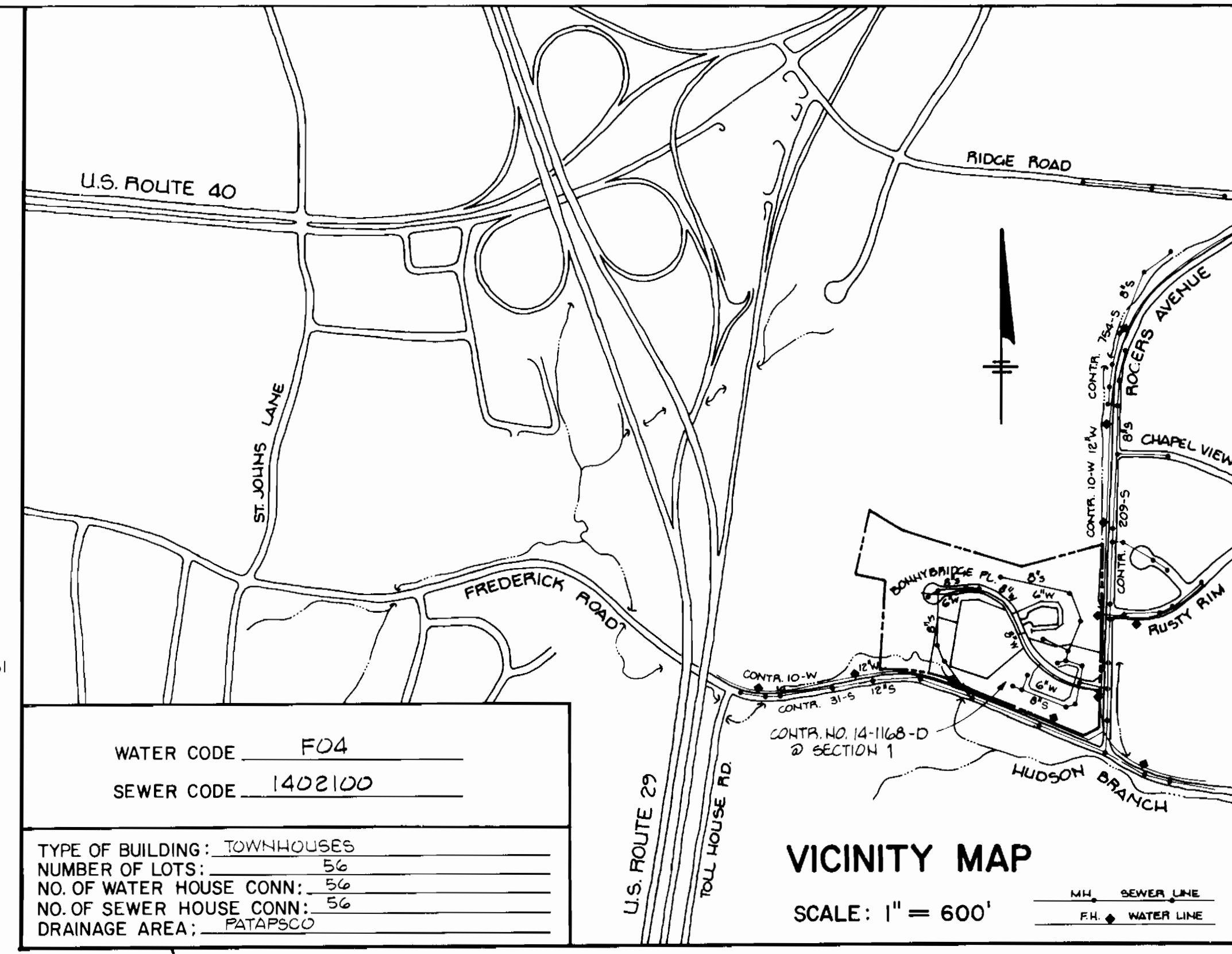
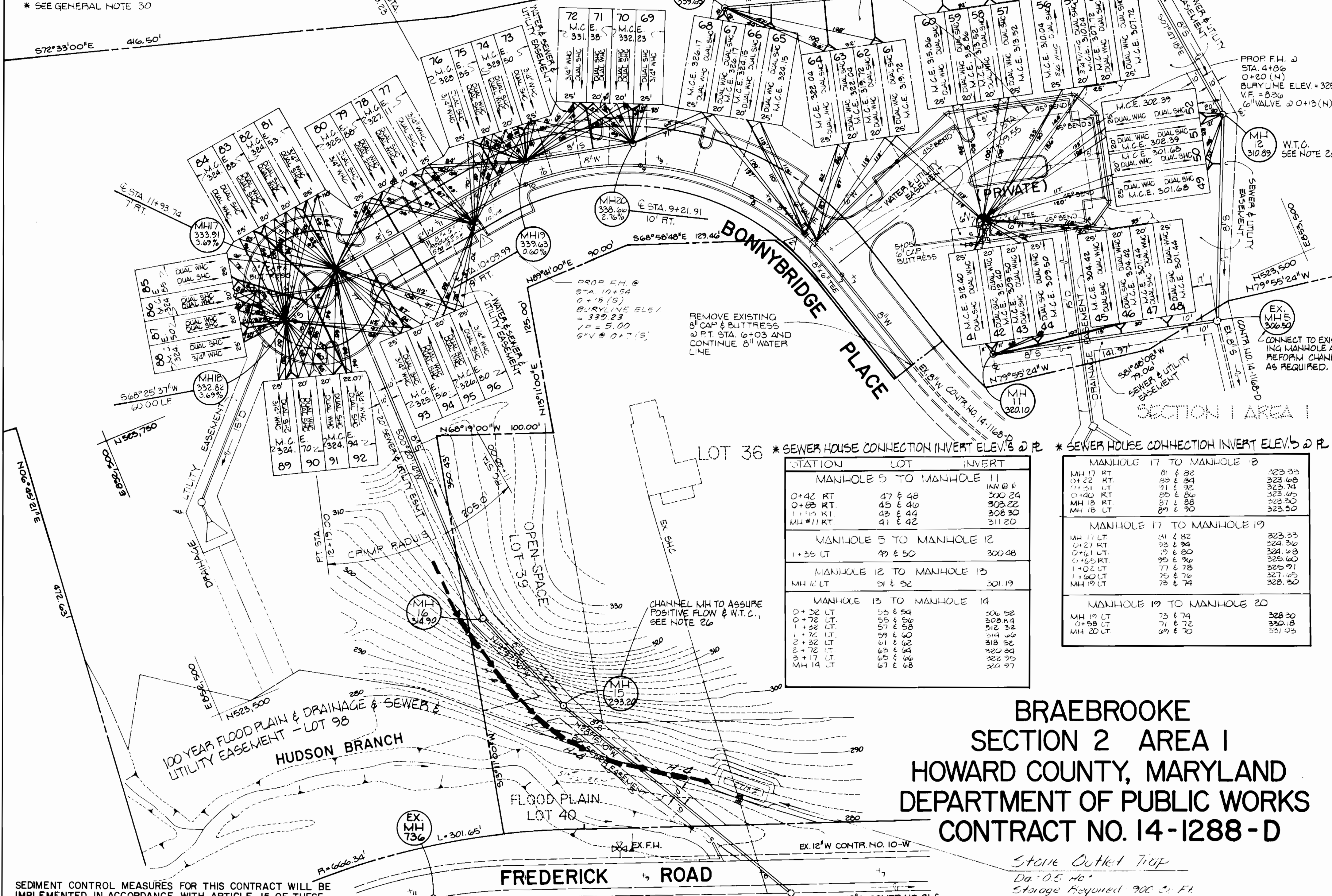


QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
8" WATER	591 LF	456 LF	GRIFFIN
6" WATER	557 LF	719 LF	"
FIRE HYD	2	2 ea	Municipal Cont.
1" WHC	637 LF	661 LF	"
3/4" WHC	396 LF	1068 LF	"
8" VALVES		1 EA.	"
6" VALVES	2	1 EA.	"
6" F.H. VALVES	2	2 EA.	"
8" SEWER	1870 LF	1878 LF	Belair Supply
6" SEWER	1049 LF	1096 LF	"
MANHOLES	10	10	B+C Utility
ADD. V.F.*	38.3		

\* SEE GENERAL NOTE 30



WATER CODE	F04
SEWER CODE	1402100
TYPE OF BUILDING	TOWNHOUSES
NUMBER OF LOTS	56
NO. OF WATER HOUSE CONN.	56
NO. OF SEWER HOUSE CONN.	56
DRAINAGE AREA	PATAPSCO

- ### 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 MATERIAL AND CONSTRUCTION METHODS, USE HOWARD COUNTY STANDARD SPECIFICATION.
  - 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.
    - BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION  
CUSTOMER SERVICE: 685-0123
    - BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION  
CUSTOMER SERVICE: 685-0123
    - ENGINEERING "DAMAGE CONTROL": 234-5621
    - "MISS UTILITY": 1-559-0100
    - CHESAPEAKE & POTOMAC TELEPHONE COMPANY: 725-9976
    - 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 OPERATION.
  - ALL SEWER MAINS SHALL BE C.S.P.X., P.V.C., V.C.P.X. OR A.C.P. CLASS 2400 UNLESS OTHERWISE NOTED.
  - CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
  - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
  - MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
  - ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
  - TOP OF WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
  - BLOCK ALL FITTINGS WITH CONCRETE.
  - BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATION 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 1003 AND 1008 OF STANDARD SPECIFICATIONS.
  - ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
  - WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOVE IT.
  - MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.
  - MANHOLES DESIGNATED WATERTIGHT IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USE, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE.
  - FOR ALL COPPER WATER HOUSE CONNECTIONS UTILIZE FLARED TYPE FITTINGS ONLY.
  - MANHOLE FRAME AND COVERS TO BE SET HIGHER THAN GRADE AT 1'-6" PER STANDARD DETAIL G5.41.
  - ENSURE COMPACTION AT ALL EXCAVATED TRENCHES IN ACCORDANCE WITH SECTION 1003 OF STANDARD SPECIFICATION.
  - STANDARD PAYMENT DEPTH FOR SANITARY MANHOLES = 8'-0".

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THESE SPECIFICATIONS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN. F-1-1-1

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE

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

APPROVED: \_\_\_\_\_ DATE: 11/15/84

HOWARD SOIL CONSERVATION DISTRICT

LOT 36 \* SEWER HOUSE CONNECTION INVERT ELEV'S @ P

STATION	LOT	INVERT
MANHOLE 5 TO MANHOLE 11		
0+42 RT.	47 & 48	300.24
0+68 RT.	45 & 46	303.22
1+13 RT.	43 & 44	308.30
MH #11 RT.	41 & 42	311.20
MANHOLE 5 TO MANHOLE 12		
1+35 LT.	49 & 50	300.48
MANHOLE 12 TO MANHOLE 13		
MH #12 LT.	51 & 52	301.19
MANHOLE 13 TO MANHOLE 14		
0+32 LT.	53 & 54	306.58
0+72 LT.	55 & 56	309.84
1+32 LT.	57 & 58	313.56
2+32 LT.	59 & 60	318.56
3+17 LT.	61 & 62	320.90
MH #14 LT.	63 & 64	322.79
	65 & 66	324.97

MANHOLE 17 TO MANHOLE 18

MH #17 RT.	81 & 82	323.35
0+22 RT.	83 & 84	323.48
0+51 LT.	85 & 86	323.74
MH #18 RT.	87 & 88	323.50
MH #18 LT.	89 & 90	323.50

MANHOLE 17 TO MANHOLE 19

MH #17 LT.	81 & 82	323.35
0+27 RT.	83 & 84	324.36
0+61 LT.	85 & 86	324.98
0+65 RT.	87 & 88	325.60
1+02 LT.	77 & 78	325.91
1+60 LT.	75 & 76	327.75
MH #19 LT.	73 & 74	328.50

MANHOLE 19 TO MANHOLE 20

MH #19 LT.	73 & 74	328.50
0+58 LT.	71 & 72	330.18
MH #20 LT.	69 & 70	331.05

Stone Outlet Trap  
D=0.5 H=1  
Storage Required 900 cu ft  
Storage from 3.4' to 3.7'  
Catchment 4  
Bottom Elev: 277.10  
Channel Elev: 278.75  
Top of Basin: 280.00  
Outlet Elev: 279.00

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

\_\_\_\_\_  
DIRECTOR OF PUBLIC WORKS

\_\_\_\_\_  
CHIEF, BUREAU OF ENGINEERING

\_\_\_\_\_  
CHIEF, LAND DEVELOPMENT DIVISION

EVANS, HAGAN & HOLDEFER, INC.  
ENGINEERS, PLANNERS & SURVEYORS

1052 WEST STREET / LAUREL, MD. 20707

(301) / 792-8086

\_\_\_\_\_  
DATE: 10/23/84

DES: MJP	DATE: 10/23/84
DRN: BLJ	BY: NO.
CHK: PLM	REVISION
LWC	10/23/84

**PLAN**

**WATER AND SEWER MAINS**

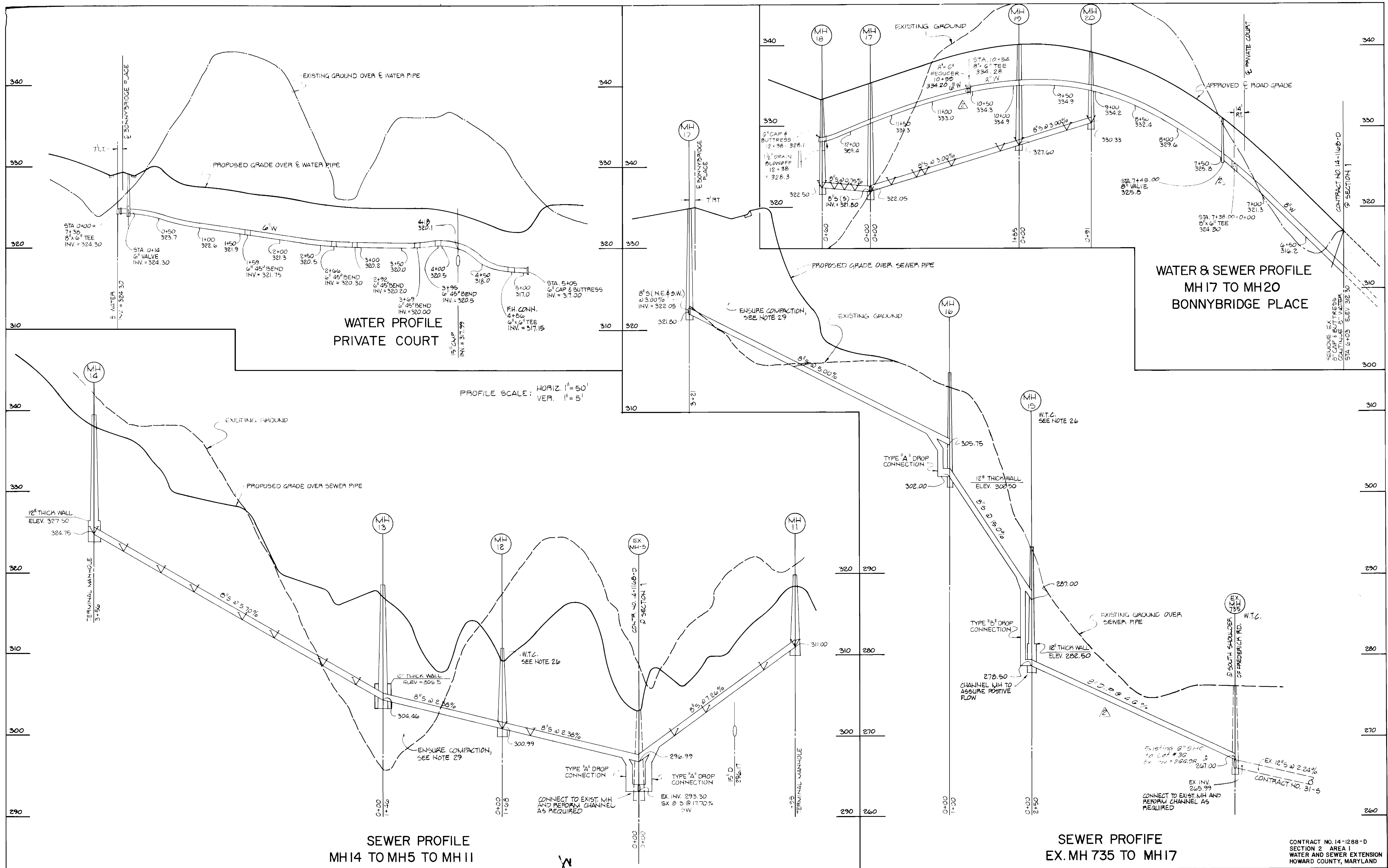
600' SCALE MAP NO. 24 BLOCK NO. 12

**BRAEBROOKE SECTION 2 AREA 1**

CONTRACT NO. 14-1288-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works  
Date: 4/18/88

Chief, Bureau of Engineering  
Date: 4/18/88

Chief, Land Development Division  
Date: 4/18/88

EVANS, HAGAN & HOLDEFER, INC.  
ENGINEERS, PLANNERS & SURVEYORS

1052 WEST STREET / LAUREL, MD. 20707

(301) 792-8086

*Robert M. Smith*

DES: MJP	DATE: 10/23/84
DRN: BLU	
CHK: BLU	
BY: LNC	REVISION: Revise Water & Sewer
N.O.	

**PROFILE**

**WATER AND SEWER MAINS**

DATE: 2-13

60' SCALE MAP NO. 24 BLOCK NO. 12

**BRAEBROOKE**  
SECTION 2 AREA I  
CONTRACT NO. 14-1288-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2