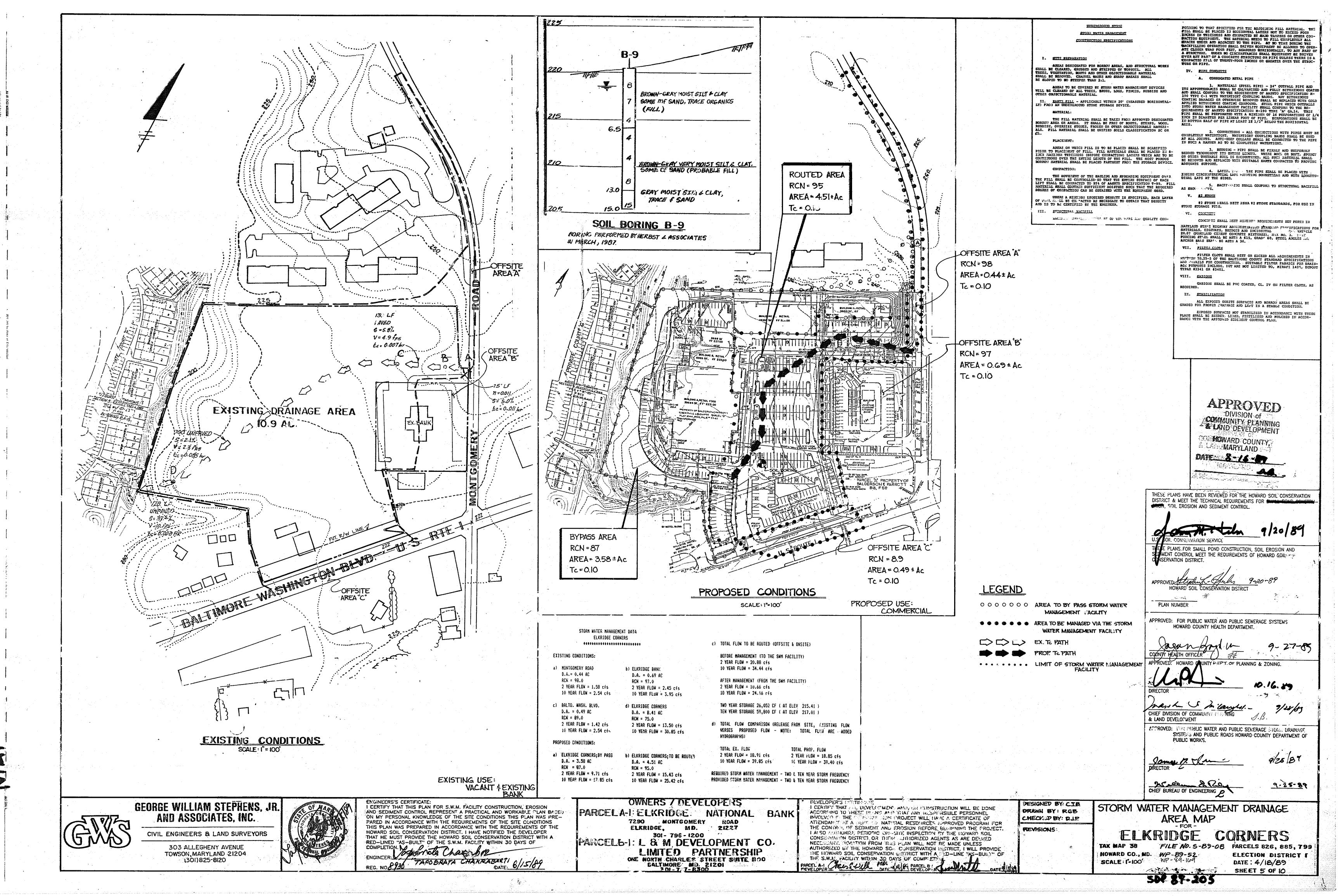
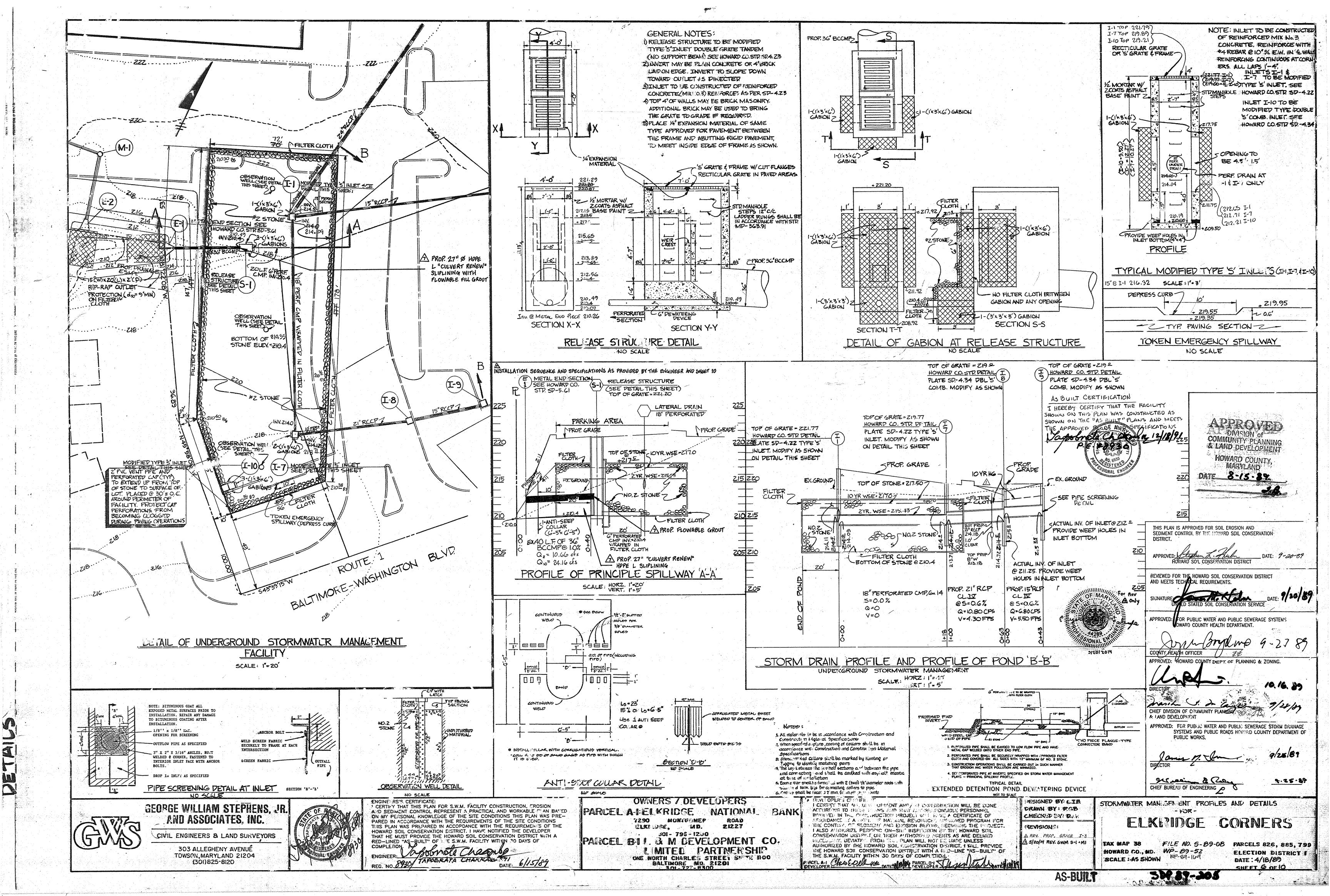


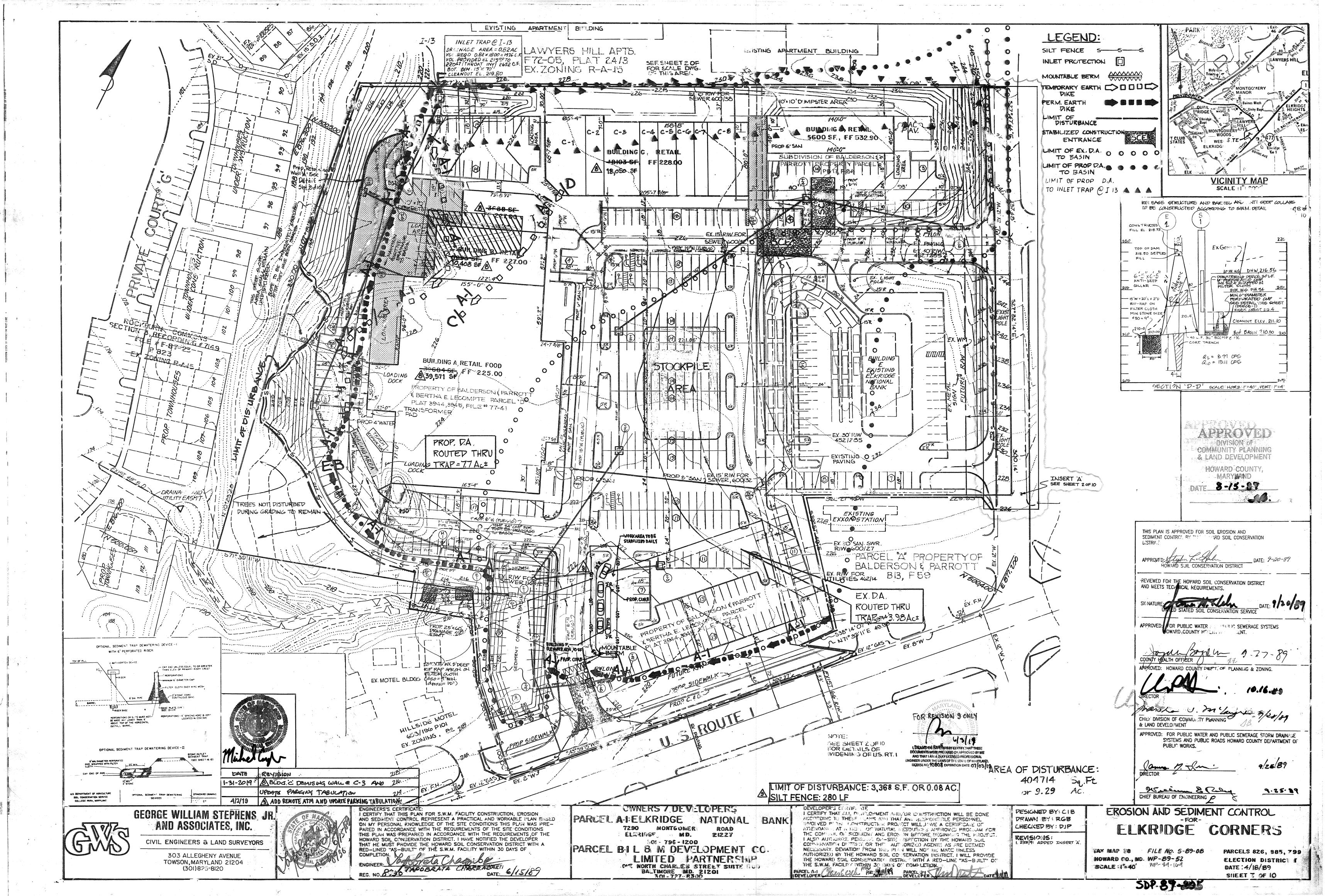
NO 1 2 3 4 5 6 7 8 9 10 11 12 13	##LET SCHEDULE  TYPE   TOP ELEV INV. 1N   INV. OUT SEE HO CO.STD.DET   A   0.50   0.92    MODIFIED 5.5   107/GRT   15.50   212.50   3.D4.23   B   0.50   0.82    DUBLE 5.1   107/GRT   10.00   12.534   5.D4.23   D   0.62   0.90    DUBLE 5.1   107/GRT   10.00   12.4.52   21.4.32   5.D4.23   D   0.62   0.90    DUBLE 5.1   107/GRT   12.4.52   21.4.32   5.D4.34   E   0.90   0.89    DUBLE 5.1   107/GRT   12.1.0   - 12.1.90   5.D4.34   E   0.90   0.89    DUBLE 5.1   108   10.00   12.4.12   11.4.00   5.D4.22   G   0.29   0.88    DUBLE 5.1   108   10.50   11.50   11.50   11.50   11.50   11.50   11.50    DUBLE 5.1   108   10.63   0.91    DUBLE 5.1   108   107/GRT   11.50   11.50   11.50   11.50    DUBLE 5.1   108   107/GRT   11.50   11.50   11.50    DUBLE 5.1   108   107/GRT   11.50   11.50   11.50    SEE DE TAIL 5.HEET 6.0F 10  DUBLE 5.1   10.63   0.91    NO. 40.50   0.91    NO. 40.50   0.91    NO. 66   0.91    NO. 50. 0.91    NO. 66	245 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4
140 	Type   Topelev inv in   Inv out   Set ho co std. det	10 YEAR HB   10
	AWYESS MAL AND STAND STA	EXISTING  EXISTI
	BANGEL W. PROPERTY OF	TIVE MATERIAL TO SEALE SHOPE IN THE SCALE SHOPE AND STRUCTURED BY THE EMBORARY PER FOR A THICKNESS OF 6 STALE SHOPE AND STRUCTURED BY THE EMBORARY PER FOR A THICKNESS OF 6 STALE SHOPE AND STRUCTURED BY THE EMBORARY PER FOR A THICKNESS OF 6 STALE SHOPE AND STRUCTURED BY THE EMBORARY PER FOR A THICKNESS OF 6 STALE SHOPE AND STRUCTURED BY THE EMBORARY PER FOR A THICKNESS OF 6 STALE SHOPE AND STRUCTURED BY THE STAL
	GEORGE WILLIAM STEPHENS, JR.  AND ASSOCIATES, INC.  CIVIL ENGINEERS B LAND SURVEYORS  303 ALLEGHENY AVENUE TOWSON, MARYLAND 21204 (301)825-8120  TAPOBRATA CHARABART  REG. NO 8920  TAPOBRATA CHARABART  DAIE	TION, FRCTION ORAGINE PLAT BASED HIS PARCEL A LELKRIDGE NATIONAL BANK HIS PLAN WAS PRE- STE CONCINIONS DETAIL PLAN BASED HIS PLAN BASED HIS PARCEL BASED HIS DOT PLAN BASED HIS PLAN BASED HIS DOT PLAN BASED HIS DOT PLAN BASED HIS PLAN BASED HIS PARCEL BASED HIS



Set 81-205







### CONSTRUCTION SPECIFICATIONS

#### Site P.eparation

Areas under the embankment shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots or other objectionable material. In order to facilitate clean-out and restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush, trees, and other objectionable materials.

#### Cut-off-Trench

A cut-off trench shall be excavated along the centerline of earth fill embankments. The minimum depth shall be two feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be four feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be dewatered during the backfilling-compaction operations.

The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed six-inch to eight-inch thick continuous layers over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.

#### Pipe Spillways

The riser shall be securely attached to the barrel or berrel stub by welding the full circumference making a watertight structural connection. The barrel stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between barrel sections must be achieved by approved watertight band assemblies. (See page 18.22 for details.) The barrel and riser shall be placed on a firm, smooth foundation of impervious soil. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collars. The fill material around the pipe spillway shall be placed in four inch layers and compacted under and around the pipe to at least the same density as the adjacent embankment.

A minimum depth of two feet of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment. Steel base plates on risers shall have at least 2-1/2 feet of compacted earth, stone or gravel placed over it to prevent flotation.

The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, antrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of + 0.2 feet.

Stabilize the embankment and emergency spillway in accordance with the appropriate vegetative Standard and Specifications immediately following construction. In no case shall the embankment remain unstabilized for more

# Erosion and Pollution Control

Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized. State and local laws shall be complied with concerning pollution abatement.

State and local requirements shall be met concerning fencing and signs, warning the public of hazards of soft scilment and floodwater.

### . Repair all damages caused by soil erosion and construction equipment at

or before the end of each working day. . Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser. This sediment shall be placed in

such a manner that it will not erode from the site. The sediment shall

not be deposited downstream from the embankment, adjacent to a stream or

flood plain.

When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed. safely disposed of, and backfilled with a structural fill. When the basin area is to remain open space the pond may be pumped dry, graded and back

### PERHANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a

<u>Seedbed Preparation:</u> Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

<u>Soil Amendments:</u> In lieu of soil test recommendations, use one of the following schedules:

1) Preferred — Apply 2 tons per acres dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)

 Acceptable -- Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft) before seeding. Harrow of disk into upper three inches of soil.

Seeding — For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1:4 lbs/1000 ag ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 ag ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 cons per acre of well inchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchired straw.

Mulching — Apply 1-1/2 to 2 tons per acre (70 to 30 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor wolch immediately after application using mulch anchoring tool or 218 gallons per acre 10 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher use 348 gallons per acre (8 gal/1000 sq ft) for

<u>Maintenance</u> — Inspect all seeded areas and make needed repairs, replacements and reservings.

### TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative

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

Soil Amendments: — Apply 60 lbs per sore 10-10-10 ortilizer (14 lbs/1000 sq ft).

Seeding: - For periods March 1 than April 30 and 1.000 August 15 thru October 15, seed with 2-1/2 bushel per sore of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru

August 14, seed with 3 lbs per some of unoping lovegrass (.07 lbs/l>00 sq ft). For the period November 16 thru Pebruary 28, protect site by applying 2 ton: per some of well suchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: — Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/).000 mg ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after rollication using mulch enchoring tool or 218 gal per acre (5 gal/1000 mg ft) of emulsified uschalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (8 gal/1000 mg ft) for anchoring. Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL PROSION AND SEDIMENT

#### SEDIMENT CONTROL NOTES .) A manimum of 24 hours notice must be given to SWALE INLET PROTECTION DETAIL the ward County Office of Inspection and Permits prior to the start of any construction. (992-2437) ) All vegetative and structural practices are to be ] 6" min. installed according to the provisions of this plan and are to be in conformance with the 1983 MARYIAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND ) Pollowing initial soil disturbance or redisturbance, permanent or 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 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the BOWARD COUNTY DESIGN MANUAL, Storm 5) All disturbed areas must be stabilized within the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOTI STANDARD SYMBOL-EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding

dates do not allow for proper germination and estab-

) All sediment control structures are to remain in place

the Howard County Sediment Control Inspector

7) Site Analysis:

THE DESCRIPTION OF THE PARTY OF

Existing ground

minimum length would apply).

3. Thickness - Not less than six (6) inches.

not be required on a single family residence loc.

drains into an approved sediment trapping device.

SOIL CONSERVATION SERVICE College Park, Md.

and are to be maintained in operative condition until permission for their removal has been obtained from

Area to be roofed or paved

Area to be vegetatively stabilized

Total Cut

1 Fill

Waste/borrow area location

Total practical cut

Total practical cut

Total practical cut

Total c

deemed necessary by the Howard County DPW sediment control inspector.

10) On all sites with disturbed areas in excess of 2 acres, approval

of the inspection agency shall be requested upon completion of

this initial approval by the inspection agency is made.

PROFILE

PLAN VIEW

CONSTRUCTION SPECIFICATIONS

2. Length - As required, but not less than 50 ft. (except on a single residence lot where a 30 ft

4. Width - Ten (10) ft. minimm, but not less than the full width at points where ingress or

egress occurs.

5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will

be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slope

. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or

flowing of sediment onto public rights-of-way. This may require periodic top dressing with

additional stone as conditions demond and repair and/or cleanout of any measures used to

trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way

must be removed immediately.

8. Weshing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-

U. S. DEPARTMENT OF AGRICULTURE STABILIZED CONSTRUCTION Standard

POSITIVE DRAMAGE -GRADE SUFFICIENT TO DRAIN

CONSTRUCTION SPECIFICATIONS

ALL DIKES SHALL BE COMPACTED BY EARTH-HOVING EQUIPMENT.
ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
TOP MIDTH HAV BE HIDER AND SIDE SLOPES HAV BE FLATTER IF DESIRED TO FACILITATE

FLOH CHANNEL STABILIZATION

.5-3.0% SEED AND STRAN HULCH

3.1-5.0% SEED AND STRAW MALCH

Periodic inspection and needed mintenance shall be provided after each rain.

EARTH DIKE

way. When washing is required, it shall be done on an area stabilized with stone and which

Stone Size - Use 2' stone, or reclaimed or recycled concrete equivalent.

installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other

building or grading inspection approvals may not be authorized until

not to scale

STABILIZED CONSTRUCTION ENTRANCE

15.01 -6"mm. CAP of 2" STOIS.

EXISTING

PAVEMEN

EXISTIN

PAVEMENT

B) Any sediment control practice which is disturbed by

9) Additional sediment controls must be provided, if

repaired on the same day of disturbance

grading activity for placement of utilities must be

2 x 4 spacer STANDARD SYMBOL U.S. DEPARTMENT OF AGRICULTURE STANDARD DRAWING INLET PROTECTION SOIL CONSERVATION SERVICE IPD-I COLLEGE PARK, MARYLAN

-CURB INLET PROTECTION DETAIL

### Construction Specification INLET PROTECTION

- I. Materials Wooden frame is to be constructed of 2" x 4" construction grade
- B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inacts, with water fully impounded against it.
- Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, EOS, 40-85, to allow sufficient passage of water and removal of sediment.
- Stone is to be 2" in size and clean, since fines would clog the

- A. A swale, ditchline or yard inlet protection.
- 1. Excavate completely around inlet to a depth of 18" below notch
- 2. Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to
- 3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post. 4. Stretch filter cloth tightly over wire mesh, the cloth must
- extend from top of frame to 18" below inlet notch elev. Fasten securely to frace. Ends must meet at post, be overlapped and folded, then fastened down Backfill around inlet in compacted 6" layers until layer of
- earth is even with notch elevation on ends and top elevation 6. If the inlet is not in a low point, construct a compacted

to be at least 6" bigher than the top of frame (weir).

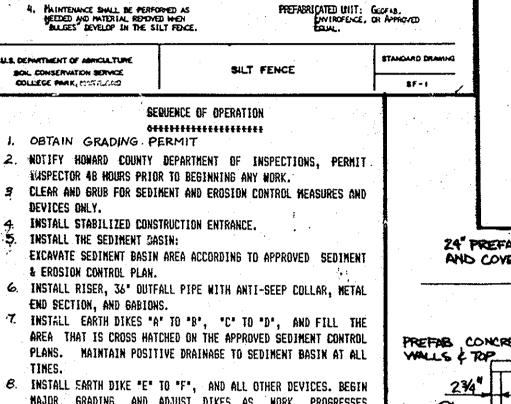
earth dike in the ditchline below it. The top of this dike is

- This structure must be inspected frequently and the filter fabric replaced when clogged.
- 1. Attach a continuous piece of wire wesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

Curb Inlet Protection.

- 2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
- 3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
- Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight
- 5. The assembly shall be placed so that the end spacers are a minimum l' beyond both ends of the throat opening.
- . Form the wire mesh and filter cloth to the concrete nutter and sgainst the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dixes directing flow into inlet

# MOUNTABLE BERM DETAIL G"MI "2 STONE AFT. MINIMUM 5:1 SIDE SLOPES THINK CLOTH ib minj: compacted earth



SILT FENCE High strength polypropylene netting

H.S. polypropylene merti

PERSPECTIVE VIEW

CONSTRUCTION NOTES FOR FAPPLICATED SILT FERKE

SEQUENCE OF OPERATION

High strength polypropylene netting or MOVEN MIRE FENCE TO BE FASTENED SECRELY TO FENCE POSTS MIT! MIRE TIES OR STAPLES

. When two sections of filter cloth adjoin each other they shall be over plapped by six inches and folded,

OBTAIN GRADING PERMIT

INSTALL THE SEDIMENT BASIN:

& EROSION CONTROL PLAN.

END SECTION, AND GABIONS.

BLDG 'A'

ENTRANCE

FF 225 °°

INSTALL STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPORTMENT OF ABRICULTUR

BOIL CONSERVATION SERVICE COLLEGE PARK, MARTILLAS

DEVICES ONLY.

TIMES.

POSTS: Steel either I on U Type on Walt Min. (Actual)

high strength polypropylene netting

HENE: SOVEN MIPE, 14. GA.
6 HAX. PERM OPENING O

FILTER CLOTH: FILTER X,
HIRAFI 100X, STABILINEA THAN OR APPROVED
EQUAL

INSTALL SARTH DIKE "E" TO "F", AND ALL OTHER DEVICES. BEGIN MAJOR GRADING AND ADJUST DIKES AS WORK PROGRESSES MAINTAINING POSITIVE DRAINAGE TO THE SEDIMENT THAP AT ALL TIMES. WHEN ROADS ARE GRADED. PLACE MOUNTABLE BERMS WHERE SHOWN, AS TO DIRECT FLOW TO THE SEDIMENT TRAPPING DEVICES. INSTALL FOUNDATIONS AND OTHER UTILITIES. PROTECT ALL INLETS WITH INLET PROTECTION DETAILED ON THIS SHEET. CONSTRUCT BUILDINGS. INSTALL INLET SEDIMENT TRAP AT I-13

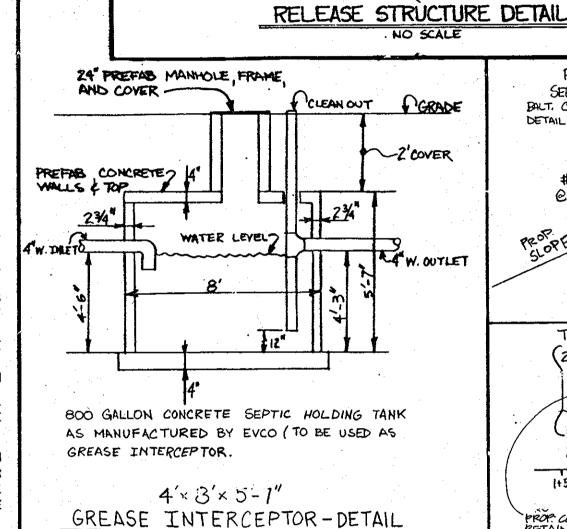
10. FINE GRADE AND INSTALL CURB/GUTTER AND STONE BASE ON THE ROADS AND PARKING AREAS. STABILIZE ALL DISTURBED AREAS OUTSIDE OF BUILDING AREAS WITH PERMANENT SEEDING.

12. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE INLET PROTECTION IN THE ROADS AND THEN PAVE ROADS. (INLET PROTECTION TO REMAIN ON ALL INLETS NOT IN ROAD WAYS) 13. WITH THE APPROVAL OF THE SEDIMENT CONTROL IMSPECTOR, PERFORM

FINAL SEDIMENT BASIN DREDGE AND CONVERT BASIN TO STORM WATER MANAGEMENT FACILITY AS PER THE APPROVED PLANS. REMOVE ALL SUPPORTING DEVICES. MODIFY RELEASE STRUCTURE. STABILIZE POND AS SHOWN ON THE APPROVED STORM MATER MANAGEMENT PLANS. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR

REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES AND STABILIZE ANY DISTURBED AREAS WITH PERMANENT SEEDING. (SEE SPECIFICATIONS THIS SHEET)

22500



NO SCALE

SECTION X-X(SCALE 1951) (29.80 (219.20 (219.20) (219.40 / 219.70 BW BW CBW 216.00 21650 (BW 216.00 PROP CONC. RETAINING PROFILE RETAINING WALL A (SEE DETAIL)

SCALE: HOR: 1 =40'

YERT 1"= 5'

PROP. CURB

**APPROVED** DIVISION of **COMMUNITY PLANNING** & LAND DEVELOPMENT MOWARD COUNTY.

MARYLAND DATE 8-15-87

HANDICAPPED RAMP A

DETAIL 'D'

SCALE 1"= 20

\_\_ DATE: 9-20-89 HOWARD SOIL CONSERVATION DISTRICT REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

THIS PLAN IS APPROVED FOR SOIL EROSION AND

SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION

BLDG 'C'

FF 22800

W503

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS OWARD COUNTY HEALTH DEPARTMENT. COUNTY HEALTH OFFICER/

CONSTRUCTION SPECIFICATION FOR ST-III Sediment shall be removed and the trap restored for its original dimensions when the sediment has a seminard to is the design depth of the trap.

GENERAL NOTES:

WEIR

SECTION Y-Y

PROP PIPE RAIL!

SEE DETAIL

BALT, CO STANDARD

DETAIL "G-II"

#6 BARS

@12" O.C.

STORM INLET SEDIMENT TRAP ST-III

14 EXPANSION

+ 217.0

·+ 215.5

+ 213.63

PERFORATED

2'-0"

SECTION X-X

I) RELEASE STRUCTURE TO BE MODIFIED

TYPE 'S' INLET DOUBLE GRATE TANDEM

(NO SUPPORT BEAM) SEE HOWARD CO.STV. SV.4. Z3

2) INVERT MAY BE PLAIN CONCRETE OR 4'BRICK

S) INLET 90 BE CONSTRUCTED OF RENFORCED

4) TOP 4" OF WALLS MAY BE BRICK MASONRY.

THE GRATE TO GRADE IF REQUIRED.

5) PLACE 14" EXPANSION MATERIAL OF SAME TYPE APPROVED FOR PAVEMENT BETWEEN

ADDITIONAL BRICK MAY BE USED TO BRING

THE FRAME AND ABUTTING RIGID PAVEMENT,

TO MEET INSIDE OF FRAME AS SHOWN.

's' grate & frame w/cut flauges

RECTICULAR GRATE IN PAVED AREAS

P.36'BCCMP

CONCRETE (MIX NO. 3) REINFORCED AS PER SP-4.25

LAIDON EDGE. INVERT TO SLOPE DOWN

TOWARD OUTLET AS DIRECTED

Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode. 2. The volume of sediment storage shall be 1800 cubic feet per acre of

Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.

5. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized. 6. #11 cut slopes shall be 1:1 or flatter.

Maximum Drainage Area: 3 Acres U.S. DEPARTMENT OF AGRICULTURE STORM MILET STANDARD DRAWES SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND SEDIMENT YEAP ST-III

CHIEF DIMSION OF COMMUNITY PLANNING & LAND DEVELOPMENT APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF 9/25/89

APPROVED HOWARD COUNTY PEPT OF PLANNING & ZONING.

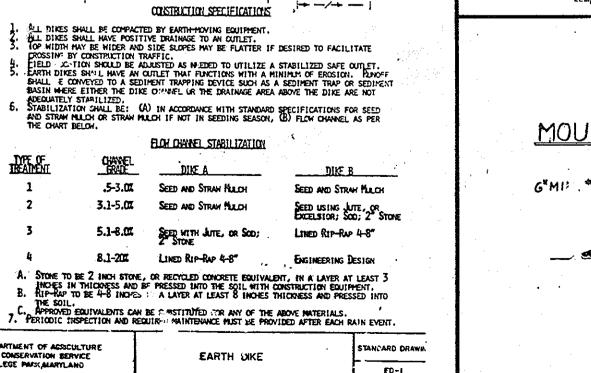
9.25.29 CHIEF BUREAU OF ENGINEERING

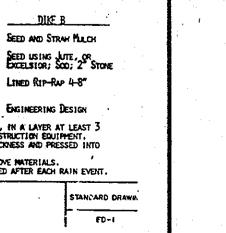
EROSION AND SEDIMENT CONTROL DETAILS ELKRIDGE CORNERS

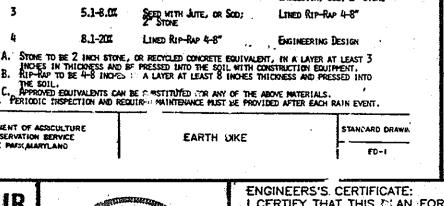
HOWARD CO., MD.

WP-89-52

PARCE \$ 826, 885, 799 FILE NO. 5-89-08 ELECTION DISTRICT DATE: 4/18/89







STANDARD SYMBOL

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

S. DEPARTMENT OF ACSICULTUR SOIL CONSERVATION SERVICE DOLLEGE PARK, MARYLAND

I CERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS THIS PLAN WAS PRE-PARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SITE CONDITIONS
THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINED "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF Vafobrata Charonte COMPLETION.

PARCEL A-LELKRIDGE WILLIONAL 7290 MOSTGOMERY ELKRIDGE, MD. **&1227** 301 - 796 - 1200

PARCEL BIL & M DEVELOPMENT CO. LIMITED PARTNERSHIP ONE MORTH CHARLES STREET SUITE 1100 FOLTIMORE MD. 21201

UWNERS / DEVELOPERS

ALIENDANCE AT A DEPT. (6) NATURAL RESOURCES APPROVED PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

HANDICAPPED RAMP

DETAIL B'

HANDICAPPED

DEPRESS

274 36 RAMP

CITHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICE I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINE "AS-BUILT" DE THE S.W.M. FACILITY WITH SO DAYS OF COMPLETION - PARCEL 8-1 CHOPER WELDPER DEVELOPER TO VELOPER TO

I CERTIFY THAT ALL DIGIT OPMENT AND/OR CONCERNICTION WILL BE DONE

ACCORDING TO THESE TO ME AND THAT ANY RESEMBLE PERSONNEL TRYOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF

I ALSO AUTHORIZE PERIODIC ON SETTING BY THE HUWARD SOIL CONSERVATION DISTRICT, OR THEIR PERIODIC AGENTS AS ARE DEFINED. NECESSARY, DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS

DEVELOPER'S CERTIFICATE

MREY HANDKAPPED RAMP, DETAIL 'D' 7/9/90

REVISIONS

DESIGNED BY: CIB

DRAWN BY: RGB

CHECKED BY: DJP

SCALE

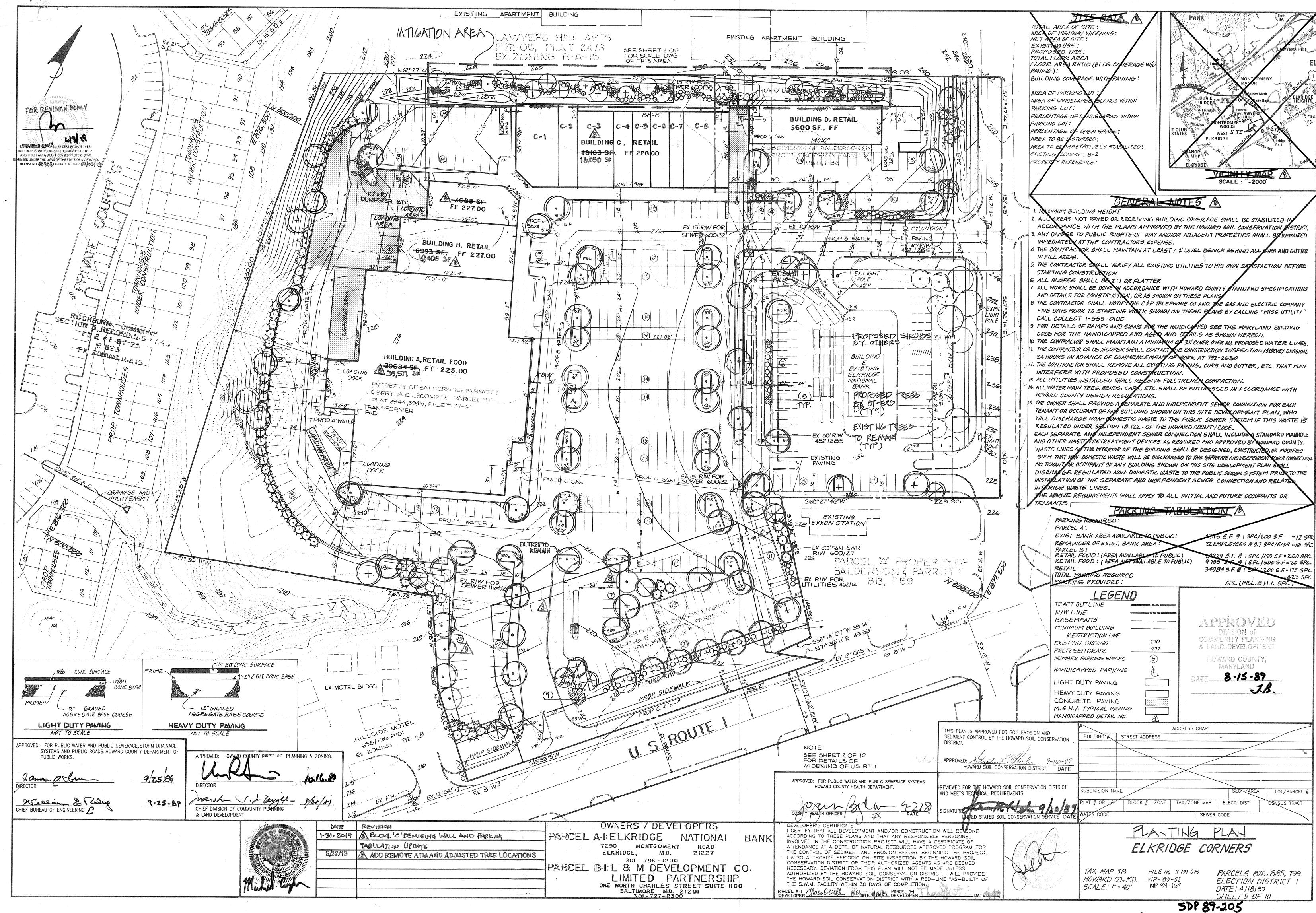
SHEEN 8 OF 10

501 87-205



CIVIL ENGINEERS & LAND SURVEYORS 303 ALLEGHENY AVENUE TOWSON MARYLAND 21204

(301)825-8120



#### PLANT LIST BOTANICAL HAME COMMON HAME QUAHTITY REMARKS PLATANLES ACERIFOLIA 'BLOODGOOD' 121/2-31/ALBEB BLOODGOOD LONDON PLANE ZELKOVÁ SERRATA VILLAGE GREEH VILLAGE GREEH ZELKOVÁ 21/2-3"(ALB &B PRIMUS YEDDENSIS 13/4-2/CALBEB YOGHILD CHERRY PIHUS STROBUS SPACE 8-10'0C 6.71 HT BEB 62 WHITE PILLE ELIOHYMUS ALATUS COMPACTA GPACE 42"O.C. WIHGED ELIOHYMLIO - DWARF PIHUS MULO MUGHUS 6PACE 36-92"0C $\odot$ MUGO PILLE JUNIPERUS SABIHA TAMARISCIFOLIA TAMS JUNIPER 15-18" SPACE 36" O.C. SPACE 12"0C. ANNUAL FLOWERS

# MITIGATION AREA PLANTING

: :	KEY	RTY	COMMON HAME	51ZE	COHDITION	REMARKS
		10	BLACK WILLOW	1-1/2 CAL	B\$B	
	+	11	ACER RUBRUM RED MAPLE	1-1/2"44.	B \$ B	
· Constitution of the contract	$\oplus$	6	FRAXIHUS PEHLISYLVALICA GREEH ASH	1-12" CAL.	B4 B	
	<u>.</u>	48	ALHUS SERRULATA SMOOTH ALDER	18.24"HT.	CAH/BR	SPACE 4'OC
	, Ф	42	LINDERA BEHZOIH SPICEBUSH	18-24 HT	CAH/BR	SPACE 4' O.C
	0	52	VACCIHIUM CORYMBOSUM HIGHDUSH BLUEBERRY	18-24 HT	CAH/BR	SPACE 4' O.C

## MITIGATION HOTES

- 1. THE LANDSCAPE CONTRACTOR HAS THE OPTION OF PROVIDING HURSERY STOCK OR REMOVING THE PROPOSED PLANTS FROM THE EXISTING WETLANDS AND HOLDING FOR PLANTING AFTER THE MITHGATION AREA 19 CONSTRUCTED
- 2. THE GRADING AND EXCAVATION CONTRACTOR IS TO REMOVE 3" OF EXISTING WETLAND TOPSOIL TO BE STOCK PILED AND RESPREAD OVER THE PROPOSED MITIGATION AREA
- 3 CALL ED MURDY @ MCCARTY & ASSOC (1-301-627-7505) 98 HOURS BEFORE PLANTING

COMMUNITY PLANNING & LAND DEVELOPMENT HOWARD COUNTY

MARYLAND DATE 8-15-89

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

9/25/84 9.25.89 CHIEF BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING. CHIEF DIMISION OF COMMUNITY PLANNING & LAND DEVELOPMENT

1-31-2019

#### SPECIFICATION FOR PLANTING

Plant Identification: All plants shall be properly marked for List of Plant Materials: The Contractor will verify plant quantities prior to hidding and any discrepancies shall be brought to the attention of the Landscape Architect. The Contractor shall furnish and plant all plants required to complete the work as shown on the drawings. Substitutions shall not be made without the written approval of the Landscape Architect. This contract will be based on the bidder having verified, prior to bidding, the availability of the required plant materials as specified on the Plant List. Plant Quality: All shrubs shall be dense, heavy to the ground, and Plant Quality: All shrubs shall be dense, heavy to the ground, and well grown, showing evidence of having been sheared regularly, and shall be vigorous, health and of good color. All plants shall be sound, free of plant disease or insect eggs and shall have a healthy no mal root system. Plants shall be pirsery grown. Plants shall not be pruned prior to delivery. The shape of the plant shall in general conform to its abtural growth proportions unless otherwise specified. All plants including container grown shall conform to the branching, caliber, ball size, height, specifications of the American Standard for Nursery Stock (ANSI 260.1-1973), and shall have a well-shaped, heavy branch structure for the species. Evergreen trees are to have an interned on greater than 24" and shall green trees are to have an internode no greater than 24" and shall be unformly well-shaped. All plant sizes shall average at least the middle of the range given in the plant list. Plant Spacing: Plant spacing is to scale on plan or as shown on the organic material, thoroughly mixed and homogenized. Ball Size: The ball size shall conform to the American Association of Nurserymen's publication entitled American Standard for Nursery Stock, ANSI Z60.1-1973. Excavation: Holes for all plants shall be 18" larger in diameter than size of ball or container and shall have vertical sides. Hedges shall be planted in a trench 12" wider than ball diameter. Beds for mass planting shall be entirely rototilled to a depth of 8" and shall be 18" beyond the average outside edge of plant balls. Organic material (i.e. Leafmold) will be incorporated into plant is by tilling again. Proportions of soil to organic material will Planting: Backfilling shall be done with soil mix, reasonably free of stones, subsoil, clay, lumps, stumps, roots, weeds, bermuda grass, litter, toxic substances, or any other mateiral which may be harmful to plant growth or hinder grading, planting, or maintenance operations. Should any unforseen or unsuitable planting conditions arise such as faulty soil drainage or chemical residues, they should be called to the attention of the Landscape Architect and Owner for

adjustments before planting. The plant shall be set plumb and straight and shall be staked at the time of planting. Brokfill shall be well worked about the roots and settled by watering Plants will be planted higher than su counding grade. Shrubs will be 1" higher and trees will be 3" higher. Remove rope from around tree trunks and lay back burlap from top of all B&B material. Nylon or vinyl rope and/or burlap will be completely removed from all plant material prior to planting.

Transplanting Trees By Tree Machines: Trees shall be moved by machines that provide a minimum of 9" per 1" of tree caliber. Holes are to be dug by the same size machine as the one transporting the plant. The plant material shall be transplanted in approximately the same growing condition as it is presently growing, in terms of soil type and moisture content. Pertilize and guy as described in these plans and specifications. Cultivation: All trenches and shrub beds shall be cultivated, edged and mulched to a depth of 3" with shredded hardwood bark. The area around isolated plants shall be mulched to at least 6" greater

diameter than that of the hole. Plant beds adjacent to buildings Maintenance: The Contractor shall be responsible during the contract and up to the time of acceptance, for keeping the planting and work incidintal therto in good condition, by replanting, plant replacement, watering, weeding, cultivating, pruning and spraying, restaking and cleaning up and by performing all other necessary operations of care for promotion of good plant growth so that all work is in satisfactory condition at time of acceptance, at no additional coat to the Owner.

additional cost to the Owner.

Pertilizer: Fertilizer shall be a slow release type contained in polyethelene perforated bags with micropore holes for controlled feeding such as Easy Grow as manufactured by Specialty Ferthlizer, Inc., Box 355, Suffern, New York 10901 or approved equal. The bag shall contain 1 ounce of solumble fertilizer analysis 16-18-16 per unit to last three years and shall be applied during planting as recommended by the manufacturer. If fertilizer packets are not used the Contractor shall apply grandular fertilizer to the soil mix with 10-6-4 analysis, 50% organic, at the following rates: Tree Pits, 2-3 lbs. per caliber inch; Shrub Beds, 3-5 lbs. per 100 sq. ft.; Ground Court 23 lbs. per 100 sq. ft.; Ground Cover, 2-3 lbs. per 100 sq. ft.

Ground Cover: All areas of ground cover shall be rototilled to a depth of 6". Apply 2" of organic material and rototill until thoroughly mixed. Apply fertilizer as stated above. Guarantee and Replacement: All material shall be unconditionally

- 1. Contractor shall notify Miss Utility a minimum of 72 hours prior Telephone: 1-800-257-7777.
- 2. The location of all plant material is to be approved in the field by the Landscape Architect.
- 3. The Landscape Architect is to be notified 48 hours before planting begins.
- 4. This plan is to be used for planting only.

### GENERAL NOTES A

- 1. UNLESS OTHERWISE NOTED, ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE LATEST HOWARD COUNTY YOLUME IV DESIGN MANUAL AND STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION UPDATED JULY 29 2011. 2. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO BEGINNING WORK 3. IN THE CASE OF A DISCREPANCY BETWEEN SCALED AND FIGURED DIMENSIONS SHOWN ON THE PLANS, THE FIGURED
- dimensions shall govern. 4. FAILURE TO MENTION SPECIFIC WORK THAT WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT
- RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO PERFORM SUCH WORK. 5. ALL WORK SHALL OCCUR UNDER THE SUPERVISION OF THE ENGINEER.
- 6. THE WORK PROPOSED HEREON SHALL BE PERFORMED ONLY BY STORMWATER MAINTENANCE, LLC UNLESS OTHERWISE approved by the engineer.

### 27" + SLIPLINING INSTALLATION A

- 1. INSTALL THE 27" SLIPLINING: A. INSPECT THE BARREL TO ENSURE THE LINER CAN BE INSERTED WITHOUT OBSTRUCTION.
- B ATTACH WOOD SKIDS TO A SECTION OF THE LINER OR TO THE EXISTING BARREL AND INSERT ONE END OF THE BARREL LINER INTO EXISTING BARREL LEAVING ABOUT FIVE (5) FEET EXPOSED.
- C. POSITION THE NEXT SECTION OF LINER PIPE (OPPOSING END) TO THE EXPOSED END OF THE FIRST SECTION. D. SCREW THE PULLING HEAD TO THE FIRST SECTION OF THE LINGR. AFTACH THE CABLE TO THE PULLING HEAD AND PULL THE FIRST SECTION OF THE LINER INTO THE CULVERT. THREAD THE FOLLOWING LINER SECTIONS USING A CHAIN OR STRAP WRENCH WITH A FOUR FOOT BAR TO TURN THE PIPE. THE PREVIOUSLY INSERTED LINER MAY HAVE TO BE BLOCKED OR WEDGED IN THE CULVERT TO PREVENT IT FROM TWISTING.
- E. PUSH JOINED LINER FIPES INTO EXISTING BARREL AND REPEAT UNTIL COMPLETELY LINED. 2. SEAL BARREL ENDS AND GROUT THE ANNULAR SPACE BETWEEN THE BARREL LINER AND EXISTING BARREL. A. PLACE BULKHEADS IN ANNULAR SPACE BETWEEN EXISTING PIPE AND SLIPLINING PIPE AT BOTH THE UPSTREAM AND cownstream ends of the barrel install at least one vent pipe through the top of each bulkhead. B. PUMP GROUT INTO THE ANNULAR SPACE USING LOW GROUT PRESSURE (<5 PSI). GROUT TO BE INSTALLED IN A
- STAGED PROCESS STARTING WITH THE LOWEST ZONG FIRST FILL APPROXIMATELY 1/4 TO 1/3 OF THE TOTAL C. AFTER LONER ZONE IS COMPLETE, PUMP REMAINING PORTION OF ANNULAR SPACE WITH GROUT UNTIL FULL 3. GROUT SHALL BE FLOWABLE WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI. ANTICIPATED YOUMS AND STOP.

# 8" SLIPLINING INSTALLATION A

1. INSTALL THE 8'S PERFORATED SCHEDULE 40 PVC PIPE.

BLDG. 'C' DEMISAG WALL AT C-3 AND UPDATE

PARKING TABULATION

- A. INSPECT THE THREE 12" & BARRELS TO ENSURE THE HIGHWAY UNDERDRAIN PIPE CAN BE INSERTED WITHOUT
- B. CUT EACH 10 FOOT LENGTH PIPE SECTION INTO 3 EQUAL LENGTHS (3'-4") WITH A FINE TOOTH SAW OR POWER SAW. SQUARE WITH ITS ARIS TO ALLOW THE PIPE INSERPRITION INTO THE 5' Ø MANHOLE.\*
- C. INSTALL A PUC END CAP ON THE FIRST 3'-4" NON BELL END SECTION AND COUPLE ACCORDING TO ASTA D2865. D. INSERT THE PUC END CAPPED PIPE INTO THE EXISTING 12" & PERFORATED PIPE WITH THE PUC END CAPPED END FACING DOWNSTREAM.
- E. INSERT THE NEXT 3'-4" NON BELL END SECTION INTO THE MANHOLE AND COUPLE THE TWO SECTIONS OF PIPE WITH Solvent cement according to astm dabst and the coupling detail on sheet 6. F. LET THE JOINTS CURE PER THE SOLVENT CEMENT'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER
- a slide the coupled pipes into the 12" & CMPs as required to fit the Next Section of 31-4" Pipe. H. INSERT THE 3'-4" BELL END SECTION INTO THE MANHOLE AND COUPLE THE NON BELL END SECTION TO THE Coupled PIPES WITH Solvent cement according to astm d2855 and the coupling Detail on sheet 6.
- 1. LET THE JOINTS CURE PER THE SOLVENT CEMENT'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER. J. SLIPE THE COUPLED PIPES INTO THE 12" & AS REQUIRED TO FIT THE NEXT SECTION OF 3'-4" PIPE. \* K. REPEAT STEPS E THROUGH I FOR THE REQUIRED LENGTH. TWO NON BELL END SECTIONS OF PIPE SHOULD BE ALTERNATED WITH ONE BELL END SECTION TO ASSIST IN THE SLIDING OF THE COUPLED HIGHWAY UNDERDRAIN PIPE INTO THE EXISTING 12" & PERFORATED CMP. THE LAST SECTION OF PIPE BHOULD BE CUT TO THE REQUIRED LENGTH
- TO BE FLUSH WITH THE MANHOLE SIDE WALLS. 2. BULKHEAD AND GROUT THE UPSTREAM BARREL END ANNULAR SPACE BETWEEN THE 8" & PIPE AND EXISTING BARREL FOR A MINIMUM THICKNESS OF 6". THE UPSTREAM BARREL BULKHEAD SHALL BE FLUSH WITH THE MANHOLE SIDEWALLS. 3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
- \* Construction sequence shown here is for a 10' bell end fipe cut into 3'-4" Sections. Longer Section of PIPE (I.E. 20' PIPES CUT INTO 4'-0" SECTION) MAY BE USED IF THE ENGINEER DETERMINES THAT IT CAN BE SAFELY INSERTED AND CONSTRUCTED INSIDE THE MANHOLE.

OWNERS / DEVELOPERS

PARCEL A-I: ELKRIDGE NATIONAL BANK

ELKRIDGE. MD. 21227

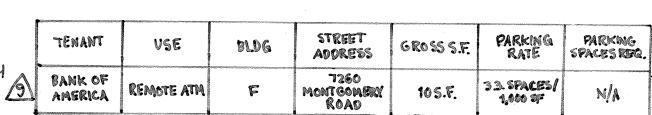
301 - 796 - 1200

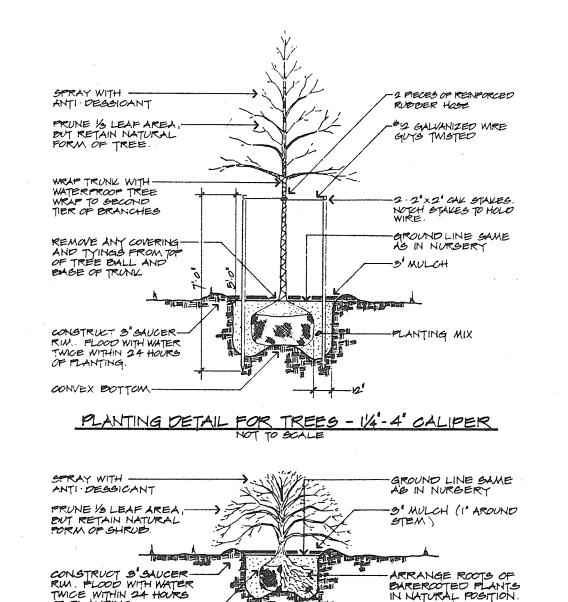
PARCEL B-1: L & M DEVELOPMENT CO.

MONTGOMERY ROAD

LIMITED PARTNERSHIP

ONE NORTH CHARLES STREET SUITE 1) OO BALTIMORE MD. 21201





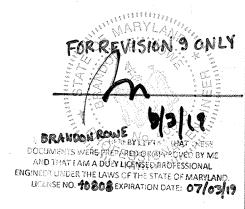
PLANTING DETAIL FOR EVERGREEN

REMOVE BURLAP FROM— TOP OF BALL

CONVEX BOTTOM-

DO NOT MAT OR TWIST

-PLANTING MIX



# PARKING TABULATION (8)

The state of the s	Anni come a come de la	Participation of the Participa	A			A	
TENANT	UŒ	Budg.	STRAET ADMESS	ADJS V.R.	PARKUMS RATE	Parking Bres Ro.	
Garin Valby Mariat Raca	ratail Ganaral	A	7280 MONTGOMERY 20	39,571	5/1,000 58	198	
Rije Ald	RETAIL GEHERAL	В	7270 Massamery Ro	10,40g	8/1,000 SF	52	
DOLLAY SHAR	rstail general	C-1	7260 MONTGOMERY RU	3,500	=/1,0005F	18	
at indiscr Tierapy	<del>(a</del> nsigl Thelapy	C-2	7260 MONTGOMERY RD	1,750	5/1,0005	. 9	
Respairant	restaupant Sitdonal	-C-3	7860 MONTGOMERY RD	3,200	14/1,000 SF	45	
OITI NAILS	BERSONAL SERVICE	C-4	7860 MONTGOMERY RD	1,600	5/1,000SF	8	
CHOP STING	Resource Sword	C-5	7260 Man 3 9727 Ro	1,600	14/1,000 57	23	
dolarmers	dry Ceausi	C-6	7260 Montsomary Rd.	1,600	5/1,000SF	8	
Ports Cups	Browal Services	C-7	7260 MONTGOMERY RO.	1,200	=/1,0005=	6	
Pizza Hut	RESTAURANT STANISHED	G-8	7260 MONTGOMERY RD	3,200	14/Lowsf	45	
cindy's Gnriff	Repaigneral	Þ	7250 MONTGOMERY RD.	5,600	5/1,0055	28	
total papeline	440						
	tal Parking Per Parking Demand Study (Nov. 27, 2018)						
TOTAL BAS		385 <b>*</b>					

\* PER 03/21/19 LETTER PREPARED BY THE TRAFFIC GROUP REGARDING THE EVALUATION OF THE REDLINE

ADDRESS CHART

REVISION TO THE DEVELOPMENT PLAN, 385 PARKING SPACES IS SUPFICIENT,

For Rev D 61111501A

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DO ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL

INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF

I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL

CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED

NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS

ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED PROGRAM FOR

THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE

THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINE "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.

HOWARD COUNTY HEALTH DEPARTMENT.

PARCEL A-I Chals & Will DATE PARCEL B-I DEVELOPER

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION BUILDING STREET ADDRESS HOWARD SOIL CONSERVATION DISTRICT DATE REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT UBDIVISION NAME AND MEETS TECHNICAL REQUIREMENTS.

BLOCK ZONE TAX/ZONE MAP | ELECT. DIST. SEWER CODE PLANTING ELKRIDGE CORNERS

TAX MAP 38 HOWARD CO., MD. WP-89-52 SCALE: 1" = 40'

FILE No 5-89-08 PARCELS 826, 885, 799 ELECTION DISTRICT I WP 89-169 DATE: 4/18/89 SHEET 10 OF 10

LOT/PARCEL

CENSUS TRACT

A 5/20/19 SWM REV. S-1+M1

(REV. 6/17/14 NOTES SHORTENED)

SDP 89-205