

**GENERAL NOTES**

- TOTAL SITE AREA: 545,929 S.F. OR 12.5328 AC.
- DEED REFERENCE: LIBER 2201 FOLIO 032
- TAX MAP: 43, PARCEL: 48
- SOILS MAP: 30 AND 31
- ELECTION DISTRICT: NO. 1, CENSUS TRACT: NO. 6012
- PROPERTY ZONED: M-2
- 100 YEAR FLOODPLAIN BY DEVELOPMENT CONSULTANTS GROUP, DATED AUGUST, 1991.
- WETLANDS STUDY BY THE LAND PLANNING AND DESIGN GROUP, DATED APRIL 16, 1998.
- FIELD RUN TOPOGRAPHY BY O'CONNELL & LAWRENCE, INC., AUGUST, 1991 AND OCTOBER, 1997.
- AREA OF BUILDING: 11,250 S.F.
- AREA OF PAVING: 81,021 S.F.
- SITE AND BUILDING TO BE USED FOR A RECYCLING TRANSFER STATION.
- WATER AND SEWER UTILITIES ARE PRIVATE.
- THERE ARE NO CEMETERIES OR BURIAL GROUNDS ON SITE.
- STORMWATER MANAGEMENT FACILITIES SHOWN HEREON TO BE PRIVATELY OWNED AND MAINTAINED.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- NO TRAFFIC STUDY REQUIRED FOR THIS PROJECT.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 43B2 AND 43B6 WERE USED FOR THIS PROJECT.
- WASTE MANAGEMENT TO BE INTERIOR OF THE BUILDING.
- FOR SEWER INFORMATION, SEE SHEET C-3.
- THE FOLLOWING WAIVERS HAVE BEEN APPROVED BY THE DEPT. OF PLANNING & ZONING, DEVELOPMENT ENGINEERING DIVISION:
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.6.F.1, APPROVED 4/9/98, TO INCREASE SIDE SLOPE OF POND TO 2:1.
  - CHECKLIST ITEM VIII.F.4.a.13, APPROVED 4/9/98, TO ALLOW OF ALUMINIZED CORRUGATED METAL PIPE (AL-CMP) RISER, BARREL, AND ANTI-SEEP COLLAR FOR THE STORMWATER MANAGEMENT FACILITY.
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.4.1, APPROVED 6/18/98, TO DECREASE THE REQUIRED 20-FOOT SETBACK OF A STORMWATER MANAGEMENT FACILITY TO A PROPERTY LINE.
  - DESIGN MANUAL, VOLUME III, SECTION 2.2.3 AND FIGURE 2.18, APPROVED 6/18/98, TO ALLOW A SIMPLE RADIUS OF 45- FEET ON A COMMERCIAL ENTRANCE FOR A WB-50 VEHICLE. "DO NOT ENTER" SIGNS MUST BE INSTALLED IN ACCORDANCE WITH MUTCD STANDARDS.
  - DESIGN MANUAL, VOLUME I, TABLE 2.01, APPROVED 9/18/98, REDUCING THE STANDARD THAT NON-RESIDENTIAL ROADS HAVE A RIGHT-OF-WAY OF 60- FEET. THE DEVELOPER MUST INSTALL A GATED FENCE AT THE NORTHERN ENTRANCE AT LEAST 40- FEET FROM THE EXISTING CENTERLINE OF KIT KAT ROAD. THE DEVELOPER SHALL CONSTRUCT ALL REQUIRED PUBLIC IMPROVEMENTS AS SHOWN ON SDP-98-113.
- WAIVER PETITION WP-99-19, APPROVED 9/1/98, TO WAIVE SECTION 16.156(g) TO REACTIVATE SDP-98-113, SUBJECT TO THE FOLLOWING CONDITIONS:
  - PROVIDE AND CONVEY RIGHT-OF-WAY WIDENING TO 30- FEET FROM CENTERLINE OF KIT KAT ROAD.
  - PROVIDE AND CONVEY A CONTINUATION OF THE RIGHT-OF-WAY IN AN EASTERLY DIRECTION TO 15- FEET FROM THE EXTENDED CENTERLINE OF KIT KAT ROAD.
  - PROVIDE A 15- FOOT WIDE PUBLIC ACCESS EASEMENT TO HOWARD COUNTY.
  - THE OWNER SHALL SUBMIT A REVISED SDP APPLICATION FOR SDP-98-113, WITH A FEE EQUAL TO 1/2 OF THE COMPUTED PROCESSING FEE BY 10/18/98.
  - ALL FENCING AND GATES MUST BE A MINIMUM M-2 SETBACK OF 10- FEET FROM THE PROPOSED RIGHT-OF-WAY WIDENING AND PUBLIC ACCESS EASEMENT.

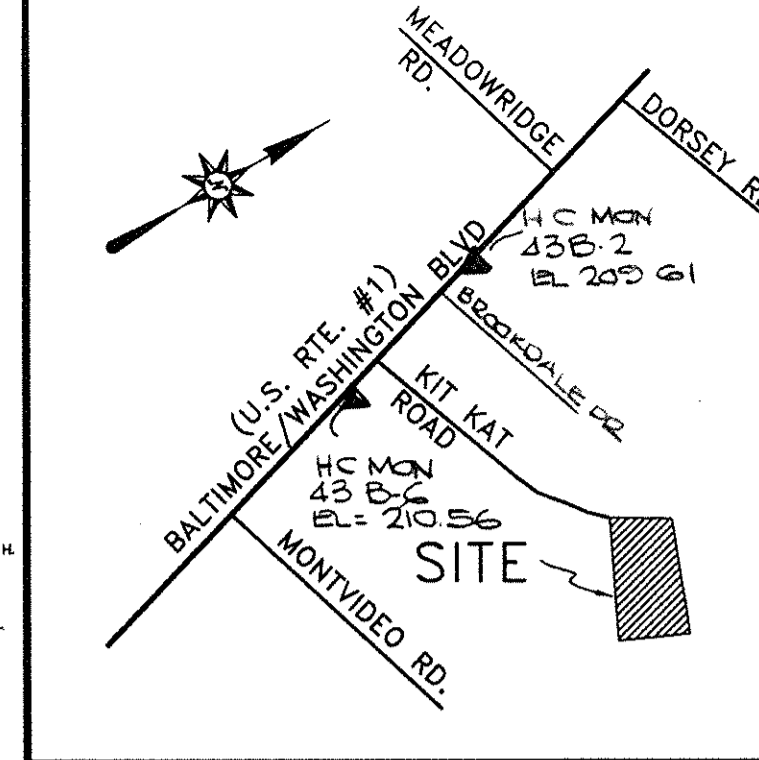
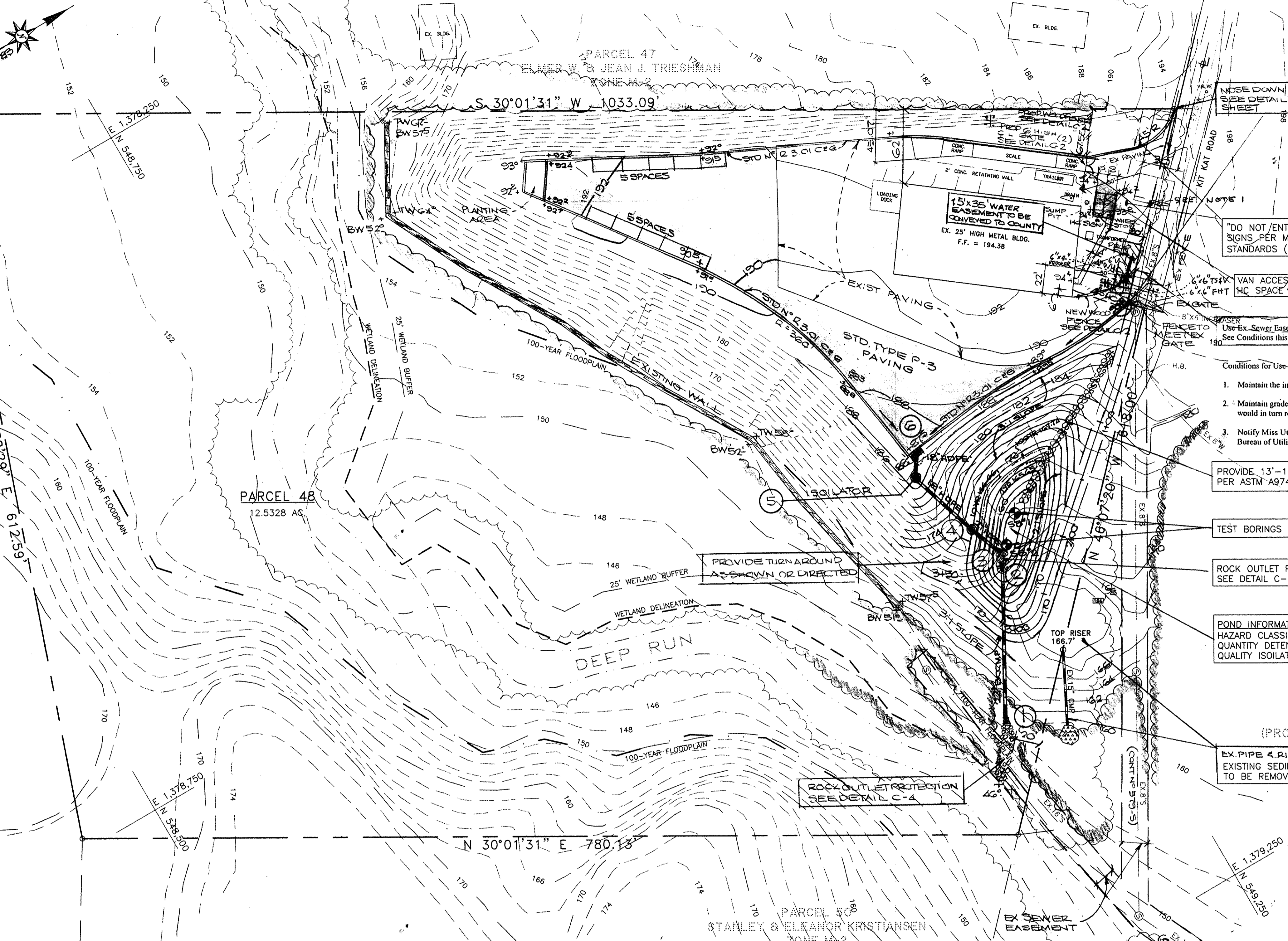
**SITE ANALYSIS**

- AREA OF BUILDING = 11,250 S.F. OR 0.2583 AC.
- AREA OF PAVING = 81,021 S.F. OR 1.86 AC.
- AREA OF GREEN SPACE = 410,893 S.F. OR 9.4328 AC.
- TOTAL IMPERVIOUS AREA = 81,021 S.F. OR 1.86 AC.
- GROSS TRACT AREA = 545,929 S.F. OR 12.5328 AC.

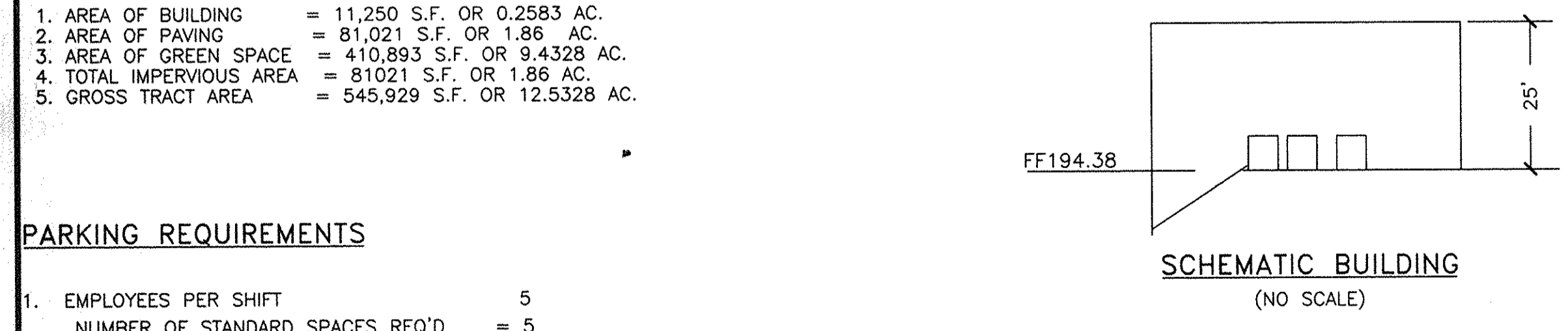
**PARKING REQUIREMENTS**

- EMPLOYEES PER SHIFT = 5
- NUMBER OF STANDARD SPACES REQ'D = 5
- PROV'D = 10
- NUMBER OF HANDICAPPED SPACES REQ'D = 1
- PROV'D = 1
- TOTAL SPACES SHOWN = 11

ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATION, SECTION 134



**VICINITY MAP**  
SCALE: 1"=2000'



**POND SUMMARY TABLE**

Storm Freq.	Existing Runoff (cfs) (TR-55)	Proposed Runoff (cfs) (TR-20)	SWM WSE (ft)	SWM Storage Provided (Ac-ft)	Clogged Proposed Runoff (SWM) (cfs)	Clogged WSE (ft)	Clogged Storage Provided (Ac-ft)
2 Yr	2	1.49	161.62	0.19	3.38	165.65	0.57
10 Yr	10	3.25	164.57	0.44	6.56	166.66	0.69
100 Yr	18	9.80	166.03	0.61	8.50	167.74	0.84

- SHEET INDEX**
- C-1 SITE DEVELOPMENT PLAN
  - C-2 SITE LAYOUT & DETAILS
  - C-3 SITE DETAILS
  - C-4 NOTES, PROFILES & DETAILS
  - C-5 EROSION & SEDIMENT CONTROL AND PROPOSED DRAINAGE AREA PLAN
  - C-6 FOREST CONSERVATION & LANDSCAPE PLAN
  - C-7 EXISTING & PROPOSED DRAINAGE AREA PLAN

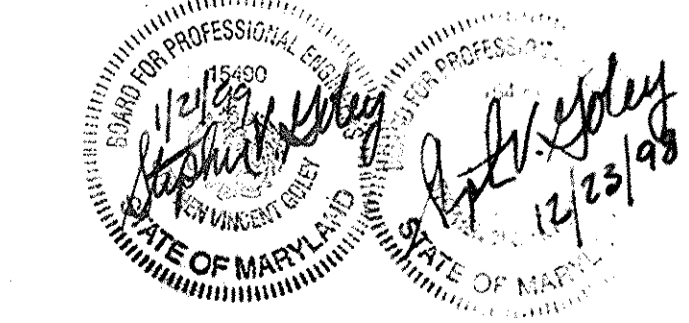
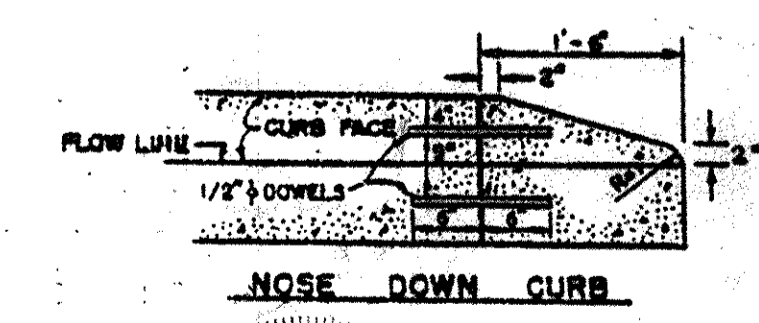
**NOTE 1**

Surveyor's Certificate

I hereby certify that the limit of the Howard County maintained Kit Kat Road (2140 feet from US Route 1) is shown thus \* on this plan.

Date: 12-22-98

Jefferson D. Lawrence  
Professional Surveyor, MD. Reg. #5216



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 2/18/99  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE

*[Signature]* 2/18/99  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/18/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

- Conditions for Use of the Easement for Access:
- Maintain the integrity of the existing sanitary sewer manhole number 321.
  - Maintain grade level of existing manhole rim. Any grade change required for access road would in turn reflect the necessary grade adjustment to this manhole.
  - Notify Miss Utility prior to commencing access road work. Such notification will allow Bureau of Utilities, Stake-Out Division to locate existing sanitary sewer manhole and sewer main.

PROVIDE 13'-12" X 6" GABIONS PER ASTM A974&U.S. DOT 720.02

TEST BORINGS

ROCK OUTLET PROTECTION SEE DETAIL C-4

POND INFORMATION HAZARD CLASSIFICATION "A" QUANTITY DETENTION POND QUALITY ISOLATOR

EX. PIPE & RIPRAP & EXISTING SEDIMENT POND TO BE REMOVED

**OWNER/DEVELOPER:**  
SOIL SAFE INC.  
4600 E. FAYETTE STREET  
BALTIMORE, MD 21224  
(410) 327-5753

**ADDRESS CHART**

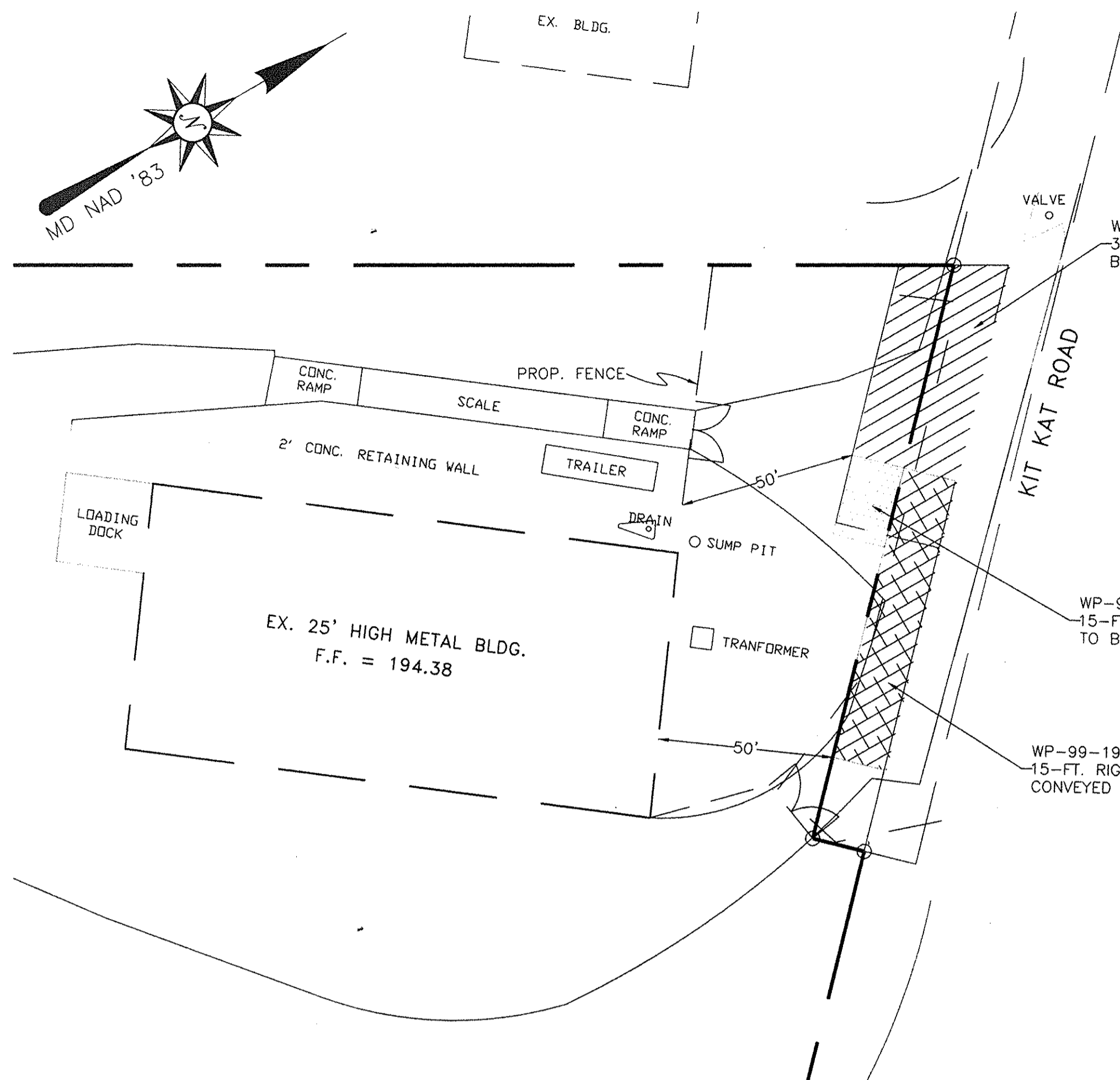
PARCEL	STREET ADDRESS
48	7170 KIT KAT ROAD

SUBDIVISION NAME PARTNERS QUALITY RECYCLING SERVICES, J.V.		SEC./AREA	PARCEL
LIBER/FOLIO 2201/032	BLOCK 11	ZONE M-2	PARCEL 48
WATER CODE 301		ELECT/DIST 1st	CENSUS TR 6012
SEWER CODE 2370000			

**SITE DEVELOPMENT PLAN**  
**SDP-98-113**  
**PARTNERS QUALITY RECYCLING SERVICES, J.V.**  
TAX MAP: 43 PARCEL: 48  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

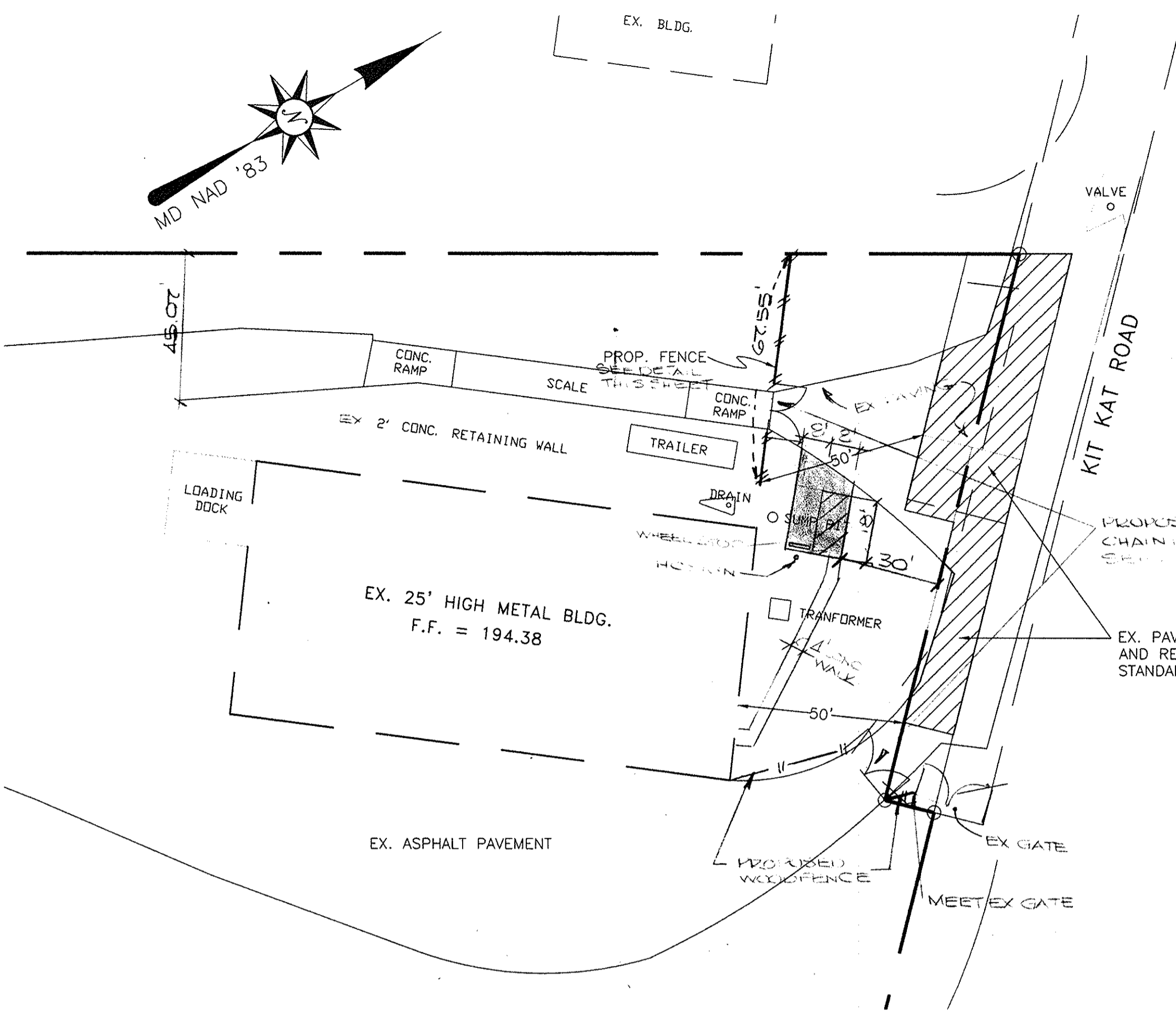
**O'CONNELL & LAWRENCE, INC.**  
ENGINEERS, SURVEYORS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-5872

DES. MJK	DWN. CADD	DATE OCT., 1998	SCALE: 1" = 50'	PROJECT NO. 320-001	SHEET NO. C-1 of 7
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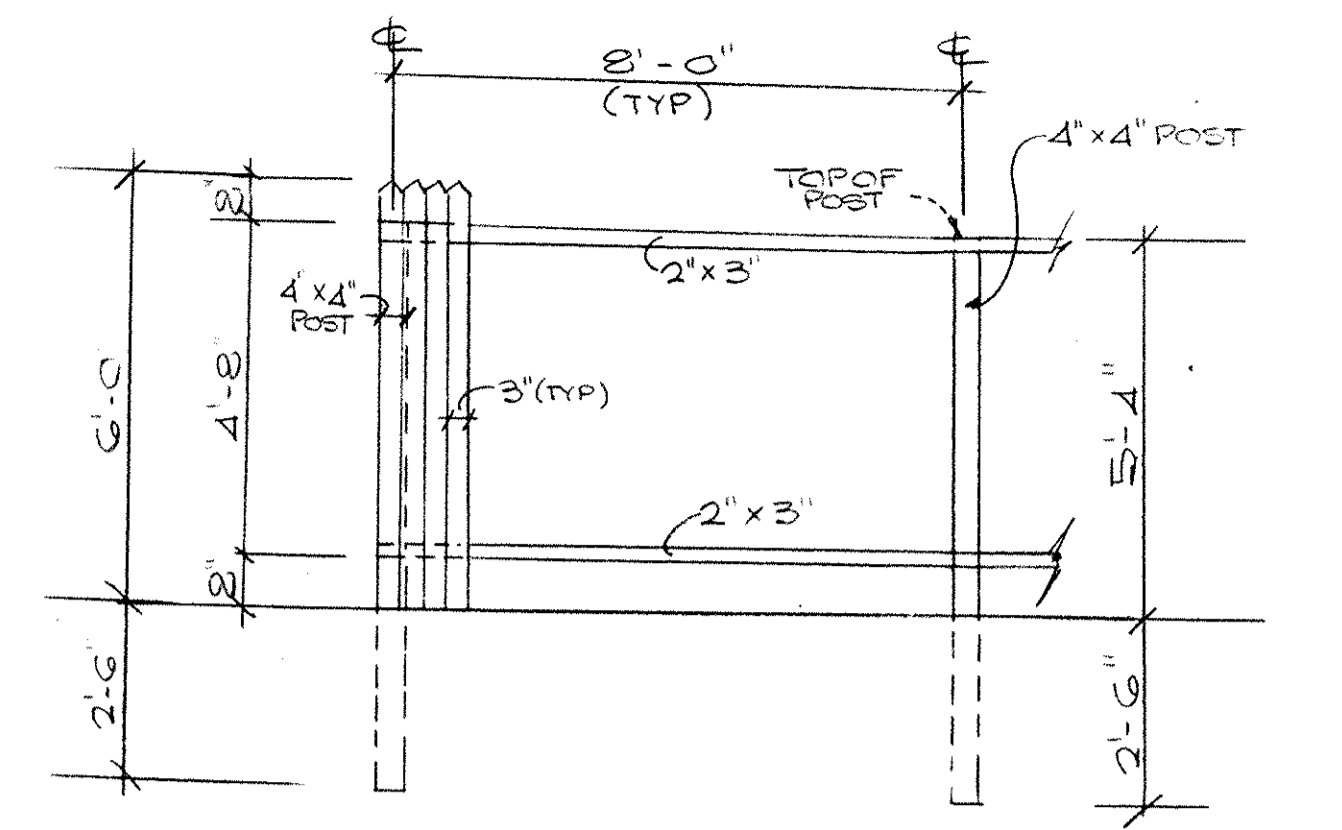
**WAIVER PETITION PLAN VIEW**

SCALE: 1" = 30'



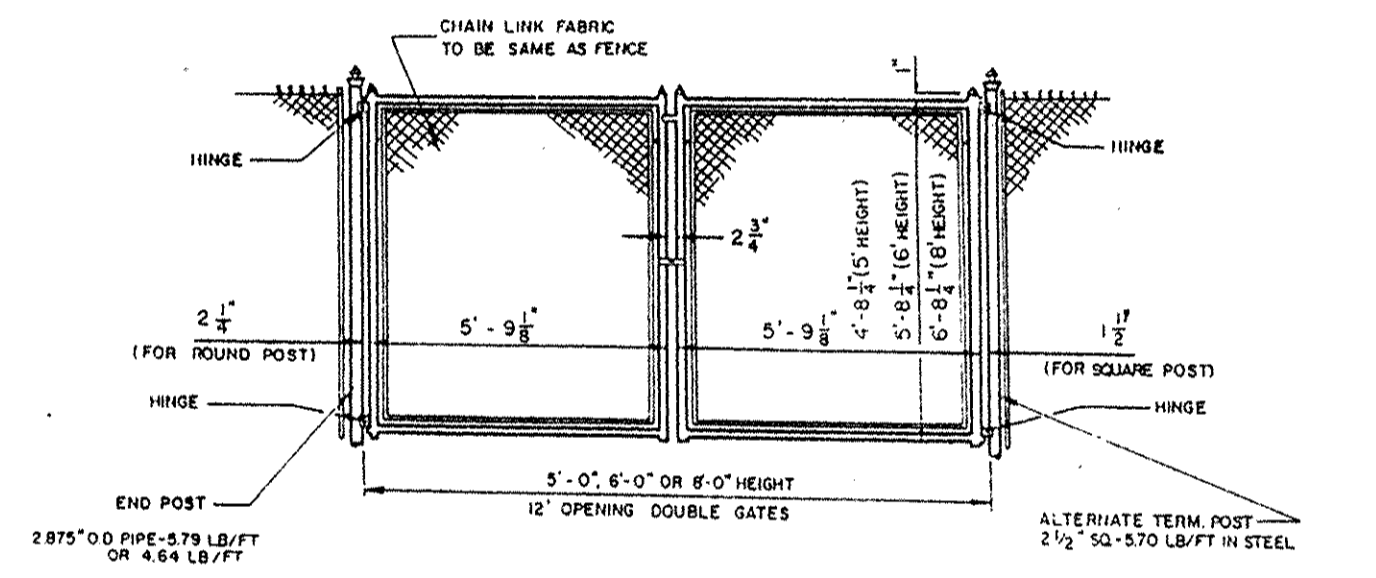
**PAVEMENT REPLACEMENT PLAN VIEW**

SCALE: 1" = 30'



**WOOD STOCKADE FENCE DETAIL**

3/8" = 1'-0"



**GATE DETAIL**

(NO SCALE)

Hardin-Kight Associates, Inc.  
7524 W B & A Road, Suite 100  
Glen Burnie, Maryland 21061  
Office: (410) 553-0802  
Fax: (410) 553-0808

7524 W B & A Road, Suite 100  
Glen Burnie, Maryland 21061  
Office: (410) 553-0802  
Fax: (410) 553-0808

**Record of Soil Exploration**

Contracted With: SOIL SAFE INC.  
Projects Name: KIT KAT ROAD  
Location: HOWARD COUNTY, MARYLAND  
Boring: SB-2  
Job #: 98173  
Datum: Hammer Wt. 140 lbs.  
Surf. Elev. 170.0 Hammer Drop 30 in.  
Date Started 4/23/98 Pipe Size 2 in.

Elev. in ft.	Soil Description <small>Color, Moisture, Density, Plasticity, Size Proportions</small>	Strata Scale	Depth	Sample				Boring & Sample Notes
				Core	Blows / 6"	FB	Type Rec.	
164.5	Brown, yellow brown, moist, loose, clayey SAND with gravel (SCg) (loam) (fill)	0.0'	0.0	I	6-4-4	1	DS 10"	Fill to 8.5'
		5.5	5.0	D	2-3-2	2	DS 10"	
161.5	Red and white mottled, moist, CLAY (CL) (clay loam) (fill)	8.5	2.0	D	5-3-8	3	DS 1"	
	S & P green and white, dry, very dense, silty SAND (SM) (sandy loam)	10.0	3.0	D	50/6"	4	DS 4"	
		15.0	5.0	I	50/3"	5	DS 3"	
149.8		20.4	6.0	D	50/4"	6	DS 2"	
Bottom of Hole at 20.4'								

Sampler Type: DS- Driven Split Spoon, PT- Pressed Shelby Tube, CA- Continuous Flight Auger, RC- Rock Core  
Sample Conditions: D- Disintegrated, U- Undisturbed, L- Lost  
Boring Method: HSA- Hollow Stem Augers, CFA- Continuous Flight Augers, DC- Driven Casing, MD- Mud Drilling  
Water Caved: at Completion, after 24 hrs

**Record of Soil Exploration**

Contracted With: SOIL SAFE INC.  
Projects Name: KIT KAT ROAD  
Location: HOWARD COUNTY, MARYLAND  
Boring: SB-1  
Job #: 98173  
Datum: Hammer Wt. 140 lbs.  
Surf. Elev. 171.0 Hammer Drop 30 in.  
Date Started 4/23/98 Pipe Size 2 in.

Elev. in ft.	Soil Description <small>Color, Moisture, Density, Plasticity, Size Proportions</small>	Strata Scale	Depth	Sample				Boring & Sample Notes
				Core	Blows / 6"	FB	Type Rec.	
166.5	Brown to gray brown, wet to moist, very loose to medium dense, silt SAND with clay and gravel (fill) (SC) (loam)	0.0'	0.0	D	13-12-10	1	DS 6"	Bottom of Hole At 20.0'
164.0	Gray brown, wet, medium dense, clayey SAND (SC) (loam)	4.5	5.0	I	4-3-7	2	DS 11"	
162.0	Orange brown, moist, dense, silty, clayey SAND trace to some gravel (SM) (sandy loam)	7.0	2.0	I	11-25-37	3	DS 12"	
	Green and white, dry, very dense, silty, fine SAND (SM) (sandy loam)	10.0	3.0	I	24-50/5"	4	DS 10"	
		15.0	5.0	D	50/5 5"	5	DS 5"	
		20.0	6.0	D	50/1"	6	DS 1"	
Bottom of Hole At 20.0'								

Sampler Type: DS- Driven Split Spoon, PT- Pressed Shelby Tube, CA- Continuous Flight Auger, RC- Rock Core  
Sample Conditions: D- Disintegrated, U- Undisturbed, L- Lost  
Boring Method: HSA- Hollow Stem Augers, CFA- Continuous Flight Augers, DC- Driven Casing, MD- Mud Drilling  
Water Caved: at Completion, after 24 hrs

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul S. Rutter* 2/18/99  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING  
*Clair Hamilton* 2/18/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*William J. ...* 2/19/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**SITE LAYOUT AND DETAILS**  
 SDP-98-113  
 PARTNERS QUALITY RECYCLING SERVICES, J.V.  
 TAX MAP: 43 PARCEL: 48  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**O'CONNELL & LAWRENCE, INC.**  
 ENGINEERS, SURVEYORS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

DES. MJK DWN. CADD DATE OCT., 1998 SCALE: AS SHOWN PROJECT NO. 320-001 SHEET NO. C-2 of 7

**INSTALLATION CONSIDERATIONS**

All excavation and site preparation shall be in accordance with OSHA Safety Regulations and with the requirements of the local, state, or Federal jurisdiction. The bedding for the base of the Isolater shall be approximately 6" of granular material or coarse aggregate, that is set on a level bearing surface. The Isolater shall extend ± 12" all around the Isolater unit and shall be level and properly compacted in accordance with the jurisdiction's requirements. The materials and procedures for placing backfill around structures shall also be in accordance with the jurisdiction's specifications.

After completion of bedding preparation, installation of the Isolater shall proceed in the following order:

- Base unit(s) and treatment chamber risers (where applicable)
- Reducer top (where applicable)
- 72" (1828mm) diameter riser housing the fiberglass insert
- Pipe installation and sealing (Pipe shall not protrude into the chamber)
- Vents, Down Pipe Assembly, and Riser Pipe Assembly
- 72" (1828mm) diameter riser above fiberglass insert (where applicable)
- Reducer top to 48" (1220mm) diameter (where applicable)
- 48" (1220mm) diameter riser (where applicable)
- Flattop for either the 72" (1828mm) riser or 48" (1220mm) riser, as necessary
- Adjustment to grade (where applicable)
- Frame and Cover (where applicable)

An installation guideline will be included with the product for each job. Lifting and placing of the units shall be done in accordance with safety standards. Specific lifting instructions will be included in the installation guideline. Also included will be instructions for installation of the joint gasket material used between the precast segments. These considerations are typical to all precast manholes and the contractor will probably be familiar with them.

When the pipes are to be grouted in place, a non-shrink grout shall be used to completely seal the opening between the precast hole and the pipe to provide a watertight seal. The grout shall be flush with the inside surface of the manhole. If the pipes are to have boots, the boots will be installed at the precast plant, and instructions will be included in the installation guideline for attachment of the pipe to the boot.

Instructions for installation of the fiberglass components (shown in Figure 4) included as part of the installation guideline, are repeated here to show the ease of installation, as well as the various components of the fiberglass insert. The main portion of the insert, the platform, is installed at the precast plant prior to delivery. It is attached to the inside wall of the manhole. The contractor installs the down pipe assembly which consists of one complete unit housing the down pipe, the "trough" and the overfall plate. This assembly has a match line that lines up with a similar match line on the precast platform and is easily secured onto the platform using standard tools. The joint between the pieces is made watertight with a caulking type material supplied by Americast.

The contractor then installs the riser pipe assembly which consists of the riser pipe and a flange that fits into the recessed area of the 24" diameter access port on the platform. A preformed rubber gasket is placed between the flange and the recess area, prior to screwing the two pieces together. This design allows easy removal of the riser plate assembly should human access into the treatment chamber be required after the unit is in service. Use proper confined space entry procedures when entering. Match lines are used for the riser pipe assembly, just as for the down pipe assembly.

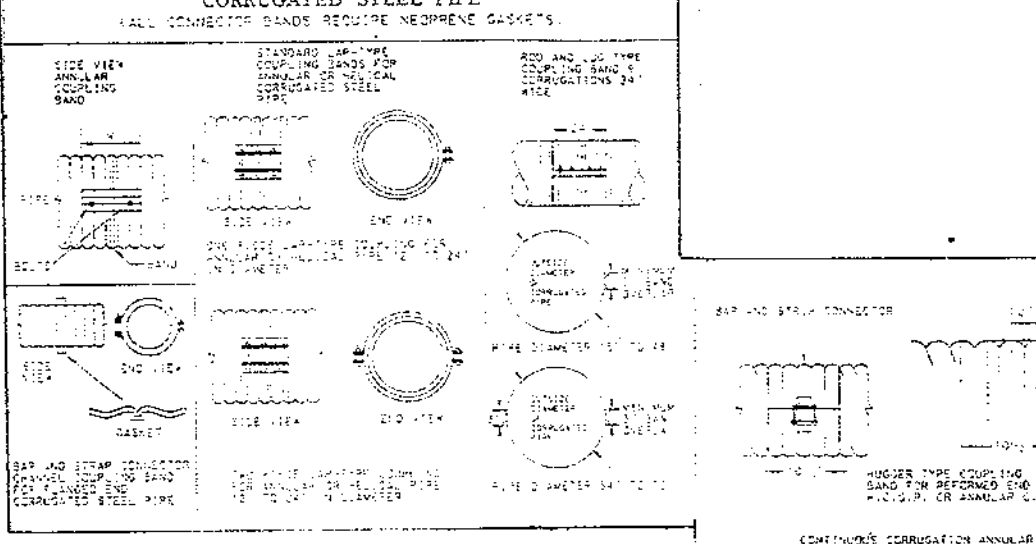
Vent pipes are then installed to the top of the platform on the stubs provided. These pipes will be tall enough to be above the maximum design water level in the unit.

The tank shall be blocked until the site is permanently stabilized, so that construction drainage is prevented from entering the unit and depositing a premature layer of sediment. Prior to putting the unit into service, the tank shall be filled with water to a point above the top of the notch in the down pipe, if required by the governing jurisdiction. Americast performs a hydrostatic test of each Isolater unit prior to shipment to ensure adequacy of the precast segments.

**ISOLATOR OPERATION AND MAINTENANCE SCHEDULE**

- A. Inspection and cleaning of the Isolator unit shall be performed periodically in order to maintain proper operation. The owner shall inspect the Isolator unit at least yearly, as a minimum, and shall record the information on the Isolator Inspection Form. The inspection shall include monitoring the levels of oil retention and sediment retention. The User's Guide gives allowable levels of oil and sediment for each model. When the depth of sediment is less than that shown in the User's Guide, the sediment must be removed. When the oil level exceeds the levels shown, the oil must be removed.
- B. The owner shall monitor the unit at least every six months for pipe obstructions. Any obstructions shall be removed and necessary repairs made.
- C. Immediately following any petroleum spill, the unit shall be inspected and cleaned. The owner shall notify the appropriate regulatory agencies.
- D. A commercial vacuum truck shall be used to remove the water, sediment, debris, petroleum products, and other pollutants from the unit. The Contractor is responsible for disposal of the individual components in an appropriate disposal facility for proper disposal. The owner shall follow all requirements for proper cleaning and arrange for proper disposal.
- E. The owner shall record and maintain the Isolator Inspection Form and shall make the form available to the appropriate regulatory agencies upon request.

**DETAIL 1 - TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE**



**DETAIL 2 - TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE**

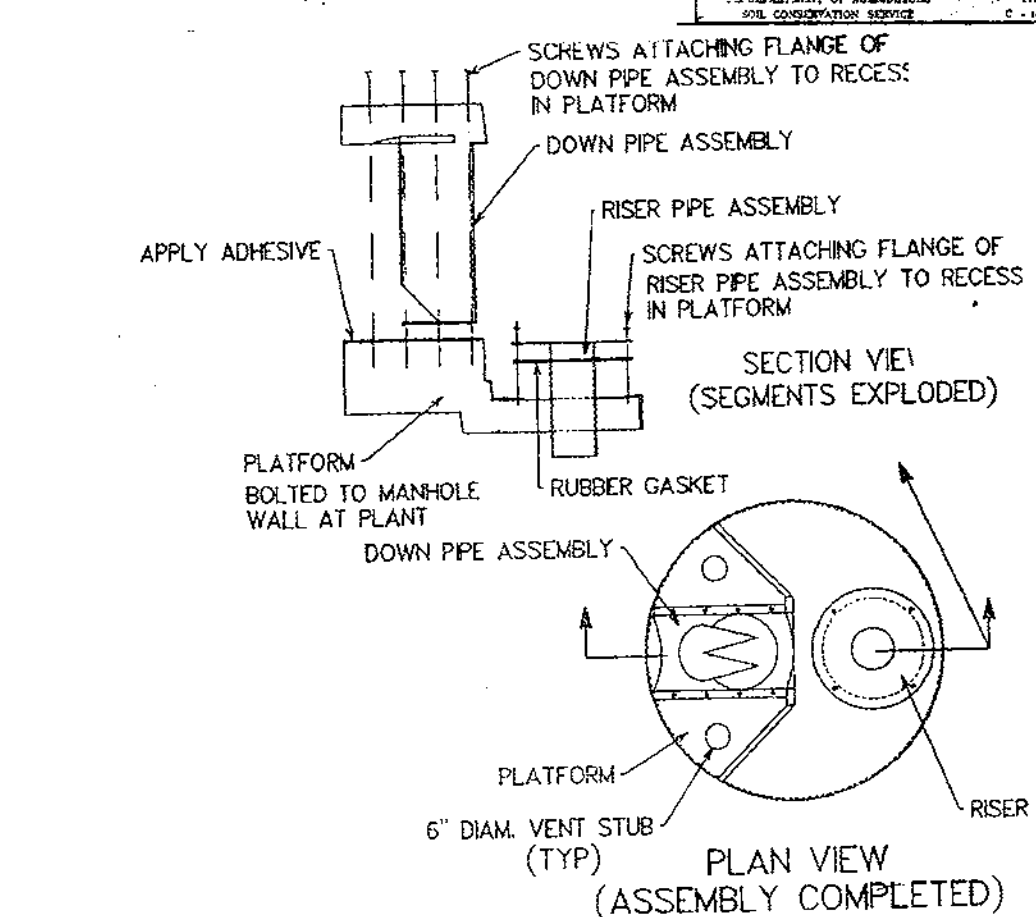


FIGURE 4 - INSTALLATION OF FIBERGLASS COMPONENTS

ISOLATOR TYPE	MAXIMUM PIPE SIZE (INCHES)	TOTAL CAPACITY (GALLONS)	OIL HOLDING CAPACITY (GALLONS)	SEDIMENT HOLDING CAPACITY (GALLONS)	MAX. TREATABLE FLOW RATE (GPM)	MAX. TREATABLE FLOW RATE (MGD)	MAX. TREATABLE FLOW RATE (MGD)	SEDIMENT HOLDING CAPACITY (GALLONS)
1	18 (457)	2020 (7730)	300 (1135)	701 (2670)	0.64 (24)	1.41 (53)	1.6 (59)	74.31
2	24 (610)	3000 (11340)	500 (1825)	174 (630)	1.30 (48)	2.80 (103)	3.4 (125)	84.18

**AMERICAST ISOILATER ORDER REQUEST FORM**

11355 Virginia Peccost Road  
Ash Land, Virginia 23005

ISOILATER MODEL - ISO 2000

DATE: 09-22-97 DWS NO. ISO2000

STRUCTURE INFO	PLEASE SHOW THE ORIENTATION OF THE HANGING PIPE(S) ON THE DIAGRAM TO THE RIGHT AND INDICATE THE ANGLE IN DEGREES BETWEEN THE PIPE AND THE HANGING PIPE(S).
Structure Number	
Site Location	
1. Total	Insert
2. 1500	TYPE 1
3. 2000	TYPE 1
4. 3000	TYPE 1
5. 4000	TYPE 1
6. 5000	TYPE 1
7. 6000	TYPE 1
8. 7500	TYPE 1

IN PIPE: 18" HOPE, 18" HOPE

OUT PIPE: Inside Diameter 18", Outside Diameter 18.2"

Material: PE

Model: ISO 2000

Project Name: PARTNERS RECYCLING FACILITY

Estimated Delivery Request Date: JUNE 15, 1998

Delivery Address: Street 7170 KIT KAT ROAD

City Baltimore State MD Zip Code 21224

Contact: MR WALTER KENNELL

Phone: (410) 322-5753 Fax:

Contractor: SOIL SAFE INC

Address: 4600 E FAYETTE STREET

City BALTIMORE State MD Zip Code 21224

Contact: MR WALTER KENNELL

Phone: (410) 322-5753 Fax:

Owner Information

Name: O'CONNELL LAWRENCE

Address: 1700 N. GREENWOOD STREET

City BALTIMORE State MD Zip Code 21224

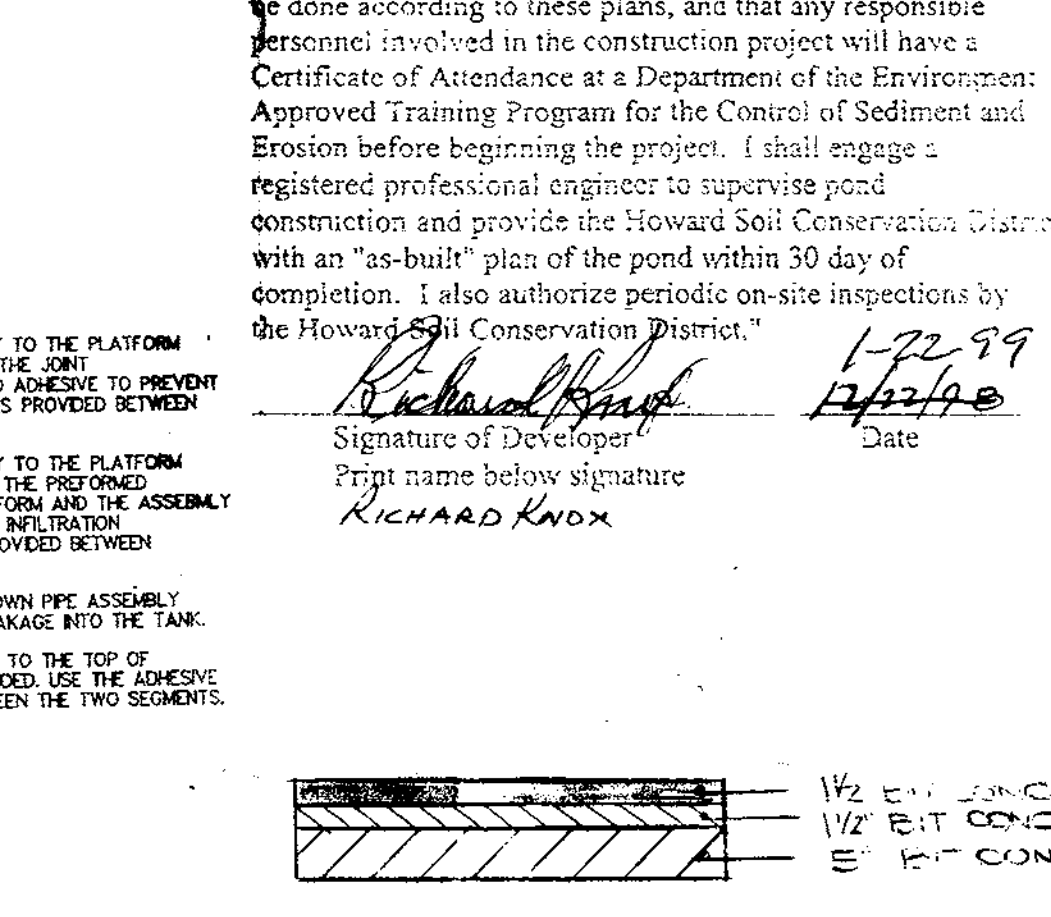
Contact: STEVE GOLEY

Phone: (410) 924-4870

Fax: (410) 924-5872

For Technical Assistance, Call (804)798-6069 or (800)999-2278 (VA) Fax Number - (804)798-3426

**SEDIMENT CONTROL & POND CONSTRUCTION**



TYPICAL P-3 PAVING SECTION (NO SCALE)

**PERMANENT SEEDING NOTES**

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

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

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

1. Preferred -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 Fertilizer (405/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. Line of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (93 lbs/1000 sq. ft.)
2. 2 acre tabs -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 Fertilizer (405/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the periods March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre C-1 Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (80 lbs/1000 sq. ft.) of weeping lovegrass. For the period October 15 -- February 28, protect site by Option 1 two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 -- Use sod. Option 3 seed with 50 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching -- Apply 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of untreated soil straw immediately after seeding. Anchor mulch immediately after application using masticating mulch. Apply 200 lbs/acre of 2" x 1/2" x 1/2" undyed eggshells on flat areas. In slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) anchoring.

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

**TEMPORARY SEEDING NOTES**

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

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

Soil Amendments -- Apply 600 lbs/acre 10-10-10 Fertilizer (34 lbs/1000 sq. ft.) for periods March 1 -- April 30 and from August 15 -- October 5, seed with 2-1/2 bushel per acre of annual ryegrass (32 lbs/1000 sq. ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass.

**POND CONSTRUCTION SPECIFICATIONS**

These specifications are applicable to all ponds constructed in accordance with the requirements of ASHTO and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, graded and compacted to meet all local, state, and federal requirements. All areas shall be free of rocks, stumps, wood, brush, and other debris. All areas shall be free of rocks, stumps, wood, brush, and other debris. All areas shall be free of rocks, stumps, wood, brush, and other debris. All areas shall be free of rocks, stumps, wood, brush, and other debris.

Excavation

Excavation shall be done in accordance with the requirements of ASHTO and AASHTO specifications. All areas shall be free of rocks, stumps, wood, brush, and other debris. All areas shall be free of rocks, stumps, wood, brush, and other debris. All areas shall be free of rocks, stumps, wood, brush, and other debris.

Contracted Area: All of the following criteria shall apply for completed metal pipe.

Material: PVC pipe shall be PVC-U 120 or PVC-U 1200 conforming to ASTM C 1173 or ASTM D 2241.

Backfill: Backfill shall be compacted to meet the requirements of ASHTO and AASHTO specifications.

Sealing: The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

Backfilling: Backfill shall conform to "Standard Backfill".

Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**GENERAL NOTES**

The location of existing utilities on these drawings are approximate and based on record information. However, it is the contractor's responsibility to locate all utilities within the area of construction prior to commencing work. The contractor shall contact Miss Utility, utility company representative, perform test pits, review current test pit data and whatever other operations available to insure the exact horizontal and vertical location of all utilities in the area of construction. The contractor shall notify the architect of any potential conflicts or discrepancies between actual locations and those of the plans prior to commencing construction and purchase of materials.

All site construction shall be accomplished in accordance with the project plans and specifications, and the Maryland State Highway standards and specifications, and the Howard County Department of Public Works (HCDPW).

All proposed utility crossings shall be tested prior to construction. No work in public right-of-way shall begin until appropriate permits have been obtained.

No excavating shall begin until the location of existing utilities has been determined. Call "Miss Utility" at 1-800-275-7777 forty-eight (48) hours prior to the start of work.

Grading shall be done in such a manner as to provide positive drainage.

The contractor shall make field adjustment to structures, when necessary, to meet existing conditions as directed by the engineer.

Contact HCDPW system maintenance engineer before excavating beneath or in the vicinity of existing water or sewer mains. Backfill to be done under the supervision of HCDPW.

Types of structures refer to the standard details of Maryland State Highway Administration and the HCDPW, unless otherwise noted.

Where the drop on the main line through a structure can be accommodated by an inlet slope of 1/1/81 or flatter, a rounded channel lined with sewer brick on edge shall be built to the crown of the pipes, otherwise a granite invert shall be provided.

Repairs to utilities on public and/or private property damaged as a result of the contractor's negligence or method of operation must be made at his own expense.

All trench bedding shall be Class "C" unless otherwise noted.

The contractor is responsible for all necessary relocation of existing utilities necessitated by this project.

Contractor shall make an inspection of the site and become familiar with the existing conditions. It shall be the contractor's responsibility to obtain all the necessary permits for utility construction and/or relocation at no additional cost to the developer.

The contractor shall coordinate any utility relocation or removal with appropriate utility companies, if the contractor has any questions as to the nature, or methods or details of the performance of his work or the contract documents, he should contact O'Connell & Lawrence, Inc. at 301-924-4570 to continuing work.

By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Signature of Developer: *Richard Knox* Date: 12/29/97

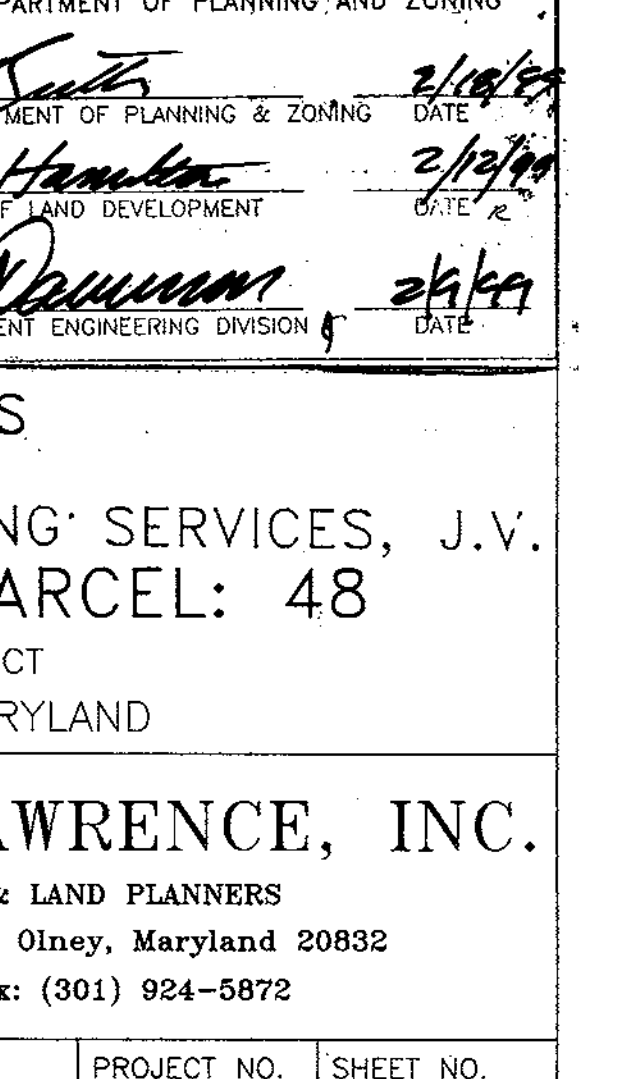
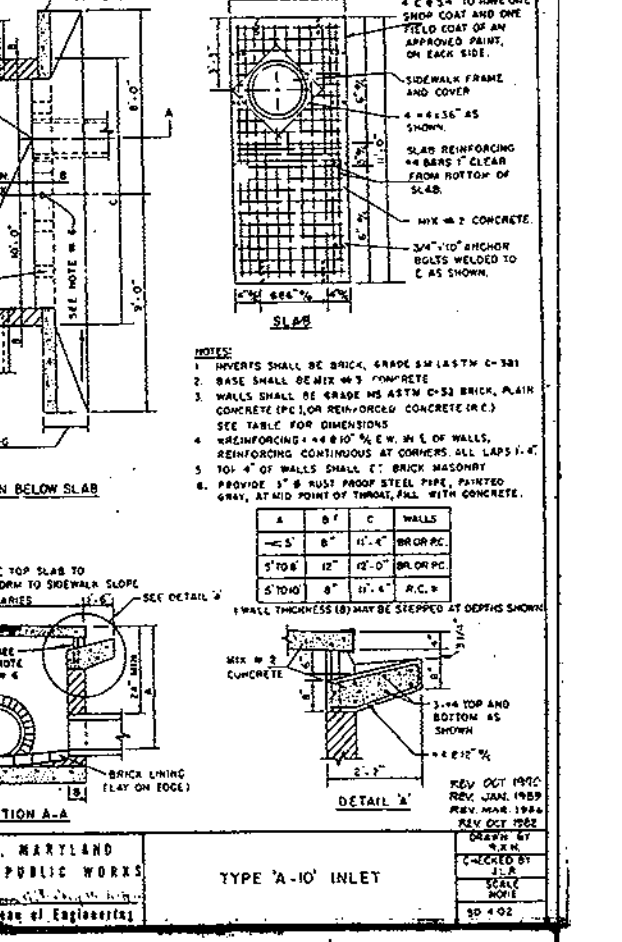
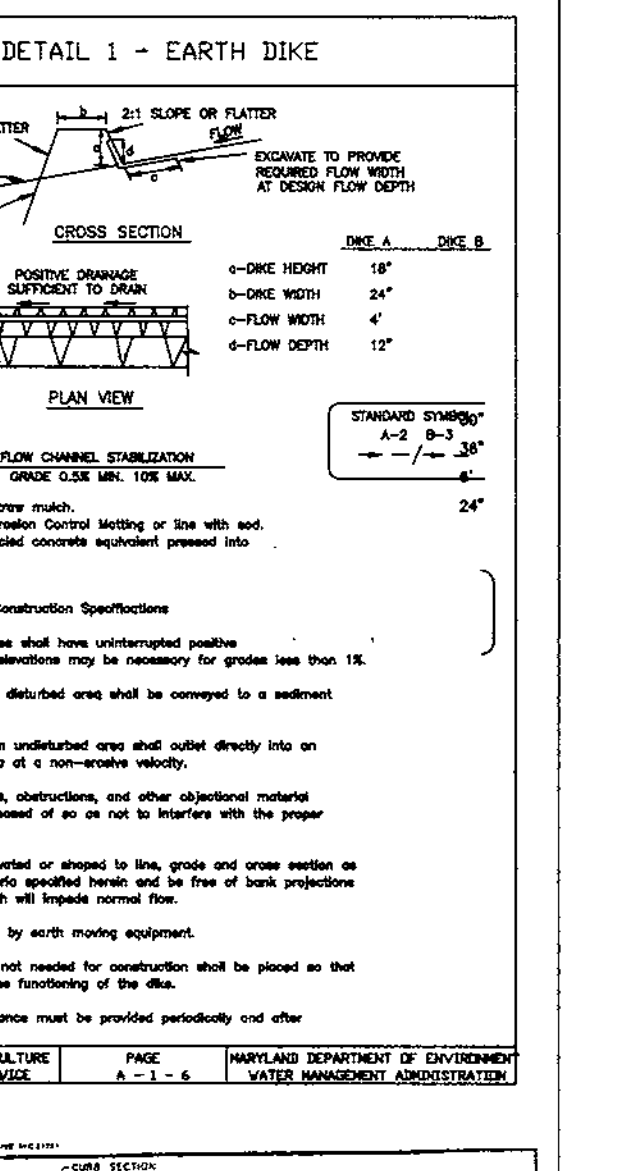
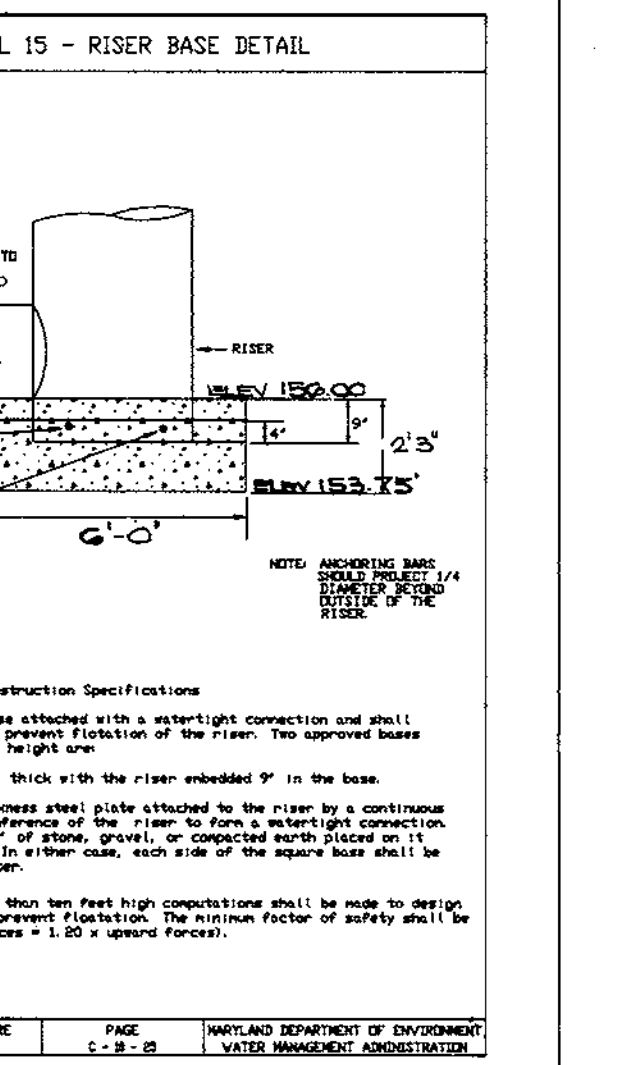
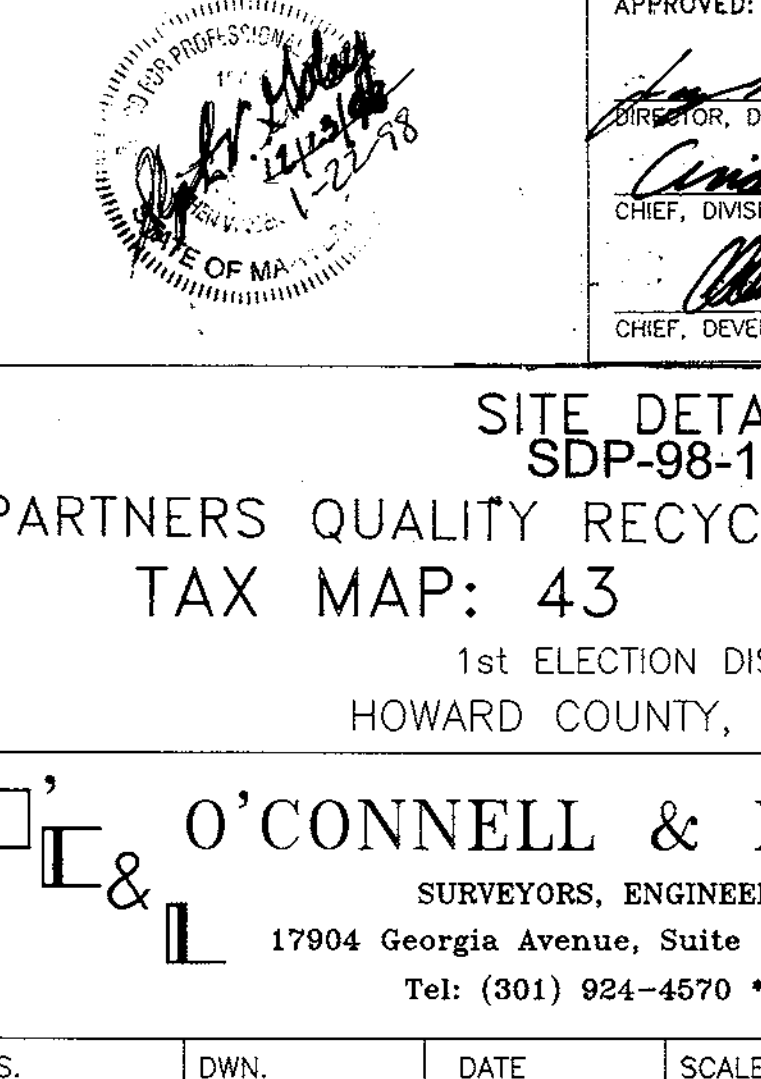
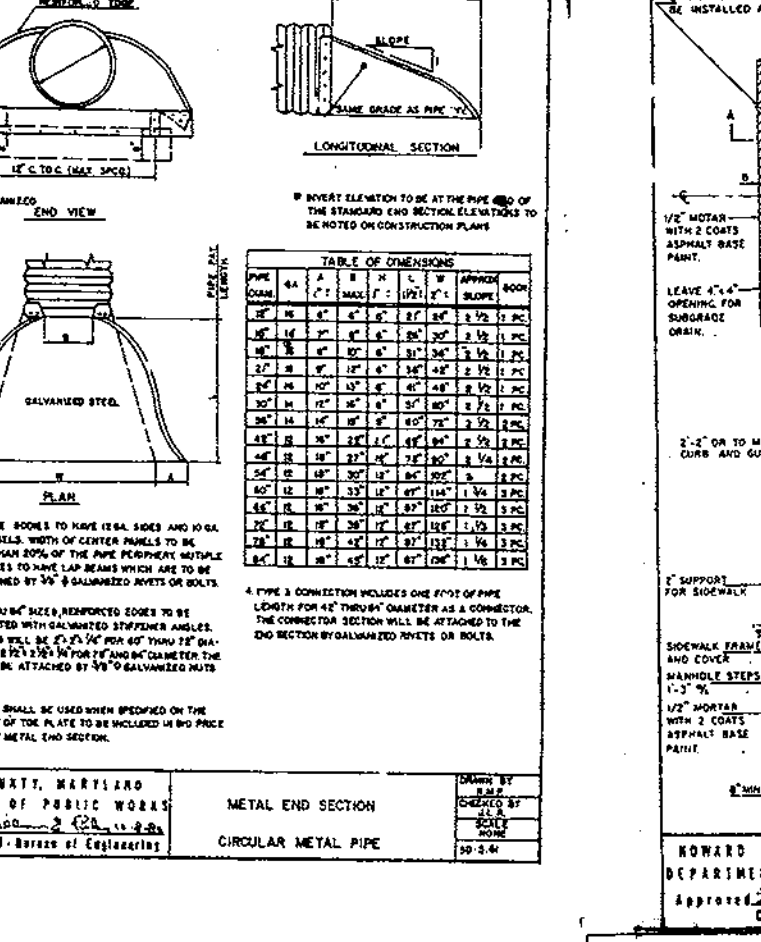
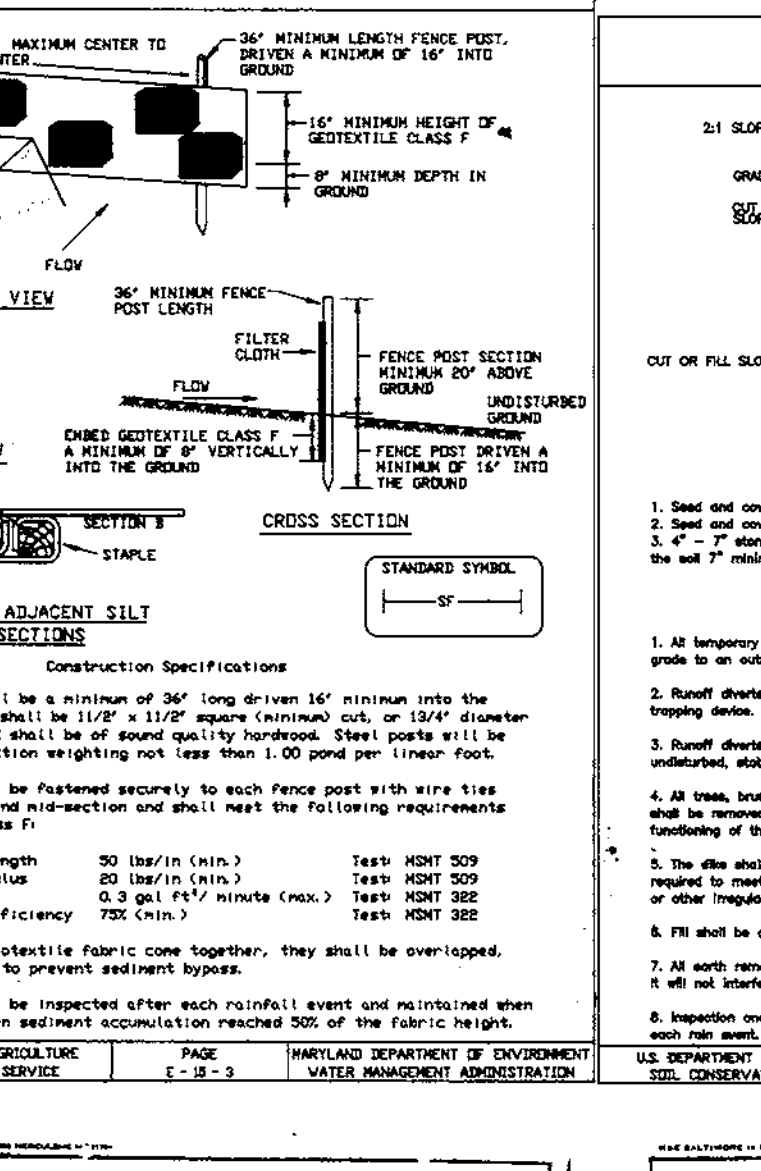
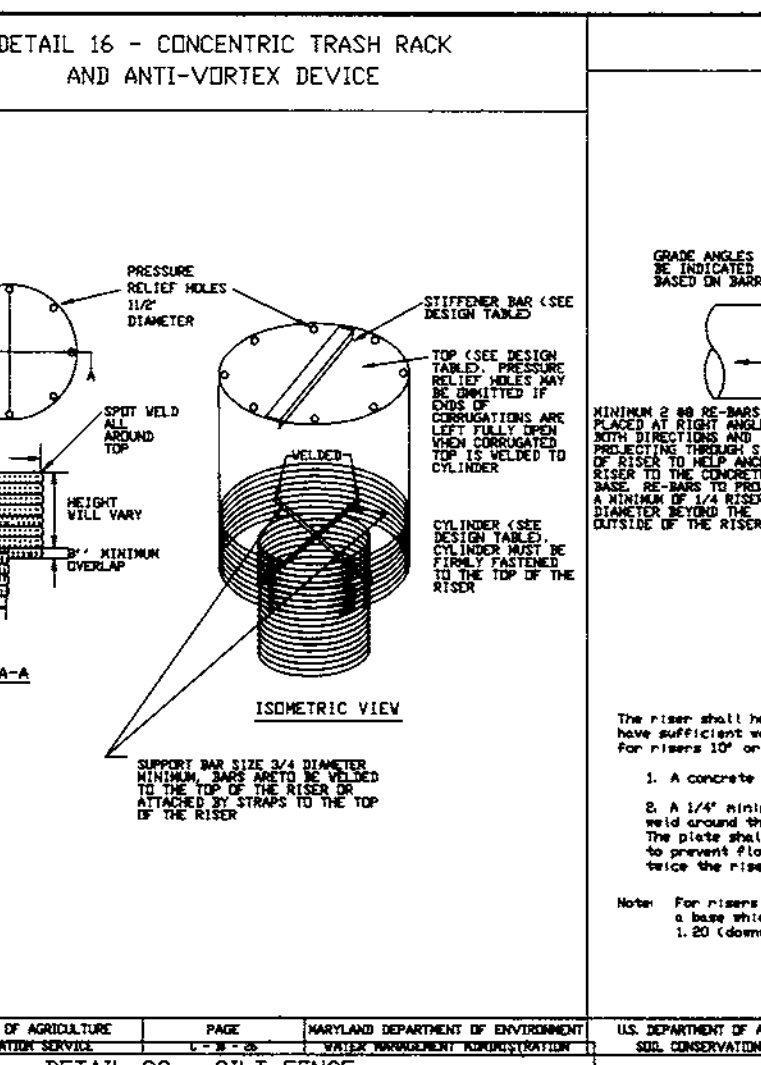
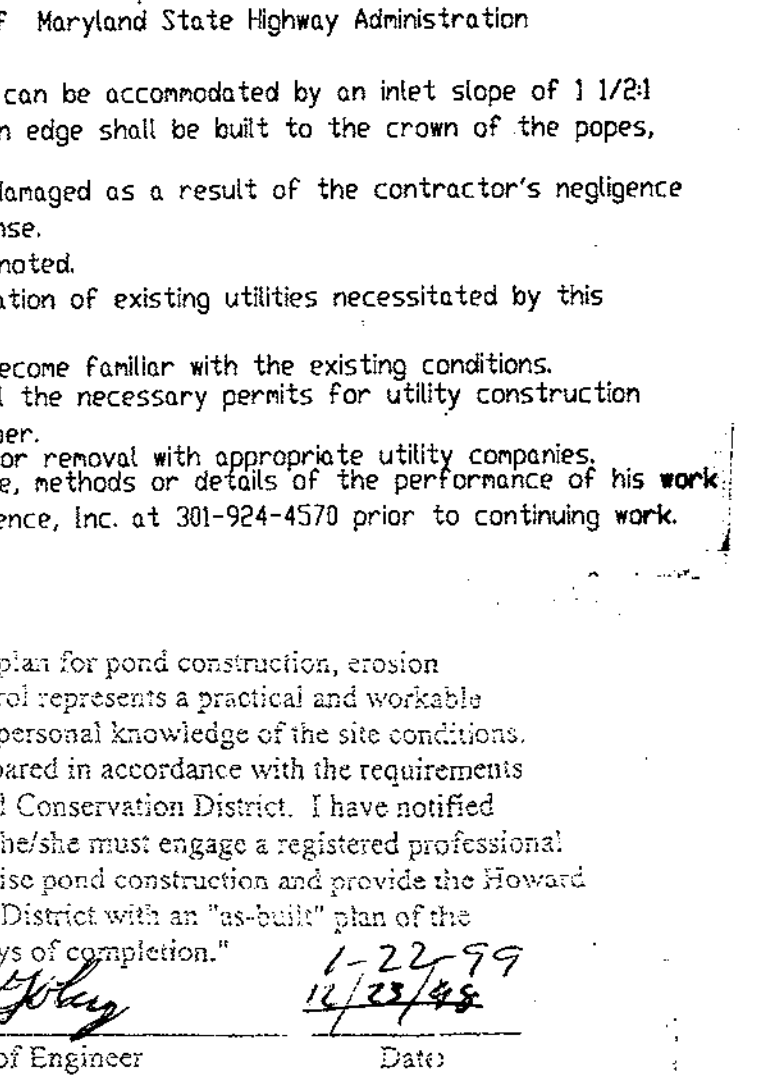
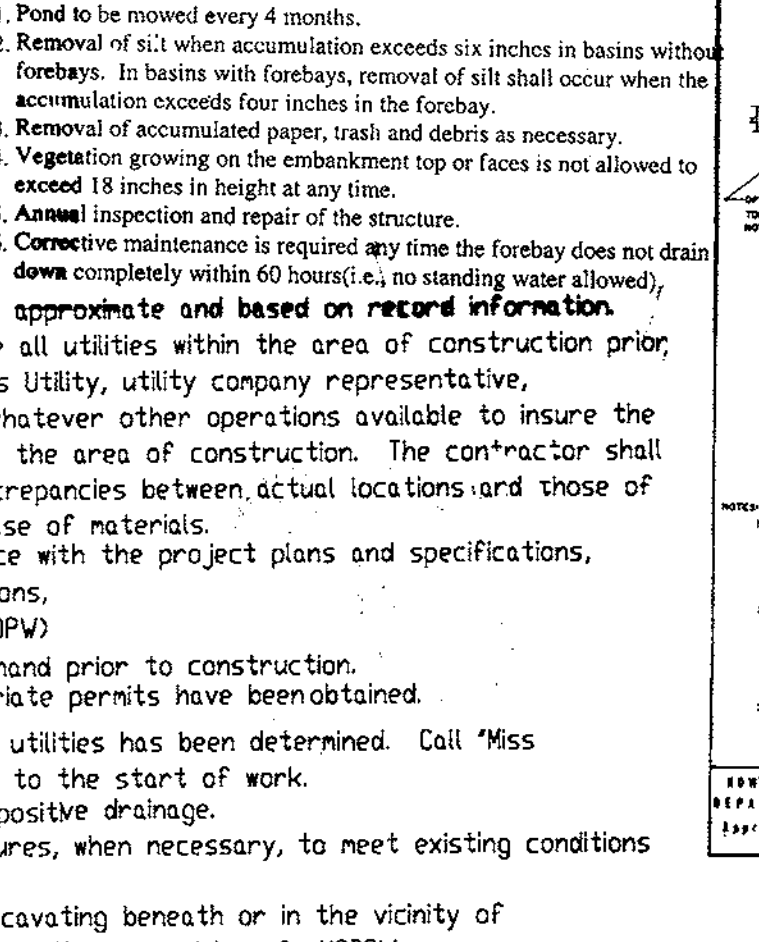
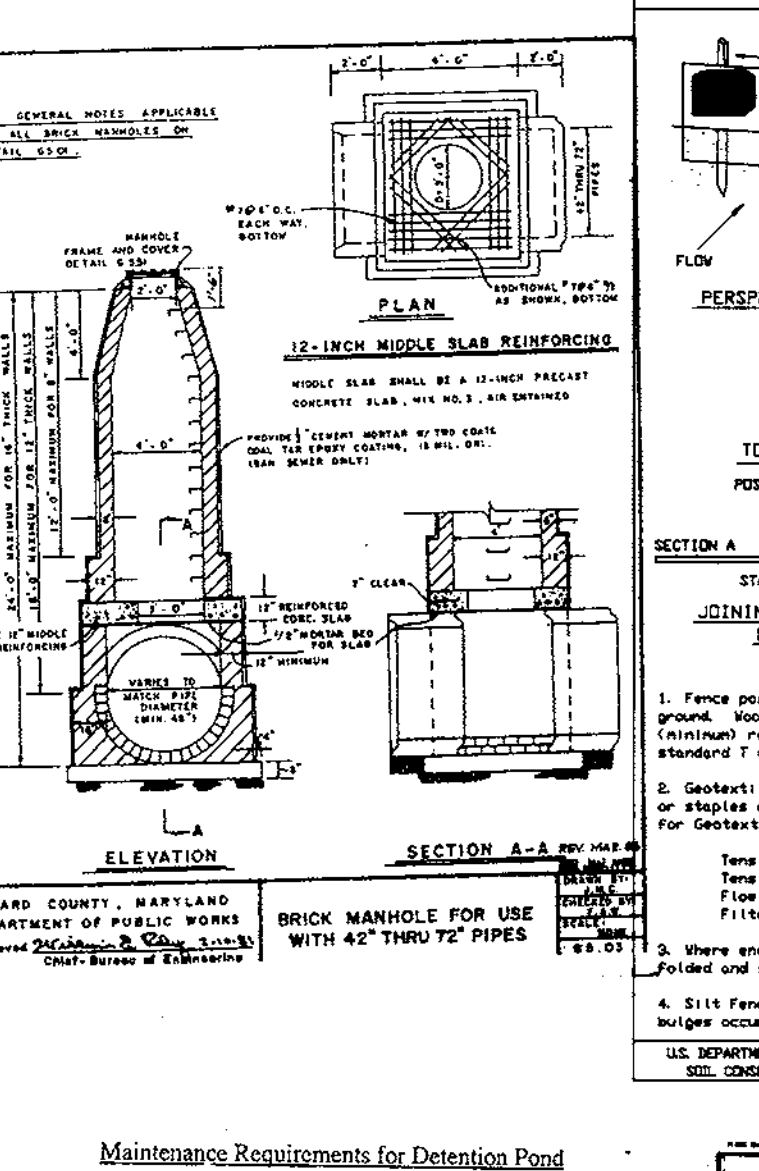
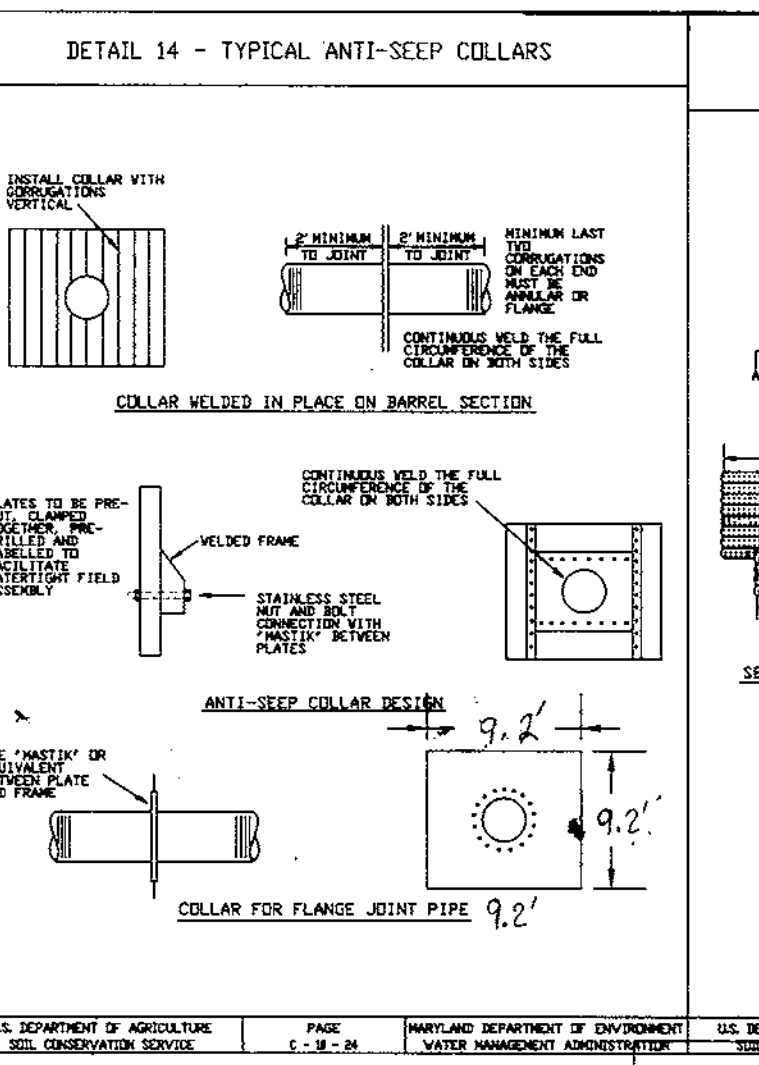
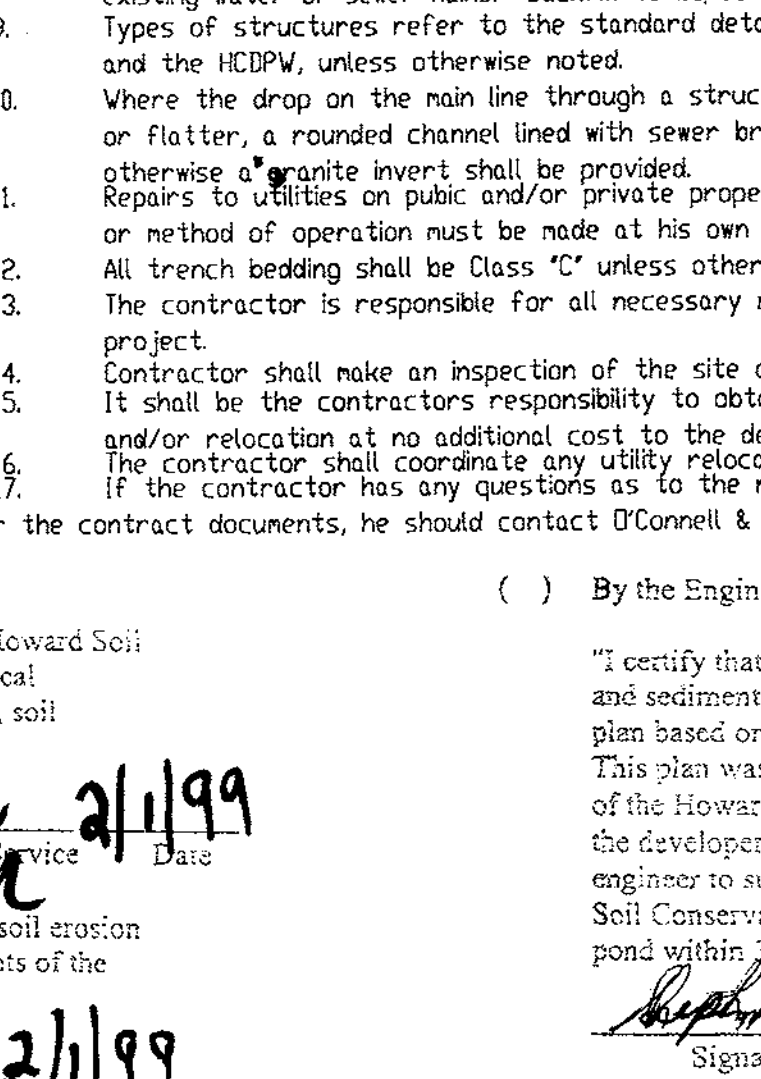
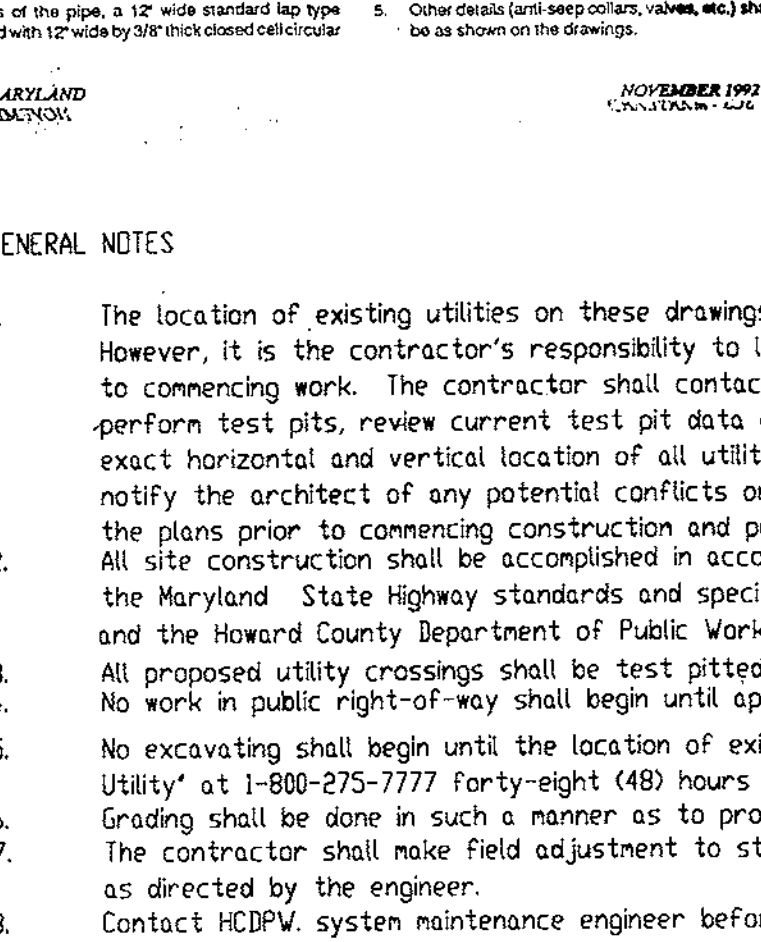
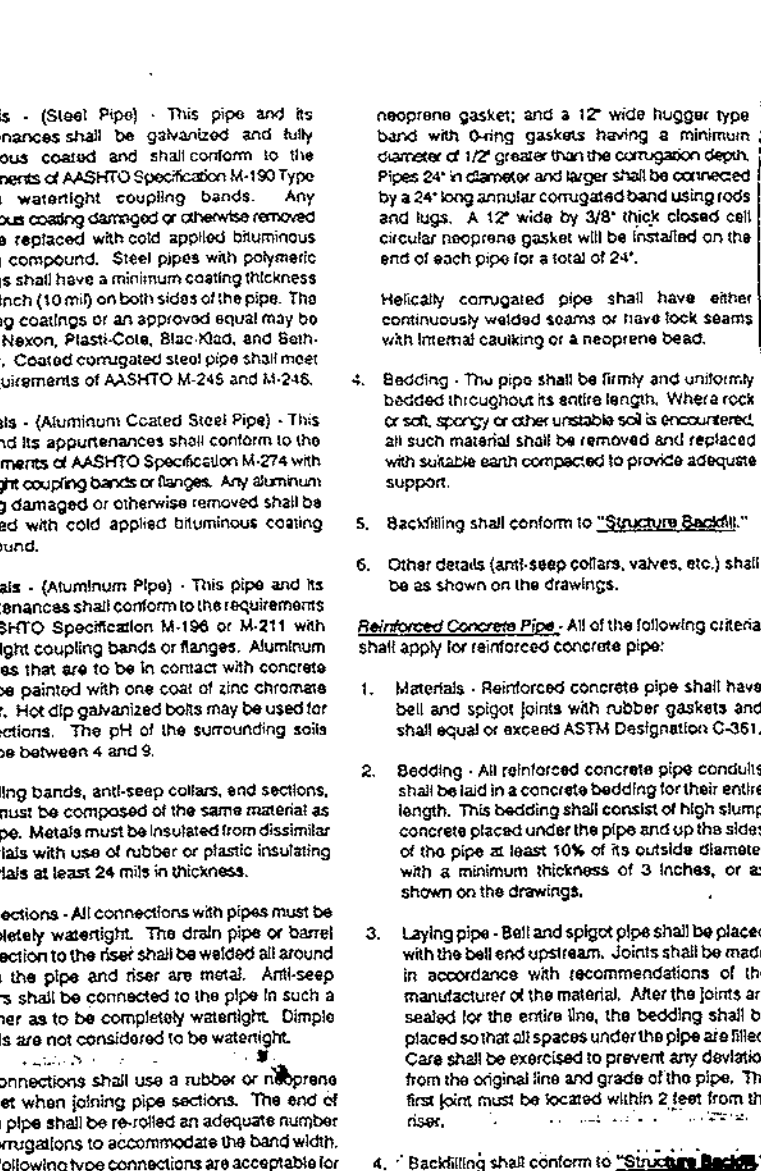
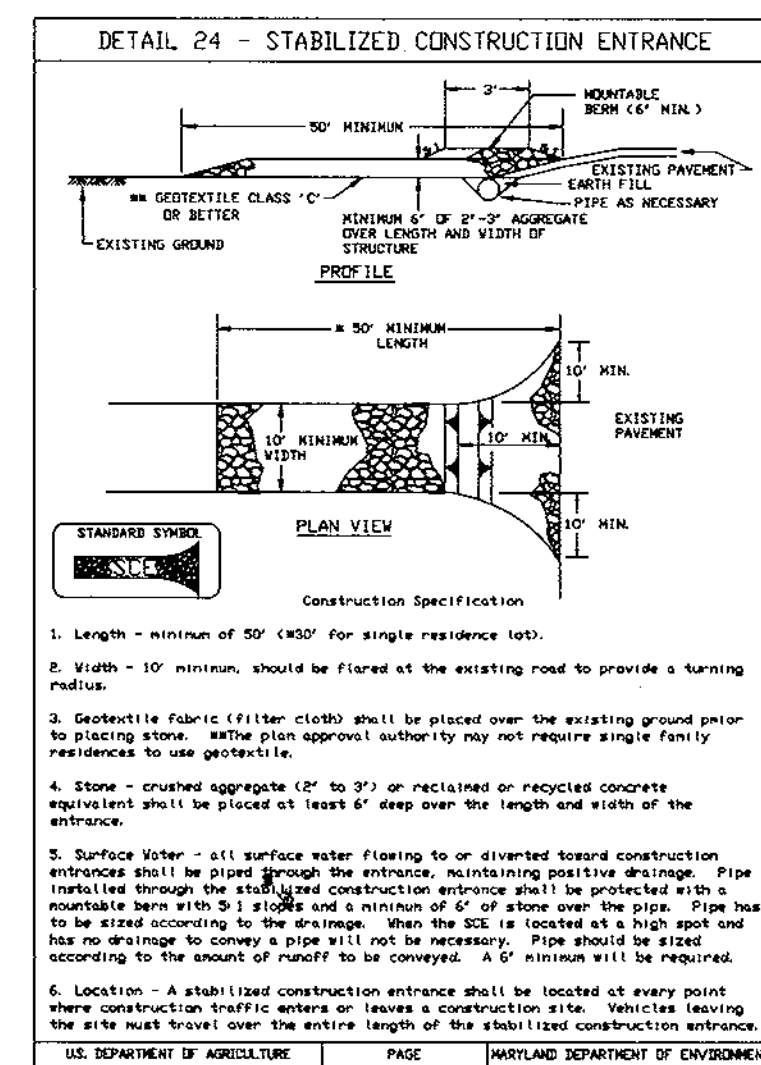
Signature of Engineer: *Richard Knox* Date: 12/29/97

By the Engineer:

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

Signature of Engineer: *Robert W. Johnson* Date: 12/29/97

Signature of Engineer: *Robert W. Johnson* Date: 12/29/97



**SITE DETAILS SDP-98-113**

PARTNERS QUALITY RECYCLING SERVICES, J.V. TAX MAP: 43 PARCEL: 48

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-5872

DES. CGA	DOWN. CADD	DATE MAR. 1998	SCALE: AS SHOWN	PROJECT NO. 320-001	SHEET NO. C-3 of 7
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ISOLATER SIZING

MODEL	INSERT TYPE	FALL ACROSS INSERT (in. mm)	MAX. PIPE SIZE (in. mm)	TOTAL CAPACITY Gal (Liters)	OIL* HOLDING CAPACITY Gal (Liters)	SEDIMENT* HOLDING CAPACITY cu. ft. (cu. m)	MAX. TREATABLE FLOWRATE cfs (l/s)	MAX.** TREATABLE ACREAGE acres (ha)	MAX.*** BYPASS FLOWRATE cfs (l/s)	SEDIMENT REMOVAL**** (%)
ISO1000	1	4.88 (124)	18 (457)	1000 (3785)	300 (1135)	67 (1.90)	.64 (18)	1.41 (.57)	16 (453)	66.16
ISO1500	1	4.88 (124)	18 (457)	1500 (5680)	300 (1135)	134 (3.80)	.64 (18)	1.41 (.57)	16 (453)	70.93
ISO1500	2	6.5 (165)	24 (610)	1500 (5680)	500 (1895)	107 (3.03)	1.30 (36)	2.90 (1.18)	34.4 (974)	61.62
ISO2000	1	4.88 (124)	18 (457)	2000 (7570)	300 (1135)	201 (5.70)	.64 (18)	1.41 (.57)	16 (453)	74.31
ISO2000	2	6.5 (165)	24 (610)	2000 (7570)	500 (1895)	174 (4.93)	1.30 (36)	2.90 (1.18)	34.4 (974)	64.16
ISO3000	1	4.88 (124)	18 (457)	3000 (11355)	300 (1135)	308 (8.72)	.64 (18)	1.41 (.57)	16 (453)	79.08
ISO3000	2	6.5 (165)	24 (610)	3000 (11355)	500 (1895)	241 (6.83)	1.30 (36)	2.90 (1.18)	34.4 (974)	68.93
ISO3000	3	9.75 (248)	36 (915)	3000 (11355)	800 (3028)	147 (4.16)	3.59 (101)	7.98 (3.25)	101.2 (2866)	57.51
ISO4000	2	6.5 (165)	24 (610)	4000 (15140)	500 (1895)	361 (10.22)	1.30 (36)	2.90 (1.18)	34.4 (974)	72.31
ISO4000	3	9.75 (248)	36 (915)	4000 (15140)	800 (3028)	281 (7.96)	3.59 (101)	7.98 (3.25)	101.2 (2866)	59.77
ISO5000	3	9.75 (248)	36 (915)	5000 (18925)	900 (3407)	401 (11.36)	3.59 (101)	7.98 (3.25)	101.2 (2866)	61.52
ISO6000	3	9.75 (248)	36 (915)	6000 (22100)	900 (3407)	535 (15.15)	3.59 (101)	7.98 (3.25)	101.2 (2866)	62.95
ISO7500	3	9.75 (248)	36 (915)	7500 (28387)	900 (3407)	669 (18.95)	3.59 (101)	7.98 (3.25)	101.2 (2866)	64.16

By the Engineer:

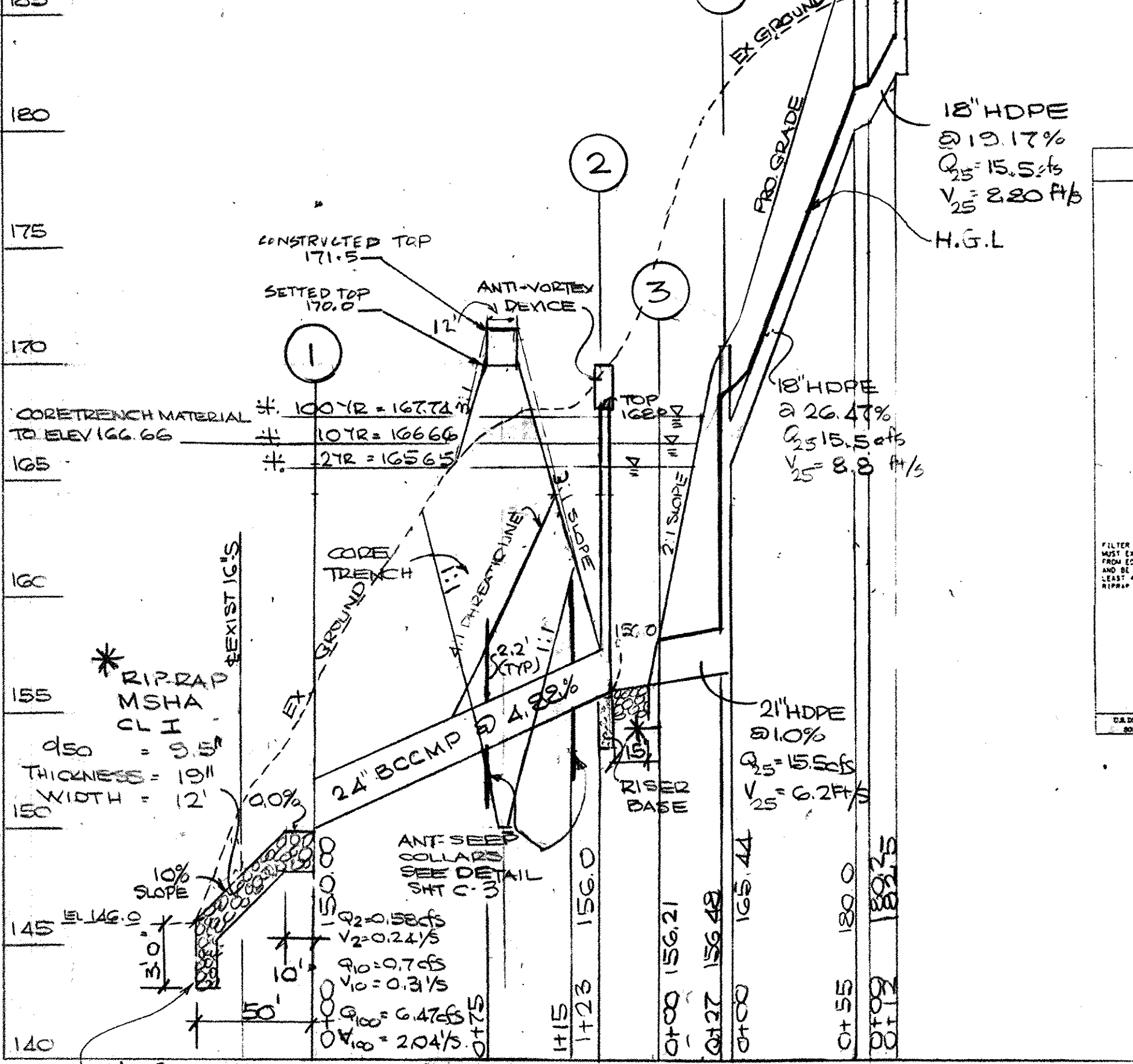
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer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

*Stephen V. Doley* 1/27/99  
Signature of Engineer Date  
Print name below signature

By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

*Richard [Signature]* 12/32/98  
Signature of Developer Date  
Print name below signature



PRINCIPAL SPILLWAY PROFILE

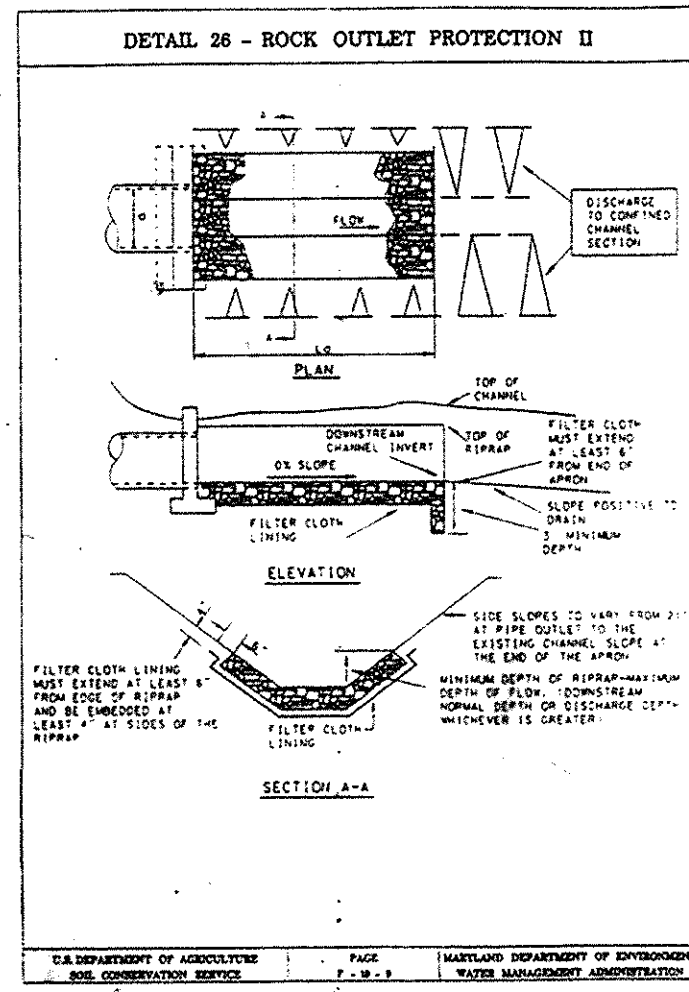
# 2, 10 @ 100YR W.S.E. BASED ON CLOGGED ROUTING CONDITIONS.

PROFILE SCALES  
HOR 1" = 50'  
VER 1" = 5'

NO.	TYPE	TOP ELEV.	INVERT ELEV.	REMARKS
1	END SECTION			HC STD SD 5.61
2	36" PIPE RISER		156.0	SEE DETAIL
3	END SECTION			HC ST SD 5.61
4	48" φ MANHOLE	171.0	165.24	HC G 5.03
5	ISOILATER	187.0	180.2	SEE DETAIL
6	A-10 INLET	188.10		HC STD SD 4.02 *

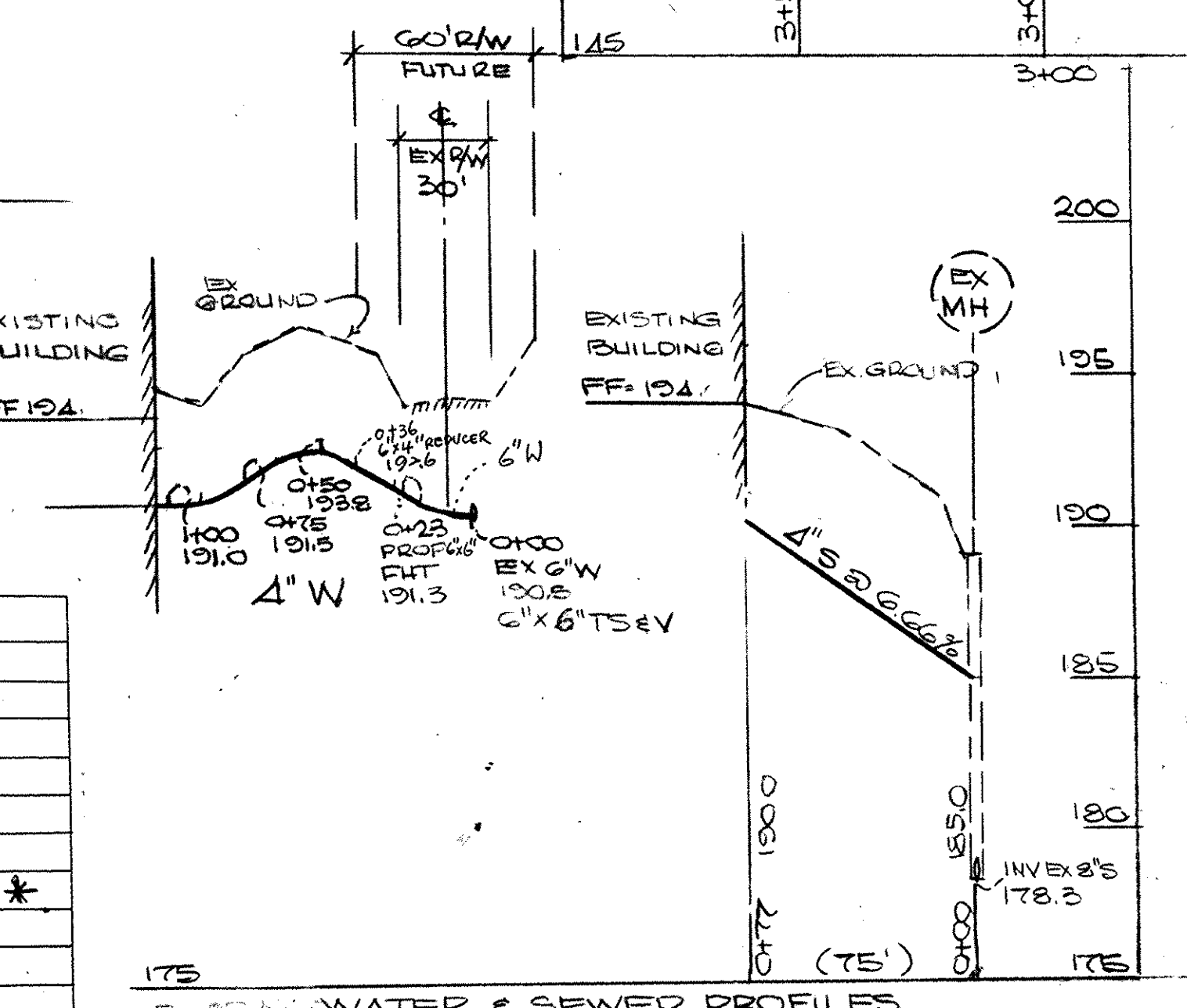
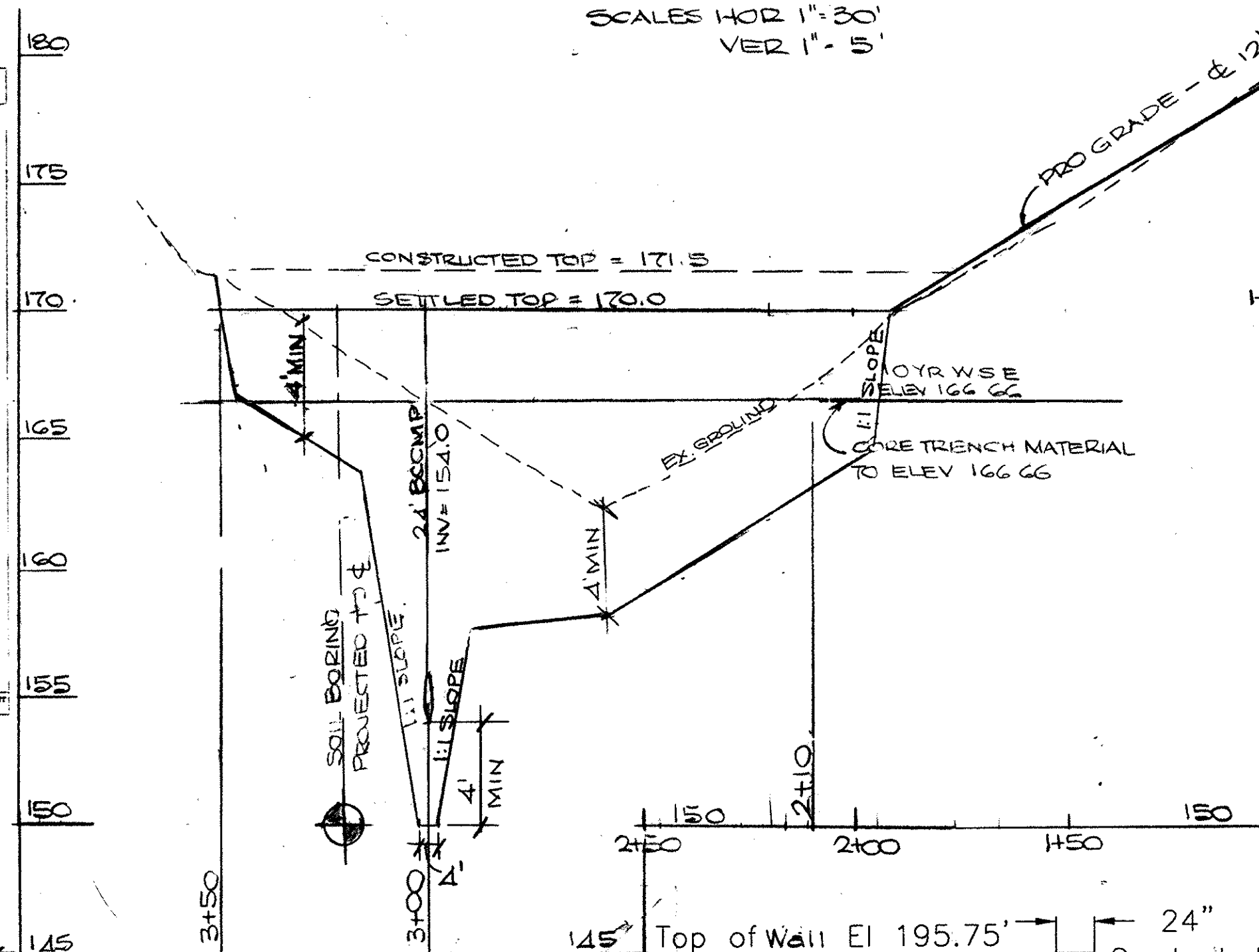
\* WIDTH = 2'-6"

SIZE	TYPE	CLASS	LENGTH
12"	HDPE		67'
21"	HDPE		27'
24"	BCCMP	IG GAGE	123'



PROFILE ACCESS ROAD & DAM

SCALES HOR 1" = 30'  
VER 1" = 5'



HANDICAPPED PARKING SIGN SPECIFICATIONS

I. Fine Sign:

Pursuant to Howard County Council Bill #45-93\* which established a \$98.00 fine for violating provisions for handicapped parking and provided for posting notifications of that fine, this specification describes the sign authorized for posting and the associated mounting detail.



Sign to utilize an aluminum blank 6" x 12" x 0.080 inch thick with two (2) single post mounting holes. The text and border shall be standard green to match the R7-8 reserved parking sign and the background shall be reflective white. The text shall be 3" characters.

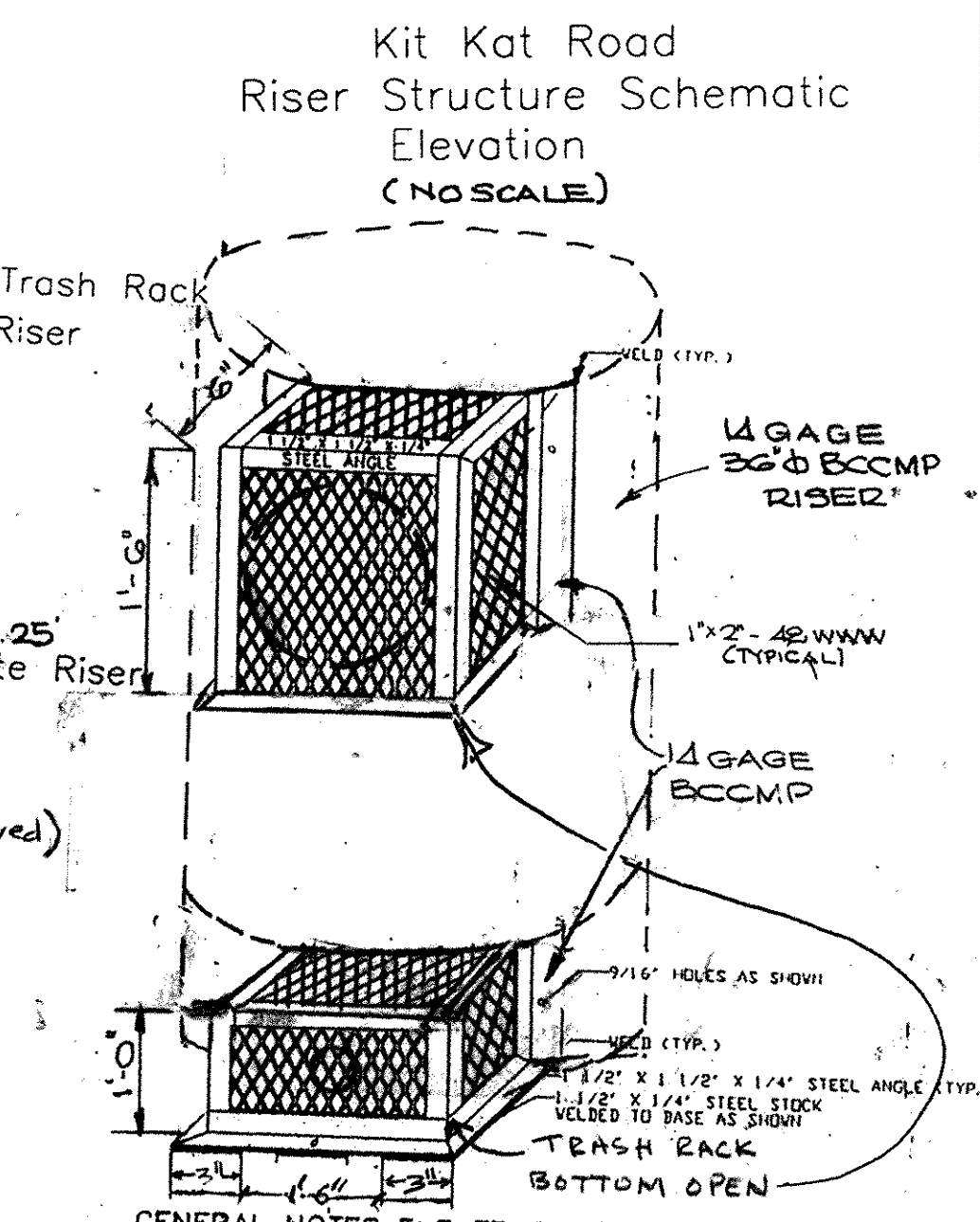
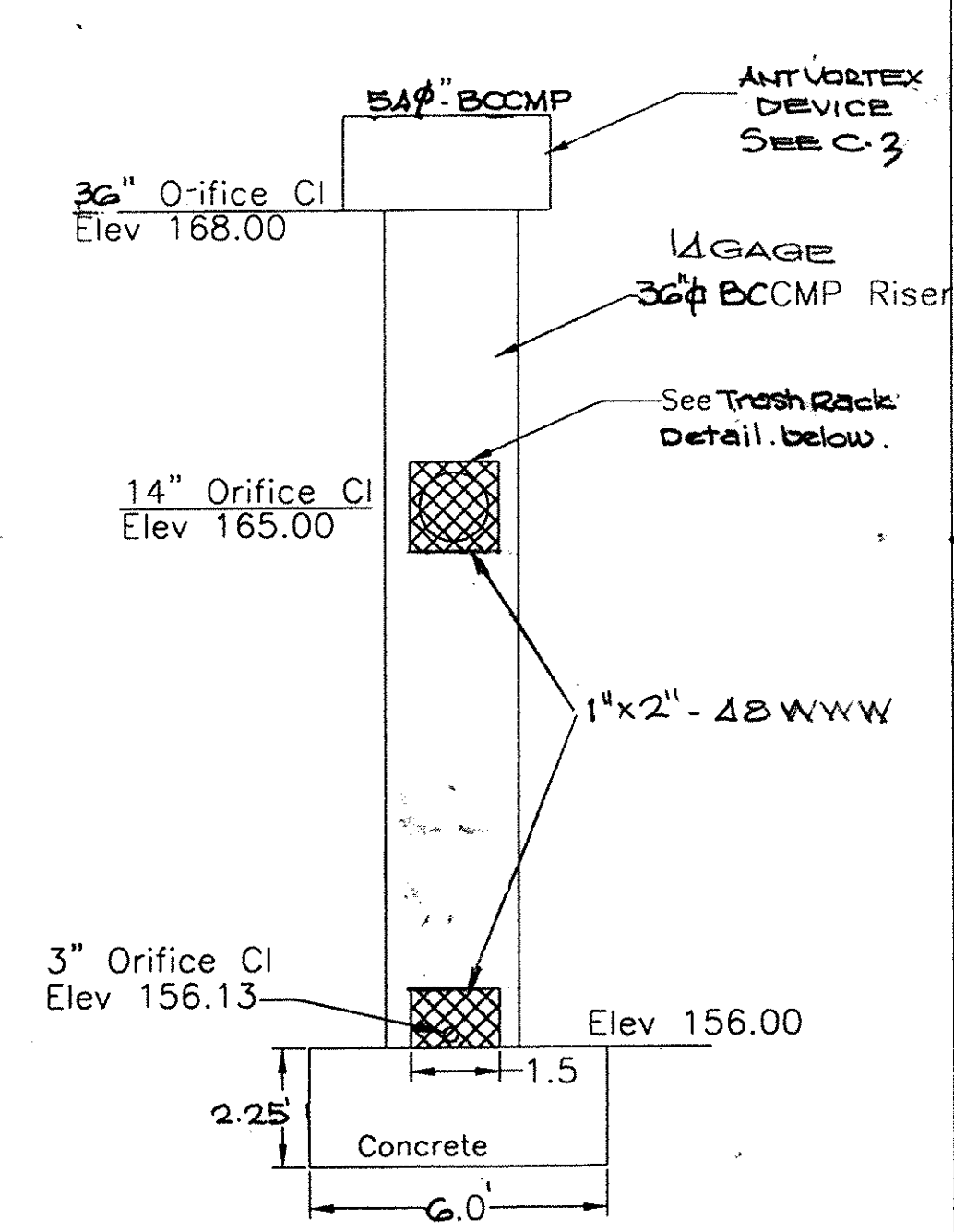
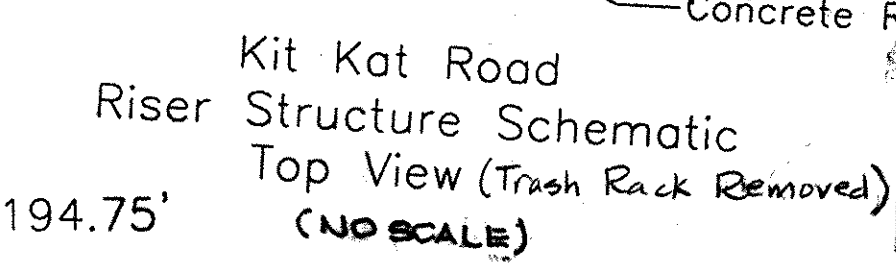
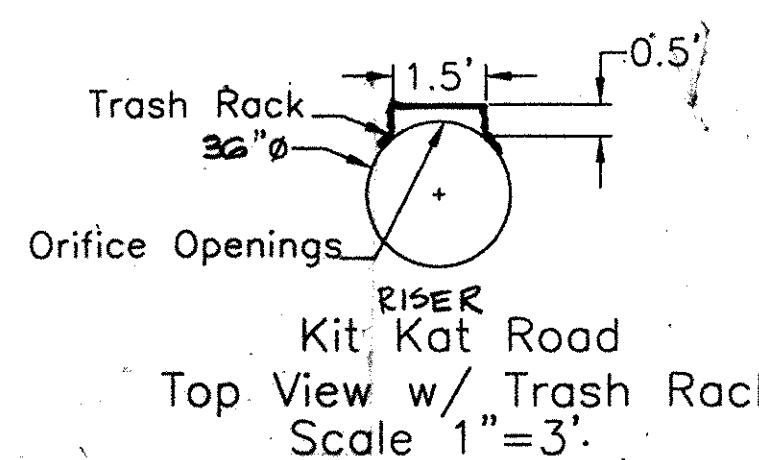
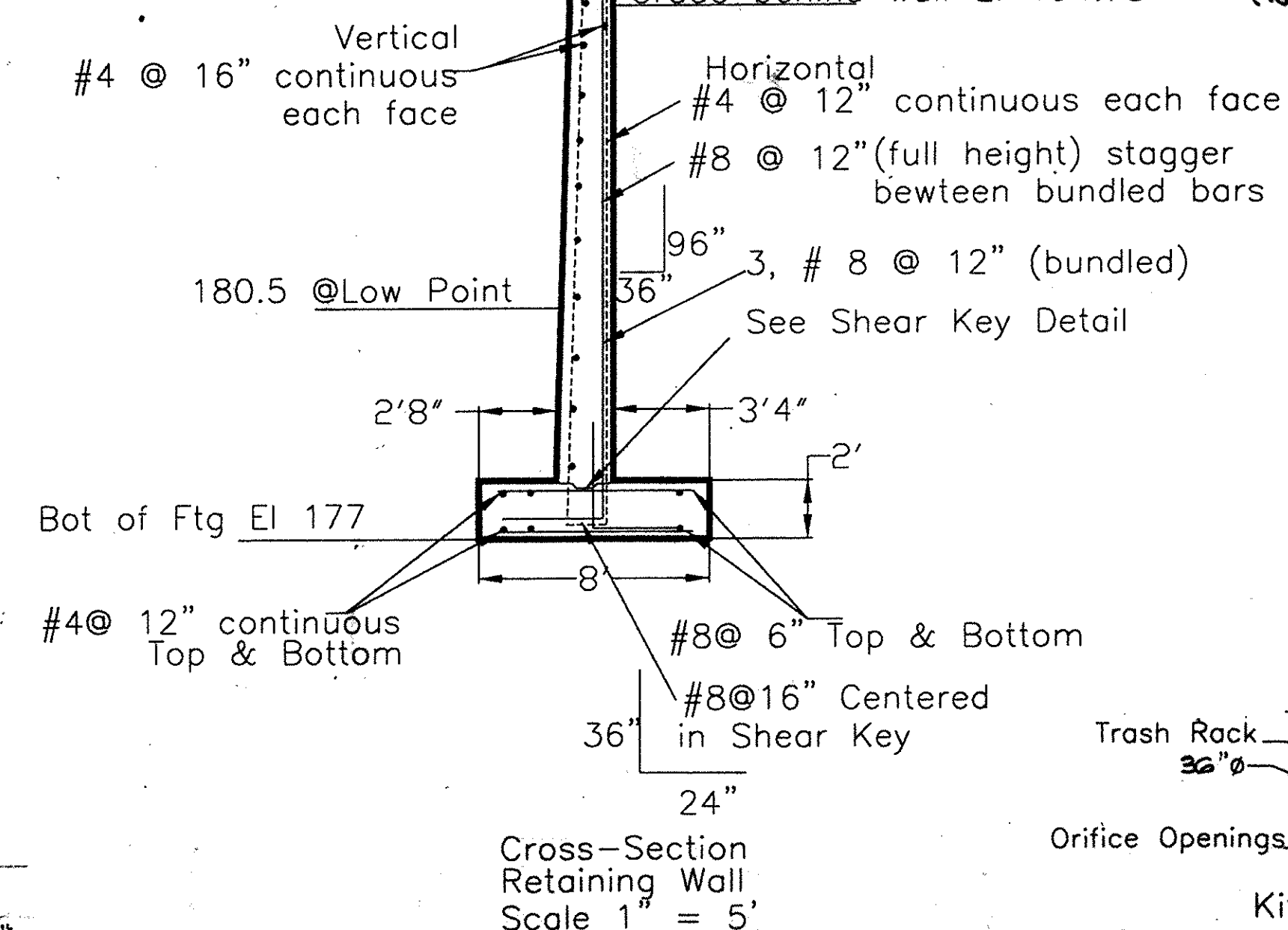
II. Mounting:

The above fine sign shall be mounted underneath the below R7-8 reserved parking sign. The bottom edge shall be no less than 7 feet above ground. If the sign is placed against a building, structure or other location where vehicle or pedestrian traffic is not obstructed, the bottom edge of the sign shall be at least 6 feet, but no more than 10 feet above ground. Because this is in addition to existing sign installations, some adjustment in height will be necessary.



Retaining Wall Notes

- Backfill must be SM or better soil.
- Provide 4" weeps @ 24" along entire length of wall.
- Soil @ bottom of footing must be tested by geotechnical engineer to confirm minimum bearing strength of 4,000 psf.
- f'c = 3,000 psi
- fy = 60 k.s.i.
- Provide 1/2" control joints (vertical) in exposed face of wall @ max. 30'0" spacing.
- Isolate wall from ramps with min. 1" expansion ft.
- Footing may be stepped @ design section 2 and again @ design section 3 to maintain minimum depth of 30" from top of ramp to bottom of footing.
- Vertical bundled bars at back face of wall may be reduced to 2 #8 bars @ design section 2 and to 1 #8 bar at design section.
- Traverse footing steel (@ top and bottom) may be changed to #8 @ 12" for design section #2 and #6 @ 12" for design section #3.
- Provide a vertical expansion joint, 1" @ the transition from design section #1 to design section #2.



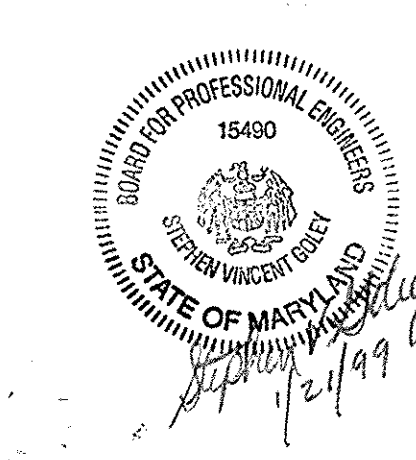
- GENERAL NOTES FOR TRASH RACK
- STEEL TO CONFORM TO ASTM A-36.
  - ALL SURFACES OF TRASH RACK(S) MUST BE HOT DIPPED GALVANIZED AFTER FABRICATION.
  - TRASH RACK(S) TO BE FASTENED TO WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK(S) TO BE REMOVABLE.
  - TRASH RACK(S) TO BE CENTERED OVER OPENING.
  - FABRICATOR MAY MODIFY COMPONENTS OF TRASH RACK FRAME TO IMPROVE CONSTRUCTIBILITY OF TRASH RACK. SHOP DRAWINGS SHOWING MODIFICATIONS MUST BE APPROVED BY HED/PMV PRIOR TO FABRICATION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 2/18/99  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE  
*[Signature]* 2/18/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*[Signature]* 2/18/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NOTES, PROFILES, AND DETAILS  
 SDP 98-113  
 PARTNERS QUALITY RECYCLING SERVICES, J.V.  
 TAX MAP: 43 PARCEL: 48  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

O'CONNELL & LAWRENCE, INC.  
 SURVEYORS, ENGINEERS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Oxley, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

DES.	DWN.	DATE	SCALE	PROJECT NO.	SHEET NO.
OCL	CADD	JAN., 1998	AS SHOWN	320-001	C-4 of 7



These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.  
*[Signature]* 2/18/99  
 USDA-Natural Resources Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
*[Signature]* 2/18/99  
 Howard Soil Conservation District Date

- HOWARD SOIL CONSERVATION DISTRICT  
 SEDIMENT CONTROL DISTRICT NOTES
1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits, Sediment Control Division prior to the start of any construction. (11-2-1995)
  2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the most current "WETLAND STANDARDS AND SPECIFICATIONS FOR SOIL PROTECTION AND RESTORATION", and revisions thereto.
  3. Following initial soil disturbance or disturbance, placement of temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
  4. All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Signage.
  5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 FLOOD PROTECTION AND OPERATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. For permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 57) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper reclamation and establishment of grasses.
  6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
  7. Site Disturbance:  
 Total Area of Site: 12.53 Acres  
 Area Disturbed: 2.70 Acres  
 Area to be roofed or paved: 1.86 Acres  
 Area to be vegetatively stabilized: 1.00 Acres  
 Total Disturbance: 5.56 Acres  
 Total Fill: 4252 Cu. Yds.  
 Office-Warehouse Area (1000 sq. ft.)
  8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
  9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
  10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other work of disturbance or grading. Once building or grading inspection approval may not be authorized until this initial approval by the inspection agency is made.
  11. Practices for the construction of utilities is limited to three pipe lengths or that which can be best filled and stabilized within one working day, whichever is shorter.
- 10/9/93

By the Developer:  
 "I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

*Richard Knox* 12/22/98  
 Signature of Developer Date  
 Print name below signature  
 RICHARD KNOX

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

*Stephen V. Goley* 1/22/99  
 Signature of Engineer Date  
 Print name below signature  
 STEPHEN V. GOLEY

FOR UTILITY WORK ONLY OR FOR OFF-SITE UTILITY WORK:

1. Place all excavated material on high side of trench.
  2. Only do as much work as can be done in one day so backfilling, final grading, seeding and mulching can occur.
  3. Any sediment control measures disturbed by construction will be repaired the same day.
- STOCKPILE NOTES
1. No stockpiling allowed on asphalt.
  2. All stockpiles left at the end of the day need to be stabilized until the next redistribution.

DISTURBED AREA QUANTITY

The total area to be disturbed shown on these plans has been determined to be approximately 138,988 sq. ft. and the total amount of excavation and fill as shown on these plans has been computed to approximately 4,259 cu. yds. of excavation and approximately 11,836 cu. yds. of fill.

*Stephen Goley* 1/21/99  
 NAME DATE

LEGEND

- EXISTING CONTOUR
- FINISHED CONTOUR
- FINISHED FLOOR ELEVATION - FIN FL: 19410
- SPOT ELEVATION
- CONC CURB
- SILT FENCE
- EAIRTH DIKE
- PROPOSED STORM DRAIN
- PROPOSED SEWER
- PROPOSED WATER
- BITUMINOUS PAVING
- DIRECTION OF DRAINAGE
- APPROX LIMITS OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- DRAINAGE DIVIDE

102  
 102  
 +93.0  
 SF  
 18" x 18" x 12" S.C.E.  
 18" x 18" x 12" S.C.E.

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

*Clayton Simmons* 2/1/99  
 Signature Date  
 HOWARD SOIL CONSERVATION DISTRICT

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

*Robert W. Zimm* 2/1/99  
 Signature Date  
 HOWARD SOIL CONSERVATION DISTRICT

Engineer's Certificate

"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."

*Stephen V. Goley* 1/21/99  
 Signature Date  
 STATE PROFESSIONAL ENGINEER  
 STATE OF MARYLAND  
 15490

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*John R. White* 2/12/99  
 Signature Date  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING

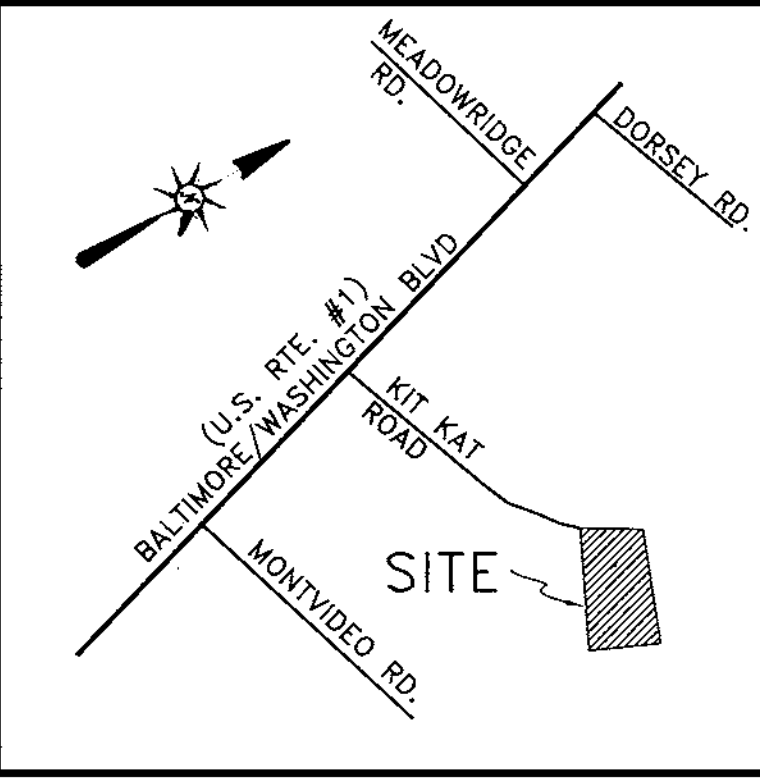
*Conrad Hambley* 2/12/99  
 Signature Date  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Mike Dammann* 2/12/99  
 Signature Date  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

EROSION & SEDIMENT CONTROL AND  
 PROPOSED DRAINAGE AREA PLAN / SDP-98-113  
 PARTNERS QUALITY RECYCLING SERVICES, J.V.  
 TAX MAP: 43 PARCEL: 48  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

O'CONNELL & LAWRENCE, INC.  
 ENGINEERS, SURVEYORS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 \* Fax: (301) 924-5872

DES. MJK	DWN. CADD	DATE OCT., 1998	SCALE: 1" = 50'	PROJECT NO. 320-001	SHEET NO. C-5 of 7
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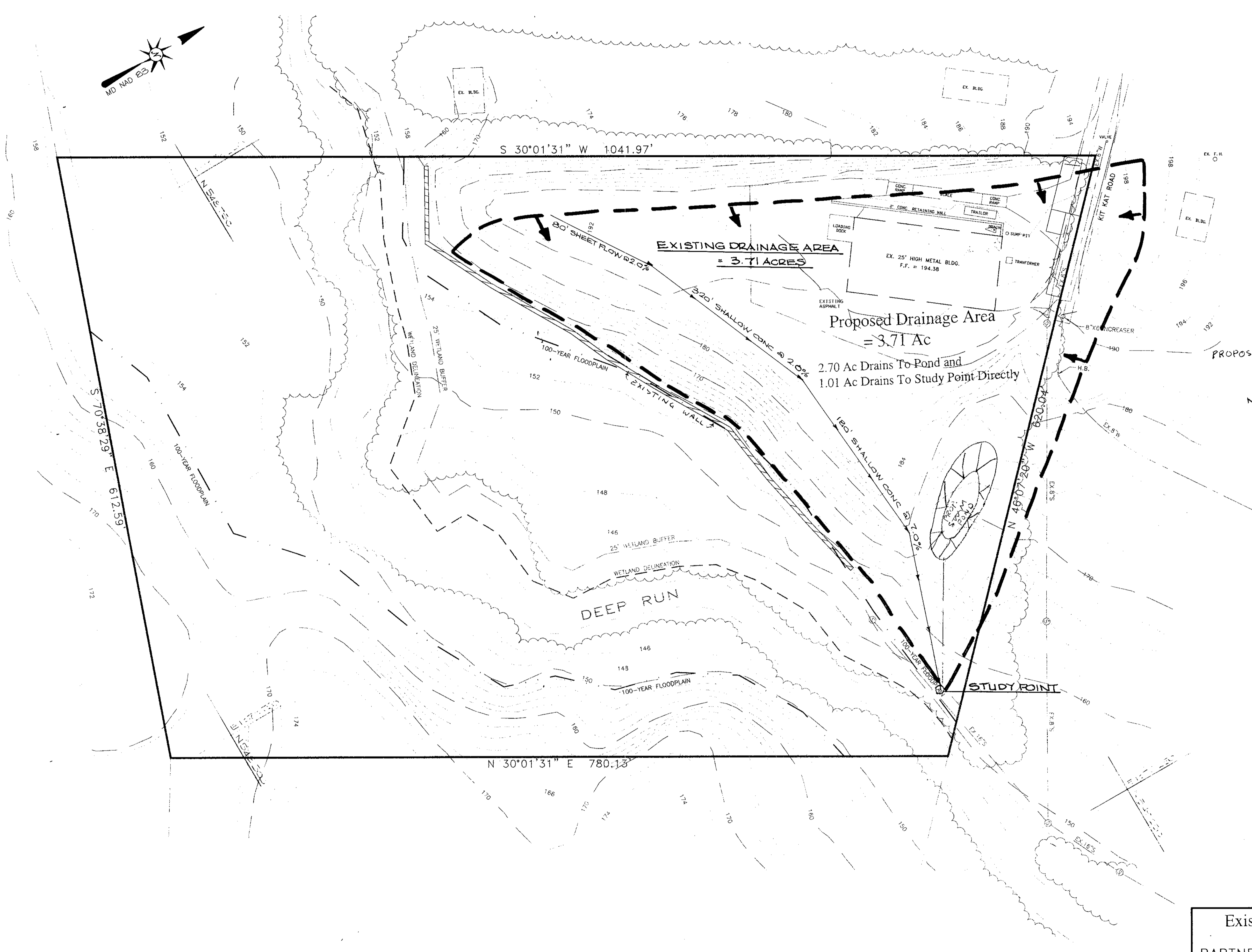
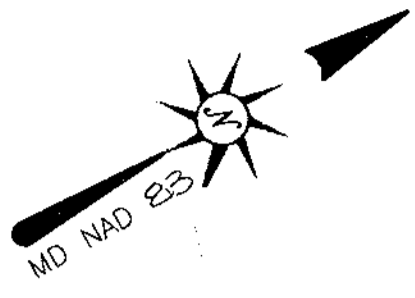
VICINITY MAP  
 SCALE: 1"=2000'

SEQUENCE OF CONSTRUCTION



Activity	Time (days)
1. Notify sediment control inspector 24 hours prior to start of construction.	2
2. Perform clearing and grubbing required for installation of pond and perimeter controls.	2
3. Install pond-and perimeter controls; inform sediment control inspector and obtain approval before proceeding further.	3
a. clear and grub	0.5
b. fine grade pond area	2
c. install riser	1
d. install barrel	1
e. install core trench	1
f. install anti-seep collar	1
g. block low orifice w/3" pipe plug	1
4. Complete all required cleaning and grubbing.	2
5. Complete rough grading for remainder of site.	2
6. Install utilities and block storm drain inlets unless otherwise noted on plan.	3
7. Finish site grading.	1
8. Complete building construction.	7
9. Complete paving and curb and gutter.	3
10. Complete final grading, stabilization, and landscaping.	1
11. Remove block from low flow orifice.	1
12. Clean and repair pond to design dimensions.	1
13. Notify sediment control inspector and obtain approval to remove sediment and erosion control.	1

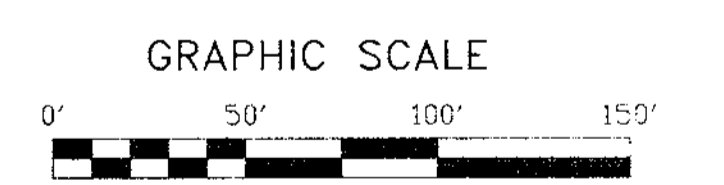
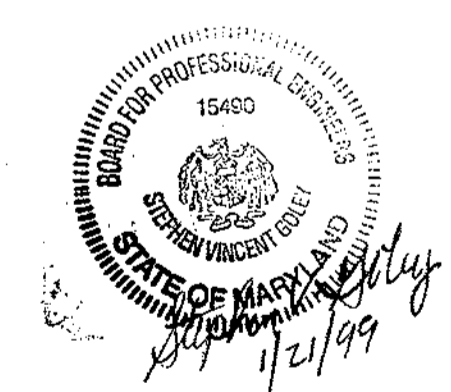


OWNER/DEVELOPER  
 SOIL SAFE INC.  
 4600 E. FAYETTE STREET  
 BALTIMORE, MD 21224  
 (410) 327-5753



**LEGEND**

PROPOSED & EXISTING DRAINAGE DIVIDE   
T.C. PATH   
NOTE: ENTIRE SITE IN TYPE "C" HYDROLOGIC SOILS

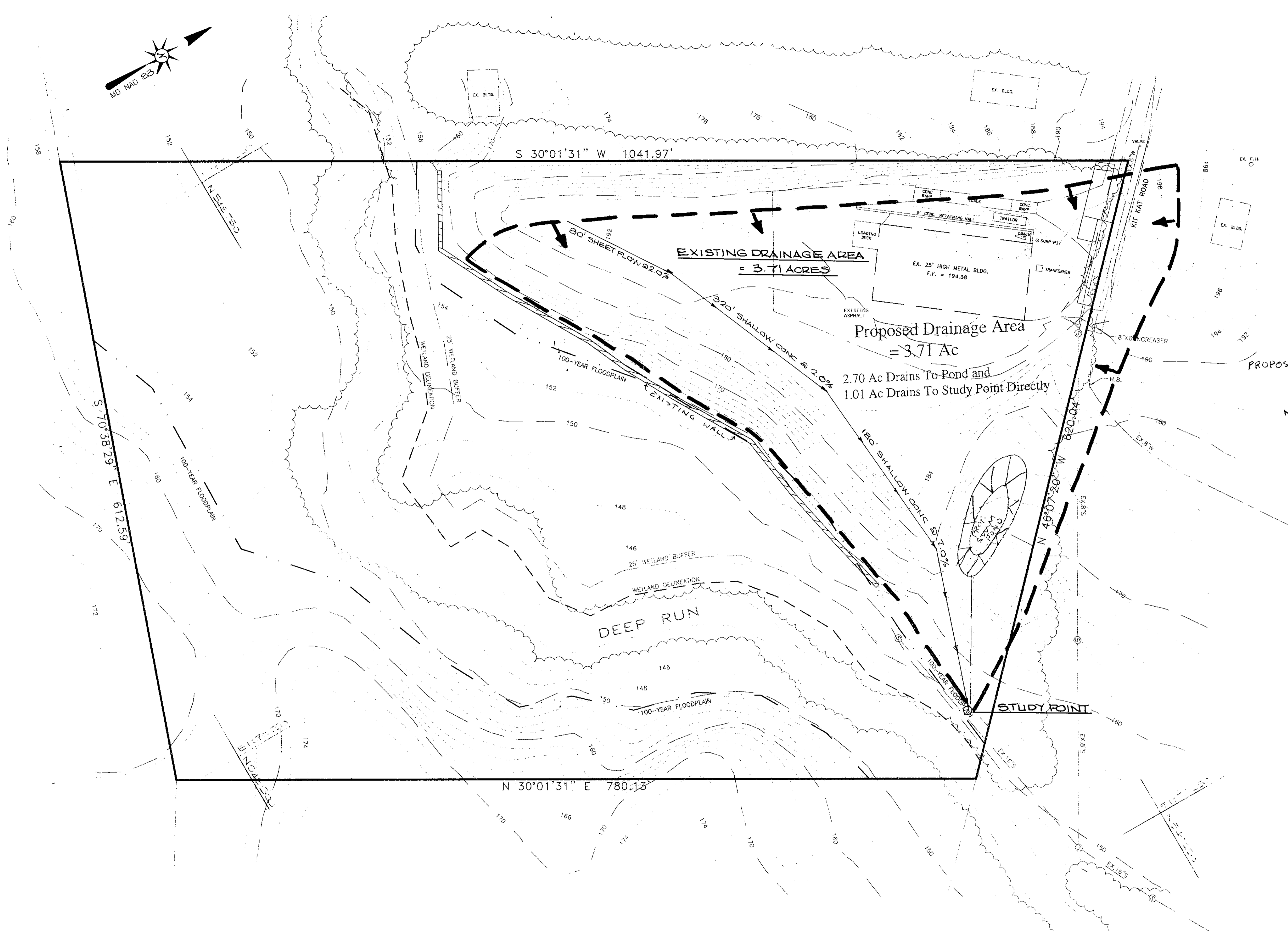
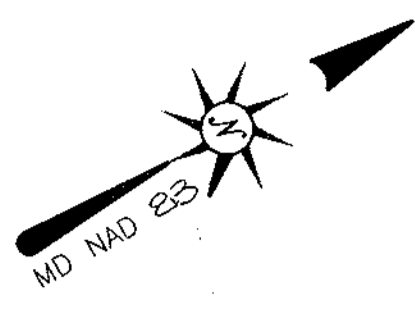


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 2/12/99  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE  
*[Signature]* 2/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*[Signature]* 2/15/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Existing & Proposed Drainage Area Plan  
SDP-98-113  
PARTNERS QUALITY RECYCLING SERVICES, J.V.  
TAX MAP: 43 PARCEL: 48  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

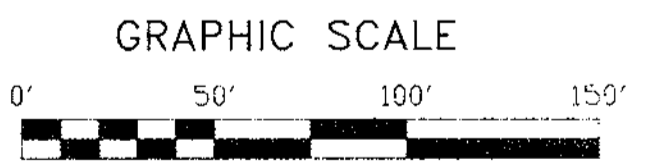
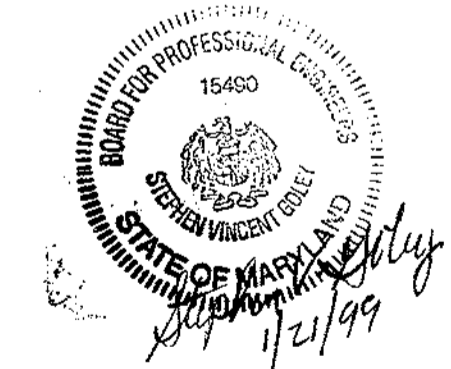
**O'CONNELL & LAWRENCE, INC.**  
ENGINEERS, SURVEYORS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 \* Fax: (301) 924-5872

DES. MJK	DWN. CADD	DATE OCT., 1998	SCALE: 1" = 50'	PROJECT NO. 320-001	SHEET NO. C-7 of 7
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**LEGEND**

- PROPOSED & EXISTING DRAINAGE DIVIDE
- TC PATH
- NOTE: ENTIRE SITE IN TYPE "C" HYDROLOGIC SOILS



Existing & Proposed Drainage Area Plan  
 SDP-98-113  
 PARTNERS QUALITY RECYCLING SERVICES, J.V.  
 TAX MAP: 43 PARCEL: 48  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 2/10/99  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE  
*[Signature]* 2/12/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*[Signature]* 2/11/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**  
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 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

DES. MJK	DWN. CADD	DATE OCT., 1998	SCALE: 1" = 50'	PROJECT NO. 320-001	SHEET NO. C-70+7
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**GENERAL NOTES**

- TOTAL SITE AREA: 545,929 S.F. OR 12.5328 AC.
- DEED REFERENCE: LIBER 2201 FOLIO 032
- TAX MAP: 43, PARCEL: 48
- SOILS MAP: 30 AND 31
- ELECTION DISTRICT: NO. 1, CENSUS TRACT: NO. 6012
- PROPERTY ZONED: M-2
- 100 YEAR FLOODPLAIN BY DEVELOPMENT CONSULTANTS GROUP, DATED AUGUST, 1991.
- WETLANDS STUDY BY THE LAND PLANNING AND DESIGN GROUP, DATED APRIL 16, 1998.
- FIELD RUN TOPOGRAPHY BY O'CONNELL & LAWRENCE, INC., AUGUST, 1991 AND OCTOBER, 1997.
- AREA OF BUILDING: 11,250 S.F.
- AREA OF PAVING: 81,021 S.F.
- SITE AND BUILDING TO BE USED FOR A RECYCLING TRANSFER STATION.
- WATER AND SEWER UTILITIES ARE PRIVATE.
- THERE ARE NO CEMETERIES OR BURIAL GROUNDS ON SITE.
- STORMWATER MANAGEMENT FACILITIES SHOWN HEREON TO BE PRIVATELY OWNED AND MAINTAINED.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- NO TRAFFIC STUDY REQUIRED FOR THIS PROJECT.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 43B2 AND 43B6 WERE USED FOR THIS PROJECT.
- WASTE MANAGEMENT TO BE INTERIOR OF THE BUILDING.
- FOR SEWER INFORMATION, SEE SHEET C-3.
- THE FOLLOWING WAIVERS HAVE BEEN APPROVED BY THE DEPT. OF PLANNING & ZONING, DEVELOPMENT ENGINEERING DIVISION:
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.6.F.1, APPROVED 4/9/98, TO INCREASE SIDE SLOPE OF POND TO 2:1.
  - CHECKLIST ITEM VIII.F.4.c.13, APPROVED 4/9/98, TO ALLOW OF ALUMINIZED CORRUGATED METAL PIPE (AL-CMP) RISER, BARREL, AND ANTI-SEEP COLLAR FOR THE STORMWATER MANAGEMENT FACILITY.
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.4.1, APPROVED 6/18/98, TO DECREASE THE REQUIRED 20-FOOT SETBACK OF A STORMWATER MANAGEMENT FACILITY TO A PROPERTY LINE.
  - DESIGN MANUAL, VOLUME III, SECTION 2.2.3 AND FIGURE 2.18, APPROVED 6/18/98, TO ALLOW A SIMPLE RADIUS OF 45- FEET ON A COMMERCIAL ENTRANCE FOR A WB-50 VEHICLE. "DO NOT ENTER" SIGNS MUST BE INSTALLED IN ACCORDANCE WITH MUTCD STANDARDS.
  - DESIGN MANUAL, VOLUME I, TABLE 2.01, APPROVED 9/18/98, REDUCING THE STANDARD THAT NON-RESIDENTIAL ROADS HAVE A RIGHT-OF-WAY OF 60- FEET. THE DEVELOPER MUST INSTALL A GATED FENCE AT THE NORTHERN ENTRANCE AT LEAST 40- FEET FROM THE EXISTING CENTERLINE OF KIT KAT ROAD. THE DEVELOPER SHALL CONSTRUCT ALL REQUIRED PUBLIC IMPROVEMENTS AS SHOWN ON SDP-98-113.
- WAIVER PETITION WP-99-19, APPROVED 9/1/98, TO WAIVE SECTION 16.156(g) TO REACTIVATE SDP-98-113, SUBJECT TO THE FOLLOWING CONDITIONS:
  - PROVIDE AND CONVEY RIGHT-OF-WAY WIDENING TO 30- FEET FROM CENTERLINE OF KIT KAT ROAD.
  - PROVIDE AND CONVEY A CONTINUATION OF THE RIGHT-OF-WAY IN AN EASTERLY DIRECTION TO 15- FEET FROM THE EXTENDED CENTERLINE OF KIT KAT ROAD.
  - PROVIDE A 15- FOOT WIDE PUBLIC ACCESS EASEMENT TO HOWARD COUNTY.
  - THE OWNER SHALL SUBMIT A REVISED SDP APPLICATION FOR SDP-98-113, WITH A FEE EQUAL TO 1/2 OF THE COMPUTED PROCESSING FEE BY 10/16/98.
  - ALL FENCING AND GATES MUST BE A MINIMUM M-2 SETBACK OF 10- FEET FROM THE PROPOSED RIGHT-OF-WAY WIDENING AND PUBLIC ACCESS EASEMENT.

**SITE ANALYSIS**

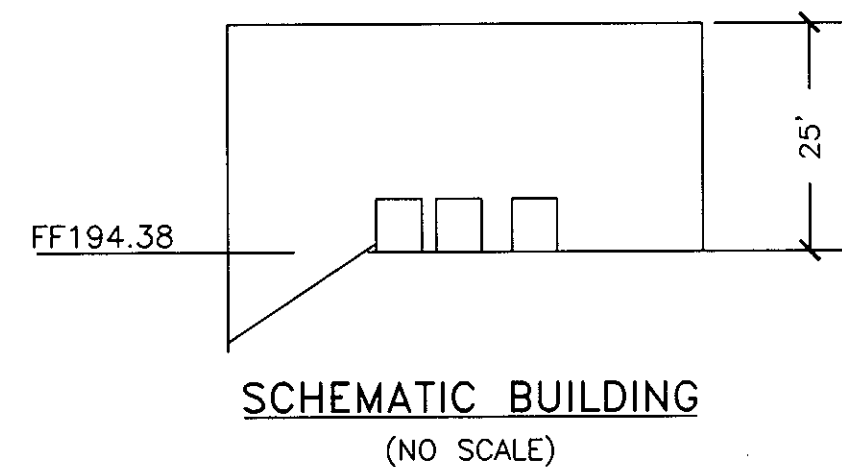
- AREA OF BUILDING = 11,250 S.F. OR 0.2583 AC.
- AREA OF PAVING = 81,021 S.F. OR 1.86 AC.
- AREA OF GREEN SPACE = 419,893 S.F. OR 9.4328 AC.
- TOTAL IMPERVIOUS AREA = 81,021 S.F. OR 1.86 AC.
- GROSS TRACT AREA = 545,929 S.F. OR 12.5328 AC.

**PARKING REQUIREMENTS**

- EMPLOYEES PER SHIFT = 5
- NUMBER OF STANDARD SPACES REQ'D = 5
- PROV'D = 10
- NUMBER OF HANDICAPPED SPACES REQ'D = 1
- PROV'D = 1
- TOTAL SPACES SHOWN = 11

ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATION, SECTION 134

NO.	REVISION	DATE
1	Add Scale House 3" SHC & 1" WHC HC RAMP	5/4/99



Storm Freq.	Existing Runoff (cfs) (TR-55)	Proposed Runoff (cfs) (TR-20)	SWM WSE (ft)	SWM Storage Provided (Ac-ft)	Clogged Runoff (SWM) (cfs)	Clogged WSE (ft)	Clogged Storage Provided (Ac-ft)
2Yr	2	1.49	161.62	0.19	3.38	165.65	0.57
10 Yr	10	3.25	164.57	0.44	6.56	166.66	0.69
100 Yr	18	9.80	166.03	0.61	8.50	167.74	0.84

**SHEET INDEX**

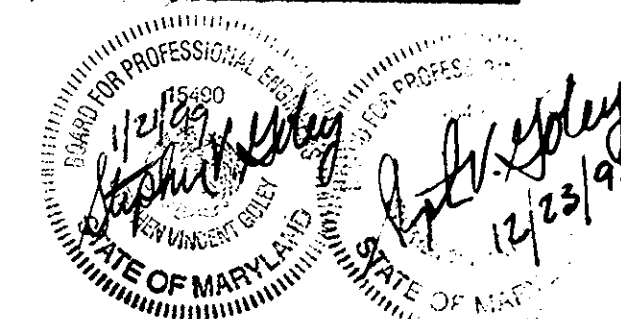
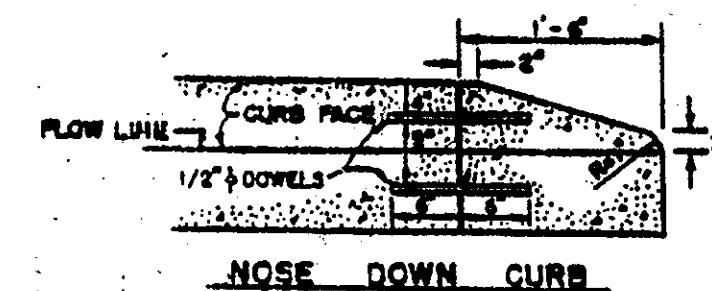
- C-1 SITE DEVELOPMENT PLAN
- C-2 SITE LAYOUT & DETAILS
- C-3 SITE DETAILS
- C-4 NOTES, PROFILES & DETAILS
- C-5 EROSION & SEDIMENT CONTROL AND PROPOSED DRAINAGE AREA PLAN
- C-6 FOREST CONSERVATION & LANDSCAPE PLAN
- C-7 EXISTING & PROPOSED DRAINAGE AREA PLAN

**NOTE 1**

Surveyor's Certificate  
I hereby certify that the limit of the Howard County maintained Kit Kat Road (2140 feet from US Route 1) is shown thus \* on this plan.

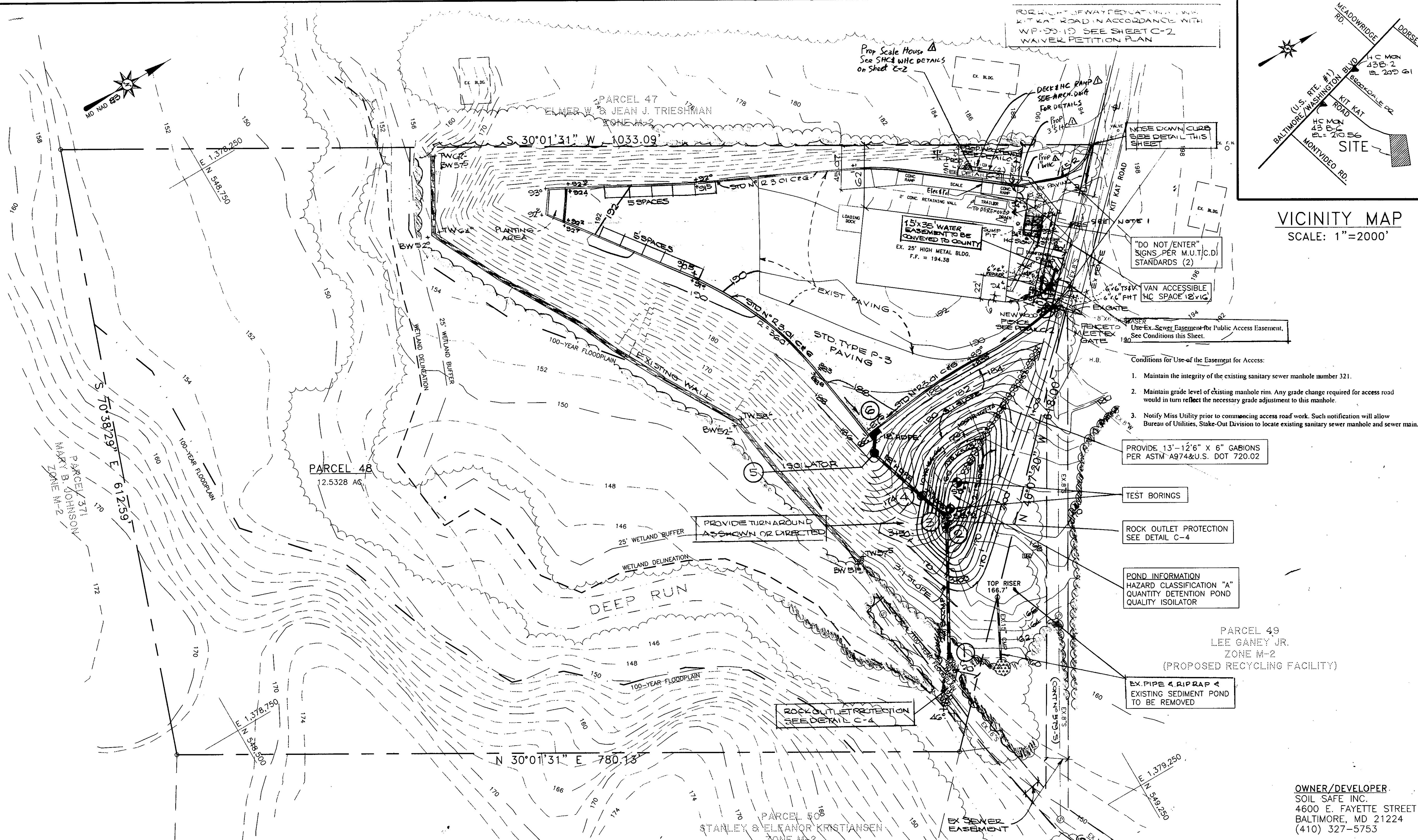
Date 12-21-99  
12-22-98

Jefferson D. Lawrence  
Professional Surveyor, MD. Reg. #5216



APPROVED: DEPARTMENT OF PLANNING AND ZONING

2/18/99  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING  
2/18/99  
CHIEF, DIVISION OF LAND DEVELOPMENT  
2/18/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION



VICINITY MAP  
SCALE: 1"=2000'

- Conditions for Use of the Easement for Access:
- Maintain the integrity of the existing sanitary sewer manhole number 321.
  - Maintain grade level of existing manhole rim. Any grade change required for access road would in turn reflect the necessary grade adjustment to this manhole.
  - Notify Miss Utility prior to commencing access road work. Such notification will allow Bureau of Utilities, Stake-Out Division to locate existing sanitary sewer manhole and sewer main.

PROVIDE 13'-12'6" X 6" GABIONS PER ASTM A974&U.S. DOT 720.02

TEST BORINGS

ROCK OUTLET PROTECTION SEE DETAIL C-4

POND INFORMATION HAZARD CLASSIFICATION "A" QUANTITY DETENTION POND QUALITY ISOLATOR

EX. PIPE & RIPRAP < EXISTING SEDIMENT POND TO BE REMOVED

OWNER/DEVELOPER:  
SOIL SAFE INC.  
4600 E. FAYETTE STREET  
BALTIMORE, MD 21224  
(410) 327-5753

PARCEL	STREET ADDRESS
48	7170 KIT KAT ROAD

SUBDIVISION NAME PARTNERS QUALITY RECYCLING SERVICES, J.V.				SEC./AREA	PARCEL
LIBER/FOLIO	BLOCK	ZONE	TAX MAP	ELECT/DIST	CENSUS TR
2201/032	11	M-2	43	1st	6012
WATER CODE	301	SEWER CODE	2370000		

**SITE DEVELOPMENT PLAN**  
**SDP-98-113**  
**PARTNERS QUALITY RECYCLING SERVICES, J.V.**  
TAX MAP: 43 PARCEL: 48  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**O'CONNELL & LAWRENCE, INC.**  
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DES. MJK	OWN. CADD	DATE OCT., 1998	SCALE: 1" = 50'	PROJECT NO. 320-001	SHEET NO. C-1 of 7
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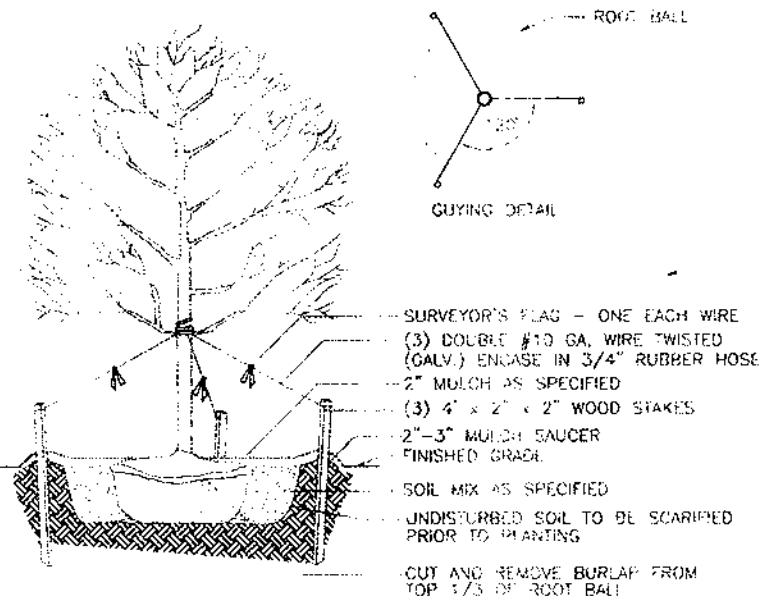


FOREST CONSERVATION WORKSHEET

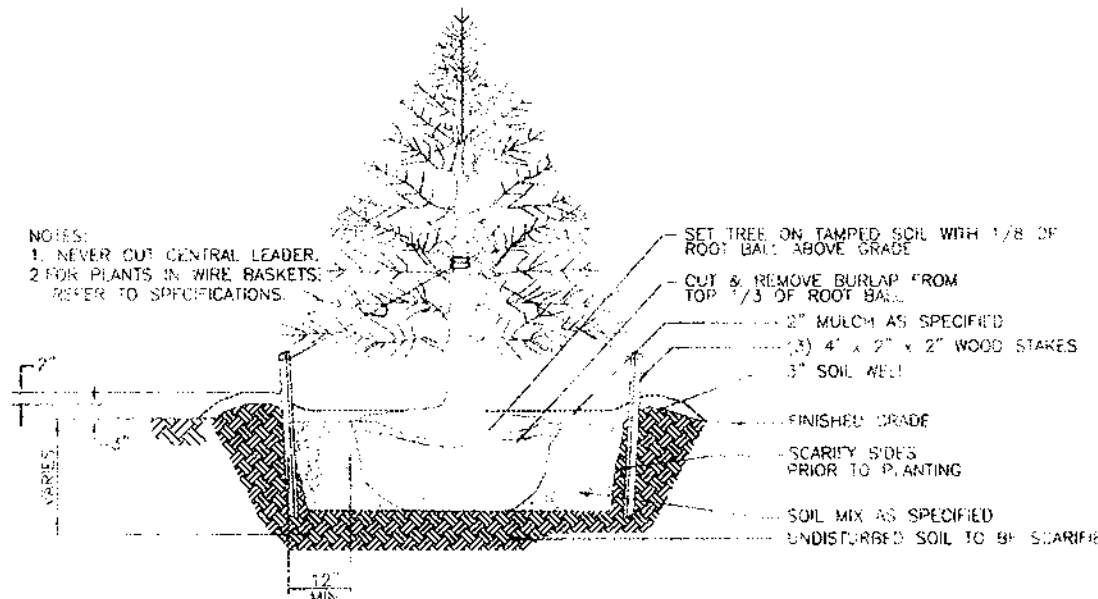
ACRES

- I. BASIC SITE DATA
- GROSS SITE AREA 12.5
  - AREA W/IN 100-YEAR FLOODPLAIN 5.8
  - AREA W/IN AG. USE OR PRES. PAR. 0
  - NET TRACT AREA 6.7
  - LAND USE CATEGORY: C/1/0
- II. INFORMATION FOR CALCULATIONS
- A. NET TRACT AREA 6.7
  - B. REFORESTATION THRESHOLD (15% x A) 1.0
  - C. AFFORESTATION MINIMUM (15% x A) 1.0
  - D. EXISTING FOREST ON NET TRACT AREA 2.7
  - E. FOREST AREAS TO BE CLEARED 0.1
  - F. FOREST AREAS TO BE RETAINED 2.6

NO FURTHER CALCULATIONS NEEDED. FOREST AREA RETAINED EXCEEDS THE REFORESTATION AND AFFORESTATION THRESHOLDS



TYPICAL TREE PLANTING



TYPICAL EVERGREEN TREE PLANTING

PLANT LIST

Qty.	Plant Name	Size / Cal.	Notes
10	Acer rubrum 'October Glory'	2-1 1/2' Gal.	Substitute credit for 7 Prop. Red Maples
1	Cedrus deodara	6-8' B&B	Shade Tree
1	Pyrus Calleryana 'Aristocrat'	1 1/2-2' Gal.	B&B Shade Tree
1	Aristocrat Pear	1 1/2-2' Gal.	B&B Shade Tree
1	Acer platanoides 'Crimson King'	1 1/2' Gal.	B&B Shade Tree
1	Cornus Florida	5-6' ht. Cont.	Shrub
1	Flowering Dogwood	1/2-1' Cal.	B&B Ornamental Tree
6	Viburnum	5-6' ht. Cont.	Shrub
8	Arborvitae	2-2 1/2' ht. Cont.	Shrub
8	Yew	2-2 1/2' ht. Cont.	Shrub
1	Rosa Rugosa	12" Spr. Cont.	Shrub

SCHEDULE A PERIMETER LANDSCAPE EDGE

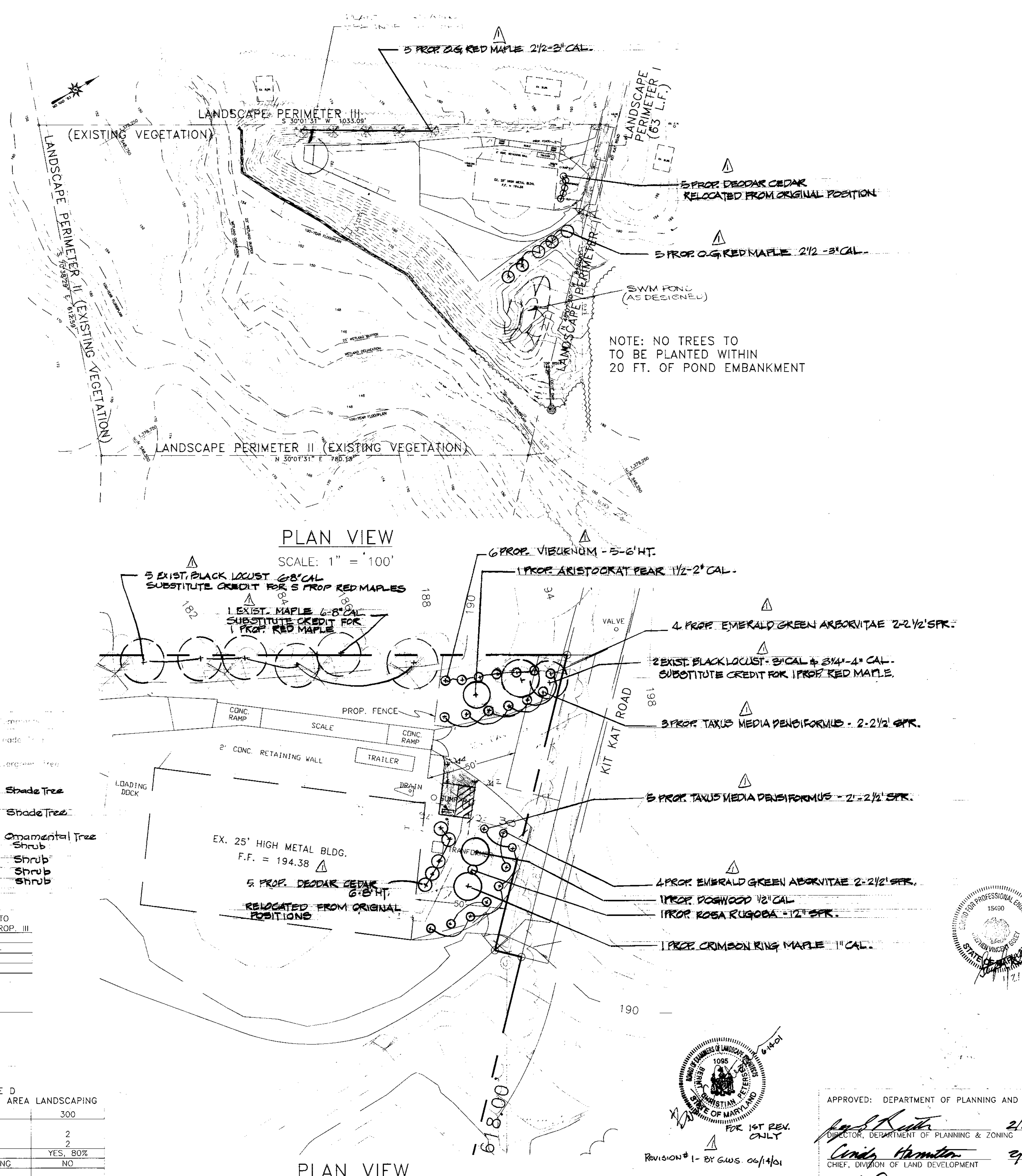
CATEGORY	ADJACENT TO ROADWAYS I	ADJACENT TO PERIMETER PROP. II	ADJACENT TO PERIMETER PROP. III
LANDSCAPE TYPE	B	A	A
LINEAR FEET OF PERIMETER	63 L.F.	1,950 L.F.	1,042 L.F.
CREDIT FOR EX. VEGETATION	NO	1,590 L.F.	370 L.F.
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO
NUMBER OF PLANTS REQUIRED			
SHADE TREES	1	6	11
EVERGREEN TREES	1	-	-
SHRUBS	-	-	-
NUMBER OF PLANTS PROVIDED			
SHADE TREES	1	6	11
EVERGREEN TREES	1	-	-
OTHER TREES (2:1 SUB.)	-	-	-
SHRUBS (10:1 SUB.)	-	-	-

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

CATEGORY	ADJACENT TO ROADWAYS I	ADJACENT TO PERIMETER PROP. II	ADJACENT TO PERIMETER PROP. III
LANDSCAPE TYPE	B	A	A
LINEAR FEET OF PERIMETER	63 L.F.	1,950 L.F.	1,042 L.F.
CREDIT FOR EX. VEGETATION	NO	1,590 L.F.	370 L.F.
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO
NUMBER OF PLANTS REQUIRED			
SHADE TREES	1	6	11
EVERGREEN TREES	1	-	-
SHRUBS	-	-	-
NUMBER OF PLANTS PROVIDED			
SHADE TREES	1	6	11
EVERGREEN TREES	1	-	-
OTHER TREES (2:1 SUB.)	-	-	-
SHRUBS (10:1 SUB.)	-	-	-

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	11
NUMBER OF TREES REQUIRED (1/9)	2
NUMBER OF TREES PROVIDED	
SHADE TREES	1
OTHER TREES (2:1 SUB.)	2



PLAN VIEW

SCALE: 1" = 100'

PLAN VIEW

SCALE: 1" = 30'

NOTE: NO TREES TO BE PLANTED WITHIN 20 FT. OF POND EMBANKMENT

NOTES:

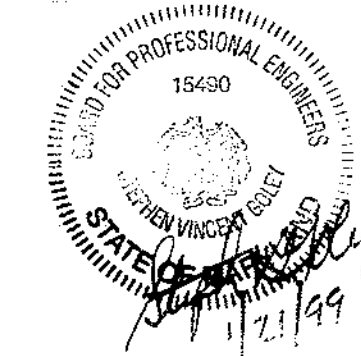
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,750.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN AND SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME: *Richard Kuef* DATE: 12/22/98

REVISED-



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*James B. Kuef* 2/18/99  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE  
*Chris Hamilton* 2/12/99  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Chris Hamilton* 2/16/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FOREST CONSERVATION & LANDSCAPE PLAN  
SDP-98-113  
PARTNERS QUALITY RECYCLING SERVICES, J.V.  
TAX MAP: 43 PARCEL: 48  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

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DES.	DWN.	DATE	SCALE	PROJECT NO.	SHEET NO.
MJK	CADD	OCT., 1998	AS SHOWN	320-001	C-6 of 7

ISOLATER SIZING

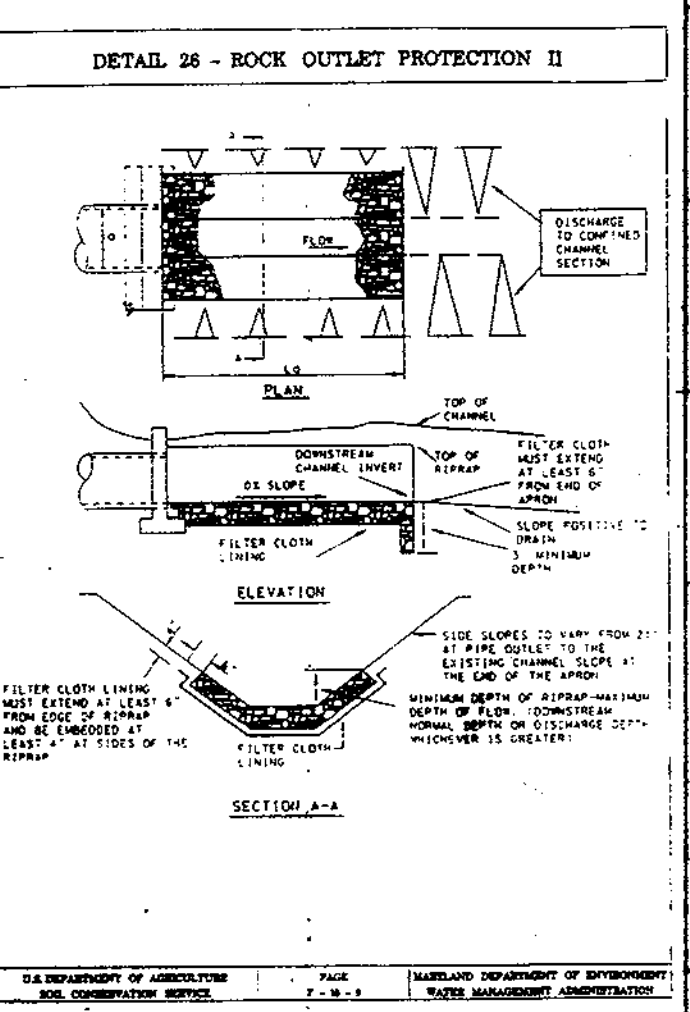
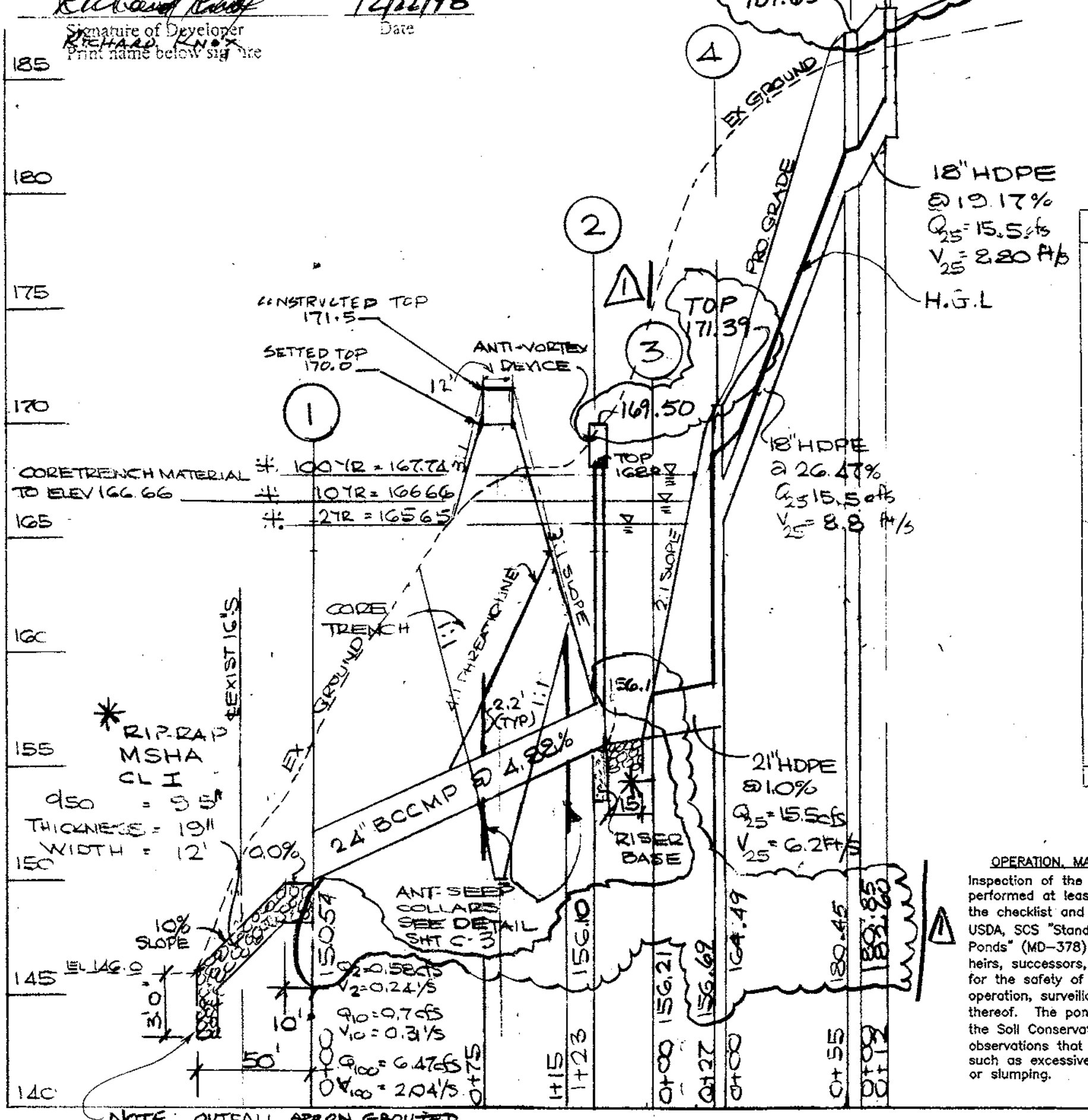
MODEL	INSERT TYPE	FALL ACROSS INSERT in. (mm)	MAX. PIPE SIZE in. (mm)	TOTAL CAPACITY Gal (Liters)	OIL* HOLDING CAPACITY Gal (Liters)	SEDIMENT* HOLDING CAPACITY cu. ft. (cu. m)	TREATABLE FLOWRATE gfs (l/s)	TREATABLE ACREAGE acres (ha)	MAX.** BYPASS FLOWRATE cfs (l/s)	SEDIMENT REMOVAL *** (%)
ISO1000	1	4.88 (124)	18 (457)	1000 (3785)	300 (1135)	67 (1.90)	64 (18)	1.41 (.57)	16 (453)	66.16
ISO1500	1	4.88 (124)	18 (457)	1500 (5680)	300 (1135)	134 (3.80)	64 (18)	1.41 (.57)	16 (453)	70.93
ISO1500	2	6.5 (165)	24 (610)	1500 (5680)	500 (1895)	107 (3.03)	1.30 (36)	2.90 (1.18)	34.4 (974)	61.62
ISO2000	1	4.88 (124)	18 (457)	2000 (7570)	300 (1135)	201 (5.70)	64 (18)	1.41 (.57)	16 (453)	74.31
ISO2000	2	6.5 (165)	24 (610)	2000 (7570)	500 (1895)	174 (4.93)	1.30 (36)	2.90 (1.18)	34.4 (974)	64.16
ISO3000	1	4.88 (124)	18 (457)	3000 (11355)	300 (1135)	308 (8.72)	64 (18)	1.41 (.57)	16 (453)	79.08
ISO3000	2	6.5 (165)	24 (610)	3000 (11355)	500 (1895)	241 (6.83)	1.30 (36)	2.90 (1.18)	34.4 (974)	68.93
ISO3000	3	9.75 (248)	36 (915)	3000 (11355)	800 (3028)	147 (4.16)	3.59 (101)	7.98 (3.25)	101.2 (2866)	57.51
ISO4000	2	6.5 (165)	24 (610)	4000 (15140)	500 (1895)	361 (10.22)	1.30 (36)	2.90 (1.18)	34.4 (974)	72.31
ISO4000	3	9.75 (248)	36 (915)	4000 (15140)	800 (3028)	281 (7.96)	3.59 (101)	7.98 (3.25)	101.2 (2866)	59.77
ISO5000	3	9.75 (248)	36 (915)	5000 (18925)	900 (3407)	401 (11.36)	3.59 (101)	7.98 (3.25)	101.2 (2866)	61.52
ISO6000	3	9.75 (248)	36 (915)	6000 (22100)	900 (3407)	535 (15.15)	3.59 (101)	7.98 (3.25)	101.2 (2866)	62.95
ISO7500	3	9.75 (248)	36 (915)	7500 (28387)	900 (3407)	669 (18.95)	3.59 (101)	7.98 (3.25)	101.2 (2866)	64.16

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

*Stephen V. Doherty*  
Signature of Engineer  
Date: 1/22/99

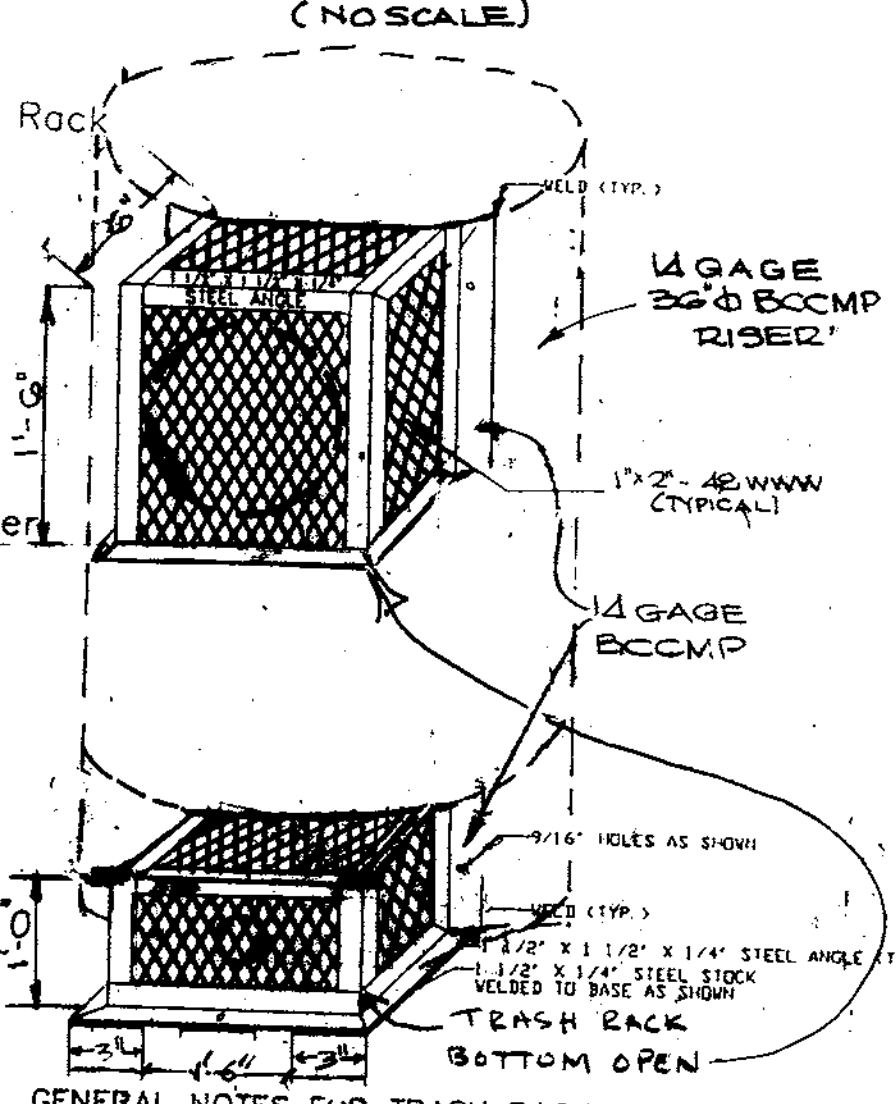
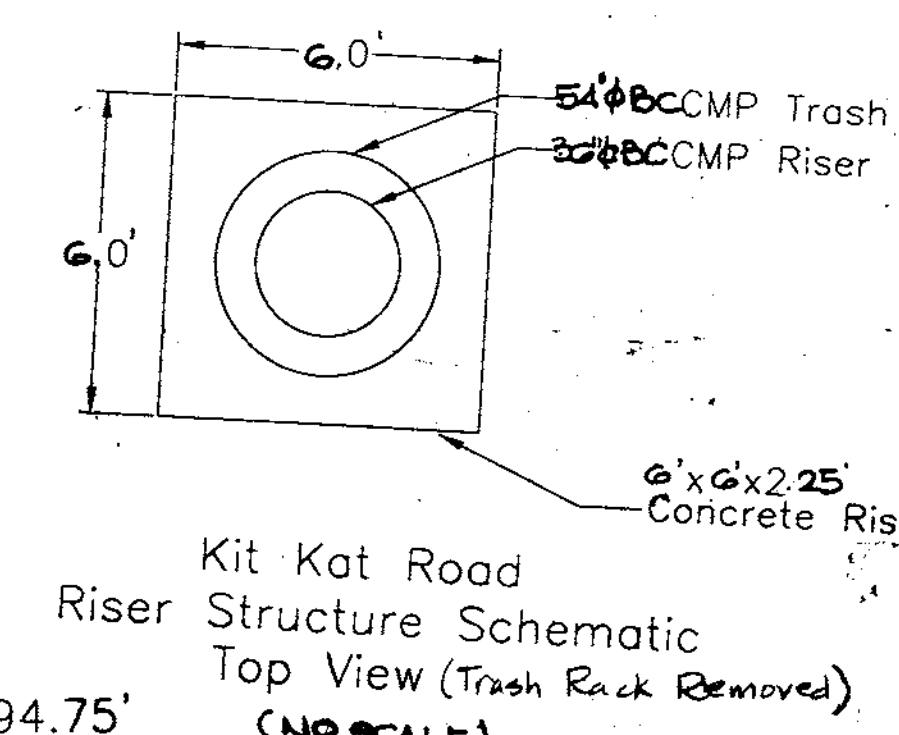
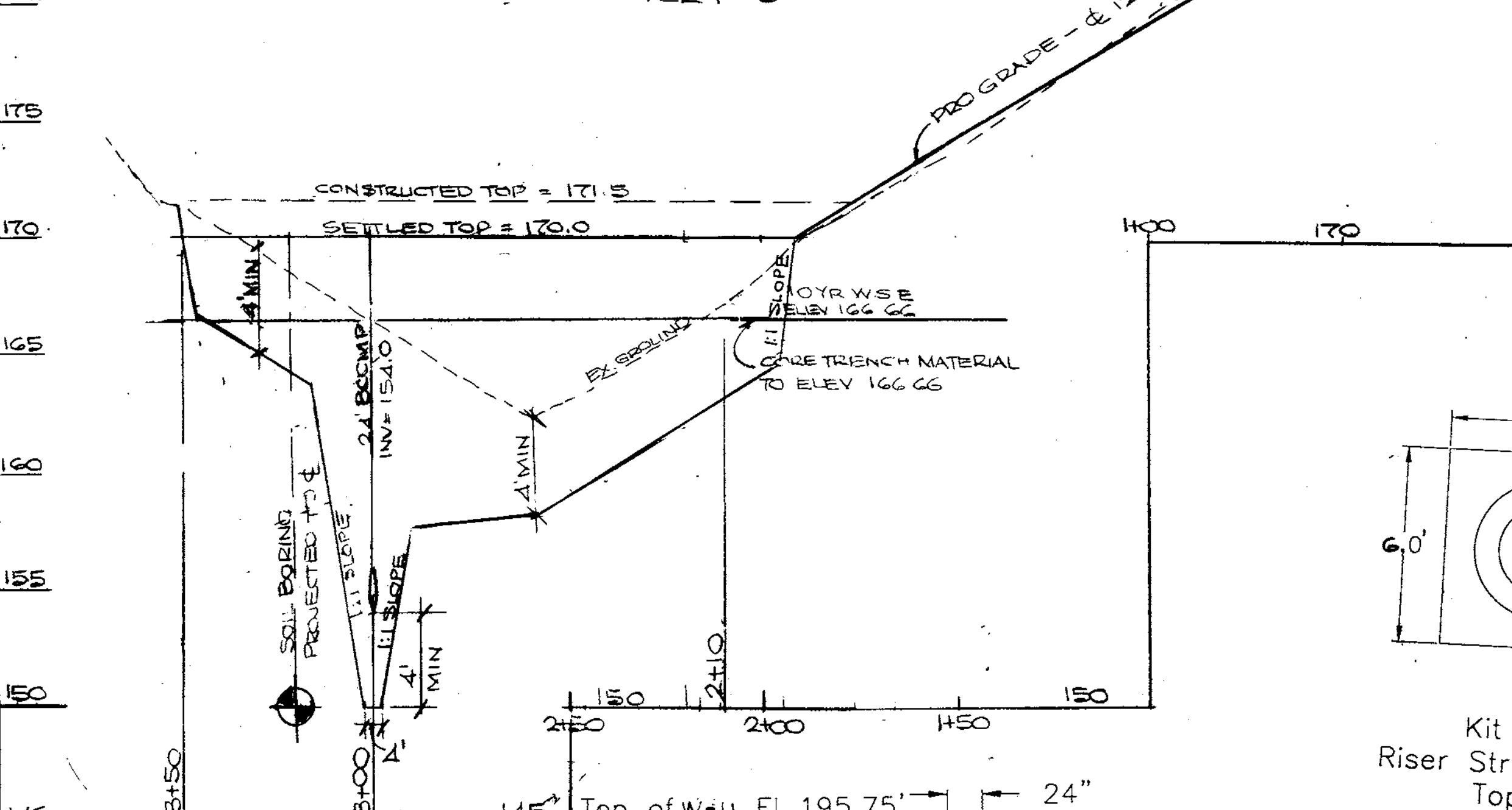
By the Developer:  
I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

*Richard [Signature]*  
Signature of Developer  
Date: 12/22/98



OPERATION, MAINTENANCE AND INSPECTION  
Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA SCS "Standards and Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

PROFILE ACCESS ROAD & DAM  
SCALES HOR 1" = 30'  
VER 1" = 5'

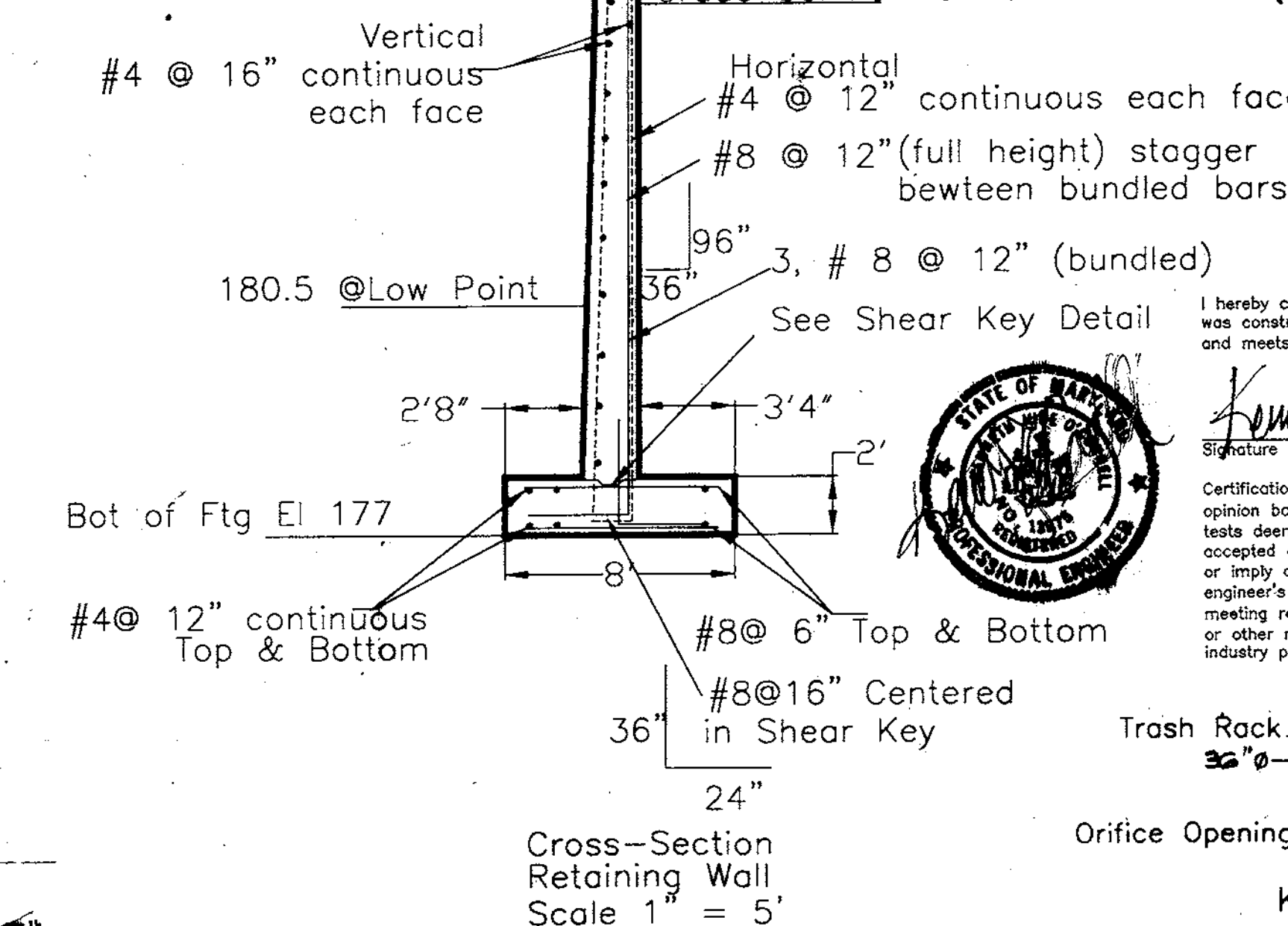
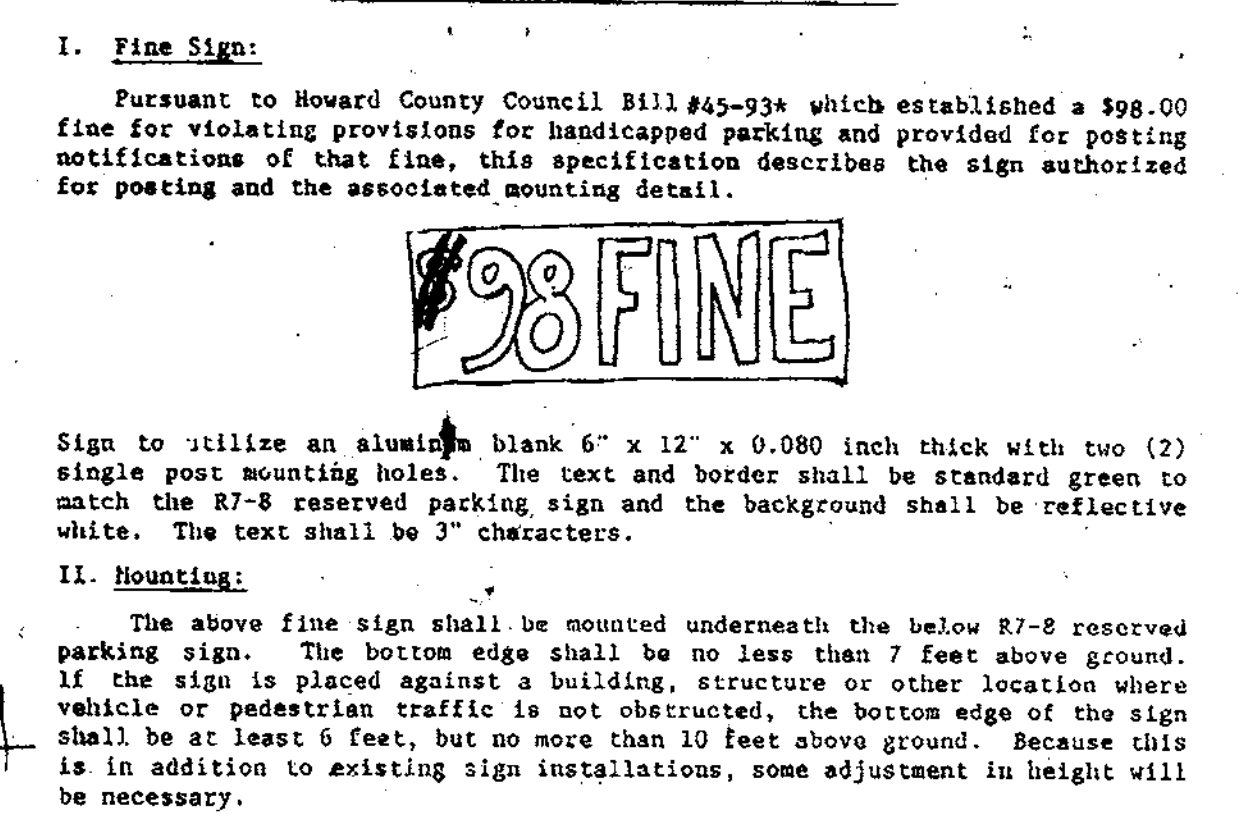


NO.	TYPE	TOP ELEV.	INVERT ELEV.	REMARKS
1	END SECTION	-	150.54	HC STD SD 5.61
2	36" PIPE RISEL	-	156.48	SEE DETAIL
3	END SECTION	-	156.21	HC ST SD 5.61
4	48" MANHOLE	171.39	164.49	HC G 5.03
5	ISOLATER	187.65	180.85	SEE DETAIL
6	A-10 INLET	188.8	182.6	HC STD SD 4.02 *

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6	A-10 INLET	188.8	182.6	HC STD SD 4.02 *

\* WIDTH = 2'-6"

SIZE	TYPE	CLASS	LENGTH
18"	HOPE		67'
21"	HOPE		27'
24"	BCCMP	1G GAGE	123'



- Retaining Wall Notes
- Backfill must be SM or better soil.
  - Provide 4" weeps @ 24" along entire length of wall.
  - Soil @ bottom of footing must be tested by geotechnical engineer to confirm minimum bearing strength of 4,000 psf.
  - f'c = 3,000 psi
  - fy = 60 k.s.i.
  - Provide 1/2" control joints (vertical) in exposed face of wall @ max. 30'0" spacing.
  - Isolate wall from ramps with min. 1" expansion ft.
  - Footing may be stepped @ design section 2 and again @ design section 3 to maintain minimum depth of 1'30" from top of ramp to bottom of footing.
  - Vertical bundled bars at back face of wall may be reduced to 2 #8 bars @ design section 2 and to 1 #8 bar at design section.
  - Traverse footing steel (@ top and bottom) may be changed to #8 @ 12" for design section #2 and #6 @ 12" for design section #3.
  - Provide a vertical expansion joint, 1" @ the transition from design section #1 to design section #2.

AS-BUILT CERTIFICATION  
I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meets the approved plans and specifications.

*[Signature]*  
Signature  
PE No. 13975  
Date: 5/31/00

Certification means to state or declare a professional opinion based upon onsite inspections and material tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

- GENERAL NOTES FOR TRASH RACK
- STEEL TO CONFORM TO ASTM A-36.
  - ALL SURFACES OF TRASH RACK(S) MUST BE HOT DIPPED GALVANIZED AFTER BE LEFT OPEN FABRICATION.
  - TRASH RACK(S) TO BE FASTENED TO WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK(S) TO BE REMOVABLE.
  - TRASH RACK(S) TO BE COVERED OVER OPENING.
  - FABRICATOR MAY MODIFY COMPONENTS OF TRASH RACK FRAME TO APPROVE CONSTRUCTIBILITY OF TRASH RACK. SHOP DRAWINGS SHOWING MODIFICATIONS MUST BE APPROVED BY HODDP PRIOR TO FABRICATION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 2/18/99  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE

*[Signature]* 2/18/99  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/18/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NOTES, PROFILES, AND DETAILS  
SDP 98-113  
PARTNERS QUALITY RECYCLING SERVICES, J.V.  
TAX MAP: 43 PARCEL: 48  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

O'CONNELL & LAWRENCE, INC.  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-5872

DES. OCL DWN. CADD DATE JAN., 1998 SCALE: AS SHOWN PROJECT NO. 320-001 SHEET NO. C-4 of 7  
SDP 98-113

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

*Cheryl Simmons* 2/11/99  
USDA-Natural Resources Conservation Service Date

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

*Robert W. [Signature]* 2/11/99  
Howard Soil Conservation District Date

**GENERAL NOTES**

- TOTAL SITE AREA: 545,929 S.F. OR 12.5328 AC.
- DEED REFERENCE: LIBER 2201 FOLIO 032
- TAX MAP: 43, PARCEL: 48
- SOILS MAP: 30 AND 31
- ELECTION DISTRICT: NO. 1, CENSUS TRACT: NO. 6012
- PROPERTY ZONED: M-2
- 100 YEAR FLOODPLAIN BY DEVELOPMENT CONSULTANTS GROUP, DATED AUGUST, 1991.
- WETLANDS STUDY BY THE LAND PLANNING AND DESIGN GROUP, DATED APRIL 16, 1998.
- FIELD RUN TOPOGRAPHY BY O'CONNELL & LAWRENCE, INC., AUGUST, 1991 AND OCTOBER, 1997.
- AREA OF BUILDING: 11,250 S.F.
- AREA OF PAVING: 81,021 S.F.
- SITE AND BUILDING TO BE USED FOR A RECYCLING TRANSFER STATION.
- WATER AND SEWER UTILITIES ARE PRIVATE.
- THERE ARE NO CEMETERIES OR BURIAL GROUNDS ON SITE.
- STORMWATER MANAGEMENT FACILITIES SHOWN HEREON TO BE PRIVATELY OWNED AND MAINTAINED.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- NO TRAFFIC STUDY REQUIRED FOR THIS PROJECT.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 43B2 AND 43B6 WERE USED FOR THIS PROJECT.
- WASTE MANAGEMENT TO BE INTERIOR OF THE BUILDING.
- FOR SEWER INFORMATION, SEE SHEET C-3.
- THE FOLLOWING WAIVERS HAVE BEEN APPROVED BY THE DEPT. OF PLANNING & ZONING, DEVELOPMENT ENGINEERING DIVISION:
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.6.F.1, APPROVED 4/9/98, TO INCREASE SIDE SLOPE OF POND TO 2:1.
  - CHECKLIST ITEM VIII.F.4.g.13, APPROVED 4/9/98, TO ALLOW OF ALUMINIZED CORRUGATED METAL PIPE (AL-CMP) RISER, BARREL, AND ANTI-SEEP COLLAR FOR THE STORMWATER MANAGEMENT FACILITY.
  - DESIGN MANUAL, VOLUME I, SECTION 5.2.4.I, APPROVED 6/18/98, TO DECREASE THE REQUIRED 20-FOOT SETBACK OF A STORMWATER MANAGEMENT FACILITY TO A PROPERTY LINE.
  - DESIGN MANUAL, VOLUME III, SECTION 2.2.3 AND FIGURE 2.18, APPROVED 6/18/98, TO ALLOW A SIMPLE RADIUS OF 45-FOOT ON A COMMERCIAL ENTRANCE FOR A WB-50 VEHICLE. "DO NOT ENTER" SIGNS MUST BE INSTALLED IN ACCORDANCE WITH MUTCD STANDARDS.
  - DESIGN MANUAL, VOLUME I, TABLE 2.01, APPROVED 9/18/98, REDUCING THE STANDARD THAT NON-RESIDENTIAL ROADS HAVE A RIGHT-OF-WAY OF 60-FOET. THE DEVELOPER MUST INSTALL A GATED FENCE AT THE NORTHERN ENTRANCE AT LEAST 40-FOET FROM THE EXISTING CENTERLINE OF KIT KAT ROAD. THE DEVELOPER SHALL CONSTRUCT ALL REQUIRED PUBLIC IMPROVEMENTS AS SHOWN ON SDP-98-113.
- WAIVER PETITION WP-99-19, APPROVED 9/1/98, TO WAIVE SECTION 16.156(g) TO REACTIVATE SDP-98-113, SUBJECT TO THE FOLLOWING CONDITIONS:
  - PROVIDE AND CONVEY RIGHT-OF-WAY WIDENING TO 30-FOET FROM CENTERLINE OF KIT KAT ROAD.
  - PROVIDE AND CONVEY A CONTINUATION OF THE RIGHT-OF-WAY IN AN EASTERLY DIRECTION TO 15-FOET FROM THE EXTENDED CENTERLINE OF KIT KAT ROAD.
  - PROVIDE A 15-FOOT WIDE PUBLIC ACCESS EASEMENT TO HOWARD COUNTY.
  - THE OWNER SHALL SUBMIT A REVISED SDP APPLICATION FOR SDP-98-113, WITH A FEE EQUAL TO 1/2 OF THE COMPUTED PROCESSING FEE BY 10/16/98.
  - ALL FENCING AND GATES MUST BE A MINIMUM M-2 SETBACK OF 10-FOET FROM THE PROPOSED RIGHT-OF-WAY WIDENING AND PUBLIC ACCESS EASEMENT.

**OPERATION, MAINTENANCE AND INSPECTION**  
 Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

**AS-BUILT CERTIFICATION**  
 I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meets the approved plans and specifications.

*Kenneth P. Conrad*  
 Signature  
 PE No. 13975  
 Date 9/31/00

**SITE ANALYSIS**

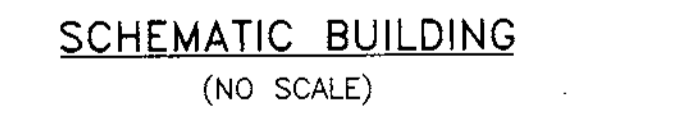
- AREA OF BUILDING = 11,250 S.F. OR 0.2583 AC.
- AREA OF PAVING = 81,021 S.F. OR 1.86 AC.
- AREA OF GREEN SPACE = 419,893 S.F. OR 9.4328 AC.
- TOTAL IMPERVIOUS AREA = 81,021 S.F. OR 1.86 AC.
- GROSS TRACT AREA = 545,929 S.F. OR 12.5328 AC.

**PARKING REQUIREMENTS**

- EMPLOYEES PER SHIFT = 5
- NUMBER OF STANDARD SPACES REQ'D = 5
- PROV'D = 10
- NUMBER OF HANDICAPPED SPACES REQ'D = 1
- PROV'D = 1
- TOTAL SPACES SHOWN = 11

ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATION, SECTION 134

NO.	REVISION	DATE
1	Add Scale House 3" SWK & 1" WMC HC RAMP	5/4/99
2	AS-BUILT	5/31/00



Storm Freq.	Existing Runoff (cfs) (TR-55)	Proposed Runoff (cfs) (TR-20)	SWM WSE (ft)	SWM Storage Provided (Ac-ft)	Clogged Proposed Runoff (SWM) (cfs)	Clogged WSE (ft)	Clogged Storage Provided (Ac-ft)
2Yr	2	1.49	161.62	0.19	3.38	165.65	0.57
10 Yr	10	3.25	164.57	0.44	6.56	166.66	0.69
100 Yr	18	9.90	166.03	0.61	8.50	167.74	0.84

**SHEET INDEX**

- C-1 SITE DEVELOPMENT PLAN
- C-2 SITE LAYOUT & DETAILS
- C-3 SITE DETAILS
- C-4 NOTES, PROFILES & DETAILS
- C-5 EROSION & SEDIMENT CONTROL AND PROPOSED DRAINAGE AREA PLAN
- C-6 FOREST CONSERVATION & LANDSCAPE PLAN
- C-7 EXISTING & PROPOSED DRAINAGE AREA PLAN

**NOTE 1**

Surveyor's Certificate  
 I hereby certify that the limit of the Howard County maintained Kit Kat Road (2140 feet from US Route 1) is shown thus \* on this plan.

Date 12-22-98

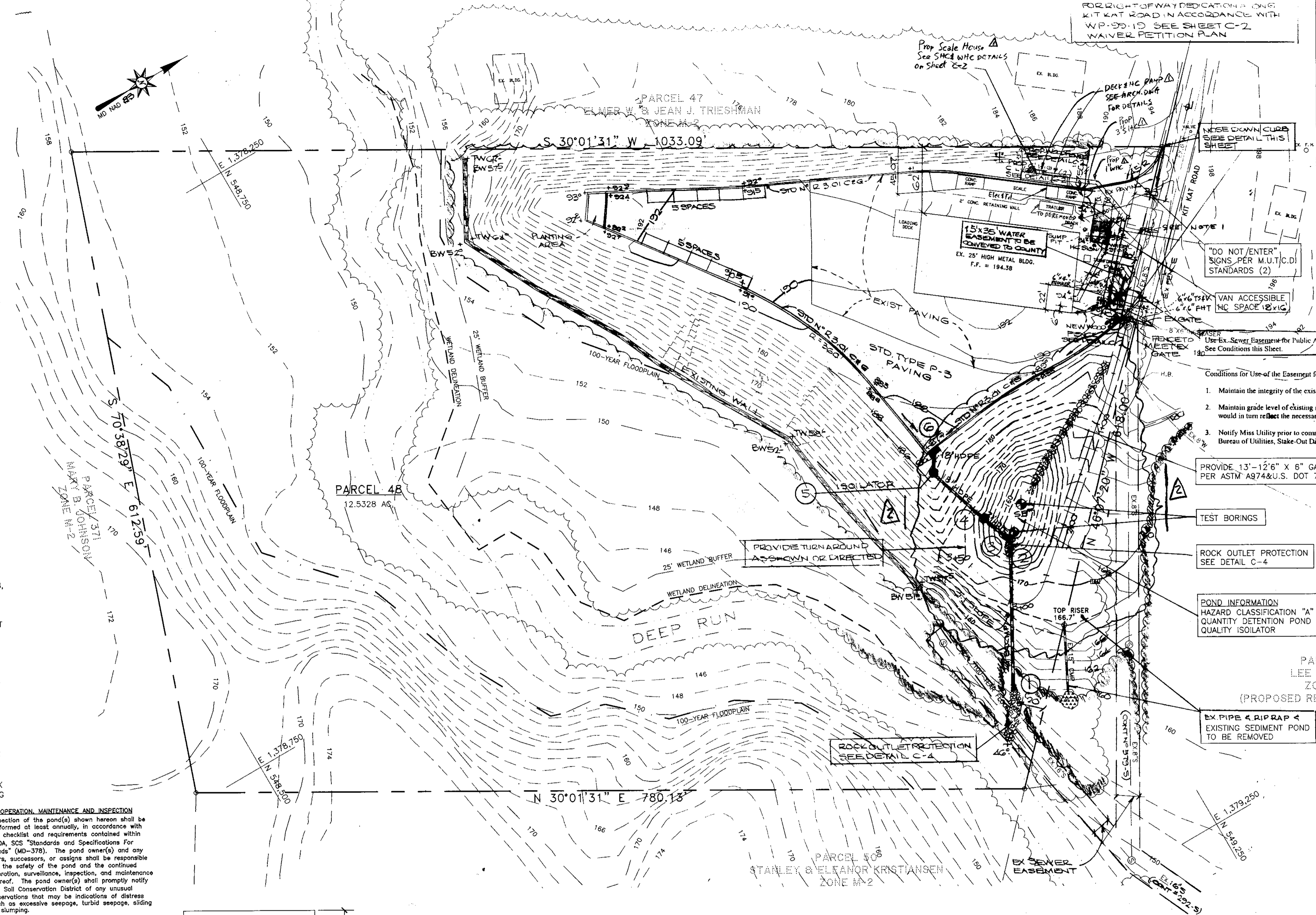
*Jefferson D. Lawrence*  
 Jefferson D. Lawrence  
 Professional Surveyor, MD. Reg. #5216

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*James Keith* 2/18/99  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE

*Conrad Hamilton* 2/18/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*John D. Lawrence* 2/18/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



**VICINITY MAP**  
 SCALE: 1"=2000'

**OWNER/DEVELOPER**  
 SOIL SAFE INC.  
 4600 E. FAYETTE STREET  
 BALTIMORE, MD 21224  
 (410) 327-5753

PARCEL	STREET ADDRESS
48	7170 KIT KAT ROAD

SUBDIVISION NAME	SEC/A	PARCEL
PARTNERS QUALITY RECYCLING SERVICES, J.V.	-	48

LIBER/FOLIO	BLOCK	ZONE	TAX MAP	ELECT/DIST	CENSUS TR
2201/032	11	M-2	43	1st	6012

WATER CODE	SEWER CODE
301	2370000

**SITE DEVELOPMENT PLAN**  
 SDP-98-113  
**PARTNERS QUALITY RECYCLING SERVICES, J.V.**  
 TAX MAP: 43 PARCEL: 48  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**O'CONNELL & LAWRENCE, INC.**  
 ENGINEERS, SURVEYORS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

DES.	DWN.	DATE	SCALE	PROJECT NO.	SHEET NO.
MJK	CADD	OCT., 1998	1" = 50'	320-001	C-1 of 7