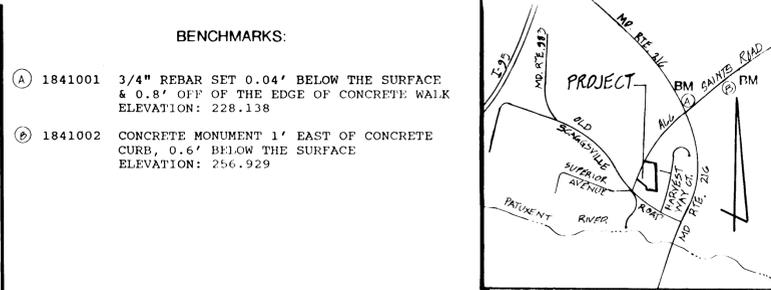
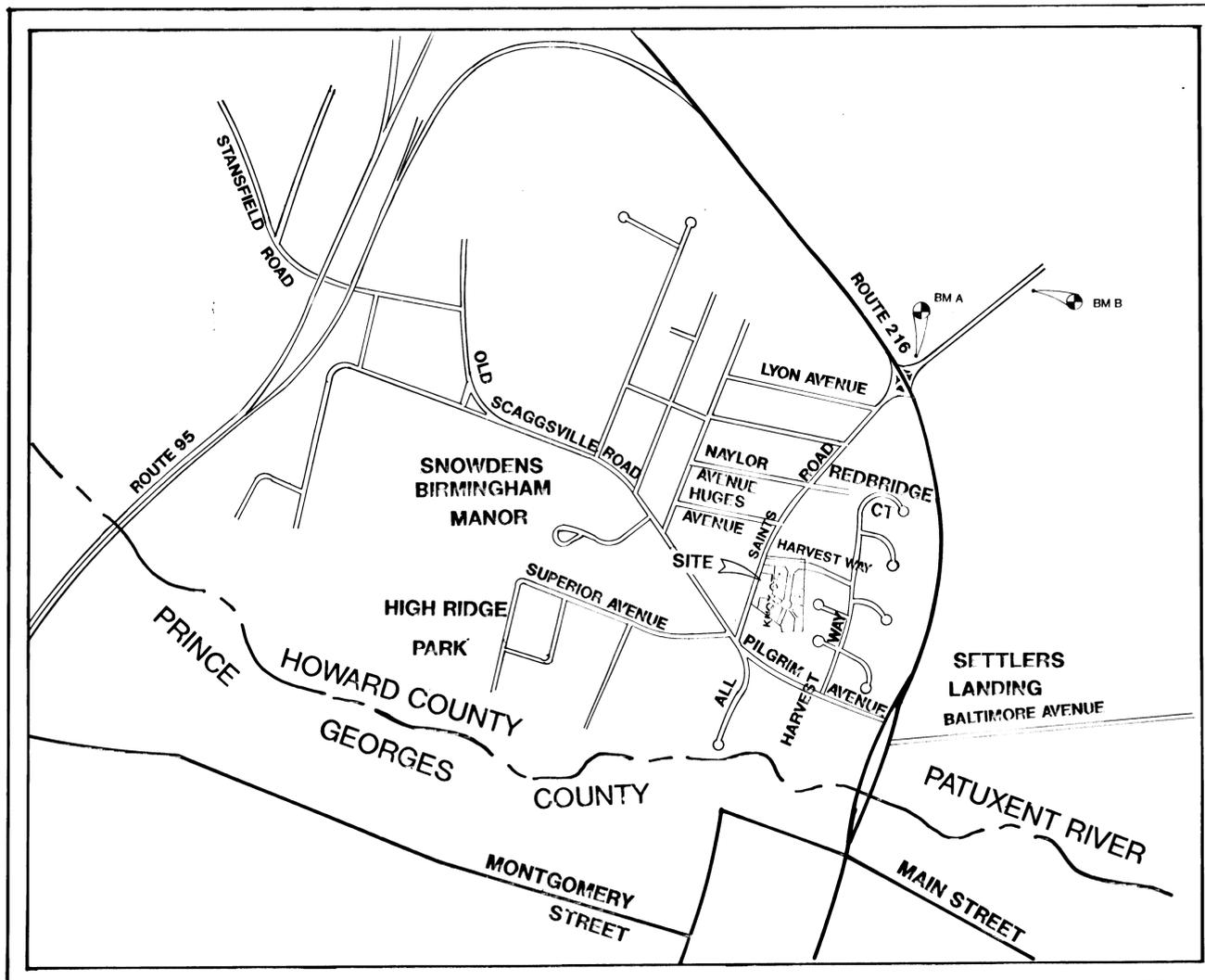


INDEX OF SHEETS	
SHEET NO.	TITLE
1	TITLE SHEET
2	PLAN & PROFILE ALL SAINTS ROAD
3	PLAN & PROFILE HARVEST WAY & KNOX COURT
4	GRADING & SLOPE CONTROL PLAN
5	ROADWAY DETAILS
6	STORM DRAIN & STORMWATER MANAGEMENT DETAILS & PROFILES
7	DRAINAGE AREA MAPS & SLOPE CONTROL DETAILS



- BENCHMARKS:**
- 1841001 3/4" REBAR SET 0.04' BELOW THE SURFACE & 0.8' OFF OF THE EDGE OF CONCRETE WALK ELEVATION: 228.138
 - 1841002 CONCRETE MONUMENT 1' EAST OF CONCRETE CURB, 0.6' BELOW THE SURFACE ELEVATION: 256.929

GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS, AND DETAILS FOR CONSTRUCTION, 1989 AMEND.
- ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HOURS IN ADVANCE OF ANY CONSTRUCTION.
- STORM DRAINAGE TRENCHES WITHIN ROAD RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY CODE.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE SE PLANS DRAWINGS: TELEPHONE 792-7272.
- 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.
- ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. STREET LIGHTS TO BE PROVIDED AS REQUIRED BY SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THE SE PLANS. ATTN: MR. PAT DAVIS - TELEPHONE NO. 892-6869.
- STATE HIGHWAY ADMINISTRATION: 531-5533
- BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND: ELECTRIC DISTRIBUTION CUSTOMER SERVICE: 685-0173 ENGINEERING DAMAGE CONTROL: 234-5611
- "MISS UTILITIES" 1-556-0100
- CHE SAFFAIRE & POTOMAC (CAP) TELEPHONE CO.: 725-9976
- AMERICAN TELEPHONE & TELEGRAPH CO. LOCATION DIVISION: 393-3533
- COLONIAL PIPELINE COMPANY: 795-1390
- BUREAU OF UTILITIES, HOWARD COUNTY: 892-2366

LANDSCAPE TABULATION

SYMBOL	NUMBER	NAME	SIZE	REMARKS
	12	ALER SACCHARUM (SUGAR MAPLE)	2 1/2" CAL. (MIN.)	BALLED & BURLAPPED
	13	ALER RUBRUM (RED MAPLE)	2 1/2" CAL. (MIN.)	BALLED & BURLAPPED

- LIGHTING LEGEND**
- TYPE 'A' 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE MOUNTED ON A 30' HIGH GALVANIZED STEEL POLE.
 - TYPE 'B' 150 WATT HIGH PRESSURE SODIUM VAPOR POST TOP MOUNTED ON A 14' HIGH FIBERGLASS POLE.

KNOX LANDING

ROAD CONSTRUCTION DRAWINGS

SIXTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

Charles M. Duggan 6/14/91
 Draunelle W. Welland 6/3/91
 6-11-91
 6/12/91

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 THE CONTROL OF SEDIMENT AND EROSION PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Mark McWhorter 5/11/91

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE 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. I HAVE NOTICED THE DEVELOPER TO BE BOUND BY THESE PLANS AND TO PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

5/16/91

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

5/17/91

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

DESIGNED BY	DATE	REVISIONS
DRAWN BY	DATE	
CHECKED BY	DATE	
APPROVED BY	DATE	

FISHER, COLLINS & CARTER, INC.

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21043
 (301) 461-2855

OWNER
 JAMES KNOX
 9411 ALL SAINTS ROAD
 LAURIE, MARYLAND 20707

DEVELOPER
 MARK S. MCWHORTER
 6851 REDHURRY ROAD
 CLARKSVILLE, MD 21704

TITLE SHEET

KNOX LANDING

TAX MAP: 50; PARCEL: 74; BLOCK: 2

SIXTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SHEET NUMBER: 1990

PLAN	SURVEYED PLOTTED NOTE BOOK NO.	CHECKED BY DATE
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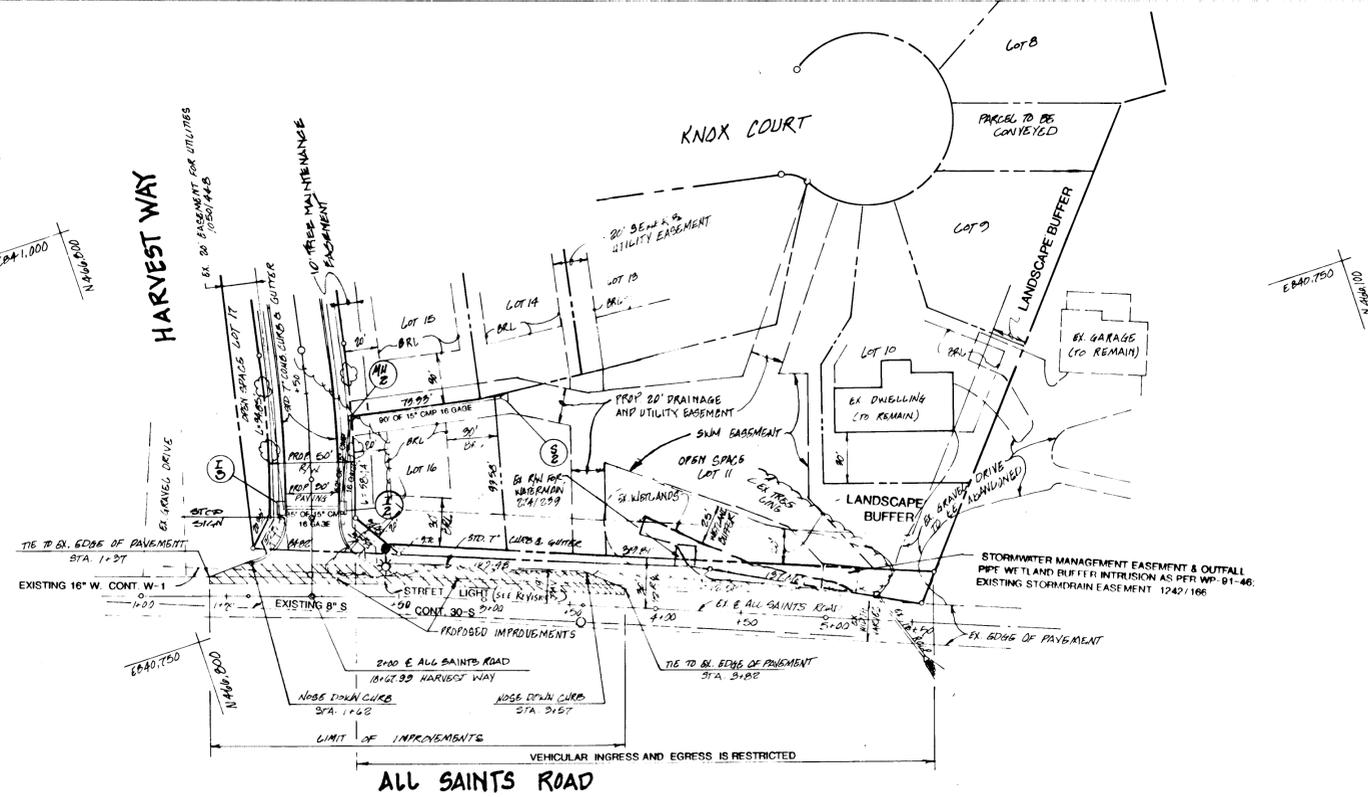
APPROVED
DEPARTMENT OF PUBLIC WORKS
Olaf M. Tengam 6/10/91
CHIEF, LAND DEVELOPMENT DIVISION

Graville W. Wakland 6/13/91
CHIEF, BUREAU OF HIGHWAYS

APPROVED
DEPARTMENT OF PUBLIC WORKS
William B. Ray 6-11-91
CHIEF, BUREAU OF ENGINEERING

APPROVED
DEPARTMENT OF PLANNING AND ZONING
John U. A. Apple 6/12/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

REVISIONS
1- 3/11/93 - LIGHTING FIXTURE ALONG ALL SAINTS RD AT HARVEST WAY CHANGED TO A 150 WATT HP'S VAPOR PENANT FIXTURE MOUNTED ON A 25' GALVANIZED STEEL POLE. LOCATION & ORIENTATION CHANGED



PLAN
SCALE: 1" = 50'



KNOX LANDING
LOT 1 THRU LOT 16
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SEPTEMBER, 1990

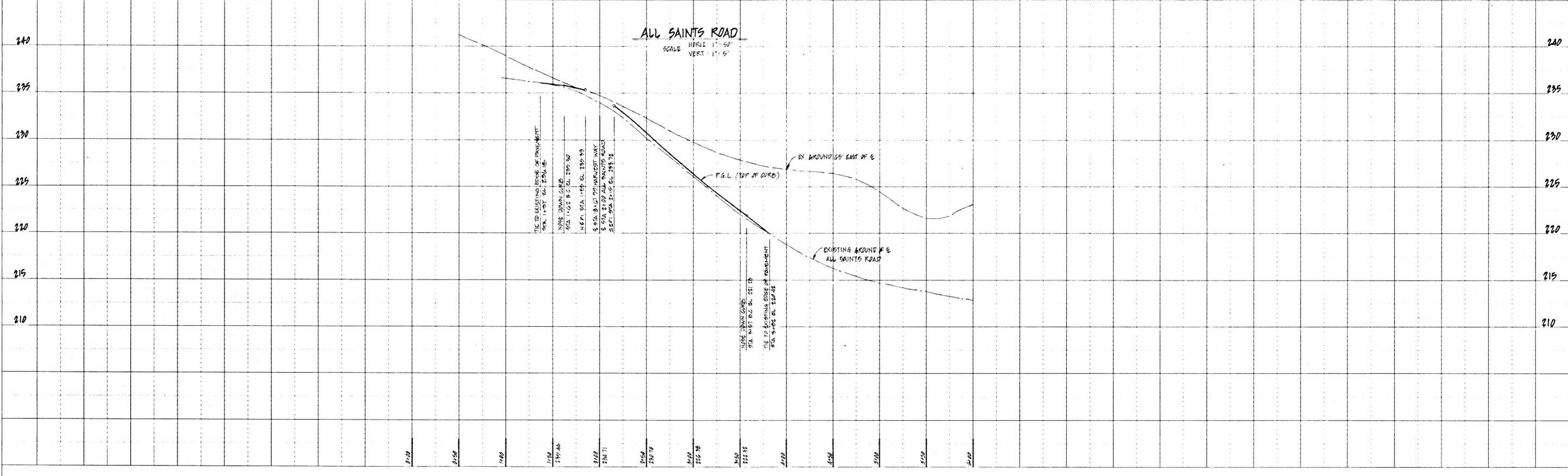
PLAN AND PROFILE
ALL SAINTS ROAD

OWNER AND DEVELOPER
JAMES KNOX 9411 ALL SAINTS ROAD LAUREL, MARYLAND 20707
MARK S. McWHORTER 6851 REDBERRY ROAD CLARKSVILLE, MD 21204

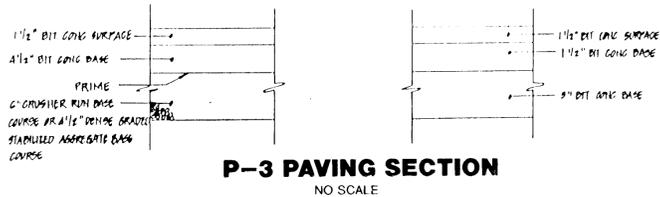
SCALE AS SHOWN DATE SEPT 1990 DWG NO. 2 OF 7
DES. KMF. DRN. DP. CHK. Z. J. S.

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

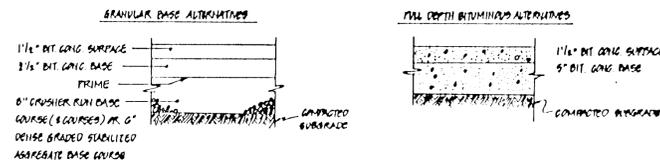
PROFILE	SURVEYED PLOTTED NOTE BOOK NO.	CHECKED BY DATE
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1627



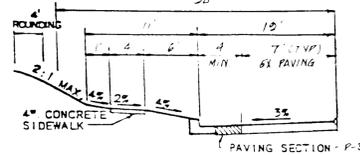
P-3 PAVING SECTION
NO SCALE



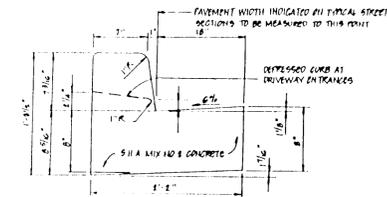
P-2 PAVING SECTION
NO SCALE

CLASSIFICATION: MINOR COLLECTOR DESIGN SPEED: 35 MPH ZONING: R-SC

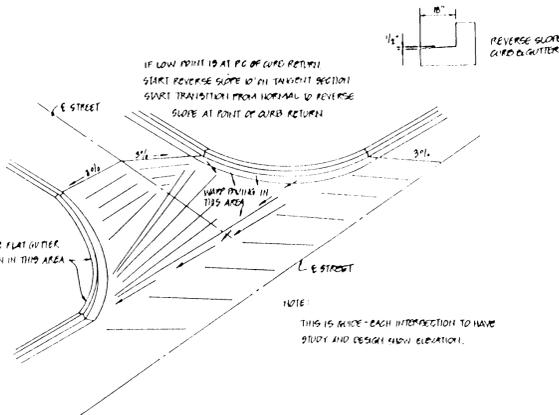
STATION LIMITS: 1+62 TO 3+57



TYPICAL SECTION MINOR COLLECTOR CLOSED SECTION ALL SAINTS ROAD
NO SCALE



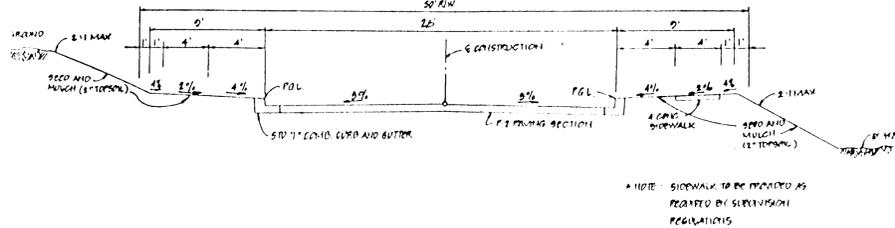
STANDARD 7" COMB. CURB & GUTTER
NOT TO SCALE



TYPICAL INTERSECTION GRADING DETAIL
NO SCALE

CLASSIFICATION: CUL-DE-SAC DESIGN SPEED: 25 MPH ZONING: R-SC

STATION LIMITS: 0+00 TO 3+10



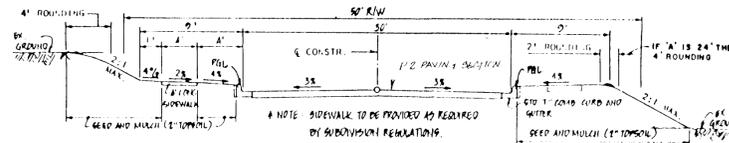
TYPICAL SECTION-CUL-DE-SAC KNOX COURT
NO SCALE

CONSTRUCTION SEQUENCE

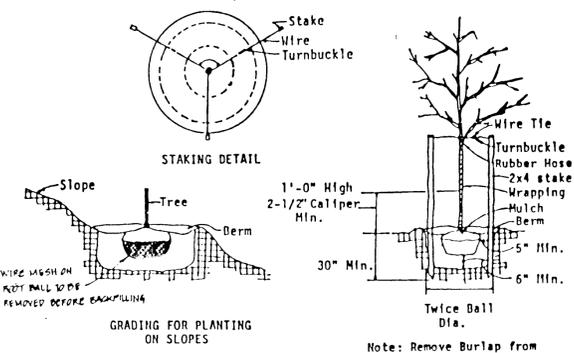
1. Obtain grading permit.
2. Install and stabilize construction entrance.
3. Install temporary swale, silt fence, and grade sediment trap/stormwater management pond.
4. Perform necessary clearing and grubbing within roadway right of way.
5. Grade roads to subgrade.
6. Install 15" barrel with collars, and connect to 24" riser. Backfill over barrel and provide necessary tamping. Stabilize with temporary seeding.
7. Construct storm drain system.
8. Finish clearing and grubbing within construction fences and limits of disturbance.
9. Construct curb and lay base course. Finish road construction and road widening improvements. Contractor shall place silt fence at the downgrade of any disturbed area at the end of each working day.
10. Fine grade and stabilize all disturbed area with permanent stabilization measures.
11. During construction and after each rainfall, the contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon.
12. Clean base course. Apply tack coat to base course and lay surface course. Stabilize all shoulders using permanent seeding.
13. Remove stabilized construction entrance.
14. Remove all sediment control devices once disturbed areas have been stabilized. Remove sediment from the pond and perform all necessary dewatering and grading for the stormwater management facility.
15. All disturbed areas due to the removal of sediment control measures shall be graded and stabilized with permanent seeding mixture.
16. Following initial soil disturbance or redistribution, 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 for all other disturbances or graded areas on the project site.

CLASSIFICATION: LOCAL STREET DESIGN SPEED: 30 MPH ZONING: R-SC

STATION LIMITS: 14+81 TO 18+67.99



TYPICAL SECTION- LOCAL STREET HARVEST WAY
NO SCALE



TREE PLANTING DETAIL
NO SCALE

NOTE: TREES TO BE LOCATED FIVE FEET (5') BEHIND SIDEWALK.

LANDSCAPE TABULATION

SYMBOL	NUMBER	NAME	SIZE	REMARKS
	12	ALER SACCHARUM (SUGAR MAPLE)	2 1/2" CAL. (MIN.)	BALLED & BURLAPPED
	19	ALER RUBRUM (RED MAPLE)	2 1/2" CAL. (MIN.)	BALLED & BURLAPPED

DESIGNED	DATE	REVISIONS
...	...	11.00 AS PER HOWARD COUNTY COMMENTS DATE 10/31/00
DRAWN	DATE	
CHECKED	DATE	
APPROVED	DATE	

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043
(301) 481 - 2855

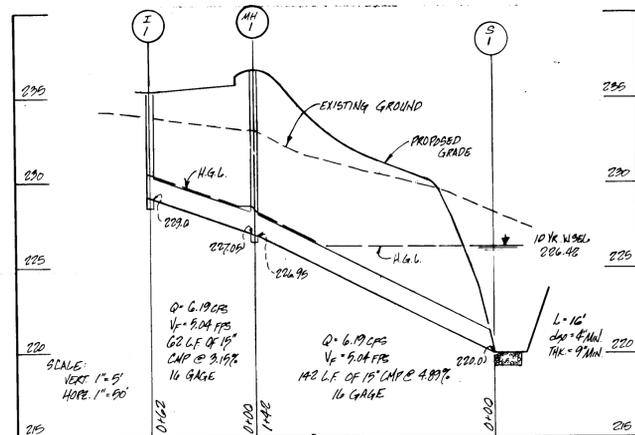
OWNER:
JAMES KNOX
9411 ALL SAINTS ROAD
LAUREL, MARYLAND 20707

DEVELOPER:
MARK S. McWHORTER
6851 REDBERRY ROAD
CLARKSVILLE, MARYLAND
21209 (301)854-3994

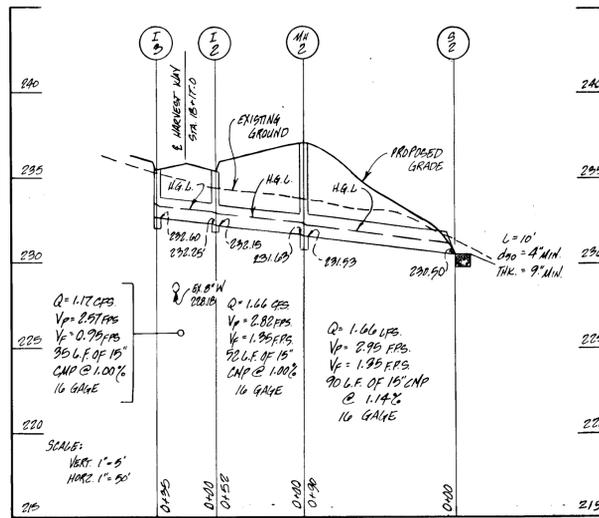
ROADWAY DETAILS
KNOX LANDING
TAX MAP:50; PARCEL:74; BLOCK:2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SEPTEMBER, 1990



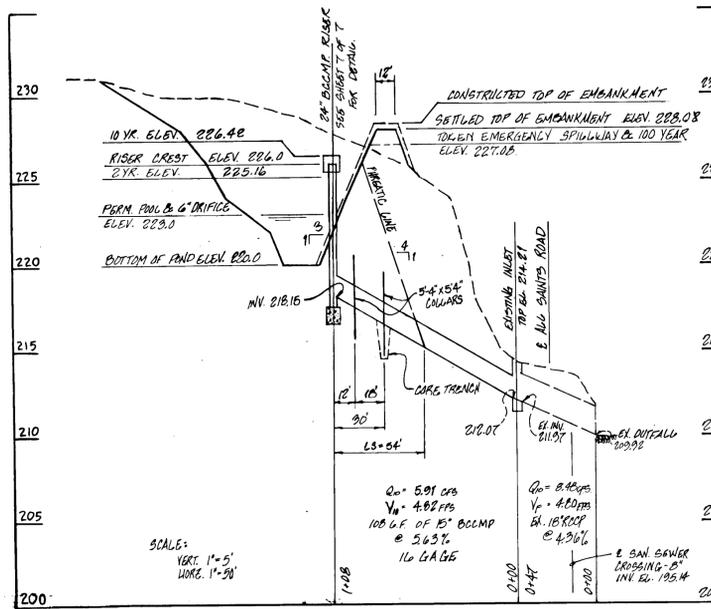
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Bennett 6/10/91
CHIEF, LAND DEVELOPMENT DIVISION
Lawrence W. Heiland 6/1/91
CHIEF, BUREAU OF HIGHWAY
William E. Reig 6-11-91
CHIEF, BUREAU OF ENGINEERING
APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Paula J. Taylor 6/13/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



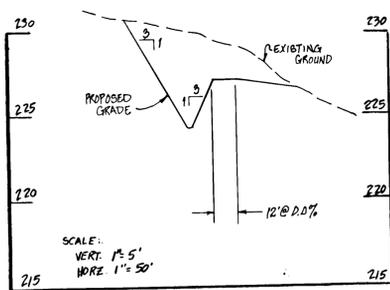
PROFILE I-1 TO S-1



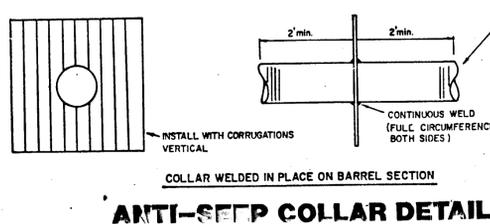
PROFILE I-3 TO S-2



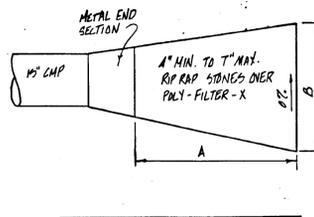
PROFILE ALONG PRINCIPAL SPILLWAY (SECTION A-A)



PROFILE THROUGH TOKEN SPILLWAY



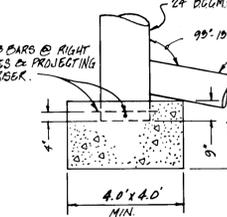
ANTI-SEEP COLLAR DETAIL



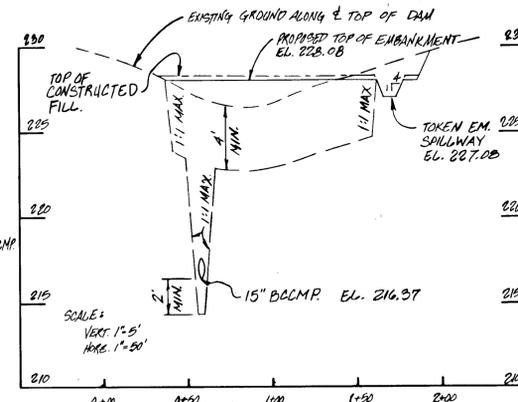
RIP RAP CHANNEL DETAIL

OUTFALL	A	B	THICK.	MIN.
S-1	16'	8.45'	9"	4"
S-2	10'	11.25'	9"	4"

RIP RAP CHANNEL DETAIL



RISER BASE DETAIL



PROFILE ALONG TOP OF EMBANKMENT

THESE SPECIFICATIONS ARE APPROPRIATE TO PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE 378.

I. SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1.

AREAS TO BE COVERED BY THE POND OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBER AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE CONVEYED TO A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

II. BARGE FILL

THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION WHICH PROVIDES FOR ANTICIPATED SETTLEMENT TO THE DESIGN ELEVATION. THE FILL HEIGHT ALL ALONG THE LENGTH OF THE EMBANKMENT SHALL BE INCREASED ABOVE THE DESIGN ELEVATION (INCLUDING FREEBOARD) AS SHOWN ON PLANS.

III. FILL MATERIAL

AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN 4-INCH MAXIMUM THICKNESS (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE MOST POROUS BOTTOM MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT.

IV. CONSTRUCTION

THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TRAIL TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TREAD OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, EACH LAYER OF FILL SHALL BE COMPACTION AS NECESSARY TO OBTAIN THAT DENSITY AND IS TO BE CERTIFIED BY THE ENGINEER.

V. SLOPE TRENCH

WHERE SPECIFIED, A SLOPE TRENCH SHALL BE EXCAVATED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE AS SHOWN ON THE PLANS, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1:1 OR FLATTER. THE BACKFILL MATERIAL FOR THE SLOPE TRENCH SHALL BE THE MOST IMPROVED MATERIAL AVAILABLE AND SHALL BE COMPACTION WITH EQUIPMENT OF ROLLERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

VI. STRUCTURAL BACKFILL

BACKFILL MATERIAL SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ACQUIRING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTION BY HAND TAMPERS OR OTHER COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT 10' TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE UNLESS THERE IS A COMPACTION FILL OF TWENTY-FOUR INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

VII. PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

A. CORRUGATED METAL PIPE

1. MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF ASHITO SPECIFICATION M-190 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR CHEMISES REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.

STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL.) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS ARE COMMERCIALLY AVAILABLE: REBOX, PLASTI-COTE, BLACK-KLAD, AND METI-CO-LOY. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF ASHITO M-215 AND M-246.

MATERIALS - (ALUMINIZED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF ASHITO SPECIFICATION M-274-793 WITH WATER TIGHT COUPLING BANDS OR FLANGES.

MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF ASHITO SPECIFICATION M-136 OR M-111 WITH WATER TIGHT COUPLING BANDS OR FLANGES. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAID MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR

MATERIALS WITH USE OF RUBBER OR PLASTIC JOINTING MATERIALS AT LEAST 24 MILS. IN THICKNESS. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED STEEL MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE LESS THAN 9 AND GREATER THAN 4.

2. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WITH THE PIPE AND RISER ARE METAL. WATER TIGHT COUPLING BANDS OR FLANGES SHALL BE USED AT ALL JOINTS. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DIPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORM BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPOONY OR OTHER UNDESIRABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTION TO PROVIDE ADEQUATE SUPPORT.

4. LAYING PIPE - THE PIPE SHALL BE PLACED WITH INSIDE CIRCUMFERENTIAL LAPS POINTING DOWNSTREAM AND WITH THE LONGITUDINAL LAPS AT THE SIDES.

5. BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

B. REINFORCED CONCRETE PIPE

1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE A RUBBER GASKET JOINT AND SHALL EQUAL OR EXCEED ASTM SPECIFICATION C-301. AN APPROVED EQUIVALENT IS ASMA SPECIFICATION C-301.

2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3", OR AS SHOWN ON THE DRAWINGS.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE.

4. BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

V. CONCRETE

1. MATERIALS

A. CEMENT - NORMAL PORTLAND CEMENT SHALL CONFORM TO THE LATEST ASTM SPECIFICATION C-150.

B. WATER - THE WATER USED IN CONCRETE SHALL BE CLEAN, FREE FROM OIL, ACID, ALKALI, SALTS, ORGANIC MATTER OR OTHER OBJECTIONABLE SUBSTANCES.

C. SAND - THE SAND USED IN CONCRETE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND SHALL BE WELL GRADED WITH 100 & PASSING A ONE-QUARTER INCH SIEVE. LIMESTONE SAND SHALL NOT BE USED.

D. COARSE AGGREGATE - THE COARSE AGGREGATE SHALL BE CLEAN, HARD, STURDY AND DURABLE, AND FREE FROM CLAY OR DIRT. IT SHALL BE WELL GRADED WITH A MAXIMUM SIZE OF ONE AND ONE-HALF (1-1/2) INCHES.

E. REINFORCED STEEL - THE REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE BILLET STEEL OR RAIL STEEL CONFORMING TO ASTM SPECIFICATION A-615.

2. DESIGN MIX - THE CONCRETE SHALL BE MIXED IN THE FOLLOWING PROPORTIONS, MEASURED BY WEIGHT. THE WATER-CEMENT RATIO SHALL BE 5 1/2 TO 6 U.S. GALLONS OF WATER PER 94 POUND BAG OF CEMENT. THE PROPORTION OF MATERIALS FOR THE TRIAL MIX SHALL BE 1:1:3-1/2. THE COMBINATION OF AGGREGATES MAY BE ADJUSTED TO PRODUCE A FRESH MIX THAT WILL NOT PRODUCE HARDENESS IN PLACING OR HONEYCOMBING IN THE STRUCTURE.

3. MIXING - THE CONCRETE INGREDIENTS SHALL BE MIXED IN BATCH MIXERS UNTIL THE MIXTURE IS HOMOGENEOUS AND OF UNIFORM CONSISTENCY. THE MIXING OF EACH BATCH SHALL CONTINUE FOR NOT LESS THAN ONE AND ONE-HALF (1 1/2) MINUTES AFTER ALL THE INGREDIENTS, EXCEPT THE FULL AMOUNT OF WATER, ARE IN THE MIXER. EXCEPT THE FULL AMOUNT OF WATER, ARE IN THE MIXER. THE SPEED OF ROTATION OF THE MIXER AND OF THE INTRODUCTION OF THE MATERIALS, INCLUDING WATER, INTO THE MIXER. WATER SHALL BE ADDED PRIOR TO DUMPING, AND FOLLOWING THE MIXER-CHARGER OPERATIONS. EXCESSIVE OVERMIXING REQUIRING THE ADDITION OF WATER TO PRESERVE THE REQUIRED CONCRETE CONSISTENCY SHALL NOT BE PERMITTED. TRUCK MIXING WILL BE ALLOWED PROVIDED THAT THE USE OF THIS METHOD SHALL CAUSE NO VIOLATION OF ANY APPLICABLE PROVISIONS OF THE SPECIFICATIONS GIVEN HERE.

4. FORMS - THE FORMS SHALL HAVE SUFFICIENT STRENGTH AND RIGIDITY TO HOLD THE CONCRETE AND TO WITHSTAND THE NECESSARY PRESSURE, TAMPING, AND VIBRATION WITHOUT DEFLECTION FROM THE PRESCRIBED LINES. THEY SHALL BE MOIST-TIGHT AND CONSTRUCTED SO THAT THEY CAN BE REMOVED WITHOUT HAMMERS OR PRYING AGAINST THE CONCRETE.

THE INSIDE OF FORMS SHALL BE OILED WITH A NON-STAINING MINERAL OIL OR THOROUGHLY WETTED BEFORE CONCRETE IS PLACED.

FORMS MAY BE REMOVED 24 HOURS AFTER THE PLACEMENT OF CONCRETE. ALL WIRE TIES AND OTHER DEVICES USED SHALL BE RECESSED FROM THE SURFACE OF THE CONCRETE.

6. CONSOLIDATING - CONCRETE SHALL BE CONSOLIDATED WITH INTERNAL TYPE MECHANICAL VIBRATORS. VIBRATION SHALL BE SUPPLEMENTED BY SPADING AND HAND TAMPING AS NECESSARY TO INSURE SMOOTH AND DENSE CONCRETE ALONG FORM SURFACES, IN CORNERS, AND AROUND EMBEDDED TIERS.

7. FINISHING DEFECTIVE CONCRETE, NONWORKED AREAS, VOIDS LEFT BY THE REMOVAL OF THE BARS, RIDGES ON ALL CONCRETE SURFACES PERMANENTLY EXPOSED TO VIEW OR EXPOSED TO WATER ON THE FINISHED SURFACE, SHALL BE REPAIRED IMMEDIATELY AFTER THE REMOVAL OF FORMS. ALL VOIDS SHALL BE REAMED AND COMPLETELY FILLED WITH DRY-PATCHING MORTAR.

8. PROTECTION AND CURING - EXPOSED SURFACES OF CONCRETE SHALL BE PROTECTED FROM THE DIRECT BEAMS OF THE SUN FOR AT LEAST THE FIRST THREE (3) DAYS. ALL CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR AT LEAST TEN (10) DAYS AFTER BEING PLACED. MOISTURE SHALL BE APPLIED BY SPRAYING OR SPRINKLING AS NECESSARY TO PREVENT THE CONCRETE FROM DRYING. CONCRETE SHALL NOT BE EXPOSED TO FREEZING DURING THE CURING PERIOD. CURING COMPOUNDS MAY ALSO BE USED.

9. PLACING TEMPERATURE - CONCRETE MAY NOT BE PLACED AT TEMPERATURES BELOW 32° F WITH THE TEMPERATURE FALLING, OR 14° F WITH THE TEMPERATURE RISING.

VI. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONCAVE CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SLOPE AND BORROW AREAS, AND BEANS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING (IF REQUIRED) IN ACCORDANCE WITH THE VEGETATIVE TREATMENT SPECIFICATIONS OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

VII. EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PERIOD.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPT. OF ENVIRONMENTAL AND LAND DEVELOPMENT

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APPROVED: HOWARD COUNTY DEPT. OF ENVIRONMENTAL AND LAND DEVELOPMENT

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 COUNTY SOIL CONSERVATION DISTRICT.

DATE: 5/16/91

DEVELOPER'S CERTIFICATE

I 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 AKE DEFEND NECESSARY.

DATE: 5/17/91

DATE: 5/17/91

DATE: 5/17/91

DATE: 5/17/91

DATE: 5/17/91

DATE: 5/17/91

DESIGNED	K.C.	DATE	8/90
DRAWN	D.P.	DATE	9/90
CHECKED	Z.F.	DATE	9/90
APPROVED	C.C.	DATE	9/90

1/4" = 1' AS PER HOWARD COUNTY COMMENTS DATED 10/13/90

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461 - 2655

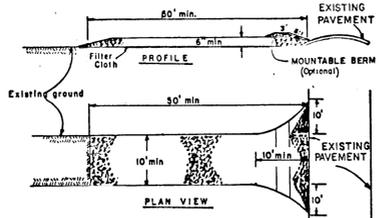
OWNER:
JAMES KNOX
9411 ALL SAINTS ROAD
LAURFL, MARYLAND 20707

DEVELOPER:
MARK S. McWHORTER
6851 REDBERRY ROAD
CLARKSVILLE, MARYLAND
21209 (301) 854-3994

KNOX LANDING
TAX MAP: 50-PARCEL: 74-BLOCK: 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SEPTEMBER, 1990

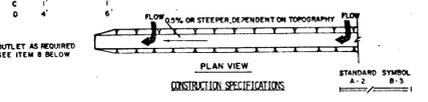
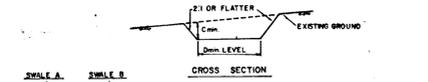
PREVIOUS SUBMISSIONS: S-89-93 & P-90-32 & W-91-46 SHEET 6 OF 7

F-91-54

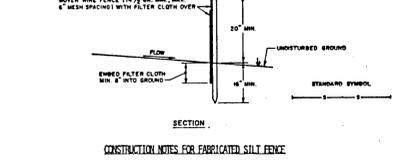
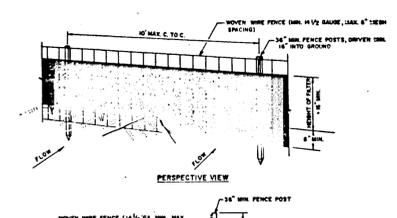


- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 30 feet (except on a simple residence lot where a 30 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be recycled on a multiple family residence lot.
 - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance (if piping is impractical), a mounded berm with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleaning of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area established with stone and which drains into an approved sediment trapping device.
 - Periodic inspection and needed maintenance shall be provided after each rain.

CONSTRUCTION ENTRANCE NOT TO SCALE



- TEMPORARY SWALE NOT TO SCALE**
- All temporary swales shall have uninterrupted positive grade to an outlet.
 - Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
 - Diverted runoff from an undisturbed area shall outlet directly into an undisturbed stabilized area at non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or graded to line, grade, and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fills shall be compacted by earth moving equipment.
 - All earth removed and not needed on construction shall be placed so that it will not interfere with the functioning of the swale.
 - Stabilization shall be as per the chart below:
- | SWALE WIDTH | SWALE DEPTH | SEEDING | STABILIZATION |
|-------------|-------------|------------------------------|--|
| 1 | 0.5-3.0' | SEED AND STRAW MULCH | 8 (5 AC OR LESS) |
| 2 | 3.1-5.0' | SEED AND STRAW MULCH | 8 (5 AC - 10 AC) |
| 3 | 5.1-8.0' | SEED WITH MULCH OR EXCELISOR | SEED USING MULCH OR EXCELISOR |
| 4 | 8.1-20' | Lined 4" Rip-Rap | Lined Rip-Rap 4" or Recycled Concrete Equivalent |
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

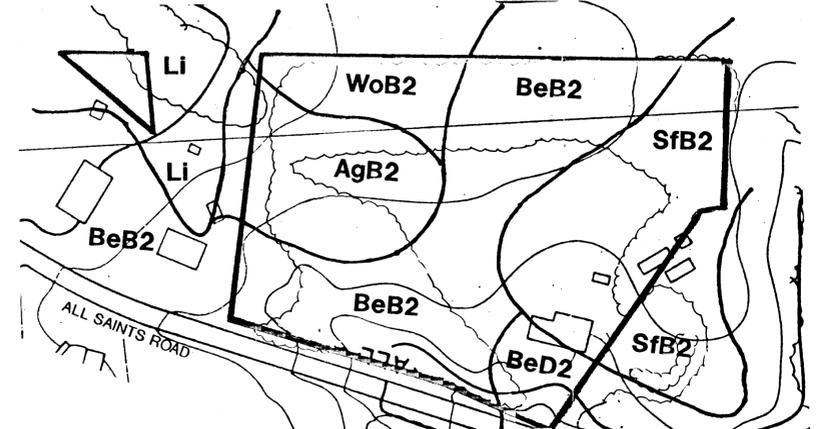


- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- MOVIE WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO MOVIE WIRE FENCE WITH WIRE TIES OR STAPLES EVERY 24" AT TOP AND MID SECTION.
 - WELD THE SECTIONS OF FILTER CLOTH ALONG EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BALKS" DEVELOP IN THE FENCE.

SILT FENCE NOT TO SCALE



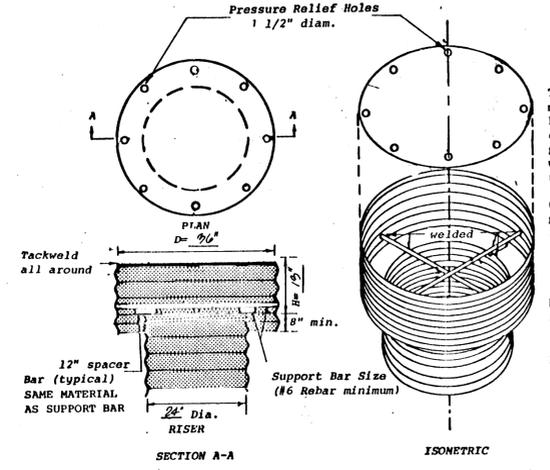
- SEDIMENT CONTROL NOTES:**
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (192-2437)
 - ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - 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.
 - 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.
 - 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) AND (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.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SITE ANALYSIS:**
TOTAL AREA OF SITE: 4.81 ACRES
AREA TO BE ROOFED OR PAVED: 1.27 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 3.54 ACRES
TOTAL CUT: 1668.2 CU. YDS.
TOTAL FILL: 1016.2 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION: 1016.2 CU. YDS.
 - ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.



SCALE: 1"=100'

- SOILS LEGEND:**
- AgB2 - AURA GRAVELLY LOAM, 1 TO 5% SLOPES, MODERATELY ERODED
 - BeB2 - BELTSVILLE SILT LOAM, 1 TO 5% SLOPES, MOD. ERODED
 - BeD2 - BELTSVILLE SILT LOAM, 10 TO 15% SLOPES, MOD. ERODED
 - SfB2 - SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5% SLOPES, MOD. ERODED
 - WoB2 - WOODSTOWN SANDY LOAM, 1 TO 5% SLOPES, MOD. ERODED
 - Li - LEONARDTOWN SILT LOAM
- HOWARD COUNTY SOILS MAP, SHEET NUMBER 31 AND 32

SOILS MAP



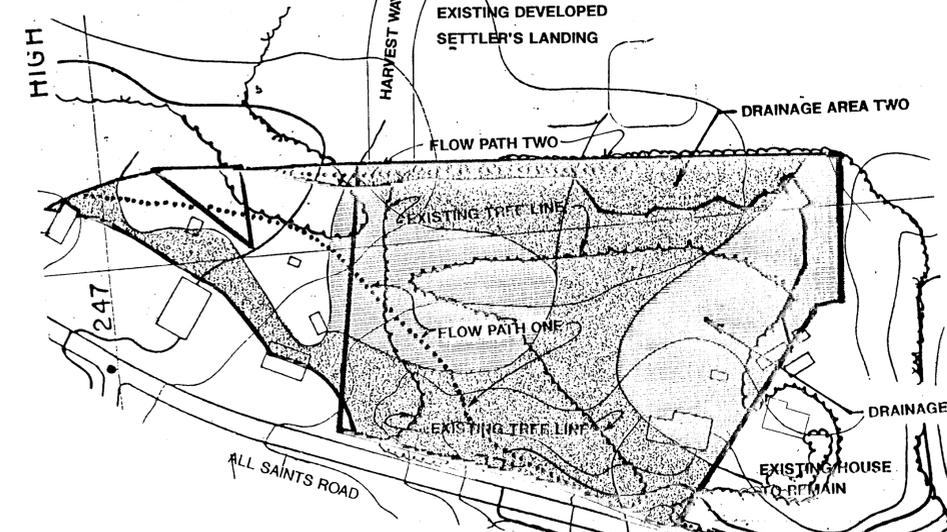
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE NOT TO SCALE

- Top is 1/4 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be omitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.
- Cylinder is 1/8 gage corrugated metal pipe or fabricated from 1/8" steel plate.
- Notes:
- The cylinder must be firmly fastened to the top of the riser.
 - Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

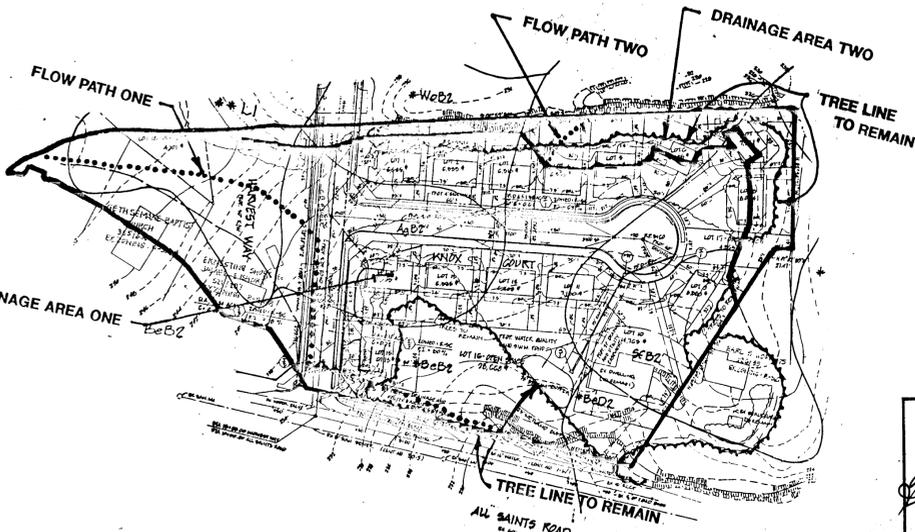
NOT TO SCALE

TEMPORARY SWALE NOT TO SCALE



DRAINAGE AREA MAP EXISTING CONDITIONS

SCALE: 1"=100'



DRAINAGE AREA MAP DEVELOPED CONDITIONS

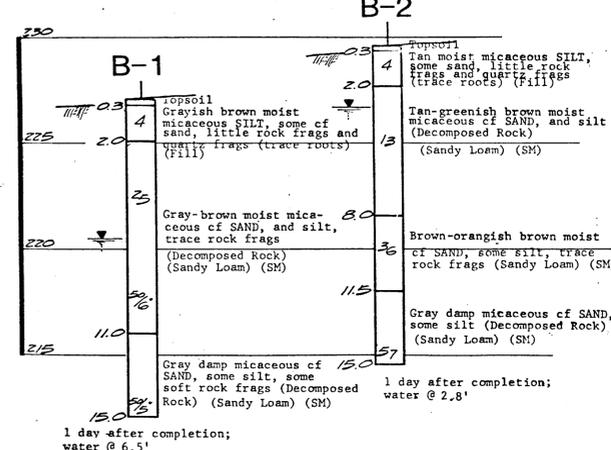
SCALE 1"=100'

PERMANENT SEEDING NOTES:

- APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE UNDER A PERMANENT LOW-LEVEL VEGETATIVE COVER IS REQUIRED.
- SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY BAKING, BROADCAST OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- 1) ACCEPTABLE - APPLY 3 TONS PER ACRE SOLICITIC LIME (88 LB/LB) AND 100 LBS PER ACRE 10-10-10 FERTILIZER (114 LB/LB) TO 2" DEPTH. FOR PERIOD MAY 1 THROUGH AUGUST 31, SEED WITH 3 LBS PER ACRE OF SEEDING MIXTURE (1.07 LB/1000 SQ. FT.). FOR PERIOD SEPTEMBER 15 THROUGH FEBRUARY 28, SEED WITH 3 TONS PER ACRE OF WELL-MANURED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.
 - 2) ACCEPTABLE - APPLY 3 TONS PER ACRE SOLICITIC LIME (88 LB/LB) AND 100 LBS PER ACRE 10-10-10 FERTILIZER (114 LB/LB) TO 2" DEPTH. FOR PERIOD APRIL 15 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 TONS PER ACRE OF ANNUAL RYE (3.2 LB/1000 SQ. FT.). FOR PERIOD MAY 1 THROUGH AUGUST 31, SEED WITH 3 LBS PER ACRE OF SEEDING MIXTURE (1.07 LB/1000 SQ. FT.). FOR PERIOD SEPTEMBER 15 THROUGH FEBRUARY 28, SEED WITH 3 TONS PER ACRE OF WELL-MANURED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.
 - 3) ACCEPTABLE - APPLY 3 TONS PER ACRE SOLICITIC LIME (88 LB/LB) AND 100 LBS PER ACRE 10-10-10 FERTILIZER (114 LB/LB) TO 2" DEPTH. FOR PERIOD APRIL 15 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 10 LBS PER ACRE (1.4 LB/1000 SQ. FT.) OF RESEEDING MIXTURE. FOR PERIOD OCTOBER 15 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 3 TONS PER ACRE OF WELL-MANURED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) USE SOO. OPTION (3) SEED WITH 40 LB/ACRE DUCKTIGHT 31 WALL FENCE AND MULCH WITH 1 TON/ACRE WELLS-MANURED STRAW.
- SEEDING: APPLY 1 1/2 TO 3 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF MIXTURED SMALL GRASS STRAW CONCENTRATED AFTER SEEDING. MOWING MUST BE IMMEDIATELY AFTER APPLICATION USING MOWER MOWING TOOL OR 2 1/2" BALLOON PER ACRE (10 GAL/1000 SQ. FT.) OF UNDEVELOPED AREAS OR PLANT AREAS, OR SLIPPER 2 FEET OR RICHER. USE 148 GALLONS PER ACRE (14 GAL/1000 SQ. FT.) FOR MOWING.
- MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS AND REPLACEMENTS AND RECORD.

TEMPORARY SEEDING NOTES:

- APPLY TO GRADED OR CLEARED AREA LIKELY TO BE REDISTURBED UNDER A SHORT-TERM VEGETATIVE COVER IS REQUIRED.
- SEEDING PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY BAKING, BROADCAST OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: APPLY 400 LBS PER ACRE 10-10-10 FERTILIZER (34 LB/1000 SQ. FT.).
- SEEDING: FOR PERIODS MARCH 1 THROUGH APRIL 15 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 TONS PER ACRE OF ANNUAL RYE (3.2 LB/1000 SQ. FT.). FOR PERIOD MAY 1 THROUGH AUGUST 31, SEED WITH 3 LBS PER ACRE OF SEEDING MIXTURE (1.07 LB/1000 SQ. FT.). FOR PERIOD SEPTEMBER 15 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 3 TONS PER ACRE OF WELL-MANURED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.
- MAINTENANCE: APPLY 1 1/2 TO 3 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF MIXTURED SMALL GRASS STRAW CONCENTRATED AFTER SEEDING. MOWING MUST BE IMMEDIATELY AFTER APPLICATION USING MOWER MOWING TOOL OR 2 1/2" BALLOON PER ACRE (10 GAL/1000 SQ. FT.) OF UNDEVELOPED AREAS OR PLANT AREAS, OR SLIPPER 2 FEET OR RICHER. USE 148 GAL PER ACRE (14 GAL/1000 SQ. FT.) OF UNDEVELOPED AREAS OR PLANT AREAS, OR SLIPPER 2 FEET OR RICHER. USE 148 GAL PER ACRE (14 GAL/1000 SQ. FT.) FOR MOWING.
- REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHOD NOT COVERED.



STORMWATER MANAGEMENT BORING PROFILES

NOT TO SCALE

REVISIONS:

NO.	DATE	DESCRIPTION
1	11/90	AS PER HOWARD COUNTY COMMENTS DATED 10/9/90

FISHER, COLLINS & CARTER, INC.

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043
(301) 461-2855

OWNER:

JAMES KNOX
9411 ALL SAINTS ROAD
LAUREL, MARYLAND 20707

DEVELOPER:

MARK S. McWHORTER
6851 REDBERRY ROAD
CLARKSVILLE, MARYLAND
21209 (301)854-3994

DRAINAGE AREA MAPS & SEDIMENT CONTROL DETAILS

KNOX LANDING

TAX MAP: 50 ; PARCEL: 74 ; BLOCK: 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SEPTEMBER, 1990

PREVIOUS SUBMISSIONS: S-89-93 & P-90-32 & W.P. 91-46

SHEET 7 OF 7

DESIGNED: K.C. DATE: 8/90
DRAWN: D.P. DATE: 9/90
CHECKED: Z.F. DATE: 9/90
APPROVED: C.C. DATE: 9/90

ENGINEER'S CERTIFICATE

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

Robert W. Ziehn 5/16/91

DEVELOPER'S CERTIFICATE

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Mark S. McWhorter 5-17-91

APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Robert W. Ziehn 5/17/91

APPROVED HOWARD COUNTY DEPT. OF PUBLIC WORKS

James W. Weiland 6/3/91

James M. Dungan 6/10/91

1627

F-91-54