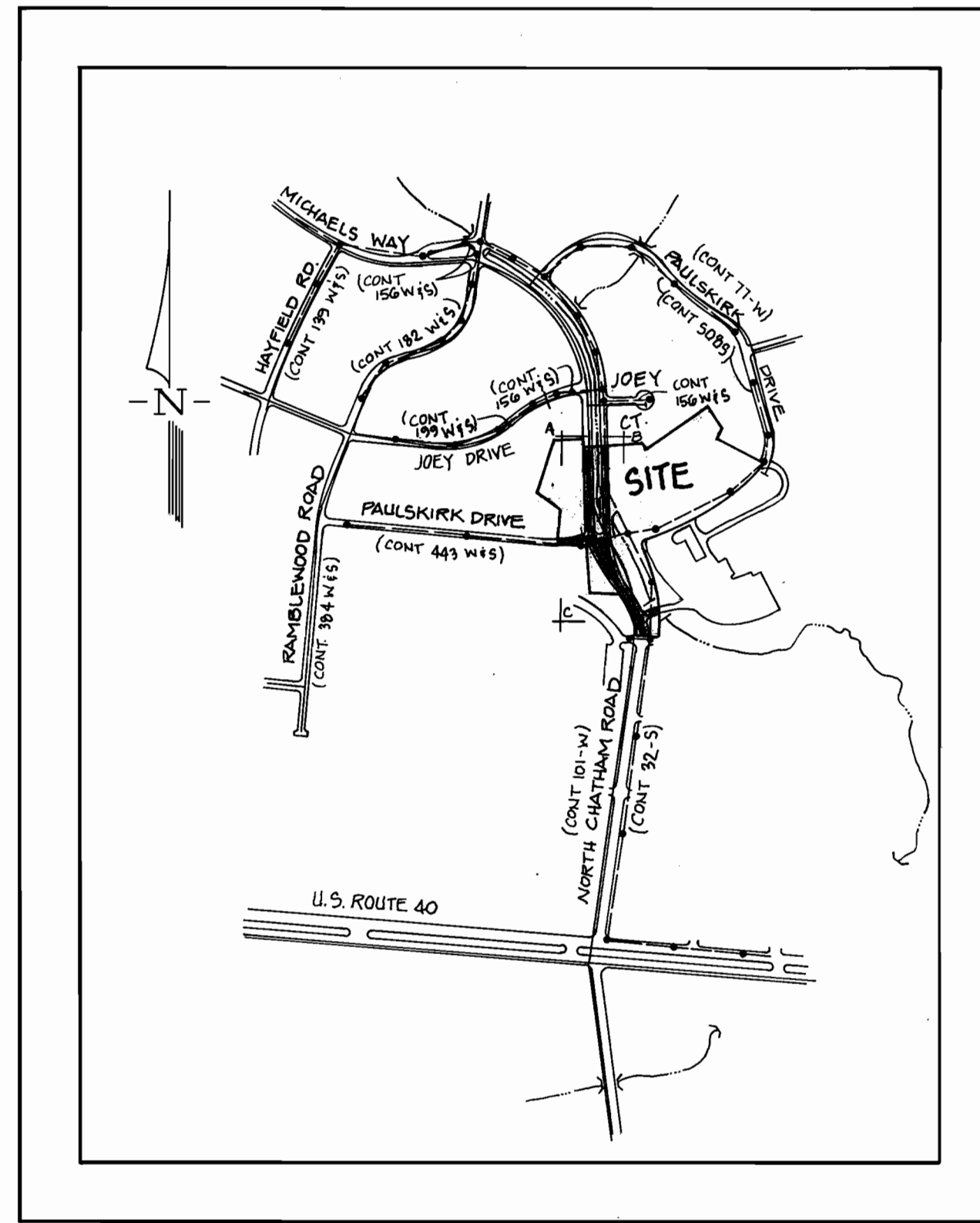


GENERAL NOTES

- 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. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 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. 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 \square 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORK DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 STATE HIGHWAY ADMINISTRATION: 531-5533
 BALTIMORE GAS & ELECTRIC CO.-CONTRACTOR SERVICES: 850-4620
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 859-9040
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9040
 MISS UTILITY: 1-800-257-7777
 COLONIAL PIPELINE COMPANY: 795-1390
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 313-2366
 C & P TELEPHONE COMPANY: 597-8585
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO 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.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION & MAINTENANCE OPERATIONS.

COORDINATE TABLE

A	N 528000
	E 847250
B	N 528000
	E 847500
C	N 527250
	E 847250



VICINITY MAP
SCALE: 1" = 600'

SEQUENCE OF OPERATIONS - WATER MAIN RELOCATION

- West baseline of North Chatham Road must be brought roughly to grade prior to construction of 8" water main along North Chatham Road.
- Construct 8" water main along North Chatham Road including 8"x8" Tee and 8" valve to serve Paulskirk Drive. Temporarily cap and block the ends at the locations indicated on the plan, sheet 2 of 3.
- Test and chlorinate the new main.
- Close valves at intersection of North Chatham Road and U.S. Rte 40, at intersection of North Chatham Road and Ramblewood Road, and at intersection of Paulskirk Drive and Ramblewood Road. (Valves to be closed by Howard County DPW.)
- Make connections at Sta 0+00 and Sta 7+44 on North Chatham Road and at Sta 0+50 on Paulskirk Drive.
- Reopen valves as listed in note 4 above. (Valves to be opened by Howard County DPW.)
- Remove existing water valves as noted on the plan and deliver to Howard County Bureau of Utilities Maintenance Yard.
- For portions of water main to be abandoned in place cut main at locations indicated on profile, sheet 3 of 3, and plug with concrete.

SEQUENCE OF OPERATIONS - SEWER MAIN RELOCATION

- Maintain sanitary sewer flow at all times during this construction.
- Verify location of proposed sanitary manhole WT1 with test pit at location indicated on plan, sheet 2 of 3.
- Upon verification of proposed sanitary manhole WT1 location construct manhole over existing pipe including stub for proposed 8" DIP running from existing MH-6806.
- Construct main from existing MH-6806 to tie in at proposed manhole WT1.
- Complete ties of existing and proposed sanitary sewer main at manhole WT1 and MH-6806.
- For portion of existing 8" ACP to be abandoned in place cut line at locations indicated on profile "8" SEWER RELOCATION - NORTH CHATHAM ROAD", sheet 3 of 3.

MATERIALS LIST

ITEM	EST'D	AS-BUILT	TYPE MATERIAL	SUPPLIER
8" SLEEVE & SPACER	3 EA.			
8" 1/8 VB	6 EA.			
8" 1/16 HB	2 EA.			
8" 18" OFFSET	1 EA.			
8" 8"x8" TEE	2 EA.			
8" VALVE	2 EA.			
BUTRESS	2 EA.			
FIRE HYDRANT	2 EA.			
8" W (DIP)	794 L.F.			
MANHOLES	1 EA.			
8" S (DIP)	224 L.F.			

WATER NOTES

- 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 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH ANWA SPECIFICATION C-153: DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTINGS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OF SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.

SEWER NOTES

- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT 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.
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.

CAPITAL PROJECT No. W-8156
CONTRACT NO. 14-3179
NORTH CHATHAM ROAD
WATER AND SEWER MAIN RELOCATION
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
[Signature] 1/17/91
 U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED:
[Signature] 1/17/91
 HOWARD SOIL CONSERVATION DISTRICT DATE

NOTE: SEDIMENT CONTROL DETAILS SHOWN ON SHEETS 9 THROUGH 11 OF THE J-4088 ROAD CONSTRUCTION DRAWING PACKAGE.

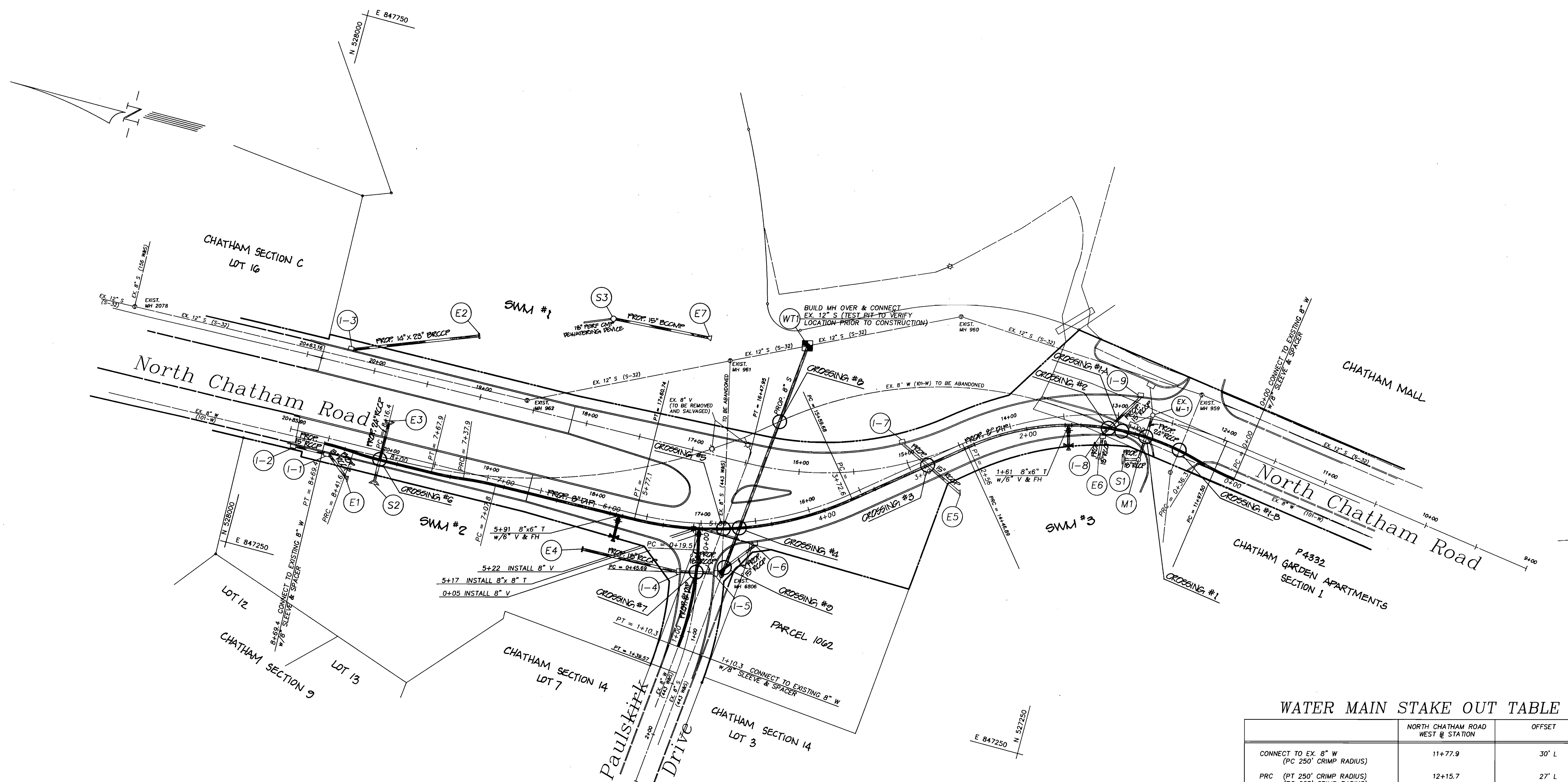
PLAN REFERENCE NUMBERS

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No in-stream construction shall take place on this job between March 1 and June 15, inclusive, of any year.

Waterway Construction Permit No. 89-WC-1180
 Corps of Engineers Permit No. 91-1167
 Water Quality Certification No. 91-WQ-0325

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 1/17/92 DIRECTOR OF PUBLIC WORKS DATE <i>[Signature]</i> 1-15-92 CHIEF, UTILITY DESIGN DIVISION DATE	MILDENBERG, MOCHI & ASSOCIATES, INC. ENGINEERS • SURVEYORS • PLANNERS 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350 (301) 461-0078 D.C. Metro No. (301) 621-5768		DES: TJP				TITLE SHEET	NORTH CHATHAM ROAD WATER & SEWER RELOCATION CAPITAL PROJECT No. W-8156 / CONTRACT No. 14-3179 ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 3
			DRN: TJP						
			CHK: RMM						
			PROJ. # 89031.03						
			DATE: JAN. 92	BY	NO.	REVISION	DATE		



WATER MAIN STAKE OUT TABLE

	NORTH CHATHAM ROAD WEST @ STATION	OFFSET
CONNECT TO EX. 8" W (PC 250' CRIMP RADIUS)	11+77.9	30' L
PRC (PT 250' CRIMP RADIUS) (PC 225' CRIMP RADIUS)	12+15.7	27' L
8"x6" T	13+47	8.5' L
PT (225' CRIMP RADIUS)	14+43	5' L
PC (305' CRIMP RADIUS)	15+59.7	5' L
8" x 8" T	17+01.6	5' L
8" V	17+07	5' L
PT (305' CRIMP RADIUS)	17+60.7	5' L
8" x 6" T	17+75	5' L
PC (300' CRIMP RADIUS)	18+91.5	5' L
PRC (PT 300' CRIMP RADIUS) (PC 300' CRIMP RADIUS)	19+21.5	6.5' L
PT (300' CRIMP RADIUS)	19+51.5	8' L
PC (250' CRIMP RADIUS)	20+00	8' L
PRC (PT 250' CRIMP RADIUS) (PC 250' CRIMP RADIUS)	20+25	6.7' L
CONNECT TO EX. 8" W (PT 250' CRIMP RADIUS)	20+53	7.5' L
	PAULSKIRK DRIVE @ STATION	OFFSET
8" V	0+10	0'
PC (290' CRIMP RADIUS)	0+24.5	0'
CONNECT TO EX. 8" W (PT 290' CRIMP RADIUS)	1+16	6' R

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Paul D. Johnson 7/15/92
DIRECTOR OF PUBLIC WORKS DATE

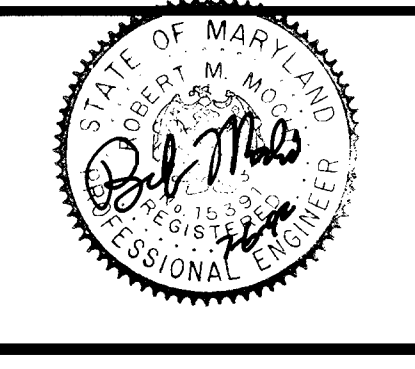
Robert J. Reay 7-15-92
CHIEF, BUREAU OF ENGINEERING DATE

Robert J. Reay 7-15-92
CHIEF, UTILITY DESIGN DIVISION DATE

Robert J. Reay 7-16-92
CHIEF, BUREAU OF UTILITIES DATE

MILDENBERG, MOCHI & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
(410) 461-0078 D.C. Metro: (301) 621-5788 FAX (410) 750-6340



DES: TJP			
DRN: TJP			
CHK: RMM			
PROJ: #89031			
DATE: 6/92	TJP	RE-ISSUED SHEET 2 OF 3 PER DPN COMMENTS	7/7/92
	BY	NO.	REVISION

WATER AND SEWER
RELOCATION PLAN

600' SCALE MAP NO. 24 BLOCK NO. 4

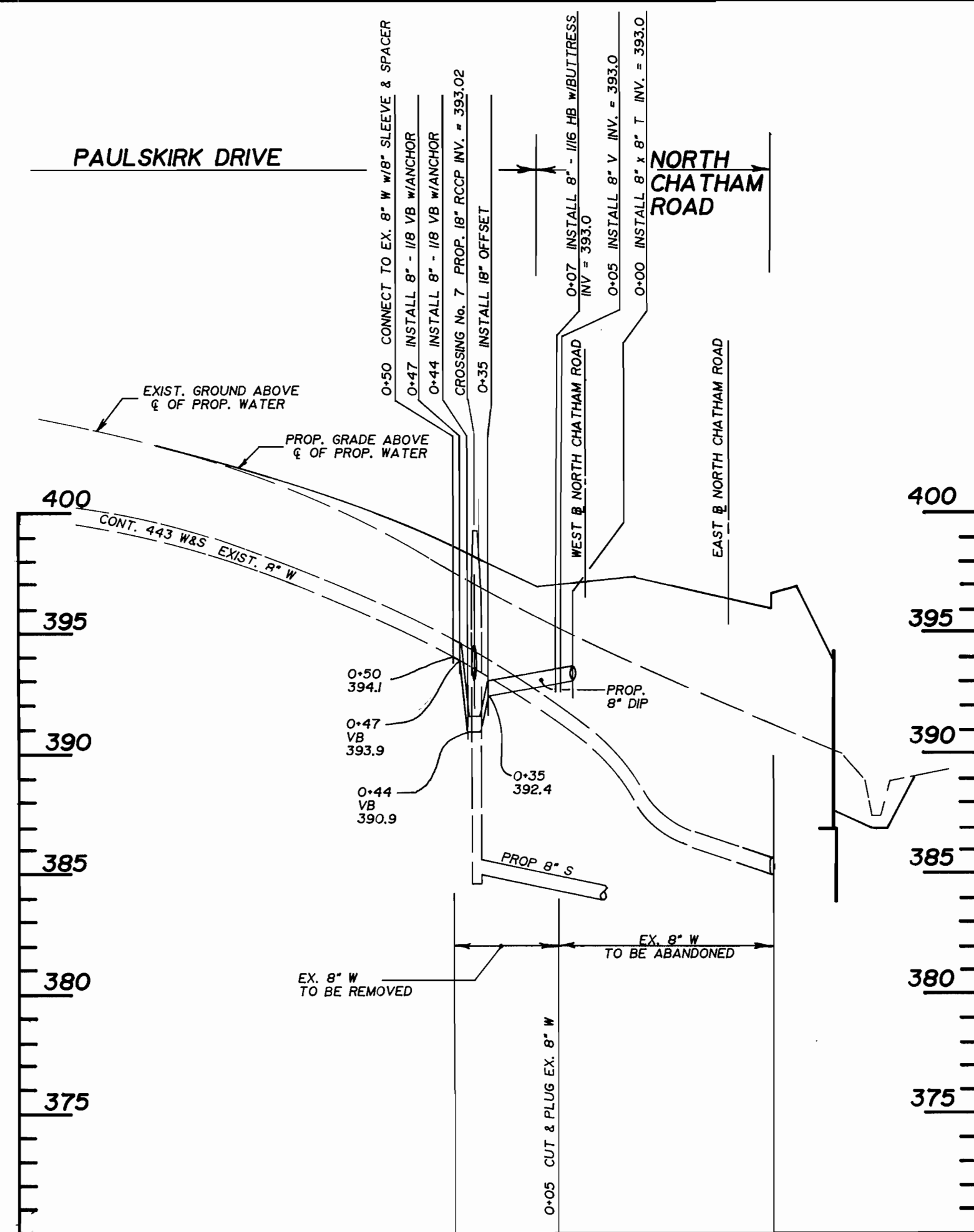
NORTH CHATHAM
ROAD IMPROVEMENTS

CAPITAL PROJ. No. W-8156 / CONTRACT No. 14-3179

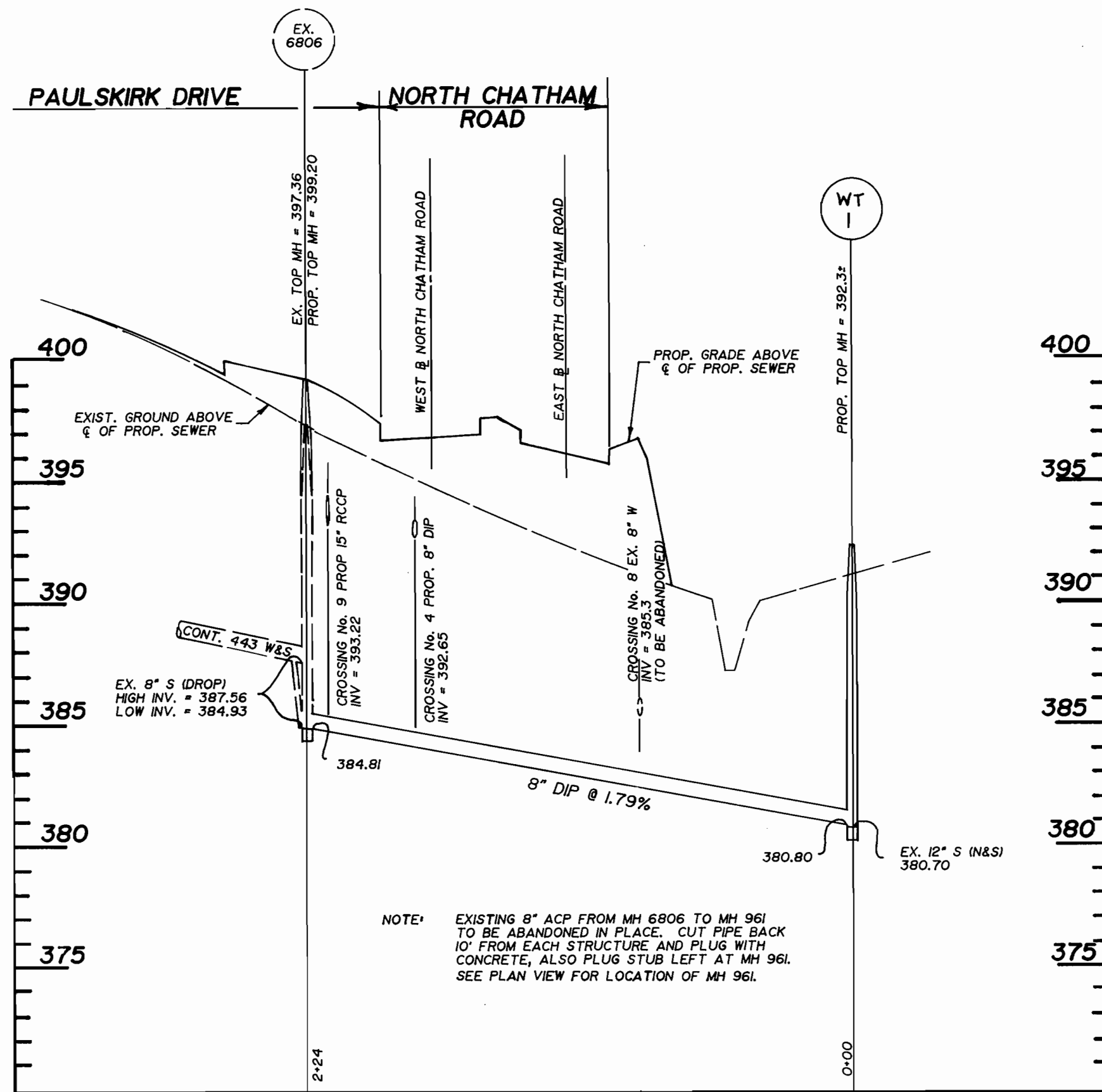
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE:
1" = 50'

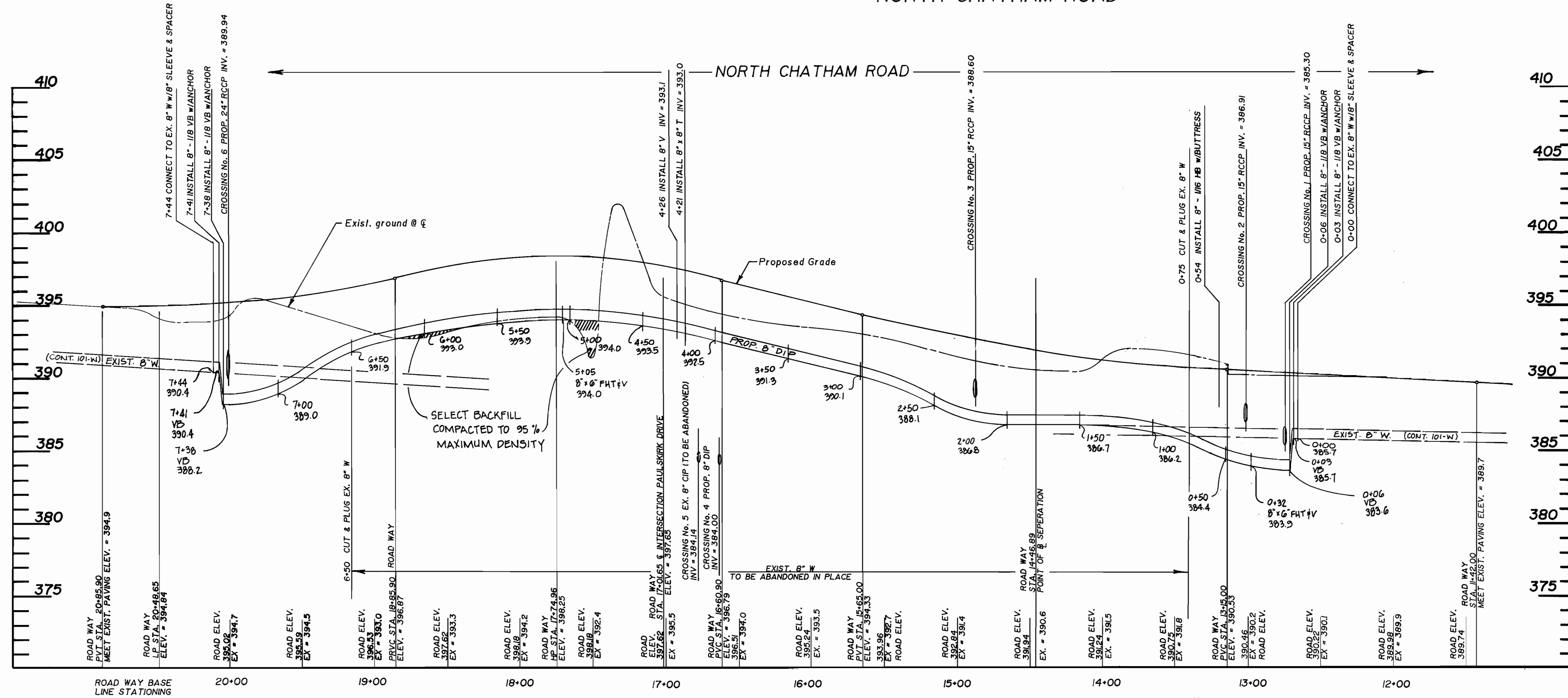
SHEET
2 OF 3



8" WATER RELOCATION
PAULSKIRK DRIVE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



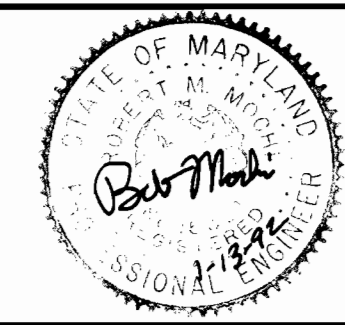
8" SEWER RELOCATION
NORTH CHATHAM ROAD
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



8" WATER RELOCATION - NORTH CHATHAM ROAD
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
1792
1-15-92
1-17-92

MILDENBERG,
MOCHI & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
(301) 461-0078 D.C. Metro No. (301) 621-5768



DES:	TJP				
DRN:	TJP				
CHK:	JBM				
PROJ. #	89031.00				
DATE:	NOV. '91	BY	NO.	REVISION	DATE

WATER & SEWER
RELOCATION
PROFILE
600' SCALE MAP NO. 24 BLOCK NO. 4

NORTH CHATHAM ROAD
IMPROVEMENTS
CAPITAL PROJECT No. W-8156 / CONTRACT No. 14-3179
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 3