

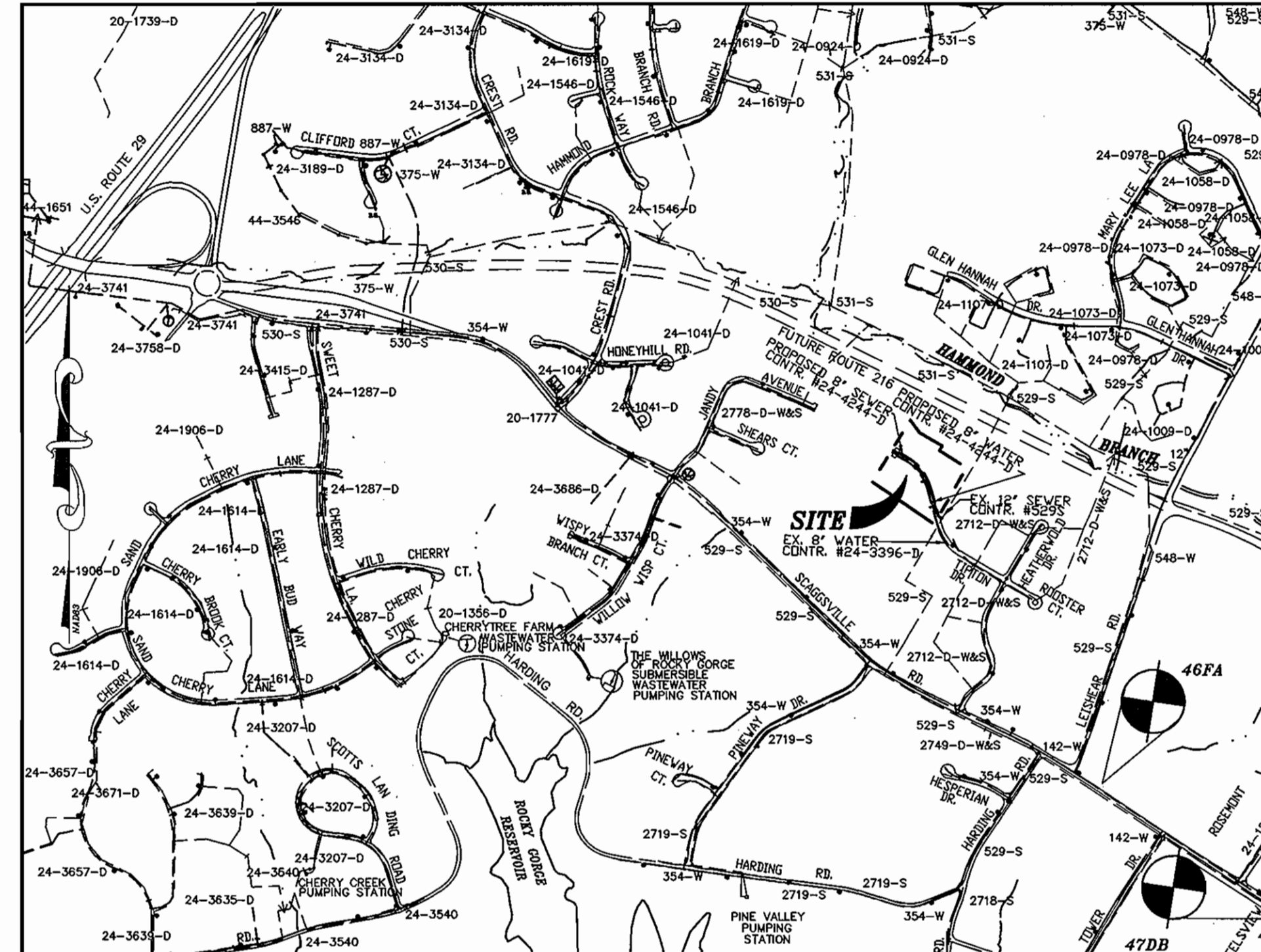
**QUANTITY TABLE**

ITEMS	QUANTITIES		TYPE	MANUFACTURER/SUPPLIER
	ESTIMATED	QUANTITIES		
STANDARD MH (HO. CO. STD. G-5.01)	4	4	PRECAST	ATLANTIC/ATLANTIC
H.C. STD. S 1.32 TYPE B DROP MANHOLE	1	1	PRECAST	ATLANTIC/ATLANTIC
8" SEWER MAIN	567 L.F.	567 L.F.	SDR 35	JM MFG./BELAIR RD. SUP'Y.
4" SEWER HOUSE CONNECTION	185 L.F.	177 L.F.	SDR 35	JM MFG./BELAIR RD. SUP'Y.
# SEWER HOUSE CONNECTIONS	7 EACH	7 EACH	PRECAST	HORNE/HORNE
8" WATER MAIN	682 L.F.	682 L.F.	CL. 52	GRIFFIN/GRIFFIN
1" WATER HOUSE CONNECTION	169 L.F.	152 L.F.	'K'	READING/BELAIR RD. SUP'Y.
# WATER HOUSE CONNECTIONS	7 EACH	7 EACH	FL	MUELLER/BELAIR RD. SUP'Y.
8"x8" T	1 EACH	1 EACH	MJ	US PIPE/BELAIR RD. SUP'Y.
8" CAP & BUTRESS	2 EACH	2 EACH	MJ	US PIPE/BELAIR RD. SUP'Y.
8"x6" T	1 EACH	1 EACH	HYDRANT	US PIPE/BELAIR RD. SUP'Y.
FH	1 EACH	1 EACH	CENT.	MUELLER/BELAIR RD. SUP'Y.
1/8 HB	1 EACH	1 EACH	MJ	US PIPE/BELAIR RD. SUP'Y.
8" V	1 EACH	2 EACH	RSORGATE	MUELLER/BELAIR RD. SUP'Y.
6" V	1 EACH	1 EACH	RSORGATE	MUELLER/BELAIR RD. SUP'Y.

NAME OF UTILITY CONTRACTOR: **CONSOLIDATED CONSTRUCTION SERVICES**  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE **MAY 2006**

**GENERAL NOTES**

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC DATA SHOWN HEREON IS BASED ON A FIELD RUN TOPOGRAPHIC SURVEY CONDUCTED IN AUGUST 2003 BY MILDENBERG, BOENDER & ASSOCIATES, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 46FA AND NO. 47DB. ALL VERTICAL CONTROLS ARE BASED ON NAVD '29. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 46FA & 47DB.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. 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 THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS 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  $\oplus$  AT THE LOCATIONS OF THE TEST PITS. 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 AT&T .....1-800-252-1133  
 BGE(CONSTRUCTION SERVICES).....410-850-4620  
 BGE(EMERGENCY).....410-685-1400  
 BUREAU OF UTILITIES.....410-313-4900  
 COLONIAL PIPELINE CO.....410-795-1390  
 STATE HIGHWAY ADMINISTRATION.....410-531-5533  
 VERIZON.....1-800-743-0033/410-224-9210
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATED. 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)313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 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.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
- ALL SEWER MAINS SHALL BE P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATED THAT THE CELLAR CANNOT BE SERVED.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- SEDIMENT CONTROL TO BE PROVIDED BY F-05-18.
- STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY. SEE ROAD PLANS FOR CONSTRUCTION DATA.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.



**VICINITY MAP**  
SCALE: 1"=600'

WATER CODE: E-18  
 SEWER CODE: 7550000  
 TEST GRADIENT 700

**EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED UNDER F-05-18**

TYPE OF BUILDING	RESIDENTIAL
No. OF UNITS	7
No. OF WATER HOUSE CONNECTION	7
No. OF SEWER HOUSE CONNECTIONS	7
ELECTION DISTRICT	SIXTH
DRAINAGE AREA	LITTLE PATUXENT
TREATMENT PLANT	LITTLE PATUXENT

**CONTRACT NO.: 24-4244-D**  
**TIPTON OVERLOOK**  
**WATER & 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.

*Ed R. Jones* 4/1/05  
 DEVELOPER'S SIGNATURE DATE  
 DEVELOPER'S NAME

*Jim Meyer* 4/1/05  
 ENGINEER'S SIGNATURE DATE  
 ENGINEER'S NAME

*John R. Robertson* 4/21/05  
 HONORARY SOIL CONSERVATION SERVICE DATE

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

PLAN REFERENCE NUMBERS:  
 S-01-03, WP-03-136, P-04-07  
 P-04-07, F-05-18

**AS BUILT**  
 DATE: **MAY 2006**

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	COVER SHEET
2	PLAN
3	PROFILES

**OWNER AND DEVELOPER**  
 ELLICOTT CITY LAND HOLDING, INC.  
 c/o LAND DESIGN & DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 443-367-0422

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

*John R. Robertson* 4-26-05  
 CHIEF, BUREAU OF UTILITIES DATE

*John R. Robertson* 4/26/05  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Ball. (301) 621-5521 Wash. (410) 997-0298 Pa.

engineering	SAA								
illustration	SAA								
approval	JBM								
project	03051								
date	APRIL 05	BY	NO.	REVISION	DATE	600' SCALE MAP NO.46_PARCEL_8	BLOCK NO.	12	

**COVER SHEET**

**TIPTON OVERLOOK**  
 TAX MAP 46, PARCEL 8  
 CONTRACT NO.: 24-4244-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY



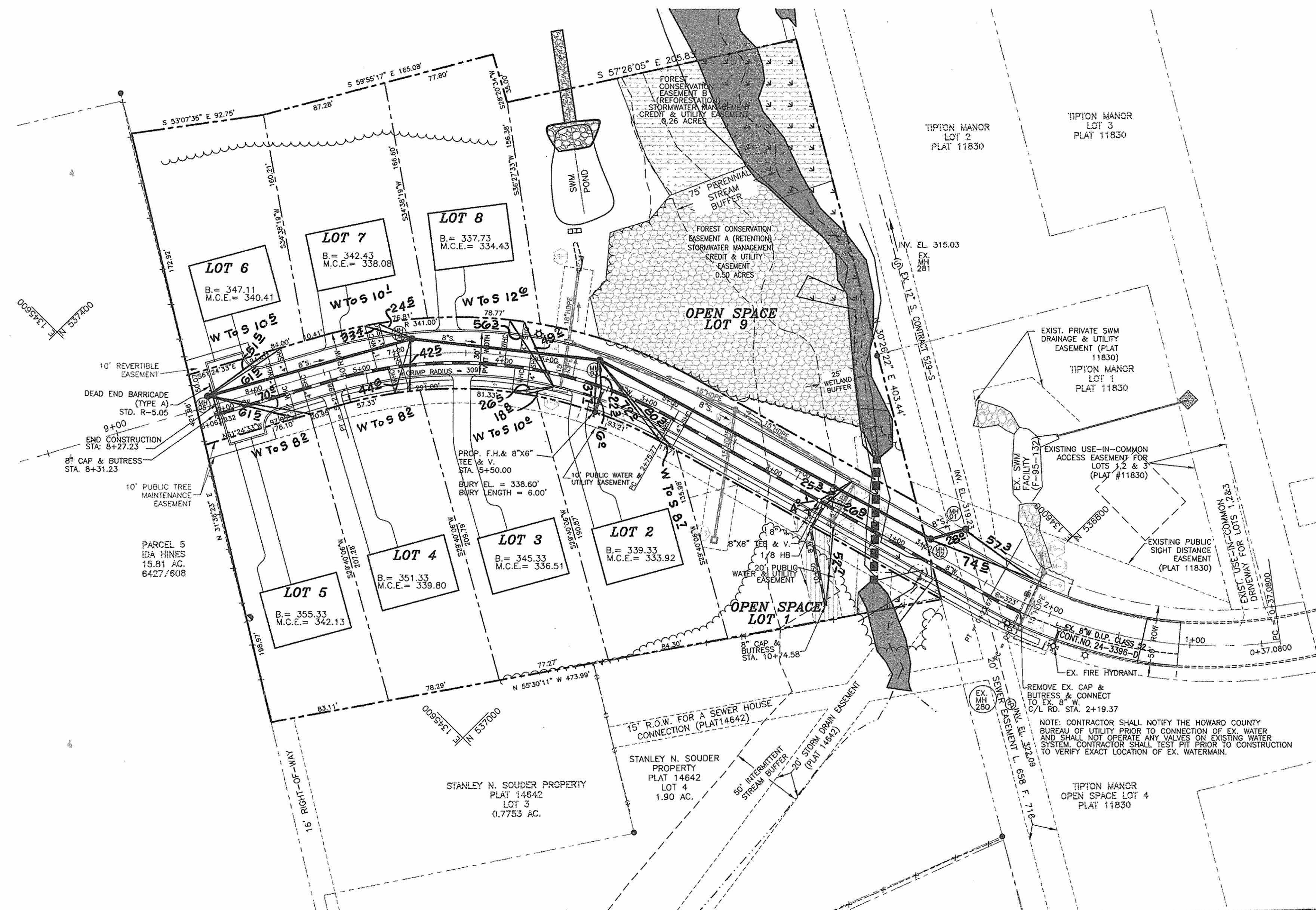
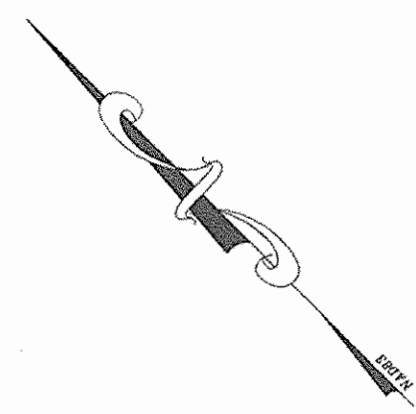
**SUGGESTED SEQUENCE OF CONSTRUCTION FOR SEWER CONSTRUCTION (CONNECTION OF OLD AND NEW SEWER LINES)**

1. BLOCK FLOW UPSTREAM OF EXISTING MANHOLE NUMBER 280 AND PUMP FLOW TO DOWNSTREAM MANHOLE 281.
2. CONSTRUCT NEW MANHOLE NUMBER 1 ON EXISTING 12-IN LINE AND CONNECT EXISTING 8-IN BTWN. MH 280 AND NEW MH-1.
3. RETURN MANHOLE 1 TO SERVICE AND ALLOW FLOW TO PROCEED THROUGH NEW MANHOLE.
4. PLEASE NOTE THAT THIS A SUGGESTED SEQUENCE OF CONSTRUCTION ONLY, THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN SERVICE IN THE EXISTING 12" SEWER AT ALL TIMES.

MANHOLE LOCATION CHART			
MH #	ROAD NAME	CL STATION	OFFSET
1	TIPTON DRIVE	2+80.31	25.58 R
2	TIPTON DRIVE	2+98.21	7.72 R
3	TIPTON DRIVE	5+58.41	10.31 R
4	TIPTON DRIVE	6+85.60	11.28 R
5	TIPTON DRIVE	8+32.27	7.00 R

8" WATER MAIN TABULATION CHART				
#	APPURTENANCE	ROAD NAME	CL STATION	OFFSET
1	8"x 8" T & V	TIPTON DRIVE	3+74.42	7.00 L
2	8" V	TIPTON DRIVE	3+75.00	7.00 L
3	F.H. & 8"x 6" T & V	TIPTON DRIVE	5+50.00	7.00 L
4	8" CAP & BUTRESS	TIPTON DRIVE	8+31.23	7.00 L
5	1/8 HB	TIPTON DRIVE	3+74.42	27.00 L
6	8" CAP & BUTRESS	TIPTON DRIVE	3+32.69	76.29 L

SEWER HOUSE CONNECTION TABULATION CHART			
LOT #	INV. @ EASEMENT	MCE	SLOPE
2	329.31	333.92	2%
3	331.20	336.51	2%
4	334.23	339.80	2%
5	336.34	342.13	2%
6	336.17	340.41	2%
7	333.96	338.08	2%
8	330.91	334.43	1%



- LEGEND**
- EXISTING FIRE HYDRANT
  - 100-YR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT
  - WETLANDS
  - STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT
  - FOREST CONSERVATION EASEMENT B, (REFORESTATION)
  - FOREST CONSERVATION EASEMENT A, (RETENTION)
  - 20' PUBLIC WATER & UTILITY EASEMENT

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.

*On R M J* 4/1/05  
DEVELOPER'S SIGNATURE DATE  
Dorval E. Davis Jr.  
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 COUNTY SOIL CONSERVATION DISTRICT.

*[Signature]* 4/19/05  
ENGINEER'S SIGNATURE DATE  
[Signature]  
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND METS TECHNICAL REQUIREMENTS.

*Jim Meyers* 4/21/05  
NADA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*John R. Robertson* 4/21/05  
HOWARD SCD DATE

**PLAN**  
SCALE: 1" = 50'

**AS BUILT**  
DATE: MAY 2000

**OWNER AND DEVELOPER**  
ELLCOTT CITY LAND HOLDING, INC.  
c/o LAND DESIGN & DEVELOPMENT, INC.  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MARYLAND 21042  
443-367-0422

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 4-26-05  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 4/26/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0296 Balt. (301) 921-5221 Wash. (410) 997-0296 Fax.

*[Signature]*  
HOWARD COUNTY ENGINEER

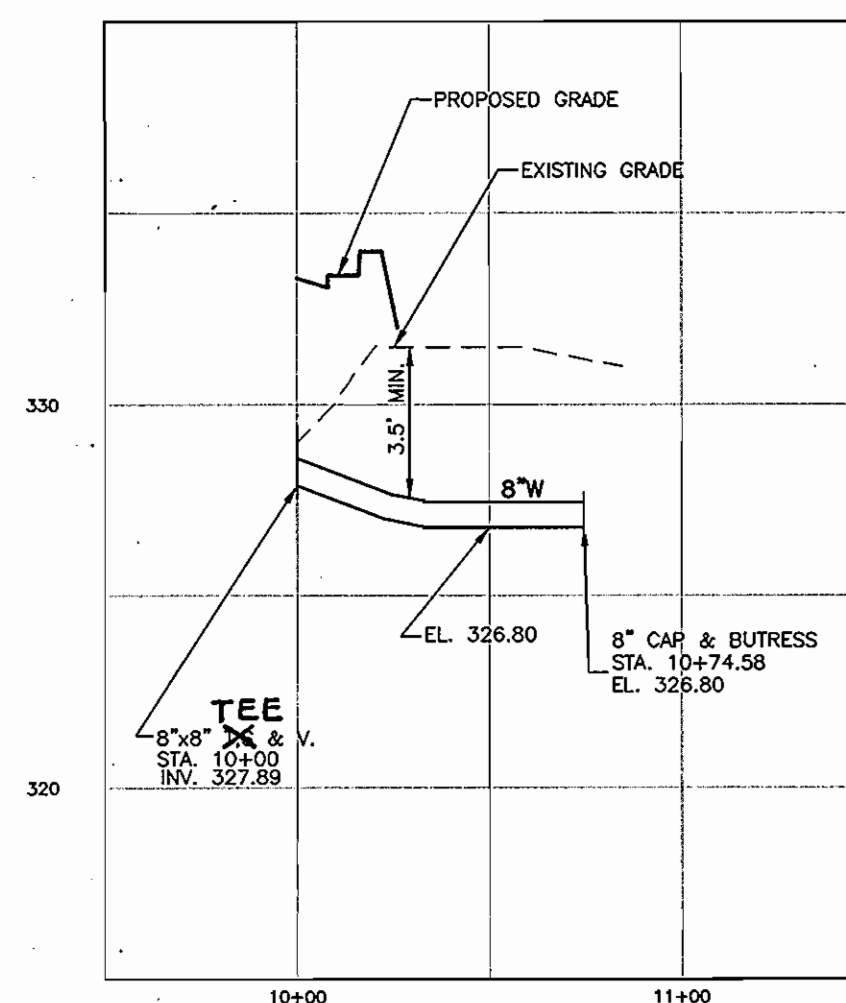
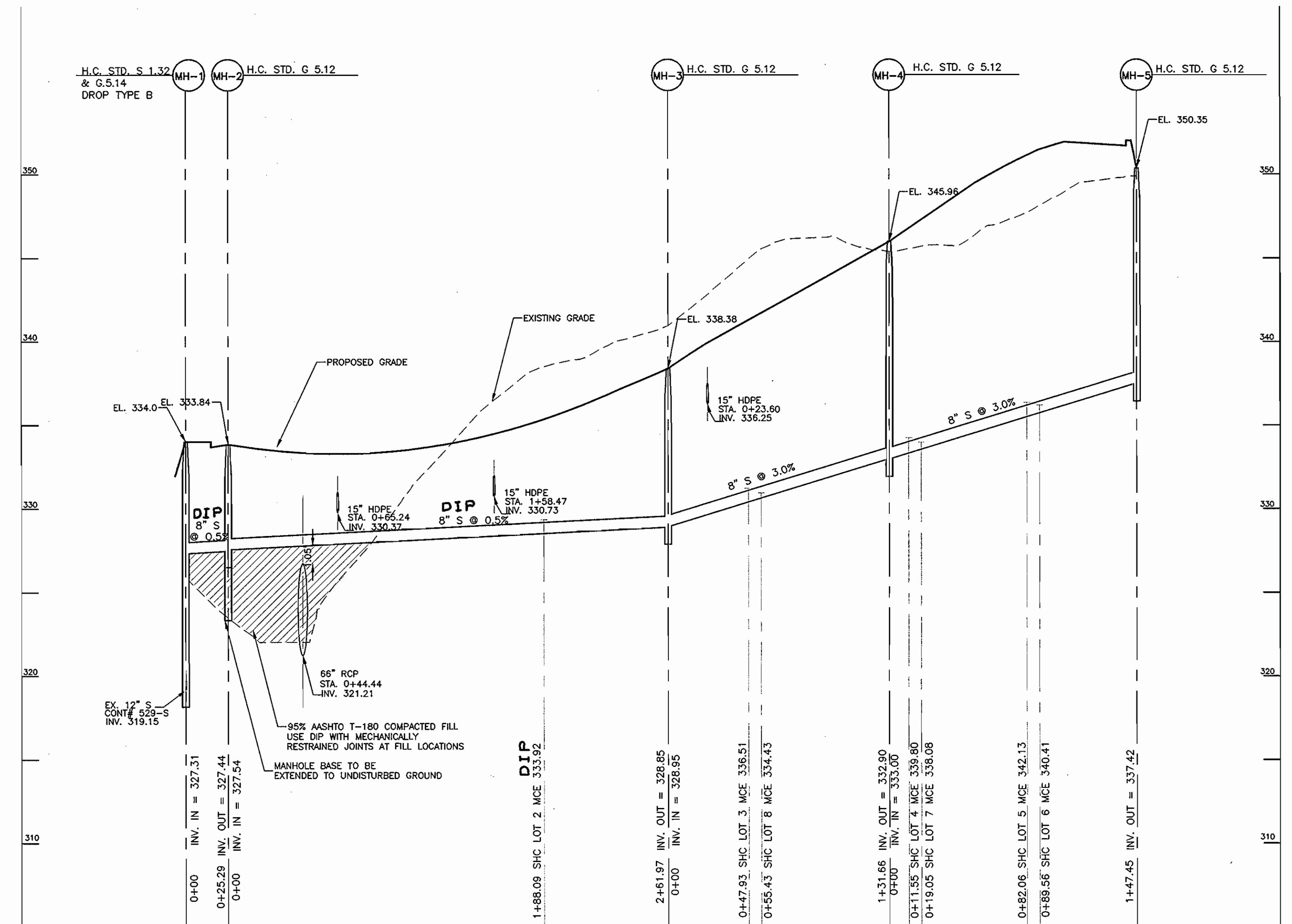
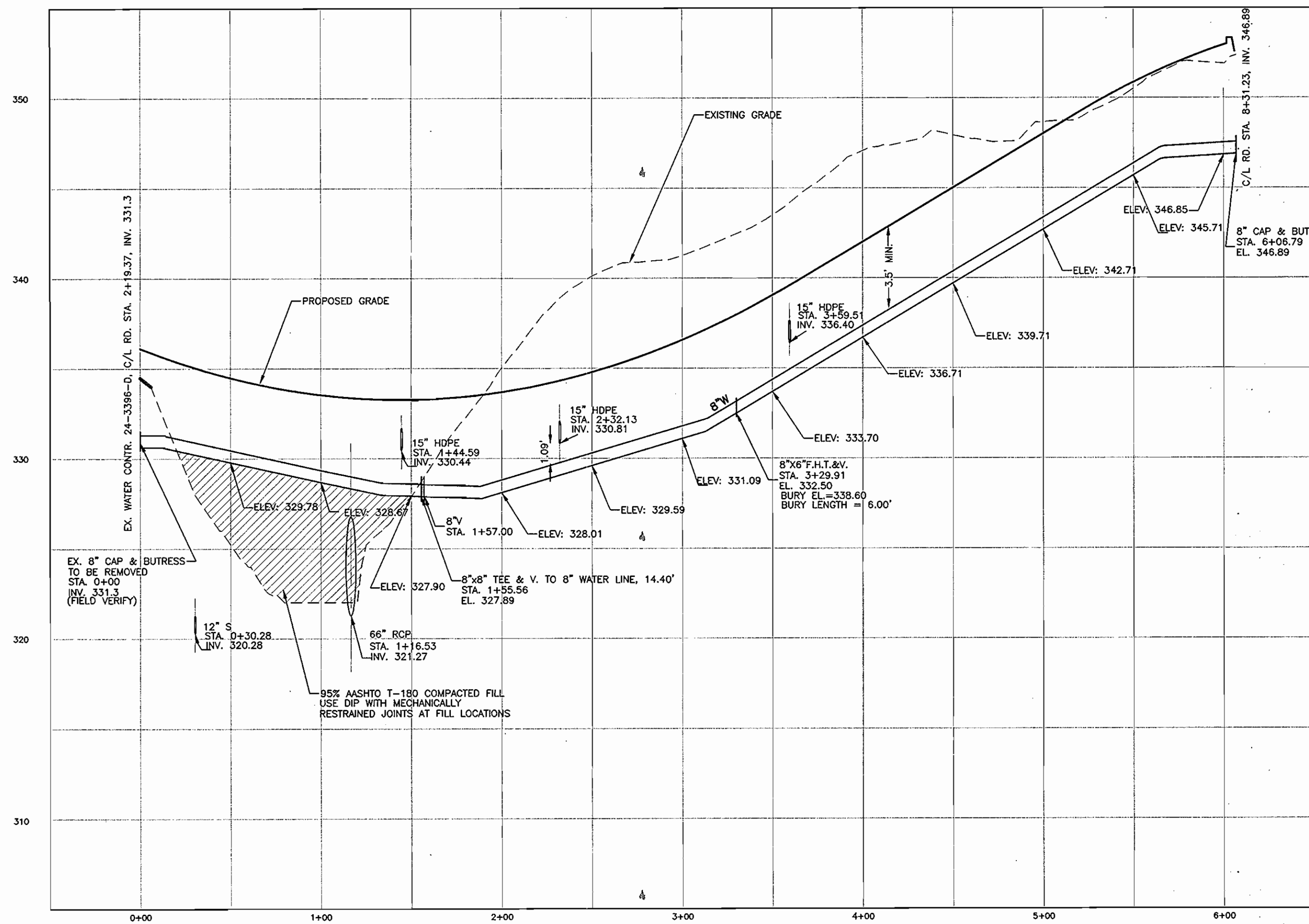
engineering	AMC				
illustration	AMC				
approval	JBM				
project	03051				
date	NOV 2004	BY	NO.	REVISION	DATE

600' SCALE MAP NO. 46, PARCEL B BLOCK NO. 12

**TIPTON OVERLOOK**  
TAX MAP 46, PARCEL 8  
CONTRACT NO.: 24-4244-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY

scale AS SHOWN  
2 OF 3





**NOTE:**  
THE LOCATION AT WHICH THE PROPOSED SEWER MAIN CONNECTS TO THE EXISTING LINE IS AN EXISTING ASBESTOS CEMENT PIPE (ACP). IT IS THEREFORE RECOMMENDED THAT THE PORTION OF EXISTING PIPE BEING CONNECTED TO SHOULD BE LINED WITH AN IN-SITU FORM LINER TO PREVENT FURTHER COMPROMISE OF THE EXISTING PIPE.

SM-1 SLEEVED ONTO EXISTING 12" SEWER USING DRESSER COUPLINGS FROM NEW DIP TO EXISTING ACP NO LINER USED

**AS BUILT**  
DATE: MAY 2000

**OWNER AND DEVELOPER**  
ELLCOTT CITY LAND HOLDING, INC.  
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5300 DORSEY HALL DRIVE  
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*Donald P. Renner* 4/15/05  
DEVELOPER'S SIGNATURE DATE  
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.

*Jim Meyer* 4/12/05  
DATE

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

*John R. Robertson* 4/21/05  
DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Ralph Beaman* 4-26-05  
CHIEF, BUREAU OF UTILITIES DATE DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*John R. Robertson* 4/21/05  
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 Fax (301) 621-5521 Wash. (410) 997-0288 F.F.



engineering	AMC				
illustration	AMC				
approval	JBM				
project	03051				
date	NOV 2004	BY	NO.	REVISION	DATE

**PROFILES**  
600' SCALE MAP NO. 46\_PARCEL 8 BLOCK NO. 12

**TIPTON OVERLOOK**  
TAX MAP 46, PARCEL 8  
CONTRACT NO.: 24-4244-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY