

# CONTRACT NO. 30-1757-D

## MONTPELIER RESEARCH PARK

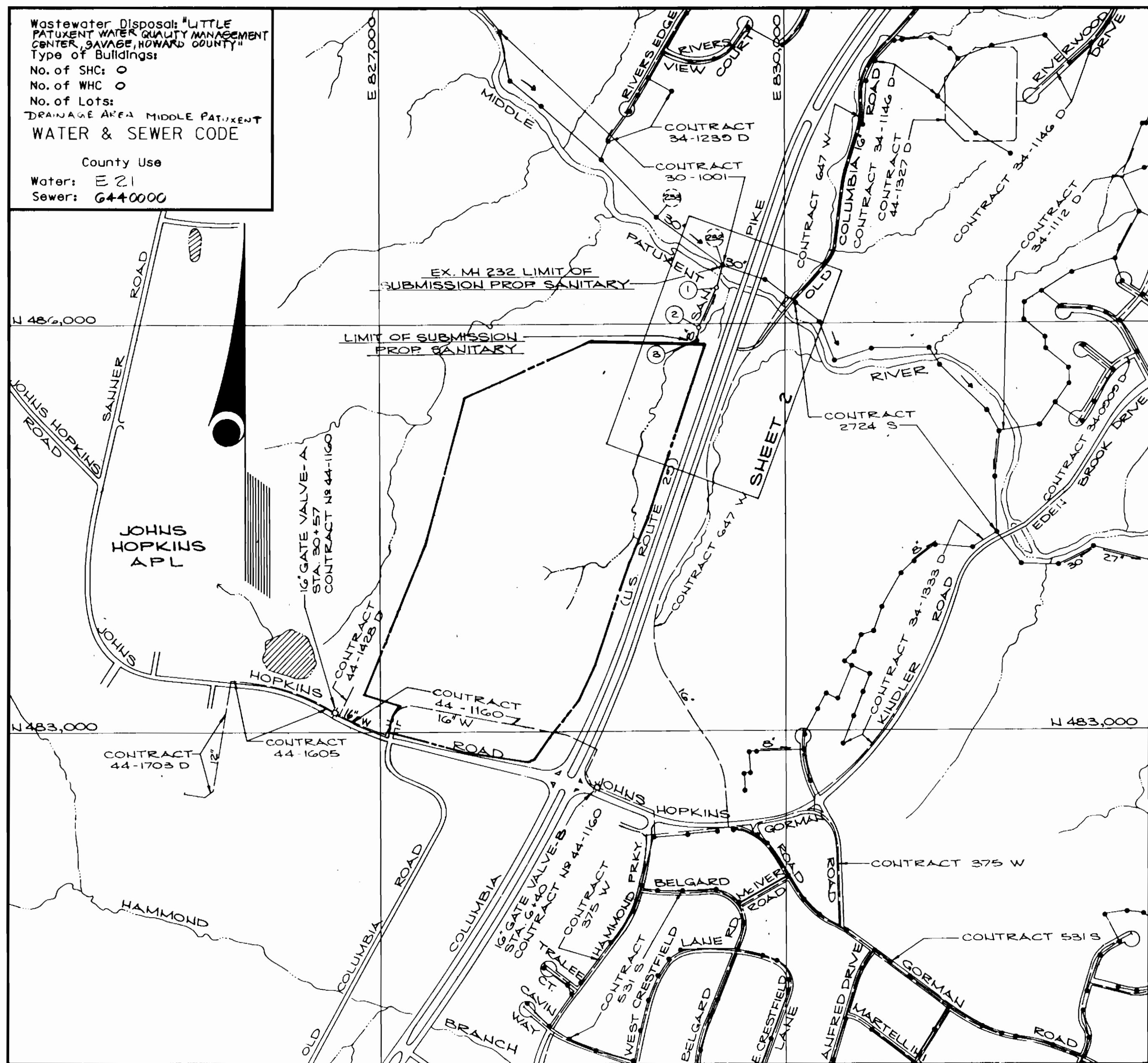
### 8" SANITARY SEWER

## HOWARD COUNTY, MARYLAND

# DEPT. OF PUBLIC WORKS

- 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.
  - ALL HORIZONTAL CONTROLS ARE BASED ON THE MARYLAND STATE PLANE COORDINATES SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINTS 213904 AND 213905.
  - ALL VERTICAL CONTROLS ARE BASED ON HOWARD COUNTY BENCH MARKS NO. 213904 ELEVATION 407.980 & 2139005 ELEVATION 375.434.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
  - FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
  - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED VIA AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 

STATE HIGHWAY ADMINISTRATION	531-5533
BGA&E CO. CONTRACTOR SERVICES	830-4620
BGA&E CO. UNDER GROUND DAMAGE CONTROL	787-9668
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	795-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES	313-4900
  - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
  - 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.
  - ALL SEWER MAINS SHALL BE D.I.P., RCP, VCPX, CSPX, RCCP AND P.V.C. UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
  - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
  - FORCE MAINS SHALL BE D.I.P. ONLY.
  - MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
  - ALL MANHOLES HAVING A DEPTH OF 18 FT. OR GREATER SHALL BE CONSTRUCTED WITH AN INTERMEDIATE LANDING AS SHOWN ON HOWARD COUNTY STANDARD DETAIL G-5.15.
  - FOR SANITARY MANHOLES DEEPER THAN 24', SEE HOWARD COUNTY STANDARD DETAIL G-5.11.
  - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVERS, STANDARD DETAIL G-5.52. WHERE WATER TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - "FULL TRENCH COMPACTION" REQUIRED FOR ENTIRE LIMITS OF THIS PROJECT.
  - REFER TO "MARYLAND'S GUIDELINES TO WATERWAY CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
  - INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST, THROUGH MAY 31ST, INCLUSIVE.
  - BORING LOCATIONS ARE SHOWN THUS - NOTES CONTAINING THE RESULTS OF THE BORINGS ARE INCLUDED ON THE DRAWINGS.
  - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION ON COUNTY ROADS FOR LAYING WATERSEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.



QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" D.I.P.	445 L.F.	445 D.I.P.	24" DIA. ATLANTIC	ATLANTIC
12" D.I.P.	153 L.F.	153 D.I.P.	24" DIA. ATLANTIC	ATLANTIC
SAN. MANHOLES	41 V.P.	41 V.P.	24" DIA. ATLANTIC	ATLANTIC
NAME OF UTILITY CONTRACTOR: _____				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: _____				

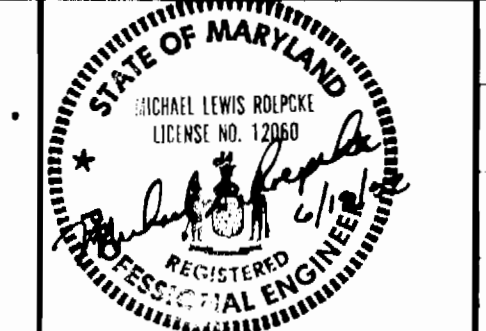
Wastewater Disposal: LITTLE PATUXENT WATER QUALITY MANAGEMENT CENTER, SAVERE, HOWARD COUNTY  
 Type of Buildings:  
 No. of SHC: 0  
 No. of WHC: 0  
 No. of Lots:  
 DRAINAGE AREA: MIDDLE PATUXENT  
**WATER & SEWER CODE**  
 County Use  
 Water: E 21  
 Sewer: G 44 0000

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT  
*John M. Helm* 10/1/92  
 SIGNATURE DATE  
 U.S. SOIL CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John R. Roberts* 10/1/92  
 HOWARD S.C.D. DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
*James P. Helm* 10/5/92  
 DIRECTOR OF PUBLIC WORKS DATE  
*Robert Beaman* 9-25-92  
 CHIEF - BUREAU OF UTILITIES DATE

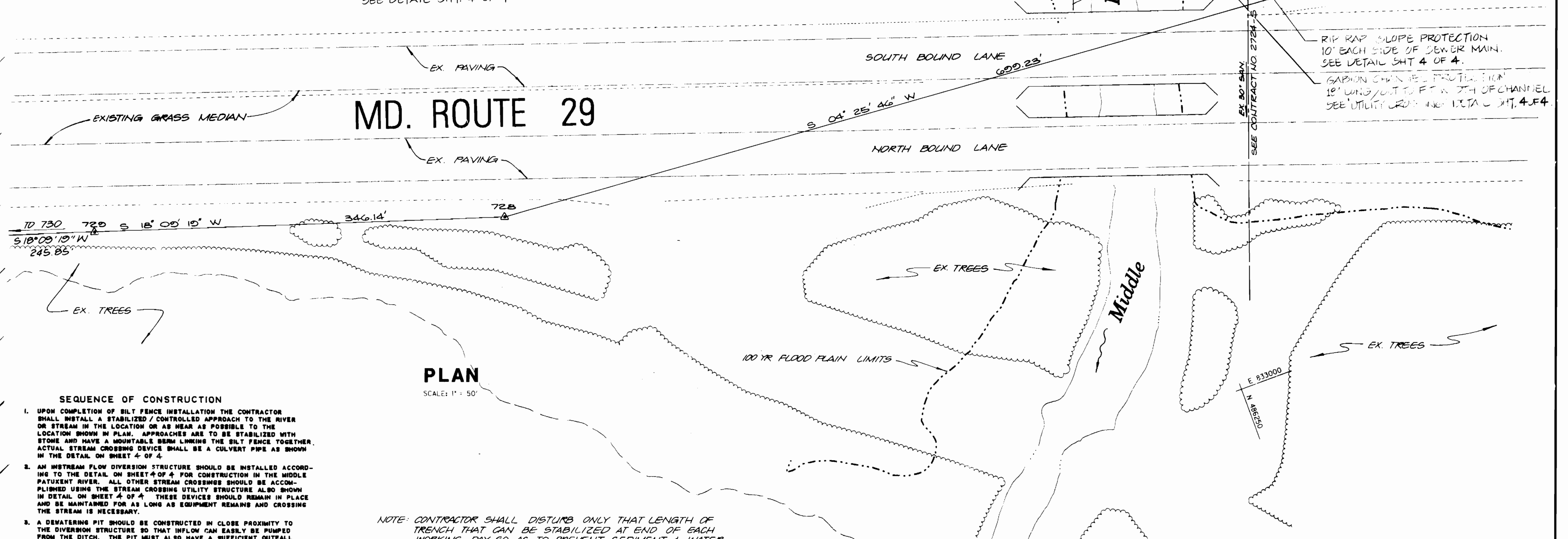
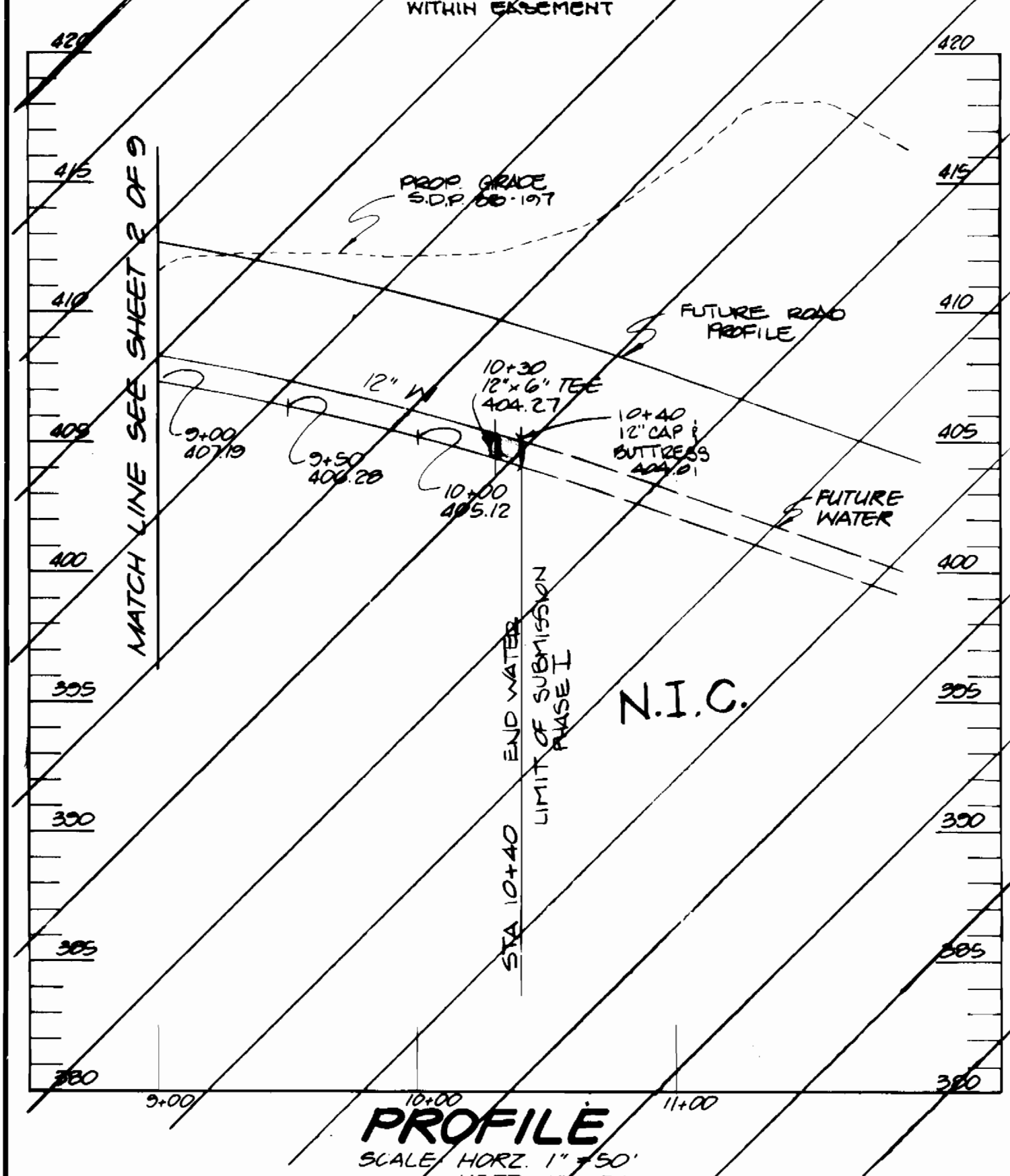
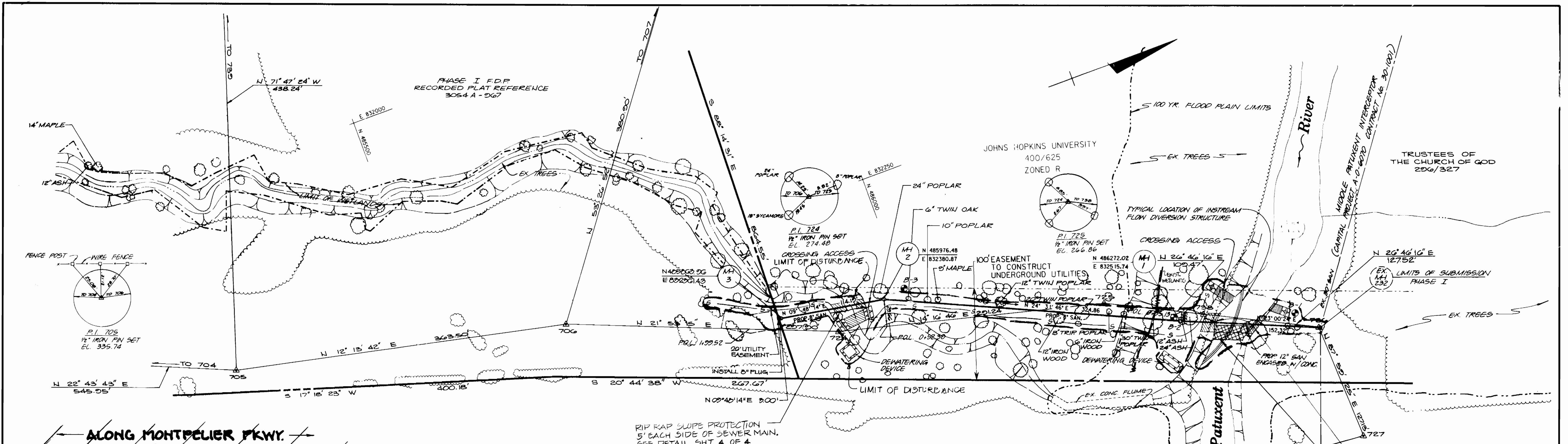
KIDDE CONSULTANTS, INC.  
 ENGINEERS SURVEYORS PLANNERS  
 1020 CROMWELL BRIDGE ROAD  
 BALTIMORE, MARYLAND 21204  
 (301) 521-5500



DES: J.J.D.  
 DRN: DAD, CAD  
 CHK: FBW  
 DATE: 9/3/92  
 BY: KCI  
 NO. 1  
 REVISION  
 DATE: 10/1/92

VICINITY MAP AND GENERAL NOTES  
 SCALE: 1" = 600'

COLUMBIA  
 MONTPELIER RESEARCH PARK  
 ELECTION DISTRICT NO. 5  
 CONTRACT NO. 30-1757-D  
 SCALE AS SHOWN  
 SHEET 1 OF 4



- SEQUENCE OF CONSTRUCTION
- UPON COMPLETION OF SILT FENCE INSTALLATION THE CONTRACTOR SHALL INSTALL A STABILIZED / CONTROLLED APPROACH TO THE RIVER OR STREAM IN THE LOCATION OR AS NEAR AS POSSIBLE TO THE LOCATION SHOWN IN PLAN. APPROACHES ARE TO BE STABILIZED WITH STONES AND HAVE A MOUNTABLE BEAM LINING THE SILT FENCE TOGETHER. ACTUAL STREAM CROSSING DEVICE SHALL BE A CULVERT PIPE AS SHOWN IN THE DETAIL ON SHEET 4 OF 4.
  - AN INSTREAM FLOW DIVERSION STRUCTURE SHOULD BE INSTALLED ACCORDING TO THE DETAIL ON SHEET 4 OF 4 FOR CONSTRUCTION IN THE MIDDLE PATUXENT RIVER. ALL OTHER STREAM CROSSINGS SHOULD BE ACCOMPLISHED USING THE STREAM CROSSING UTILITY STRUCTURE ALSO SHOWN IN DETAIL ON SHEET 4 OF 4. THESE DEVICES SHOULD REMAIN IN PLACE AND BE MAINTAINED FOR AS LONG AS EQUIPMENT REMAINS AND CROSSING THE STREAM IS NECESSARY.
  - A DOWELLING PIT SHOULD BE CONSTRUCTED IN CLOSE PROXIMITY TO THE DIVERSION STRUCTURE SO THAT WFLOW CAN EASILY BE PUMPED FROM THE DITCH. THE PIT MUST ALSO HAVE A SUFFICIENT OUTFALL FOR RELEASING DE-SILTED WATER.
  - FOR UTILITY CROSSING OF DRY SWALE USE SILT FENCE DOWNSTREAM IN DRY WEATHER. IN WET WEATHER, AN INSTREAM STONE DIKE SHALL BE USED DOWNSTREAM, A DETAIL OF WHICH IS SHOWN ON SHEET 4 OF 4.
  - UPON COMPLETION OF THE UTILITY CROSSINGS THE CONTRACTOR SHALL INSTALL RIP-RAP CHANNEL PROTECTION AS SHOWN IN PLAN AND ACCORDING TO THE DETAIL ON SHEET 4 OF 4.
  - FINE GRADING AND PERMANENT STABILIZATION PROCEDURES SHOULD BEGUN IMMEDIATELY UPON COMPLETION OF THE UTILITY INSTALLATION.
  - SEDIMENT CONTROL DEVICES CAN ONLY BE REMOVED WITH THE CONSENT OF THE SEDIMENT CONTROL INSPECTOR.

NOTE: CONTRACTOR SHALL DISTURB ONLY THAT LENGTH OF TRENCH THAT CAN BE STABILIZED AT END OF EACH WORKING DAY SO AS TO PREVENT SEDIMENT & WATER FROM ENTERING TRENCH EXCAVATION. USE OF EXCAVATED DIRT AS A DIVERSION DIKE AS TEMP MEASURE (ONE DAY ONLY) WILL BE ADEQUATE PROVIDED THAT THE CONTRACTOR CLOSSES AND STABILIZES TRENCH AT THE END OF THE WORKDAY.

NOTE: CONTRACTOR TO MAKE AN EFFORT TO SAVE EXISTING TREES WHERE POSSIBLE.

TOTAL DISTURBED AREA = 22,625 S.F. 0.52 AC.

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

*[Signature]* 10/1/92 DATE

HOWARD S.C.D.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

10/5/92 DATE

9-25-92 DATE

KIDDE CONSULTANTS, INC.  
ENGINEERS SURVEYORS PLANNERS  
1020 CROMWELL BRIDGE ROAD  
TOWSON, MARYLAND 21204  
(301) 321-5500



DES: J.J.D.			
DRN: C.H.C.			
CHK: F.B.W.			
DATE: 6/3/92	KCI 1	REV MH LOCATION	12/2/92
BY: NO.		REVISION	DATE

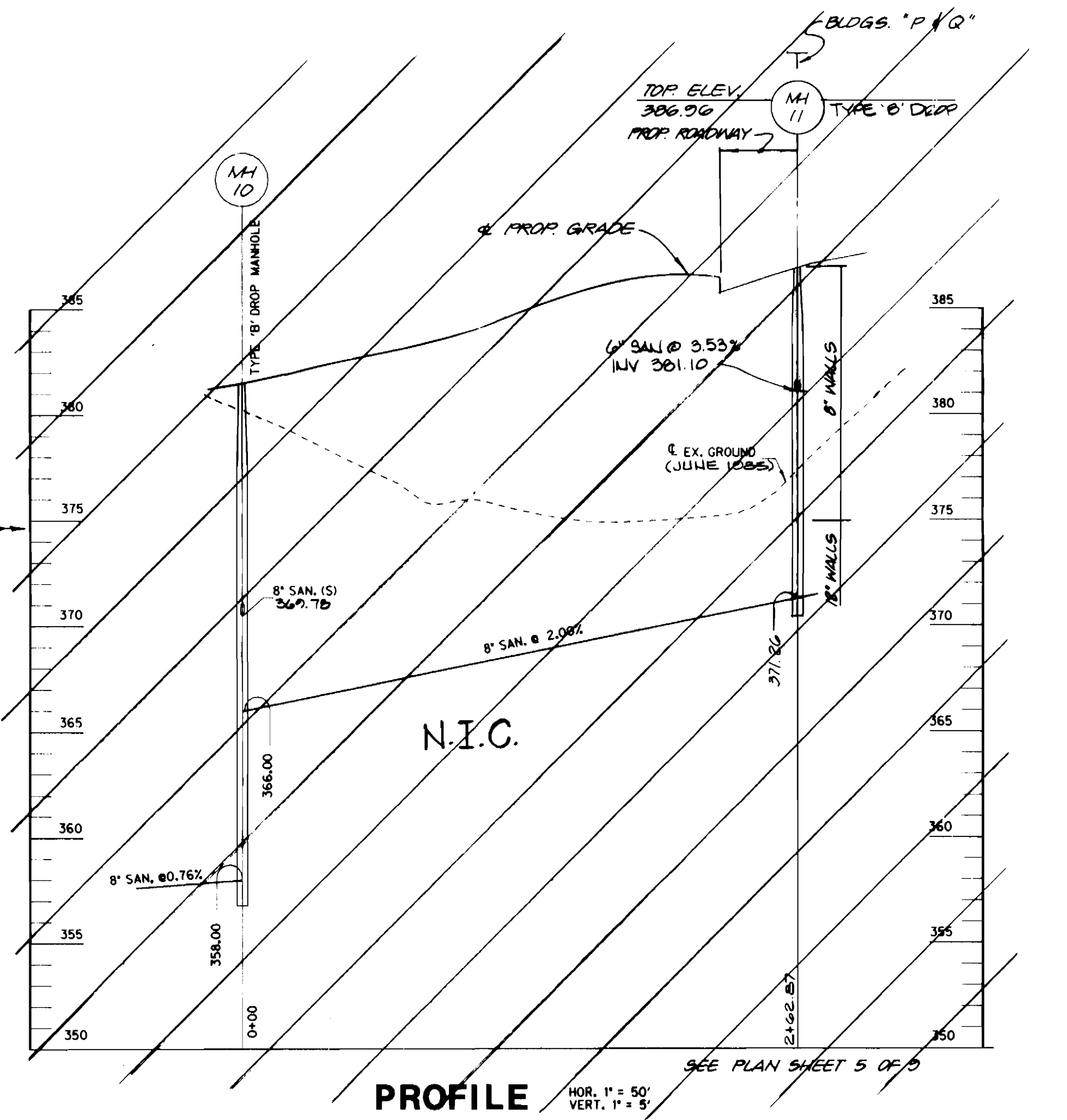
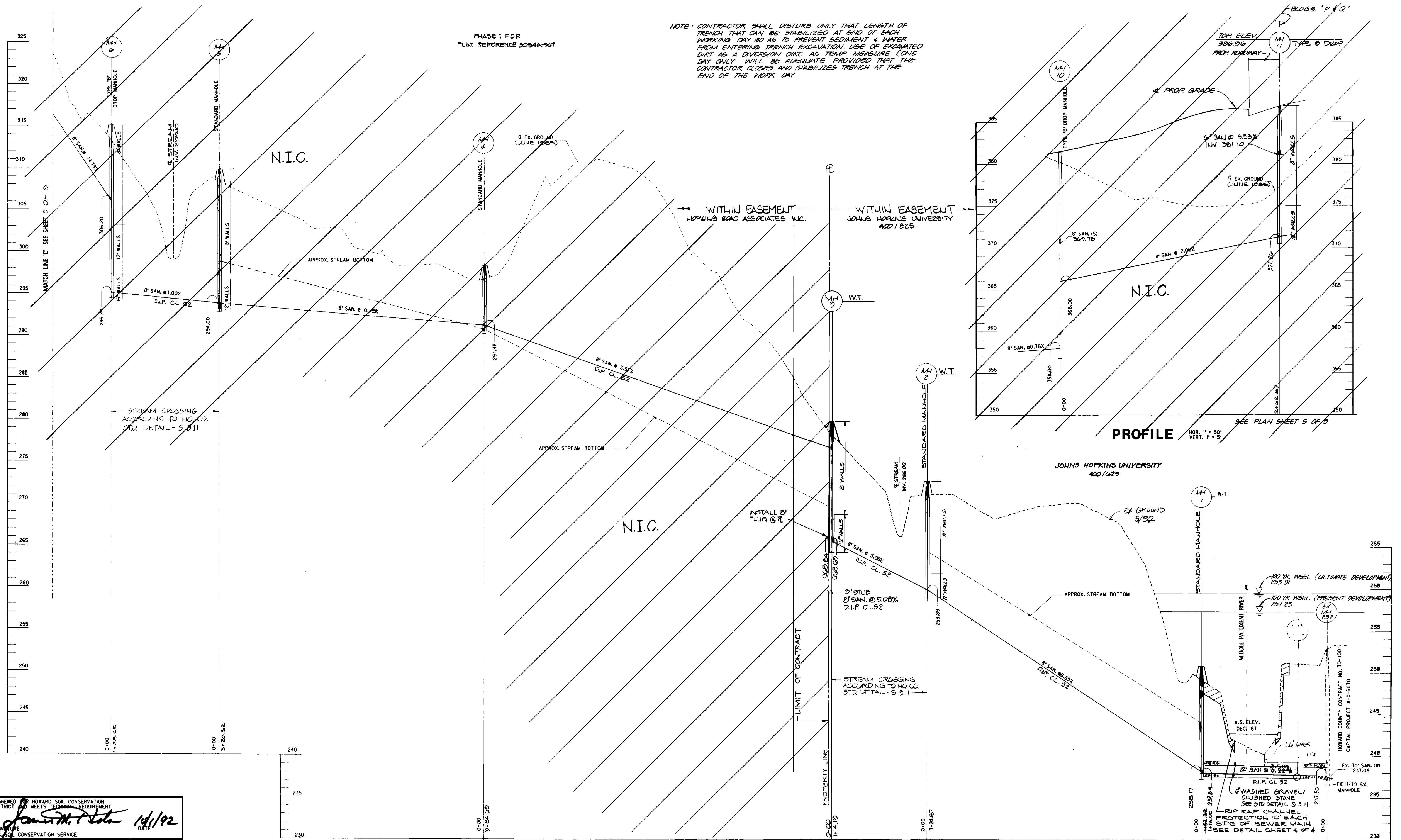
COLUMBIA  
MONTPELIER RESEARCH PARK  
ELECTION DISTRICT NO. 5  
CONTRACT NO. 30-1757-D

600' SCALE NO. 41 BLOCK NO. 14,19,24

SCALE AS SHOWN  
SHEET 2 OF 4

NOTE: CONTRACTOR SHALL DISTURB ONLY THAT LENGTH OF TRENCH THAT CAN BE STABILIZED AT END OF EACH WORKING DAY SO AS TO PREVENT SEDIMENT & WATER FROM ENTERING TRENCH EXCAVATION. USE OF EXCAVATED DIRT AS A DIVERSION DIKE AS TEMP MEASURE (ONE DAY ONLY) WILL BE ADEQUATE PROVIDED THAT THE CONTRACTOR CLOSES AND STABILIZES TRENCH AT THE END OF THE WORK DAY.

PHASE I F.D.P.  
PLAT REFERENCE 3064A-967



PROFILE HOR. 1" = 50'  
VERT. 1" = 5'

SEE PLAN SHEET 2 OF 4

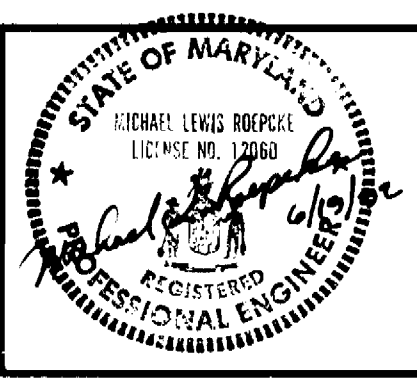
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT  
*James M. [Signature]* 10/1/92  
DATE  
SIGNATURE  
U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John R. [Signature]* 10/1/92  
DATE  
HOWARD S.C.D.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James [Signature]* 10/1/92  
DIRECTOR OF PUBLIC WORKS  
*Robert [Signature]* 9-25-92  
CHIEF BUREAU OF UTILITIES  
*[Signature]* 10/1/92  
LAND DEVELOPMENT DIVISION

KIDDE CONSULTANTS, INC.  
ENGINEERS SURVEYORS PLANNERS  
1020 CROMWELL BRIDGE ROAD  
TOWSON, MARYLAND 21204  
(301) 321-5500



DES: J.J.D.					
DRN: C.H.C.					
CHK: F.B.W.					
DATE: 6/3/92	KCI	1	REV. MH LOCATION	12/10/92	
	BY	NO.	REVISION	DATE	

PROFILE SEWER MAIN	
600' SCALE NO. 41	BLOCK NO. 14, 19, 24

COLUMBIA  
MONTPELIER RESEARCH PARK  
ELECTION DISTRICT NO. 5  
CONTRACT NO. 30-1757-D

SCALE AS SHOWN  
SHEET 2 OF 4

**STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOO**

**SPECIFICATIONS**

- CLASS OF TURFGRASS SOO SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOO.
- SOO SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH PLUS OR MINUS 1/8 INCH AT THE TIME OF CUTTING MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROUND AND THATCH.
- STANDARD SIZE SECTIONS OF SOO SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- INDIVIDUAL PIECES OF SOO SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH, MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE UNIFORM, BUCKLE PADS AND TORN OR CHECKED EDGES WILL NOT BE ACCEPTABLE.
- SOO SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT EXCEEDS 10% DRY OR WITH MOISTURE AFFECTING ITS SURVIVAL.
- SOO SHALL BE NUTRIENT DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOO NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED FROM THE TIME OF INSTALLATION.

**SITE PREPARATION**

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TESTS UNDER UNUSUAL CIRCUMSTANCES THERE SHOULD BE SUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AGRICULTURAL EQUIPMENT.

**A. PREP TO SOOING:** THE SURFACE SHALL BE CLEANED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

**B. WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIME SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE OR 20 POUNDS PER 1,000 SQUARE FEET. IN ALL SOILS, 1,000 POUNDS PER ACRE OR 25 POUNDS PER 1,000 SQUARE FEET OF FERTILIZER SHALL BE APPLIED TO THE SOIL. THE UNIFORM LIME AND FERTILIZER SHALL BE APPLIED AND MIXED WITHIN THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME AND FERTILIZER.**

**C. THE SOO SHALL BE NECESSARILY FIRE GRASS.**  
HAND-PAKED EARTH SHALL BE SCAMPED PRIOR TO PLACEMENT OF SOO.

**D. SOO INSTALLATION**

**A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOO SHALL BE LIGHTLY SPRINKLED EXCESSIVELY PRIOR TO LAYING OF SOO.**

**B. THE FIRST ROW OF SOO SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY BEDDED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STaggerED TO PROMOTE MOISTURE GROWTH AND STRENGTH. INSURE THAT SOO IS NOT STRETCHED OR OVERLAPPED AND THAT JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.**

**C. ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM SOO SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOO BY TAMPING AND PECCING OR OTHER APPROVED METHODS.**

**D. AS SOOING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE CLOSE CONTACT OF ROOTS WITH THE SOIL. SURFACE SOO SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMPING. THE UNDERSIDE OF THE NEW SOO PAD AND SOIL SURFACE BELOW THE SOO ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND WATERING FOR ANY PIECE OF SOO SHALL BE COMPLETED WITHIN 24 HOURS.**

**B. SOO MAINTENANCE**

**A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS AFTER AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.**

**B. AFTER THE FIRST WEEK, SOO SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.**

**C. FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOO IS FINELY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.**

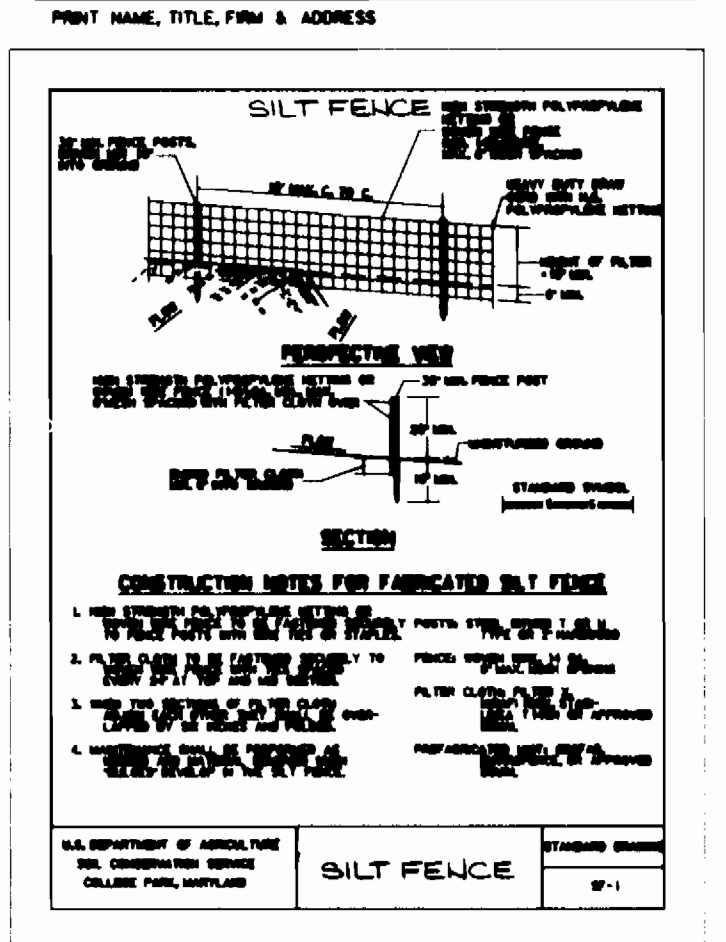
**D. MAINTENANCE OF ESTABLISHED SOO SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 94-1.**

**OWNERS/DEVELOPERS CERTIFICATION**

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT PERMITTED BY THIS PERMIT IS IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THAT I/WE SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE SOIL AND WATER RESOURCES AND THE PROTECTION OF THE ENVIRONMENT. I/WE SHALL MAINTAIN THE SOO AND WATER RESOURCES AND THE PROTECTION OF THE ENVIRONMENT. I/WE SHALL MAINTAIN THE SOO AND WATER RESOURCES AND THE PROTECTION OF THE ENVIRONMENT.

**DEVELOPER** \_\_\_\_\_ **DATE** \_\_\_\_\_

**PRINT NAME, TITLE, FIRM & ADDRESS**



**REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT**

*John M. Hilde* 10/1/92

**U.S. SOIL CONSERVATION SERVICE**

**THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT**

*John P. Burton* 10/1/92

**HOWARD S.C.D.**

**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.
- All vegetative and structural practices are to be installed in accordance with the provisions of this permit, standards and specifications for SOIL EROSION AND SEDIMENT CONTROL.
- Vegetative and structural practices shall be installed in accordance with the provisions of this permit, standards and specifications for SOIL EROSION AND SEDIMENT CONTROL.
- All sediment traps shall be installed in accordance with the provisions of this permit, standards and specifications for SOIL EROSION AND SEDIMENT CONTROL.
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**TEMPORARY SEEDING NOTES**

**SEEDING PREPARATION**  
LOOSEN UPPER 3 INCHES OF SOIL BY DISCING, RANGING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

**SOIL AMENDMENTS**  
APPLY 400 LBS. PER ACRE (14 LBS./1,000 SQ. FT.) OF 10-10-10 FERTILIZER.

**SEEDING**  
FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 1 1/2 LBS. PER ACRE OF ANNUAL RYE (1.5 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THRU JULY 15, SEED WITH 3 LBS. PER ACRE OF KEEPING LOWLANDS LOT 100 SQ. FT. FOR PERIOD NOV. 15 THRU FEB. 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOO.

**MALCOLM**  
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ. FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER SEEDING. APPLY 2 TONS PER ACRE (140 LBS./1,000 SQ. FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER SEEDING. APPLY 2 TONS PER ACRE (140 LBS./1,000 SQ. FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER SEEDING.

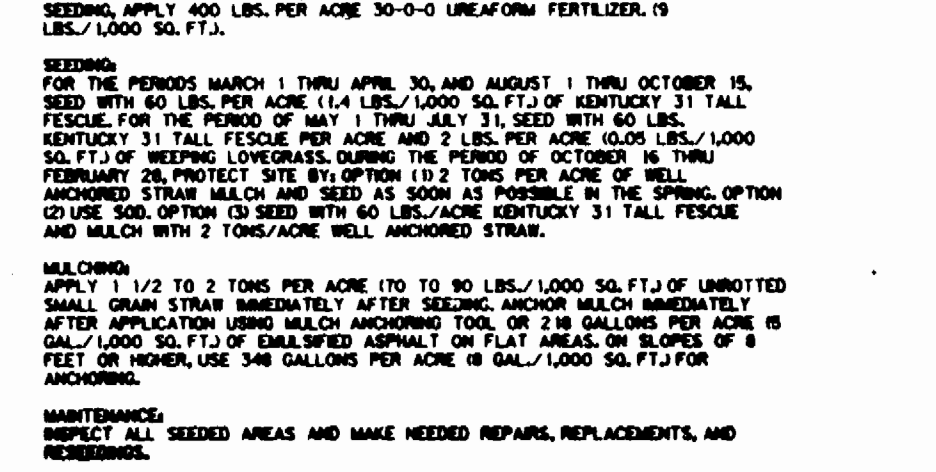
**PERMANENT SEEDING NOTES**  
ALL SEEDING AREAS SHALL BE STABILIZED AS FOLLOWS:  
**SEEDING PREPARATION**  
LOOSEN UPPER 3 INCHES OF SOIL BY RANGING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

**SOIL AMENDMENTS**  
APPLY 2 TONS PER ACRE DOLICITE LIME (20 LBS./1,000 SQ. FT.) AND 400 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ. FT.) BEFORE SEEDING. SEEDING HOLLOW ON DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 2 LBS. PER ACRE 30-0-0 UNIFORM FERTILIZER TO 1 LBS./1,000 SQ. FT.

**SEEDING**  
FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED WITH 40 LBS. PER ACRE (14 LBS./1,000 SQ. FT.) OF IDENTIFY 31-TALL FESCUE FOR THE PERIOD MAY 1 THRU JULY 15, SEED WITH 80 LBS. PER ACRE (28 LBS./1,000 SQ. FT.) OF IDENTIFY 31-TALL FESCUE PER ACRE. IN ALL SOILS, 1,000 POUNDS PER ACRE OR 25 POUNDS PER 1,000 SQUARE FEET OF FERTILIZER SHALL BE APPLIED TO THE SOIL. THE UNIFORM LIME AND FERTILIZER SHALL BE APPLIED AND MIXED WITHIN THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME AND FERTILIZER.

**MALCOLM**  
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ. FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER SEEDING. APPLY 2 TONS PER ACRE (140 LBS./1,000 SQ. FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER SEEDING.

**MAINTENANCE**  
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDING.



**FLOW CHANNEL STABILIZATION**

TYPE OF CHANNEL	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0' OK	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0' OK	SEED AND STRAW MULCH	SEED WITH 4" STONE
3	5.1-8.0' OK	SEED WITH 4" STONE	LINED RIP-RAP 4-8"
4	8.1-20'	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

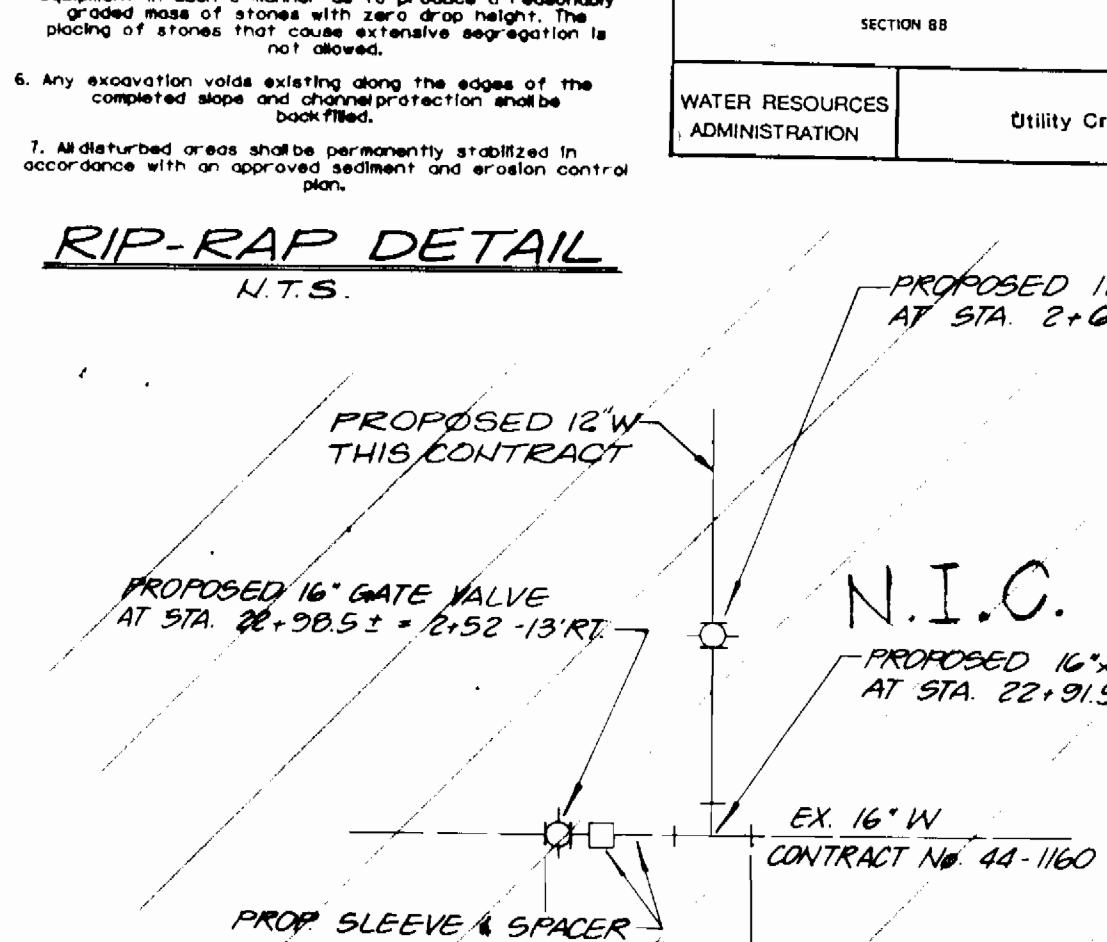
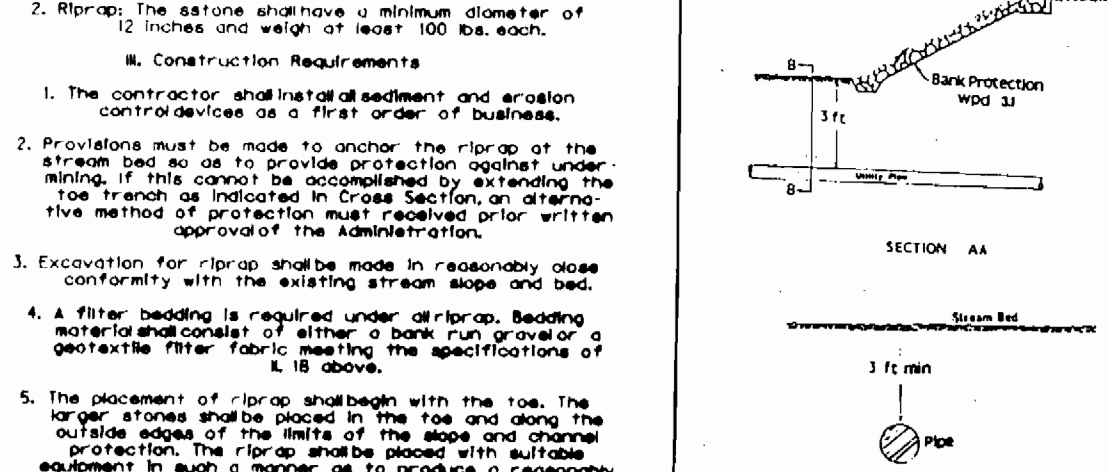
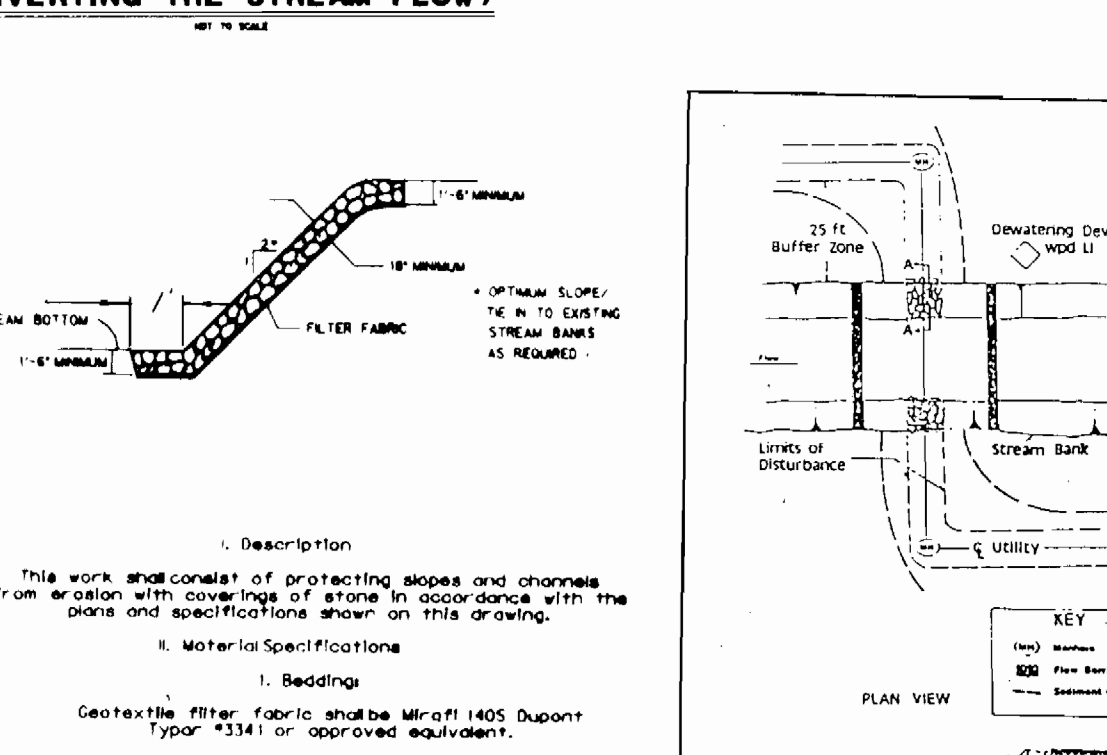
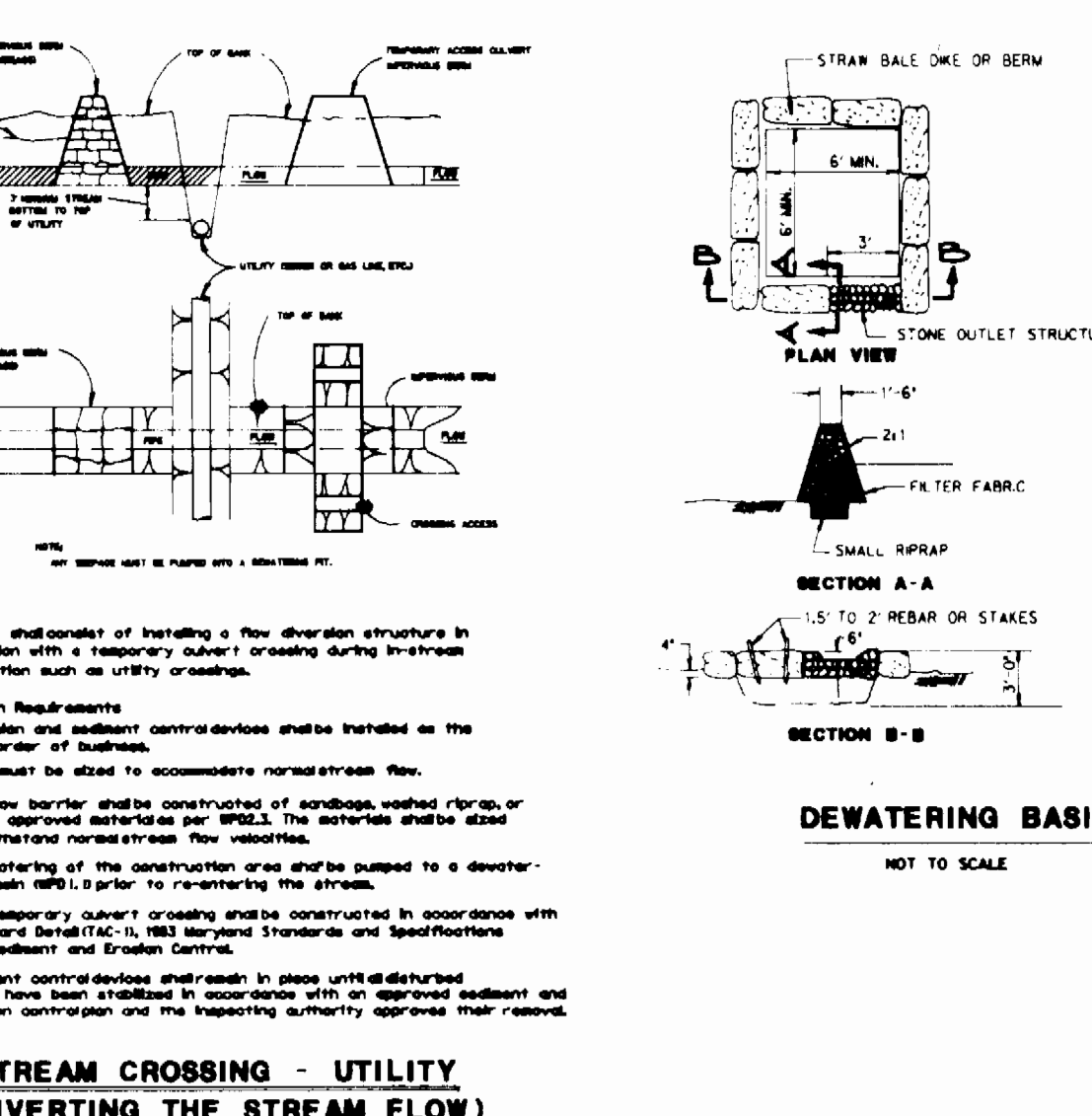
**A. STONE TO BE 2 INCH HIGH, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS SHALL BE PLACED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.**  
**B. RIP-RAP TO BE 4 TO 8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND PLACED INTO THE SOIL.**  
**C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.**  
**D. PERIODIC INSPECTION AND REPAIRS MUST BE PERFORMED AFTER EACH MAIN EVENT.**

**U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND**

**CONSULTANT'S CERTIFICATION**  
I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND REASONABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE CONSULTANT DEVELOPER.

*John P. Burton* 10/1/92

**HOWARD COUNTY SOIL CONSERVATION DISTRICT**



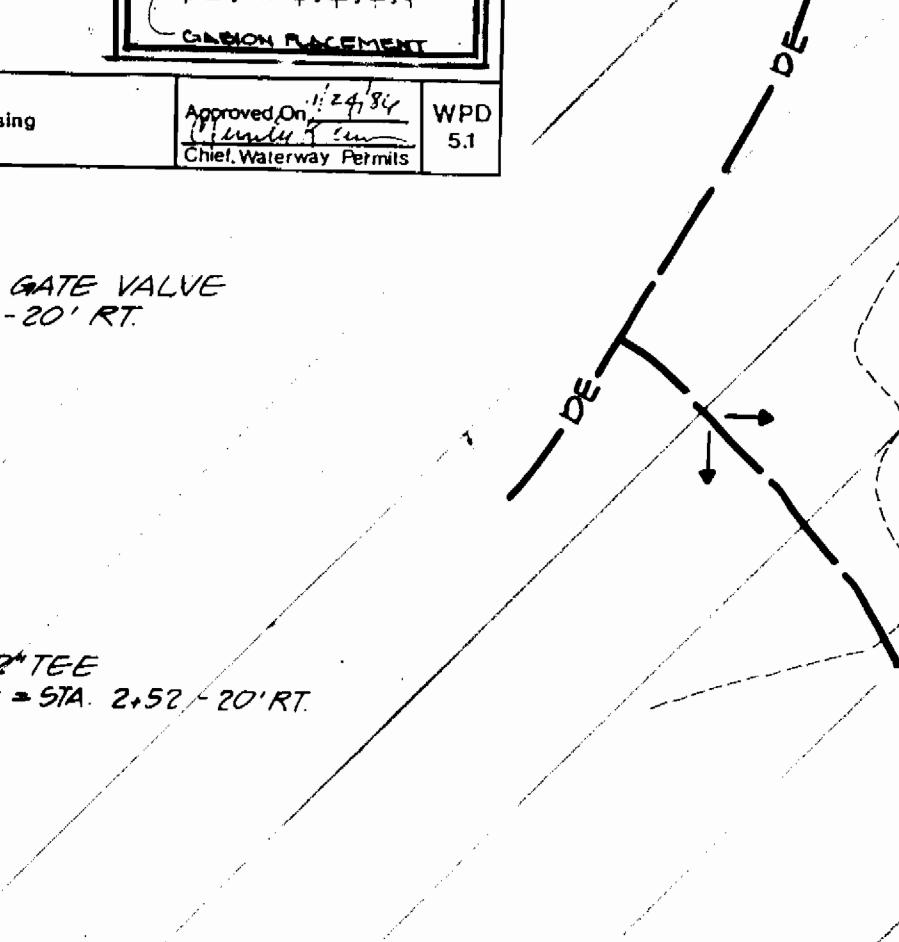
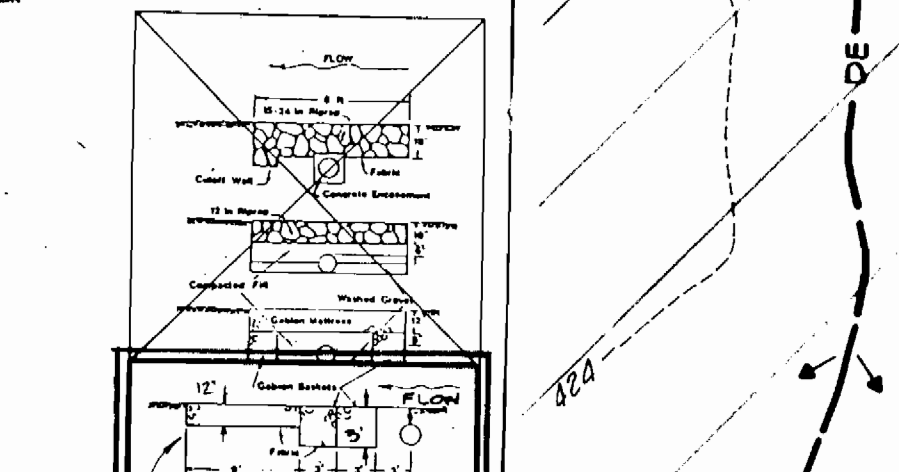
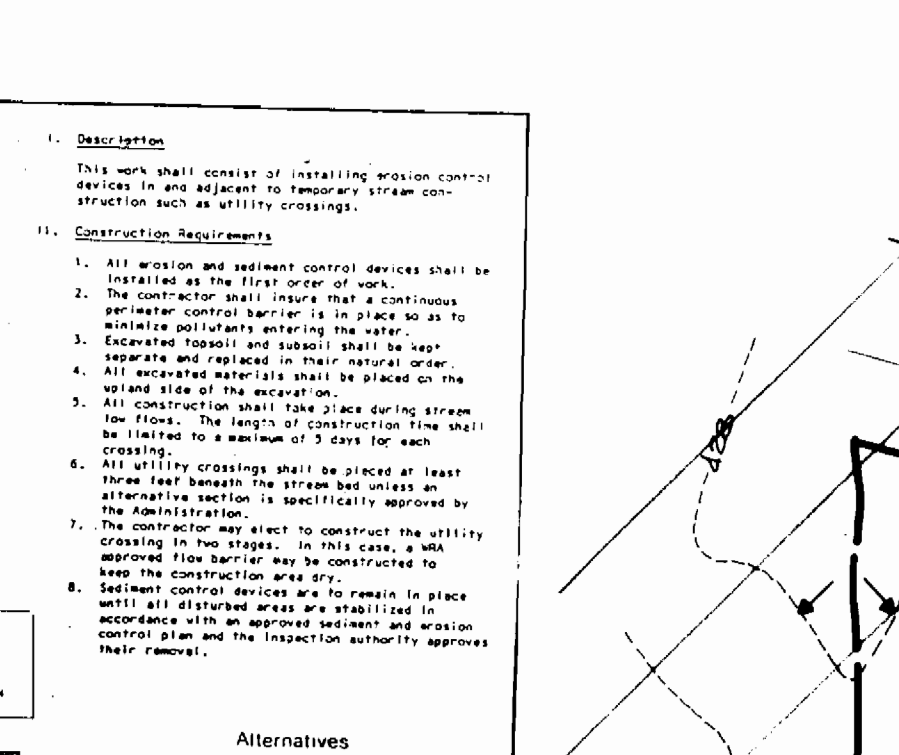
**SEQUENCE OF OPERATIONS**

- OBTAIN A GRADING PERMIT.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES.
- CLEAR AND GRUB FOR SEDIMENT CONTROL FEATURES ONLY.
- INSTALL SILT FENCE AND CLEAR LIMITS OF CONSTRUCTION, INSTALLING TEMPORARY STREAM CROSSINGS AS REQUIRED FOR ACCESS TO ALIGNMENT.
- SEE INDIVIDUAL SHEETS FOR SEQUENCE OF OPERATION AT STREAM CROSSINGS CONSTRUCT DEWATERING PITS AS REQUIRED.
- CONSTRUCT UTILITIES.
- UPON BACKFILLING, TRENCH, FINEGRADE AND STABILIZE WITH SEED AND MULCH.
- ALL SEDIMENT CONTROL FEATURES TO REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY THE SEDIMENT CONTROL INSPECTOR.

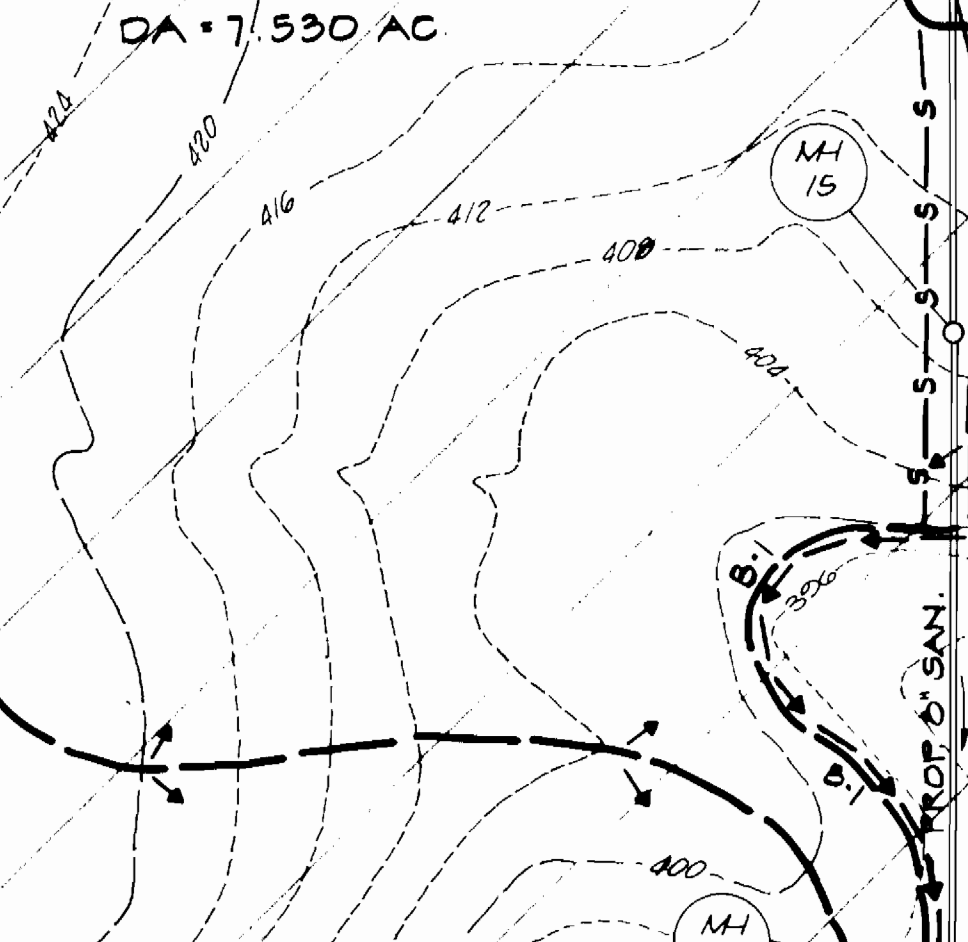
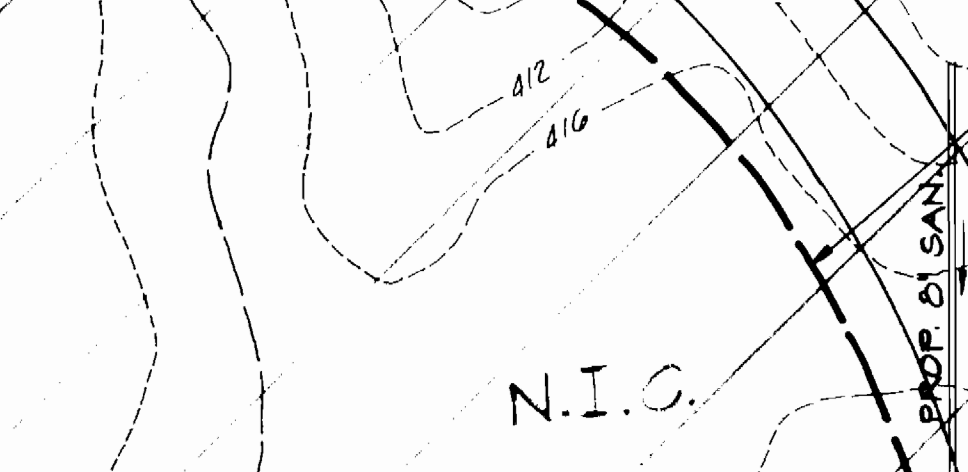
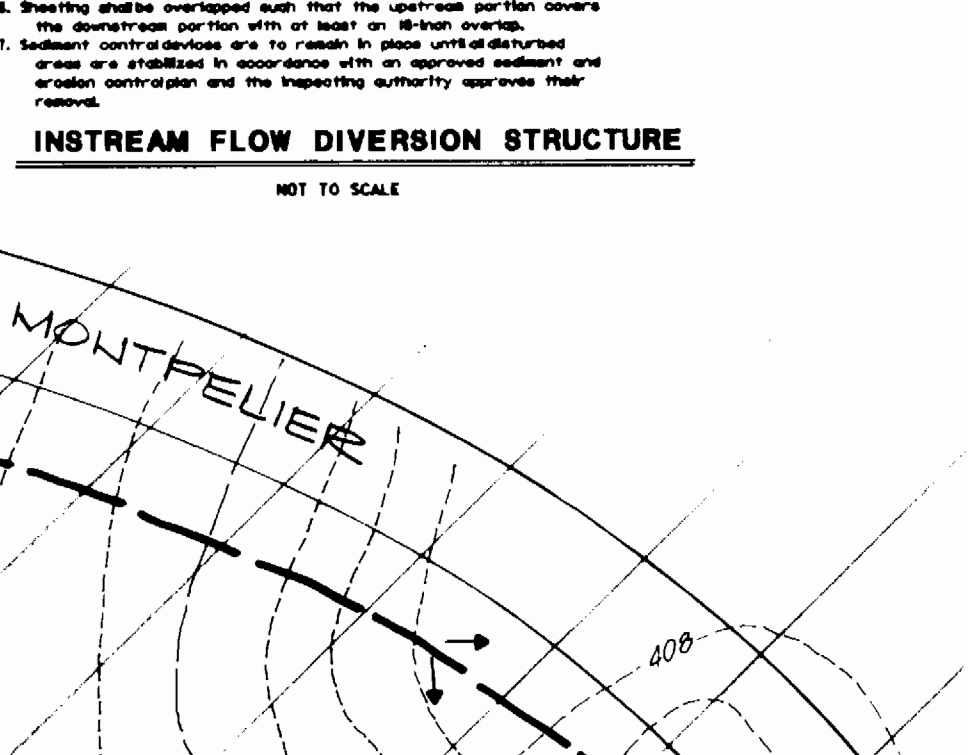
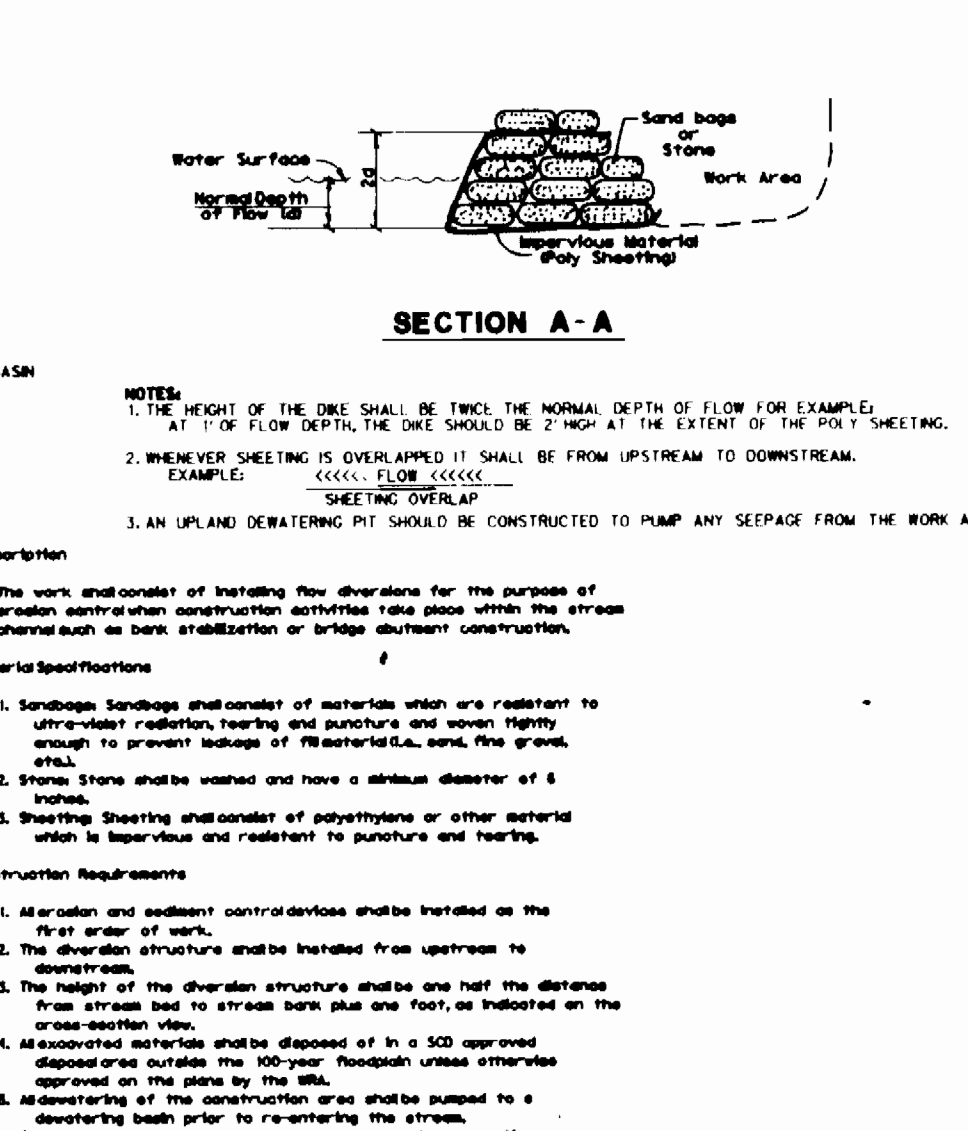
**DESCRIPTION**  
The work shall consist of installing a new diversion structure in accordance with a temporary stream crossing during stream construction such as utility crossings.

**CONSTRUCTION REQUIREMENTS**

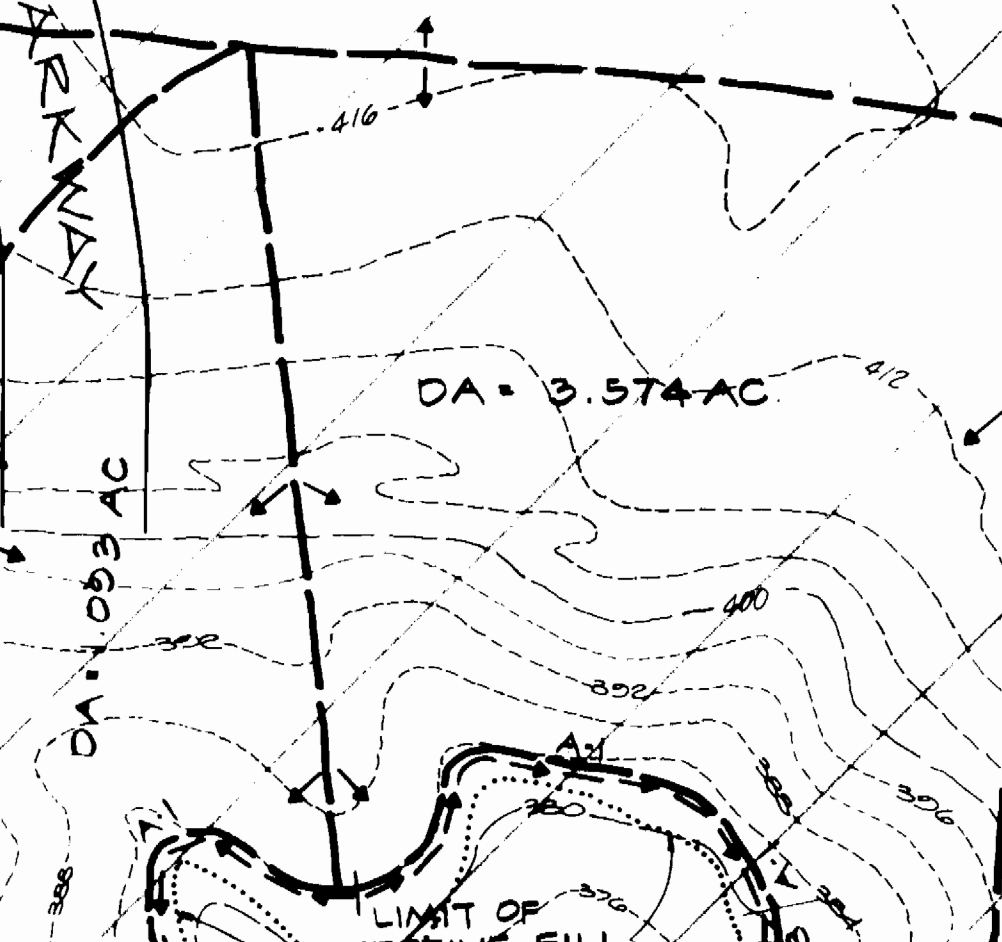
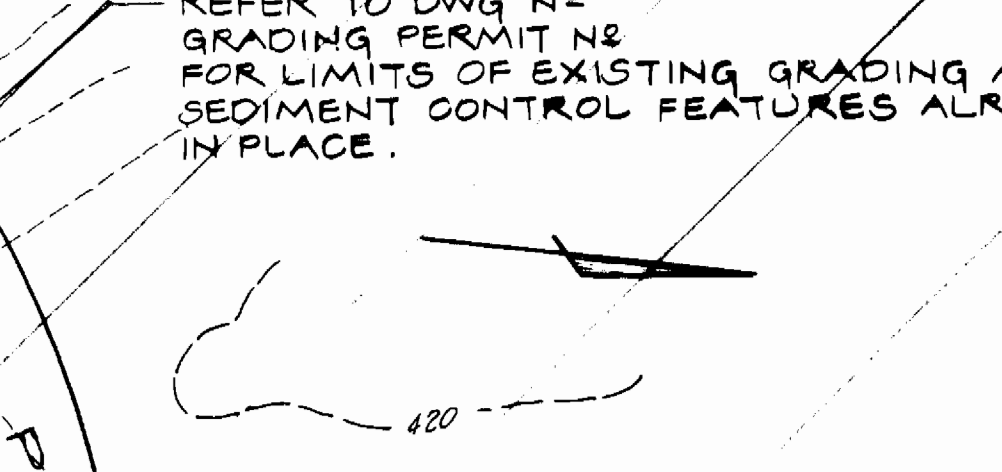
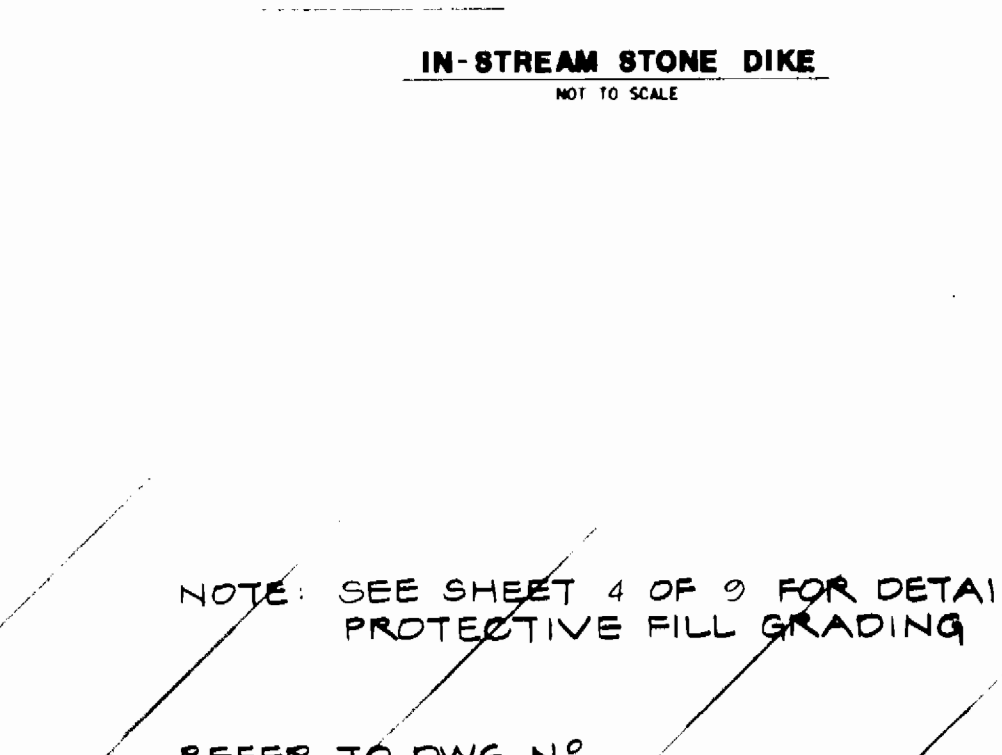
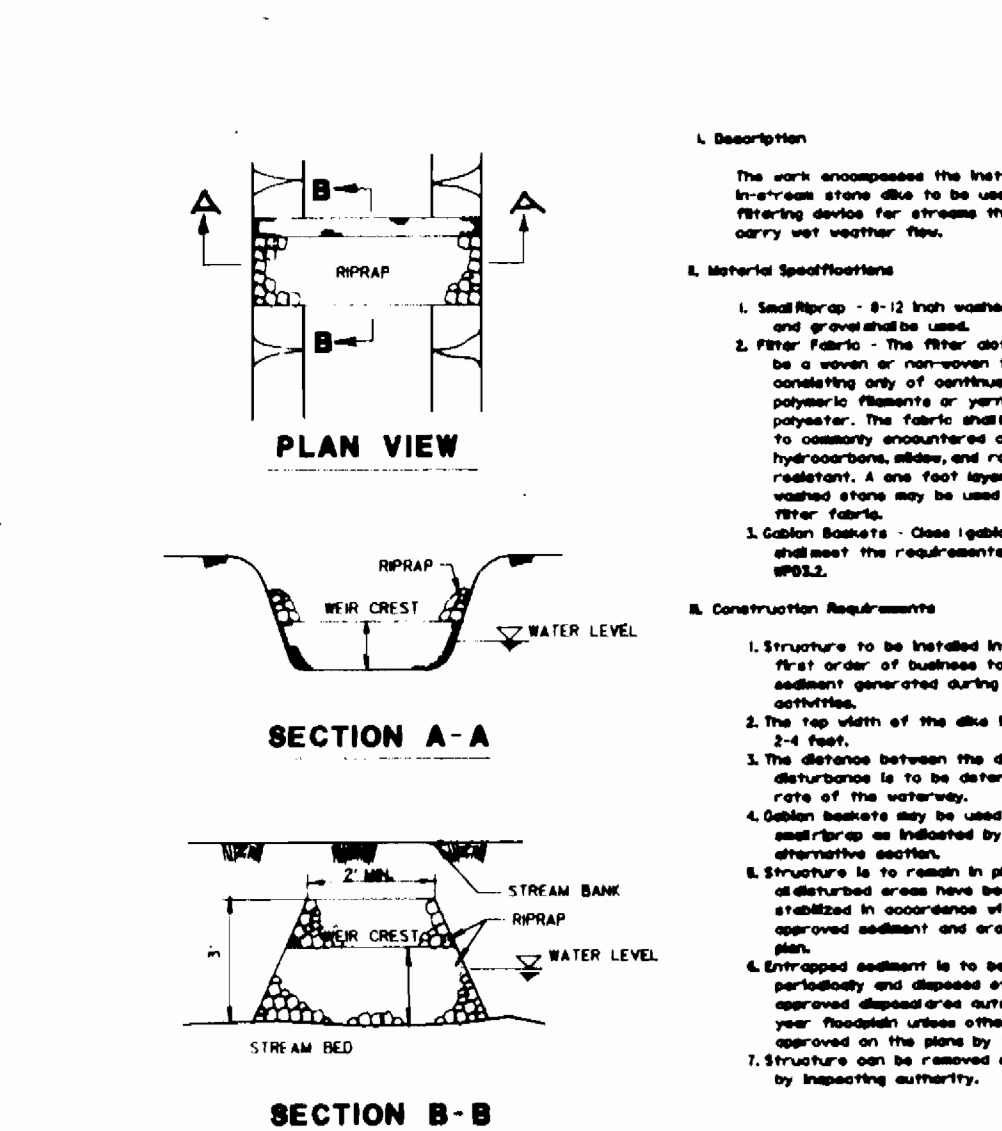
- The diversion structure shall be constructed of concrete, masonry, or other approved material.
- The diversion structure shall be constructed to divert the stream flow to a depth of 2 feet below the stream bed.
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**CONTRACTOR TO DEWATER EXISTING 16" (DIP/GRIFFIN) MAIN AND SAW-CUT LENGTH TO SUIT TEE, GATE VALVE, SLEEVE AND SPACER. HOWARD COUNTY TO CLOSE EXISTING VALVES AS REQUIRED (REFER TO VICINITY MAP SHEET 1 OF 9 FOR VALVE LOCATIONS) PROVIDE BUTTRESS FOR 16" x 12" TEE ACCORDING TO DETAIL SHEET B OF 9.**



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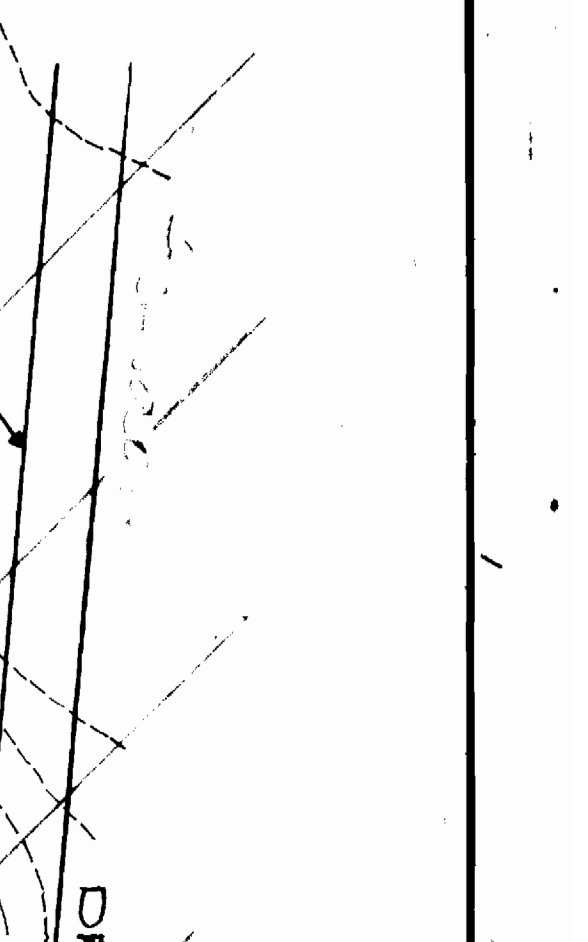
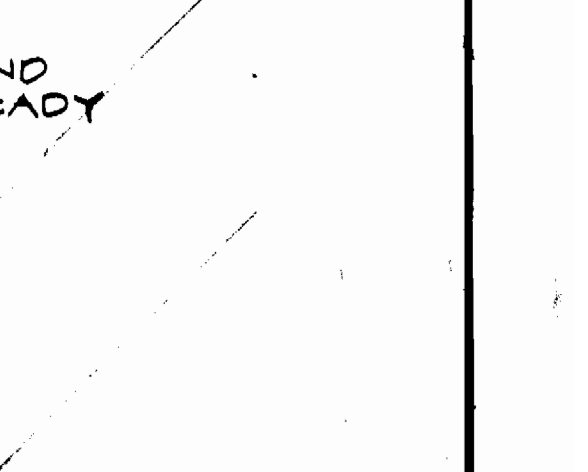
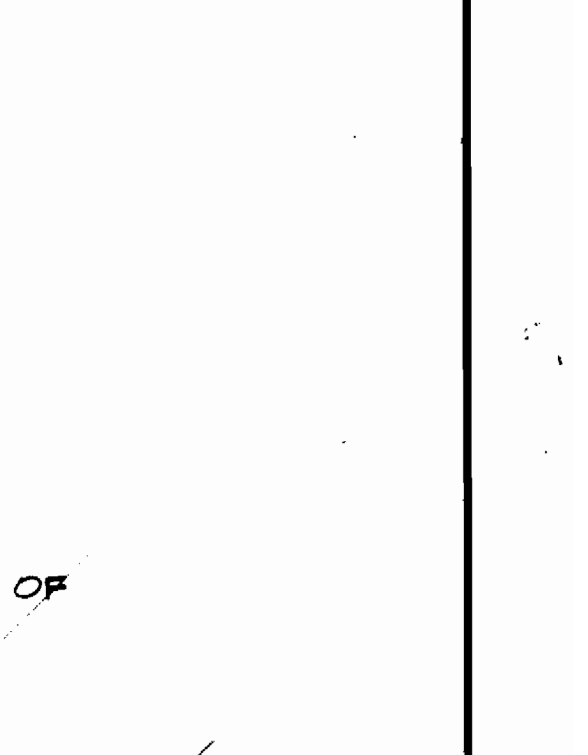


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**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

**KIDDE CONSULTANTS, INC.**  
ENGINEERS SURVEYORS PLANNERS  
1020 CROMWELL BRIDGE ROAD  
BALTIMORE, MARYLAND 21204  
(301) 321-5500

**COLUMBIA**  
MONTPELIER RESEARCH PARK  
ELECTION DISTRICT NO. 5  
CONTRACT NO. \_\_\_\_\_

**SCALE AS SHOWN**  
SHEET 4 OF 4

DES: J.J.D.  
DRN: S.J.B.  
CHK: F.B.W.  
DATE: \_\_\_\_\_

600' SCALE MAP NO. 41 BLOCK NO. 14,19,24

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