

**CENTERLINE CURVE DATA**

STREET NAME & STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC 2189.66 to PT 2170.27	175.00'	91° 52' 26"	280.61'	180.82'	251.50' N82° 56' 13"E
PT 2170.27 to PT 2176.68	212.00'	40° 00' 00"	148.00'	77.16'	145.02' N27° 00' 00"E
PC 1485.74 to PT 2194.65 PRIVATE DRIVE	196.00'	32° 00' 00"	108.91'	55.92'	107.50' N67° 00' 00"W

**Developers Certification:**

"We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Approved: *Robert W. Zichner* 11/1/88  
Howard S.C.D. Date

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Howard S.C.D. Date

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Howard S.C.D. Date

**APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**

*Arnold Jensen* 11/1/88  
Chief, Land Development Division Date

*David B. ...* 11/21/88  
Chief, Bureau of Highways Date

*...* 11/21/88  
Chief, Bureau of Engineering Date

**APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING**

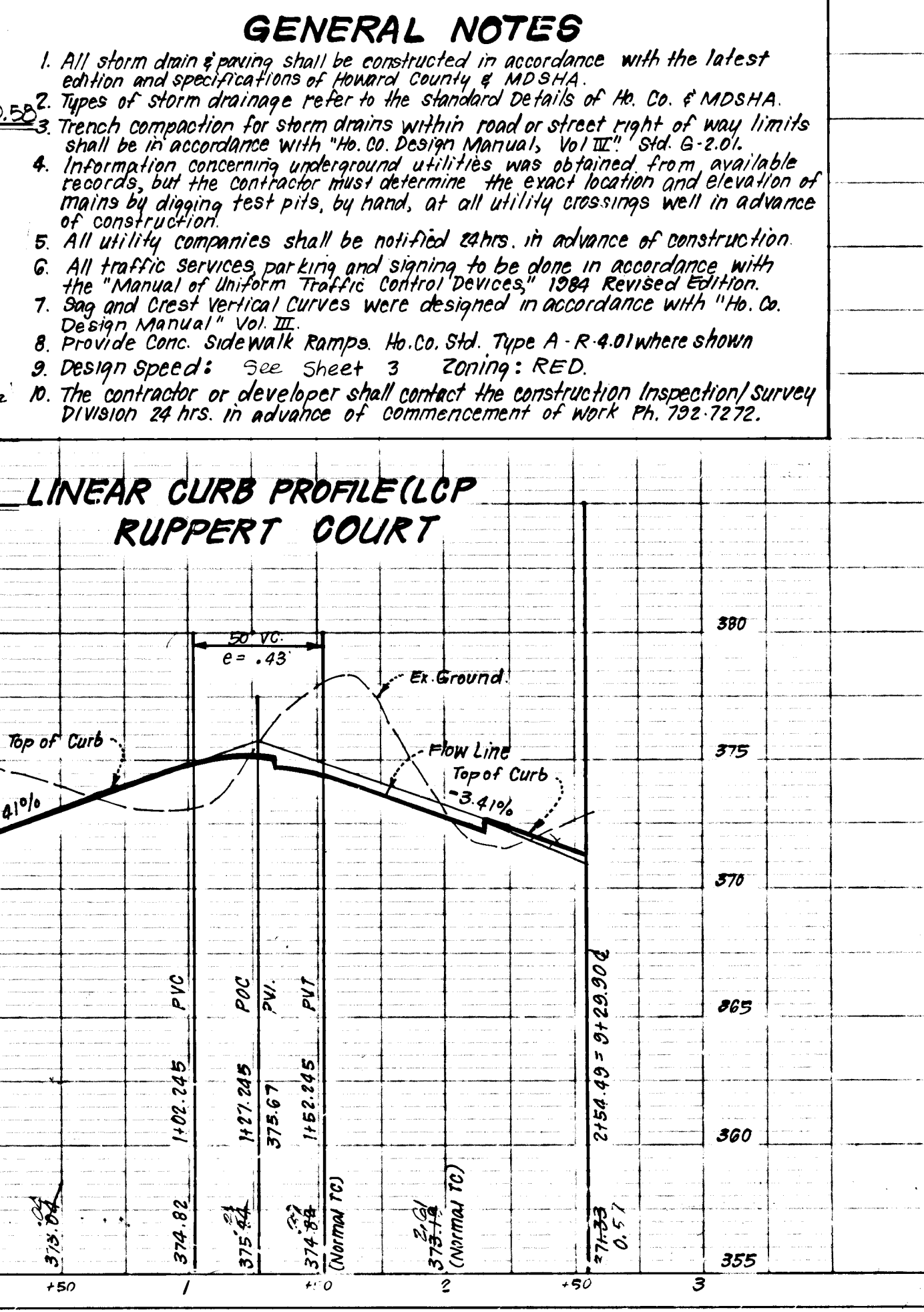
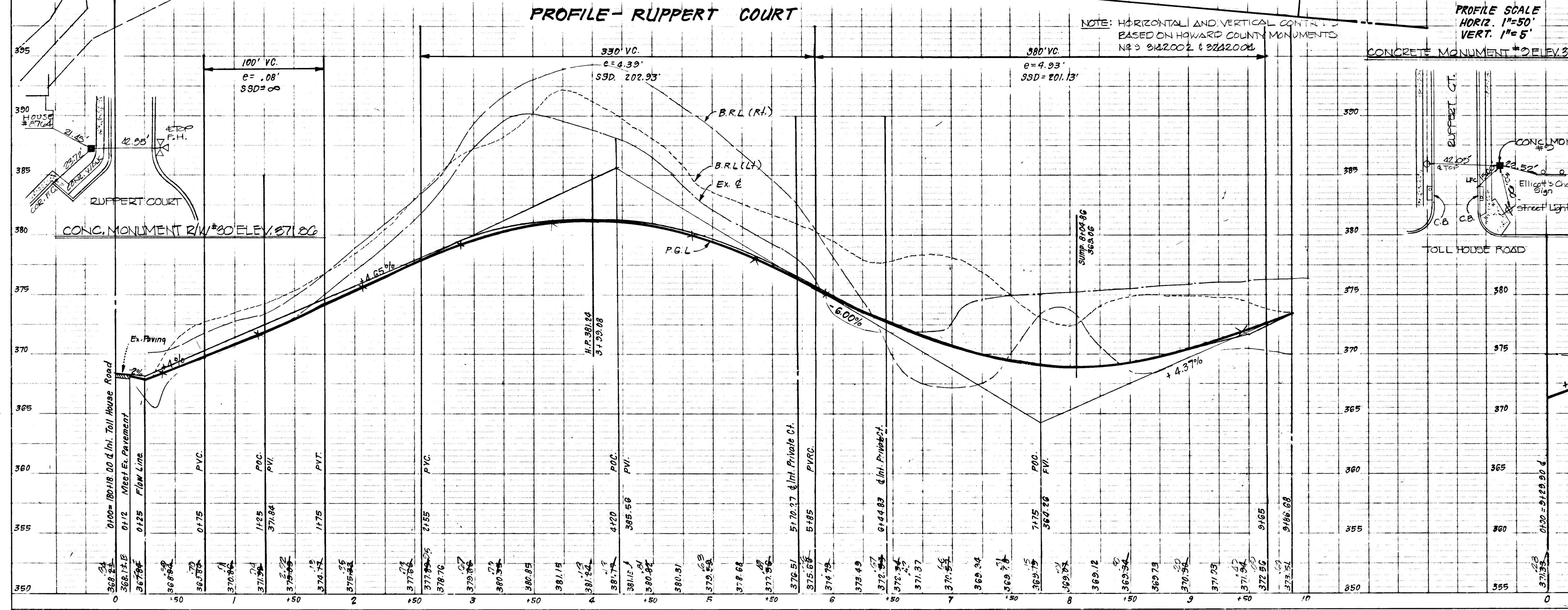
*...* 11-30-88  
Chief, Division of Community Planning & Land Development Date

**CLARK FINEFROCK & SACKETT INC.**  
ENGINEERS PLANNERS SURVEYORS  
7135 MINSTREL WAY COLUMBIA, MD. 21045 BALT 301 381-7500 WASH 301 621 8100

DESIGNED	ROAD CONSTRUCTION PLANS RUPPERT COURT	SCALE	As Shown
DRAWN	KIW	DRAWING	10F6
CHECKED	GLB	JOB NO	86-062
DATE	3-31-88	FILE NO	86-062-D

**GENERAL NOTES**

- All storm drain & paving shall be constructed in accordance with the latest edition and specifications of Howard County & MD SHA.
- Types of storm drainage refer to the standard details of Hb. Co. & MD SHA.
- Trench compaction for storm drains within road or street right of way limits shall be in accordance with "Hb. Co. Design Manual, Vol. III" Std. G-2.01.
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of mains by digging test pits, by hand, at all utility crossings well in advance of construction.
- All utility companies shall be notified 24hrs. in advance of construction.
- All traffic services parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices" 1984 Revised Edition.
- Sign and Crest Vertical Curves were designed in accordance with "Hb. Co. Design Manual" Vol. III.
- Provide Conc. Side Walk Ramps Hb. Co. Std. Type A-R-4.01 where shown.
- Design Speed: See Sheet 3 Zoning: RED.
- The contractor or developer shall contact the construction inspection/survey Division 24 hrs. in advance of commencement of work th. 792-7272.

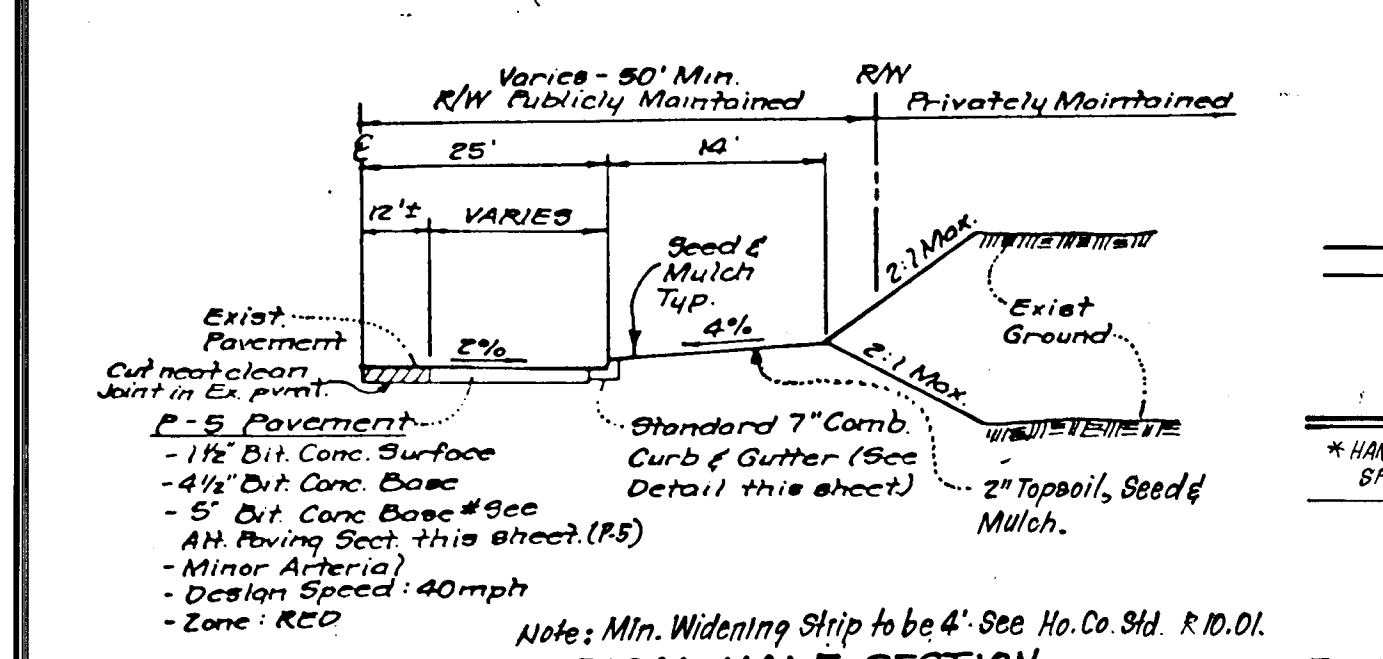
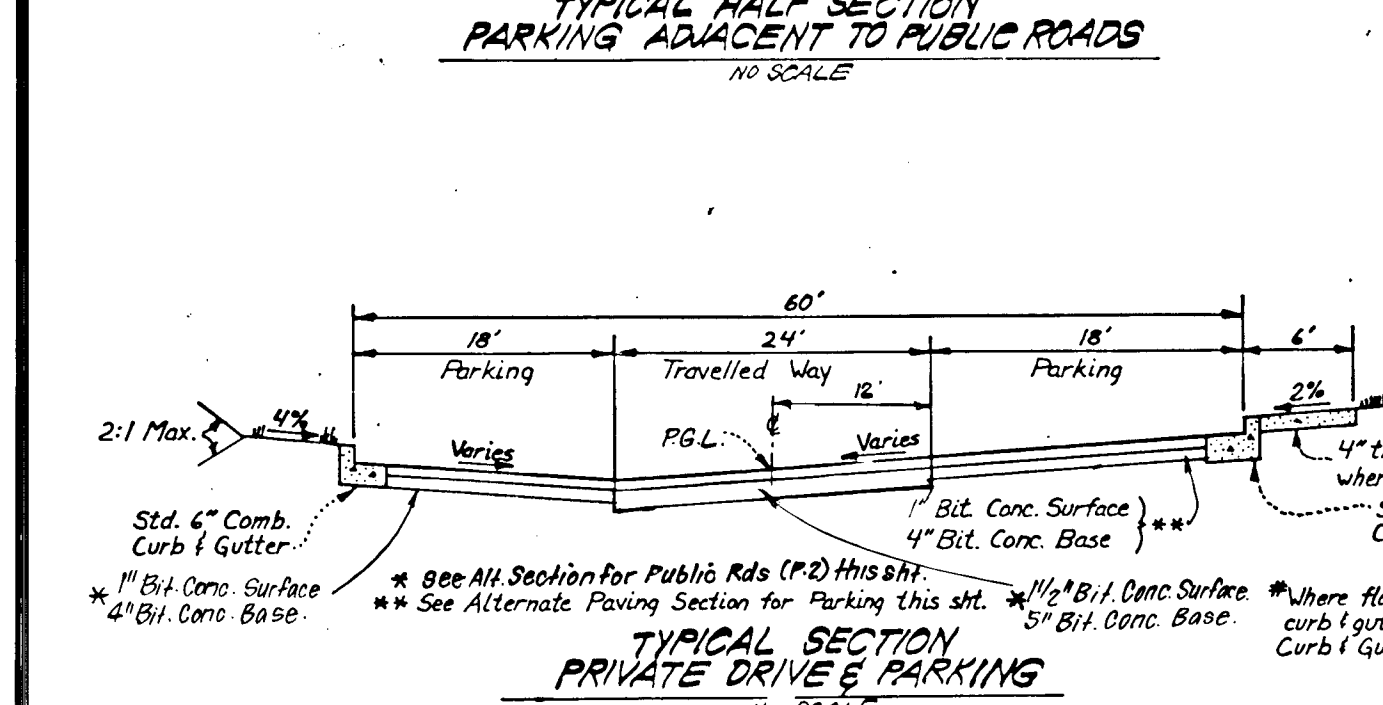
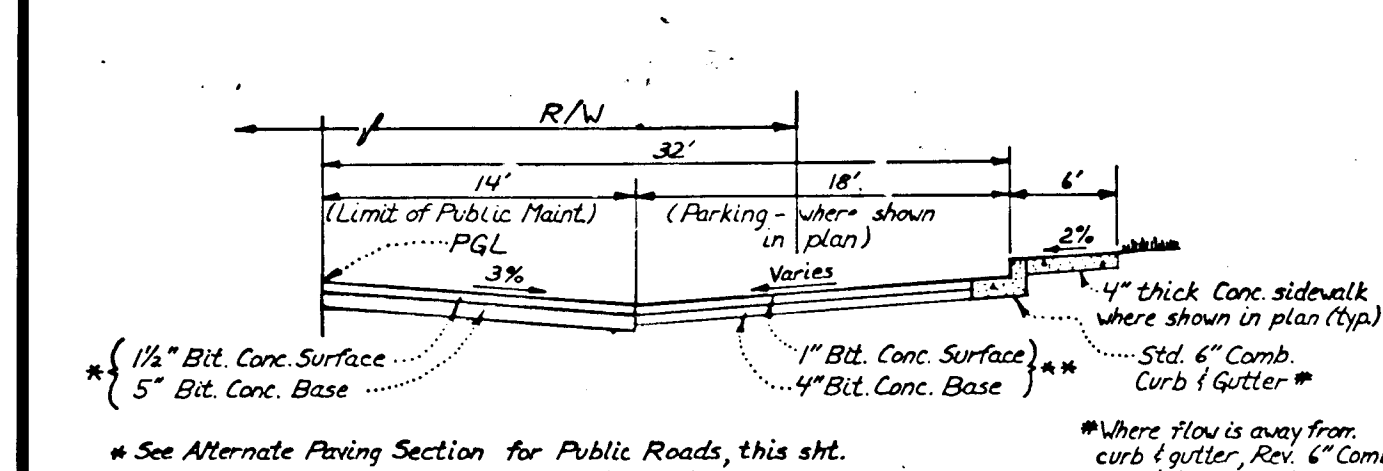
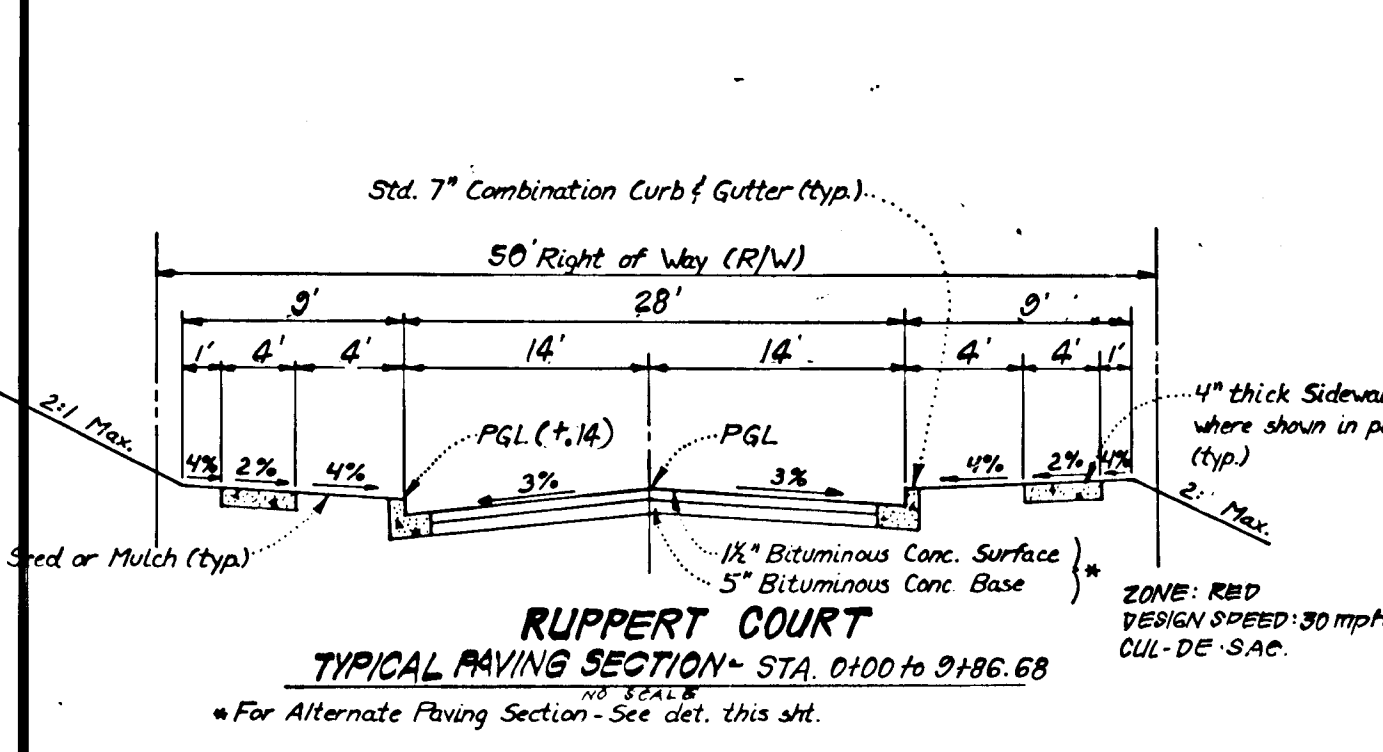
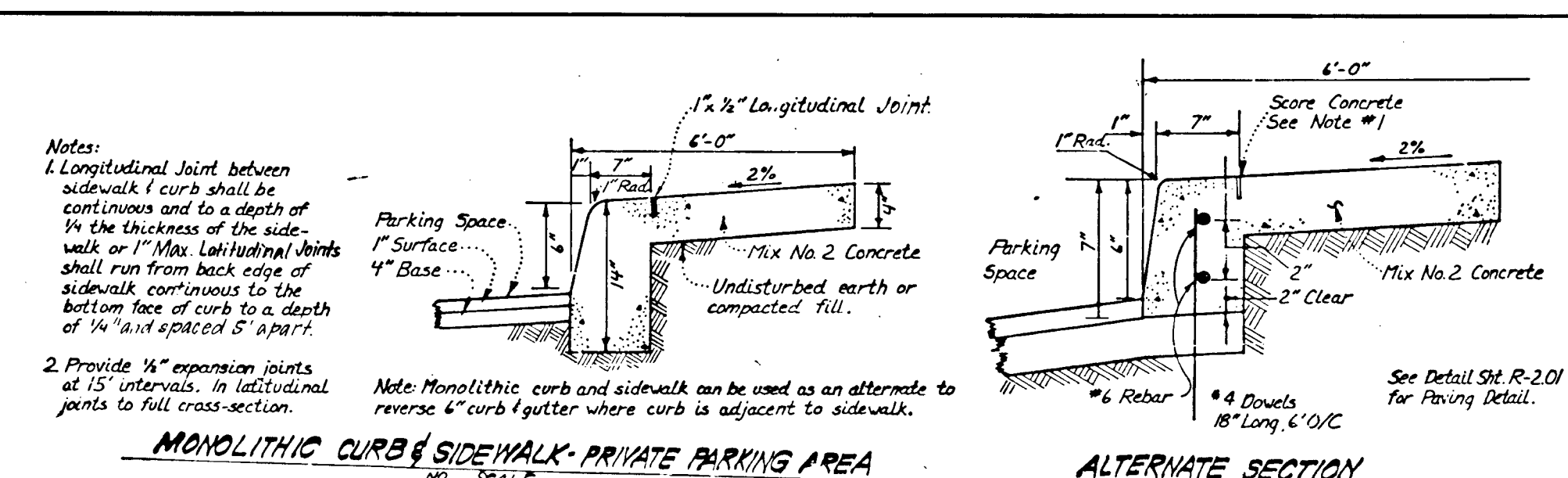
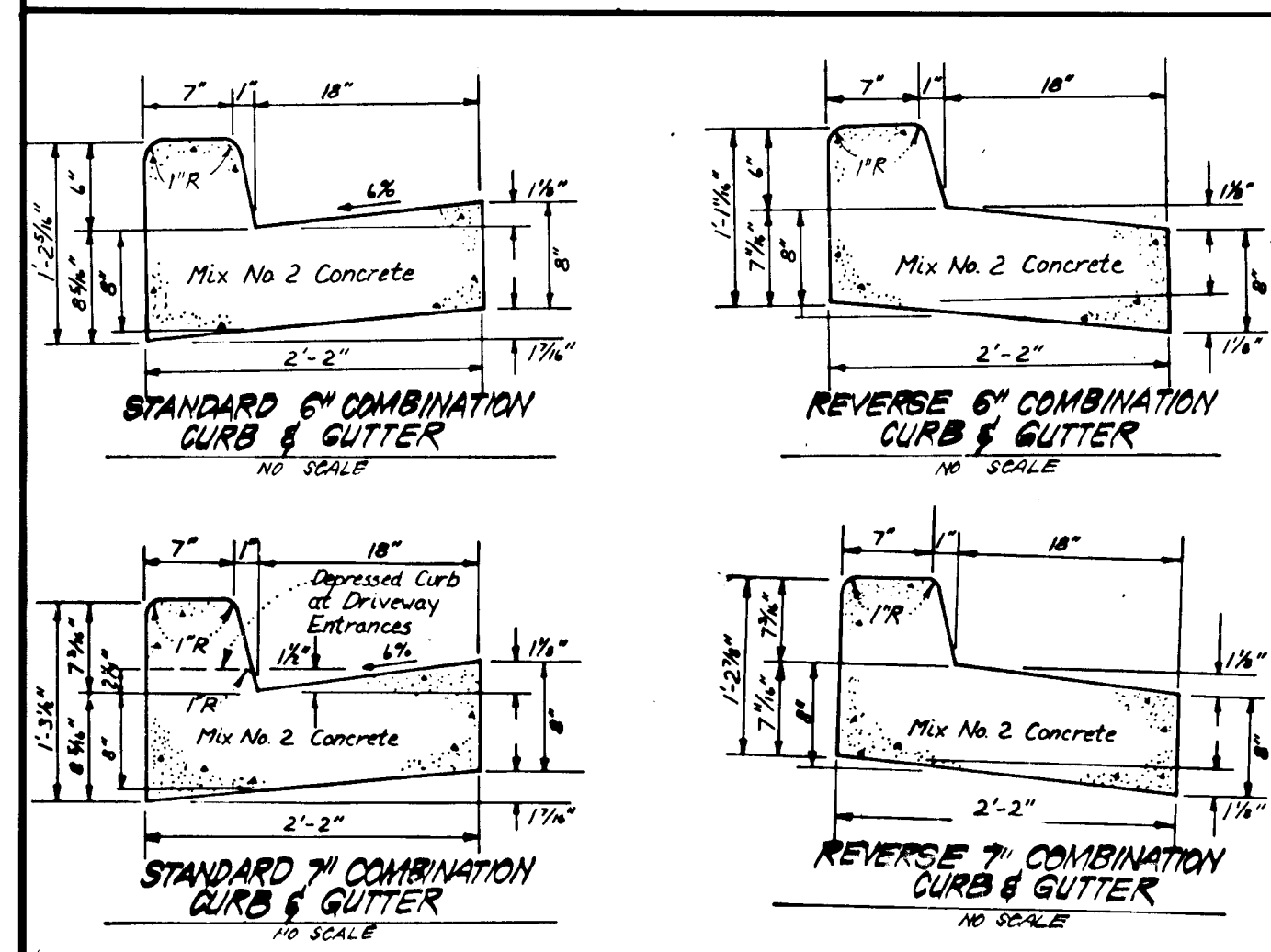


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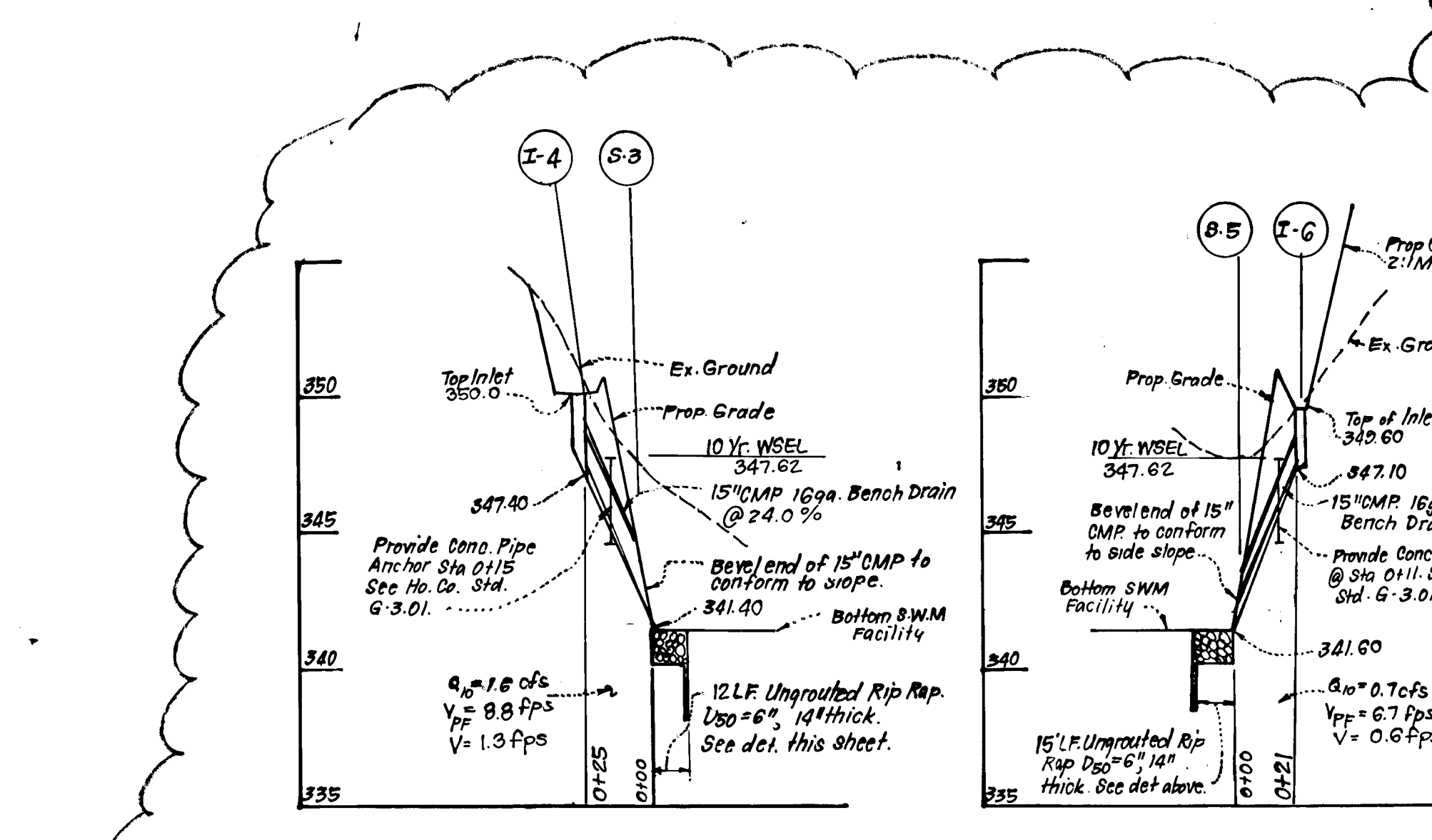


Bituminous Conc. Surface	1"	Bituminous Conc. Surface	1 1/2"	Bituminous Conc. Surface	1 1/2"
Bituminous Conc. Base	2"	Bituminous Conc. Base	2 1/4"	Bituminous Conc. Base	1 1/2"
Prime		Prime		Bituminous Conc. Base	5"
5" Crusher Run Base Course	5"	8" Crusher Run Base (Placed in 2 Courses)	4"	Prime	8"
4" Dense Graded Stabilized Aggregate Base Course	4"	6" Dense Graded Stabilized Aggregate Base Course	6"	8" Crusher Run Base (Placed in 2 Courses) or 6" Dense Graded Stabilized Aggregate Base Course	8"

**ALTERNATE PAVING SECTION FOR PARKING AREAS (SECTION P-1)**  
NO SCALE

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

**ALTERNATE PAVING SECTION TOLL HOUSE ROAD (SECTION P-3)**  
NO SCALE



NO.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	Metal End Section	333.00	332.08			Ho. Co. Std. SD 5.61 8 1/2"	See Plan
S-2	Special		342.00	350.3		See Detail Sht. 4	See Plan
S-7	Metal End Section	341.78	341.40			Ho. Co. Std. SD 5.61 18 1/2"	See Plan
M-8	Brick Manhole	361.21	360.74	362.00		G 5.01 48 1/2"	See Plan
I-9	A-5 Inlet	364.98	363.25	362.25	362.00	SD 4.02 W=3:0' Inlet 8104.86 Ruppert Ct. 14.83' RT	
I-10	A-5 Inlet	364.98	362.51	374.78	374.39	SD 4.01 W=3:0' Inlet 6106.85 Ruppert Ct. 14.83' RT	
I-11	Depressed S Comb. Inlet	364.98	362.27	369.20	369.12	SD 4.32 Inlet 8110.96 Ruppert Ct. 10.54' LT	
M-13	Precast Manhole	368.10	366.88	379.28	379.28	G 5.13	See Plan
I-14A	D Inlet	369.75	369.75	373.83	373.83	SD 4.11 21 1/2"	See Plan
M-16	Shallow Brick Manhole	369.75	369.75	368.72	368.72	G 5.05 48 1/2"	See Plan
I-17	A-10 Inlet w/Deflectors	365.28	365.08	369.84	369.74	SD 4.02 W=3:0' Inlet 0158.50 14.83' RT	
I-18	A-10 Inlet	365.28	365.58	369.84	369.40	SD 4.02 W=2:6" Inlet 0158.50 14.83' LT	
I-19	A-5 Inlet w/Deflectors	365.28	367.00	370.37	370.68	SD 4.01 W=3:0' Inlet 180163 Toll Hse. Rd. 25.83' LT	
M-14	Precast Manhole	368.00	368.00	370.30		G 5.13 24 1/2"	See Plan
I-4	K Inlet	347.40	360.00	360.00		SD 4.12	See Plan
I-6	K Inlet	347.10	348.00	348.00		SD 4.12	See Plan

**STRUCTURE NOTES:**

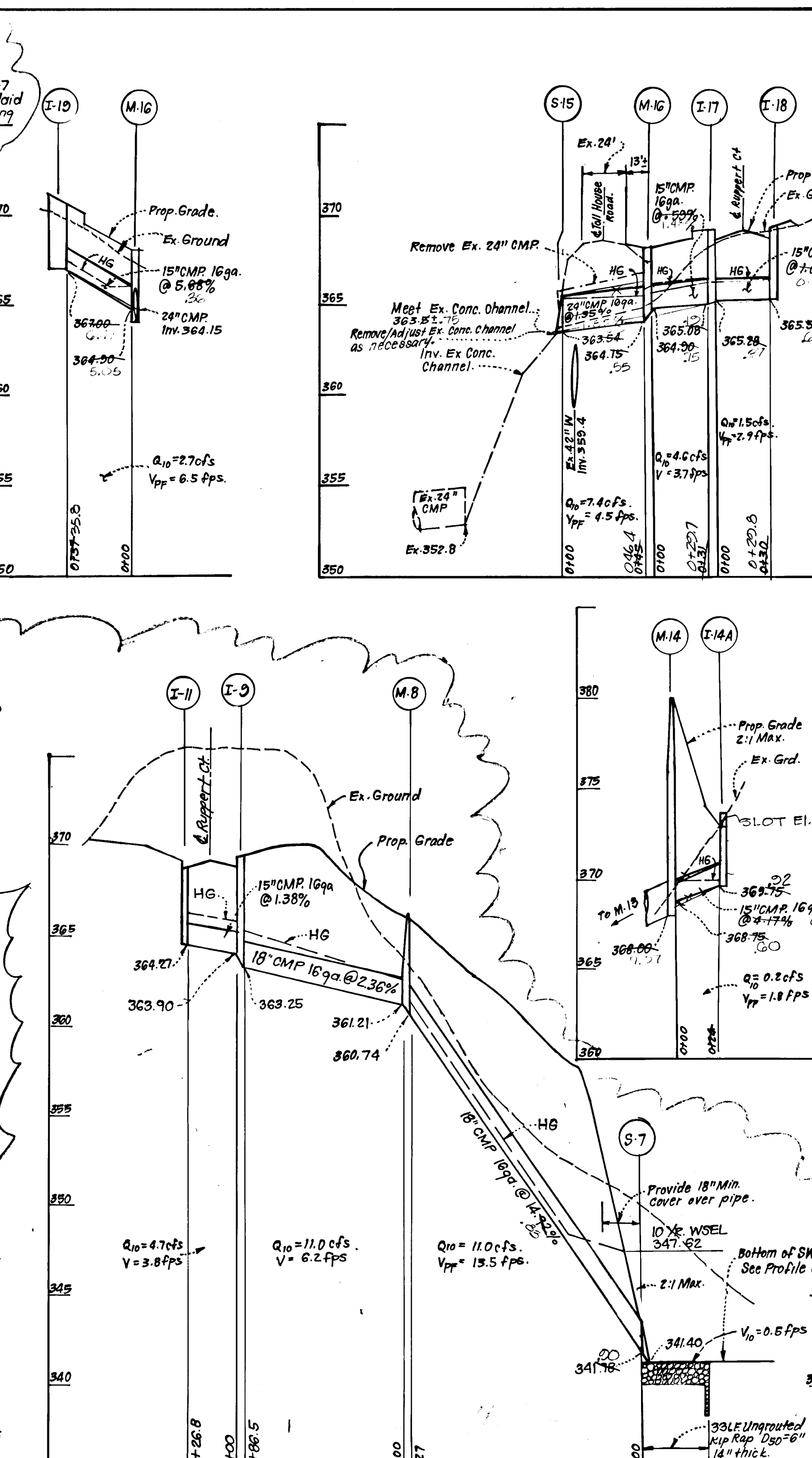
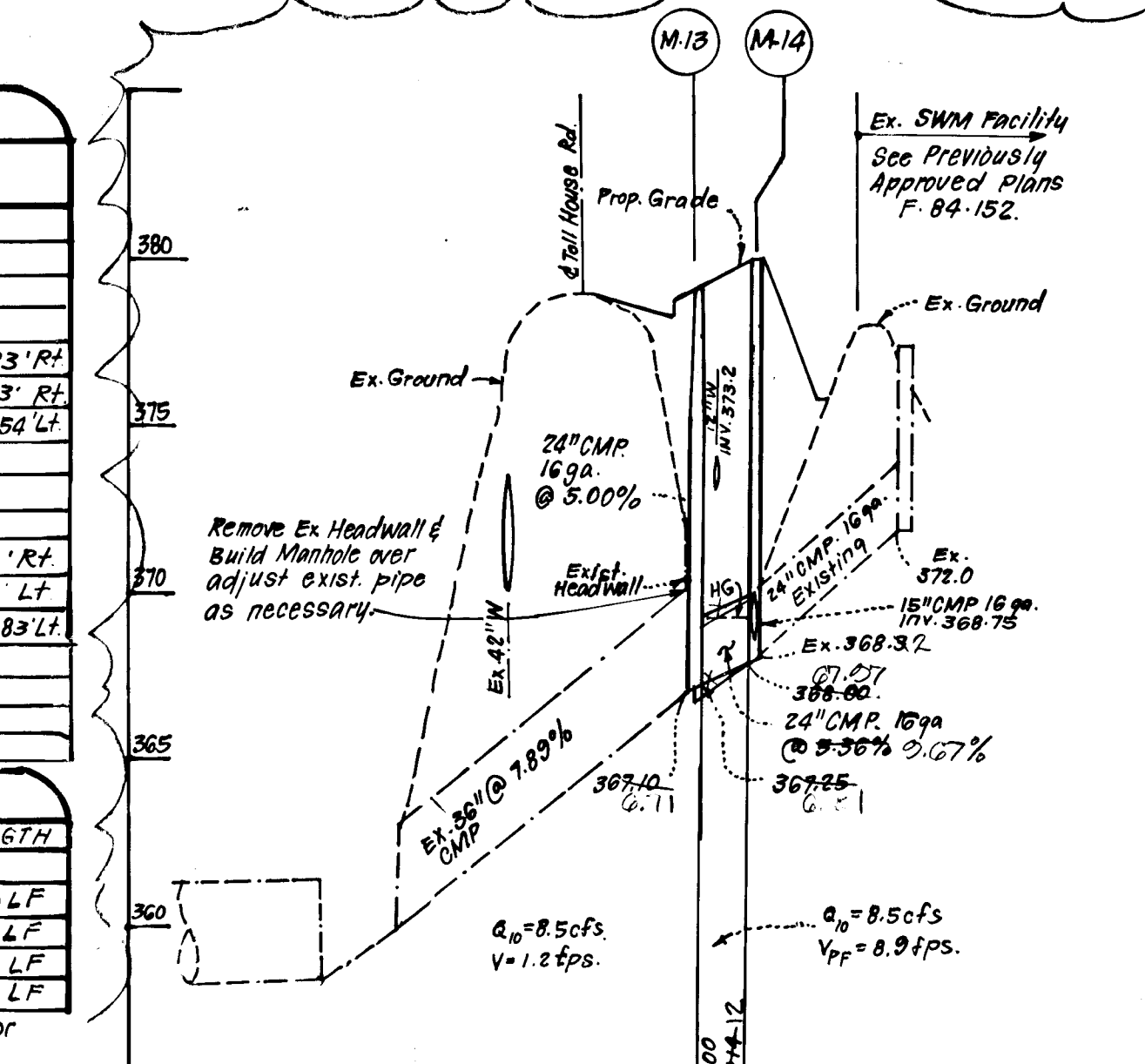
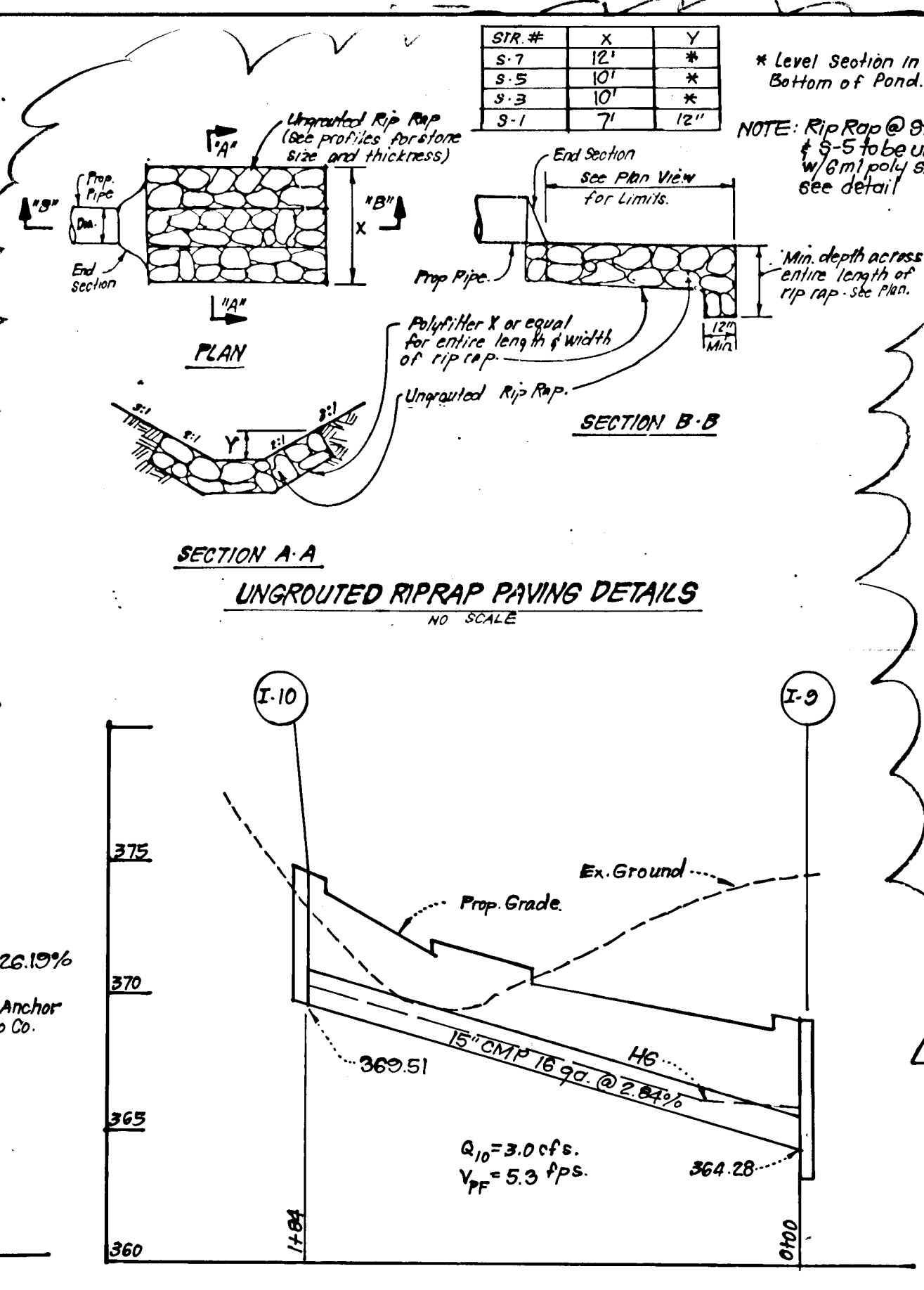
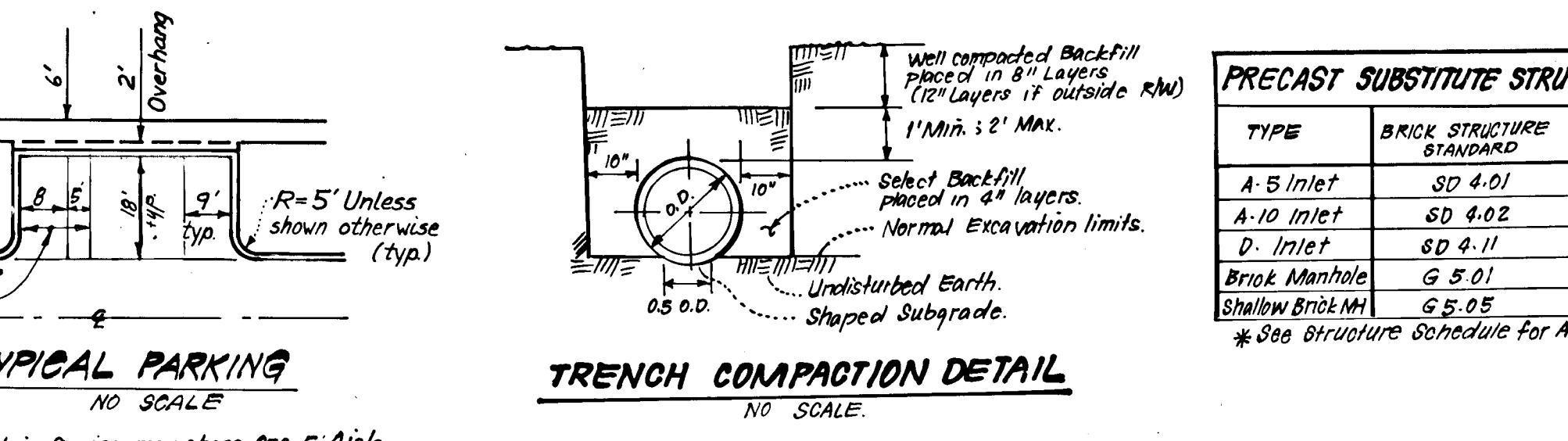
- All inverts to be fully developed.
- See Ho. Co. Std. SD 4.83 for inlet deflectors.
- S 3 & S 5 are beveled pipe ends.

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
15"	CMP 16ga	378.8 LF
18"	CMP 16ga	213.5 LF
24"	CMP 16ga	50 LF
18"	BCCMP 16ga	72 LF

**PIPE NOTES:**

- All CMP's to have 2 1/2" x 1/2" corrugations.
- All CMP's to be substituted for CMP's & BCCMP's.



**REVISION**

No.	REVISION	Date
1	Rev Storm Drainage I-11 thru S-3 and Rip Rap Detail per As-Built Plans	4-8-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Paul D. Jensen* Chief, Land Development Division 11/10/88  
*Howard W. Helms* Chief, Bureau of Highways 11/10/88  
*William E. Ray* Chief, Bureau of Engineering 11-21-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

*Mark J. Dr. Lawler* Chief, Division of Community Planning & Land Development 11-21-88

**CLARK FINECROCK & SACKETT INC.**  
ENGINEERS PLANNERS SURVEYORS

7135 MINSTREL WAY COLUMBIA, MD 21045 BALT. 301-381-7500 WASH. 301-621-8100

**ROAD CONSTRUCTION PLANS**  
**DRAINAGE PROFILES AND PAVING DETAILS**

**RUPPERT PROPERTY**

2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

FOR: COLUMBIA BUILDERS, INC.  
3 Lakefront North Suite 200  
Columbia, Md 21045

DESIGNED: **GLB** SCALE: **As Shown**

DRAWN: **K/W** DRAWING: **30FG**

CHECKED: **GLB** JOB NO: **86-062**

DATE: **3-25-88** FILE NO: **86-062-D**

Reviewed for... **HOWARD S.C.D.**

Name: *John W. Ziehm*

Signature: *John W. Ziehm* Date: **11-1-88**

U.S. Soil Conservation Service

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

*Abraham Ziehm* 11/1/88

**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 of Developer/Builder: *John W. Ziehm* Date: **4-1-88**

**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 of Engineer: *John W. Ziehm* Date: **4-1-88**







**LEGEND**

1. Contour Interval 2 Ft.
2. Existing Contour
3. Prop. Contour
4. Prop. Storm Drain
5. Temp. Storm Drain
6. Straw Bale Dike or Silt Fence
7. Earth Dike

Note: Temporarily Brick Shut 15" CMP opening from I-18 to I-17

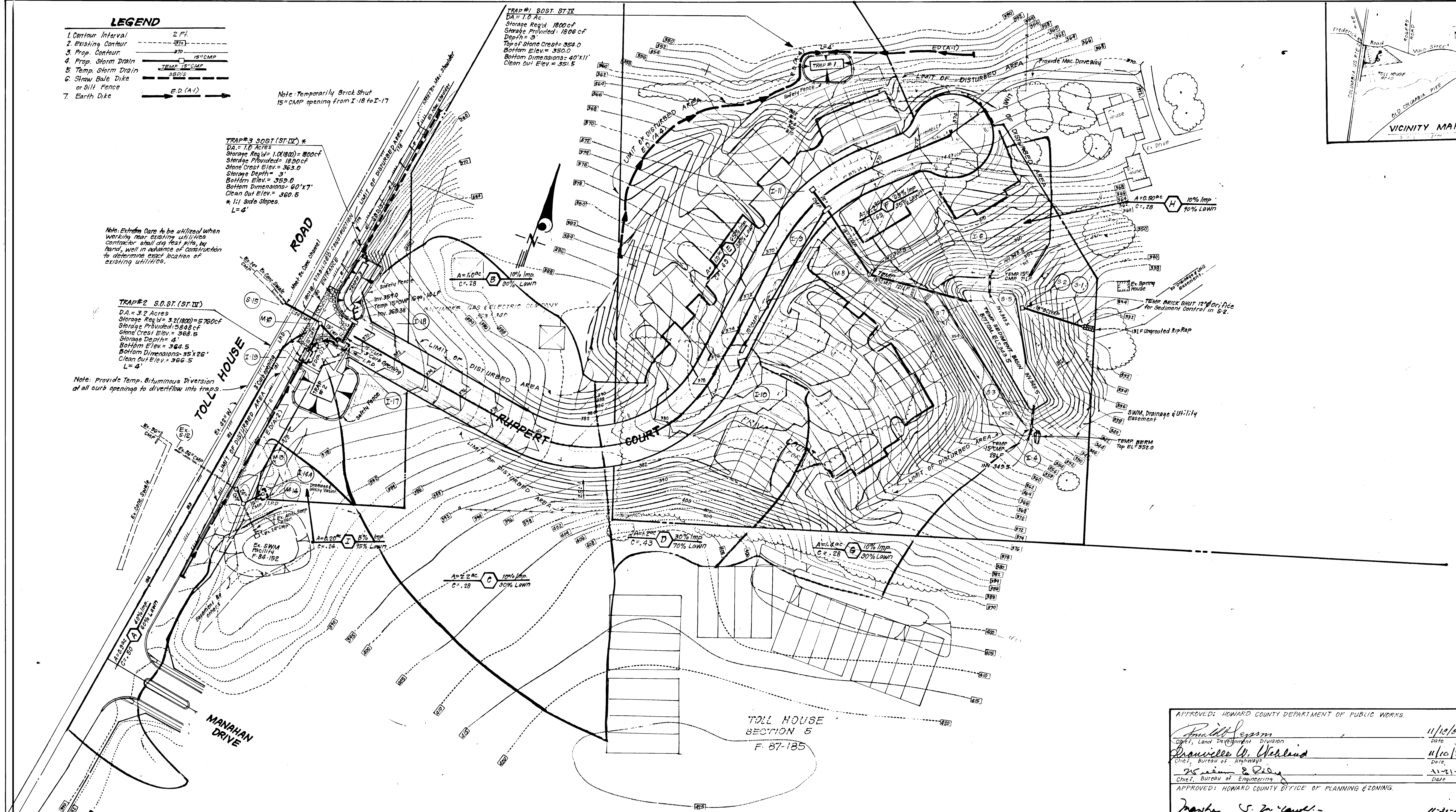
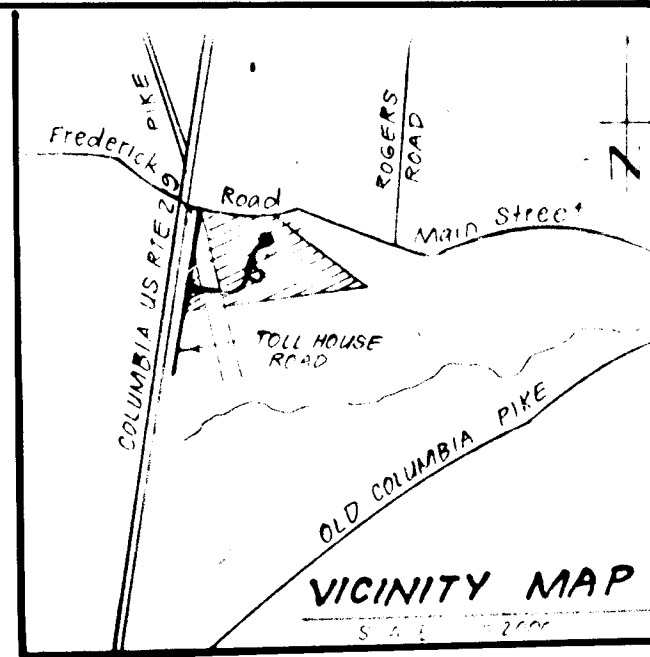
**TRAP #3 S.O. ST. (ST. IV) \***  
 DA = 1.0 Acres  
 Storage Req'd = 1,000cf  
 Storage Provided = 1,800cf  
 Stone Crest Elev. = 363.0  
 Storage Depth = 3'  
 Bottom Elev. = 359.0  
 Bottom Dimensions = 60'x7'  
 Clean Out Elev. = 360.5  
 \* 1:1 Side Slopes  
 L = 4'

Note: Extreme Care to be utilized when working near existing utilities. Contractor shall dig test pits, by hand, well in advance of construction to determine exact location of existing utilities.

**TRAP #2 S.O. ST. (ST. IV)**  
 DA = 3.2 Acres  
 Storage Req'd = 3,200cf  
 Storage Provided = 5,700cf  
 Stone Crest Elev. = 368.5  
 Storage Depth = 4'  
 Bottom Elev. = 364.5  
 Bottom Dimensions = 35'x26'  
 Clean Out Elev. = 366.5  
 L = 4'

Note: Provide Temp. Bituminous Diversion of all curb openings to divertflow into traps.

**TRAP #1 S.O. ST. (ST. IV)**  
 DA = 1.0 Ac.  
 Storage Req'd 1,800cf  
 Storage Provided: 1,800cf  
 Depth = 3'  
 Top of Stone Crest = 354.0  
 Bottom Elev. = 350.0  
 Bottom Dimensions = 40'x11'  
 Clean Out Elev. = 351.5



TOLL HOUSE SECTION 5  
 F-87-185

**DEVELOPER'S CERTIFICATE**

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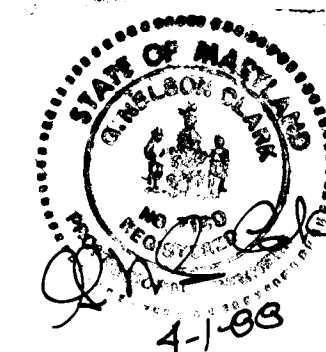
*James R. Pugh*  
 Signature of Developer/Builder  
 4-1-88  
 Date

Reviewed for **HOWARD** S.C.D.  
 Name  
 Signature: *Robert W. Zich*  
 Date: 11-1-88  
 U.S. Soil Conservation Service  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert W. Zich*  
 Signature  
 11-1-88  
 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.

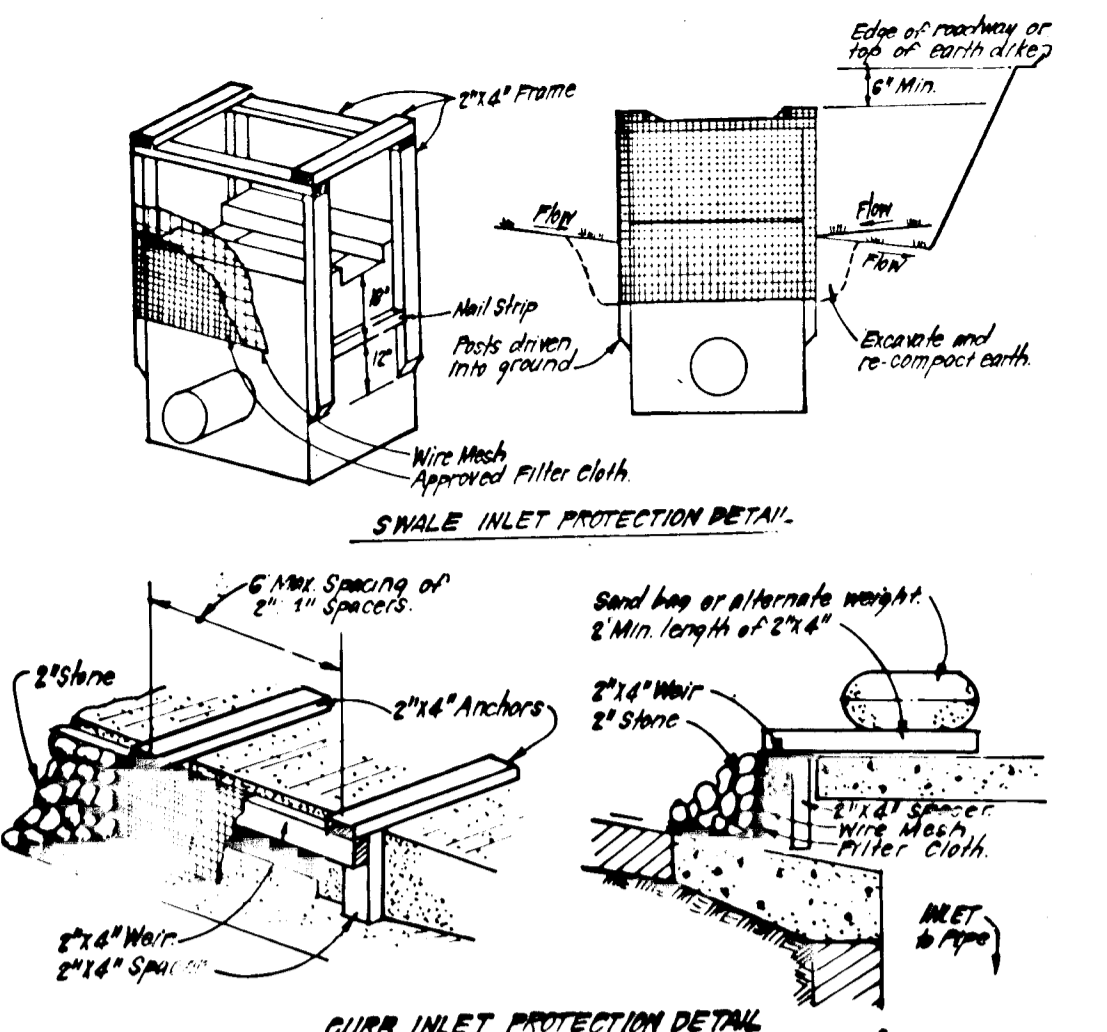


*Clark Finefrock*  
 Signature  
 4-1-88  
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James W. Johnson*  
 Chief, Land Development Division  
 11/12/88  
 Date  
*Donald W. Weiland*  
 Chief, Bureau of Highways  
 11/10/88  
 Date  
*William S. Rice*  
 Chief, Bureau of Engineering  
 11-21-88  
 Date  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*Mark S. Z. Campbell*  
 Chief, Division of Community Planning & Land Development  
 11-21-88  
 Date

<b>CLARK FINEFROCK &amp; SACKETT INC.</b> ENGINEERS PLANNERS SURVEYORS		7135 MINSTREL WAY COLUMBIA, MD. 21045 BALT. 301-381-7500 WASH. 301-621-8100	
DESIGNED	GLB	SCALE	As Shown
DRAWN	KIW	DRAWING	50FG
CHECKED	GLB	JOB NO.	86-062
DATE	3-31-88	FILE NO.	86-062-D
<b>ROAD CONSTRUCTION PLANS                  SEDIMENT &amp; EROSION CONTROL AND                  DRAINAGE AREA MAP                  RUPPERT PROPERTY</b>			
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND			
FOR: COLUMBIA BUILDERS, INC. 3 Lakefront North Suite 200 Columbia, Md 21045			





**CONSTRUCTION SPECIFICATIONS:**

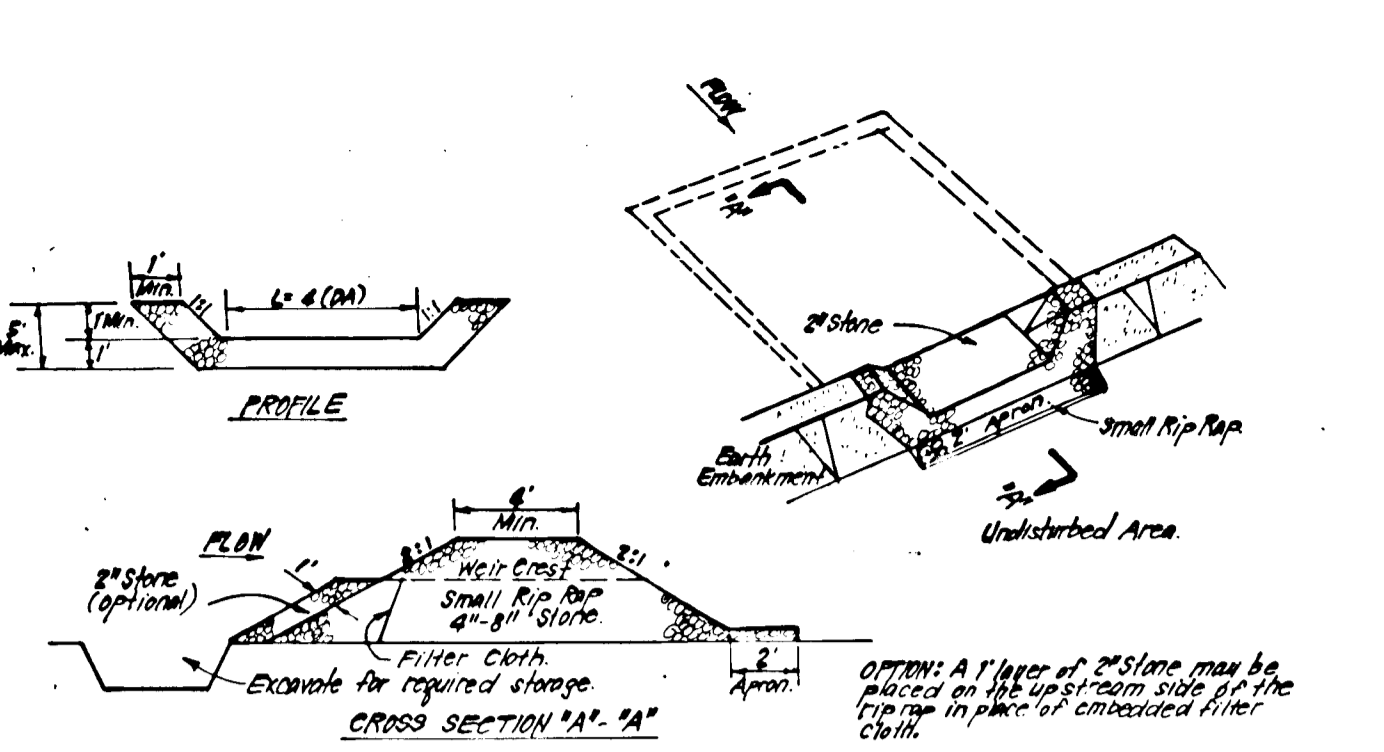
1. A wooden frame is to be constructed of 2x4 construction grade lumber.
2. Wire mesh must be of sufficient strength to support filter fabric, and when in each inlet, with water fully impounded against it.
3. Filter cloth must be of a type approved for this purpose resistant to sunlight with sieve size, E15, 20, 35, to allow sufficient passage of water and removal of sediment.
4. Stone is to be 2" in size and clean, since fines would clog the cloth.

**II. PROCEDURE: SNAILE DITCHLINE OR YARD INLET PROTECTION**

1. Excavate completely around inlet a depth of 12" below ditch elevation.
2. Drive 2x4 posts 1/2" on center at 4' intervals at inlet. Place nail strips between posts at ends of inlet. Assemble top portion of 2x4 frame using overlap joint between top of frame (wire) must be 6" below edge of road way adjacent to inlet.
3. Stretch wire mesh tightly against frame and fabric accurately. Cloth must meet at post.
4. Stretch filter cloth tightly over wire mesh. The cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely in frame. Ends must meet at post, be secured and riveted with 16-gauge steel.
5. Backfill around inlet in compacted 6" layers until layer of earth is even with ditch elevation on ends and top elevation on sides.
6. If the inlet is in low ground, construct a compacted perpendicular to the ditch line below the top of the earth dike is to be at least 6" higher than the top of frame (wire).
7. The structure shall be inspected after each rain and repairs made as needed.
8. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
9. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

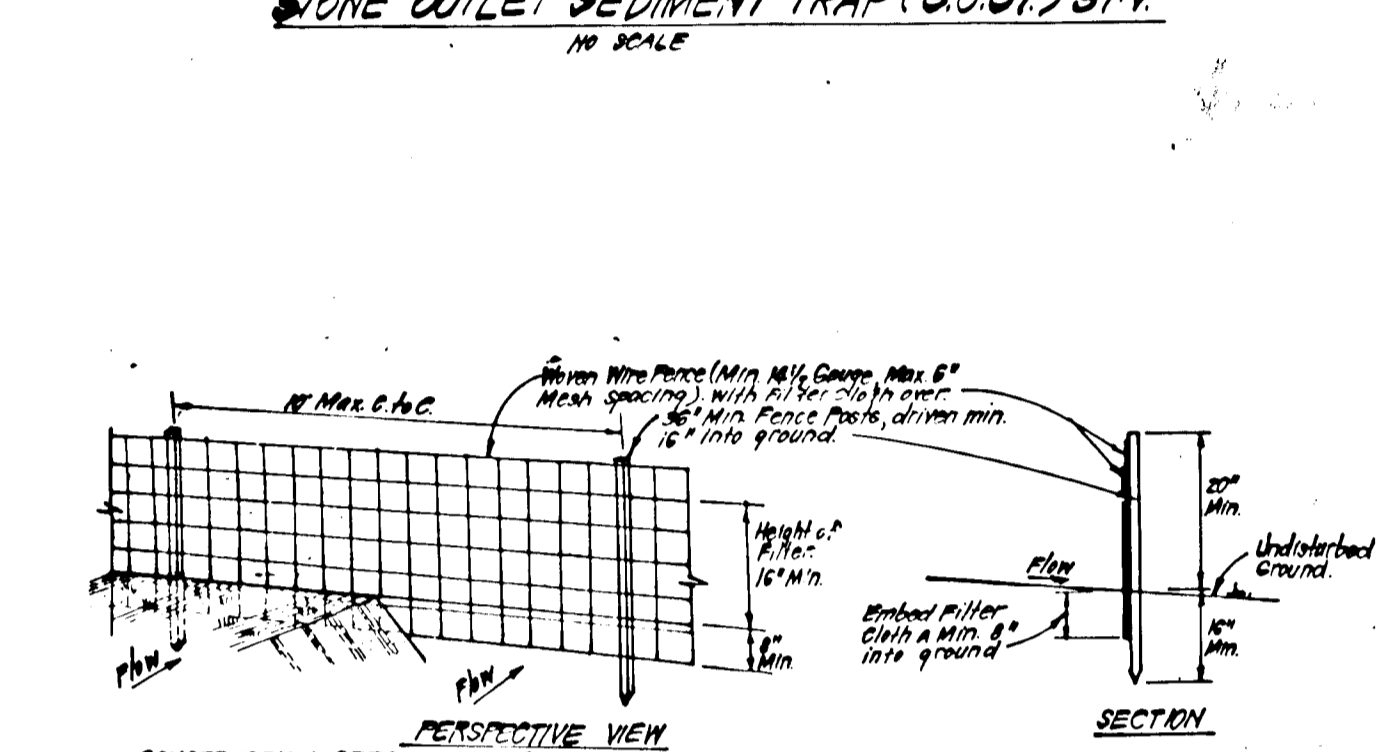
**II. PROCEDURE: CURB INLET PROTECTION**

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 6") to the 2x4 wire (measuring throat length plus 6") as shown in detail drawing.
2. Place a piece of approved filter cloth (60-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2x4 wire.
3. Securely nail the 2x4 wire to 2" long vertical spacers to be located between the wire mesh and filter cloth.
4. Place the assembly against the inlet throat and nail (min 2" lengths of 2x4" to the top of the work at spacer locations. Top edge of assembly shall extend across the inlet throat and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a min 1" beyond both ends of throat opening.
6. From the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or through the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assume that storm flow does not bypass the inlet by installing temporary earth or asphalt dikes directing flow to inlet.



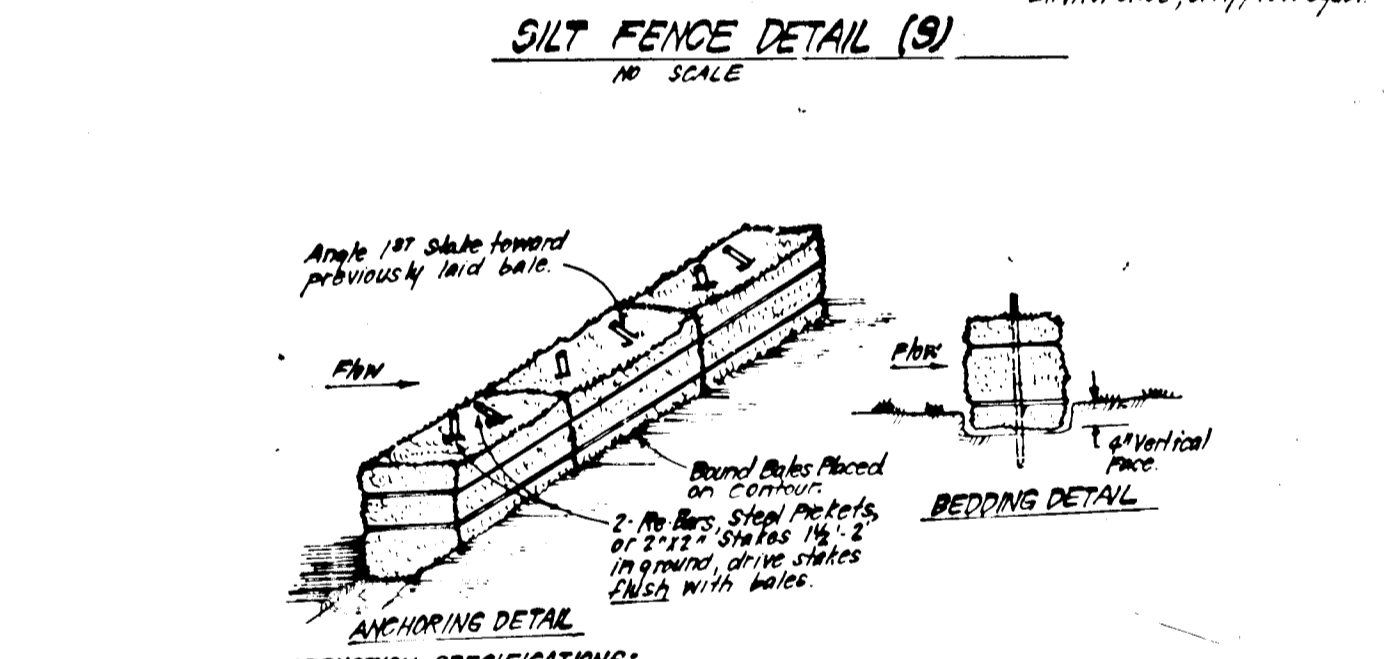
**CONSTRUCTION SPECIFICATIONS:**

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The top soil shall be replaced.
2. The filter material for the embankment shall be free of rocks and other hard objects. It shall be compacted by watering with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small rip rap 4" to 6" in diameter with a thickness of 2" appropriate placed on the inside slope of the outlet. The stone shall be placed in its equal dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
5. The structure shall be inspected after each rain and repairs made as needed.
6. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
7. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.



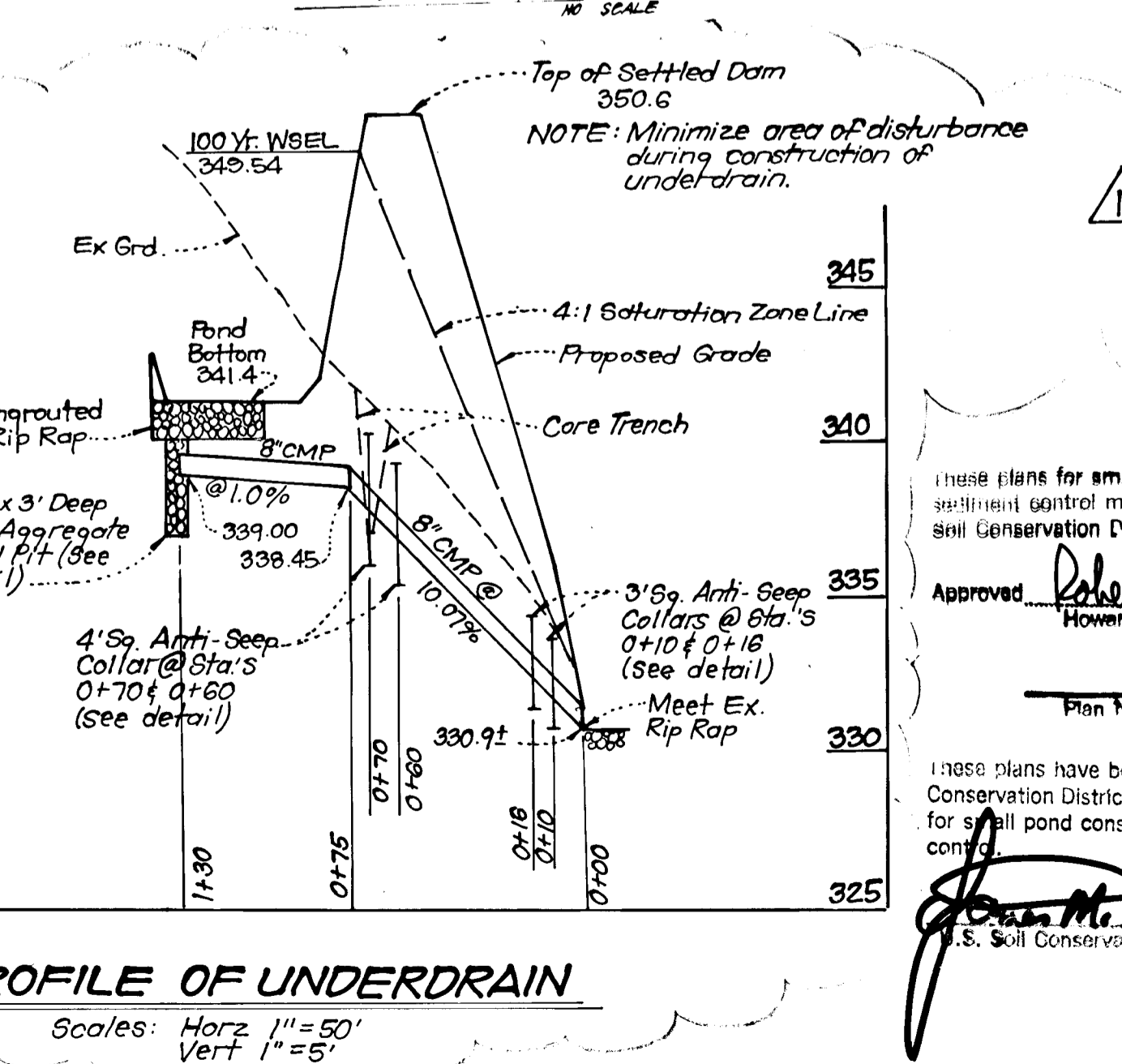
**CONSTRUCTION SPECIFICATIONS:**

1. When wire fence is to be fastened securely to force posts with wire ties - staples.
2. With ties spaced every 24" at top and mid section.
3. When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and secured with staples.
4. Maintenance shall be performed on normal and material removed when "bulges" develop in silt fence.

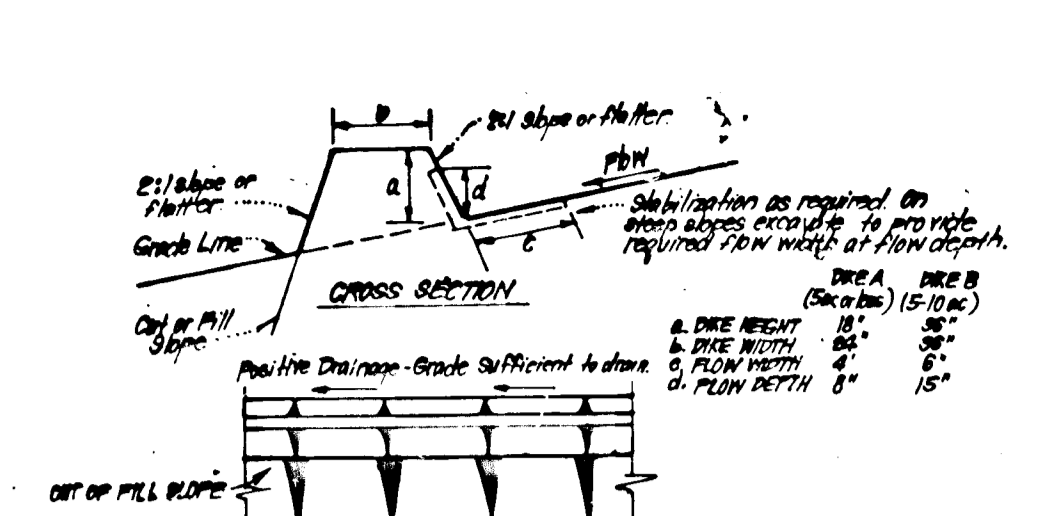


**CONSTRUCTION SPECIFICATIONS:**

1. Bales shall be placed at the top of a slope or on the contour and in a row with ends of bales abutting.
2. Each bale shall be embedded in the soil a min of 6" and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by driving 2 stakes or rebar driven thru the bale. The 1st stake in each bale shall be driven down the length of the bale at an angle to force the bales together. Stakes shall be driven flush with the bale.
4. Inspection shall be frequent and repair/replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



**PROFILE OF UNDERDRAIN**  
Scales: Horiz 1"=50'  
Vert 1"=5'



**CONSTRUCTION SPECIFICATIONS:**

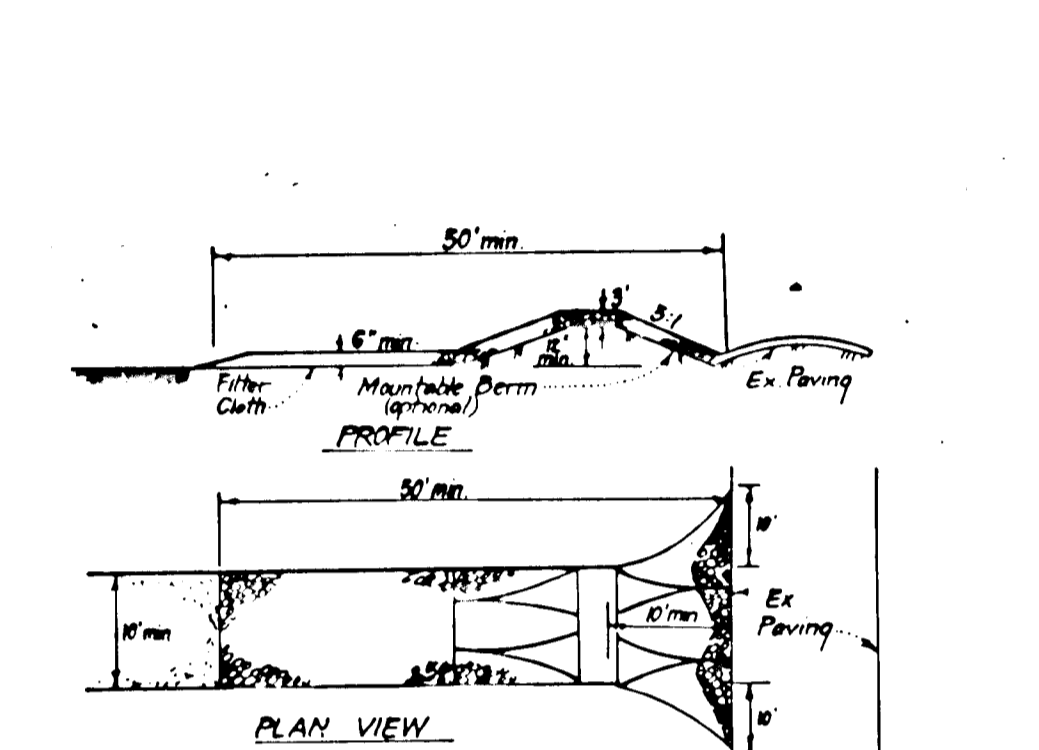
1. All dikes shall be constructed by earth-moving equipment.
2. All dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired to facilitate clearing by construction machinery.
4. Filter fabric shall be adjusted or secured to utilize a stabilized soil outlet.
5. 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.
6. 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**

TYPE OF TREATMENT	CHANNEL SLOPE	DIKE A	DIKE B
1	15:1 to 3:1	Seed or straw mulch	Seed or straw mulch
2	3:1 to 2:1	Seed or straw mulch	Seed or straw mulch
3	2:1 to 1.5:1	Seed or straw mulch	Seed or straw mulch
4	1.5:1 to 1:1	Seed or straw mulch	Seed or straw mulch

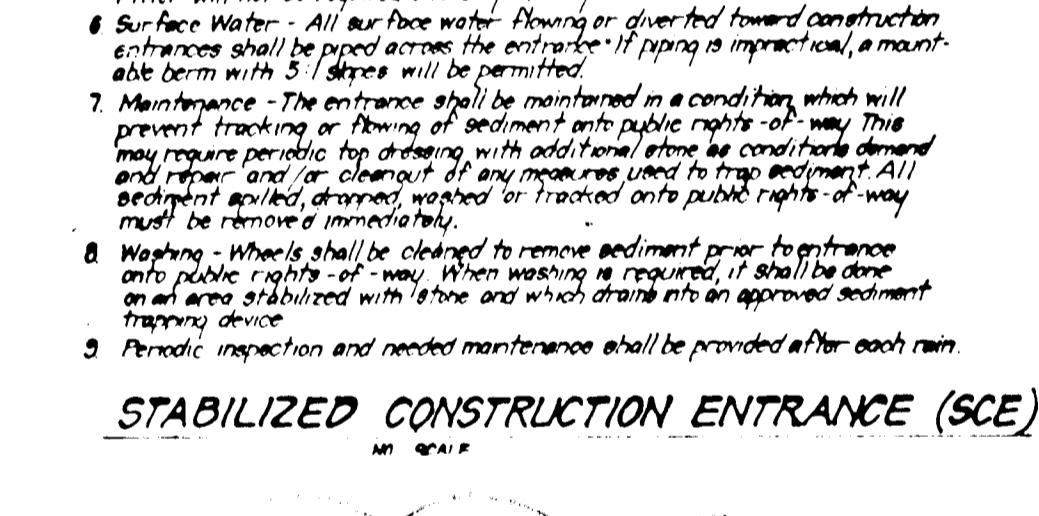
**CONSTRUCTION SPECIFICATIONS:**

1. Stone size - Use 2" stone or recycled concrete equipment.
2. Length - As required, but not less than 50 feet (exception a single residence lot where a 30' maximum length would apply).
3. Thickness - Not less than 6" inches.
4. Width - Ten (10) feet 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 residence lot.
6. Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mound of earth with a 5:1 slope will be constructed.
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 or construction material and repair and clearing of any material which has accumulated. All sediment applied, cleaned, washed or tracked onto public rights-of-way shall be removed immediately.
8. 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.
9. Periodic inspection and needed maintenance shall be provided after each rain.



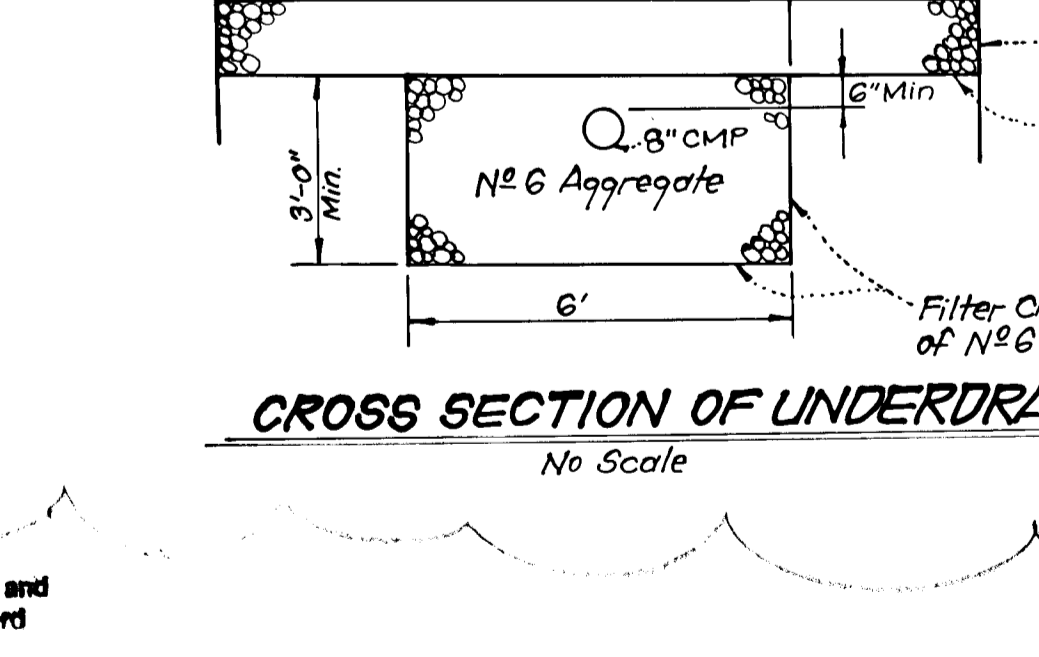
**CONSTRUCTION SPECIFICATIONS:**

1. Stone size - Use 2" stone or recycled concrete equipment.
2. Length - As required, but not less than 50 feet (exception a single residence lot where a 30' maximum length would apply).
3. Thickness - Not less than 6" inches.
4. Width - Ten (10) feet 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 residence lot.
6. Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mound of earth with a 5:1 slope will be constructed.
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 or construction material and repair and clearing of any material which has accumulated. All sediment applied, cleaned, washed or tracked onto public rights-of-way shall be removed immediately.
8. 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.
9. Periodic inspection and needed maintenance shall be provided after each rain.



**CONSTRUCTION SPECIFICATIONS:**

1. Bales shall be placed at the top of a slope or on the contour and in a row with ends of bales abutting.
2. Each bale shall be embedded in the soil a min of 6" and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by driving 2 stakes or rebar driven thru the bale. The 1st stake in each bale shall be driven down the length of the bale at an angle to force the bales together. Stakes shall be driven flush with the bale.
4. Inspection shall be frequent and repair/replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



**DEVELOPER'S CERTIFICATION:**

"We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an 'as built' plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Approved: Robert J. Zepher 11-1-88  
Howard Soil Conservation District

1988 plans have been reviewed for the Howard Soil Conservation District and meet the technical requirement for small pond construction, soil erosion and sediment control.

Approved: James M. Smith 11-1-88  
S. Soil Conservation Service

Developers Certification:  
"I certify that this plan for pond construction, erosion, and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with a red-lined 'as built' of the pond within 30 days of completion."

Approved: G. N. Cook 4-1-88  
Signature of Engineer

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate 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 (16 lbs/1000 sq ft) before seeding.
- 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.

**SEEDING -** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 50 lbs per acre (1.4 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.

**TEMPORARY SEEDING NOTES**

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

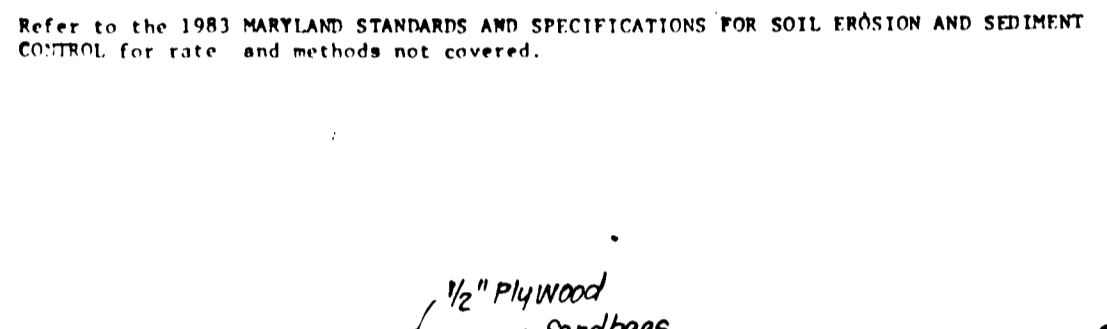
**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**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 25 bushels 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.

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



**CONSTRUCTION SEQUENCE:**

No.	Description	No. of DAYS
1.	Obtain Grading Permit.	2
2.	Install SCE, Clear & Grub for Installation of Sediment Control Devices.	2
3.	Install E.D.'s, Trap #3, SBD's, and Construct Basin #1.**	15
4.	Construct Temp Basin to Bottom Elev 343.5 Temp. Brick Shut 12" Orifice.	30
5.	Clear & Rough Grade Site.	10
6.	Provide Inlet Protection for I-14-A&I-19. Adjust SCE as necessary to construct I-10 - S-15.	60
7.	Fine Grade and Stabilize Site.	15
8.	Upon Approval of the Sediment Control Inspector, convert sediment basin to Final SWM Specs. Remove sediment control and stabilize.	10

**\* At I-18, Temp. Brick shut 15" CMP to I-17, and construct temp. 15" CMP to trap #3. Upon temp. pipe removal, repair temp. opening.**

**\*\* Utilize SBD's as necessary.**

**REVISIONS**

No.	Description	Date
1	Added underdrain profile and cross section	4-8-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Approved: *William W. Newland* 11/15/88  
Chief, Land Development Division

Approved: *James W. Newland* 11/10/88  
Chief, Bureau of Highways

Approved: *James W. Newland* 11-21-88  
Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

Approved: *James W. Newland* 11-21-88  
Chief, Division of Community Planning & Land Development

**ENGINEER'S CERTIFICATE**

"I certify that this plan for pond construction, erosion, and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with a red-lined 'as built' of the pond within 30 days of completion."

Approved: *G. N. Cook* 4-1-88  
Signature of Engineer

**CLARK FINEFROCK & SACKETT INC.**  
ENGINEERS PLANNERS SURVEYORS

7135 MINSTREL WAY COLUMBIA, MD. 21045 BALT. 301-381-7500 WASH. 301-621-8100

DESIGNED: GLB  
DRAWN: KIW  
CHECKED: GLB  
DATE: 3-31-88

SCALE: As Shown  
DRAWING: 60-F6  
JOB NO: 86-062  
FILE NO: 86-062-D

BORING #	Depth (feet)	Soil Description	Remarks
BORING #1	1.0	Topsoil and Root Zone	
	1.0	Brown and Red Brown, Moist Silty Sand and Gravel (fragments below 1.0' (S&G) Sand	
BORING #2	1.0	Dark Green and Orange, Moist Silty Clay (S&G) Sand Zone	
	1.0	Orange, Moist, Silty Fine Sand, Cobble (fragments below 9.0' (S&G) Sand	
BORING #3	1.0	Topsoil and Root Zone	
	1.0	Dark Green and Orange, Moist Silty Clay (S&G) Sand Zone	
BORING #4	1.0	Topsoil and Root Zone	
	1.0	Orange, Moist, Silty Fine Sand, Cobble (fragments below 9.0' (S&G) Sand	
BORING #5	1.0	Topsoil and Root Zone	
	1.0	Dark Green and Orange, Moist Silty Clay (S&G) Sand Zone	

1391

**SEDIMENT 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. (1993-2437)
- 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 perimeter 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 encasings shall 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) and (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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: 22.44 Acres  
Area Disturbed: 6.74 Acres  
Area to be roofed or paved: 2.88 Acres  
Area to be vegetatively stabilized: 3.91 Acres  
Total Cut: 16,800 Cu. yds  
Total Fill: 25,200 Cu. yds  
Off-site waste/borrow area location: N/A
- 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 SWM sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of 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 "As-Built" basins, 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).
- 13) The total amount of straw bale dikes/silt fence equals 550 L.F.

F-88-2.26