ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

CHARLES J. CROVO SR. — 7/21/86

DEVELOPER'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 DEPARTMENT 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY."

RONALD B. CARTER — 7/21/86 DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE — 12-31-86 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 12-31-86 DATE

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES MUST BE NOTIFIED 24HRS. IN ADVANCE OF ANY CONSTRUCTION.
3. STORM DRAINAGE TRENCHES WITHIN ROAD RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE
4. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
5. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TELEPHONE 792-7272.
6. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION, CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1978 EDITION

APPROVED
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — 1-7-87 DATE

APPROVED
OFFICE OF PLANNING AND ZONING
AND ZONING ADMINISTRATION — 12-31-86 DATE

STREET LIGHT

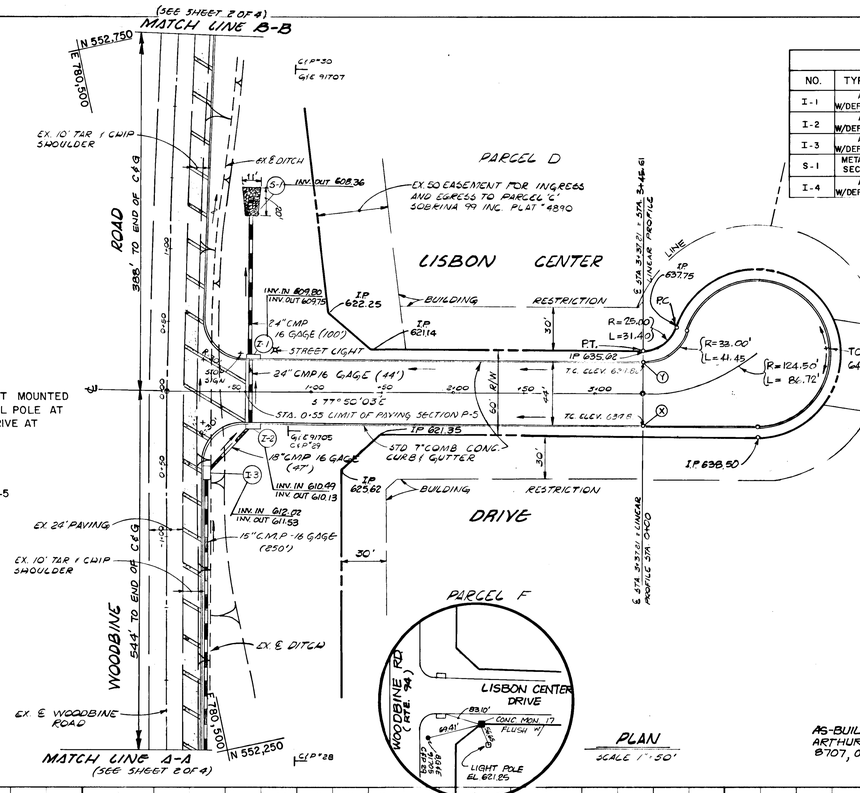
250-400-WATT MERCURY VAPOR LAMP PENDANT MOUNTED FIXTURE ON A 30-FOOT GALVANIZED STEEL POLE AT STATION 0+75 LEFT OF LISBON CENTER DRIVE AT THE N.E. CORNER OF WOODBINE ROAD.

- DENOTES PAVING SECTION P-5

BENCH MARKS

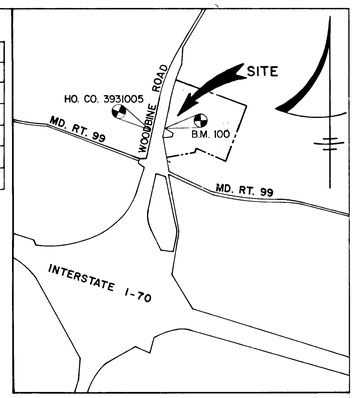
HO. CO. 3931005 — ELEV. 634.96
3/4" REINFORCING ROD 0.5' BELOW SURFACE 285' N. OF RT. 99 ALONG W. SIDE WOOBINE ROAD

B.M. 100 — ELEV. 634.46
IRON PIPE AT SOUTH PROP. COR. OF PARCEL D ALONG WOODBINE ROAD.



PLAN
SCALE 1"=50'

AS-BUILT SURVEY CERTIFIED BY ARTHUR E. MUESSE, MD. R.E. No. 8707, ON 2-25-88



VICINITY MAP
SCALE 1"=1200'

STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	℄ LOC.	REMARKS
I-1	A-10 W/DEFLECTORS	~~609.80~~ ~~609.87~~	~~609.75~~ ~~609.68~~	~~618.74~~ ~~615.79~~	~~0+60.75~~ ~~0+25.75~~	DRWGS. S.D. 4.02 & 4.83
I-2	A-10 W/DEFLECTORS	~~610.49~~ ~~610.74~~	~~610.13~~ ~~610.24~~	~~618.74~~ ~~615.79~~	~~0+60.75~~ ~~0+25.75~~	DRWGS. SD. 4.02 & 4.83
I-3	A-10 W/DEFLECTORS	~~612.02~~ ~~612.10~~	~~611.53~~ ~~611.85~~	~~618.74~~ ~~616.68~~	0+35.75	DRWG. SD. 4.02
S-1	METAL END SECTION	----	~~608.36~~ ~~608.87~~	~~610.57~~ 610.37	----	DRWG. SD. 5.61
I-4	A-10 W/DEFLECTORS	----	~~617.57~~ ~~618.00~~	~~622.92~~ 623.22	2+85.75	DRWG. SD. 4.02

No.	DATE	REVISIONS
1	3-17-87	CHANGE TO OFFSET CUL-DE-SAC

ROUTE 94 BUSINESS CENTER

PARCELS D-F AND LOTS 1 & 2
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

LISBON CENTER DRIVE PLAN, PROFILE AND STORM DRAIN PROFILE

OWNER AND DEVELOPER
ROUTE 94 LIMITED PARTNERSHIP
3525 ELLICOTT MILLS DRIVE
SUITE N
ELLICOTT CITY, MD. 21043

SCALE: AS SHOWN | DATE NOV 18, 1986 | DWG. NO. 1 OF 4
DES. A.M. VITUCCI | DRN. J. WEAVER | CHK. C. CROVO

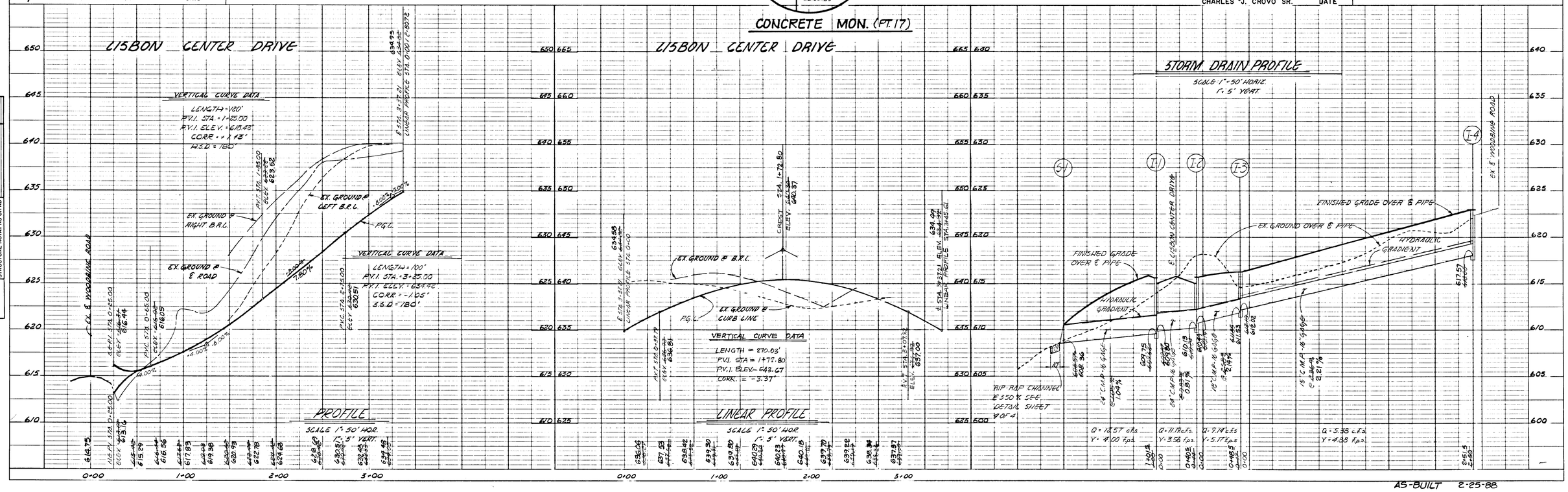
FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

STATE OF MARYLAND — CHARLES J. CROVO — No. 15208 — REGISTERED PROFESSIONAL ENGINEER

CHARLES J. CROVO SR. — 7/21/86 DATE

PLAN: SURVEYED, PLOTTED, PROFILE CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK NO.
BY | DATE

CONCRETE MON. (PT. 17)



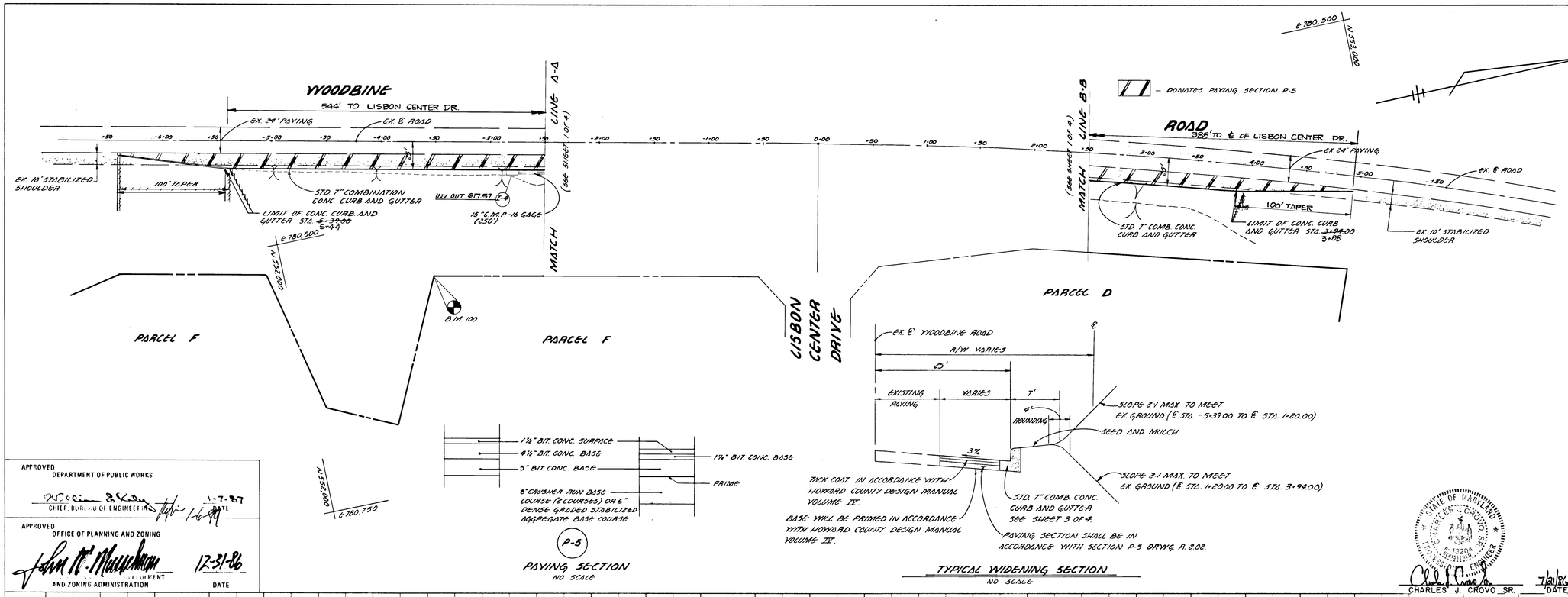
AS-BUILT 2-25-88

1246

F 87-64

PLAN | NOTE BOOK NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | ST. OF WAY CHECKED | BY | DATE

PROFILE | NOTE BOOK NO. | SURVEYED | PLOTTED | GRADES CHECKED | AS-BUILT | STRUCTURE NOTATING CHKD | BY | DATE



APPROVED
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 1-7-87

APPROVED
OFFICE OF PLANNING AND ZONING
DIRECTOR OF PLANNING AND ZONING ADMINISTRATION — DATE 12-31-86

ROUTE 94 BUSINESS CENTER

PARCELS D-F AND LOTS 1 & 2
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

WOODBINE ROAD
PLAN AND TYPICAL SECTION

OWNER AND DEVELOPER
ROUTE 94 LIMITED PARTNERSHIP
3525 ELLICOTT MILLS DRIVE
SUITE N
ELLICOTT CITY, MD. 21043

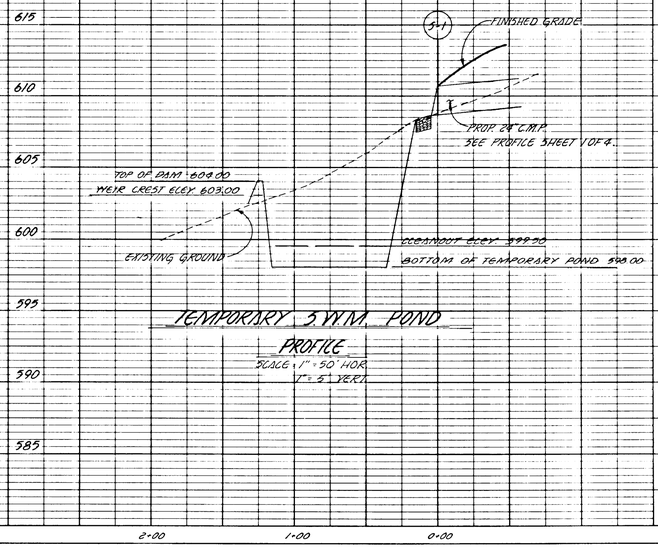
SCALE AS SHOWN	DATE NOV 18, 1986	DWG. NO. 2 OF 4
DES. A.M. VITUCCI	DRN. J. WEAVER	CHK. C. CROVO

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

STATE OF MARYLAND — CHARLES J. CROVO — No. 12026 — REGISTERED PROFESSIONAL ENGINEER

CHARLES J. CROVO SR. — 7/20/86 DATE

AS-BUILT SURVEY CERTIFIED BY ARTHUR E. MUEGGE III, MD. P.E. No. 8707, ON 2-29-88



TEMPORARY SWM POND
PROFILE
SCALE 1" = 50' HOR.
1" = 5' VERT.

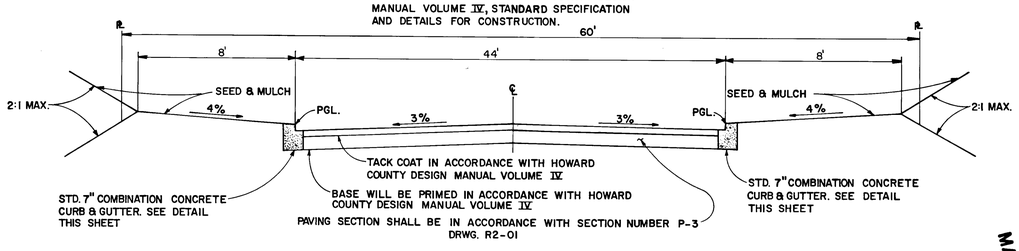
1246

AS-BUILT 2-29-88

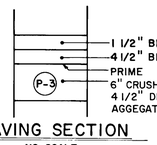
F-87-64

TYPICAL ROADWAY SECTION

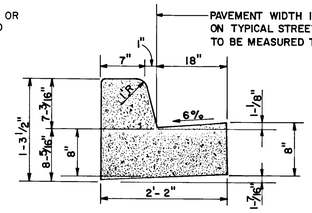
ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.



ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STA. LIMITS
LISBON CENTER DRIVE	CUL-DE-SAC	25 M.P.H.	B-2	0+00 TO 3+34.39



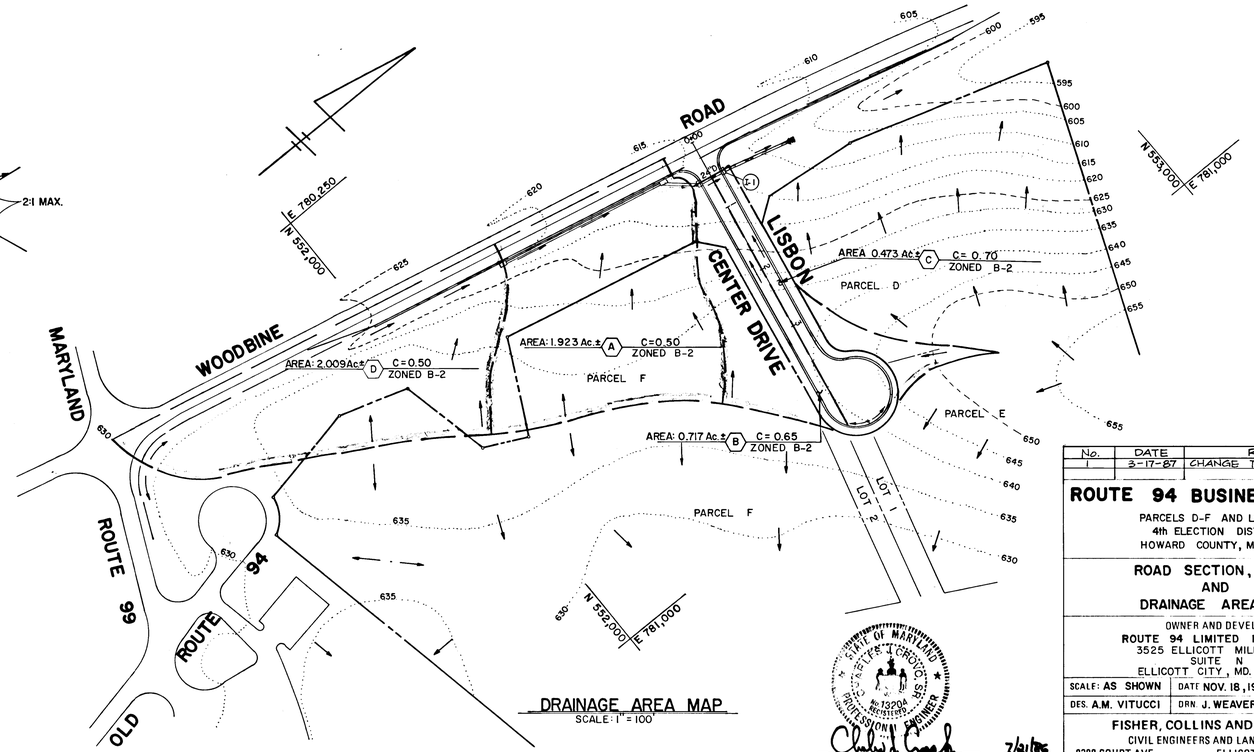
PAVING SECTION
NO SCALE



STANDARD 7" COMB. CONC. CURB & GUTTER
NO SCALE

APPROVED
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 1-7-87

APPROVED
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 12-31-86



DRAINAGE AREA MAP
SCALE: 1" = 100'

STATE OF MARYLAND — CHARLES J. CROVO SR. — No. 13206 — REGISTERED PROFESSIONAL ENGINEER

CHARLES J. CROVO SR. — DATE 7/21/87

No.	DATE	REVISIONS
1	3-17-87	CHANGE TO OFFSET CUL-DE-SAC

ROUTE 94 BUSINESS CENTER

PARCELS D-F AND LOTS 1 2
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ROAD SECTION, DETAILS, AND DRAINAGE AREA MAP

OWNER AND DEVELOPER
ROUTE 94 LIMITED PARTNERSHIP
3525 ELLICOTT MILLS DRIVE
SUITE N
ELLICOTT CITY, MD. 21043

SCALE: AS SHOWN	DATE NOV. 18, 1986	DWG. NO. 3 OF 4
DES. A.M. VITUCCI	DRN. J. WEAVER	CHK. C. CROVO

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

PLAN — SURVEYED, PLOTTED, DRAWING CHECKED, ALIGNMENT RT. OF WAY CHECKED, NOTE BOOK NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, B. M.'s NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK NO., BY, DATE

1246

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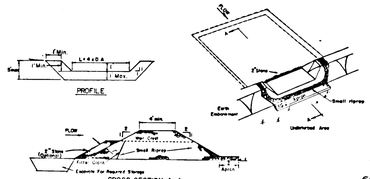
STONE OUTLET SEDIMENT TRAP 'S'



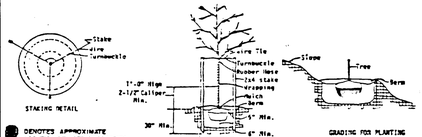
OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-'S'

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. 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 traversing 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 riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap on embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET,
SEDIMENT TRAP AND TEMPORARY S.W.M. POND DATA:

TOP DIMENSIONS 89'x42'
BOTTOM DIMENSIONS 81'x34'
DRAINAGE AREA : 30 ac ±
CAPACITY REQUIRED : 333 cu yds.
CAPACITY PROVIDED : 488 cu yds
DEPTH : 4.0 ft
SIDE SLOPES: 1:1
CLEANOUT ELEVATION: 599.5
WEIR CREST ELEV : 603.00
BOTTOM OF TRAP ELEV: 599.00



● DENOTES APPROXIMATE LOCATION OF ACER SACCHARUM (SUGAR MAPLE) 2½" CALIPER, PLANTED 40' ON CENTER.

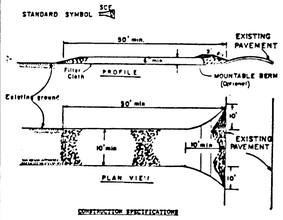
Note: Remove burlap from Top 1/3 of ball

TREE PLANTING DETAIL
NO SCALE

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS". SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

STABILIZED CONSTRUCTION ENTRANCE
not to scale

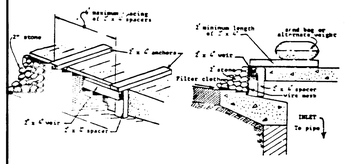
STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. 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.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or clean out of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - 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 trap, pond or device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

CURB INLET PROTECTION DETAIL



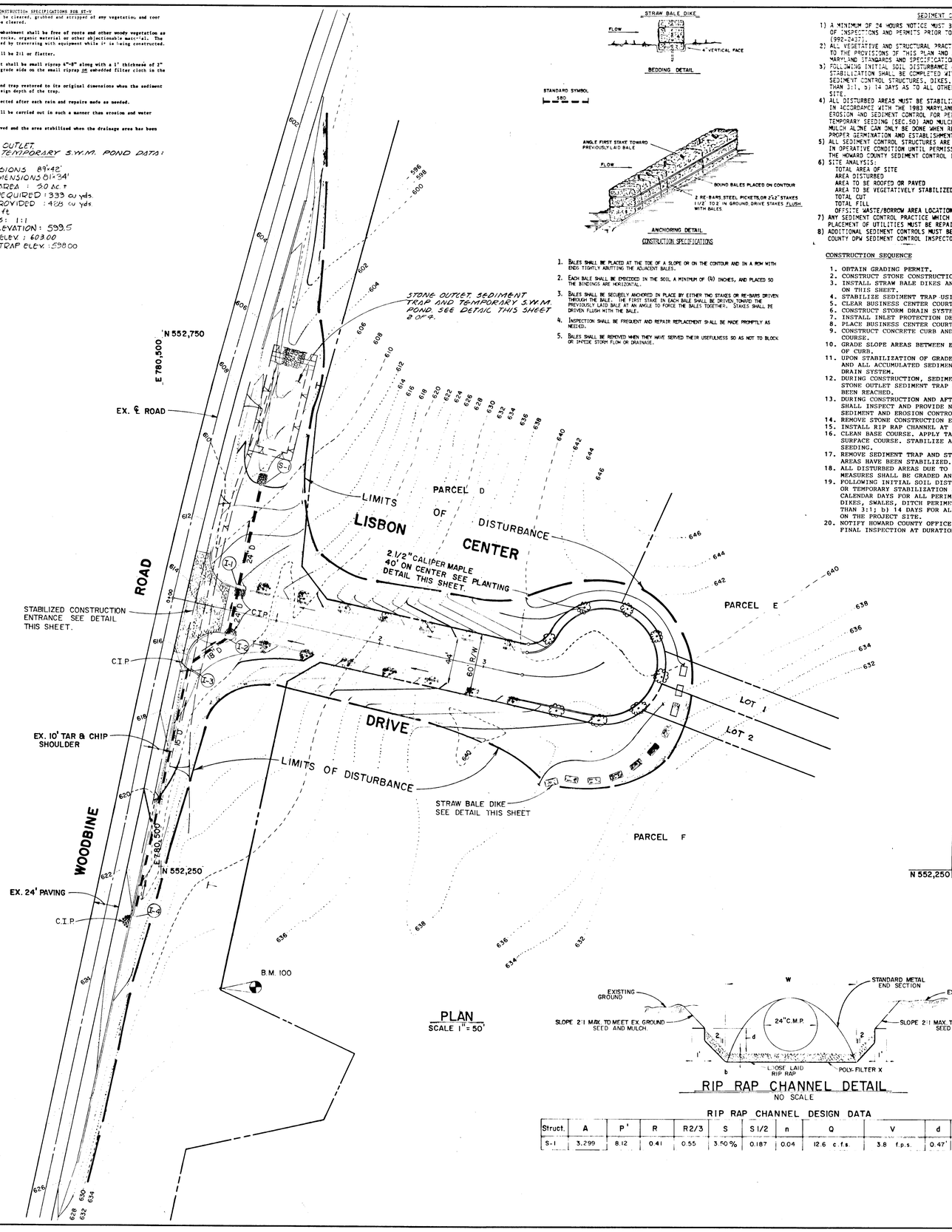
B. Curb Inlet Protection.

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 6" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form 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 around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

No.	DATE	REVISIONS
1	3-17-87	CHANGE TO OFFSET CUL-DE-SAC

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND 21043
TELEPHONE (301) 461-2855

12-4-86



PLAN
SCALE 1" = 50'

STRAW BALE DIKE

STANDARD SYMBOL
SBD

CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed at the toe of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of (4) inches, and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by either two stakes or re-bars driven through the bale. The first stake in each bale shall be driven toward the previously laid 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.

SEDIMENT CONTROL NOTES:

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2427).
2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) 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.
5) 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.
6) SITE ANALYSIS:

TOTAL AREA OF SITE	25.690	ACRES
AREA DISTURBED	1.837	ACRES
AREA TO BE ROOFED OR PAVED	0.494	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.343	ACRES
TOTAL CUT	------	CU.YDS.
TOTAL FILL	------	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	------	

7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. CONSTRUCT STONE CONSTRUCTION ENTRANCE.
3. INSTALL STRAW BALE DIKES AND SEDIMENT TRAP AS SHOWN ON THIS SHEET.
4. STABILIZE SEDIMENT TRAP USING TEMPORARY SEEDING.
5. CLEAR BUSINESS CENTER COURT.
6. CONSTRUCT STORM DRAIN SYSTEM FROM S-1 TO S-2.
7. INSTALL INLET PROTECTION DEVICES AT I-1 AND I-2.
8. PLACE BUSINESS CENTER COURT TO SUBGRADE.
9. CONSTRUCT CONCRETE CURB AND GUTTER AND LAY BASE COURSE.
10. GRADE SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB.
11. UPON STABILIZATION OF GRADED AREAS, INLETS SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
12. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE STONE OUTLET SEDIMENT TRAP WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.
13. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
14. REMOVE STONE CONSTRUCTION ENTRANCE.
15. INSTALL RIP RAP CHANNEL AT S-1.
16. CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSES AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
17. REMOVE SEDIMENT TRAP AND STRAW BALE DIKE? ONCE DISTURBED AREAS HAVE BEEN STABILIZED.
18. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
19. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
20. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION AT DURATION OF PROJECT.

RIP RAP CHANNEL DETAIL
NO SCALE

RIP RAP CHANNEL DESIGN DATA

Struct.	A	P'	R	R2/3	S	S1/2	n	Q	V	d	w	Rip Rap Size d50	dmax.	b
S-1	3.299	8.12	0.41	0.55	3.50%	0.187	0.04	12.6 c.f.s.	3.8 f.p.s.	0.47'	6'	6"	9"	14"

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 — DATE 7/8/86

DEVELOPER'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 DEPARTMENT 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."

Konrad P. Carter G.P. — 12-29-86
SIGNATURE OF DEVELOPER — DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE — 12-31-86 DATE

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

APPROVED: — 12-31-86 DATE
DISTRICT
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF ENGINEERING — 1-7-87 DATE

APPROVED: OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — 12-31-86 DATE

PERMANENT SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREA 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 SCHEDULE:

1) 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.).
2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LPS/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 80 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 1½ 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 REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

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 2½ 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 1½ 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.

OWNER AND DEVELOPER
ROUTE 94 LIMITED PARTNERSHIP
3525 ELLICOTT MILLS DRIVE
SUITE N
ELLICOTT CITY, MD. 21043

CHARLES J. CROVO SR. — 7/8/86 DATE

STEET TREE GRADING AND SEDIMENT CONTROL PLAN

ROUTE 94 BUSINESS CENTER

PARCELS D-F AND LOTS 1&2
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN SHEET 4 OF 4 JULY 18, 1986

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