

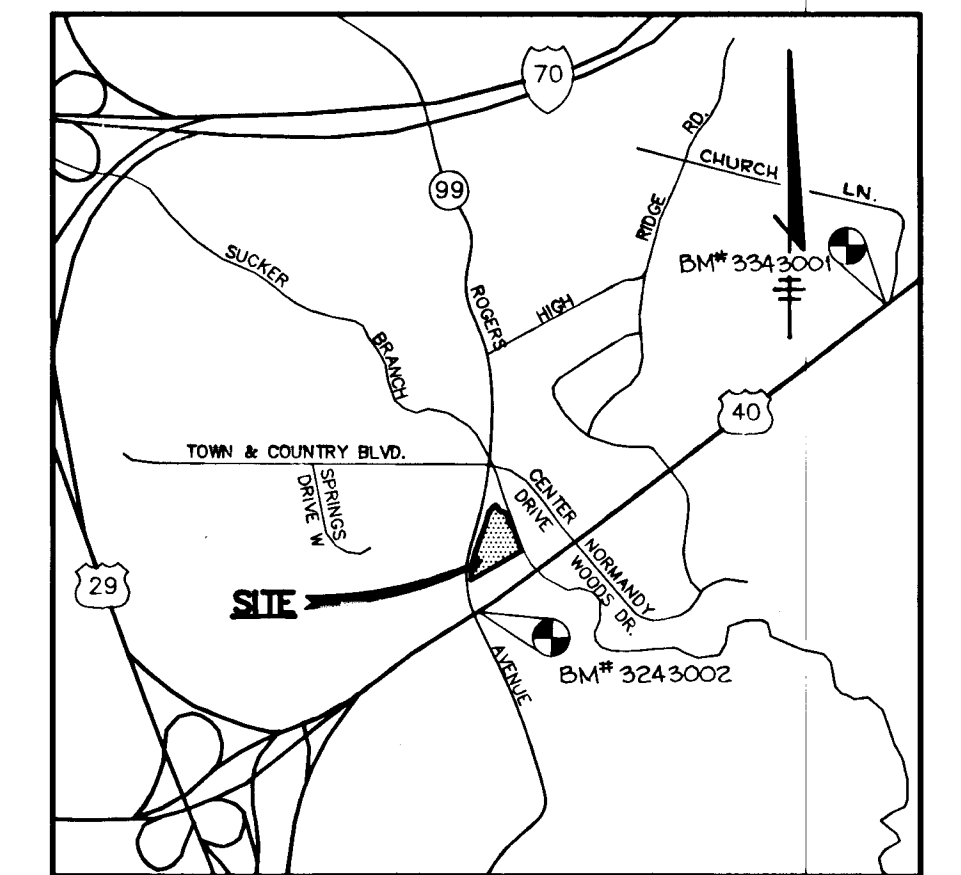
SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN & PROFILE OF ROGERS AVENUE & DETAILS
3	SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP
4	STORM DRAIN PROFILES & DETAILS
5	FLOODPLAIN REFORESTATION PLAN
6	BOX CULVERT EXTENSION DETAILS

BENCH MARKS

BM# 3343001 N 529235.880; E 855331.855
 CONCRETE MONUMENT AT SURFACE 4'± NORTH OF MACADAM SHOULDER OF ROUTE 40 WEST, 18'± WEST OF YELLOW BLINKING SIGNAL, NEAR INTERSECTION OF ROUTE 40 WEST AND CHURCH LANE.

BM# 3243002 N 527899.393; E 853619.674
 CONCRETE MONUMENT AT SURFACE OF MEDIAN, 6.5'± SOUTH OF LEFT TURN LANE OF ROUTE 40 WEST, 14'± EAST OF EAST EDGE OF CROSSOVER TO ROGERS AVENUE SOUTH.

ROADS & STORM DRAINS BROOKSIDE 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND



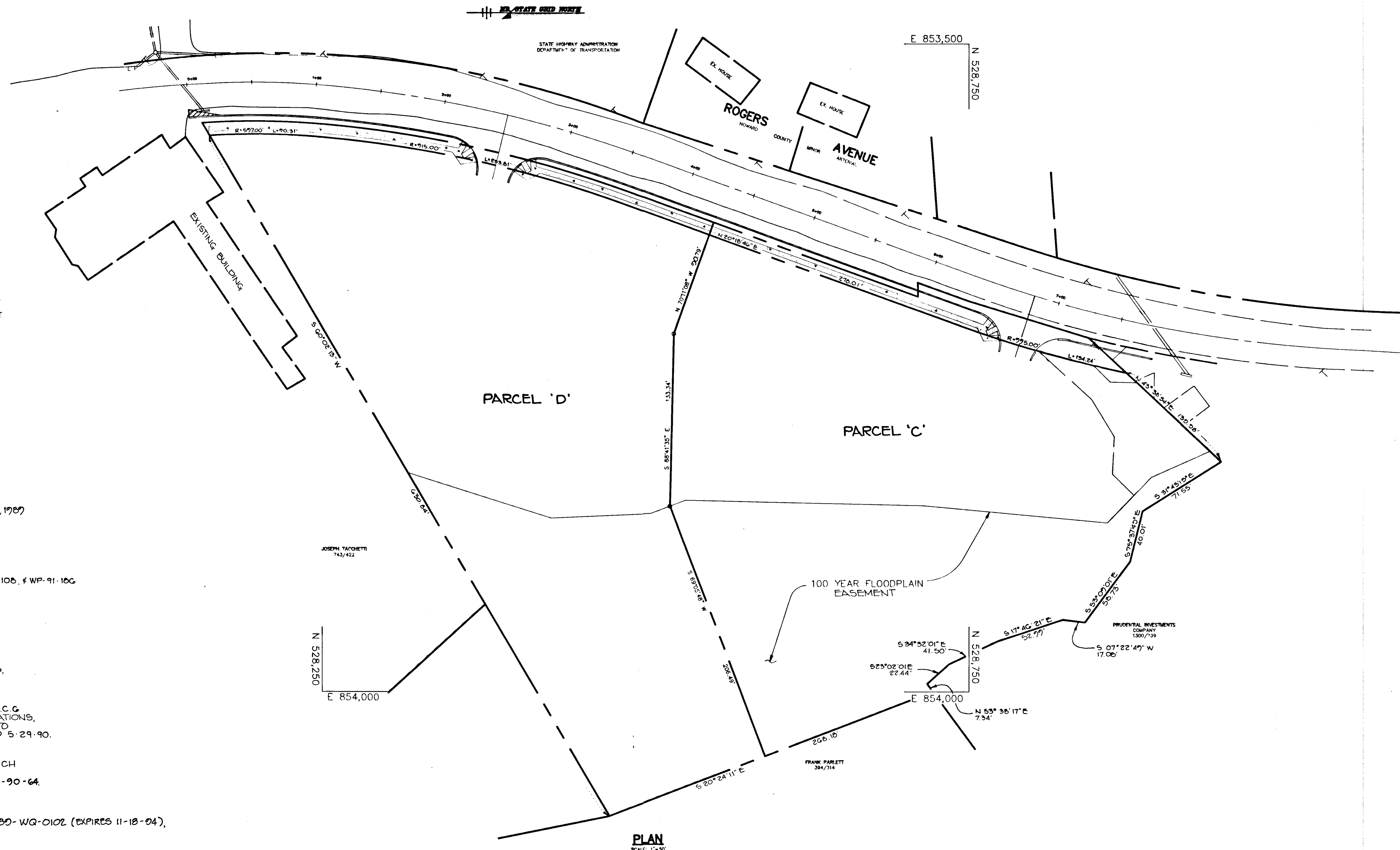
VICINITY MAP
 SCALE: 1"=2000'

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-777
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 or 3554
BALTIMORE GAS AND ELECTRIC CO.	539-8000
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION	792-7272
INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	
COLONIAL PIPELINE	795-1390
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 25' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1990 AMENDMENTS.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1988 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL 80' RIGHT-OF-WAYS	40 M.P.H.
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- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEAL LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED B-2 PER 8-25-85 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM FIELD RUN SURVEY BY TRACY, SCHULTE & ASSOC. DATED MAY, 1989.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAS BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPT. OF PLANNING AND ZONING FILE NO'S. WP-90-04, WP-88-14G & F-89-10B, & WP-91-10G.
- LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III - ROAD AND BRIDGES, PAGE 4A-26.
- THE STORMWATER MANAGEMENT FOR ROGERS AVENUE WILL BE COMPENSATED FOR UNDER SITE DEVELOPMENT PLAN FOR PARCEL 'C'.
- WP-88-14G:
 A REQUEST FOR WAIVERS FROM SECTION 1G.119 AND SECTION 1G.120 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, REQUIRING SUBMISSION OF A SKETCH AND PRELIMINARY PLAN, WAS APPROVED IN A LETTER DATED 9-7-88.
- WP-90-04:
 A REQUEST FOR WAIVERS FROM SECTION 1G.116 C.4 AND SECTION 1G.116 C.6 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, TO ALLOW STEEP SLOPE DISTURBANCE ADJACENT TO WETLANDS, AND TO ALLOW FILLING OF WETLANDS, WAS APPROVED IN A LETTER DATED 5-29-90.
- WP-91-10G:
 A REQUEST FOR A WAIVER FROM SECTION 1G.103 (C) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH VALIDATES WAIVERS FOR UP TO 12 MONTHS, WAS APPROVED IN A LETTER DATED 6-26-91, FOR REACTIVATION OF WP-88-14G & WP-90-04.
- 100 YR. FLOODPLAIN WAS DETERMINED USING A STUDY PERFORMED BY PURDUM & JESCHKE DATED DECEMBER, 1980.
- WETLAND PERMIT NUMBERS: MARYLAND DEPARTMENT OF THE ENVIRONMENT 80-WG-0102 (EXPIRES 11-18-04), U.S. ARMY CORPS OF ENGINEERS 80-C2861-15 (EXPIRES 11-18-04).

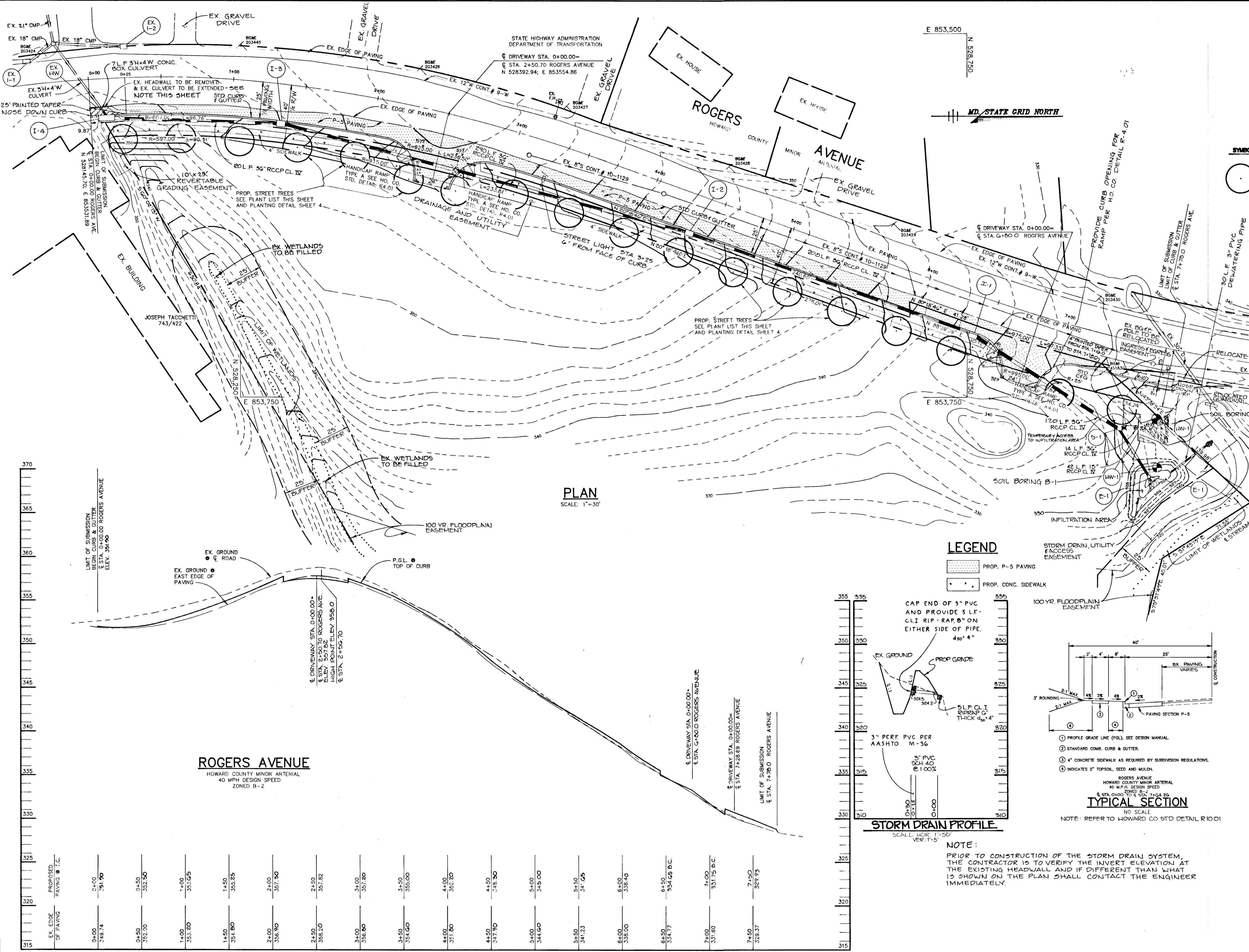


AS BUILT CERTIFICATE	
ARTHUR E. MUEGGE #8707	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT <i>Shirley Holman</i> 2/19/92 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Col. Danman</i> 2/19/92 CHIEF, LAND DEVELOPMENT DIVISION	
<i>John M. Duggan</i> 2/19/92 CHIEF, BUREAU OF HIGHWAY (Aerial) DATE	
<i>John M. Duggan</i> 2-21-92 CHIEF, BUREAU OF ENGINEERING DATE	
DATE	REVISION
OWNER	BROOKSIDE LIMITED PARTNERSHIP 8480 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043
DEVELOPER	SECURITY ENTERPRISES, INC. P.O. BOX 609 ELLICOTT CITY, MARYLAND 21043
PROJECT	BROOKSIDE SECTION 1 AREA 1 PARCELS 'C' & 'D'
AREA	TAX MAP NO. 17 PARCELS 156, 263 & 651 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE TITLE SHEET	
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 3105 North Ridge Road Ellicott City, Maryland 21043 301-461-2690 FAX: 301-750-3176	
DATE 2-19-92	DESIGNED BY: JB, CB
	DRAWN BY: CB
	PROJECT NO: 76801
	DATE: FEBRUARY 5, 1992
	SCALE: AS SHOWN
ARTHUR E. MUEGGE #8707	DRAWING NO. 1 OF 6

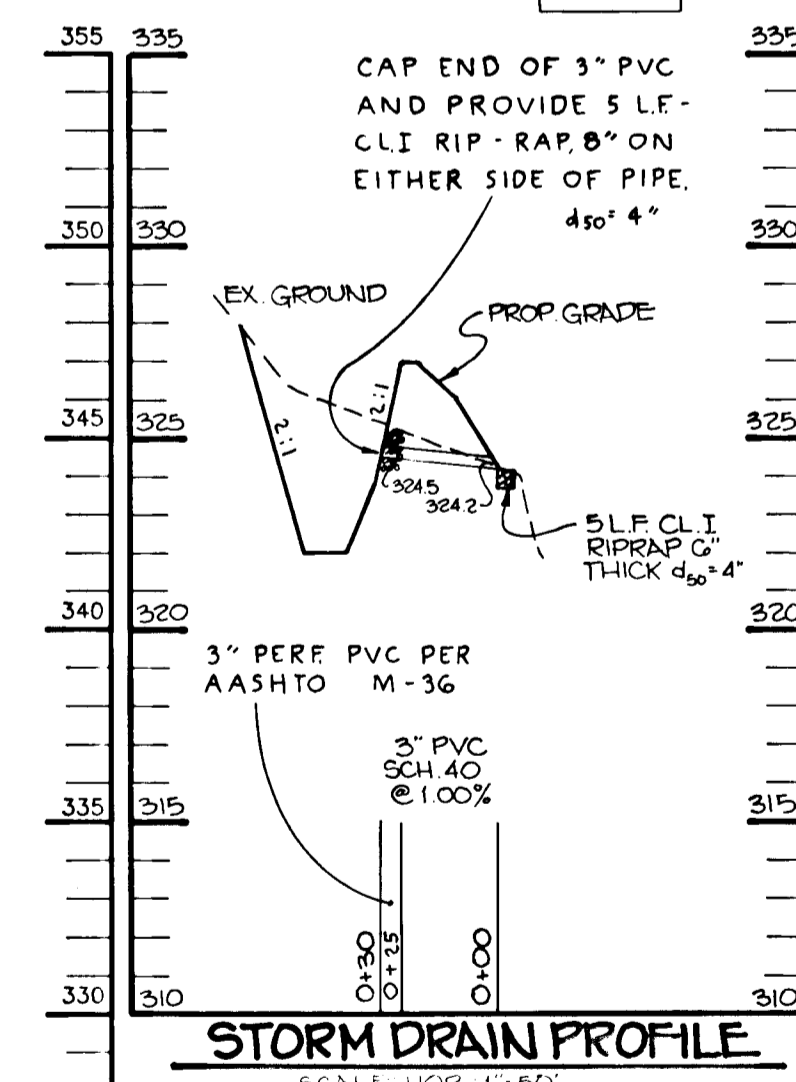
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PLANT LIST

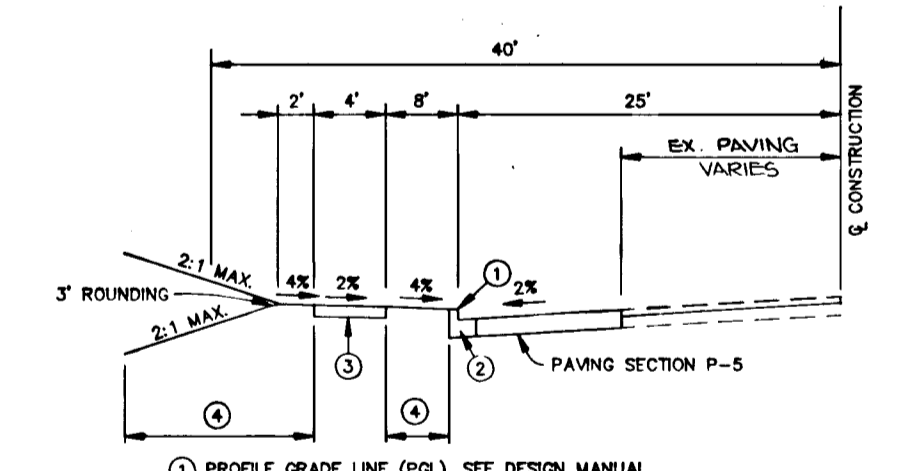
SYMBOL	QUANTITY	NAME	REMARKS
(Symbol)	10	ACER FRUTUM (RED MAPLE)	2 1/2 MIN. CAL. BAR FULL HEAD



PLAN SCALE: 1"=30'



STORM DRAIN PROFILE SCALE: HOR: 1"=50' VER: 1"=5'



TYPICAL SECTION

LEGEND

- PROP. P-5 PAVING
- PROP. CONC. SIDEWALK

NOTE: PRIOR TO CONSTRUCTION OF THE STORM DRAIN SYSTEM, THE CONTRACTOR IS TO VERIFY THE INVERT ELEVATION AT THE EXISTING HEADWALL AND IF DIFFERENT THAN WHAT IS SHOWN ON THE PLAN SHALL CONTACT THE ENGINEER IMMEDIATELY.

EX. EDGE OF PAVING	PROPOSED PAVING @ T.C.
0+00	0+00
3+87.4	3+91.00
0+50	0+50
352.00	352.50
1+00	1+00
353.60	353.65
1+50	1+50
354.80	355.85
2+00	2+00
356.90	357.30
2+50	2+50
358.20	357.82
3+00	3+00
358.00	357.80
3+50	3+50
354.60	355.00
4+00	4+00
357.80	352.80
4+50	4+50
347.90	348.90
5+00	5+00
344.60	345.00
5+50	5+50
341.23	341.05
6+00	6+00
338.00	338.40
6+50	6+50
334.77	334.65 B.C.
7+00	7+00
331.80	331.75 B.C.
7+50	7+50
328.37	327.75

PROFILE SCALE: HOR: 1"=50' VER: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT

Anna Hamath 2/14/92 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division 2/1/92 DATE

Chief, Bureau of Highways (Anna) 2/1/92 DATE

Chief, Bureau of Engineering 2-21-92 DATE JH

DATE NO. REVISION

OWNER BROOKSIDE LIMITED PARTNERSHIP 8480 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043

DEVELOPER SECURITY ENTERPRISES, INC. P.O. BOX 6029 ELLICOTT CITY, MARYLAND 21043

PROJECT BROOKSIDE SECTION 1 AREA 1 PARCELS 'C' & 'D'

AREA TAX MAP NO. 17 PARCELS 156, 263 & 651 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE PLAN & PROFILE OF ROGERS AVENUE AND DETAILS

RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 3105 North Ridge Road Ellicott City, Maryland 21043 301-461-2690 FAX: 301-750-3176

DATE 2-5-92

DESIGNED BY: JB, CB

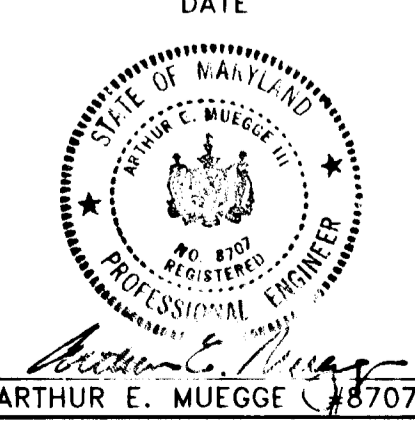
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PROJECT NO: 76801

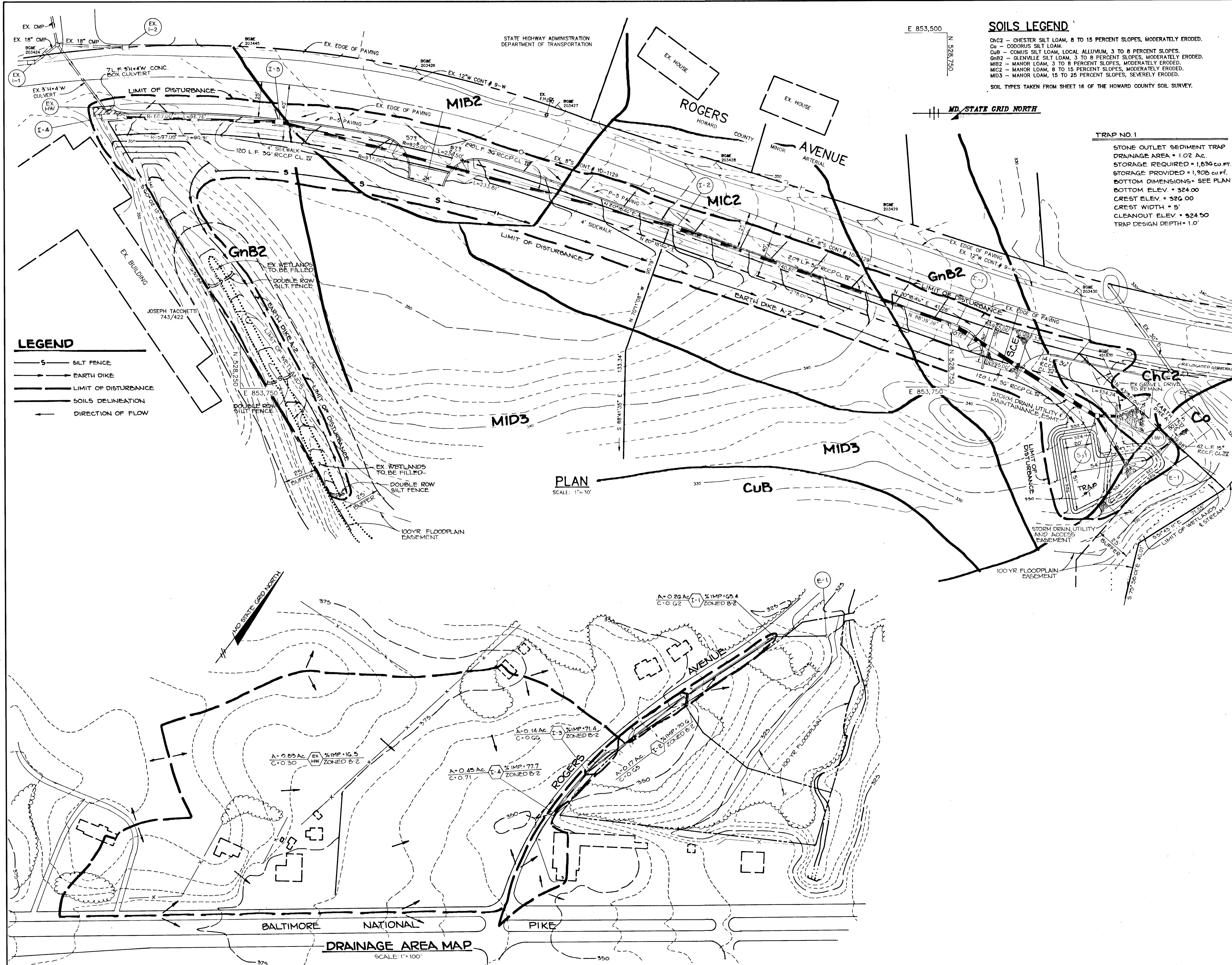
DATE: FEBRUARY 5, 1992

SCALE: AS SHOWN

DRAWING NO. 2 OF 6



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SOILS LEGEND
 ChC2 - CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED.
 Co - CODORUS SILT LOAM.
 CuB - COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES.
 GnB2 - GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
 MIB2 - MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
 MIC2 - MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED.
 MID3 - MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED.
 SOIL TYPES TAKEN FROM SHEET 16 OF THE HOWARD COUNTY SOIL SURVEY.

TRAP NO. 1
 STONE OUTLET SEDIMENT TRAP
 DRAINAGE AREA = 1.02 AC.
 STORAGE REQUIRED = 1,836 CU. FT.
 STORAGE PROVIDED = 1,908 CU. FT.
 BOTTOM DIMENSIONS - SEE PLAN
 BOTTOM ELEV. = 324.00
 CREST ELEV. = 326.00
 CREST WIDTH = 5'
 CLEANOUT ELEV. = 324.50
 TRAP DESIGN DEPTH = 1.0'

PLAN
 SCALE: 1"=30'

LEGEND
 -S- SILT FENCE
 -E- EARTH DIKE
 -L- LIMIT OF DISTURBANCE
 -S- SOILS DELINEATION
 -A- DIRECTION OF FLOW

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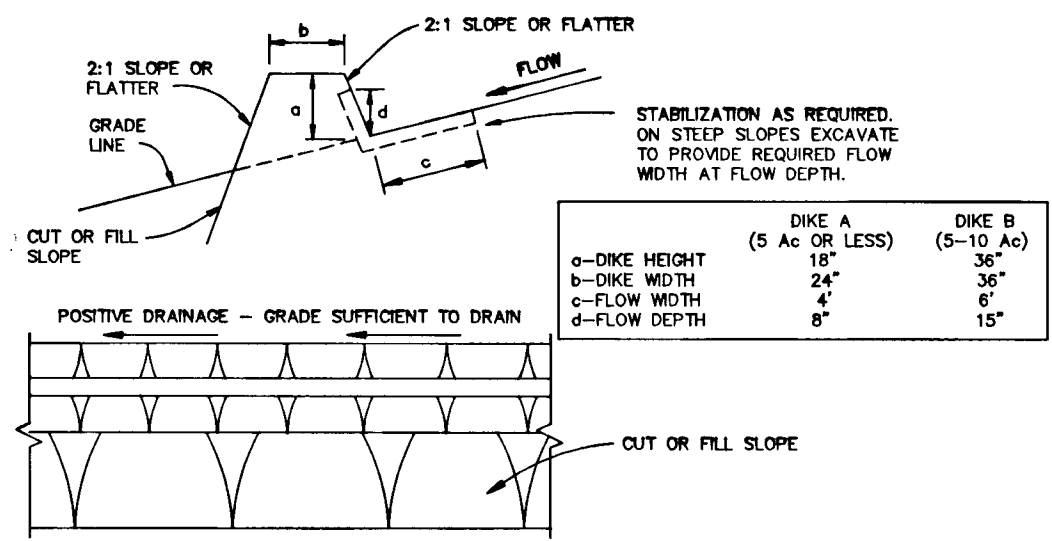
DRAINAGE AREA MAP
 SCALE: 1"=100'

AS BUILT CERTIFICATE	
ARTHUR E. MUEGGE #8707	DATE
BY THE DEVELOPER:	
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>Arthur E. Muegge</i>	2-4-92
DEVELOPER	DATE
BY THE ENGINEER:	
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>Arthur E. Muegge</i>	2-5-92
ENGINEER	DATE
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.	
<i>James M. Altmeyer</i>	2/13/92
S. SOIL CONSERVATION SERVICE	DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>John R. Roberts</i>	2/13/92
HOWARD SOIL CONSERVATION DISTRICT	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT	
<i>Emma Holmuth</i>	2/13/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>William J. ...</i>	2/13/92
CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>William J. ...</i>	2/13/92
CHIEF, BUREAU OF HIGHWAYS (Senior)	DATE
<i>William J. ...</i>	2-21-92
CHIEF, BUREAU OF ENGINEERING	DATE
DATE NO.	REVISION
OWNER	BROOKSIDE LIMITED PARTNERSHIP 8480 BALTIMORE NATIONAL PIKE ELLCOTT CITY, MARYLAND 21043
DEVELOPER	SECURITY ENTERPRISES, INC. P.O. BOX 6009 ELLCOTT CITY, MARYLAND 21043
PROJECT	BROOKSIDE SECTION 1 AREA 1 PARCELS C, F, D
AREA	TAX MAP NO. 17 PARCELS 156, 263 & 651 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	SEDIMENT CONTROL PLAN & DRAINAGE AREA MAP
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 3105 North Ridge Road Ellicott City, Maryland 21043 301-461-2690 FAX: 301-750-3176	
<i>Arthur E. Muegge</i>	DATE
DESIGNED BY: JB, CB	
DRAWN BY: CB	
PROJECT NO: 76801	
DATE: FEBRUARY 5, 1992	
SCALE: AS SHOWN	
DRAWING NO. 3 OF 6	

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.
- Following 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 other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around the perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION 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 establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Submission	5.15 acres
Area Disturbed	1.02 acres
Area to be roofed or paved	0.26 acres
Area to be vegetatively stabilized	0.68 acres
Cut Out	423 cu.yds.
Total Fill	547 cu.yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
- Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
- Sediment will be removed from traps when its depth reaches clean out elevation shown on the plans.
- Cut and fill quantities provided under site analysis do not represent bid quantities. These quantities do not distinguish between topsoil, structural fill or embankment material, nor do they reflect consideration of undercutting or removal of unsuitable material. The contractor shall familiarize himself with site conditions which may affect the work.
- Borrow site to be pre-approved by the Sediment Control Inspector. Or, in case of excess material, an approved sediment control plan will be needed to deposit excess off-site.



CONSTRUCTION SPECIFICATIONS

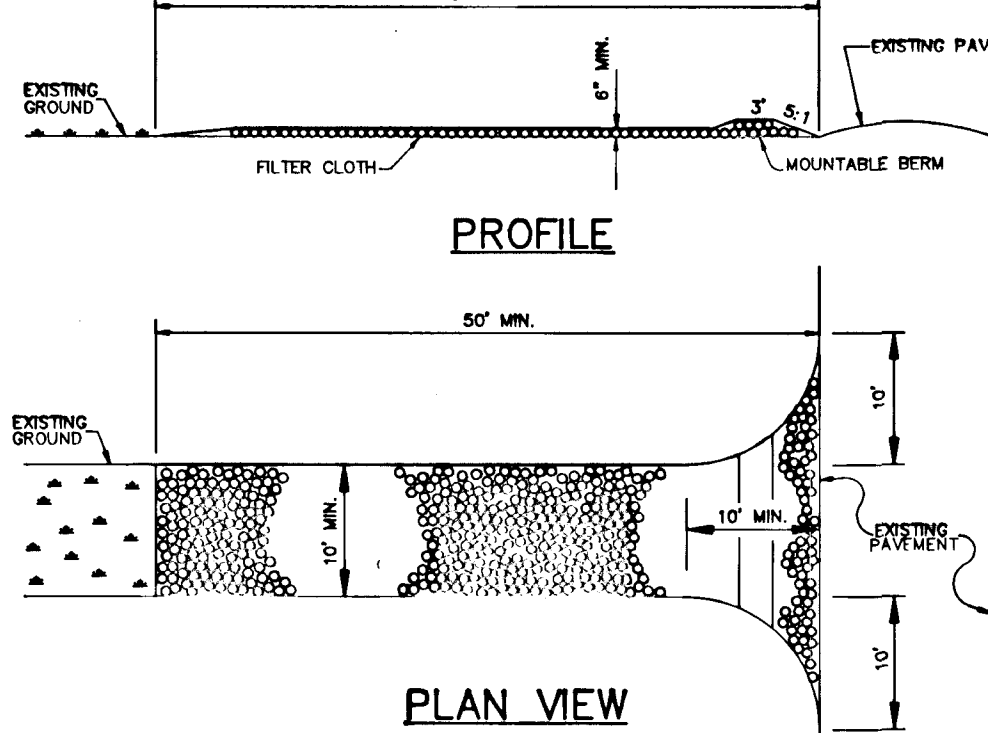
- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
2	3.1-5.0%	SEED & STRAW MULCH	SEED USING JUTE, OR EXCLUSOR; 500:2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR 500:2" STONE	LINED RIPRAP 4"-8"
4	8.1-20%	LINED RIPRAP 4"-8"	ENGINEERED DESIGN

EARTH DIKE

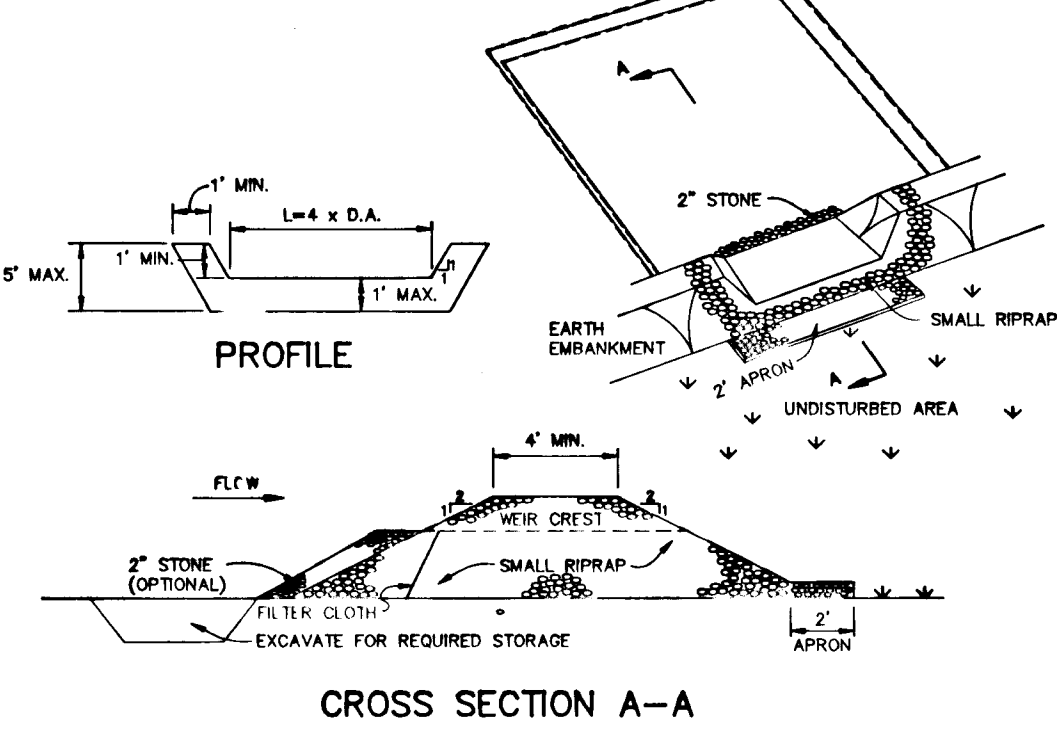
- STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
- RIPPRAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
- APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or recycled or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where ingress and egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
- Surface Water - All surface water flowing or diverted toward construction entrance shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or floating of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment applied, dropped, washed or tracked onto public right-of-way must be removed immediately.
- Working - Means shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS

- AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
- THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBANKED FILTER CLOTH IN THE RIPRAP.
- SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
- THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STONE OUTLET SEDIMENT TRAP

NO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- Woven wire fence to be fastened securely to fence posts with wire ties or staples. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid sections.
 - When two sections of filter cloth adjoin, each other they shall be overlapped by six inches and folded.
 - Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.
- POSTS: Steel, either T or U type or 2" hardwood.
 FENCE: Woven wire, 14 Ga., 12" max mesh opening.
 FILTER CLOTH: Filter X, Minot 100X, Stoblinko T1401 or approved equal.
 PREFABRICATED UNIT: Geotab, Envirofence or approved equal.

SILT FENCE DETAIL

NO SCALE

STRUCTURE	DIKE	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	6"	---	---	14"
HW-1	9"	20'	23'	20"

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

PERMANENT SEEDING NOTES

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

PERMANENT SEEDING NOTES

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

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

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

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

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

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

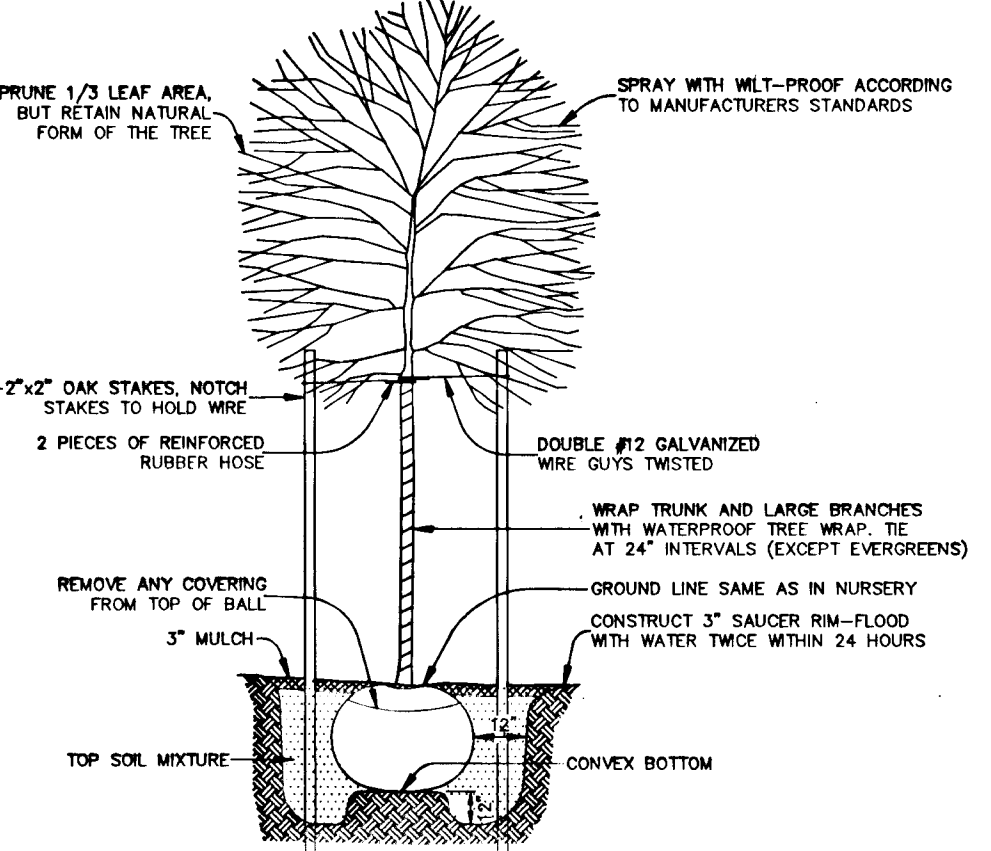
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Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.



TREE PLANTING DETAIL

NO SCALE

TEMPORARY SEEDING NOTES

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

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

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

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

PERMANENT SEEDING NOTES

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
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Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

PERMANENT SEEDING NOTES

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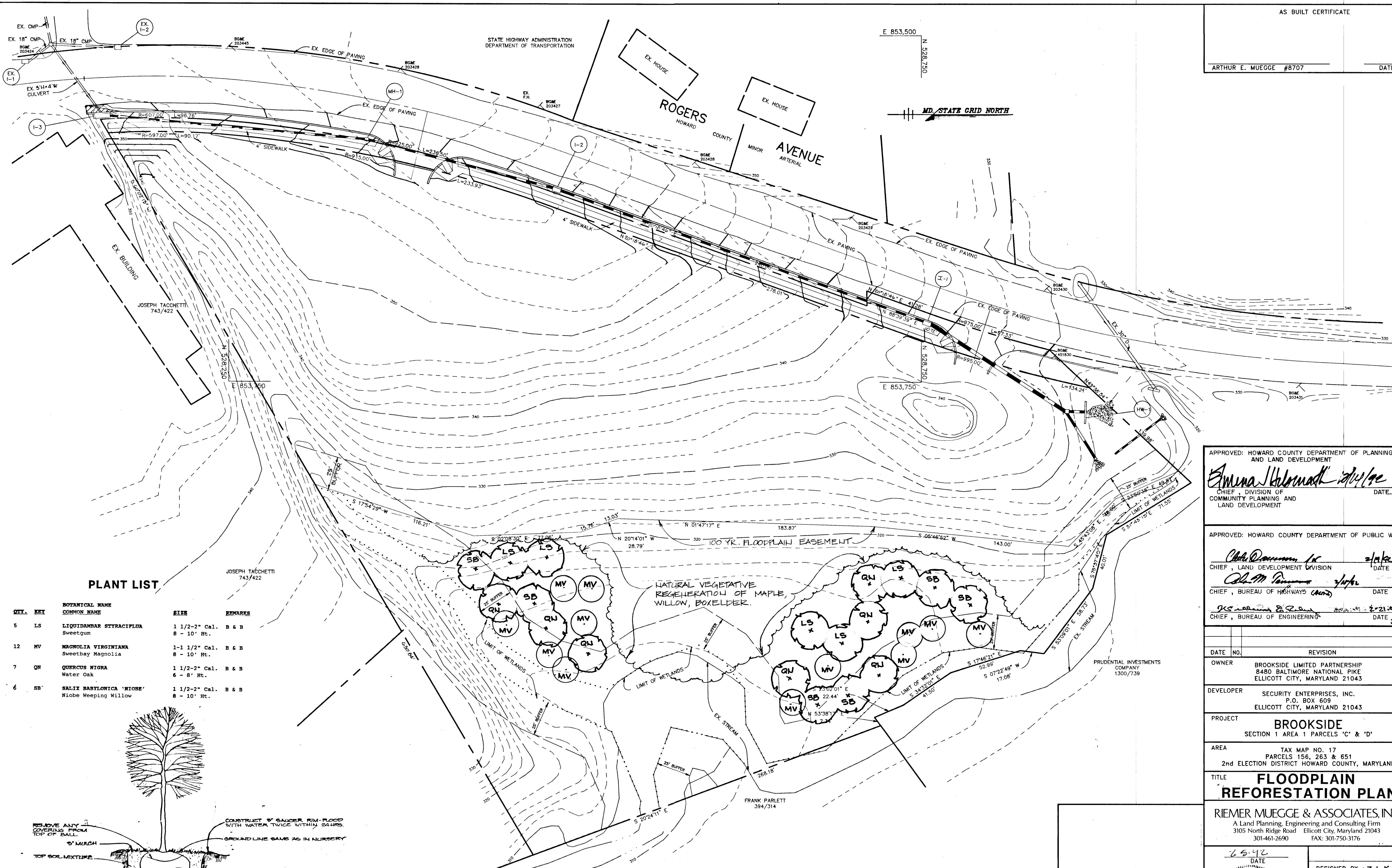
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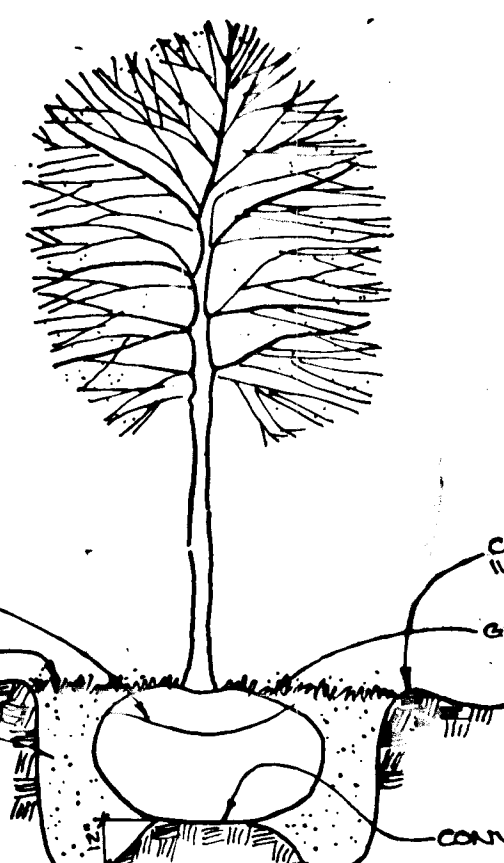
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PLANT LIST

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	REMARKS
5	LS	LIQUIDAMBAR STRACIPLA Sweetgum	1 1/2-2" Cal. 8 - 10' Ht.	B & B
12	MV	MAGNOLIA VIRGINIANA Sweetbay Magnolia	1-1 1/2" Cal. 8 - 10' Ht.	B & B
7	QN	QUERCUS NIGRA Water Oak	1 1/2-2" Cal. 6 - 8' Ht.	B & B
6	SB	SALIX BABYLONICA 'NIOBE' Niobe Weeping Willow	1 1/2-2" Cal. 8 - 10' Ht.	B & B



TREE PLANTING DETAIL FOR NATURALIZED PLANTING N.T.S.

PLAN SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT
Emma Holmash 2/14/92
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chris Dorman 2/14/92
 CHIEF, LAND DEVELOPMENT DIVISION
John M. Tommaso 2/14/92
 CHIEF, BUREAU OF HIGHWAYS (M&D)
John S. ... 2-21-92
 CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION

OWNER: BROOKSIDE LIMITED PARTNERSHIP
 8480 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER: SECURITY ENTERPRISES, INC.
 P.O. BOX 609
 ELLICOTT CITY, MARYLAND 21043

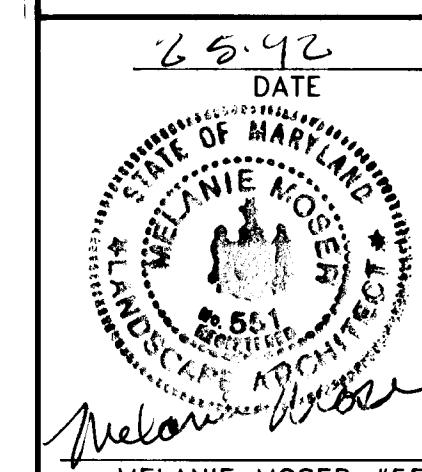
PROJECT: BROOKSIDE
 SECTION 1 AREA 1 PARCELS 'C' & 'D'

AREA: TAX MAP NO. 17
 PARCELS 156, 263 & 651
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

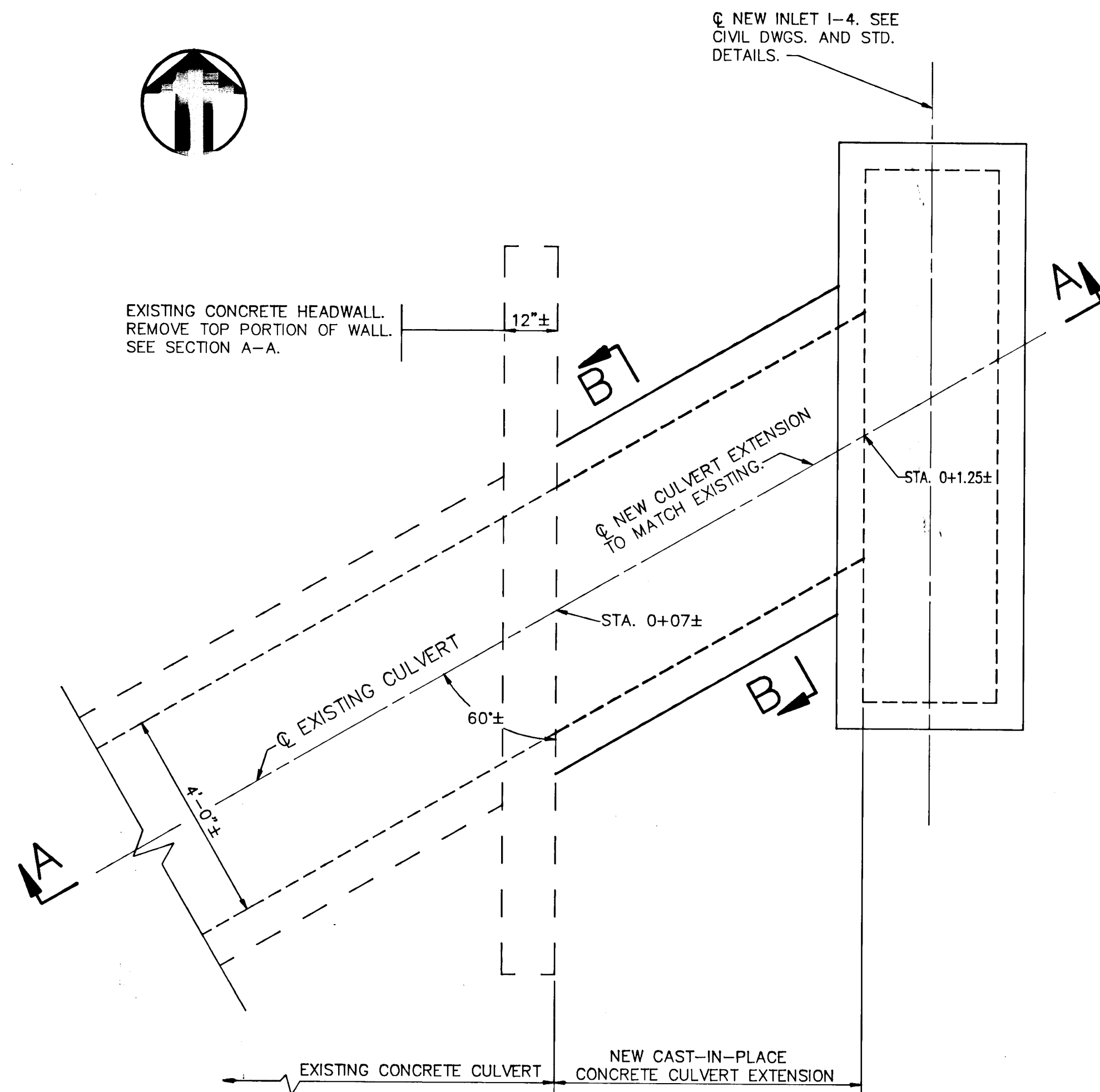
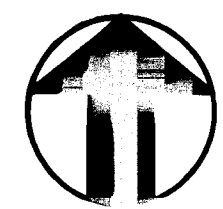
TITLE: FLOODPLAIN REFORESTATION PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 3105 North Ridge Road Ellicott City, Maryland 21043
 301-461-2690 FAX: 301-750-3176

DATE: 2-5-92
 DESIGNED BY: Z.L.K.
 DRAWN BY: CB/Z.K.
 PROJECT NO.: 76801
 DATE: FEBRUARY 5, 1992
 SCALE: AS SHOWN
 DRAWING NO. 5 OF 6

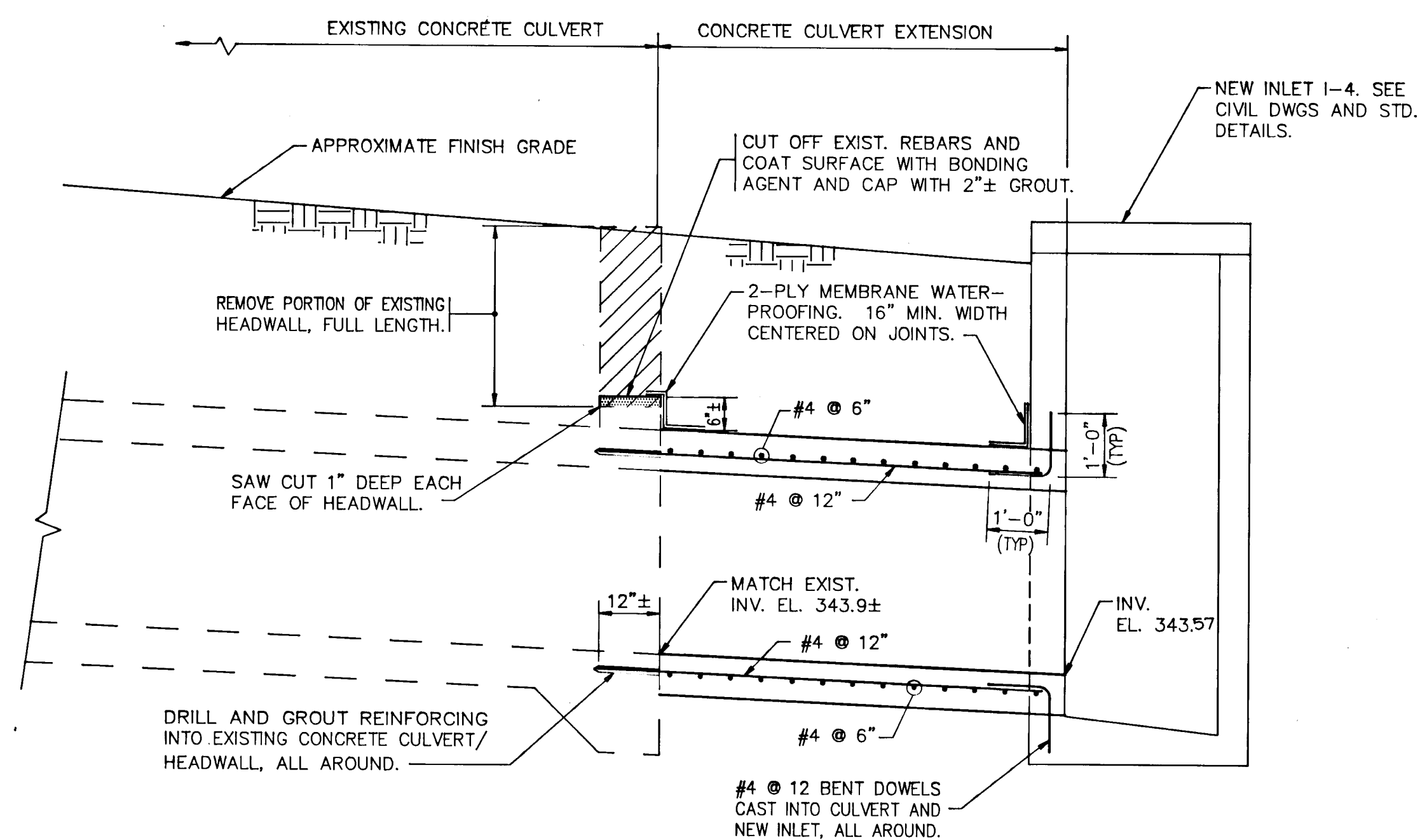


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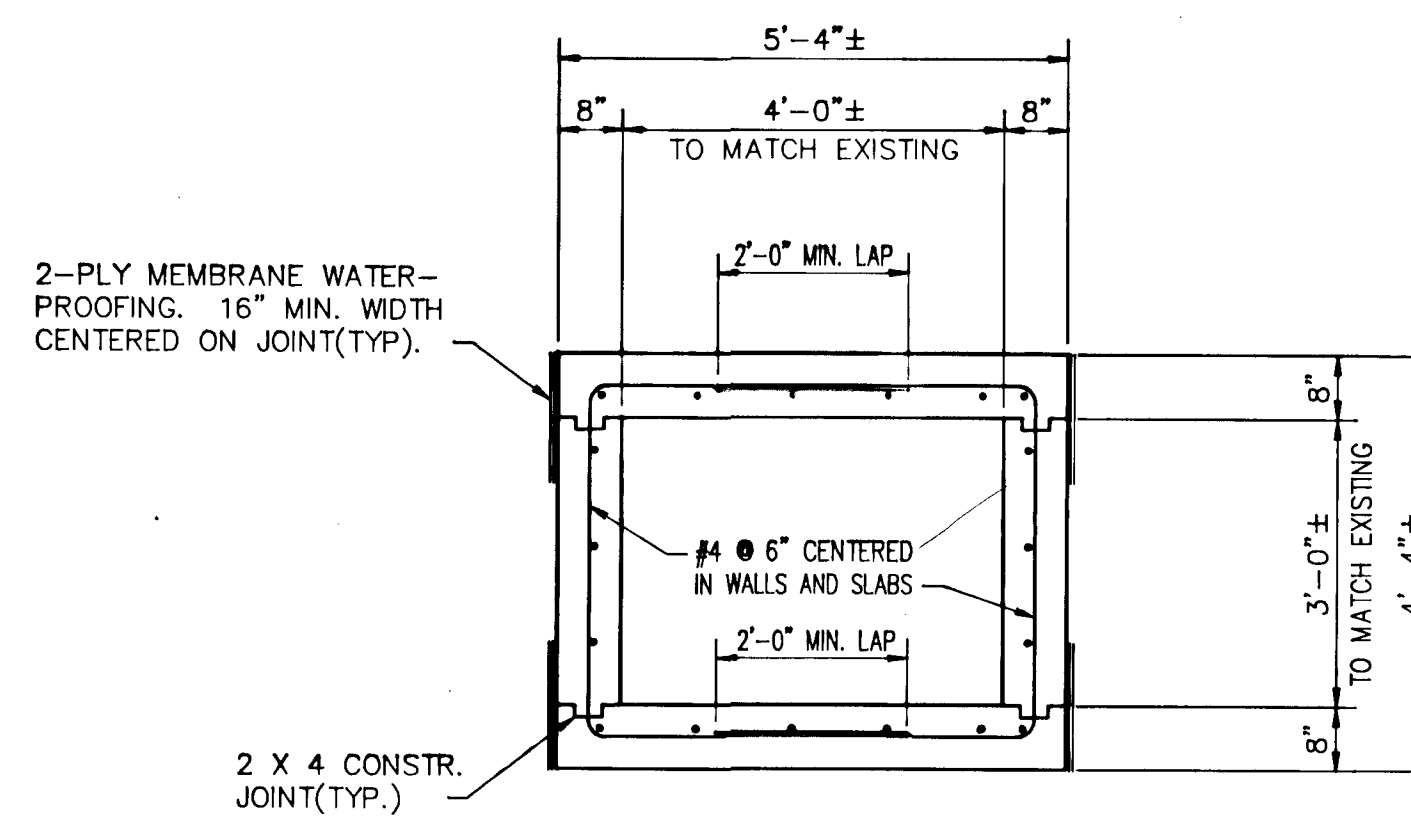
PLAN-CULVERT EXTENSION

SCALE: 1/2"=1'-0"



SECTION A-A

SCALE: 1/2"=1'-0"



SECTION B-B

SCALE: 1/2"=1'-0"

COVER FOR CONCRETE CULVERT: NO CONSTRUCTION EQUIPMENT SHALL BE PERMITTED TO PASS OVER THE CULVERT UNTIL A MINIMUM OF 3 FT. OF COMPACTED FILL HAS BEEN PLACED OVER THE CULVERT.

GENERAL NOTES-CULVERT EXTENSION

- SPECIFICATIONS:** HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND SHA SPECIFICATIONS DATED JANUARY, 1982, SUPPLEMENT TO SPECIFICATIONS DATED, JANUARY 1988, REVISIONS THEREOF AND ADDITIONS THERETO, INCLUDING ALL INTERIM SPECIFICATION ADDENDA.
- AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1983 FOR DESIGN INCLUDING ALL INTERIM SPECIFICATIONS THROUGH 1988.**
- LOADING:** HS-25.
- CONCRETE:** ALL CONCRETE FOR BOX CULVERT EXTENSION SHALL BE MIX NO. 3(3500 PSI).
- REINFORCING STEEL:** REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL SPLICES NOT SHOWN SHALL BE LAPPED 40 BAR DIAMETERS. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS NOTED OTHERWISE. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- KEY:** ALL KEYS ARE NOMINAL SIZE.
- CONCRETE DESIGN:** LOAD FACTOR DESIGN METHOD.
- EXISTING STRUCTURE:** ALL DIMENSIONS AFFECTED BY THE GEOMETRICS, AND/OR LOCATION OF THE EXISTING CULVERT SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR, BEFORE ANY CONSTRUCTION IS DONE, AND BEFORE ANY REINFORCING STEEL, ETC., IS ORDERED OR FABRICATED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS REQUIRED TO CHECK DETAIL DRAWINGS. THE ± MARKS SHOWN WITH DIMENSIONS AND STATIONS DO NOT INDICATE ANY DEGREE OF PRECISION. THESE MARKS (±) INDICATE EXISTING DIMENSIONS AND STATIONS THAT MAY VARY AND DO REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.

EXISTING STRUCTURE SHOWN IN LONG DASHED LINES.

PORTIONS OF EXISTING STRUCTURE SHOWN HATCHED, TO BE REMOVED

AS BUILT CERTIFICATE

ARTHUR E. MUEGGE P.E.#8707 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT
Anna J. Helmuth 1/12/92
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
McDermott Jr 2/10/92
 CHIEF, LAND DEVELOPMENT DIVISION
John M. Pongora 2/10/92
 CHIEF, BUREAU OF HIGHWAYS (Acting)
William B. Roman 2-21-92
 CHIEF, BUREAU OF ENGINEERING

DATE NO. REVISION

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 ELLICOTT CITY, MARYLAND 21043

DEVELOPER: SECURITY ENTERPRISES, INC.
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 ELLICOTT CITY, MARYLAND 21043

PROJECT: **BROOKSIDE**
 SECTION 1 AREA 1 PARCEL 'C'

AREA: TAX MAP NO. 17
 PARCELS 156, 263 & 651
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: **BOX CULVERT EXTENSION DETAILS**

NOLAN ASSOCIATES, INC.
 CONSULTING ENGINEERS - CIVIL/STRUCTURAL
 P.O. BOX 2579, COLUMBIA, MARYLAND 21045
 PHONE: (301) 995-3651 FAX: (301) 995-1363

DESIGNED BY: CSN
 DRAWN BY: CSN
 NAI PROJECT NO.: 91-030
 DATE: FEBRUARY 5, 1992
 SCALE: AS SHOWN
 DRAWING NO. 6 OF 6