

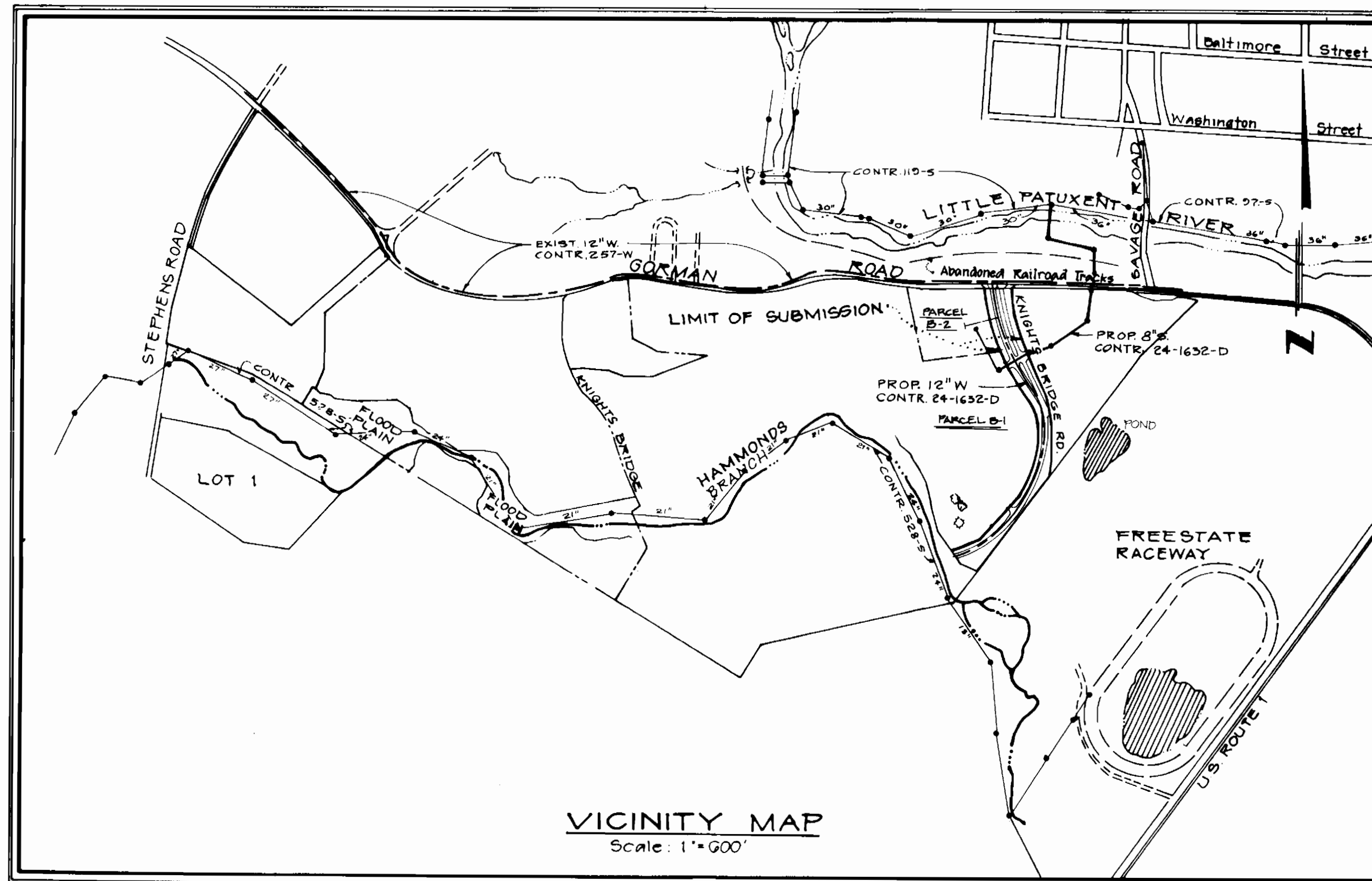
BOWLING BROOK FARMS

KNIGHTS BRIDGE ROAD

GENERAL NOTES

1. THE APPROXIMATE LOCATION OF ALL UTILITIES IS SHOWN BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL LOCATE, PROTECT AND SUPPORT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER/INSPECTOR, AT THE CONTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
3. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC COMPANY - 561-2585 (CONTRACTOR SERVICES)
 - BALTIMORE GAS & ELECTRIC COMPANY - 234-6313 (UNDERGROUND DAMAGE CONTROL)
 - BALTIMORE GAS & ELECTRIC COMPANY - 298-9013 (TROUBLE SHOOTING)
 - "MISS UTILITY" - 800-257-7777
 - CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY - 725-9976
 - BUREAU OF UTILITIES/HOWARD COUNTY - 992-2366
4. ALL DETAILS NOT SHOWN ON THE DRAWINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS.
5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
7. TREES SHALL BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE. TREES SIX INCH (6") DIAMETER OR GREATER (MEASURED FOUR FEET (4') ABOVE EXISTING GRADE) ADJACENT TO THE LIMITS OF CONSTRUCTION SHALL NOT BE REMOVED OR DAMAGED BY THE CONTRACTOR.
8. ALL HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON MARYLAND STATE PLANE COORDINATES SYSTEM PROVIDED BY HOWARD COUNTY.
9. TOPOGRAPHY TAKEN FROM MAPS PREPARED BY PHOTOGRAMMETRY BY "AERIAL SURVEYS" IN 1984. TOPOGRAPHY FIELD CHECKED 1986.
10. ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
11. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED
12. TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
13. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
14. ALL WATER MAIN FITTINGS REQUIRE CONCRETE THRUST BLOCKS AS DESCRIBED IN HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS MANUAL, VOLUME IV.
15. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
16. CLEAR ALL UTILITIES BY A MINIMUM OF 12", CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION AND SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION BACKFILL.
17. SEPARATION BETWEEN WATER AND SANITARY SEWER: WATER MAINS SHALL BE LAID AT LEAST TEN FEET (10') HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER. DEVIATION MAY BE ALLOWED FOR INSTALLATION OF THE WATER MAIN CLOSER TO A SEWER, PROVIDED THAT THE WATER MAIN IS LAID IN A SEPARATE TRENCH, SUCH THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX FEET (6') ABOVE THE TOP OF THE SEWER. WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWELVE INCHES (12") BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER LINE.
18. BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS.
19. MANHOLES M-14 THRU M-22 SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE COVER, STANDARD DETAIL G.551
20. ALL SEWER MAINS 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.
21. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
22. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
23. ALL FIRE HYDRANTS SHALL BE SITUATED PER "LOCATION A", STD. DETAIL W1.11. UNLESS NOTED OTHERWISE

QUANTITIES			
ITEM	ESTIMATED	AS BUILT	MATERIAL/SUPPLIER
8" SEWER	1,235 L.F.	1,225	CONTRACTOR
MANHOLE	7 EACH	6	ATLANTA TIG
4" WATER	43 L.F.		
6" WATER	104 L.F.	81 L.F.	
8" WATER	179 L.F.	141 L.F.	
12" WATER	1,878 L.F.	1,858 L.F.	
4" VALVE	1 EACH		
8" VALVE	4 EACH	5	
12" VALVE	5 EACH		
FIRE HYDRANT	6 EACH		
AIR RELEASE MANHOLE	1	1	
8" SEWER (DIP)	610 L.F.	610 L.F.	
2 1/2" WHC	46 L.F.	46 L.F.	Howell Brothers
2" Valves		4	CONTRACTOR
1" Fire Hydrant		1	Keatinge



Watercode - 003
Sewercode - 5090000

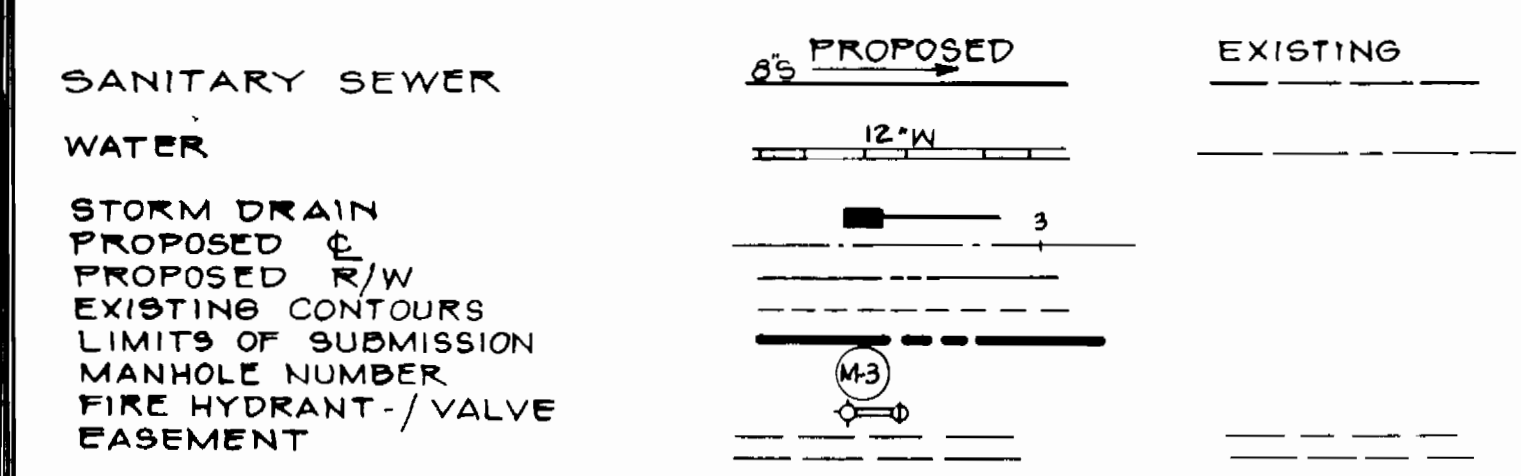
TYPE OF BUILDINGS	N/A
NUMBER OF LOTS	N/A
NUMBER OF WATER HOUSE CONNECTIONS	N/A
NUMBER OF SEWER HOUSE CONNECTIONS	N/A
DRAINAGE AREA	Little Patuxent River

CONTRACT NO. 24-1632-D

WATER AND SEWER

CONSTRUCTION PLANS

LEGEND



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
James M. ...
U.S. SOIL CONSERVATION SERVICE
DATE: 1-21-88

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F 88-40

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
APPROVED: *Stephen ...*
HOWARD SOIL CONSERVATION DISTRICT
DATE: 1/21/88

OWNER/DEVELOPER
GORMAN ROAD LIMITED PARTNERSHIP
C/O JAMES F. KNOTT DEVELOPMENT CORPORATION
118 WEST ROAD, SUITE 203
TOWSON, MARYLAND 21284
(801) 321-6436

Drawing Index.

1. Title sheet
2. Plan-Water & Sewer Mains
3. Profile-Water Mains
4. Profile-Sewer Mains
5. Erosion and Sediment Control Plan
6. Landscape Plan For Water & Sewer Mains

BOWLING BROOK FARMS
PARCEL B-1, B-2 AND M
LOTS 212 AND 213

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS: *Robert ...*
DATE: 1-22-88
CHIEF, BUREAU OF UTILITIES

PHRA
Preston Harris and Associates, Inc.
7600 Sandhill Place
Baltimore, Maryland 21285
Phone: 301-752-2200 Fax: 301-752-7244



DES: MJK	1	ADDRESS HO CO COMMENTS DATED 11/17/87	1/21/88
DRN: C.N.	2	ADDRESS HO CO COMMENTS DATED 12/22/87	1/21/88
CHK: R.E.T.	3	QUANTITIES CORRECTED	1/21/88
	4	8" WATER LINE ADDED	4/19/88
DATE: 8/31/87	BY: NO.	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 47 BLOCK NO.

BOWLING BROOK FARMS
KNIGHTS BRIDGE ROAD
CONTRACT NO. 24-1632-D
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 6

BM #35
 60" NAIL IN 12" POP
 65' @ EAST Δ#35
 ELEV. = 174.70

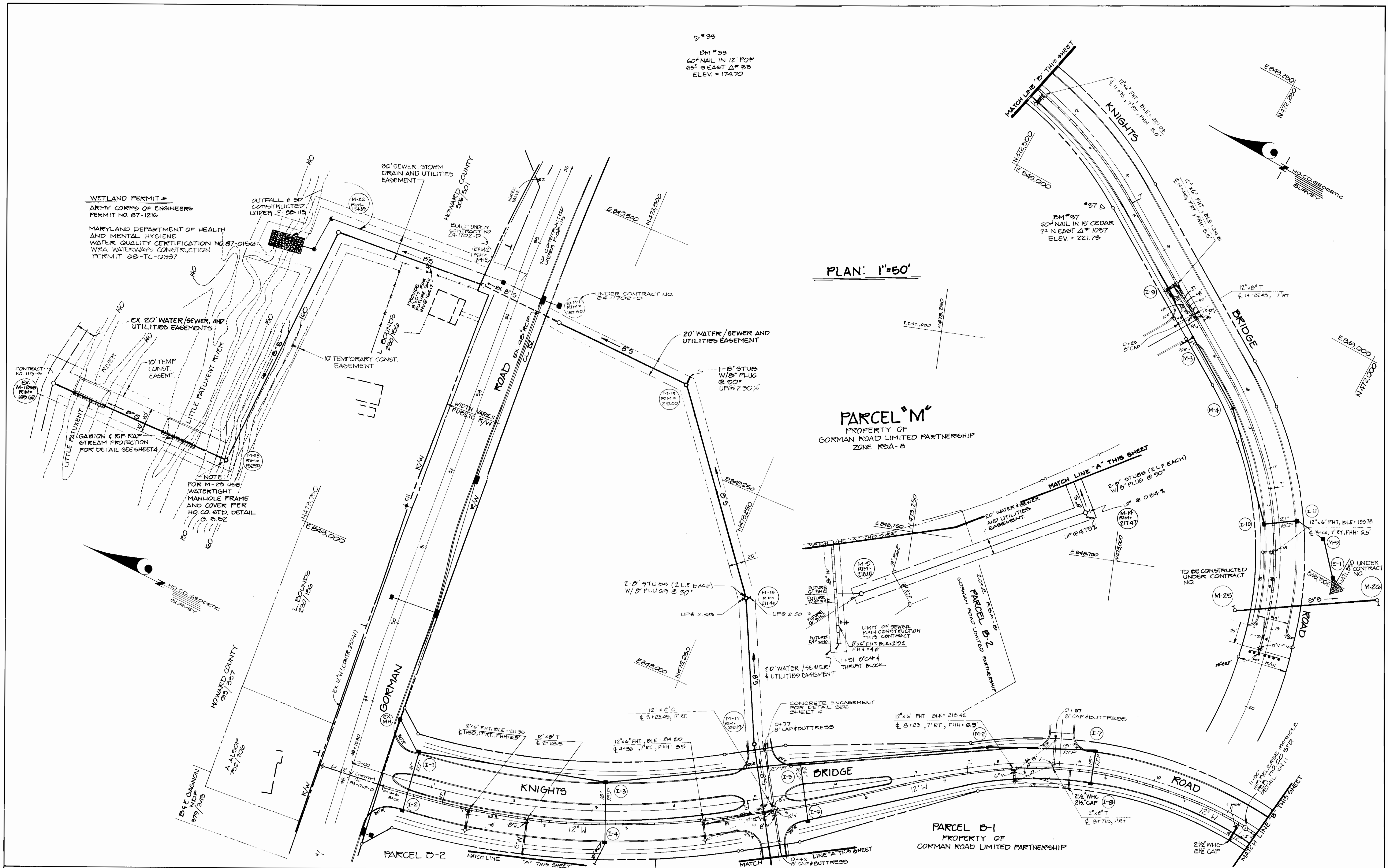
WETLAND PERMIT #
 ARMY CORPS OF ENGINEERS
 PERMIT NO. 87-1216

MARYLAND DEPARTMENT OF HEALTH
 AND MENTAL HYGIENE
 WATER QUALITY CERTIFICATION NO. 87-0156
 WQA WATERWAYS CONSTRUCTION
 PERMIT 88-TL-0337

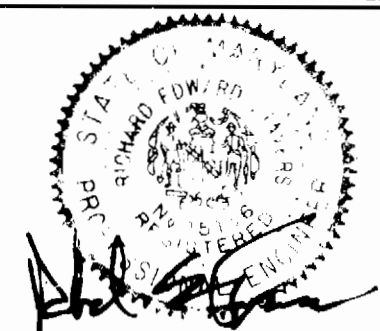
PLAN: 1"=50'

PARCEL 'M'
 PROPERTY OF
 GORMAN ROAD LIMITED PARTNERSHIP
 ZONE R5A-B

PARCEL B-1
 PROPERTY OF
 GORMAN ROAD LIMITED PARTNERSHIP



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND



DES: MJK	DRN: J.D.W.	CHK: R.E.T.	DATE: 8/31/07
CH. 4	LN 3	M.J.K. 2	BY NO.
MATCHLINE 'A' ADDED			
SEWER ALIGNMENT CORRECTED BETWEEN M-10 & M-14			
SEWER ALIGNMENT CORRECTED BETWEEN M-17 & M-22			
SEWER MAIN LENGTHENED BETWEEN M-23 & EX 125B			
REVISION			
DATE: 8/31/07	DATE: 4/11/08	DATE: 7/14/07	DATE: 1/4/07

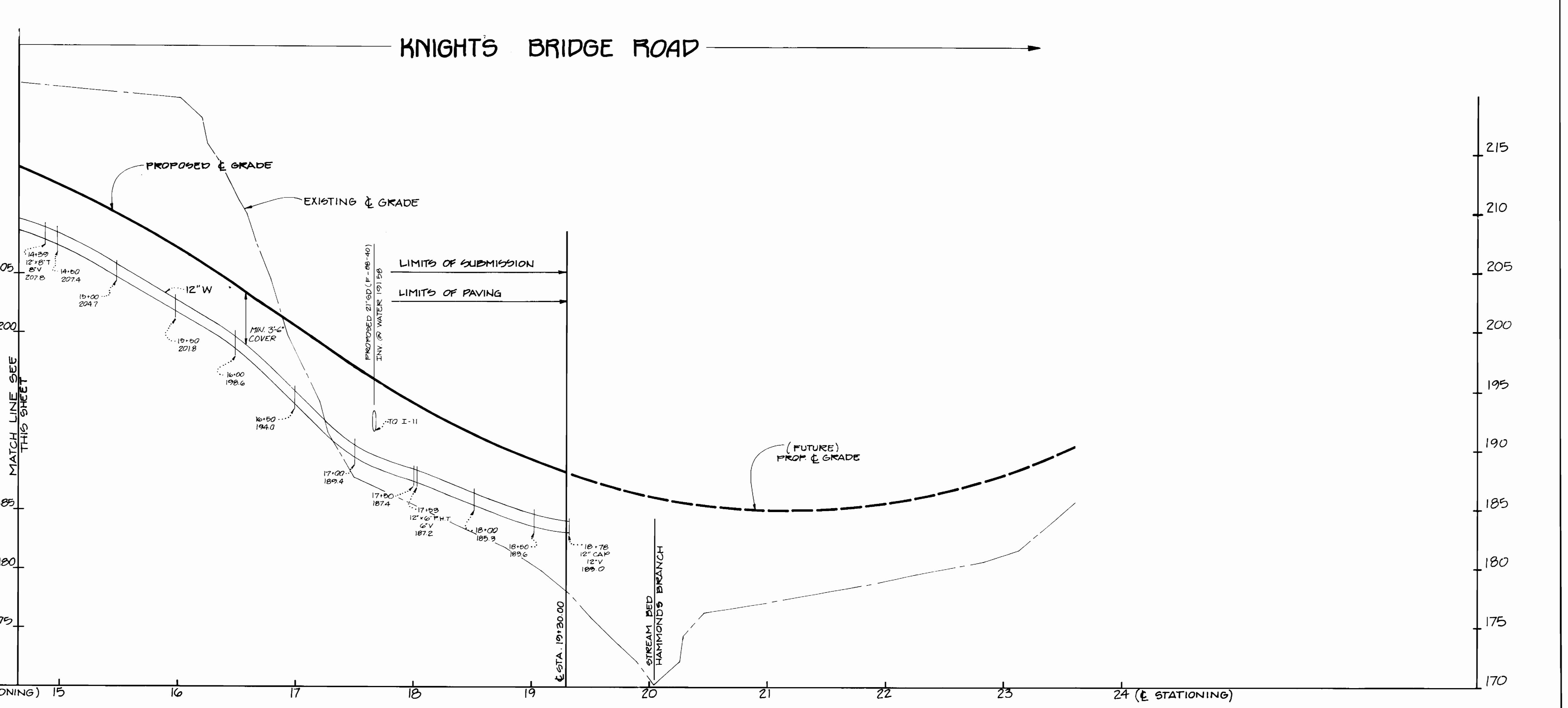
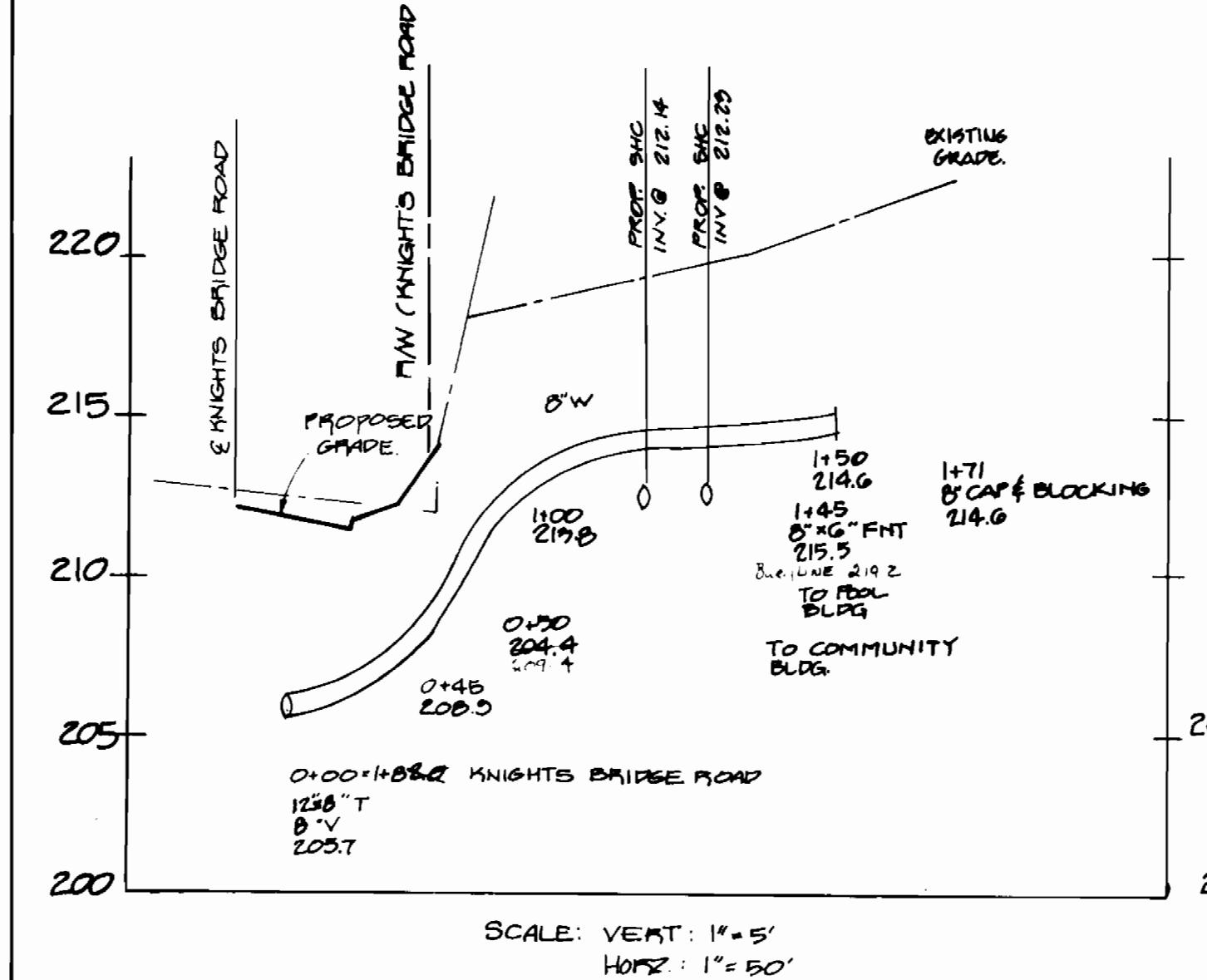
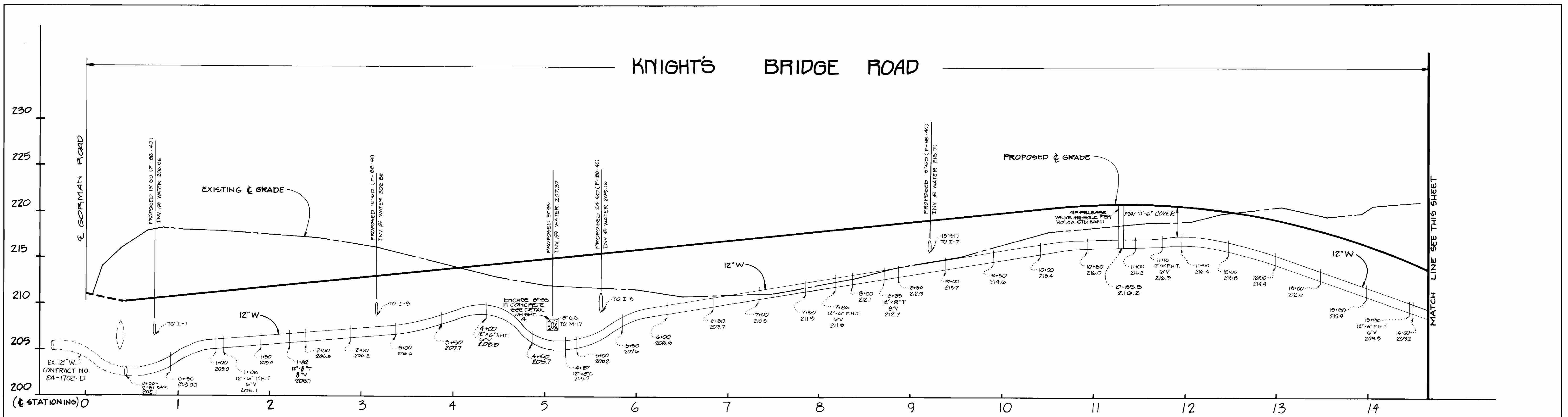
PLAN
 WATER & SEWER MAINS

BOWLING BROOK FARMS
 KNIGHTS BRIDGE ROAD
 CONTRACT NO. 24-1632-D
 A RESUBDIVISION OF BOLLING BROOKE, LOT 2
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 6

BRUNING 68150

AT 11:11 P 31 00

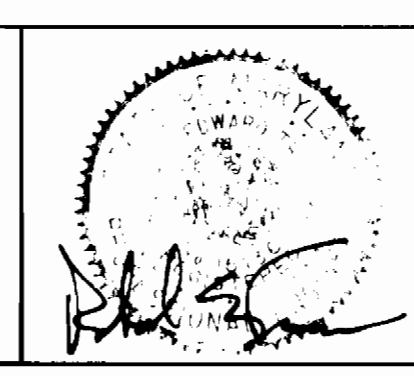
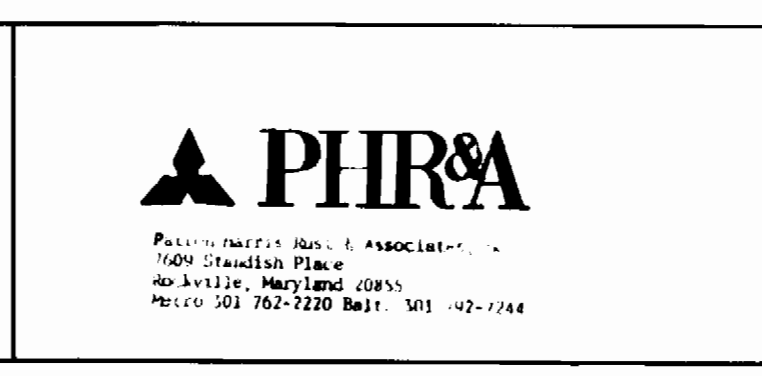


DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. Beinger
DIRECTOR OF PUBLIC WORKS
DATE: 1/22/88

William E. Young
CHIEF, BUREAU OF ENGINEERING
DATE: 1-24-88

William E. Young
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 1-25-88



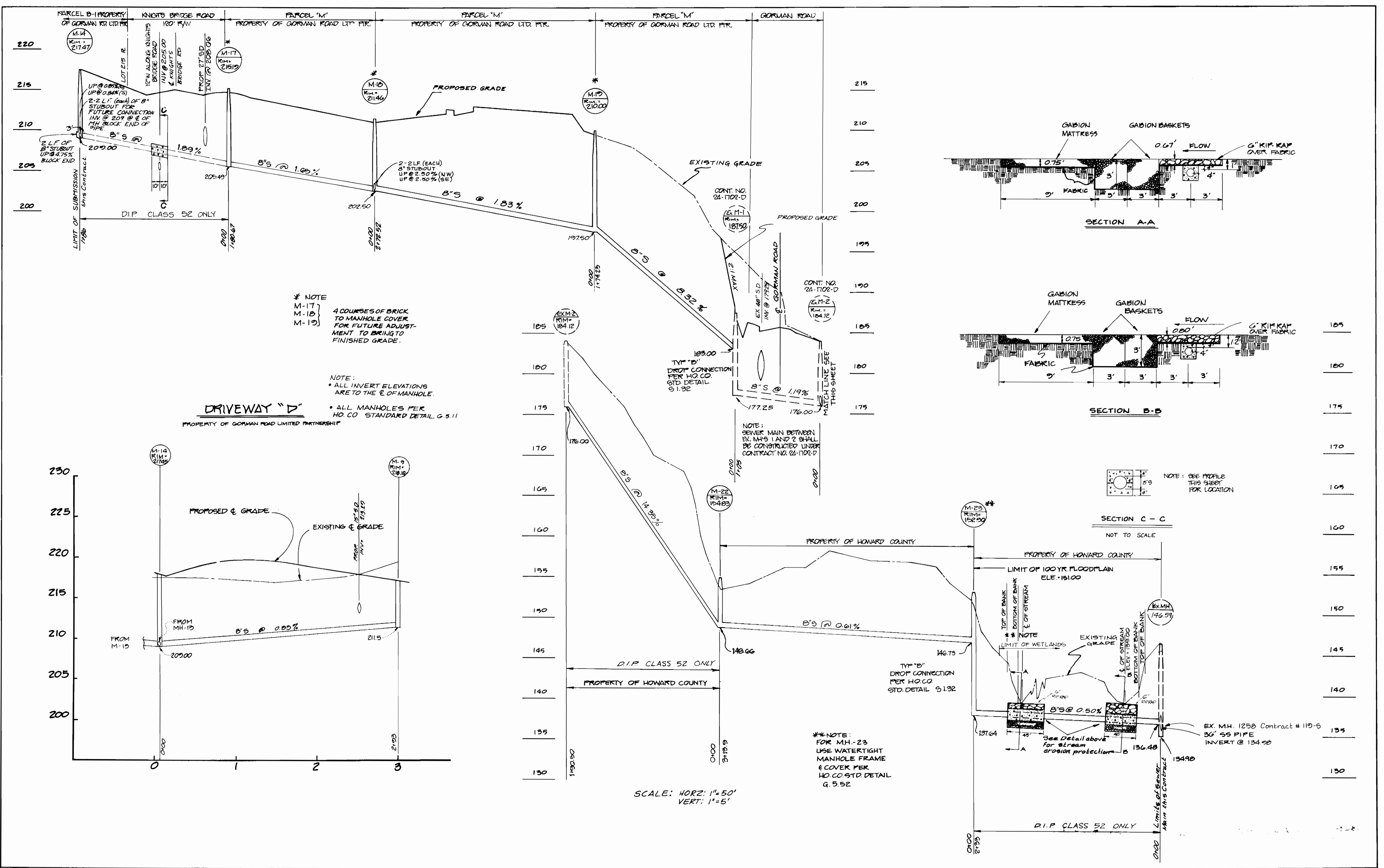
DES: M.J.K.	DATE: 8/21/87
DRN: C.N.II J.D.W.	
CHK: R.E.T.	
BY: M.J.K.	
NO: 1	

PROFILES	
4	4" WATERLINE CHANGED TO 6" WATER
2	WATER LINE PROFILE CHANGED BETWEEN STA 4+00 & STA 5+00
1	45' LF OF 4" W CHANGED FROM 8" W

BOWLING BROOK FARMS
KNIGHTS BRIDGE ROAD
CONTRACT NO. 24-1632-D
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 6

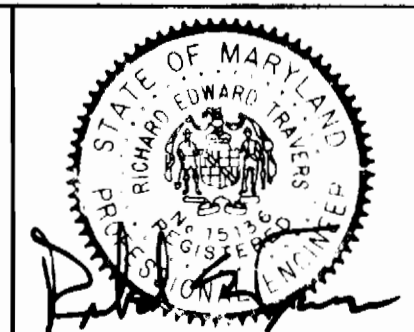
AC 1111 8-30-85



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *John A. Lewis* Date: 1-26-88
Chief, Bureau of Engineering: *William J. Kelly* Date: 1-15-88
Chief, Bureau of Utilities: *William J. Kelly* Date: 1-22-88
Chief, Land Development Division: *William J. Kelly* Date: 1-15-88

PHRA
Patrick Harris Ruet & Associates, Inc.
1609 Standish Place
Baltimore, Maryland 21205
Metro 301 782-1230 Fax: 301 799-7244



DES: MJK				
DRN: CNII	GN: 4	" 11-30 ADDED		4-1-88
	GN: 5	DRIVEWAY "D" PROFILE ADDED		2-1-88
CHK: R.E.T.	M.J.K.	SEWER MAIN BETWEEN M-14 & M-17 LOWERED TO CLEAR SD		1/14/88
	M.J.K.	SEWER PROFILE LENGTHENED BETWEEN M-2 & EX. M.H. TO MEET WISA STD'S		1/14/88
DATE: 9/31/87	BY: NO.	REVISION		DATE

PROFILE SEWER MAINS

600' SCALE MAP NO. 47 BLOCK NO. _____

BOWLING BROOK FARMS
KNIGHTS BRIDGE ROAD
CONTRACT NO. 24-1632-D
A RESUBDIVISION OF BOWLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 6

HOWARD COUNTY
913/357

MATCH LINE THIS SHEET

HOWARD COUNTY
506/501

GARBER
709/532

ALSOP
752/706

BOUNDS
230/156

THIS BUILT UNDER
CONTRACT NO. 24-1702-D
AND F-87-115

10' TEMP
CONSTRUCTION
EASEMENT

USE WPD 2.3 SANDBAG/
STONE STREAM DIVERSION
AND WPD 1.1 "DEWATERING
BASINS" & UTILITY CROSSING
BASINS" @ THIS SHEET.
SEE DETAILS AT THE
ADJUST / REMOVE AT THE
DIRECTION OF THE SEDIMENT
CONTROL INSPECTOR.

NOTE: ALL CONSTRUCTION OF PERMANENT STREAM PROTECTION SHALL BE IN ACCORDANCE WITH THE CONTRACT NO. 24-1632-D

NOTE:
All disturbed areas should be revegetated before the Erosion & Sediment Control devices are removed.

DESCRIPTION:
The work shall consist of installing the diversion for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.

GENERAL SPECIFICATIONS:
1. The diversion structure shall consist of materials which are resistant to ultraviolet radiation, tearing and puncture and secure tightly enough to prevent leakage of this material (i.e., sand, fine gravel, etc.).
2. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
3. Sheeting: Sheeting shall consist of polyethylene or other material which is appropriate and resistant to puncture and tearing.
4. Installation and Sediment Control Devices shall be installed as the first order of work.
5. The diversion structure shall be installed from upstream to downstream.
6. The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross-section view.
7. All excavated materials shall be disposed of in a 500 approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
8. All dewatering of the construction area shall be pumped to a dewatering catch basin for recirculating the stream.
9. Sheeting shall be overlapped such that the upstream portion covers the downstream portion with at least an 18-inch overlap.
10. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.

WATER RESOURCES ADMINISTRATION Sandbag/Stone Diversion WPD 2.3

NOTE: ALL CONSTRUCTION OF PERMANENT STREAM PROTECTION SHALL BE IN ACCORDANCE WITH THE CONTRACT NO. 24-1632-D

NOTE: OBTAIN WRA PERMIT PRIOR TO STARTING ANY WORK

MATCH LINE THIS SHEET

GORMAN ROAD

KNIGHT

PARCEL B-2

Parcel M

LIMITS OF DISTURBED AREA
25' WIDE

BRIDGE

Future Road

TEMP SEDIMENT TRAP #1

SAFETY FENCE

LIMITS OF DISTURBED AREA

TEMP SEDIMENT TRAP #1
TYPE ST-VI

LOT 212
PARCEL B-1

ROAD

MATCH SHEET

THIS PLAN FOR EROSION AND
SEDIMENT CONTROL ONLY

DESCRIPTION:
The work shall consist of the construction of a dewatering basin for the purpose of preventing sediment from entering the stream during construction activities. The basin shall be constructed to allow filtration before the water re-enters the stream.

GENERAL SPECIFICATIONS:
1. The basin shall consist of a concrete or masonry structure with a minimum depth of 6 inches.
2. The basin shall be constructed with a minimum depth of 6 inches.
3. The basin shall be constructed with a minimum depth of 6 inches.
4. The basin shall be constructed with a minimum depth of 6 inches.

WATER RESOURCES ADMINISTRATION Dewatering Basin WPD 1.1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *James H. Law* 1/26/88
Chief, Bureau of Engineering: *James H. Law* 1-26-88
Chief, Bureau of Utilities: *John B. ...* 1-22-88
Chief, Land Development Division: *...* 1-22-88

NO.	DESCRIPTION	DATE	APPROVED	DATE
1	CONTRACT ADDED	1/20/88		



EROSION AND SEDIMENT CONTROL PLAN

Patton Harris Rust and Associates
A Professional Corporation
Engineers, Surveyors, Planners and Landscape Architects
7609 Standish Place, Rockville, MD 20855 (301)762-2220

BOWLING BROOK FARMS
KNIGHTS BRIDGE ROAD
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

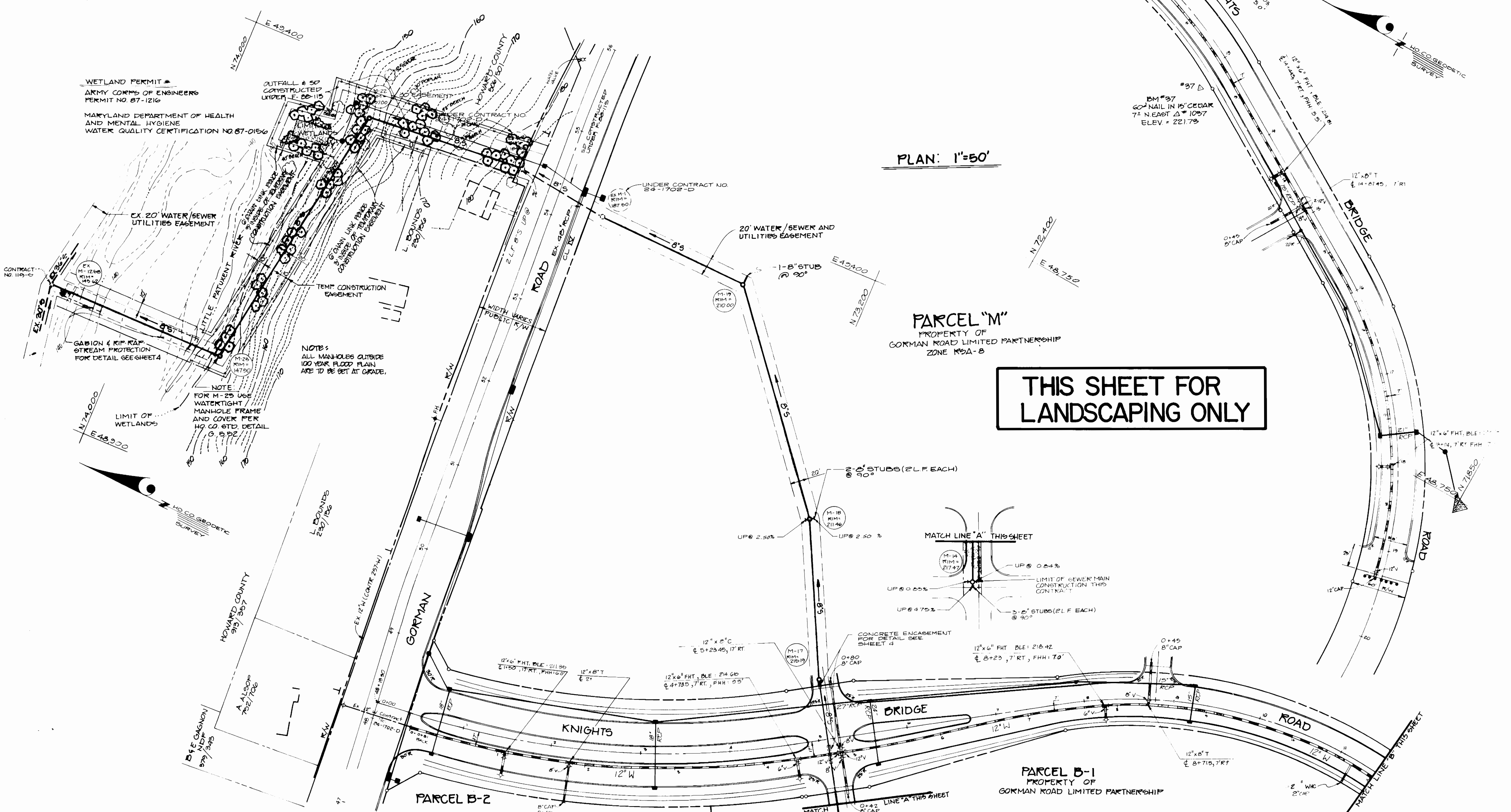
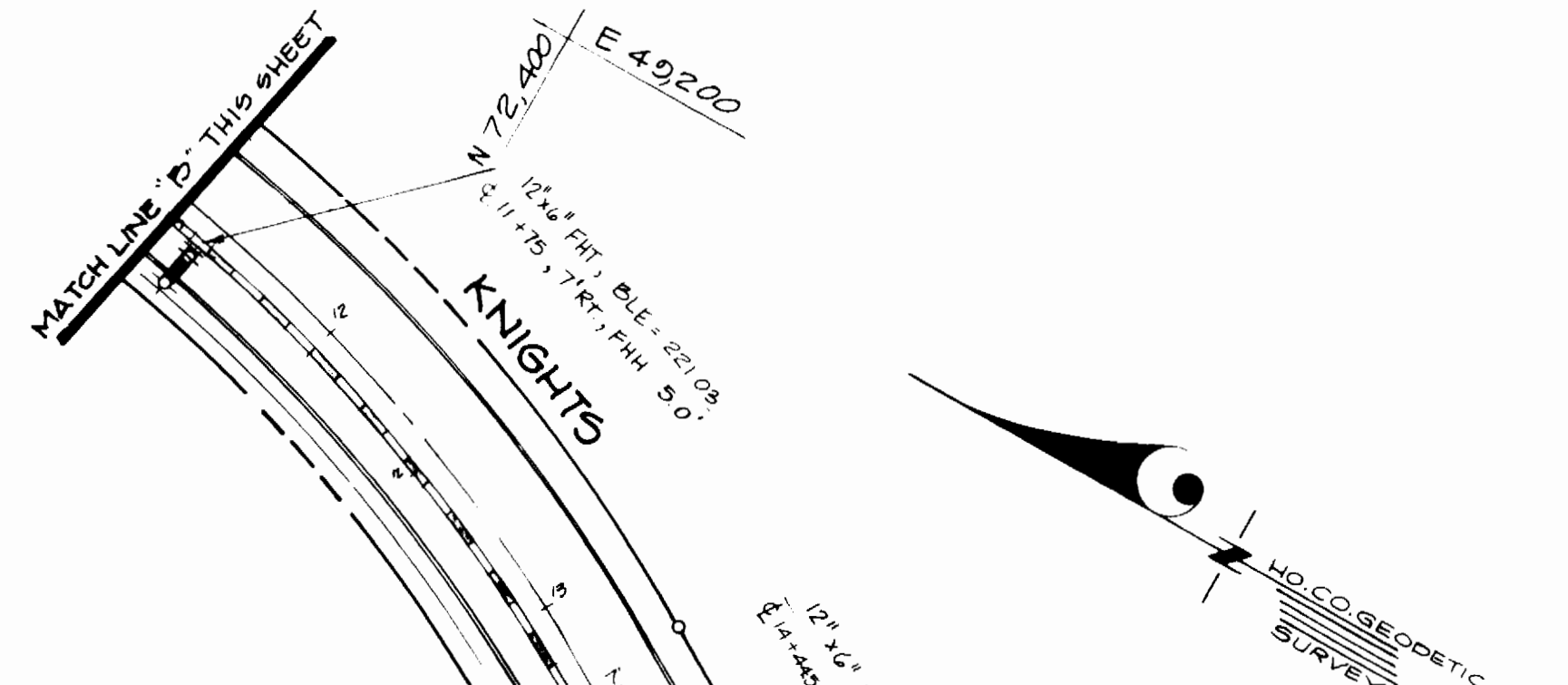
SURVEY DATE: 10-8-87
DESIGN J.P.C.
DRAWN C.S.R.
CHECKED J.P.C.
SCALE 1" = 50'
SHEET 5 OF 6
FILE NO. 24-10

PLANT LIST

KEY	QUAN	NAME	SIZE	ROOT	SPACING
⊙	64	CORNUS FLORIDA	3'-4'	B+B/CONTAINER	12' OC.
⊙	15	ILEX VERTICILLATA	2'-3'	B+B	3' OC.

INSTALL ALL PLANTS IN CONFORMANCE WITH LCAMW SPECS.

BM #33
60" NAIL IN 12" POP
65' S EAST Δ# 33
ELEV. = 174.70



PLAN: 1"=50'

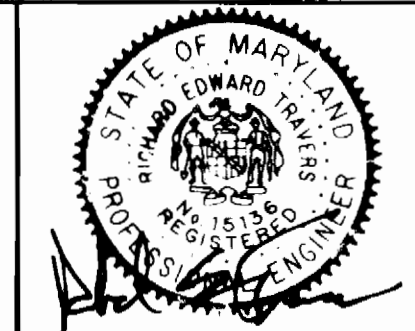
THIS SHEET FOR LANDSCAPING ONLY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Benjamin
DIRECTOR OF PUBLIC WORKS
DATE: 1-22-88

Robert Benjamin
CHIEF, BUREAU OF UTILITIES
DATE: 1-22-88

PHRA
PETER HERRIN PAUL & ASSOCIATES, P.C.
7609 Roundhill Place
Rockville, Maryland 20855
Tel: 301-767-2220 Fax: 301-767-2722



DES: MJK	DATE: 8/31/87
DRN: J.D.W.	
CHK:	
BY NO.	1 THIS SHEET ADDED TO W&S PLAN ON 1/14/88
REVISION	

LANDSCAPE PLAN
FOR
WATER & SEWER MAINS
12-23-87

BOWLING BROOK FARMS
KNIGHTS BRIDGE ROAD
CONTRACT NO. 24-1632-D
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 6 OF 6

BRUNING 68150