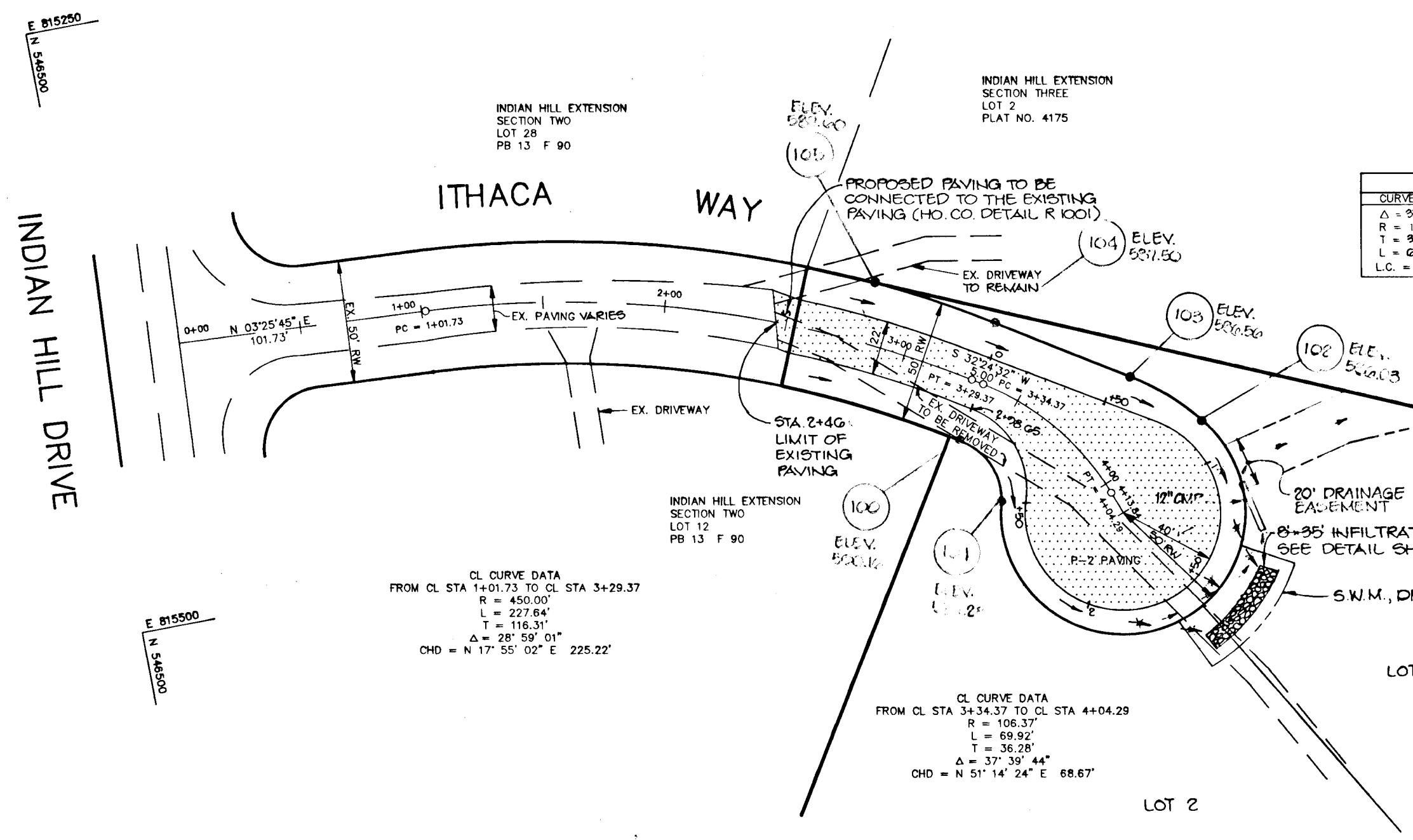


| SHEET INDEX | |
|-------------|-----------------------------------|
| NO. | DESCRIPTION |
| 1 | PLAN AND PROFILE OF ITHACA WAY |
| 2 | GRADING AND SEDIMENT CONTROL PLAN |

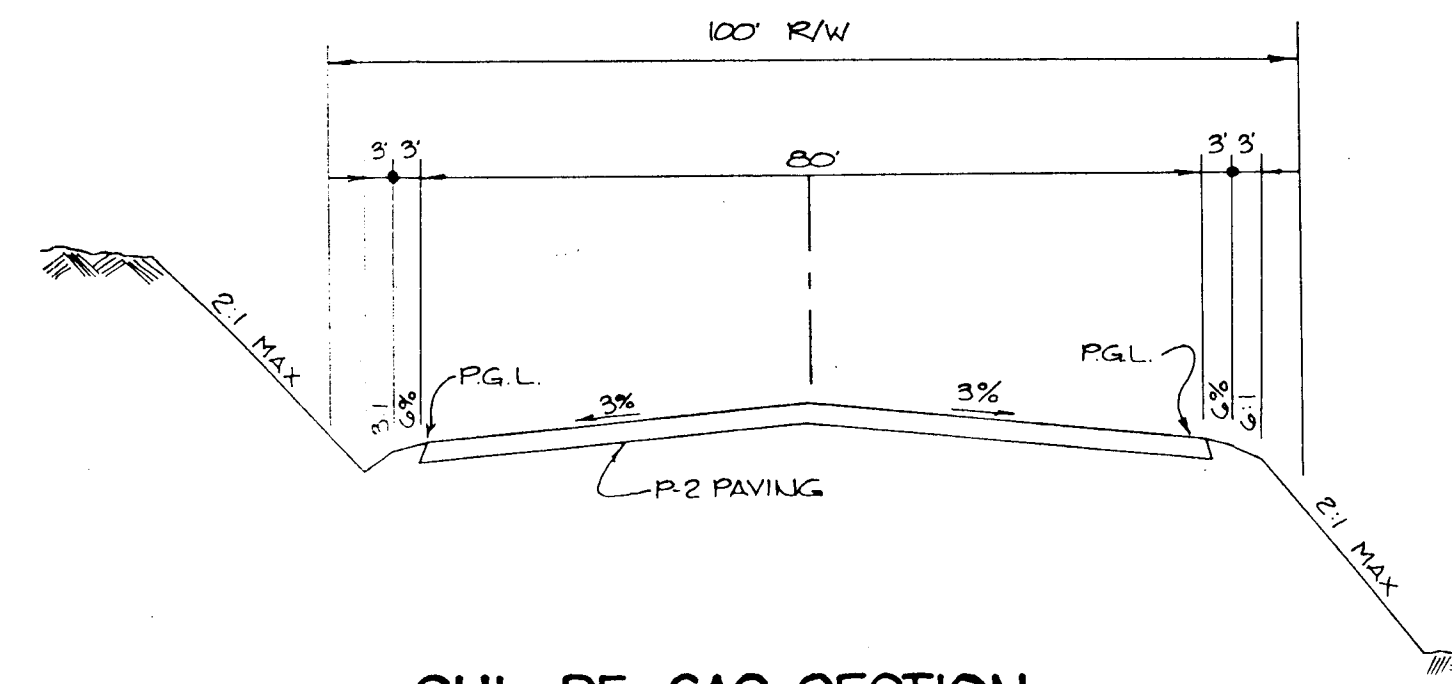


PLAN
SCALE: 1" = 50'

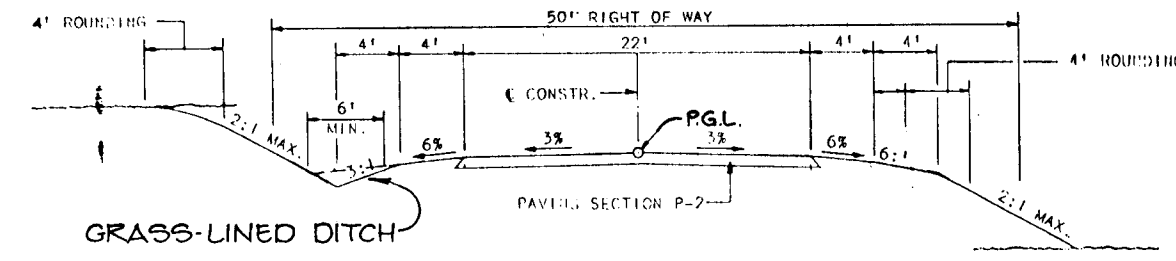
| CURVE DATA | | | | | |
|---------------|----------------|----------------|---------------|----------------|---------------|
| CURVE NO. 1 | CURVE NO. 2 | CURVE NO. 3 | CURVE NO. 4 | CURVE NO. 5 | CURVE NO. 6 |
| Δ = 97°00'44" | Δ = 193°37'37" | Δ = 233°38'27" | Δ = 72°56'32" | Δ = 256°51'15" | Δ = 76°21'18" |
| R = 106.37' | R = 100.00' | R = 50.00' | R = 25.00' | R = 40.00' | R = 35.00' |
| T = 96.58' | T = 17.30' | T = 38.90' | T = 18.48' | T = 23.52' | T = 22.52' |
| L = 60.00' | L = 34.28' | L = 203.89' | L = 31.83' | L = 179.32' | L = 46.64' |
| L.C. = 68.67' | L.C. = 34.09' | L.C. = 29.72' | L.C. = 29.72' | L.C. = 43.27' | L.C. = 43.27' |

OFFSET CUL-DE-SAC
NO SCALE

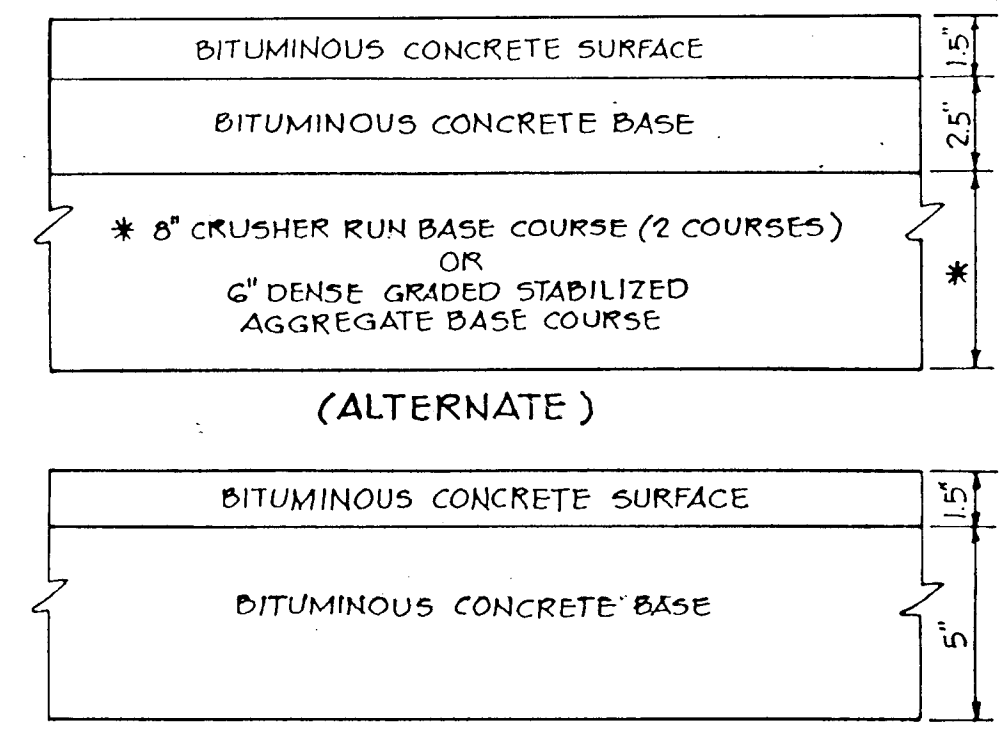
NOTE: INFILTRATION TRENCH NOT CONSTRUCTED. ZAWANER HAS BEEN REQUESTED THROUGH THE DEPARTMENT OF PUBLIC WORKS.



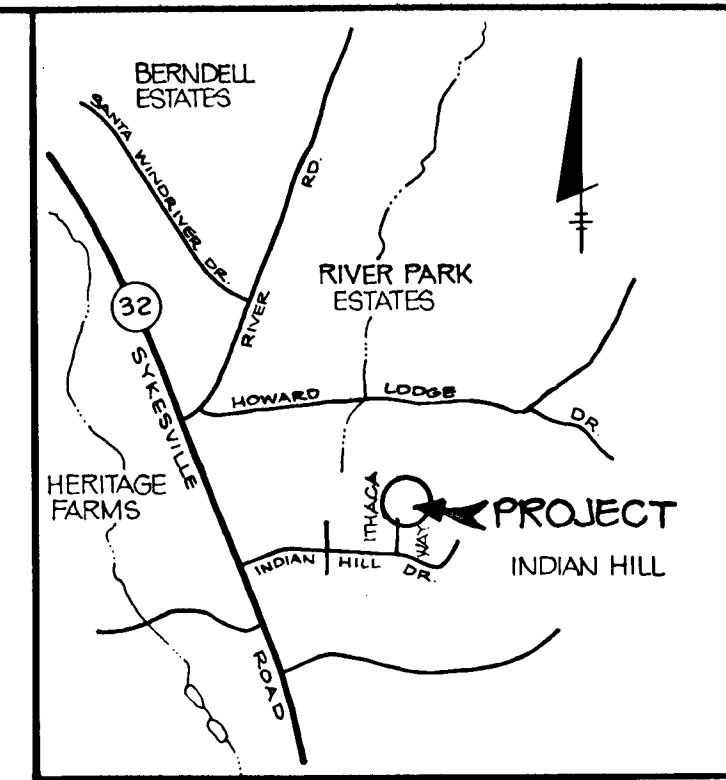
CUL-DE-SAC SECTION
NO SCALE



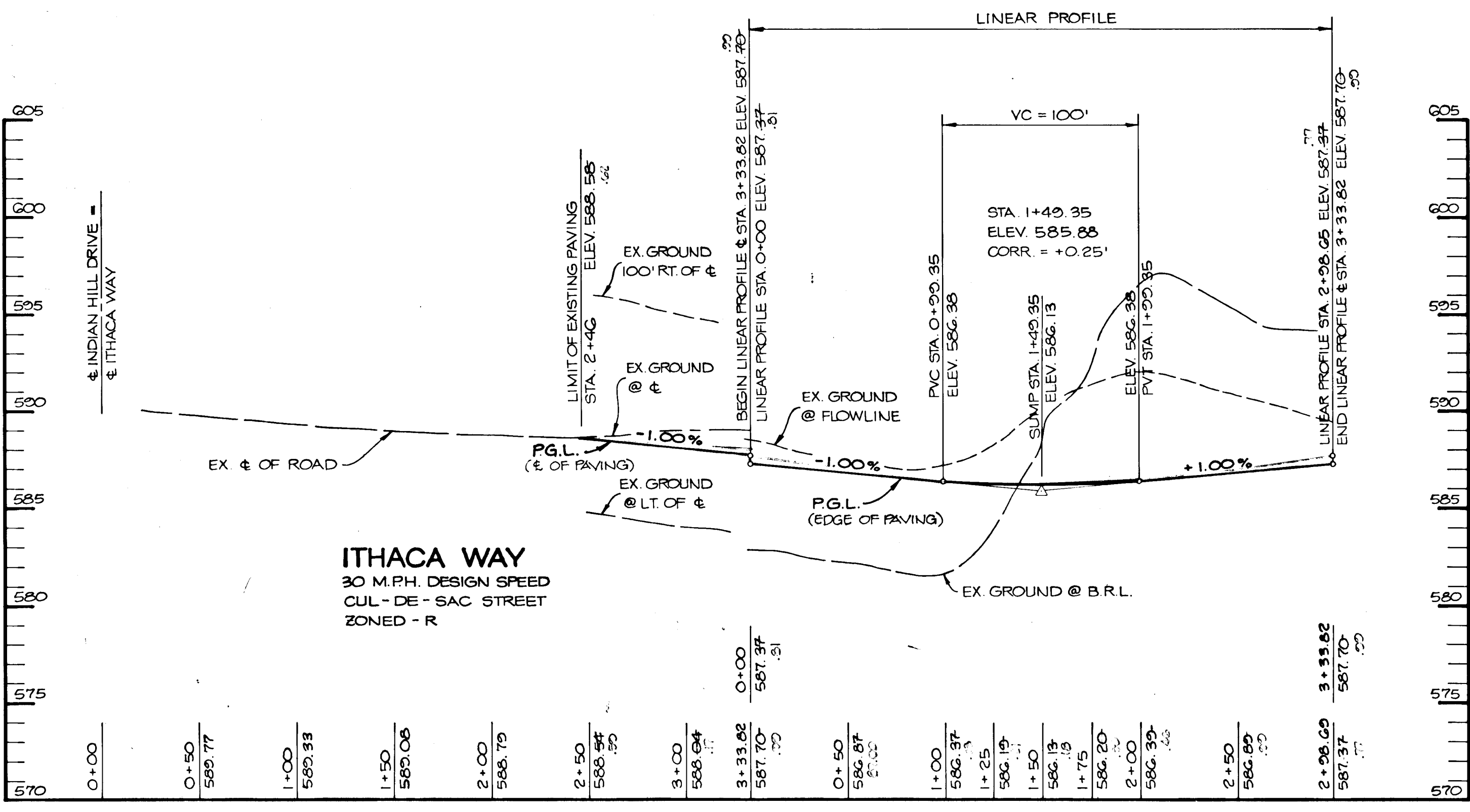
CUL-DE-SAC STREET (TYPICAL SECTION)
NO SCALE



P-2 PAVING DETAIL
NO SCALE



VICINITY MAP
SCALE: 1" = 2,000'



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

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, 1989 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.
- 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: 1-800-257-7777
 - BELL TELEPHONE SYSTEM: 393-3649
 - LONG DISTANCE CABLE DIVISION: 393-3553 or 3554
 - BALTIMORE GAS AND ELECTRIC CO.: 539-8000, ext. 691
 - HOWARD COUNTY BUREAU OF UTILITIES: 992-2366
 - HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK): 792-7272
 - COLONIAL PIPELINE: 795-4390
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII 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, 1989 AMENDMENTS.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1985 REVISED 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 50' RIGHT-OF-WAYS: 30 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA 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 R-2/85 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED APRIL 1990 BY RIEMER MUEGGE & ASSOCIATES, INC.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEHIND SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: WP-80-181

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DATE: 9.1.92

OWNER/DEVELOPER: HOWARD KRIEGER, PO BOX 44, CLARKSVILLE, MARYLAND 21020

PROJECT: KRIEGER PROPERTY LOTS 1 AND 2

AREA: TAX MAP 89 ZONED R-2/85 ELECTION DISTRICT PARCEL 221, HOWARD COUNTY, MARYLAND

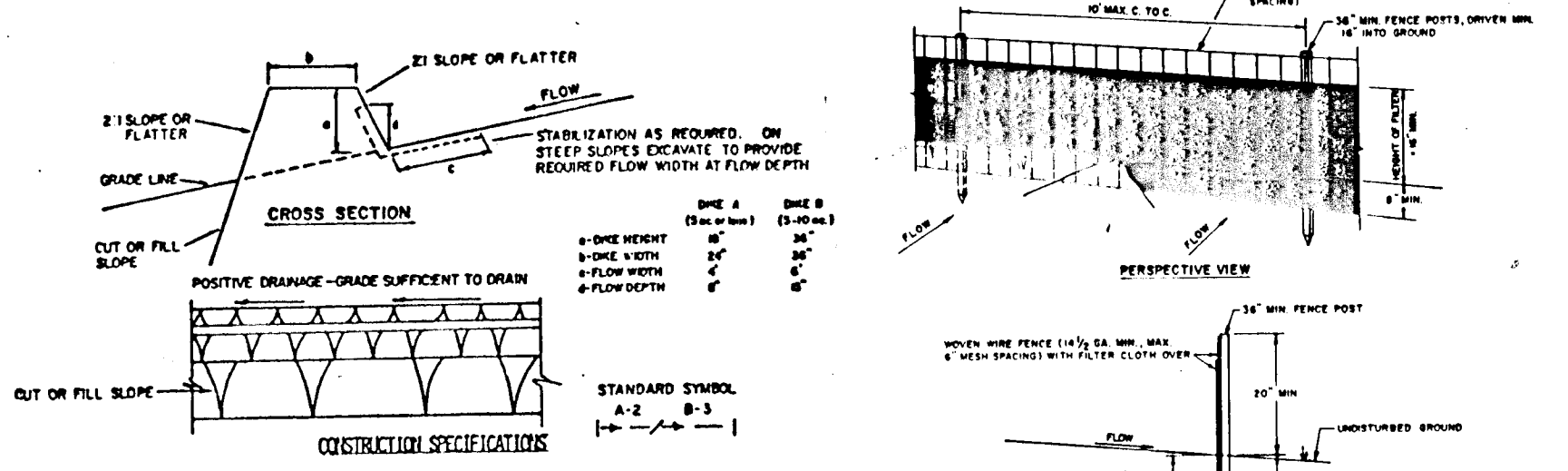
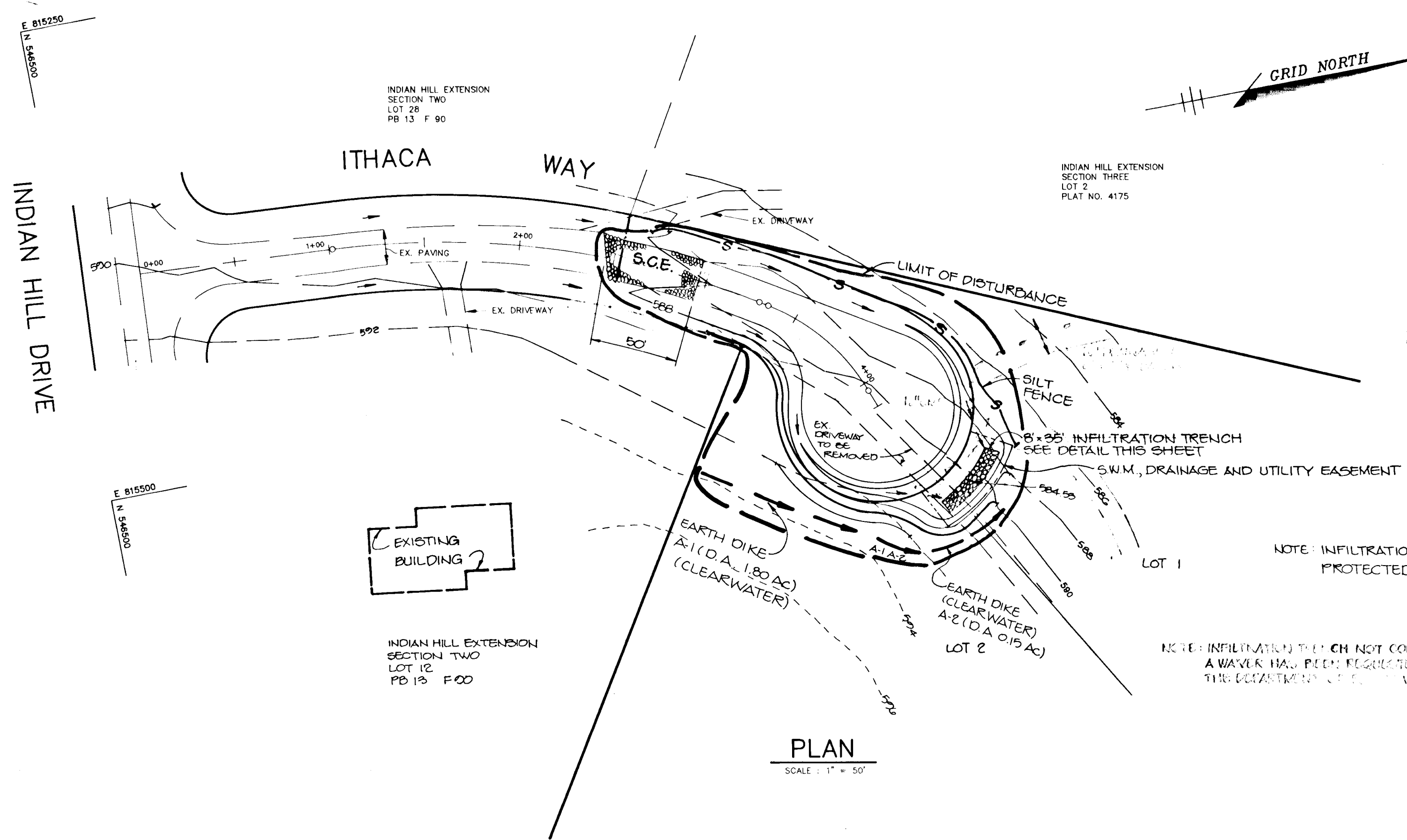
TITLE: PLAN AND PROFILE OF ITHACA WAY

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: 8-27-90

DESIGNED BY: DAKI
 DRAWN BY: S.R.H.
 PROJECT NO: 70901
 DATE: MAY 2, 1990
 SCALE: AS SHOWN
 DRAWING NO. 1 OF 2

1587



CONSTRUCTION SPECIFICATIONS

1. 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.
2. 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. FLOW PATH SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASKET WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT PERMANENTLY STABILIZED.
3. 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.

| TYPE OF TREATMENT | CHANNEL SIZE | DIKE A | DIKE B |
|-------------------|--------------|-----------------------------------|---|
| 1 | 3-3.00 | SEED AND STRAW MULCH | SEED AND STRAW MULCH |
| 2 | 3.1-5.00 | SEED AND STRAW MULCH | SEED USING MULCH, OR EXCESSIVE SOIL, 2" STONE |
| 3 | 5.1-8.00 | SEED WITH MULCH, OR SOIL 2" STONE | LINED RIP-RAP 4-8" |
| 4 | 8.1-200 | LINED RIP-RAP 4-8" | ENGINEERING DESIGN |

CONSTRUCTION NOTES FOR EXHIBITED SILT FENCE

1. WHEN WIRE FENCE IS FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOOD OR METAL POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION.
3. HOLE AND CENTER OF FILTER CLOTH SHOULD BE ANCHORED TO EACH OTHER THAT SHALL BE OBTAINED BY THE OWNER'S OFFICE.
4. MAINTENANCE SHALL BE PROVIDED AS NEEDED AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY SEEDING NOTES

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

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

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

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./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./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./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

AS BUILT CERTIFICATE

JAYKANT P. PAREKH # 01048

DATE: 9/1/90

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."

Younes S. Koozei Aug 27 1990

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."

Arthur E. Muegge 8/19/90

REVIEWED FOR NAME S.C.D.

AND MEETS TECHNICAL REQUIREMENTS

Howard S.C.D. 8/21/90

U.S. SOIL CONSERVATION SERVICE DATE

Howard S.C.D. 8/21/90

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Community Planning and Land Development 9/2/90

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division MK 9/16/90

Chief, Bureau of Highways 9/14/90

Chief, Bureau of Engineering 9/20/90

DATE NO REVISION

OWNER/DEVELOPER

HOWARD KRIEGER
PO BOX 44
CLARKSVILLE, MARYLAND 21020

PROJECT: **KRIEGER PROPERTY LOTS 1 AND 2**

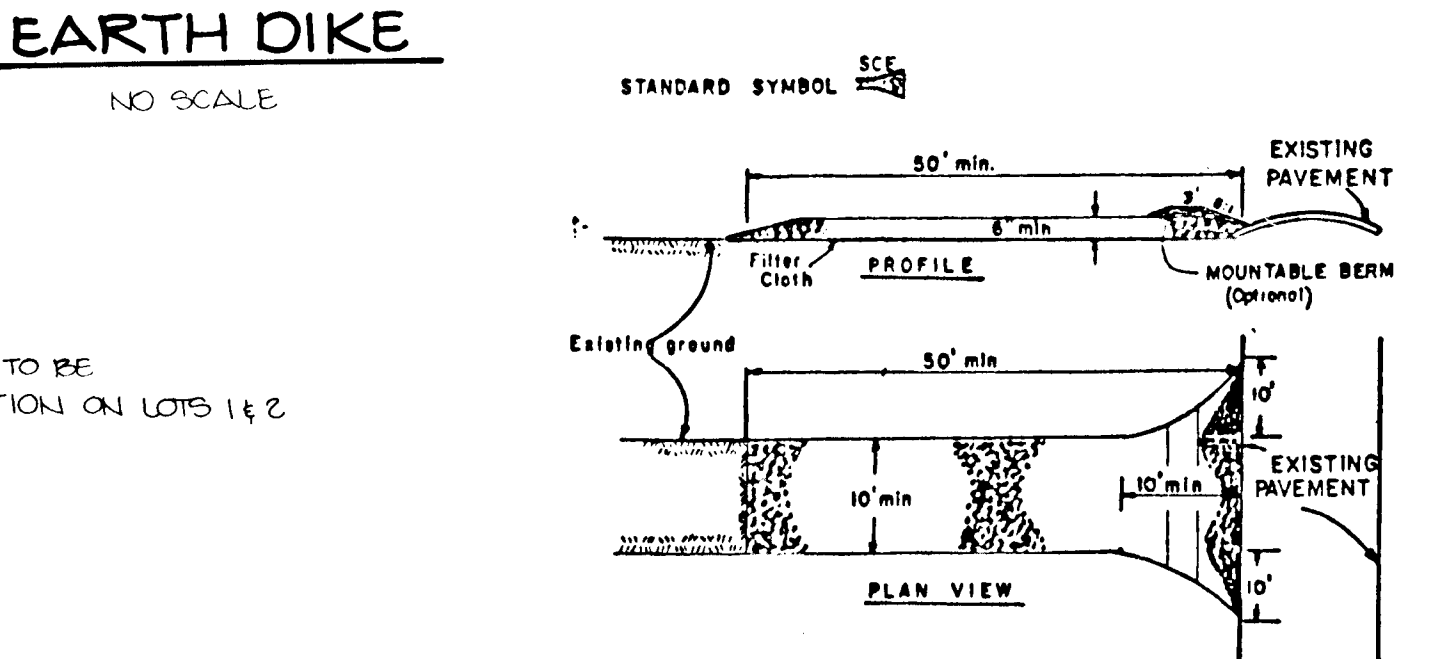
AREA TAX MAP ZONED R PARCEL 221
8th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **GRADING AND SEDIMENT CONTROL PLAN**

RIEMER MUEGGE & ASSOCIATES, INC.

A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road - Ellicott City, Maryland 21034
301-461-2690 FAX: 301-750-3176

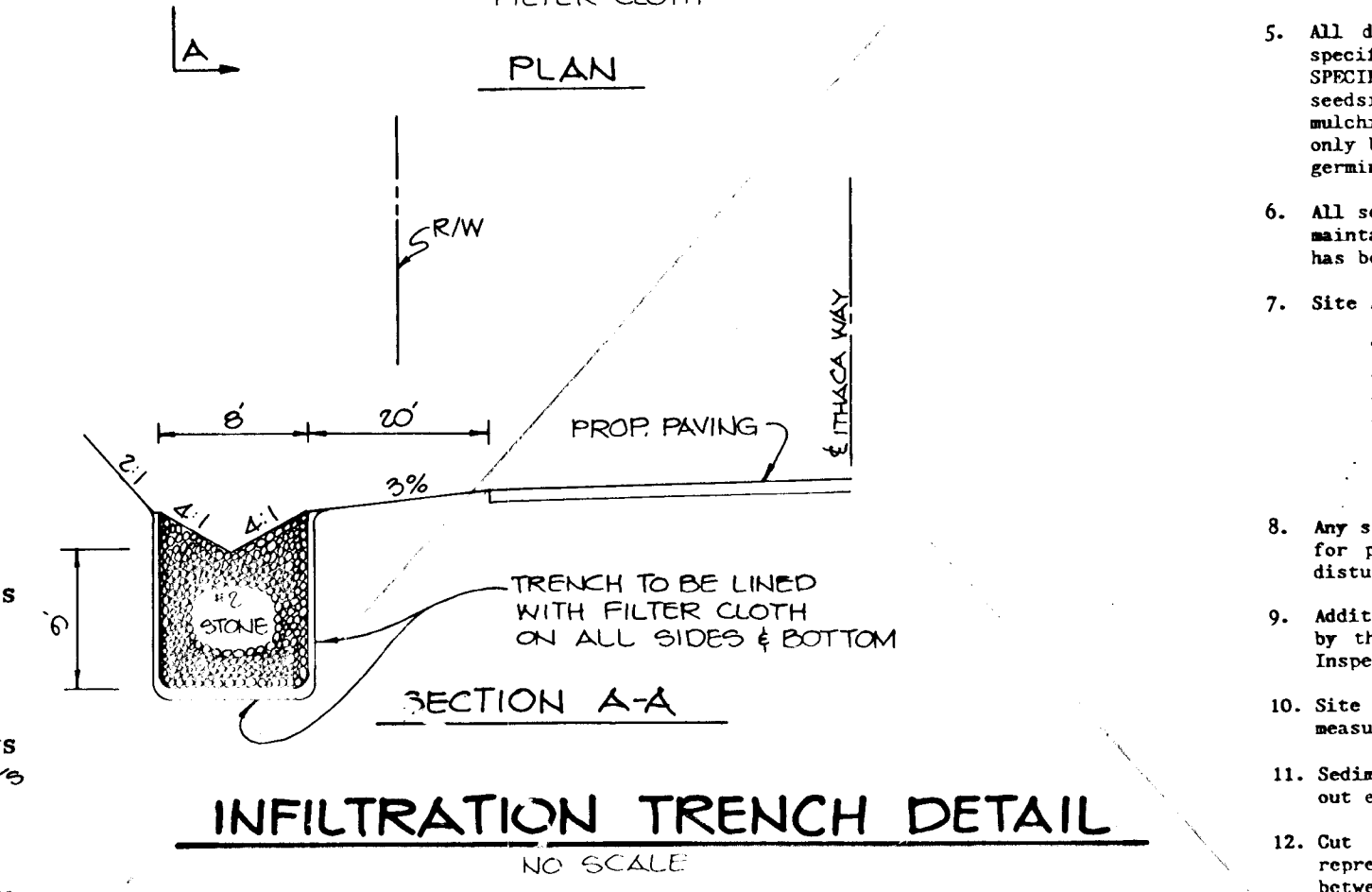
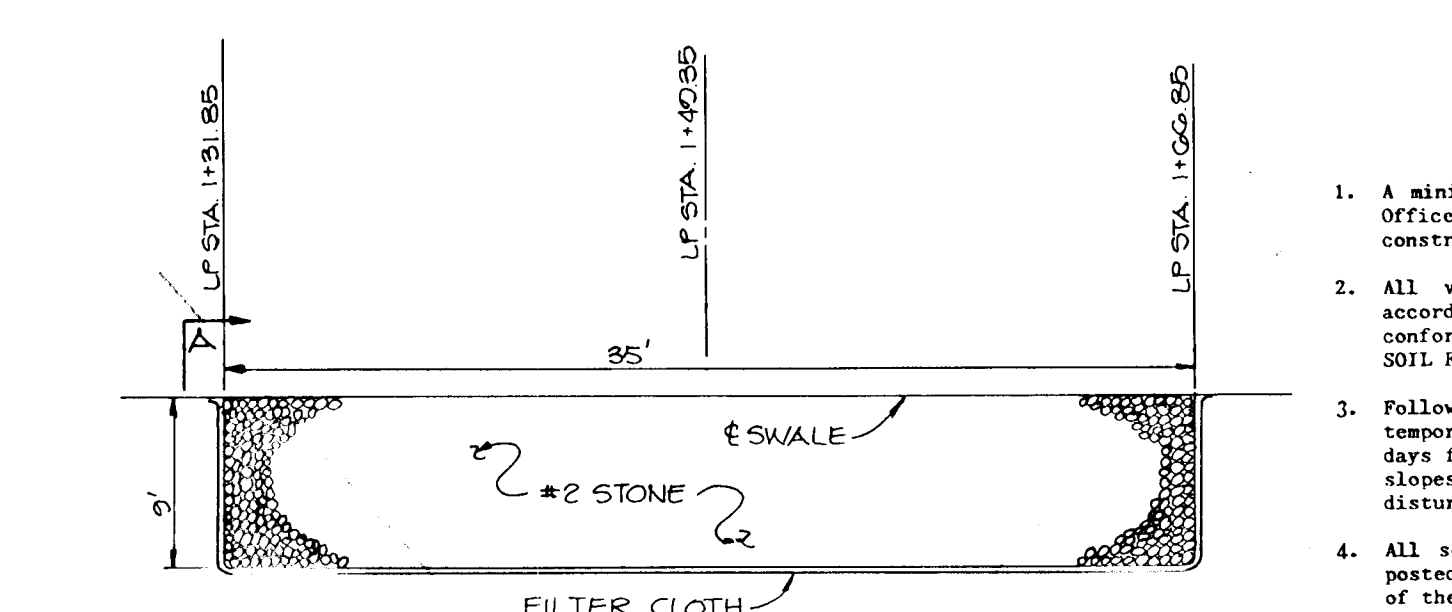
DESIGNED BY: D.A.M.
DRAWN BY: MAD
PROJECT NO: 70001
DATE: MAY 2, 1990
SCALE: AS SHOWN
DRAWING NO: 2 OF 2



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 30 feet (except on a single residential lot where a 20 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, 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 not be required on a single family residential lot.
6. Surface Water - All surface water flowing or diverted toward construction entrance shall be piped across the entrance. If piping is impractical, a mountable beam with 1/2 slope will be permitted.
7. 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 demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Shovels shall be cleaned to remove sediment prior to entrance onto public rights-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.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



INFILTRATION TRENCH DETAIL
NO SCALE

PERMANENT SEEDING NOTES

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

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

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

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./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./1000 sq. ft.).
- 2) 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 or disc 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 (14 lbs./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 (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 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 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well-anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 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 anchoring.

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

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. 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 calendar days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL 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 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 Analysis:

| | | |
|------------------------------------|------|----------|
| Total Area of Site | 6.00 | acres |
| Area to be graded or paved | 0.15 | acres |
| Area to be vegetatively stabilized | 0.25 | acres |
| Total Cut | 0.15 | cu. yds. |
| Total Fill | 0.15 | cu. yds. |
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 controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
10. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
11. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.
12. 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.

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN GRADING PERMIT.
 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE (OUT FENCE & EARTH DIKE)... 1 DAY
 3. PERFORM ROAD GRADING... 2 DAYS
 4. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH TEMPORARY SEEDING NOTES... 1/2 DAYS
 5. INSTALL PAVING... 3 DAYS
 6. STABILIZE ALL DISTURBED AREA IN ACCORDANCE WITH PERMANENT SEEDING NOTES... 1/2 DAYS
 7. INSTALL INFILTRATION TRENCH
 8. UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL AND STABILIZE THE REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES... 1/2 DAYS

1587

MARYLAND BLUEPRINT CO. INC. 127079