

SHEET INDEX

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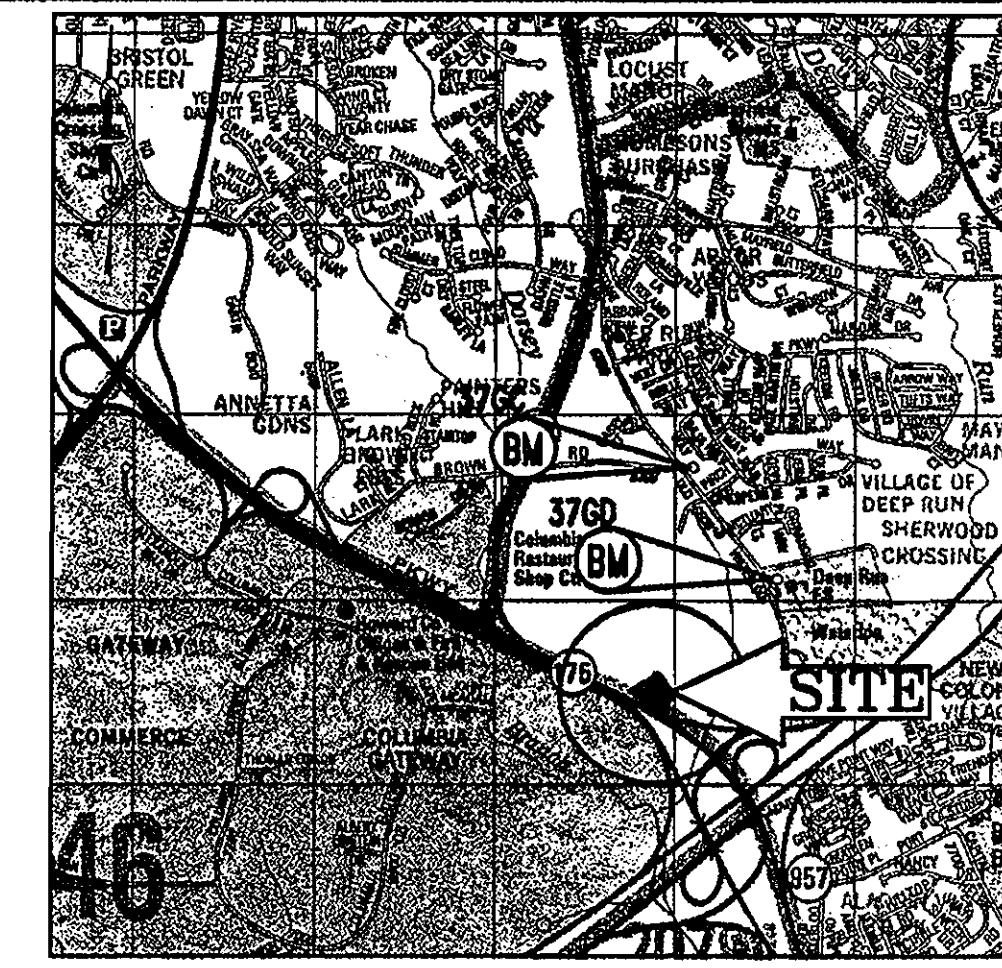
PUBLIC WATER EXTENSION

BENSON EAST, ONSITE

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-4378-D



LOCATION MAP
 COPYRIGHT AND THE MAP PEOPLE
 PERMIT USE NO. 20602153-5
 SCALE: 1"=2000'

BENCHMARKS
 GEODETIC SURVEY CONTROL 376D
 N 553,237.204
 E 1,372,353.605
 ELEV. 290.931
 LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL 376C
 N 555,250.791
 E 1,370,949.348
 ELEV. 331.855
 LOCATED ON THE SOUTH SIDE OF OLD WATERLOO ROAD ACROSS FROM DEEP RUN PARKWAY

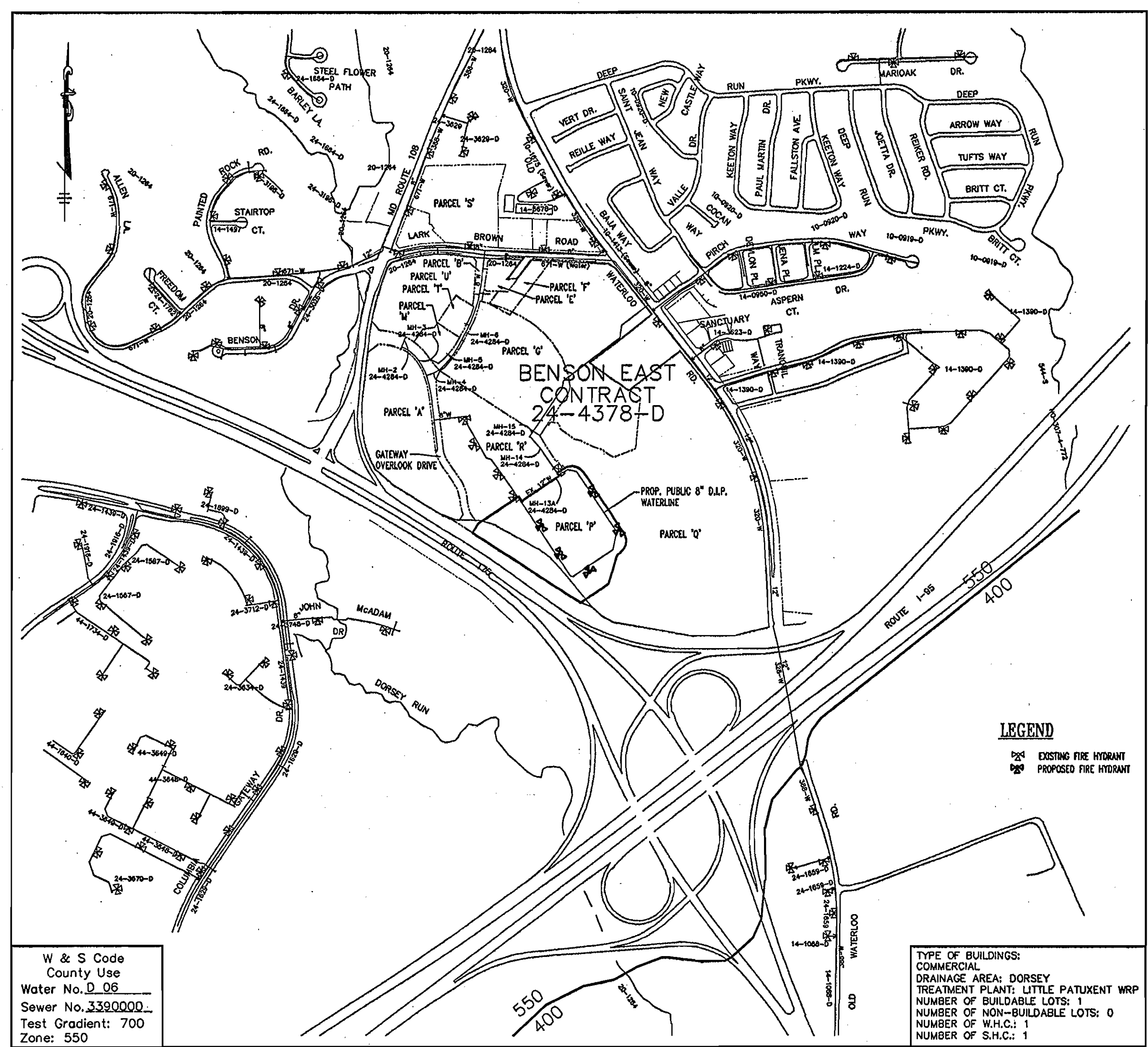
GENERAL NOTES

- 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.
- THESE PLANS REFERENCE A BOUNDARY SURVEY PREPARED BY CONTROL POINT ASSOCIATES, INC. DATED 04/21/05
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
 THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 376D AND NO. 376C.
 ALL VERTICAL CONTROLS ON NAVD '88. VERTICAL CONTROLS ON THE DRAWINGS ARE ELEVATION 290.931 AND ELEVATION 331.855
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. 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 TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, 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 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.
- 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)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERTIZON	1-800-743-0033 / 410-224-9210
- 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.
- THE 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/LACKING 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(A) OF THE HOWARD COUNTY CODE.

WATER NOTES

- ALL WATER MAINS SHALL BE D.I.P. CLASS S2 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF 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 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.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.



LEGEND
 EXISTING FIRE HYDRANT
 PROPOSED FIRE HYDRANT

W & S Code
 County Use
 Water No. 006
 Sewer No. 3390000
 Test Gradient: 700
 Zone: 550

TYPE OF BUILDINGS:
 COMMERCIAL
 DRAINAGE AREA: DORSEY
 TREATMENT PLANT: LITTLE PATUXENT WRP
 NUMBER OF BUILDABLE LOTS: 1
 NUMBER OF NON-BUILDABLE LOTS: 0
 NUMBER OF W.H.C.: 1
 NUMBER OF S.H.C.: 1

DEVELOPER
 LOWE'S COMPANIES, INC.
 ENGINEERING AND CONSTRUCTION EAST DOCK
 P.O. BOX 1111
 HIGHWAY 268 EAST DOCK
 NORTH WILKESBORO, NC 28659

VICINITY MAP
 SCALE: 1"=600'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT	
		QUANTITIES	MANUFACTURER / SUPPLIER
6" WATER	134 LF	125.5 L.F.	TYTON DIPCL52 U.S. PIPE/U.S. PIPE
8" WATER	1374 LF	1314 L.F.	TYTON DIPCL52 U.S. PIPE/U.S. PIPE
12" WATER	394 LF	457 L.F.	TYTON DIPCL52 U.S. PIPE/U.S. PIPE
FIRE HYDRANTS	6 EA.	6 EA.	A 423 FH MUELLER CO./FERGUSON
12"x8" REDUCER	2 EA.	2 EA.	MJ C 153 TYLER PIPE/FERGUSON
6" VALVE	6 EA.	6 EA. G.V.A.	MJRS A2360-23 MUELLER CO./FERGUSON
8" VALVE	5 EA.	5 EA. G.V.A.	MJRS A2360-23 MUELLER CO./FERGUSON
10" VALVE	0 EA.	1 EA. G.V.A.	MJRS A2360-23 MUELLER CO./FERGUSON
12" VALVE	2 EA.	1 EA. G.V.A.	MJRS A2360-23 MUELLER CO./FERGUSON
12"x12"x10" TEE	1 EA.	1 EA.	MJ C 153 TYLER PIPE/FERGUSON
12"x12"x6" TEE	1 EA.	1 EA.	MJ C 153 TYLER PIPE/FERGUSON
8"x8"x6" TEE	5 EA.	5 EA.	MJ C 153 TYLER PIPE/FERGUSON
8" - 1/8 BEND	6 EA.	6 EA.	MJ C 153 TYLER PIPE/FERGUSON
10" WATER	—	19 L.F.	TYTON DIPCL52 U.S. PIPE/U.S. PIPE

NAME OF UTILITY CONTRACTOR: **AMERICAN INFRASTRUCTURE**

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-05-058

CHECKBOX
 AS-BUILT DATE: **JULY 2007**
 SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

John Mays
 NATURAL RESOURCES CONSERVATION SERVICE
 DATE: **10/24/06**

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John Mays
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: **10/24/06**

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert M. Benjamin
 CHIEF, BUREAU OF UTILITIES
 DATE: **10-16-06**

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

Adam M. Wobant
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: **10/24/06**

BOHLER ENGINEERING
 PROFESSIONAL ENGINEERING SERVICES
 4310 GLENHEATH COURT, SUITE 100, TOWSON, MARYLAND, 21286
 (410) 921-7900 FAX: (410) 921-7997 | MDPE@bohlere.com

Adam M. Wobant
 PROFESSIONAL ENGINEER
 NO. 21342
 ADAM M. WOBANT

DES: MJG					
DRN: RFG					
CHK: AJV					
DATE: 09/22/06	REV.	DATE	DESCRIPTION	BY	

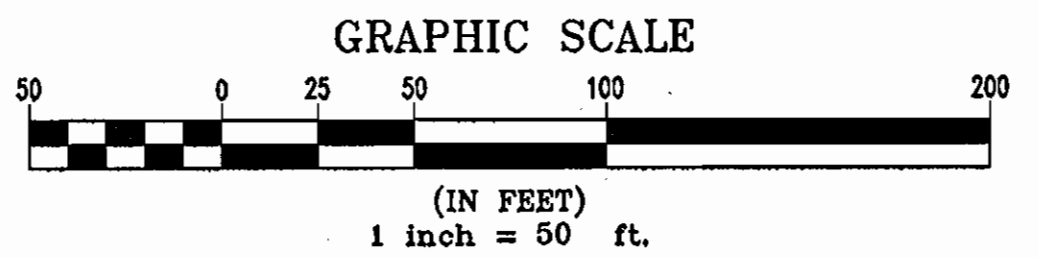
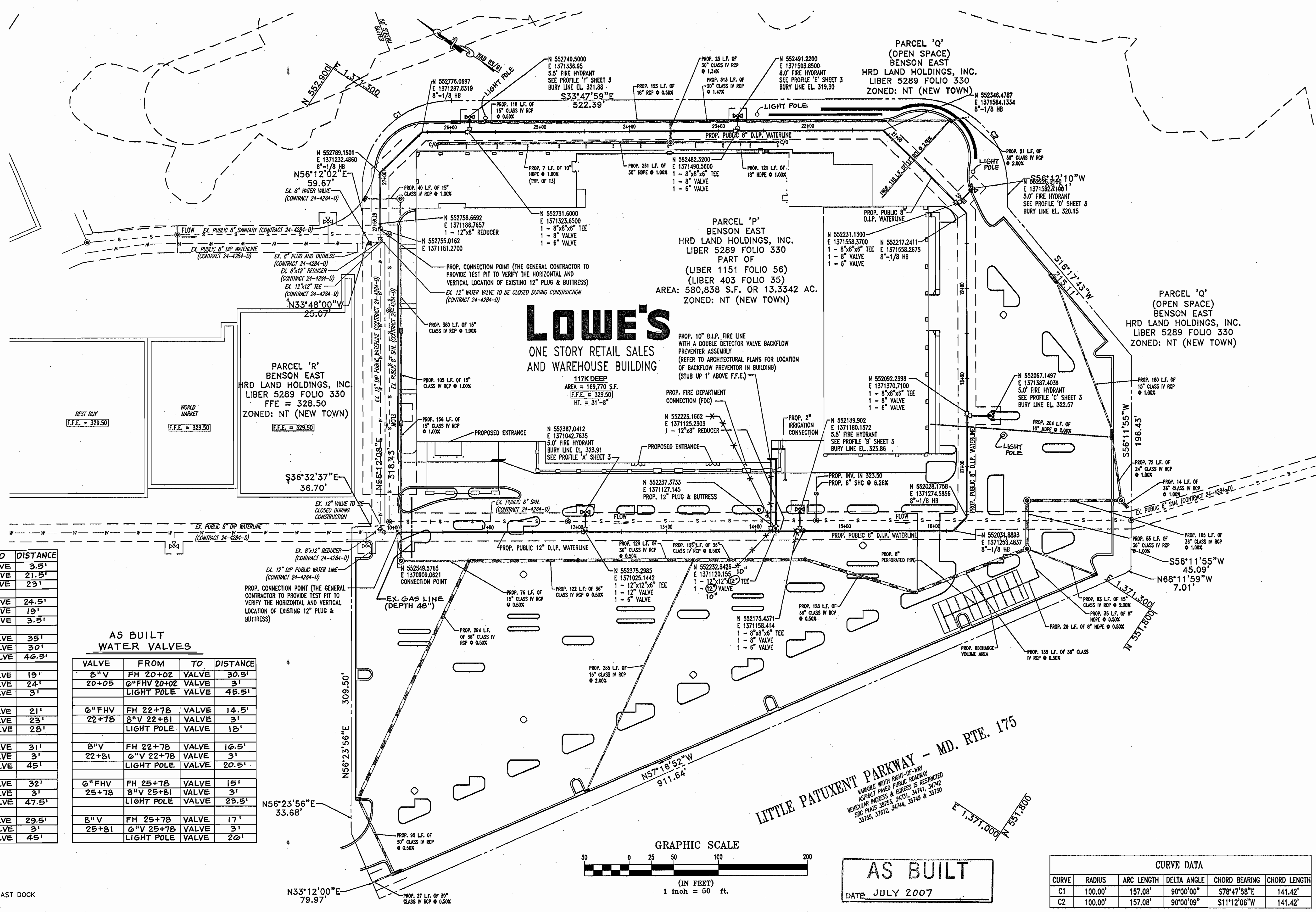
AS BUILT
 DATE: **JULY 2007**

TITLE SHEET

PARCEL NO. **P**
 600' SCALE MAP NO. **37 & 43** BLOCK NO. **20**

BENSON EAST, ONSITE
 PARCEL P
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 24-4378-D

SCALE AS SHOWN
 SHEET 1 OF 3



AS BUILT
DATE: JULY 2007

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	100.00'	157.08'	90°00'00"	S78°47'58"E	141.42'
C2	100.00'	157.08'	90°00'09"	S11°12'06"W	141.42'

DEVELOPER
LOWE'S COMPANIES, INC.
ENGINEERING AND CONSTRUCTION EAST DOCK
P.O. BOX 1111
HIGHWAY 268 EAST DOCK
NORTH WILKESBORO, NC 28659

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

BOHLER ENGINEERING
PROFESSIONAL ENGINEERING SERVICES
810 GREENGLASS COURT, SUITE 200, TOWSON, MARYLAND, 21286
(410) 561-7900 FAX: (410) 561-7901 MD@bohlereng.com

ADAM J. VOLANTH

DES: MJG					
DRN: RFG					
CHK: AJV					
DATE: 09/22/06	REV.	DATE	DESCRIPTION	BY	

WATER AND SEWER PLAN

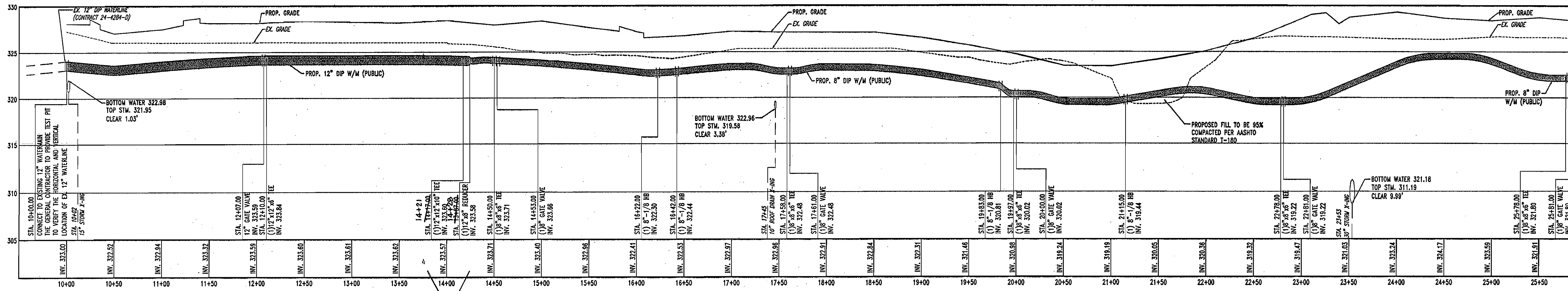
PARCEL NO. P
600' SCALE MAP NO. 37 & 43 BLOCK NO. 20

BENSON EAST, ONSITE
PARCEL P
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-4378-D

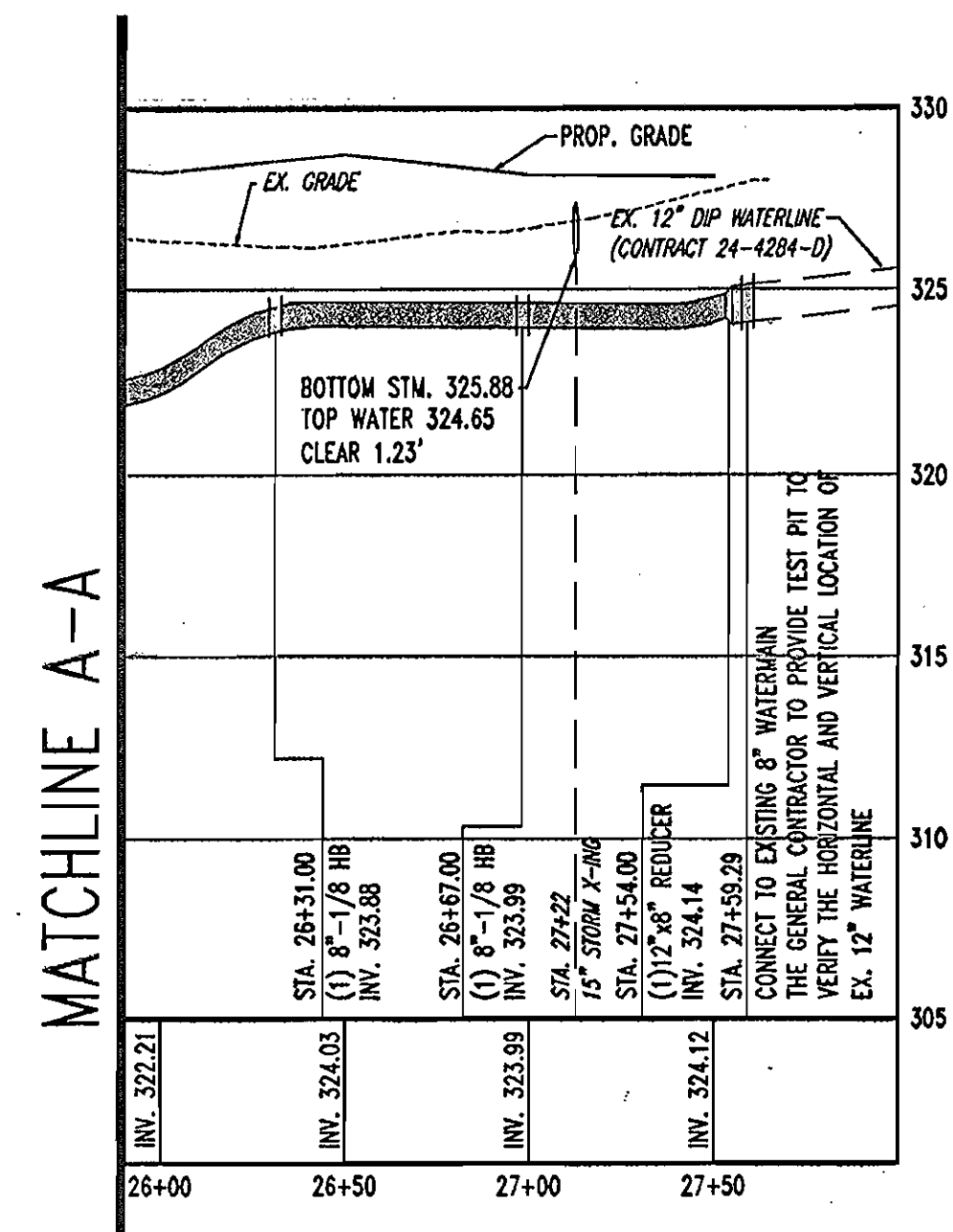
SCALE AS SHOWN
SHEET 2 OF 3

MISS UTILITY
BEFORE YOU DIG CALL 800-488-5877
PROTECT YOURSELF. GIVE TWO WORKING DAYS NOTICE.

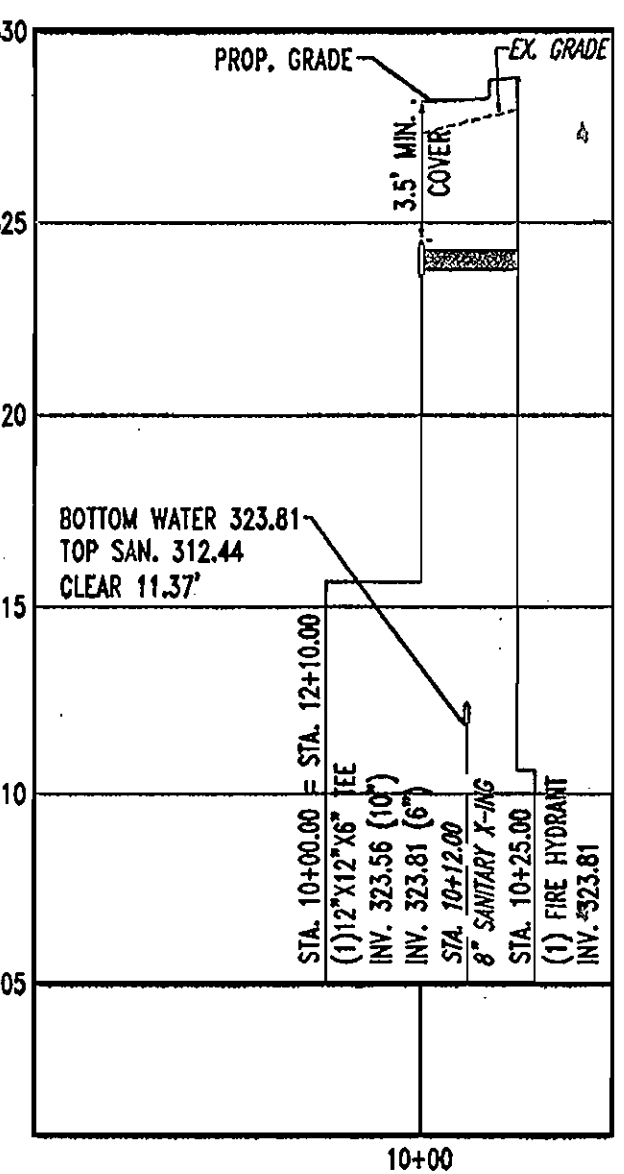
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.
THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.



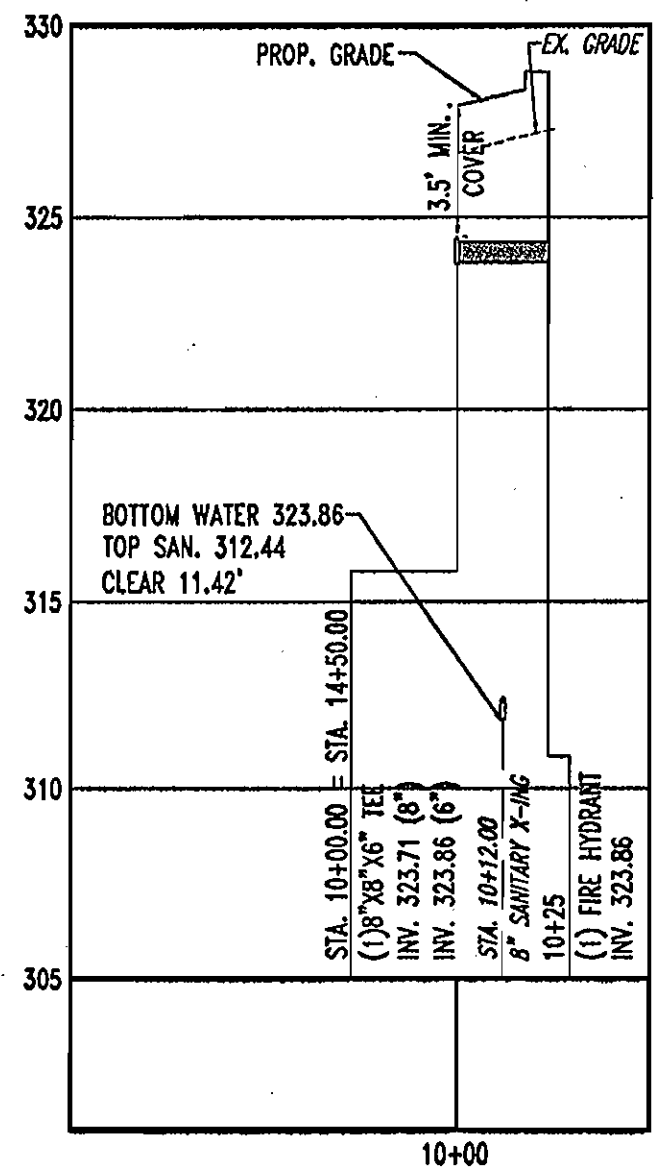
PROPOSED WATER MAIN PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



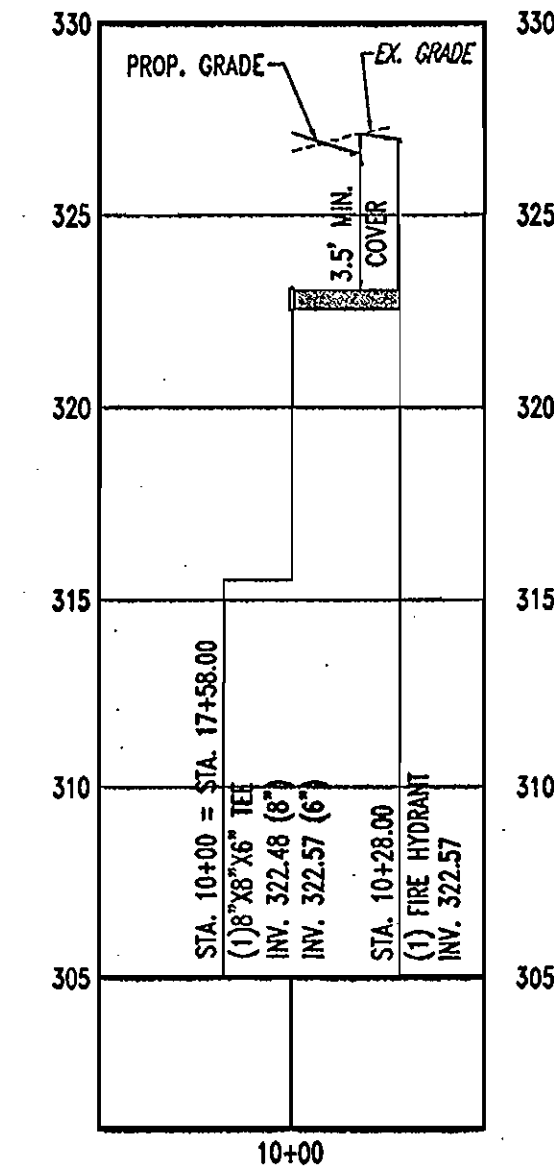
PROPOSED WATER MAIN PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



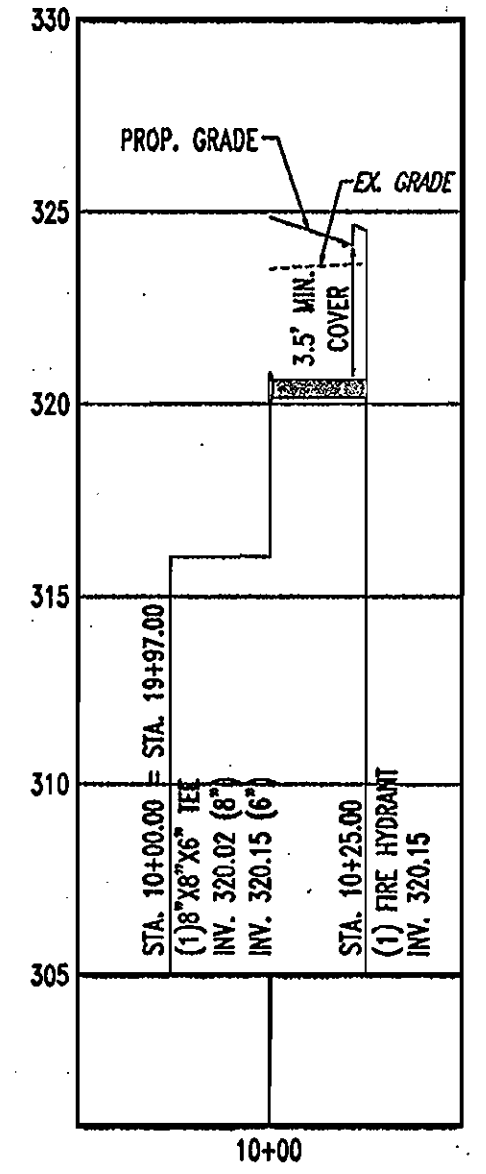
PROPOSED FIRE HYDRANT (A) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



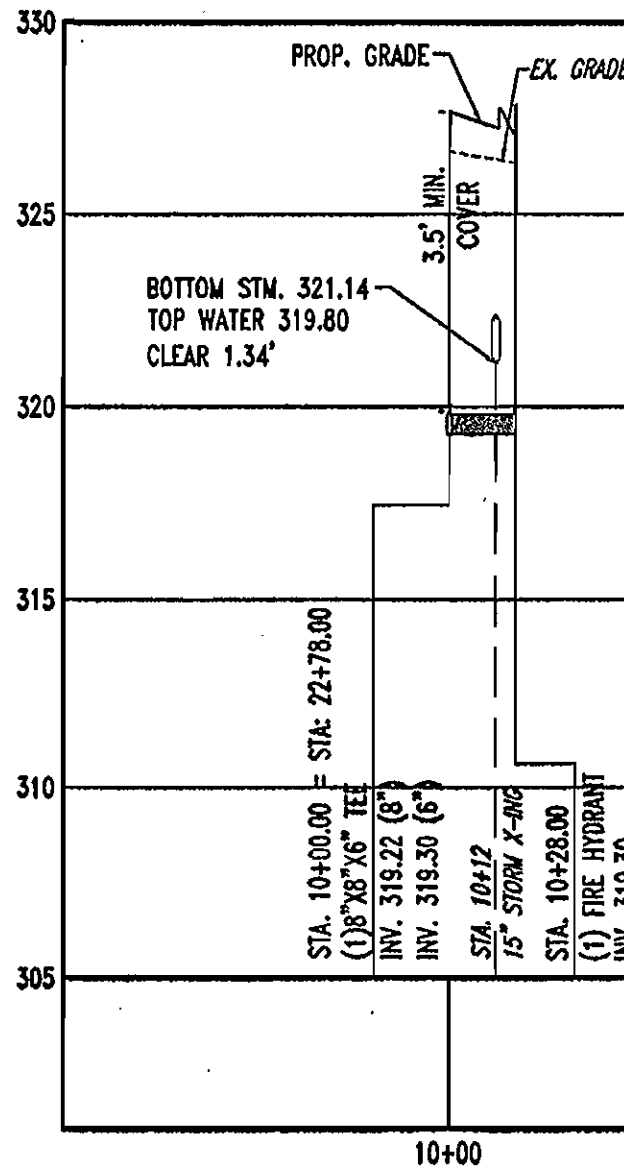
PROPOSED FIRE HYDRANT (B) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



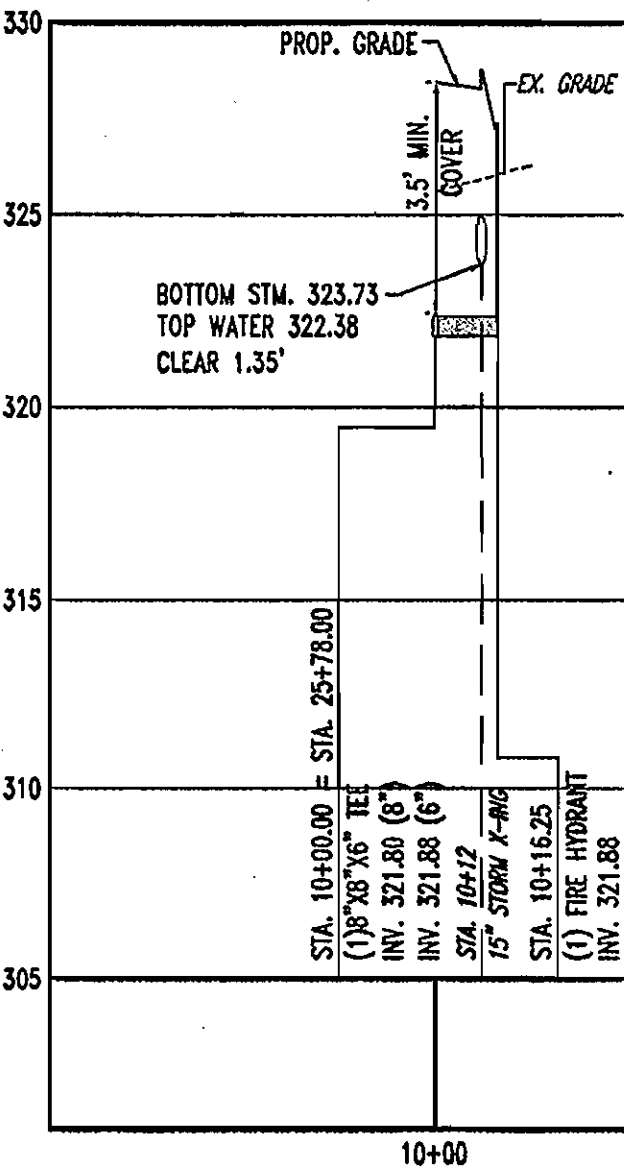
PROPOSED FIRE HYDRANT (C) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



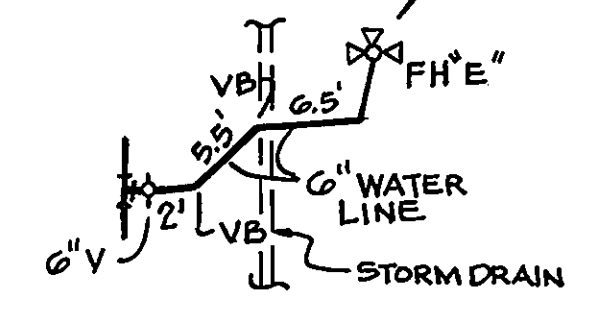
PROPOSED FIRE HYDRANT (D) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



PROPOSED FIRE HYDRANT (E) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL



PROPOSED FIRE HYDRANT (F) PROFILE
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

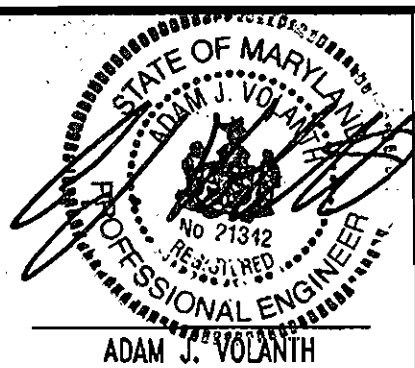


AS BUILT
 DATE: JULY 2007

DEVELOPER
 LOWE'S COMPANIES, INC.
 ENGINEERING AND CONSTRUCTION EAST DOCK
 P.O. BOX 1111
 HIGHWAY 268 EAST DOCK
 NORTH WILKESBORO, NC 28659

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

BOHLER ENGINEERING
 PROFESSIONAL ENGINEERING SERVICES
 810 GLENEAGLES COURT, SUITE 300, TOWSON, MARYLAND, 21286
 (410) 821-7900 FAX: (410) 821-7997 | MDPE@bohlereng.com



DES: MJG
 DRN: RFG
 CHK: AJV
 DATE: 09/22/06

REV.	DATE	DESCRIPTION	BY

WATERLINE PROFILES
 PARCEL NO. P
 600' SCALE MAP NO. 37 & 43, BLOCK NO. 20

BENSON EAST, ONSITE
 PARCEL P
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 24-4378-D

SCALE AS SHOWN
 SHEET 3 OF 3

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