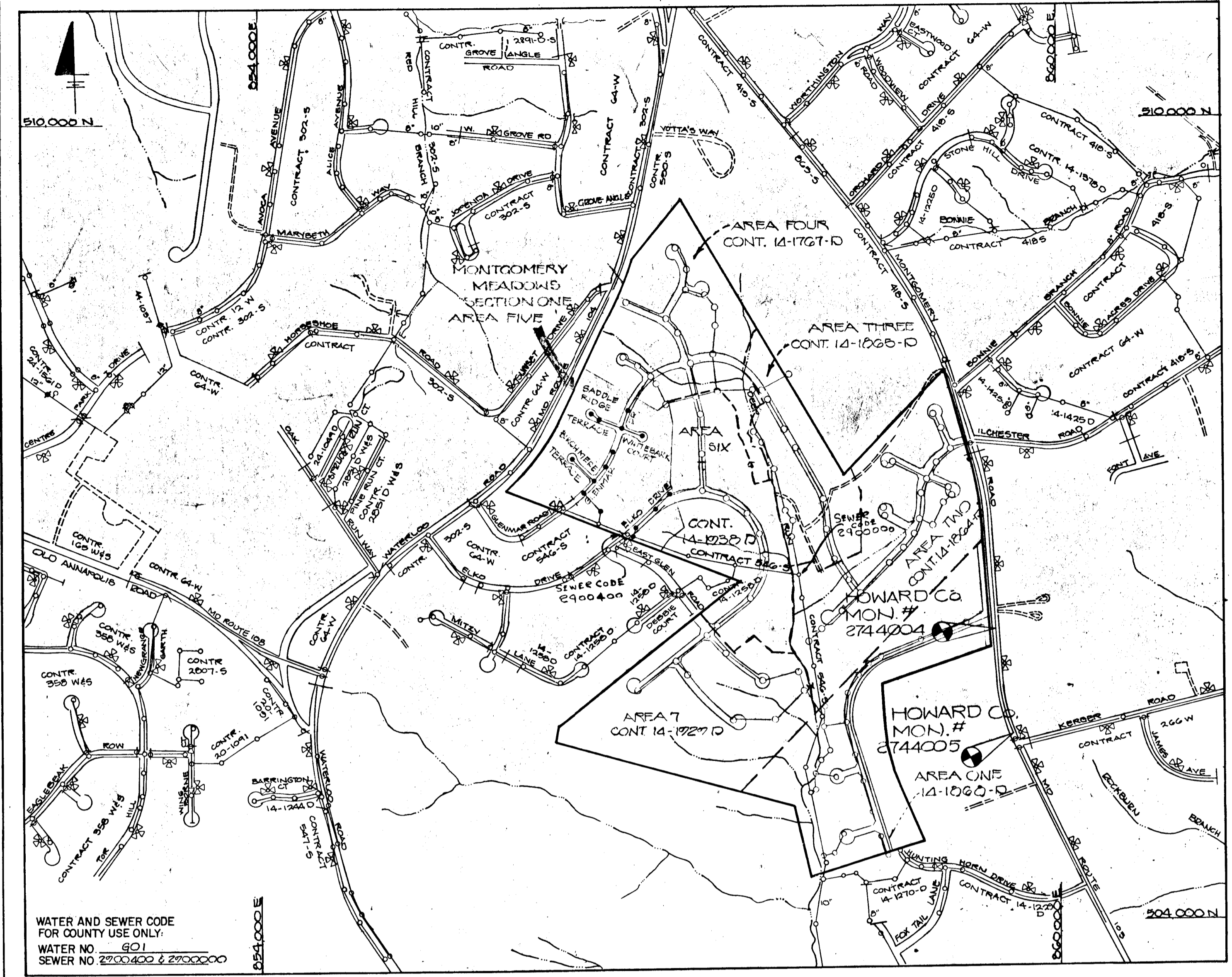


QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
8" WATER	1754 LF	1704 LF	GRIFFEN PIPE
6" WATER	714 LF	756 LF	GRIFFEN PIPE
3/4" W.H.C.	452 LF	471 LF	MIMBRIDGE LEE
1" W.H.C.	551 LF	651 LF	MIMBRIDGE LEE
FIRE HYDRANTS	3	3	LENNETT
8" SEWER	1255 LF	1312 LF	G.T.I.
8" SEWER (D.I.P.)	0	0	
MANHOLES	15	15	ATLANTIC PIPE CAST
4" S.H.C.	1585 LF	175	E.T.I.
8" VALVES	2	2	LENNETT
6" VALVES (EXCLUDING F.H.)	3	3	LENNETT
6" F.H. VALVES	3	3	LENNETT



GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS.
- FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 STATE HIGHWAY ADMINISTRATION 531-5533
 BALTIMORE GAS AND ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE 685-0123
 BALTIMORE GAS AND ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE 685-0123
 ENGINEERING - "DAMAGE CONTROL" 234-5611
 "MISS UTILITY" 1-559-0100
 CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY 725-9976
 AMERICAN TELEPHONE AND TELEGRAPH - CABLE LOCATION DIVISION 333-3533
 COLONIAL PIPELINE COMPANY 795-1390
 BUREAU OF UTILITIES HOWARD COUNTY 992-2366
- TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE.
- ALL WATER MAINS TO BE DUCTILE IRON CLASS 52 ONLY.
- TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- BLOCK ALL FITTINGS WITH CONCRETE.
- BURYLENE ELEVATIONS ON ALL FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT TO BE COMPACTED IN ACCORDANCE WITH SECTIONS 1000.03.19 OF THE STANDARD SPECIFICATIONS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR PVC UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G.5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE, STANDARD DETAIL G.5.41.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CAN NOT BE SERVED.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3 inch THROUGH 12 inch WATER AND OTHER LIQUIDS.

BENCH MARKS

HOWARD CO # 2744004 ELEV. 415.967
 3/4" REBAR 0.8' BELOW SURFACE, 7'± (W)
 OF ROUTE 103 & 1400±(S) OF INTER. WITH
 ILCHESTER ROAD.

HOWARD CO # 2744005 ELEV. 419.625
 3/4" REBAR 0.6' BELOW SURFACE, 10'± (W)
 EDGE OF ROUTE 103 & 500± (N) OF E. KERGER
 ROUTE.

WATER AND SEWER CODE
 FOR COUNTY USE ONLY:
 WATER NO. 601
 SEWER NO. 2700400 & 2700000

TYPE OF BUILDING	SINGLE FAMILY - FEED
NUMBER OF LOTS	53
NO. OF WATER HOUSE CONNECTIONS	52
NO. OF SEWER HOUSE CONNECTIONS	52
DRAINAGE AREA	225'± RUN CREEK

LOCATION MAP
 SCALE: 1" = 600'

CONTRACT NO. 14-1866-D

MONTGOMERY MEADOWS

SECTION ONE - AREA FIVE

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

F88-87
SEE W/S 1866

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F-88-287

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
James M. Helm 7/31/09
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:
Stephen L. Fisher 7/31/09
 HOWARD SOIL CONSERVATION DISTRICT DATE

CONTRACT NO. 14-1866-D
 MONTGOMERY MEADOWS
 SECTION ONE - AREA FIVE
 WATER & SEWER MAIN EXTENSIONS

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. Helm 8/25/09
 DIRECTOR OF PUBLIC WORKS DATE

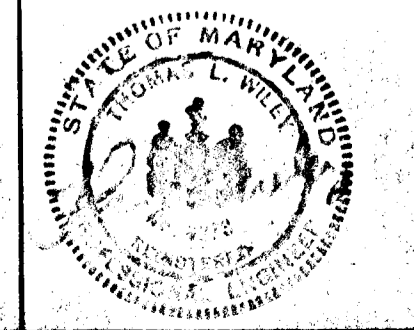
Richard A. Boccia 8/25/09
 CHIEF, BUREAU OF UTILITIES DATE

William J. Kelly 8/25/09
 CHIEF, BUREAU OF ENGINEERING DATE

Carol M. Gorman 8/25/09
 CHIEF, LAND DEVELOPMENT DIVISION DATE

DEWBERRY & DAVIS
 ARCHITECTS-ENGINEERS-PLANNERS-SURVEYORS

3300 N. RIDGE ROAD
 SUITE 100
 ELLICOTT CITY, MD. 21043
 (301) 461-7478



DES: GPM	WEO	REVISION AS PER HOWARD COUNTY COMMENTS 10/20/09 11/2/09
DRN: GPM	WEO	REVISED AS PER RECORDING CORRECTIVE 7/10/09 7/12/09
CHK:		
DATE: APR 13 2009	BY NO.	REVISION DATE

TITLE SHEET

600' SCALE MAP NO. 281, BLOCK NO. 14

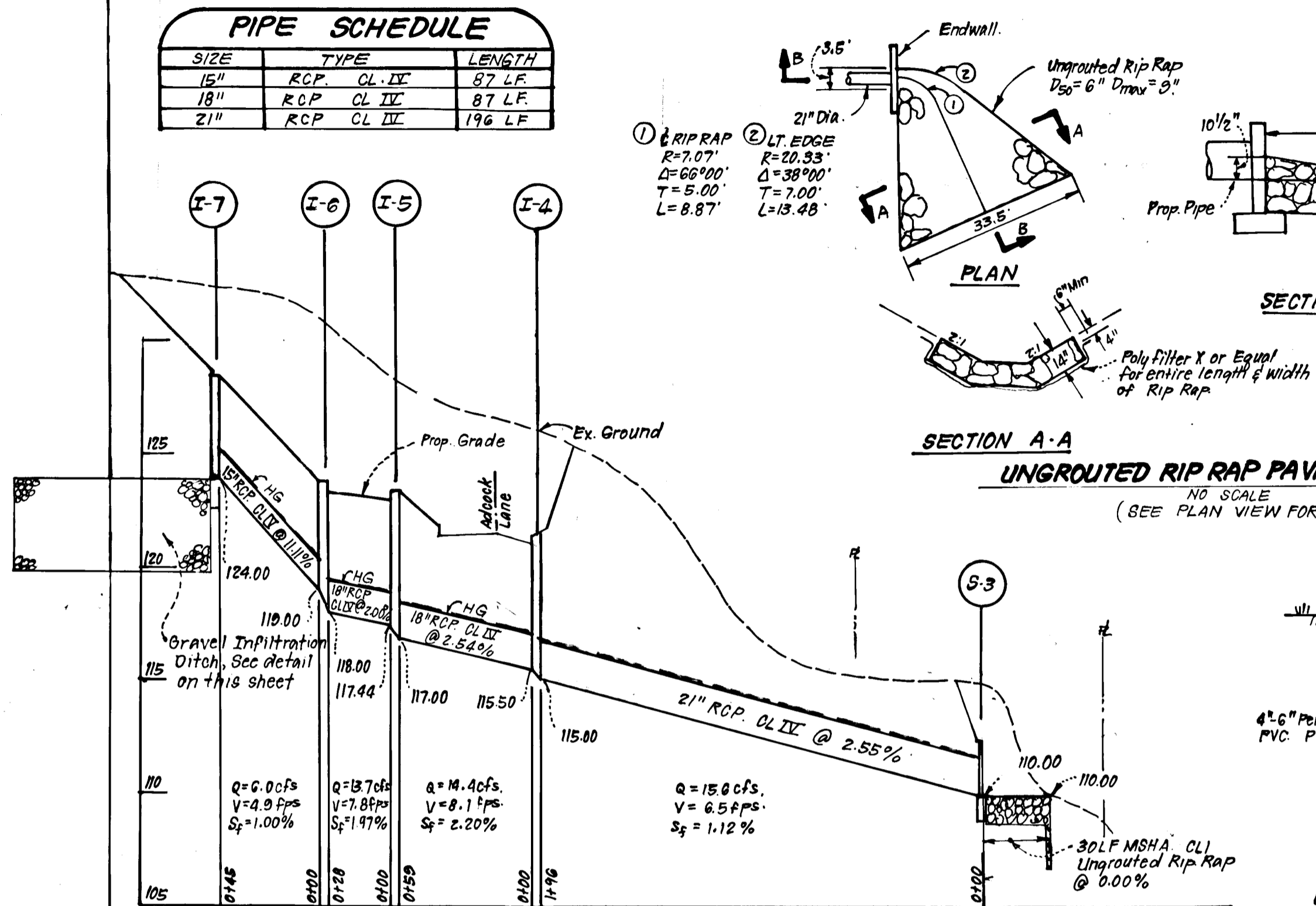
MONTGOMERY MEADOWS
 SECTION ONE - AREA FIVE
 CONTRACT NO. 14-1866-D
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 6

1443

STRUCTURE SCHEDULE							
NO.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
6-3	C-Endwall	112.00	-	-	-	Ho. Co. Std. SD 5.21 24"Ø	See Plan
I-4	A-5 Inlet w/Deflectors	115.50	115.00	121.68	121.05	Ho. Co. Std. SD 4.01 & SD 4.83 W=2'6"	Lower End 12' 84.15' Rt.
I-5	A-10 Inlet	117.44	117.00	123.50	123.02	Ho. Co. Std. SD 4.02 W=2'6"	Lower End 04 40.53, 14' Lt.
I-6	A-10 Inlet	119.00	118.00	123.72	123.58	Ho. Co. Std. SD 4.02 W=2'6"	Lower End 04 49.65, 14' Lt.
I-7	A-10 Inlet w/Deflectors	-	124.00	128.83	127.69	Ho. Co. Std. SD 4.02 & SD 4.83 W=2'6"	Lower End 13 150.43, 15' Lt.
6-8	Concrete End Section	-	136.00	-	-	Ho. Co. Std. SD-5.51 15"Ø	See Plan
I-9	K-Inlet w/Grate	-	142.80	149.50	-	Ho. Co. Std. SD-4.12 & SD-4.13	See Plan

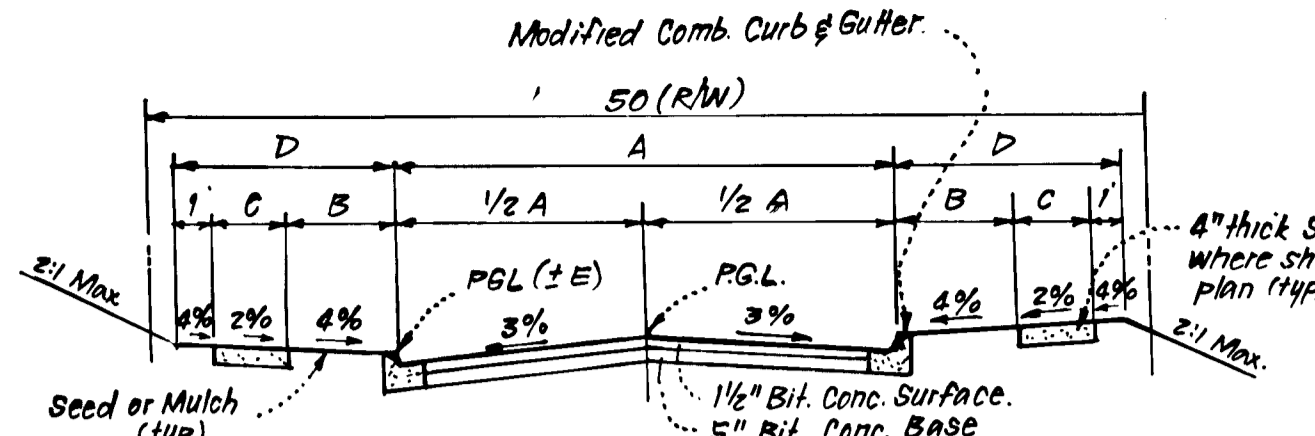
PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	RCP CL. IV	87 LF
18"	RCP CL. IV	87 LF
21"	RCP CL. III	196 LF



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

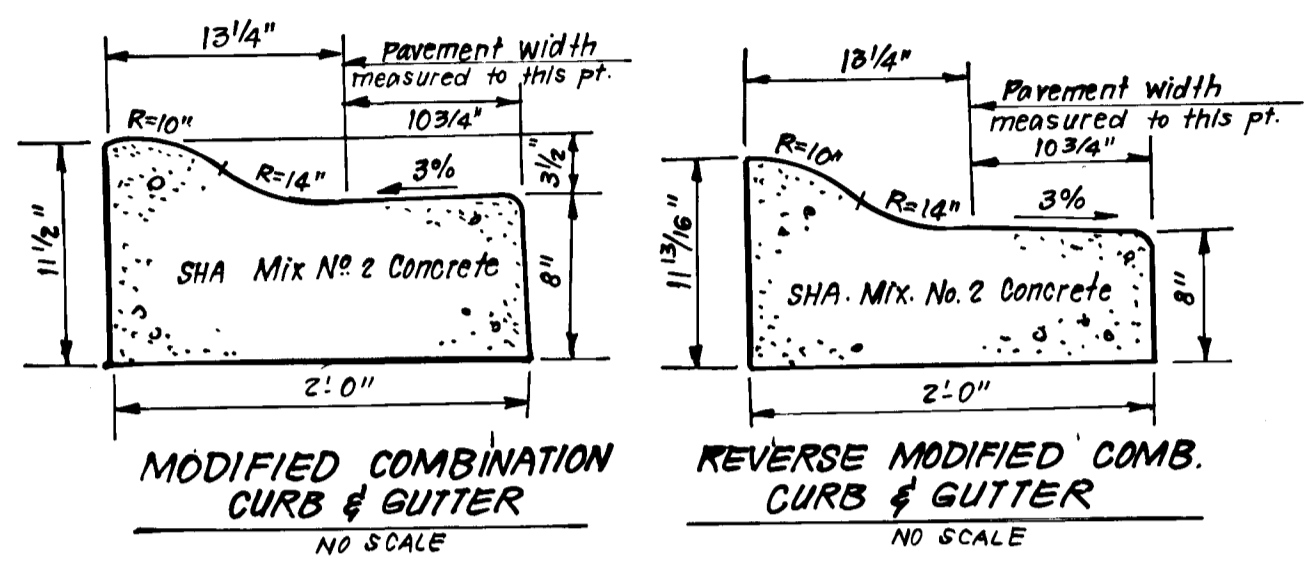
5" Bituminous Conc. Surface	1 1/2"
5" Bituminous Conc. Base	2 1/2"
Prime	1"
3" Crusher Run Base (Placed in 2 Courses)	8"
6" Dense Graded Stabilized Aggregate Base Course	6"

ALTERNATE PAVING SECTION FOR PUBLIC ROADS
(SECTION P-2) NO SCALE



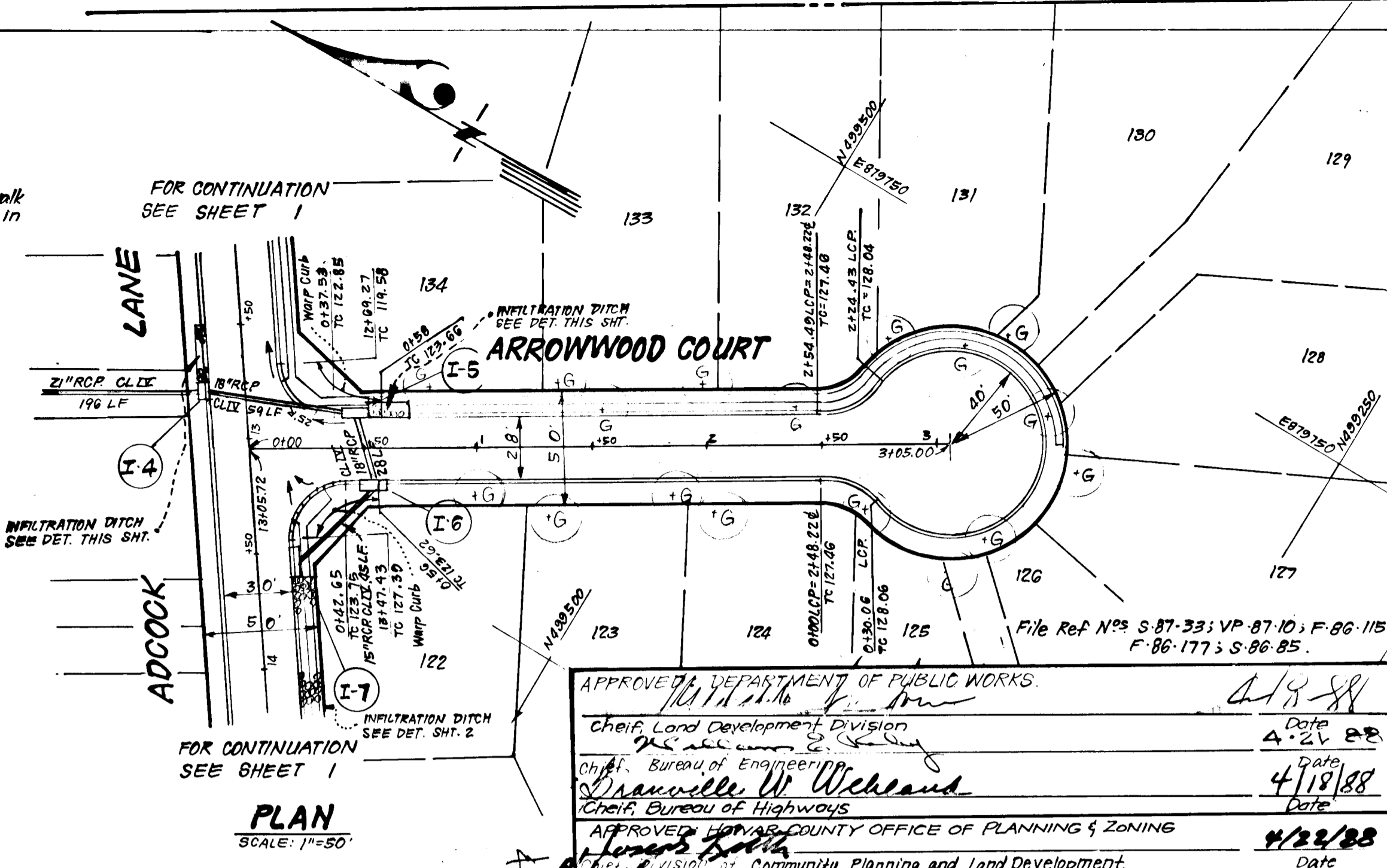
TYPICAL PAVING SECTION
NO SCALE
* For Alternate Paving Section-See det. this sht.

STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	ZONING	DESIGN SPEED	E
Adcock La.	Local	30'	4'	4'	9'	50'	R-12	30 mph	13
Arrowwood Ct.	Cul. de Sac.	28'	4'	4'	9'	50'	R-12	30 mph	10



MODIFIED COMBINATION CURB & GUTTER
NO SCALE

REVERSE MODIFIED COMB. CURB & GUTTER
NO SCALE



PLAN
SCALE: 1"=50'

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division
Date: 4-21-88

Chief, Bureau of Engineering
Date: 4-19-88

Chief, Bureau of Highways
Date: 4-22-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Date: 4-22-88

CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS

7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 (301) 381-7500

DESIGNED: E.P.
DRAWN: KIW
CHECKED: E.P.
DATE: 3-18-87

ROAD CONSTRUCTION PLANS
ARROWWOOD COURT

SCALE: As Shown
DRAWING: 2 OF 4
JOB NO: 85-085
FILE NO: 85-085-D

FOR: ELK RIDGE LIMITED PARTNERSHIP
3030 Red Branch Rd. Suite 210
Columbia, Md. 21045

ENGINEER'S CERTIFICATE

I hereby 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.

G. Nelson Clark
Professional Engineer
Date: 3-2-87

CONSTRUCTION SPECIFICATIONS FOR INFILTRATION TRENCHES.

TIMING
An infiltration trench shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible inspector.

TRENCH PREPARATION
Excavate the trench to the design dimensions. Excavated materials shall be placed away from the trench sides to enhance trench wall stability. Large tree roots must be trimmed flush with the trench sides in order to prevent fabric puncturing or tearing during subsequent installation procedures. The side walls of the trench shall be roughened where sheared and sealed by heavy equipment.

FABRIC LAYDOWN
The filter fabric roll must be cut to the proper width prior to installation. The cut width must include sufficient material to trench perimeter irregularities and for a 6" min. top overlap. Place the fabric roll over the trench and unroll a sufficient length to allow placement of the fabric down into the trench. Stones or other anchoring objects should be placed on the fabric at the edge of the trench to keep the lined trench open during windy periods. When overlaps are required between rolls, the upstream roll should lap a min. of 2' over the downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or to ensure that the fabric conforms to the excavation surface during aggregate placement and compaction.

STONE AGGREGATE PLACEMENT & COMPACTION
The stone aggregate should be placed in lifts and compacted using plate compactors. As a rule of thumb, a max. loose lift thickness of 2" is recommended. The compaction process ensures fabric continuity to the excavation sides, thereby reducing the potential for soil piping, fabric clogging, and settlement problems.

OVERLAPPING AND COVERING
Following the stone aggregate placement, the filter shall be folded over the stone aggregate to form a 6" min. longitudinal lap. The desired fill soil or stone aggregate shall be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.

CONTAMINATION
Care shall be exercised to prevent natural or fill soils from intermixing with the stone aggregate. All contaminated stone aggregate shall be removed and replaced with uncontaminated stone aggregate.

VOIDS BEHIND FABRIC
Voids can be created between the fabric and excavation sides and shall be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric conformity to the excavation sides. Soil piping, fabric clogging and possible surface subsidence will be avoided by this remedial process.

UNSTABLE EXCAVATION SIDES
Vertically excavated walls may be difficult to maintain in areas where the soil moisture is high or where soft, cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability. Trapezoidal rather than rectangular cross sections may result.

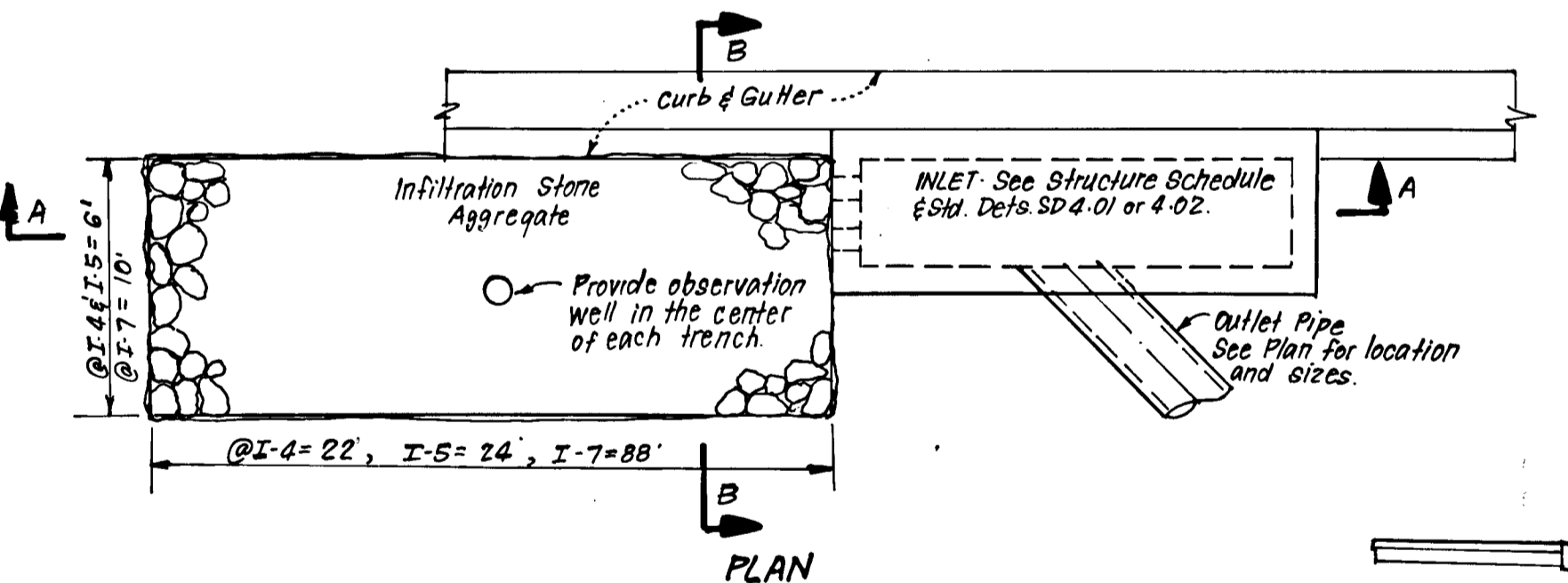
TRAFFIC CONTROL
Heavy equipment and traffic shall be restricted from travelling over the infiltration areas to minimize compaction of soil.

OBSERVATION WELL
An observation well shall be provided. The depth of the well at the time of installation will be clearly marked on the well cap.

Reviewed for: *[Signature]* S.C.D.
Name: *[Signature]*
Date: 3-29-88
Signature: *[Signature]* Date: 3/28/88
U.S. Soil Conservation Service

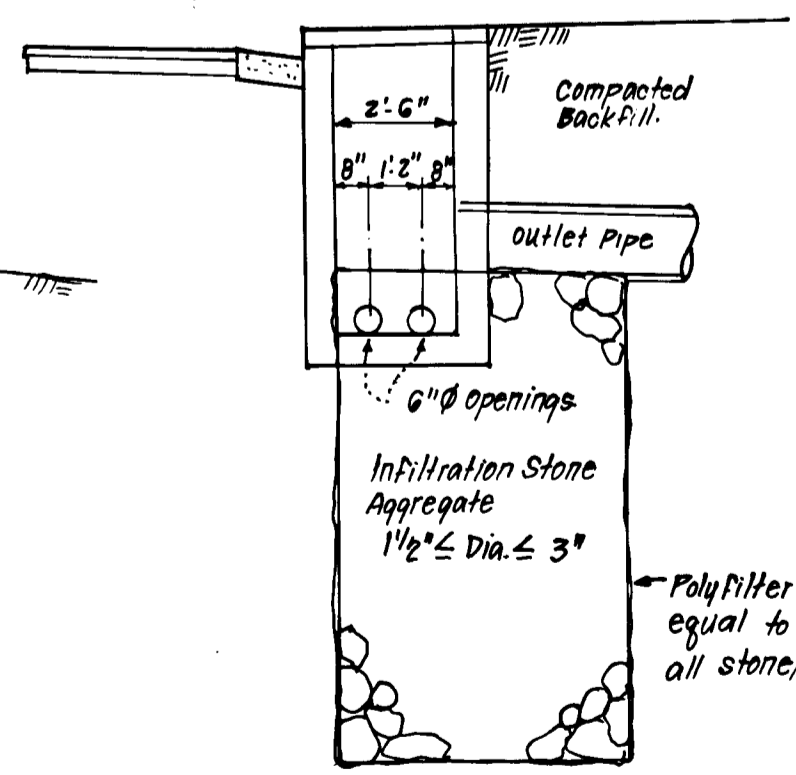
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] Approved Date: 3/28/88

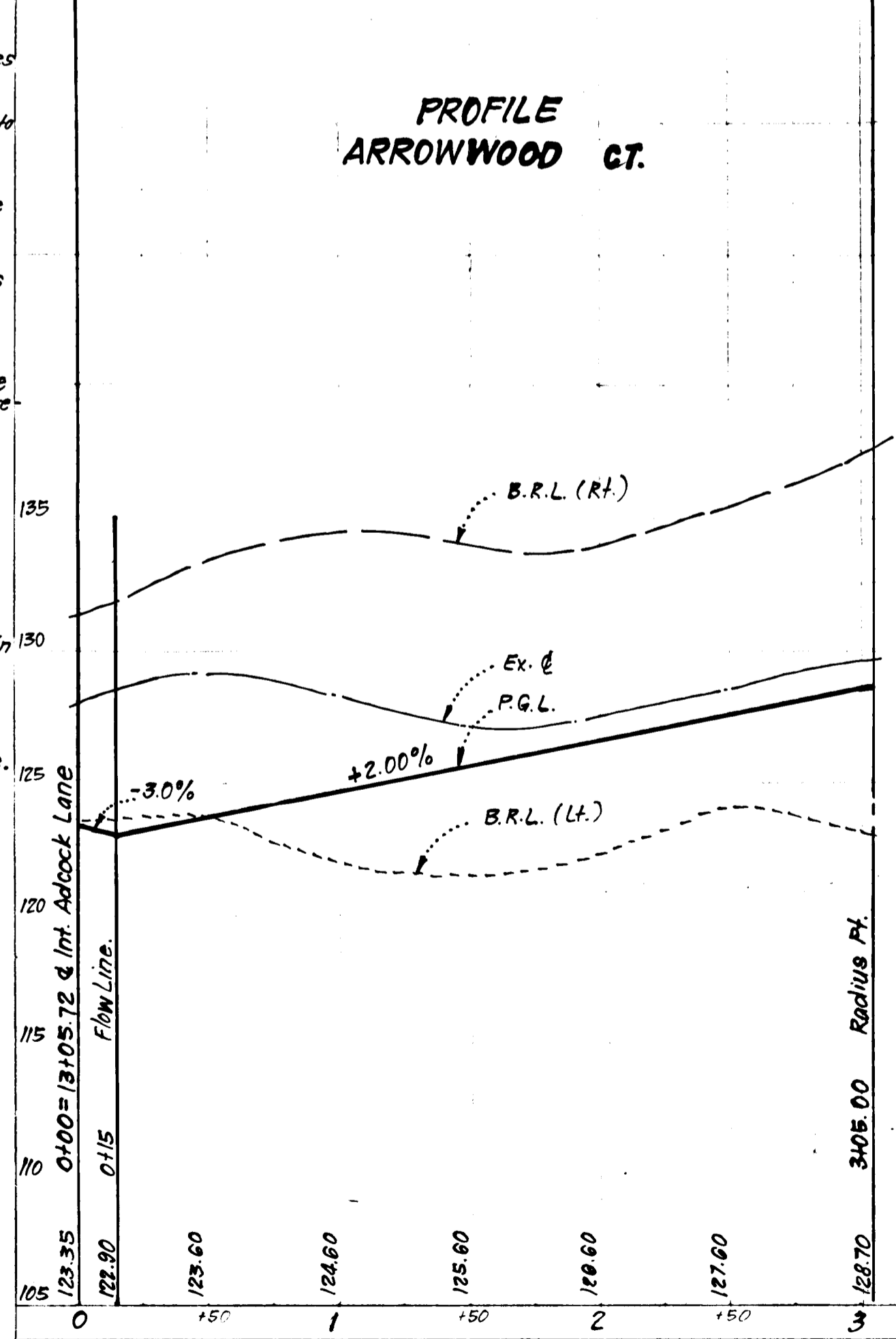


SECTION A-A

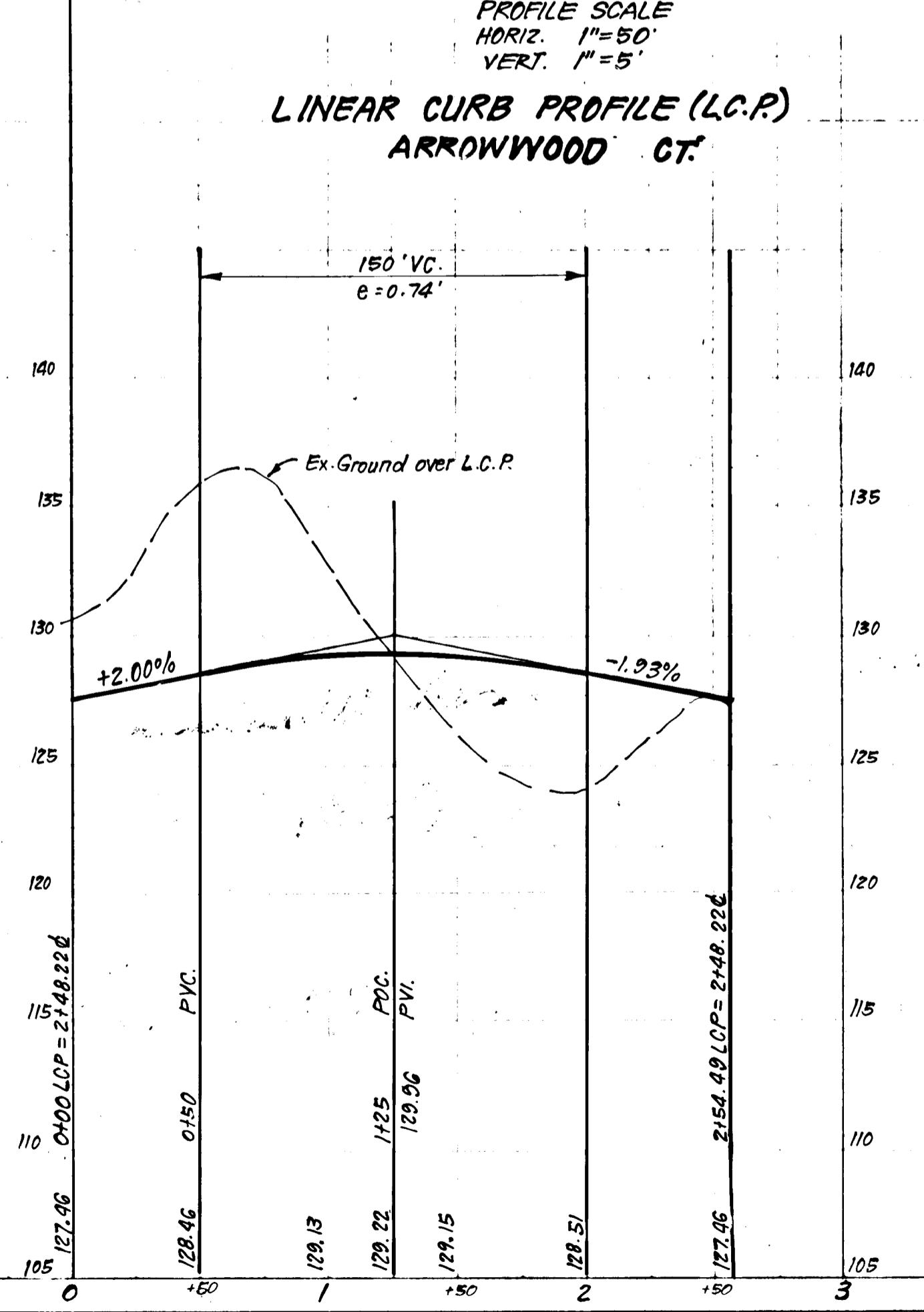
TYPICAL INFILTRATION DITCH ADJACENT TO INLET
NO SCALE



SECTION B-B



PROFILE
ARROWWOOD CT.



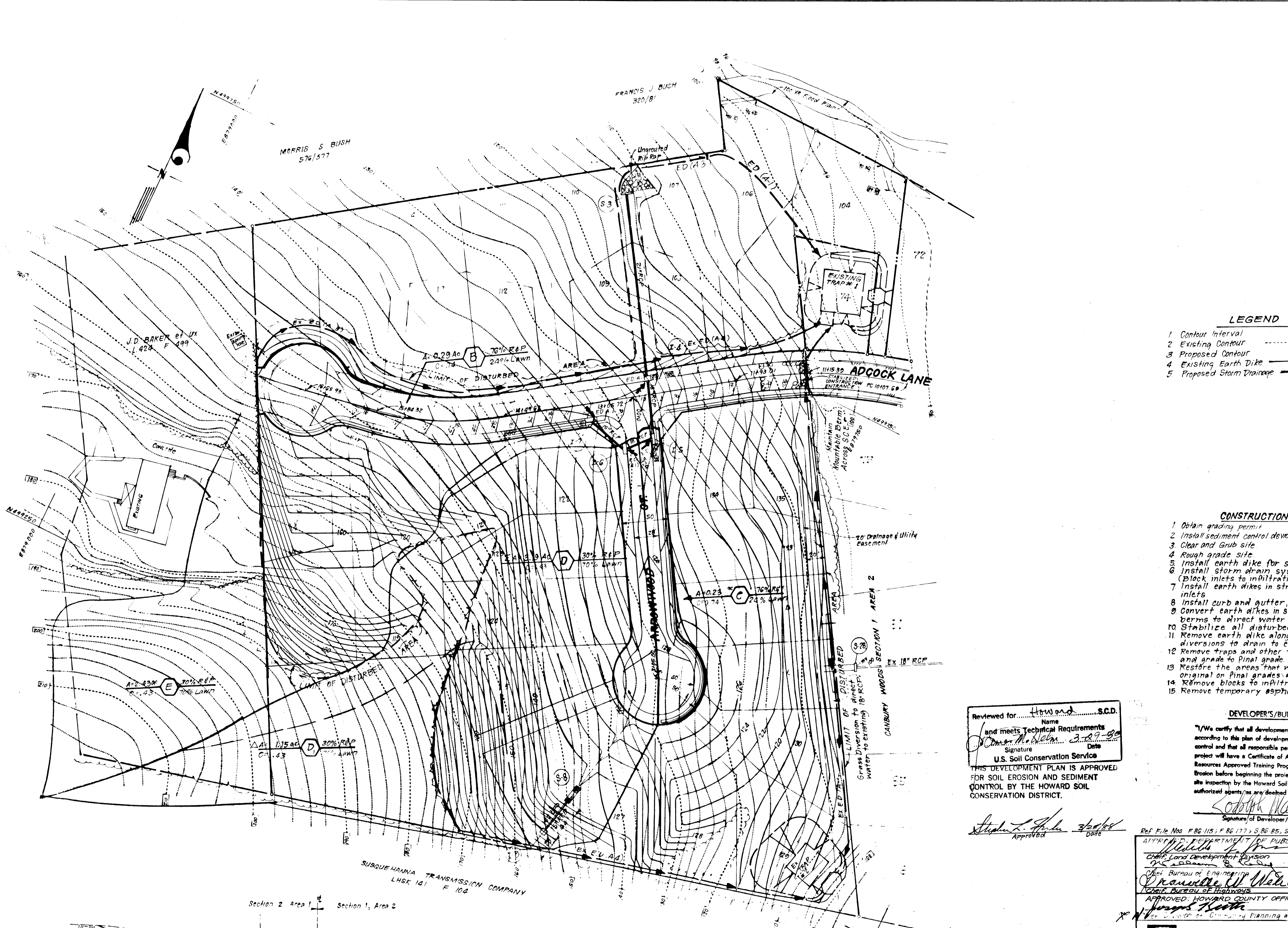
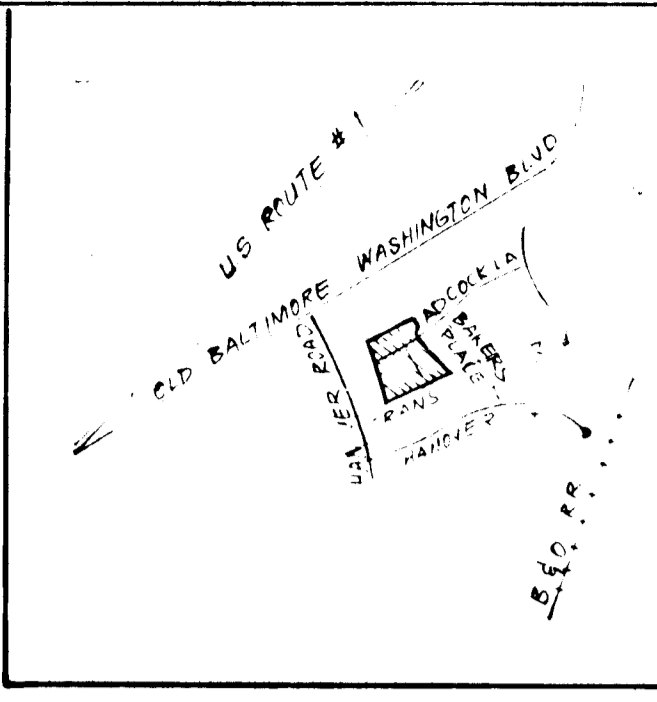
LINEAR CURB PROFILE (L.C.P.)
ARROWWOOD CT.

DEVELOPER'S/CITY'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sedimentation Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

[Signature] Date: 10-2-87

2221



- LEGEND**
- 1 Contour Interval 2 FT
 - 2 Existing Contour
 - 3 Proposed Contour
 - 4 Existing Earth Dike
 - 5 Proposed Storm Drainage

- CONSTRUCTION SEQUENCE**
- 1 Obtain grading permit
 - 2 Install sediment control devices outside area to be graded.
 - 3 Clear and Grub site
 - 4 Rough grade site
 - 5 Install earth dike for storm drain outlet
 - 6 Install storm drain systems and infiltration trenches (Block inlets to infiltration)
 - 7 Install earth dikes in street rights-of-way to direct water to inlets
 - 8 Install curb and gutter, sidewalks and paving.
 - 9 Convert earth dikes in street rights-of-way to temporary asphalt berms to direct water to inlets
 - 10 Stabilize all disturbed areas.
 - 11 Remove earth dike along east property line and construct diversions to drain to existing 18" RCP.
 - 12 Remove traps and other temporary sediment control devices and grade to final grade.
 - 13 Restore the areas that were under sediment control devices to original or final grades and stabilize with vegetative measures.
 - 14 Remove blocks to infiltration trenches in inlets.
 - 15 Remove temporary asphalt berms in streets.

Reviewed for Howard S.C.D.
 Name
 and meets Technical Requirements
Donna Nelson 3-29-88
 Signature Date
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED
 FOR SOIL EROSION AND SEDIMENT
 CONTROL BY THE HOWARD SOIL
 CONSERVATION DISTRICT.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary."

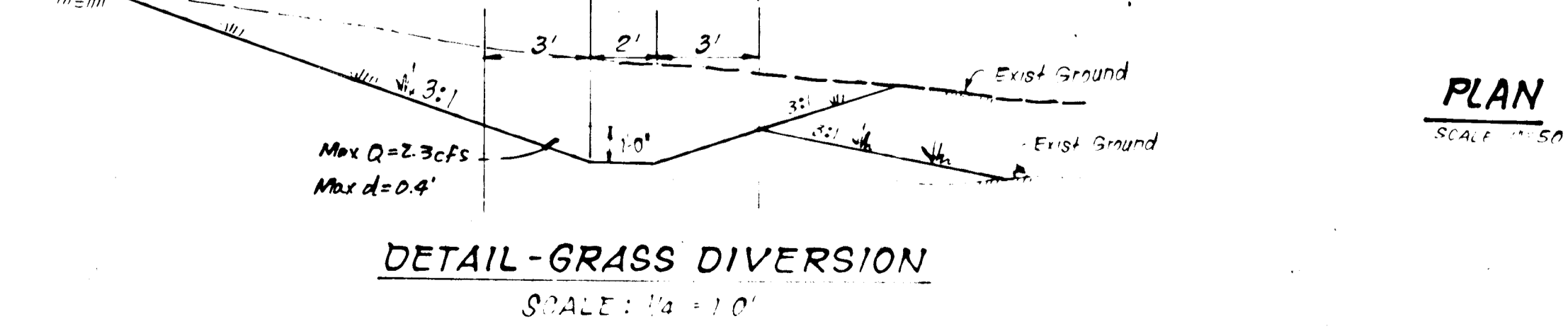
Stephen J. Clark 3/16/88
 Signature of Developer/Builder Date

Ref. File Nos. F 86-115; F 86-177; S 86-85; S 87-33; VP 88-10

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 4-19-88
 Chief, Land Development Division
 Date

Chief, Bureau of Engineering
Dr. ... 4/1/88
 Chief, Bureau of Inspections
 Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
James ... 4/22/88
 Director of Community Planning and Land Development
 Date



ENGINEER'S CERTIFICATE

I hereby 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.

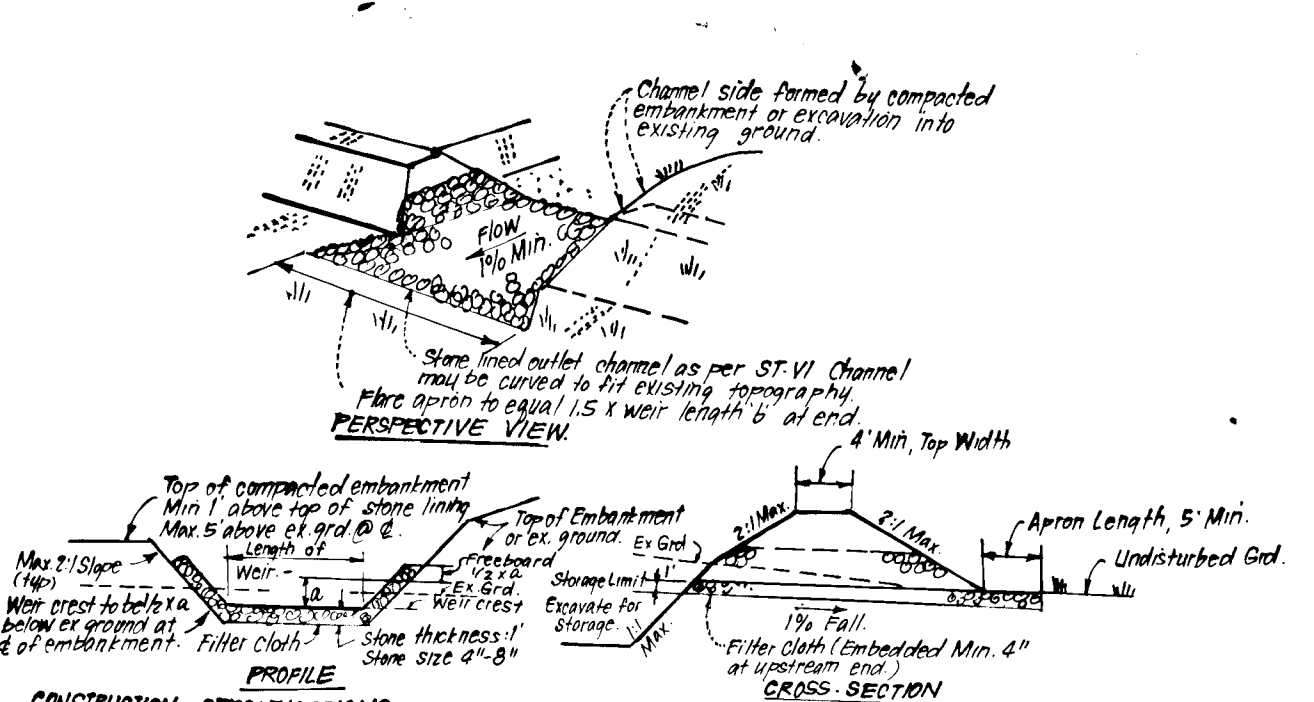
Donna Nelson 3-1-88
 Approved Date
 G. Nelson Clark

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

DESIGNED	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL AND DRAINAGE AREA MAP CANBURY WOODS SECTION 2 AREA 1 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: ELK RIDGE LIMITED PARTNERSHIP 2030 Red Branch Rd. Suite 210 Columbia Md. 21045	SCALE
DRAWN		1" = 50'
CHECKED		DRAWING
DATE		3 OF 2
		JOB NO.
	85 085	FILE NO.
		85 085 D

F-86-87

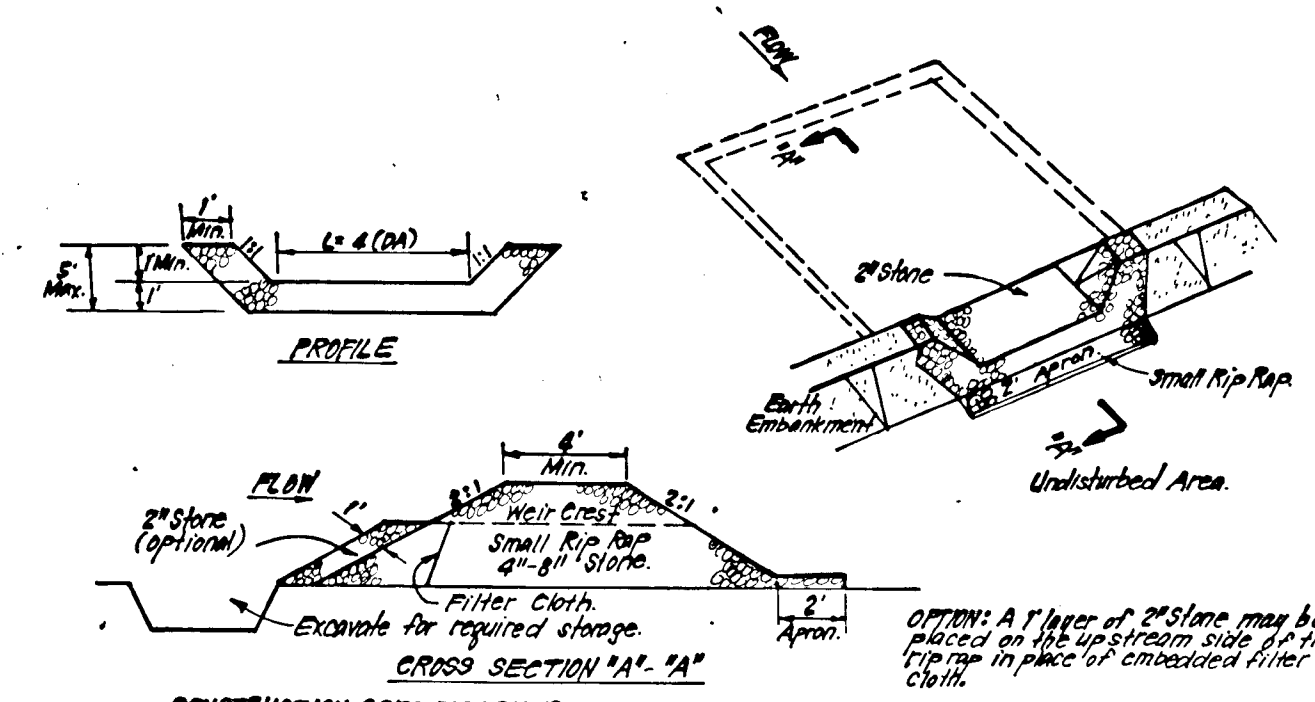
222



CONSTRUCTION SPECIFICATIONS:

- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The riprap shall be placed on a prepared subgrade.
- 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 hand or machine while it is being constructed. Max. height of embankment shall be 5' measured at 1/2" slope.
- All fill slopes shall be 2:1 or 1 1/2:1 cut slopes 1:1 or flatter.
- Elevation of the top of any side directing water the flow most equal or exceed height of embankment.
- Storage area provided shall be figured by computing the volume available behind the outlet channel up to the top of embankment.
- Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be anchored at least 6" into existing ground or concrete at outlet channel.
- Stones used in the outlet channel shall be 4" to 6" riprap. To provide a filtering effect, a layer of filter cloth shall be placed on the upstream face of the outlet.
- Stones shall be compacted and placed in layers. The design depth of the trap. Removal of stones when the sediment has accumulated that it will not stop.
- The structure shall be inspected after each rain and repaired as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
- Drainage area for this practice is limited to 15 acres, 31 acres.

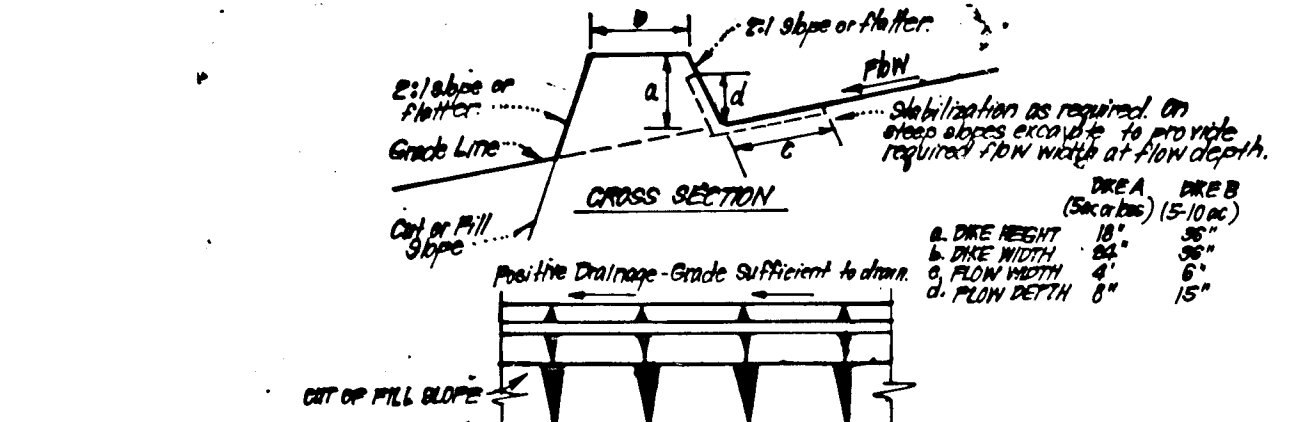
RIPRAP OUTLET SEDIMENT TRAP - ST. VI
NO SCALE



CONSTRUCTION SPECIFICATIONS:

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The riprap shall be placed on a prepared subgrade.
- 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 hand or machine while it is being constructed.
- All fill slopes shall be 2:1 or 1 1/2:1 cut slopes 1:1 or flatter.
- The stone used in the outlet shall be small riprap 4" to 6" with 1" thickness of 2" appropriate placed on the up-grade side on the small riprap or embedded 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 repaired as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) ST. V
NO SCALE



CONSTRUCTION SPECIFICATIONS:

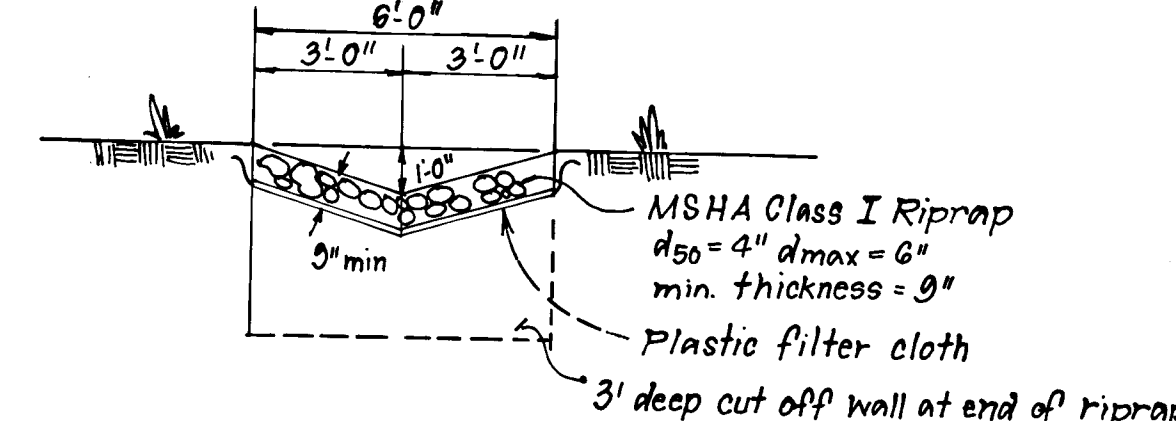
- All dikes shall be constructed by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- The width may be wider and side slopes may be flatter if desired to facilitate dressing by construction traffic.
- Final location should be adjusted as needed to utilize a stabilized earth outlet.
- Earth dikes shall have an outlet that functions with a minimum of erosion. Riprap 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 chart below.

TYPE OF TREATMENT	CHANNEL	DIKE A	DIKE B
1	85-90%	Seed or Straw Mulch	Seed or Straw Mulch
2	3:1 - 5:0%	Seed or Straw Mulch	Seed or Straw Mulch
3	5:1 - 8:0%	Seed or Straw Mulch	Seed or Straw Mulch
4	6:1 - 20:0%	Seed or Straw Mulch	Seed or Straw Mulch

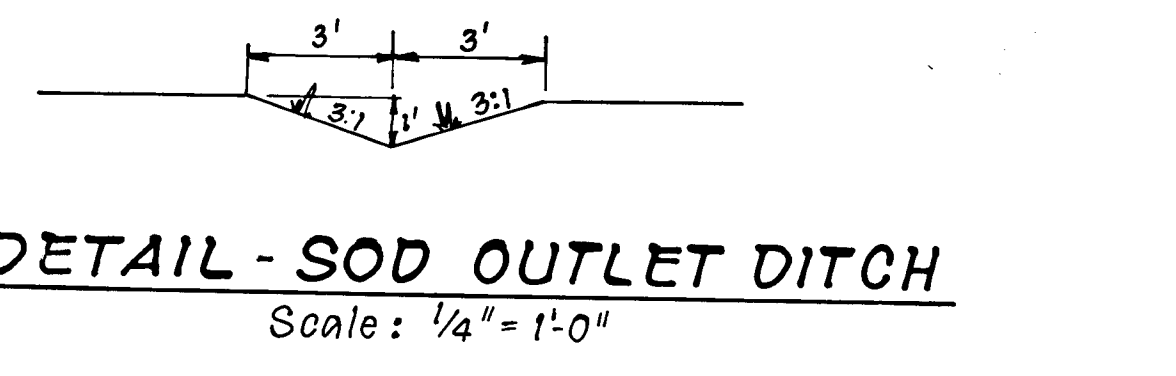
A. Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B. Riprap to be 4" to 6" in a layer at least 3" thick, pressed into soil.
C. Riprap to be 4" to 6" in a layer at least 3" thick, pressed into soil.
D. Riprap to be 4" to 6" in a layer at least 3" thick, pressed into soil.

7. Periodic inspection and required maintenance must be provided after each rain.

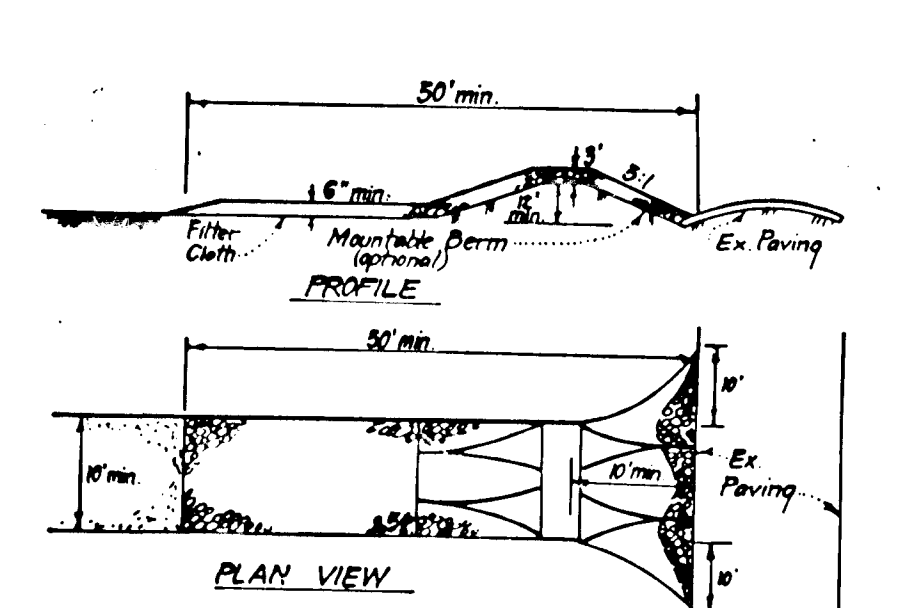
EARTH DIKE DETAIL (E.D.)
NO SCALE



DETAIL - UNGROUTED RIP-RAP
Scale: 1/4" = 1'-0"



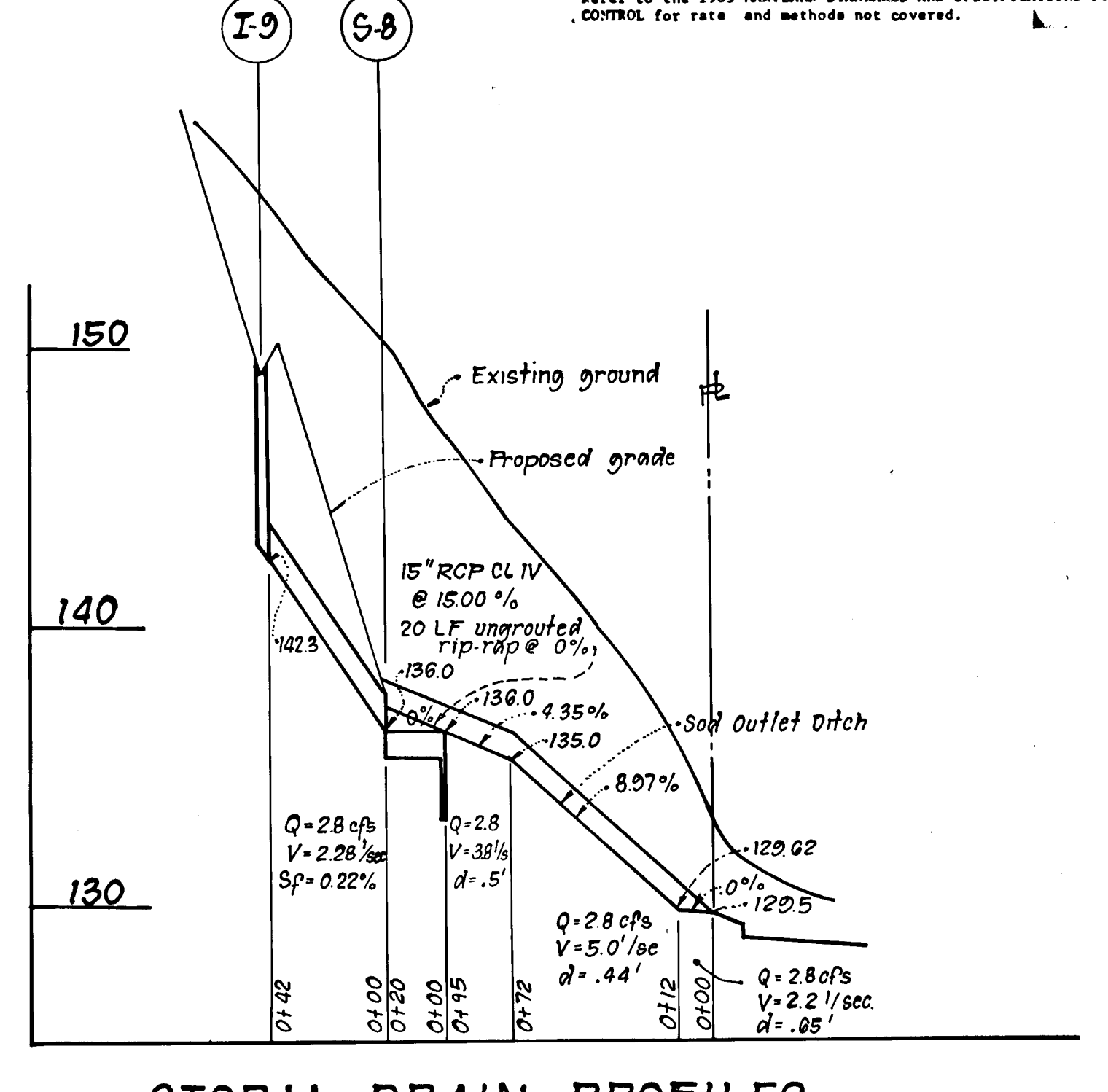
DETAIL - SOD OUTLET DITCH
Scale: 1/4" = 1'-0"



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 maximum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter 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 mounted berm with 5:1 slope will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment into public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup if any requirements listed to trap sediment. All sediment applied, stored, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels 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.
- Periodic inspection and required maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE



STORM DRAIN PROFILES
SCALE: HORIZONTAL = 1" = 50'
VERTICAL = 1" = 5'

Reviewed for... S.C.D. and meets Technical Requirements
Signature: [Signature]
Date: 3-29-88
U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved: [Signature] 3/29/88

ENGINEER'S CERTIFICATE

I hereby 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.

[Signature]
Date: 10-2-87

File Ref. No.: F-88-115; F-88-177; S-88-85; S-87-33; VP-88-10

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division
Date: 4-21-88

Chief, Bureau of Engineering
Date: 4/18/88

Chief, Bureau of Highways
Date: 4/22/88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Chief, Division of Community Planning and Land Development
Date: 4/22/88

CLARK & FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7200 - BALTO. • (301) 621-8100 - WASH.

DESIGNED	E.P.	SCALE	1" = 50'
DRAWN	K.W.	DRAWING	404
CHECKED	E.P.	JOB NO.	85-085
DATE	9/18/87	FILE NO.	85-085-D

CANBURY WOODS
SECTION 2 AREA 1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: ELK RIDGE LIMITED PARTNERSHIP
9030 Red Branch Rd. Suite 210
Columbia Md. 21045

F-88-87

SEEDING CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permit 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 redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all permanent sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins 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. 31) and (Sec. 34), temporary seeding (Sec. 30) and mulching (Sec. 32). 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.

Site Analysis:

Total Area of Site	10.4 Acres
Area Disturbed	4.0 Acres
Area to be seeded or paved	0.70 Acres
Area to be vegetatively stabilized	8.3 Acres
Total Cut	4,971 Cu. yds
Total Fill	8,770 Cu. yds
Offsite waste/borrow area location	on Sect. 2 Area 2

- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment control must be provided, if deemed necessary by the Howard County Erosion control Inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- 11) If houses are to be constructed on an "As-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented. N/A
- 12) All pipes to be blocked at the end of each day (see detail below). N/A
- 13) The total amount of straw bale dikes/silt fence equals None. L.P.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

[Signature]
Signature of Developer/Builder
Date: 10-2-87