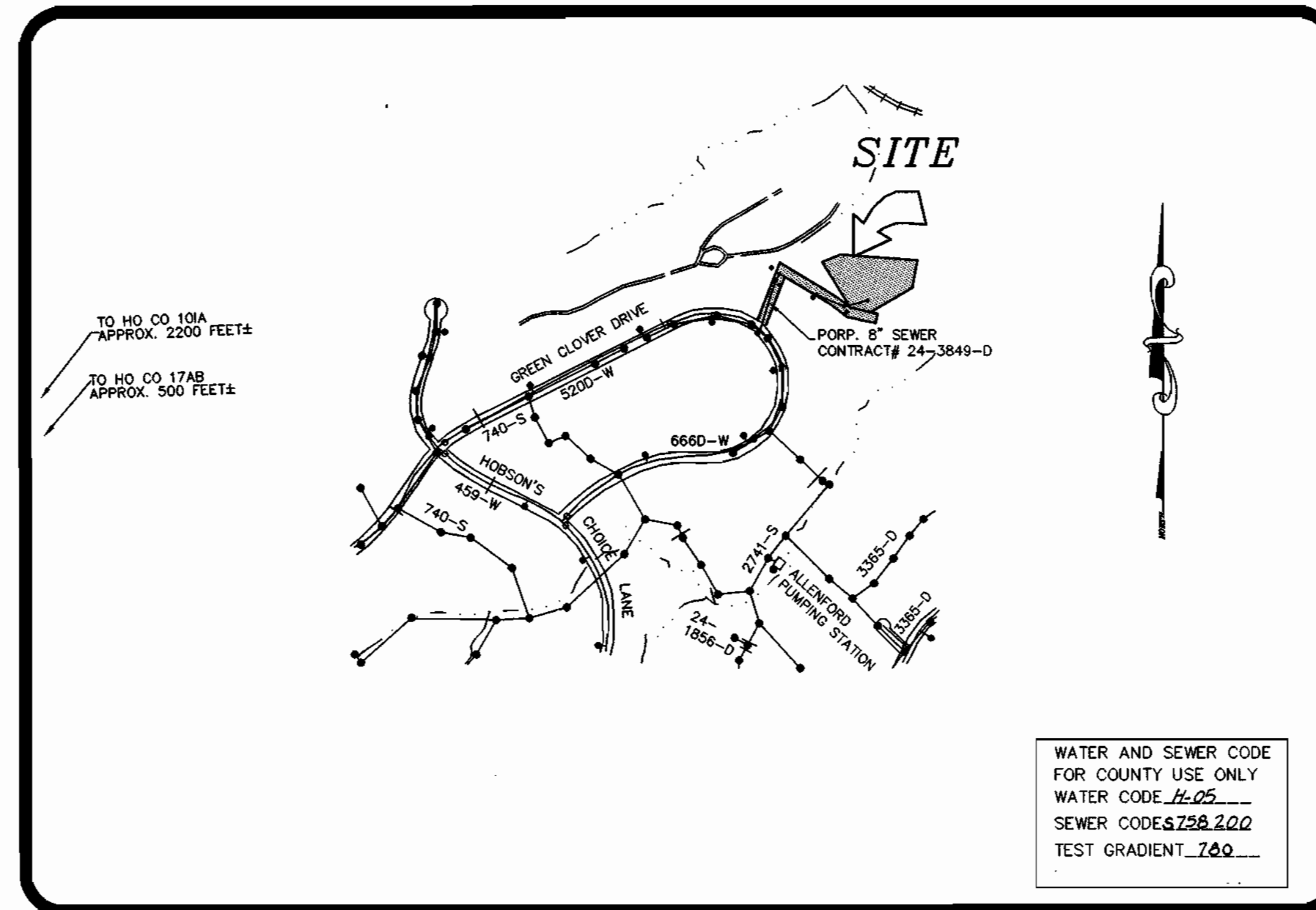


**QUANTITY TABLE**

ITEMS	QUANTITIES ESTIMATED	AS - BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	6			
8" SEWER MAIN	858 L.F.			
4" SHC	45 L.F.			
4" WATER MAIN	262 L.F.			
8" WATER MAIN	538 L.F.			
4" CAP & BUTTRESS	1			
1" WHC	85 L.F.			
8"x8" TAPPING SLEEVE AND VALVE	1			
FIRE HYDRANT ASSEMBLY	1			
1/4 HB	1			
1/8 HB	1			
1/32 HB	2			
4" VALVE	1			
8"x4" REDUCER	1			
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				



**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. 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, ANY COST INCURRED BY THE OWNER FOR 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 DETAIL FOR CONSTRUCTION (LATEST EDITION). 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 [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:  
 AT & T (410) 865-3803  
 CHEASAPEAKE & POTOMAC TELEPHONE CO. (410) 597-8585  
 STATE HIGHWAY ADMINISTRATION (410) 531-5533  
 BG & E CO. CONTRACTOR SERVICES (410) 850-4620  
 BG & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068  
 MISS UTILITY 1-800-257-7777  
 COLONIAL PIPELINE CO. (410) 795-1390  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES (410) 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.11(a) OF HOWARD COUNTY CODE.
- 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 BURY 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 1000 AND 1005 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 INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- FOR SPRINKLER SYSTEM FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.
- ALL SEWER MAINS SHALL BE P.V.C. D.I.P. PIPES SHALL BE CLASS 52 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL 05.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1' - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

NOTE:  
EROSION AND SEDIMENT CONTROL PROVIDED UNDER GP-01-79

**GREEN CLOVER**  
**LOTS 1 THRU 4**  
**CONTRACT NO. 24-3849-D**  
**WATER AND SEWER MAIN EXTENSIONS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/26/00  
 DEVELOPER'S SIGNATURE DATE  
**Donald R. Renner Jr. PRESIDENT ECLH Inc.**  
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/26/00  
 ENGINEER'S SIGNATURE DATE  
**R. JACOB HIKMAT, P.E.**  
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*[Signature]* 11/29/00  
 USF - NATURAL RESOURCE CONSERVATION SERVICE

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

*[Signature]* 11/29/00  
 HOWARD SCD

PLAN REFERENCE NUMBERS  
 F-00-109  
 F-00-175

**OWNERS**  
 ELLICOTT CITY LAND HOLDING INC.  
 8000 MAIN ST.  
 ELLICOTT CITY, MARYLAND 21043

CONTRACT No. 24-3849-D  
 GREEN CLOVER  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 10-25-00 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 11/29/00 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Dorsey Hill Drive, Suite 202, Ellicott City, Maryland 21042 (410) 907-0200 Fax. (301) 621-5521 Wash. (410) 907-0200 Fax.	engineering illustration MT approval project 99094 date OCT 2000 BY NO. REVISION DATE	TITLE SHEET 600' SCALE MAP NO. 17 BLOCK NO. 2	GREEN CLOVER LOTS 1 THRU 4 CONTRACT# 24-3849-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale NTS 1 OF 3
---	---	---	---	--	---	------------------------

**WATER MAIN TABULATION CHART**

EASEMENT	
NORTHING & EASTING	APPURTENANCE
N 599465.588 E 1352983.922	8"x8" TS&V
N 599709.009 E 1352888.533	1/32 HB
N 599727.273 E 1352885.796	1/4 HB
N 599778.119 E 1353131.659	F.H.
N 599779.774 E 1353139.662	8"x4" REDUCER
N 599787.339 E 1353176.247	1/32 HB
N 599795.486 E 1353272.207	1/8 HB
N 599906.748 E 1353351.940	4" CAP & BUTTRISS

NOTE : - CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.  
- CONTRACTOR TO VERIFY THE LOCATION OF EXISTING WATER MAINS IN GREEN CLOVER DRIVE.

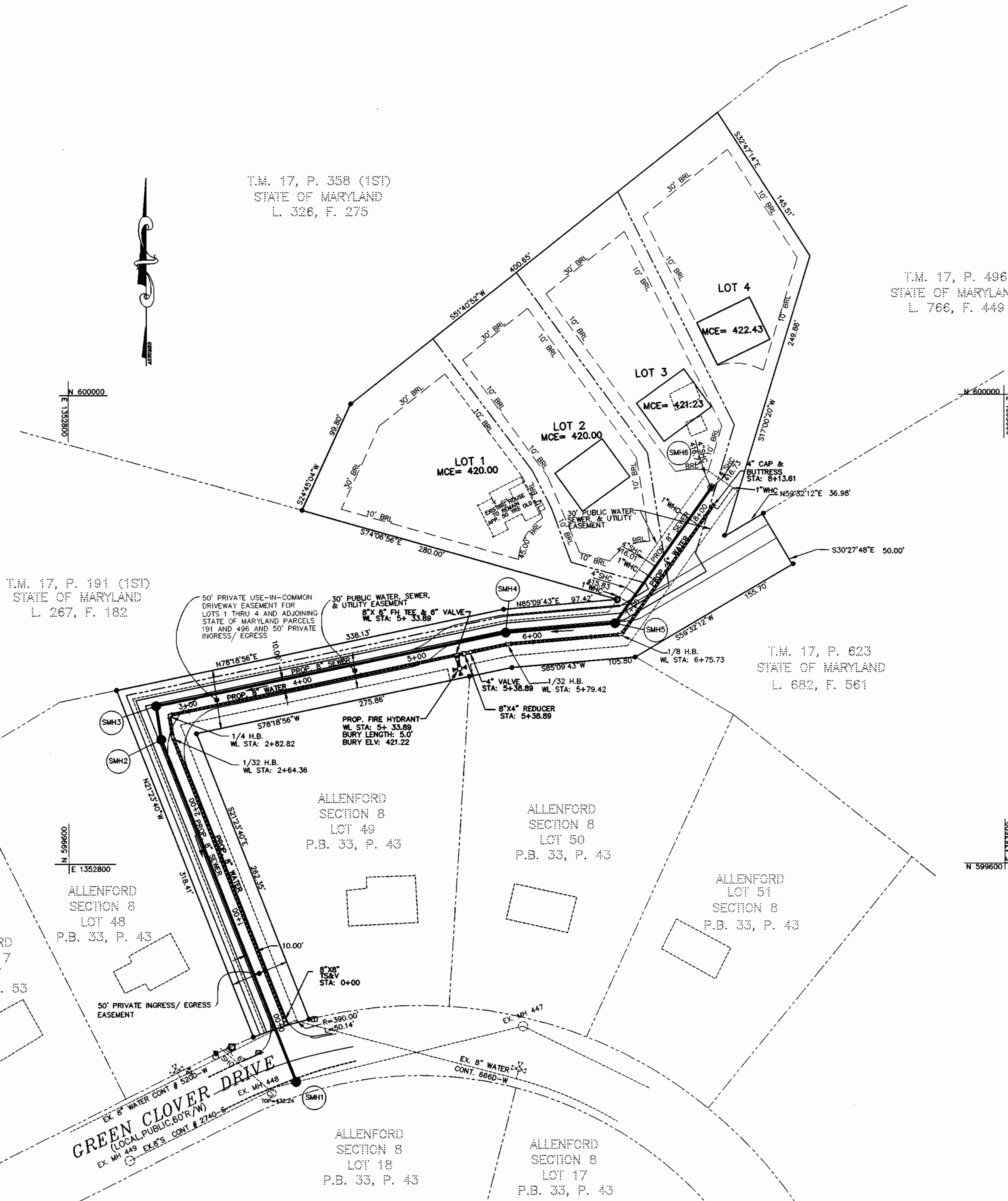
**MANHOLE LOCATION CHART**

MH #	NORTHING & EASTING
1	N 599413.842 E 1352993.435
2	N 599706.411 E 1352878.811
3	N 599735.149 E 1352874.504
4	N 599797.153 E 1353173.616
5	N 599805.065 E 1353267.098
6	N 599921.146 E 1353349.828

NOTE : CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

**LEGEND**

- OHE OVERHEAD ELEC.
- CLEAN OUT
- FENCE
- IRON ROD FOUND
- IRON PIPE FOUND
- δ WATER METER
- ⊗ FIRE HYDRANT
- SANITARY SEWER MANHOLE



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Robert Bauman* 10-25-00  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*John Dammann* 11/20/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Beltsville, Maryland 20842  
(410) 997-0286 Fax: (301) 627-5523 Telex: (410) 997-0286 Fax



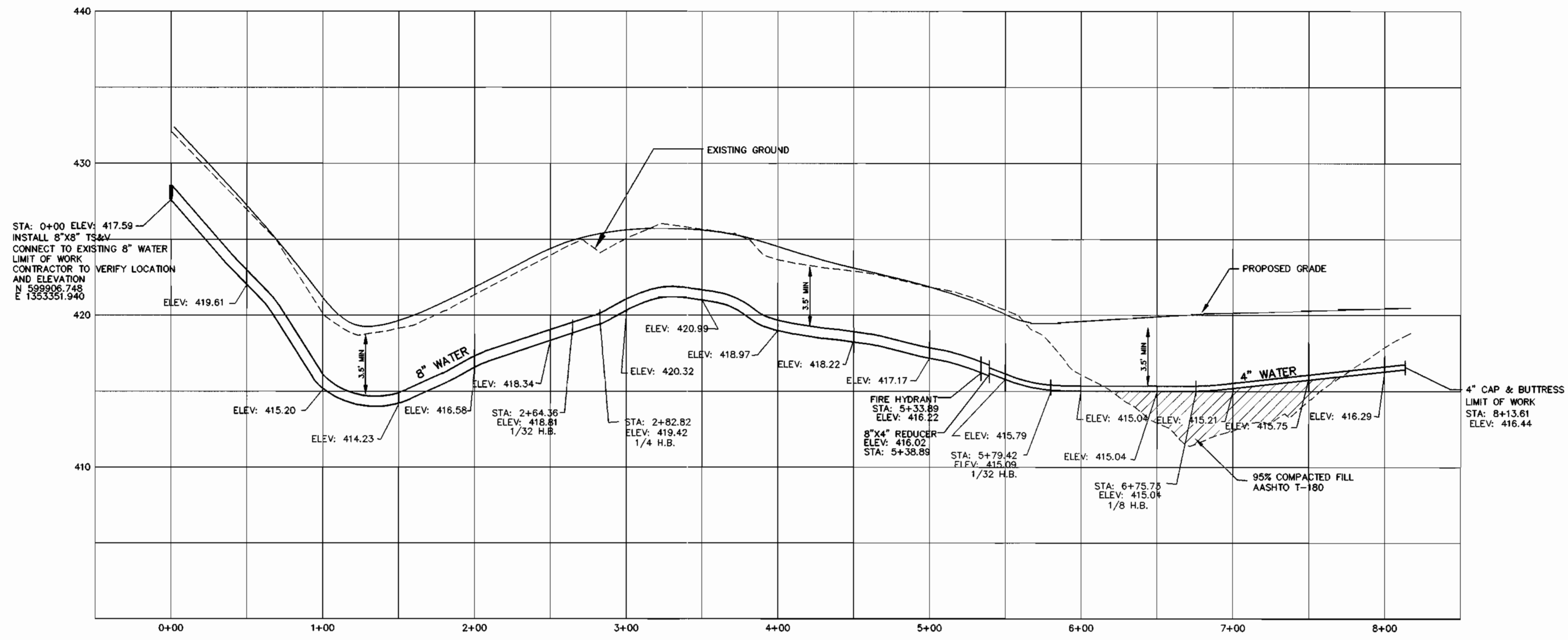
engineering					
illustration	MT				
approval					
project	99094				
date	OCT 2000	BY	NO.	REVISION	DATE

**WATER AND SEWER PLAN**  
600' SCALE MAP NO. 17 BLOCK NO. 2

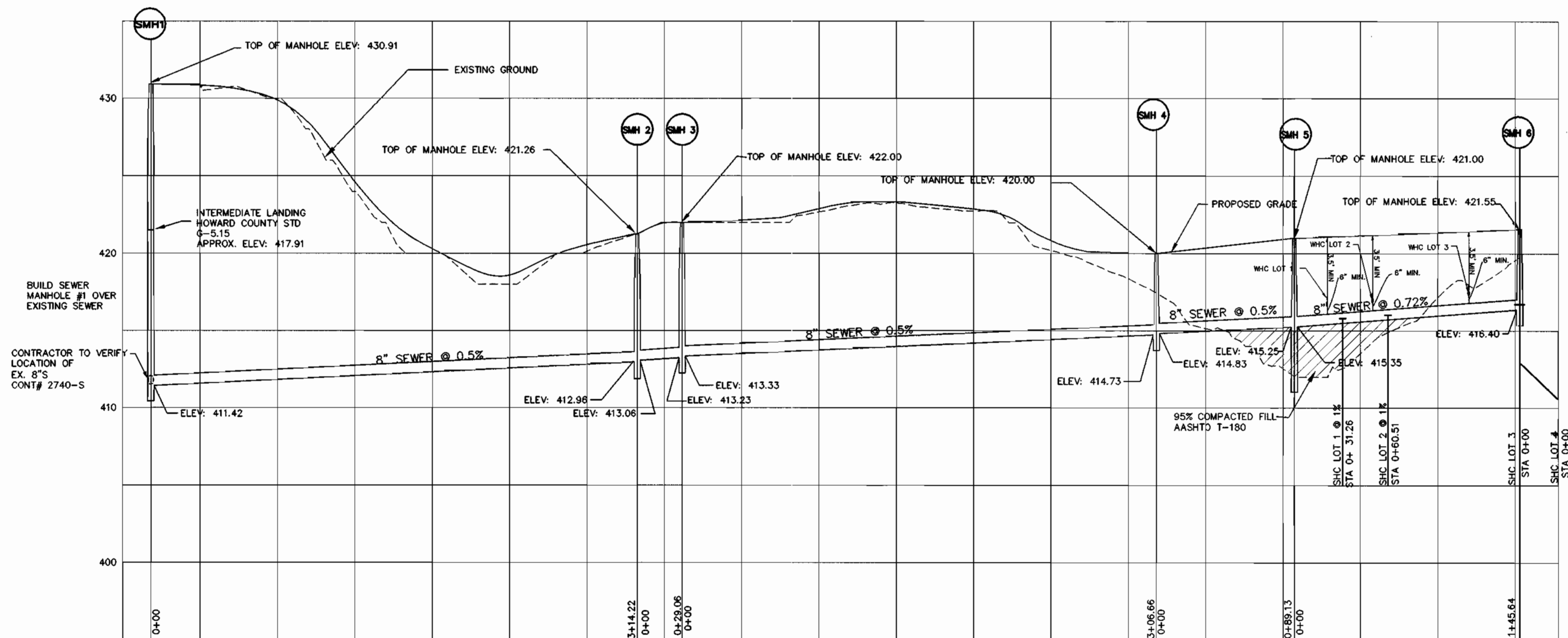
**GREEN CLOVER**  
LOTS 1 THRU 4  
CONTRACT # 24-3849-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
1" = 50'  
2 OF 3

99094.DWG, 10/25/00, 10:25 AM, RBT



**WATER PROFILE**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



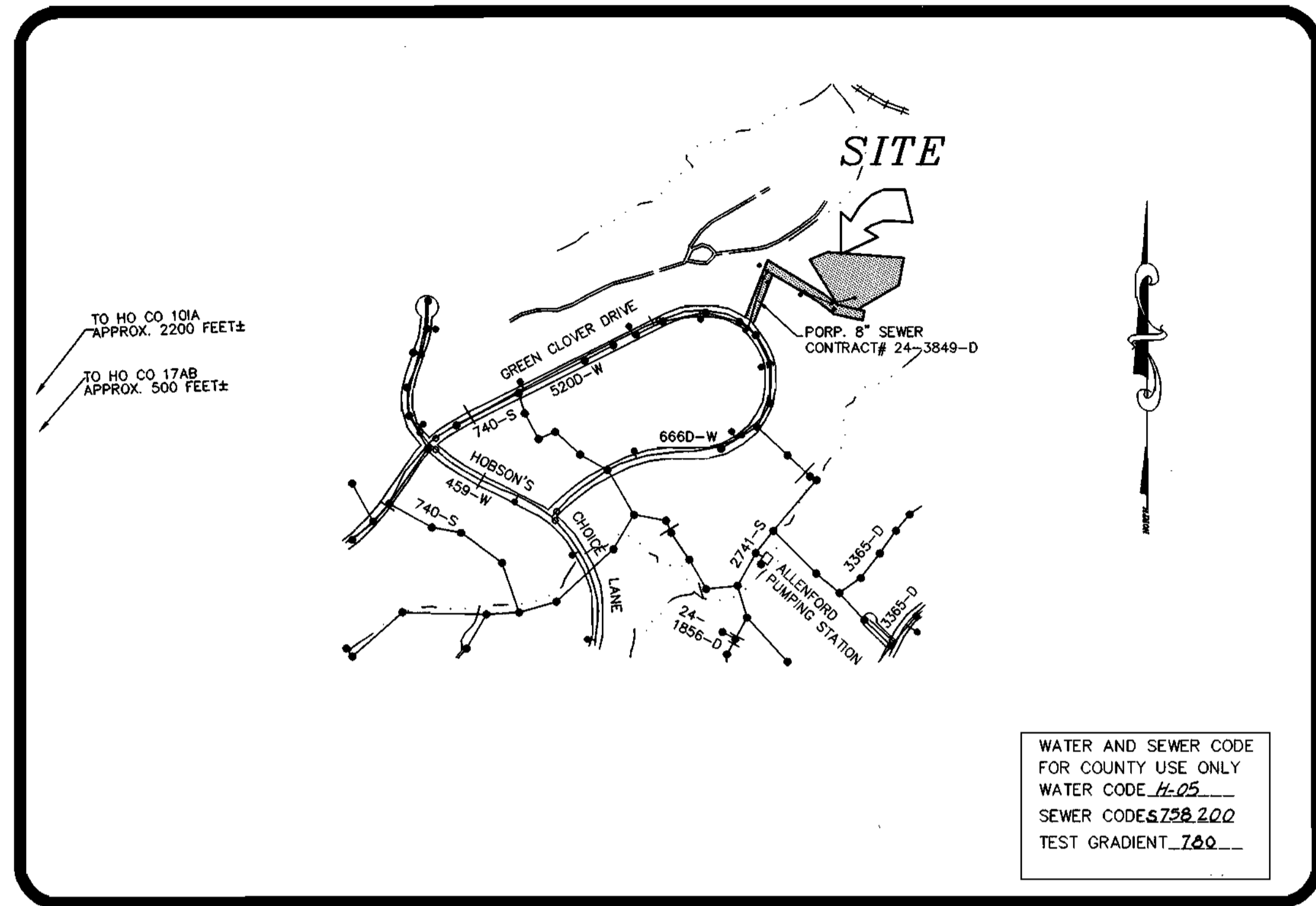
**SEWER MAIN PROFILE**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'

99094.DWG VMS 1094-WST.DWG

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>Robert B. ...</i> CHIEF, BUREAU OF UTILITIES DATE: 10-25-00	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND  <i>...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	 <b>MILDENBERG, BOENDER &amp; ASSOC., INC.</b> <small>Engineers Planners Surveyors</small> 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0286 Fax: (301) 621-5521 Res: (410) 997-0288 Fax	 PROFESSIONAL ENGINEER	engineering illustration MT approval project 99094 date OCT 2000	<b>WATER AND SEWER PROFILE</b>	<b>GREEN CLOVER LOTS 1 &amp; 2</b> CONTRACT # 24-3849-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale AS SHOWN <b>3 OF 3</b>
REVISION: BY NO. REVISION DATE					600' SCALE MAP NO. 17 BLOCK NO. 2		

### QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	AS - BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	6			
8" SEWER MAIN	858 L.F.			
4" SHC	45 L.F.			
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1" WHC	85 L.F.			
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FIRE HYDRANT ASSEMBLY	1			
1/4 HB	1			
1/8 HB	1			
1/32 HB	2			
4" VALVE	1			
8"x4" REDUCER	1			
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				



TYPE OF BUILDING: RESIDENTIAL: SINGLE FAMILY DETACHED  
 NO. OF LOTS: 2 & FUTURE LOTS  
 NO. WATER HOUSE CONNECTIONS: 4  
 NO. OF SEWER HOUSE CONNECTIONS: 4

### 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.
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  - CHEASAPEAKE & POTOMAC TELEPHONE CO. (410) 597-8585
  - STATE HIGHWAY ADMINISTRATION (410) 531-5533
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  - BC & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068
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- 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.
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- FOR SPRINKLER SYSTEM FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.
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- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

### INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

NOTE:  
 EROSION AND SEDIMENT CONTROL PROVIDED UNDER GP-01-79

# GREEN CLOVER

## LOTS 1 & 2

### CONTRACT NO. 24-3849-D

### WATER AND SEWER MAIN EXTENSIONS

### HOWARD COUNTY, MARYLAND

### DEPARTMENT OF PUBLIC WORKS

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*David R. Renner, Jr.* 10/26/00  
 DEVELOPER'S SIGNATURE DATE  
 DAVID R. RENNER, JR. PRESIDENT ECLH INC.  
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*R. Jacob Hikmat, P.E.* 10/26/00  
 ENGINEER'S SIGNATURE DATE  
 R. JACOB HIKMAT, P.E.  
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*J. H. W. [Signature]* 11/29/00  
 U.S. NATURAL RESOURCE CONSERVATION SERVICE

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

*John [Signature]* 11/29/00  
 HOWARD SCD

PLAN REFERENCE NUMBERS  
 F-00-175

### OWNERS

ELLICOTT CITY LAND HOLDING INC.  
 8000 MAIN ST  
 ELLICOTT CITY, MARYLAND 21043

CONTRACT No. 24-3849-D  
 GREEN CLOVER  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

FH 190994 DMG WMS 1094-WS-DWG

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors

5972 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0288 Fax: (301) 621-5521 Tech: (410) 997-0288 Fax



engineering					
illustration	MT				
approval					
project	99094	MBA	1	CHANGED IDENTIFICATION OF CONTRACT	12/8/00
date	OCT 2000	BY	NO.	REVISION	DATE

### TITLE SHEET

600' SCALE MAP NO. 17 BLOCK NO. 2

### GREEN CLOVER

LOTS 1 & 2  
 CONTRACT# 24-3849-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 NTS

1 of 3

**WATER MAIN TABULATION CHART**

EASEMENT	
NORTHING & EASTING	APPURTENANCE
N 599465.588 E 1352983.922	8"x8" TS&V
N 599709.009 E 1352868.533	1/32 HB
N 599727.273 E 1352885.796	1/4 HB
N 599778.119 E 1353131.659	F.H.
N 599779.774 E 1353139.662	8"x4" REDUCER
N 599787.339 E 1353176.247	1/32 HB
N 599795.486 E 1353272.207	1/8 HB
N 599906.748 E 1353351.940	4" CAP & BUTTRESS

NOTE: - CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.  
- CONTRACTOR TO VERIFY THE LOCATION OF EXISTING WATER MAINS IN GREEN CLOVER DRIVE.

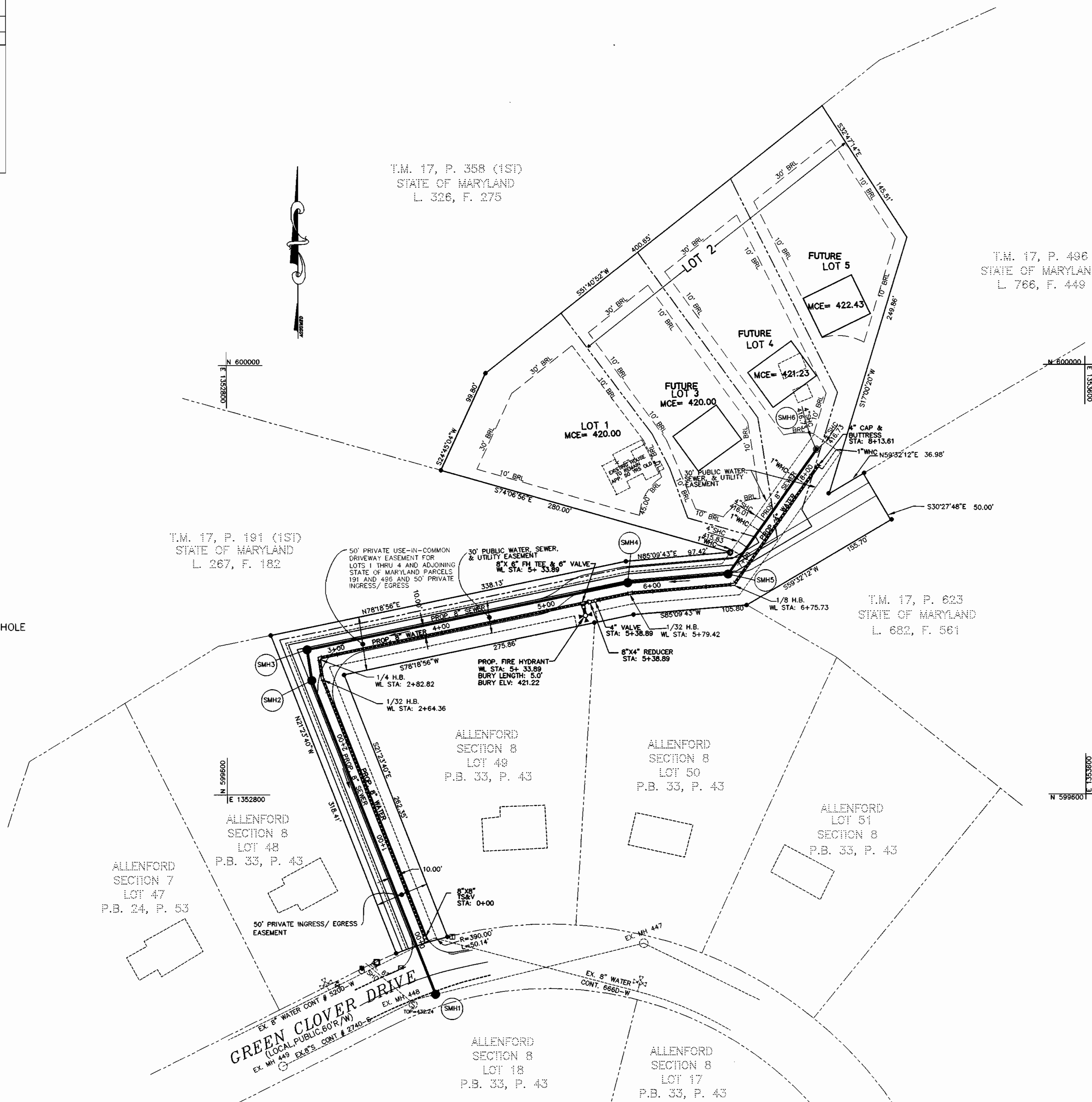
**MANHOLE LOCATION CHART**

MH #	NORTHING & EASTING
1	N 599413.842 E 1352993.435
2	N 599706.411 E 1352878.811
3	N 599735.149 E 1352874.504
4	N 599797.153 E 1353173.616
5	N 599805.065 E 1353267.098
6	N 599921.146 E 1353349.928

NOTE: CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

**LEGEND**

- OHE OVERHEAD ELEC.
- CLEAN OUT
- FENCE
- IRON ROD FOUND
- IRON PIPE FOUND
- ⊙ WATER METER
- ⊕ FIRE HYDRANT
- ⊙ SANITARY SEWER MANHOLE



99094 (DWG) W&S 1024-1024-1024.DWG

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Roland Berman* 10-25-00  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*John DeMunn* 11/20/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

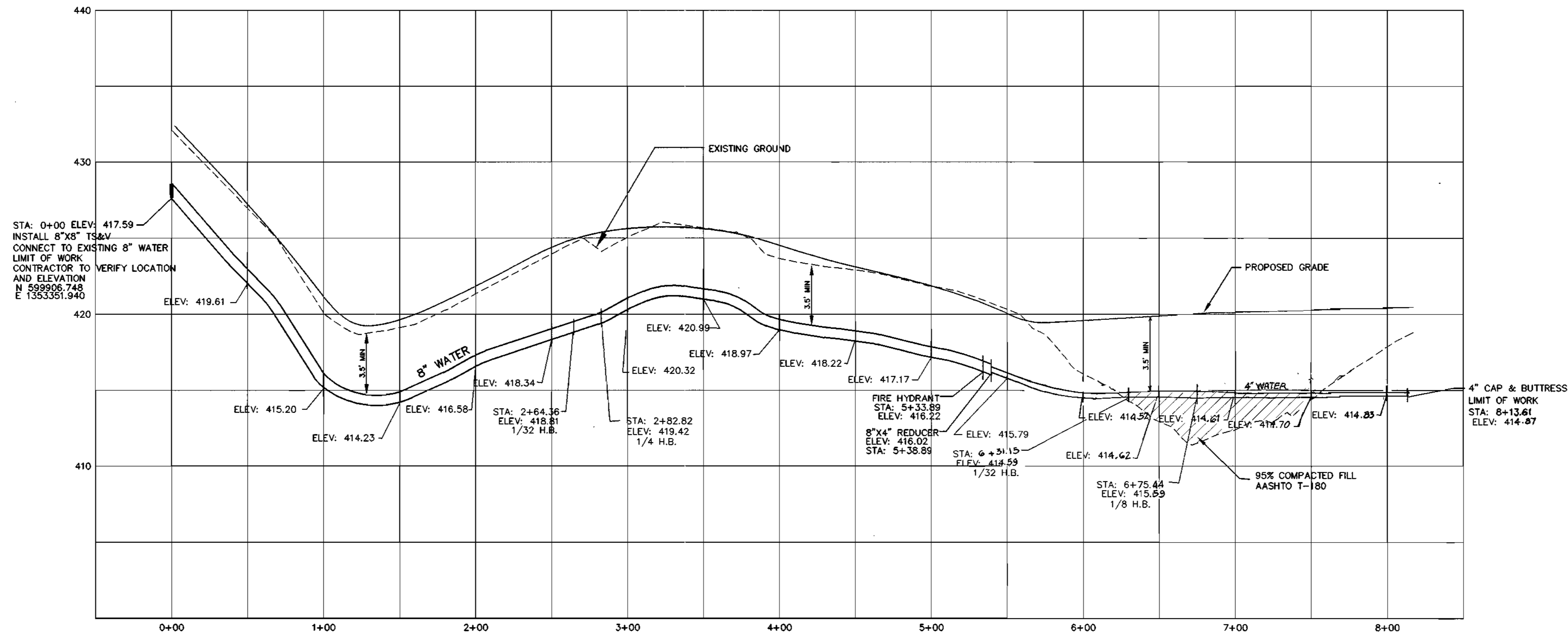
**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Beltsville, Maryland 20842  
(410) 997-0206 Balt. (301) 621-5221 Wash. (410) 997-0206 Fax.



engineering			
illustration	MT		
approval			
project	99094		
date	OCT 2000		
BY	NO.	REVISION	DATE

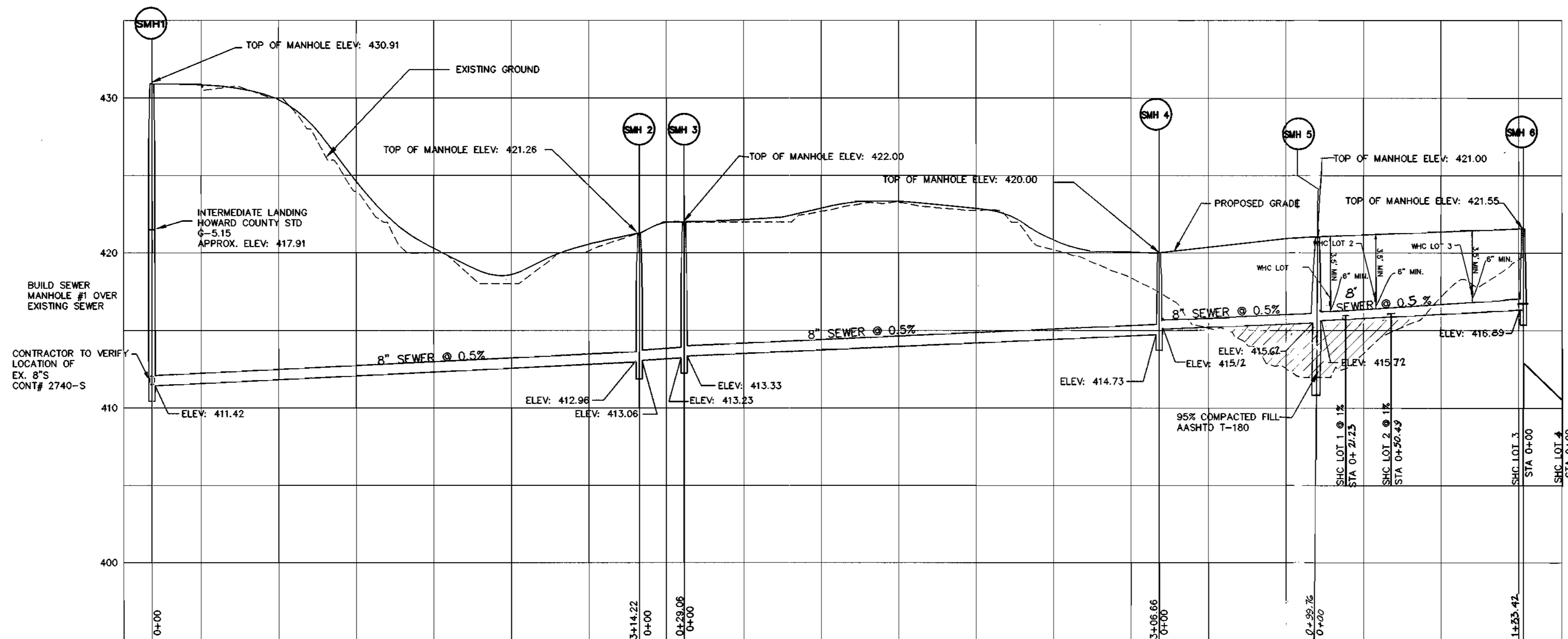
**WATER AND SEWER PLAN**  
600' SCALE MAP NO. 17 BLOCK NO. 2

**GREEN CLOVER LOTS 1 & 2**  
CONTRACT # 24-3849-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND



**WATER PROFILE**

HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**SEWER MAIN PROFILE**

HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'

99094.DWG WMS\084-WST.DWG

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

**MILDENBERG,  
 BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors



engineering					
illustration	MT				
approval					
project	99094	MBA	1	CHANGE TO WATER & SEWER PROFILES	2/20/01
date	OCT 2000	BY	NO.	REVISION	DATE

**WATER AND SEWER  
 PROFILE**

600' SCALE MAP NO. 17 BLOCK NO. 2

**GREEN CLOVER**  
 LOTS 1 & 2  
 CONTRACT # 24-3849-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS SHOWN

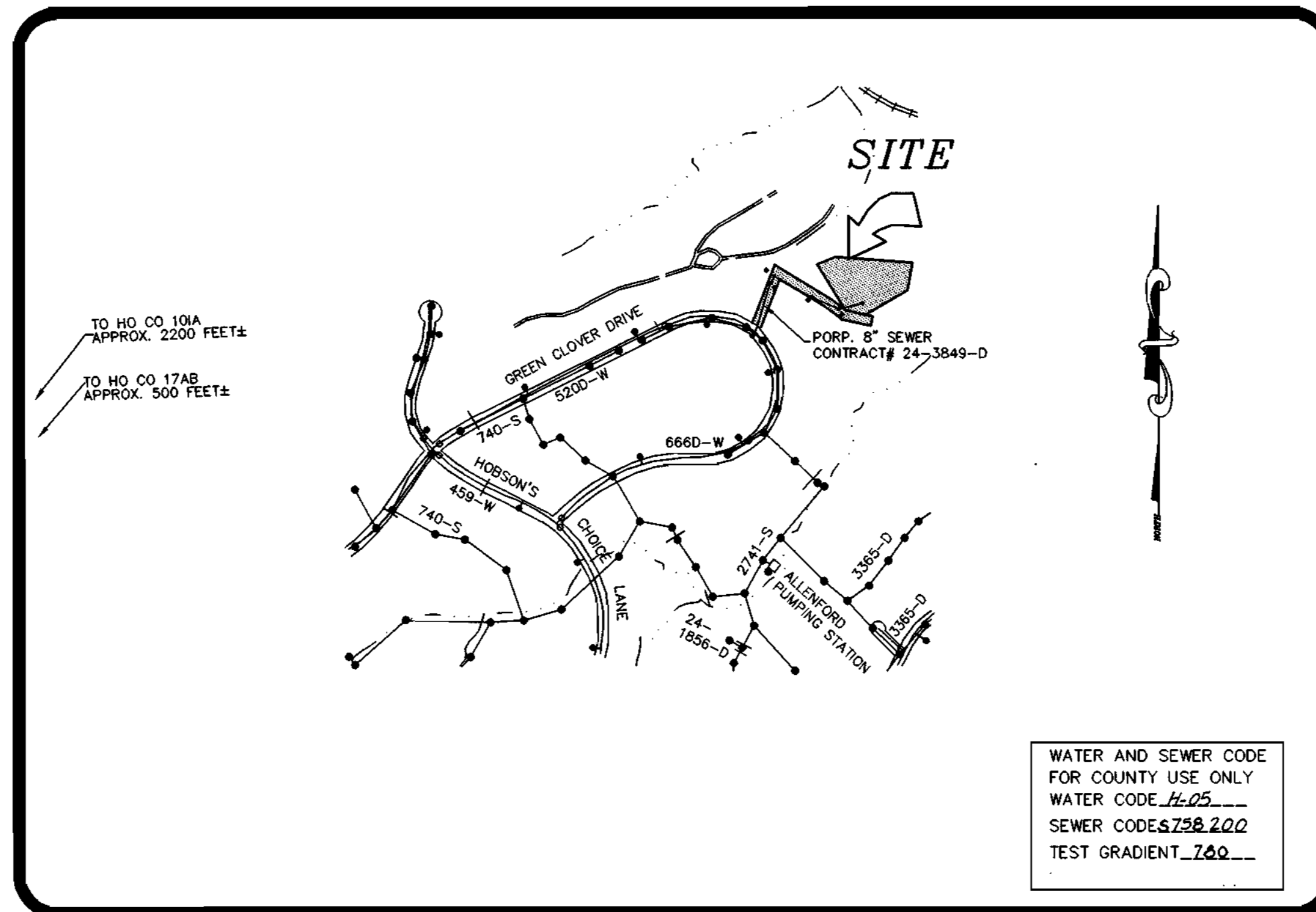
*Robert Beaman*  
 CHIEF, BUREAU OF UTILITIES  
 10-25-00  
 DATE

*Michael J. Boender*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 11/30/00  
 DATE

5072 Dorsey Hall Drive, Suite 202, Beltsville, Maryland 20812  
 (410) 997-0286 Dalt. (301) 621-5521 Wash. (410) 997-0288 Fax.

### QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	AS - BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	6	6	Pre-Cast	ATLANTIC CONCRETE
8" SEWER MAIN	858 L.F.	872 L.F.	P.V.C.	J-M. / BRS.
4" SHC	45 L.F.	50 L.F.	P.V.C.	J-M. / BRS.
4" WATER MAIN	262 L.F.	271 L.F.	D.I.P.	U.S. Pipe / BRS.
8" WATER MAIN	538 L.F.	524 L.F.	D.I.P.	U.S. Pipe / BRS.
4" CAP & BUTTRESS	1	1		U.S. Pipe / BRS.
1" WHC	85 L.F.	100 L.F.	K-Copper	Reading Tube / BRS.
8"X8" TAPPING SLEEVE AND VALVE	1	1		Dresser Co. / BRS.
FIRE HYDRANT ASSEMBLY	1	1		Mueller / BRS.
1/4 HB	1	1		U.S. Pipe / BRS.
1/8 HB	1	1		U.S. Pipe / BRS.
1/32 HB	2	-	-	-
4" VALVE	1	1		Mueller / BRS.
8"X4" REDUCER	1	1		U.S. Pipe / BRS.
NAME OF UTILITY CONTRACTOR: C. C. S.				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				



TYPE OF BUILDING: RESIDENTIAL SINGLE FAMILY DETACHED  
 NO. OF LOTS: 2 & FUTURE LOTS  
 NO. WATER HOUSE CONNECTIONS: 4  
 NO. OF SEWER HOUSE CONNECTIONS: 4

### 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. 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, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO 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 DETAIL FOR CONSTRUCTION (LATEST EDITION). 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 [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:  
 AT & T (410) 865-3803  
 CHEASAPEAKE & POTOMAC TELEPHONE CO. (410) 597-8585  
 STATE HIGHWAY ADMINISTRATION (410) 531-5533  
 BG & E CO. CONTRACTOR SERVICES (410) 850-4620  
 BG & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068  
 MISS UTILITY 1-800-257-7777  
 COLONIAL PIPELINE CO. (410) 795-1390  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES (410) 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(o) OF HOWARD COUNTY CODE.
- 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 BURY 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 1000 AND 1005 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 INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- FOR SPRINKLER SYSTEM FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.
- ALL SEWER MAINS SHALL BE P.V.C. D.I.P. PIPES SHALL BE CLASS 52 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES DESIGNATED W.T. 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 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

### INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

NOTE:  
 EROSION AND SEDIMENT CONTROL PROVIDED UNDER GP-01-79

# GREEN CLOVER LOTS 1 & 2 CONTRACT NO. 24-3849-D WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/26/00  
 DEVELOPER'S SIGNATURE DATE  
 DONALD R. REWNER, JR. PRESIDENT ECLH Inc.  
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/26/00  
 ENGINEER'S SIGNATURE DATE  
 R. JACOB HIGMAT, P.E.  
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*[Signature]* 11/29/00  
 USFS NATURAL RESOURCE CONSERVATION SERVICE

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

*[Signature]* 11/29/00  
 HOWARD SCD

PLAN REFERENCE NUMBERS  
 F-00-175

OWNERS  
 ELLICOTT CITY LAND HOLDING INC.  
 8000 MAIN ST  
 ELLICOTT CITY, MARYLAND 21043

CONTRACT No. 24-3849-D  
 GREEN CLOVER  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

H:\99094\DWG\WKS\994-WS-DWG

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
*[Signature]* 10-25-00  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
*[Signature]* 11/29/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0286 Balt. (301) 621-5323 Wash. (410) 997-0288 Fax.



engineering					
illustration	MT				
approval					
project	99094	MBA	1	AS BUILT	07/04/01
date	OCT 2000	BY	NO.	CHANGED IDENTIFICATION OF CONTRACT	12/10/00
				REVISION	

TITLE SHEET  
 WATER AND SEWER AS-BUILTS  
 600' SCALE MAP NO. 17 BLOCK NO. 2

GREEN CLOVER  
 LOTS 1 & 2  
 CONTRACT# 24-3849-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 NTS  
 1 OF 3

**WATER MAIN TABULATION CHART**

EASEMENT	
NORTHING & EASTING	APPURTENANCE
N 599465.588 E 1352983.922	8"x8" TS&V
N 599709.008 E 1352868.952	1/2" HB
N 599727.273 E 1352885.796	1/4" HB
N 599778.110 E 1353131.659	F.H.
N 599779.774 E 1353139.662	8"x4" REDUCER
N 599782.559 E 1353176.247	1/2" HB
N 599795.486 E 1353272.207	1/8" HB
N 599906.748 E 1353351.940	4" CAP & BUTTRISS

NOTE: - CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.  
- CONTRACTOR TO VERIFY THE LOCATION OF EXISTING WATER MAINS IN GREEN CLOVER DRIVE.

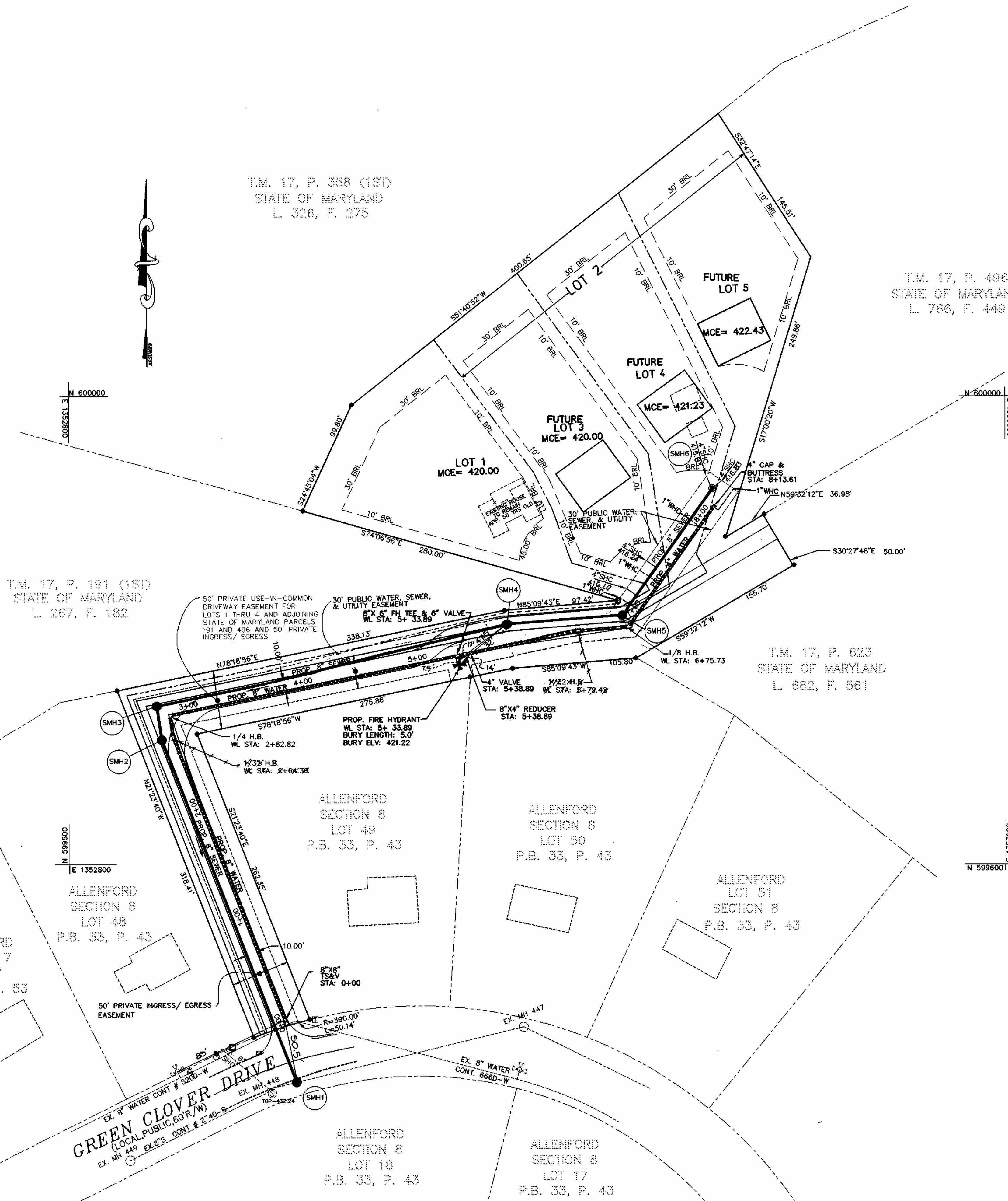
**MANHOLE LOCATION CHART**

MH #	NORTHING & EASTING
1	N 599413.842 E 1352993.435
2	N 599706.411 E 1352878.811
3	N 599735.149 E 1352874.504
4	N 599797.153 E 1353173.616
5	N 599805.065 E 1353267.098
6	N 599921.146 E 1353349.923

NOTE: CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

**LEGEND**

- O/E — OVERHEAD ELEC.
- CLEAN OUT
- X — FENCE
- IRON ROD FOUND
- IRON PIPE FOUND
- ⊕ WATER METER
- ⊕ FIRE HYDRANT
- ⊕ SANITARY SEWER MANHOLE



**WATER HOUSE CONNECTIONS**

FROM	TO	DISTANCE
MH5	LOT 1	12'
MH5	LOT 3	39.5'
MH5	LOT 5	98.5'
MH5	LOT 4	144'
MH6	LOT 5	18.5'
MH6	LOT 4	36.5'
MH6	LOT 3	95'
MH6	LOT 1	124'

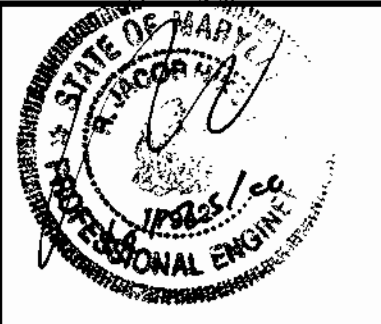
**SANITARY HOUSE CONNECTIONS**

FROM	TO	DISTANCE
MH5	LOT 1	20.5'
MH5	LOT 3	47.5'
MH5	LOT 4	139'
MH5	LOT 5	145'
MH6	LOT 5	11'
MH6	LOT 4	10.5'
MH6	LOT 3	87.5'
MH6	LOT 1	115.0'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Robert Berman* 10-25-00  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*John D. ...* 11/20/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Blissoft City, Maryland 21042  
(410) 997-0286 Fax: (301) 627-5521 Week: (410) 997-0288 Fax

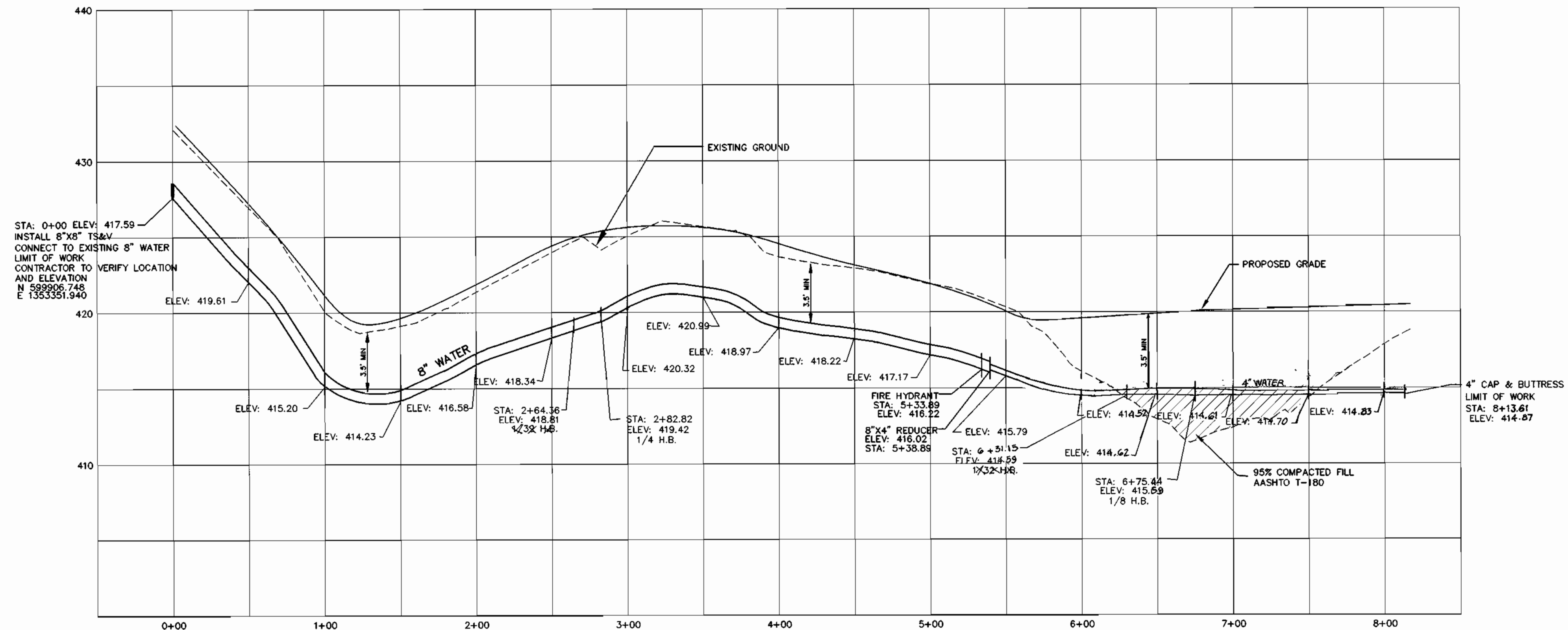


engineering			
illustration	MT		
approval			
project	MBA	2	AS BUILT
	MBA	1	REVISED WATER / SEWER ALIGNMENT
			REVISED LOT NUMBERS
date	OCT 2000	BY	NO.
			REVISION
			DATE

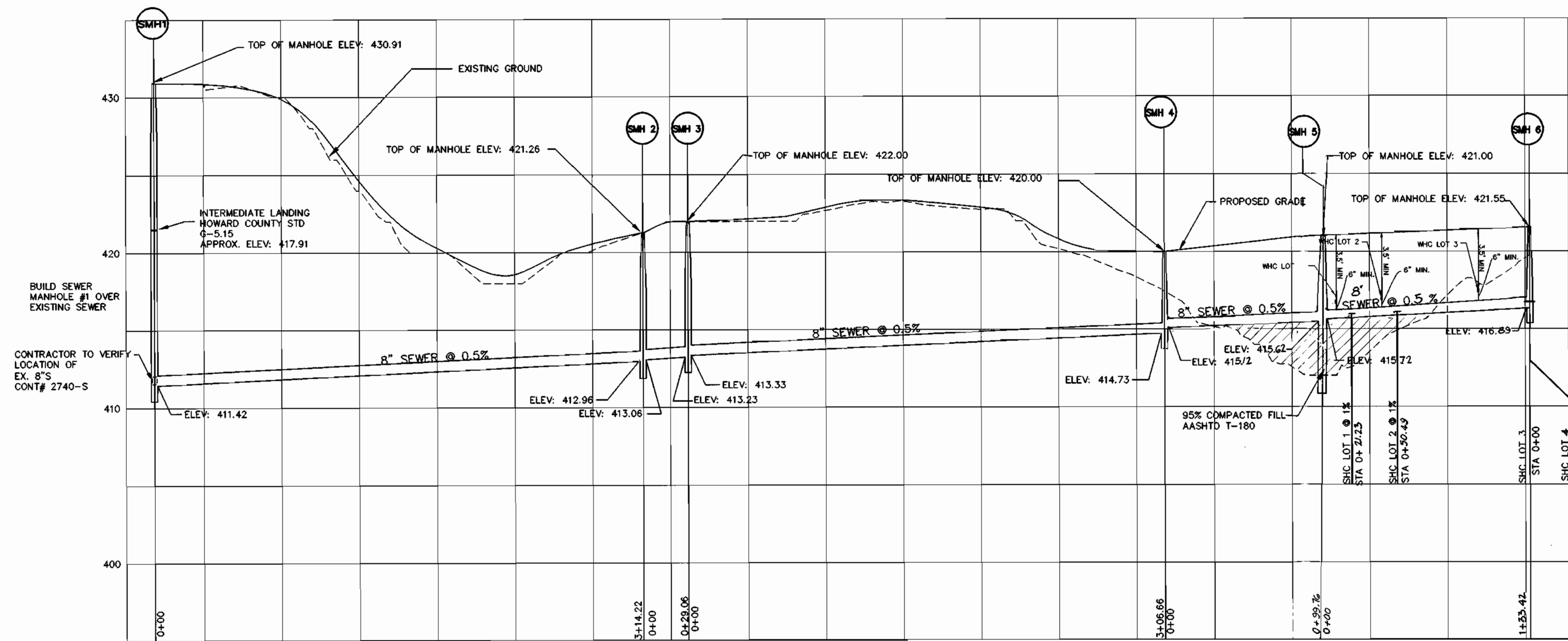
**WATER AND SEWER AS-BUILT PLAN**  
600' SCALE MAP NO. 17 BLOCK NO. 2

**GREEN CLOVER LOTS 1 & 2**  
CONTRACT # 24-3849-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND





**WATER PROFILE**  
 HORIZONTAL SCALE : 1" = 50'  
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**SEWER MAIN PROFILE**  
 HORIZONTAL SCALE : 1" = 50'  
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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

**MILDENBERG,  
 BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors

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engineering					
illustration	MT				
approval					
project	98094	NBR	1	AS BUILT	07/04/01
date	OCT 2000	BY	NO.	CHANGE TO WATER & SEWER PROFILES	2/28/01
				REVISION	DATE

**WATER AND SEWER  
 AS-BUILT  
 PROFILE**

600' SCALE MAP NO. 17 BLOCK NO. 2

**GREEN CLOVER  
 LOTS 1 & 2**  
 CONTRACT # 24-3849-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS SHOWN

3 OF 3

98094.DWG.M&S 094-MSI.DWG

*Ruth Berger* 10-25-00  
 CHIEF, BUREAU OF UTILITIES DATE

*Mike Damman* 11/30/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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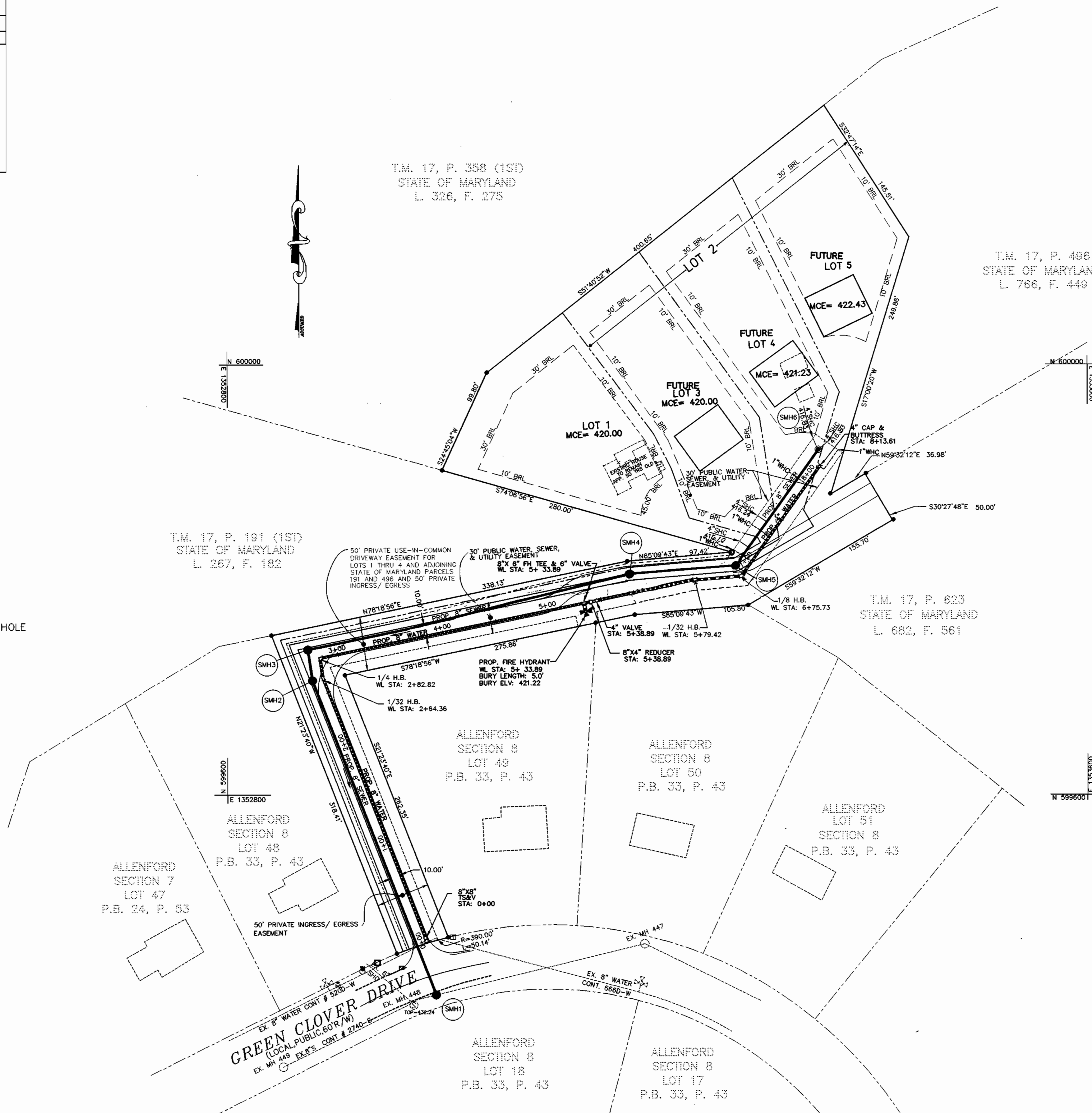
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- O — OVERHEAD ELEC.
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- IRON ROD FOUND
- IRON PIPE FOUND
- ⊕ WATER METER
- ⊕ FIRE HYDRANT
- ⊕ SANITARY SEWER MANHOLE



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Roland B. ...*  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*Alfred ...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0296 Fax



engineering				
illustration	MT			
approval				
project	MBA 2	REVISED WATER & SEWER ALIGNMENT	2/20/01	
date	99094	REVISED LOT NUMBERS	12/18/00	
date	OCT 2000	BY NO.	REVISION	DATE

**WATER AND SEWER PLAN**  
600' SCALE MAP NO. 17 BLOCK NO. 2

**GREEN CLOVER LOTS 1 & 2**  
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SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND