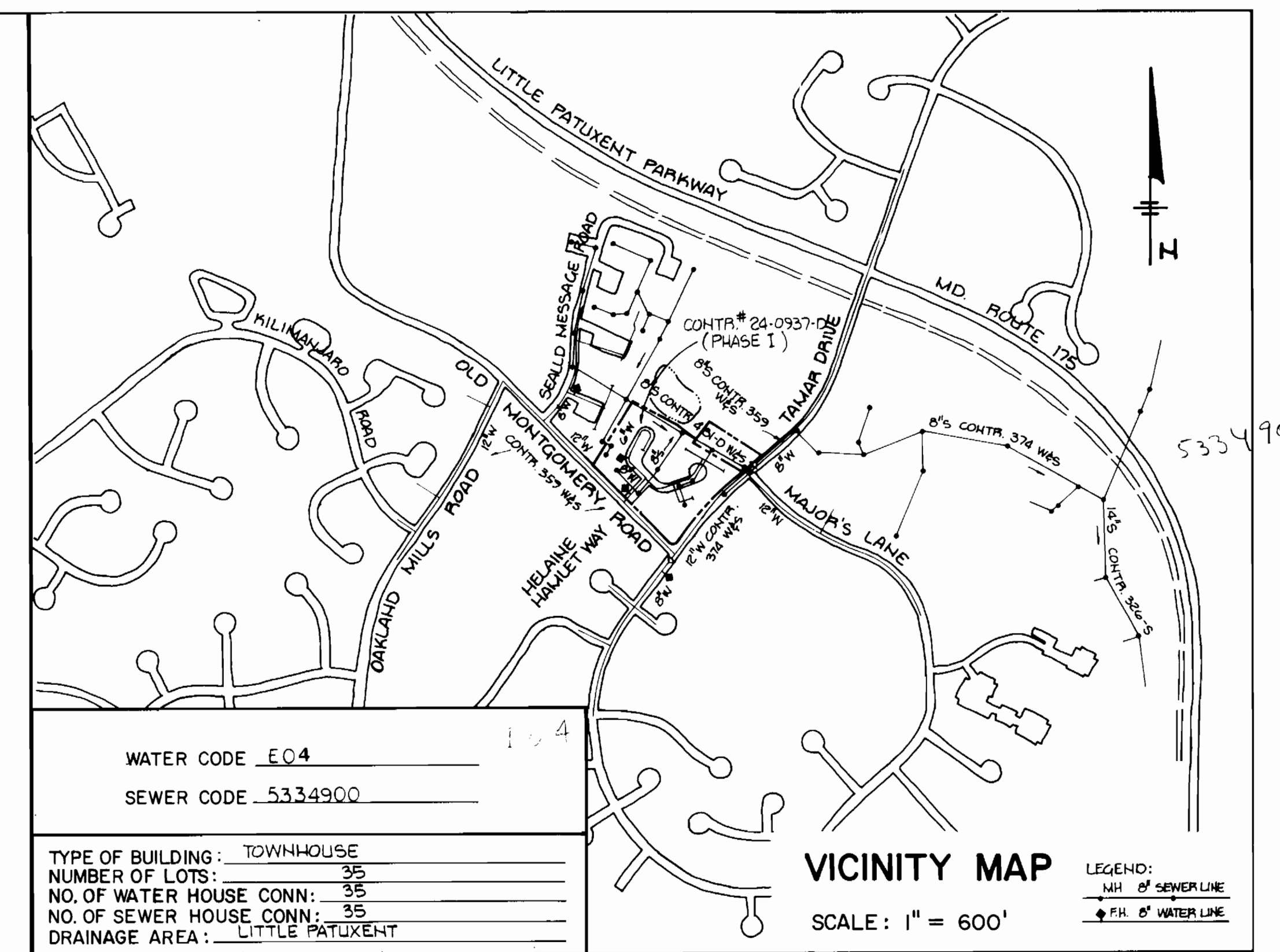
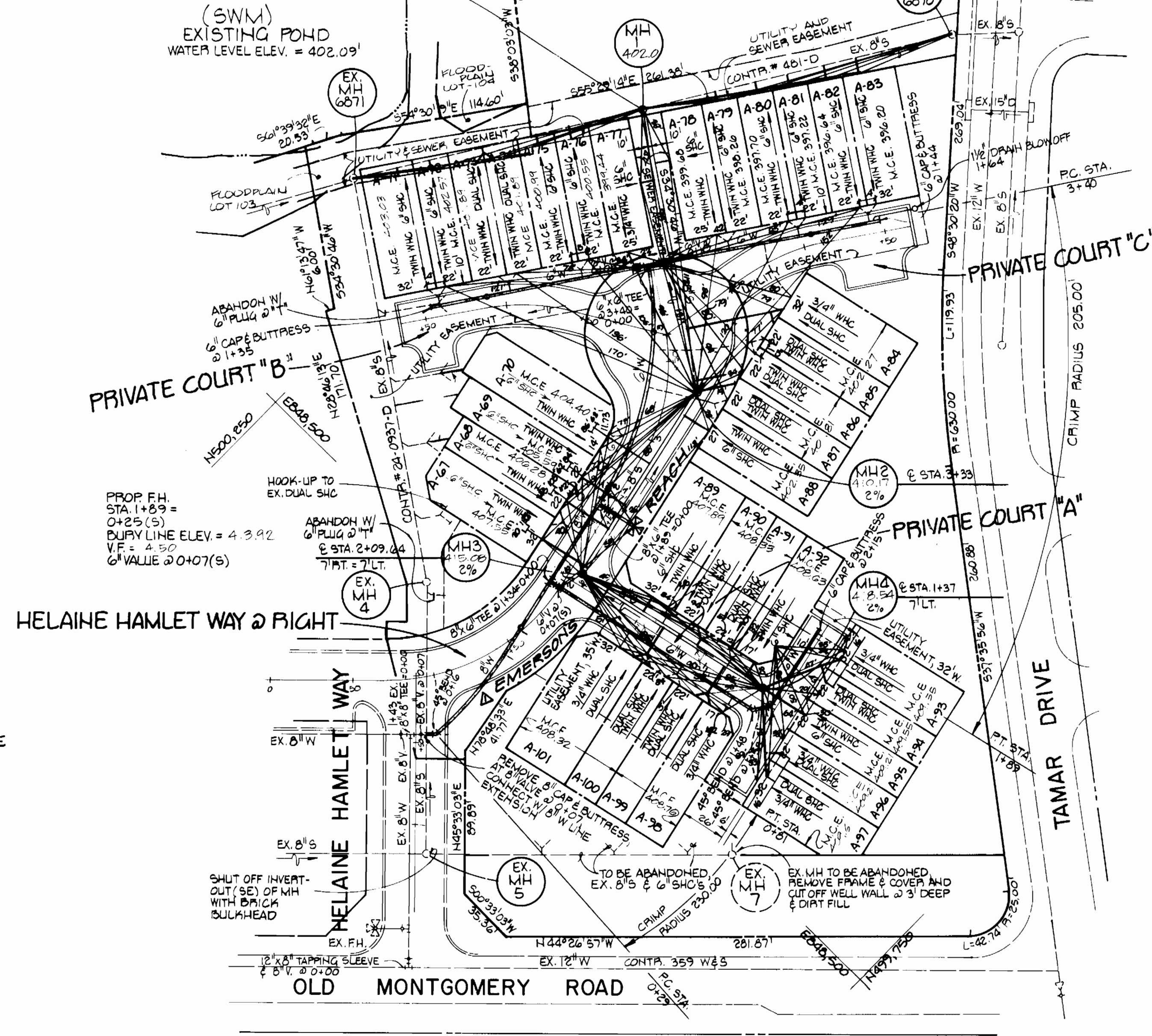


QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
8" WATER	133 LF	175	Griffin
6" WATER	664 LF	667	"
FIRE HYD.	1	1	U.S. Pipe
1" WHC	345 LF	355	Howard Metal
3/4" WHC	210 LF	208	"
8" VALVES	0	0	YA
6" VALVES	4	4	U.S. Pipe
6" F.H. VALVES	1	1	"
8" SEWER	435 LF	423	Johns Man.
6" SEWER	545 LF	684	"
MANHOLES	4	4	Atlantic Pr.
ADD. V.F.*	14.43		"
1 1/2" DRAIN	1	1	A.Y. McDonald

SHC INVERT TABULATION

STATION	LOT	INV. @ MAIN	INV. @ P.E.
MANHOLE 1 TO MANHOLE 2			
0+33	A-78	395.92	396.12
0+44	A-77	396.04	396.24
1+36	A-84 & A-85	397.03	398.17
1+69	A-86 & A-87	397.30	398.01
MANHOLE 3 TO MANHOLE 4			
0+44	A-89	403.87	404.19
0+59	A-100 & A-101	404.02	404.52
0+82	A-90 & A-91	404.25	404.47
1+03	A-98 & A-99	404.46	404.46
1+16	A-92	404.61	404.29
MH 4	A-93 & A-94	404.73	405.79
MH 4	A-95	404.73	405.99
MH 4	A-96 & A-97	404.73	405.81
MANHOLE 5 TO MANHOLE 6			
0+15	A-79	398.19	398.55
0+51	A-70	399.22	400.47
0+80	A-69	401.13	401.73
0+95	A-68	401.82	402.42
1+24	A-67	403.15	403.75
EX. MANHOLE 6870 TO EX. MANHOLE 1			
0+60	A-83	392.30	392.50
0+80	A-82	392.78	392.94
1+04	A-81	393.36	393.52
1+24	A-80	393.84	394.00
1+45	A-79	394.42	394.56
MANHOLE 1 TO EX. MANHOLE 6871			
0+47	A-76	396.69	396.81
0+67	A-75	397.17	397.29
1+01	A-73 & A-74	397.99	398.19
1+34	A-72	398.79	398.95
1+54	A-71	399.27	399.39

Lot No	M.H.	EX. MH	6871
A71	154	-	27
A72	134	-	47
A73	107	-	75
A74	97	-	85
A75	67	-	114
A76	47	-	135
A79	45	148	-
A80	61	123	-
A81	91	102	-
A82	112	82	-
A83	141	64	-



WATER CODE E04
SEWER CODE 5334900

TYPE OF BUILDING: TOWNHOUSE
NUMBER OF LOTS: 35
NO. OF WATER HOUSE CONN: 35
NO. OF SEWER HOUSE CONN: 35
DRAINAGE AREA: LITTLE PATUXENT

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 PRICE 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 TEES SHALL BE STRAPPED TO TEES.
- BURY LINE 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 USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE.
- FOR ALL COPPER WATER HOUSE CONNECTIONS UTILIZE FLARED TYPE FITTINGS ONLY.
- 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, F81-21C.

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S. SOIL CONSERVATION SERVICE DATE

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

PLAN
SCALE: 1"=50'

VILLAGE OF LONG REACH, SECTION I AREA 9
A RESUBDIVISION OF LOTS A31 TO A66
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
CONTRACT NO. 24-1275-D

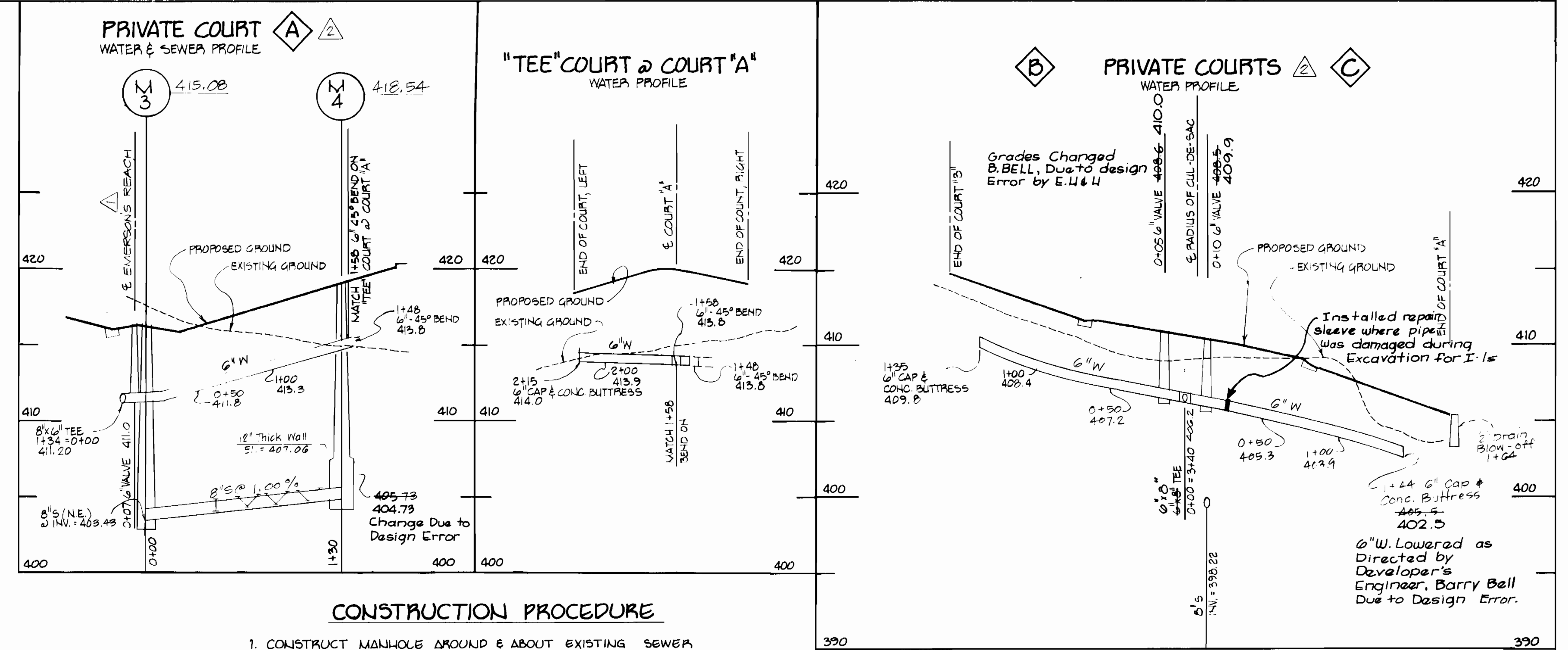
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS DATE
CHIEF, BUREAU OF UTILITIES DATE
CHIEF, LAND DEVELOPMENT DIVISION DATE

EVANS, HAGAN & HOLDEFER, INC.
ENGINEERS, PLANNERS & SURVEYORS
8101 SANDY SPRING ROAD / SUITE 304
LAUREL, MD. 20707
(301) / 792-8086

DES: MJP
LWC
LWC
Revise Public Road Names 11-84
Revise M.C.E. & SHC Invert Table 1-85
DRN: BLJ
CHK: BLM
DATE: 9/21/84
BY NO. REVISION DATE

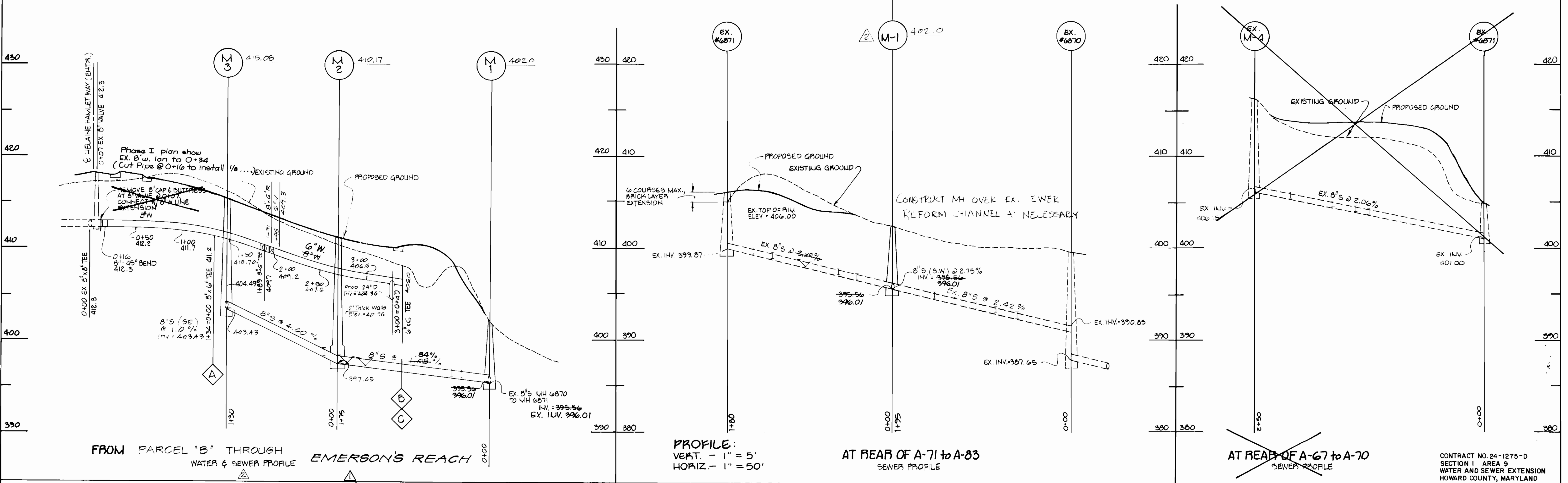
PLAN
WATER AND SEWER MAINS
600' SCALE MAP NO. 36 BLOCK NO. 11

VILLAGE OF LONG REACH, SECTION I AREA 9
A RESUBDIVISION OF LOTS A31 TO A66
CONTRACT NO. 24-1275-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 1 OF 2



CONSTRUCTION PROCEDURE

1. CONSTRUCT MANHOLE AROUND & ABOUT EXISTING SEWER LINE.
2. AFTER MANHOLE IS COMPLETED, REMOVE TOP HALF OF EXIST. 8" SEWER, (BEING CAREFUL NOT TO ALLOW ANY PIECES OF PIPE FROM FLOWING INTO SYSTEM), TO CREATE AN OPEN CHANNEL.
3. CHANNEL PROPOSED 8" SEWER TO MATCH AND FLOW WITH EXISTING 8" SEWER.



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James S. Nunn* DATE: 11-16-84
 Chief, Bureau of Engineering: *Robert M. ...* DATE: 11-16-84
 Chief, Bureau of Utilities: *Robert M. ...* DATE: 11-16-84
 Chief, Land Development Division: *Robert M. ...* DATE: 11-16-84

EVANS, HAGAN & HOLDEFER, INC.
 ENGINEERS, PLANNERS & SURVEYORS
 8101 SANDY SPRING ROAD / SUITE 304
 LAUREL, MD. 20707
 (301) / 792-8086

Robert May

DES: MJP	LWC	Revise Public Road Names	11-84
DRN: BLW	LWC	Revise Water, Sewer & Road Profiles	1-85
CHK: PLM			
DATE: 9/21/84	BY NO.	REVISION	DATE

PROFILE
 WATER AND SEWER MAINS
 600' SCALE MAP NO. 36 BLOCK NO. 11

VILLAGE OF LONG REACH, SECTION I AREA 9
 A RESUBDIVISION OF LOTS A31 TO A66
 CONTRACT NO. 24-1275-D
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2