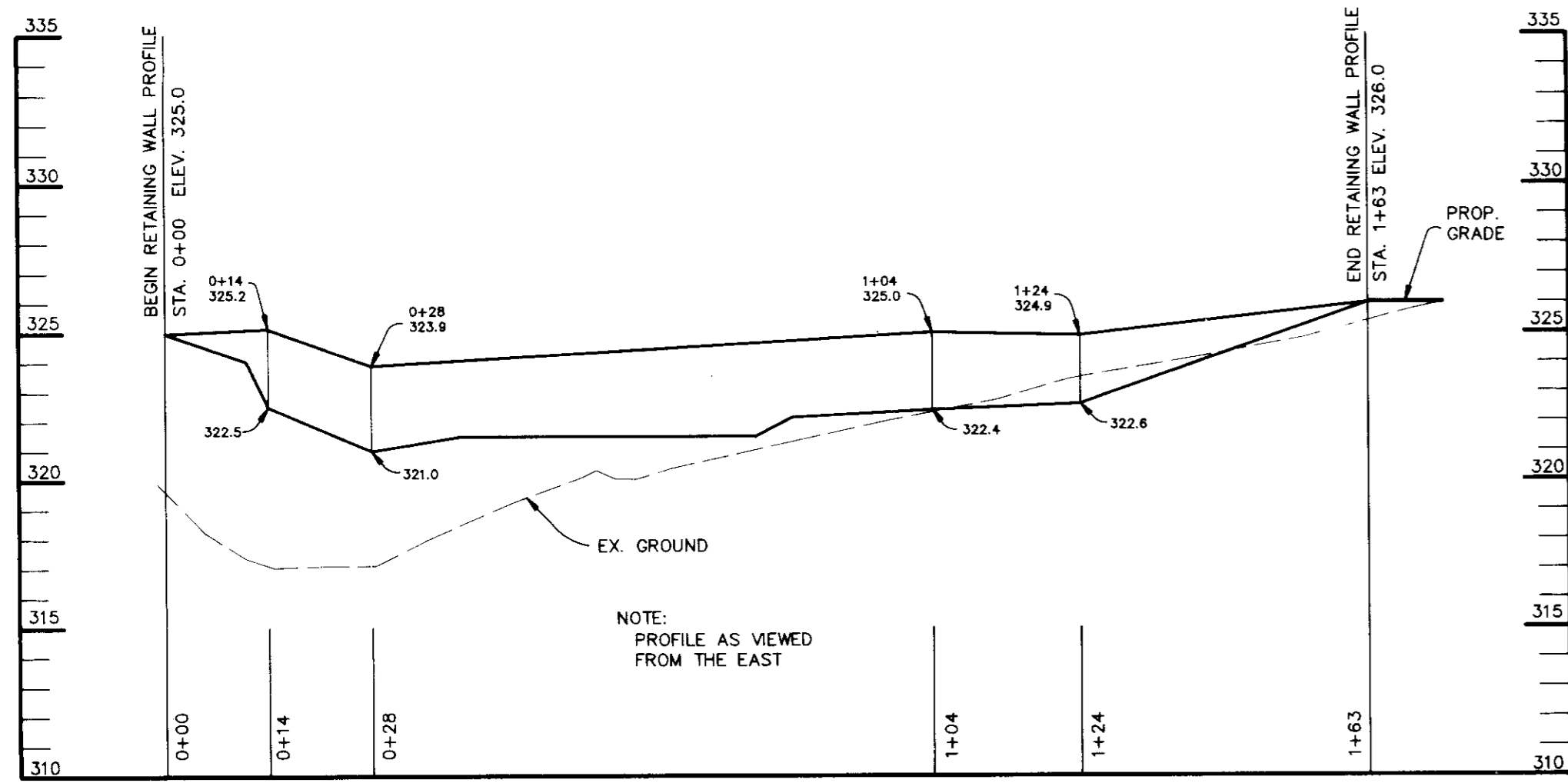
SECTION NAME	SECTION	PARCEL
108-WATERLOO PROPERTY		A
PLAT #	BLOCK #	ZONING
11602	20	B-2
TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
37	6th	6067 03
WATER CODE	SEWER CODE	
E08	3460000	

WATERLOO ROAD ELEVATION (EAST)

FRONT ELEVATION (NORTH)
BUILDING ELEVATIONS
SCALE: 1"=30'

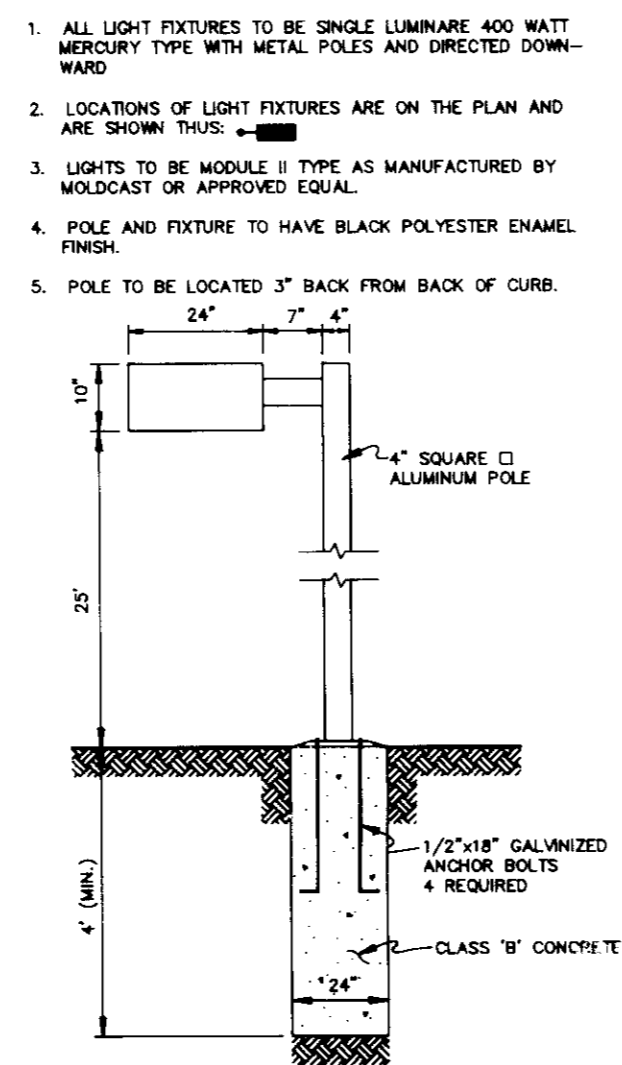


AS BUILT CERTIFICATE	
DATE	
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
<i>James M. Blandford</i> 7/25/95 COUNTY HEALTH OFFICER DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Richard Blood</i> 8/7/95 DIRECTOR DATE	
<i>Richard Blood</i> 8/4/95 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE	
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
<i>James G. Shaw</i> 7/10/95 DIRECTOR DATE	
<i>Paul D. Johnson</i> 7/10/95 CHIEF, BUREAU OF ENGINEERING DATE	
DATE NO.	REVISION
OWNER / DEVELOPER	
SPARKROW II JOINT VENTURE 9175 GUILFORD ROAD SUITE 301 COLUMBIA, MARYLAND 21046	
PROJECT	
108-WATERLOO PROPERTY A COMMERCIAL CENTER	
AREA	
TAX MAP 37 PARCEL A PLAT 11602 ZONED B-2 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
TITLE SHEET	
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
DATE	DESIGNED BY: CB
10-11-94	DRAWN BY: CB
	PROJECT NO: 76902
	DATE: OCTOBER 17, 1994
	SCALE: AS SHOWN
<i>J. Luckh</i> JAYKANT O. PAREKH #10140	DRAWING NO. 1 OF



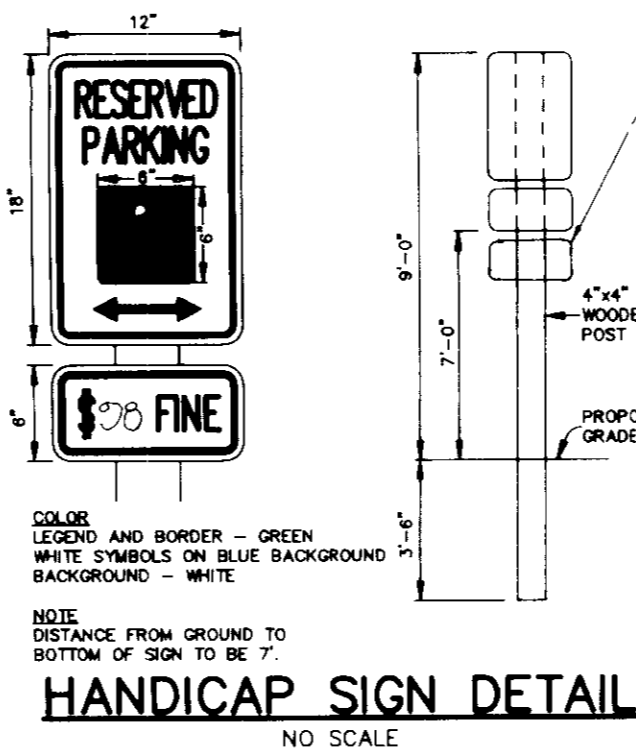
RETAINING WALL 'A' PROFILE

SCALE:
HOR. - 1" = 20'
VERT. - 1" = 5'



LIGHT POLE DETAIL

NO SCALE

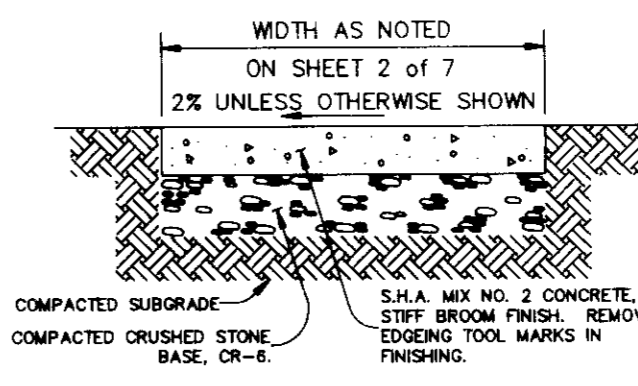


HANDICAP SIGN DETAIL

NO SCALE

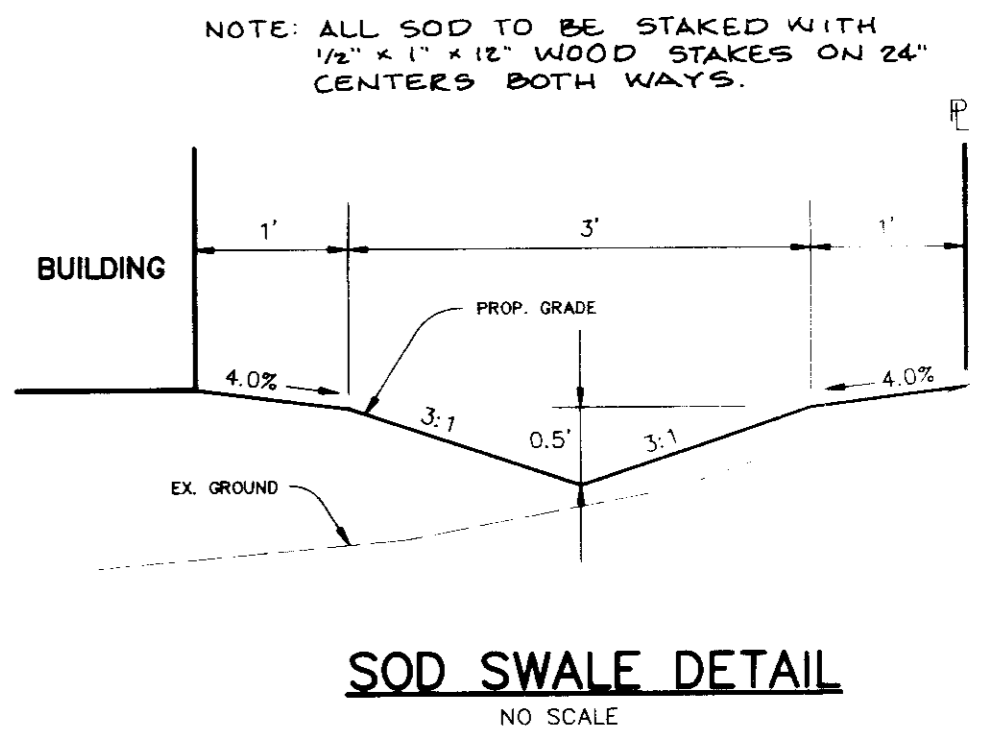
REVERSE 7" COMBINATION CURB AND GUTTER

NO SCALE



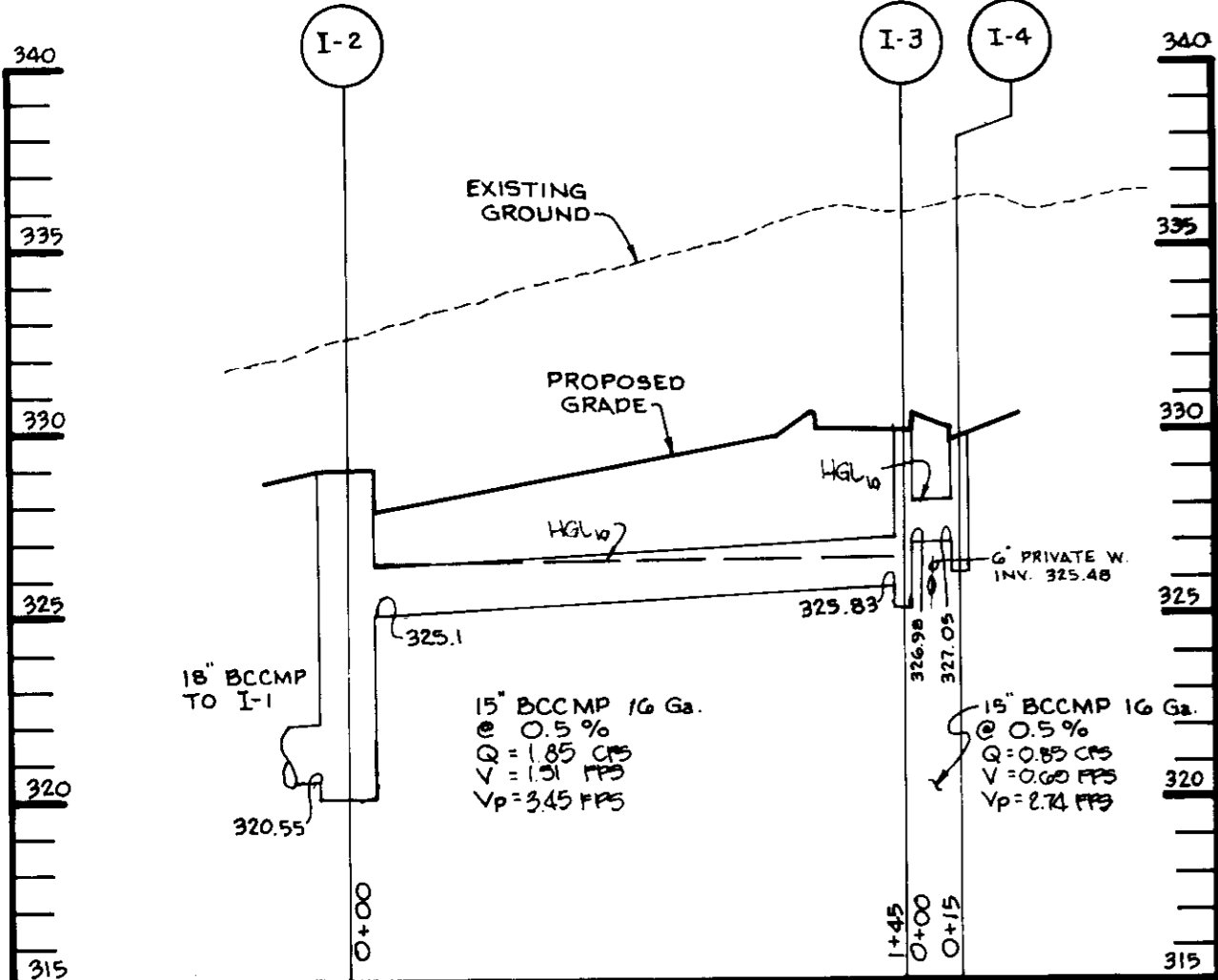
SIDEWALK DETAIL

NO SCALE



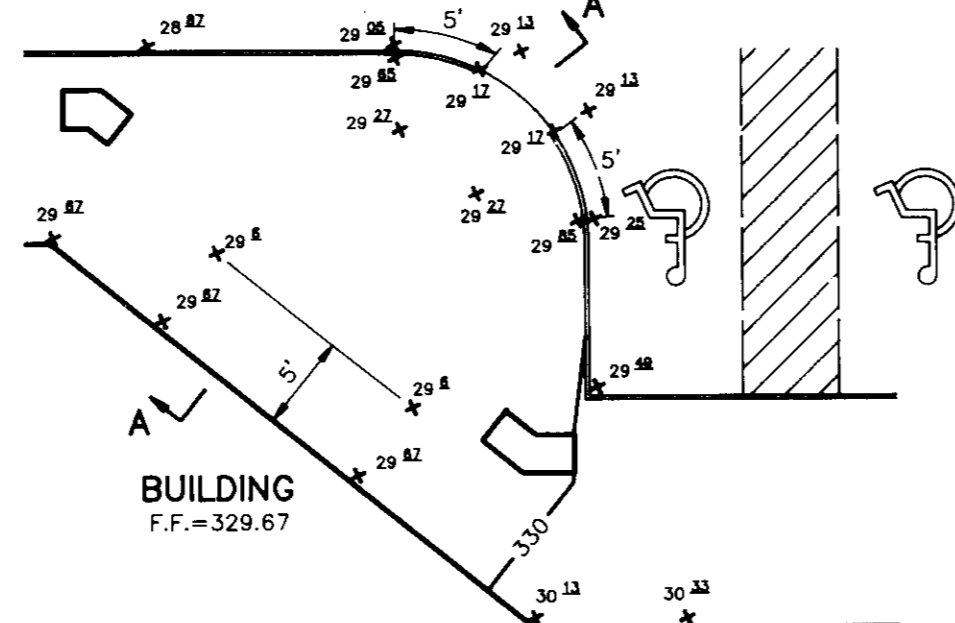
SOD SWALE DETAIL

NO SCALE



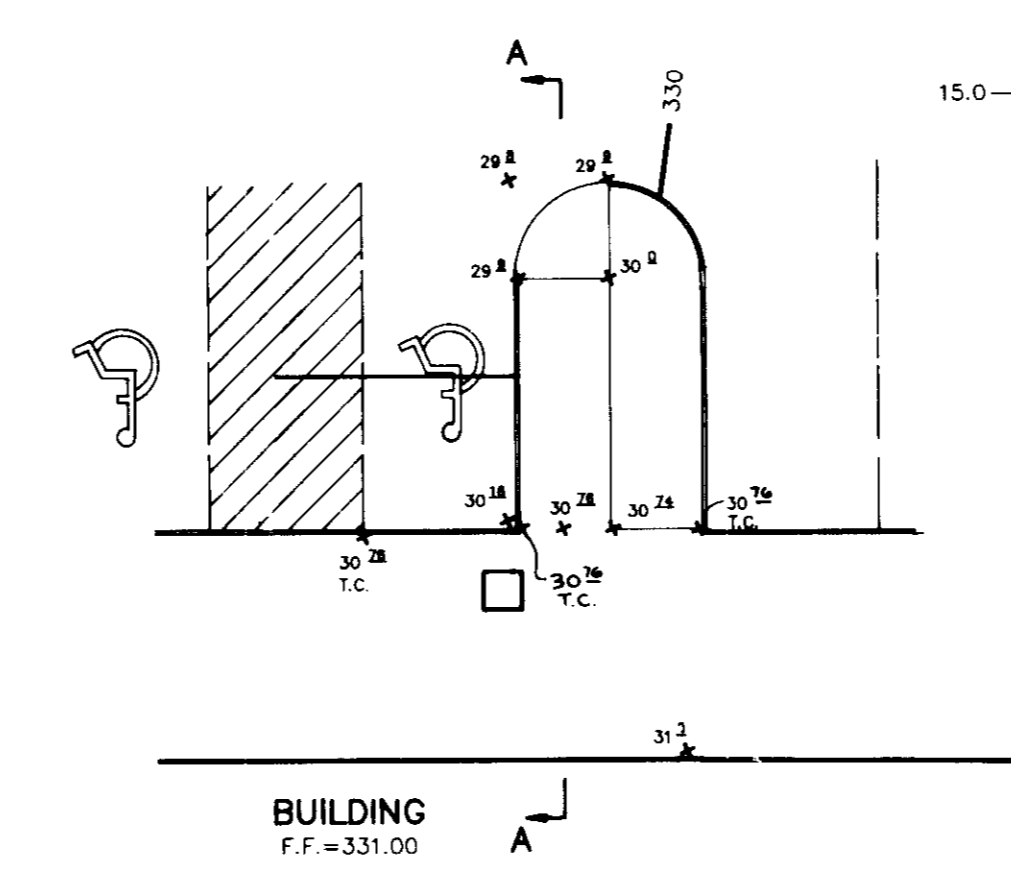
S.D. PROFILE

SCALE: HOR. - 1" = 50'
VERT. - 1" = 5'



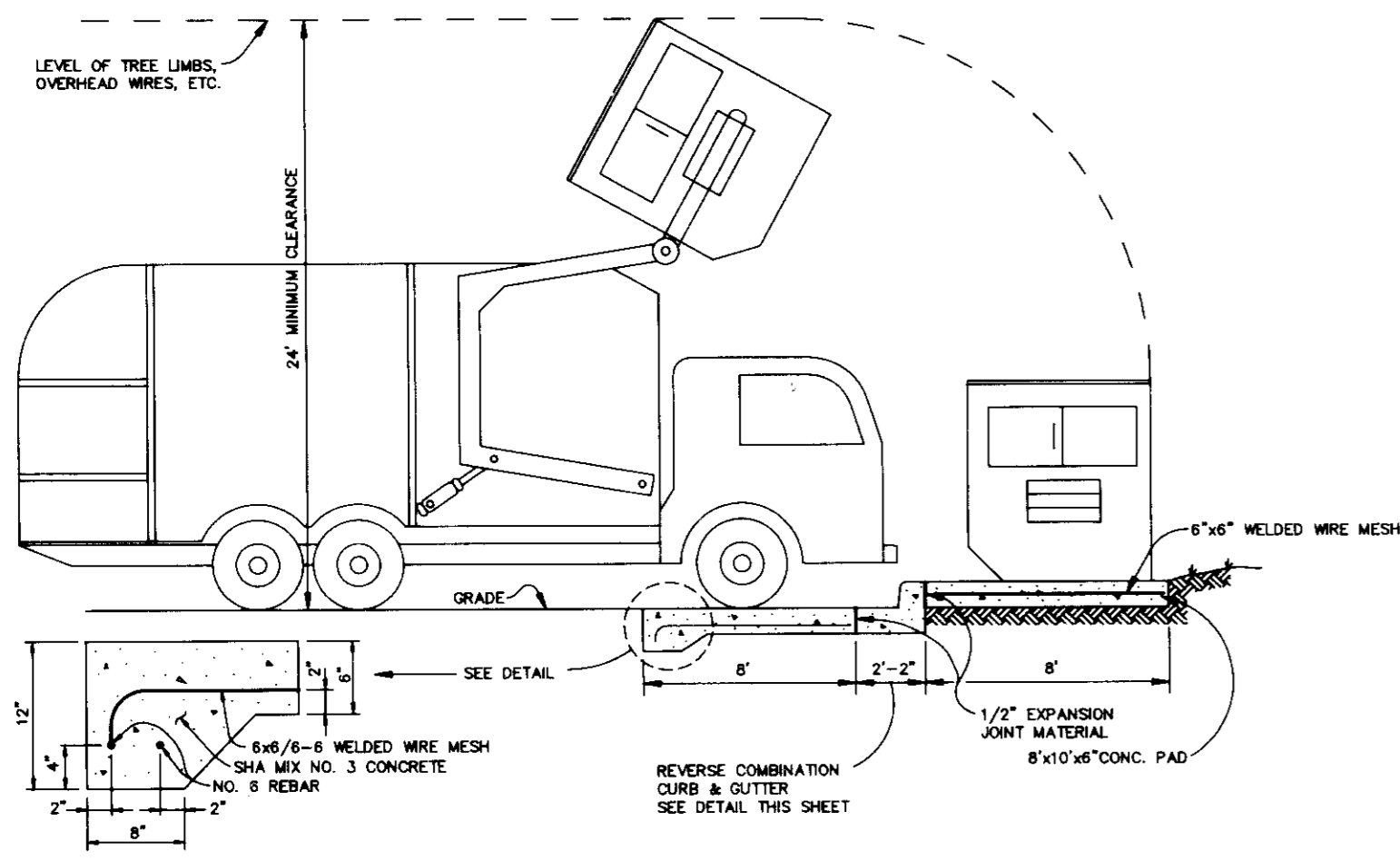
HANDICAP RAMP 'A' DETAIL

NO SCALE



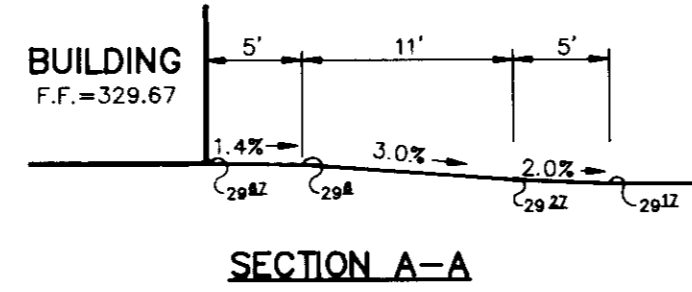
HANDICAP RAMP 'B' DETAIL

NO SCALE

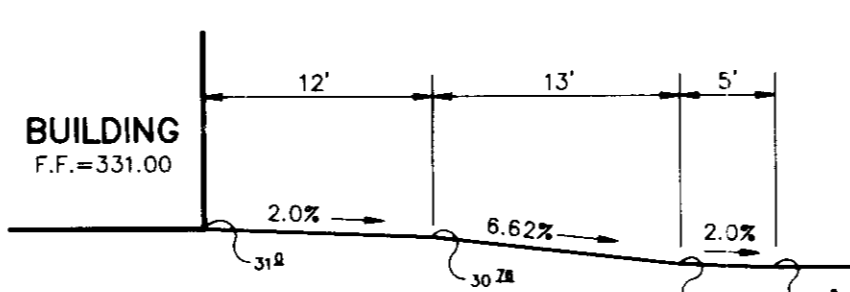


DUMPSTER PAD

NO SCALE

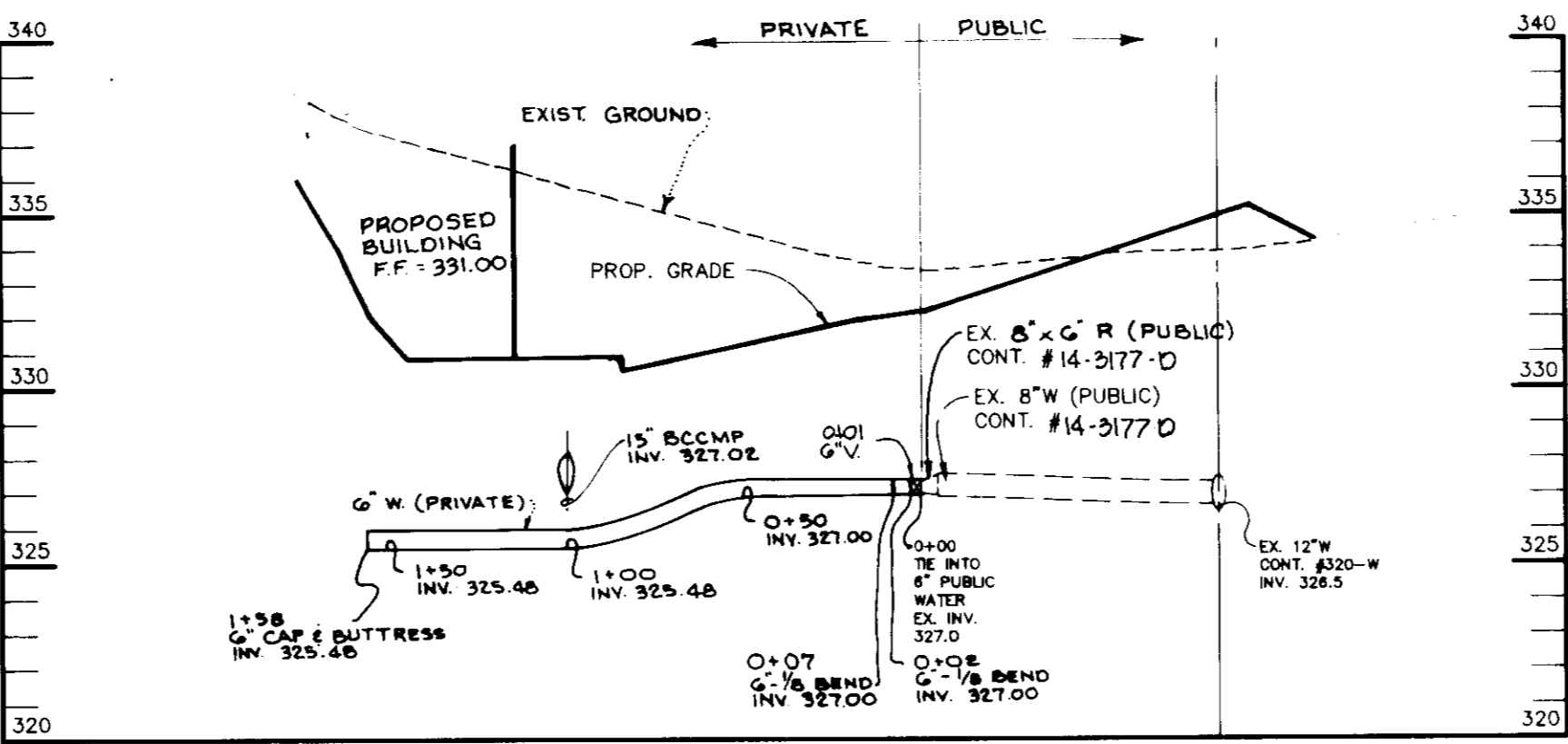


HANDICAP RAMP 'A' DETAIL



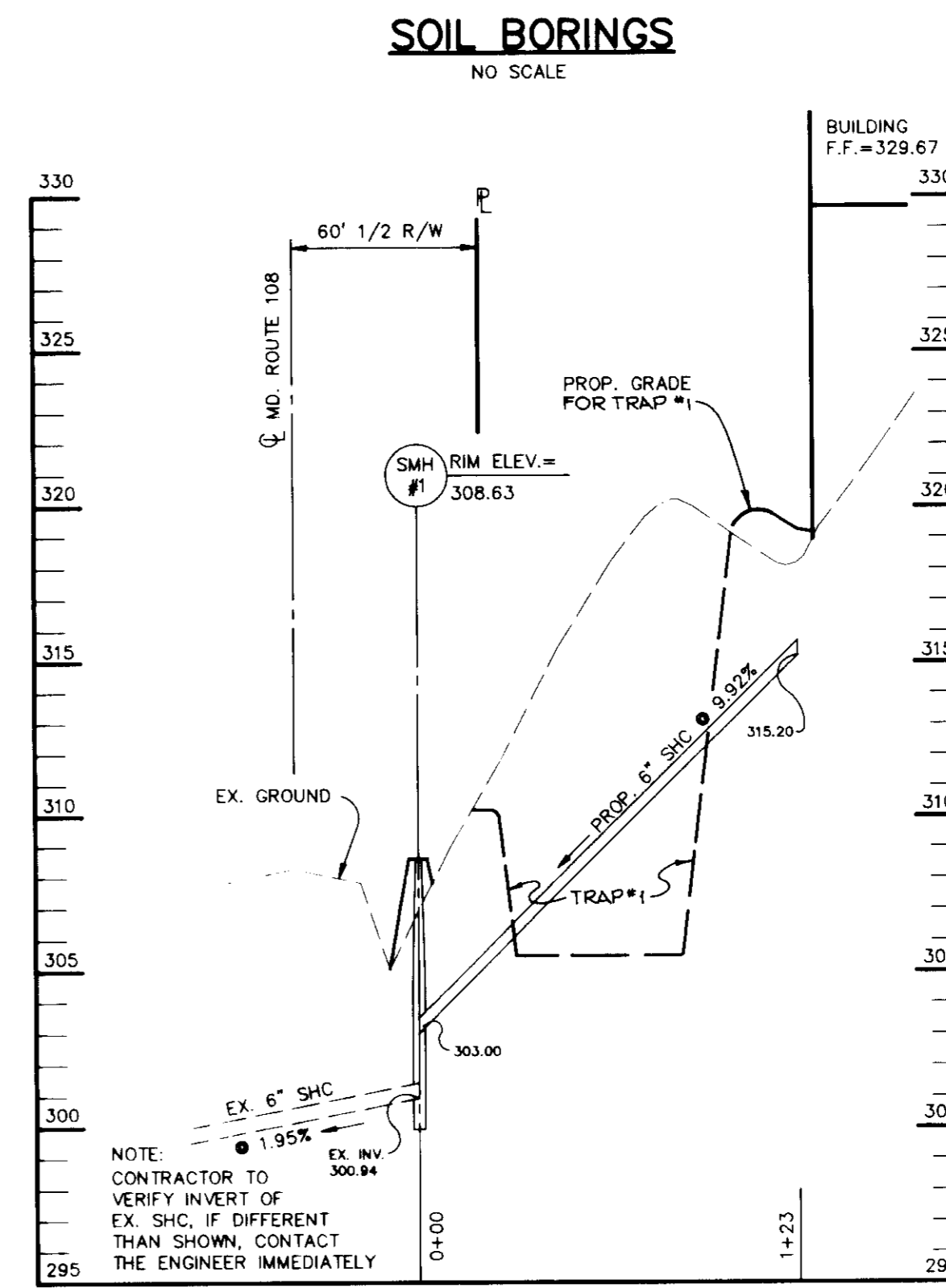
HANDICAP RAMP 'B' DETAIL

NO SCALE



WATER PROFILE

SCALE: HOR. - 1" = 50'
VERT. - 1" = 5'



SEWER PROFILE

NO SCALE

FOR ADDITIONAL INFORMATION RELATING TO THE SUBSURFACE INVESTIGATION FOR THIS PROJECT, REFER TO THE GEOTECHNICAL REPORT PREPARED BY FROEHLING & ROBERTSON, INC. DATED SEPTEMBER, 1991.

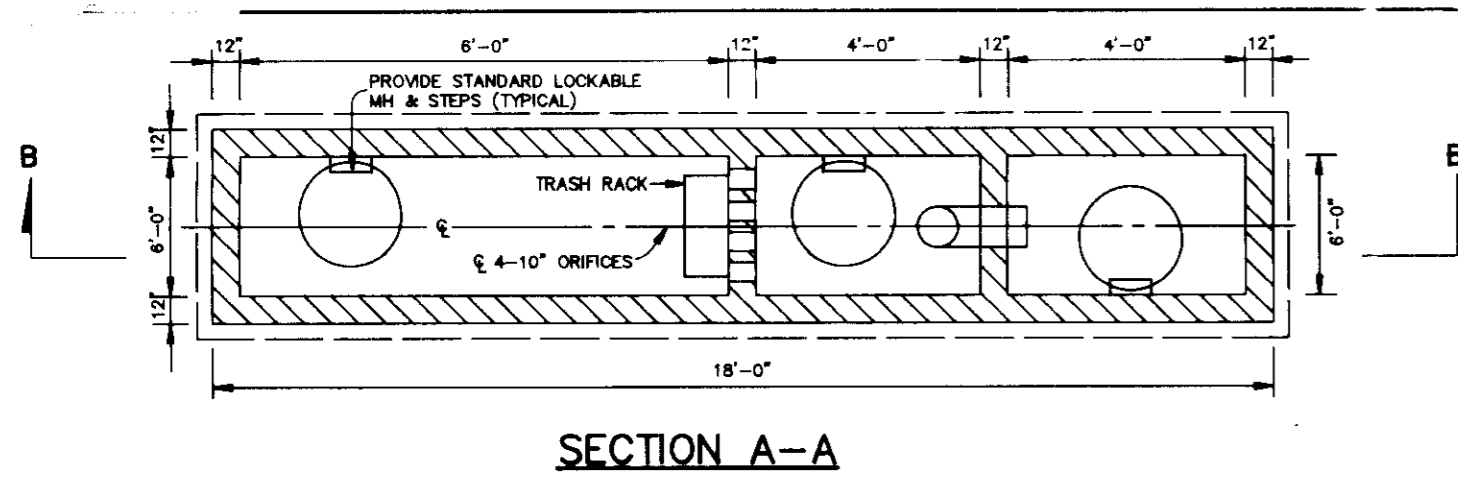
SOIL BORINGS

NO SCALE

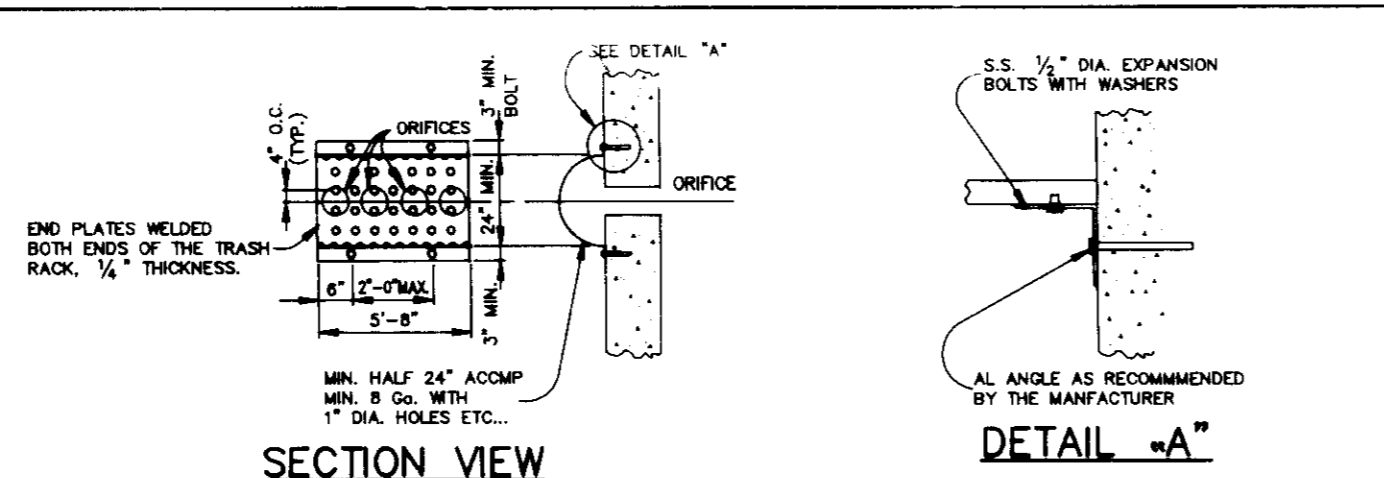
AS BUILT CERTIFICATE	
DATE	
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
<i>James M. Boydland</i> per <i>J. J. [Signature]</i> 7/25/95	DATE
COUNTY HEALTH OFFICER	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>[Signature]</i> 8/1/95	DATE
DIRECTOR	
<i>Richard Blood</i> 8/14/95	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
<i>[Signature]</i> 7/18/95	DATE
DIRECTOR	
<i>[Signature]</i> 7/10/95	DATE
CHIEF, BUREAU OF ENGINEERING	
DATE NO.	REVISION
OWNER / DEVELOPER	
SPARROW II JOINT VENTURE 9175 GUILFORD ROAD SUITE 201 COLUMBIA, MARYLAND 21046	
PROJECT	
108-WATERLOO PROPERTY A COMMERCIAL CENTER	
AREA	
TAX MAP 17 PARCEL A PLAT 16002 ZONED B-2 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
CONSTRUCTION DETAILS	

OWNER / DEVELOPER	
SPARROW II JOINT VENTURE 9175 GUILFORD ROAD SUITE 201 COLUMBIA, MARYLAND 21046	
PROJECT	
108-WATERLOO PROPERTY A COMMERCIAL CENTER	
AREA	
TAX MAP 17 PARCEL A PLAT 16002 ZONED B-2 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
CONSTRUCTION DETAILS	

RIEMER MUEGGE & ASSOCIATES, INC.	
A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
10-17-97 DATE	DESIGNED BY: CB
<i>[Signature]</i>	DRAWN BY: CB
	PROJECT NO.: 7690
	DATE: OCTOBER 17, 1997
	SCALE: AS SHOWN
	DRAWING NO. 3 OF 3

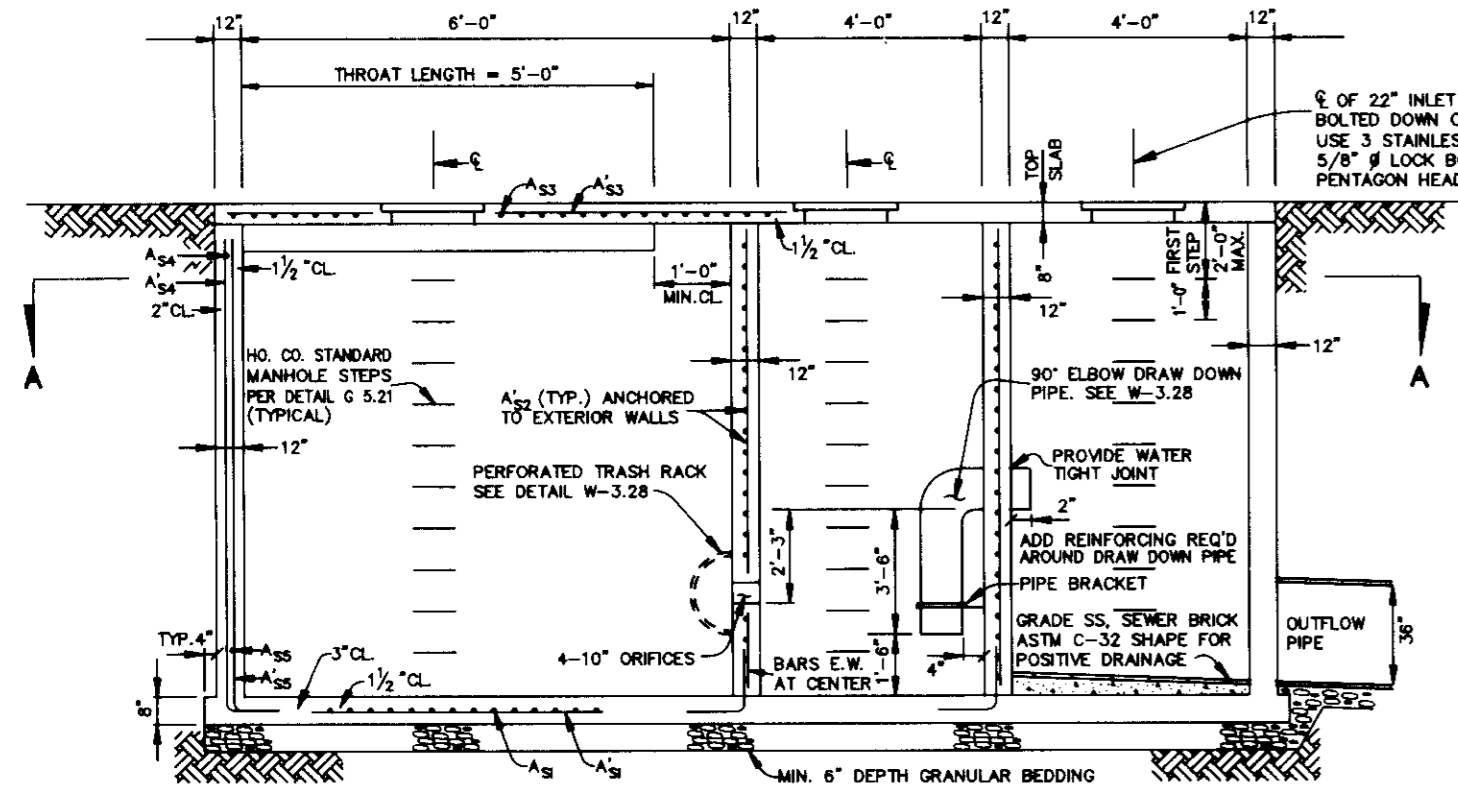


SECTION A-A

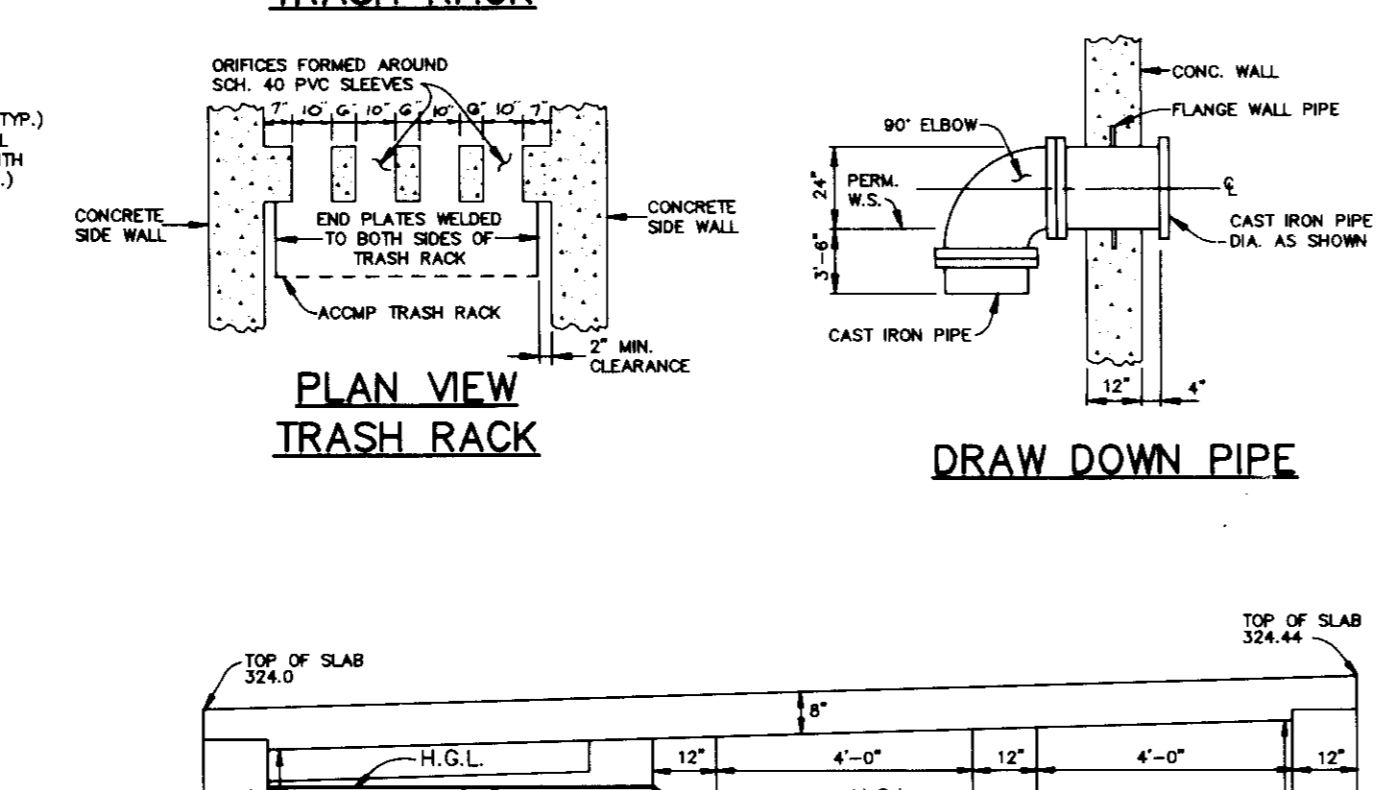


SECTION VIEW TRASH RACK

DETAIL A-A

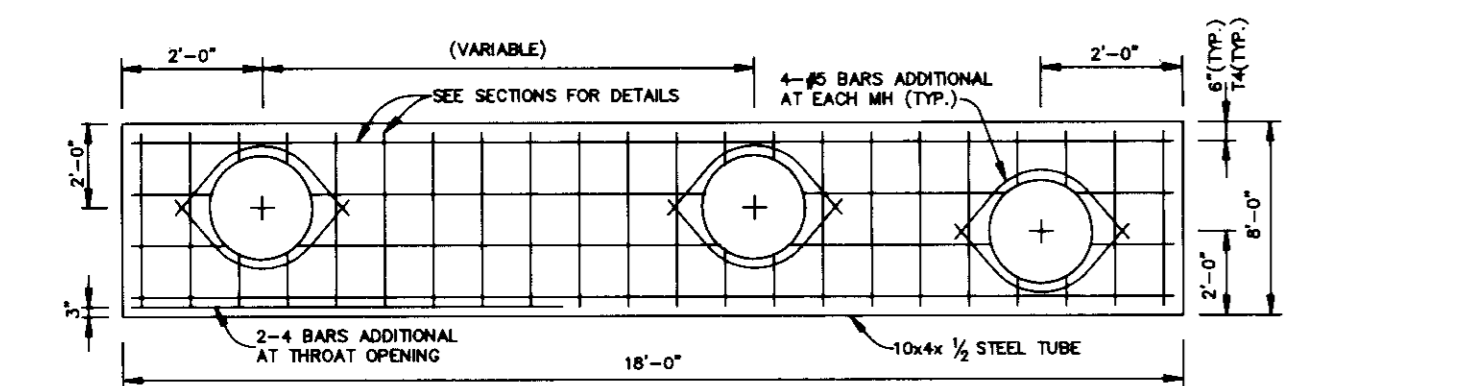


SECTION B-B

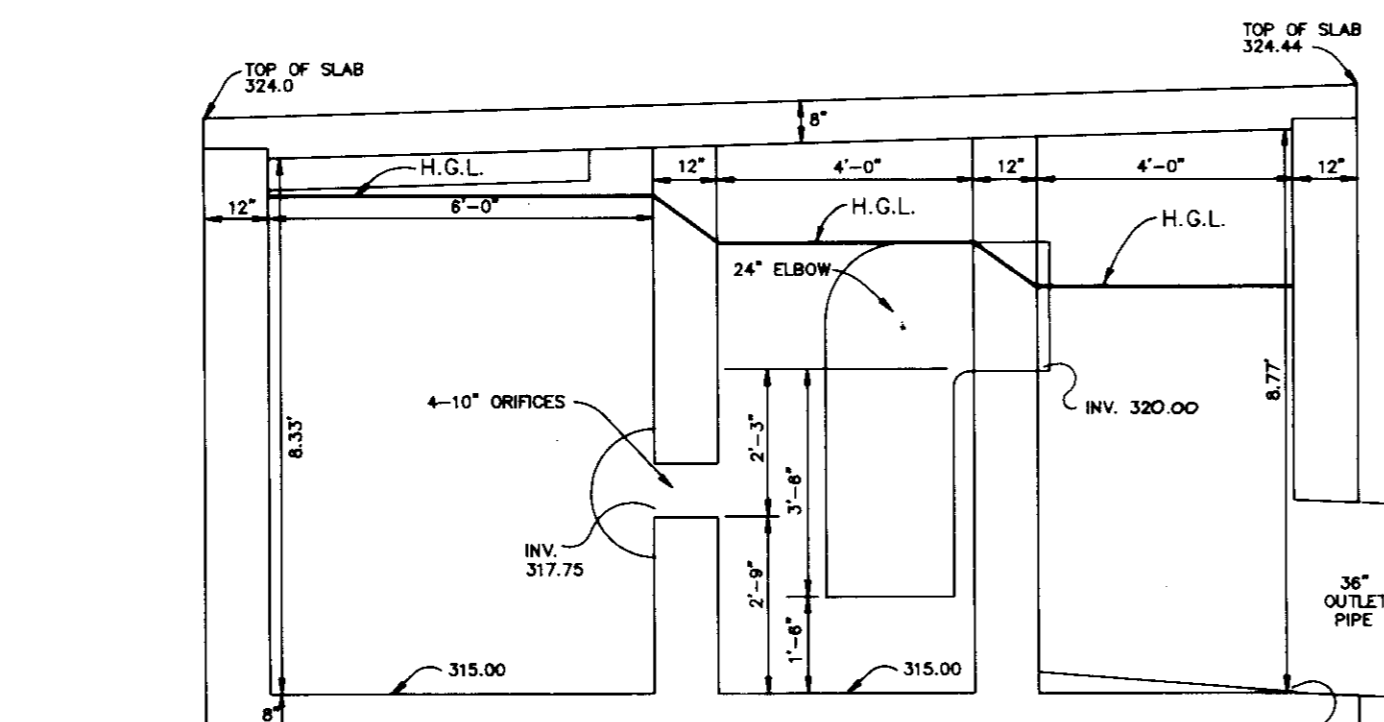


PLAN VIEW TRASH RACK

DRAW DOWN PIPE



DETAIL OF TOP SLAB



DIMENSION DETAIL

BASE SLAB	PARTITION WALLS	TOP SLAB	OUTER WALLS
A ₅₁	A ₅₁	A ₅₂	A ₅₄
A ₅₂	A ₅₂	A ₅₃	A ₅₅
A ₅₃	A ₅₃	A ₅₄	A ₅₅
A ₅₄	A ₅₄	A ₅₅	A ₅₅

WATER QUALITY INLET 1-1 DETAIL
NO SCALE UNLESS OTHERWISE NOTED

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-1	WATER QUALITY INLET	SEE PLAN	UP: 324.44 DN: 324.00	—	315.00	SEE DETAIL THIS SHEET
I-2	WATER QUALITY INLET	SEE PLAN	UP: 328.93 DN: 328.40	325.1	320.55	SEE DETAIL THIS SHEET
W-1	WATER	SEE PLAN	335.10	*	*	HO. CO. STD. DETAIL G 5.12
I-3	PRECAST WR INLET	SEE PLAN	330.0	326.98	325.83	HO. CO. STD. DETAIL SD 4.35
I-4	PRECAST WR INLET	SEE PLAN	329.8	—	327.05	HO. CO. STD. DETAIL SD 4.35

* MATCH EX. INVERTS

DESIGN AND GENERAL NOTES

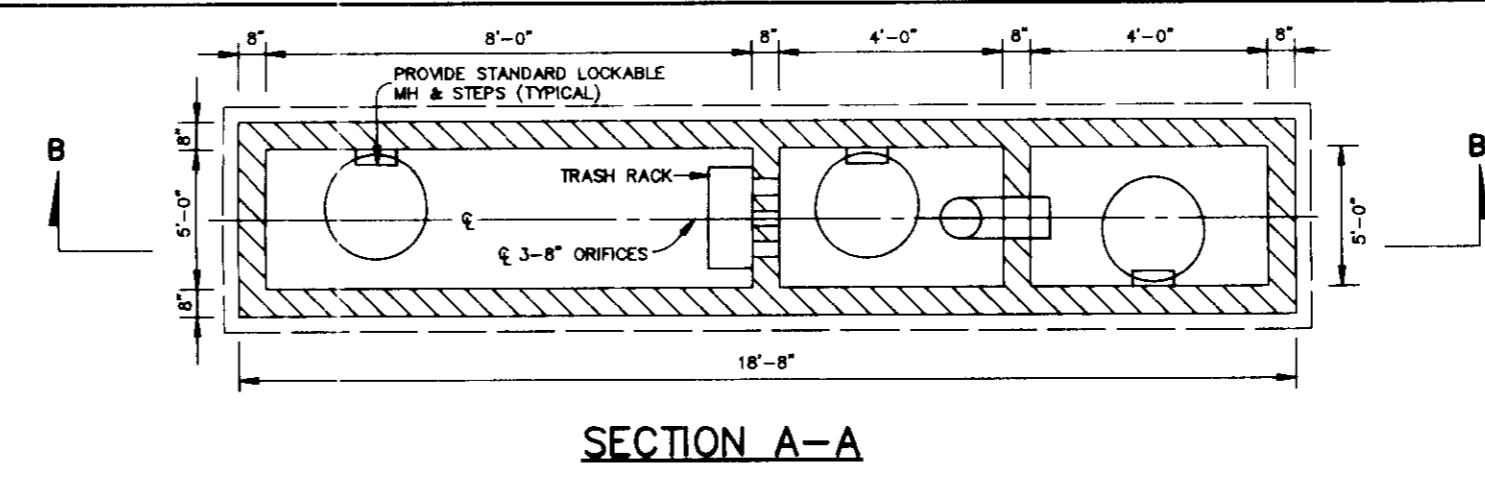
- Use precast in place concrete for the entire structure.
- Refer to Maryland State Highway Administration for materials and methods of construction.
- Wall thickness shall be as per Howard County Standard Details W-3.26 and W-3.27.
- FC = 4,000 psi at 28 days.
- All reinforcing steel to be ASTM A615, GR.60.
- For details concerning throat openings, refer to Howard County Standard Detail SD-4.01.
- For details not noted in this standard, refer to Howard County Standard Detail SD-4.01, W-3.27 and W-3.30.
- The top 4 inches of walls may be brick masonry for leveling. If required brick masonry shall comply with the latest SHA specifications.
- When grate opening is used, refer to the appropriate SHA Standard for details. Details shall be shown on the plans.
- When inside width of structure is greater than 4'-0", reinforcing shall be reduced or needed.
- When structure is subject to traffic loading, reinforcing shall be designed for the appropriate traffic loads. Design loads shall be indicated on the plan.
- All plate and framing pipe shall be checked for possible buckling or lateral problems.

MAINTENANCE NOTES

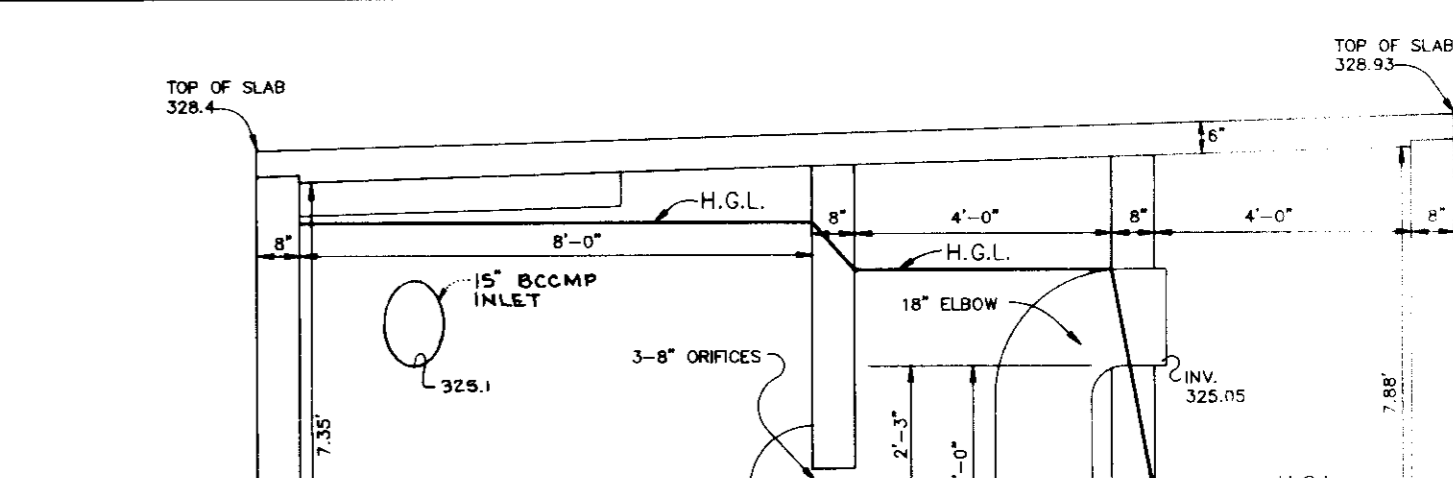
- Water Quality Structures will require periodic cleaning. Owners of these facilities will have to clean them as needed or on a frequency that the County determines to be appropriate. Owners of water quality structures will be notified by the County of the frequency of maintenance.
- Maintenance of these facilities will consist of cleaning out the separator and disposal of the waste and the result of the facility as needed.
- The disposal of the liquid and solid matter should be as follows:
 - All liquid material in the separator inlet shall be pumped into a suitable tank truck and disposed of oil on approved sanitary district discharge manifold or be taken to an approved sewerage treatment plant for discharge.
 - The solid material shall be landfilled in an approved sanitary landfill.
- The inlet pipes, trash racks, grates and structural parts shall be replaced as needed.

CONSTRUCTION NOTES

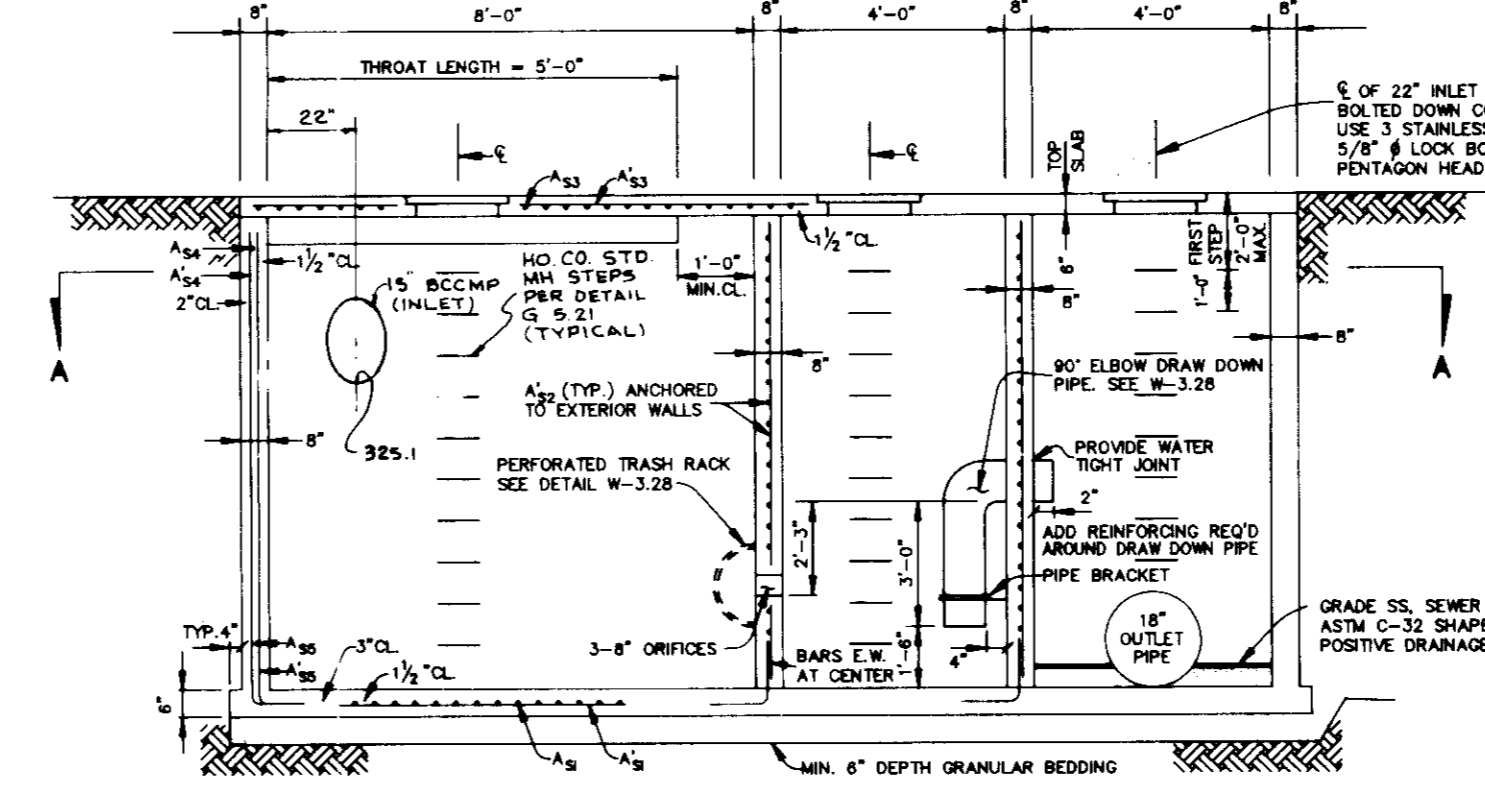
- SH and debris shall not be allowed to enter the structure until contributing drainage areas have been permanently stabilized.
 - All openings to structure shall be protected with the appropriate sediment control measure during construction.
- INSPECTION NOTES
- Prior to start of construction on water quality structure, the Howard County Department of Public Works Inspector must be called 48 hours in advance at 782-2830.
 - The Howard County Department of Public Works Inspector must be notified (782-2830) at each of the following stages:
 - Approval of subgrade for footings.
 - Forming formed and steel set prior to pouring.
 - Structure sides formed and steel set prior to pouring.
 - Prior to top slab and manhole being set, Howard County Department of Public Works Inspector must check structure and all debris and silt in structure removed.
 - When site is permanently stabilized and sediment control measure to protect inlet are to be removed.



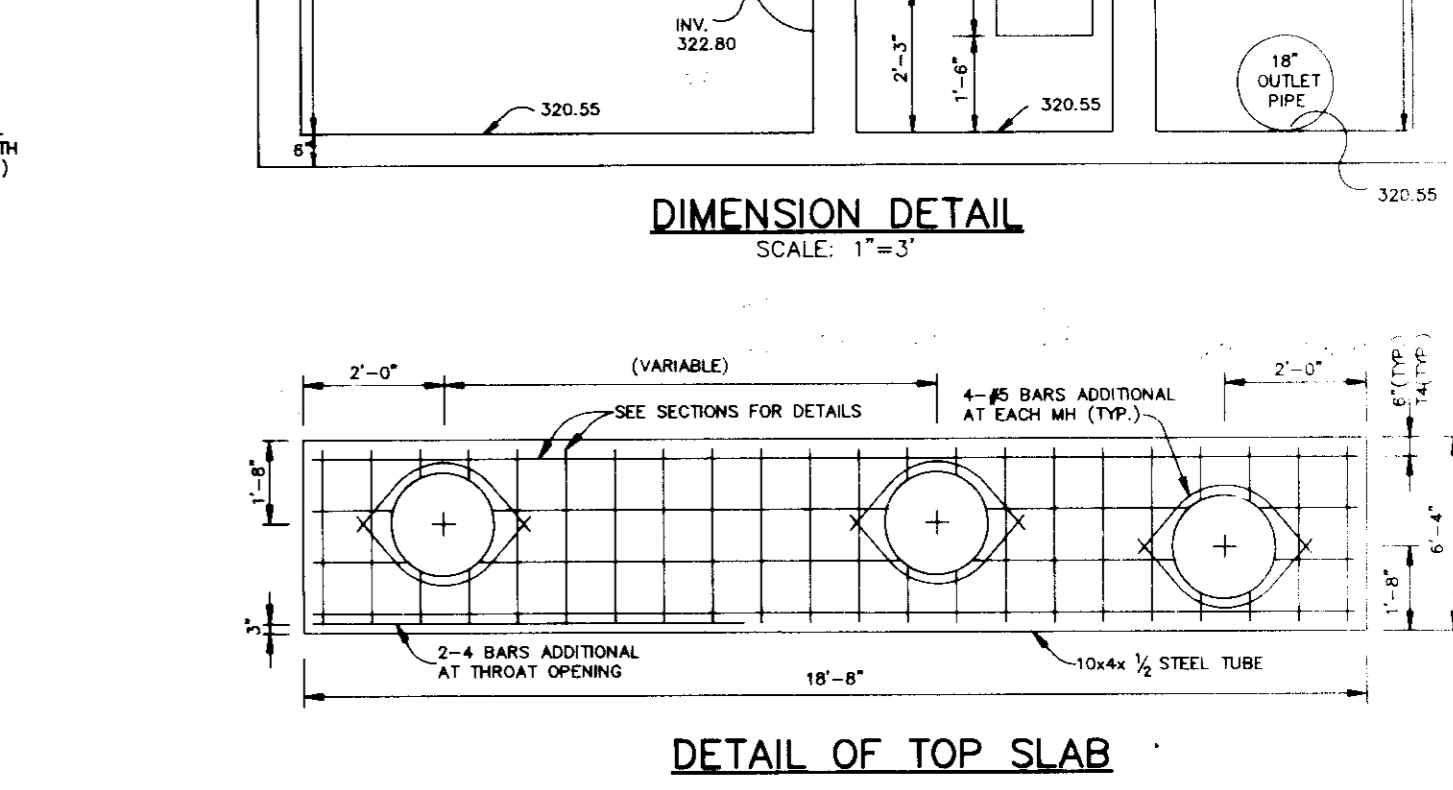
SECTION A-A



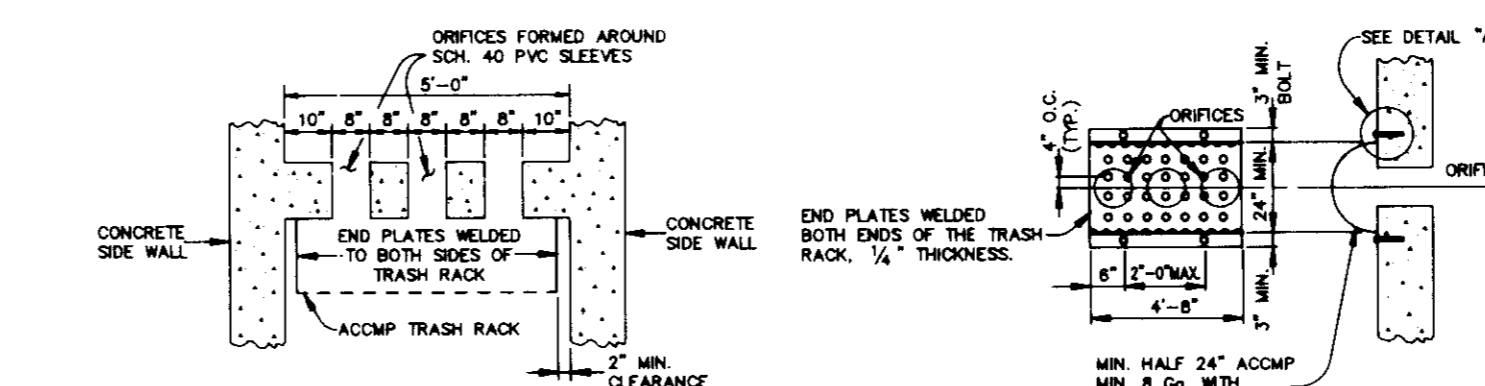
DIMENSION DETAIL



SECTION B-B



DETAIL OF TOP SLAB



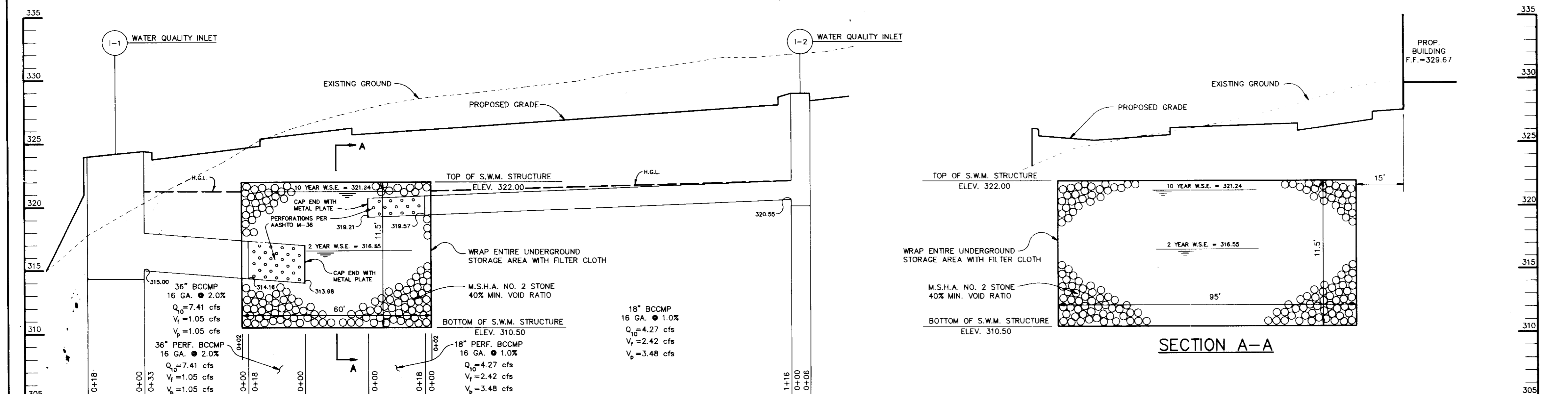
PLAN VIEW TRASH RACK

SECTION VIEW TRASH RACK

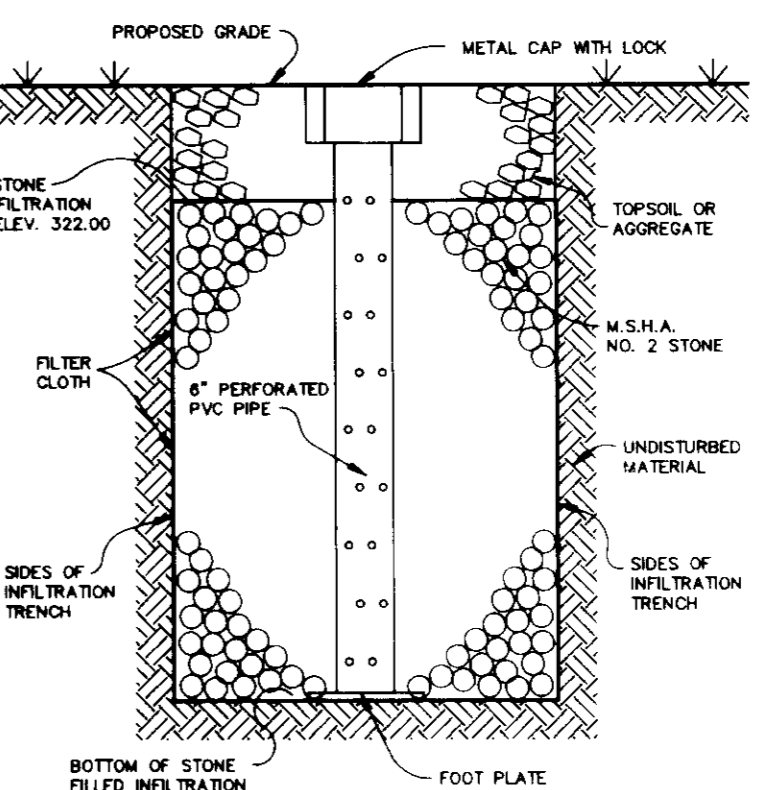
DETAIL A

BASE SLAB	PARTITION WALLS	TOP SLAB	OUTER WALLS
A ₅₁	A ₅₁	A ₅₂	A ₅₄
A ₅₂	A ₅₂	A ₅₃	A ₅₅
A ₅₃	A ₅₃	A ₅₄	A ₅₅
A ₅₄	A ₅₄	A ₅₅	A ₅₅

WATER QUALITY INLET 1-2 DETAIL
NO SCALE UNLESS OTHERWISE NOTED



PROFILE
SCALE: HOR. 1"=20'
VER. 1"=5'



OBSERVATION WELL DETAIL
NO SCALE

AS BUILT CERTIFICATE

DATE: _____

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
James M. Boyd 7/25/95
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Richard Bloom 8/1/95
DIRECTOR DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
James J. Shuman 7/16/95
DIRECTOR DATE

Richard J. Sporn 7/12/95
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER
SPARKROW II JOINT VENTURE
9175 GUILFORD ROAD
SUITE 201
COLUMBIA, MARYLAND 21046

PROJECT
108-WATERLOO PROPERTY
A COMMERCIAL CENTER

AREA
TAX MAP 37 PARCEL A
PLAT 1800Z ZONED M-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
OIL/GRIT SEPARATOR DETAILS
& STORM DRAIN/S.W.M. PROFILE

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX: 410-997-9282

10.17.94
DATE

DESIGNED BY: CB
DRAWN BY: CB
PROJECT NO.: 76902
DATE: OCTOBER 17, 1994
SCALE: AS SHOWN
DRAWING NO. 4 OF

DATE

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

James M. Bayland 10/12/94
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. L. ...
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Peter ... 6/12/95
 U.S. SOIL CONSERVATION SERVICE DATE

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

Steph ... 6/12/95
 HOWARD SOIL CONSERVATION DISTRICT DATE

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

James M. Bayland 7/25/95
 COUNTY HEALTH OFFICER DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James ... 8/1/95
 DIRECTOR DATE

Richard ... 8/1/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED : FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James ... 7/19/95
 DIRECTOR DATE

Richard ... 7/19/95
 CHIEF, BUREAU OF ENGINEERING DATE

DATE NO. REVISION

OWNER / DEVELOPER
 SPARROW II JOINT VENTURE
 9175 GUILFORD ROAD
 SUITE 201
 COLUMBIA, MARYLAND 21046

PROJECT
 108-WATERLOO PROPERTY
 A COMMERCIAL CENTER

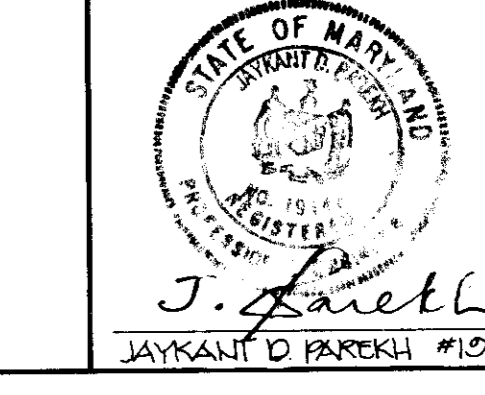
AREA
 TAX MAP 37 PARCEL A
 PLAT 11602 ZONED B-2
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
 SEDIMENT CONTROL PLAN
 & DRAINAGE AREA MAP

RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21046
 410-997-8900 FAX : 410-997-9282

10.17.94
 DATE

DESIGNED BY : CB
 DRAWN BY : CB
 PROJECT NO : 76902
 DATE : OCTOBER 17, 1994
 SCALE : AS SHOWN
 DRAWING NO. 5 OF

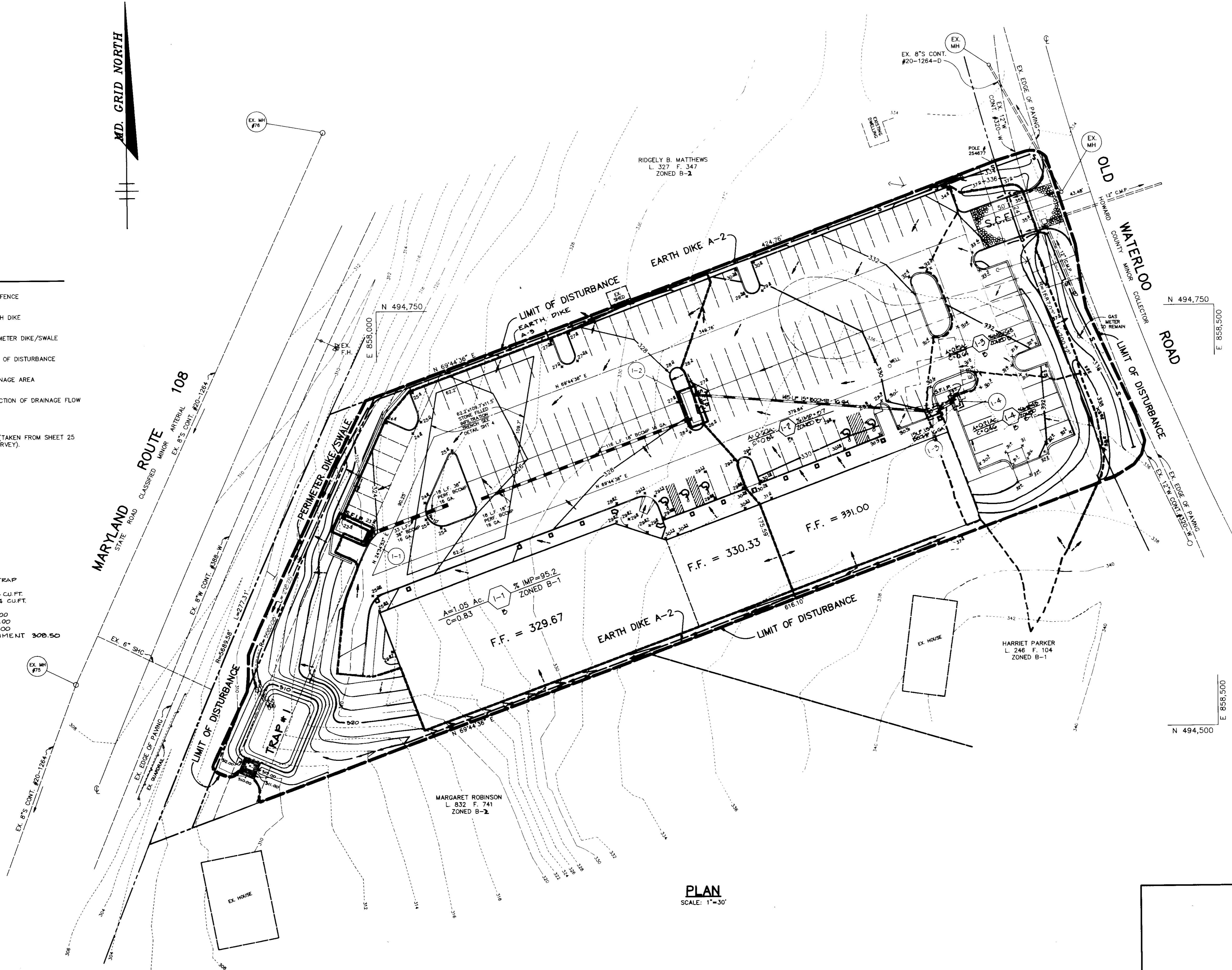


LEGEND

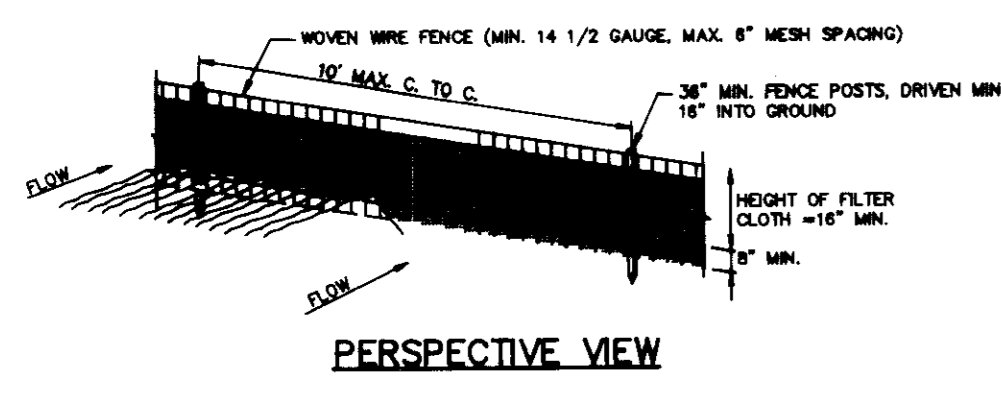
- S — SILT FENCE
- E — EARTH DIKE
- P — PERIMETER DIKE/SWALE
- L — LIMIT OF DISTURBANCE
- D — DRAINAGE AREA
- F — DIRECTION OF DRAINAGE FLOW

NOTE:
 ALL SOILS ARE GROUP 'B' SOILS (TAKEN FROM SHEET 25 OF THE HOWARD COUNTY SOIL SURVEY).

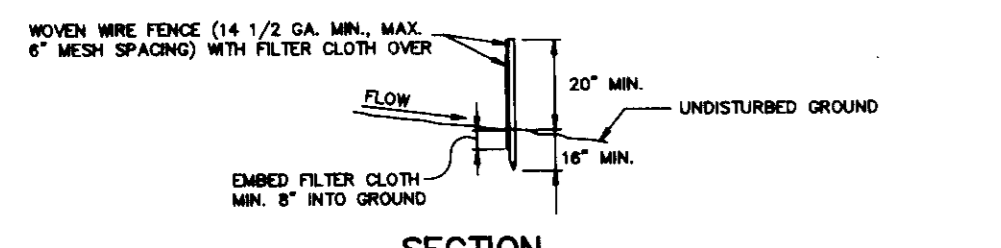
TRAP #1
 STONE OUTLET SEDIMENT TRAP
 DRAINAGE AREA: 2.95 AC.
 STORAGE REQUIRED: 4,194 CU.FT.
 STORAGE PROVIDED: 4,244 CU.FT.
 OUTLET LENGTH: 10'
 TOP OF DAM ELEV.: 312.00
 BOTTOM ELEV.: 306.00
 CREST ELEV.: 311.00
 CLEANOUT DEPTH FOR SEDIMENT 308.50



PLAN
 SCALE: 1"=30'



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with wire staples...

SILT FENCE DETAIL

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...

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. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer...

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre Kentucky 31 Tall Fescue...

- 1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
2) Use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding.

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.

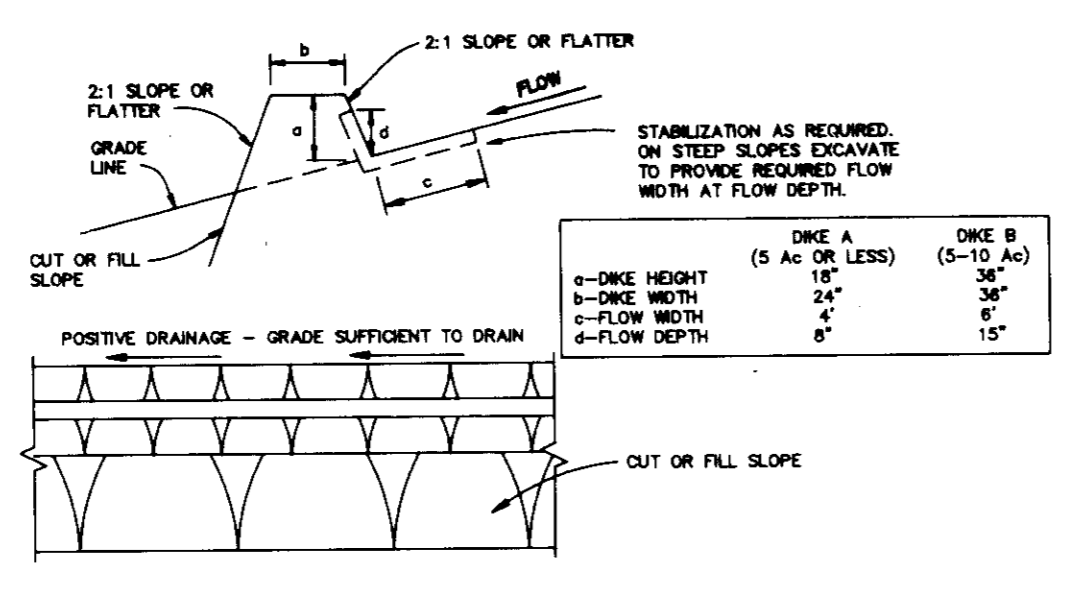
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding...

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

Seeding: For periods March 1 thru April 30 and from August 1 thru November 15, seed with 2-1/2 bushels per acre of annual rye...

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding.

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



CONSTRUCTION SPECIFICATIONS

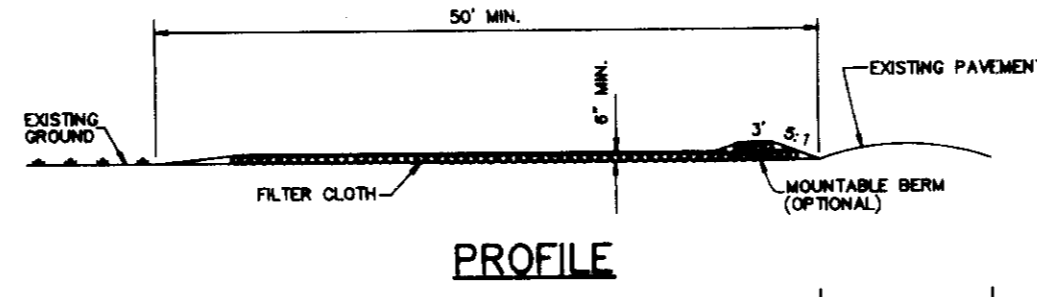
- 1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.

EARTH DIKE

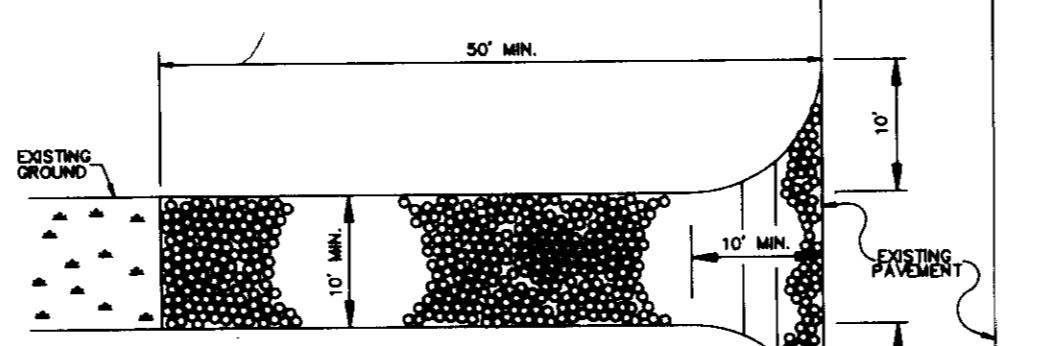
NO SCALE

SEDIMENT CONTROL NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.



PROFILE



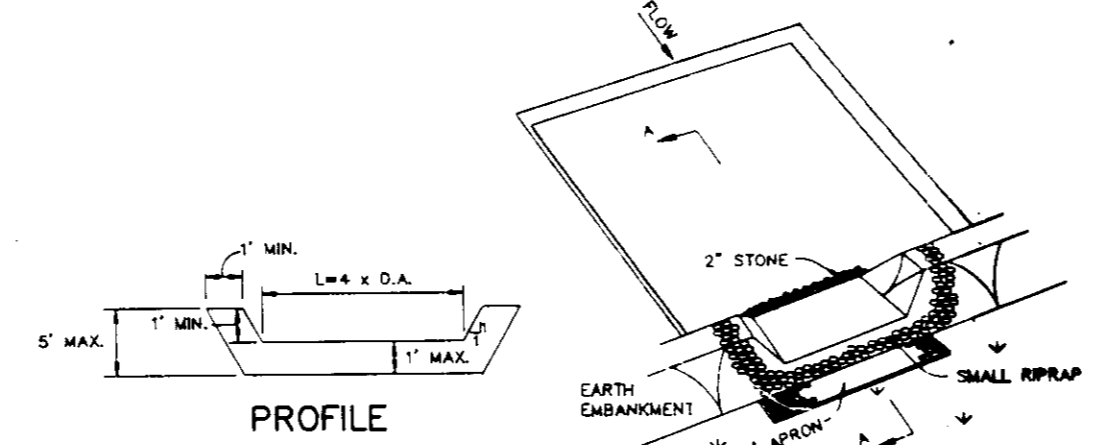
PLAN VIEW

CONSTRUCTION SPECIFICATIONS

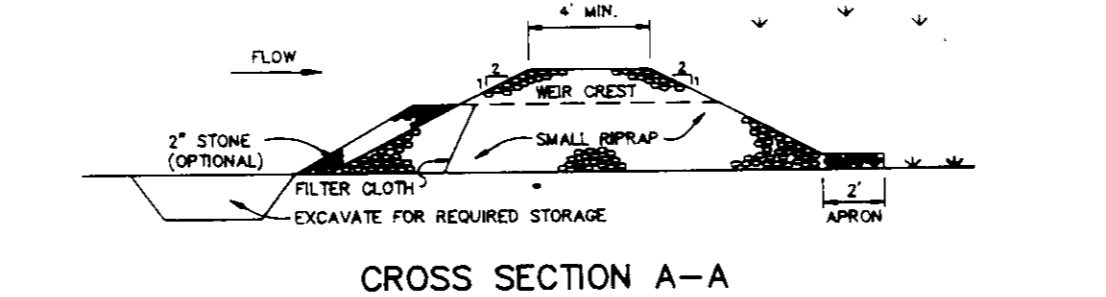
- 1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE



PROFILE



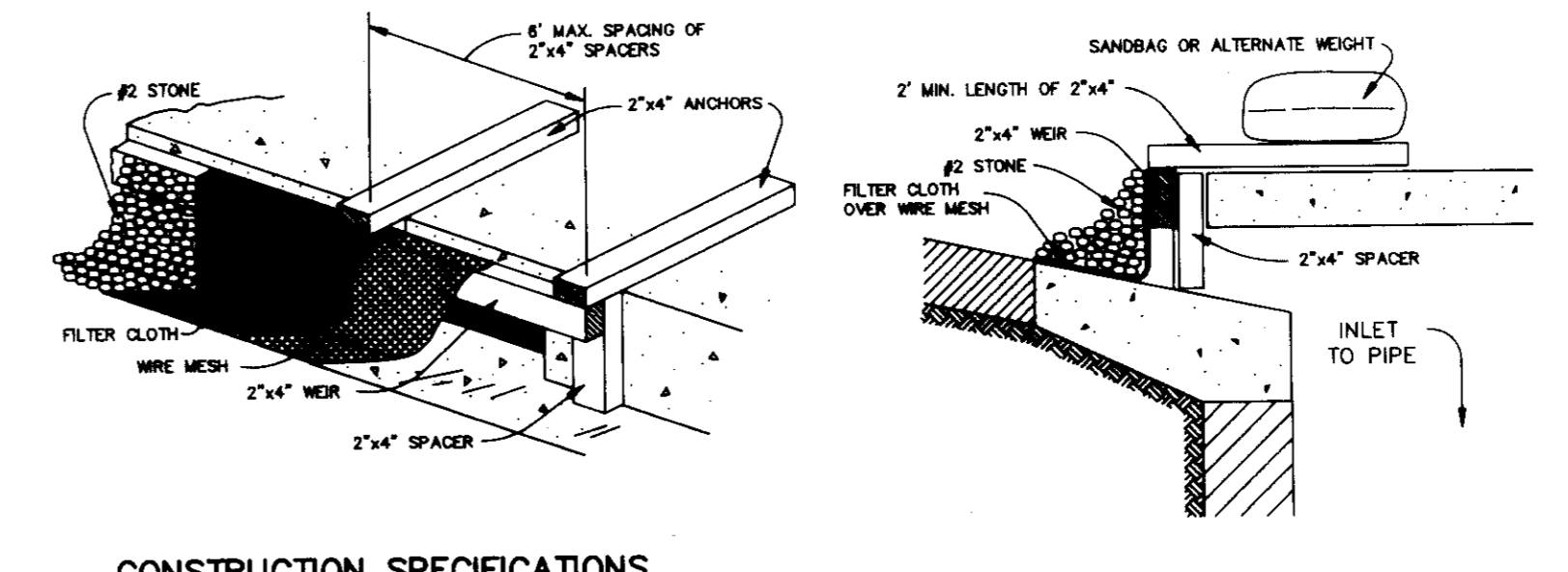
CROSS SECTION A-A

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 OBSTRUCTIONAL MATERIAL...

STONE OUTLET SEDIMENT TRAP

NO SCALE



CONSTRUCTION SPECIFICATIONS

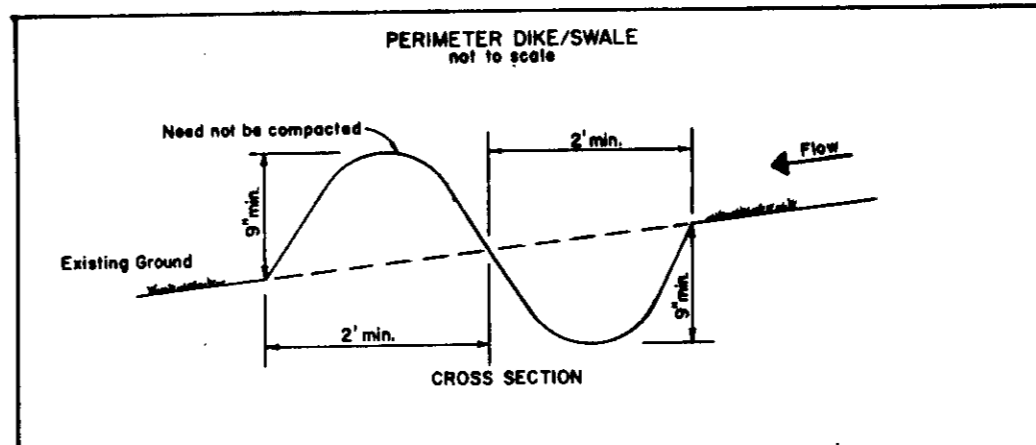
- 1. MATERIALS
A. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
B. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC AND STONE WITH WATER FULLY BACKED AGAINST IT.

STONE FILTER INLET PROTECTION

NO SCALE

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SILT FENCE AND TRAP #1.
3. ROUGH GRADE SITE, MINIMIZE CONSTRUCTION TRAFFIC OVER INFILTRATION AREA.



CONSTRUCTION SPECIFICATIONS

- 1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.

Table with 3 columns: US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, PERIMETER DIKE/SWALE, Standard Drawing PDS-1.

DATE

BY THE DEVELOPER: [Signature] / FOR RICHARD TALKIN 10-17-94 DATE

BY THE ENGINEER: [Signature] DATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE...

ENGINEER [Signature] DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 6/12/95 DATE

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

[Signature] 6/12/95 DATE

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

[Signature] 7/25/95 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 8/2/95 DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

[Signature] 7/19/95 DATE

[Signature] 7/10/95 DATE

DATE NO. REVISION

OWNER / DEVELOPER: SPARROW II JOINT VENTURE 9175 GUILFORD ROAD SUITE 301 COLUMBIA, MARYLAND 21046

PROJECT: 108-WATERLOO PROPERTY A COMMERCIAL CENTER

AREA: TAX MAP 37 PARCEL A PLAT 11602 ZONED B-2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL NOTES & DETAILS

RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282

10-17-94 DATE DESIGNED BY: CB DRAWN BY: CB PROJECT NO: 76902 DATE: OCTOBER 17, 1994 SCALE: AS SHOWN DRAWING NO. 6 OF

VEGETATIVE ANALYSIS

AREA	SPECIES	AVERAGE D.B.H.	CLASSIFICATION	NOTES
1	ACER RUBRUM MALUS (PYRUS) SP.	30" 10"	ORNAMENTALS ORNAMENTALS	SCATTERED AROUND HOUSE SCATTERED AROUND HOUSE
2	ROBINIA PSEUDOACACIA	12"	HARDWOODS	SCATTERED IN FIELD
3	ROBINIA PSEUDOACACIA ULMUS RUBRA PRUNUS SEROTINA MORUS RUBRA ROSA MULTIFLORA LUNICERA JAPONICA TOXICODENDRON RADICANS	4" 4" 4" 4" 4" WV WV	TREE LINE FENCE LINE HARDWOODS	PERIMETER OF PROPERTY
4	GRASSES SOLIDAGO (SP) (CO) PLANTAGO (SP) TRIFOLIUM REPENS		OPEN FIELD	

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of Parking Spaces	137
Number of Trees Required	7
Number of Trees Provided	7
Shade Trees	7
Other Trees (2:1 substitution)	

Internal landscape islands req'd @ 1/20 = 7
Internal landscape islands prov. = 7

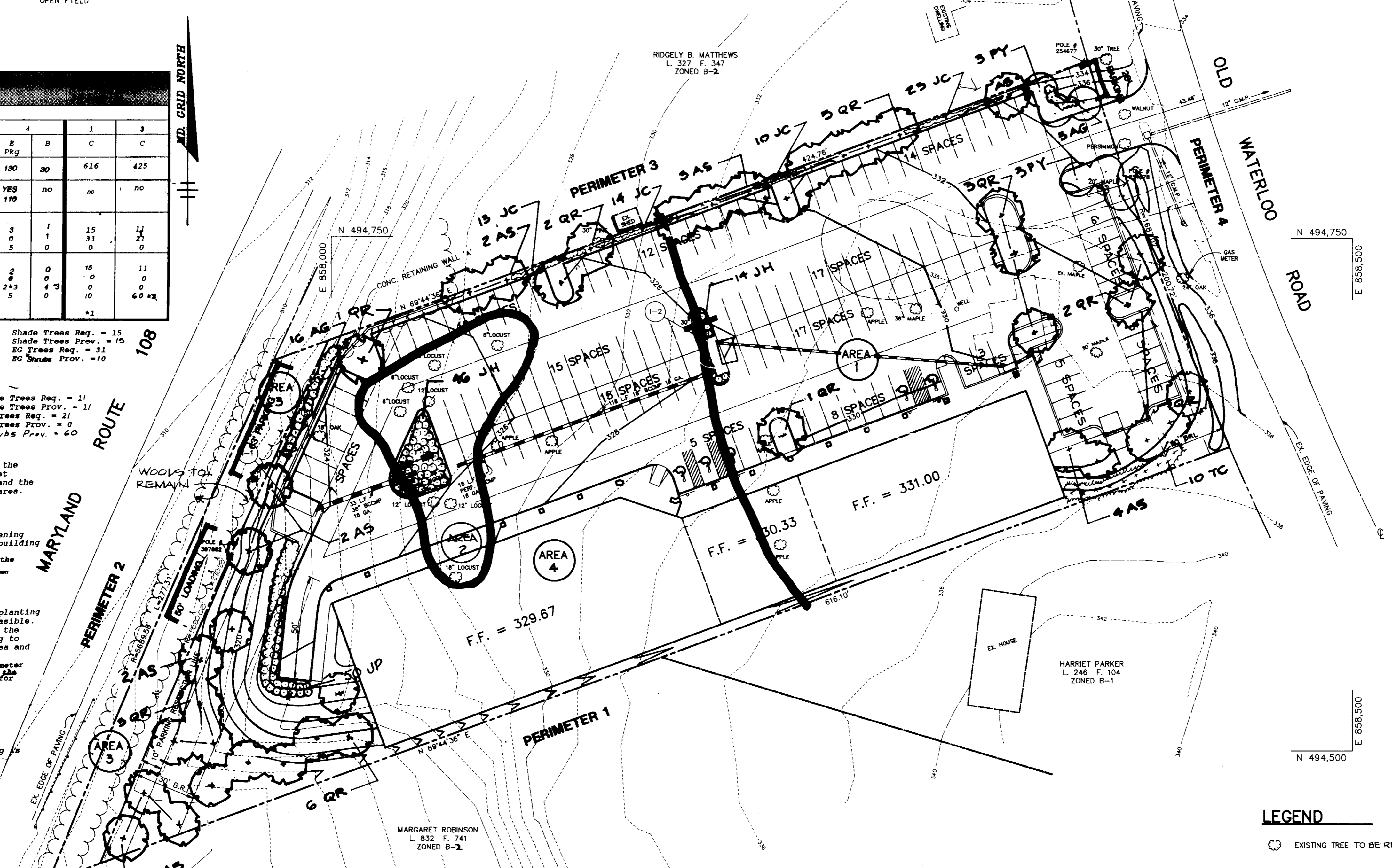
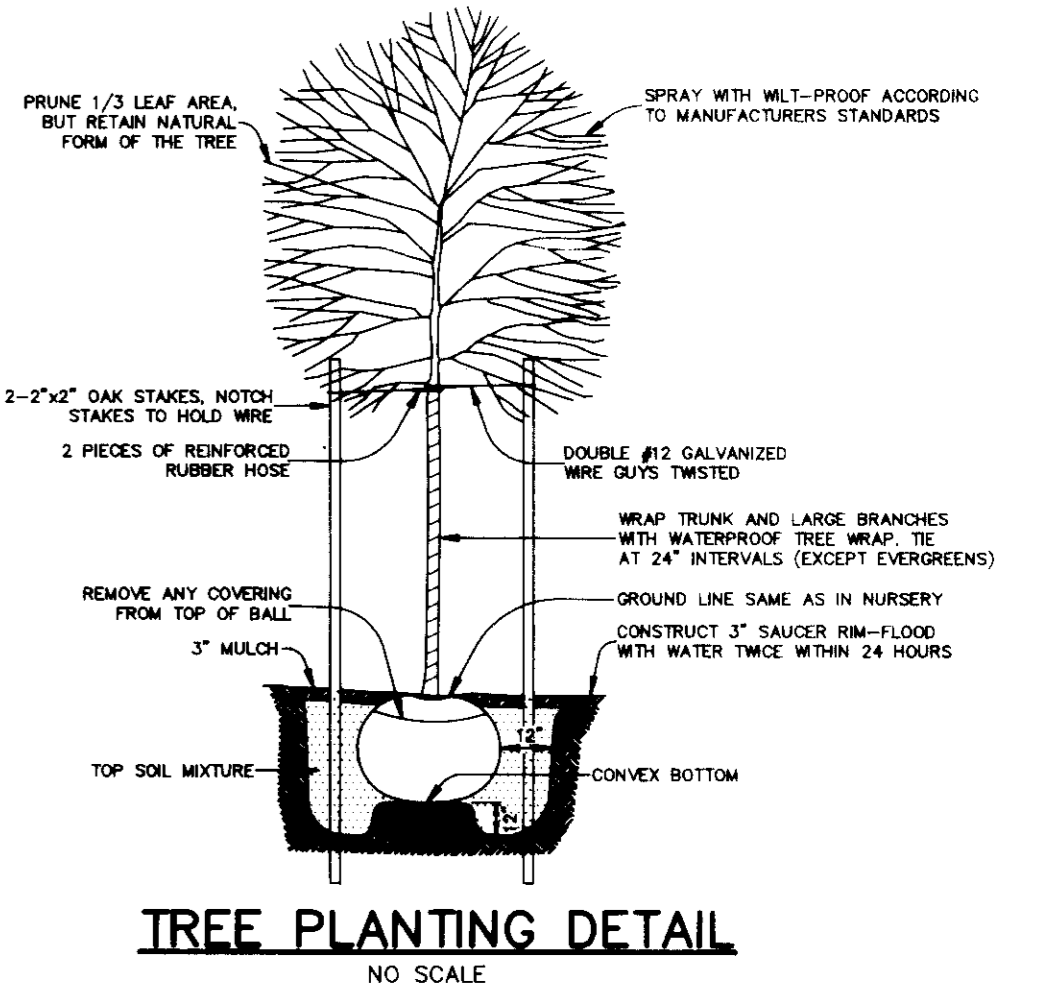
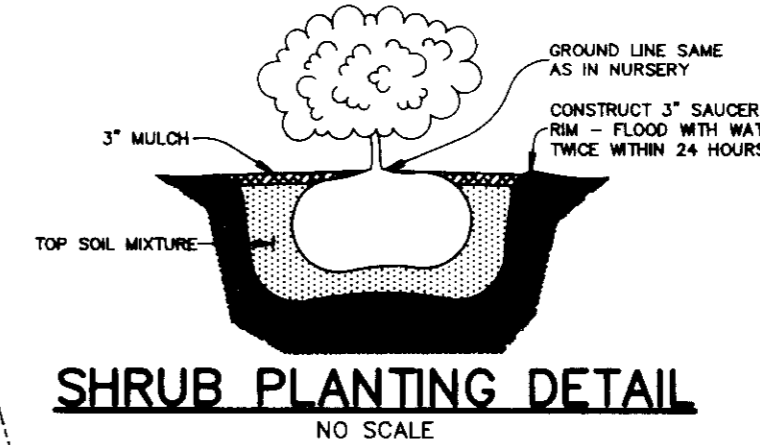
**SCHEDULE A
PERIMETER LANDSCAPE EDGES**

Perimeter Edge	2		4		1		3	
	E Pkg	D Ldg	B	E Pkg	B	C	C	C
Linear Feet of Roadway Frontage/Perimeter	63	50	165	130	30	616	425	
Credit for Wall Fence Berm Yes No Linear Feet	no	no	no	YES	no	no	no	
Describe below if needed				110				
Number of Plants Required								
Shade Trees	2	1	3	3	1	15	11	
Evergreen Trees	0	5	4	0	1	31	21	
Shrubs	16	0	0	5	0	0	0	
Number of Plants Provided								
Shade Trees	2	1	3	2	0	15	11	
Evergreen Trees	0	0	0+5	0	0	0	0	
Flowering Trees	0	0	0	2+3	4+3	0	0	
Shrubs	16	50+4	0	5	0	10	60+2	
Describe plant substitution credits below if needed								

TOTALS:
 Perimeter 2: Shade Trees Req. = 6
 Shade Trees Prov. = 6
 EG Trees Req. = 9
 EG Trees Prov. = 9
 Shrub Req. = 16
 Shrubs Prov. = 16
 Perimeter 1: Shade Trees Req. = 15
 Shade Trees Prov. = 15
 EG Trees Req. = 31
 EG Trees Prov. = 31
 Shrub Req. = 10
 Shrubs Prov. = 10
 Perimeter 4: Shade Trees Req. = 4
 Shade Trees Prov. = 2
 EG Trees Req. = 1
 EG Trees Prov. = 0
 Shrub Req. = 5
 Shrubs Prov. = 5
 Perimeter 3: Shade Trees Req. = 11
 Shade Trees Prov. = 11
 EG Trees Req. = 21
 EG Trees Prov. = 21
 Shrub Req. = 60
 Shrubs Prov. = 60

- *1 The constraints along perimeter edge 1 are such that the planting requirements of the Landscape Manual cannot be met because only a 5' wide strip exists between the building and the property line. Trees would not survive in such a narrow area. Additionally, a swale located in the strip precludes the placement of any plant materials.
- A fence or wall placed in the strip is unfeasible as it would not accomplish the purpose of screening the building from the view of the adjacent property. The building height would certainly exceed any fence height. Trees were placed where possible in the most practical areas between the main road and building. Evergreens which will reach a mature height of 10'-12' have been provided to screen the dumpster.
- *2 The constraints along perimeter 3 are such that the planting requirement of 21 evergreen trees along this edge is unfeasible. Only a 5' wide planting strip exists between the curb and the property line. Evergreen trees with wide spread extending to ground level would, upon maturity overhang the parking area and the adjacent property.
- The most appropriate solution is to place shrubs along the perimeter closest to the non-conforming residence in order to help fulfill the intent of the Landscape Manual. Shrubs have been substituted for trees at a 10:1 ratio where space permits.
- *3 2:1 substitution
- *4 10:1 substitution
- *5 Unfeasible due to limited space availability; loading is adequately screened from road.

NOTES:
 This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and the Landscape Manual.
 Financial surety for the required landscaping has been posted as part of the DPW developers agreement in the amount of \$10,200.00.



LEGEND
 ○ EXISTING TREE TO BE REMOVED

PLANT LIST

KEY	QTY	NAME	SIZE	REMARKS
JC	60	JUNIPERUS CHINENSIS 'SEA GREEN' Sea Green Juniper	30"-36" HT.	CONT. 3' O.C.
TC	10	TAXUS X MEDIA 'HICKSII' Hicks Upright Yew	30"-36" HT.	B & B
AG	21	ABELIA GRANDIFLORA GLOSSY ABELIA	30"-36" HT.	CONT.
AS	17	ACER SACCHARUM SUGAR MAPLE	2 1/2"-3" CAL. 10'-12' HT.	B & B
JH	60	JUNIPERUS HORIZONTALIS 'P.C. YOUNGSTOWN' COMPACT ANDORRA JUNIPER	18"-24" SPREAD	CONT. 3' O.C.
JP	50	JUNIPERUS CHINENSIS 'PFITZERIANA' PFITZER JUNIPER	30"-36" HT.	B & B
PY	6	PRUNUS YEDOENSIS YOSHINO CHERRY	8'-10' HT.	B & B
QR		QUERCUS RUBRA RED OAK	2 1/2"-3" CAL. 10'-12' HT.	B & B

AS BUILT CERTIFICATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 Approved: *James M. Boyd* 7/25/95
 COUNTY HEALTH OFFICER DATE

APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Approved: *James D. Tate* 8/1/95
 DIRECTOR DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 Approved: *James J. Shaw* 7/19/95
 DIRECTOR DATE

APPROVED FOR LAND DEVELOPMENT AND RESEARCH.
 Approved: *Richard B. Reed* 8/1/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED PER COUNTY COMMENTS DTD. 7/15/94
 10/28/93 REV. PER COUNTY COMMENTS 3/7/93 TO COMPLY WITH MD. CO. LANDSCAPE MANUAL

DATE NO. REVISION

OWNER / DEVELOPER
 SPARROW II JOINT VENTURE
 9175 GUILFORD ROAD
 SUITE 201
 COLUMBIA, MARYLAND 21046

PROJECT
 108-WATERLOO PROPERTY
 A COMMERCIAL CENTER

AREA
 TAX MAP 37 PARCEL A
 PLAT 1602 ZONED B-2
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
 LANDSCAPE PLAN &
 ENVIRONMENTAL ANALYSIS

RIEMER MUEGGEL & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
 410-997-8900 FAX: 410-997-9282

10.17.94
 DATE

DESIGNED BY: CB
 DRAWN BY: CB/Z.K.
 PROJECT NO: 76902
 DATE: OCTOBER 17, 1994
 SCALE: 1" = 30'
 DRAWING NO. 7 OF

Melanie Moser
 MELANIE MOSEK