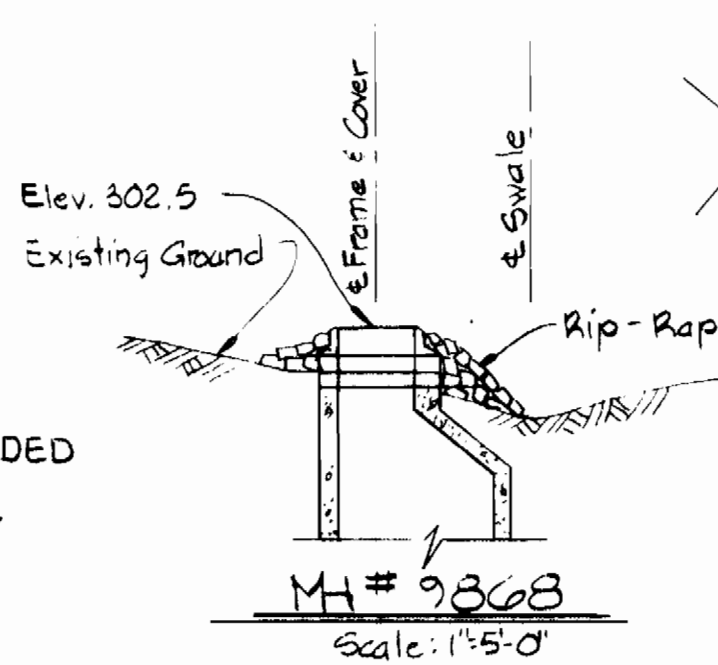
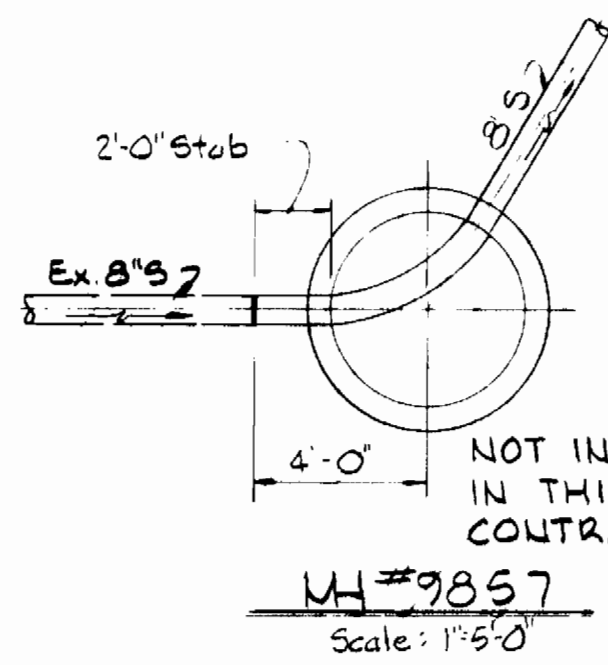


BENCH MARKS

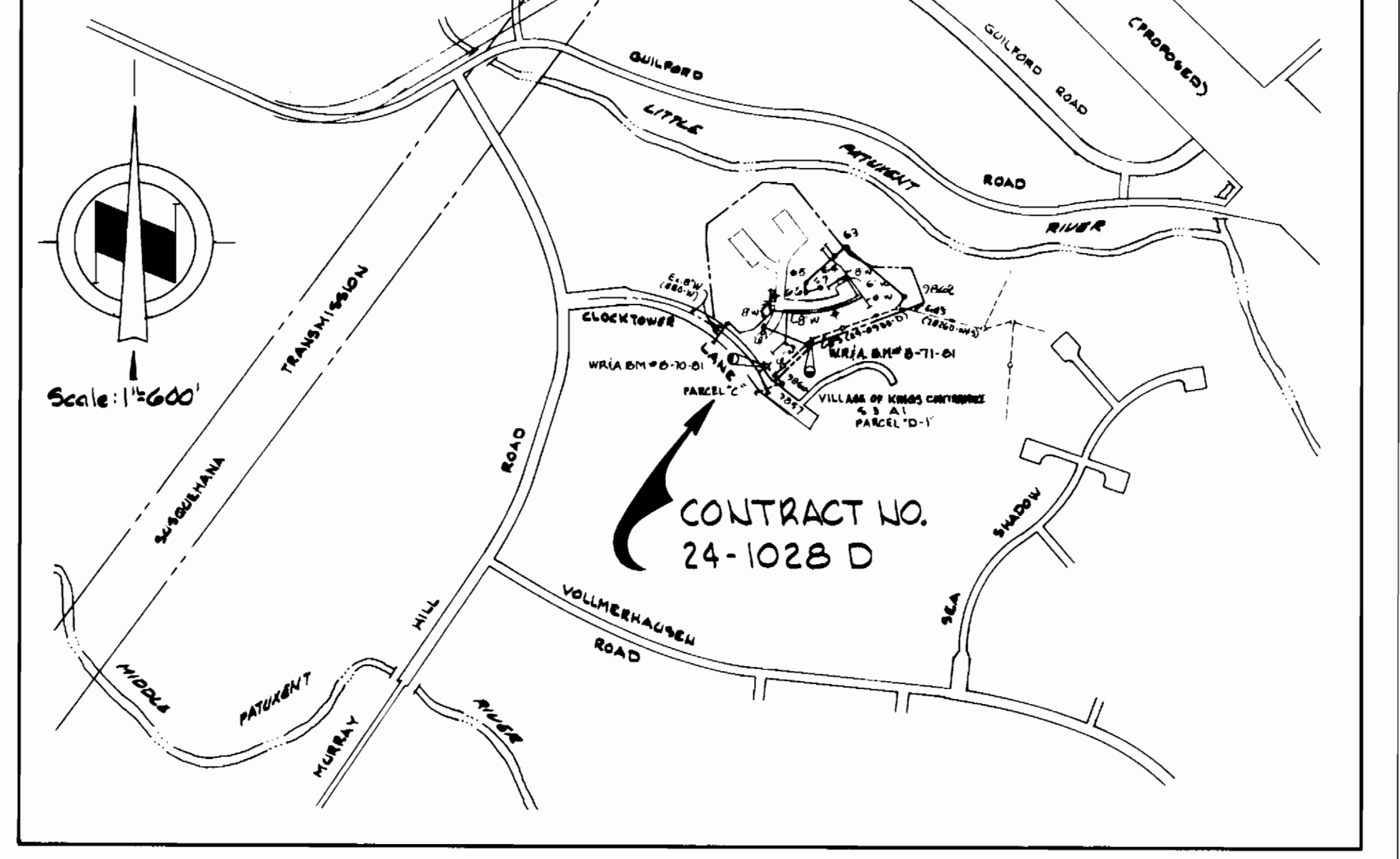
W.R.A. BM # B-70-B1 Elev. 321.40
 X-Cut in flange bolt on fire hydrant on Clocktower Lane Sta. 2+65 between P.I. # B-66-B1 and P.I. # B-66-B1.
 W.R.A. BM # B-71-B1 Elev. 299.97
 X-Cut in rim of sanitary manhole at Rt. Sta. 3+41 between P.I. # B-66-B1 and P.I. # B-67-B1.



Note: Silt Fence and Diversion Dike by Grading and Drainage Contractor.

Waste Water Disposal: Sewage
 Type of Buildings: Town Houses
 No. of BHC: 75
 No. of WHC: 56
 No. of Lots: 56

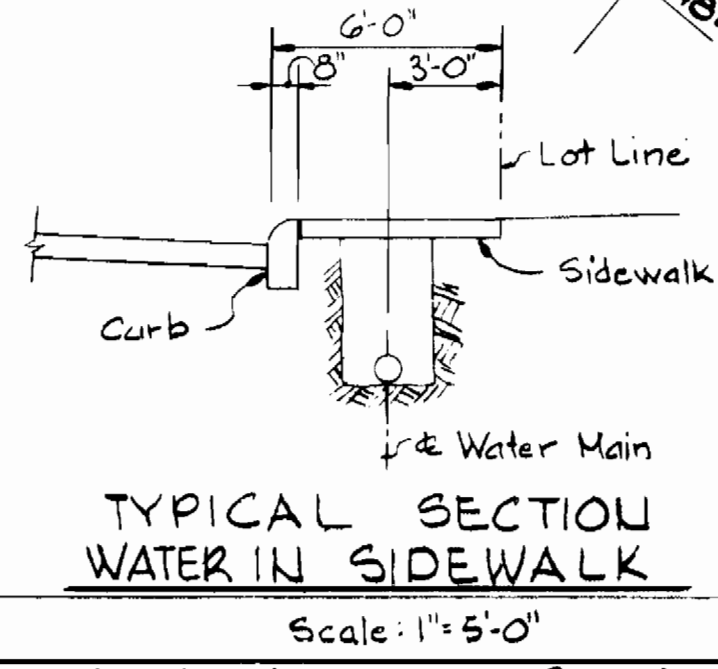
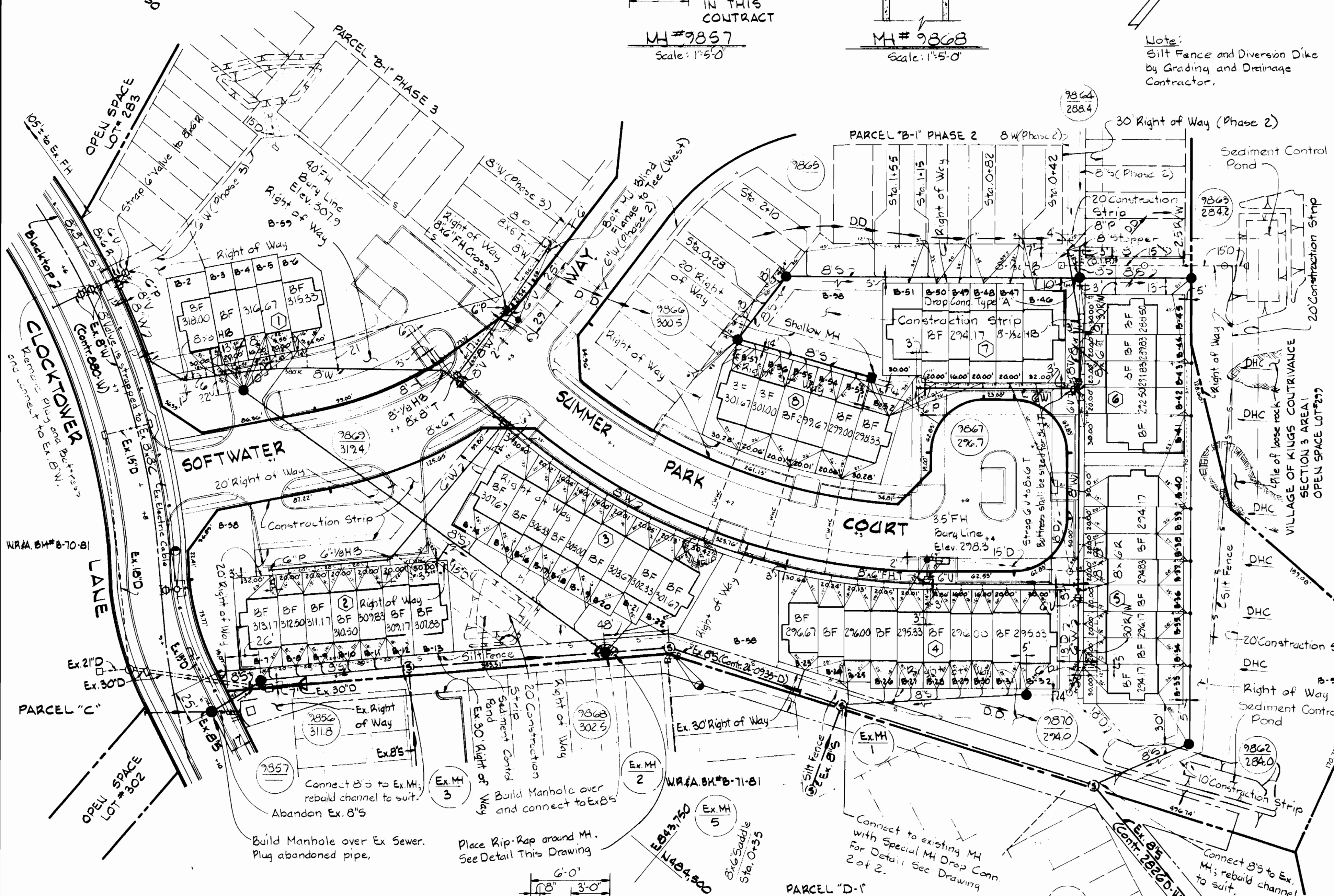
WATER & SEWER CODE
 County Use:
 Water: E 15
 Sewer: 9180000



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 PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF UTILITIES AT HIS EXPENSE.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, USE HOWARD COUNTY STANDARD DETAILS.
- FOR MATERIALS AND CONSTRUCTION REQUIREMENTS, USE HOWARD COUNTY STANDARD SPECIFICATIONS.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON USGS DATUM.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE COST FOR TUNNELING OR BRACING POLES SHALL BE INCLUDED IN APPROPRIATE UNIT PRICES BID.
- 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 AND GAS DISTRIBUTION CUSTOMER SERVICE - 685-0123
 DAMAGE CONTROL - 234-5621
 "MISS UTILITY" - 1 - 559-0100
 CHESAPEAKE & POTOMAC TELEPHONE COMPANY - 725-9976
 "AMERICAN TELEPHONE AND TELEGRAPH" - CABLE LOCATION DIVISION - 393-3553
 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. PAYMENTS FOR SUCH REMOVAL SHALL BE INCLUDED IN APPROPRIATE UNIT PRICES BID.
- 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 OPERATIONS.
- ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3 1/2 FEET OF COVER UNLESS OTHERWISE NOTED.
- VALVES SHALL BE STRAPPED WHERE APPLICABLE.
- BLOCK ALL FITTINGS WITH CONCRETE.
- 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, SOIL AROUND THE FIRE HYDRANT TO BE COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., A.C.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.



ITEM	BID	AS-BUILT	MATERIAL/SUPPLIER
8" Sewer - LF	1,560	1534	CARLON PVC
Manholes - Ea.	11	11	ATLANTIC PRE-CAST
8" Water - LF	1,200	1108	US PIPE DIP
8" Valves - Ea.	4	4	DRESSER M&H
6" Water - LF	600	438	US PIPE DIP
6" V (Excluding FHV)	4	4	DRESSER M&H
Fire Hydrants	2	2	DRESSER M&H
8x6 Saddles Ea.	1	1	FLOW IND.
Drop House Conn. Ea.	6	6	CARLON PVC.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

[Signature] 12-29-81 DATE
 SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard County Conservation District

APPROVED: *[Signature]* 12-29-81 DATE
 HOWARD SCD

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 12-29-81 DATE
 DIRECTOR OF PUBLIC WORKS - DATE

[Signature] 12-29-81 DATE
 CHIEF - BUREAU OF ENGINEERING - DATE

[Signature] 12-29-81 DATE
 CHIEF - BUREAU OF UTILITIES - DATE

[Signature] 12-29-81 DATE
 CHIEF - LAND DEVELOPMENT DIVISION - DATE

Sediment Control Measures for this Contract will be implemented in accordance with Article 15 of the Standard Specifications and Road Construction Plans F-82-53.

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS
 2315 ST. PAUL ST.
 BALTIMORE, MARYLAND

CONTRACT NO. 24-1028 D

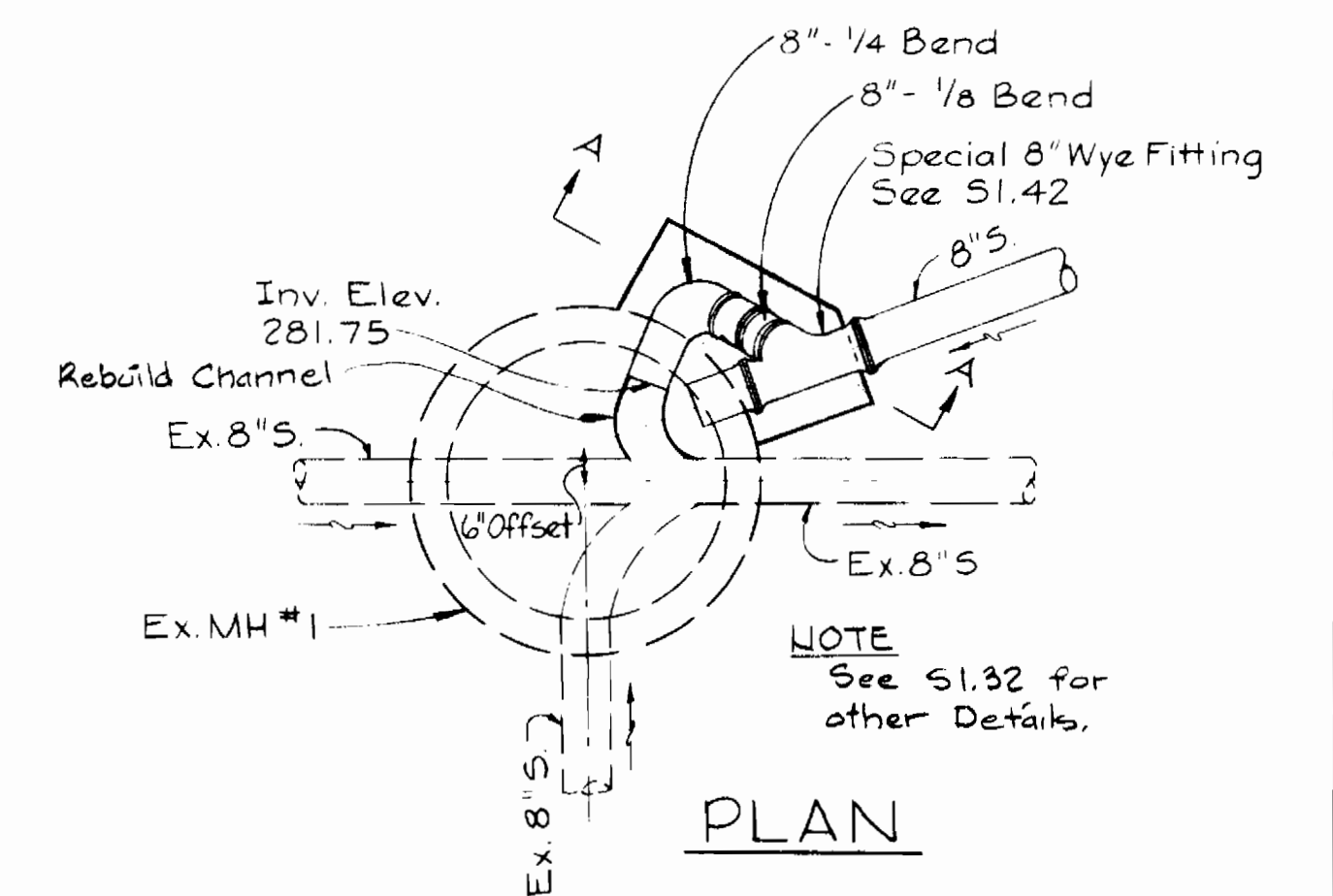
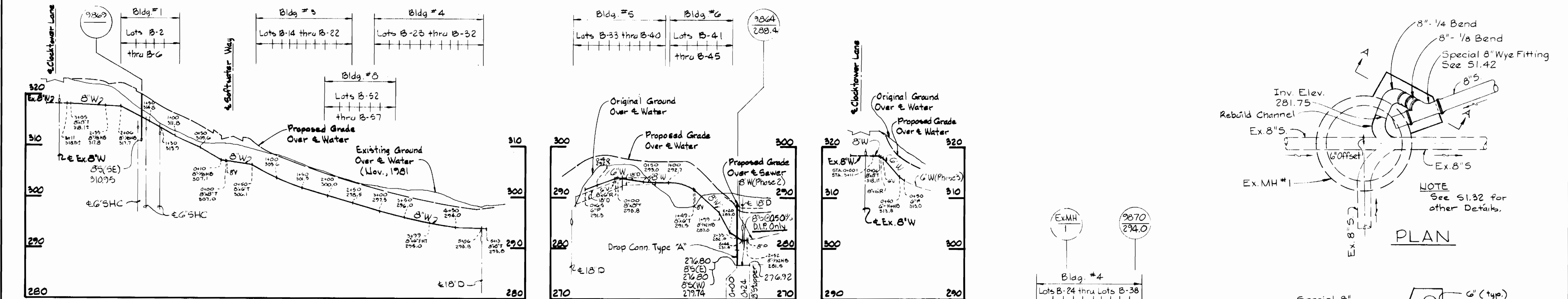
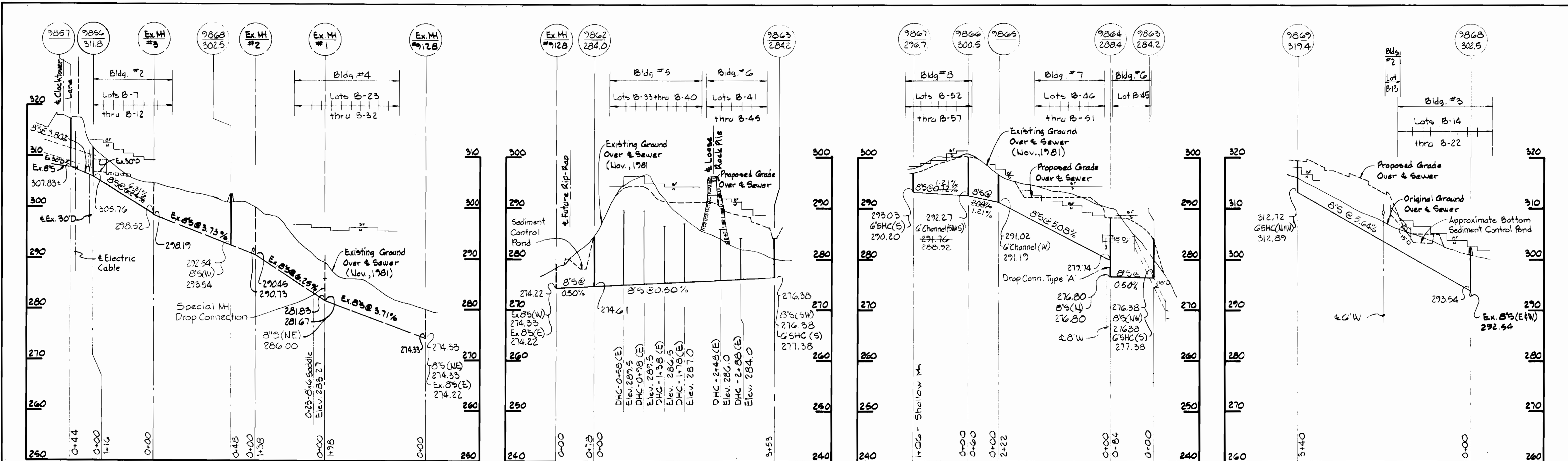
PLAN OF WATER & SEWER MAINS

COLUMBIA VILLAGE OF KINGS CONTRIVANCE ELECTION DISTRICT GUILFORD NO. 6

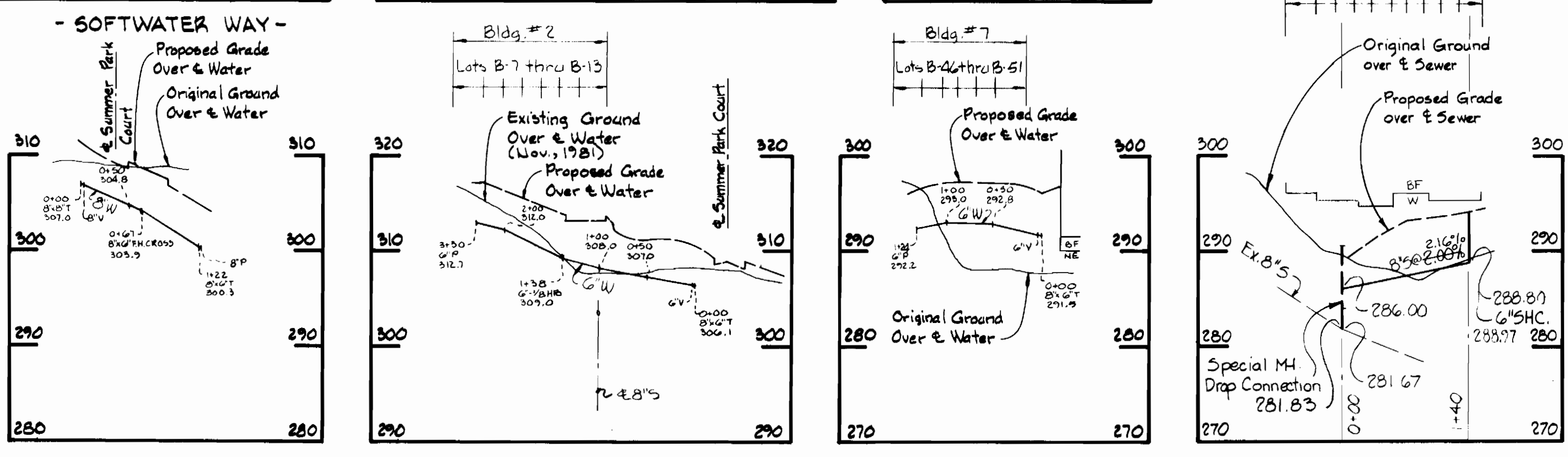
DRAWING NO. 1 OF 2 SCALE AS SHOWN

As Built June 1982

December 23 1981



NOTE:
 Original Ground over Water and Sewer was taken from Aerial Photography prepared by Maps and Inc., and verified by field survey in November, 1981.



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works - DATE
 Chief - Bureau of Engineering - DATE
 Chief - Bureau of Utilities - DATE
 Chief - Land Development Division - DATE

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 2315 ST. PAUL ST.
 BALTIMORE, MARYLAND

CONTRACT NO. 24-1028 D

PROFILES OF
 WATER & SEWER MAINS

COLUMBIA
 VILLAGE OF KINGS CONTRIVANCE
 ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 2 OF 2
 SCALE: H:1"=100' V:1"=10'