

Reviewed for Howard County S.C.D. and meets technical requirements

*James M. McLean* Date: 2/13/85  
U.S. SOIL CONSERVATION SERVICE

This development plan is approved for soil erosion and sediment control by the Howard County Soil Conservation District.

Approved: *Stephen R. Kuhl* Date: 2/13/85  
HOWARD COUNTY S.C.D.

**ENGINEER'S CERTIFICATION**

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.

*Chad D. Dwyer* Date: 1/31/85  
JOHN E. HARMS, JR. & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
P.O. BOX 5 PASADENA, MD. 21122

**DEVELOPER'S CERTIFICATION**

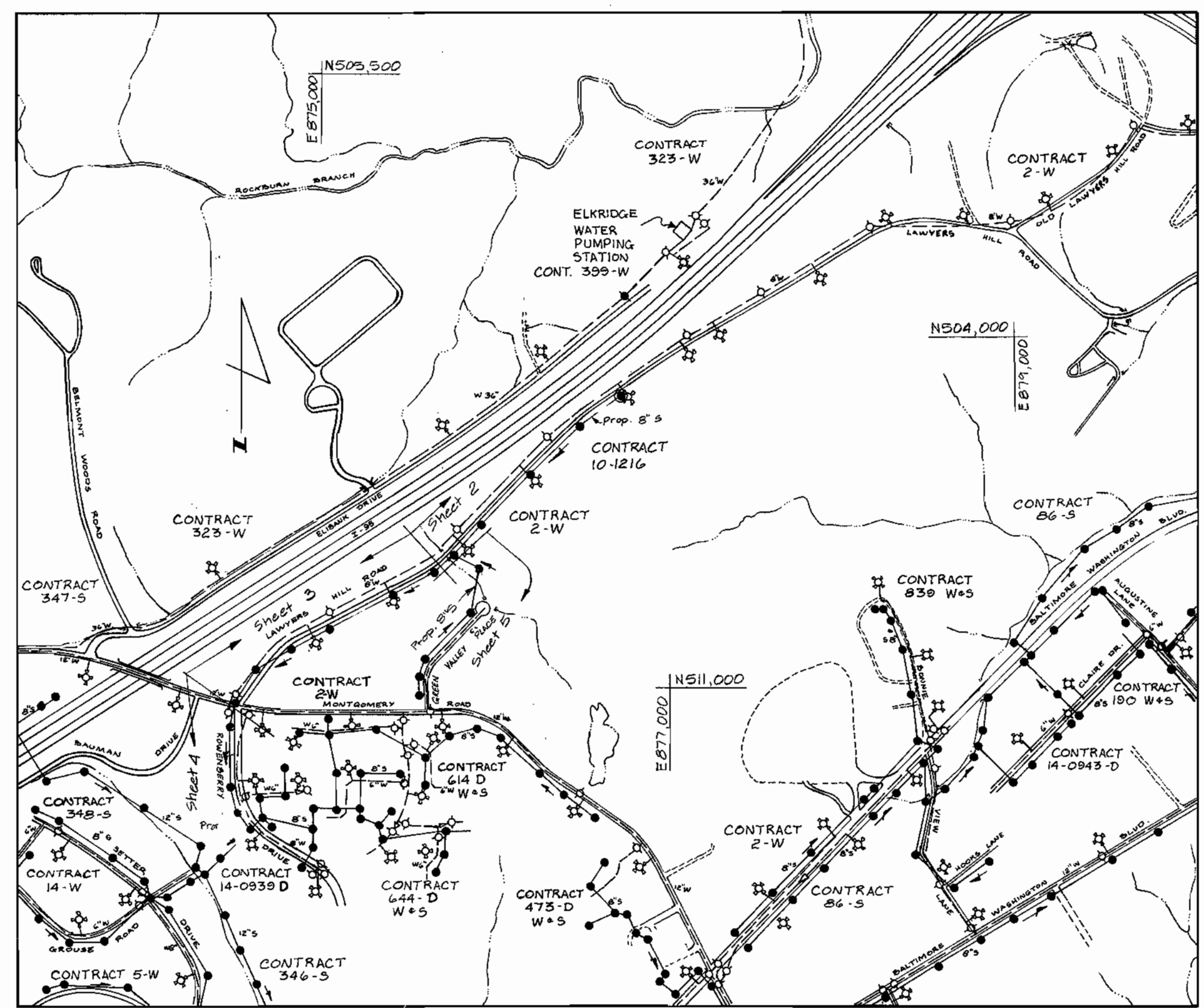
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

*Kenneth S. Perry*  
BUREAU OF ENGINEERING  
DEPARTMENT OF PUBLIC WORKS


QUANTITIES			
ITEM	ESTIMATE	AS-BUILT	MATERIAL/SUPPLIER
6" Sewers	697		
8" Sewers	4644		
Manholes	19		

**LIST OF DRAWINGS**

SHEET	TITLE
1	Location Map
2	Piping Plan & Profile
3	Piping Plan & Profile
4	Piping Plan & Profile, Sediment Control
5	Piping Plan & Profile



Number of SHC's 29      SCALE: 1" = 600'      Type of buildings Residential  
 Drainage Area Patapsco      Number of parcels 36  
 Sewer code for County  
 use only: Sewer No. \_\_\_\_\_

- 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 Contractors expense.
  - All horizontal controls are based on Maryland State Coordinates.
  - All vertical controls are based on U.S.G.S. data.
  - All pipe elevations shown are invert elevations.
  - Clear all utilities by a minimum of 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.
  - 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 located 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.
  - Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days as to all other disturbed or graded areas on the project site.
  - Contractor shall notify the following utilities or agencies at least five working days before starting work shown on these plans:  
 State Highway Administration - 531-5533  
 Baltimore Gas & Electric Co. - Contractor Services 561-2585  
 Baltimore Gas & Electric Co. Under Ground Damage Control- 234-5621  
 Baltimore Gas & Electric Co. Trouble Shooting- 298-9013  
 Miss Utility- 1-559-0100  
 Colonial Pipeline Co. - 795-1390  
 Bureau of Utilities, Howard County Depart. of Public Works- 992-2366
  - 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 main shall be C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. Class 2400 or 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.
  - Manholes shown with 12" and 16" walls are brick manholes only.
  - Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 1"-6" above finished grade unless otherwise noted on the drawings.
  - Sediment control shall be implemented in accordance with Article 15 of the Howard County Design Manual and the 1983 STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

# CAPITAL PROJECT S-6089


## CONTRACT NO. 10-1216

### LAWYERS HILL ROAD COLLECTION SYSTEM

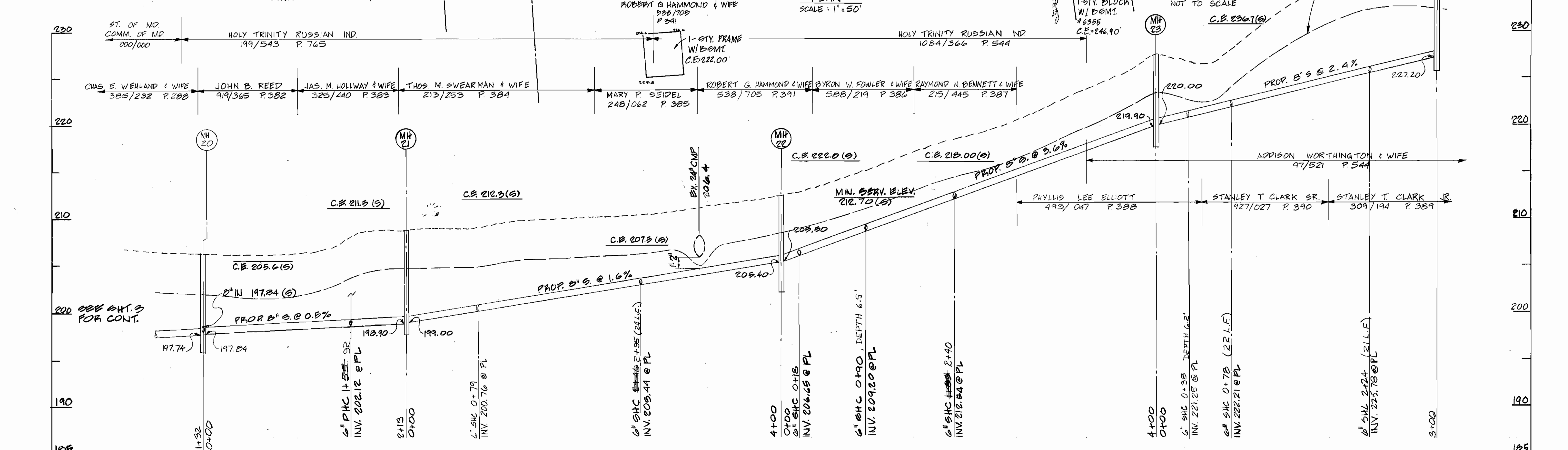
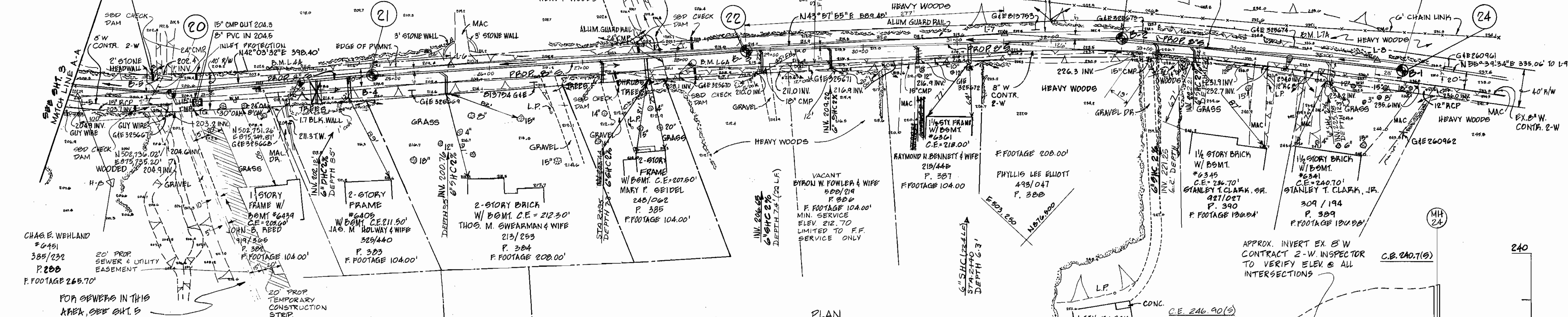
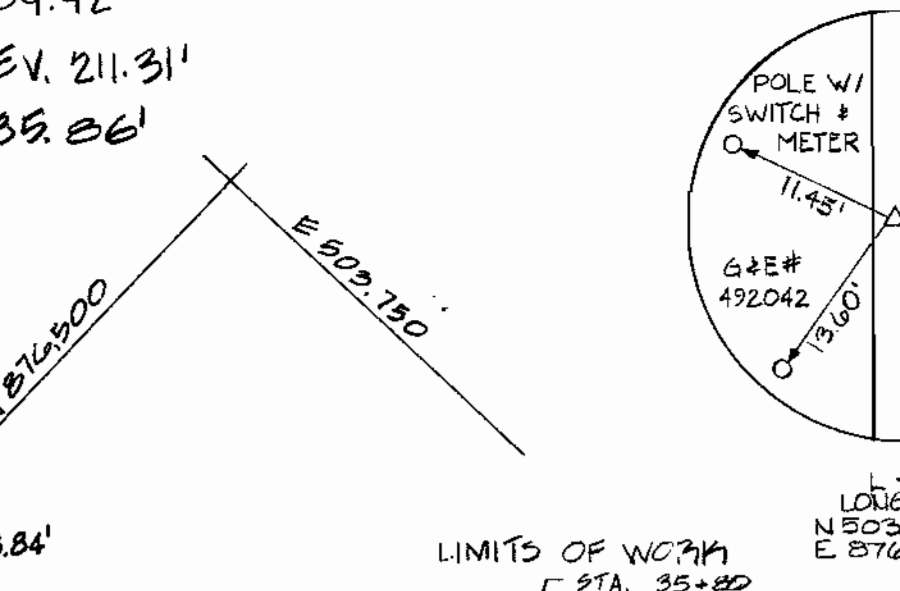
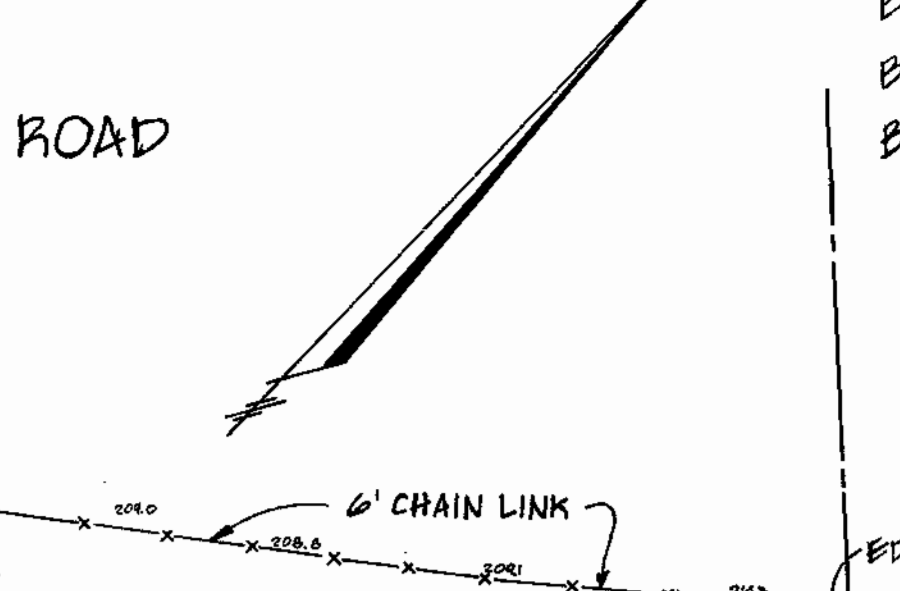
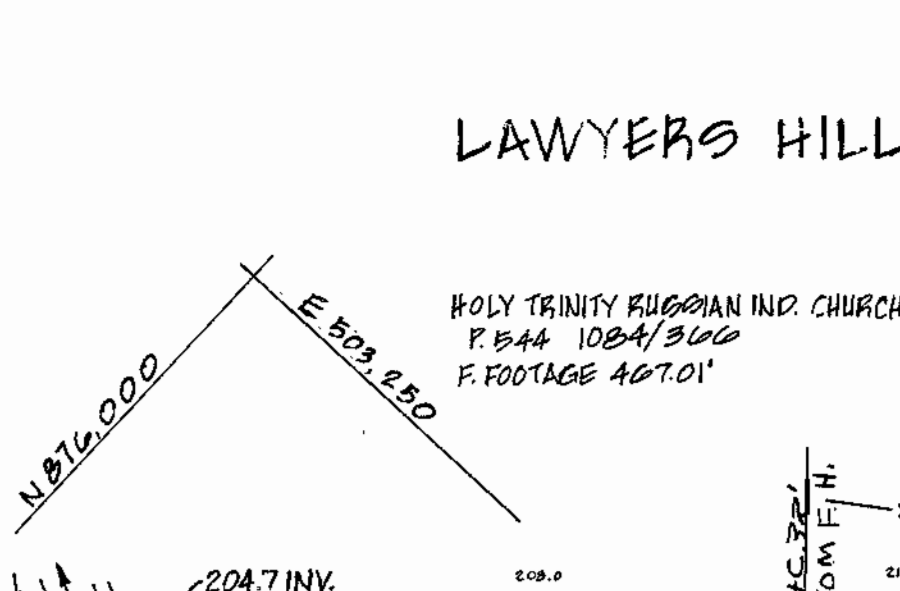
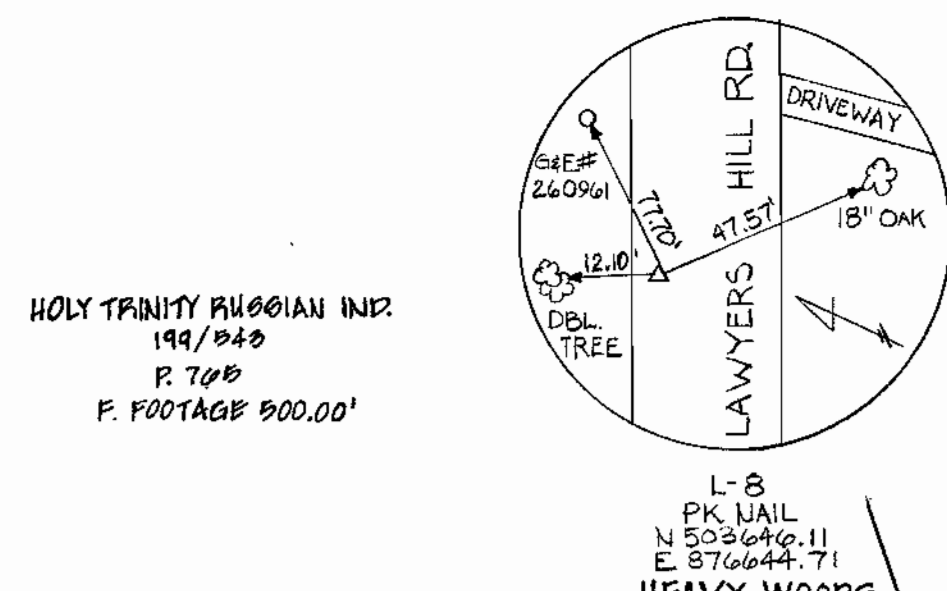
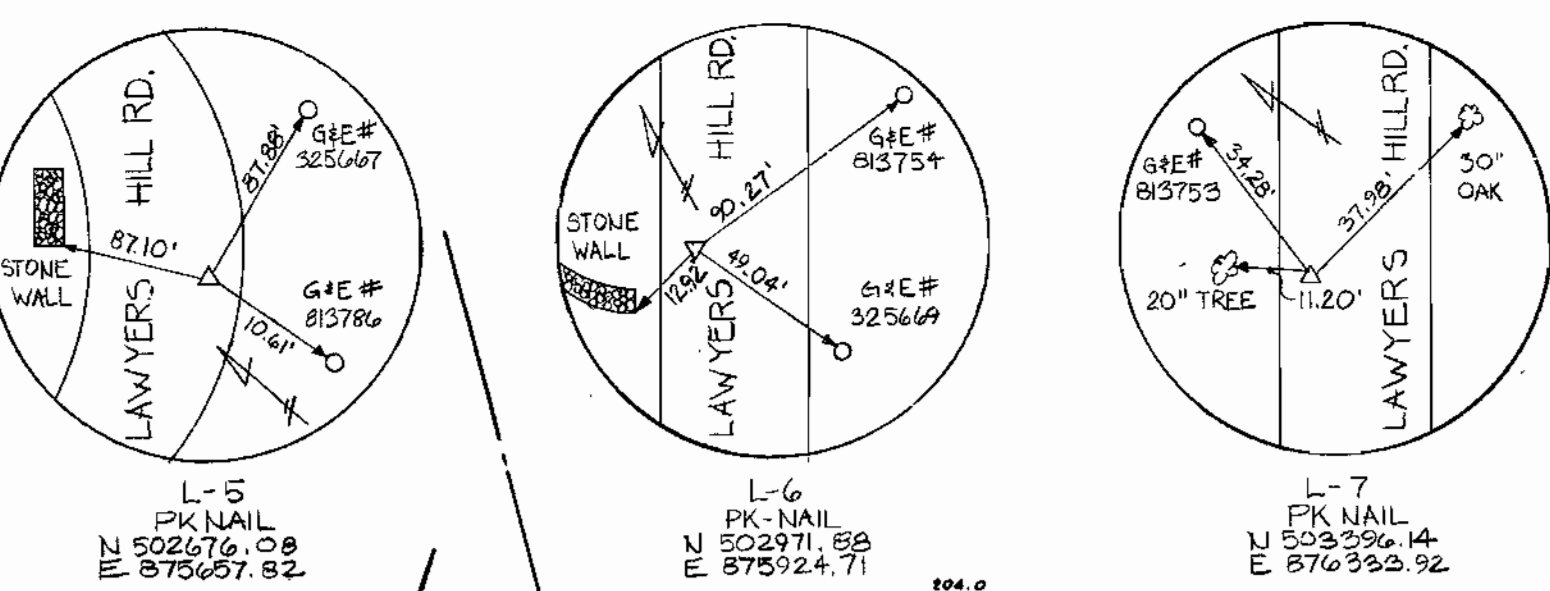
## HOWARD COUNTY, MARYLAND

### DEPARTMENT OF PUBLIC WORKS

CONTRACT NO. 10-1216  
 LAWYER HILL ROAD COLLECTION SYSTEM  
 HOWARD COUNTY CAPITAL PROJECT S-6089

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Frank F. Nemy</i> 2-10-85 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>Robert M. Bevington</i> 2-15-85 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>JOHN E. HARMS, JR &amp; ASSOCIATES, INC. CONSULTING ENGINEERS</p> <p>P.O. BOX 5 PASADENA, MARYLAND</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DES: CB</td> <td>L.F.</td> <td>I</td> <td>Revised General Notes</td> <td>6/5/85</td> </tr> <tr> <td>DRN: WMM</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CHK: CB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DATE: 11-30-84</td> <td>BY</td> <td>NO.</td> <td>REVISION</td> <td>DATE</td> </tr> </table>	DES: CB	L.F.	I	Revised General Notes	6/5/85	DRN: WMM					CHK: CB					DATE: 11-30-84	BY	NO.	REVISION	DATE	<p>LOCATION MAP LAWYERS HILL ROAD COLLECTION SYSTEM ELECTION DISTRICT NO. 1</p> <p>600' SCALE MAP NO. <u>38</u> BLOCK NO. <u>1.2</u></p>	<p>LAWYERS HILL ROAD COLLECTION SYSTEM</p> <p>HOWARD COUNTY, MARYLAND</p> <p>CONTRACT NO. 10-1216</p>	<p>SCALE AS SHOWN</p> <p>SHEET 1 OF 5</p>
DES: CB	L.F.	I	Revised General Notes	6/5/85																						
DRN: WMM																										
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DATE: 11-30-84	BY	NO.	REVISION	DATE																						

AS-BUILT 9/14/86



NOTE: EXISTING SEPTIC CLEANOUTS COULD NOT BE LOCATED.

SURVEY DATE: 7/19/84

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

JOHN E. HARMS, JR & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
P.O. BOX 5  
PASADENA, MARYLAND

DES: C.B.  
DRN: W.M.M.  
CHK: C.B.  
DATE: 11-30-84

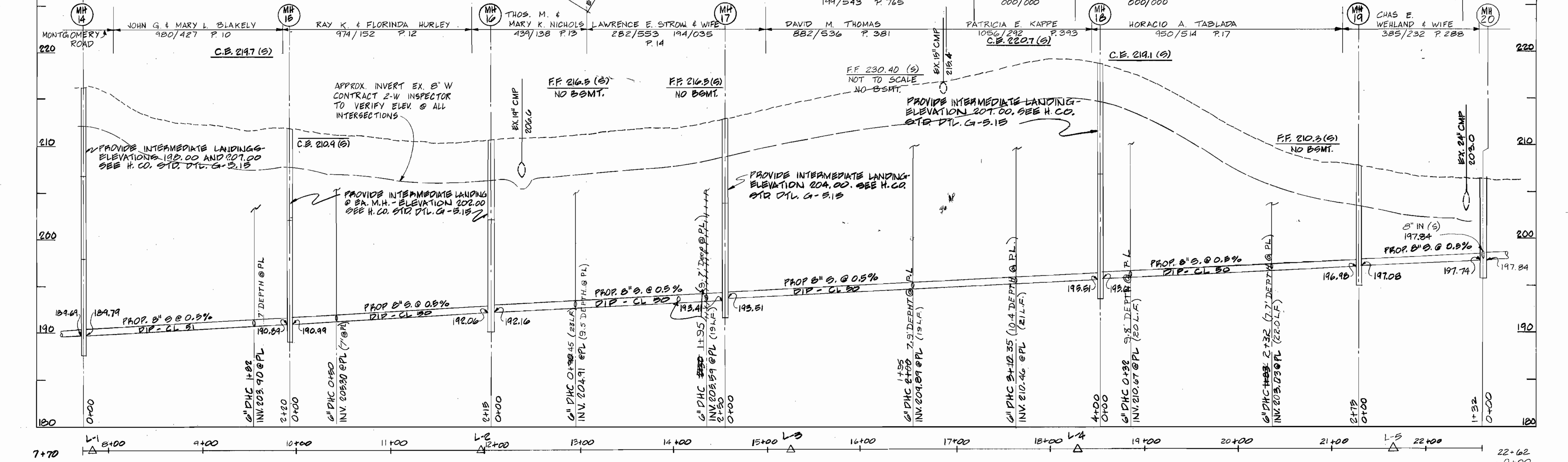
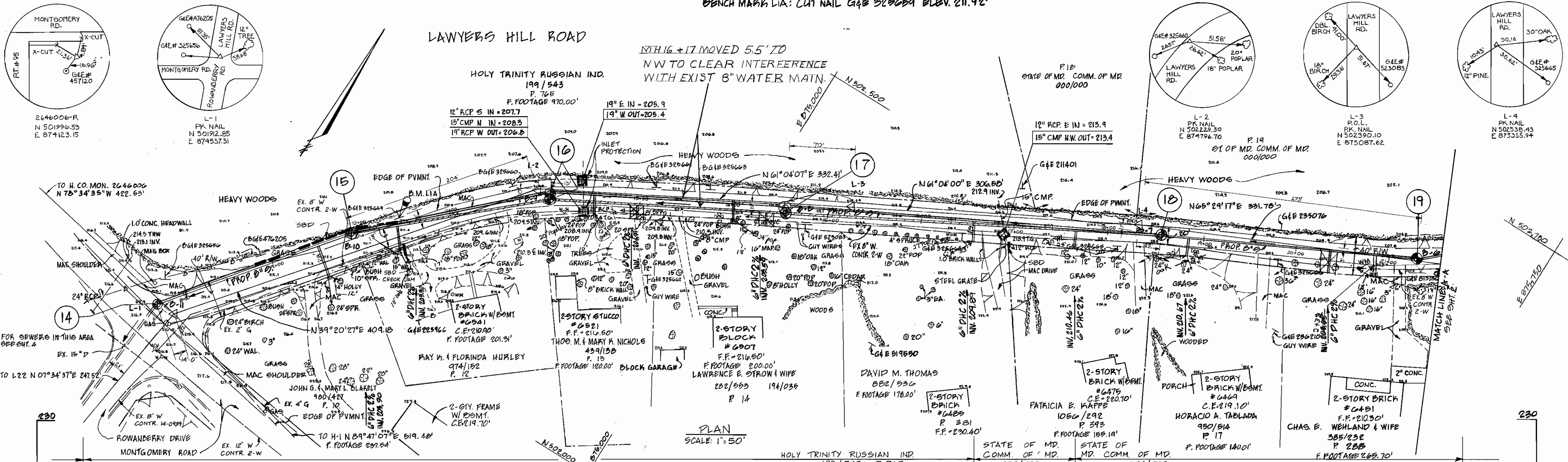
PIPING PLAN AND PROFILE  
LAWYERS HILL ROAD COLLECTION SYSTEM

LAWYERS HILL ROAD COLLECTION SYSTEM  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 10-1216

SCALE AS SHOWN  
SHEET 2 OF 5

AS-BUILT 9/4/86

BENCH MARK LIA: CUT NAIL G&E 329059 ELEV. 211.92'



NOTE: EXISTING SEPTIC CLEANOUTS COULD NOT BE LOCATED.

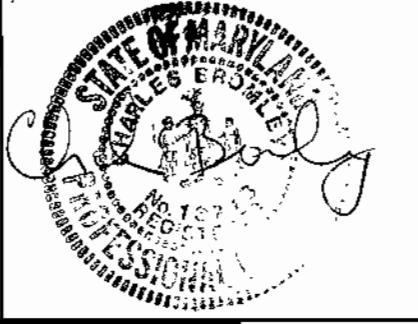
PROFILE  
SCALE: 1"=5' V.  
1"=80' H.

NOTE: IN DISTURBED AREAS FROM STA. 8+00 TO STA. 10+40, THE CONTRACTOR SHALL PROVIDE SUD IN ACCORDANCE W/STANDARD SPECIFICATIONS, SECTION 15.09.

CONTRACT NO. 10-1216  
LAWYERS HILL ROAD COLLECTION SYSTEM  
HOWARD COUNTY CAPITAL PROJECT S-6089

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 2-10-85  
DATE: 2-14-85

JOHN E. HARMS, JR & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
P.O. BOX 5  
PASADENA, MARYLAND



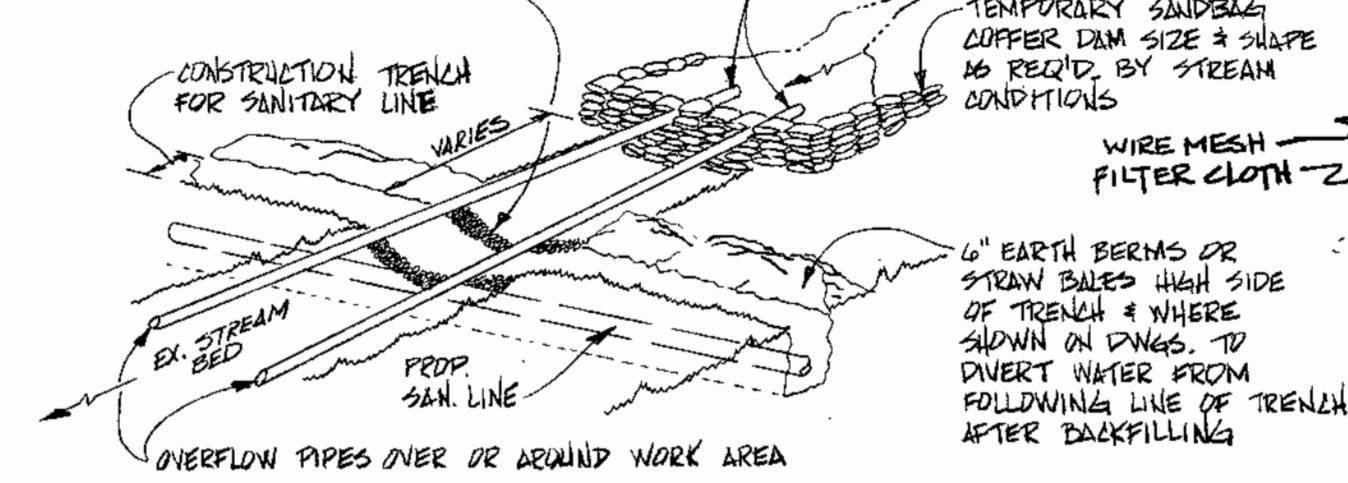
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DRN: W.M.M.	
CHK: C.B.	
DATE: 11-30-84	
BY: _____	NO. _____
REVISION	
DATE	

PIPING PLAN AND PROFILE  
LAWYERS HILL ROAD COLLECTION SYSTEM  
600' SCALE MAP NO. 38 BLOCK NO. 1,2

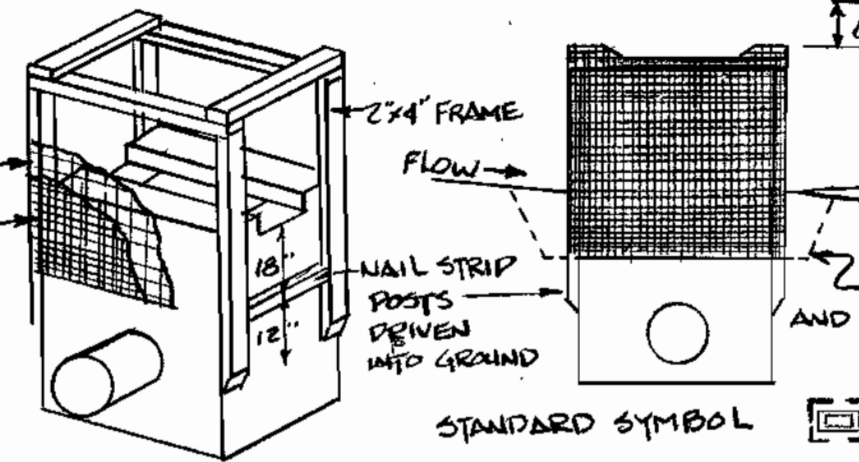
LAWYERS HILL ROAD COLLECTION SYSTEM  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 10-1216  
SCALE AS SHOWN  
SHEET 3 OF 5

AS-BUILT 9/4/86

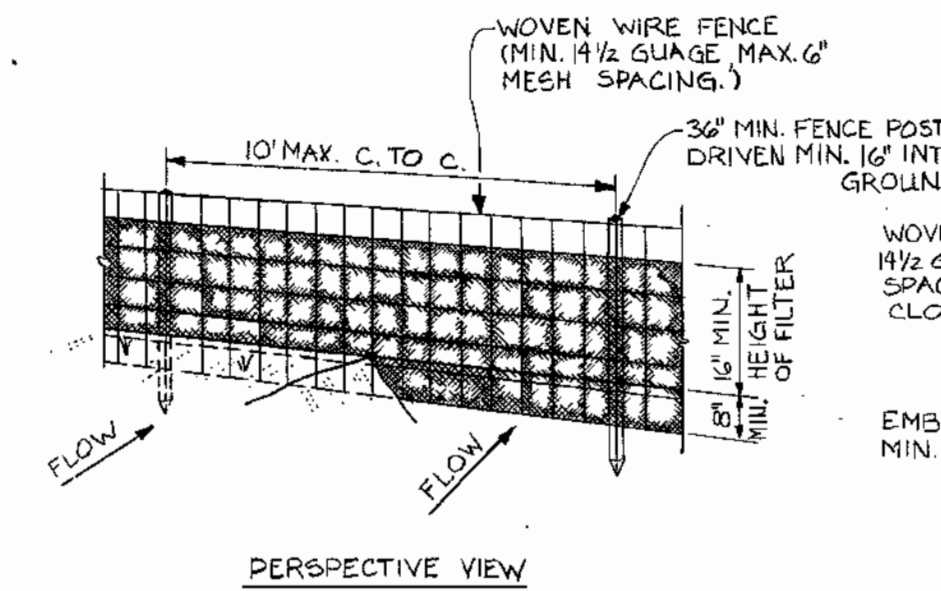
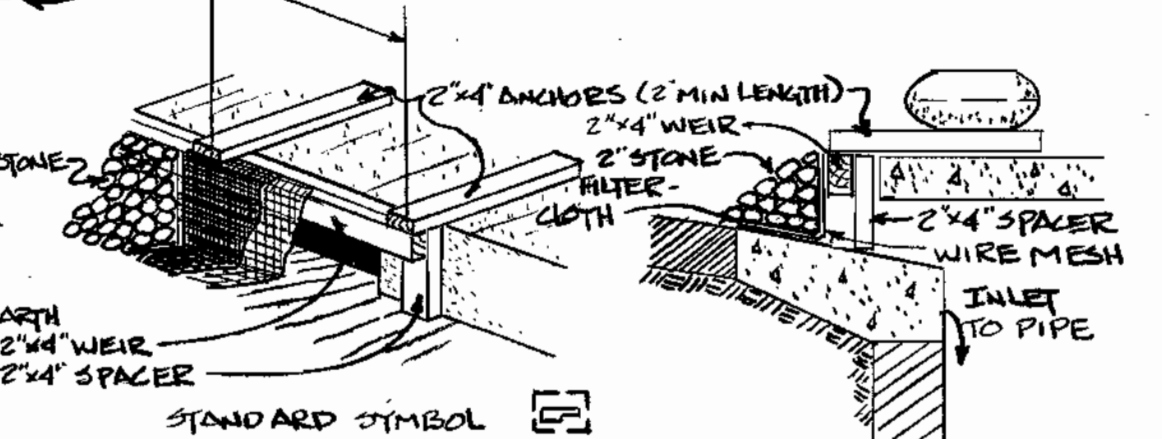
\*ANY DISTURBED STREAM BED WILL BE COMPACTED AND TOPPED WITH 2'-0" DEPTH OF 3" TO 9" STONE COMPACTED IN PLACE. STREAM BANKS WILL BE FULLY COMPACTED AND SLOPED TO A POINT 2' ABOVE THE TOP OF BANK.



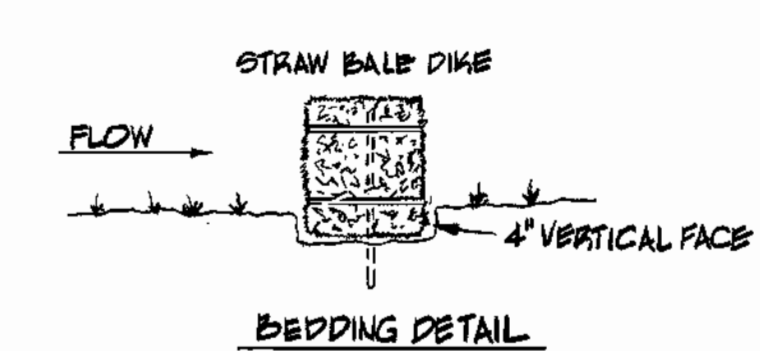
SWALE INLET PROTECTION DETAIL NOT TO SCALE



CURB INLET PROTECTION DETAIL NOT TO SCALE



BENCH MARK L22A: -LIT @ CONC. WALK ELEV. 211.76'  
BENCH MARK L23B: -LIT PCONNET BOLT F.H. ELEV. 198.12'

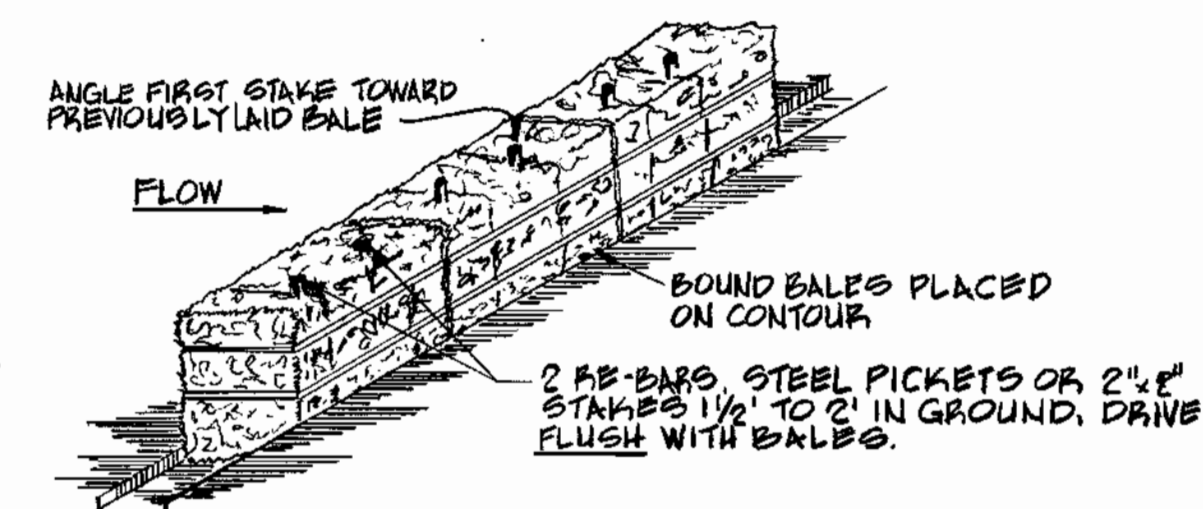


STANDARD SYMBOL

NOTE: FOR CONSTRUCTION NOTES SEE SPECIFICATIONS, THIS CONTRACT

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

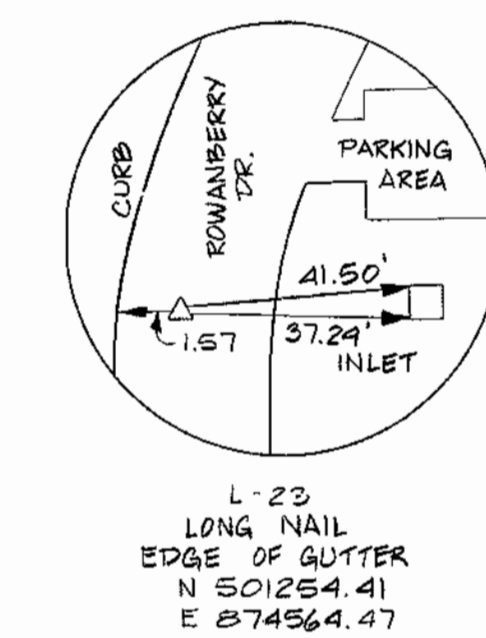
- 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.



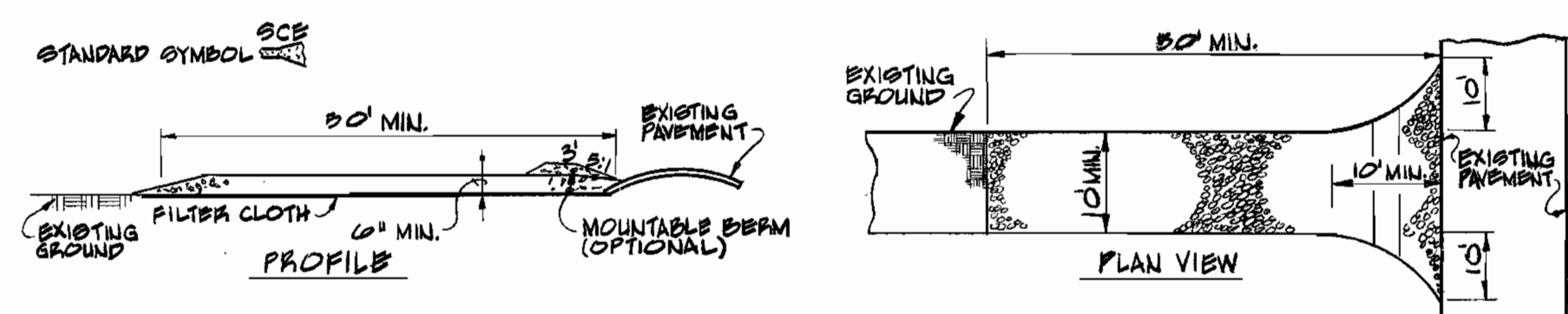
CONSTRUCTION SPECIFICATIONS

- 1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED INTO SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR BE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.

SILT FENCE DETAIL NOT TO SCALE



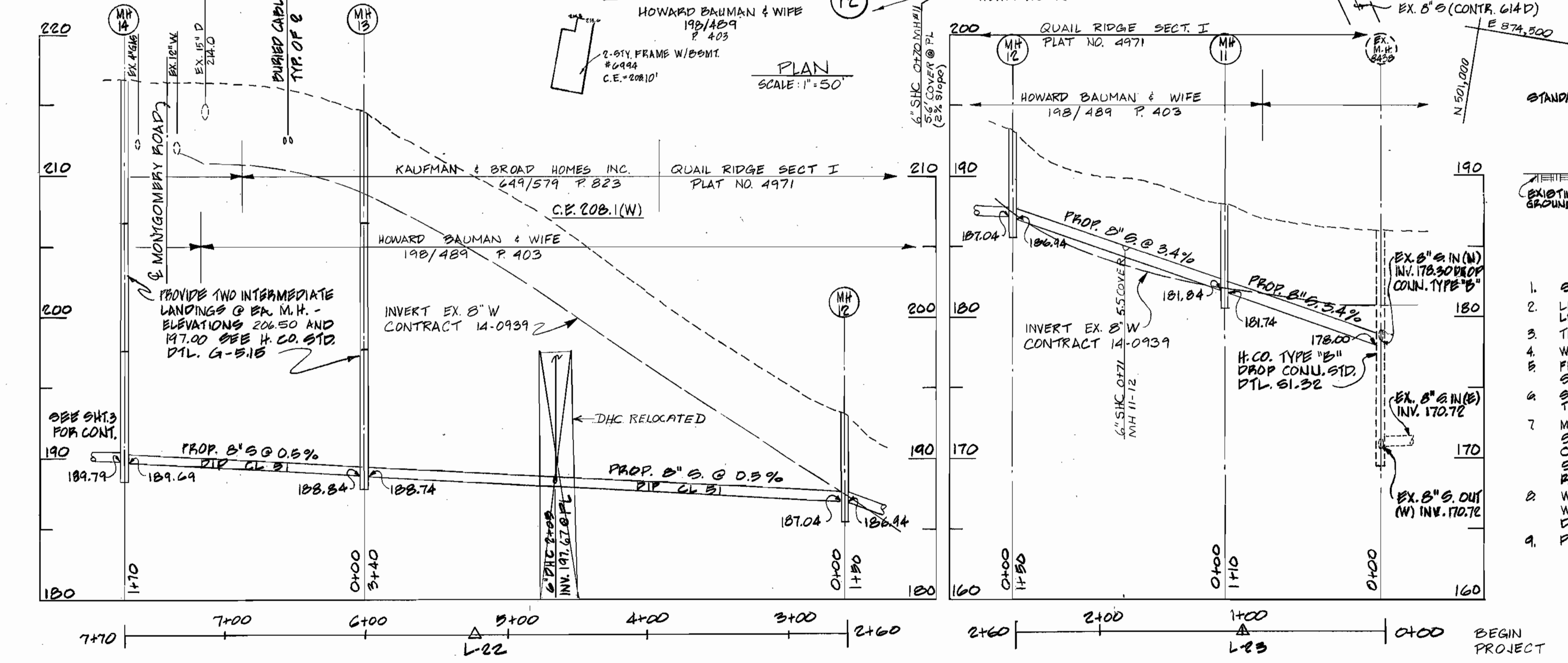
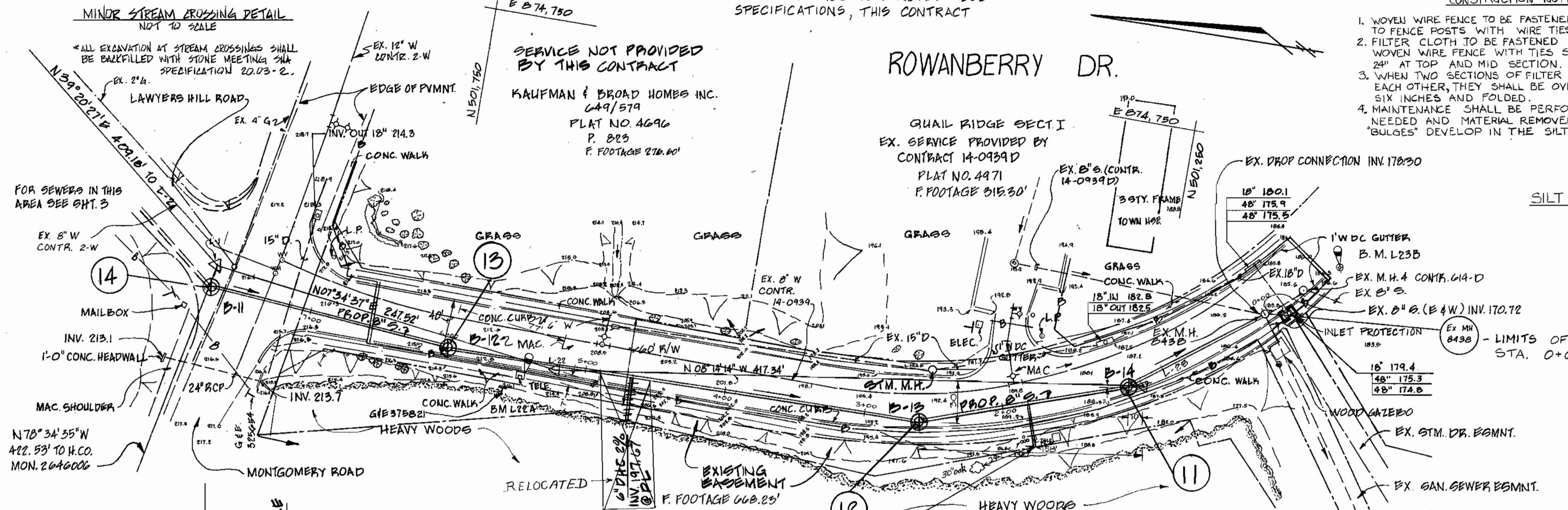
STRAW BALE DIKE DETAIL NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

- 1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BEAM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE



NOTE: EXISTING SEPTIC CLEANOUTS COULD NOT BE LOCATED

SURVEY DATE: 7/19/84

CONTRACT NO. 10-1216  
LAWYER HILL ROAD COLLECTION SYSTEM  
HOWARD COUNTY CAPITAL PROJECT S-6089

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND. Includes signatures of Director of Public Works and Chief of Bureau of Engineering.

JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS. P.O. BOX 5 PASADENA, MARYLAND.



Table with columns: DES: C.B., DRN: W.M.M., CHK: C.B., DATE: 11-30-84, BY: NO., REVISION, DATE.

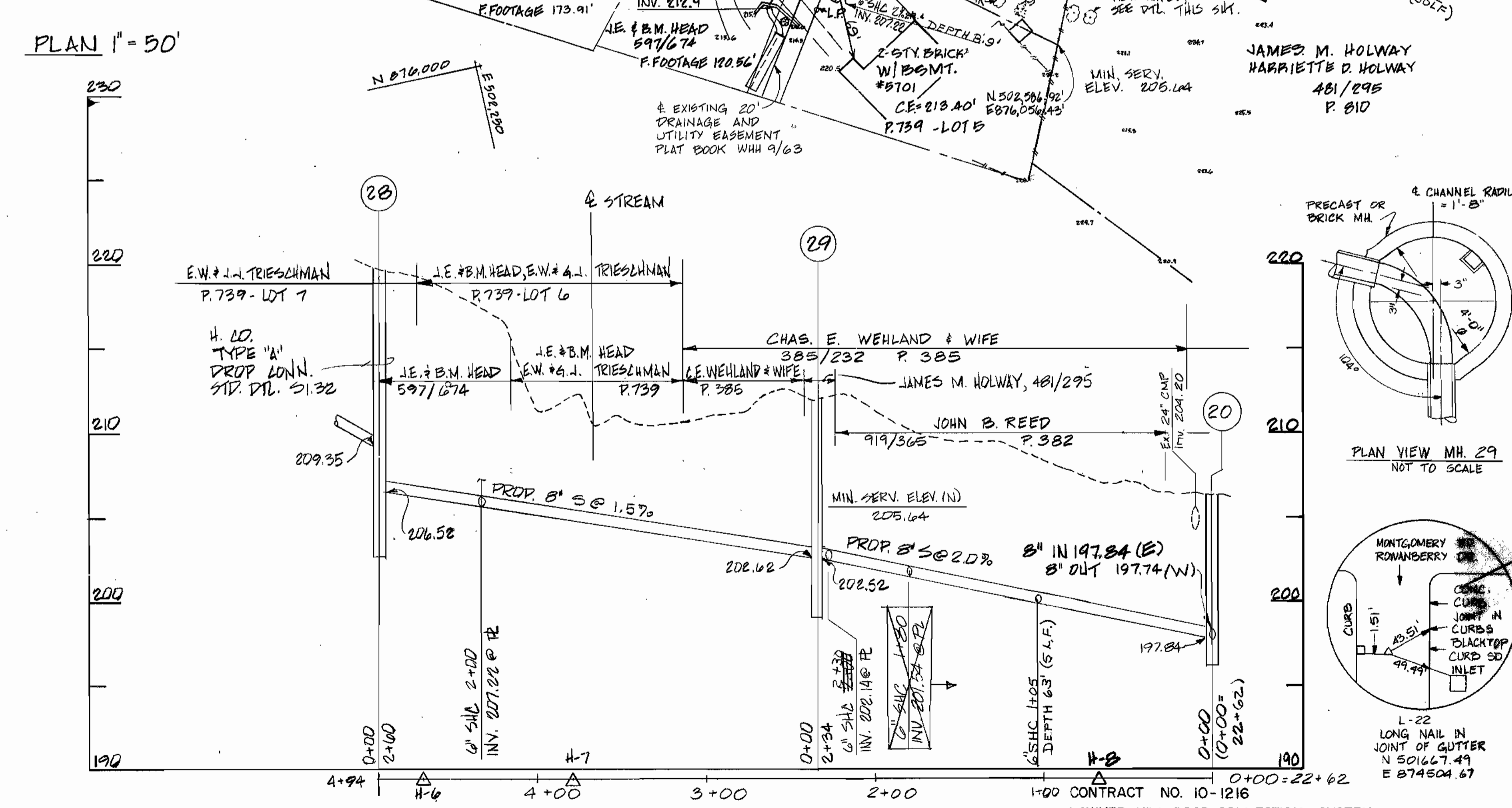
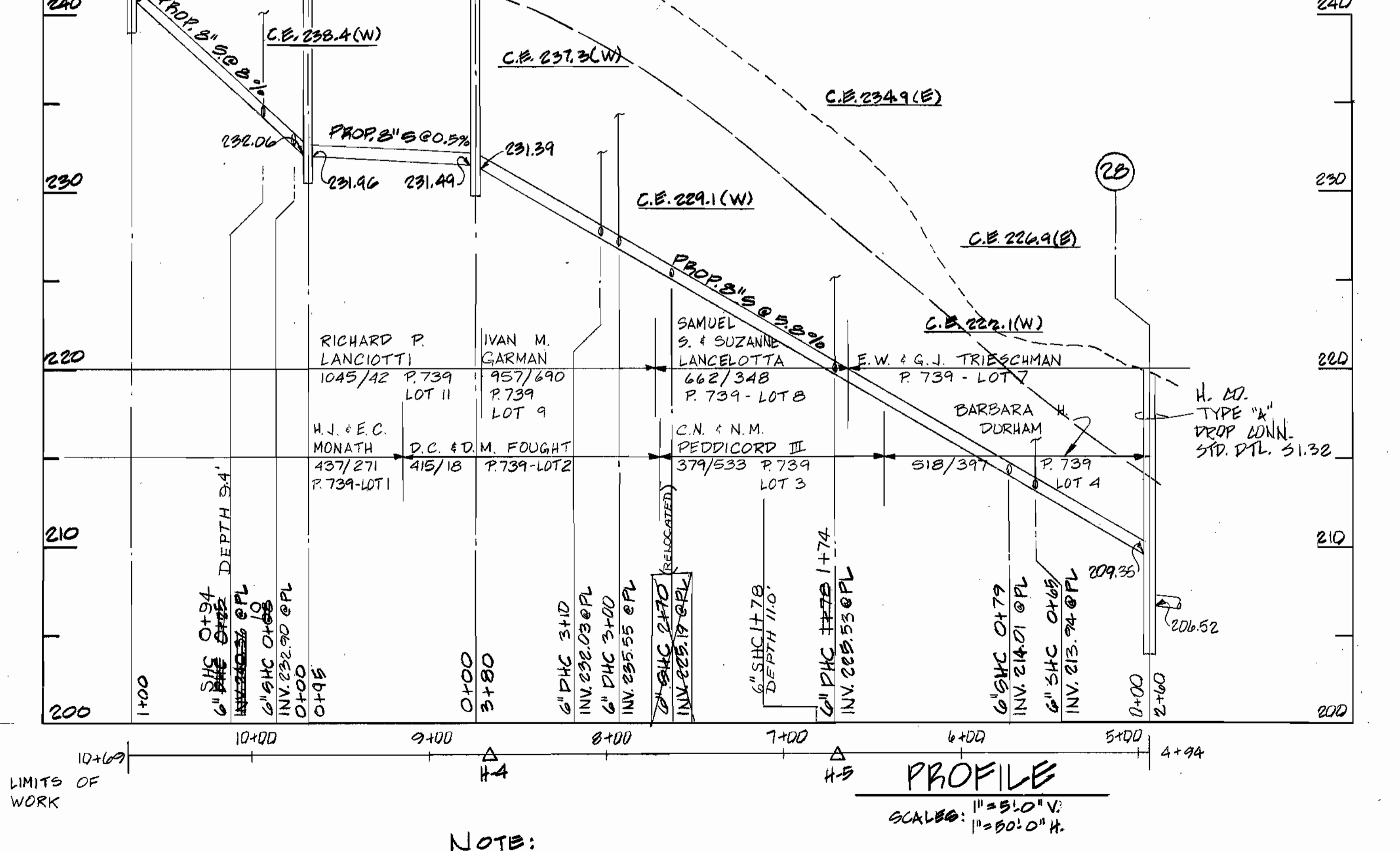
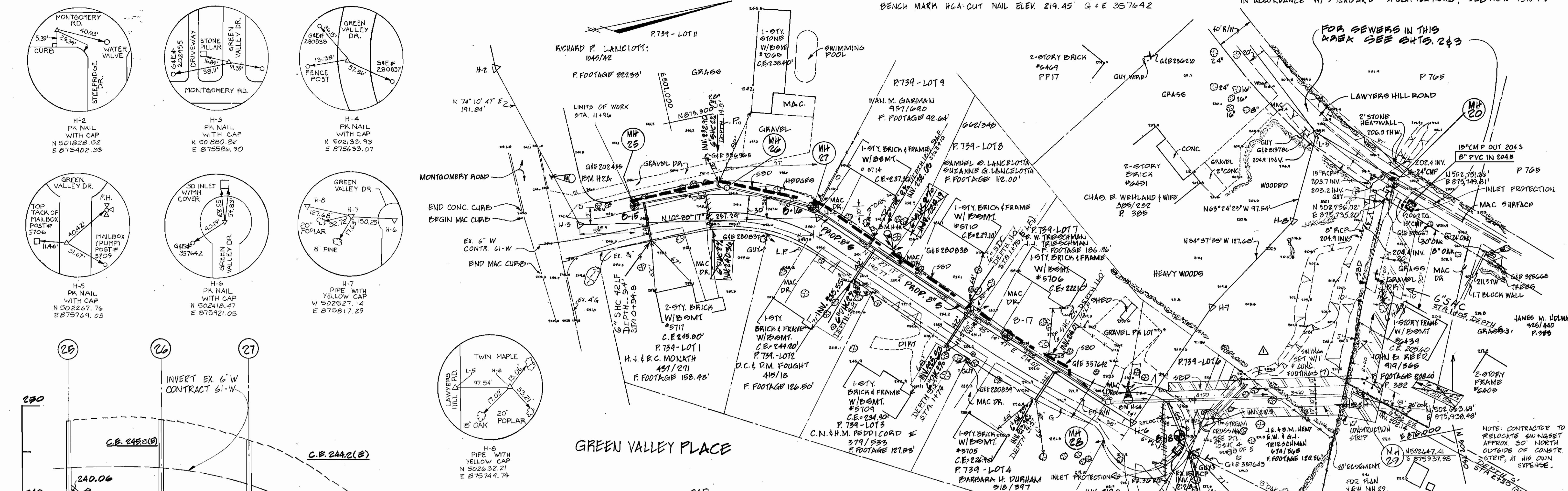
PIPING PLAN AND PROFILE, SEDIMENT CONTROL. LAWYERS HILL ROAD COLLECTION SYSTEM.

LAWYERS HILL ROAD COLLECTION SYSTEM. HOWARD COUNTY, MARYLAND. CONTRACT NO. 10-1216. SCALE AS SHOWN. SHEET 4 OF 5.

AS BUILT 9/4/84

BENCH MARK #2A CUT NAIL ELEV. 244.28' G & E 202455  
 BENCH MARK #4A CUT NAIL ELEV. 242.20' G & E 280838  
 BENCH MARK #6A CUT NAIL ELEV. 219.45' G & E 357642

NOTE: IN DISTURBED AREAS FROM STA. 0+20 TO STA. 4+25 AND STA. 0+70 TO STA. 0+89, THE CONTRACTOR SHALL PROVIDE SOD IN ACCORDANCE W/ STANDARD SPECIFICATIONS, SECTION 15.09.



NOTE:  
 EXISTING SEPTIC CLEANOUTS COULD NOT BE LOCATED.

SURVEY DATE: 7/19/84

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John F. Nunn* 2-20-85  
 DIRECTOR OF PUBLIC WORKS DATE

*W. E. ...* 2/14/85  
 CHIEF, BUREAU OF ENGINEERING DATE

*...* 2-15-85  
 CHIEF, BUREAU OF UTILITIES DATE

*...* 2/14/85  
 CHIEF, UTILITY DIVISION DATE

JOHN E. HARMS, JR & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

P.O. BOX 5  
 PASADENA, MARYLAND



DES: C.B.	L.F.	PLAN & PROFILE-MH 28 TO MH 29	8/20/85
DRN: W.M.M.			
CHK: C.B.			
DATE: 11-30-84	BY	NO.	REVISION
			DATE

PIPING PLAN AND PROFILE  
 LAWYERS HILL ROAD COLLECTION SYSTEM

600' SCALE MAP NO. 38 BLOCK NO. 2

LAWYERS HILL ROAD COLLECTION SYSTEM  
 HOWARD COUNTY, MARYLAND

CONTRACT NO. 10-1216

SCALE AS SHOWN

SHEET 5 OF 5

AS-BUILT 9/4/80