


U.S. ROUTE 1 WATER MAIN RELOCATION FROM BREWERS COURT TO WHISKEY BOTTOM RD.

**HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT W-8212
CONTRACT NO. 44-3997**

GENERAL NOTES

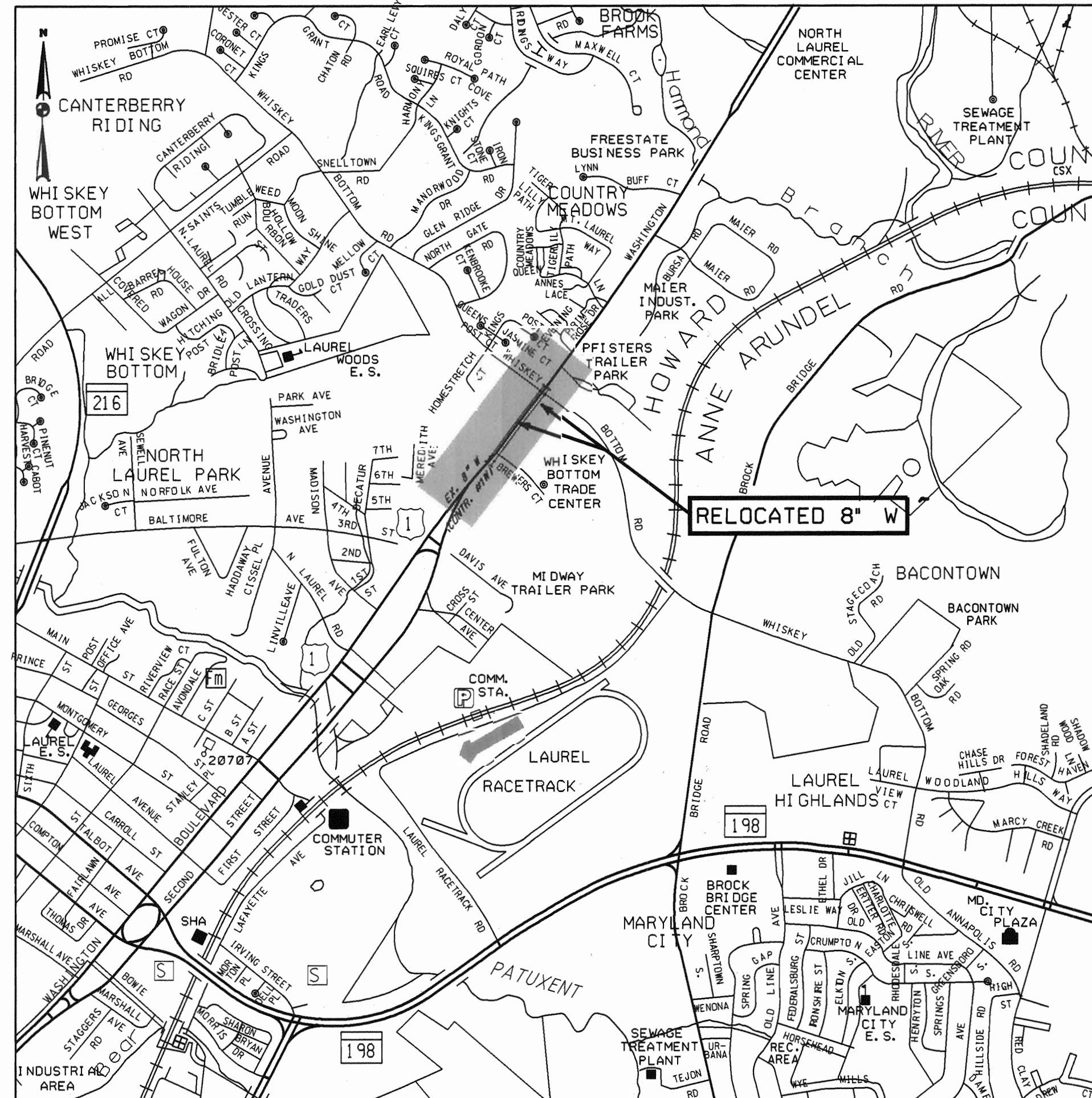
1. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
2. ALL TOPOGRAPHIC INFORMATION, HORIZONTAL AND VERTICAL CONTROLS AS PROVIDED MARYLAND STATE HIGHWAY ADMINISTRATION FOR SHA CONTRACT # H08295176.
3. DELETED
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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 THE 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 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 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:
 BG&E (CONTRACTOR SERVICES).....410-850-4620
 BG&E - UNDERGROUND DAMAGE CONTROL.....410-787-9068
 BUREAU OF UTILITIES (DPW).....410-313-4900
 VERIZON410-393-4499
 COLONIAL PIPELINE CO.410-795-1390
 MISS UTILITY1-800-257-7777
 STATE HIGHWAY ADMINISTRATION410-531-5533
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 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 WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER MAINS, SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS.
12. ALL WATER MAINS SHALL BE D.I.P CLASS 52 UNLESS OTHERWISE NOTED.
13. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
15. ALL FITTINGS SHALL BE RESTRAINED WITH 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 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.
17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
18. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS BUSINESSES AND COORDINATING HIS WORK ACTIVITIES SO AS NOT TO NEGATIVELY IMPACT CONNECTED CUSTOMERS. THE INSTALLATION OF WATER MAIN SHALL CAUSE A MINIMUM DISTURBANCE TO THE EXISTING BUSINESSES AND NOTIFICATION TO THE BUSINESS OF ANY INTERRUPTION OF SERVICE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COUNTY REQUIRES THAT THE CONTRACTOR NOTIFY EACH BUSINESS AFFECTED BY LETTER OR DOOR TAGS OF THE IMPENDING SERVICE INTERRUPTION AT LEAST 48 HOURS IN ADVANCE OF THE PLANNED INTERRUPTION.
19. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES HOWARD COUNTY, AT LEAST 15 DAYS PRIOR TO WATER MAIN SHUT DOWNS.
20. THE CONTRACTOR SHALL RETURN ALL SALVAGED FIRE HYDRANTS TO THE BUREAU OF UTILITIES AT 8250 MONTGOMERY RD. COLUMBIA, MD 21045.
21. 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.

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	8-INCH WATERMAIN RELOCATION, PLANS & PROFILE

SEQUENCE OF CONSTRUCTION FOR WATER UTILITY

1. CONTRACTOR TO PROVIDE CONSTRUCTION SURVEY STAKE OUT CUT SHEETS. EXCAVATE TRENCH TO THE GRADE SPECIFIED ON THE PROFILE AND INSTALL SOUTHBOUND ROADWAY (SBR) WATER MAIN. PROVIDE TEMPORARY WATER SERVICE TO CUSTOMERS DURING CONNECTION TO NEW MAIN. COORDINATE TIE-IN AND SHUT DOWN OF WATER MAIN WITH COUNTY. BACKFILL TRENCH AND RESTORE TO EXISTING CONDITIONS. REMOVE ABANDONED WATER MAIN (30 DAYS) AS DESIGNATED ON PLAN.
 2. PROCEED WITH THE INSTALLATION OF WATER MAIN IN SAME METHOD PRESENTED ABOVE AND REMOVAL OF ABANDONED WATER MAIN ALONG OPPOSITE SIDE OF ROADWAY (NBR). (30 DAYS)
- NOTE: 1. CONTRACTOR TO TEST PIT ALL TIE-IN LOCATIONS TO THE EX. 8" W AND PROVIDE ENGINEER WITH HORIZONTAL AND VERTICAL LOCATION OF EX. 8" W PRIOR TO PROCEEDING WITH ANY WORK.
 2. REFER TO SEQUENCE OF CONSTRUCTION FOR MSHA HWY CONTRACT NO. H08295176



TYPE OF BUILDING: N/A
NUMBER OF PARCELS: N/A

WATER HOUSE CONNECTIONS: N/A
DRAINAGE AREA: PATUXENT





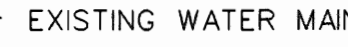


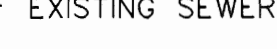


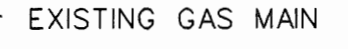
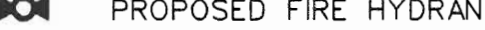

HO. CO. SURVEY CONTROL
SEE "GENERAL NOTE" 2
THIS SHEET

BENCH MARK
SEE "GENERAL NOTE" 2
THIS SHEET

LOCATION MAP

SCALE: 1" = 600'

LEGEND

 DECIDUOUS TREE	 PROPOSED WATER HOUSE CONNECTION	 EXISTING WATER MAIN TO BE REMOVED
 CONIFEROUS TREE	 EXISTING WATER MAIN	 EXISTING STORM DRAIN
 TRAVERSE POINT	 EXISTING SEWER	 TEST PIT
 PROPOSED WATER MAIN	 EXISTING GAS MAIN	
 PROPOSED FIRE HYDRANT	 LIMIT OF DISTURBANCE	

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
SEWER MANHOLE ADJUSTMENT	EA.	2	2	N/A
8" W	L.F.	950'	890 L.F.	D.I.R. CL-52 U.S. PIPE
6" W	L.F.	30'	79 L.F.	D.I.R. CL-52 U.S. PIPE
FIRE HYDRANT	EA.	2	4	MULLER
6" VALVE	EA.	2	1	KENNEDY
1" WATER SERVICE RECONNECTION	L.F.	100	95 L.F.	K-COPPER CAMBRIDGE LEE
1/2" WATER SERVICE RECONNECTION	L.F.	35	30 L.F.	K-COPPER

NAME OF UTILITY CONTRACTOR: _____

CHECKBOX	
AS-BUILT DATE:	
SURVEY AND DRAFTING DIVISION	

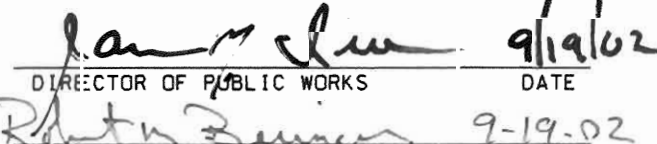



STAKEOUT SCHEDULE		
ITEM	COORDINATES	
	NORTHING	EASTING
WATER LINE 'A'		
STA 52+50 8" 45" HB	N 527451.19	E 1359769.82
STA 52+60 8" 45" HB	N 527453.03	E 1359784.65
STA 54+18 WATER SERVICE	N 527577.83	E 1359882.36
STA 54+34 8" X 6" TEE	N 527587.98	E 1359892.47
STA 56+71 8" 45" HB	N 527776.57	E 1360037.97
STA 56+90 8" 45" HB	N 527796.24	E 1360035.58
WATER LINE 'B'		
STA 52+30 8" 45" HB	N 527469.10	E 1359711.11
STA 52+46 8" 45" HB	N 527471.99	E 1359734.36
STA 53+47 WATER SERVICE	N 527557.53	E 1359796.45
STA 55+18 WATER SERVICE	N 527689.23	E 1359899.36
STA 55+65 8" X 6" TEE	N 527725.24	E 1359930.86
STA 56+81 8" 45" HB	N 527818.32	E 1360002.98
STA 56+94 8" 45" HB	N 527834.81	E 1360000.90


TRAVERSE COORDINATE SCHEDULE			
NUMBER	NORTHING	EASTING	ELEVATION
T.P. 1	527561.67	1359772.59	248.72
T.P. 6	527285.67	1359529.06	235.04
T.P. 10	527762.34	1360049.99	242.02
T.P. 11	528083.11	1360281.61	233.88

Note:
FOR ALL WATER AND SEWER SERVICE LINE RELOCATION, CURBSTOPS AND/OR CLEANOUTS SHALL BE PROVIDED AT EXISTING STATE HIGHWAY R/W LINE. FOR ANY WATER HOUSE CONNECTION WITH OUTSIDE METER VAULTS, REPLACEMENT SHALL BE IN KIND. COUNTY MAINTENANCE OF ANY RELOCATED WATER AND SEWER SERVICE CONNECTION SHALL END AT STATE HIGHWAY R/W LINES.

AS BUILT - 6-13-05 SHA CONTRACT #H08295176

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

 DIRECTOR OF PUBLIC WORKS DATE: 9-19-02	 CHIEF, BUREAU OF ENGINEERING DATE: 2/17/02
 CHIEF, BUREAU OF UTILITIES DATE: 9-17-02	 CHIEF, UTILITY DESIGN DIVISION DATE: 9-17-02


 10 NORTH PARK DRIVE
 HUNT VALLEY, MD 21030
 PHONE: (410) 316-7800
 FAX: (410) 316-7817
 www.kci.com

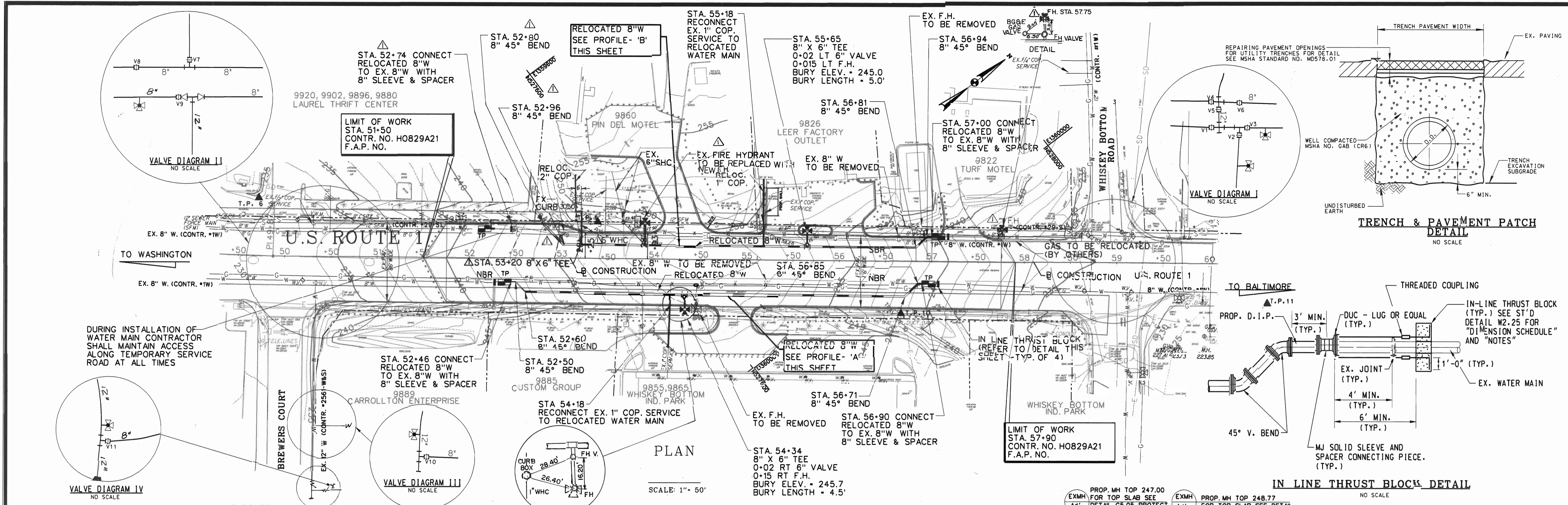


DES: TW			
DRN: CK			
CHK:			
DATE: 9/02	LN	AS BUILT INFORMATION ADDED	6/05
	BY	NO.	REVISION

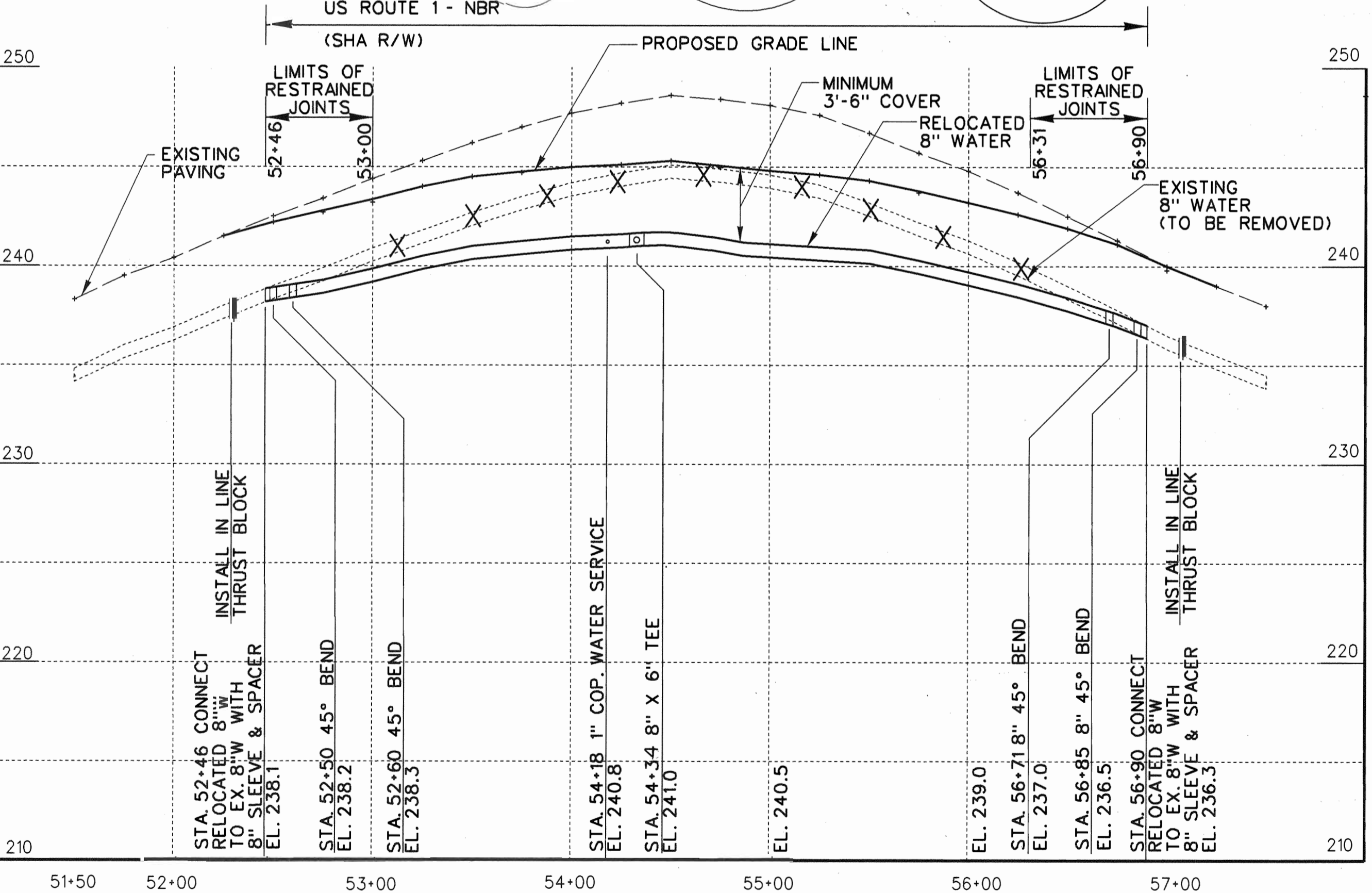
TITLE SHEET	
600' SCALE MAP NO. 50	BLOCK NO. 4

U.S. ROUTE 1 WATER MAIN RELOCATION
 FROM BREWERS COURT TO WHISKEY BOTTOM RD.
 CAPITAL PROJECT NO. W-8212
 CONTRACT NO. 44-3997
 ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

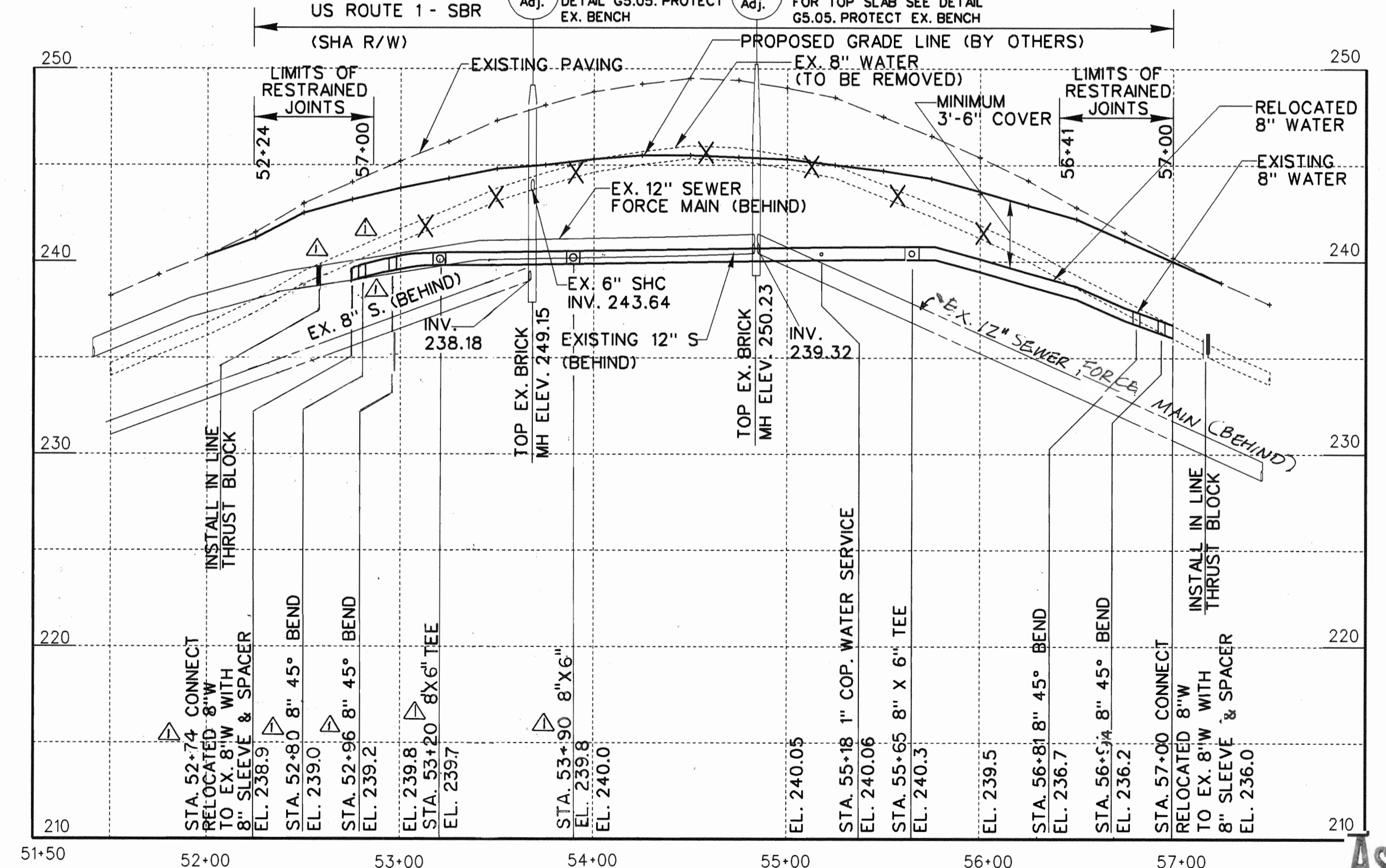
SCALE AS SHOWN
SHEET 1 OF 2



PLAN
SCALE: 1" = 50'



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



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

NOTE:
1. CONTRACTOR TO COORDINATE ELEVATIONS FOR TOP OF EXISTING MANHOLES.
2. CONTRACTOR TO COORDINATE REMOVAL AND REPLACEMENT OF MANHOLE TOP SLAB

NOTE: 1. ELEVATION TO THE RIGHT OF THE STATIONS ARE INVERTS OF RELOCATED 8" W.

AS BUILT - 6-13-05
SHA CONTRACT *H08295176

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Beaman 9/17/02
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Beaman 9-19-02
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Beaman 9-17-02
CHIEF, UTILITIES DESIGN DIVISION DATE

KCI TECHNOLOGIES

10 NORTH PARK DRIVE
HUNT VALLEY, MD 21030
PHONE: (410) 316-7800
FAX: (410) 316-7817
www.kci.com



DES:	TW			
DRN:	CK			
CHK:				
DATE:	9/02			
LN	NO.	AS BUILT INFORMATION ADDED	6/05	
BY		REVISION		

8" WATER MAIN RELOCATION
PLAN AND PROFILE

600' SCALE MAP NO. 50

U.S. ROUTE 1 WATER MAIN RELOCATION
FROM BREWERS COURT TO WHISKEY BOTTOM RD.

CAPITAL PROJECT NO. W-8212
CONTRACT NO. 44-3897
ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 2