

GENERAL NOTES

PART 1 - GENERAL

- APPROXIMATE LOCATION 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 SURVEYS WERE PERFORMED ON OR ABOUT OCTOBER, 2003 AND DECEMBER, 2004 BY BENCHMARK ENGINEERING, INC., AND ARE SHOWN AT 2' INTERVALS.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83/91. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12" 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 BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED TO 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 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 AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS ARE 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) 410-665-1400
 HO. CO. DPW BUREAU OF UTILITIES 410-513-4900
 COLONIAL PIPELINE CO. 410-795-1390
 MISS UTILITY 1-800-257-7777
 STATE HIGHWAY ADMINISTRATION 410-531-5533
 VERIZON 1-800-743-0033/410-224-9210
- 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY AT (410) 313-450 AT LEAST TWO WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OR ANY JOINT ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 16.1.1 (G) OF THE HOWARD COUNTY CODE.

PART 2 - WATER

- ALL WATER MAINS BE D.I.P. CLASS 30 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO MAINS 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE 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.

SEQUENCE OF CONSTRUCTION

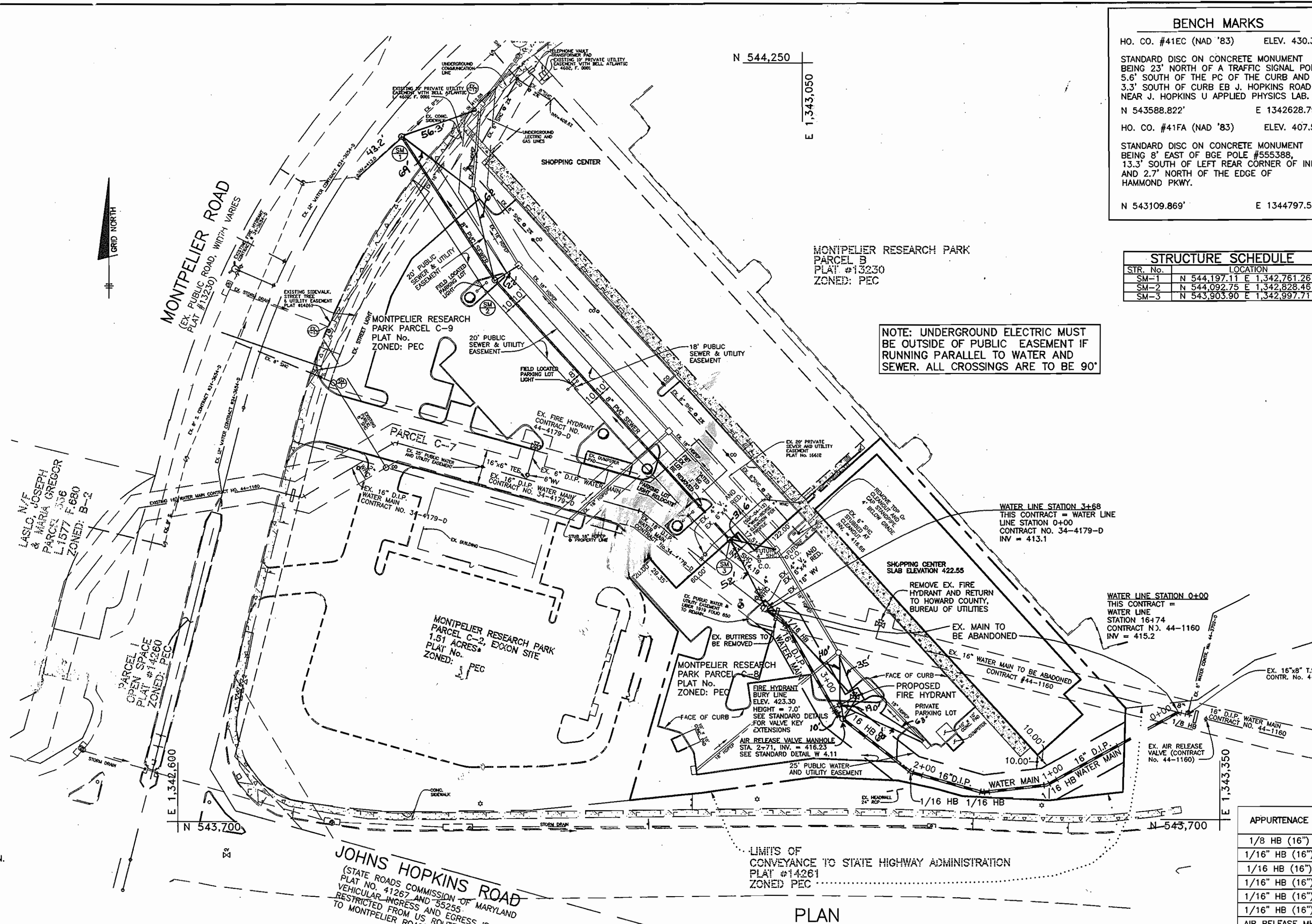
- NOTIFY HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS, 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- COORDINATE CLOSURE OF VALVES WITH CONSTRUCTION.
- NEW WATER MAIN AND HYDRANT IS TO BE INSTALLED FROM VALVE AT STATION 0+07 TO STATION 3+14.
- NEW WATER MAIN IS TO BE PRESSURE TESTED AND CHLORINATED.
- ON A SATURDAY NIGHT CLOSE THE EXISTING VALVES AS SHOWN ON CONTRACT NO. 44-1160, AT STATIONS 6+40 AND ON CONTRACT NO. 44-4179-0, STATION 0+07.
- DRAIN THE EXISTING MAIN FROM THE FIRE HYDRANT, CONTRACT NO. 44-1160, AT STATION 18+80.
- ONCE THE MAIN IS DRAINED CUT THE EXISTING 16" MAIN AND MAKE THE CONNECTION TO THE NEW MAIN.
- OPEN THE 16" VALVE, CONTRACT NO. 44-1160, AT STATION 6+40.
- INSPECT THE CONNECTION BETWEEN THE NEW MAIN AND CONTRACT NO. 44-1160.
- FROM THE FIRE HYDRANT AT STATION 2+07 CONTRACT NO. 44-4179-D, DRAIN THE WATER UNTIL ADEQUATE WATER QUALITY IS ACHIEVED.

LEGEND

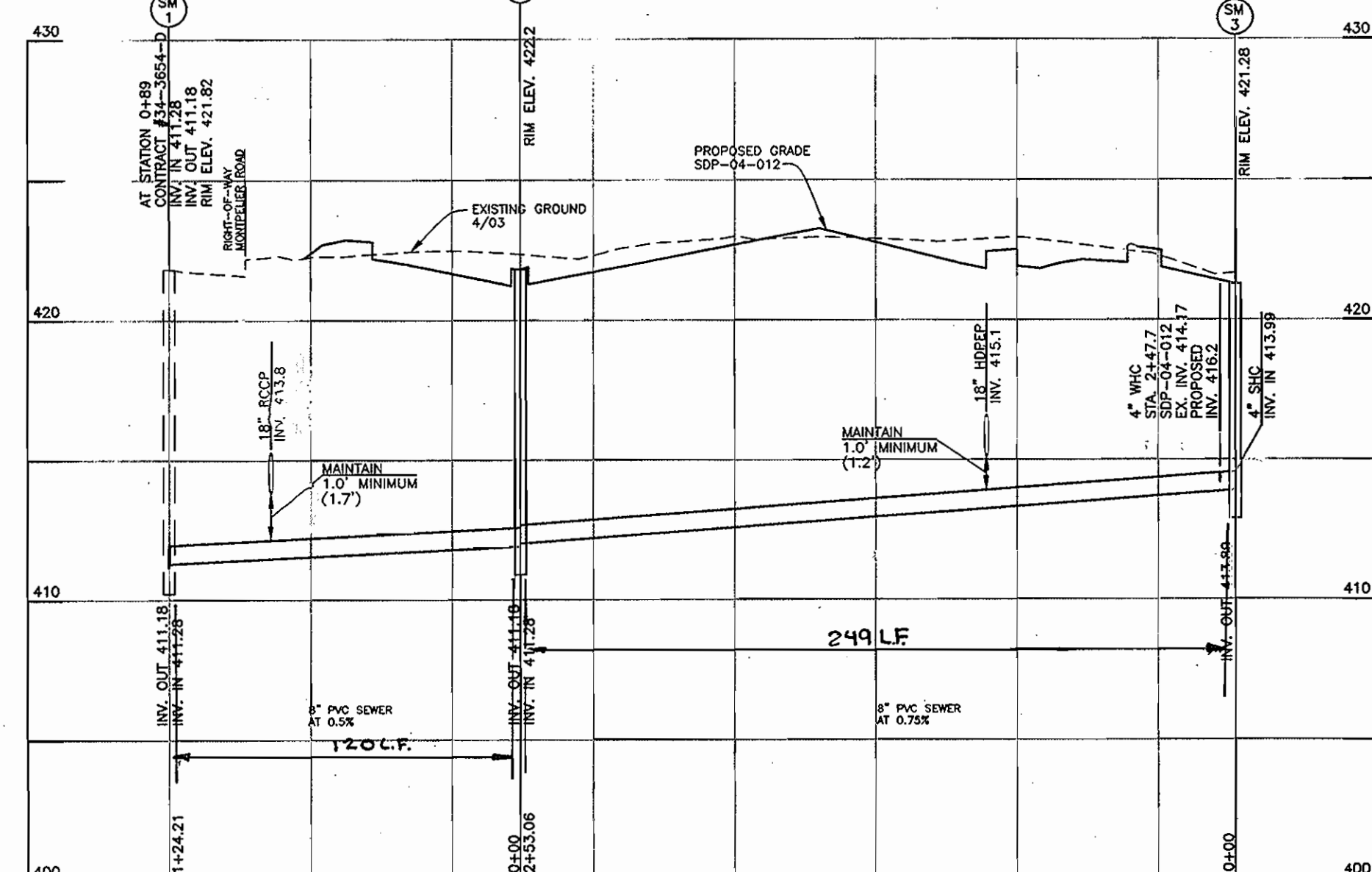
EXIST. WATER MAIN	
EXIST. SEWER MAIN	
EXIST. SEWER MANHOLE	
PROP. WATER MAIN	
PROP. SEWER MAIN	
PROP. STORM DRAIN (OTHERS)	
PROP. SEWER MANHOLE	
PROP. TERMINAL MANHOLE	
PROP. FIRE HYDRANT	
PROP. VALVE	

Reviewed for HOWARD COUNTY S.C.D. Name: Jim M... Date: 1/31/06
 Signature: [Signature]
 USDA, NATURAL RESOURCES SERVICE

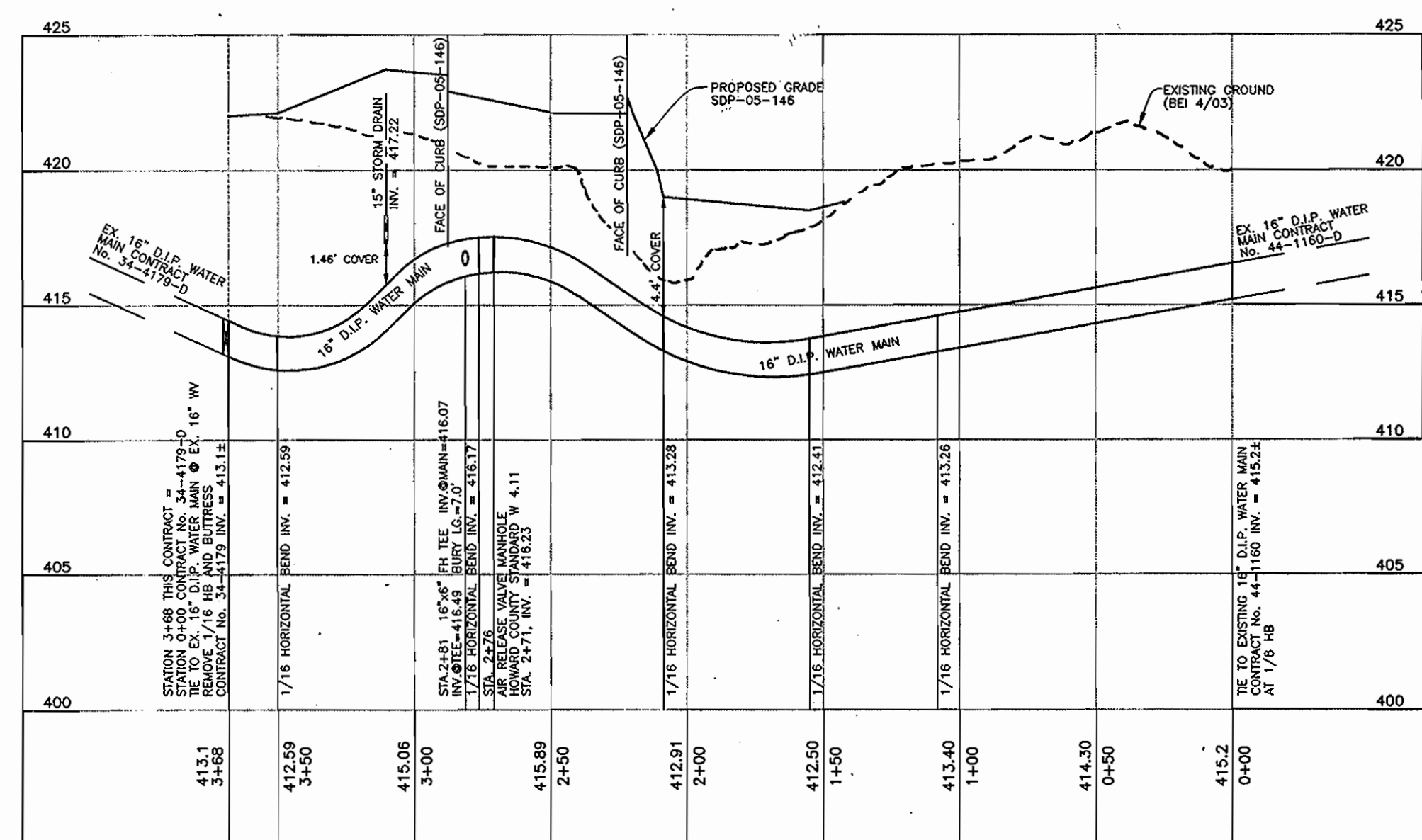
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 Signature: [Signature] 1/31/06
 HOWARD COUNTY SOIL CONSERVATION DISTRICT
 SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER THE SITE DEVELOPMENT PLAN, SDP-05-146



PLAN
SCALE: 1" = 50'



SEWER PROFILE
SM-1 TO SM-3
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



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

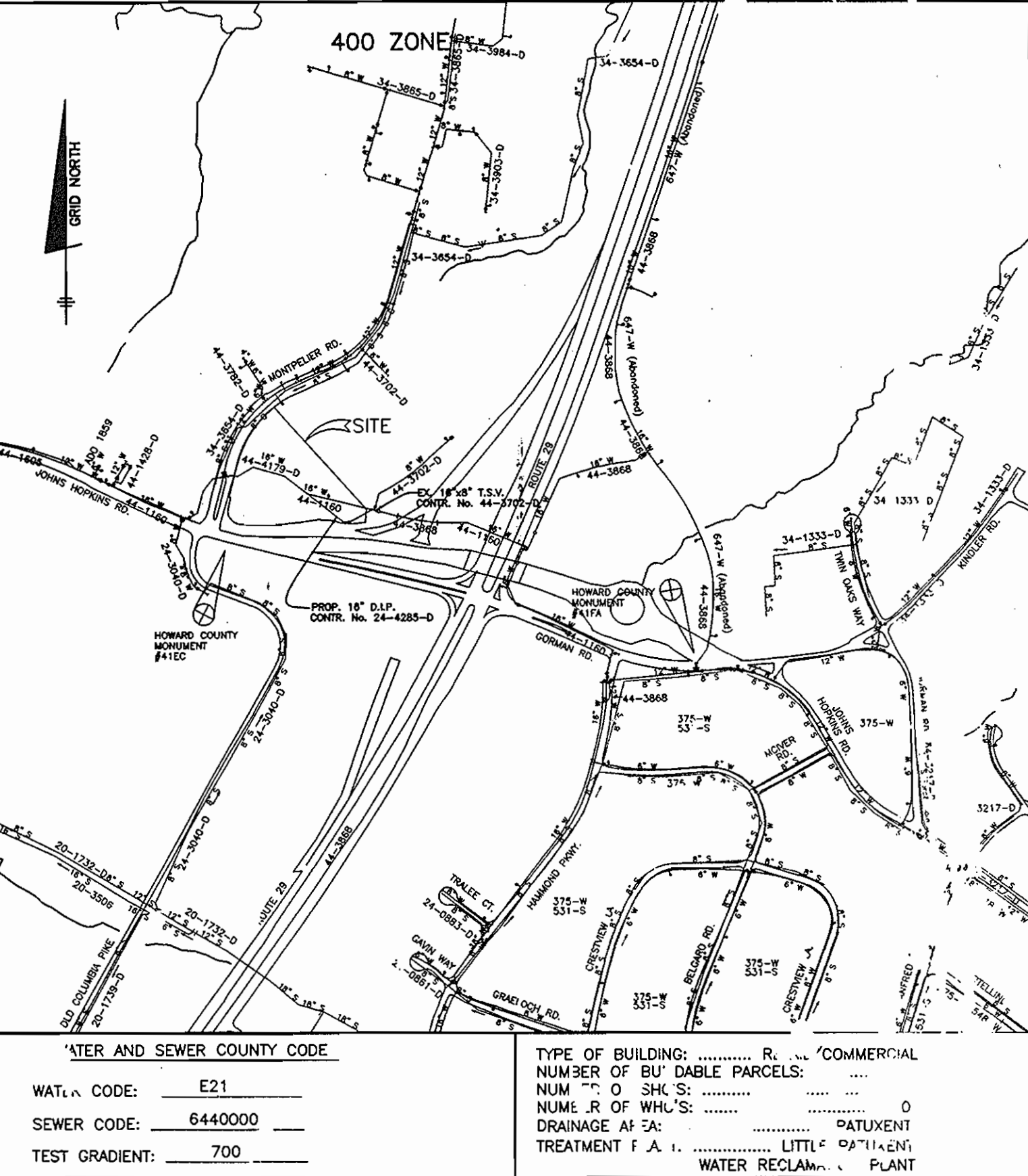
BENCH MARKS

HO. CO. #41EC (NAD '83)	ELEV. 430.329'
STANDARD DISC ON CONCRETE MONUMENT BEING 23' NORTH OF A TRAFFIC SIGNAL POLE, 5.6' SOUTH OF THE PC OF THE CURB AND 3.3' SOUTH OF CURB E.J. HOPKINS ROAD NEAR J. HOPKINS U APPLIED PHYSICS LAB.	
N 543588.822'	E 1342628.79'
HO. CO. #41FA (NAD '83)	ELEV. 407.585'
STANDARD DISC ON CONCRETE MONUMENT BEING 8' EAST OF BOE POLE #555388, 13.3' SOUTH OF LEFT REAR CORNER OF INLET AND 2.7' NORTH OF THE EDGE OF HAMMOND PKWY.	
N 543109.869'	E 1344797.53'

STRUCTURE SCHEDULE

STR. NO.	LOCATION
SM-1	N 544,187.11 E 1,342,761.26
SM-2	N 544,092.75 E 1,342,878.46
SM-3	N 543,903.90 E 1,342,997.71

NOTE: UNDERGROUND ELECTRIC MUST BE OUTSIDE OF PUBLIC EASEMENT IF RUNNING PARALLEL TO WATER AND SEWER. ALL CROSSINGS ARE TO BE 90°

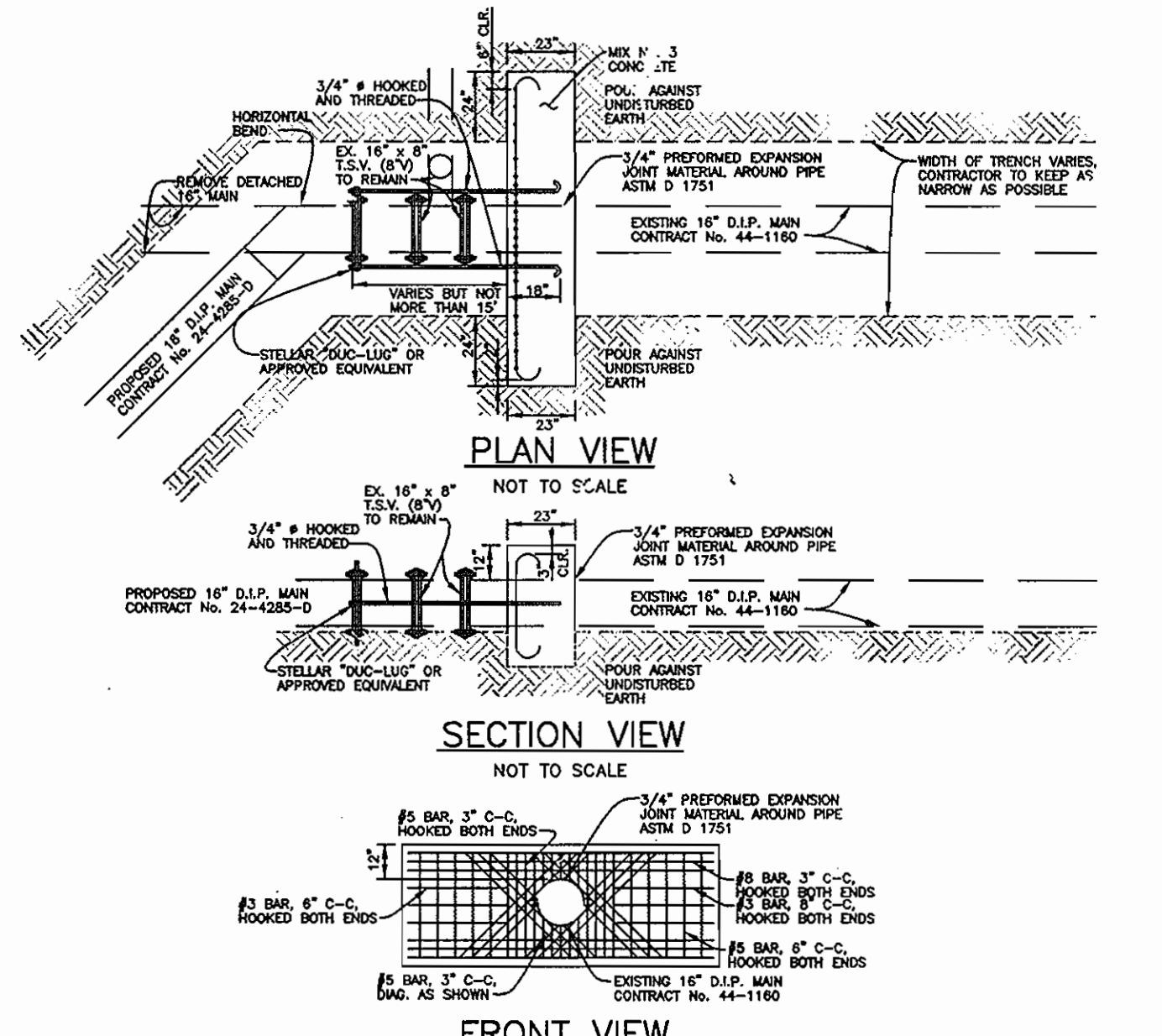


VICINITY MAP
SCALE: 1" = 600'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	AS-BUILT	TYPE	MANUF. SUPPLIER
16" D.I.P.	368 L.F.	368 L.F.	DIP		ATLANTIC
6" VALVE	1 EACH	1 EACH			MUELLER CO.
6" D.I.P.	15 L.F.	15 L.F.	DIP		ATLANTIC
1/8" HB (16")	1 EACH	1 EACH			TYLER PIPE
1/16" HB (16")	5 EACH	5 EACH			TYLER PIPE
FIRE HYDRANT	1 EACH	1 EACH			MUELLER CO.
AIR RELEASE MH	1 EACH	1 EACH			ATLANTIC CO.
8" PVC SEWER	377 LF	377 LF	PVC		NORTH AMERICAN
MANHOLE	3 EACH	3 EACH			ATLANTIC CO.
4" H.C.	10 LF	10 LF	PVC		NORTH AMERICAN

NAME OF UTILITY CONTRACTOR: C.J. MILLER LLC
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 7/31/06



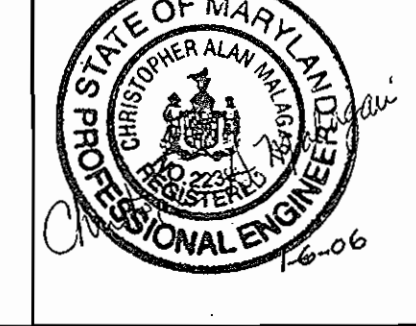
DEVELOPER:
CASCADE MONTPELIER, LLC
P.O. BOX 417
ELICOTT CITY, MD 21041
410-465-4244

DEAD MAN BUTTRESS AND TIE-IN DETAIL

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Signature: [Signature] 1-18-06
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Signature: [Signature] 2/3/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-6844



DES: JMC	
DRN: JMC	
CHK: DAM	
DATE: 1/06/06	
ADD AS-BUILT DATA TO PLAN	1/1/06
BY NO.	REVISIONS

WATER AND SEWER PLAN, PROFILE AND DETAILS
600 SCALE MAPS: 41 BLOCKS: 17

MONTPELIER RESEARCH PARK
PARCEL C-8 AND C-9
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-4285-D
SCALE: AS SHOWN
SHEET NO. 1 OF 1
AS-BUILT 11-7-07