

NOTE: PROVIDE BRICK BULKHEAD AND JOINT

- CASING PIPE

· 2A"& CASING

AT END OF CASING AS SHOWN ON HOWARD COUNTY STANDARD DETAIL 69.01

THICK STEEL CASING PIPE

STAINLESS STEEL CASING SPACERS

SEAL AND INSULATOR INC. OR EQUAL.

-24" A.S.T.M. C76 CLASS II, R.C.P. WITH RUBBER AND CONCRETE JOINTS OR 0.5"

CASCADE WATERWORKS MFG. CO.; PIPELINE

ANGLE FIRST STAKE-TOWARD PREVIOUSLY SOUND BALES PLACED ON CONTOUR -2-rebard Steel Pickets or 2"x 2" Stakes 142' to 2' in Ground Drive Stakes flush with Bales. ANCHORING DETAIL

STRAW BALE DIKE DETAIL

NOT TO SCALE

STRAW BALE DIKE

- 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 PLACED 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 CHALL BE DRIVEN FLUSH WITH THE BALE.
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR OR 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.

S.H.C. INVERT ELEVATIONS @ PROPERTY LINE ELEVATION STATION M#100 TO SM# 101 0+30 LT. 0+ 60 LT. MH# 101 TO 5MH# 102 0+60 LT

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROGION AND DEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT 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 AUTHORISED AGENTS AS ARE DEEMED NECESSARY."



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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

MANHOLE TABULATION CHART						
NO.	LOCATION	RIM ELEV.				
#100	WATER, SEWER FUTILITY EASEM'T. (0.5-10T#4)	167.20				
#101	20' SEWER & UTILITY CASEMIT. (LOT # 3)	168.58				
#102	20' SEWER FUTILITY EASEM'T. (LOT#2)	185.54				

- SET MH RIM FLUSH W/ PROP. FINISHED GRADE:

NOTE THE LENGTH OF OPEN WATER & SENIER MAIN TRENCH

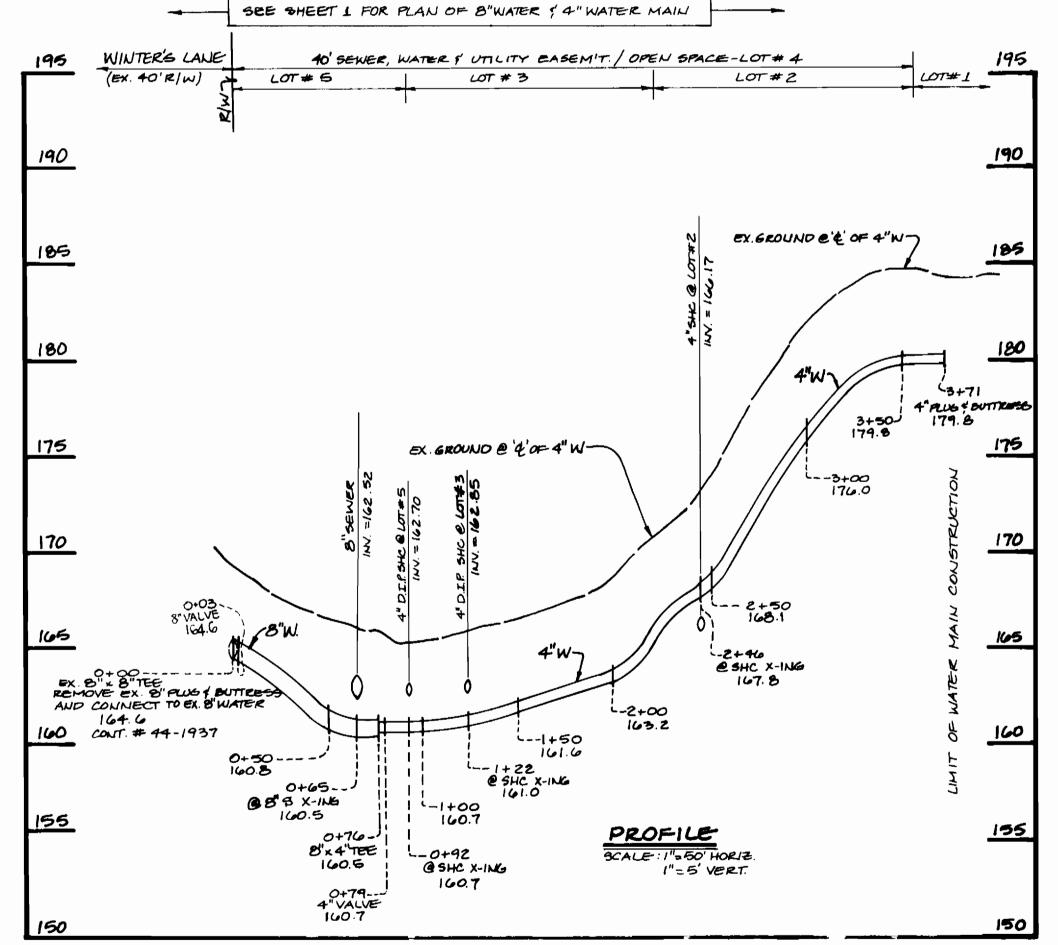
SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED

WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

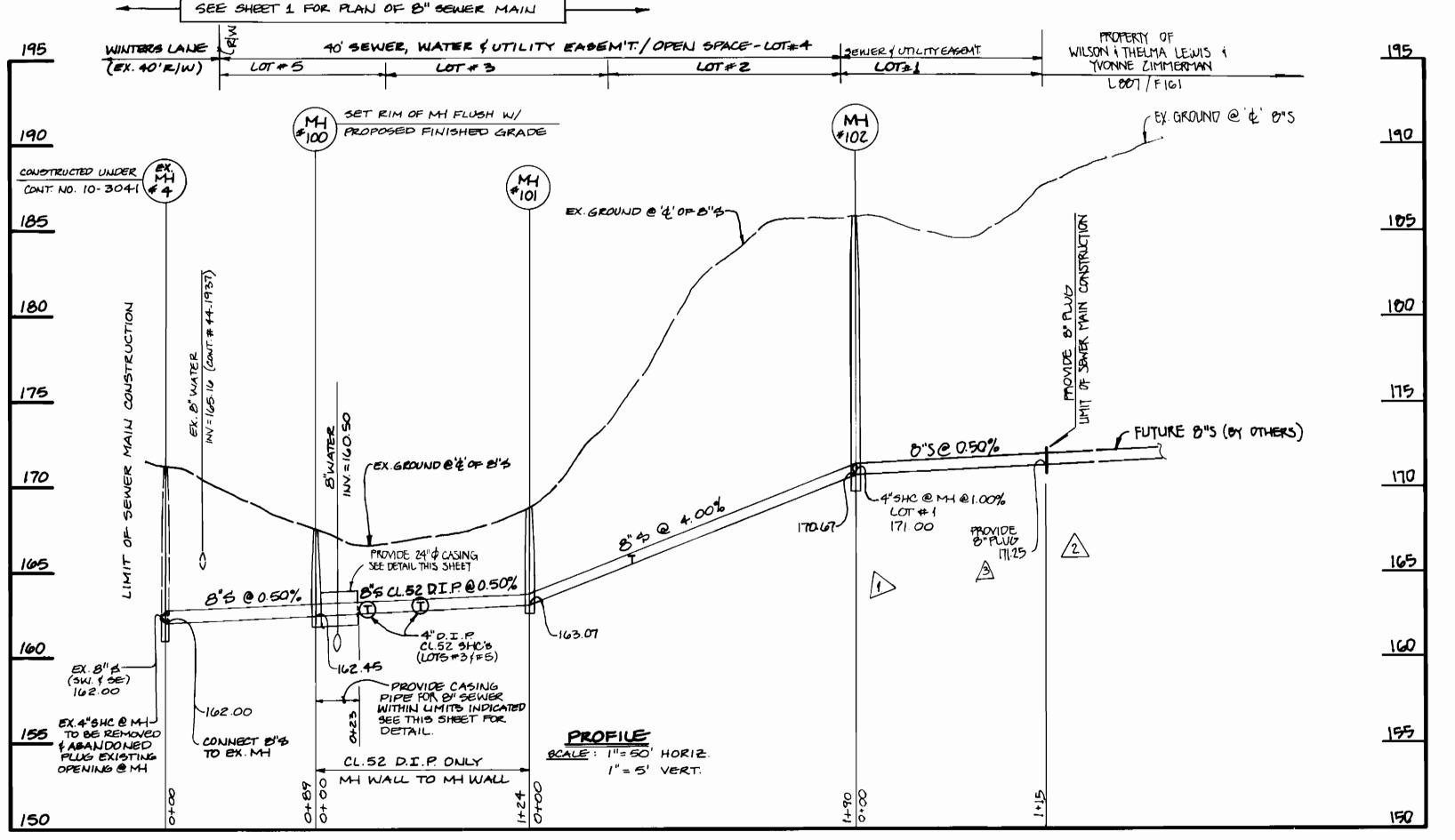
CASING DETAIL

FLOWABLE FILL MIX WITH MINIMUM COMPRESSIVE STRENGTH OF 100 PSI-

OUTSIDE OF BELL



8-INCH/4-INCH WATER MAIN EXTENSIONS



8-INCH SEWER MAIN EXTENSION

CONTRACT NO. 14-3260-D DENNIS PROPERTY LOTS I-5 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF ENGINEERING DATE

FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS SUITE 100, 9171 BALTIMORE NATIONAL PIKE

(410) 461-2855

ELLICOTT CITY, MARYLAND 21043

F.C. & C PELOCATED MH # 102 & PROVIDED SEWER EASEN'T, TO P#237 7/93 DES: M.S.V ADD MI 103 TO PROPILE & MH TABULATION CHART ELIMINATE MIFIOSE END OF ADDITIONAL BIS EXTENSION DRN: M.S.V. CHK : P.W.K. DATE: MARCH'93 BY NO. DATE 600'SCALE MAP NO 38 REVISION

WATER AND SEWER MAINS **PROFILES**

BLOCK NO. 14

DENNIS PROPERTY LOTS 1-5 CONTRACT NO. 14-3260-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

AS SHOWN SHEET 2 OF 3

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.

2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.

3. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE TRENCH.

4. IMMEDIATELY FOLLOWING BACKFILL OF THE WATER & SEWER MAIN TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS SHEET.

THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES AND PROVIDE ALL NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION.

6. ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

NOTE: THE LENGTH OF OPEN WATER SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY! WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN THE REQUIRED GRADING PERMIT
- 2. Install the required sediment and erosion control devices; as indicated on sheet 1 of 3.
- 3. CLEAR AND GRUB AS NECESSARY; ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER & SEWER MAINS. ONLY WITHIN THE DESIGNATED WATER, SEWER & UTILITY EASEMENTS.
- 4. <u>Note</u>: The Length of Open Water & Sewer Main Trench Shall be Limited to three (3) Pipe Lengths or that which Will be Backfilled and Stabilized within one working day, whichever is shorter.
- 5. BEGINNING AT BX. SEWER MANHOLE NO. 4 AND THE EX. 8"RUG & BUTTLESS (@ EX. 8" x 8" TEE); UP TO PROPOSED MANHOLE NO. 10Z AND THE PROPOSED 8" PLUG, AND THE PROPOSED 4" PLUS; EXCAVATE TRENCHES AND INSTALL WATER & SEWER MAINS AND APPURTENANCES, AND BACKFILL TRENCHES ACCORDINGLY. PROPOSED MH NO. 102 & PROPOSED B" & 4" PLUGS INDICATE LIMITS OF WATER & SEWER MAIN CONSTRUCTION THIS CONTRACT.
- G. STABILIZE, SEED & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
- T. FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION & SEDIMENT CONTROL DEVICES.

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENCES AND FERMITS PRIOR TO THE START OF ANY CONSTRUCTION (313-12455).

CONSTRUCTION (\$13-2455).

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 1963 MARYLAND STANDARDS AND SPECIFICATIONS.

FOR SOIL EROSION AND SEDIMENT SCHTROL.

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 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 ERGSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEG. 51) SOD (SEG. 54), TEMPORARY SEEDING (SEG. 50) AND MULCHING (SEG. 52), 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.

7) SITE ANALYSIS:

TOTAL AREA OF SITE (PENNIS PROPERTY)

AREA DISTURBED

AREA TO BE ROOFED OR PAVED

AREA TO BE VEGETATIVELY STABILIZED

TOTAL CUT (TRENCH EXCAVATION)

TOTAL FILL (TRENCH BACKFILL)

C37 CU.YDS.

TOTAL FILL (TRENCH BACKFILL)

OFFSITE WASTE/BORROW AREA LOCATION

NA CU.YOS.

B) 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 CONTROLS MUST BE PROVIDED. IF DEEMED NECESSARY BY THE HOWARD COUNTY DRY 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.

PERMANENT SEEDING NOTES:
APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTRUBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDSED 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 SCHEDULE.

1) PREFERRED - APPLY Z TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SO.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

BEFORE SEEDING

SOLFT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQLFT.)
BEFORE SEEDING.
HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING.
APPLY 400 LBS. PER 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQLFT.)

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQLFT.)
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 SO.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 WILL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OR 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 HIGHTER. USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS

AND RESECTIONS.

TEMPORARY SEEDING NOTES:

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURSED 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 2 1/2 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 SOO.

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.

ENGINEER'S CERTIFICATE

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IGNATURE OF ENGINEER

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SIGNATURE OF DEVELOPER

DATE

CONTRACT NO.14-3260-D
DENNIS PROPERTY
LOTS 1-5
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

HOWARD COUN

Come M. - Lun 5/17/93

RECTOR OF PUBLIC WORKS DATE

Solution 5-10-93

CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, LAND DEVELOPMENT DIVISION DATE

CHIEF, LAND DEVELOPMENT DIVISION

FISHER, COLLINS, AND CARTER, INC
CONSULTING ENGINEERS AND LAND SURVEYORS

CONSULTING ENGINEERS AND LAND SURVEYOR

SITH BALTIMORE NATIONAL PIKE JUITE 1002

ELLICOTT CITY, MARYLAND 21043

(410) 461-2855

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- 0	СНК: Р.W.K .												
LA FISHER	DATE:MARCH'93	ВҮ	NO.		REVISION								

SEDIMENT & EROSION
CONTROL NOTES & DETAILS

DATE 600'SCALE HAP NO 38 BLOCK NO. 14

HOWARD COUNTY, MARYLAND

DENNIS PROPERTY

LOTS I-5

CONTRACT NO. 14-3260-D

FIRST ELECTION DISTRICT

SCALE AS SHOWN

SHEET 3 OF 3