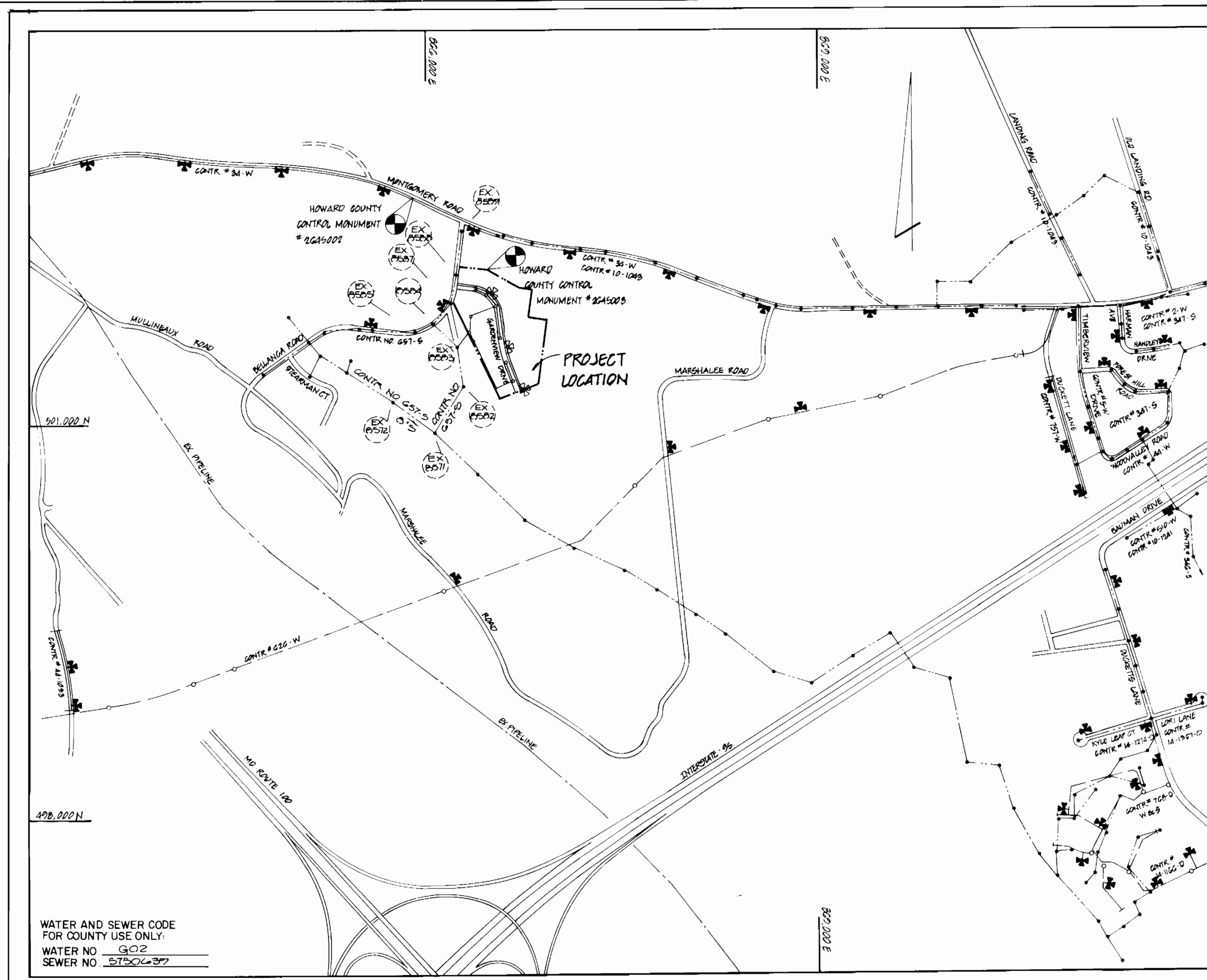


**BENCHMARKS**

HOWARD COUNTY MONUMENT # 2645001 - ELEV. 970.908  
CONCRETE MONUMENT 2'5" BELOW SURFACE 1 1/2" NORTH OF  
NORTH EDGE OF ROAD

HOWARD COUNTY MONUMENT # 2645003 - ELEV. 964.186  
CONCRETE MONUMENT 2'5" BELOW SURFACE AT TOP OF BANK

QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
8" WATER	1100	1050	A & P Water, 1500 Atlantic States
6" WATER	0	0	
3/4" W.H.C.	467	470	Atlantic States
1" W.H.C.	0	0	
FIRE HYDRANTS	3	3	Municipal Contr. Kennedy
8" SEWER	1703.5	1705	Municipal Contr. Hunter
8" SEWER (D.I.P.)	0	0	
MANHOLES	10	10	Atlantic Concrete Products
6" S.H.C.	557	556.5	Municipal Contr. Hunter
8" VALVES	1	1	Municipal Contr. Kennedy
6" VALVES (EXCLUDING F.H.)	0	0	
6" F.H. VALVES	3	3	Municipal Contr. Kennedy



TYPE OF BUILDING	SINGLE FAMILY DETACHED DWELLING
NUMBER OF LOTS	22 (19 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS	15
NO. OF SEWER HOUSE CONNECTIONS	20
DRAINAGE AREA	PRIMPWOOD

VICINITY MAP  
SCALE 1" = 600'

**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 CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- 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. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS.
- FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
- 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.
- 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 AND ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE 685-0123
  - BALTIMORE GAS AND ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE 685-0123
  - ENGINEERING - "DAMAGE CONTROL" 234-5621
  - "MISS UTILITY" 1-559-0100
  - CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY 725-9976
  - AMERICAN TELEPHONE AND TELEGRAPH - CABLE LOCATION DIVISION 393-3553
  - COLONIAL PIPELINE COMPANY 795-1390
  - BUREAU OF UTILITIES HOWARD COUNTY 992-2366
- TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES 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 AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE.
- ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
- TOP 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.
- BLOCK ALL FITTINGS WITH CONCRETE.
- BURY LINE ELEVATIONS ON ALL 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. SOIL AROUND THE FIRE HYDRANT TO BE COMPACTED IN ACCORDANCE WITH SECTIONS 10.05 OF THE STANDARD SPECIFICATIONS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPE FITTINGS ONLY.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR PVC 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.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- 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 G 5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE, STANDARD DETAIL G 5.41.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CAN NOT BE SERVED.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C-199 DUCTILE IRON CONTACT FITTINGS, 3/4-INCH THROUGH 12-INCH WATER AND OTHER LIQUIDS.

# CONTRACT NO. 14-1877-D MARKHAM WOODS WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 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-29-B2.

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*James M. Helms* 12/21/87  
U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:

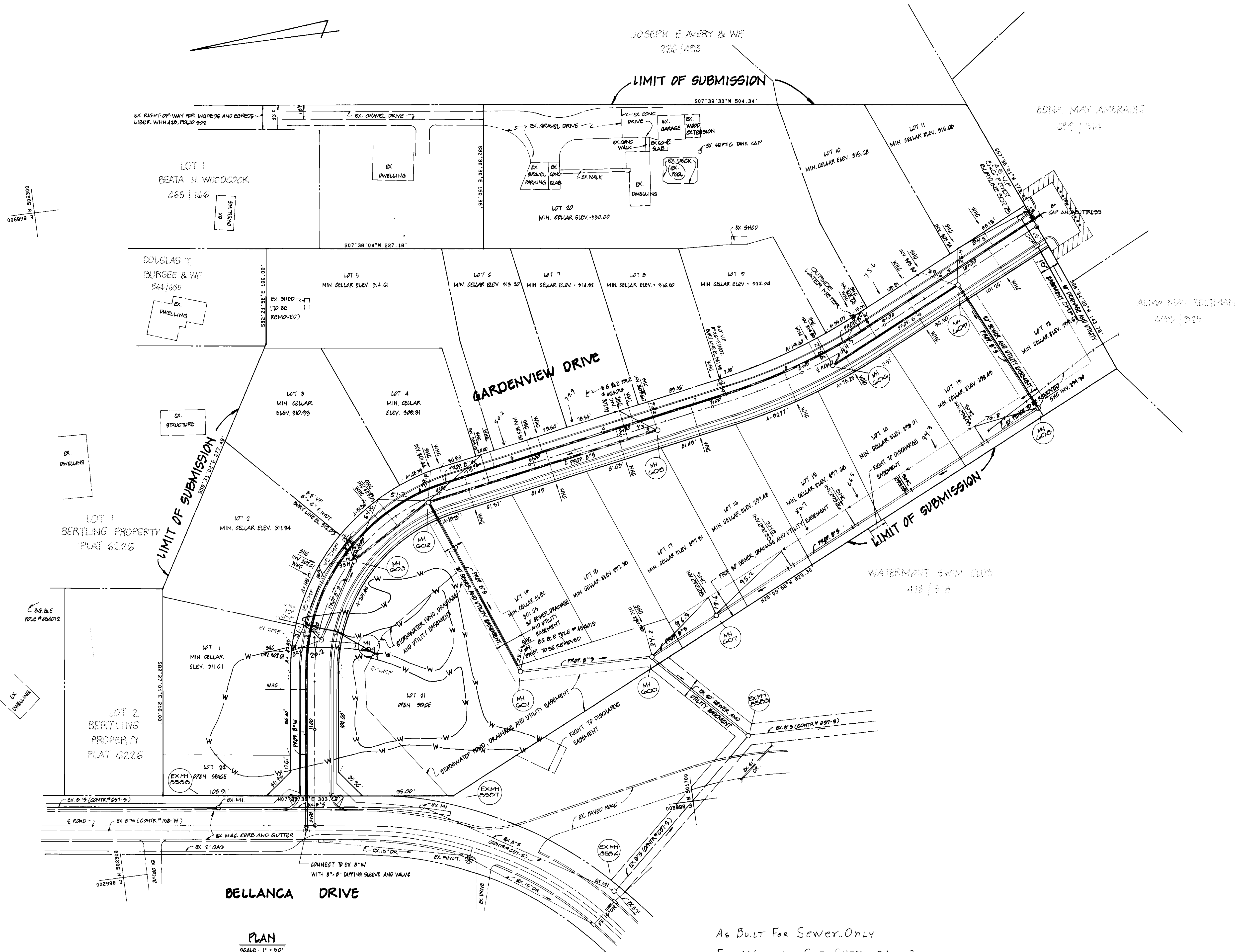
*Stephen R. Ripstein* 12/21/87  
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

CONTRACT NO. 14-1877-D  
MARKHAM WOODS  
LOT 1 THRU LOT 22  
WATER AND SEWER MAIN EXTENSIONS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>James M. Helms</i> 9-23-89 DIRECTOR, PUBLIC WORKS DATE  <i>Robert H. Beninger</i> 6-15-89 CHIEF, BUREAU OF UTILITIES DATE	DEWBERRY & DAVIS ARCHITECTS-ENGINEERS-PLANNERS-SURVEYORS  3300 N. RIDGE ROAD SUITE 100 ELLCOTT CITY, MD 21043 (301) 461-7478  <i>David L. Davis</i> 12/21/89	DES: WEO DRN: DMP CHK: JHE W/DP: [ ] BY: NO DATE: NOV, 1988 REVISIONS AS PER COUNTY COMMENTS DATED DECEMBER 2, 1988 REVISION 37	TITLE SHEET  MARKHAM WOODS CONTRACT NO. 14-1877-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  SCALE AS SHOWN SHEET 1 OF 9
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AS BUILT 10-29-90

W9009 EC



PLAN  
SCALE: 1" = 50'

As Built For Sewer Only  
For Water, See Sheet 2A of 3

CONTRACT NO. 14-1877-0  
MARKHAM WOODS  
LOT 1 THRU LOT 22  
WATER AND SEWER MAIN EXTENSION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James H. Law* 9/28/89  
DIRECTOR OF PUBLIC WORKS DATE

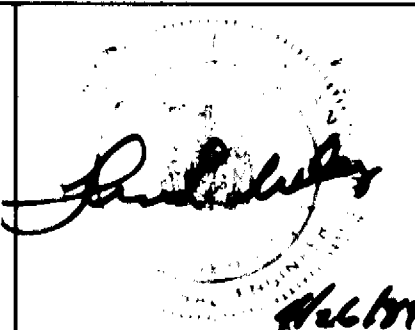
*Robert Keenan* 6/15/86  
CHIEF, BUREAU OF UTILITIES DATE

*William E. Ridge* 9-27-89  
CHIEF, BUREAU OF ENGINEERING DATE

*Paul D. Brown* 6/28/89  
CHIEF, LAND DEVELOPMENT DIVISION DATE

DEWBERRY & DAVIS  
ARCHITECTS - ENGINEERS - PLANNERS - SURVEYORS

3900 N. RIDGE ROAD  
SUITE 100  
BELLGATE CITY, MARYLAND 21043  
(301) - 461-7478



DES: WEO					
DRN: DMP					
CHK: JHE					
DATE: NOV, 1988	BY: NO.	REVISIONS AS PER COUNTY COMMENTS DATED DECEMBER 2, 1989	REVISION	DATE	

WATER AND SEWER PLAN

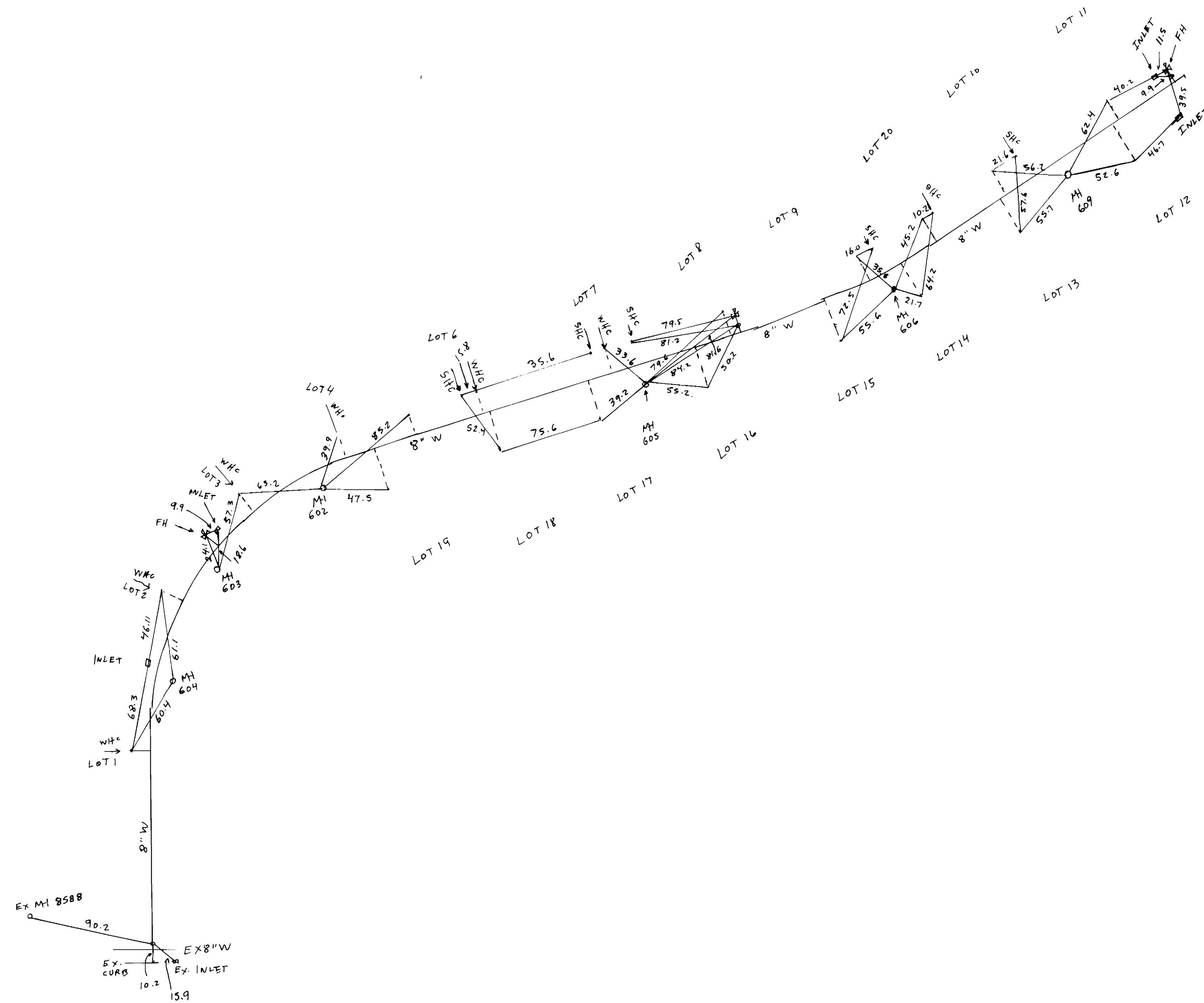
600' SCALE MAP NO. 37 BLOCK NO. 9

MARKHAM WOODS  
CONTRACT NO. 14-1877-0  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 3

BRUNING 44-132-69150



AS BUILTS FOR WATER ONLY

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

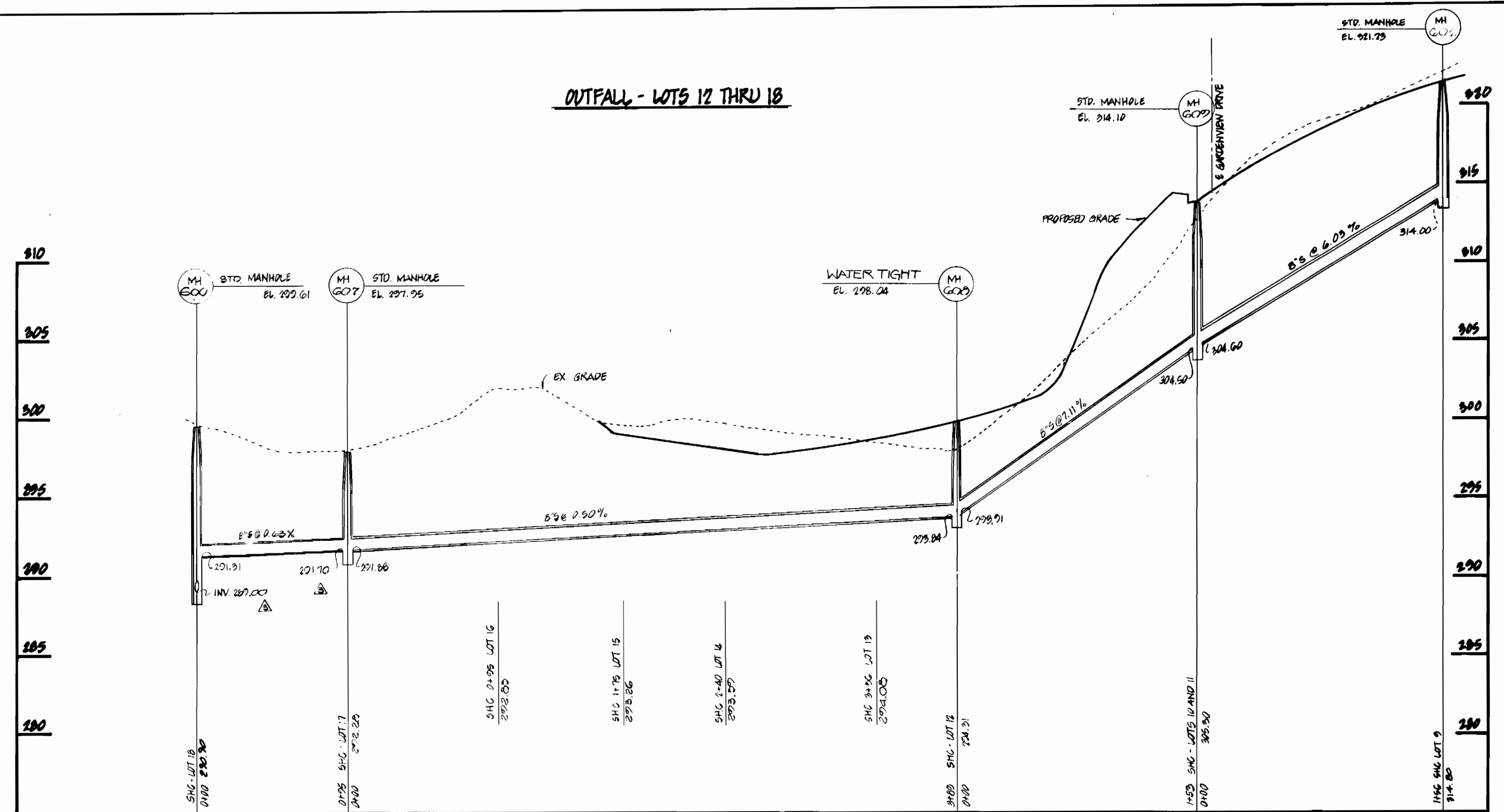
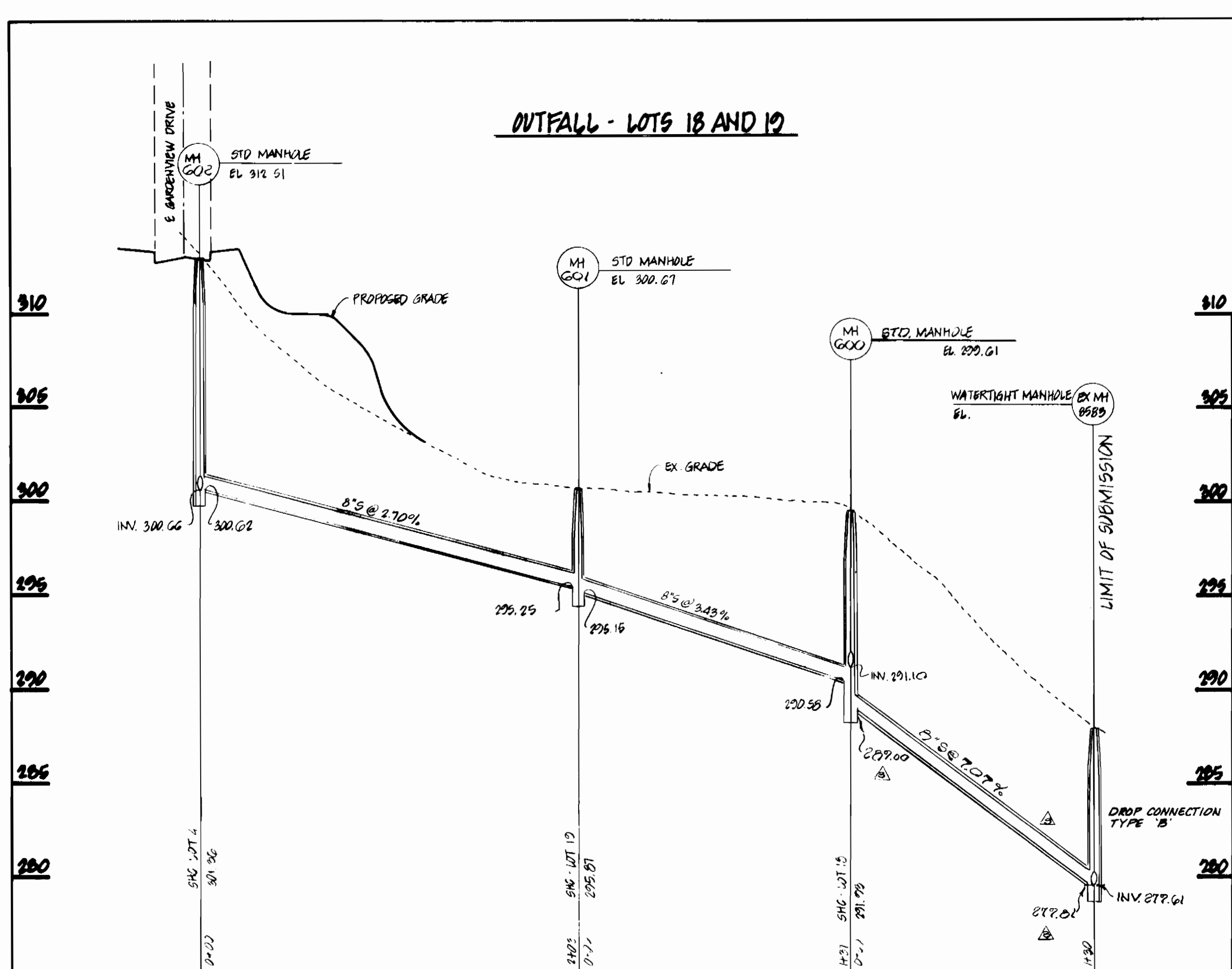
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

MARKHAM WOODS  
CONTRACT No 14-1877-D

SCALE  
AS  
SHOWN

SHEET  
21 OF 3

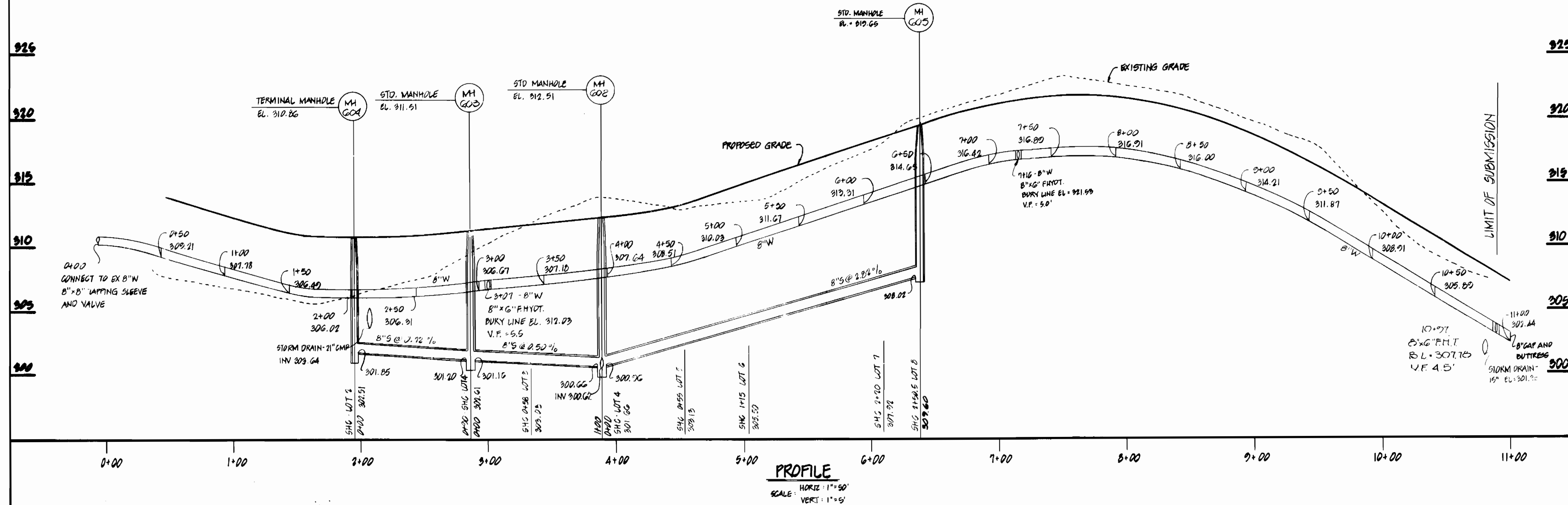
AS-BUILT 10-29-90



**PROFILE**  
 HORIZ: 1"=50'  
 VERT: 1"=5'

**PROFILE**  
 HORIZ: 1"=50'  
 VERT: 1"=5'

**GARDENVIEW DRIVE**



**PROFILE**  
 HORIZ: 1"=50'  
 VERT: 1"=5'

CONTRACT NO. 14-1871-D  
 MARKHAM WOODS  
 LOT 1 THRU LOT 22  
 WATER AND SEWER MAIN EXTENSION

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

9/15/87  
 DATE

6-15-86  
 DATE

DEWBERRY & DAVIS  
 ARCHITECTS - ENGINEERS - PLANNERS - SURVEYORS

3900 N. HIGGE ROAD  
 SUITE 100  
 BRIGHT CITY, MARYLAND 21045  
 (301) 461-7478



DES: WEO			
DRN: DMP			
CHK: J.H.E.	U/EO	REVISOR AS PER REDLINE CORRECTS JUNE 8, 1990	6/7/90
	MLH	REVISED INVERT ON MH 601 AND 605 PER CO. COMMENTS	5/7/90
	W/LOP	REVISION AS PER COUNTY COMMENTS DATED DECEMBER 8, 1988	4/89
DATE: NOV, 1988	BY	NO.	REVISION

WATER AND SEWER PROFILE

600' SCALE MAP NO. 37 BLOCK NO. 9

MARKHAM WOODS  
 CONTRACT NO. 14-1871-D  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 3 OF 3

BRUNING 44-132-69150

W9009 EC