

**GENERAL NOTES**

**PART I**

- 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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON NOVEMBER 2007 AND FEBRUARY 2012 BY ROBERT H. VOGEL ENGINEERING, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:**  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 35A2 AND 0044. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:  
GEODETIC SURVEY CONTROL 35A2 (N 564,154.81 E 1,331,201.09)  
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.  
GEODETIC SURVEY CONTROL 0044 (N 562,176.48 E 1,329,641.84)  
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- 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 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 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 LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:  
AT&T \_\_\_\_\_ 1-800-252-1133  
BGE (CONTRACTOR SERVICE) \_\_\_\_\_ 410-637-8713  
BGE (EMERGENCY) \_\_\_\_\_ 410-685-0123  
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
- 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 THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY 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(g) OF THE HOWARD COUNTY CODE.

**PART II - WATER**

- ALL WATER MAINS TO BE D.I.P UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAIL. 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.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE REST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON. FOR FIRE SPRINKLER SYSTEM, ALL SINGLE FAMILY DWELLINGS WILL HAVE A MINIMUM OF A 1-1/2" W.H.C WITH A 1" OUTSIDE METER SETTING.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-12-049.

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

*John C. Robertson* 8/29/12  
SOIL CONSERVATION DISTRICT DATE

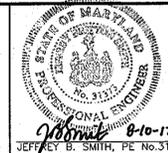
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Silva Chen* 8/23/12  
CHIEF, BUREAU OF UTILITIES DATE

*Robert H. Vogel* 9/6/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET TEL: 410.461.7666  
ELLCOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE	RVE	1	REVISED PLAN TO SHOW NEW PROP. BLDG. & WATER HOUSE CONNECTION	04/22/13
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9100, EXPIRATION DATE 01-21-2013.	RVE	2	REVISE PLAN TO SHOW REVISED CONNECTION TO EXISTING MAIN	07/04/13
DRN: KG	DES: JBS			
CHK: JBS				
DATE: MARCH 2012				
BY	NO.	REVISION		DATE

**FINAL WATER PLAN**  
**CONTRACT 24-4753-D**

**OWNER**  
ANTOY LLC  
12420 AUTO DRIVE  
CLARKSVILLE, MD 21029  
(410) 531-5700

**NEW CAR DEALERSHIP**  
**ANTWERPEN TOYOTA**  
12410 AUTO DRIVE  
PARCEL 365 (L. 04960 / F. 00136)  
PLAT NO. 11178

TAX MAP 34 BLOCK 06  
5th ELECTION DISTRICT

PARCEL 'B'  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 1 OF 2

# FINAL WATER PLAN

## NEW CAR DEALERSHIP ANTWERPEN TOYOTA

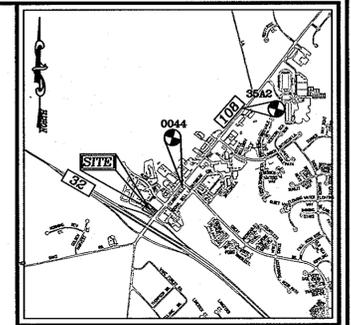
### 12410 AUTO DRIVE

#### PARCEL 365 (L. 04960 / F. 00136)

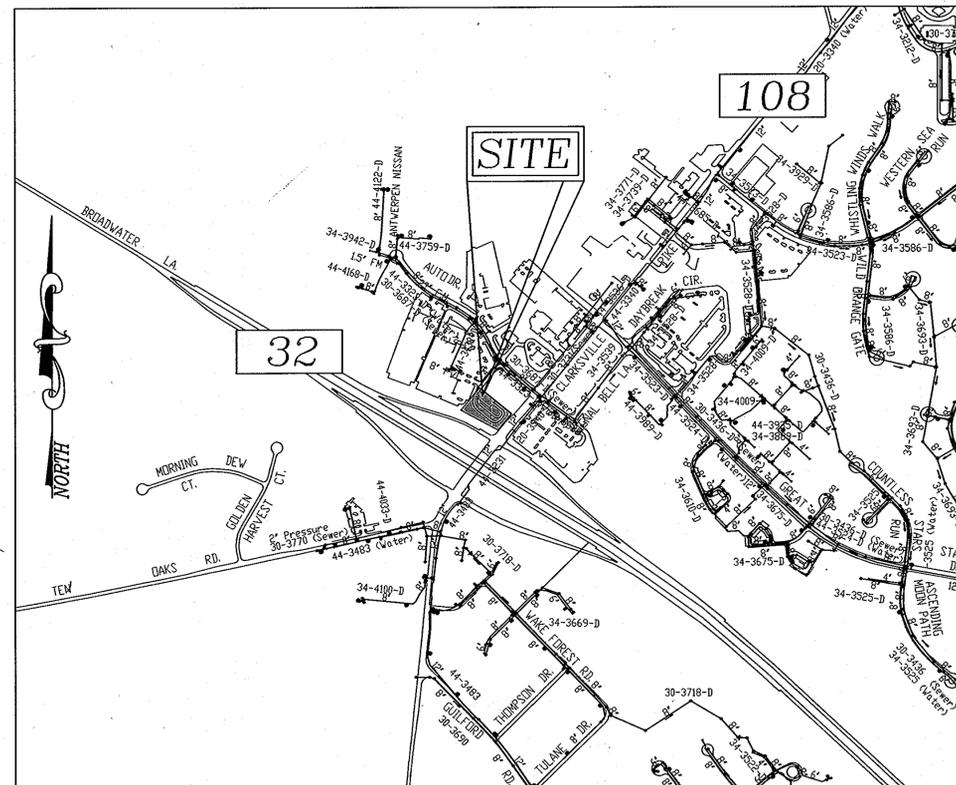
#### PLAT NO. 11178

## CONTRACT 24-4753-D

**BENCHMARKS**  
HOWARD COUNTY BENCHMARK 35A2  
N 564,154.81 E 1,331,201.09 ELEV. 487.90  
HOWARD COUNTY BENCHMARK 0044  
N 562,176.48 E 1,329,641.84 ELEV. 484.47



**VICINITY MAP**  
SCALE: 1"=2,000'  
ADC MAP COORDINATE: PG. 4933 / K-7



**VICINITY MAP**  
SCALE: 1"=600'

WATER ZONE: 630W  
TEST GRADIENT: 780

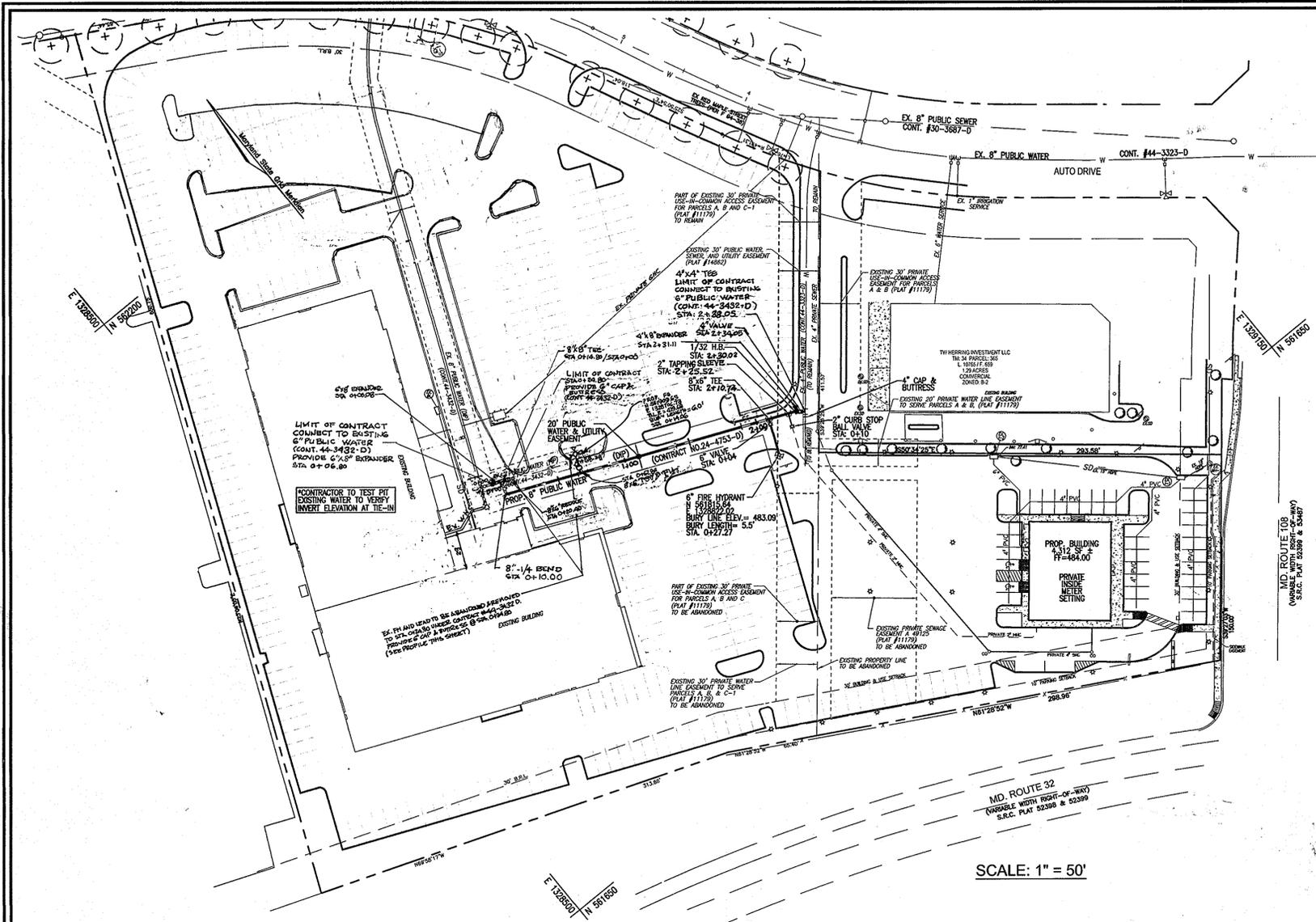
TYPE OF BUILDING :	COMMERCIAL
NO. OF LOTS/PARCELS :	1
NO. OF SINGLE WATER HOUSE CONNECTIONS :	1
NO. OF SEWER HOUSE CONNECTIONS :	N/A
SEWER SHED :	N/A
TREATMENT PLANT :	N/A

**LEGEND**

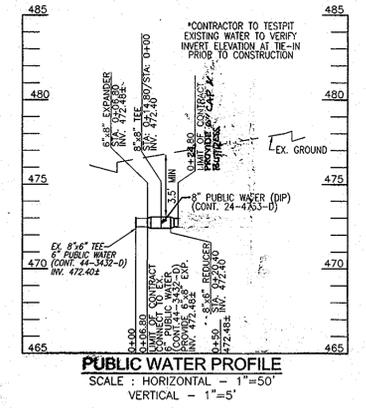
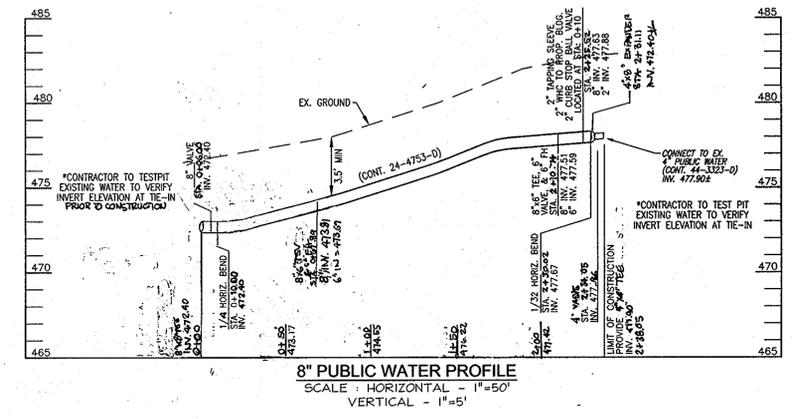
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED TEE
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING SEWER
- SEWER MANHOLE
- PRIVATE WATER HOUSE CONNECTION
- PRIVATE SEWER HOUSE CONNECTION
- PROPOSED SIGN
- PROPOSED LIGHT

**QUANTITIES**

NAME OF UTILITY CONTRACTOR :				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER DIP	25 LF			
6" WATER DIP	3 LF			
8" VALVE	2 EA			
6" VALVE	2 EA			
6" FIRE HYDRANT	1 EA			
8" TEE	1 EA			
8" TAPPING SLEEVE	1 EA			
8" x 8" TEE	1 EA			
8" 1/32 HORIZ. BEND	1 EA			
4" COP AND BUTTRESS	1 EA			
4" TAPPING TEE	1 EA			
2" WATER DIP	10 LF			
2" CURB STOP BALL VALVE	1 EA			
6" x 8" EXPANDER	1 EA			
8" x 8" REDUCER	1 EA			
8" 90° BEND	1 EA			
4" x 8" EXPANDER	1 EA			
4" VALVE	1 EA			
4" DIP	6 LF			

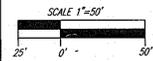
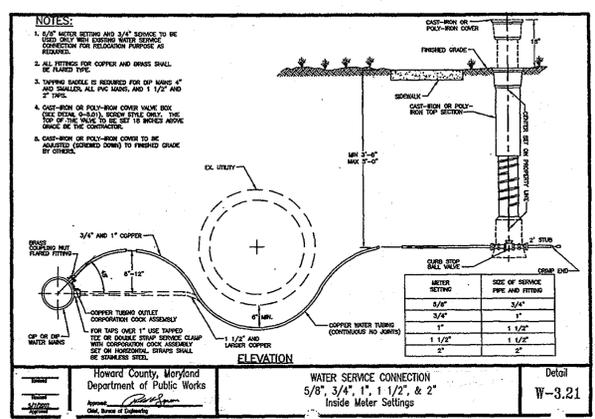


WL STA.	APPURTENANCE
WL STA. 0430.00	8" x 8" TEE
WL STA. 0432.00	8" VALVE
WL STA. 0710.00	8" - 1/4" HORIZONTAL BEND
WL STA. 2110.34	8" x 6" TEE, 6" VALVE & FH
WL STA. 2125.52	2" TAPPING SLEEVE, 2" WHC, 2" CURB STOP BALL VALVE
WL STA. 2130.00	6" - 1/2" HORIZONTAL BEND
WL STA. 2131.11	4" x 8" EXPANDER
WL STA. 2134.05	4" VALVE
WL STA. 2138.05	4" x 4" TEE



SCALE: 1" = 50'

**NOTES:**  
 THE WATER CONNECTION FOR THE PROPOSED BUILDING SHALL BE 2" WITH INSIDE METER SETTINGS. REFER TO HOWARD COUNTY DETAILS W-3.21.



**OWNER**  
 ANTOY LLC  
 12420 AUTO DRIVE  
 CLARKSVILLE, MD 21029  
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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 Chief, Development Engineering Division

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 TEL: 410.461.7666  
 FAX: 410.461.5961



CHK.	BY	NO.	REVISION	DATE
DRN	JMR	DES	RHV	
CHK	RHV			
DATE	JULY 2013			

**FINAL WATER PLAN**  
**CONTRACT 24-4753-D**

**NEW CAR DEALERSHIP**  
**ANTWERPEN TOYOTA**  
 12410 AUTO DRIVE  
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SCALE AS SHOWN  
 SHEET 2 OF 2