

# MD 216 RELOCATED FROM EAST OF US 29 TO WEST OF I-95 WATER AND SEWER UTILITIES RELOCATIONS

**CAPITAL PROJECT W-8282  
CONTRACT NO. 24-4018**

**GENERAL NOTES:**

**PART I**

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". 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.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, 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.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL 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.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
  - AT&T.....1-800-526-2000
  - BGE (CONTRACTOR SERVICES).....410-850-4620
  - BGE (UNDERGROUND DAMAGE CONTROL).....410-787-9068
  - BUREAU OF UTILITIES.....410-313-4900
  - VERIZON.....1-800-621-9900
  - COLONIAL PIPELINE CO.....410-795-1390
  - MISS UTILITY.....1-800-257-7177
  - STATE HIGHWAY ADMINISTRATION.....410-531-5533
9. 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.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE 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)313-7450 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(d) OF THE HOWARD COUNTY CODE.
12. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY BUREAU OF UTILITIES FIFTEEN (15) DAYS PRIOR TO MAKING ANY CONNECTIONS TO THE EXISTING WATER OR SEWER MAINS.

**PART II WATER**

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 52.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 4'-0" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE RESTRAINED AND BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. 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.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

**PART III SEWER**

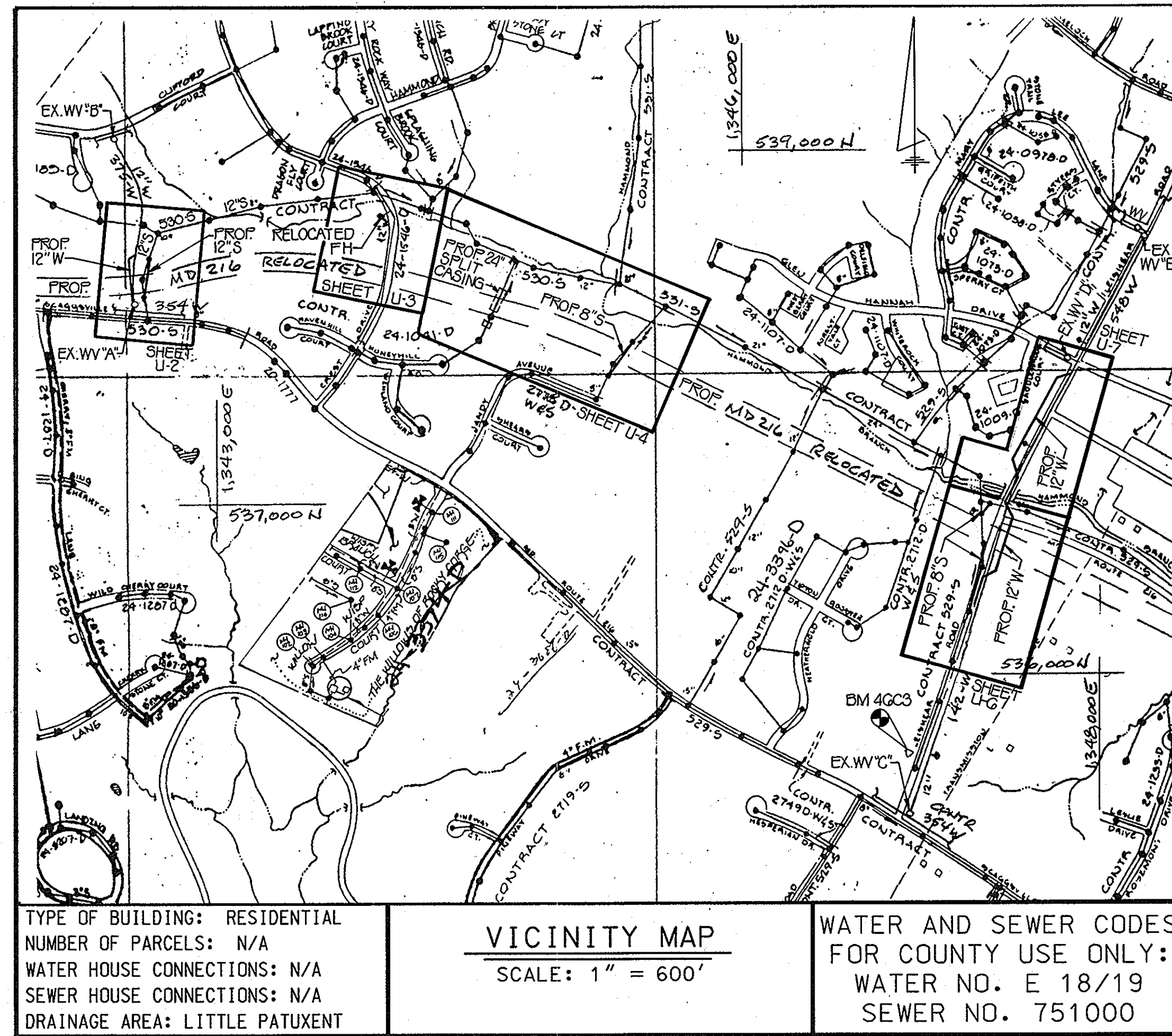
1. ALL SEWER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
3. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

"AS BUILT" 2/2/06 SHA CONTRACT NO. H0306B21 **AS-BUILT** U-1

WATER QUANTITIES				
ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIER
	ESTIMATED	AS BUILT		
12" WATER	1455 LF		DIP	US PIPE
12" WATER IN 36" STEEL CASING - OPEN CUT	370 LF		DIP & STEEL	US PIPE
FIRE HYDRANTS	1 EACH		---	MUELLER CO.
12" WATER IN 36" STEEL CASING (BORE & JACK)	100 LF		DIP & STEEL	US PIPE

SEWER QUANTITIES				
ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIER
	ESTIMATED	AS BUILT		
8" SEWER	420 LF		DIP	U.S. PIPE
8" SEWER IN 24" STEEL CASING	150 LF		DIP & STEEL	U.S. PIPE
12" SEWER	25 LF		DIP	U.S. PIPE
12" SEWER IN 24" STEEL CASING (OPEN-CUT)	200 LF		DIP & STEEL	US PIPE
MANHOLES	50 VF		---	ATLANTIC PRECAST CONCRETE CO.
24" STEEL <del>PIPE</del> CASING	550 LF		STEEL	O.R.S. SALES CO.

NAME OF UTILITY CONTRACTOR: \_\_\_\_\_



INDEX OF SHEETS		
SHEET NO.	DWG. NO.	DESCRIPTION
1	U-1	TITLE SHEET
2	U-2	PLAN AND PROFILE
3	U-3	PLAN AND PROFILE
4	U-4	PLAN
5	U-5	PROFILE
6	U-6	PLAN AND PROFILE
7	U-7	PLAN AND PROFILE
8	U-8	PROFILE AND DETAILS

BENCHMARKS				
N <sup>o</sup>	ELEV.	NORTHING	EASTING	DESCRIPTION
4GBA	426.400	537,545.794	1,339,849.092	U.S. ROUTE 29 0.15 MILES SOUTH OF MD ROUTE 216
4GBB	423.326	538,306.510	1,341,329.150	AT TRAFFIC CIRCLE MD RT. 216 EAST OF U.S. RT. 29
4GC3	334.537	537,405.871	1,347,556.240	LEISHAAR ROAD 400' NORTH OF MD RT. 216
47AA	363.346	538,361.685	1,348,438.970	LEISHAAR ROAD 260' SOUTH OF GRAELOCK RD.
BAS8	436.366	538,932.730	1,340,077.863	IN PARKING LOT, NW CORNER MD RT. 216 AT U.S. RT. 29

NOTE:  
THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES, GRADES AND ELEVATION OF THE PROPOSED FACILITIES. CUT SHEETS SHALL BE PREPARED BASED ON THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

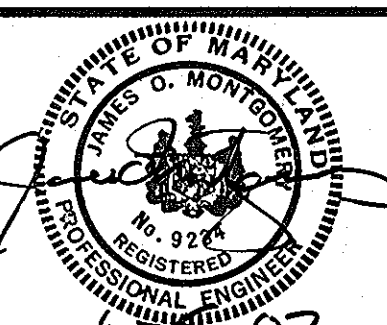
*[Signature]* 9/4/02  
DIRECTOR OF PUBLIC WORKS

*[Signature]* 8/29/02  
CHIEF, BUREAU OF ENGINEERING

*[Signature]* 9-4-02  
CHIEF, BUREAU OF UTILITIES

*[Signature]* 8-29-02  
CHIEF, UTILITY DESIGN DIVISION

**WALLACE, MONTGOMERY & ASSOCIATES, LLP**  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21284



DES: LAF	WMA	ADD. 1: ADDED BENCHMARK DATA & REVISED 8/29/02
DRN: KJP		VICINITY MAP
CHK: JJS		
DATE: JUNE 2002	BY NO.	REVISION

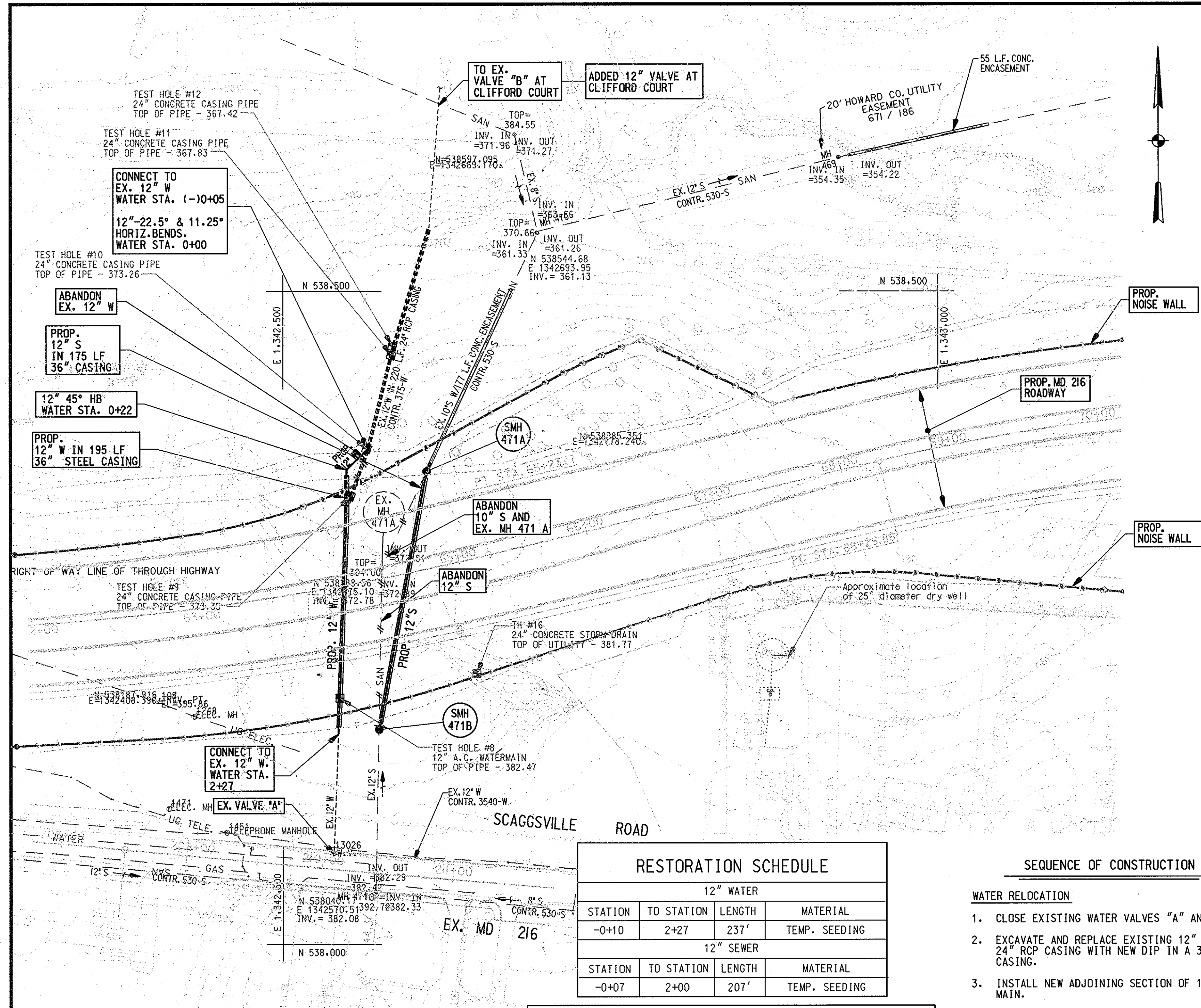
**WATER & SEWER RELOCATIONS  
TITLE SHEET**

600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 1 OF 8





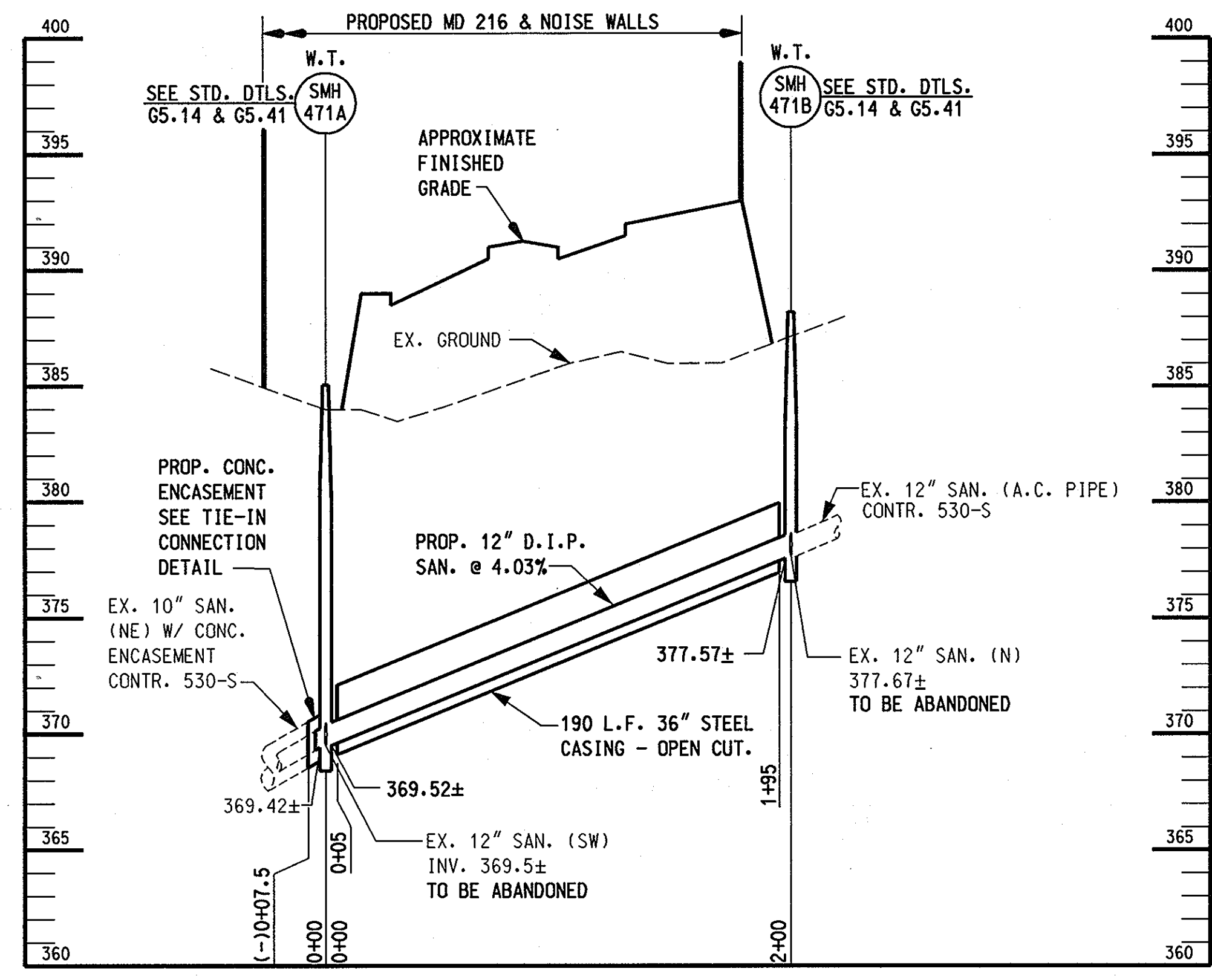
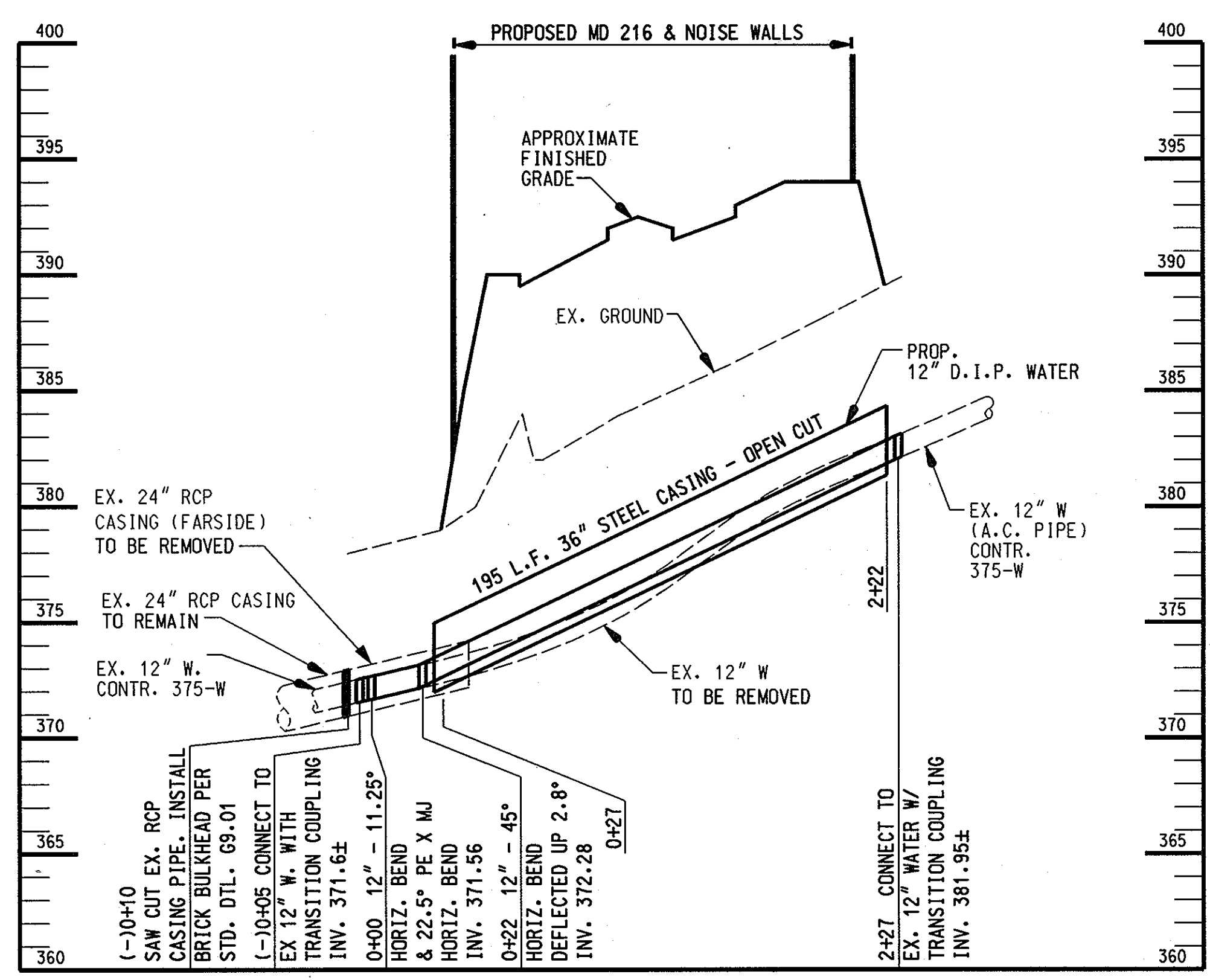
NOTE: AFTER CONSTRUCTION OF WATER AND SEWER MAINS, PLACE FIBERGLASS UTILITY MARKERS OVER CENTERLINE OF NEW MAINS AT THE PROPOSED NOISE WALL CROSSINGS.

EXISTING UTILITY SCHEDULE				
WATER				
FROM SHA STA.	TO SHA STA.	LENGTH	DESCRIPTION	
64+24, 280'LT	64+49, 281'LT	48'	ABANDON 12" W	
SEWER				
64+17, 101'RT	64+41, 8'LT	79'	ABANDON 10" S	
64+41, 8'LT	64+89, 283'LT	121'	ABANDON 12" S	

NOTE: FOR SHA STATIONING USE @ OF CONSTRUCTION MD 216

RESTORATION SCHEDULE				
12" WATER				
STATION	TO STATION	LENGTH	MATERIAL	
-0+10	2+27	237'	TEMP. SEEDING	
12" SEWER				
-0+07	2+00	207'	TEMP. SEEDING	

STAKEOUT TABLE				
WATER				
STATION	DESCRIPTION	NORTH	EAST	
-0+05	CONNECT TO EX. 12" W	538384.50	1342566.20	
0+00	12" 22.5° AND 11.25° H.B.	538379.64	1342565.00	
0+22	12" 45° H.B.	538363.63	1342548.58	
2+27	CONNECT TO EX. 12" W	538161.49	1342542.28	
SEWER				
-0+07	CONNECT TO EX. 10" S	538369.05	1342612.78	
0+00	SMH 471 A	538362.24	1342609.62	
2+00	SMH 471 B	538164.77	1342573.27	



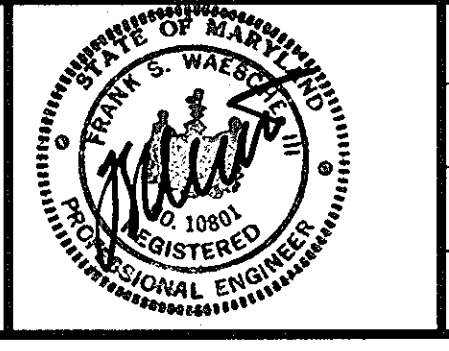
AS-Built

"AS BUILT Replacement Sheet"  
2/206  
U-2

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *Janet D. ...*  
Date: 2/16/06  
Chief, Bureau of Engineering: *...*  
Date: 2-15-06

WALLACE, MONTGOMERY & ASSOCIATES, LLP  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21204

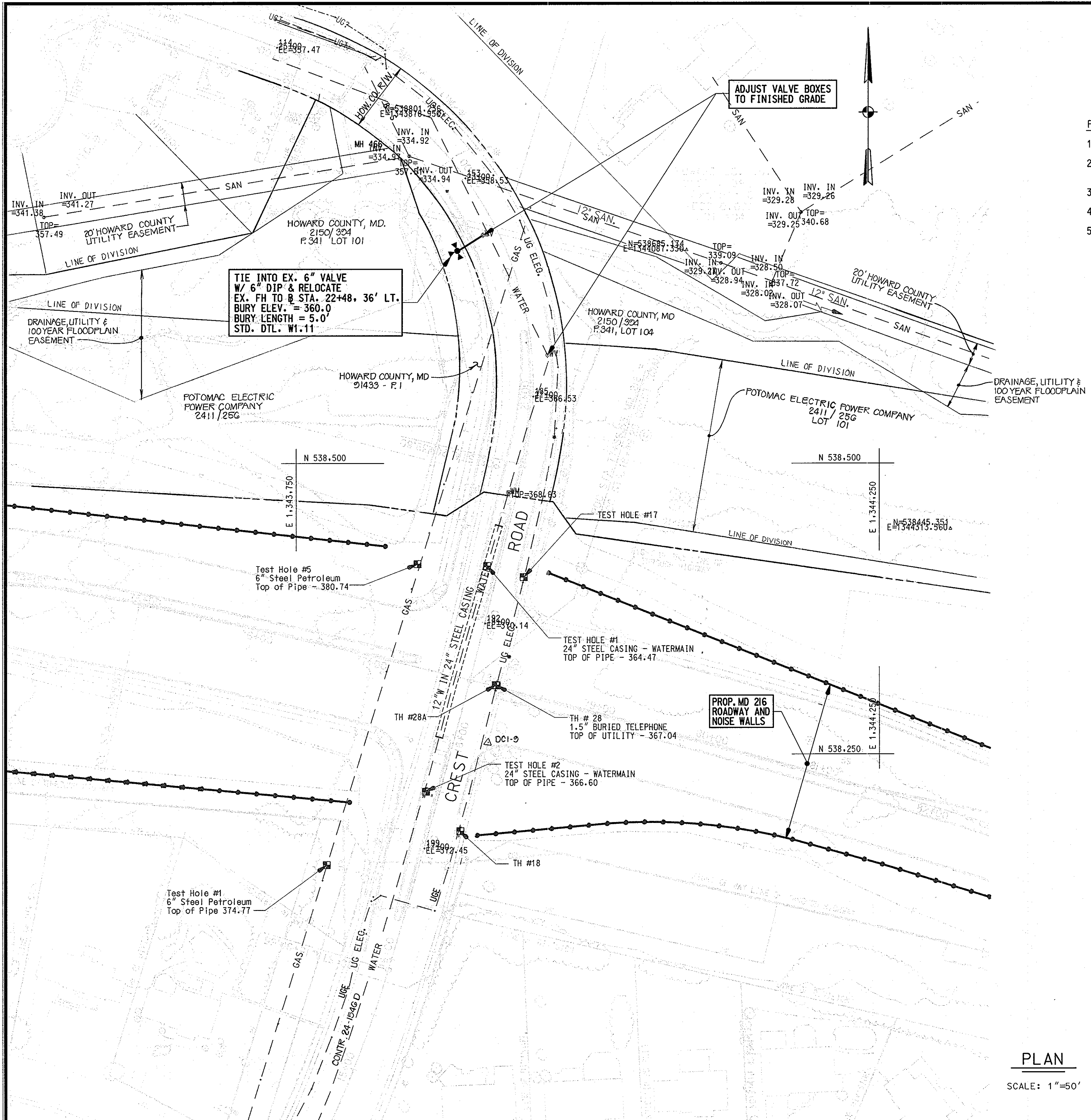


DES: LAF				
DRN: KJP				
CHK: JJS				
DATE: JUNE 2002	BY:	NO.:	REVISION:	DATE:

WATER & SEWER RELOCATIONS  
PLAN AND PROFILE  
600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 8



**SEQUENCE OF CONSTRUCTION**

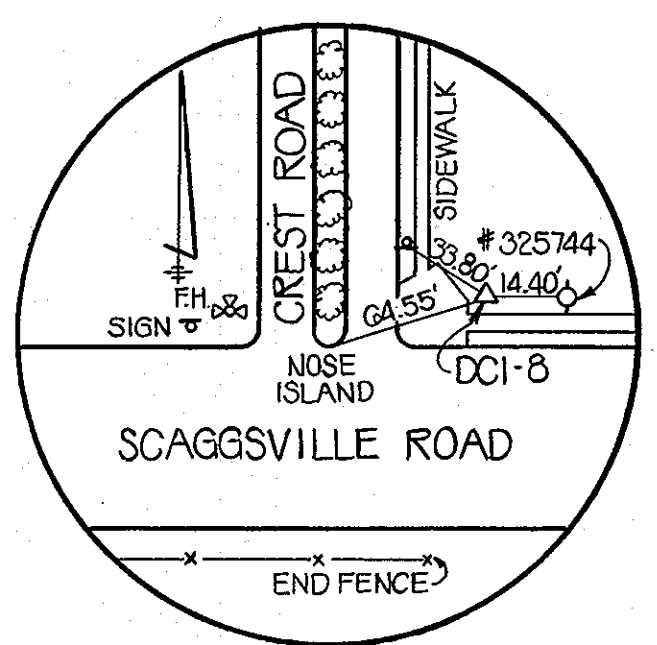
- FIRE HYDRANT RELOCATION**
1. CLOSE EXISTING FIRE HYDRANT VALVE.
  2. EXCAVATE AND REMOVE EXISTING FIRE HYDRANT, STANDPIPE AND SHOE.
  3. INSTALL PROPOSED FIRE HYDRANT ASSEMBLY.
  4. PERFORM LEAKAGE TESTS AND DISINFECTION.
  5. REOPEN EXISTING WATER VALVE.

**STAKEOUT TABLE**

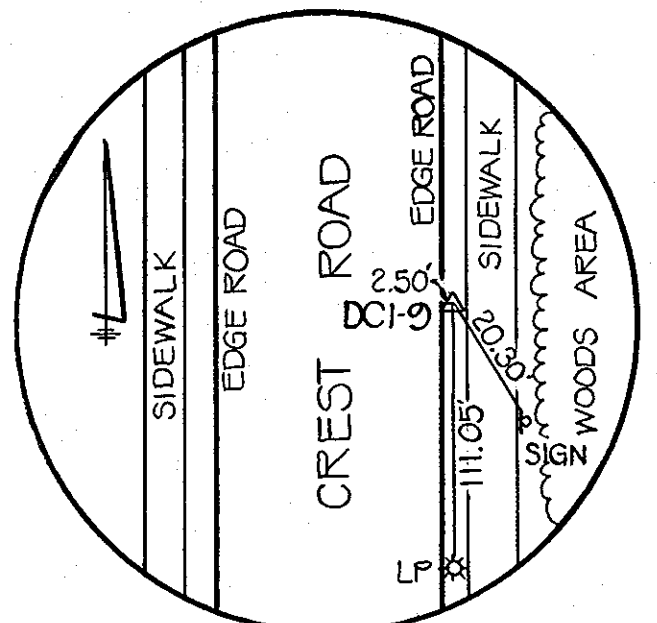
WATER			
STATION	DESCRIPTION	NORTH	EAST
0+00	CONNECT TO EX. 6" V	538695.48	1343908.83
0+24	RELOCATED FIRE HYDRANT	538683.68	1343890.42

**RESTORATION SCHEDULE**

6" WATER			
STATION	TO STATION	LENGTH	MATERIAL
0+00	0+10	10'	BITUMINOUS PAVING
0+10	0+24	14'	TEMP. SEEDING



DCI-8: HUB & TACK (INTERSECTION OF SCAGGSVILLE & CREST)  
 NORTHING: 537547.7818  
 EASTING: 1343578.3256  
 ELEVATION: 399.65 FT.



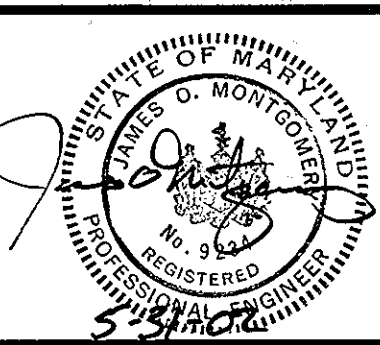
DCI-9: HUB & TACK (CREST ROAD)  
 NORTHING: 538250.7887  
 EASTING: 1343908.1974  
 ELEVATION: 370.72 FT.

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

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* DATE: 6/3/02  
 Chief, Bureau of Engineering: *[Signature]* DATE: 6/3/02  
 Chief, Bureau of Utilities: *[Signature]* DATE: 6-3-02  
 Chief, Utility Design Division: *[Signature]* DATE: 6-3-02

**WALLACE, MONTGOMERY & ASSOCIATES, LLP**  
 CIVIL AND STRUCTURAL ENGINEERS  
 110 WEST ROAD  
 TOWSON, MARYLAND 21204



DES: LAF	WMA	ADD. NO. 4: ADDED PROPERTY INFO	8/29/02
ORN: KJP			
CHK: JJS			
DATE: JUNE 2002	BY NO.	REVISION	DATE

**WATER & SEWER RELOCATIONS**  
**PLAN**

600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
 CAPITAL PROJECT W-8212  
 CONTRACT NO. 24-4018  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY, MARYLAND

...1200002.00\Cad\ut61216.dgn 05/31/02 05:05:23 PM



SEQUENCE OF CONSTRUCTION

- SPLIT SLEEVE INSTALLATION**
1. EXCAVATE AND EXPOSE EXISTING SANITARY SEWER.
  2. INSTALL SPLIT SLEEVE CASINGS.
  3. EXTEND EXISTING SMH 2 UP TO FINISHED GRADE.
  4. BACKFILL TRENCHES.
- SEWER RELOCATION**
1. EXCAVATE AND INSTALL PROPOSED SMH 416 A.
  2. INSTALL TEMPORARY BY-PASS PUMPING SYSTEM FROM EXISTING SMH 2 TO PROPOSED SMH 416 A.
  3. INSTALL PROPOSED 8" SEWER SYSTEM FROM SMH 416 A TO 416 B TO 416 C.
  4. PERFORM SEWER TESTS.
  5. BACKFILL TRENCH.
  6. REMOVE BY-PASS PUMPING SYSTEM.

RESTORATION SCHEDULE			
SEWER (STA. 290+50 +/-)			
STATION	TO STATION	LENGTH	MATERIAL
-1+22	0+20	142'	TEMP. SEEDING

RESTORATION SCHEDULE			
SEWER (STA. 297+40 +/-)			
STATION	TO STATION	LENGTH	MATERIAL
0+00	-1+05	405'	TEMP. SEEDING
0+00	1+11.5	111.5'	TEMP. SEEDING
0+00	2+00	200'	TEMP. SEEDING

EXISTING UTILITY SCHEDULE			
SEWER (STA. 297+40 +/-)			
FROM SHA STA.	TO SHA STA.	LENGTH	DESCRIPTION
91+69, 82' RT	92+22, 80' LT	473'	ABANDON 8" S
91+61, 83' RT	92+64, 157' LT	265'	

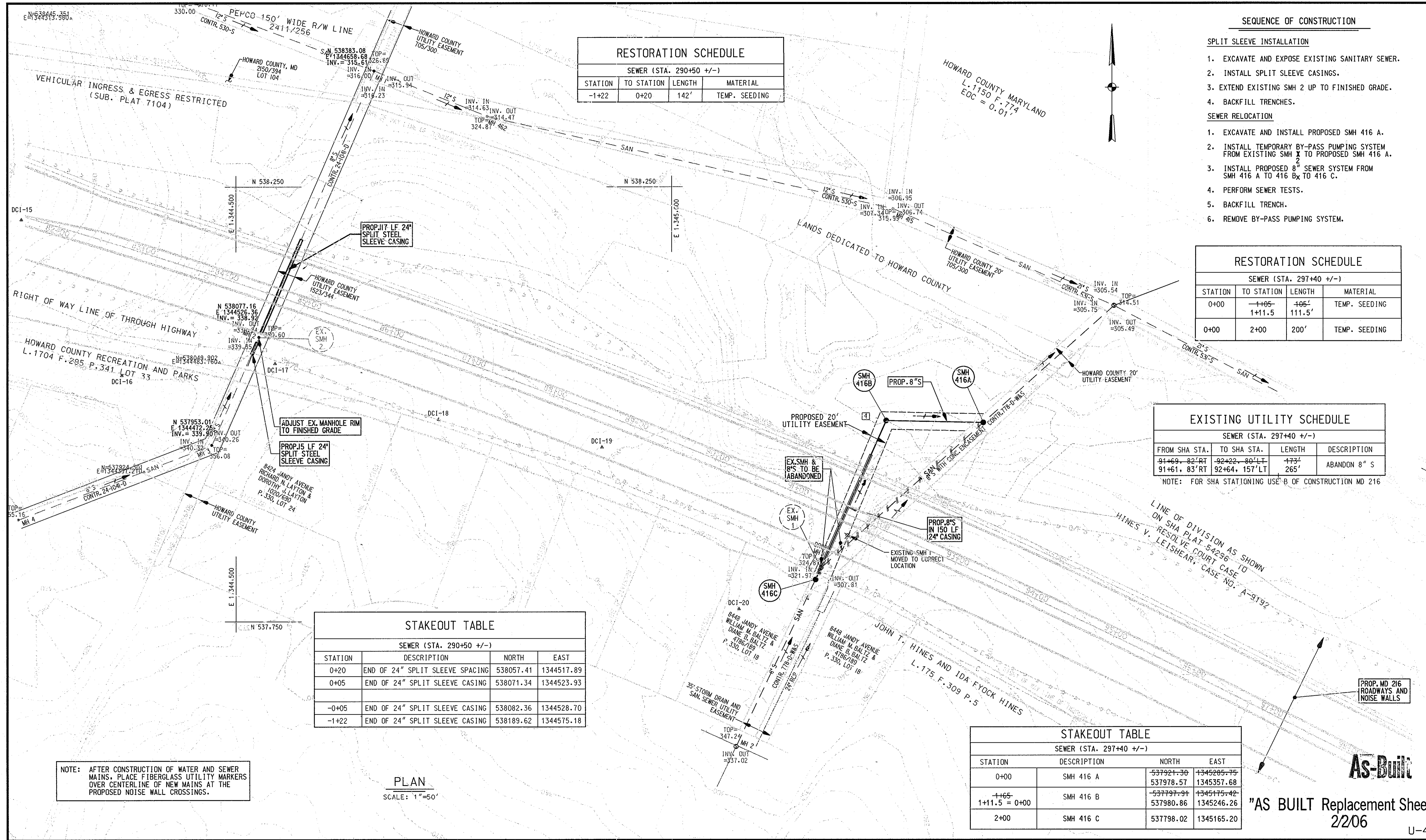
NOTE: FOR SHA STATIONING USE B OF CONSTRUCTION MD 216

STAKEOUT TABLE			
SEWER (STA. 290+50 +/-)			
STATION	DESCRIPTION	NORTH	EAST
0+20	END OF 24" SPLIT SLEEVE SPACING	538057.41	1344517.89
0+05	END OF 24" SPLIT SLEEVE CASING	538071.34	1344523.93
-0+05	END OF 24" SPLIT SLEEVE CASING	538082.36	1344528.70
-1+22	END OF 24" SPLIT SLEEVE CASING	538189.62	1344575.18

STAKEOUT TABLE			
SEWER (STA. 297+40 +/-)			
STATION	DESCRIPTION	NORTH	EAST
0+00	SMH 416 A	537921.30	1345285.75
		537978.57	1345357.68
+1+65	SMH 416 B	537797.91	1345175.42
1+11.5 = 0+00		537980.86	1345246.26
2+00	SMH 416 C	537798.02	1345165.20

NOTE: AFTER CONSTRUCTION OF WATER AND SEWER MAINS, PLACE FIBERGLASS UTILITY MARKERS OVER CENTERLINE OF NEW MAINS AT THE PROPOSED NOISE WALL CROSSINGS.

PLAN  
SCALE: 1"=50'

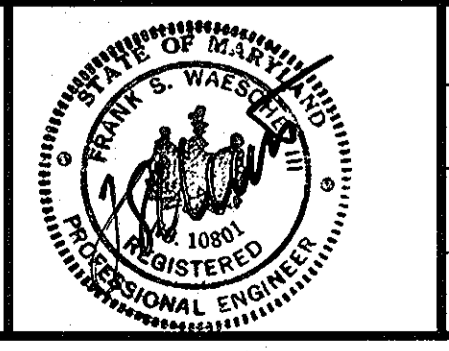


DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 2/16/06  
DATE: 2/16/06  
CHIEF, BUREAU OF ENGINEERING

*[Signature]* 2-15-06  
DATE: 2-15-06  
CHIEF, UTILITY DESIGN DIVISION

WALLACE, MONTGOMERY & ASSOCIATES, LLP  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21204



DES: LAF	WM&A	ADD No. 4 - MINOR REVISIONS	8/29/02
DRN: KJP	WM&A	REVISED EX. & PROP. 8" SEWER ALIGNMENTS	3/24/03
CHK: JJS			
DATE: JUNE 2002	BY NO.	REVISION	DATE

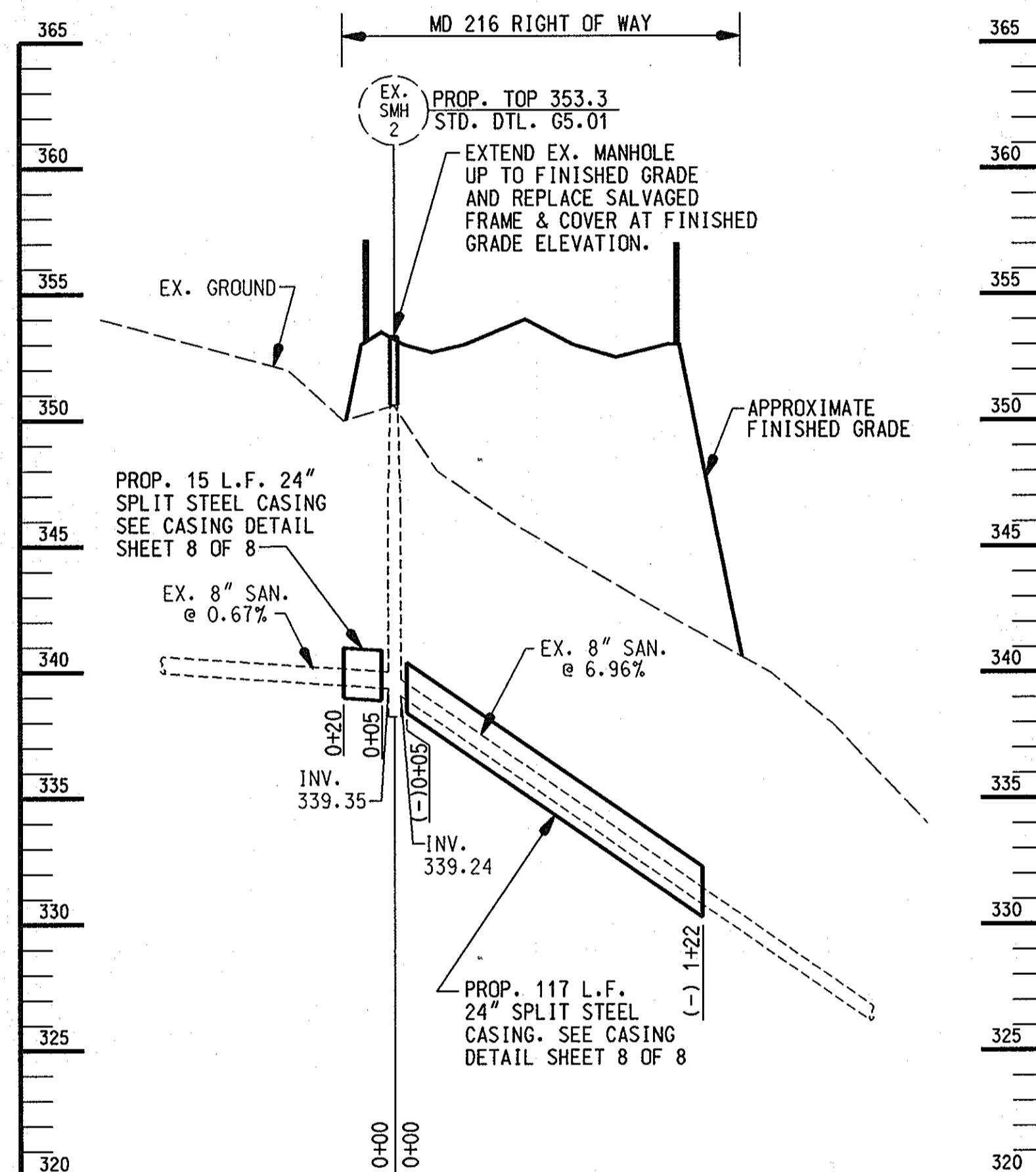
WATER & SEWER RELOCATIONS  
PLAN

600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

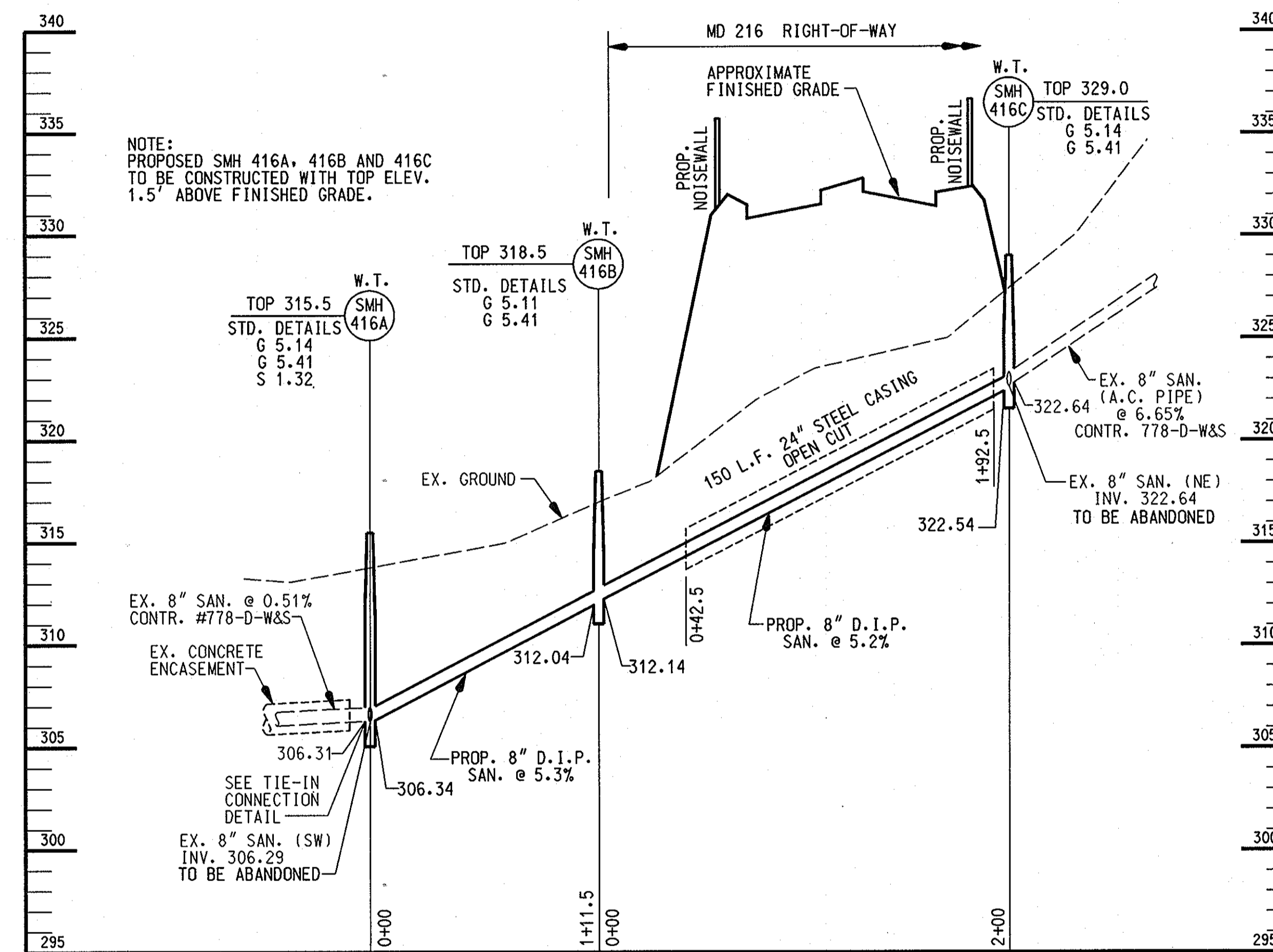
MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 8

As-Built  
"AS BUILT Replacement Sheet" 2/206



8" GRAVITY SEWER PROFILE  
(B.L. STA. 84+62 - LOOKING WEST)  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.



8" GRAVITY SEWER PROFILE  
(B.L. STA. 92+04)  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.

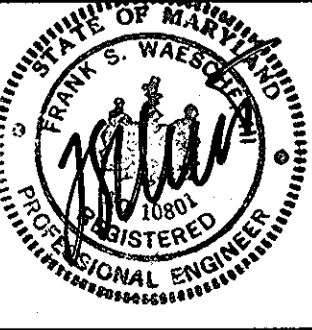
As-Built

"AS BUILT Replacement Sheet"  
2/206

U-5

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 2/16/06  
DATE: 2/15/06

WALLACE, MONTGOMERY & ASSOCIATES, LLP  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21204



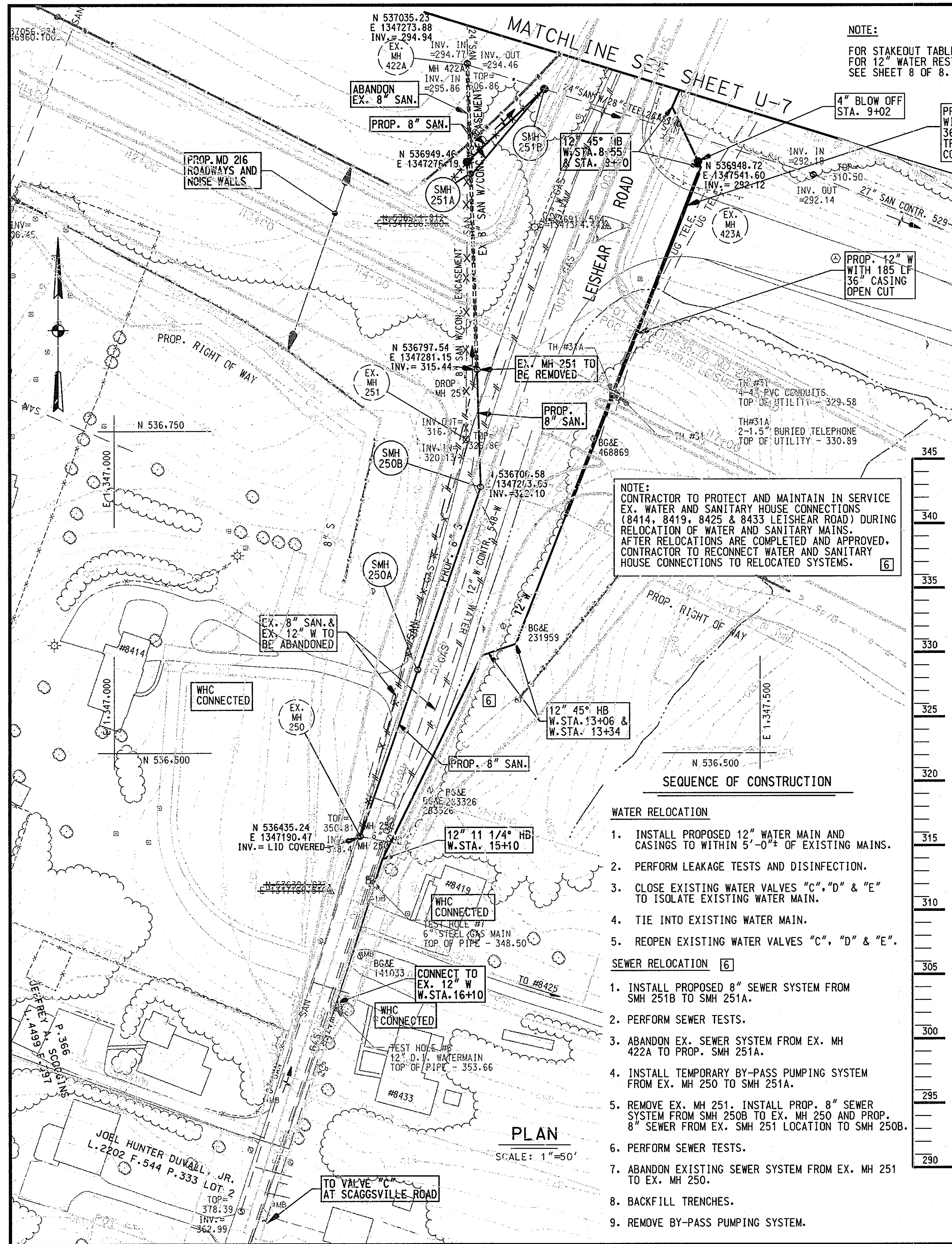
DES: LAF	WM&A	4	REVISED 8" SAN. SEWER PROFILE	3/24/03
DRN: KJP				
CHK: JJS				
DATE: JUNE 2002	BY	NO.	REVISION	DATE

WATER & SEWER RELOCATIONS  
PROFILES  
600' SCALE MAP NO. 46 BLOCK NO. 4:5:12

MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 5 OF 8

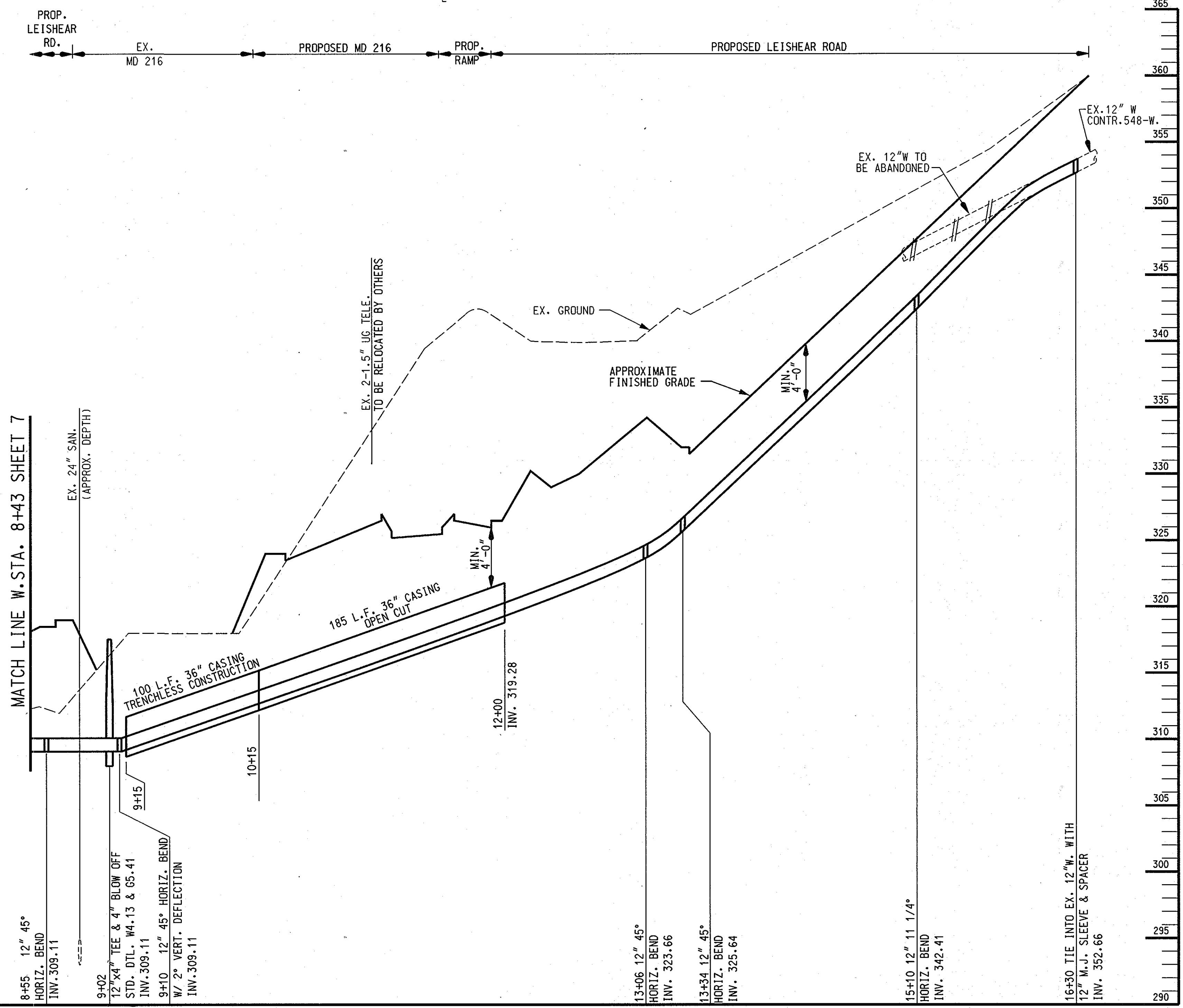




EXISTING UTILITY SCHEDULE			
WATER			
FROM SHA STA.	TO SHA STA.	LENGTH	DESCRIPTION
47+37, 13'RT	61+85, 13'LT	1634'	ABANDON 12" W
SEWER			
47+47, 9'LT	51+30, 35'LT	370'	ABANDON 8" S
52+65, 87'LT	53+46, 117'LT	85'	ABANDON 8" S

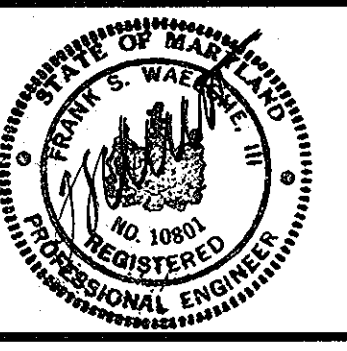
RESTORATION SCHEDULE			
12" SEWER			
STATION	TO STATION	LENGTH	MATERIAL
SMH 251 A	SMH 251 B	87'	TEMP. SEEDING
EX. SMH 250	SMH 250 B	287'	BITUMINOUS PAVING
SMH 250 B	50+90, 23'LT	60'	BITUMINOUS PAVING
50+90, 23'LT	51+30, 35'LT	31'	TEMP. SEEDING

NOTE: FOR SHA STATIONING USE @ OF CONSTRUCTION LEISHEAR RD



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
2/16/06  
2/15/06

WALLACE, MONTGOMERY & ASSOCIATES, LLP  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21204



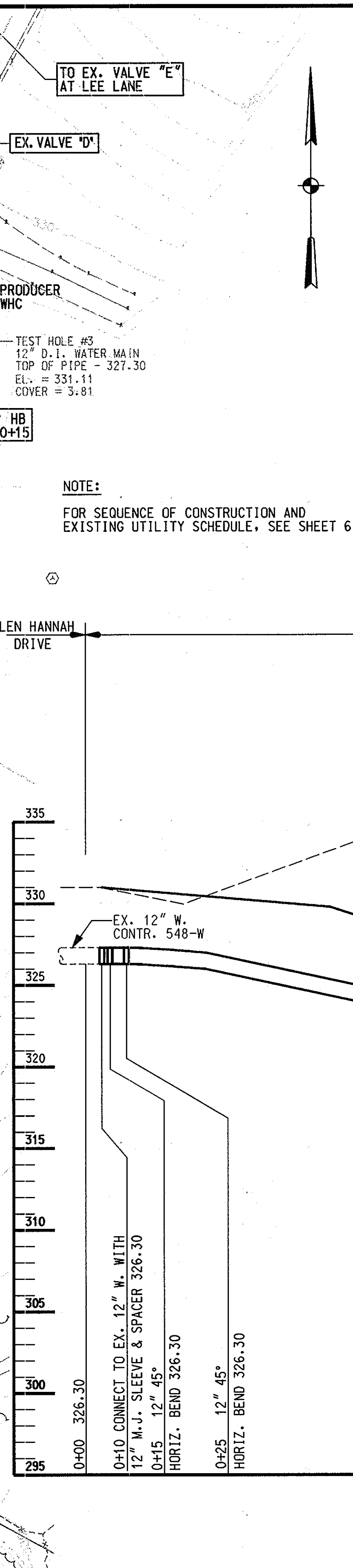
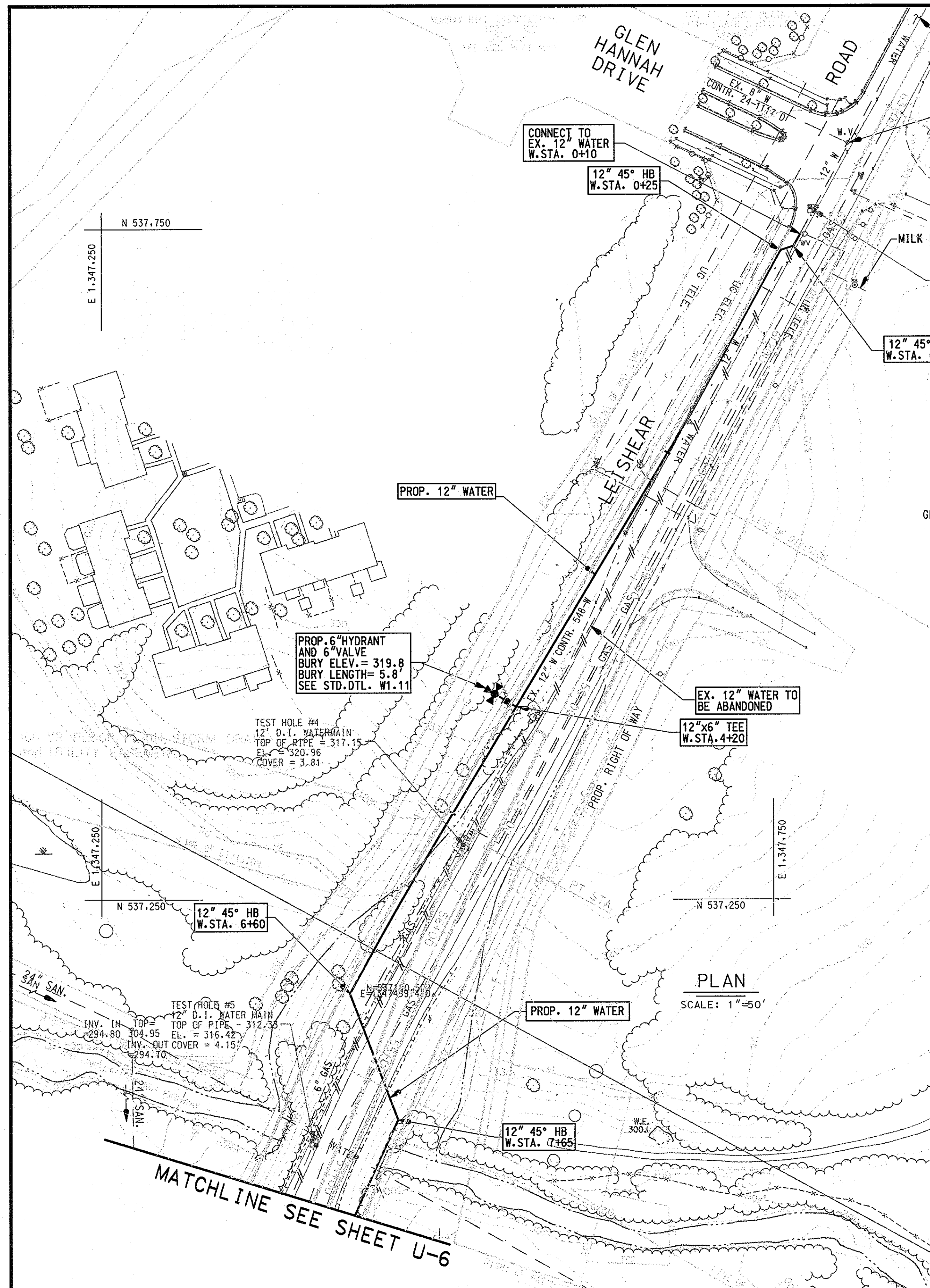
DES: LAF	WM&A [6]	REVISED SANITARY SEWER ALIGNMENT	4-16-03
DRN: KJP			
CHK: JJS			
DATE: JUNE 2002	BY NO.	REVISION	DATE

WATER & SEWER RELOCATIONS  
PLAN AND PROFILE  
600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 6 OF 8





WATER			
STATION	DESCRIPTION	NORTH	EAST
0+10	CONNECT TO EX. 12" W	537745.99	1347770.23
0+15	12" 45° H.B.	537737.44	1347765.55
0+25	12" 45° H.B.	537734.18	1347755.68
4+20	12" x 6" TEE	537393.71	1347558.62
6+60	12" 45° H.B.	537174.82	1347434.64
7+65	12" 45° H.B.	537085.80	1347470.45
8+55	12" 45° H.B.	537001.22	1347432.44
9+02	4" BLOW OFF	536959.07	1347452.39
9+10	12" 45° H.B.	536954.55	1347454.53
13+06	12" 45° H.B.	536584.82	1347310.96
13+34	12" 45° H.B.	536575.73	1347284.48
15+10	12" 11 1/4" H.B.	536417.43	1347207.42
16+30	CONNECT TO EX. 12" W	536305.87	1347171.59

SEWER			
STATION	DESCRIPTION	NORTH	EAST
0+00	SMH 251 B	537015.24	1347333.37
0+87	SMH 251 A	536949.46	1347276.19
0+00	SMH 250 B	536706.58	1347283.63
1+50	SMH 250 A	536564.87	1347234.92

12" WATER			
STATION	TO STATION	LENGTH	MATERIAL
0+00	1+00	100'	BITUMINOUS PAVING
1+00	7+00	600'	TEMP. SEEDING
7+00	7+50	50'	BITUMINOUS PAVING
7+50	16+30	880'	TEMP. SEEDING

NOTE:  
FOR SEQUENCE OF CONSTRUCTION AND EXISTING UTILITY SCHEDULE, SEE SHEET 6 OF 8.

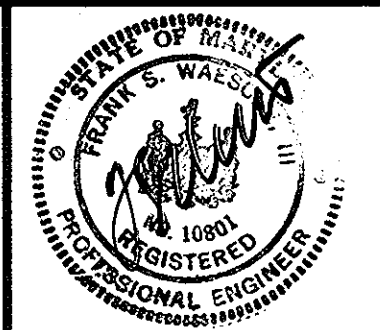
PLAN  
SCALE: 1"=50'

12" WATER PROFILE  
(B.L. STA. 116+07)  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.

**AS-BUILT** "AS BUILT Replacement Sheet"  
2/206

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 2/16/06  
DATE: 2/15/06

WALLACE, MONTGOMERY & ASSOCIATES, LLP  
CIVIL AND STRUCTURAL ENGINEERS  
110 WEST ROAD  
TOWSON, MARYLAND 21204

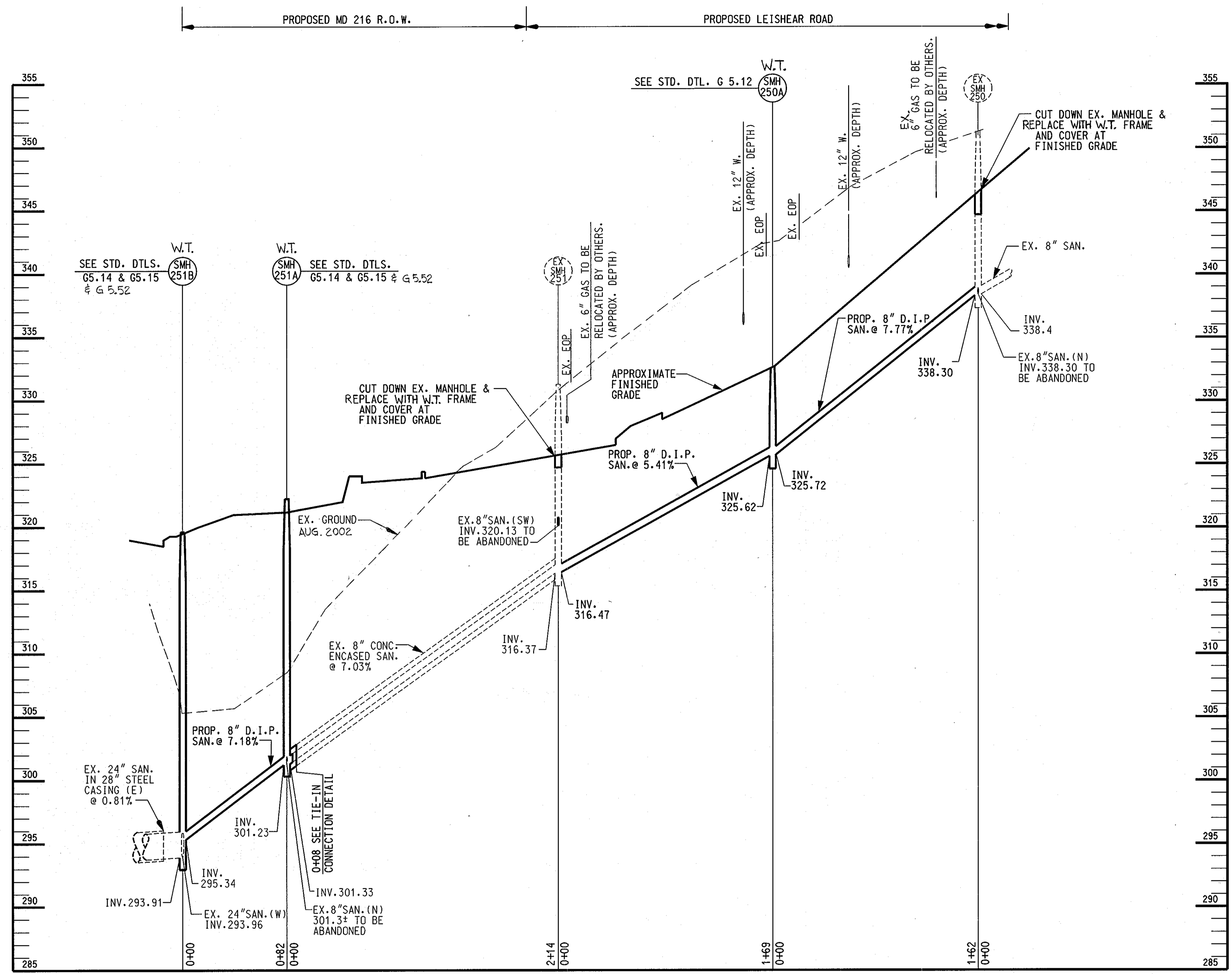


DES: LAF	WM&A	6	REVISED SANITARY SEWER ALIGNMENT	4-16-03
DRN: KJP				
CHK: JJS				
DATE: JUNE 2002	BY NO.		REVISION	DATE

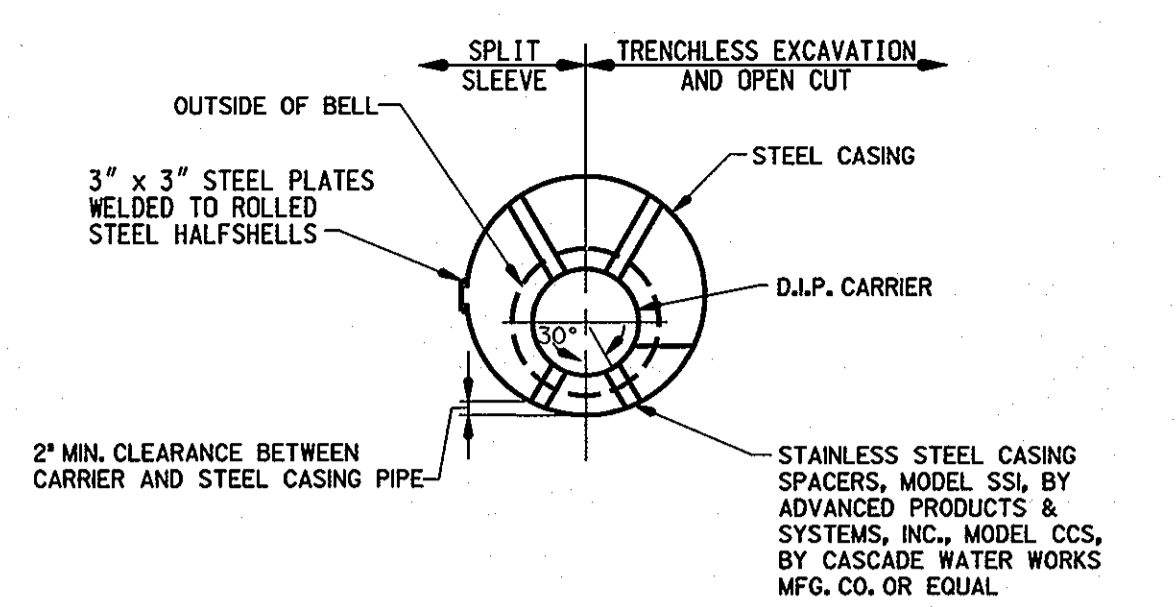
WATER & SEWER RELOCATIONS  
PLAN AND PROFILE  
600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
CAPITAL PROJECT W-8212  
CONTRACT NO. 24-4018  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

U-7  
SCALE AS SHOWN  
SHEET 7 OF 8

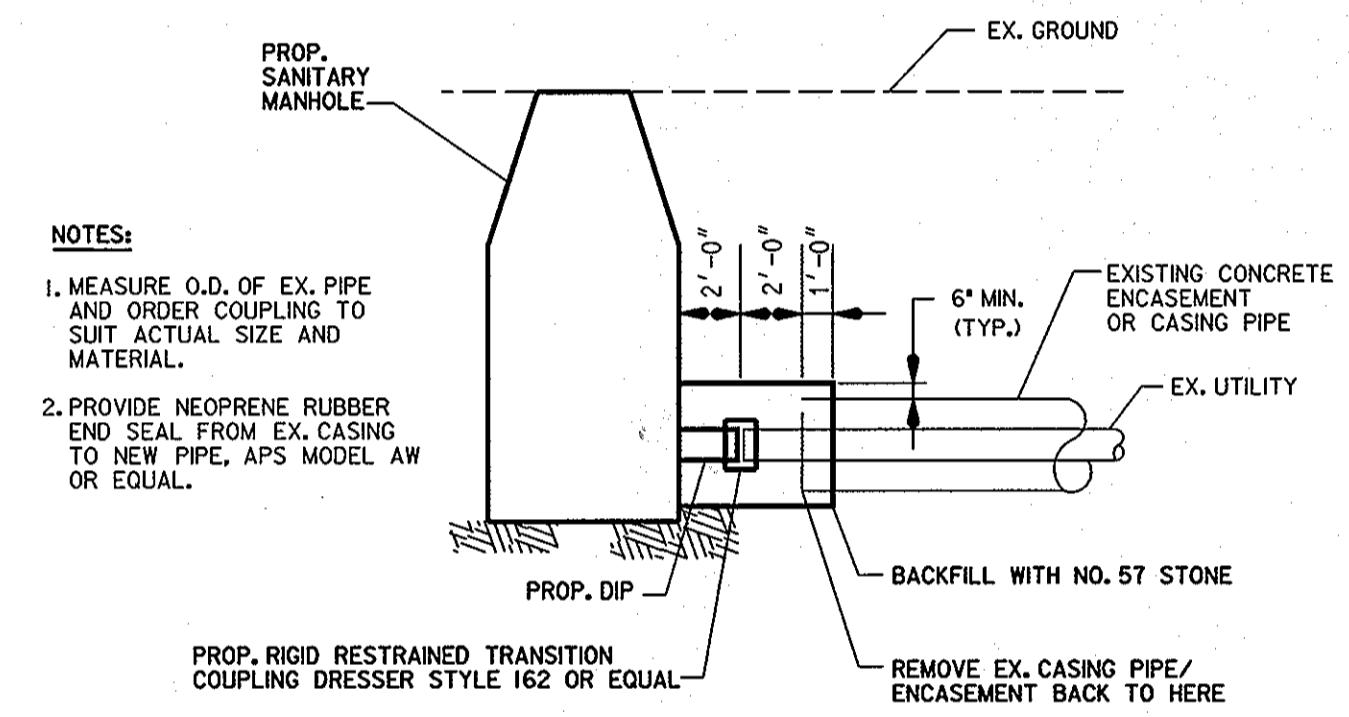


**8" GRAVITY SEWER PROFILE**  
**(B.L. STA. 49+80 LEISHEAR ROAD)**  
 SCALE: 1" = 50' HORIZ.  
 1" = 5' VERT.



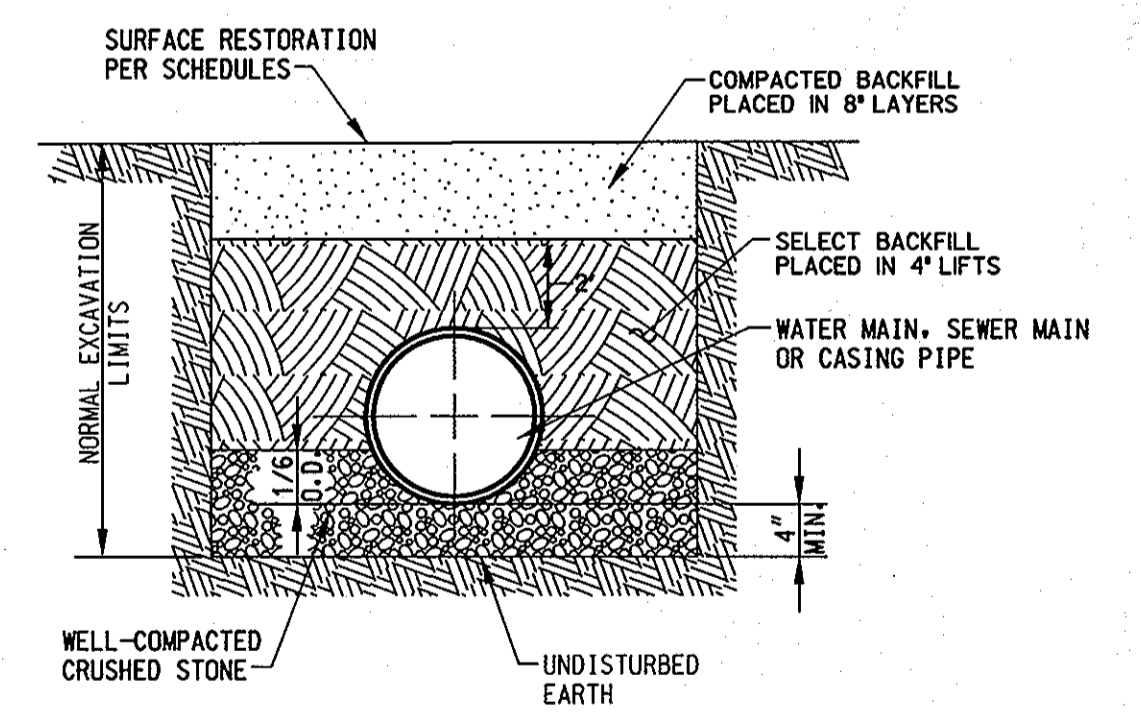
- NOTES:**
1. PROVIDE NEOPRENE RUBBER END SEAL WITH S.S. WORM GEAR CLAMPS. END SEALS SHALL BE ADVANCE PRODUCTS & SYSTEMS, INC. MODEL AW OR EQUAL. PROVIDE A JOINT IN THE MAIN WITHIN 2'-0" OF THE END OF THE CASING.
  2. STEEL CASING PIPE 3/4" WALL THICKNESS, A.W.W.A. C-203 OR C-210, IN 10' LENGTHS. JOINTS TO BE WELDED FULL CIRCUMFERENCE.
  3. MAXIMUM LENGTH OF EXISTING PIPE TO BE EXPOSED DURING INSTALLATION OF SPLIT SLEEVE CASING SHALL BE 10 L.F. AND ONE PIPE JOINT. ALL SEAMS IN SPLIT SLEEVES SHALL BE WELDED.
  4. FOR INSTALLATION OF SPLIT SLEEVE CASING PIPE AND OPEN CUT STEEL CASING, SEE TRENCH DETAIL, THIS SHEET.
  5. VERIFY THE LOCATION AND ELEVATION OF THE EXISTING MAINS PRIOR TO THE START OF ANY CONSTRUCTION.

**SPLIT SLEEVE & CASING DETAIL**  
 NOT TO SCALE



- NOTES:**
1. MEASURE O.D. OF EX. PIPE AND ORDER COUPLING TO SUIT ACTUAL SIZE AND MATERIAL.
  2. PROVIDE NEOPRENE RUBBER END SEAL FROM EX. CASING TO NEW PIPE, APS MODEL AW OR EQUAL.

**TIE-IN CONNECTION TO EX. ENCASEMENT/CASING**  
 NOT TO SCALE



- NOTES:**
1. FOR TRENCHES IN EXISTING ROADWAYS, CONTRACTOR SHALL PLACE TEMPORARY PAVING RESTORATION WITH COLD PATCH, WITH THICKNESS TO MATCH EXISTING SECTION. 3" MINIMUM, 5" MAXIMUM. MAINTAIN COLD PATCH SURFACE UNTIL PERMANENT PAVING IS PLACED.
  2. PLACE PERMANENT BITUMINOUS PAVING TO MATCH EXISTING WITHIN 90 DAYS OF INSTALLATION OF THE PIPE.

**TRENCH DETAIL**  
 NOT TO SCALE

**AS-Built**

U-8

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John J. ...* 6/3/02  
 DIRECTOR OF PUBLIC WORKS DATE

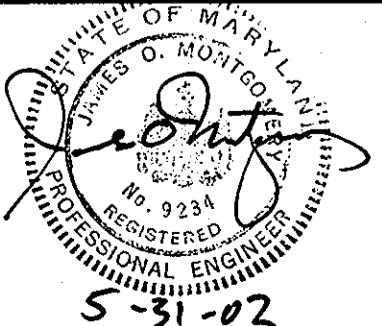
*Paul ...* 6-3-02  
 CHIEF, BUREAU OF ENGINEERING DATE

*John ...* 6-3-02  
 CHIEF, BUREAU OF UTILITIES DATE

*John ...* 6-3-02  
 CHIEF, UTILITY DESIGN DIVISION DATE

**WALLACE, MONTGOMERY & ASSOCIATES, LLP**  
 CIVIL AND STRUCTURAL ENGINEERS

110 WEST ROAD  
 TOWSON, MARYLAND 21204



DES: LAF	WM&A	ADD. NO. 4: REVISED EX. GROUND LINE	8/29/02
DRN: KJP			
CHK: JJS			
DATE: JUNE 2002	BY NO.	REVISION	DATE

**WATER & SEWER RELOCATIONS**  
**PROFILE & DETAILS**

600' SCALE MAP NO. 46 BLOCK NO. 4.5.12

MD 216 RELOCATED FROM US 29 TO I-95  
 CAPITAL PROJECT W-8212  
 CONTRACT NO. 24-4018  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 8 OF 8