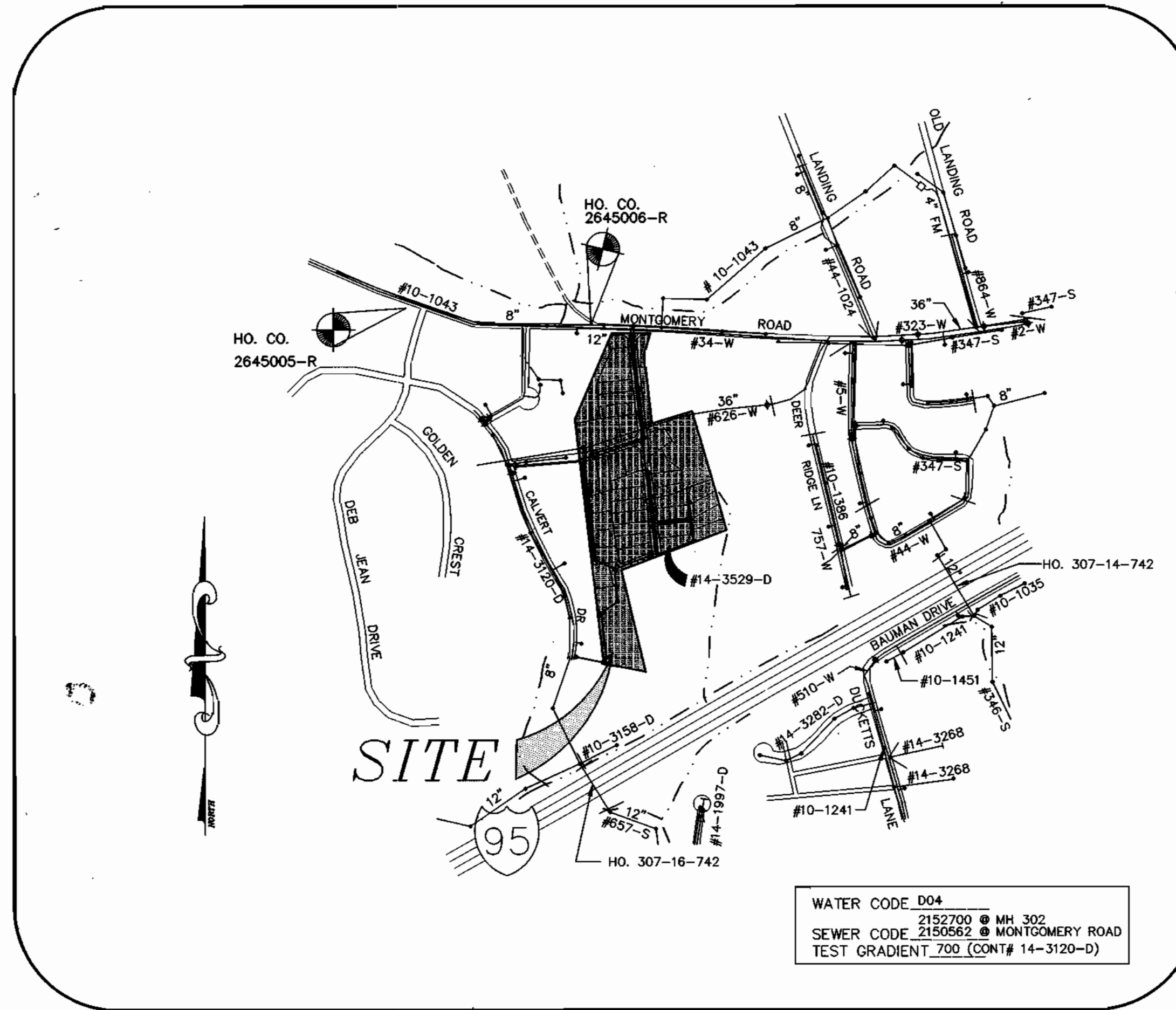


**QUANTITY TABLE**

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	18	18		ATLANTIC CONCRETE
DROP MH, TYPE "B"	1	1		ATLANTIC CONCRETE
INTERMEDIATE LANDING	1	1		ATLANTIC CONCRETE
8" SEWER MAIN	3316 L.F.	3,316		J-M/MFC SALES
4" SEWER HOUSE CONNECTION	1051 L.F.	843		J-M/MFC SALES
# DROP HOUSE CONNECTIONS	48	23		
# SEWER HOUSE CONNECTIONS	9			
# MH CONNECTIONS	8			
8" WATER	1703 L.F.	1,705		GRIFFIN PIPE
6" WATER	623 L.F.	686		GRIFFIN PIPE
4" WATER	239 L.F.	238		GRIFFIN PIPE
F.H.	4	4		KENNEDY/MFC
F.H.T. & V.	4	4		GRIFFIN PIPE
12"x8" TS&V	1	1		CLOW & KENNEDY/MFC
8"x8" T	1	1		GRIFFIN PIPE
8"x6" T	1	1		GRIFFIN PIPE
8"x4" T	1	1		GRIFFIN PIPE
8" V	5	5		KENNEDY/MFC
6" V	1	1		" "
4" V	1	1		" "
8" PLUG & BUTTRESS	1	1		GRIFFIN PIPE
6" CAP & BUTTRESS	1	1		" "
4" CAP & BUTTRESS	1	1		" "
# WHC	36	40		CAMBRIDGE/MFC
3/4" (1" W.N.C. TRP NO. SADDLE) WHC	1,100			CAMBRIDGE/MFC
J" AIR RELEASE MH	1	1		" "
1/2" DRAIN	2	2		FORD/MFC
NAME OF UTILITY CONTRACTOR: CONSOLIDATED CONSTRUCTION SERVICE INC.(C)				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				



**VICINITY MAP**

SCALE: 1"=600'

TYPE OF BUILDING	SFD
No. OF UNITS	36 40
No. OF WATER HOUSE CONNECTION	36 40
No. OF SEWER HOUSE CONNECTIONS	36 40
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO WASTE WATER TREATMENT PLANT

**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 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 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 531-5533
  - BG & E CO. CONTRACTOR SERVICES 850-4620
  - BG & E CO. UNDERGROUND DAMAGE CONTROL 787-9068
  - MISS UTILITY 1-800-257-7777
  - COLONIAL PIPELINE CO. 795-1390
  - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES 313-4900
- 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.
- 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.
- 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.
- ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITH 2'-0" OF EXTERIOR MANHOLE WALL.
- 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 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.
- ALL WATER METERS TO BE LOCATED INSIDE PROPOSED UNITS.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- ALL CLEANOUTS AND BALL VALVES ARE TO BE LOCATED AT THE WATER, SEWER AND UTILITY EASEMENT LINE.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENSING CONSTRUCTION.
- SEDIMENT CONTROL TO BE PROVIDED BY F-96-165. ALL WATER AND SEWER CONSTRUCTION TO BE INSIDE F-96-165'S LIMIT OF DISTURBANCE, EXCEPT AS SHOWN ON SHEET 3 OF 8.
- ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE.
- ALL WATER HOUSE CONNECTIONS TO BE 3/4" IN SIZE.
- ALL WATER HOUSE CONNECTIONS TO BE 3/4" IN SIZE UNLESS OTHERWISE NOTED.
- ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED.
- THERE WILL BE NO TWIN SEWER HOUSE CONNECTIONS ON SITE UNLESS APPROVED BY HOWARD COUNTY.
- ALL WATER MAINS TO BE 8", 6", OR 4" DIP CLASS 52.
- THE EXISTING WATER AND SEWER HOUSE CONNECTIONS SERVICING THE EXISTING HOUSE ARE TO BE ABANDONED.
- STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY, SEE ROAD PLANS FOR CONSTRUCTION DATA.

**CONTRACT NO.: 14-3529-D  
RAUSCH PROPERTY  
LOTS 4-42-46**

**WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS**

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PLAN
4	WATER PROFILES
5	WATER PROFILES
6	SEWER PROFILES
7	SEWER PROFILES
8	SEDIMENT CONTROL NOTES AND DETAILS

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.

*J. Thomas Scrivener* 1/14/98  
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.

*R. Jacob Hikmat* 1/14/98  
ENGINEER'S SIGNATURE DATE  
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*Cheerl Simmons* 1/23/98  
USDA-NATURAL RESOURCES SERVICE DATE

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

*John K. Robertson* 1/23/98  
HOWARD SCD DATE

PLAN REFERENCE NUMBERS

S-94-34	F-96-165
P-96-09	
F-84-160	
F-94-54	

CONTRACT NO.: 14-3529-D  
RAUSCH PROPERTY  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Reimer</i> 1-20-98 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>John K. Robertson</i> 1/23/98 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	<b>MILDENBERG, BOENDER &amp; ASSOC., INC.</b> Engineers Planners Surveyors 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Fax (301) 621-5211 Wash. (410) 997-0298 Fax	engineering SJD illustration SJD approval <i>K.C.I.</i> 3 ASBUILT CONDITIONS ADDED TO PLAN <i>colb561</i> project 97027 <i>R.C.J.</i> 2 ASBUILT CONDITIONS ADDED TO PLAN <i>colb561</i> date JAN 1998 BY NO. REVISION DATE 600' SCALE MAP NO. 37 BLOCK NO. 6 & 12	"ASBUILT" TITLE SHEET	<b>RAUSCH PROPERTY</b> LOTS 4-46 CONTRACT NO. 14-3529-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale AS SHOWN 1 of 8
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**WATER MAIN TABULATION CHART**

RUXTON DRIVE		
STATION	APPURTENANCE	DIST. FROM C
0+14.83	12"X8" TS&V	7' RT.
0+79.68	8"X8" F.H.T.	7' RT.
5+74.13	8"X8" F.H.T.	7' RT.
6+60.38	8" V	7' RT.
6+64.38	AIR RELEASE MH	7' RT.
6+68.38	8"X8" F.H.T.	7' RT.
6+73.38	8" V	7' RT.
11+50.45	8"X4" T	7' RT.
11+50.45	4" V	2' RT.
11+50.45	1 1/2" DRAIN	230.17' LT.
11+50.45	4" C&B	231.67' LT.
11+55.45	8" V	7' RT.
13+33.33	8" P&B	7' RT.

ELK MAR DRIVE		
STATION	APPURTENANCE	DIST. FROM C
7+56.44	8" V	7' RT.
4+70.75	8"X8" F.H.T.	7' RT.
4+09.40	8"X8" T	7' RT.
4+08.22	6" V	12' RT.
4+04.44	8" V	7' RT.
3+93.65	8"-1/8 H.B.	7' RT.
3+83.61	8"-1/8 H.B.	17.35' RT.
3+97.26	1 1/2" DRAIN	627.64' RT.
3+97.24	6" C&B	629.13' RT.

**MANHOLE LOCATION CHART**

MH #	ROAD OR NORTHING & EASTING	CL STATION	OFFSET
1	CALVERT DRIVE	19+58.38	24.31' LT.
2	N 500,060.859 E 869,560.577		
3	N 500,081.087 E 869,575.358		
4	N 500,242.129 E 869,557.680		
5	N 500,310.174 E 869,651.916		
6	N 500,496.387 E 869,638.988		
7	RUXTON DRIVE	13+27.41	42.80' RT.
8	RUXTON DRIVE	13+30.75	2.88' LT.
9	RUXTON DRIVE	9+94.00	7.00' LT.
10	RUXTON DRIVE	8+54.00	7.00' LT.
11	RUXTON DRIVE	12+84.92	221.19' LT.
12	RUXTON DRIVE	10+50.06	221.67' RT.
13	N 500,552.797 E 869,519.478		
14	N 500,825.403 E 869,489.545		
15	N 501,905.280 E 869,755.288		
16	RUXTON DRIVE	1+11.43	5.47' LT.
17	RUXTON DRIVE	3+60.86	7.00' LT.
18	RUXTON DRIVE	6+48.27	7.00' LT.
19	ELK MAR DRIVE	5+41.00	7.96' LT.



PLAN REFERENCE NUMBERS

S-94-34	F-96-165
P-96-09	
F-84-160	
F-94-54	

CONTRACT NO. 14-3529-D  
 RAUSCH PROPERTY  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 Chief, Development Engineering Division

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

engineering	SJD	
illustration	SJD	
approval	K.C.I. 3	AS-BUILT CONDITIONS ADDED TO PLAN (SEWER)
project	97027	AS-BUILT CONDITIONS ADDED TO PLAN
date	JAN 1998	ADD LOT 41 WMC & DHC AND MCE & REVISE LOT NUMBERS

**"ASBUILT" WATER AND SEWER PLAN**  
 600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

**RAUSCH PROPERTY**  
 LOTS 4-46  
 CONTRACT NO. 14-3529-D  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale 1" = 50'  
 2 of 8

**WATER MAIN TABULATION CHART**

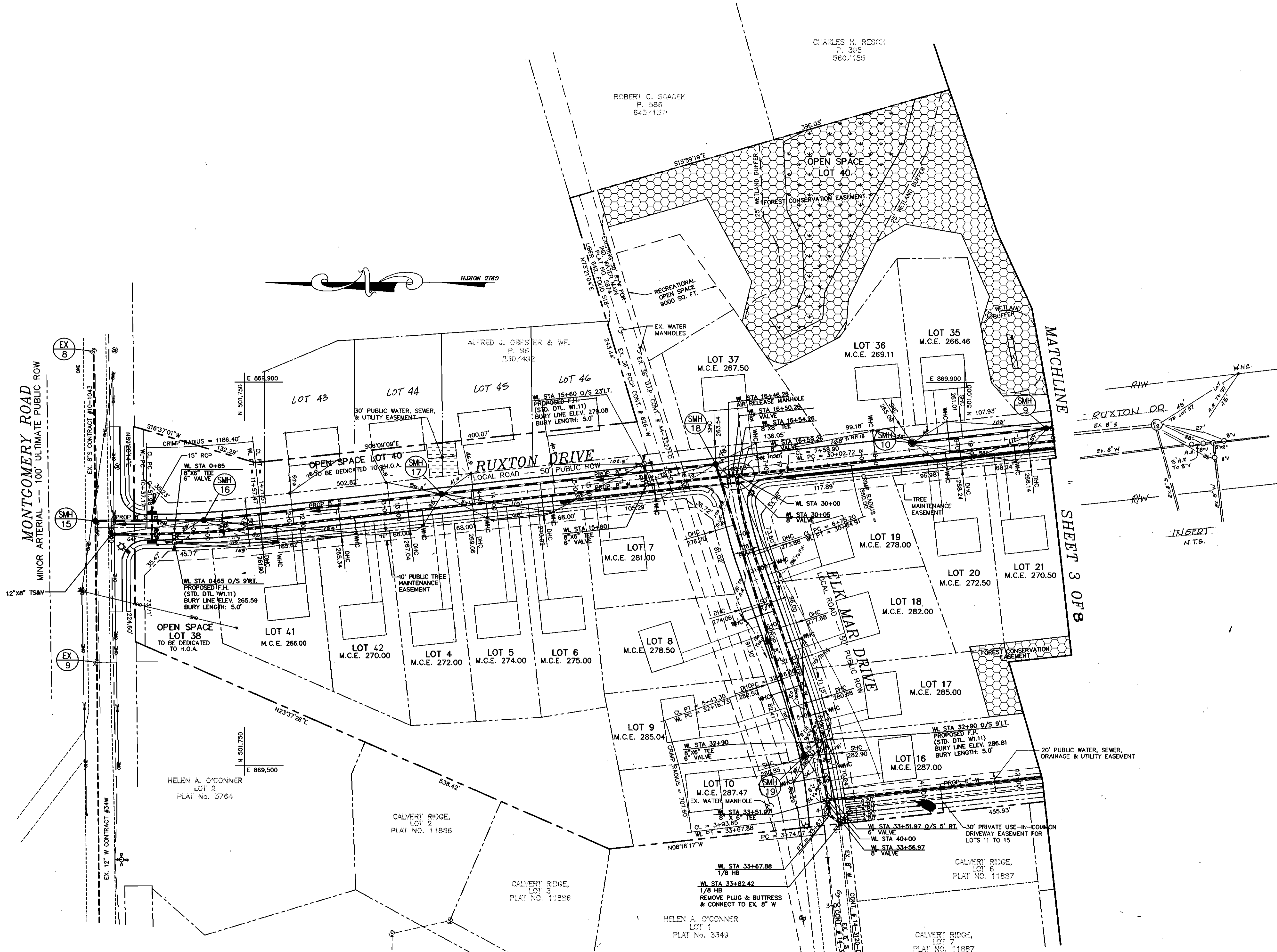
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CHARLES H. RESCH  
P. 395  
560/155

ROBERT C. SPACEK  
P. 586  
643/137

PLAN REFERENCE NUMBERS

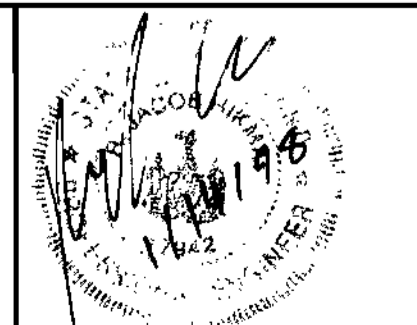
S-94-34	F-96-165
P-96-09	
F-84-160	
F-94-54	

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

DATE: 1-20-98

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Elkton City, Maryland 21042  
(410) 997-0286 Ball. (301) 621-5521 Wash. (410) 997-0286 Fax



engineering	SJD				
illustration	SJD				
approval	KREI 3	ASBUILT CONDITIONS ADDED TO PLAN (WATER)	0/4/01		
project	KOL 2	ASBUILT CONDITIONS ADDED TO PLAN	16-08-96		
date	97027	RCJ 1	ADD LOT 41 WHC & DHC AND MCE & REVISE LOT NUMBERS	8-11-98	
BY	JAN 1998	NO.		REVISION	DATE

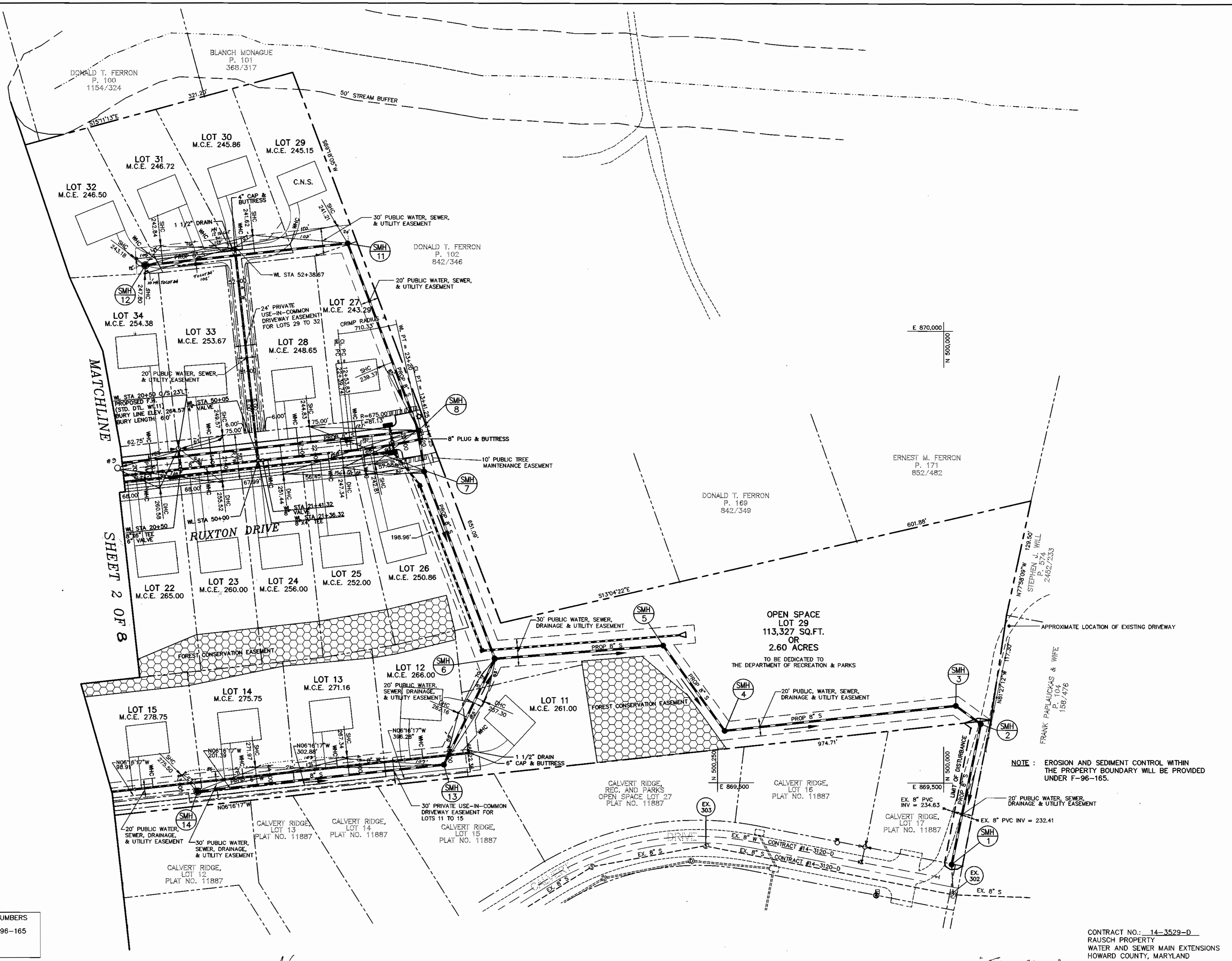
**"ASBUILT"**  
**WATER AND SEWER PLAN**

600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

**RAUSCH PROPERTY**  
LOTS 4-46  
CONTRACT NO. 14-3529-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
1" = 50'  
2 OF 8





E 870,000  
N 500,000

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.

DEVELOPER'S SIGNATURE: *J. Thomas Scrivener* DATE: 1/14/98  
DEVELOPER'S NAME: J. THOMAS SCRIVENER

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.

ENGINEER'S SIGNATURE: *R. Jacob Hikmat* DATE: 11/14/98  
ENGINEER'S NAME: R. JACOB HIKMAT

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*Deep Simmons* DATE: 1/23/98  
LIBRA-NATURAL RESOURCES CONSERVATION SERVICE

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

*John P. Roberts* DATE: 1/23/98  
HOWARD SCD

PLAN REFERENCE NUMBERS  
S-94-34 F-96-165  
P-96-09  
F-84-160  
F-94-54

NOTE: EROSION AND SEDIMENT CONTROL WITHIN THE PROPERTY BOUNDARY WILL BE PROVIDED UNDER F-96-165.

CONTRACT NO. 14-3529-D  
RAUSCH PROPERTY  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

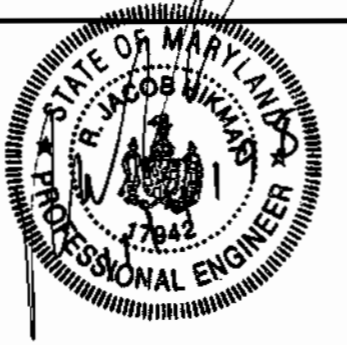
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert M. Bennett* 1-20-98  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 1/24/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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



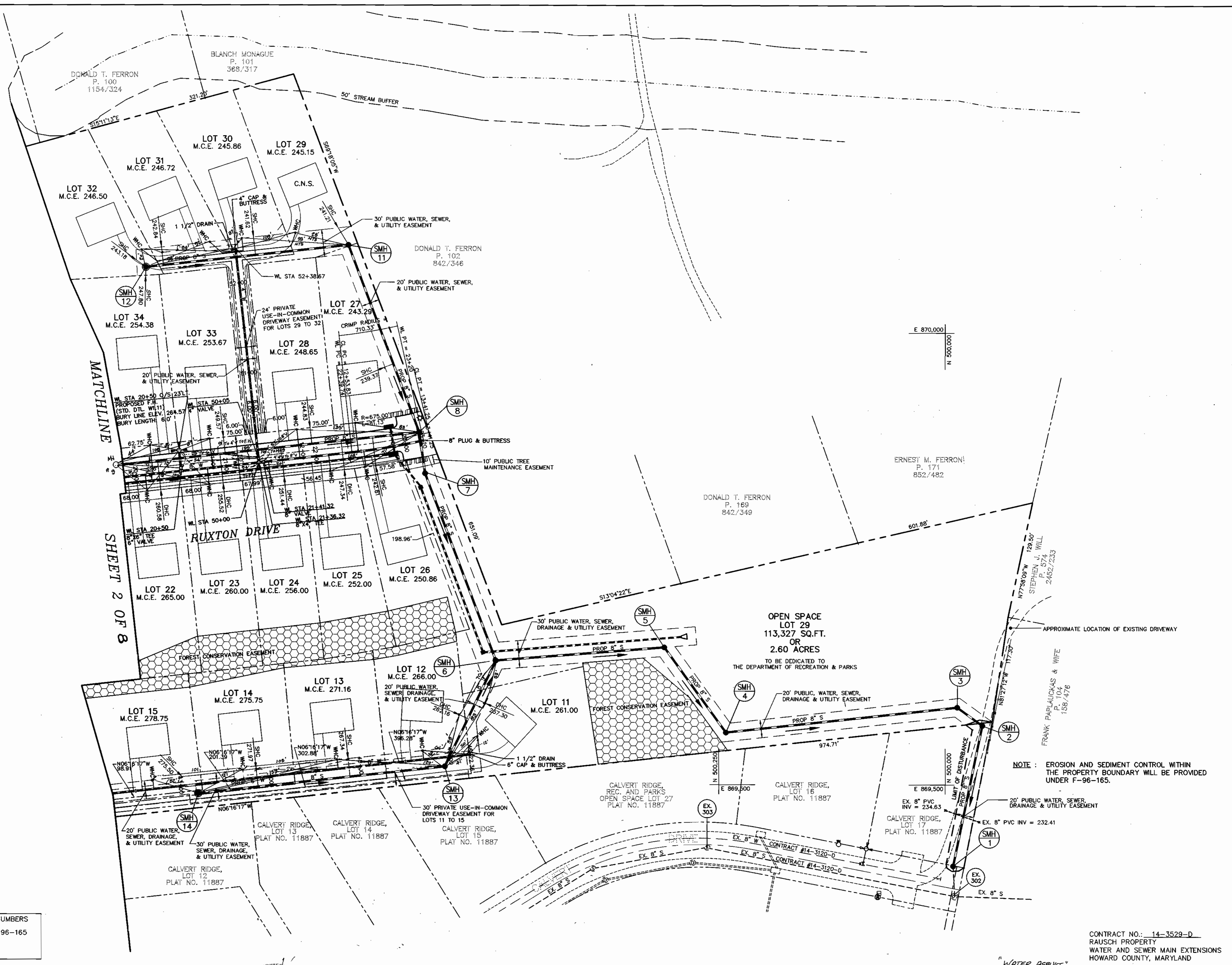
engineering	SJD				
illustration	SJD				
approval					
project	97027	K.C.I.	2	ASBUILT CONDITIONS ADDED TO PLAN (SEWER)	10/26/98
date	JAN 1998	SJD	1	REVISE LOT NUMBERS	8-12-98
BY	NO.			REVISION	DATE

"ASBUILT" WATER AND SEWER PLAN  
600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

RAUSCH PROPERTY  
LOTS 4-46  
CONTRACT NO. 14-3529-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale 1" = 50'  
3 of 8





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.

DEVELOPER'S SIGNATURE: *J. Thomas Scrivener* DATE: 1/4/98  
 DEVELOPER'S NAME: J. THOMAS SCRIVENER

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.

ENGINEER'S SIGNATURE: *R. Jacob Hikmat* DATE: 11/14/98  
 ENGINEER'S NAME: R. JACOB HIKMAT

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
*Deep Simmons* DATE: 1/23/98  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.  
*John P. Roberts* DATE: 1/23/98  
 HOWARD SCD

PLAN REFERENCE NUMBERS

S-94-34	F-96-165
P-96-09	
F-84-160	
F-94-54	

NOTE: EROSION AND SEDIMENT CONTROL WITHIN THE PROPERTY BOUNDARY WILL BE PROVIDED UNDER F-96-165.

CONTRACT NO.: 14-3529-D  
 RAUSCH PROPERTY  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John P. Roberts* 1-20-98  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

*[Signature]* 1/24/98  
 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 Baltimore (301) 621-5521 Wash. (410) 997-0296 Fax



engineering	SJD				
illustration	SJD				
approval					
project	97027	KCF 2	ASBUILT CONDITIONS ADDED TO PLAN (WATER)	10-28-98	
		SJD 1	REVERSE LOT NUMBERS	8-12-98	
date	JAN 1998	BY NO.	REVISION	DATE	600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

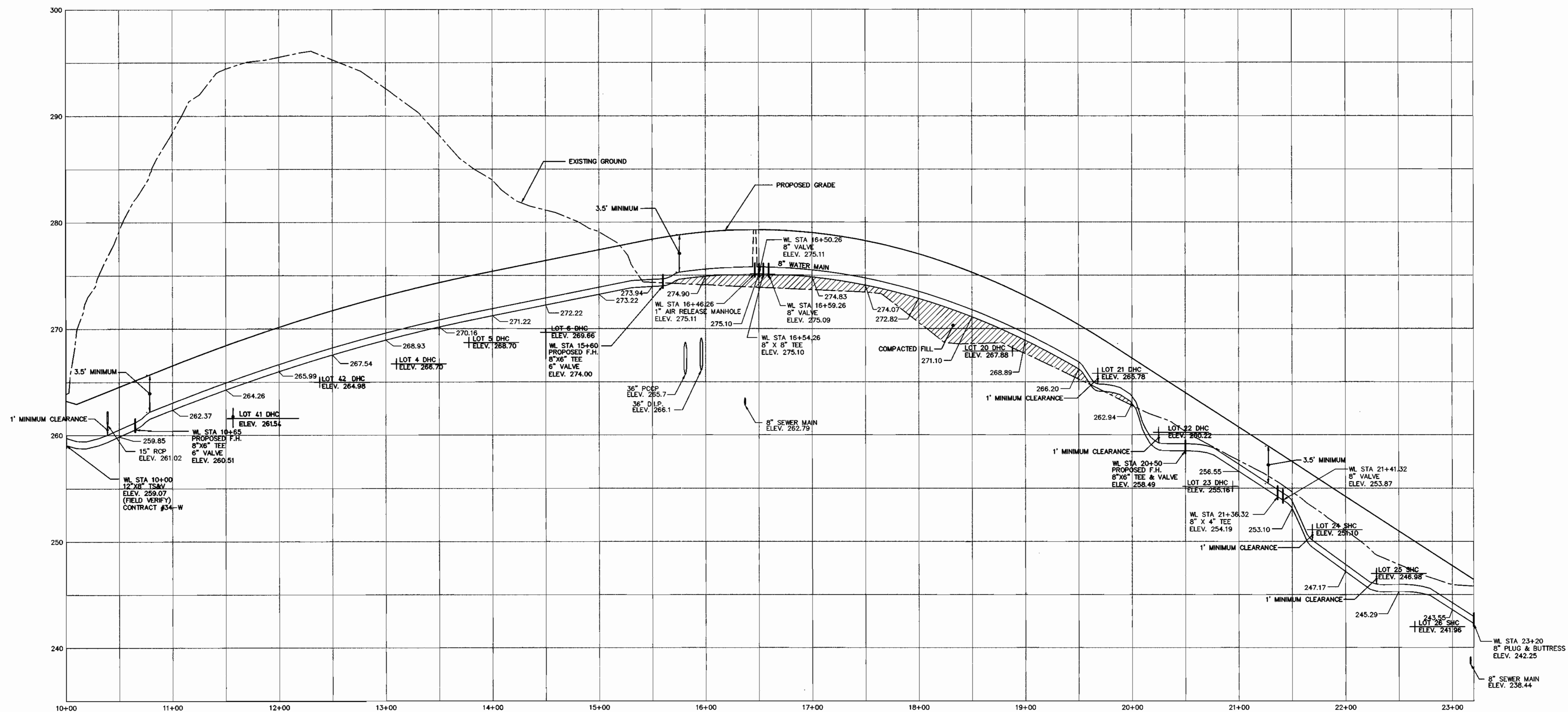
"ASBUILT"  
**WATER AND SEWER PLAN**

**RAUSCH PROPERTY**  
 LOTS 4-46  
 CONTRACT NO. 14-3529-D  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale 1" = 50'  
 3 OF 8

MONTGOMERY ROAD

RUXTON DRIVE



WATER PROFILE STA 10+00.00 TO STA 23+20

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

CONTRACT NO.: 14-3529-D  
RAUSCH PROPERTY  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**MILDENBERG, BOENDER & ASSOC., INC.**  
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engineering	SJD				
illustration	SJD				
approval					
project	97027				
date	JAN 1998	BY	NO.	REVISION	DATE
				ADD DHC CROSSING FOR LOT 41 & REVISE LOT NUMBERS	8-12-98

WATER PROFILES

**RAUSCH PROPERTY**  
LOTS 4-46  
CONTRACT NO. 14-3529-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN

4 of 8

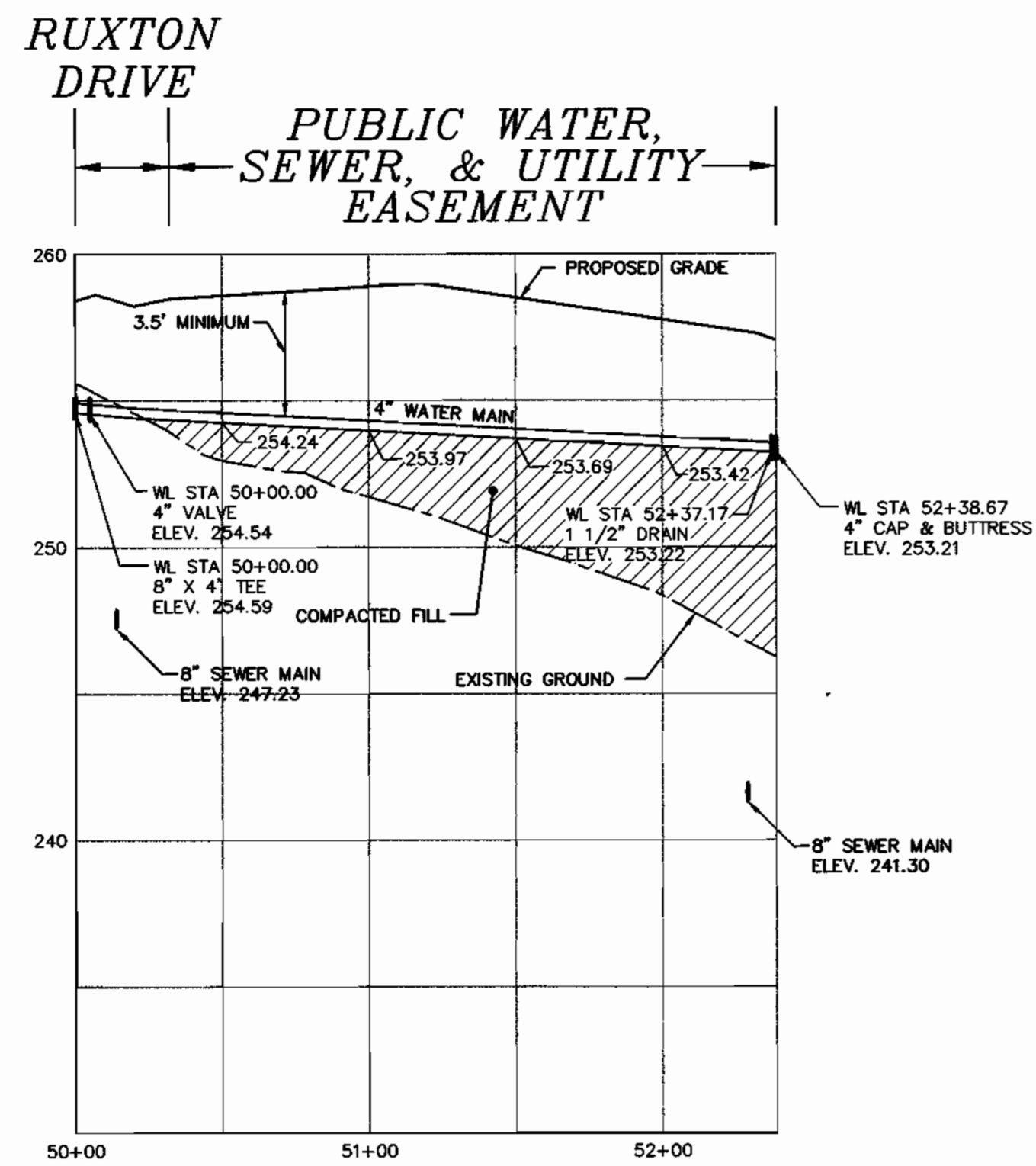
P. 17027.DWG (FINAL) 12-98

Robert M. Boender 1-20-98  
CHIEF, BUREAU OF UTILITIES DATE

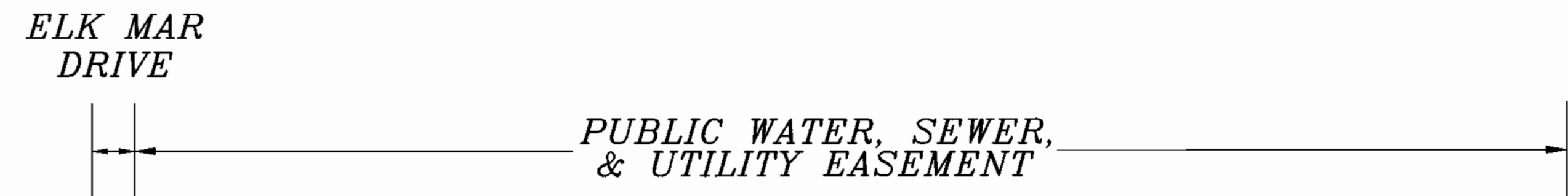
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

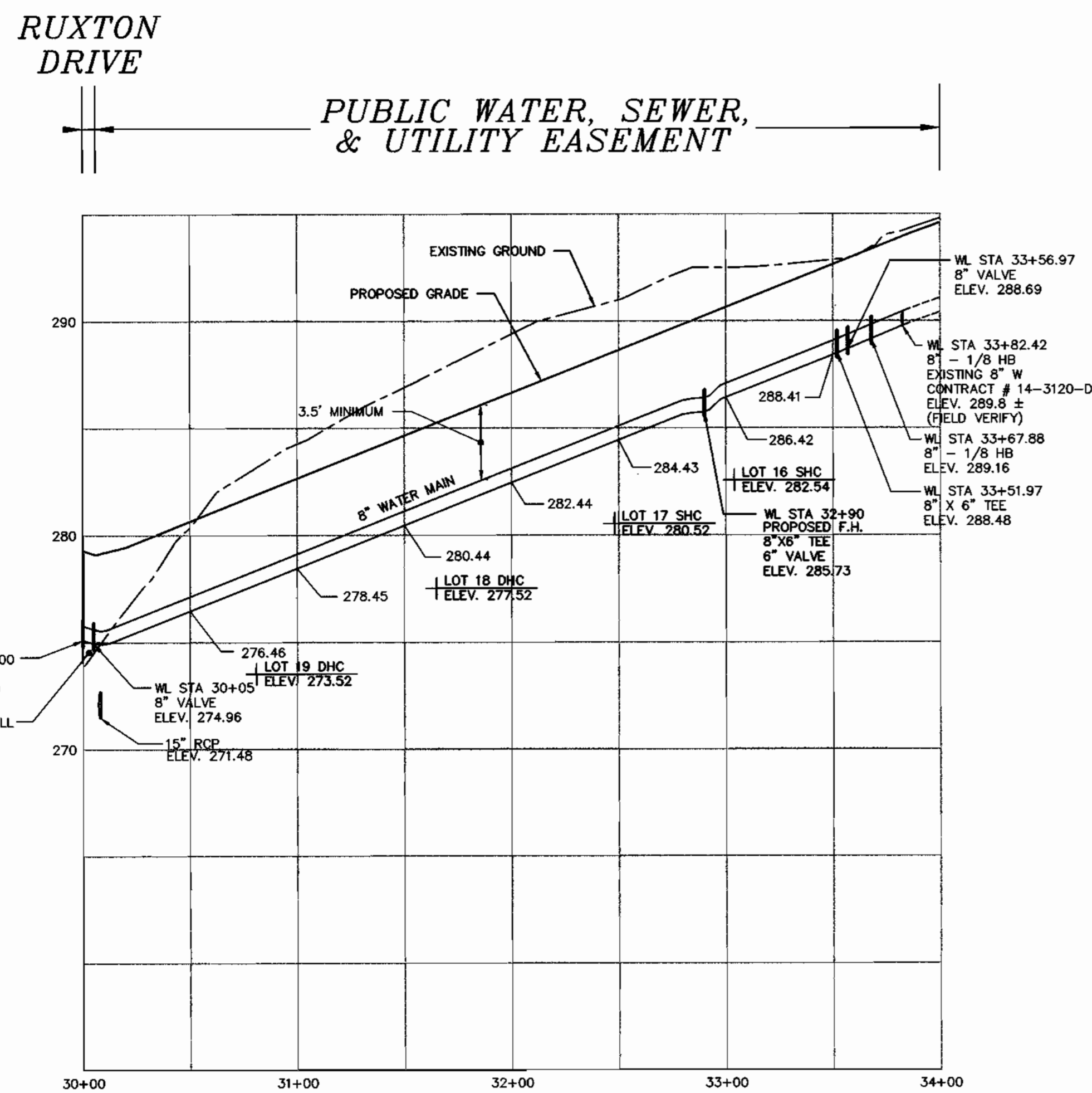




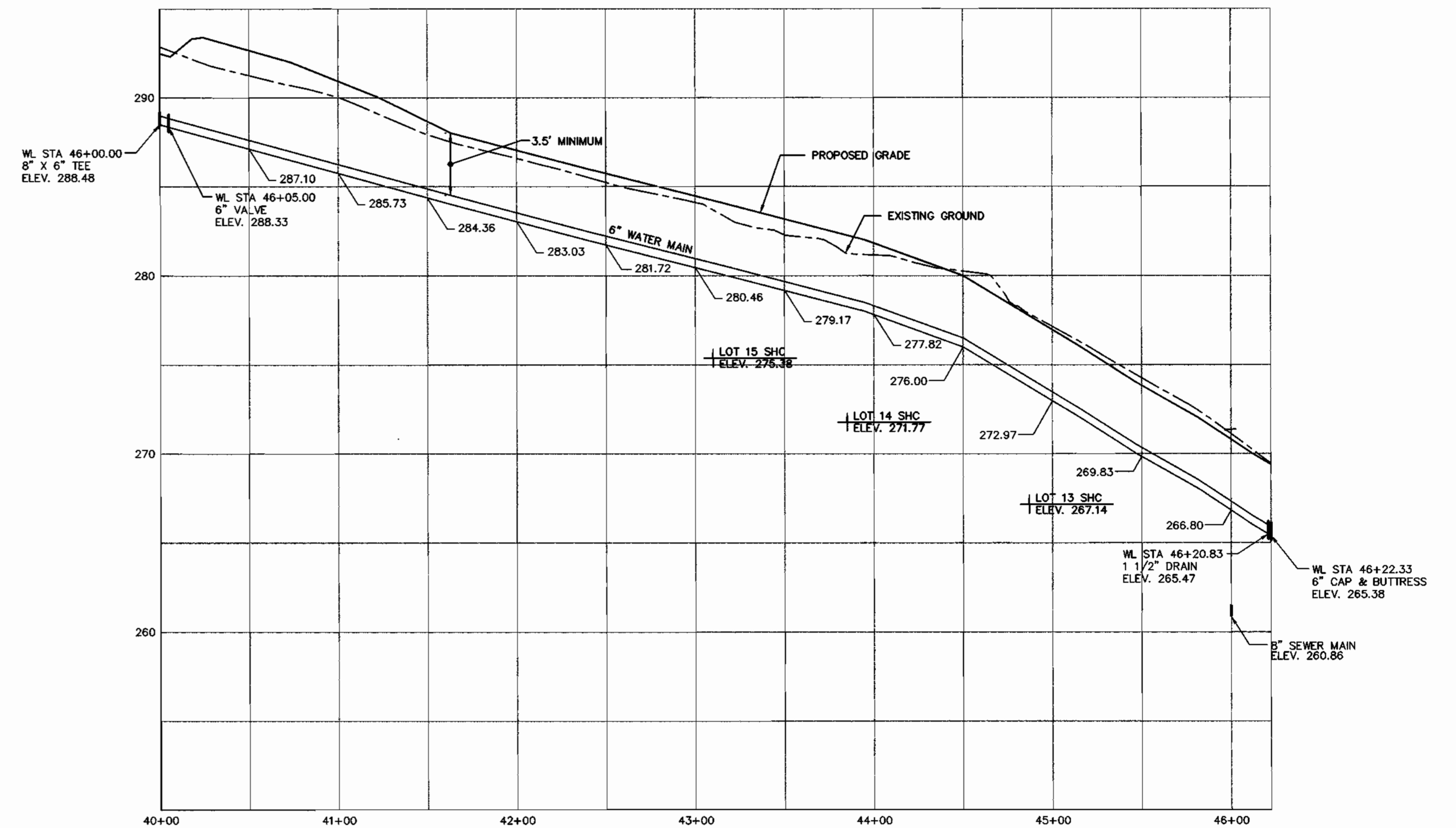
**WATER PROFILE STA 50+00.00 TO STA 52+38.67**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**WATER PROFILE STA 40+00.00 TO STA 46+22.33**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**WATER PROFILE STA 30+00.00 TO STA 33+82.42**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



CONTRACT NO.: 14-3529-D  
 RAUSCH PROPERTY  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

**MILDENBERG,  
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5875 Dorsey Hill Drive, Suite 202, Elkton City, Maryland 21042  
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engineering	SJD				
illustration	SJD				
approval					
project	97027	SJD	1	REVISE LOT NUMBERS	8-12-98
date	JAN 1998	BY	NO.	REVISION	DATE

**WATER PROFILES**

600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

**RAUSCH PROPERTY**  
 LOTS 4-46  
 CONTRACT NO. 14-3529-D  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS SHOWN

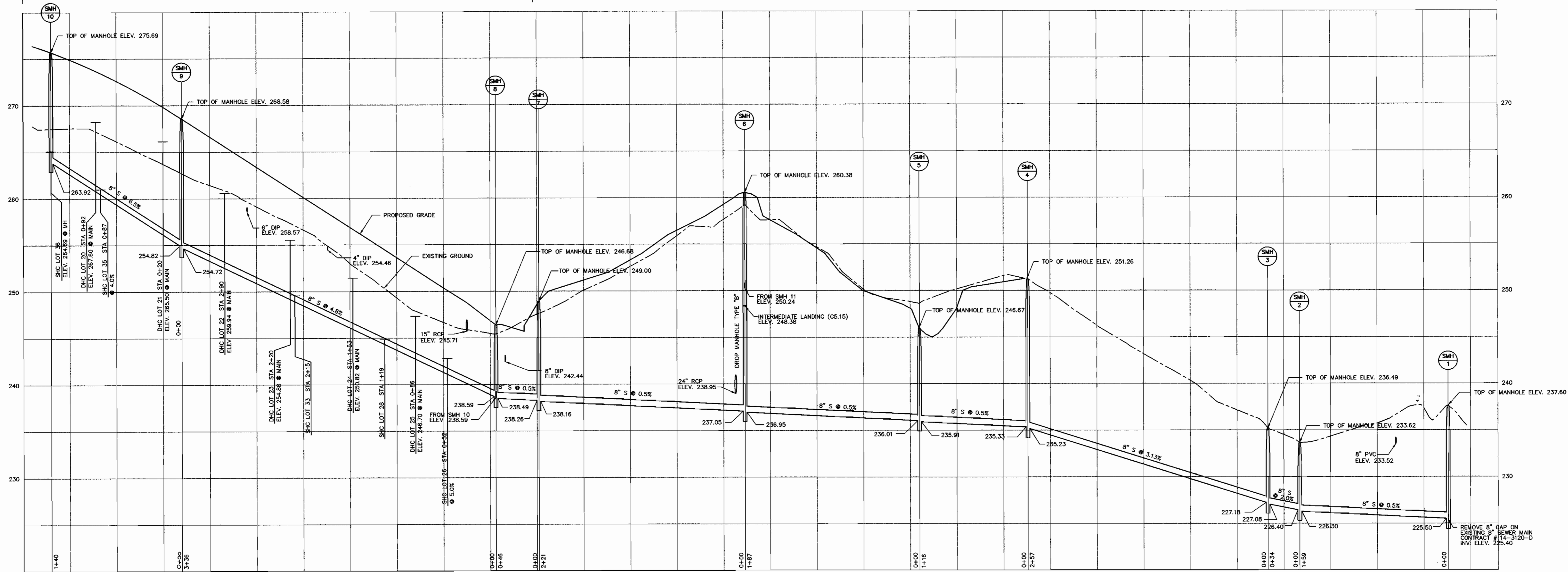
5 of 8

Robert M. Boender 1-20-98  
 CHIEF, BUREAU OF UTILITIES DATE

[Signature] 1/26/98  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

RUXTON DRIVE

PUBLIC WATER, SEWER, DRAINAGE, & UTILITY EASEMENT



SEWER PROFILE SMH 10 TO SMH 1

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

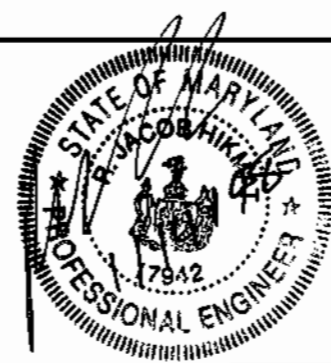
CONTRACT NO. 14-3529-D  
RAUSCH PROPERTY  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**MILDENBERG,  
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Engineers Planners Surveyors

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engineering	SJD				
illustration	SJD				
approval					
project	97027				8-12-98
date	JAN 1998	BY	NO.	REVISION	DATE
				REVISE LOT NUMBERS	

SEWER PROFILES

60' SCALE MAP NO. 37 BLOCK NO. 6 & 12

**RAUSCH PROPERTY**  
LOTS 4-46  
CONTRACT NO. 14-3529-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN

6 of 8

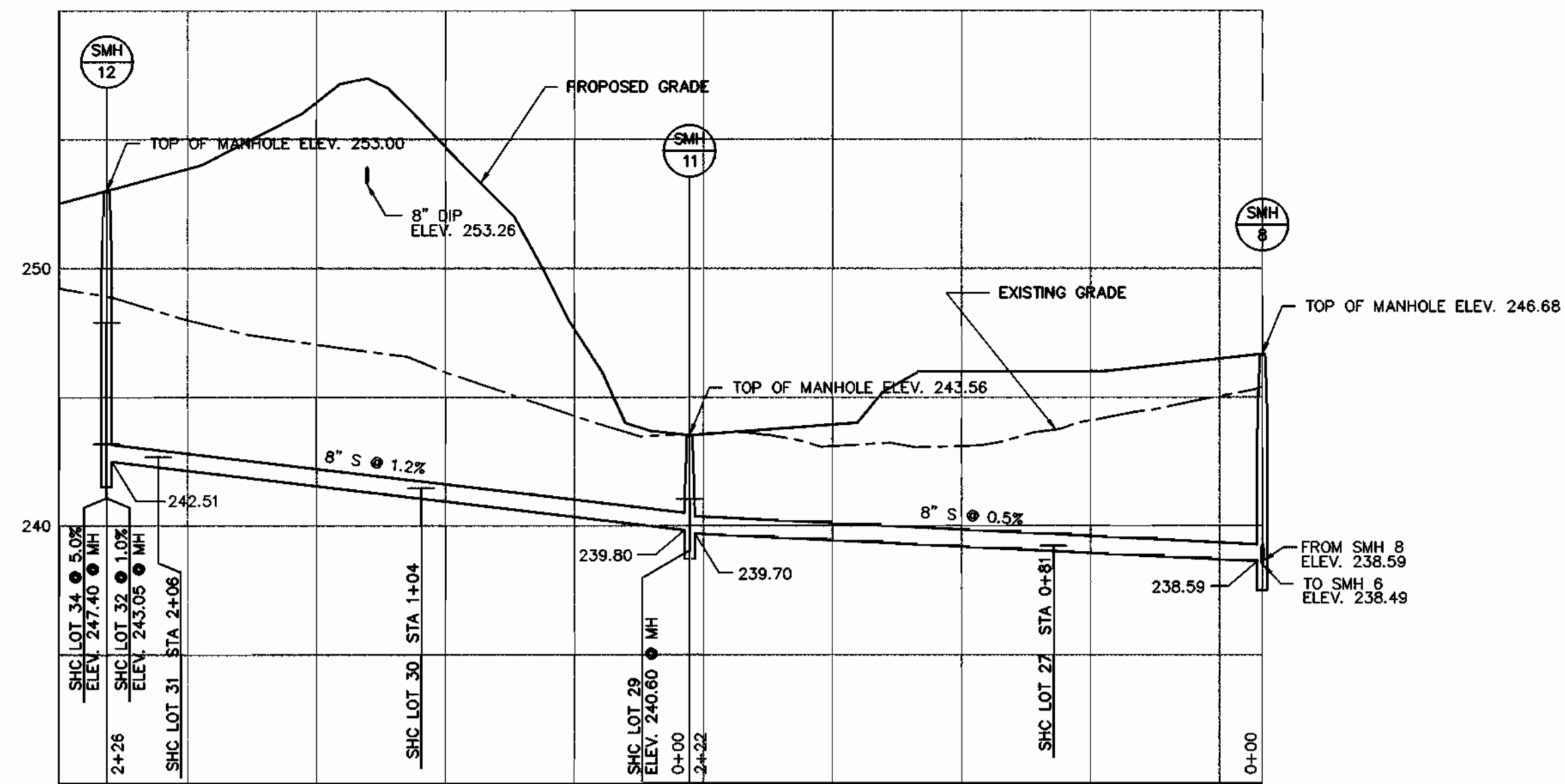
F:\97027\DWG\FINAL\27-WS-2.DWG

Robert M. Boender 1-20-98  
CHIEF, BUREAU OF UTILITIES DATE

DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PUBLIC WATER, SEWER, & UTILITY EASEMENT

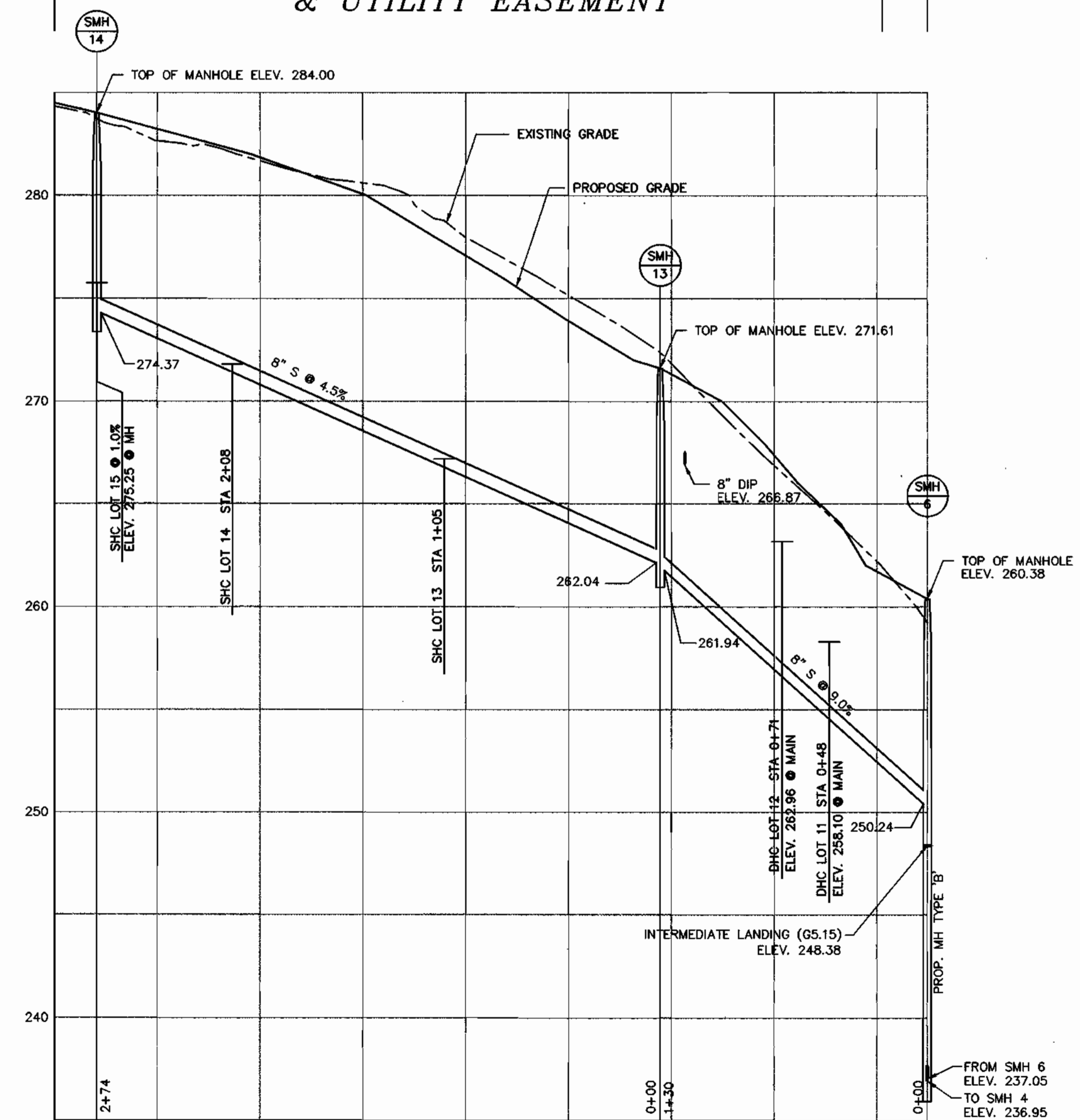


SEWER PROFILE SMH 12 TO SMH 8

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

RUXTON DRIVE

PUBLIC WATER, SEWER, & UTILITY EASEMENT

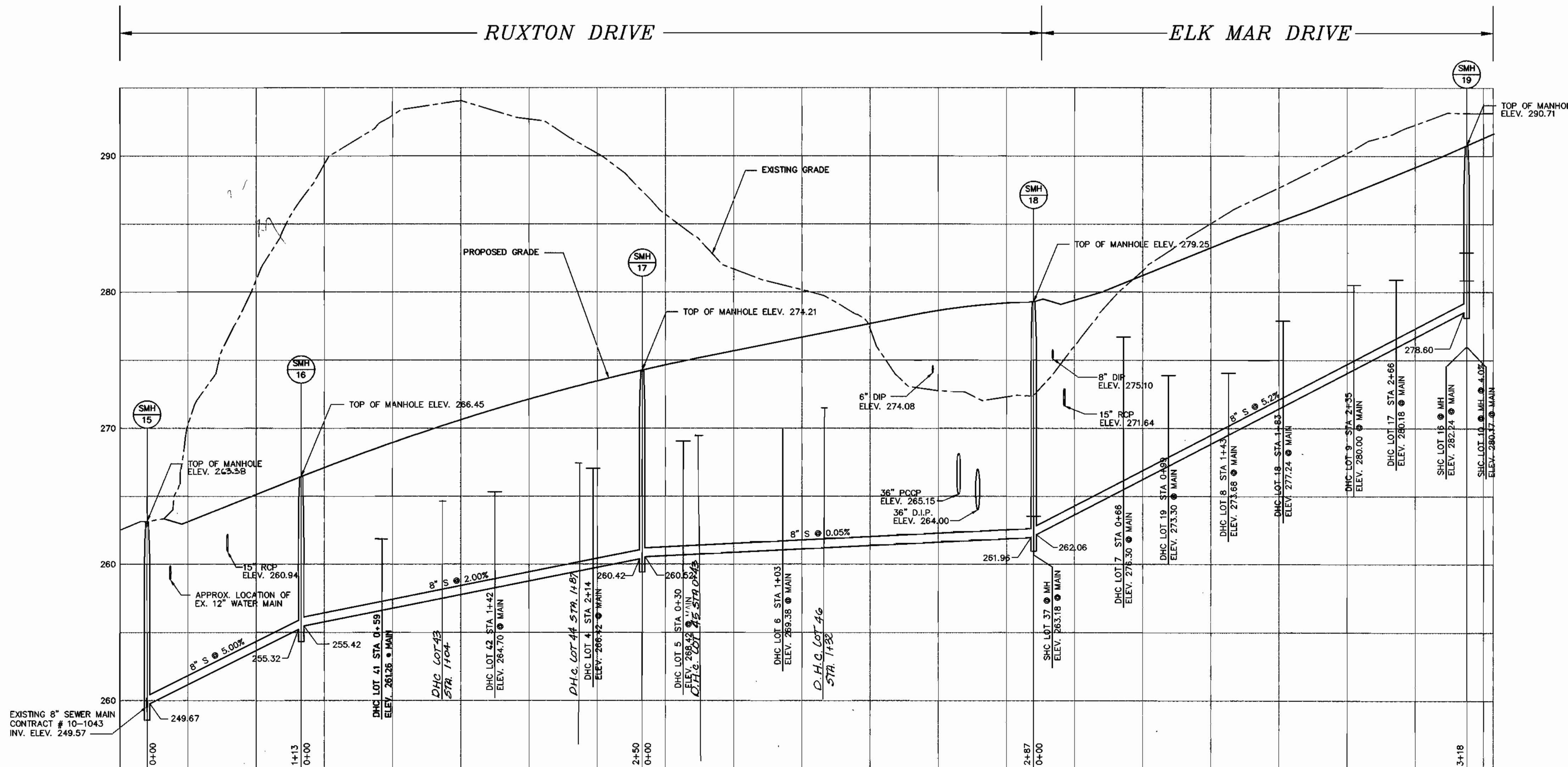


SEWER PROFILE SMH 14 TO SMH 6

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

RUXTON DRIVE

ELK MAR DRIVE



SEWER PROFILE SMH 15 TO SMH 19

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

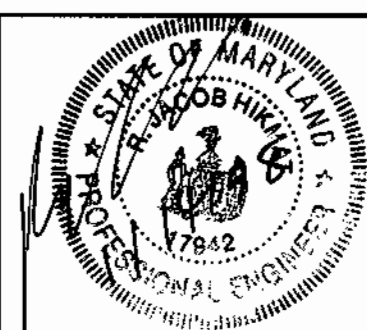
CONTRACT NO.: 14-3529-D  
RAUSCH PROPERTY  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

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engineering	SJD				
illustration	SJD				
approval					
project	97027	K.O.I. 2	ASBUILT CONDITIONS ADDED TO PLAN	02/04/01	
date	JAN 1998	SJD 1	ADD LOT 41 DHC & REVISE LOT NUMBERS	8-12-98	
BY	NO.		REVISION	DATE	600' SCALE MAP NO. 37

SEWER PROFILES

**RAUSCH PROPERTY**  
LOTS 4-46  
CONTRACT NO. 14-3529-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN  
7 of 8

**HOWARD SOIL CONSERVATION DISTRICT**

**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

**TEMPORARY SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

**STANDARD SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7) SITE ANALYSIS:	
TOTAL AREA OF SITE:	N/A ACRES
AREA DISTURBED:	0.08 ACRES
AREA TO BE ROOFED OR PAVED:	N/A ACRES
AREA TO BE VEGETATIVELY STABILIZED:	0.08 ACRES
TOTAL CUT:	N/A CU. YDS.
TOTAL FILL:	N/A CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	-

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

**STANDARD AND SPECIFICATIONS FOR TOPSOIL**

**DEFINITION**

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

**PURPOSE**

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

**CONDITIONS WHERE PRACTICE APPLIES**

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
  - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
  - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
  - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
  - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
  - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CLAY-TEXTURED TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
  - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-SON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
  - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
  - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
    - PH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERSCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
    - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
    - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
    - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
  - NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.0.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION
  - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
  - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
  - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
  - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

- ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW.
  - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
    - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
    - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
    - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
  - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB./1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

**SEQUENCE OF CONSTRUCTION**

- OBTAIN THE REQUIRED GRADING PERMIT.
- CLEAR AND GRUB AREAS SURROUNDING SEDIMENT CONTROL FEATURES.
- CLEAR AND GRUB AS NECESSARY. ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER AND SEWER MAINS. ONLY WITHIN THE DESIGNATED WATER, SEWER AND UTILITY EASEMENTS. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF UTILITY TRENCH IN AREAS OF EXISTING PAVEMENT, STABILIZE WITH STONE AGGREGATE UNTIL PERMANENT PAVING REPAIR CAN BE DONE.
- PLACE SILT FENCE AT DOWN STREAM LIMITS OF PREVIOUS DAYS CONSTRUCTION PRIOR TO COMMENCEMENT OF FUTURE EXCAVATION. SILT FENCE TO EXTEND ACROSS WIDTH OF DISTURBED AREA.
- CONSTRUCT STREAM CROSSING IN ACCORDANCE WITH DETAIL WPR 2.3 AS SHOWN ON THIS SHEET. PLACE RIP-RAP AS SHOWN ON DETAIL.
- STABILIZE, SEED & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
- INSPECT ALL SEDIMENT CONTROL DEVICES DAILY AND AFTER EACH RAINFALL, REPAIR AS NECESSARY.
- WHEN ALL CONTRIBUTING AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN PERMANENTLY STABILIZED AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.
  - FOLLOWING INITIAL SOILS DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
    - 7 CALENDAR DAYS FOR ALL PERIMETER SLOPES GREATER THAN 3:1
    - 14 CALENDAR DAYS FOR ALL OTHER DISTURBED GRADED AREAS ON THE PROJECT SITE.

**EROSION AND SEDIMENT CONTROL NOTES**

- ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
- ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH.
- EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY.
- IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS SHEET.
- THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES AND PROVIDE ALL NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION.
- ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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.

*J. Thomas Scrivener* 1/14/98  
 DEVELOPER'S SIGNATURE DATE  
**J. THOMAS SCRIVENER**  
 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* 1/14/98  
 ENGINEER'S SIGNATURE DATE  
**R. JACOB HIKMAT**  
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*Cheer Sumner* 1/23/98  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*John Roberts* 1/23/98  
 HOWARD SCD DATE

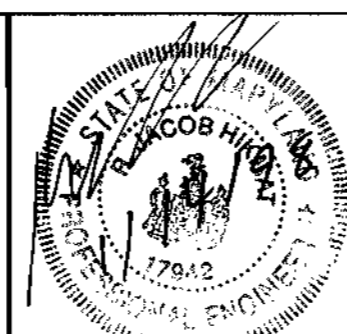
PLAN REFERENCE NUMBERS
S-94-34 F-96-165
P-96-09
F-84-160
F-94-54

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) 997-0296 Fax: (301) 821-5521 Wash. (410) 997-0298 Fax



engineering	SJD			
illustration	SJD			
approval				
project	97027			
date	JAN 1998	BY	NO.	REVISION

**SEDIMENT CONTROL NOTES AND DETAILS**

600' SCALE MAP NO. 37 BLOCK NO. 6 & 12

**RAUSCH PROPERTY**  
 LOTS 4-48  
 CONTRACT NO. 14-3529-D  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 NOT TO SCALE  
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