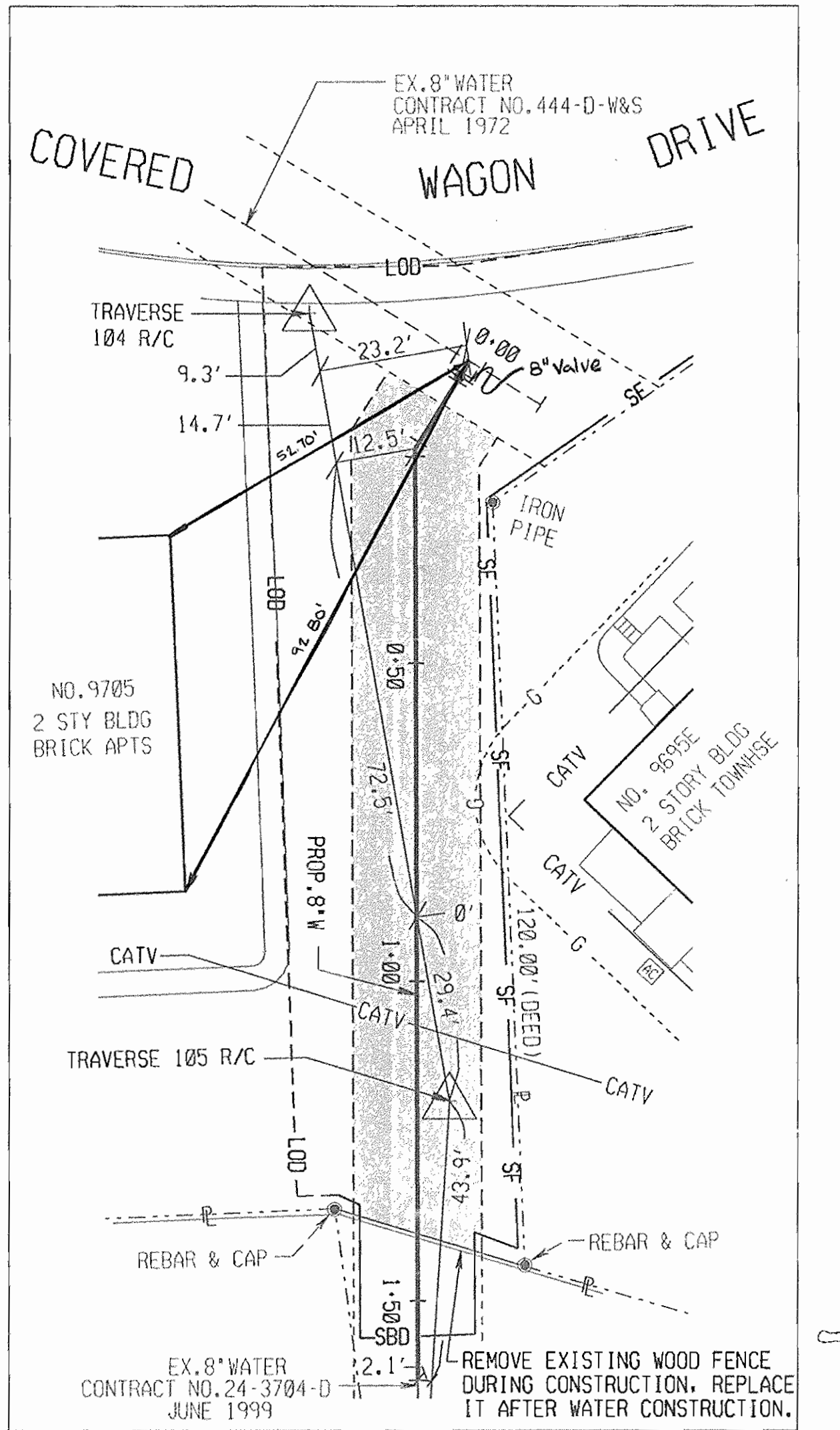


ITEM	ESTIMATED	QUANTITIES		
		ESTIMATED	AS-BUILT	SUPPLIER
8" D.I.P. WATER MAIN	162 L.F.	158 L.F.	CL 54 DIP	Griffin Pipe
8" TAPPING SLEEVE AND VALVE	1	1	B-B SS Tee V	JMC Indus.
8" 22.5" H.B.	1	1	M&J Sigma	Sigma Corp
8" 11.25" H.B.	1	1	M&J Sigma	Sigma Corp

* TAPPING SLEEVE AND VALVE FOR CAST IRON PIPE OR DUCTILE IRON PIPE SHALL BE OF A MECHANICAL JOINT TYPE MATERIAL, OR STAINLESS STEEL PRESSURE RATED WITH FLANGED OUTLET. ALL TAPPING SLEEVES SHALL BE FURNISHED WITH AN OUTLET FOR TESTING. THE CONTRACTOR SHALL PROVIDE FACILITIES FOR AND SHALL TEST THE TAPPING SLEEVE AND VALVE PRIOR TO MAKING TAP. MECHANICAL JOINT TYPE AS MANUFACTURED BY U.S. PIPE, MUELLER OR EQUAL. STAINLESS STEEL TYPE AS MANUFACTURED BY POWER SEAL, CASCADE WATER WORKS MFG. OR APPROVED EQUAL.

WATER RESTORATION SCHEDULE			
STATION	TO STATION	DISTANCE	MATERIAL
0+00	1+62	162 L.F. FROM TEE	SEEDING AND MULCHING



BM NO. 1 ELEV. 233.099
N 528.418.13
E 1,355,577.08

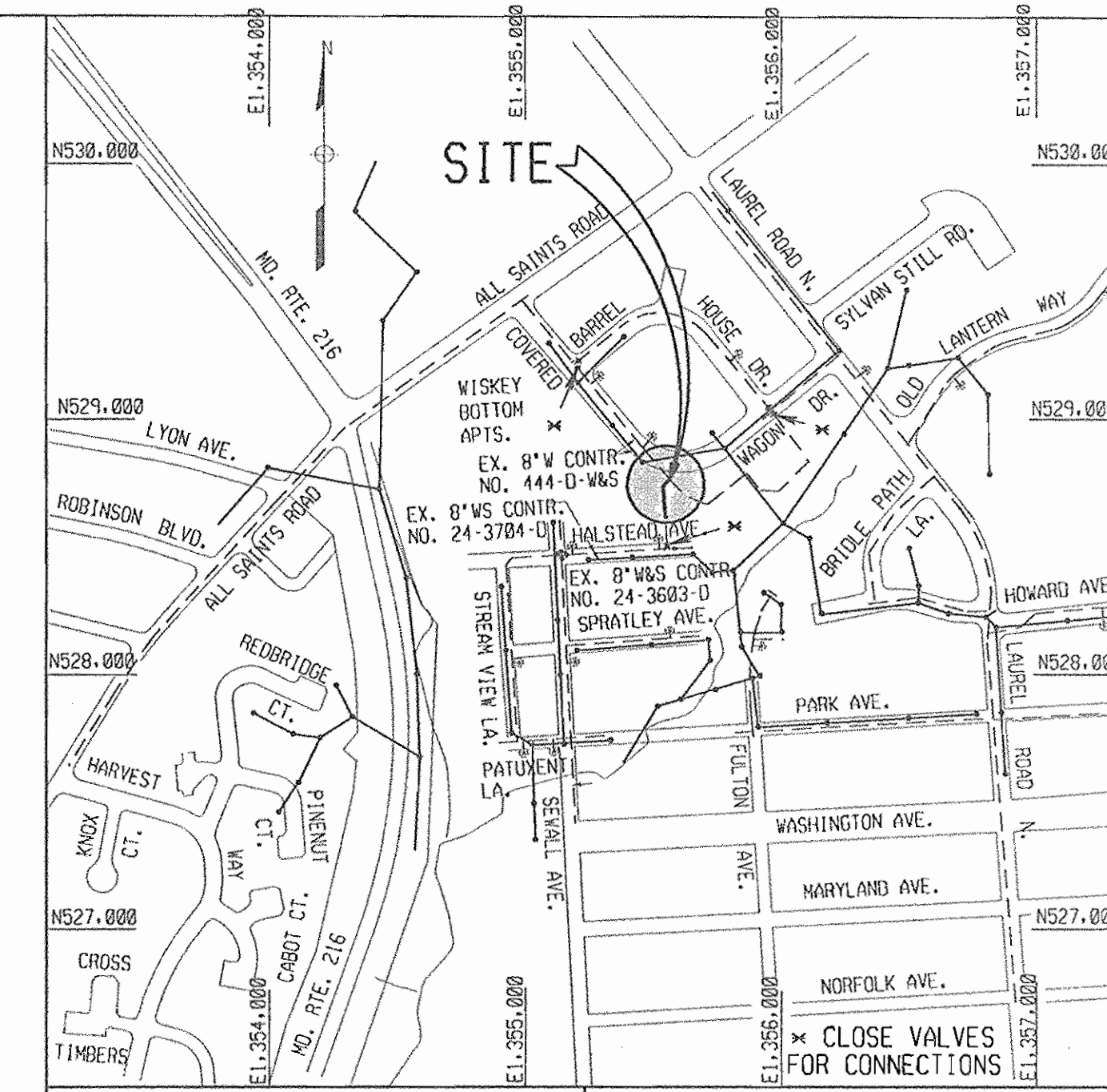
BM NO. 2 ELEV. 223.415
N 528,778.77
E 1,355,513.81

* CUT IN RIM OF WATER METER AT 9650 COVERED WAGON DRIVE.

* CUT @ ROADSIDE FLANGE BOLT OF FIRE HYDRANT BETWEEN NO. 9663 AND 9667 HALSTEAD AVE.

NEW	LEGEND	EXISTING
---	UTILITY EASEMENT LINE	---
---	PROPERTY LINE - R/W LINE	---
---	TRAFFIC, PROPERTY SIGN	---
---	UTILITY POLE & GUY WIRE	---
---	BANK/SLOPE	---
---	FENCE	---
---	TREE/TREE LINE/CONIFEROUS	---
---	HEDGE, BUSH	---
---	CONTOUR	---
---	PIPELINE CURVE P.I./ TRAVERSE P.I.	---
---	SEWER MANHOLE	---
---	WATER	---
---	SEWER CLEAN-OUT	---
---	WATER VALVE	---
---	WATER METER	---
---	FIRE HYDRANT	---
---	LIMITS OF DISTURBANCE	---
---	GAS	---
---	UNDERGROUND TELE. CABLE	---
---	TELE. PEDESTAL	---
---	TEST PIT	---
---	SOIL BORING	---
---	BENCHMARK	---
---	IRON PIN/IRON PIPE	---
---	CONCRETE MONUMENT	---
---	STONE	---
---	STORM DRAIN MANHOLE	---
---	YARD LAMP	---
---	CABLE TV	---
---	CABLE TV PEDESTAL	---
---	TRANSFORMER	---
---	AIR CONDITION	---
---	MAIL BOX	---

TRAVERSE CONTROL		
POINT	NORTH	EAST
104	528,707.62	1,355,557.90
105	528,585.09	1,355,586.71
106	528,386.54	1,355,585.50



WATER AND SEWER COUNTY CODE
WATER CODE: C 05
SEWER CODE: N/A
TEST GRADIENT: 550

TYPE OF BUILDING: NA
NUMBER OF LOTS: NA
NO. OF SEWER HOUSE CONNECTIONS: 0
NO. OF WATER HOUSE CONNECTIONS: 0
DRAINAGE AREA: LITTLE PATUXENT

- ### GENERAL NOTES
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC SURVEY CONTROL WHICH IS BASED UPON THE MARYLAND PLANE COORDINATE SYSTEM (NAD 83) (91) HOWARD COUNTY MONUMENTS NOS. 47H2 AND 47H4 WERE USED FOR THIS PROJECT.
 - ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM NAVD 80
 - ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON PLANS.
 - CLEAR ALL UTILITIES BY A MINIMUM OF 12" CLEAR ALL POLES BY 5'-0" MINIMUM, OR TUNNEL AS REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES, IF REQUIRED.
 - FOR DETAILS NOT SHOWN ON DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION), THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
 - EXISTING UTILITIES IN THE VICINITY OF PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES..... 410-313-4900
 - BOE (CONTRACTOR SERVICES)..... 410-850-4620
 - BCE (UNDERGROUND DAMAGE CONTROL)..... 410-291-3634
 - MISS UTILITY..... 1-800-257-7777
 - AT&T..... 301-865-3077
 - COLONIAL PIPELINE CO..... 410-549-4120
 - VERIZON..... 1-800-446-5266
 - COMCAST CABLEVISION..... 410-931-4600
 - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE.
 - CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 - NO WETLAND EXISTS WITHIN THE LIMITS OF THIS CONTRACT.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER VALVES ON THE EXISTING WATER SYSTEM. THE CONTRACTOR SHALL CONTACT HOWARD COUNTY DPW BUREAU OF UTILITIES IF OPERATION OF VALVES IS NEEDED.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-7450 AT LEAST FIVE DAYS BEFORE OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER AND SEWER MAIN OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH THE DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.
 - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL DEVICES AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 - THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY WITHMAN REQUARDT AND ASSOCIATES IN APRIL 2001.
 - EXISTING WATER IS PUBLIC, CONTRACTS NOS. 444-D-W&S AND 24-3704-D PROPOSED WATER IS PUBLIC, CONTRACT NO. 44-3981. DRAINAGE AREA IS LITTLE PATUXENT.
 - THE EXISTING WATER ZONE IS 400. THE PROPOSED WATER ZONE IS 400
 - ALL WATER MAINS SHALL BE SPECIAL THICKNESS CLASS 52 D.I.P. UNLESS OTHERWISE NOTED.
 - ALL WATER MAINS SHALL HAVE A MINIMUM 3'-6" COVER UNLESS OTHERWISE NOTED.
 - ALL VALVES ADJACENT TO TEES, SHALL BE STRAPPED TO TEES.
 - ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH TO 12-INCH FOR WATER MAINS.
 - ALL FITTINGS ON WATER MAINS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE COUNTY STANDARD DETAIL UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS.
 - ALL PIPELINE TRENCHES ON THIS PROJECT SHALL BE BACKFILLED ACCORDING TO SECTION 1000.03.19 OF THE STANDARD SPECIFICATIONS INCLUDING THE FOLLOWING REQUIREMENTS TO FULL TRENCH COMPACTION WITHIN THE COUNTY ROAD RIGHT OF WAY, USING ASHOTO 1-180A, COMPACT SOILS TO 95% IN THE TOP TWO FEET OF THE TRENCH BELOW FINAL SUBGRADE AND 90% FROM TWO FEET BELOW FINAL SUBGRADE TO THE TOP OF THE PIPE BEDDING.
 - CONTRACTOR TO PROTECT EXISTING PROPERTY MARKERS FROM BEING DISTURBED. IF A DISTURBANCE OCCURS, REPLACEMENT MUST BE DONE BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR EXPENSE.
 - CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD POWER LINES. IF THE OPERATION BECOMES DANGEROUS HE SHALL CONTACT THE POWER COMPANY TO TEMPORARILY SHUT-OFF SERVICE.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works
4/12/07

Chief, Bureau of Engineering
4/10/07

Chief, Utility Design Division
4-10-07

PREPARED BY
WR&A
WHITMAN, REQUARDT AND ASSOCIATES, LLP.
2315 ST. PAUL ST.
BALTIMORE, MD. 21218
410-235-3450

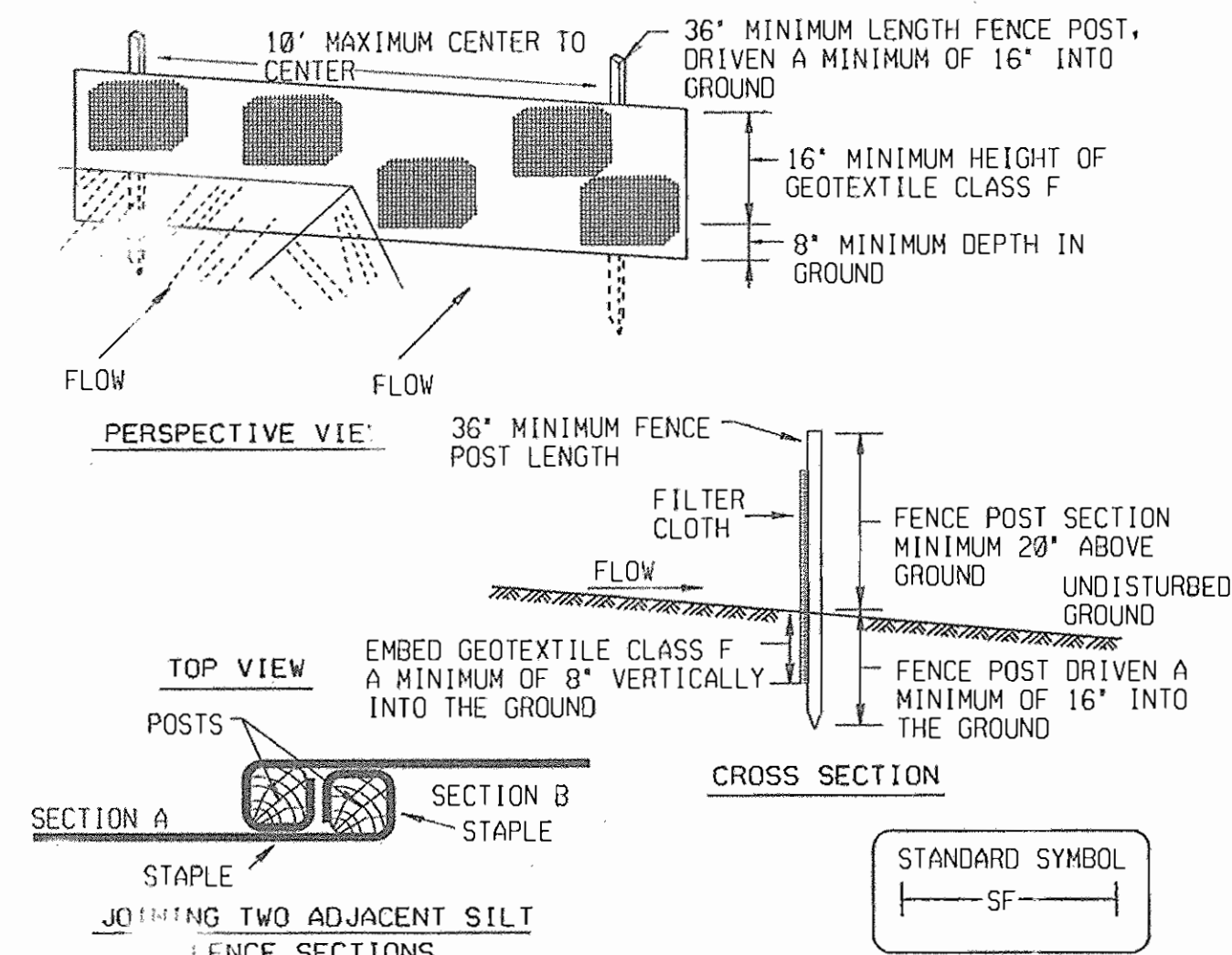
DES: EJM					
DRN: EJM					
CHK: WRD					
DATE: 03-26-02	BY NO.	REVISION	DATE	600' SCALE MAP NO.	50

PLAN AND PROFILE

HALSTEAD AVENUE WATER MAIN LOOP
CAPITAL PROJECT W-8235
CONTRACT NO. 44-3981
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 2

DETAIL 22 - SILT FENCE



- CONSTRUCTION SPECIFICATIONS**
- FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1" X 1" SQUARE (MINIMUM) CUT, OR 1" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
 - GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL /12" MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322
 - WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
 - SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE THE FOLLOWING:
 TOTAL DISTURBED AREA: 6,500 SQ. FT., OR 0.15 AC. +/-
 THE AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE THE FOLLOWING:
 TOTAL 110 CU. YDS. CUT AND 110 CU. YDS. FILL

JAMES A. AVIRETT JR. DATE
 (NOTE: THESE QUANTITIES ARE APPROXIMATE AND SHALL NOT BE USED BY THE CONTRACTOR FOR BIDDING PURPOSES).

REQUIRED SEQUENCE OF CONSTRUCTION

- OBTAIN THE REQUIRED GRADING PERMIT. (7 DAYS)
- NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK @ (1-800-257-7777). NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK @ 410-313-1870 (2 DAYS).
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS PER THESE DRAWINGS. (2 DAYS)
- THE CONTRACTOR TO INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL DEVICES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS. (DURATION OF PROJECT)
- EXCAVATE TRENCHES, CONSTRUCT PIPELINES AS SHOWN ON THE CONSTRUCTION DRAWINGS, KEEPING ALL CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF DISTURBANCE. ALL TREES SHALL BE PRESERVED AND PROTECTED UNLESS THEY DIRECTLY INTERFERE WITH SEWER AND WATER CONSTRUCTION. (10 DAYS)
- FINE GRADE ALL AREAS DISTURBED BY PIPELINE CONSTRUCTION AND STABILIZE ACCORDING TO RESTORATION SCHEDULES. (2 DAYS)
- FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE REMAINING DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH. (3 DAYS)

SEDIMENT AND EROSION CONTROL NOTES

- ALL EROSION /SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION IN ASSOCIATION WITH THE NATIONAL RESOURCES CONSERVATION SERVICE AND THE STATE SOIL CONSERVATION COMMITTEE (REFERENCED AS THE 94 STANDARDS AND SPEC'S).
- AREAS THAT HAVE BEEN CLEARED AND/OR GRADED, BUT WILL NOT BE CONSTRUCTED ON OR PERMANENTLY VEGETATED FOR MORE THAN 14 DAYS (7 DAYS FOR STEEP SLOPES) MUST BE STABILIZED WITH MULCH OR TEMPORARY STABILIZATION. ANY AREAS THAT ARE IN TEMPORARY VEGETATION FOR OVER ONE YEAR WILL NEED TO BE PERMANENTLY VEGETATED.
- FOR SPECIFICATIONS ON PERMANENT OR TEMPORARY STABILIZATION SEE SECTION G-20 OF THE 1994 STANDARDS AND SPECIFICATIONS.
- MULCHING CAN ONLY BE USED ON DISTURBED AREAS AS A TEMPORARY COVER WHERE VEGETATION IS NOT FEASIBLE OR WHERE SEEDING GERMINATION CANNOT BE COMPLETED BECAUSE OF WEATHER CONDITIONS. FOR SPECIFICATIONS SEE G-20 SEC. 1- F, G, & H.
- FOR SPECIFICATIONS ON THE STABILIZATION OF CUT AND FILL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL, SEE G-20 SEC. 1, I & J.
- THE REQUIRED SEQUENCE OF CONSTRUCTION MUST BE FOLLOWED DURING SITE DEVELOPMENT. ANY CHANGES IN THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE SOIL CONSERVATION DISTRICT.
- ANY REVISIONS TO THE SEDIMENT CONTROL PLAN, NOT COVERED UNDER THE LIST OF PLAN MODIFICATIONS THAT CAN BE APPROVED BY THE SEDIMENT CONTROL INSPECTOR, NEED TO BE SUBMITTED TO THE SOIL CONSERVATION DISTRICT FOR APPROVAL.
- NO PROPOSED SLOPE SHALL BE GREATER THAN 2:1.
- ALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED ONCE A WEEK AND AFTER EACH RAINFALL AND WILL BE REPAIRED, AS NEEDED, SO THAT THE STRUCTURE MEETS THE MINIMUM SPECIFICATIONS AS SHOWN IN THE 94 STANDARDS AND SPEC'S.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT AND EROSION CONTROL MEASURES UNTIL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED.
- THE DISTRICT APPROVAL FOR THIS SEDIMENT CONTROL PLAN IS GOOD FOR 2 YEARS. AT THE END OF 2 YEARS, IF CONSTRUCTION OF THE PLAN HAS NOT STARTED, THE PLAN WILL NEED TO BE RESUBMITTED TO THE SOIL CONSERVATION DISTRICT FOR REVIEW AND RE-APPROVAL. ANY PLANS THAT ARE CURRENTLY UNDER CONSTRUCTION AFTER 2 YEARS MAY BE REQUIRED TO BE RESUBMITTED TO THE SOIL CONSERVATION DISTRICT BY THE SEDIMENT CONTROL INSPECTOR.

TEMPORARY SEEDING NOTES

SCOPE: PLANTING SHORT TERM (NO MORE THAN 1 YEAR) VEGETATION TO TEMPORARILY STABILIZE ANY AREAS WHERE SOIL DISTURBANCE HAS OCCURRED, UNTIL THE AREA CAN BE PERMANENTLY STABILIZED WITH VEGETATIVE OR NON-VEGETATIVE PRACTICES.
 STANDARDS: THE FOLLOWING NOTES SHALL CONFORM TO THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY THE MARYLAND DEPARTMENT OF ENVIRONMENT- WATER MANAGEMENT ADMINISTRATION, THE NATIONAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.
 THE SEED BED SHALL BE PREPARED BY LOOSENING THE SOIL TO A DEPTH OF 3 TO 5 INCHES AND INCORPORATING THE LIME AND FERTILIZER INTO THIS LOOSENED LAYER OF SOIL. SEE G-20 SEC. 1- C.
 FERTILIZER SHALL CONSIST OF A MIXTURE OF 10-10-10 AND BE APPLIED AT A RATE OF 600 LB PER ACRE (15LB PER 1000 SQ. FT.) AND WILL MEET THE REQUIREMENTS IN G-20 SEC. 1- B.
 LIME SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE (100 LB PER 1000 SQ. FT.) AND SHALL MEET THE REQUIREMENTS IN G-20 SEC. 1- B.
 SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY THE TYPE AND RATE OF SEED USED. THE SEED MUST MEET THE REQUIREMENTS IN G-20 SEC. 1- C.
 MULCHING WILL BE APPLIED IMMEDIATELY AFTER SEEDING AND WILL NEED TO MEET THE REQUIREMENTS IN G-20 SEC. 1- F, G, & H.
 SEEDING MIXTURE SHALL BE SELECTED FROM OR WILL BE EQUAL TO THOSE ON TABLE 26.

TEMPORARY SEEDING SUMMARY

NO. 1 SPECIES	RATE (LB/AC)	DATES	DEPTHS
RYE	140	2/1-4/30 8/15-11/30	1'-2"

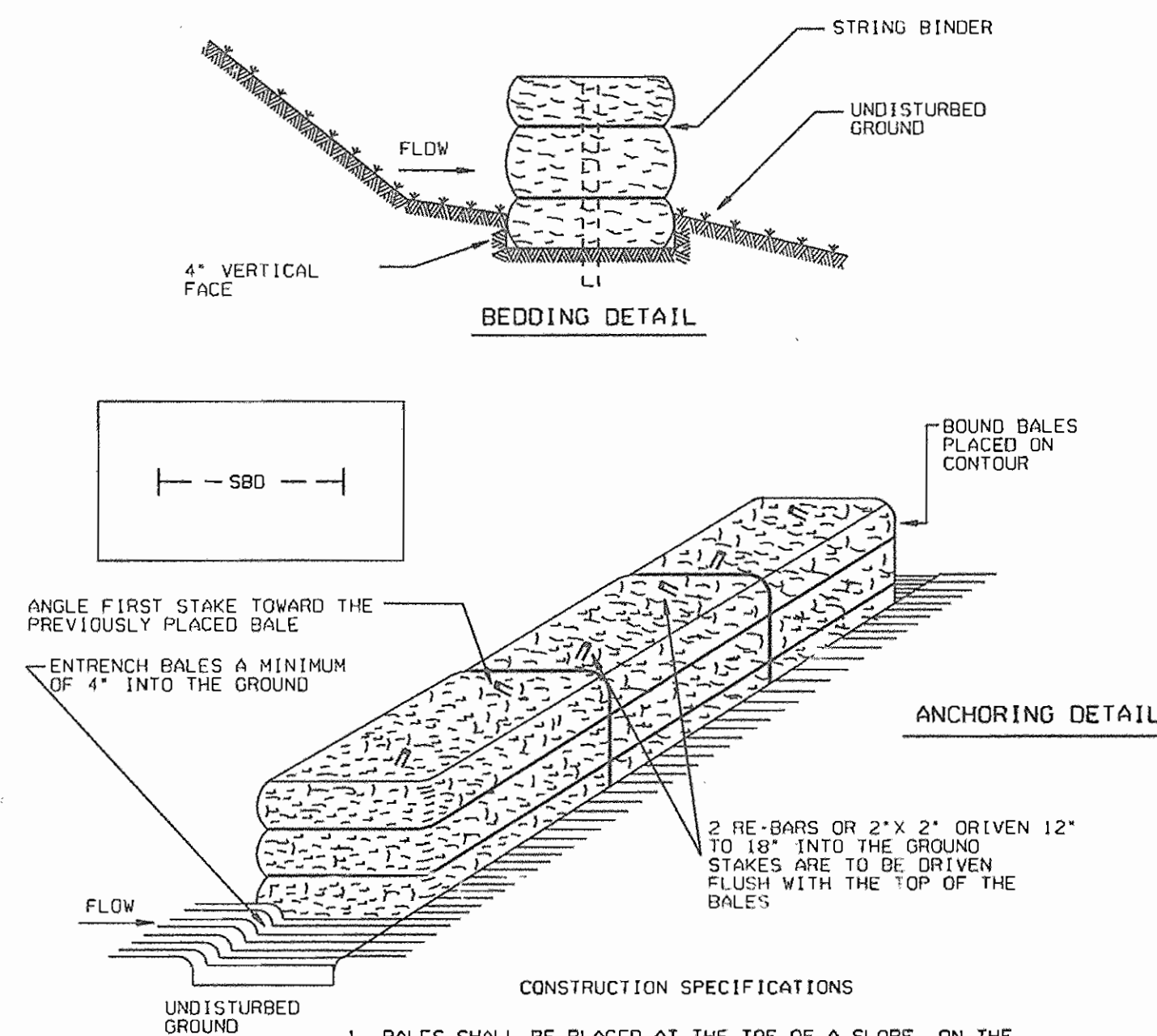
**WORK ZONE TRAFFIC CONTROL PLAN
 GENERAL NOTES**

- ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, SECTION 107, THE MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) BOOK OF STANDARDS, THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND THE MARYLAND SUPPLEMENT TO THE MUTCD.
- ALL SIGNS SHALL CONFORM TO THE LATEST VERSION OF MSHA'S STANDARD SIGN BOOK AND FHWA'S MUTCD.
- ALL EXISTING TRAFFIC SIGNS IN CONFLICT WITH THIS WORK ZONE TRAFFIC CONTROL PLANS AND/OR TEMPORARY TRAFFIC SIGNS NOT IN USE DURING A SPECIFIC STAGE OF CONSTRUCTION SHALL BE COVERED.
- VEHICULAR ACCESS TO ALL SIDE STREETS AND DRIVEWAYS SHALL BE MAINTAINED THROUGHOUT THE WORK ZONE USING FLAGGERS PER MSHA STD. NO. MD 104.32-02 (SEE COPY IN SPECIAL PROVISIONS) OR AS DIRECTED BY THE ENGINEER.
- DURING NON-WORKING HOURS, UTILITY EXCAVATIONS ACROSS/ ALONG TRAFFIC LANES (INCLUDING SIDE STREETS AND DRIVEWAYS) SHALL BE BACKFILLED OR PLATED PER MSHA STD. NOS. 104.09-01 THROUGH MD 104.92, WITH W8-1 "BUMP" AND/OR W95-5(1)" STEEL PLATES" SIGNS INSTALLED IN ADVANCE OF THE PATCH OR PLATE(S). (SEE SPECIAL PROVISIONS FOR COPIES OF MSHA STANDARD DETAILS.)

PERMANENT SEEDING NOTES

SCOPE: PLANTING PERMANENT, LONG LIVED VEGETATIVE COVER ON GRADED AND/OR CLEARED AREAS AND AREAS THAT HAVE BEEN IN TEMPORARY VEGETATION FOR MORE THAN 1 YEAR.
 STANDARDS: THE FOLLOWING NOTES SHALL CONFORM TO THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY THE MARYLAND DEPARTMENT OF ENVIRONMENT- WATER MANAGEMENT ADMINISTRATION, THE NATIONAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.
 THE SEED BED SHALL BE PREPARED BY LOOSENING THE SOIL TO A DEPTH OF 3 TO 5 INCHES AND INCORPORATING THE LIME AND FERTILIZER INTO THIS LOOSENED LAYER OF SOIL. SEE G-20 SEC. 1- C.
 FOR SITES OF 5AC. OR LESS OF DISTURBANCE, THE FOLLOWING FERTILIZER AND LIME RATES SHALL APPLY.
 FERTILIZER SHALL CONSIST OF A MIXTURE OF 10-20-20 AND BE APPLIED AT THE FOLLOWING RATES: N-90 LB PER ACRE (2 LB PER 1000 SQ. FT.) P205- 175LB PER ACRE (4 LB PER 1000 SQ. FT.) K20-175 LB PER ACRE (4LB PER 1000 SQ. FT.). FERTILIZER SHALL MEET THE REQUIREMENTS IN G-20 SEC. 1- B.
 LIME SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE (100 LB PER 1000 SQ. FT.) AND SHALL MEET THE REQUIREMENTS IN G-20 SEC. 1- B.
 SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY THE TYPE AND RATE OF SEED USED. THE SEED MUST MEET THE REQUIREMENTS IN G-20 SEC. 1- C.
 MULCHING WILL BE APPLIED IMMEDIATELY AFTER SEEDING AND WILL NEED TO MEET THE REQUIREMENTS IN G-20 SEC. 1- F, G, & H.
 REFER TO G-20 SEC. 1- E FOR METHODS OF SEEDING SPECIFICATIONS.
 REFER TO G-20 SEC. 4 FOR SOD SPECIFICATIONS.
 REFER TO G-20 SEC. 5 FOR TURFGRASS ESTABLISHMENT SPECIFICATIONS
 SEEDING MIXTURE SHALL BE SELECTED FROM OR WILL BE EQUAL TO THOSE ON TABLE 25.
PERMANENT SEEDING SUMMARY
 FERTILIZER MIXTURE AND APPLICATION RATES
 N-90 LB PER ACRE P205 175 LB PER ACRE K20 175 LB PER ACRE
 LIME APPLICATION RATE
 SEED MIXTURE HARDINESS ZONE 7A (G-20 FIGURE 5)
APPLICATION SEEDING SEEDING
 MIX NO. 1 SPECIES RATE (LB/AC) DATES DEPTHS
 150 3/15-6/1 1'-1/2"
 8/1-10/1

STRAW BALE DIKE



CONSTRUCTION SPECIFICATIONS

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE, ON THE CONTOUR, AND IN A ROW WITH THE ENDS OF EACH BALE TIGHTLY ADJUTING THE ADJACENT BALES.
- EACH BALE SHALL BE ENTRENCHED IN THE SOIL A MINIMUM OF 4' AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE 12" TO 18" INTO THE GROUND. 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 TOP OF THE BALE.
- STRAW BALE DIKES SHALL BE INSPECTED FREQUENTLY AND AFTER EACH RAIN EVENT AND MAINTENANCE PERFORMED AS NECESSARY.
- ALL BALES SHALL BE REMOVED WHEN THE SITE HAS BEEN STABILIZED. THE TRENCH WHERE THE BALES WERE LOCATED SHALL BE GRADED FLUSH AND STABILIZED.

BY THE DEVELOPER:

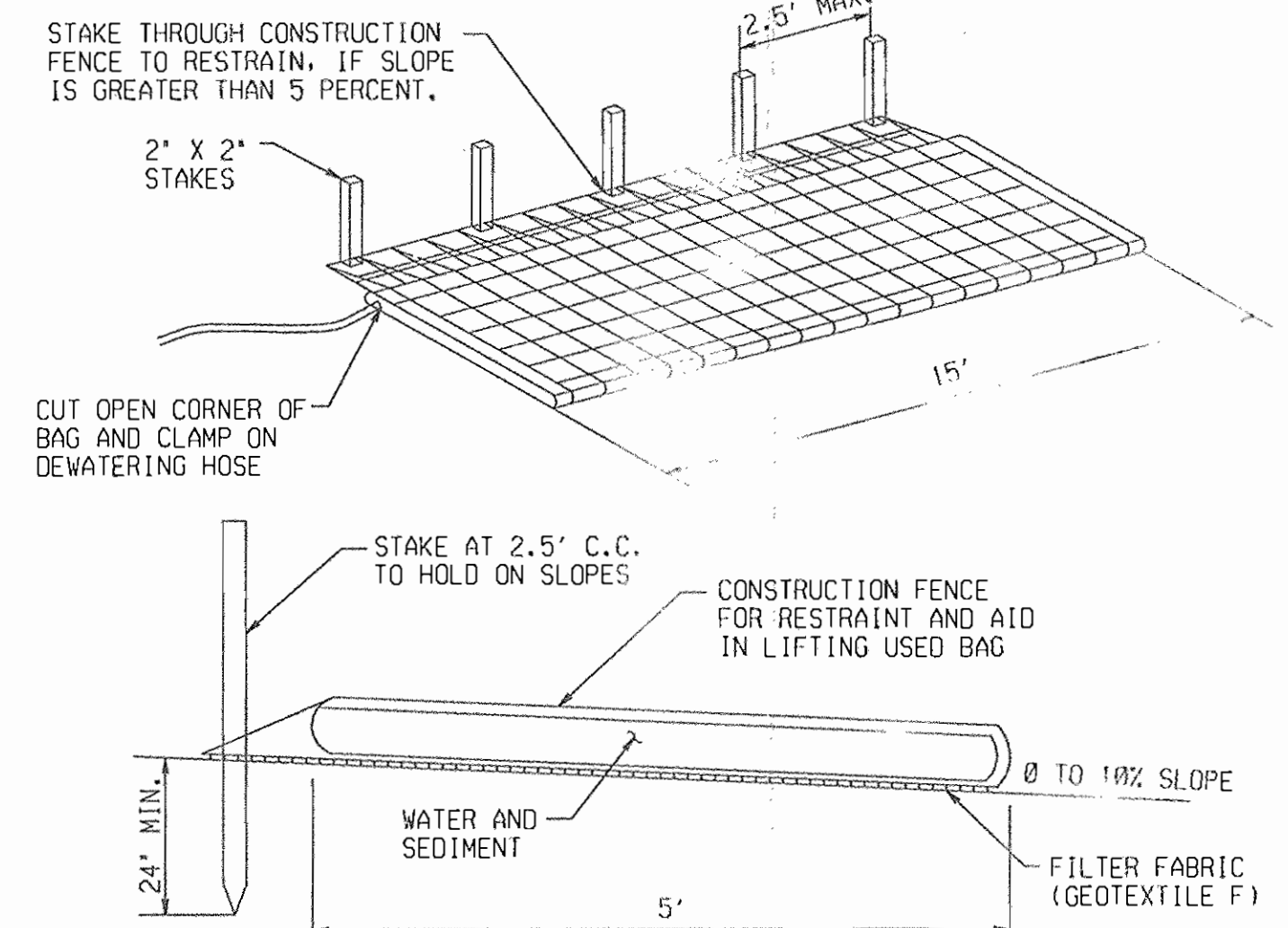
"I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Paul J. Sepsom 4/10/07 DATE

BY THE ENGINEER:

"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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Dennis J. Hanson PE. NO. 24178 4/1/07 DATE



NOTES:

- FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
- WIDTH AND LENGTH SHALL BE AS SHOWN.
- THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
- FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
- DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.
- FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL. FT. /MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

FILTER BAG

TEMPORARY EROSION CONTROL MEASURE (FB)

SEDIMENT CONTROL LEGEND

- SF— SILT FENCE
- SSF— SUPER SILT FENCE
- LOD --- LOD LIMIT OF DISTURBANCE
- UTILITY CROSSING
- SCB STABILIZED CONSTRUCTION ENTRANCE
- SBD STRAW BALE DIKE
- FB FILTER BAG

DEVELOPER

PLAT NO. 22/8
 "WHISKEY BOTTOM APARTMENTS"

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Meyer 6/26/07 DATE
 HOWARD NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 6/26/07 DATE
 HOWARD S.C.D.

SC-1

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

Paul J. Sepsom 4/10/07 DATE
 CHIEF, BUREAU OF ENGINEERING

John R. Robertson 4-10-07 DATE
 CHIEF, UTILITY DESIGN DIVISION

John R. Robertson 4/12/07 DATE
 CHIEF, BUREAU OF UTILITIES

PREPARED BY: **WR&A**
 WHITMAN, REQUARDT AND ASSOCIATES, LLP.
 2315 ST. PAUL ST.
 BALTIMORE, MD. 21218
 410-235-3450

DES: EJM
 DRN: EJM
 CHK: WRD
 DATE: 03-25-02

BY	NO.	REVISION	DATE

SEDIMENT CONTROL
 NOTES AND DETAILS

HALSTEAD AVENUE WATER MAIN LOOP
 CAPITAL PROJECT W-8235
 CONTRACT NO. 44-3981
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2