

SEWER HOUSE CONNECTION INVERTS AT MAIN LINE, PROPERTY LINE, AND MINIMUM SEWER SERVICE ELEVATIONS

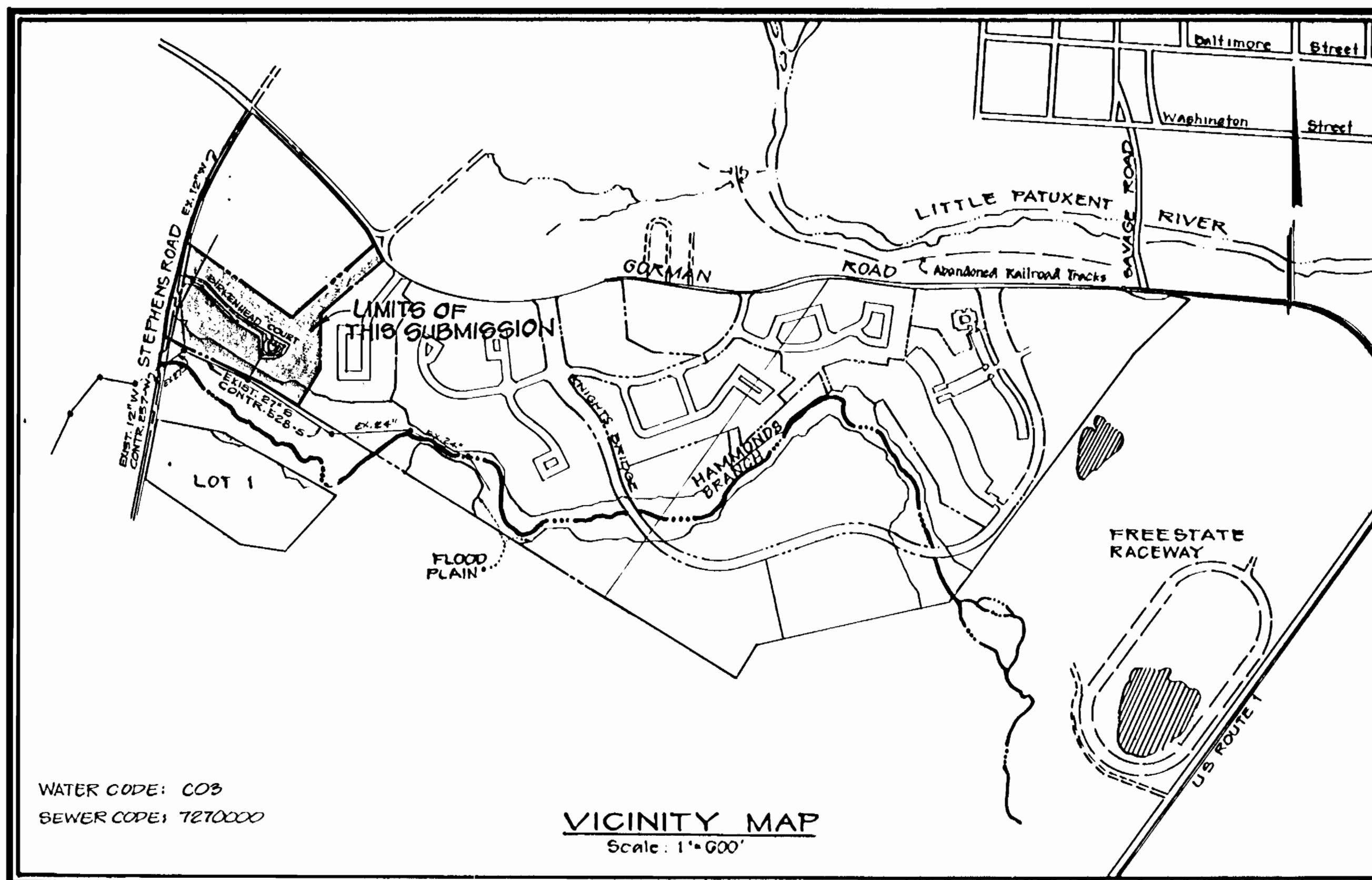
LOT NUMBER	INVERT (MAIN LINE)	INVERT (PROP. LINE)	MIN. SEWER SERVICE ELEV.	LOT NUMBER	INVERT (MAIN LINE)	INVERT (PROP. LINE)	MIN. SEWER SERVICE ELEV.
L-1	260.5	261.4	265.1	L-27	262.6	263.4	267.1
L-2	260.5	261.4	265.1	L-28	262.8	263.4	267.1
L-3	261.0	261.9	265.6	L-29	261.9	262.5	266.2
L-4	261.0	261.9	265.6	L-30	261.9	262.5	266.2
L-5	261.4	262.2	265.9	L-31	261.5	262.1	265.8
L-6	261.4	262.2	265.9	L-32	261.5	262.1	265.8
L-7	262.2	263.0	266.7	L-33	261.0	261.6	265.3
L-8	262.2	263.0	266.7	L-34	261.0	261.6	265.3
L-9	262.5	263.4	267.1	L-35	257.0	257.3	261.0
L-10	262.5	263.4	267.1	L-36	257.0	257.3	261.0
L-11	263.1	264.0	267.7	L-37	263.0	263.5	267.2
L-12	263.1	264.0	267.7	L-38	263.0	263.5	267.2
L-13	263.6	265.0	268.7	L-39	264.8	265.3	269.0
L-14	263.6	265.0	268.7	L-40	264.8	265.3	269.0
L-15	266.7	268.3	272.0	L-41	263.6	264.2	267.9
L-16	266.7	268.3	272.0	L-42	263.6	264.2	267.9
L-17	266.7	267.7	271.4	L-43	263.5	264.0	267.7
L-18	266.7	267.7	271.4	L-44	263.5	264.0	267.7
L-19	267.9	268.5	272.2	L-45	263.0	263.6	267.3
L-20	267.9	268.5	272.2	L-46	263.0	263.6	267.3
L-21	267.1	267.7	271.4	L-47	262.4	263.1	266.8
L-22	267.1	267.7	271.4	L-48	262.4	263.1	266.8
L-23	266.2	266.8	270.5	L-49	261.9	262.6	266.3
L-24	266.2	266.8	270.5	L-50	261.9	262.6	266.3
L-25	263.2	264.0	267.7	L-51	261.5	262.2	265.9
L-26	263.2	264.0	267.7	L-52	261.5	262.2	265.9

QUANTITIES			
ITEM	ESTIMATED	AS BUILT	MATERIAL/SUPPLIER
6" SEWER	815 L.F.	890 L.F.	BEHRM ROAD SUP.
MANHOLE	7	7	MUSKIE RECORDS
8" WATER	601 L.F.	690 L.F.	GUTHILL P.P.E.
12" WATER	—	—	—
6" VALVE	0	—	—
12" VALVE	—	—	—
FIRE HYDRANT	2	2	MILLER P.P.
AIR RELEASE MANHOLE	—	—	BEHRM ROAD SUP.
BLOW OFF VALVE	—	—	—
6" WATER	340 L.F.	330 L.F.	GUTHILL P.P.E.
8" WATER	1570 L.F.	1557 L.F.	BEHRM ROAD SUP.
6" VALVE	3	3	" " "
6" SMC	1120 L.F.	1302 L.F.	" " "

LEGEND

	PROPOSED	EXISTING
SANITARY SEWER	— SMC	—
SEWER HOUSE CONNECTION	— SMC	—
WATER	— W/W	—
WATER HOUSE CONNECTION	— W/W	—
STORM DRAIN	— S/D	—
PROPOSED E	—	—
PROPOSED R/W	—	—
EXISTING CONTOURS	—	—
LIMITS OF SUBMISSION	—	—
MANHOLE NUMBER	—	—
FIRE HYDRANT-/VALVE	—	—
EASEMENT	—	—

PARCEL L
LOTS L-1 THRU L-55
BOWLING BROOK FARMS
HOWARD COUNTY, MARYLAND



CONTRACT NO. 24-1781-D
WATER AND SEWER
CONSTRUCTION PLANS

GENERAL NOTES

- PART I
- 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 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". 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 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 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 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
 - Baltimore Gas & Electric Co. - Contractor Services - 850-4620
 - Baltimore Gas & Electric Co. - Under Ground Damage Control - 859-9004
 - Baltimore Gas & Electric Co. - Trouble Shooting - 298-9001
 - Mies Utility - 1-559-0100
 - Colonial Pipeline Co. - 795-1390
 - Bureau of Utilities, Howard County Dept. 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.
- PART II - WATER
- All water mains to be D.I.P. Class 52 unless otherwise noted.
 - Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
 - Valves adjacent to tees shall be strapped to tees.
 - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 - Fire hydrants shall be set to the bary 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 of the Standard Specifications.
 - The contractor shall not operate any water main valves on the existing water system.
 - All water house connections shall be for an inside meter setting.
 - All D.I.P. fittings shall be in accordance with AWWA Specification C-153 Ductile Iron Compact Fittings, 3-inch through 12-inch for water and other liquids.
- PART III - SEWER
- 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.
 - 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.

TYPE OF BUILDINGS TOWNHOUSE UNITS	
NUMBER OF LOTS	55
NUMBER OF WATER HOUSE CONNECTIONS	55
NUMBER OF SEWER HOUSE CONNECTIONS	55
DRAINAGE AREA	LITTLE PATUXENT

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-88-288.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 SIGNATURE: *John M. H. ...* DATE: 8/19/88

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.
 APPROVED: *Stephen L. ...* DATE: 8/19/88
 HOWARD SCD

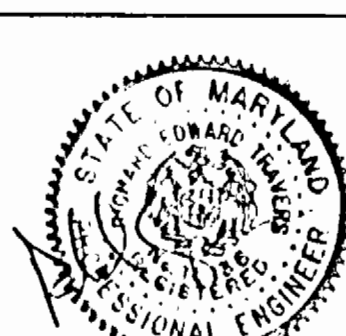
OWNER/DEVELOPER
 GORMAN ROAD LIMITED PARTNERSHIP
 C/O JAMES F. KNOTT DEVELOPMENT CORPORATION
 110 WEST ROAD, SUITE 203
 TOWSON, MARYLAND 21284
 (301) 321-6436

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN OF WATER AND SEWER MAINS
3	PROFILE OF WATER AND SEWER MAINS

INDEX OF DRAWINGS

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS: *Ronald W. ...* DATE: 9/11/88
 CHIEF, BUREAU OF UTILITIES: *...* DATE: 8-24-88
 CHIEF, LAND DEVELOPMENT DIVISION: *...* DATE: 8/19/88

PHR&A
 PATTON, HARRIS, RUST & ASSOCIATES, PC
 7609 STANDISH PLACE
 ROCKVILLE, MARYLAND 20855
 METRO: 301-762-2220 BALT: 301-782-7244



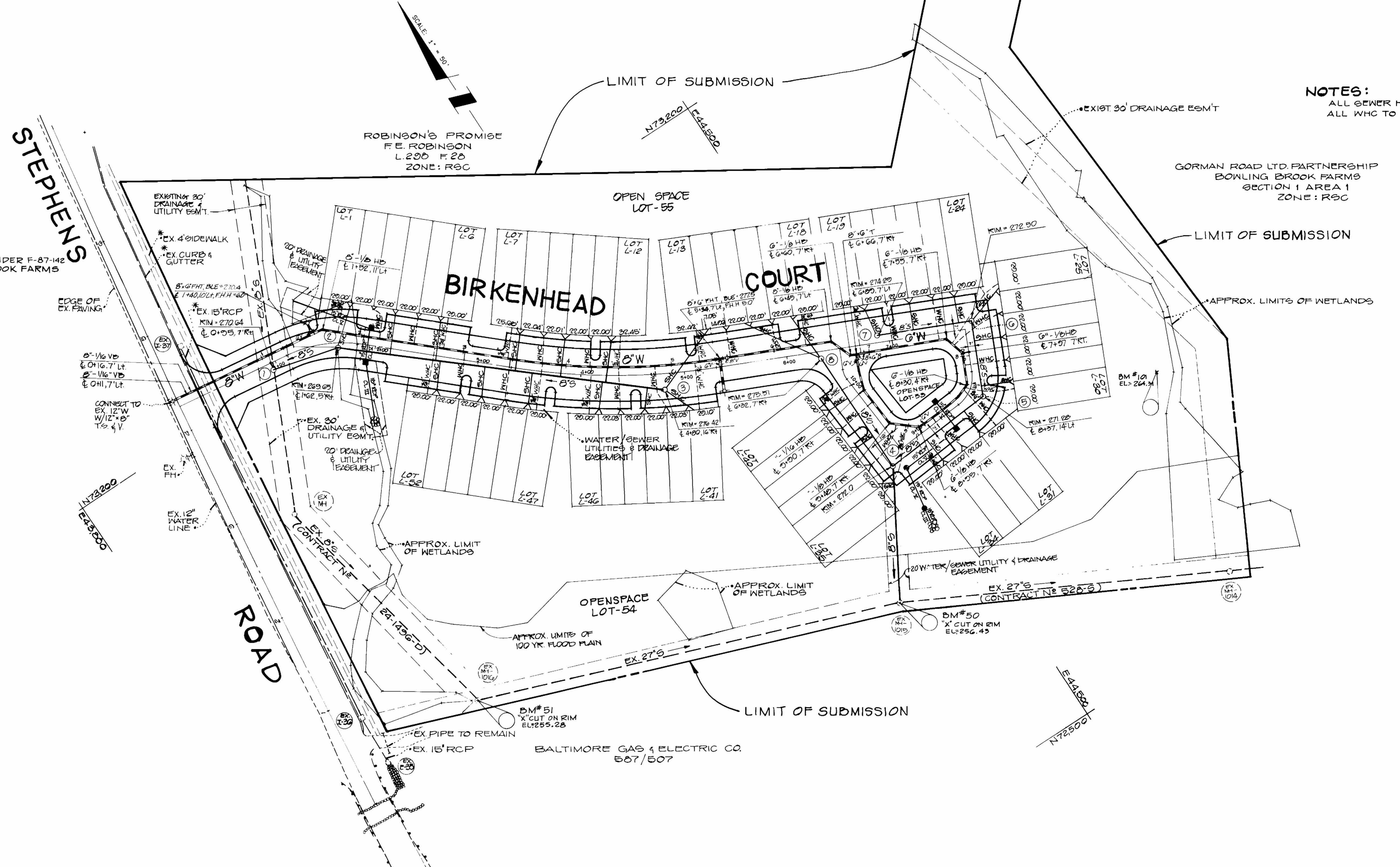
DES.	CHK.	DATE	BY	NO.	REVISION	DATE
K.O.R.						
C.O.R.						
K.O.R.		8/20/88		1	ISSUED TO HO.CO.	8/20/88
				2	REVISED FOR HO.CO. COMMENTS; ORIGINALS SUBMITTED 8/18/88	8/20/88
				3	REVISED TO 6" WATER BEYOND P.H.	8/20/88

TITLE SHEET

BOWLING BROOK FARMS
 PARCEL L
 LOTS L-1 THRU L-55
 CONTRACT NO. 24-1781-D
 A RESUBDIVISION OF LOT 71 BOWLING BROOK FARMS
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 39

STEPHENS ROAD



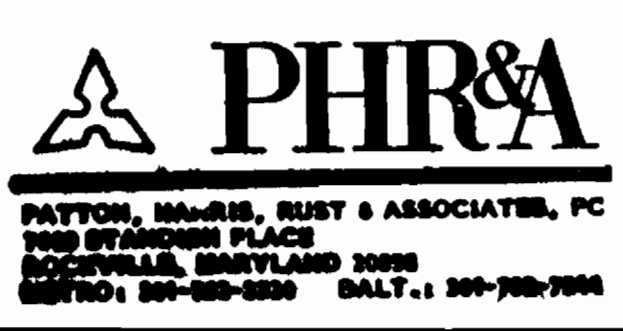
NOTES:
 ALL SEWER HOUSE CONNECTIONS TO BE 6"
 ALL W/C TO BE 1" UNLESS NOTED OTHERWISE.

* TO BE BUILT UNDER F-87-142
 (BOWLING BROOK FARMS
 PARCEL K)

GORMAN ROAD LTD PARTNERSHIP
 BOWLING BROOK FARMS
 SECTION 1 AREA 1
 ZONE: R3C

BALTIMORE GAS & ELECTRIC CO.
 507/507

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

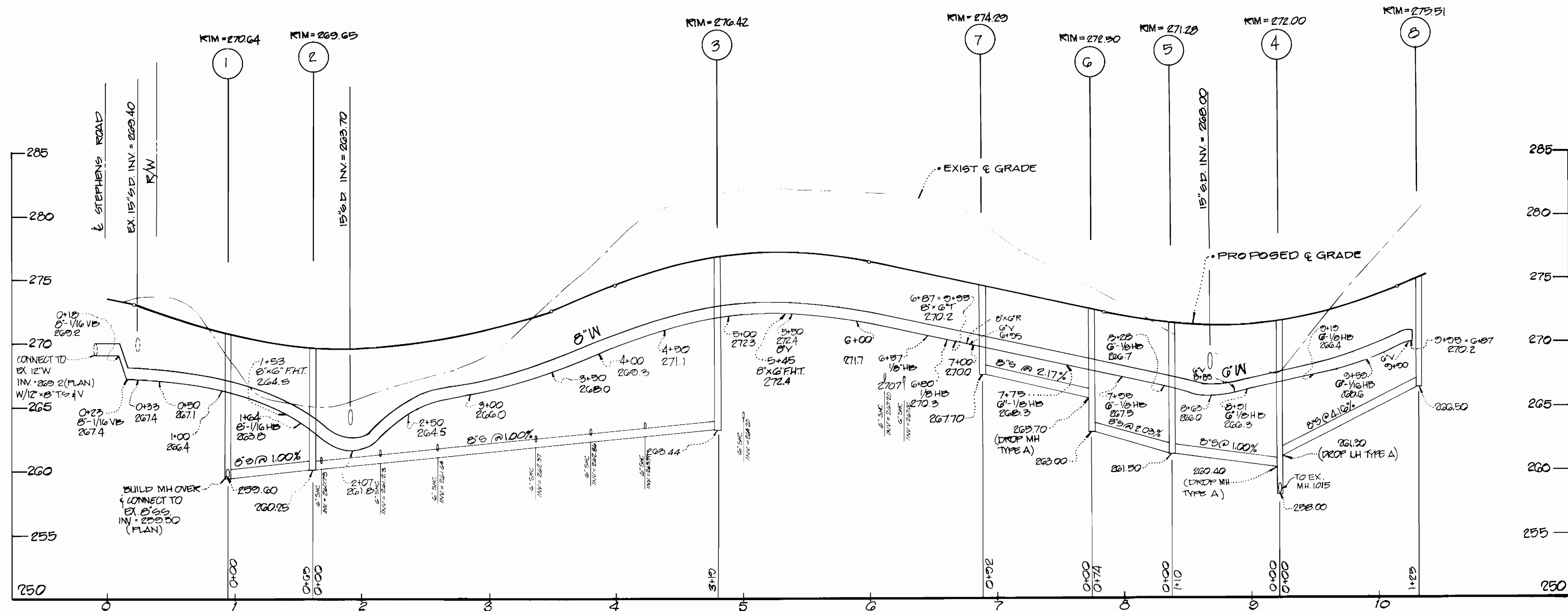


DES:	K.O.R.			
URN:	C.S.R.			
CHK:	K.O.R.	3	REVISED TO G.W. BEYOND FH.	8/20/88
		2	REVISED PER HO. CO. COMMENTS; ORIGINALS SUBMITTED	8/19/88
		1	ISSUED TO H.O.C.A.	8/20/88
DATE:	6-20-88	BY:	NO.	REVISION

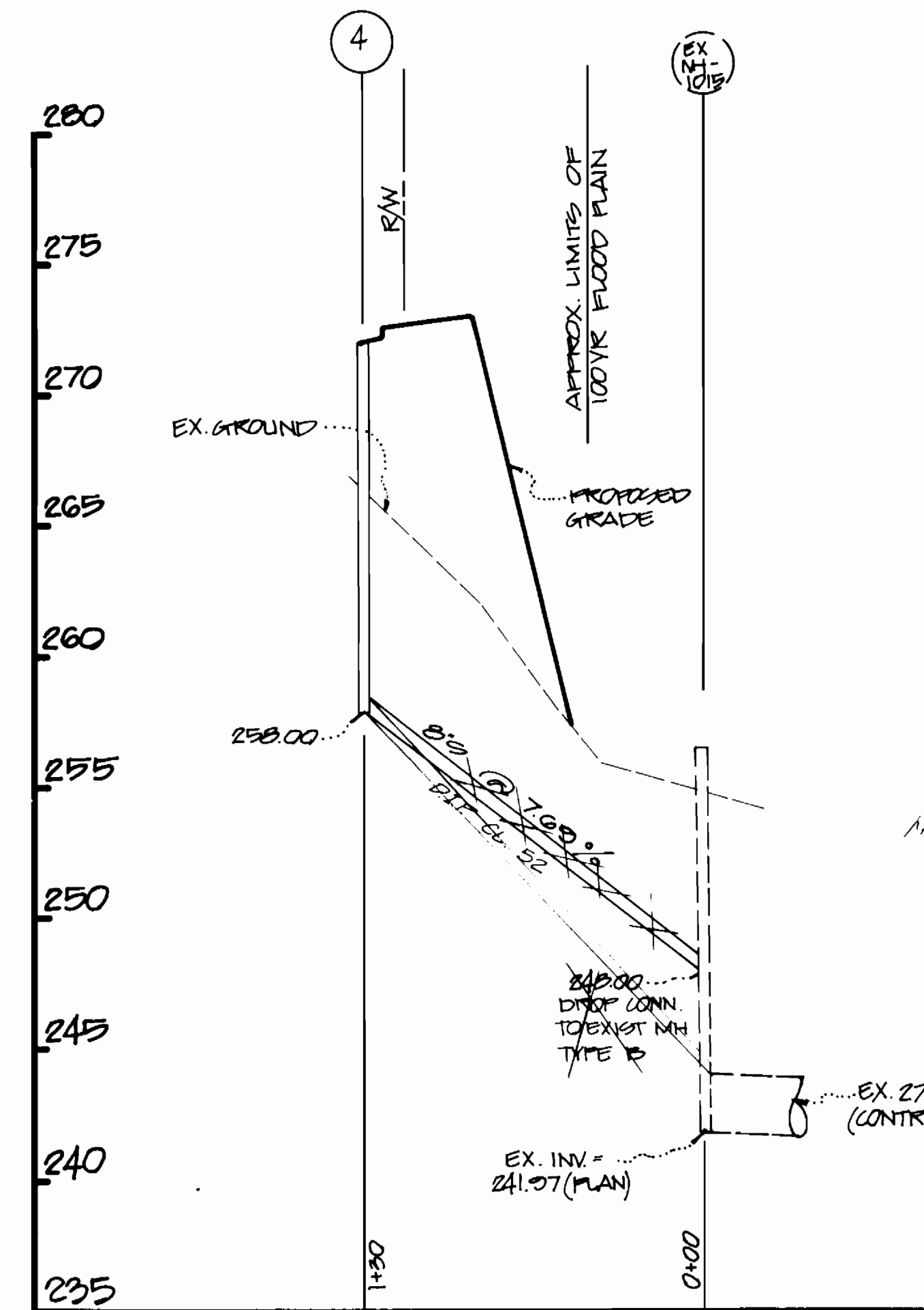
PLAN
 WATER & SEWER MAINS

BOWLING BROOK FARMS
 PARCEL L
 LOTS L-1 THRU L-55
 CONTRACT NO. 24-1781-D
 A RESUBDIVISION OF LOT 71 BOWLING BROOK FARMS
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE
 AS
 SHOWN
 SHEET
 2 OF 3



PROFILE SCALE:
 HORZ: 1"=50'
 VERT: 1"=5'



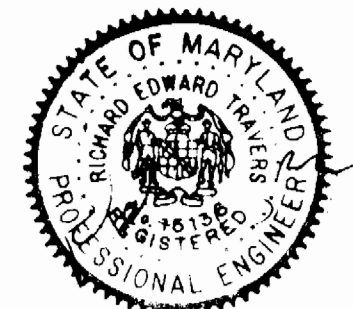
NOTE: DELETE PROP. CONN. TYPE C
 NEW TO 10.60
 NEW INVERT 249.00
 TO EX. INV. TOP of 27" CONN.
 OF EXISTING 27" CONN. (X-10)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. Hill
 DIRECTOR OF PUBLIC WORKS
 DATE 8-24-88

Michael J. Hill
 CHIEF BUREAU OF ENGINEERING
 DATE 8/23/88

PHR&A
 PATTON, HARRIS, RUST & ASSOCIATES, PC
 7609 STANDISH PLACE
 ROCKVILLE, MARYLAND 20855
 METRO: 301-762-2220 BALT.: 301-792-7244



DES: K.O.R.					
DRN: C.S.R.					
CHK: K.O.R.	3	REVISED TO G.W. BEYOND MH.	8/20/88		
	2	REVISED PER HO. CO. COMMENTS; ORIGINALS SUBMITTED.	8/19/88		
	1	ISSUED TO HO. CO.	8/20/88		
DATE: 6-20-88	BY: NC	REVISION	DATE	600 SCALE MAP NO.	BLOCK NO.

PROFILES
 WATER & SEWER MAINS

BOWLING BROOK FARMS
 PARCEL L
 LOTS L-1 THRU L-55
 CONTRACT NO. 24-1781-D
 A RESUBDIVISION OF LOT 71 BOWLING BROOK FARMS
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE
 AS
 SHOWN

SHEET
 3 OF 3A

2104-1-9

SEWER AS BUILT

WATER AS BUILT

Lot #1	Manhole #2	41'	Lot #26	Manhole #6	37'	Lot #1	Manhole #2	49'	Lot #26	Manhole #6	31'
"	FIRE HYDRANT STA: 1+40.5	43'	Lot #27	"	36'	"	FIRE HYDRANT STA: 1+40.5	41'	Lot #27	"	32'
Lot #2	"	48'	Lot #27	Manhole #5	64'	Lot #2	"	64'	"	Manhole #5	80'
"	Manhole #2	47'	Lot #28	"	59'	"	Manhole #2	52'	Lot #28	"	48'
Lot #3	"	65'	"	Manhole #6	39'	Lot #3	"	55'	"	Manhole #6	50'
"	FIRE HYDRANT STA: 1+40.5	83'	Lot #29	"	69'	"	FIRE HYDRANT STA: 1+40.5	68'	Lot #29	"	54'
Lot #4	"	88'	"	Manhole #5	34'	Lot #4	"	107'	"	Manhole #5	43'
"	Manhole #2	69'	Lot #30	"	22'	"	Manhole #2	83'	Lot #30	"	31'
Lot #5	"	103'	"	Manhole #6	74'	Lot #5	"	87'	"	Manhole #6	78'
"	FIRE HYDRANT STA: 1+40.5	127'	Lot #31	Manhole #4	95'	"	FIRE HYDRANT STA: 1+40.5	111'	Lot #31	Manhole #4	108'
Lot #6	"	132'	"	Manhole #5	36'	Lot #6	"	136'	"	Manhole #5	30'
"	Manhole #2	108'	Lot #32	"	40'	"	Manhole #2	111'	Lot #32	"	52'
Lot #7	Manhole #3	155'	"	Manhole #4	28'	Lot #7	Manhole #3	160'	"	Manhole #4	74'
"	FIRE HYDRANT STA: 5+34.2	210'	Lot #33	"	54'	"	FIRE HYDRANT STA: 5+34.2	215'	Lot #33	"	69'
Lot #8	"	203'	"	Manhole #5	73'	Lot #8	"	186'	"	Manhole #5	58'
"	Manhole #3	148'	Lot #34	"	78'	"	Manhole #3	132'	Lot #34	"	84'
Lot #9	"	113'	"	Manhole #4	49'	Lot #9	"	127'	"	Manhole #4	44'
"	FIRE HYDRANT STA: 5+34.2	166'	Lot #35	"	25'	"	FIRE HYDRANT STA: 5+34.2	181'	Lot #35	"	21'
Lot #10	"	159'	"	Manhole #8	140'	Lot #10	"	148'	"	Manhole #8	148'
"	Manhole #3	111'	Lot #36	"	132'	"	Manhole #3	91'	Lot #36	"	119'
Lot #11	"	76'	"	Manhole #4	22'	Lot #11	"	87'	"	Manhole #4	23'
"	FIRE HYDRANT STA: 5+34.2	125'	Lot #37	"	38'	"	FIRE HYDRANT STA: 5+34.2	138'	Lot #37	"	27'
Lot #12	"	118'	"	Manhole #8	78'	Lot #12	"	114'	"	Manhole #8	111'
"	Manhole #3	69'	Lot #38	"	91'	"	Manhole #3	67'	Lot #38	"	77'
Lot #13	"	62'	"	Manhole #4	44'	Lot #13	"	64'	"	Manhole #4	58'
"	FIRE HYDRANT STA: 5+34.2	64'	Lot #39	"	79'	"	FIRE HYDRANT STA: 5+34.2	64'	Lot #39	"	66'
Lot #14	"	62'	"	Manhole #8	58'	Lot #14	"	62'	"	Manhole #8	69'
"	Manhole #3	73'	Lot #40	"	50'	"	Manhole #3	82'	Lot #40	"	44'
Lot #15	"	100'	"	Manhole #4	88'	Lot #15	"	88'	"	Manhole #4	90'
"	FIRE HYDRANT STA: 5+34.2	67'	Lot #41	Manhole #3	35'	"	FIRE HYDRANT STA: 5+34.2	63'	Lot #41	Manhole #3	39'
Lot #16	"	71'	"	FIRE HYDRANT STA: 5+34.2	35'	Lot #16	"	81'	"	FIRE HYDRANT STA: 5+34.2	30'
"	Manhole #3	106'	Lot #42	"	43'	"	Manhole #3	122'	Lot #42	"	27'
Lot #17	"	141'	"	Manhole #3	29'	Lot #17	"	126'	"	Manhole #3	22'
"	FIRE HYDRANT STA: 5+34.2	97'	Lot #43	"	27'	"	FIRE HYDRANT STA: 5+34.2	85'	Lot #43	"	23'
Lot #18	"	102'	"	FIRE HYDRANT STA: 5+34.2	76'	Lot #18	"	105'	"	FIRE HYDRANT STA: 5+34.2	63'
"	Manhole #3	152'	Lot #44	"	84'	"	Manhole #3	151'	Lot #44	"	99'
Lot #19	Manhole #6	110'	"	Manhole #3	33'	Lot #19	Manhole #6	115'	"	Manhole #3	51'
"	Manhole #7	34'	Lot #45	"	65'	"	Manhole #7	36'	Lot #45	"	52'
Lot #20	"	31'	"	FIRE HYDRANT STA: 5+34.2	121'	Lot #20	"	33'	"	FIRE HYDRANT STA: 5+34.2	111'
"	Manhole #6	101'	Lot #46	"	137'	"	Manhole #6	87'	Lot #46	"	138'
Lot #21	"	69'	"	Manhole #3	72'	Lot #21	"	82'	"	Manhole #3	77'
"	Manhole #7	44'	Lot #47	Manhole #2	192'	"	Manhole #7	35'	Lot #47	Manhole #2	202'
Lot #22	"	49'	"	FIRE HYDRANT STA: 1+40.5	232'	Lot #22	"	61'	"	FIRE HYDRANT STA: 1+40.5	227'
"	Manhole #6	61'	Lot #48	"	225'	"	Manhole #6	50'	Lot #48	"	211'
Lot #23	"	36'	"	Manhole #2	188'	Lot #23	"	41'	"	Manhole #2	175'
"	Manhole #7	82'	Lot #49	"	152'	"	Manhole #7	68'	Lot #49	"	166'
Lot #24	"	89'	"	FIRE HYDRANT STA: 1+40.5	189'	Lot #24	Manhole #5	106'	"	FIRE HYDRANT STA: 1+40.5	208'
"	Manhole #6	32'	Lot #50	"	181'	"	Manhole #6	34'	Lot #50	"	169'
Lot #25	"	41'	"	Manhole #2	145'	Lot #25	"	44'	"	Manhole #2	133'
"	Manhole #5	107'	Lot #51	"	109'	"	Manhole #5	110'	Lot #51	"	124'
"	"	99'	Lot #52	"	139'	"	"	85'	Lot #52	"	134'
Lot #26	"		"	Manhole #2	102'	Lot #26	"		"	Manhole #2	93'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

DES:

DRN:

CHK:

DATE:

BY NO.

REVISION

DATE

SEWER & WATER AS-BUILT

KATHY WILSON

600' SCALE MAP NO.

BLOCK NO.

BOWLING BROOK FARMS

CONT. NO. 24-1781-d

SCALE AS SHOWN

SHEET 32 OF 39