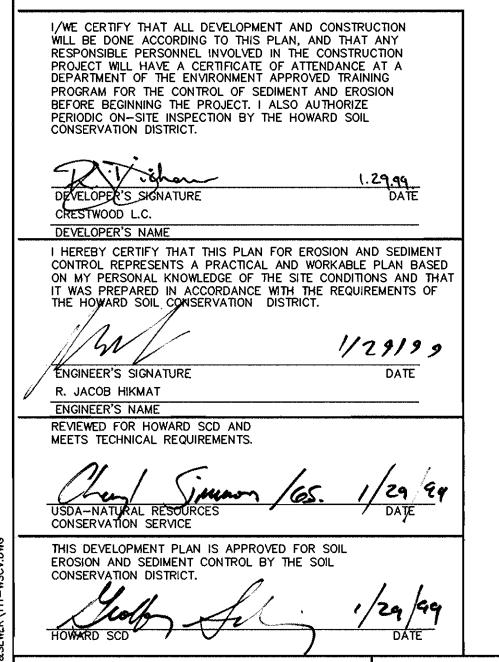
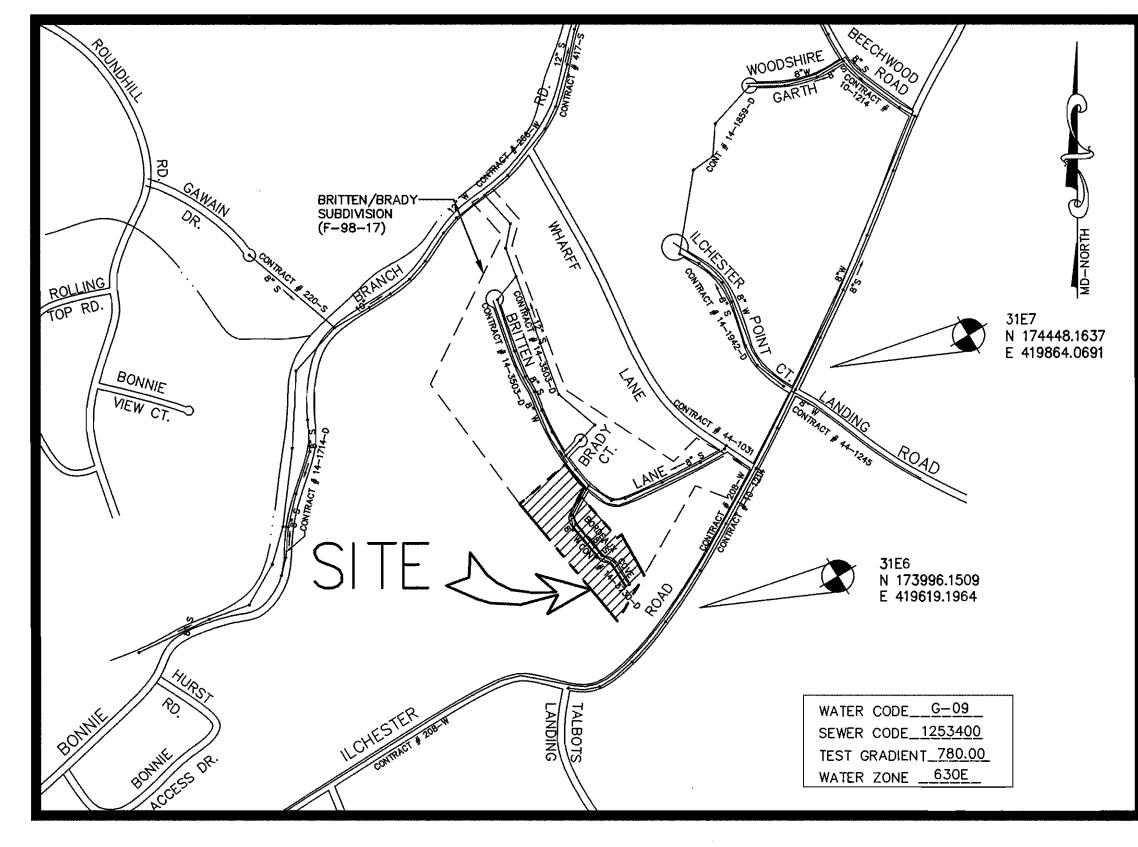
## QUANTITY TABLE

ITEMS	QUANTITIES	AS - BUILT			
II E M O	ESTIMATED		TYPE	MANUFACTURER/SUPPLIER	
STANDARD MH	5				
8" SEWER MAIN	662 L.F.				
6" TWIN SEWER HOUSE CONN.	26 L.F.				
4" SEWER HOUSE CONNECTION	415 L.F.				
# SEWER HOUSE CONNECTIONS	17				
# MH CONNECTIONS	4				
8" WATER	658 L.F.				
F.H.	1				
F.H.T.& V.	1				
	2				
8" VAP & BUTTRESS	1				
22.5* BEND	3				
45° BEND	3				
# WHC/# TWIN WHC	11/3				
1" WHC	272 L.F.				
1 1/2" WHC	95 L.F.				

EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED UNDER F-99-46

SURVEY AND DRAFTING DIVISION AS-BUILT DATE





# <u>VICINITY MAP</u>

SCALE: 1'=600'

TYPE OF BUILDING S.F.D.

No. OF UNITS 18

No. OF WATER HOUSE CONNECTION 15

No. OF TWIN WATER HOUSE CONNECTION 1

No. OF SEWER HOUSE CONNECTIONS 16

DRAINAGE AREA PATAPSCO

PLANT\_BALTIMORE\_\_\_\_\_

TREATMENT PLANT PATAPSCO WASTE WATER TREATMENT

CONTRACT NO.: #14-3730-D

ELM STREET ESTATES,
LOTS 1-18

PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

#### GENERAL NOTES

- 1. 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.
- 2. 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.

TO SCHEDULE THE BRACING OF THE POLES.

- 5. 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
- 6. 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.
- 7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE 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.

  8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE
  - WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS: 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
  - COLONIAL PIPELINE CO. (410) 795–13
    HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
    BUREAU OF UTILITIES (410) 313–49
- BUREAU OF UTILITIES (410) 313-4900

  9. 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.
- 10. 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.
- 11. 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 ROASS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS.
  THE APPRROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF HOWARD COUNTY CODE.
- 12. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.

  13. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE
- NOTED.
- 14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 16. 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.
- 17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
- 18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- 19. FOR SPRINKLER SYSTEM FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE
- A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.

  20. ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 20. ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NO 21. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 21. ALL MANHOLES SHALL BE 4-U INSIDE DIAMETER UNLESS OTHERWISE NOTED.

  22. FORCE MAINS SHALL BE D.I.P. ONLY.
- 23. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- 24. STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- 25. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PROIR TO COMMENCING CONSTRUCTION.
- 26. SEDIMENT CONTROL TO BE PROVIDED BY F-99-46.
- 27. ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE UNLESS OTHERWIAE NOTED.
- 28. ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
  29. ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED.
- 30. THE EXISTING WELL AND SEPTIC SERVICING EXISTING HOUSE(S) ARE TO BE ABANDONED.
- 31. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

### OWNER/DEVELOPER

CRESTWOOD L.C. 6820 ELM STREET MCLEAN, VA 22101 (703) 734-9730

#### INDEX OF DRAWINGS

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

CONTRACT No. 14-3730-D ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION OF

MILDENBERG,
BOENDER & ASSOC., INC.

Engineers Planners Surveyors

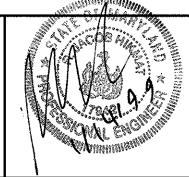
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

PLAN REFERENCE NUMBERS

P-98-28 WP-99-09

F-99-46

SP-98-13



engineering SA					
illustration SA					
approval					TITLE
project <b>97111</b>					
date NOV. 1998	BY	NO.	REVISION	DATE	600' SCALE MAP NO31

TITLE SHEET

BLOCK NO. 10

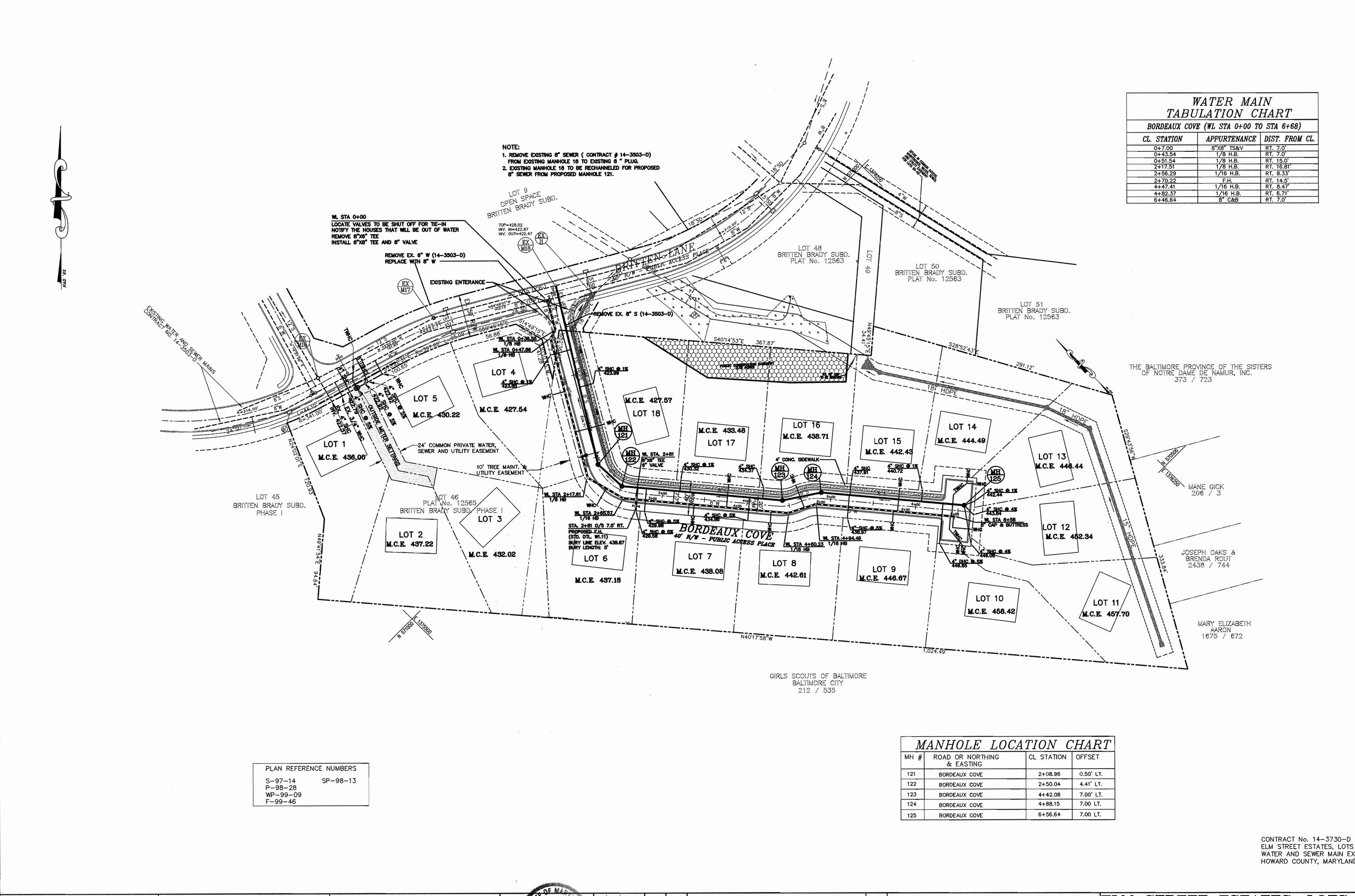
ELM STREET ESTATES, LOTS 1-18
PARCEL 147 & RESUBDIVISION OF

LOT 46, BRITTEN/BRADY CONTRACT NO. 14-3730-D FIRST ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

1 of 3

AS SHOWN



ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

MILDENBERG,
BOENDER & A BOENDER & ASSOC., INC. 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.



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A STATE OF THE STA	engineering SA				
	illustration				
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BIHHH	project <b>97111</b>				
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	dote NOV. 1998	BY	NO.	REVISION	DATE

WATER AND SEWER PLAN

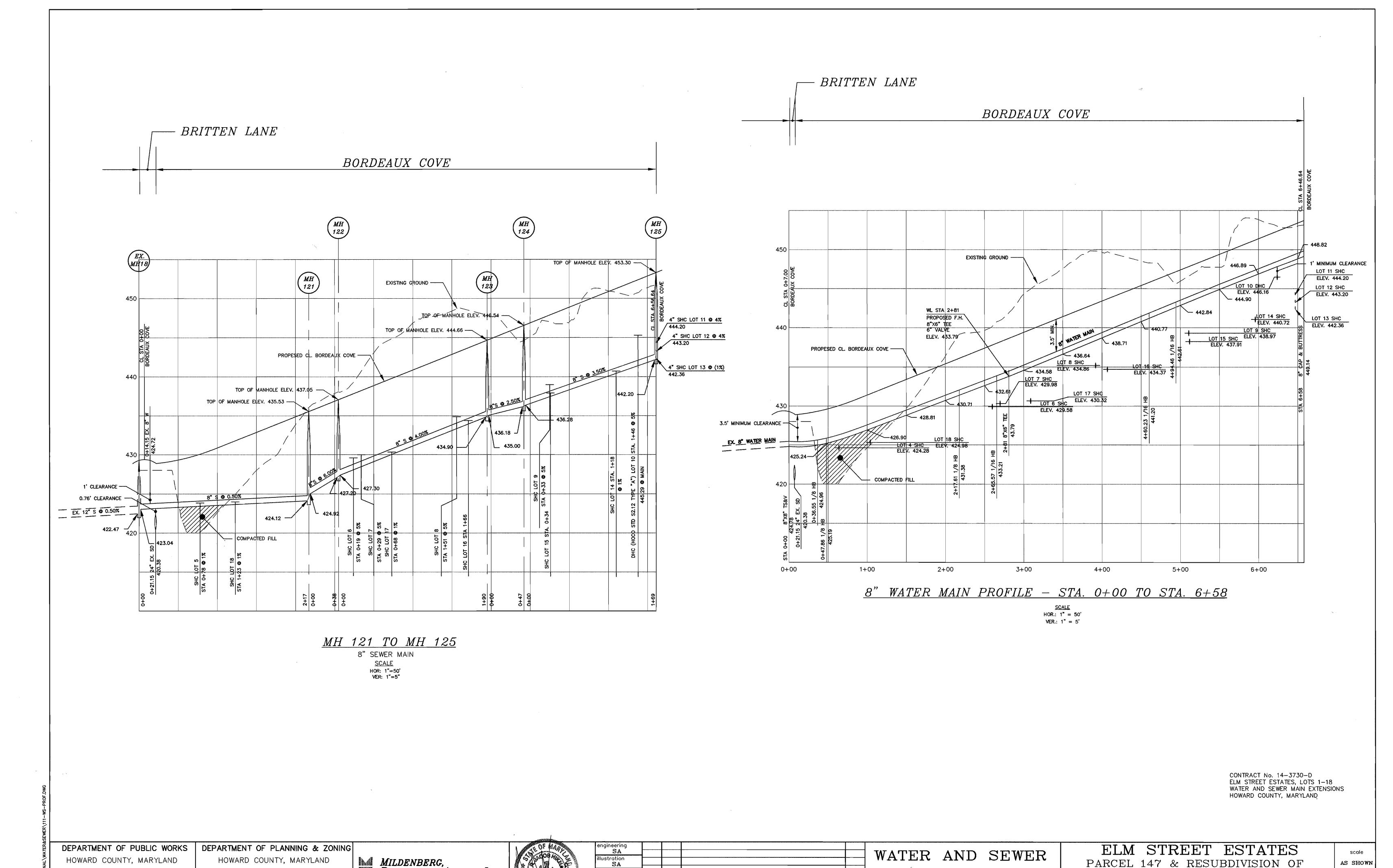
BLOCK NO.\_\_10\_

600' SCALE MAP NO. 31

ELM STREET ESTATES, LOTS 1-18 PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY

> CONTRACT NO. 14-3730-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

2 of 3



HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND MILDENBERG, BOENDER & ASSOC., INC. PARCEL 147 & RESUBDIVISION OF approval LOT 46, BRITTEN/BRADY PROFILES CONTRACT NO. 14-3730-D project **97111** FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND date NOV. 1998 BLOCK NO. 10 REVISION DATE 600' SCALE MAP NO. 31

AS SHOWN

3<sub>0</sub>F3

## QUANTITY TABLE

ITEMS	QUANTITIES	AS - BUILT					
II EMS	ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER			
STANDARD MH	5	5					
8" SEWER MAIN	662 L.F.	<i>6</i> 58					
6" TWIN SEWER HOUSE CONN.	26 L.F.	27					
4" SEWER HOUSE CONNECTION	415 L.F.	466					
# SEWER HOUSE CONNECTIONS	17	17					
# MH CONNECTIONS	4	4					
8" WATER / G" WATER	658 L.F.	241/399					
F.H.	1	1					
F.H.T.& V.	1	1					
	2						
8" VAP & BUTTRESS	1	1					
22.5* BEND	3	3					
45° BEND	3	3					
# WHC/# TWIN WHC	11/3	11/3					
1" WHC	272 L.F.	289					
1 1/2" WHC	95 L.F.	95					
NAME OF UTILITY CONTRACTOR: W.F. WILSON CO.							
SURVEY AND DRAFTING DIVISION AS-BUILT DATE							

VICINITY MAP SCALE: 1'=600'

SUBDIVISION

(F-98-17)

TYPE OF BUILDING S.F.D. No. OF UNITS\_\_\_\_\_18\_ No. OF WATER HOUSE CONNECTION\_\_\_ No. OF TWIN WATER HOUSE CONNECTION\_\_\_1\_ No. OF SEWER HOUSE CONNECTIONS\_ DRAINAGE AREA PATAPSCO TREATMENT PLANT PATAPSCO WASTE WATER TREATMENT PLANT BALTIMORE

EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED *UNDER F-99-46* 

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.
DEVELOPER'S SIGNATURE  CRESTWOOD L.C.  DEVELOPER'S NAME
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.
1/29199
ENGINEER'S SIGNATURE DATE

I /WE CERTIES THAT ALL DEVELOPMENT AND CONCERNICTION

ENGINEER'S NAME	
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.	
USDA-NATURAL RESOURCES CONSERVATION SERVICE  DATE	' <del>Q</del> <b>q</b>
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.  HOWARD SCD  DATE	i9

CONTRACT NO.: #14-3730-D ELM STREET ESTATES, LOTS 1-18

PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND PLAN REFERENCE NUMBERS SP-98-13 DEPARTMENT OF PUBLIC WORKS

<u>GENERAL NOTES</u>

- 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.
- 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- 3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- 5. 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.
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- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS: 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
- 10. 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
- 11. 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 ROASS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPRROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF HOWARD COUNTY CODE.
- 12. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 13. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE
- 14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 16. 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.
- 17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
- 18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE
- NOTED ON PLANS OR IN SPECIFICATIONS. 19. 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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- 31. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

OWNER/DEVELOPER

CRESTWOOD L.C. 6820 ELM STREET MCLEAN, VA 22101 (703) 734-9730

INDEX OF DRAWINGS

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

CONTRACT No. 14-3730-D ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

R. JACOB HIKMAT

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

S-97-14

P-98-28 WP-99-09 F-99-46

MILDENBERG, BOENDER & ASSOC., INC.



engineering				
SA				
illustration <b>SA</b>				
approval				
project				
97111	K.C.I	1	AS BUILT CONDITIONS ADDED TO PLAN	12/8/99
date NOV. 1998	BY	NO.	REVISION	DATE

TITLE SHEET

BLOCK NO. 10

600' SCALE MAP NO. 31

N 174448.1637

E 419864.0691

N 173996.1509

E 419619.1964

WATER CODE\_\_G-09\_

SEWER CODE 1253400

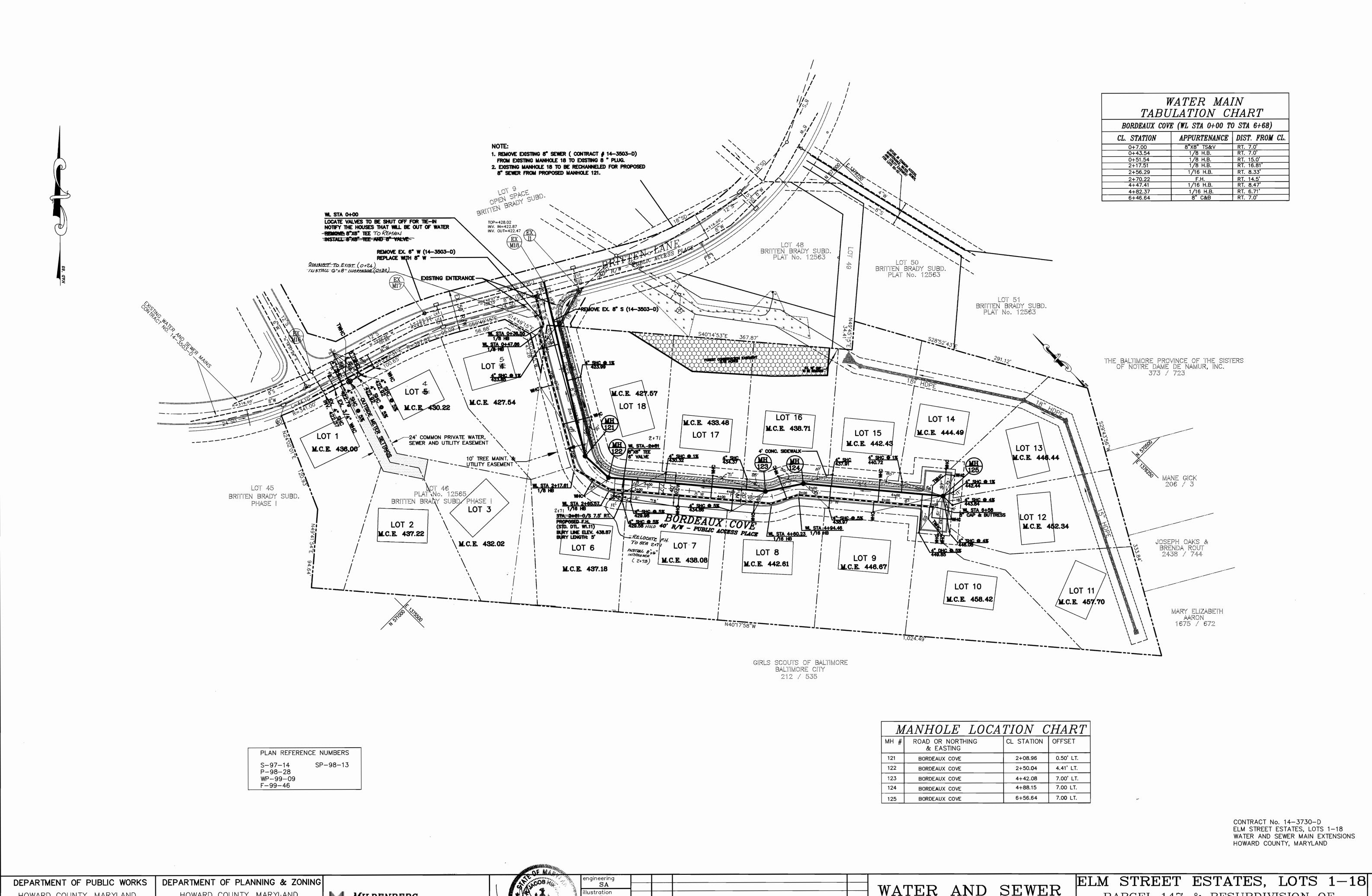
TEST GRADIENT 780.00

WATER ZONE 630E

ELM STREET ESTATES, LOTS 1-18 PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY

> CONTRACT NO. 14-3730-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

AS SHOWN 1 of 3



ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.



, 2	engineering <b>SA</b>	_			
Montherecedent	illustration				
3333	SA				
	approval				
	project <b>97111</b>	K.C.I	1	ASBUILT CONDITIONS ADDED TO PLAN	12/9/99
	date NOV. 1998	BY	NO.	REVISION	DATE

WATER AND SEWER PLAN

BLOCK NO. 10

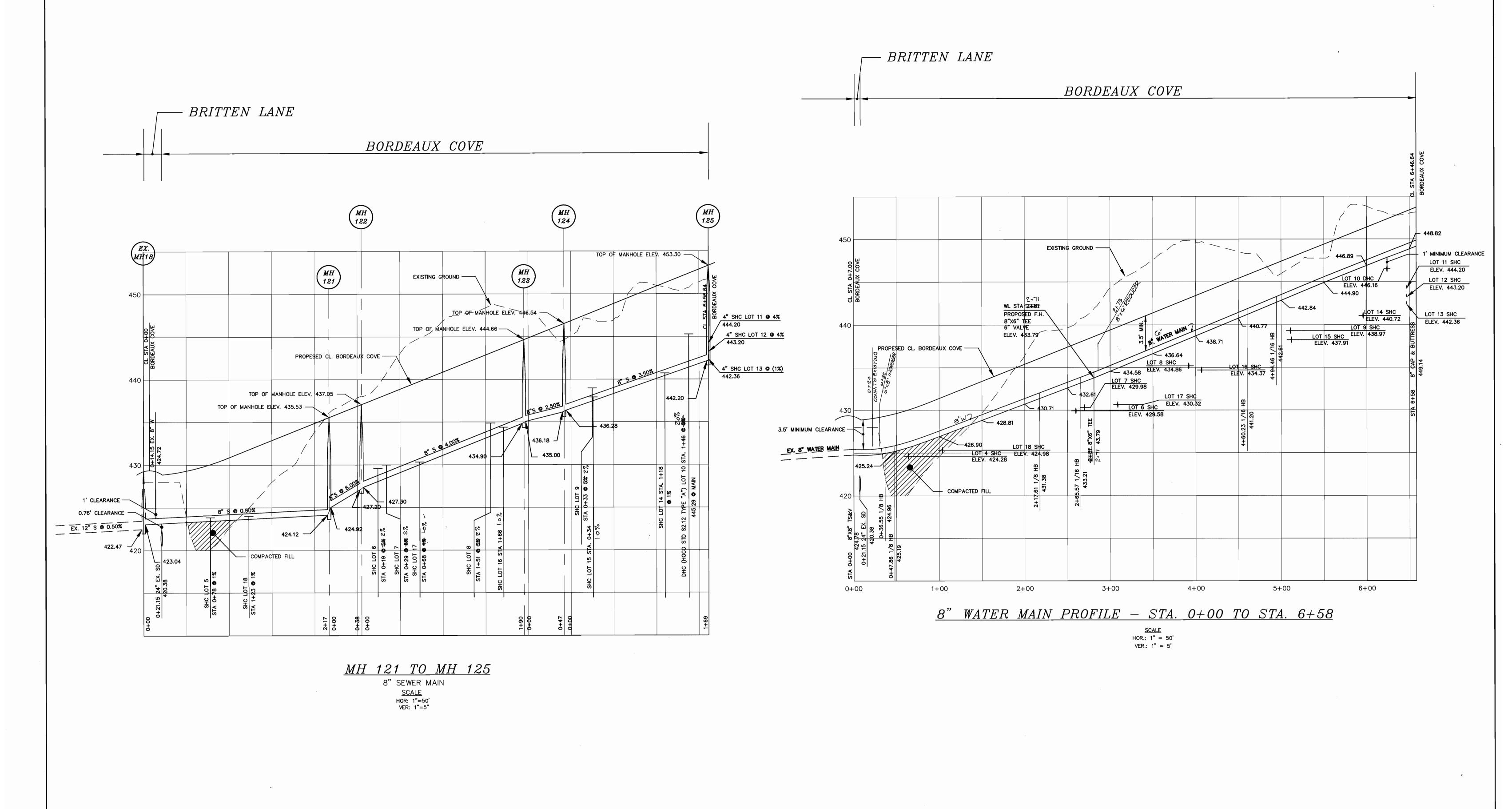
600' SCALE MAP NO. 31

PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY CONTRACT NO. 14-3730-D

FIRST ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

1" = 50' 2<sub>0</sub>F3



CONTRACT No. 14-3730-D ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY MARYLAND



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project <b>97111</b>	K.C.I	1	ASBUILT CONDITIONS ADDED TO PLAN	12/9/99	
date NOV. 1998	BY	NO.	REVISION	DATE	600' SCALE N

WATER AND SEWER
PROFILES

BLOCK NO. 10

ELM STREET ESTATES

PARCEL 147 & RESUBDIVISION OF
LOT 46, BRITTEN/BRADY

CONTRACT NO. 14-3730-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND 3 of 3

AS SHOWN

## QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	AS - BUILT				
II E M S		QUANTITIES	TYPE	MANUFA	CTURER/S	UPPLIER
STANDARD MH	5	5		ATLANTIC / BELAIR		
8" SEWER MAIN	662 L.F.	658		JOHN	MANVILLE	BELAIR
6" TWIN SEWER HOUSE CONN.	26 L.F.	27		,,	и	u
4" SEWER HOUSE CONNECTION	415 L.F.	466		u	4	и
# SEWER HOUSE CONNECTIONS	17	17		"	*	a
# MH CONNECTIONS	4	4		**		
8" WATER / G" WATER	658 L.F.	241/399		U.S. P	PIPE & FOUN	oly
F.H.	1	1		MUELL	ER	
F.H.T.& V.	1	1		14	41	
	2			"	**	
8" VAP & BUTTRESS	1	I		U.5. Ph	PE & FOUNT	ORY
22.5* BEND	3	3		и	4 (1	
45° BEND	3	3		4	t. ((	
# WHC/# TWIN WHC	11/3	11/3		MUELL	ER	_
1" WHC	272 L.F.	289		READING	TUBE	
1 1/2" WHC	95 L.F.	95		^	"	
NAME OF UTILITY CONTRACTO	OR: W.F. y	VILSON CO.		·	<u> </u>	
SURVEY AND DRAFTING DIVIS	SION AS-BUILT	DATE		-		

EROSION AND SEDIMENT CONTROL

FOR THIS CONTRACT IS PROVIDED

*UNDER F-99-46* 

VICINITY MAP SCALE: 1'=600'

SUBDIVISION

(F-98-17)

TYPE OF BUILDING S.F.D.	
No. OF UNITS18	
No. OF WATER HOUSE CONNECTION1	5
No. OF TWIN WATER HOUSE CONNECTION1	
No. OF SEWER HOUSE CONNECTIONS	5
DRAINAGE AREA <u>PATAPSCO</u>	
TREATMENT PLANT_PATAPSCO_WASTE_WATER TREATMENT	4ENT
PLANT, BALTIMORE	

CONTRACT NO.: #14-3730-D

ELM STREET ESTATES, LOTS 1-18

PARCEL 147 & RESUBDIVISION OF LOT 46, BRITTEN/BRADY WATER AND SEWER MAIN EXTENSIONS

> HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

GENERAL NOTES

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- 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.

3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA. 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

- 5. 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.
- 6. 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 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: STATE HIGHWAY ADMINISTRATION 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
- 9. 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

- 11. 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 ROASS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPRROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF HOWARD COUNTY CODE.
- 12. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 13. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE
- 14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 16. 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.
- 17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
- 18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- 19. FOR SPRINKLER SYSTEM FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.
- 20. ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 21. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED. 22. FORCE MAINS SHALL BE D.I.P. ONLY.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- 24. STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PROIR TO COMMENCING CONSTRUCTION.
- 26. SEDIMENT CONTROL TO BE PROVIDED BY F-99-46.
- 27. ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE UNLESS OTHERWIAE NOTED.
- 28. ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
- 29. ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED 30. THE EXISTING WELL AND SEPTIC SERVICING EXISTING HOUSE(S) ARE TO BE ABANDONED.
- 31. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

OWNER/DEVELOPER

CRESTWOOD L.C. 6820 ELM STREET MCLEAN, VA 22101 (703) 734-9730

INDEX OF DRAWINGS

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).	DESCRIPTION					
	TITLE SHEET					
	WATER AND SEWER PLAN					

WATER AND SEWER PROFILES

CONTRACT No. 14-3730-D ELM STREET ESTATES, LOTS 1-18 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

1.29.99 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. 1/29199 ENGINEER'S SIGNATURE R. JACOB HIKMAT REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS. THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

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

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

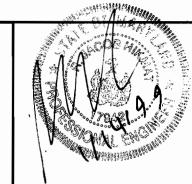
PLAN REFERENCE NUMBERS

P-98-28 WP-99-09

F-99-46

SP-98-13

MILDENBERG, BOENDER & ASSOC., INC. 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fas



engineering <b>SA</b>						
illustration SA						
approval						$   ext{TITLE}$
project				Φ	<b>②</b>	
97111	K.C.I	_ 1	AS BUILT CONDITIONS	ADDED TO PLAN 12/8/00	1/17/00	16
date <b>NOV</b> . <b>1998</b>	BY	NO.	REVISION		DATE	600' SCALE MAP NO. 31

TITLE SHEET

BLOCK NO.\_\_10

N 174448.1637

E 419864.0691

N 173996.1509

E 419619.1964

WATER CODE \_\_G-09\_

SEWER CODE <u>1253400</u>

TEST GRADIENT 780.00

WATER ZONE \_\_630E\_

ELM STREET ESTATES, LOTS 1-18 PARCEL 147 & RESUBDIVISION OF

LOT 46, BRITTEN/BRADY

CONTRACT NO. 14-3730-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND 1 of 3

AS SHOWN