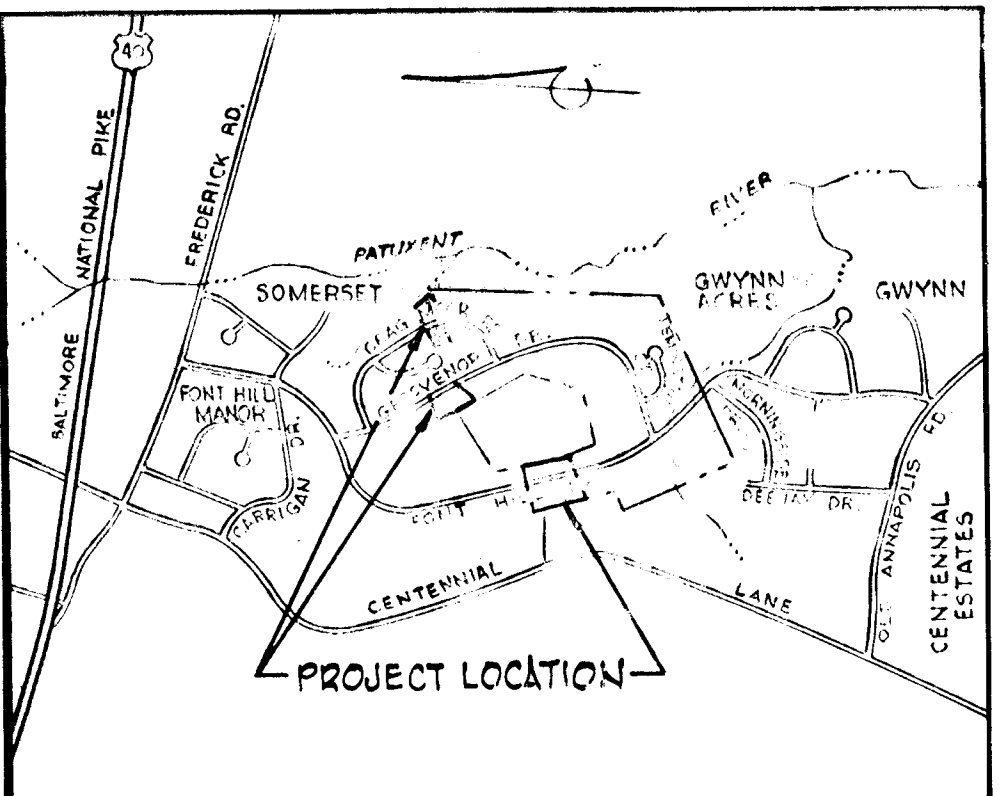


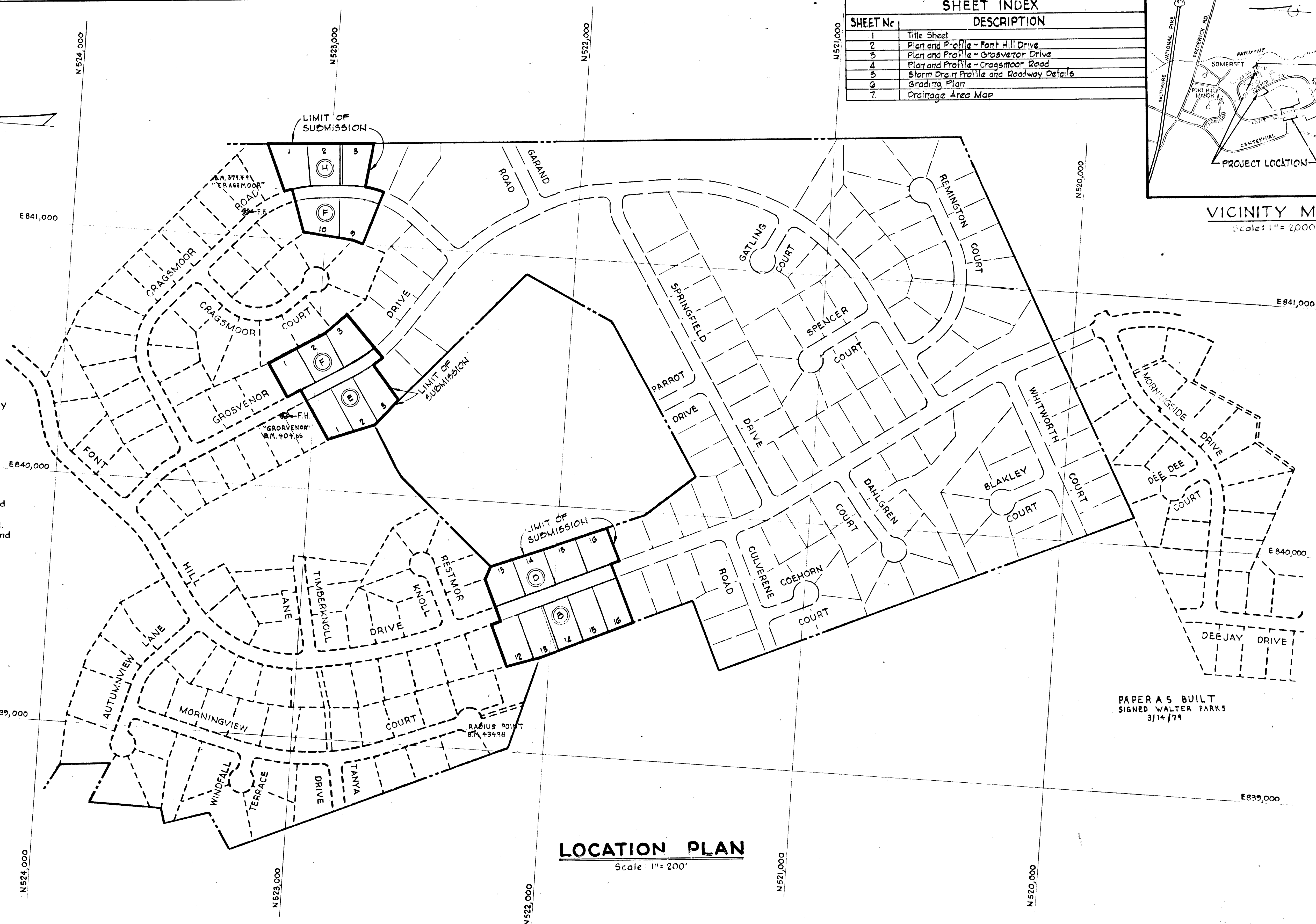
SHEET INDEX	
SHEET No.	DESCRIPTION
1	Title Sheet
2	Plan and Profile - Font Hill Drive
3	Plan and Profile - Grosvenor Drive
4	Plan and Profile - Cragmoor Road
5	Storm Drain Profile and Roadway Details
6	Grading Plan
7	Drainage Area Map



VICINITY MAP
Scale: 1" = 2,000'

GENERAL NOTES

- All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
- All Utility Companies shall be notified 24 hours in advance of construction.
- Streets are designed for traffic speed of 30 m.p.h. in accordance with AASHTO Standards.
- All inlets shall be Howard County Standards unless otherwise shown.
- All street curb returns shall have a 35' radii unless otherwise noted.
- Storm Drain trenches within road rights of way shall be backfilled and compacted in accordance with Howard County Road Code.
- Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the Contractor's operations shall be repaired immediately at the Contractor's expense.
- The Contractor shall test pit existing utilities where directed by the Engineer, a minimum of two weeks in advance of construction operations.
- All Reinforced Concrete for Storm Drain Structures shall have minimum 28 days strength of 3500 p.s.i.
- Traffic Control Devices and their installation shall be in accordance with the Manual on Uniform Traffic Control Devices, 1971 Revised Edition.
- Poly Filter-X (Filter Cloth Blanket) or equal shall be placed under all stone rip-rap.
- Rip-Rap of outfalls shall be unpeaved unless otherwise noted.
- All horizontal and vertical controls are based on Maryland State Datum.
- Seed and Mulch all disturbed areas.



LOCATION PLAN
Scale: 1" = 200'

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND
Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
No. 1974

DEPARTMENT OF PUBLIC WORKS
Stanville M. Walsend 4/14/74
CHIEF, BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
Kenneth A. McCord 4-11-74
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
AND TRANSPORTATION PLANNING

FONT HILL VILLAGE
SECTION 3 AREA 1
ROAD CONSTRUCTION PLANS
2ND ELECTION DISTRICT OF HOWARD COUNTY, MD.
Date: 4-1-77 Scale: As Shown
DEVELOPER
FONT HILLS JOINT VENTURE
7208 OAK HAVEN CIRCLE SUITE 101
BALTIMORE, MARYLAND 21208

AS BUILT 7/10/74

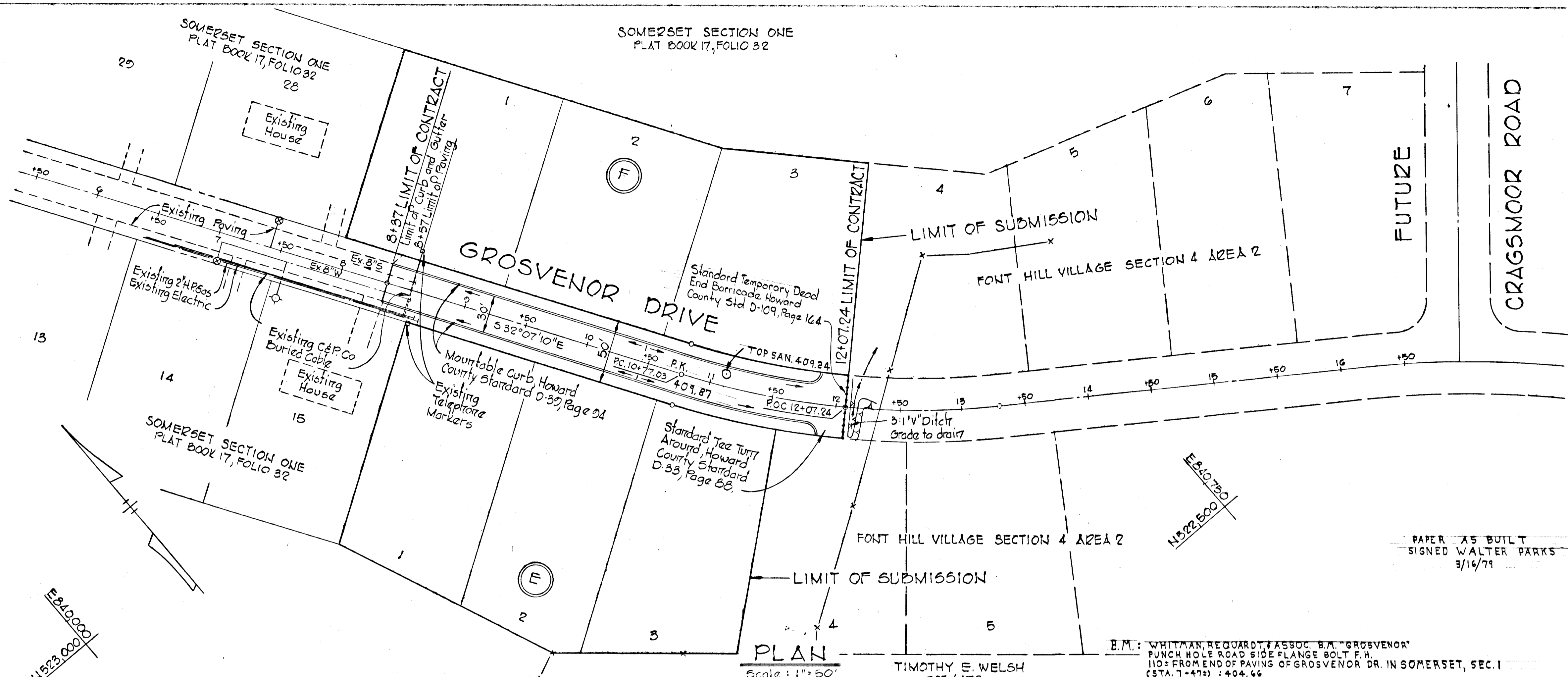
SOMERSET SECTION ONE
PLAT BOOK 17, FOLIO 32

DEPARTMENT OF PUBLIC WORKS
Lawrence M. Weiland 4/14/77
CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
John W. McAllister 4-1-77
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
AND TRANSPORTATION PLANNING

± CURVE DATA

PC 10+77.03 TO POC 12+07.24	PC 10+77.03 TO PT 19+30.44 (FUTURE)
Δ = 11°56'12"	Δ = 23°13'50"
R = 625.00'	R = 625.00'
A = 130.21'	A = 253.41'
T = 65.34'	T = 126.47'
Ch = 129.97'	Ch = 251.67'
Brg = S 33° 05' 16" E	Brg = S 43° 44' 05" E



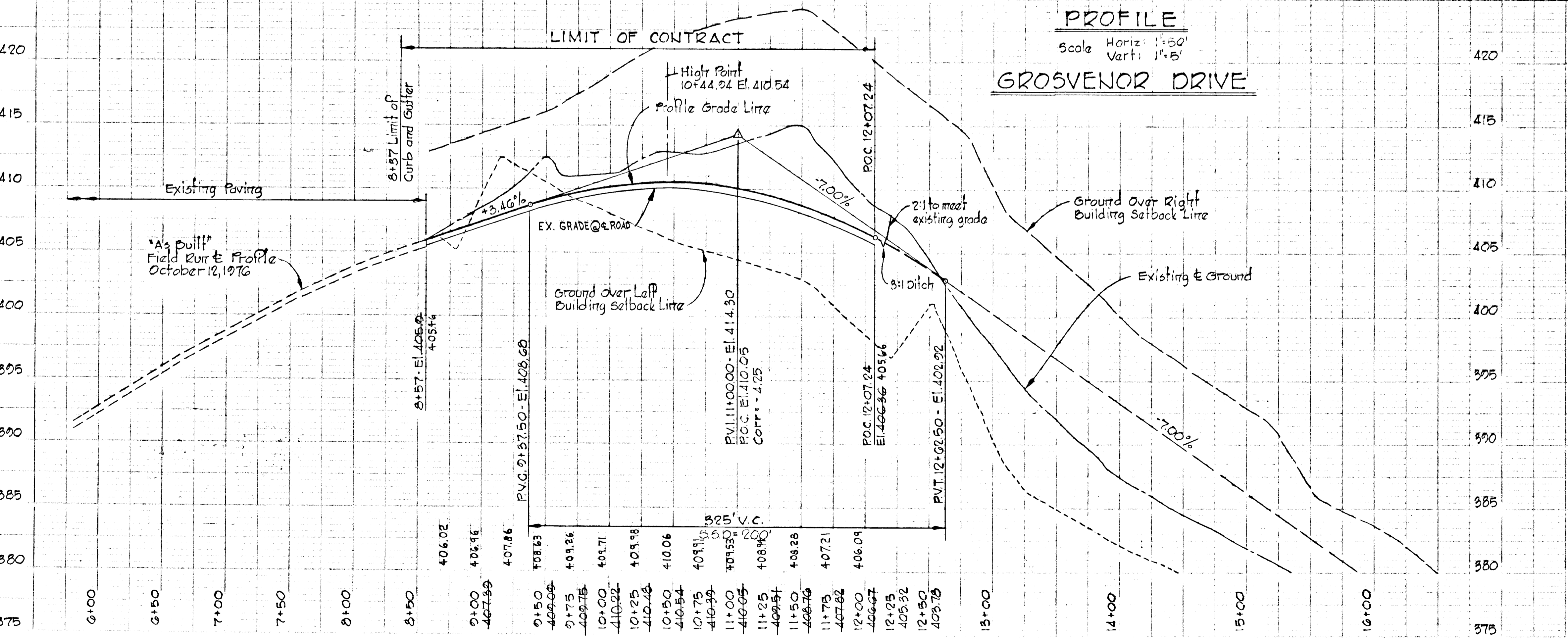
PROJECT TITLE
**FONT HILL VILLAGE
SECTION 3 AREA 1
PLAN AND PROFILE
GROSVENOR DRIVE**

SCALE: AS SHOWN DATE: 4-1-77

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

DEVELOPER
FONT HILLS JOINT VENTURE
7202 OAK HAVEN CIRCLE SUITE 101
BALTIMORE, MARYLAND

Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
No. 1074



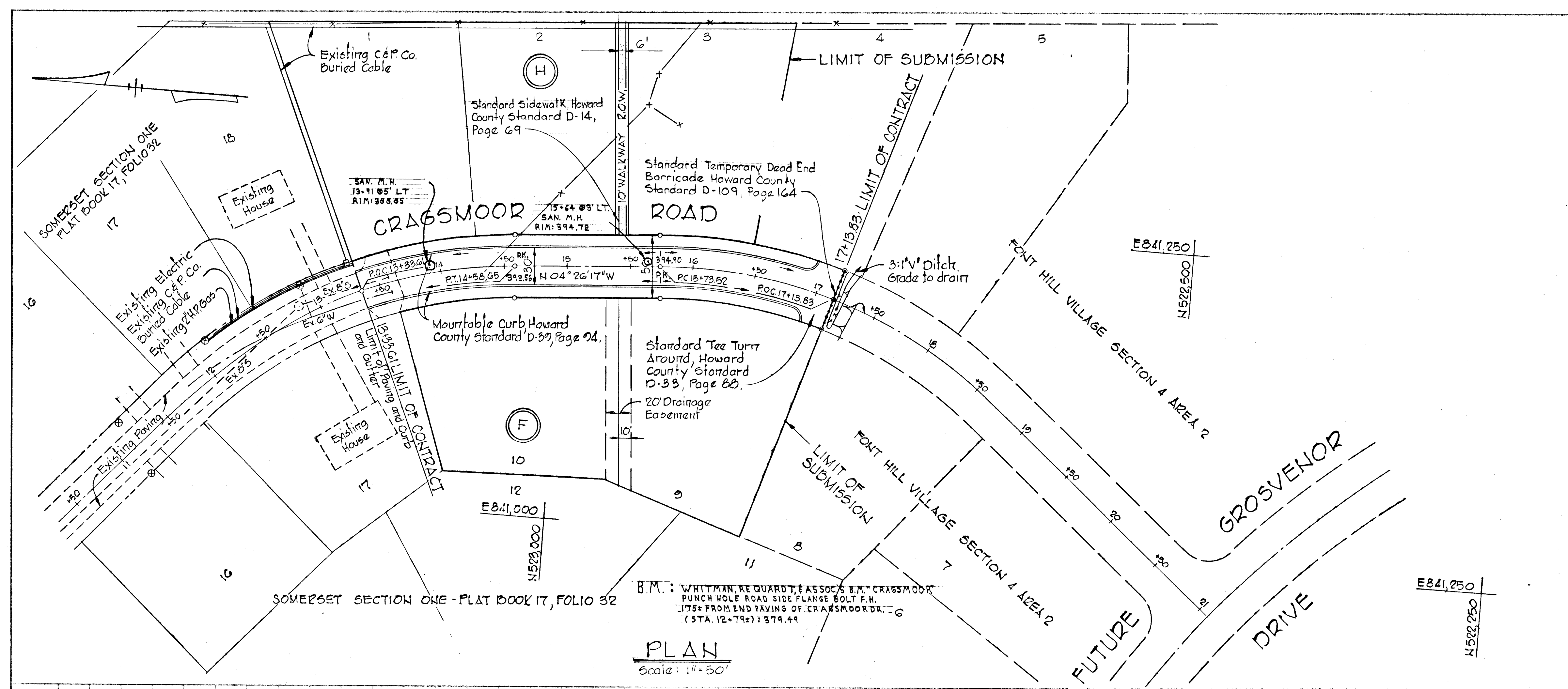
DEPARTMENT OF PUBLIC WORKS
Dr. W. W. Weiland 4/14/79
 CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
William Weiland 4-1-77
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

± CURVE DATA

PC. 13+39.61 TO PT. 14+58.65	PC. 15+73.52 TO PC. 17+13.83
Δ = 19°00'07"	Δ = 21°26'17"
R = 378.46'	R = 375.00'
A = 125.52'	A = 140.31'
T = 63.34'	T = 70.99'
Ch = 124.94'	Ch = 139.50'
Brg = 5°15'56"20"E	Brg = 6°06'16"51"W

PC. 15+73.52 TO PC. 15+64.44 (FUTURE)
Δ = 44°27'00"
R = 375.00'
A = 290.92'
T = 153.23'
Ch = 283.68'
Brg = 61°47'13"W



PLAN
 Scale: 1" = 50'

PAPER AS BUILT
 SIGNED WALTER PARKS
 3/15/79

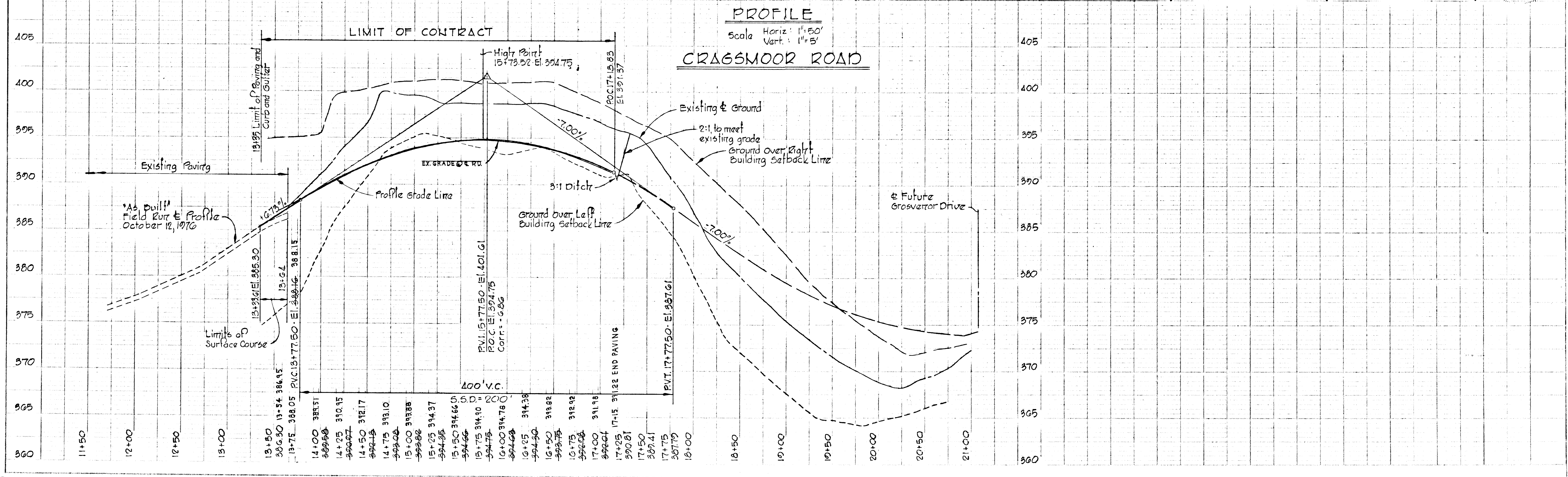
PROJECT TITLE
FONT HILL VILLAGE
SECTION 3 AREA 1
PLAN AND PROFILE
CRAGSMOOR ROAD

SCALE: AS SHOWN DATE: 4-1-77

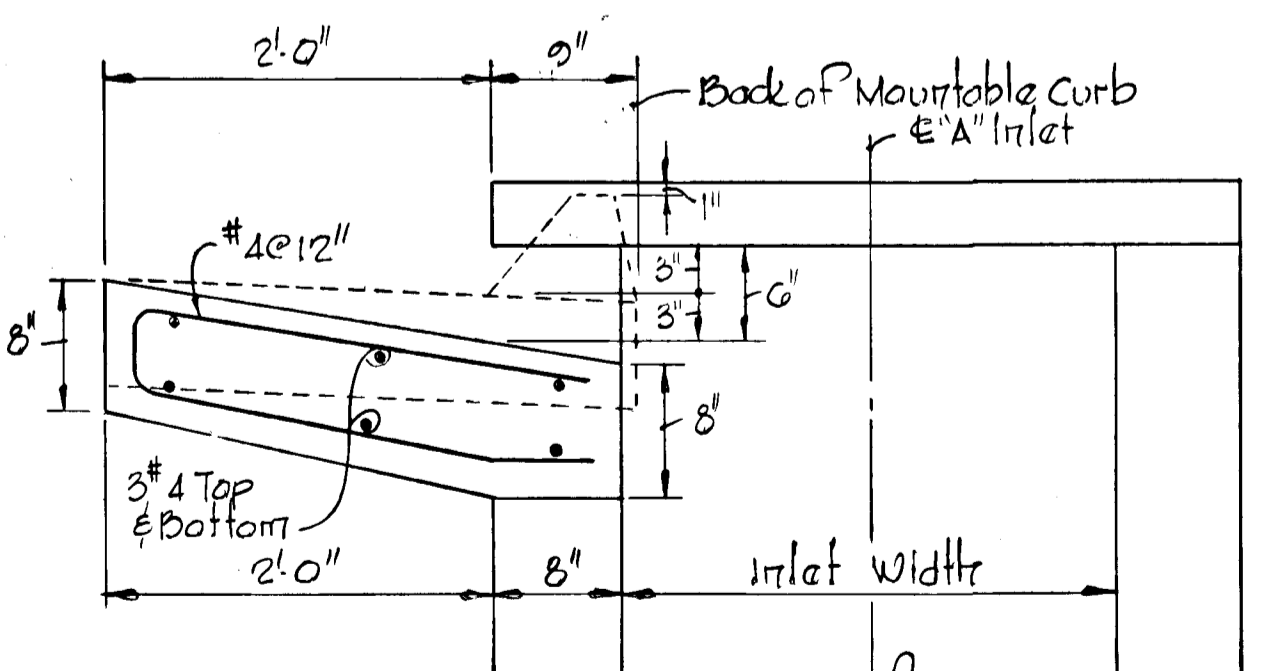
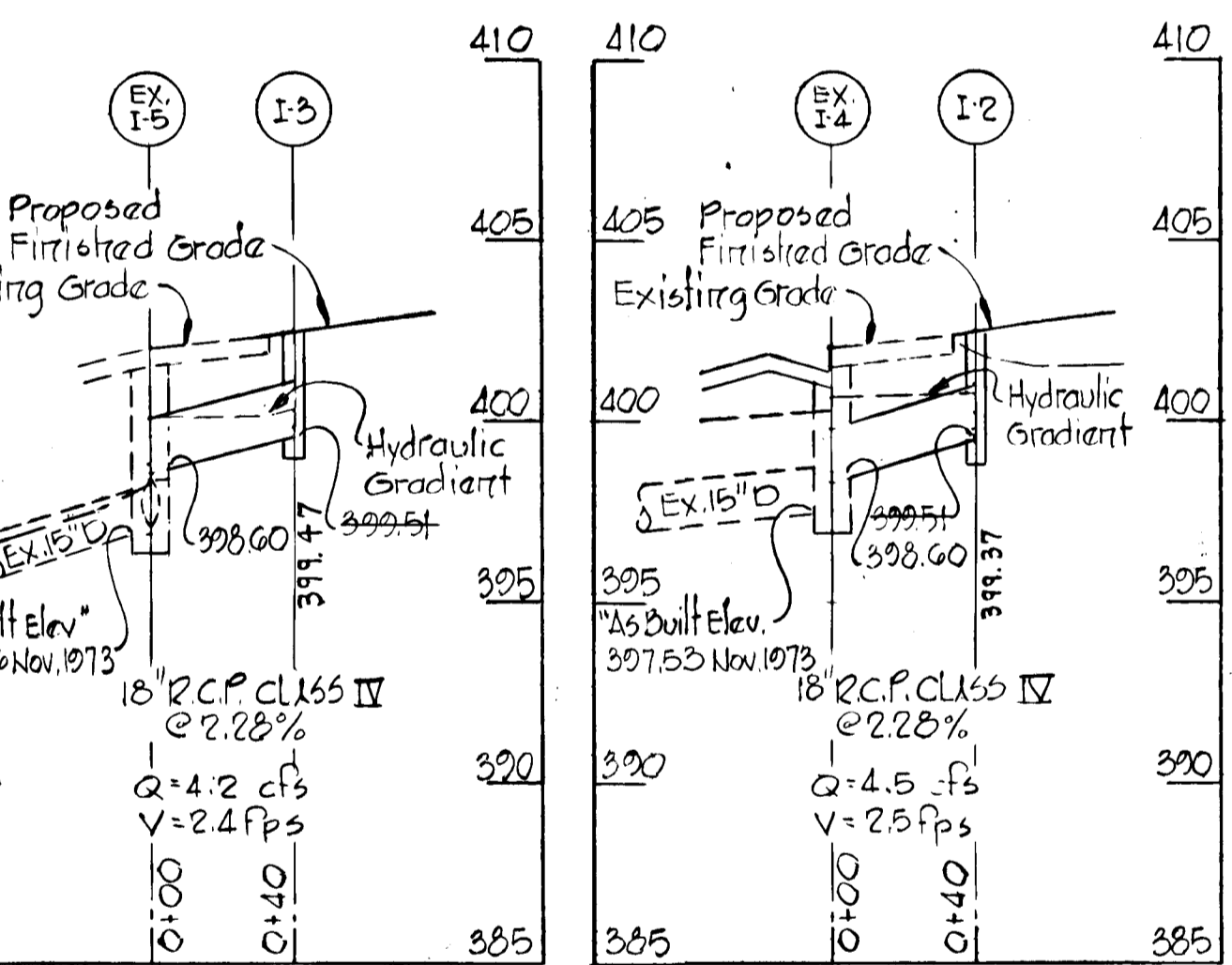
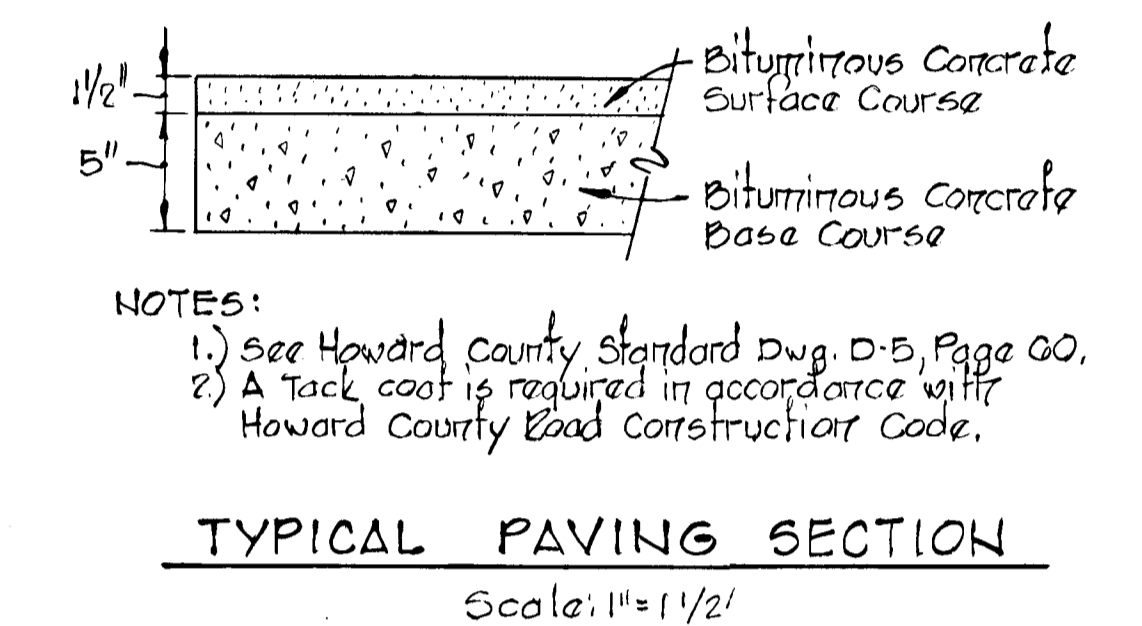
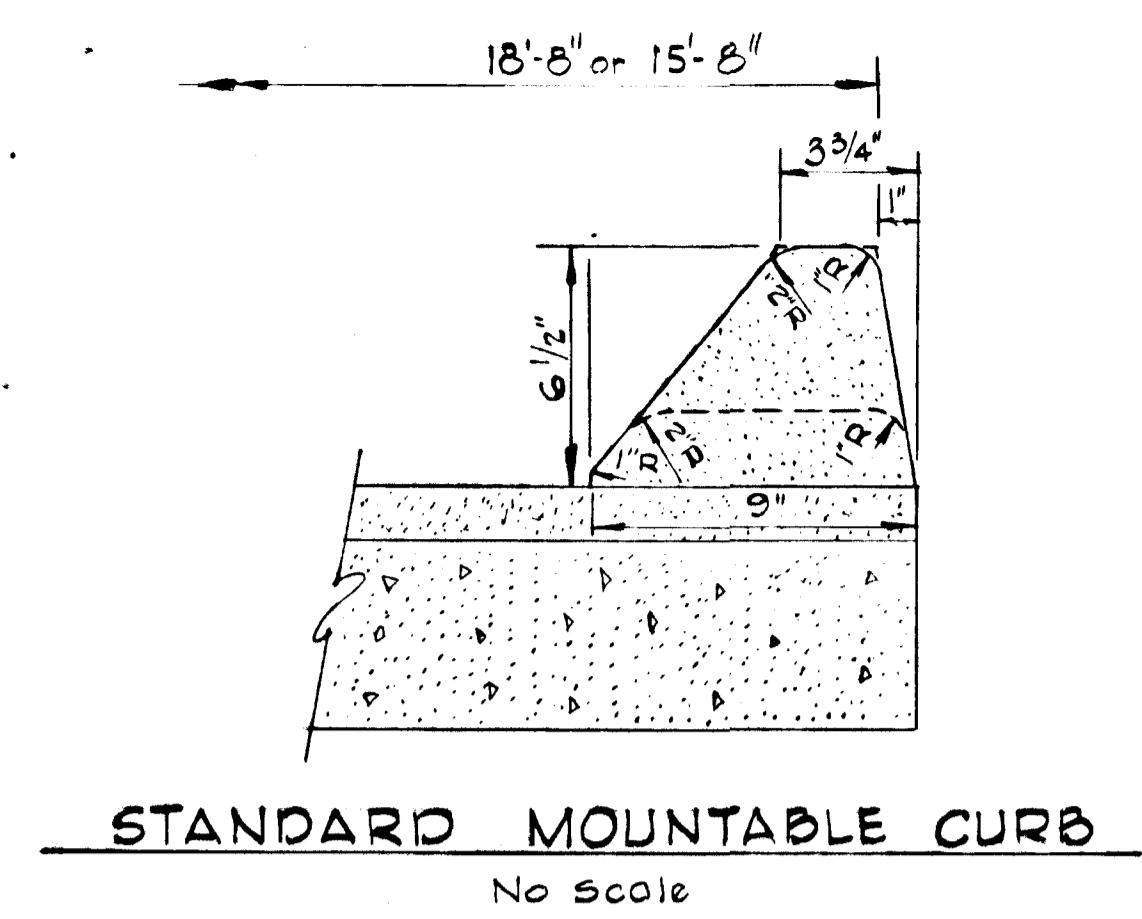
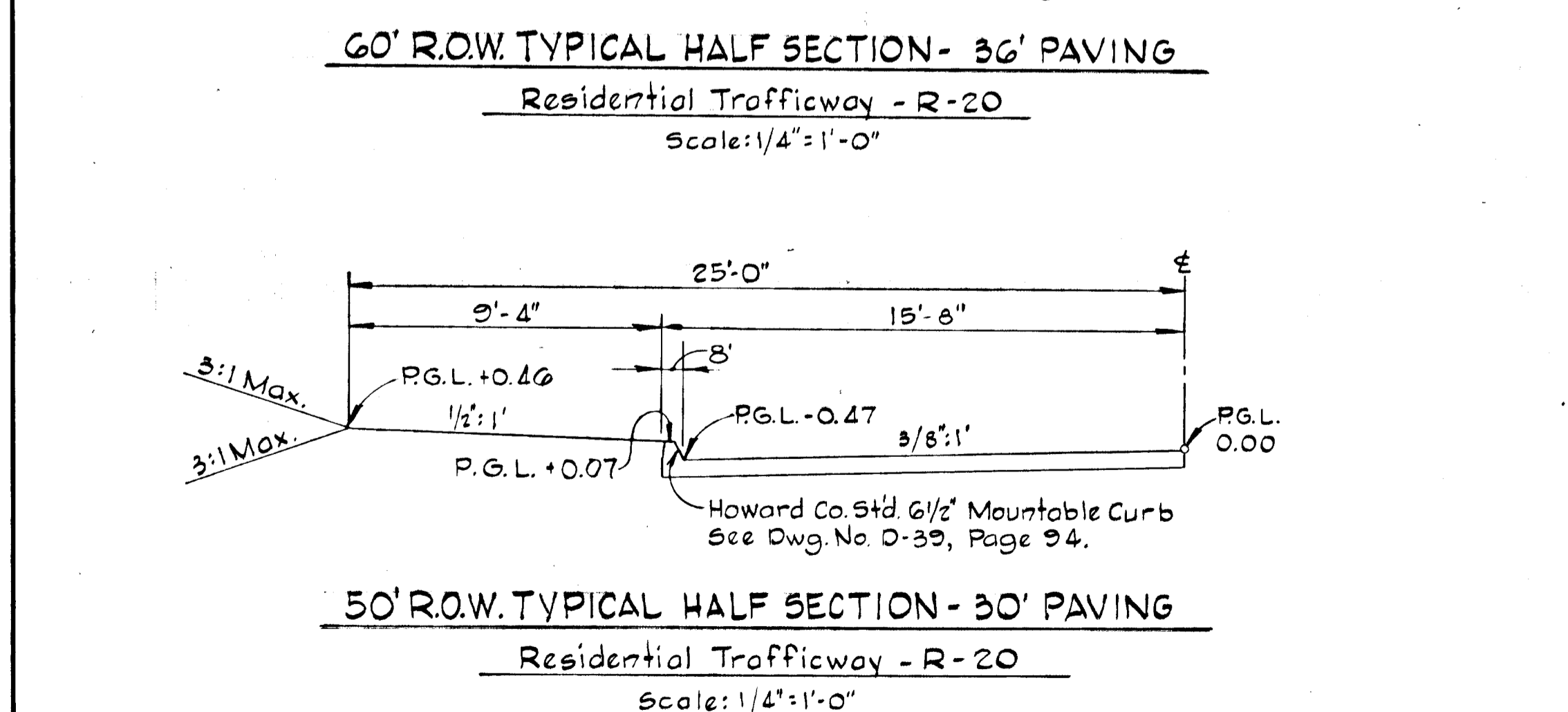
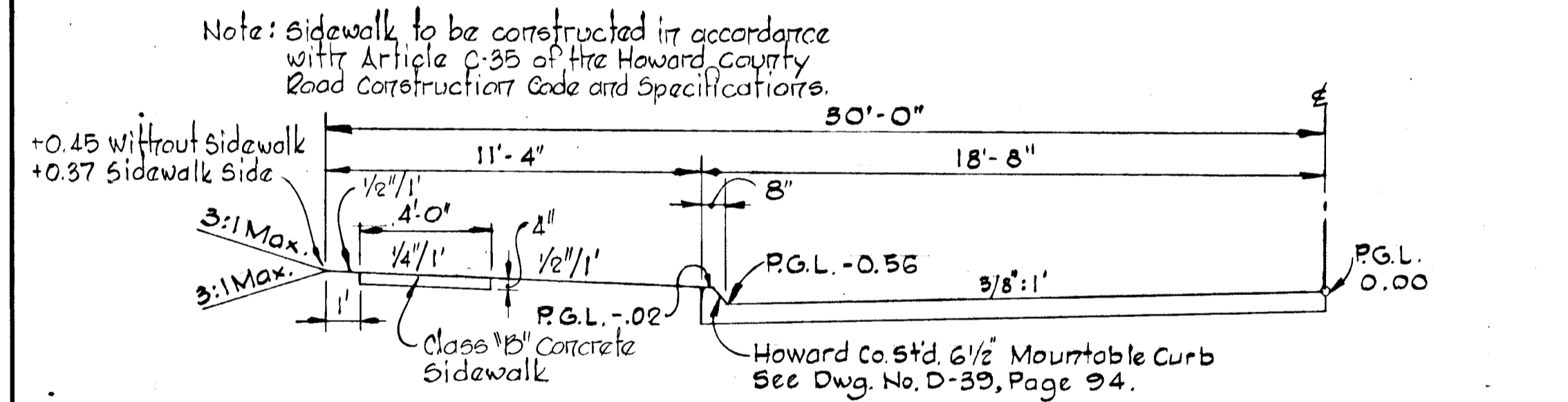
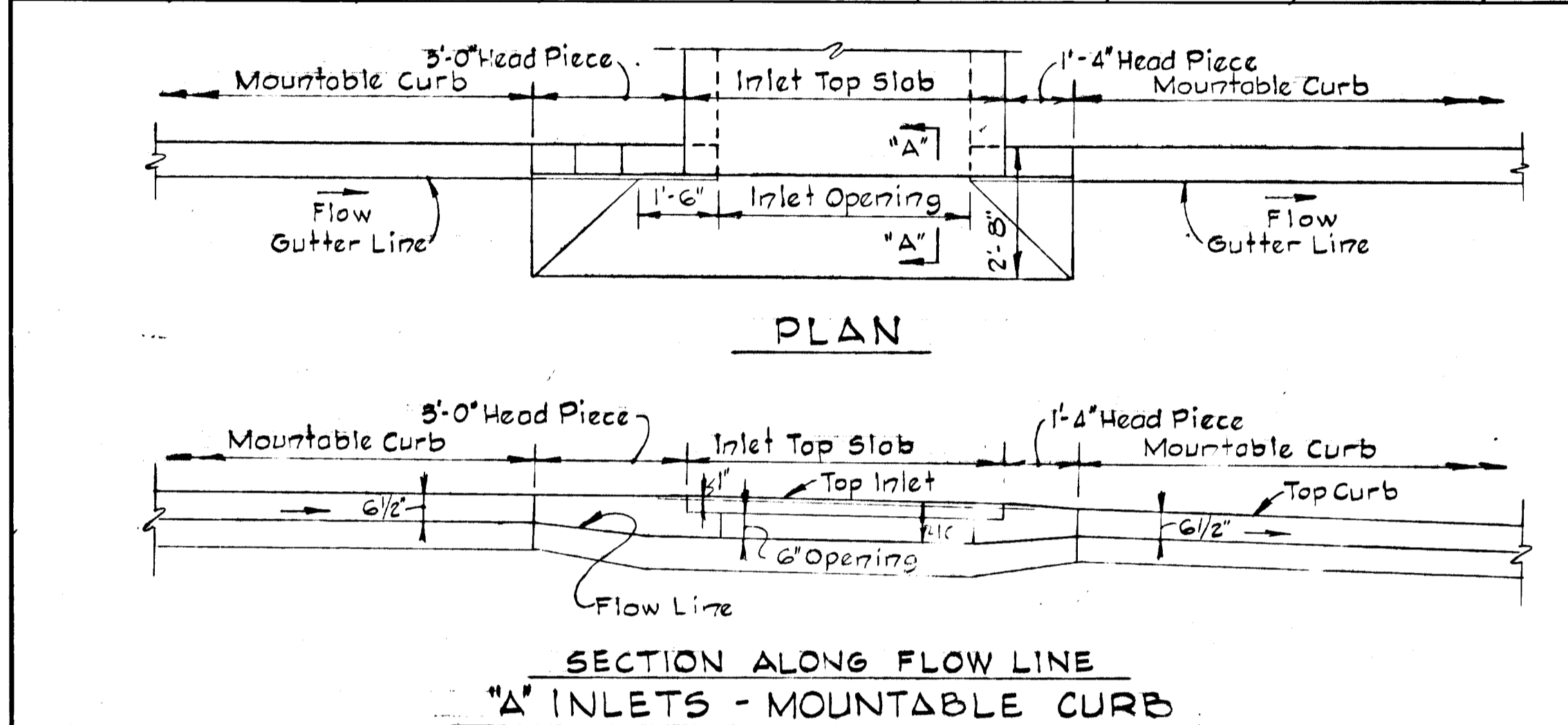
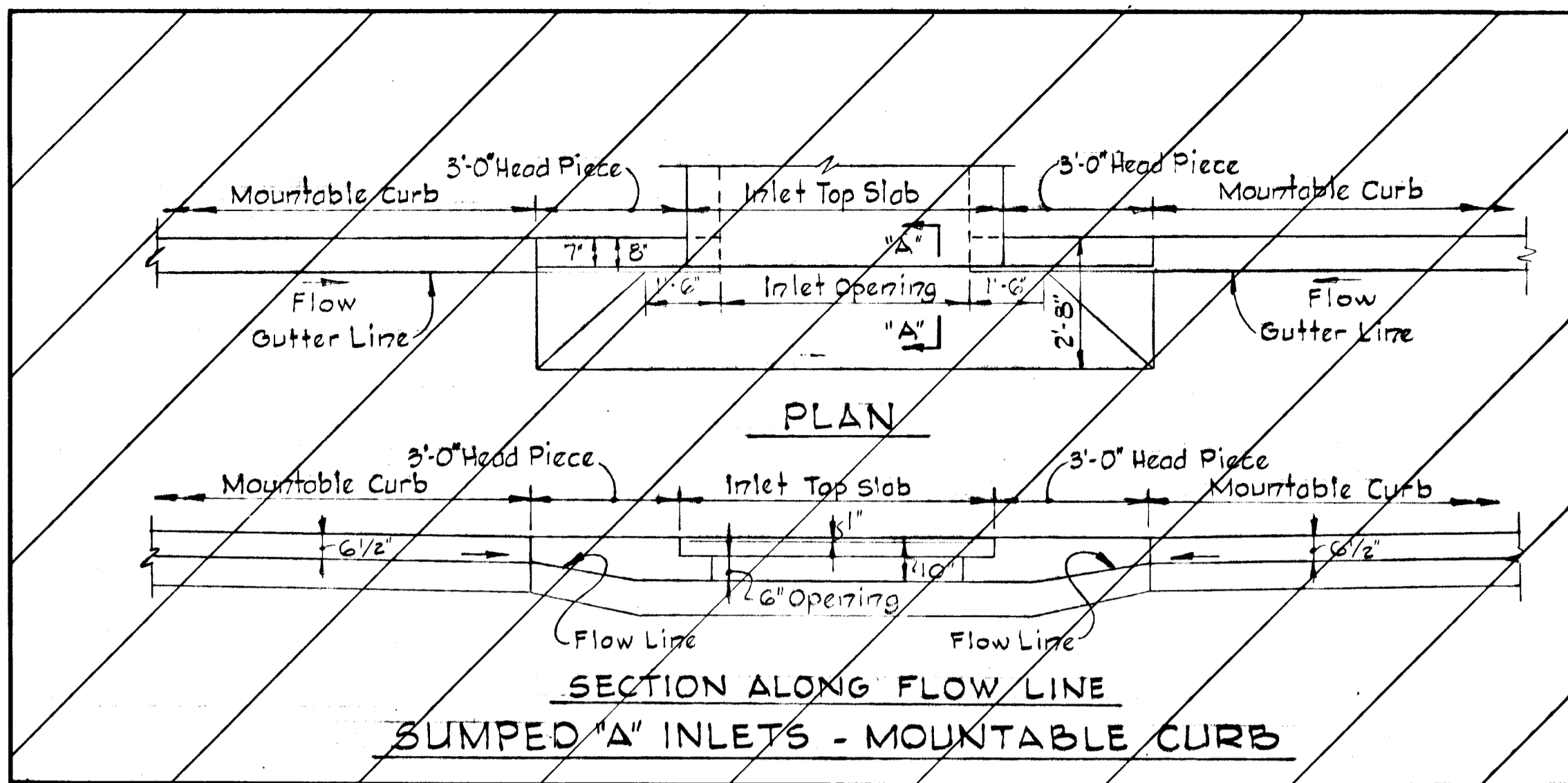
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

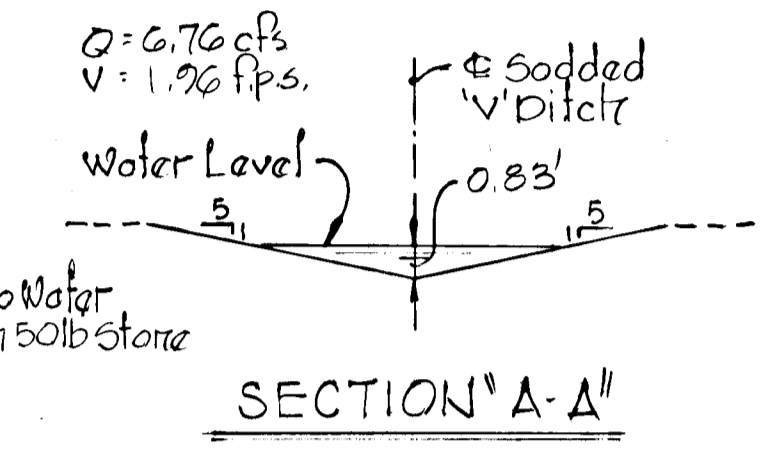
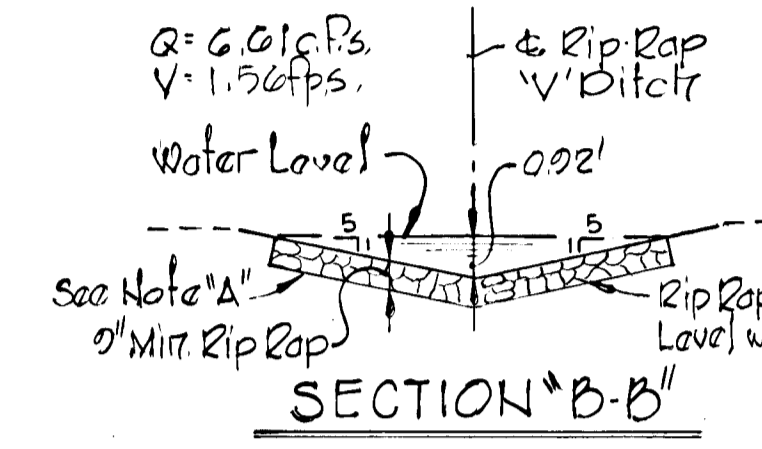
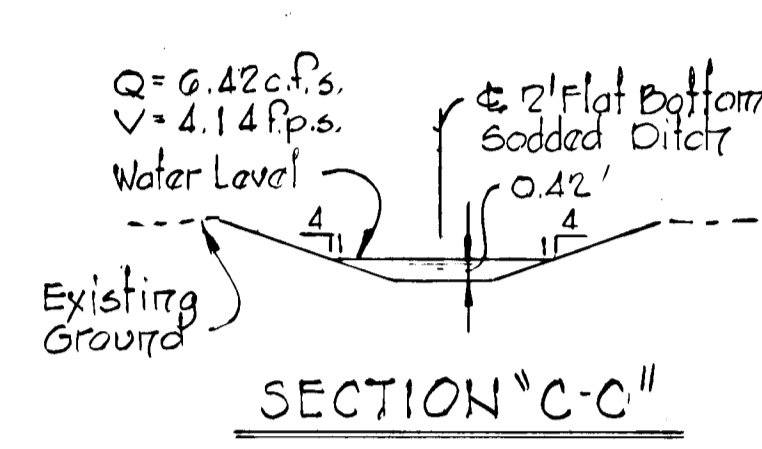
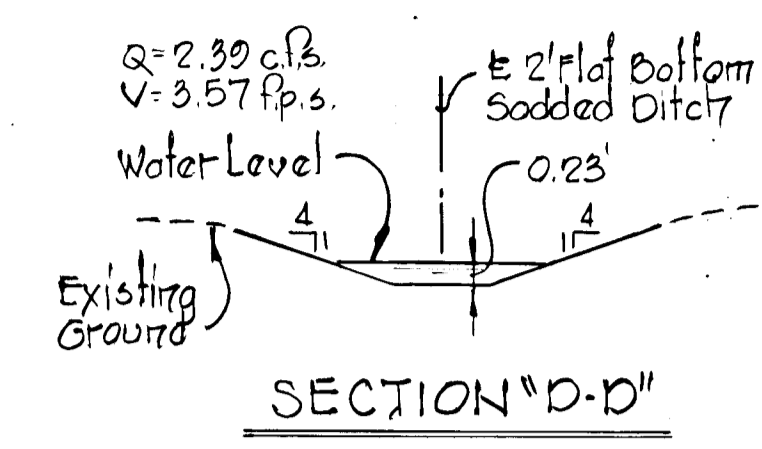
DEVELOPER
 FONT HILLS JOINT VENTURE
 7208 OAK HAVEN CIRCLE SUITE 101
 BALTIMORE, MARYLAND



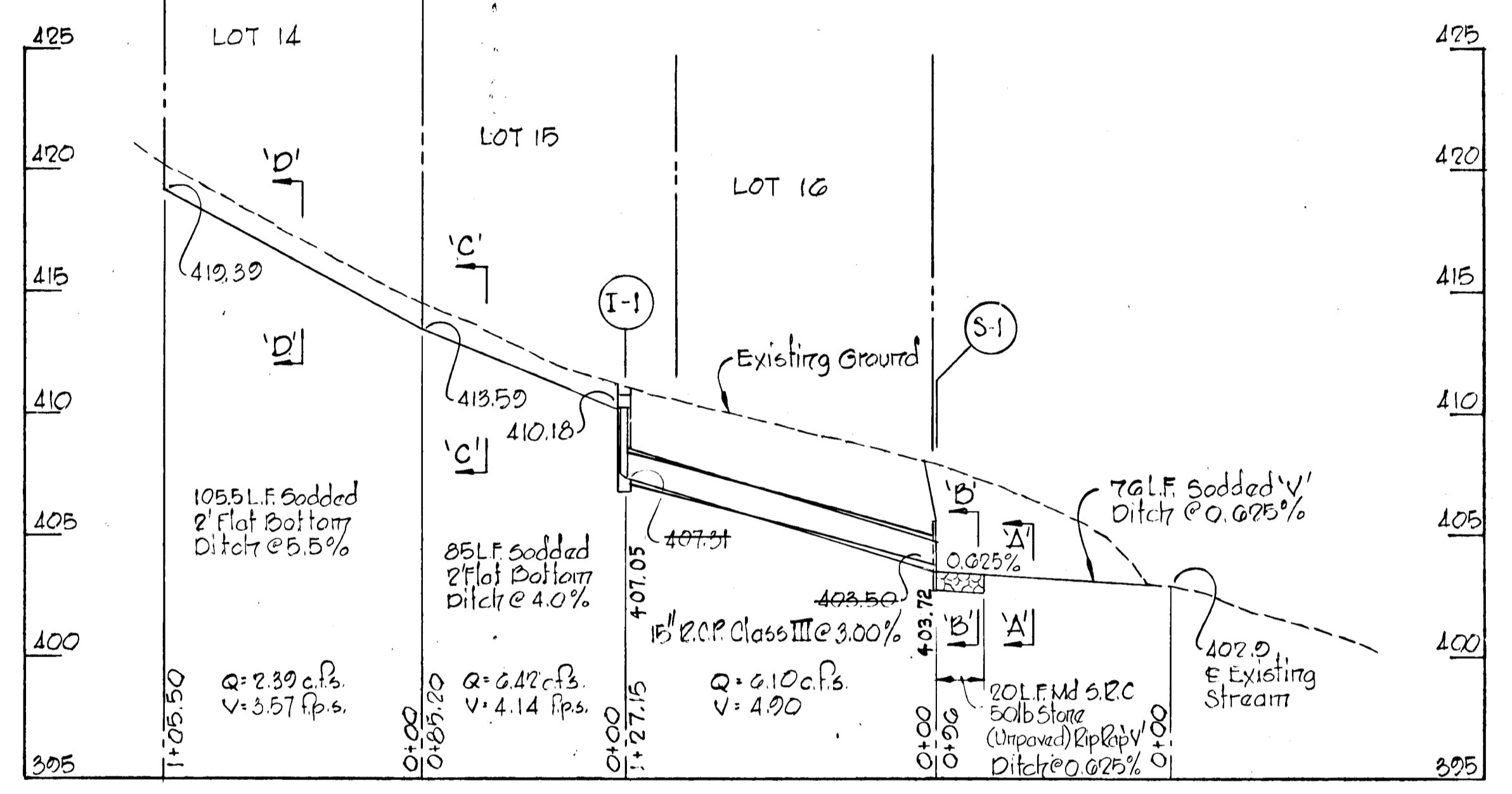
PROFILE
 Scale Horiz: 1" = 50'
 Vert: 1" = 5'
CRAGSMOOR ROAD



Note: for "A" Inlet dimensions and structural details see Standard Howard County Drawing G4-A, Page 119-A.



Note "A"
 Poly Filter X shall be bedded and smooth surface and anchored with steel pins before placement of rip-rap.



STORM DRAIN PROFILE
 Scale: Hor. 1" = 50', Vert. 1" = 5'

PAPER AS BUILT
 SIGNED WALTER PARKS
 3/16/79

PROJECT TITLE	
FONT HILL VILLAGE	
SECTION 3 AREA 1	
STORM DRAIN PROFILE AND ROADWAY DETAILS	
SCALE: AS SHOWN	DATE: 4-1-77
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202	
 KENNETH A. MCCORD Registered Engineer No. 1974	

DEVELOPER
 FONT HILLS JOINT VENTURE
 7200 OAK HAVEN CIRCLE SUITE 101
 BALTIMORE, MARYLAND

RESTMOR

KNOLL

FONT HILL

DRIVE

Note:
Deflectors to be installed
in existing inlets 14 & 15.

20' Drainage Easement

PLAN
Scale: 1" = 50'

GROSVENOR

DRIVE

PLAN
Scale: 1" = 50'

CRAGSMOOR
ROAD

PLAN
Scale: 1" = 50'

NOTE:
FIRST FLOOR ELEVATIONS SHOWN
ARE APPROXIMATE.

DEPARTMENT OF PUBLIC WORKS
Drawn by R. M. McLeod 4/14/77
 CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
John M. Mueselman 4-11-77
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND TRANSPORTATION PLANNING

PROJECT TITLE
FONT HILL VILLAGE
 SECTION 3 AREA 1
 GRADING PLAN

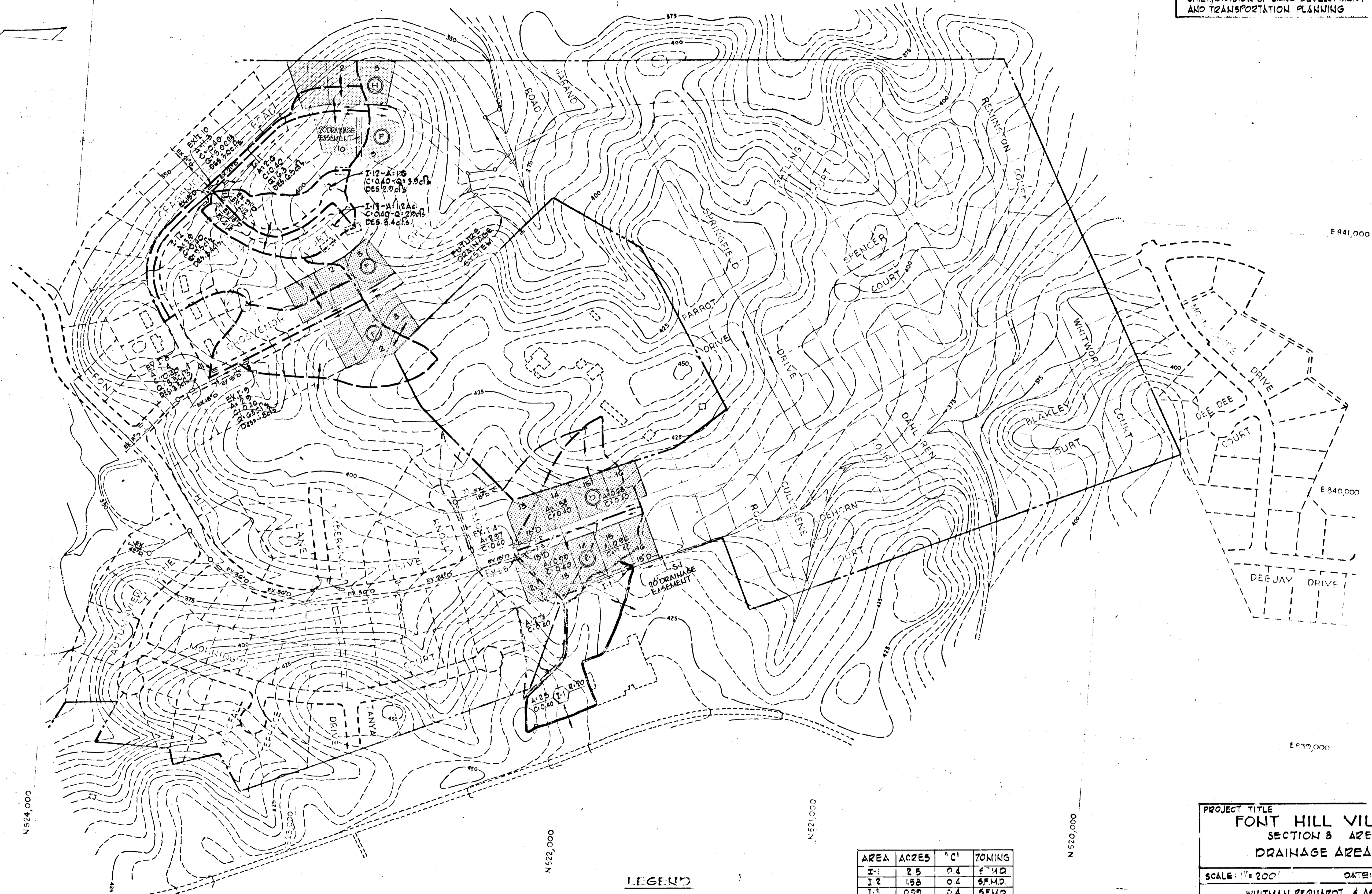
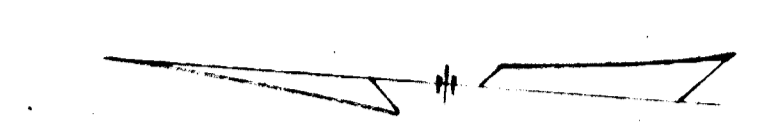
SCALE: 1" = 50' DATE: 4-1-77

WHITMAN, REGUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

DEVELOPER
FONT HILLS JOINT VENTURE
1708 OAK HAVEN CIRCLE SUITE 101
BALTIMORE, MARYLAND

Kenneth A. McCord
KENNETH A. MCCORD
Registered Engineer
No. 1974

DEPARTMENT OF PUBLIC WORKS
Craville M. Waldland 4/14/77
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
Craville M. Waldland 4/14/77
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



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N 520,000

LEGEND
 ——— INLET I-I AREA
 - - - DESIGN AREA
 - - - DESIGN AREA BY OTHERS

AREA	ACRES	"C"	TONING
I-1	2.5	0.4	F.M.D.
I-2	155	0.4	S.F.M.D.
I-3	0.99	0.4	S.F.M.D.

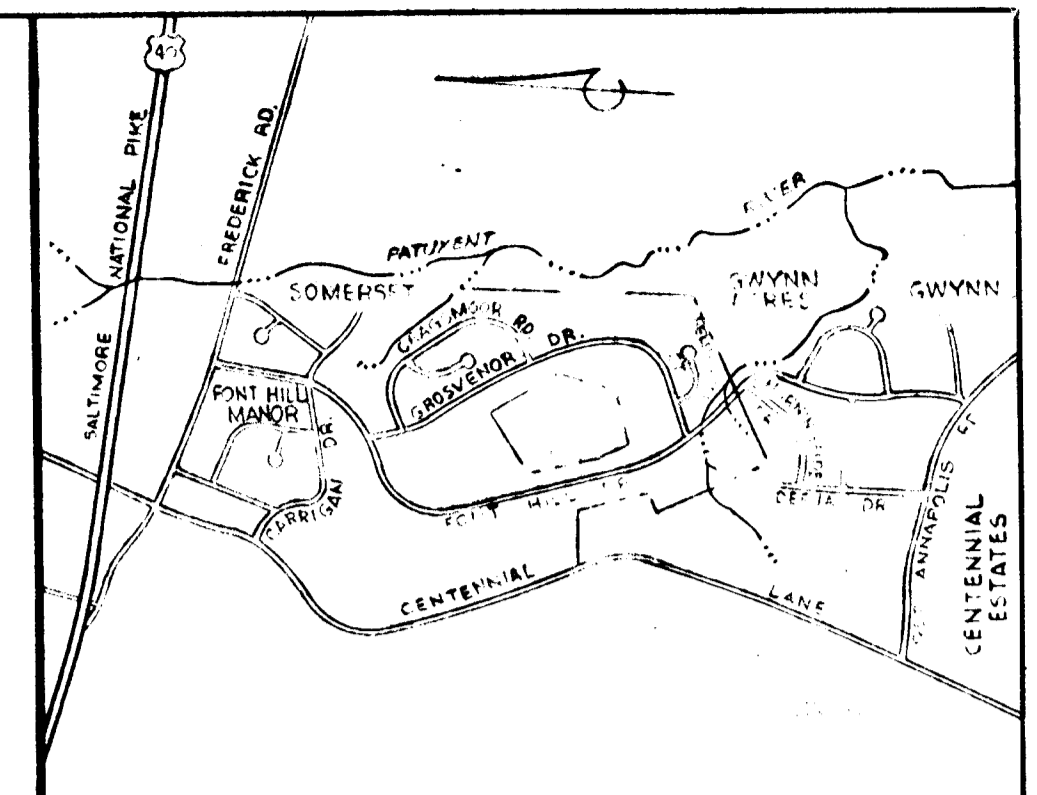
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FONT HILL VILLAGE
 SECTION B AREA 1
 DRAINAGE AREA MAP

SCALE: 1" = 200' DATE: 4-1-77

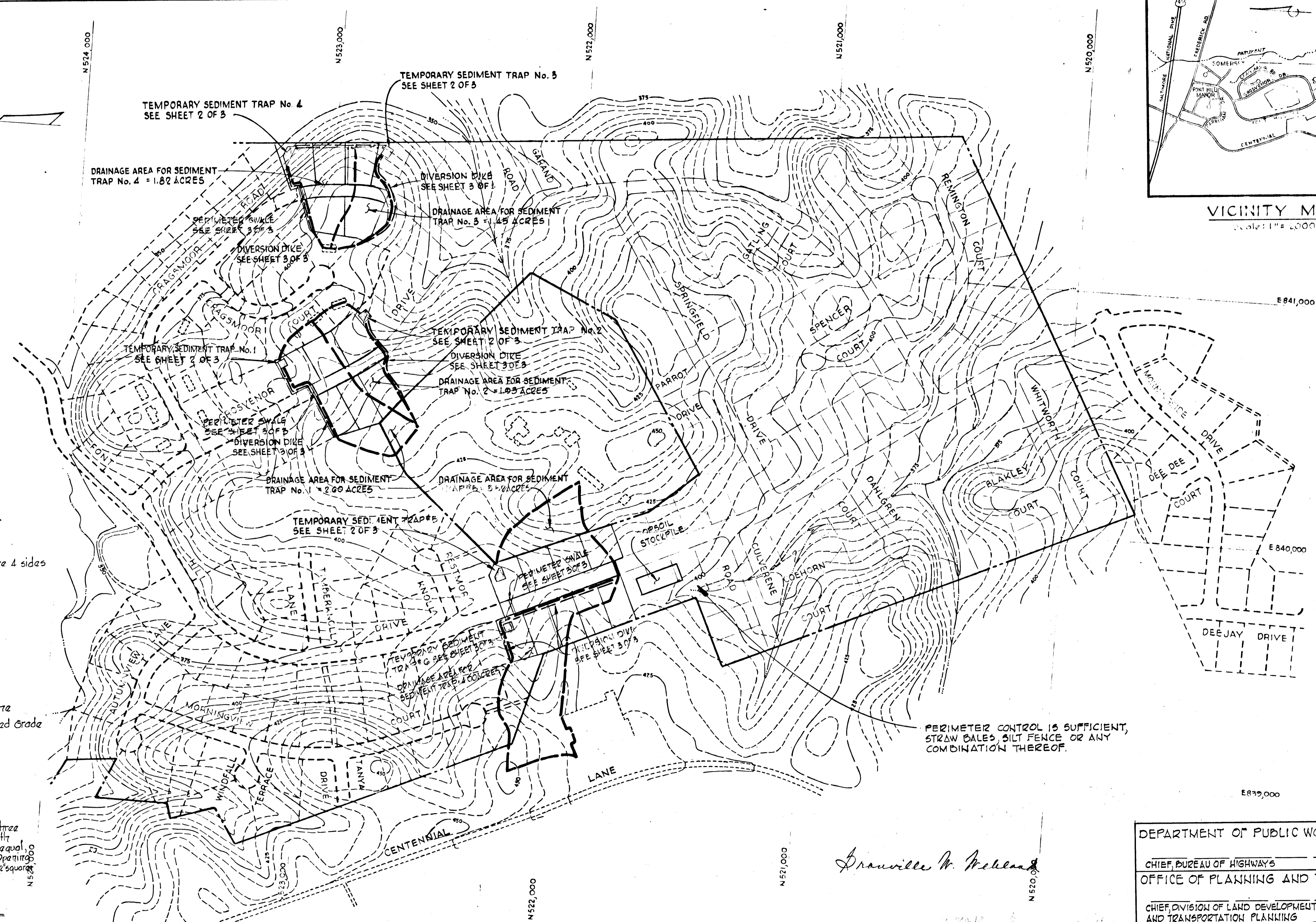
WHITMAN, REGUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

DEVELOPER
 FONT HILLS JOINT VENTURE
 7202 OAK HAVEN CIRCLE SUITE 101
 BALTIMORE, MARYLAND

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974



VICINITY MAP
Scale: 1" = 4,000'

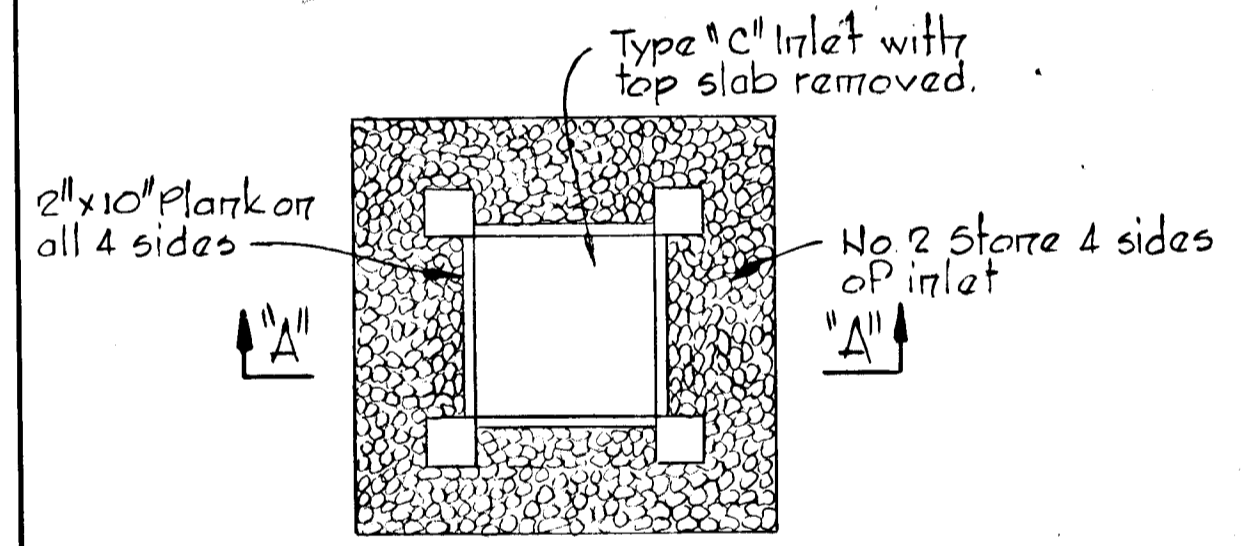


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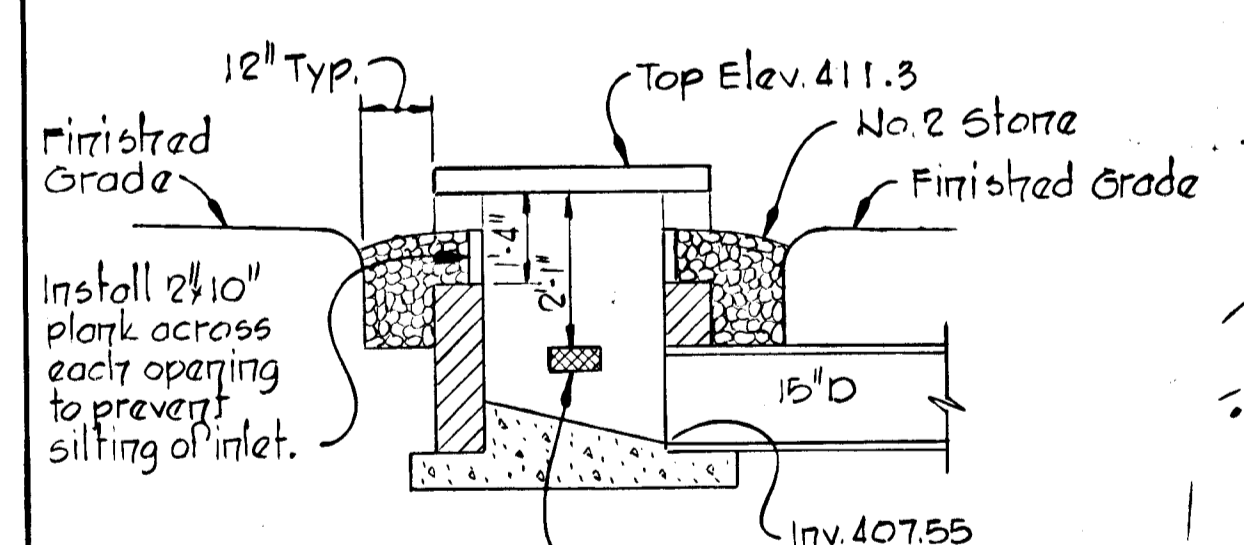
E841,000

E840,000

E839,000



PLAN



SECTION A-A'
DETAIL-INLET I-1
Scale: 3/8" = 1'-0"

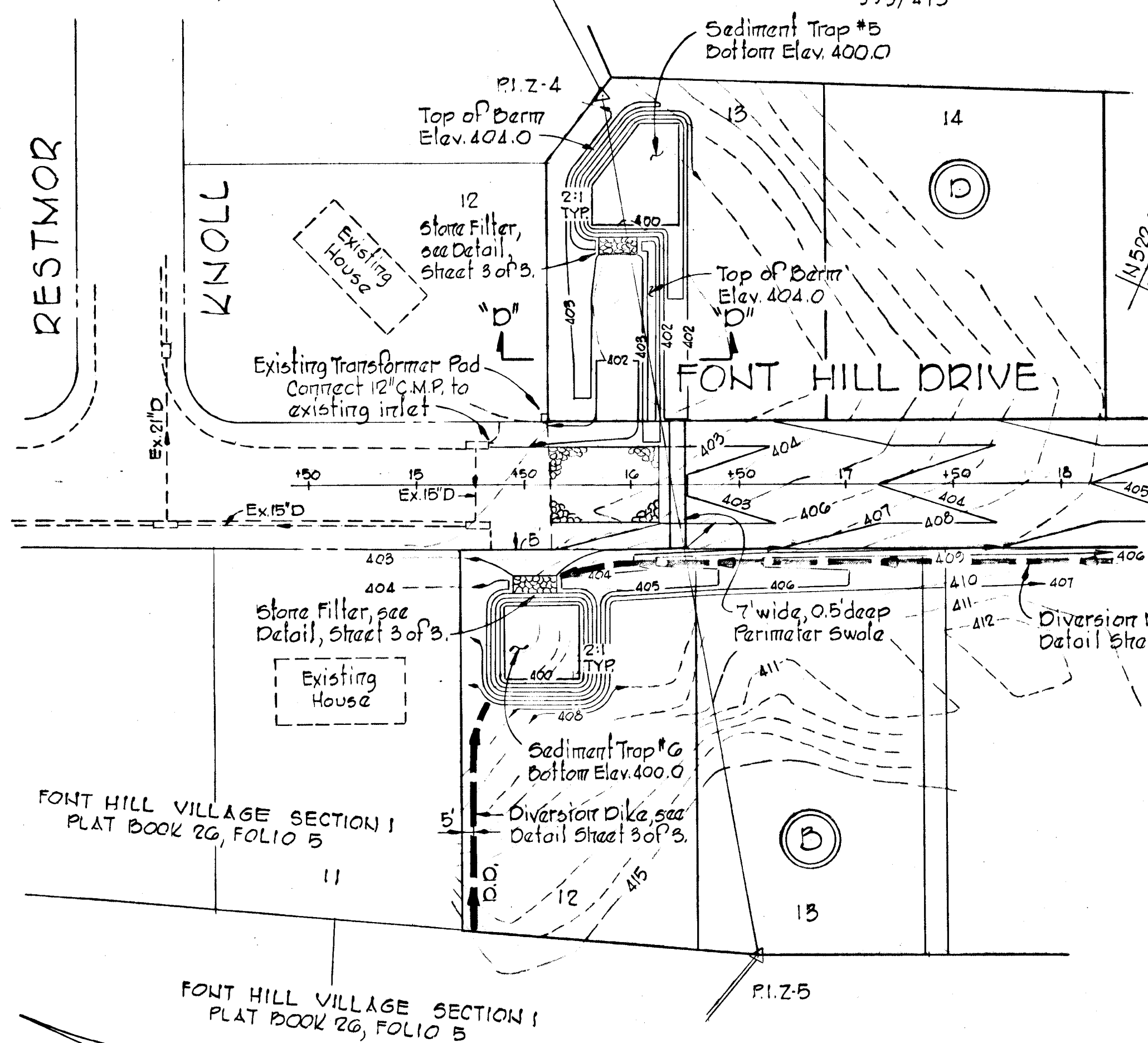
PERIMETER CONTROL IS SUFFICIENT,
STRAW BALES, SILT FENCE OR ANY
COMBINATION THEREOF.

Granville W. Nelson

<p>WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1904 ST. PAUL STREET BALTIMORE, MARYLAND KENNETH A. McCORD, P.E. 1974</p>	<p>Reviewed for Howard S.C.D and meets Technical Requirements. <i>Eric J. Hansen</i> Date 4-7-77 Signature U.S. Soil Conservation Service</p>	<p>THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT Approved <i>John Meyer</i> Date 4-7-77 Howard S.C.D.</p>	<p>CERTIFICATION BY THE DEVELOPER "I certify that all development and/or construction will be done according to this plan of Development and plan for Erosion and Sediment Control, and I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary." <i>Martin Novak</i> 12/2/76 Signature of Developer Date</p>	<p>CERTIFICATION 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>Kenneth A. McCord</i> 6-2-76 KENNETH A. McCORD, P.E. 1974 Date</p>	<p>DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS DATE OFFICE OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE</p> <p>FONT HILL VILLAGE SECTION 3 AREA 1 SEDIMENT CONTROL 2nd ELECTION DISTRICT OF HOWARD COUNTY, MD. Date: 12-6-76 Scale: As Shown</p>
--	---	--	---	--	--

FONT HILL VILLAGE SECTION 1
PLAT BOOK 26, FOLIO 5

TIMOTHY E. WELSH
595/473

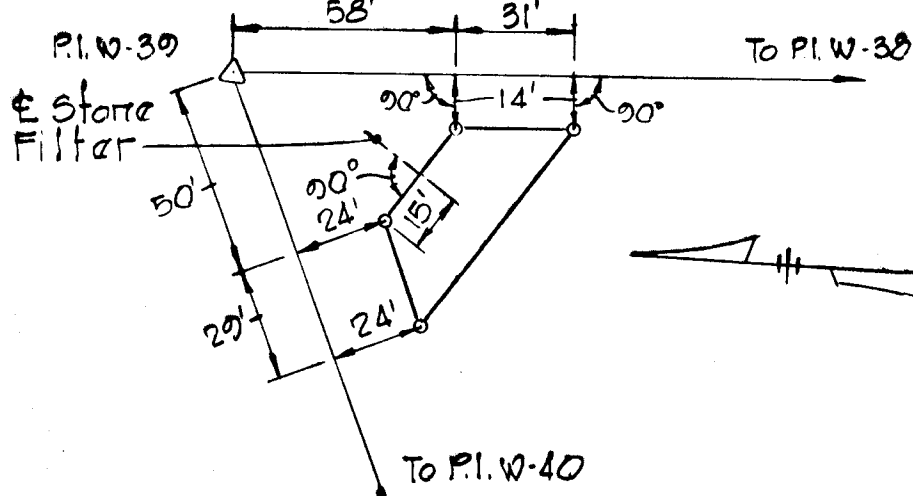


PLAN
Scale: 1"=50'

STAKEOUT PLAN - SEDIMENT TRAP #1

DESIGN DATA - SEDIMENT TRAP #1

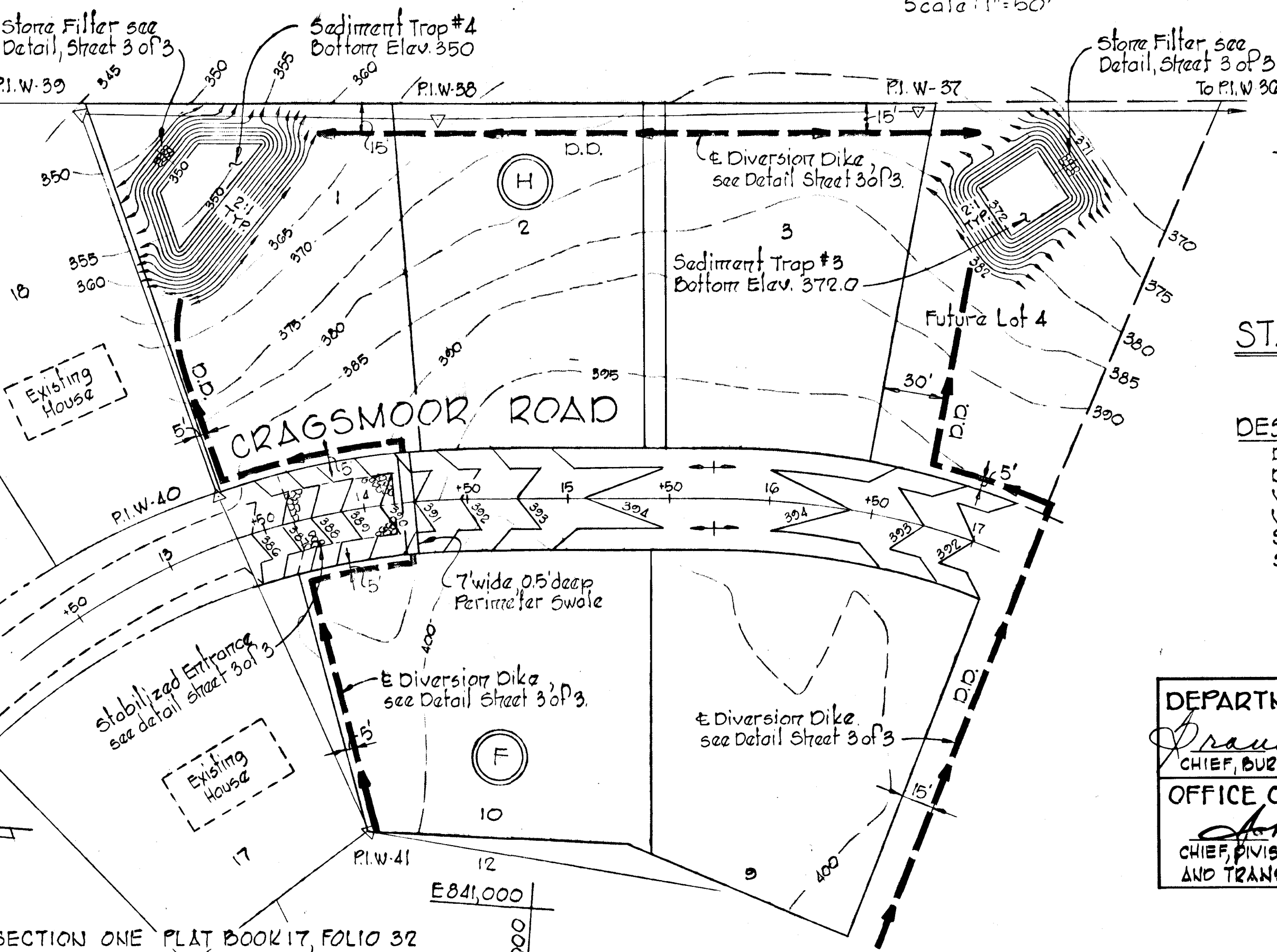
Drainage Area = 2.60 Acres
Disturbed Area = 2.60 Acres
Volume Required = $67 \times 2.60 = 174.20$ CY.
Volume Available = 177.8 CY.
Size of Trap = $40' \times 40' \times 3'$
Stone Filter Width = $5 \times 2.60 = 13'$



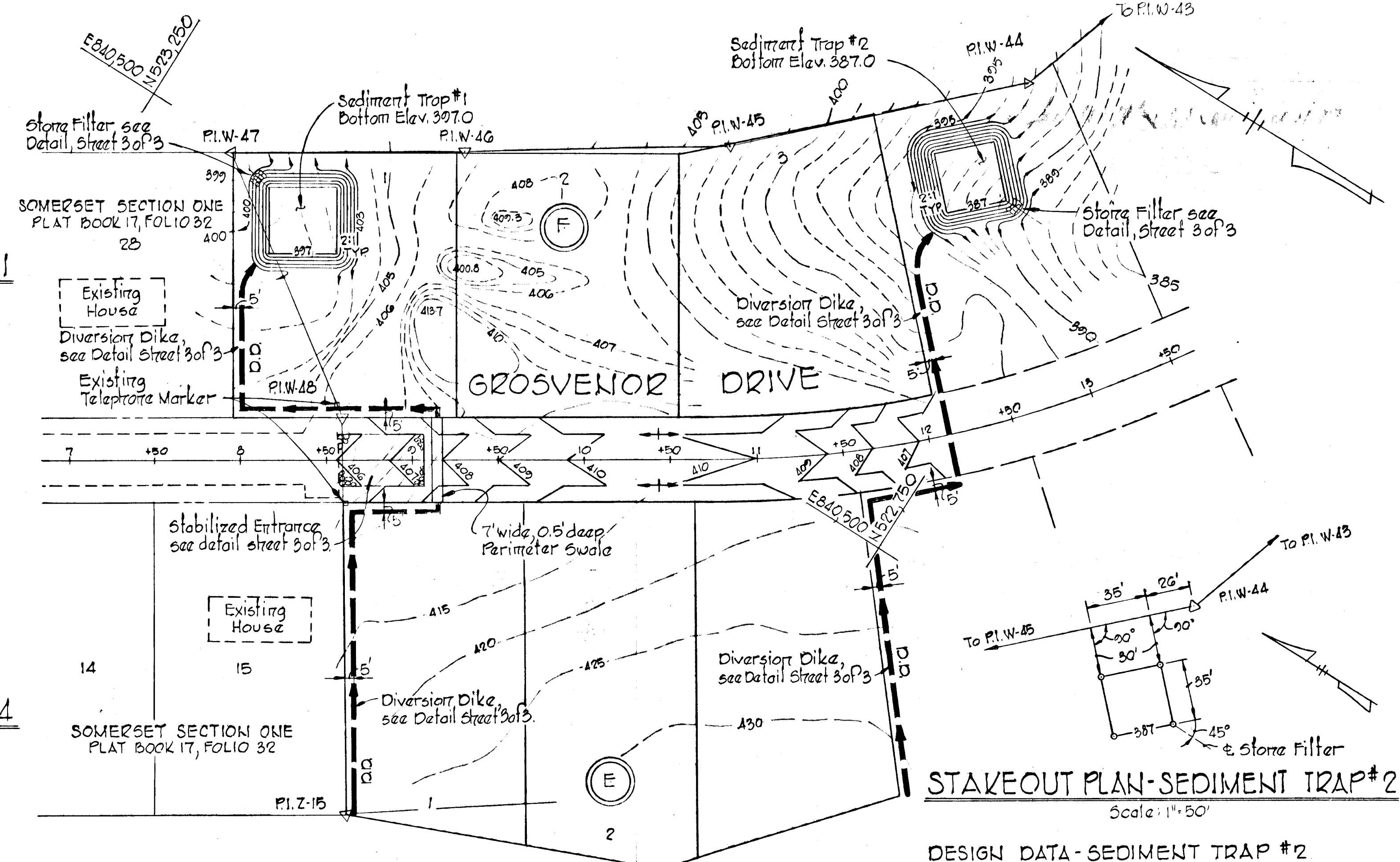
STAKEOUT PLAN - SEDIMENT TRAP #4

DESIGN DATA - SEDIMENT TRAP #4

Drainage Area = 1.82 Acres
Disturbed Area = 1.82 Acres
Volume Required = $67 \times 1.82 = 122$ CY.
Volume Available = 133 CY.
Size of Trap = $1/2 (30' \times 60') \times 25' \times 3'$
Stone Filter Width = $5 \times 1.82 = 9.1'$



PLAN
Scale: 1"=50'



STAKEOUT PLAN - SEDIMENT TRAP #2

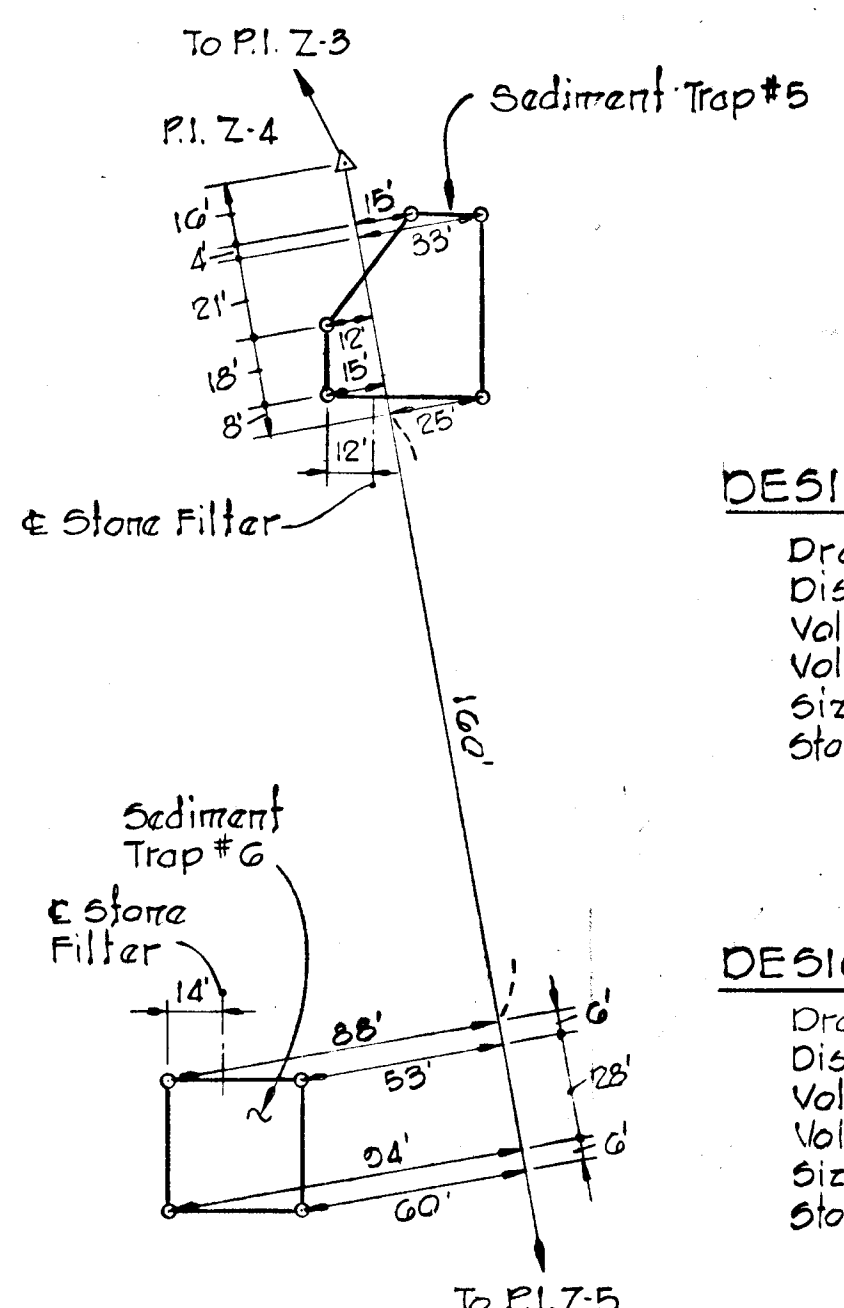
DESIGN DATA - SEDIMENT TRAP #2

Drainage Area = 1.93 Acres
Disturbed Area = 1.93 Acres
Volume Required = $67 \times 1.93 = 129.31$ CY.
Volume Available = 136 CY.
Size of Trap = $35' \times 35' \times 3'$
Stone Filter Width = $5 \times 1.93 = 9.65'$

STAKEOUT PLAN - SEDIMENT TRAP #3

DESIGN DATA - SEDIMENT TRAP #3

Drainage Area = 1.45 Acres
Disturbed Area = 1.45 Acres
Volume Required = $67 \times 1.45 = 97.15$ CY.
Volume Available = 105.8 CY.
Size of Trap = $28' \times 34' \times 3'$
Stone Filter Width = $5 \times 1.45 = 7.25'$



STAKEOUT PLAN
SEDIMENT TRAP #5 & #6
Scale: 1"=50'

DESIGN DATA - SEDIMENT TRAP #5

Drainage Area = 3.52 Acres
Disturbed Area = 2.20 Acres
Volume Required = $67 \times 2.2 = 147.4$ CY.
Volume Available = 160 CY.
Size of Trap = $(42' \times 18') \times 2' \times 48' \times 3'$
Stone Filter Width = $5 \times 3.52 = 17.60'$

DESIGN DATA - SEDIMENT TRAP #6

Drainage Area = 4.00 Acres
Disturbed Area = 1.61 Acres
Volume Required = $67 \times 1.61 = 107.87$ CY.
Volume Available = 136 CY.
Size of Trap = $35' \times 35' \times 3'$
Stone Filter Width = $5 \times 4.00 = 20'$

DEPARTMENT OF PUBLIC WORKS
Dr. William M. Weiland 4/14/77
CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
Arthur H. Hesterman 4-11-77
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

PROJECT TITLE
FONT HILL VILLAGE
SECTION 3 AREA 1
SEDIMENT CONTROL PLANS

SCALE: AS SHOWN DATE: 12-6-76

WHITMAN, REARDON & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

DEVELOPER
FONT HILLS JOINT VENTURE
1708 OAK HAVEN CIRCLE SUITE 101
BALTIMORE, MARYLAND

Kenneth A. McLeod
KENNETH A. McLEOD
Registered Engineer
No. 1074

TRAP NO	TOP DIKE ELEV.	WIDTH	BOTTOM ELEV.
1	401.0	13'	397.0
2	391.0	9.65'	387.0
3	376.0	7.25'	372.0
4	354.0	9.1'	350.0
5	404.0	17.60'	400.0
6	404.0	20'	400.0

GENERAL NOTES

- Temporary, compacted 18" high earth fill diversion dikes shall be constructed above the lips of all slopes on the R.O.W. concurrently with the initial grading and directed to undisturbed soil areas at the end of each day.
- Contractor to notify the Howard County Soil Conservation District at least 3 days before starting work shown on these drawings.
- All disturbed slope areas to be stabilized as soon as grading is completed.
- Separate Sediment Control Plans will be submitted at a later date to provide protection during house construction and lot grading. Approval of this plan is not intended to imply approval of grading for home construction. (See #7)
- All swales shall be sodded and tamped, and all slopes shall be seeded or sodded in conjunction with the Howard County Soil Conservation District and the Howard County Planning Board Standards entitled "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas".
- Contractor shall provide perforated Erosion Control Blankets in all Drainage Swales and Ditches as noted. The Blankets which shall be Jute Mat or approved equal, shall be placed full width of swales. Seeding is required under blankets. See permanent seeding note.
- Sediment control shown on these drawings is adequate for lot grading during home construction although approval of these plans is for road construction only.

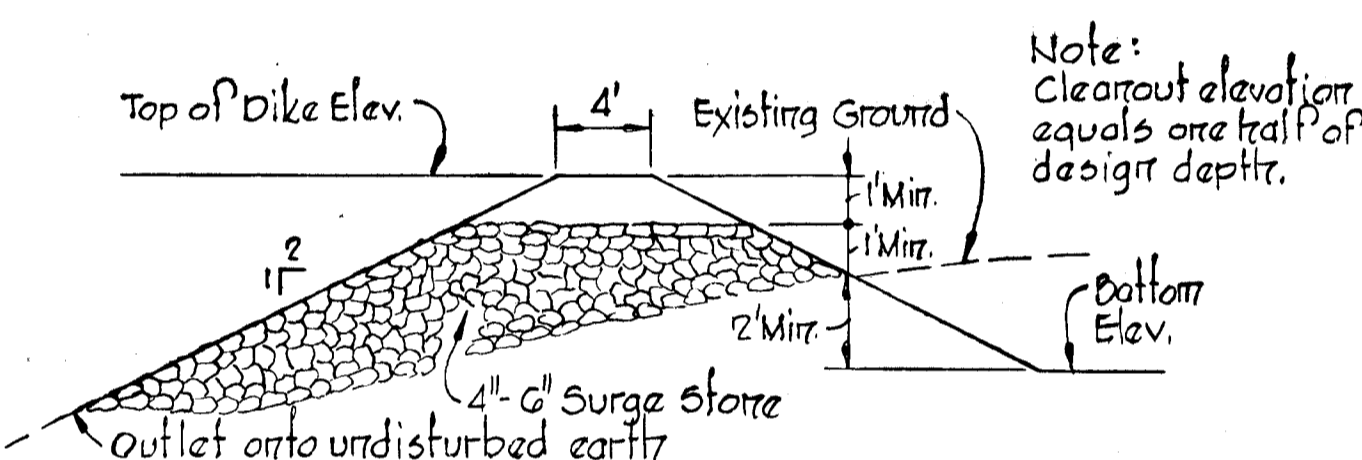
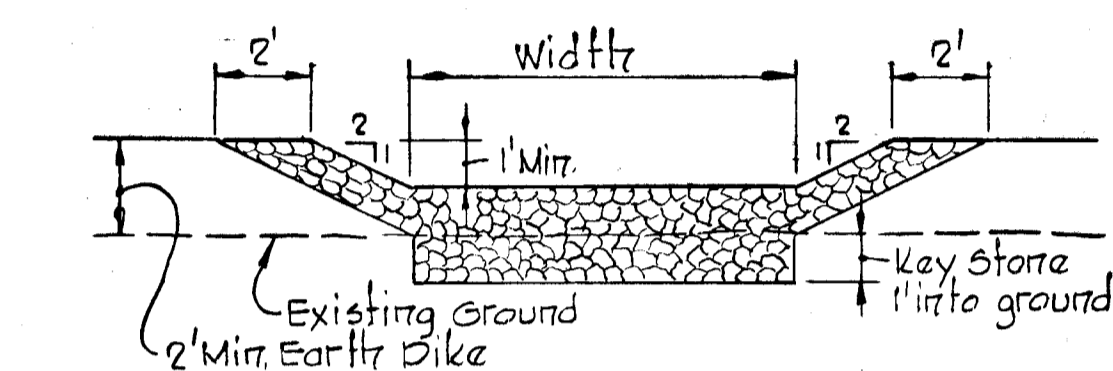
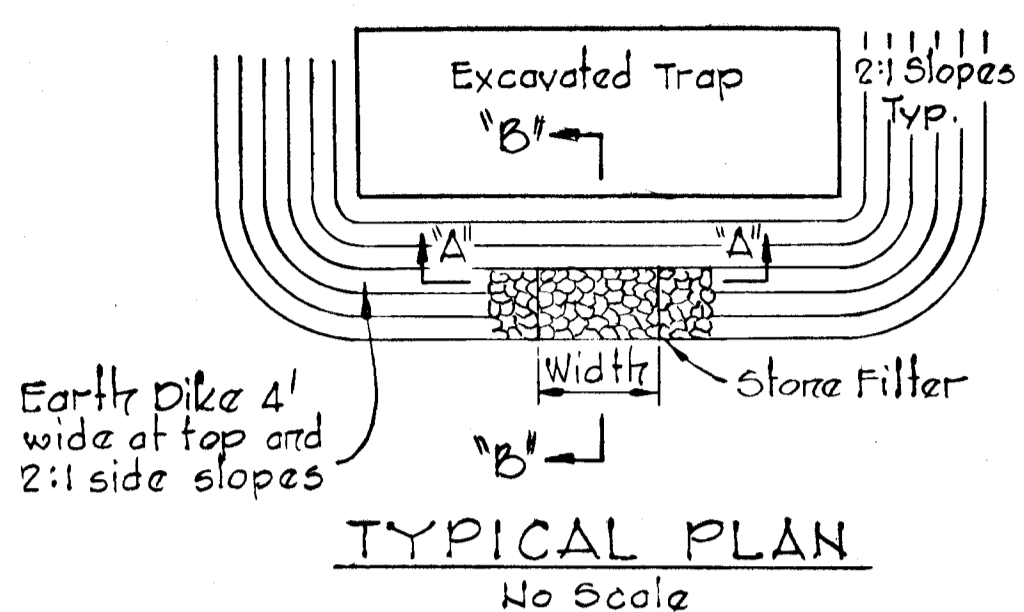
SEQUENCE OF CONSTRUCTION

- Install stone construction entrances to Fort Hill Drive, Grosvenor Drive and Cragmoor Road.
- Clear, grub and strip the areas required for the construction of temporary sediment basin and sediment traps and construct dikes along Fort Hill Drive, Grosvenor Drive and Cragmoor Road, utilizing the topsoil for those street areas.
- Topsoil from trap excavation shall be stockpiled where designated on Sheet 1 of 3. Stabilize topsoil stockpile immediately after completion according to Note 3. Stockpile sediment control provided for existing trap as shown on Sheet 1 of 3.
- Construct the temporary sediment basin and temporary traps and stabilize immediately after completion.
- Clear and strip the site as required and construct topsoil stockpiles where designated by the owner and stabilize immediately after completion. According to Note 3.
- Stabilize all dikes, slopes and swales as required immediately after grading is completed.
- Construct storm drain system and cap inlet; repair dikes that are crossed immediately. Any open storm drains to be covered with plywood at the end of each working day.
- Complete roadway construction, including mountable curb and gutter and asphalt paving.
- Stabilize all drainage ditches immediately after completion. According to Note (Sodding)
- Remove the temporary sediment traps, diversion dikes after house construction is complete and grass is established in the contributing drainage area. Stabilize areas when removed. According to Note 3.

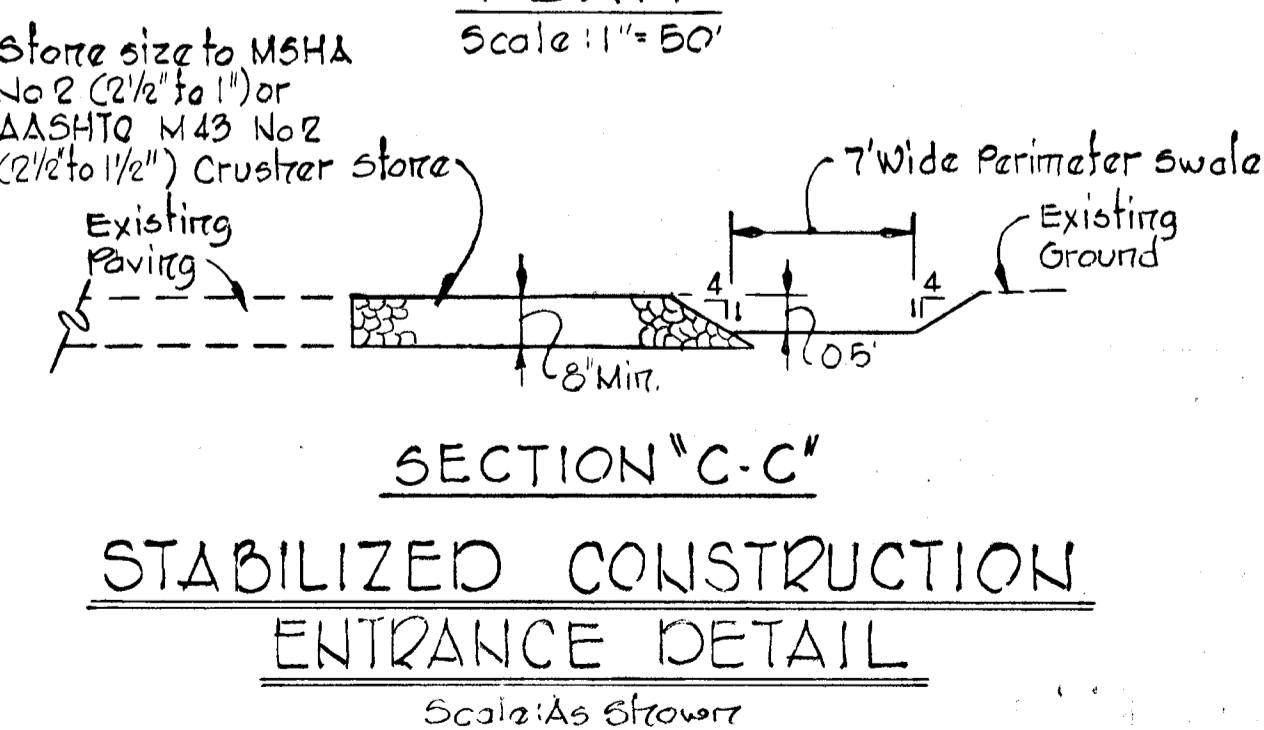
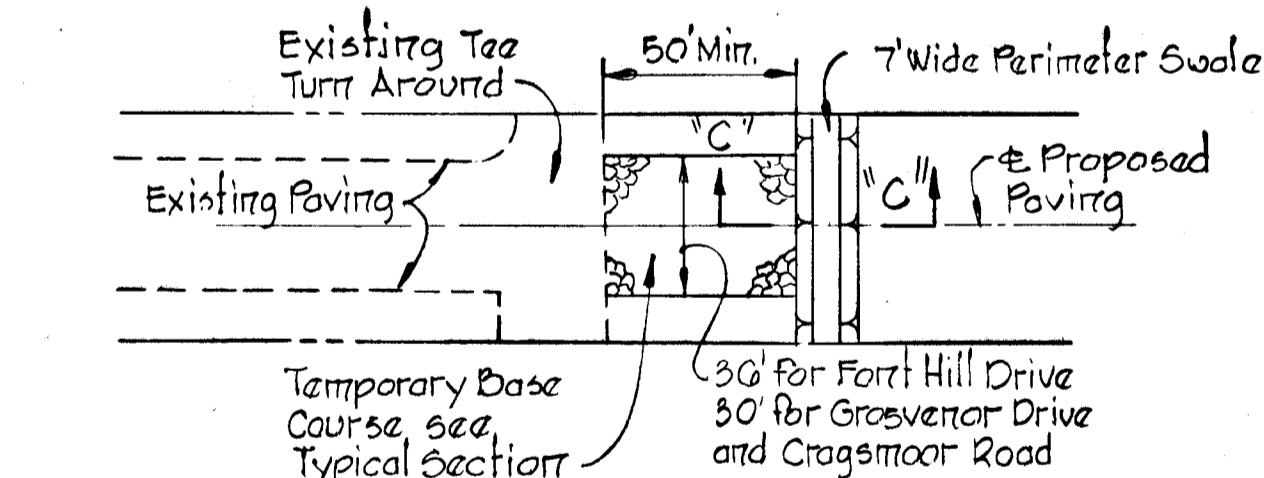
SITE ANALYSIS

Total area to be disturbed	2.0 Acres
Total area to be vegetated	1.0 Acres
Total area of pavement	1.0 Acra
Total area of site	10.970 Acres

DEPARTMENT OF PUBLIC WORKS
James M. McKeand 4/12/77
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
John W. McKeand 4-1-77
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



STONE FILTER DETAILS
No Scale



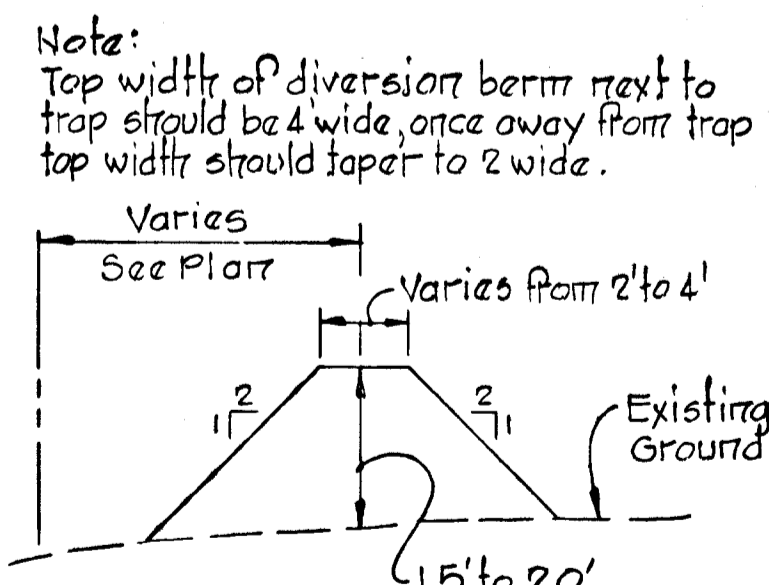
STABILIZED CONSTRUCTION ENTRANCE DETAIL
Scale: As Shown

PERMANENT SEEDING NOTES

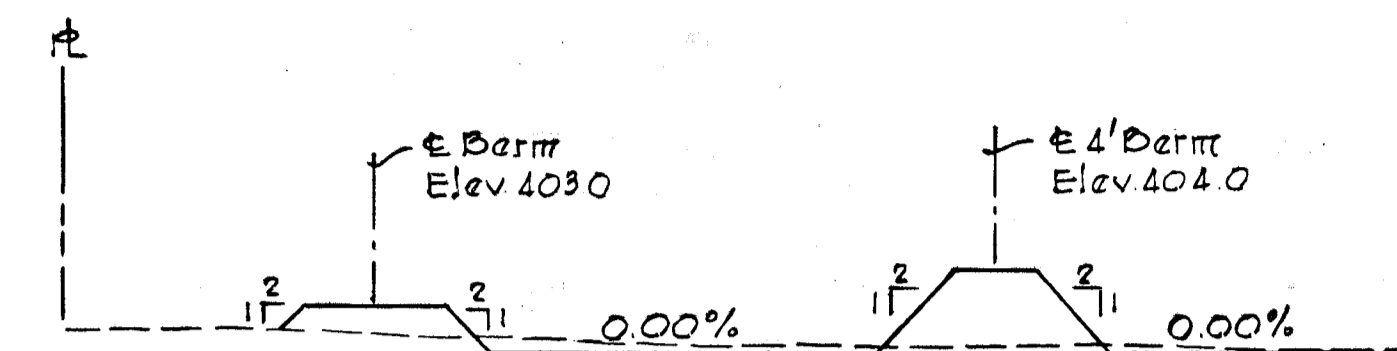
- All Sediment Control Measures must be constructed and stabilized according to note 3 prior to any other grading on the site.
- No temporary sediment control structure may be removed or destroyed without approval of the Howard Soil Conservation District.
- All areas to be seeded (dikes, basins, drainage swales and disturbed areas) at the rate of 60 lbs/acre of the following: Kentucky 31 Tall Fescue - 60 lbs/acre and Korean Lespedeza (Scarify and Inoculate) 20 lbs/acre, immediately after construction. Sow with a mechanical spreader, rake minimum two (2) passes with "York Rake", cover and compact with cultipacker. Surface preparation to include ground limestone over topsoil surface area at the rate of one ton/acre (50 lbs/1000⁺) commercial fertilizer (10-10-10) at the rate of 1000 lbs/acre. Mulch areas with straw at the rate of two tons/acre. Anchor with asphalt at the rate of 480 gallons/acre. Drainage Swales with slopes greater than 2% will be mulched as stated but the mulch in the center of the channel will be anchored with plastic netting according to manufacturers recommendations. Stabilization of slopes steeper than 3:1 shall be planted with Kentucky 31 Tall Fescue - 40 lbs/acre (1 lb/1000⁺) and Crownvetch (Scarify and Inoculate) 15 lbs/acre.

SODDING NOTES

- Apply 10-10-10 fertilizer @ 1000 lbs/acre (25 lbs/1000⁺)
- Apply Ground Agricultural Limestone @ 2000 lbs/acre (50 lbs/1000⁺)
- Incorporate both lime and fertilizer into soil by disking. Firm up after incorporation.
- Lay sod to a tight fit. Roll to ensure contact with underlying soil. Water as necessary for 1st 2 weeks (in summer) to ensure establishment.



Note: Diversion berm shall be stabilized, see Note 3 thru 5 of this sheet.



SECTION "D-D" SEDIMENT TRAP # 5

PROJECT TITLE
FONT HILL VILLAGE
 SECTION 3 AREA 1
 SEDIMENT CONTROL DETAILS

SCALE: AS SHOWN DATE: 12-6-76

WHITMAN, REQUARDT & ASSOCIATES
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