

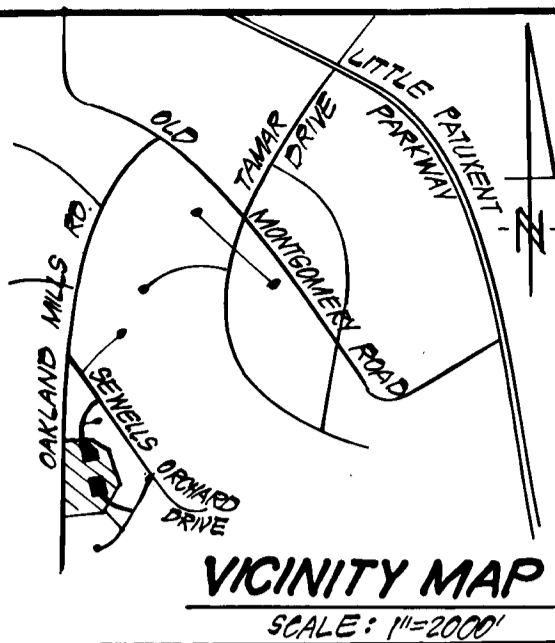
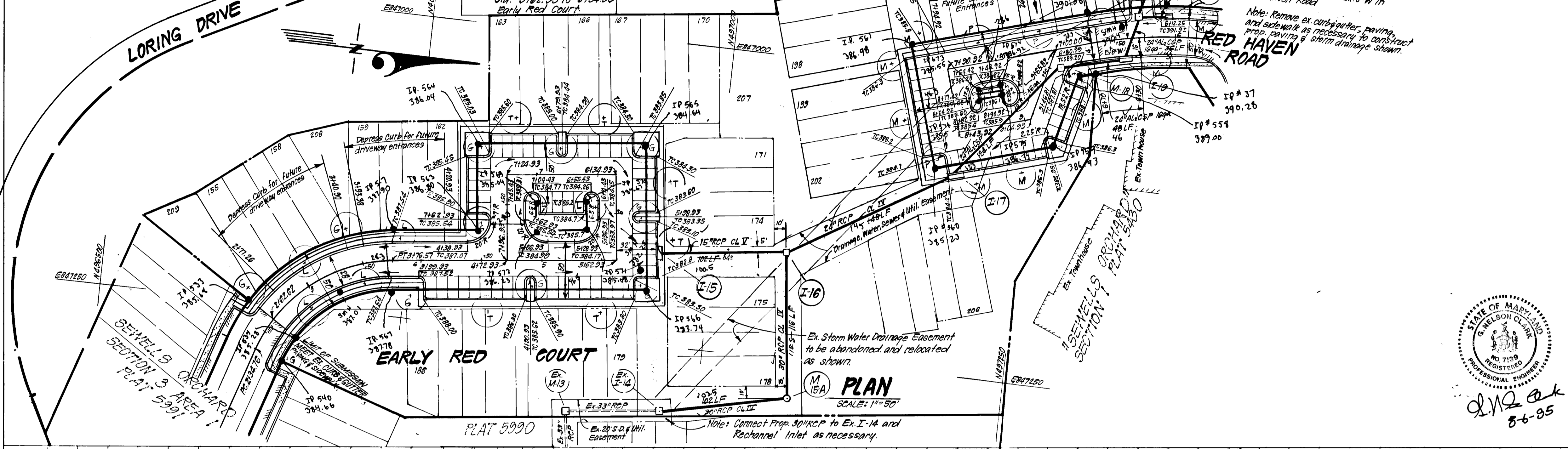
| PLANT SCHEDULE | | | | |
|----------------|-------------------------------------|----------------|-------|----------------------|
| KEY | PLANT NAME | SIZE | QUANT | REMARKS |
| (M) | Acer rubrum 'Sunset' | 2 1/2 Cal Min. | 9 | 8 1/2 B. HEAVY HEADS |
| (P) | Quercus palustris | | 8 | |
| (L) | Platanus acerifolia | | 6 | |
| (G) | Fraxinus F. lanceolata 'Marshall's' | | 11 | |
| (T) | Tilia cordata 'Greenspire' | | 6 | |
| | Greenspire Linden | | | |

- Contractor shall verify location of underground utilities prior to digging.
- Final location of trees may be adjusted slightly to accommodate field conditions.
- Planting procedure shall comply with "Landscape Specs. for Baltimore Washington Metropolitan Areas".
- Substitution of the approved species may be permitted provided that the planting is in accordance with the street trees and landscape requirements as specified in Section 10.131 of the Ho. Co. Subdivision Regulation.

Curve Data - Early Red Ct.
 PC 2162.02 to PT 3476.57
 R = 125.00'
 $\Delta = 52^{\circ}13'48''$
 L = 113.95'
 T = 61.28'
 CHD = N32^{\circ}40'54''W 110.04'

Curve & Gutter Legend
 Std. 7" Comb. C&G
 Rev. 7" Comb. C&G
 Std. 6" Comb. C&G
 Rev. 6" Comb. C&G

Curve Data - Red Haven Road
 PC 0155 to PT 6170
 R = 365.00'
 $\Delta = 96^{\circ}52'22''$
 L = 615.00'
 T = 409.23'
 CHD = S28^{\circ}18'01''W 544.70'



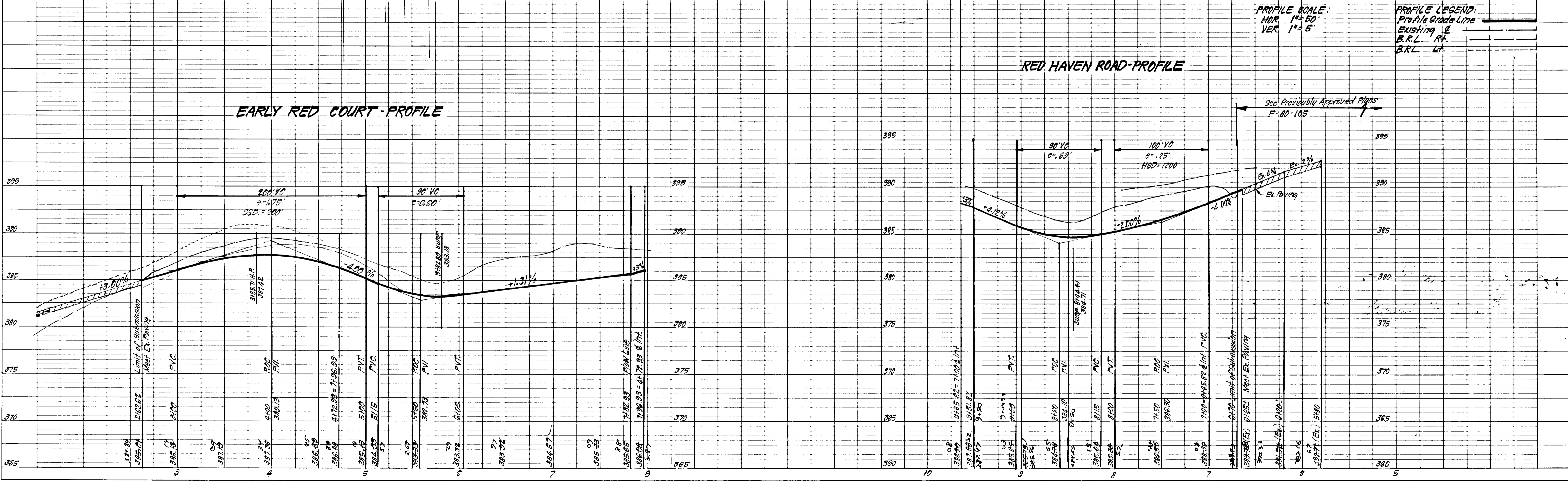
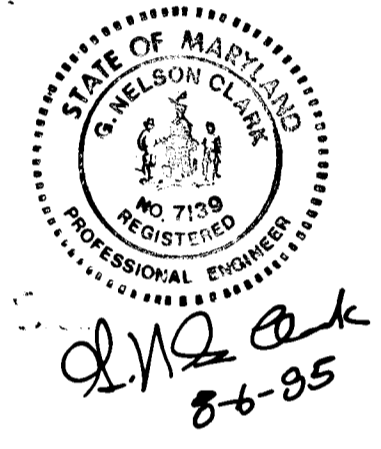
- ### GENERAL NOTES
- All storm drain and paving shall be constructed in accordance with the latest details and specifications of Howard County & MD SHA.
 - Types of Storm Drain structures refer to the Standard Details of Howard County & Maryland State Highway Administration.
 - Trench Construction for storm drains, within Road or Street rights-of-way limits shall be in accordance with Howard Co. Design Manual Vol. II. (Class C Trench Bedding to be used for all storm drains, except where shown otherwise).
 - Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of the mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
 - All utility companies shall be notified 24 hrs. in advance of construction.
 - All traffic control services, parking, and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices," 1978 Edition.
 - Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of the mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
 - Provide Concrete Sidewalk Ramps to Co. Std. Type A, R. 4-01 where shown.
 - Design Speed: 50 mph & Zoning: RSC.
 - Storm Water Management Provided in Central Facility in Sewells Orchard, Section 3, Area 1, F-84-215.
 - Contractor or Developer shall contact the Construction Inspection/Survey Division 24 hrs. before commencing work @ 792-7272.

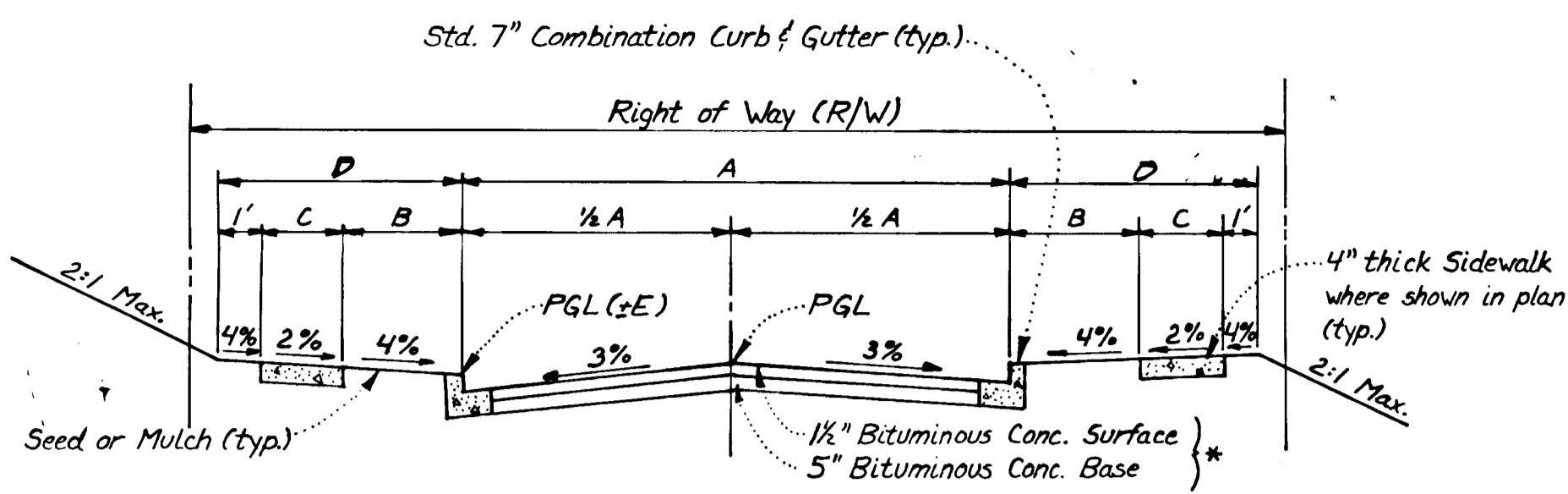
APPROVED: DEPARTMENT OF PUBLIC WORKS:
Walter J. ... 9-30-85
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING:
John W. ... 9-27-85
 Chief, Division of Land Development & Zoning Administration

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 ENGINEERS · PLANNERS · SURVEYORS
 11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301)593-3400

| | | | |
|----------|--|----------|----------|
| DESIGNED | ROAD CONSTRUCTION PLANS EARLY RED COURT & RED HAVEN ROAD | SCALE | As Shown |
| DRAWN | | DRAWING | 10F3 |
| CHECKED | | JOB NO. | 83-076 |
| DATE | AUG. 85 | FILE NO. | 83-076-D |

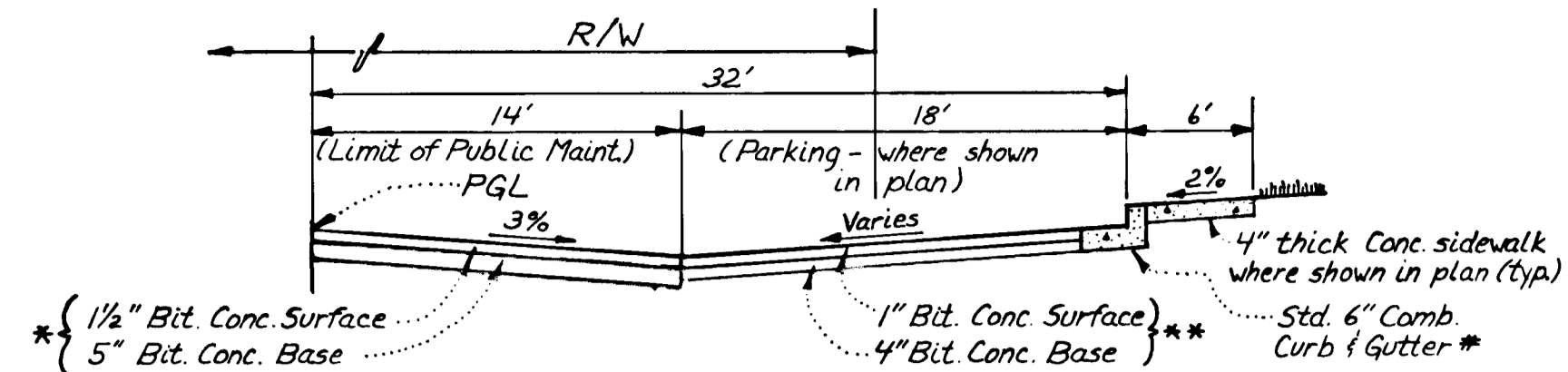
FOR: ORCHARD ASSOCIATES
 P.O. Box 213
 Columbia, Md 21044





TYPICAL PAVING SECTION - PUBLIC ROADS

For Alternate Paving Section - See det. this sht.



TYPICAL HALF SECTION PARKING ADJACENT TO PUBLIC ROADS

EARLY RED COURT 3199.93 to 7196.93
RED HAVEN ROAD 7190.92 to 9165.82

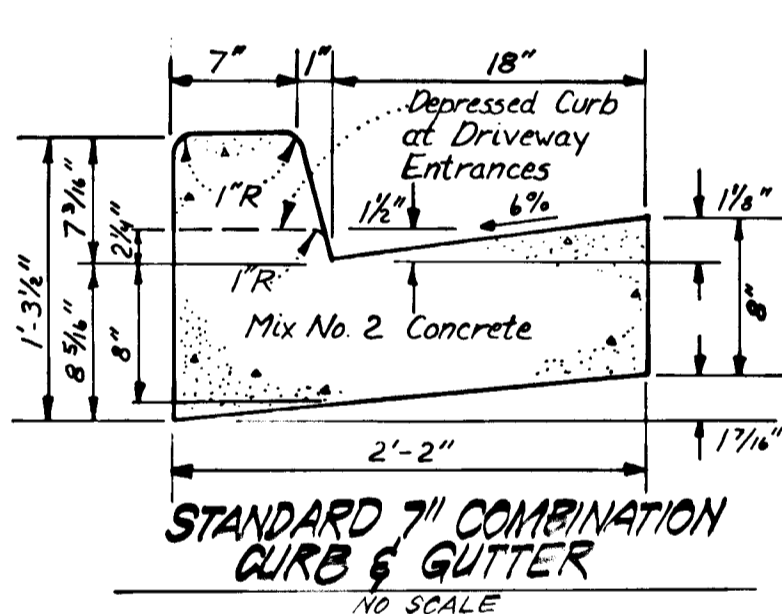
| SIZE | TYPE | LENGTH | QTY |
|------|---------------------|---------|----------|
| 15" | AL ₂ CSP | 16.9992 | 21.9 LF |
| 24" | AL ₂ CSP | 16.9992 | 294 LF |
| 24" | RCP CL II | 14.8 | 14.5 LF |
| 30" | RCP CL II | 21.6 | 21.9 LF |
| 15" | RCP CL II | 10.2 | 100.5 LF |

* 2 1/2" x 1/2" corrugations.

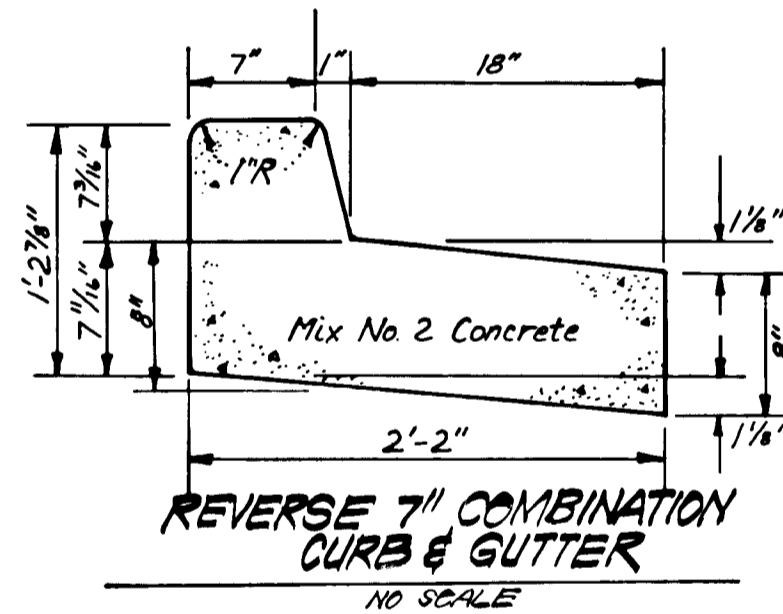
| STREET NAME & STATION | TYPE OF TRAFFIC | A | B | C | D | R/W | ZONING | DESIGN SPEED | E |
|---------------------------------|-----------------|-----|----|----|----|-----|--------|--------------|----|
| EARLY RED CT 2462.02 to 3199.93 | CUL-DE-SAC | 28' | 4' | 4' | 9' | 50' | RSC | 30 mph | 14 |
| RED HAVEN RD. 0170 to 7190.92 | CUL-DE-SAC | 28' | 4' | 4' | 9' | 50' | RSC | 30 mph | 14 |

| No | TYPE | INV IN | INV OUT | TOP ELEVATION UPPER | LOWER | REMARKS | LOCATION |
|-------|-------------------------|----------|----------|---------------------|----------|------------------------------|-------------------------|
| I-15 | A-10 Inlet | 378.7652 | 378.7652 | 382.5052 | 382.5052 | No. Co. Sid. SD 4.02 W=4'-0" | See Plan |
| I-16 | D Inlet | 375.3900 | 375.3900 | 381.8330 | 381.8330 | SD 4.11 W=4'-0" | " " |
| M-15A | Brick Manhole | 374.8475 | 374.8475 | 384.0625 | 384.0625 | G-5.02 W=5'-0" | " " |
| I-17 | A-10 Inlet | 379.4910 | 379.4910 | 384.2930 | 384.2930 | BD 0.02 W=3'-6" | " " |
| M-18 | Shallow Brick Manhole | 383.5054 | 383.5054 | 387.3084 | 387.3084 | G-5.05 W=4'-0" | 48" sq. 48" R.H. 9' RT. |
| I-19 | A-10 Inlet w/Deflectors | 386.0099 | 386.0099 | 391.4118 | 391.4118 | SD 4.02 W=3'-0" | 51" R.H. 16' LT. |
| M-20 | Shallow Brick Manhole | 387.0587 | 387.0587 | 394.0098 | 394.0098 | G-5.05 W=4'-0" | 51" R.H. 16' LT. |
| M-21 | Brick Manhole | 389.0994 | 389.0994 | 398.0030 | 398.0030 | G-5.01 W=2'-6" | 48" R.H. See Plan |
| I-22 | A-5 Inlet w/Deflectors | 388.0601 | 388.0601 | 392.1636 | 392.1636 | SD 4.01 W=2'-6" | 48" R.H. 16' RT. |

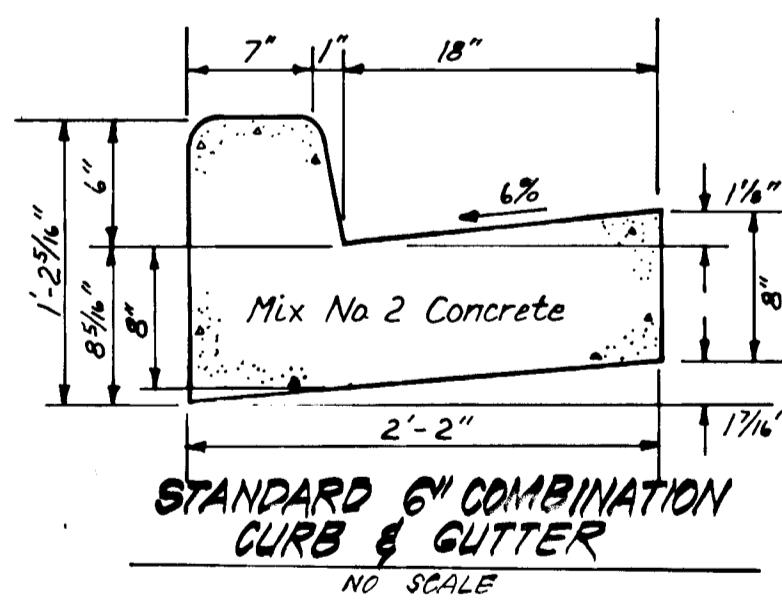
+ Provide slots in all sides. Modify inlet to 48" sq.
△ All inverts to be fully developed except M-21.
See th. Co. Std. SD 4.83 for Inlet Deflectors.



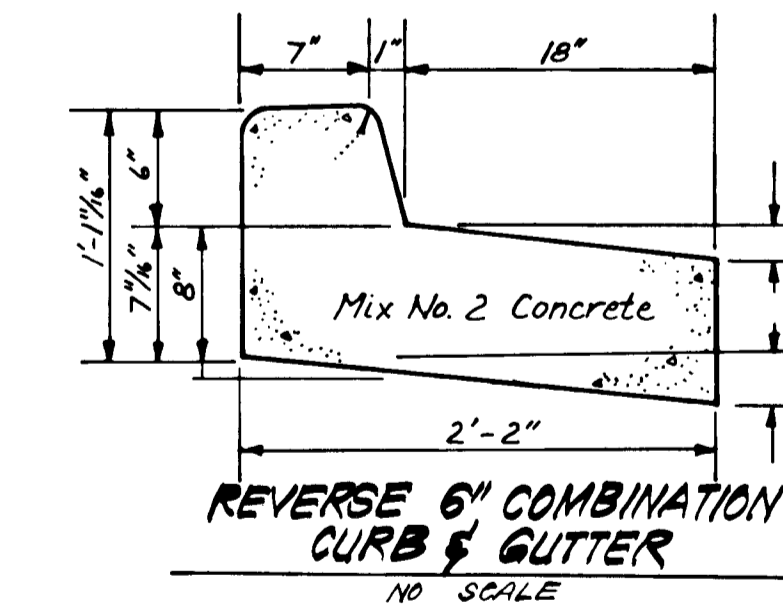
STANDARD 7" COMBINATION CURB & GUTTER



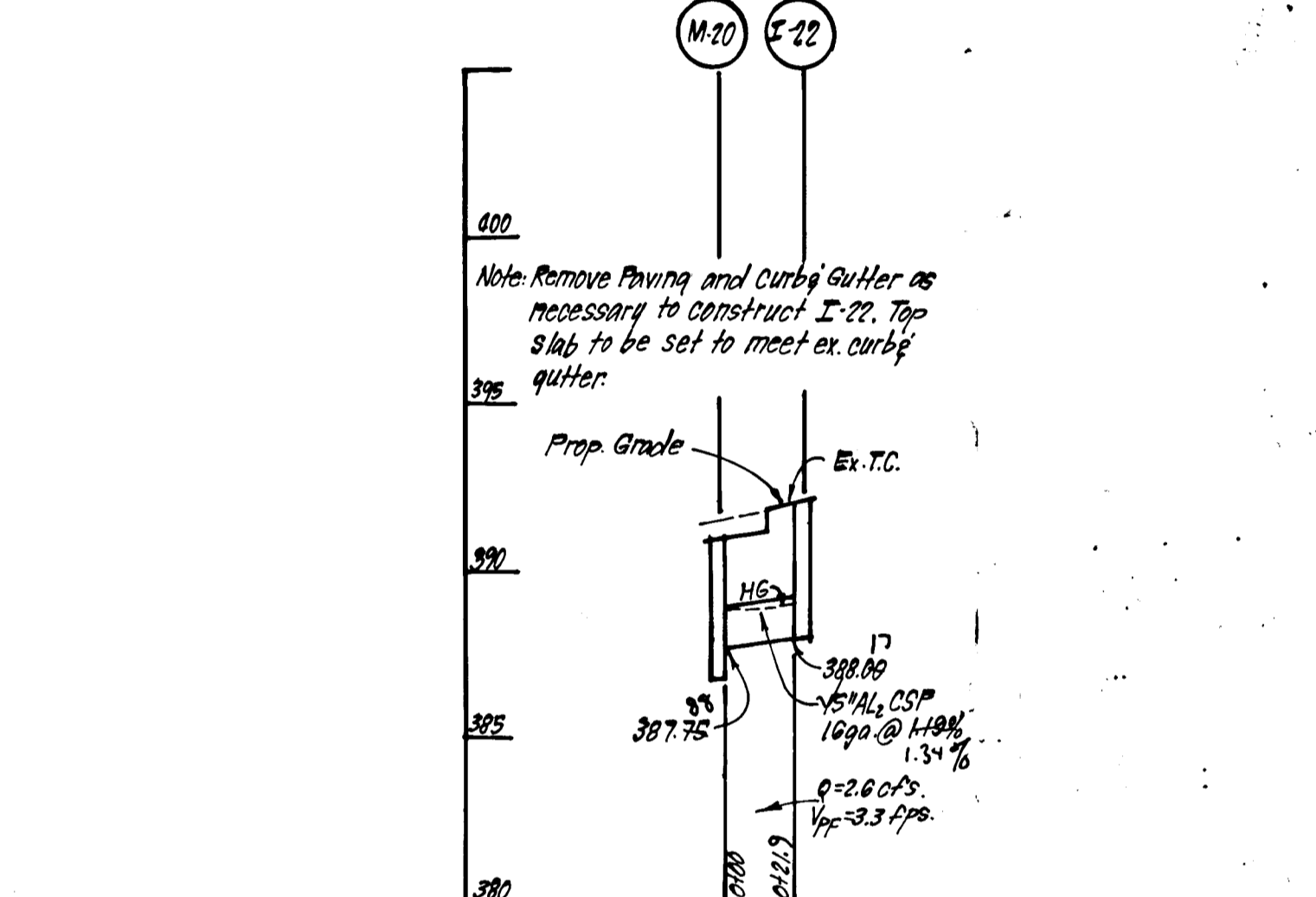
REVERSE 7" COMBINATION CURB & GUTTER



STANDARD 6" COMBINATION CURB & GUTTER

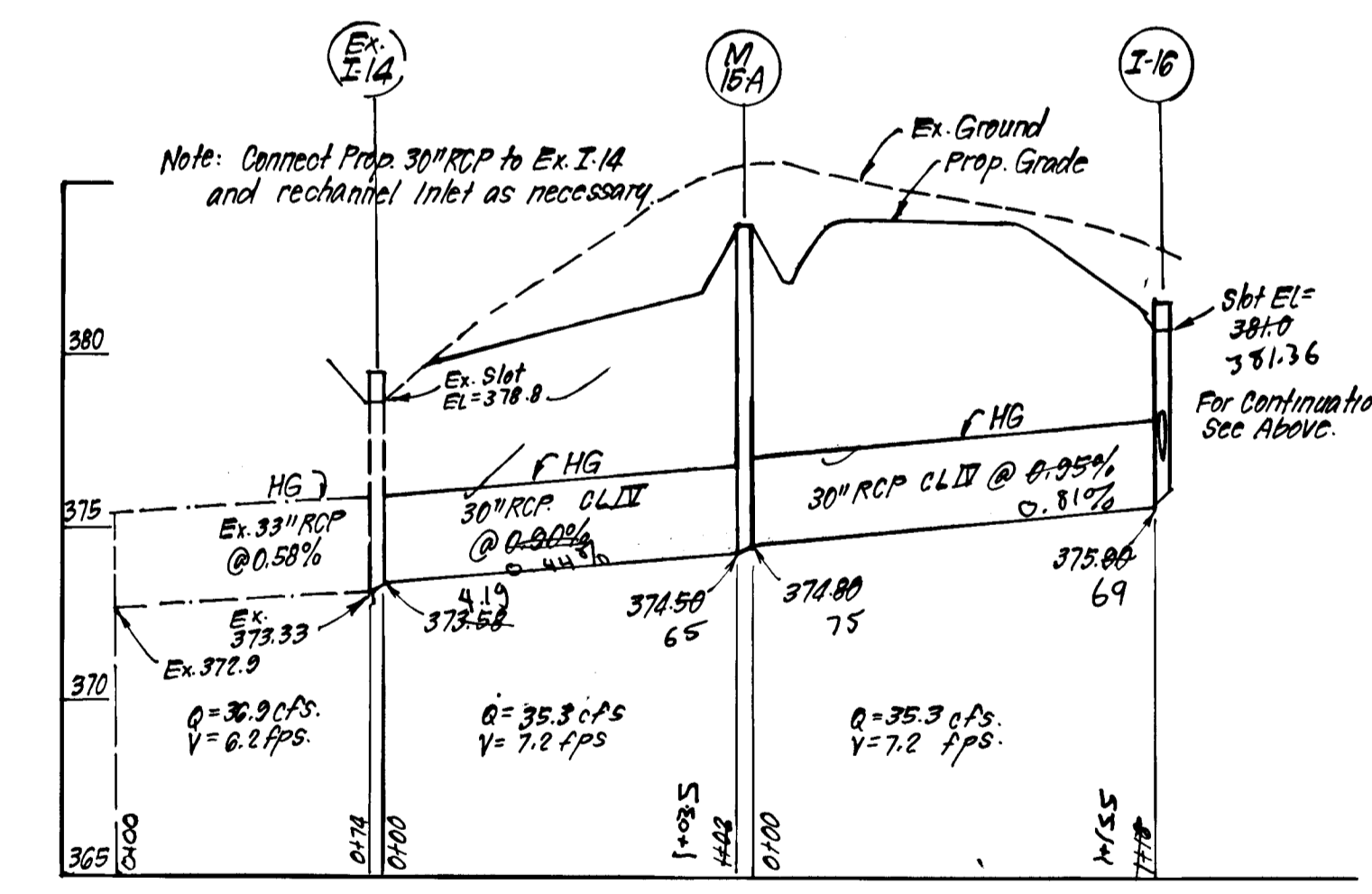


REVERSE 6" COMBINATION CURB & GUTTER



STORM DRAIN PROFILES

SCALE: HORIZ 1"=50' VERT 1"=5'

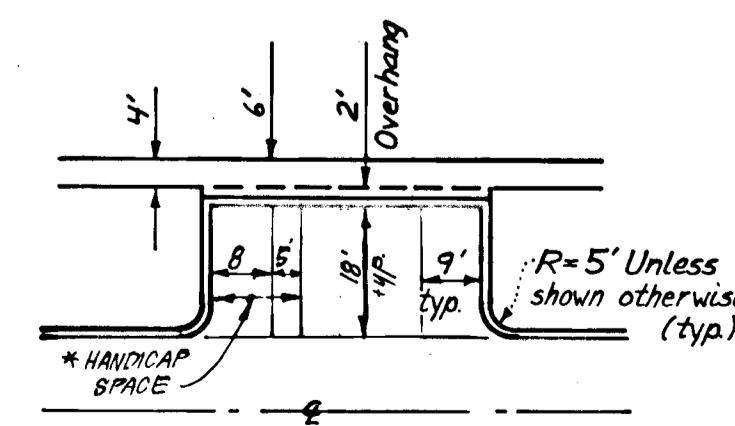


| | |
|--|--------|
| Bituminous Conc Surface | 1 1/2" |
| Bituminous Conc Base | 2 1/4" |
| Prime | |
| 8" Crusher Run Base (Placed in 2 Courses) | 8" |
| or | |
| 6" Dense Graded Stabilized Aggregate Base Course | 6" |

ALTERNATE PAVING SECTION FOR PUBLIC ROADS (SECTION P-2)

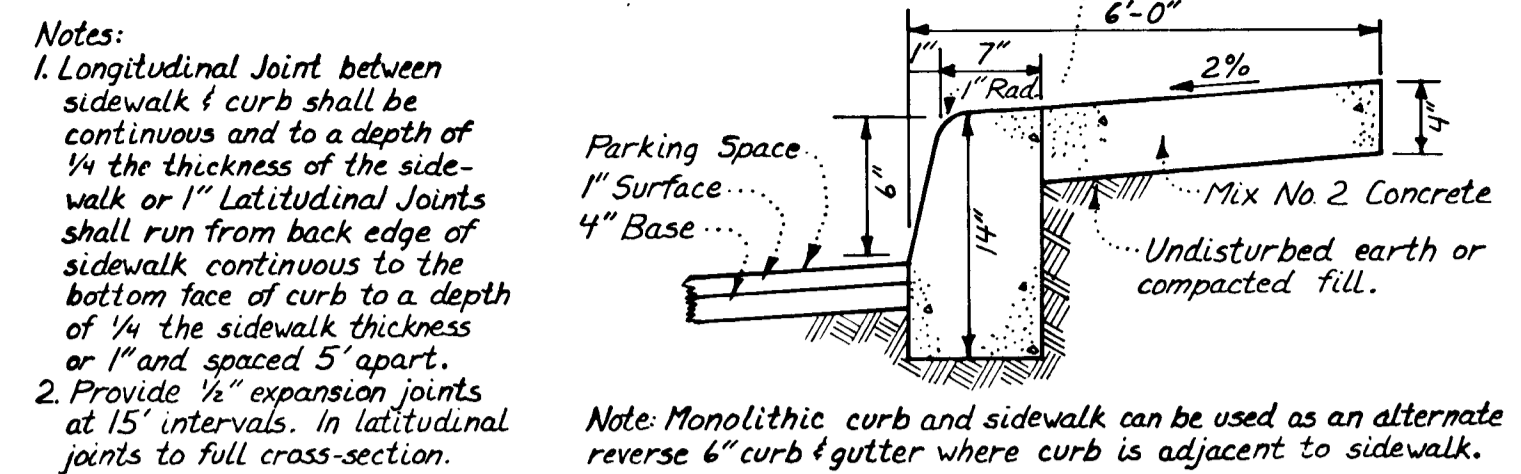
| | |
|--|----|
| Bituminous Conc Surface | 1" |
| Bituminous Conc Base | 2" |
| Prime | |
| 5" Crusher Run Base Course | 5" |
| or | |
| 4" Dense Graded Stabilized Aggregate Base Course | 4" |

ALTERNATE PAVING SECTION FOR PARKING AREAS (SECTION P-1)

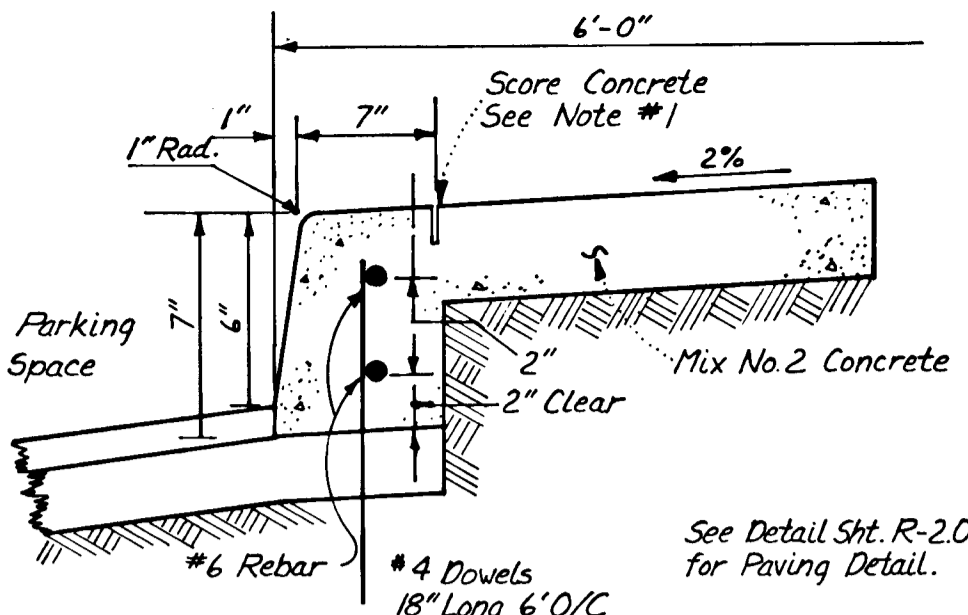


TYPICAL PARKING

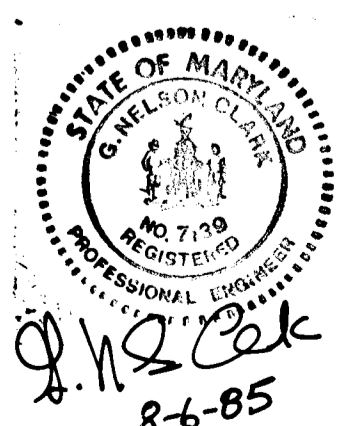
* Two 8' Handicap Spaces may share One 5' Aisle



MONOLITHIC CURB & SIDEWALK - PRIVATE PARKING AREA

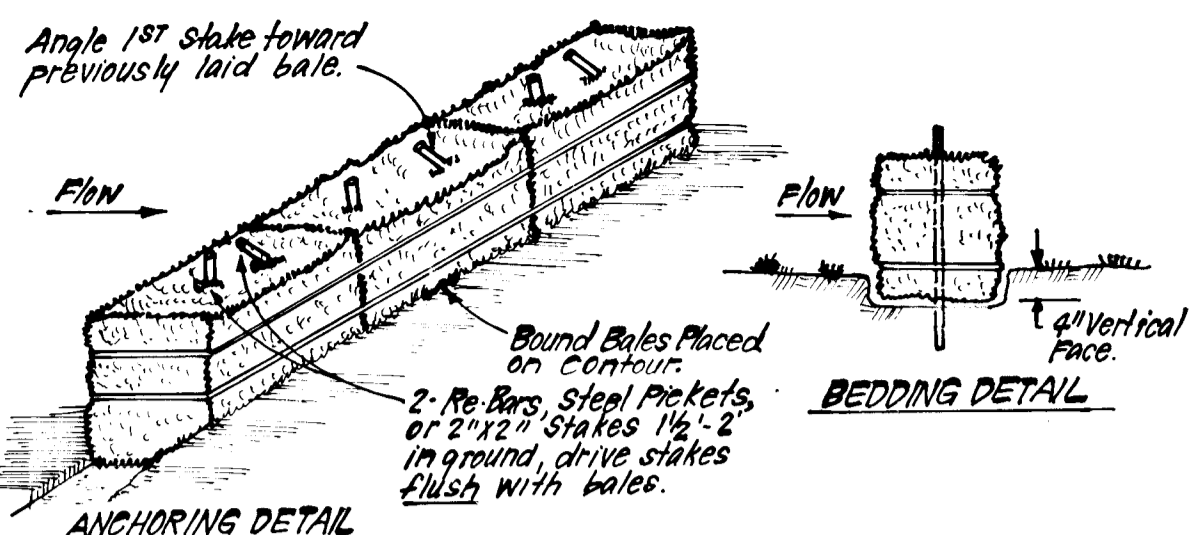


ALTERNATE SECTION



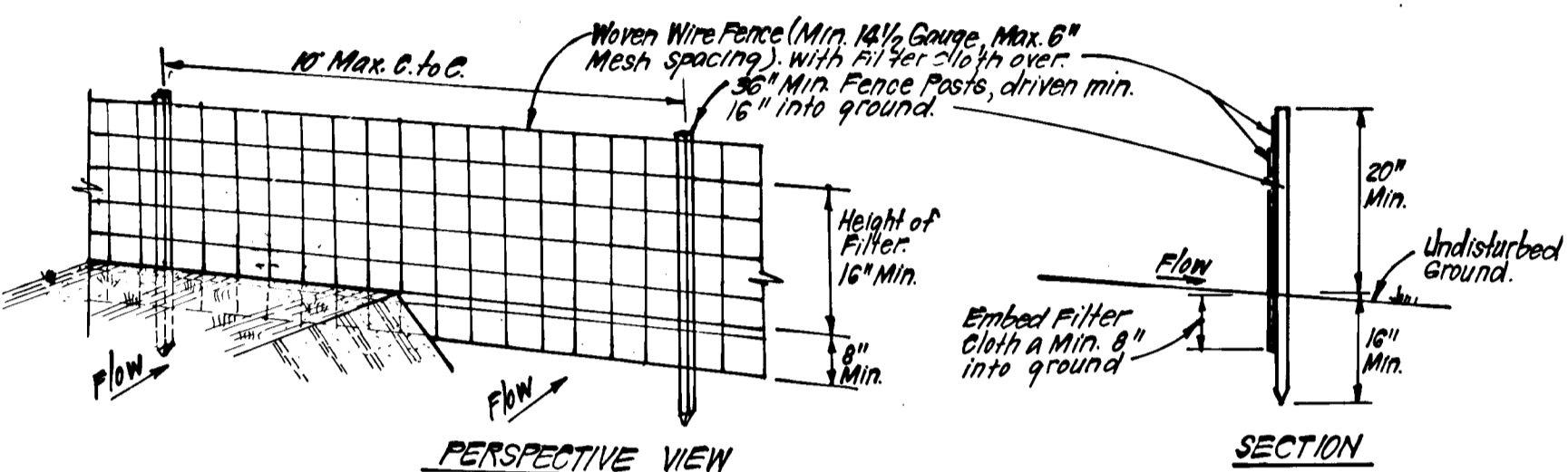
1 Revised Storm Drainage I-15 to I-16, M-20 to M-21 & M-20 to I-22 11-20-85
 No. 1 REVISION DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Chief, Division of Land Development & Zoning Administration

| | | | |
|-----------------------------|-----------|--|-------------------|
| CLARK · FINEFROCK & SACKETT | | ENGINEERS · PLANNERS · SURVEYORS | |
| 11315 LOCKWOOD DRIVE | | SILVER SPRING, MARYLAND 20904 (301) 593-3400 | |
| DESIGNED | ILS | ROAD CONSTRUCTION PLANS | SCALE As SHOWN |
| DRAWN | KW | STORM DRAIN & PAVING DETAILS | DRAWING 2 OF 3 |
| CHECKED | ILS | SEWELLS ORCHARD | JOB NO. 83-076 |
| DATE | AUG. 1985 | SECTION 3 AREA 2 | FILE NO. 83-076-D |
| | | 6TH ELECTION DISTRICT | |
| | | HOWARD COUNTY, MARYLAND | |
| | | FOR: ORCHARD ASSOCIATES | |
| | | P.O. Box 919 | |
| | | Columbia, Md. 21044 | |



- CONSTRUCTION SPECIFICATIONS:**
- Bales shall be placed at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
 - Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
 - Bales shall be securely anchored in place by either 2 stakes or re-bars driven thru the bale. The 1st stake in each bale shall be driven through the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bales.
 - Inspection shall be frequent and repair/replacement shall be made promptly as needed.
 - Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)
NO SCALE

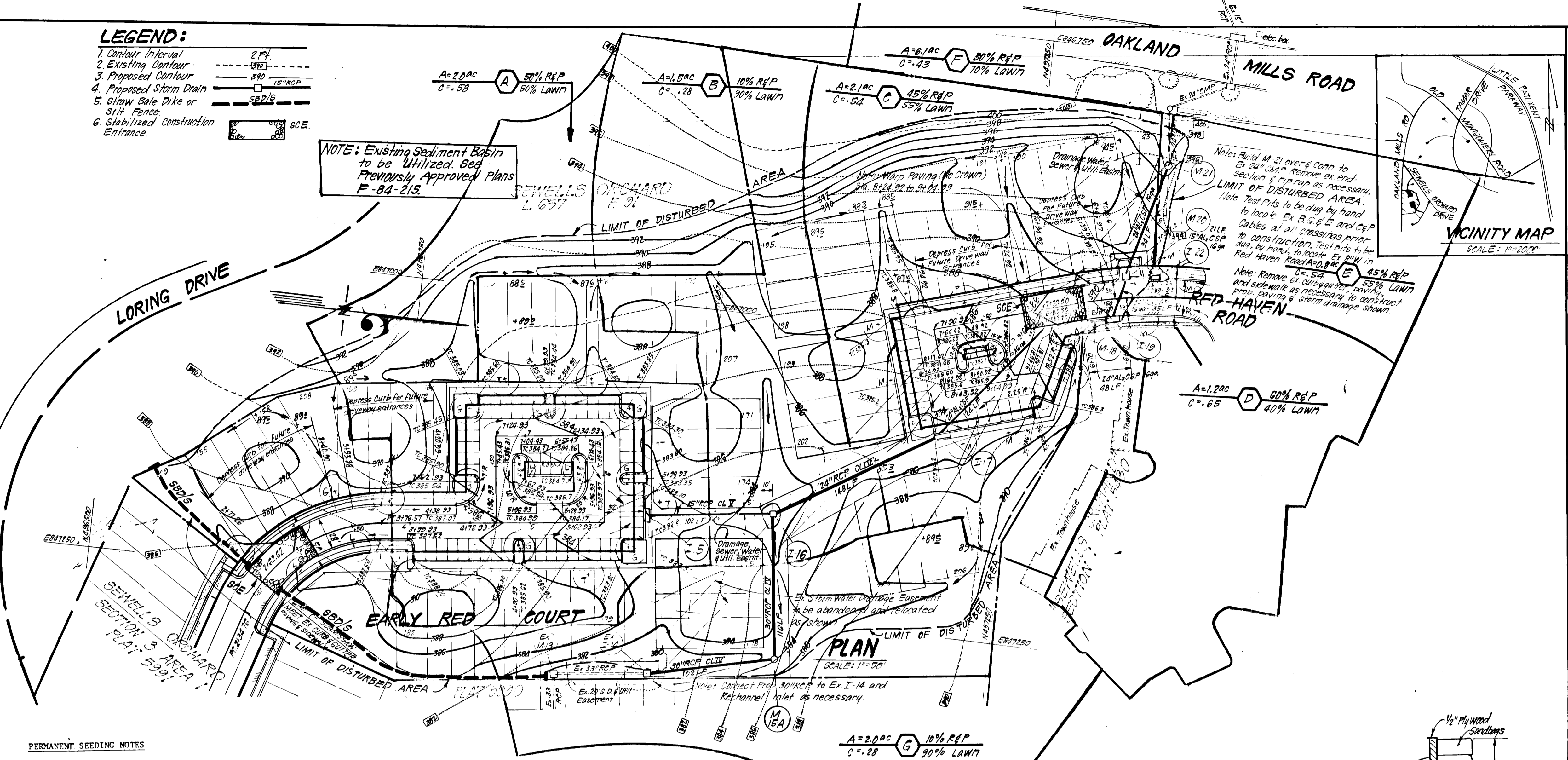


- CONSTRUCTION SPECIFICATIONS:**
- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
 - When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
 - Maintainance shall be performed as needed and material removed when "bulges" develop in silt fence.

SILT FENCE DETAIL (S)
NO SCALE

- LEGEND:**
- Contour Interval 2 Ft.
 - Existing Contour
 - Proposed Contour
 - Proposed Storm Drain
 - Straw Bale Dike or Silt Fence
 - Stabilized Construction Entrance

NOTE: Existing Sediment Basin to be Utilized. See Previously Approved Plans F-84-215.



PLAN
SCALE: 1"=50'

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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.
- 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.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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:

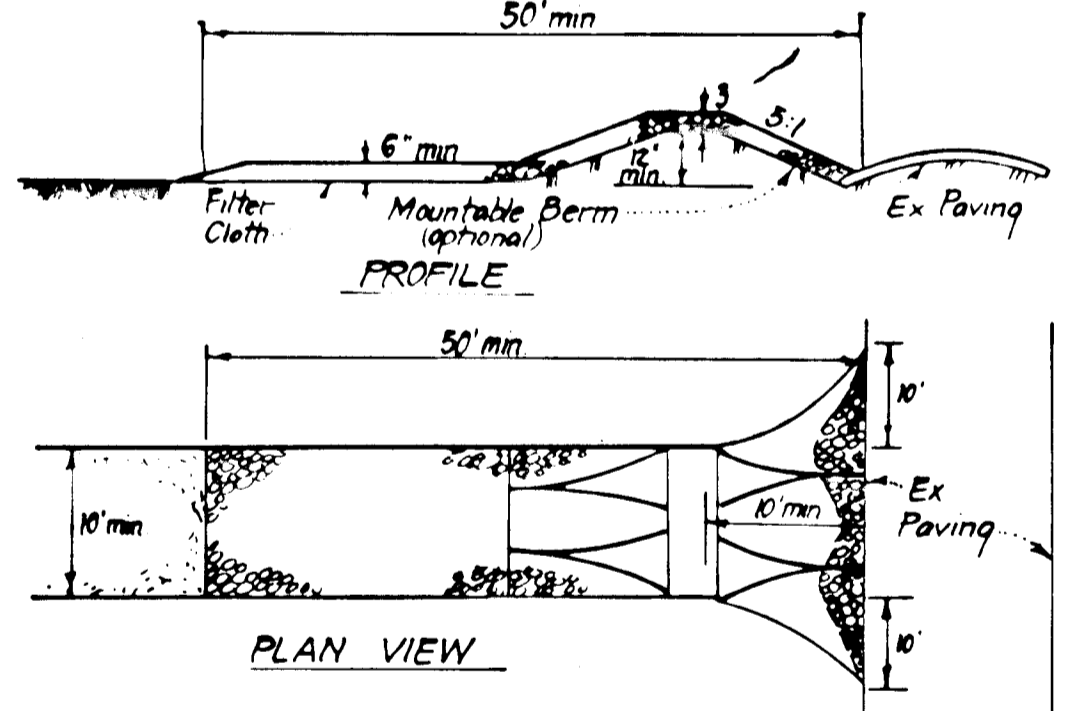
| | |
|------------------------------------|----------------|
| Total Area of Site | 6.2361 Acres |
| Area Disturbed | 5.8220 Acres |
| Area to be roofed or paved | 1.015 Acres |
| Area to be vegetatively stabilized | 4.805 Acres |
| Total Cut | 14,230 Cu. yds |
| Total Fill | 4,400 Cu. yds |
| Offsite waste/borrow area location | N/A |
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- 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.
- 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
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals 300 L.F.

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.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- Seeding -** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of 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.
- 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 24 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
- Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.
- Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



- CONSTRUCTION SPECIFICATIONS:**
- Stone size - Use 2" stone or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress 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 entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or blowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spoiled, dropped, 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 needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE

Reviewed for: Howard S.C.D. Name
and meets Technical Requirements
Signature: Stephen L. Hulm Date: 9-27-85
U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Signature: Stephen L. Hulm Date: 9/27/85

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: L. Emulige Date: 8-5-85

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: Nelson Clark Date: 8-5-85

CONSTRUCTION SEQUENCE

| | NO. OF DAYS |
|---|-------------|
| 1. Obtain grading permit. | 2 |
| 2. Install Sediment and Erosion Control measures. | 7 |
| 3. Construct Storm Drainage and Relocate Ex 8"W. | 30 |
| 4. Clear and Rough Grade Site. | 21 |
| 5. Construct Utilities. | 62 |
| 6. Fine grade and construct paving. | 62 |
| 7. Stabilize all other disturbed areas onsite. | 14 |
| 8. Upon approval of the HSCD and Sediment Control Inspector remove sediment and erosion control measures. | 2 |
| 9. Convert Ex. Sediment Basin to SWM Pond after all areas draining to it have been stabilized in accordance with previously approved plans F-84-215. Note: Sediment Basin not to be converted to SWM Pond without approval of HSCD and the Sediment Control Inspector. Storm Drainage System to be flushed prior to conversion to SWM Pond. | 14 |

APPROVED: DEPARTMENT OF PUBLIC WORKS:
Signature: [Signature] Date: 9-22-85
Chief, Bureau of Engineering
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING:
Signature: John W. Muehlenberg Date: 9-27-85
Chief, Division of Land Development & Zoning Administration

CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301)593-3400

| | | | |
|----------|---------|---|----------|
| DESIGNED | US | ROAD CONSTRUCTION PLANS | SCALE |
| DRAWN | US | SEDIMENT & EROSION CONTROL PLAN AND DRAINAGE AREA MAP | AS SHOWN |
| CHECKED | US | SEWELLS ORCHARD | 30F3 |
| DATE | AUG. 85 | SECTION 3 AREA 2 | JOB NO. |
| | | 6TH ELECTION DISTRICT | 83-076 |
| | | HOWARD COUNTY, MARYLAND | FILE NO. |
| | | FOR: ORCHARD ASSOCIATES | 83-076-D |
| | | P.O. Box 313 | |
| | | Columbia, Md 21044 | |

#850

7-14-88

F-86-24