

SHEET INDEX

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PUBLIC WATER EXTENSION PARCEL G

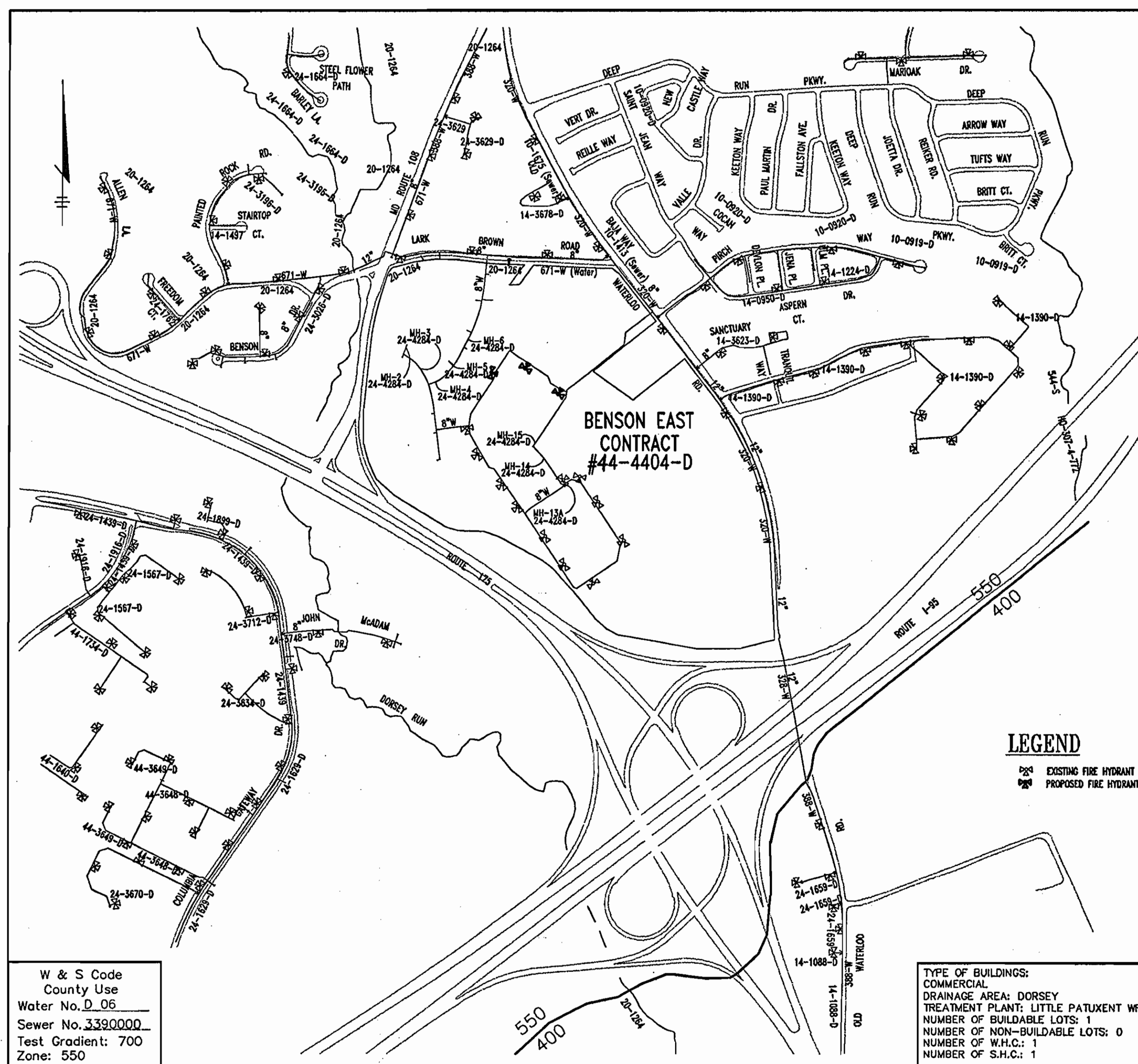
BENSON EAST, ONSITE

6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 44-4404-D

BENCHMARKS

GEODETIC SURVEY CONTROL 376D
N 553,237.204
E 1,372,353.605
ELEV. 290.531
LOCATED 30' EAST OF FIRE HYDRANT ACROSS FROM DEEP RUN ELEMENTARY SCHOOL

GEODETIC SURVEY CONTROL 376C
N 555,250.791
E 1,370,946.348
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.
- THE TOPOGRAPHY FOR PARCEL G IS BASED ON A PLAN PREPARED BY PATTON HARRIS RUST AND ASSOCIATES, P.C. ENTITLED "DEVELOPERS MASS GRADING PLAN", DATED JUNE 28, 2005.
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '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 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. 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
VERIZON	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/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(A) OF THE HOWARD COUNTY CODE.

WATER NOTES

- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 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 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

MISS UTILITY



BEFORE YOU DIG CALL
1-800-257-7777
PROTECT YOURSELF. GET THIS
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 APPROPRIATE.
THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.



FOR REVISION 1.
Bohler Engineering, P.C.

AS BUILT
DATE: JUNE 2007

VICINITY MAP
SCALE: 1"=600'

W & S Code
County Use
Water No. D.06
Sewer No. 3380000
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

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	968 LF	925 L.F.	DIP CL52 TYTON	GRIFFIN PIPE/BELAIR RD. SUPPLY
6" WATER	46 LF	75.5 L.F.	DIP CL52 TYTON	GRIFFIN PIPE/BRS
FIRE HYDRANTS	3 EA.	3 EA.	MUELLER HYDRANT ORANGE	MUELLER CO./BRS
6" VALVE	3 EA.	3 EA.	GATE VALVE	MUELLER CO./BRS
8" VALVE	3 EA.	4 EA.	GATE VALVE	MUELLER CO./BRS
8" X 8" X 6" TEE	3 EA.	3 EA.	FHT SIGMA	SIGMA CORR/BRS
8" 1/8 BEND	4 EA.	4 EA.	MJ SIGMA	SIGMA CORR/BRS
8" 1/16 BEND	3 EA.	2 EA.	MJ SIGMA	SIGMA CORR/BRS
8" X 8" X 8" TEE	2 EA.	2 EA.	SIGMA	SIGMA CORR/BRS
8" SLEEVES	—	3 EA.	L.P. MJ SIGMA	SIGMA CORR/BRS

NAME OF UTILITY CONTRACTOR: CONSOLIDATED CONSTRUCTION SERVICES

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

Review for Howard Soil Conservation District and meets technical requirements.
Jim Myers / 105
NATURAL RESOURCES CONSERVATION SERVICE
DATE: 12/18/06

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
Mark Selig
HOWARD SOIL CONSERVATION DISTRICT
DATE: 12/18/06

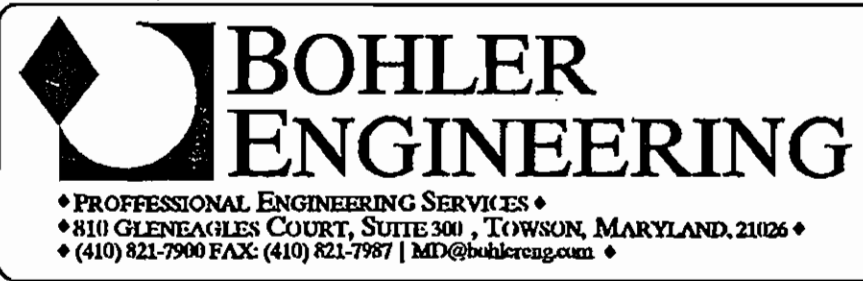
CHECKBOX
AS-BUILT DATE: JUNE 2007
SURVEY AND DRAFTING DIVISION

OWNER
HRD LAND HOLDINGS, INC.
HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
PHONE: (410) 992-6000

DEVELOPER
COSTCO WHOLESALE
45940 HORESHOE DRIVE
SUITE 150
STERLING, VA 20166
ATTN: RUSTY COLLINS
PHONE: (703) 406-6862

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND



DES: JAD				
DRN: BMH				
CHK: MJG				
DATE: 11/30/06	1	4/11/07	REVISE WHC LOCATION	Bohler
	REV.	DATE	DESCRIPTION	BY

TITLE SHEET

PARCEL NO. G
600' SCALE MAP NO. 37 & 43 BLOCK NO.

BENSON EAST, ONSITE
PARCEL G
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-4404-D

SCALE AS SHOWN
SHEET 1 OF 3

HRD LAND HOLDINGS, INC.
LIBER 5289 FOLIO 330
TM 37 PARCEL 587 AND PARCEL 482

GENERAL NOTE TO CONTRACTOR

GENERAL CONTRACTOR TO PROVIDE TEST PIT TO VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE 8" WATERLINE AND THE EXISTING 8" SANITARY LINE AT ALL TIE IN LOCATIONS. GENERAL CONTRACTOR TO CONTACT BOHLER ENGINEERING, P.C. IMMEDIATELY WITH ANY DISCREPANCIES. BOHLER ENGINEERING, P.C. SHALL REMAIN HARMLESS IN THE EVENT OF AN IMPROPER CONNECTION TO EXISTING UTILITIES. THE CONTRACTOR TO CLOSE UPSTREAM VALVE AND REMOVE THE EXISTING CAP AND BUTTRISS FOR ALL NEW WATER MAIN CONNECTIONS.

AS BUILT WATER VALVES

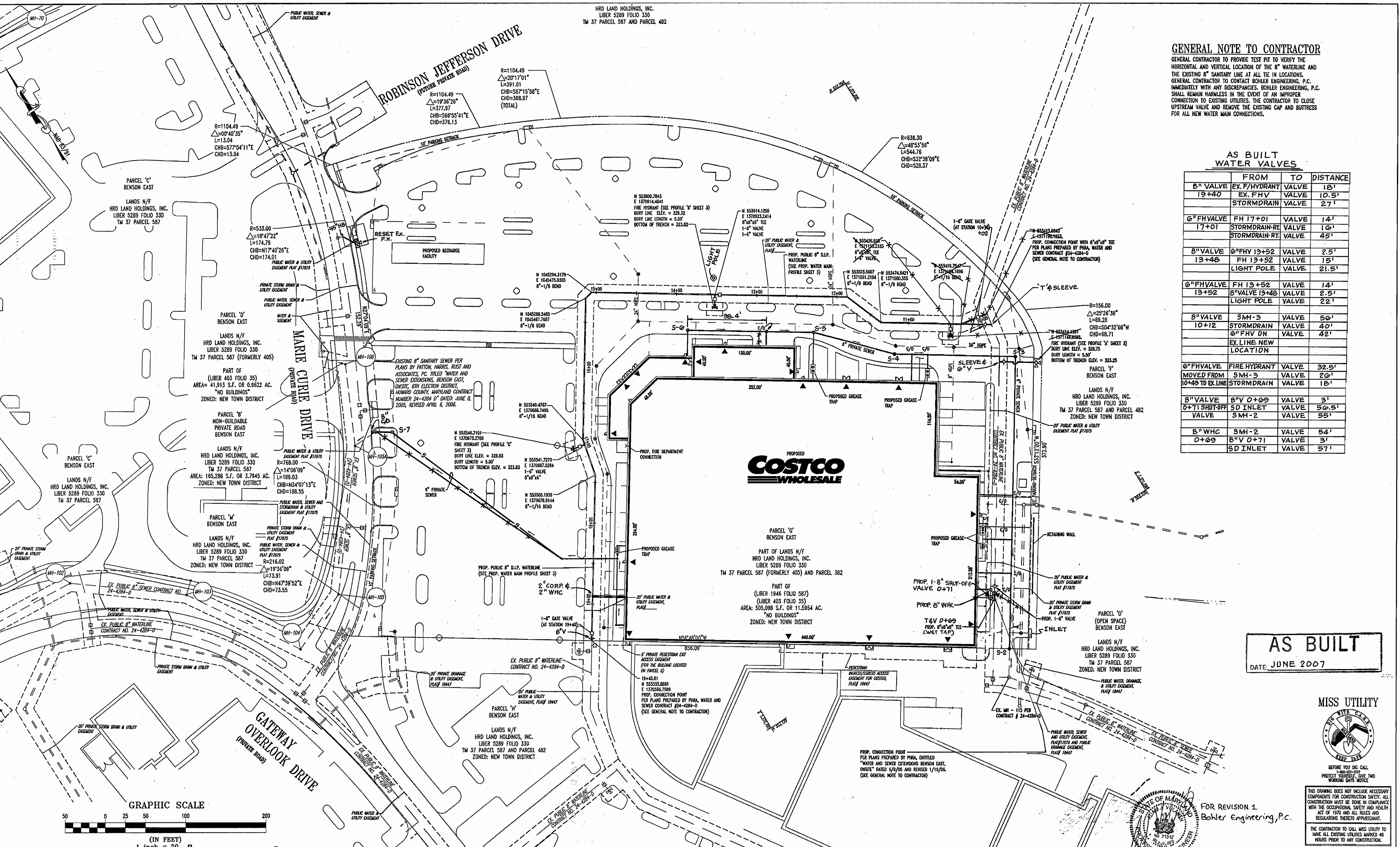
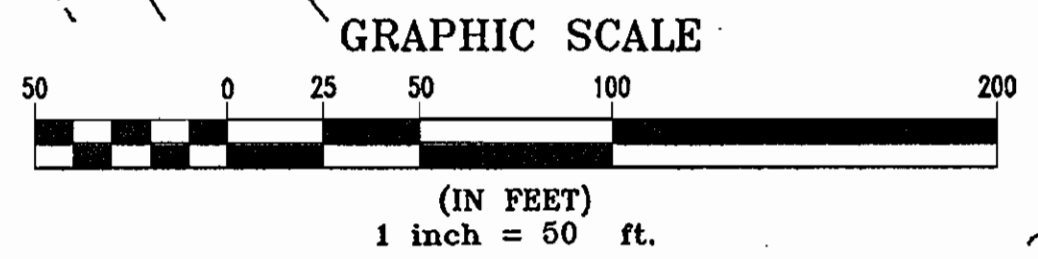
FROM	TO	DISTANCE
8" VALVE 19+40	EX. FHV VALVE	18'
	STORMDRAIN VALVE	10.5'
		27'
6" FHV 17+01	FH 17+01 VALVE	14'
	STORMDRAIN-RT. VALVE	16'
		45'
8" VALVE 13+48	6" FHV 13+52 VALVE	2.5'
	FH 13+52 VALVE	15'
	LIGHT POLE VALVE	21.5'
6" FHV 13+52	FH 13+52 VALVE	14'
	8" VALVE 13+48 VALVE	2.5'
	LIGHT POLE VALVE	22'
8" VALVE 10+12	SM-3 VALVE	50'
	STORMDRAIN VALVE	40'
	6" FHV ON VALVE	42'
	EX. LINE NEW LOCATION	
6" FHV 10+43	FIRE HYDRANT VALVE	32.5'
	MOVED FROM SM-3 VALVE	20'
	10+43 TO EX. LINE STORMDRAIN VALVE	18'
8" VALVE 0+71	8" V 0+09 VALVE	3'
	SD INLET VALVE	50.5'
	VALVE	55'
8" WVC 0+09	SM-2 VALVE	54'
	8" V 0+71 VALVE	3'
	SD INLET VALVE	57'

AS BUILT
DATE: JUNE 2007



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THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

FOR REVISION 1
Bohler Engineering, P.C.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. M. B... 12-8-06
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
... 12/20/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

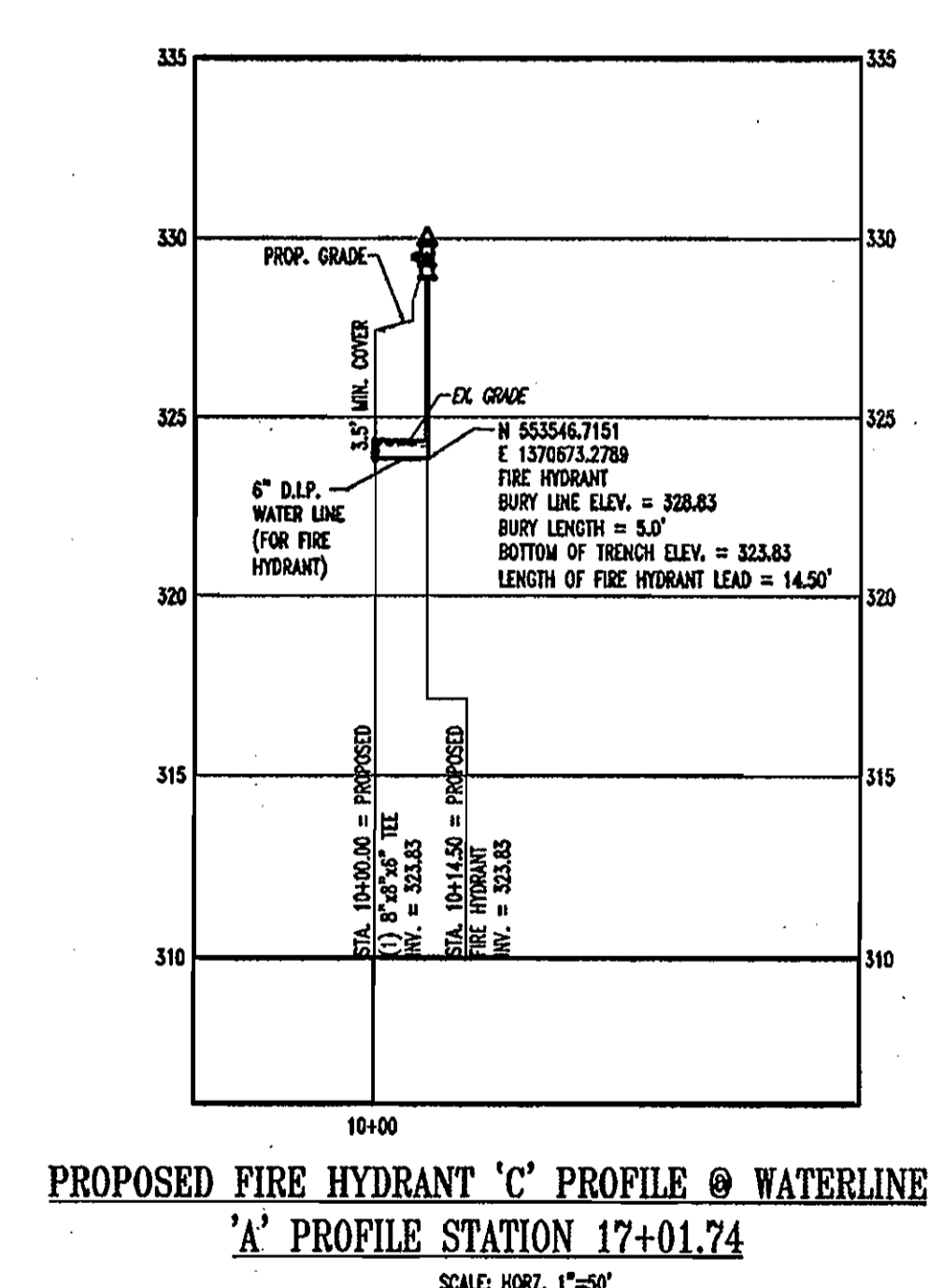
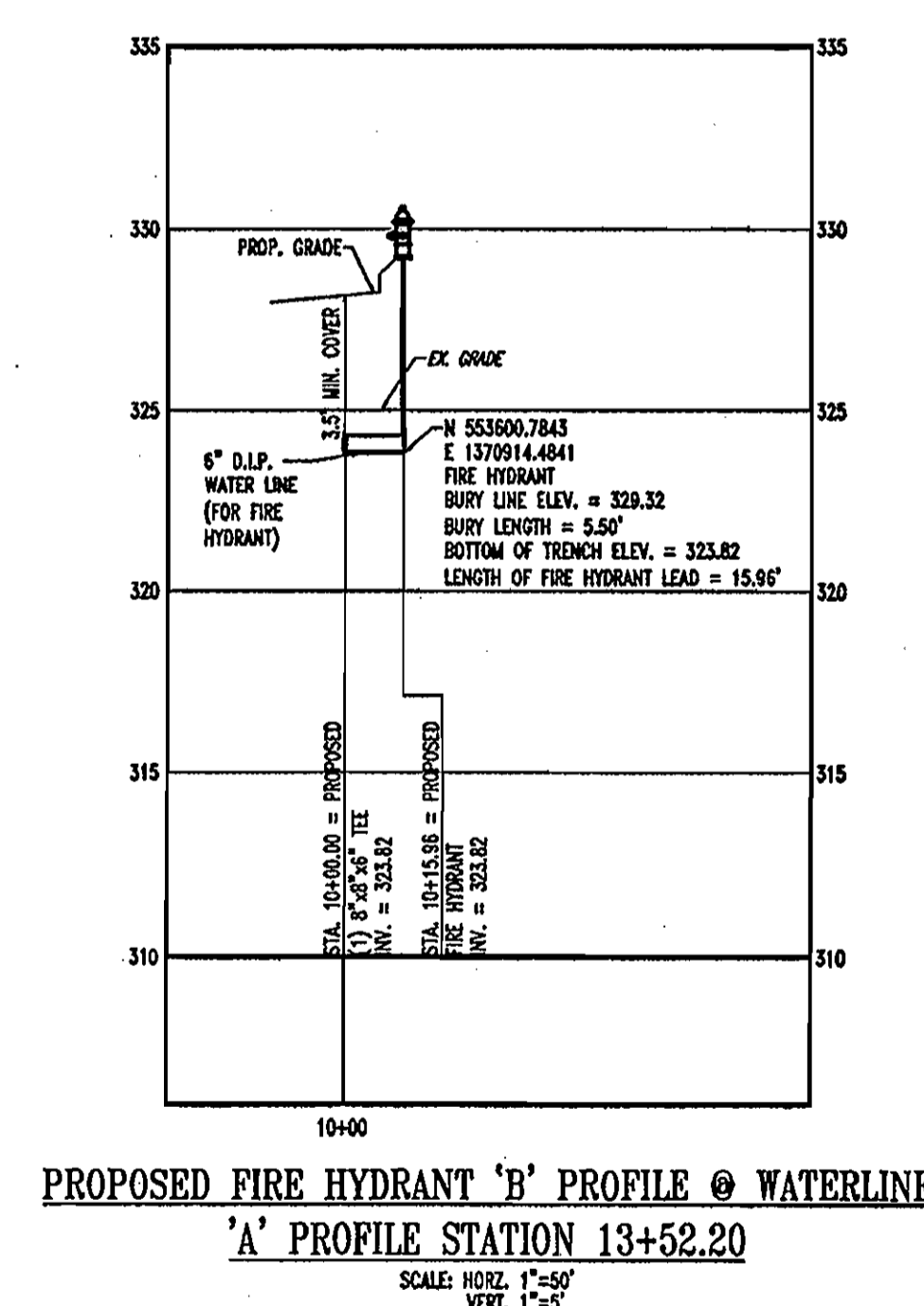
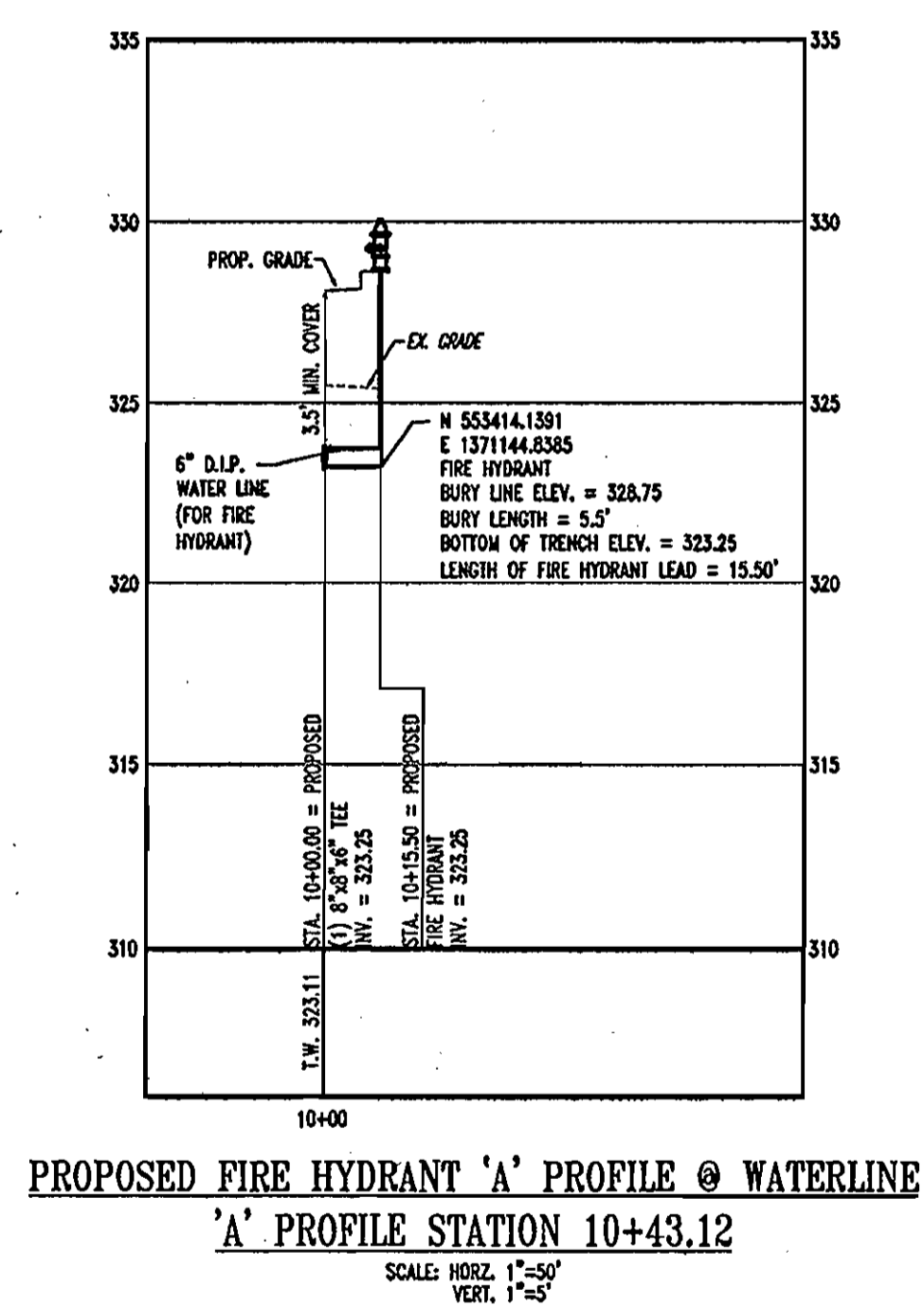
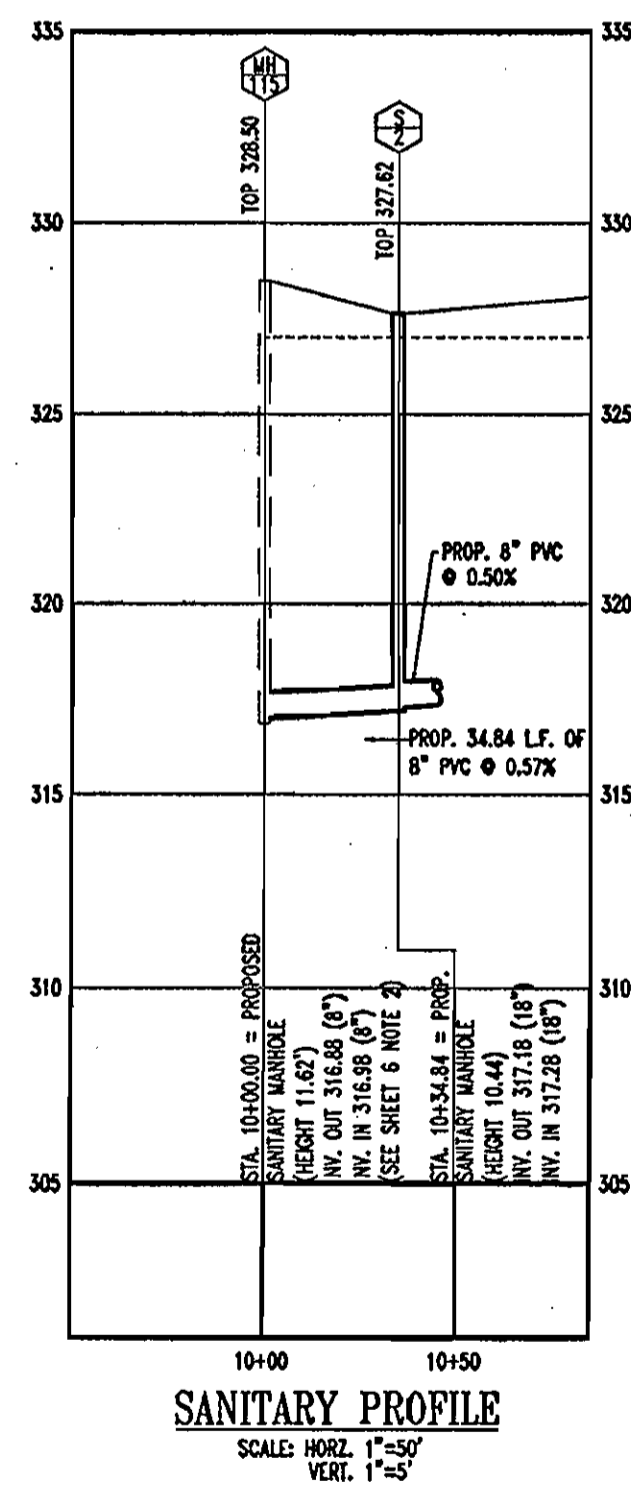
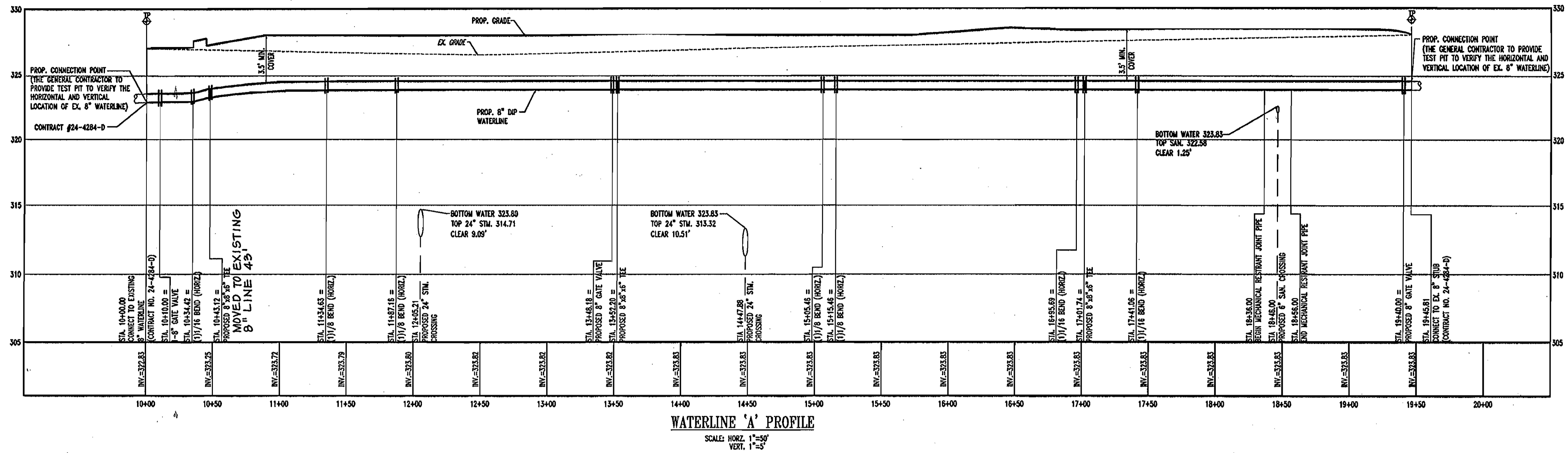
BOHLER ENGINEERING
PROFESSIONAL ENGINEERING SERVICES
810 GLENAGLES COURT, SUITE 300, TOWSON, MARYLAND, 21286
(410) 821-7900 FAX: (410) 821-7997 | MDPE@bohlereng.com

STATE OF MARYLAND
ADAM J. VOLANTH
PROFESSIONAL ENGINEER

DES: MJG					
DRN: BMH					
CHK: AJV					
DATE: 11/30/06	4/11/07	REVISED WVC LOCATION	BOHLER	PARCEL NO. G	
REV.	DATE	DESCRIPTION	BY	600' SCALE MAP NO. 37 & 43 BLOCK NO.	

UTILITY PLAN

BENSON EAST, ONSITE
PARCEL G
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-4404-D
SCALE 1" = 50'
SHEET 2 OF 3



AS BUILT
 DATE: JUNE 2007



FOR REVISION 1
 Bohler Engineering, P.C.

MISS UTILITY



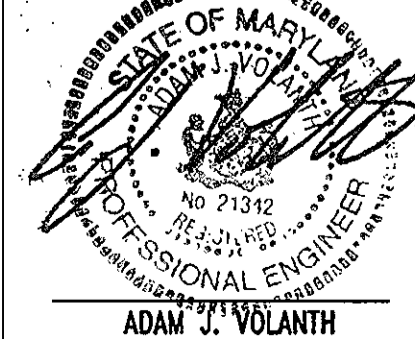
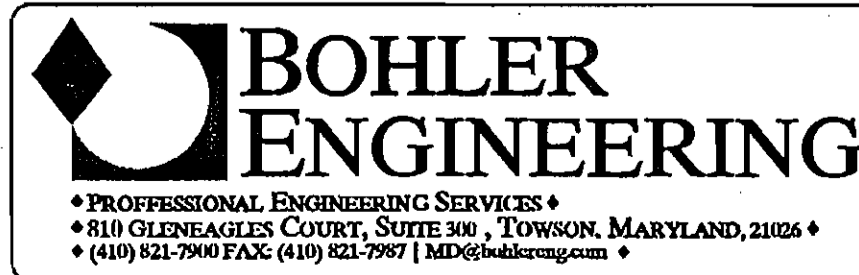
BEFORE YOU DIG CALL
 1-800-357-3777
 PROTECT YOURSELF - GIVE TWO
 WORKING DAYS NOTICE

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 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 APPLICANT.

THE CONTRACTOR TO CALL MISS UTILITY TO
 HAVE ALL EXISTING UTILITIES MARKED 48
 HOURS PRIOR TO ANY CONSTRUCTION.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND



DES:	MJG				
DRN:	BMH				
CHK:	AJV				
DATE:	11/30/06	REV.	DATE	DESCRIPTION	BY
		1	4/1/07	REVISED WAC LOCATION	Bohler

UTILITY PROFILES

PARCEL NO. G
 600' SCALE MAP NO. 37 & 43 - BLOCK NO.

BENSON EAST, ONSITE
 PARCEL G
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 44-4404-D

SCALE
 AS
 SHOWN

SHEET
 3 OF 3

Robert Benson 12-8-06
 CHIEF, BUREAU OF UTILITIES DATE

Chief, Development Engineering Division DATE