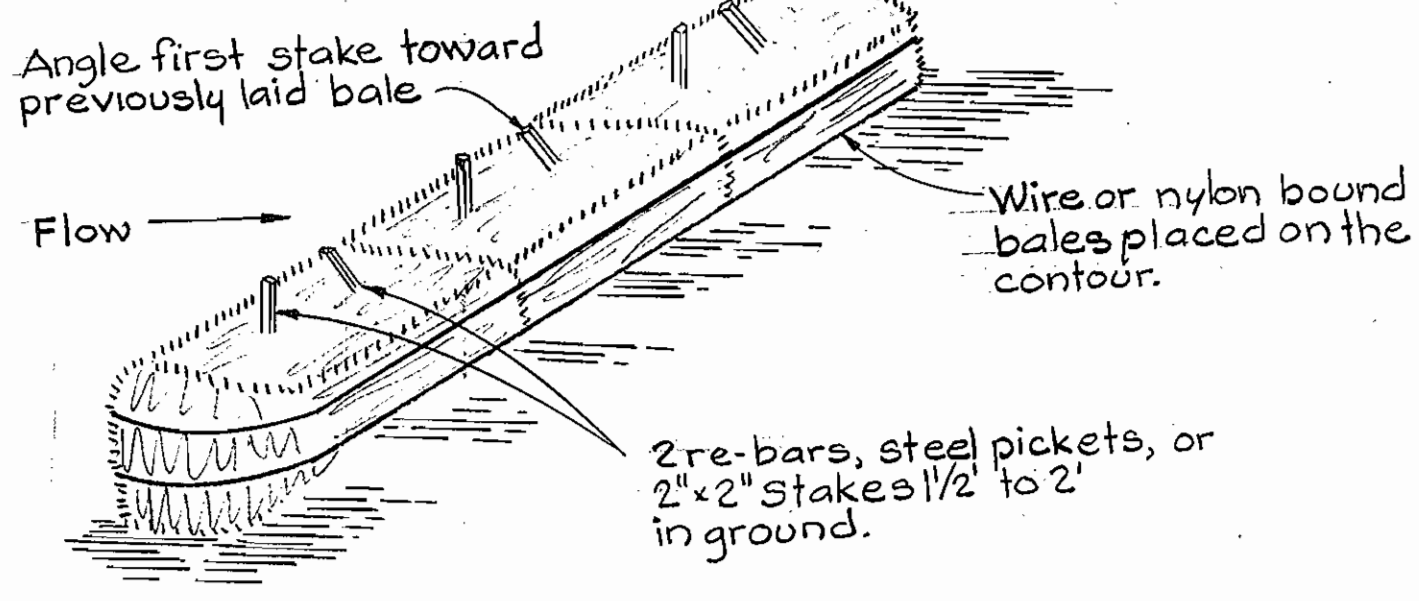
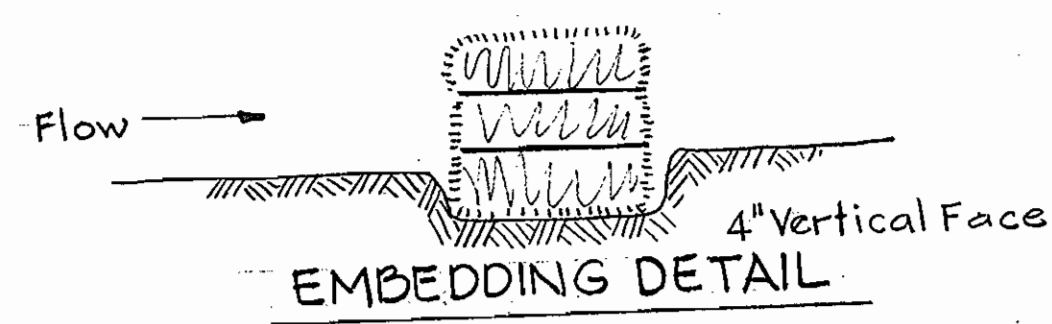


- WATER CODE (County Use)**
Water No. B 01
- GENERAL NOTES**
1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
 2. All horizontal controls are based on Maryland State Coordinates.
 3. All vertical controls are based on U.S.G.S. data.
 4. All pipe elevations shown are invert elevations.
 5. Clear all utilities by a minimum of 6'.
 6. For details not shown on the drawings, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction. The contractor shall have a copy of Volume IV on the job.
 7. Where test pits have been made on existing utilities, they are noted by the symbol 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 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.
 8. Contractor shall notify the following utilities or agencies at least five working days before starting work shown on these plans:
Baltimore Gas & Electric Co. - Contractor Service - 850-4620
Baltimore Gas & Electric Co. - Under Ground Damage Control - 859-9004
Baltimore Gas & Electric Co. - Trouble Shooting - 298-9001
Miss Utility - 1-859-0100; C&P Telephone Co. - 800-257-7777
Bureau of Utilities, Howard County Department Public Works - 992-2366
 9. 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.
 10. 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.
 11. All water mains to be D.I.P. Class 52 unless otherwise noted.
 12. Tops of all water mains to have a minimum of 3 1/2' cover unless otherwise noted.
 13. Valves adjacent to trees shall be strapped to trees.
 14. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 15. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1003 the Standard Specifications.
 16. The contractor shall not operate any water main valves on the existing water system.
 17. All water house connections shall be for inside meter setting, unless otherwise noted on the plans or in specifications.

| | | | | | | | |
|--|---|--|-----------|--|---|---|--------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>Michael J. Papp</i> 1-13-87 Chief, Bureau of Engineering: <i>Wallace Montgomery</i> 1/10/87 Chief, Bureau of Utilities: <i>Michael J. Papp</i> 1/10/87 Chief, Utility Division: <i>Wallace Montgomery</i> 1/10/87 | WALLACE MONTGOMERY & ASSOCIATES 9 W 29 TH STREET BALTIMORE, MD. 21218 (301) 235-7600 | | DES: H.K. | | PLAN & PROFILE OF WATER MAIN | KIT KAT ROAD WATER MAIN CAPITAL PROJECT W-8148 CONTRACT NO. 44-1534 ELECTION DISTRICT NO. I HOWARD COUNTY MD. | SCALE AS SHOWN SHEET 1 OF 2 |
| | | | DRN: P.B. | | | | |



CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4"
3. Bales shall be securely anchored in place by stakes or re-bars driven thru the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together
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.

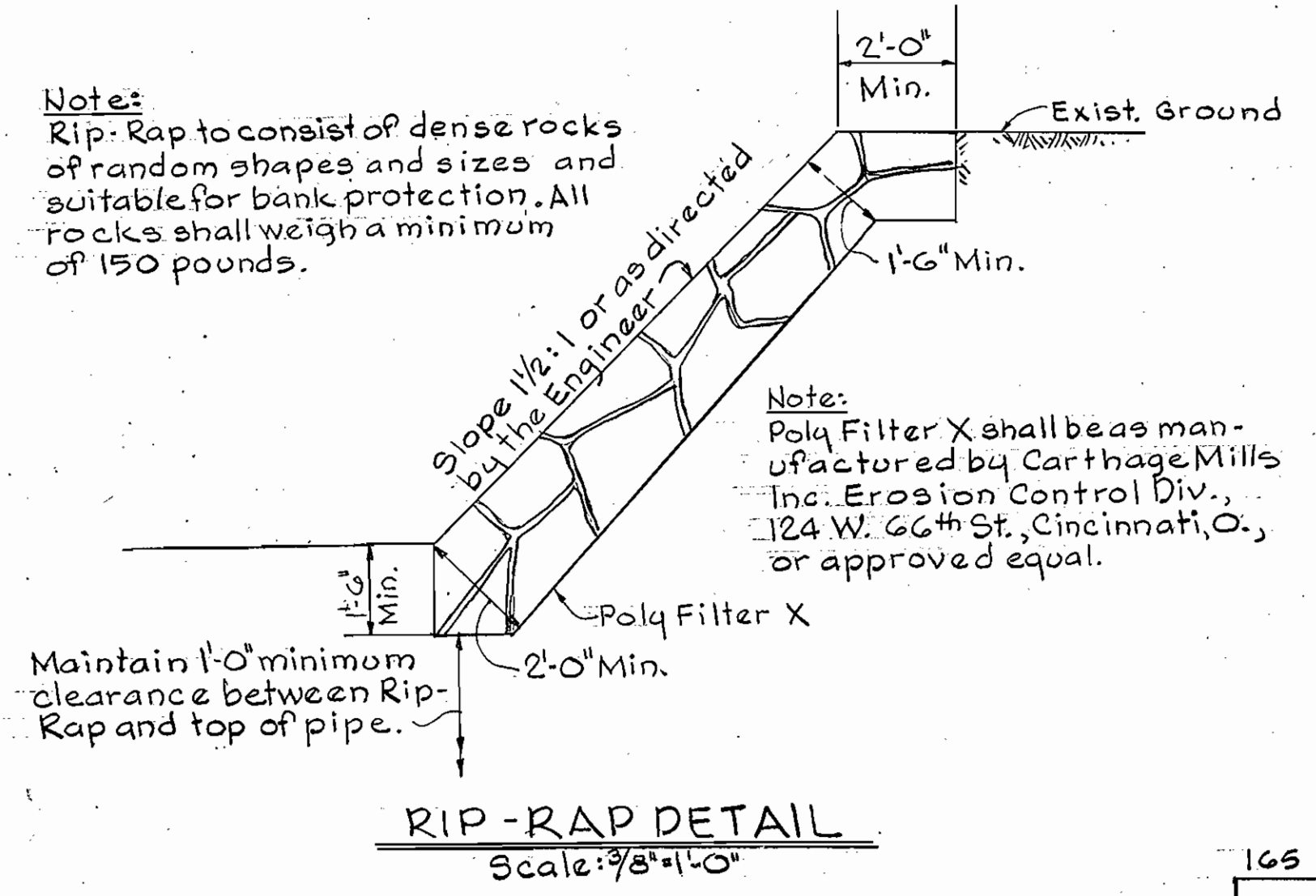
DETAIL STRAW BALE DIKE
No Scale

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Contractor will comply with all Requirements of Sediment and Erosion Control set forth in the Contract Drawings, the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control and Volume IV - Section 219 of the Howard County Design Manual, IV -
2. The Contractor shall not Pump from Excavated Areas directly into the Howard County Storm Drainage System or any Natural Water Course. Where Ground water is encountered during Construction, the Contractor shall provide Portable or Excavated Sediment Traps to prevent Silted Trench Water from entering Storm Drainage Systems or Natural Waterways.
3. All Excavated Material shall be placed on the high side of the Trench whenever possible, and confined to an area where it will not obstruct the Normal Flow or Drainage Courses.
4. All Swales shall be equipped with a Sediment Retention Device to trap Sediment and Filter Water leaving the Right-of-Way prior to entering any Running Stream.
5. The Contractor shall provide Straw Bale Dikes normal to Surface Water Flow around all Vehicle and Equipment Staging Areas as shown in Detail of a Straw Bale Dike enclosed in Specifications.
6. Road Side Ditches and Drainage Pipes shall be Restored to a condition Equal to or Better than the Original Condition following Completion of Construction.
7. The Contractor shall Dispose of Spoils in accordance with Good Soil Conservation practice and in such a manner that none can be carried into any Drainage Facility or Water Course. The Contractor shall be responsible for disposing of all Spoil or Excess Excavated Material on a Site approved by the Soil Conservation District. Documentation of approval and site shall be provided to the Engineer prior to Beginning Work.
8. The Howard County Soil Conservation District must be Notified in writing by the Contractor as to where Excess Material will be Disposed or Borrow Material will be obtained. Prior to beginning any Work on this Project, copies shall be provided to the Engineer.
9. Continuous Inspection and Maintenance of all Sediment and Erosion Control Devices will be Required.
10. The Contractor shall provide Additional Soil Erosion and Sediment Control as Required by the Sediment Control Inspector, as the Work Progresses or Requires.
11. The Contractor shall notify in writing, a Howard County Sediment Control Division Representative at least three (3) days prior to starting Work. Please Contact: Howard County - # 992-2436. Copies shall be provided to the Engineer.
12. The Contractor shall place a Stabilized Construction Entrance as shown in the Howard County Standard Details, G.C.11 where shown on the Plans unless otherwise Directed by the Engineer.
13. Sediment Removal - All Trapped Sediment is to be Removed and Disposed of at the Authorized Land Fills prior to Removal of Sediment Control Structures.
14. Following Initial Soil Disturbance, or Redisturbance, Permanent or Temporary Stabilization shall be completed within:
 - A) Seven (7) Calendar days for all Perimeter Sediment Control Structures, Dikes, Swales, Ditches, Perimeter Slopes and all Slopes greater than 3:1.
 - B) Fourteen (14) days as to all other Disturbed or Graded Areas on the Project Site.

| ITEM | | | TYPE, MATERI | SUPPLIER |
|-----------------------|----------|----------|--------------|--------------|
| | ESTIM. | AS BUILT | | |
| 8" WATER | 978 L.F. | 978 L.F. | CL-52 DIP | GRIFFIN PIPE |
| 6" VALVE | 1 | 1 | M4H VALVE | |
| 12" x 8" T.S. & VALVE | 1 | 1 | | CLOW |
| 3" BLOWOFF | 1 | 1 | CL-52 DIP | GRIFFIN PIPE |
| FIRE HYDRANT | 1 | 1 | | M4H VALVE |

Notes:
Rip-Rap to consist of dense rocks of random shapes and sizes and suitable for bank protection. All rocks shall weigh a minimum of 150 pounds.



RESTORATION SCHEDULE

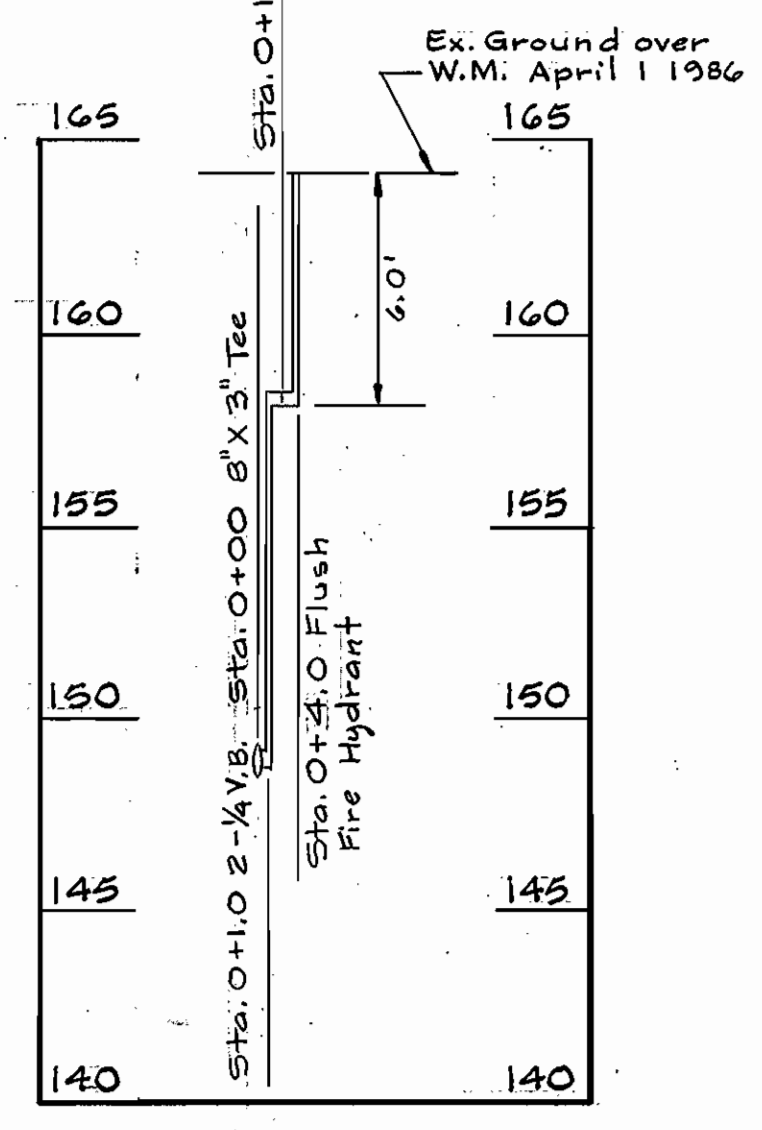
| STATION | MATERIAL |
|--------------|-----------------|
| 0+00 To 5+40 | Seed |
| 5+40 To 9+60 | Rip-Rap |
| 9+60 To 9+78 | Seed |
| 9+78 To 9+80 | Macad. Pavem't. |

BENCH MARKS

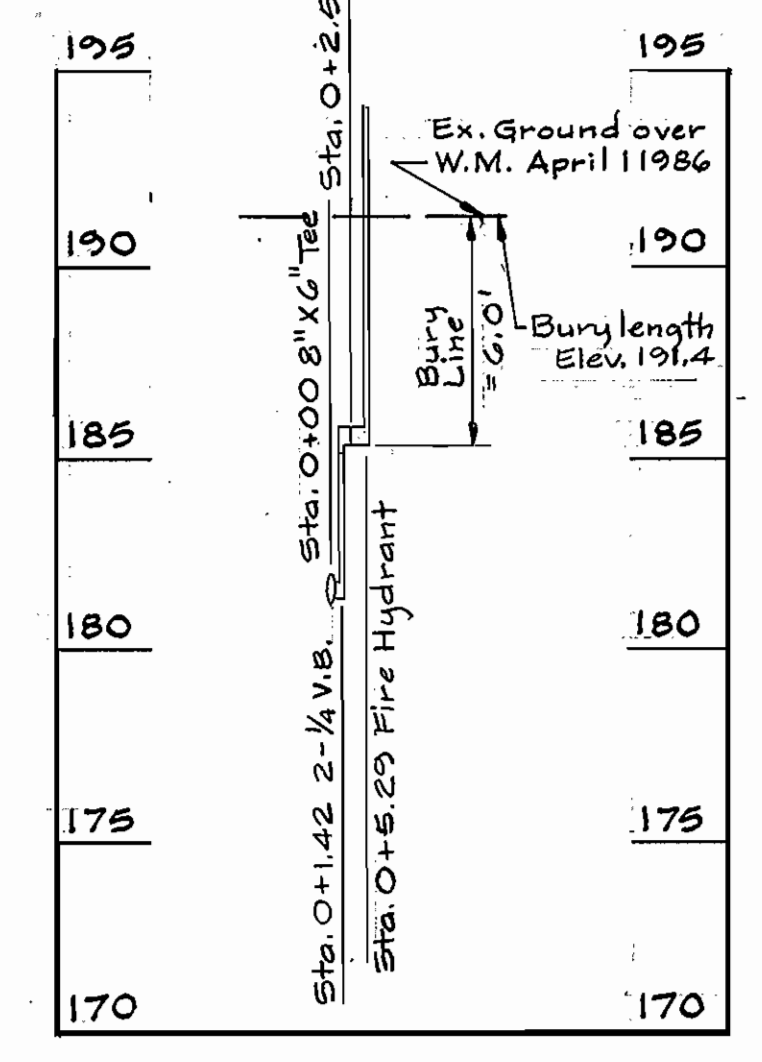
- B.M. 'A'** Elev. 192.51
R.R. Spike in G+E Pole #519506, South side Brookdale Road, 60'± North-west of traverse point #10.
- B.M. 'B'** Elev. 198.65
R.R. Spike in G+E Pole #272627, North side Kit Kat Road 240'± Northwest of traverse point #5.
- Howard Co. Mon. #2345002** Elev. 209.665
Concrete Monument (Flush), Southwest end of island, 300'± Northeast of Brookdale Rd.
- Howard Co. Mon. #2345006** Elev. 210.611
Conc. Mon., Southwest island, entrance to Luskins, 340'± Southwest of Kit Kat Rd.

TRAVERSE DESCRIPTION

| Δ POINT | BEARING | DISTANCE |
|---------|-------------------|----------|
| B | | |
| 6 | N 72° 10' 49.1" E | 221.65' |
| 7 | N 57° 29' 53.8" E | 109.54' |
| 8 | N 50° 56' 48.6" E | 92.45' |
| 9-A | N 26° 04' 48.2" E | 255.43' |
| 10 | N 38° 18' 59.1" E | 252.12' |



PROFILE - BLOW-OFF STA. 6+00
See Special Detail Spec. Prov. Appendix E



PROFILE - FIRE HYDRANT STA. 9+58
See Special Detail Spec. Prov. Appendix F

DEVELOPER'S CERTIFICATION
"I/WE 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."
David M. Abron 1/13/87
BUREAU OF ENGINEERING DATE
DEPARTMENT OF PUBLIC WORKS

ENGINEER'S CERTIFICATION
I CERTIFY THAT THIS PLAN FOR EROSION & 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 HOWARD COUNTY SOIL CONSERVATION DISTRICT.
David M. Abron 1/21/87
WALLACE MONTGOMERY & ASSOCIATES DATE
9 W 29 TH STREET
BALTIMORE, MD. 21218
301-235-7600

REVIEWED FOR HOWARD COUNTY S.C.D. MEETS TECHNICAL REQUIREMENTS.
1/21/87
U.S. SOIL CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.
1/22/87
APPROVED DATE
HOWARD COUNTY S.C.D.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Michael A. ... 1-26-87
DIRECTOR OF PUBLIC WORKS DATE
Michael A. ... 1/16/87
CHIEF, BUREAU OF UTILITIES DATE

WALLACE, MONTGOMERY & ASSOCIATES
9 W. 29 TH STREET
BALTIMORE, MD. 21218
301-235-7600
1-13-87
CHIEF, BUREAU OF ENGINEERING DATE
1/12/87
CHIEF, UTILITY DIVISION DATE

| | |
|----------------|------|
| DES: H.K. | |
| DRN: P.B. | |
| CHK: D.A. | |
| DATE: 10/21/86 | |
| BY | NO. |
| REVISION | DATE |

DETAILS OF WATER MAIN
600' SCALE MAP NO. 43 BLOCK NOS. 5 & 11

KIT KAT ROAD WATER MAIN CAPITAL PROJECT W-848
CONTRACT NO. 44-1534
ELECTION DISTRICT NO. 1
HOWARD COUNTY MD.
SCALE AS SHOWN
SHEET 2 OF 2