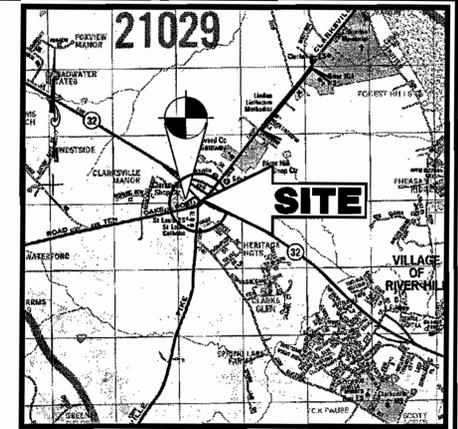


# ANTWERPEN AUTOMOTIVE SITE DEVELOPMENT PLAN

**6389 & 6381 TEN OAKS ROAD  
CLARKSVILLE  
HOWARD COUNTY, MARYLAND**  
**PREPARED BY:**  
**BOHLER ENGINEERING, P.C.**  
**810 GLENEAGLES COURT  
TOWSON, MARYLAND  
(410) 821-7900**



**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'

MARYLAND STATE PLANE GRID NORTH REFERENCES HOWARD COUNTY SURVEY CONTROL STATIONS 35A1 & 35A2, NAD83.  
 BENCHMARK:  
 DOCK SPIKE SET  
 ELEV.=479.23

◆ BENCHMARK  
 — GEODETIC DISK LOCATION

## LEGEND

EXISTING	PROPOSED
ON-SITE PROPERTY LINE / R.O.W. LINE	ON-SITE PROPERTY LINE / R.O.W. LINE
NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE
EASEMENT LINE	EASEMENT LINE
BUILDING/PARKING SETBACK LINE	BUILDING/PARKING SETBACK LINE
R.O.W. CENTERLINE	R.O.W. CENTERLINE
SANITARY SEWER MAIN	SANITARY SEWER MAIN
SANITARY SEWER LATERAL	SANITARY SEWER LATERAL
STORM SEWER	STORM SEWER
WATER LINE	WATER LINE
GAS LINE	GAS LINE
UG ELECTRIC LINE	UG ELECTRIC LINE
UG TELEPHONE LINE	UG TELEPHONE LINE
OH WIRE	OH WIRE
UG CABLE LINE	UG CABLE LINE
LIGHTING ISOLUX LINE	LIGHTING ISOLUX LINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
CONCRETE CURB	CONCRETE CURB
CONCRETE CURB & GUTTER	CONCRETE CURB & GUTTER
BUILDING CURB	BUILDING CURB
STORM/SANITARY SEWER FLOW ARROW	STORM/SANITARY SEWER FLOW ARROW
SURFACE DRAINAGE FLOW ARROW	SURFACE DRAINAGE FLOW ARROW
TC PATH	TC PATH
DRAINAGE DIVIDE	DRAINAGE DIVIDE
INDEX CONTOUR LINE	INDEX CONTOUR LINE
INTERMEDIATE CONTOUR LINE	INTERMEDIATE CONTOUR LINE
SPOT ELEVATION	SPOT ELEVATION
RIP RAP	RIP RAP
FLARED END SECTION	FLARED END SECTION
FLARED END SECTION	FLARED END SECTION
HEADWALL OR END WALL	HEADWALL OR END WALL
IRON ROD / PIPE	IRON ROD / PIPE
R.O.W. MONUMENT	R.O.W. MONUMENT
BENCHMARK	BENCHMARK
MANHOLE	MANHOLE
YARD INLET	YARD INLET
CURB INLET	CURB INLET
GRATE INLET	GRATE INLET
STORM STRUCTURE NO. LABEL	STORM STRUCTURE NO. LABEL
DECORATIVE AREA LIGHT	DECORATIVE AREA LIGHT
AREA / YARD LIGHT	AREA / YARD LIGHT
CLEAN OUT	CLEAN OUT
HYDRANT	HYDRANT
WATER METER	WATER METER
WATER VALVE	WATER VALVE
GAS VALVE	GAS VALVE
UTILITY POLE	UTILITY POLE
TRAFFIC SIGNAL	TRAFFIC SIGNAL
SIGN	SIGN
TYPICAL NOTE TEXT	TYPICAL NOTE TEXT

## SHEET INDEX

- COVER SHEET
- DEMOLITION PLAN
- DEMOLITION PLAN
- SITE PLAN
- SITE PLAN
- GRADING & UTILITY PLAN
- GRADING & UTILITY PLAN
- EROSION & SEDIMENT CONTROL PLAN
- EROSION & SEDIMENT CONTROL PLAN
- EROSION AND SEDIMENT CONTROL DETAILS
- FOREST CONSERVATION & LANDSCAPE PLAN
- FOREST CONSERVATION & LANDSCAPE PLAN
- FOREST CONSERVATION & LANDSCAPE DETAILS
- UTILITY PROFILES
- SWM PRE-DEVELOPMENT DRAINAGE AREA MAP
- SWM POST-DEVELOPMENT DRAINAGE AREA MAP
- SWM NOTES & DETAILS
- NOTES & DETAILS

## SITE ANALYSIS DATA CHART

PROJECT AREA:	
PARCEL B = 0.438 ACRES	
PARCEL C = 1.984 ACRES	
TOTAL = 2.422 ACRES	
LIMIT OF DISTURBED AREA:	103,918S.F. (2.39 AC.)
PRESENT ZONING:	PARCEL B - B-1 (BUSINESS) PARCEL C - B-2 (BUSINESS LOCAL)
PROPOSED USE:	PARCEL B - VACANT LOT PARCEL C - AUTOMOBILE SALES FACILITY
FLOOR SPACE:	500 S.F.
MAXIMUM NUMBER OF EMPLOYEES:	2
PARKING SPACES REQUIRED:	57
PARKING SPACES PROVIDED:	150
AREA OF RECREATION OPEN SPACE:	0 ACRES REQUIRED 0 ACRES PROVIDED
BUILDING COVERAGE OF PARCEL 361:	0.011 ACRES (0.5% OF GROSS AREA)

## GENERAL NOTES:

- THIS PLAN REFERENCES A SURVEY BY CONTROL POINT ASSOCIATES:  
 GWYNEDO CORPORATE CENTER  
 1120 WELSH ROAD, SUITE 200  
 NORTH WALES, PA 19454  
 SURVEY COMPLETED 12/28/2000
- PROPERTY OWNER: PARCEL C & PARCEL B  
 JACOB ANTWERPEN  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MD 21228
- ZONING: B-2 (PARCEL C) AND B-1 (PARCEL B)
- EXISTING USE: PARCEL B - VACANT  
 PARCEL C - COMMERCIAL OFFICES  
 PROPOSED USE: PARCEL B - VACANT LOT  
 PARCEL C - AUTOMOBILE SALES FACILITY
- BUILDING HEIGHT: 1 STORY, NOT TO EXCEED 40' (ACTUAL HEIGHT 10' +/-)
- PARKING:  
 REQUIRED -  
 VEHICLE SALES:  
 TWO SPACES/1,000 SF OF BUILDING OFFICE AREA  
 2 x 500/1,000 = 1 SPACE  
 ONE SPACE/1,000 SF OF DISPLAY AREA  
 55,611/1,000 SF = 56 SPACES  
 TOTAL PARKING REQUIRED = 57 SPACES
- REFUSE SHALL BE DISPOSED OF DAILY IN TRASH RECEPTACLES.

- THERE SHALL BE NO WASTE MATERIALS STORED ON SITE.
- LIGHTING SHALL BE SHIELDED AND DIRECTED SO THAT IT DOES NOT ILLUMINATE RESIDENTIAL PROPERTIES AND SHALL NOT PRODUCE GLARE WHICH WOULD CAUSE A HAZARD FOR MOTOR VEHICLE OPERATIONS IN THE VICINITY OF THE SITE. LIGHTING SHALL AND COMPLY WITH SECTION 134 OF THE ZONING REGULATIONS.
- OUTSIDE OPERATIONS SHALL BE LIMITED TO THE SALE OF AUTOMOBILES.
- UTILITIES:  
 WATER, PUBLIC - 8" WATER LINE RUNS ON THE SOUTH SIDE OF TEN OAKS ROAD WITH A 1" CONNECTION FOR THIS SITE.  
 SEWER, PUBLIC - AN 8" SANITARY SEWER LINE IS LOCATED IN THE MD 108 RIGHT-OF-WAY. APPLICANT WILL BE REQUIRED TO MAKE CONNECTION.  
 STORM DRAIN - A 12" STORM DRAINAGE LINE IS SITUATED AT THE CORNER OF TEN OAKS ROAD AND MD 108 AND OUTLETS INTO THE MD 32 R.O.W.
- ALL HOWARD COUNTY STORM WATER QUANTITY AND QUALITY REQUIREMENTS SHALL BE MET. A PRIVATE UNDERGROUND DETENTION FACILITY SHALL BE CONSTRUCTED TO PROVIDE QUANTITY MANAGEMENT. A POCKET SAND FILTER (PARCEL C) SHALL BE PROVIDED FOR QUALITY MANAGEMENT. THE MAINTENANCE AND OWNERSHIP OF THE SWM FACILITY SHALL BE OF THE EXISTING LANDOWNER.
- ELECTION DISTRICT: 5
- DEED REFERENCE:  
 PARCEL B - 4014/475  
 PARCEL C - 2833/445
- TAX MAP: 34, BLOCK: 12, PARCEL: B & C
- PROPOSED EXTERIOR BUILDING MATERIALS: METAL TRAILER
- PROPERTY IS LOCATED IN THE CLARKSVILLE AREA.
- PROPERTY IS OUTSIDE THE 100-YEAR FLOOD PLAN (FEMA FIRM# 240044 00328 MAP 12/14/86).
- ATTORNEY: RICHARD B. TALKIN, P.A.  
 QUARRY PARK PLACE  
 9175 GUILFORD ROAD  
 SUITE 301  
 COLUMBIA, MD 21046
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY PREPARED BY CONTROL POINT ASSOCIATES DATED 12/28/00.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 35A1 AND 35A2 WERE USED FOR THIS PROJECT.
- SEWER IS PUBLIC. CONTRACT # 50-3770
- WATER IS PUBLIC. CONTRACT # 44-3482
- THERE ARE NO WETLANDS ON THIS SITE.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PROVIDED BY TRAFFIC CONCEPTS WAS APPROVED BY DEED MAY 2003.
- FOREST CONSERVATION OBLIGATION OF 0.36 ACRES IS TO BE MET BY PAYMENT OF A FEE-IN-LIEU, IN THE AMOUNT OF \$7,840.80
- THIS PLAN IS SUBJECT TO COMPLIANCE WITH THE 5TH EDITION OF THE SUBDIVISION REGULATIONS AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL 50-2001.
- RELATED FILE APPLICATIONS: F-76-01
- SURETY IN THE AMOUNT OF \$18,030 FOR 44 SHADE TREES, 12 EVERGREEN TREES, AND 101 SHRUBS IS TO BE POSTED WITH THE DEVELOPER'S AGREEMENT.
- TRASH REMOVAL WILL BE PRIVATELY CONTRACTED.

PERMIT INFORMATION CHART				
SUBDIVISION NAME	SECTION/AREA	N/A	LOT/PARCEL NO.	SDP-03-97
ANTWERPEN AUTOMOTIVE			PARCEL C & PARCEL B	
PLAT# OR L/T	BLOCK#	ZONING	TAX MAP NO.	ELECT. DIST.
F-03-173	12	B-2/B-1	MAP 34	5
16419	11	11	6853000	30-3770
WATER CODE	SEWER CODE	CONTRACT NO.	CENSUS TRACT	
	6853000	30-3770	6023.02	
ADDRESS CHART				
LOT/PARCEL #	STREET ADDRESS			
PARCEL B	6389 TEN OAKS ROAD			
PARCEL C	6381 TEN OAKS ROAD			
ANTWERPEN CAR FACILITY				
6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029				
COVER SHEET				
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003		
DRAWN BY: R.L.B.	DATE: 1/26/03	DRAWING NUMBER		
CHECKED BY: A.J.V.	APPROVED: A.J.V.	1		
REVISION NO.: 2	DRAWING NAME: M32003SC2	OF 19		
REVISION NO.	DATE	REVISION DESCRIPTION		
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS		
2	6/15/03	REVISED PER DEED & OLD COMMENTS		
3	10/10/03	REVISED PER DLP COMMENTS		

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
 DIRECTOR

**BOHLER ENGINEERING, P.C.**  
 \*PROFESSIONAL ENGINEERING SERVICES\*  
 #810 GLENEAGLES COURT, SUITE 300, TOWSON, MD 21286  
 \*(410) 821-7900 FAX: (410) 821-7907 | MDBohlereng.com\*

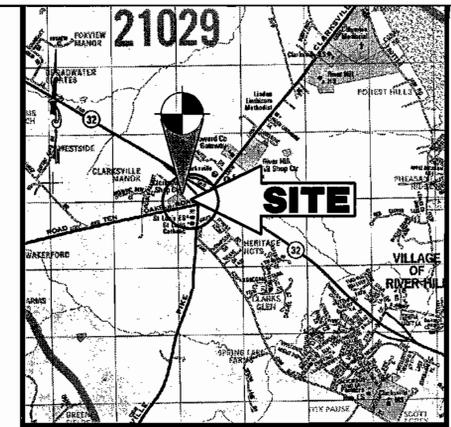
GENERAL NOTE:  
 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

11/18/03  
 DATE  
  
 ADAM J. VOLANTI  
 PROFESSIONAL ENGINEER NO. 21342

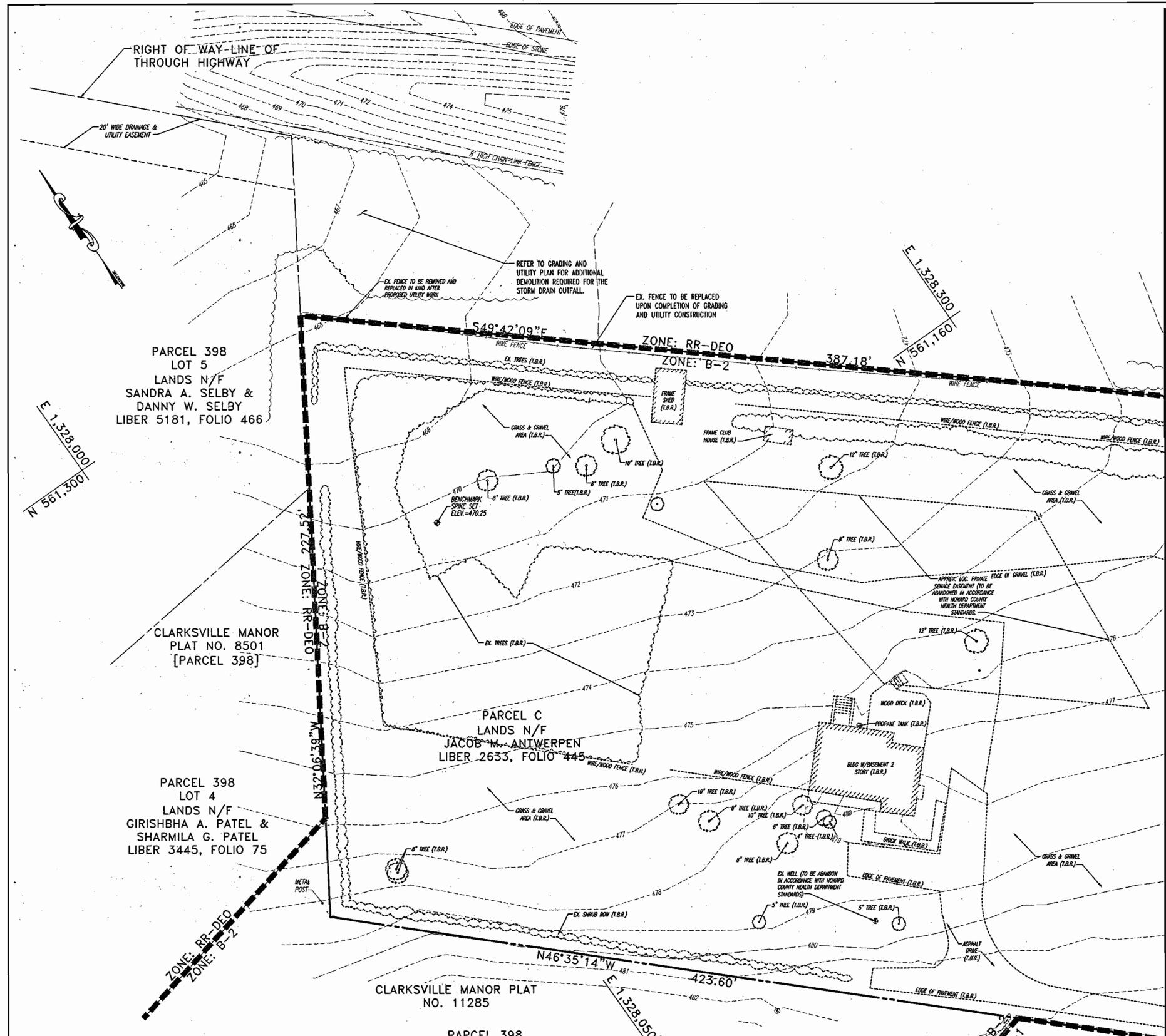
OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN





**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'



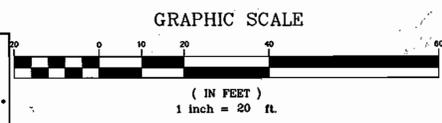
MATCHLINE SEE SHEET 2

**NOTE:**  
 ABANDONMENT OF ON-SITE WELLS AND SEPTIC SYSTEMS MUST BE APPROVED BY THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO COMMENCEMENT ANY ON-SITE DEMOLITION.

**GENERAL NOTE:**  
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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE: 12/11/03  
 [Signature] DATE: 12/13/03  
 [Signature] DATE: 12/23/03

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 821-7900 FAX: (410) 821-7987 MD@bohlere.com



11/19/03 DATE  
 [Professional Engineer Seal for Adam J. Volanth, No. 21342]  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342

MISS UTILITY  
 [Miss Utility Logo]  
 BEFORE YOU DIG CALL  
 PROJECT YOURSELF, ONE THREE  
 WORKING DAYS NOTICE  
 WE REMIND YOU THAT MISS UTILITY  
 OPERATES FOR CONSTRUCTION SAFETY. ALL  
 CONSTRUCTION WORK OF ANY KIND IN CONTACT  
 WITH THE OCCUPANCY SAFETY AND HEALTH  
 ACT OF THIS STATE, AS WELL AS NEARBY  
 NEIGHBORHOODS.  
 WE GUARANTEE TO BE HERE WHEN  
 YOU CALL TO HELP YOU IDENTIFY UTILITIES  
 TO BE AVOIDED IN ANY CONSTRUCTION.

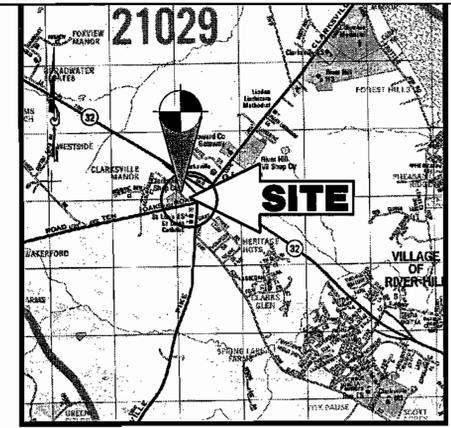
OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN: JACOB ANTWERPEN

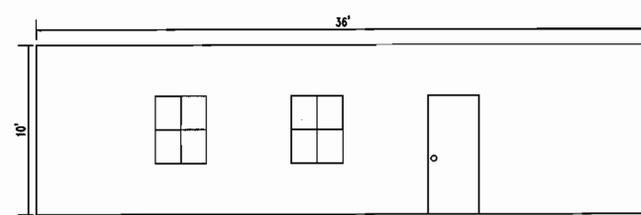
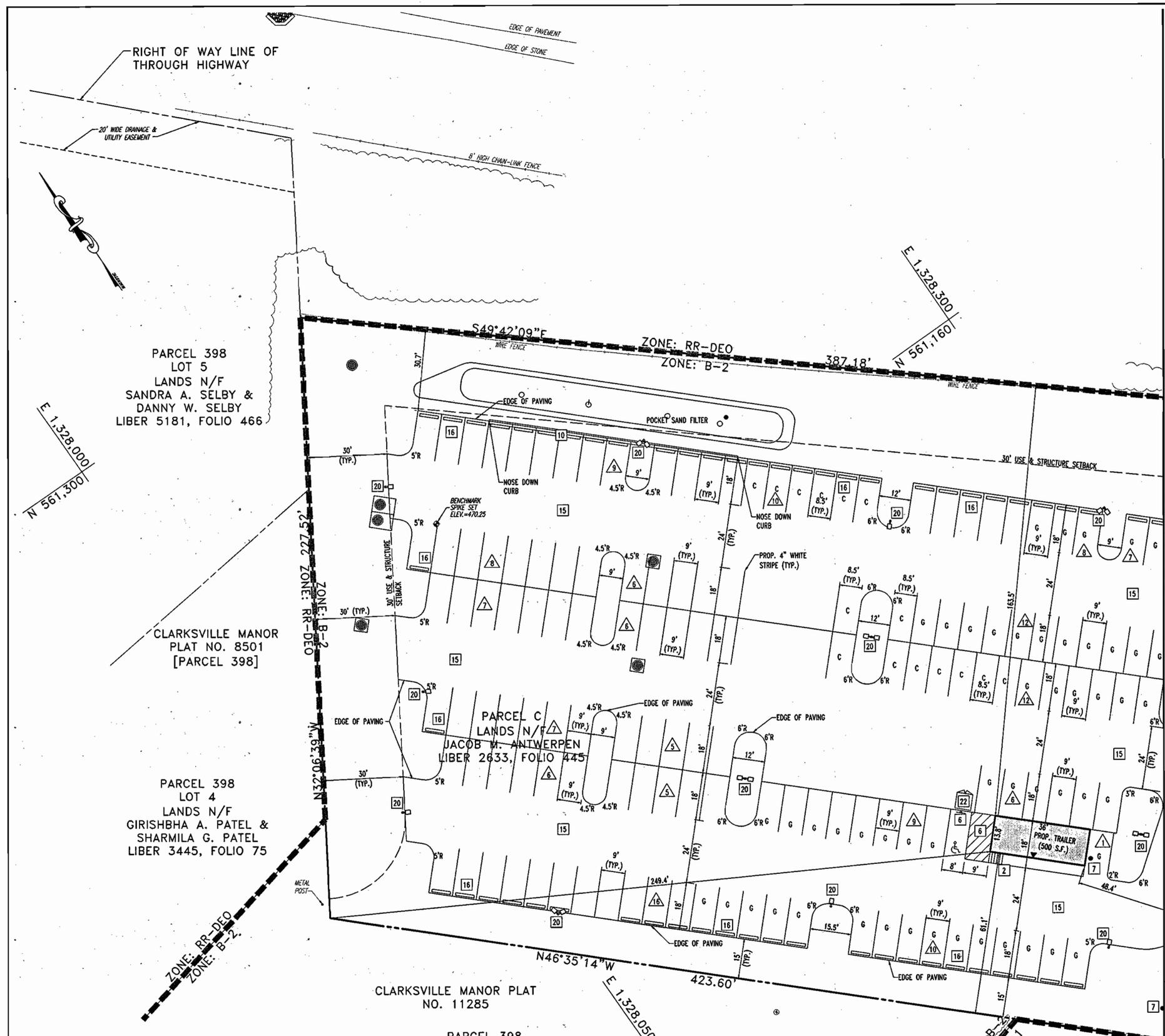
ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		
DEMOLITION PLAN		
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	3
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19
REVISION NO.:	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DED & BLD COMMENTS
3	10/10/03	REVISED PER BLD COMMENTS

SDP-03-97





LOCATION MAP  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=200'



PROPOSED TRAILER ELEVATION  
 SCALE: 1"=5'

MATCHLINE SEE SHEET 4

**SITE PLAN DESIGN NOTES & KEY PLAN**  
 REFER TO SHEETS 18 THRU 19 FOR HOWARD COUNTY STANDARD DETAILS

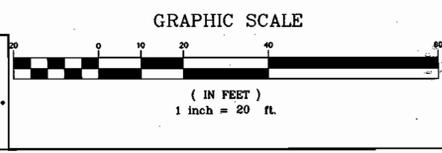
- 1 HOWARD CO. STD. PAVING
- 2 HANDICAP RAMP
- 3 HANDICAP SIGN & STRIPING
- 4 TYPICAL CLEANOUT
- 5 HOWARD CO. STD. CURB AND GUTTER
- 6 ONSITE PAVING SECTION
- 7 CONCRETE WHEEL STOP
- 8 20' HGH, 1000 WATT LIGHTING FIXTURE
- 9 6'x6' TRASH ENCLOSURE

- SYMBOL LEGEND**
- ▲ PARKING SPACE (C-COMPACT SPACE)(FOR DISPLAY USE ONLY) (G-GENERAL SPACES)(57 SPACES)
  - ⊕ STORM DRAIN STRUCTURE
  - ⊠ IMPROVEMENT ITEM (FOR STRUCTURE TABLE SEE SHEET 14)

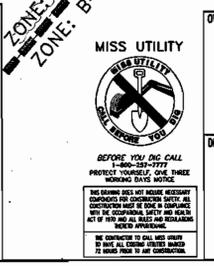
**GENERAL NOTE:**  
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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12/4/03  
 DATE: 10/23/03  
 DATE: 1/23/04

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 921-7890 FAX: (410) 921-7997



11/18/03 DATE  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342



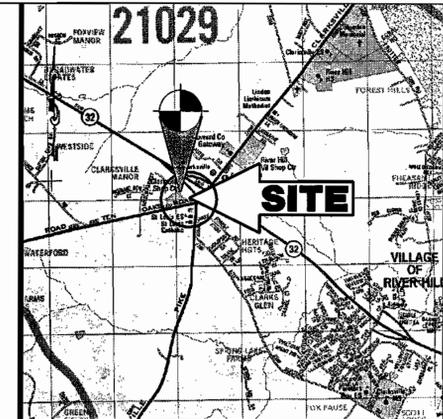
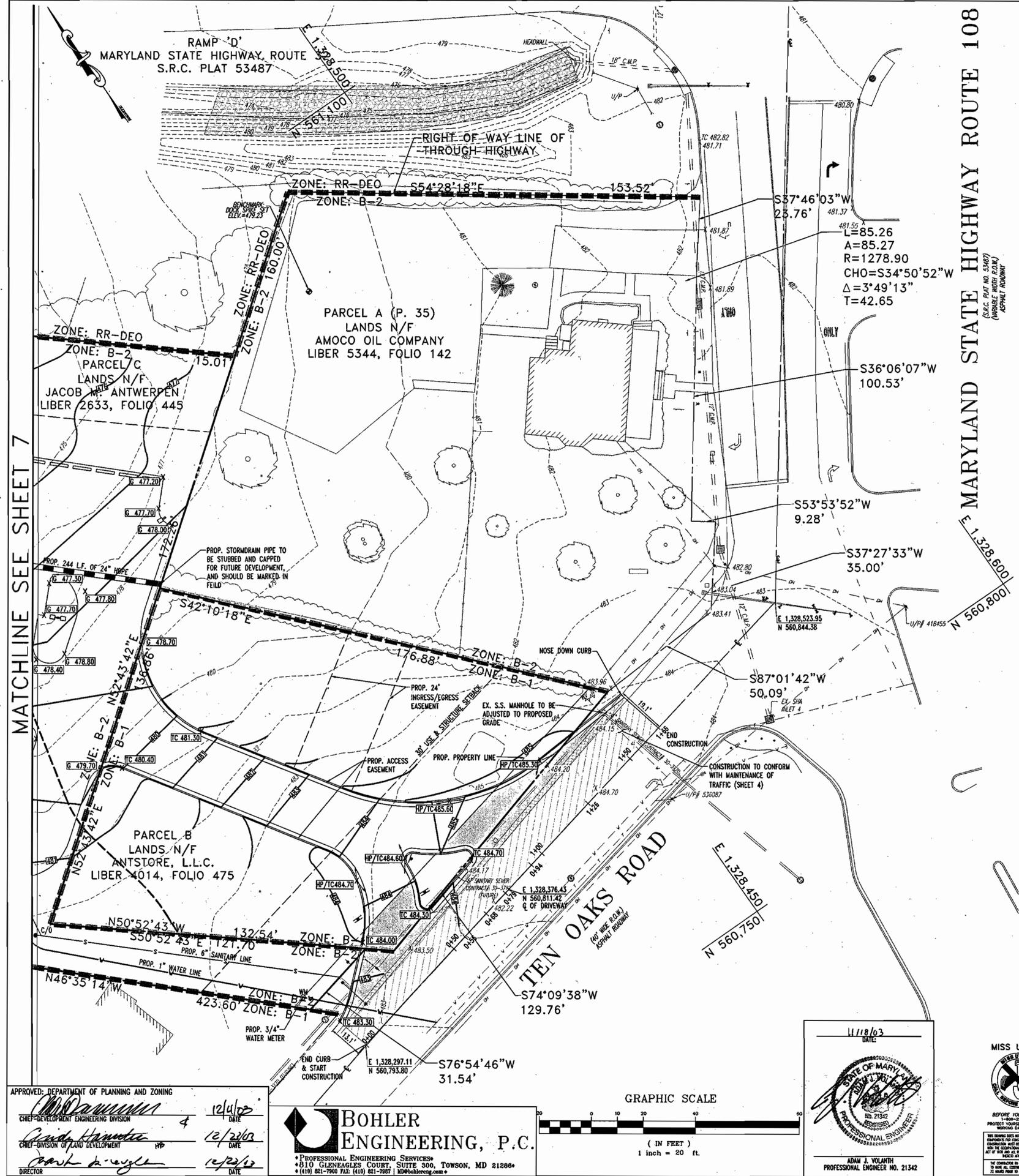
OWNER:  
 DEVELOPER:

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 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

**ANTWERPEN AUTOMOTIVE**  
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ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		
SITE PLAN		
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	5
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19
REVISION NO.:	DATE:	REVISION DESCRIPTION:
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DEO & BLD COMMENTS
3	10/10/03	REVISED PER BLD COMMENTS

MATCHLINE SEE SHEET 7



LOCATION MAP  
COPYRIGHT ADC MAP PEOPLE  
PERMIT USE NO. 20694276  
SCALE: 1"=2000'

**GRADING NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHY AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MIN. SLOPE AGAINST ALL GUTTERS TO PREVENT PONDING. ANY DISCREPANCIES SHALL BE PROVIDED TO THE ENGINEER IN WRITING IMMEDIATELY.
- SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND STANDARDS OF THE LOCAL AUTHORITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED, LICENSED, SOILS ENGINEER, CERTIFYING THAT THE SUBBASE WITHIN THE AREAS TO BE PAVED HAS BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- LOCATION OF ALL EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICES CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST POINTS. CROSSINGS WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL SPOT SHOTS ON PROPOSED ON-SITE AND COUNTY CURBS ARE TAKEN FROM TOP OF CURB AND ARE TO BE 6" TO BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL ROAD WIDENING TO BE IN ACCORDANCE WITH HOWARD COUNTY STD. DETAIL R-10.01

STA.	DISTANCE	ELEVATION
0+00	15.10' LEFT TO BEGINNING OF CONSTRUCTION AND CURB & GUTTER	
0+56	16.70' LEFT TO PC	TC 484.35
0+68	65.68' LEFT TO PT	TC 484.30
0+79	17.87' LEFT TO PC	TC 484.15
0+94	78.47' LEFT TO PT	TC 484.00
1+26	25.09' LEFT TO PC	TC 485.30
1+66	19.01' LEFT TO END OF CONSTRUCTION AND CURB & GUTTER	TC 483.30

**ENGINEER'S CERTIFICATE**  
I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ADAM J. VOLANTH P.E. 11/18/03

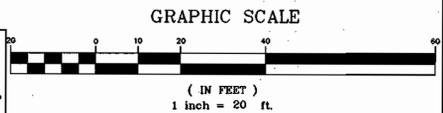
**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

11/24/03

**GENERAL NOTE:**  
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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
12/10/03  
12/23/03  
12/23/03

**BOHLER ENGINEERING, P.C.**  
PROFESSIONAL ENGINEERING SERVICES  
4110 GLENDALES COURT, SUITE 300, TOWSON, MD 21286  
(410) 821-7900 FAX: (410) 821-7957 MD@bohlereng.com



11/18/03  
DATE

ADAM J. VOLANTH  
PROFESSIONAL ENGINEER NO. 21342

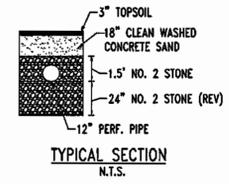
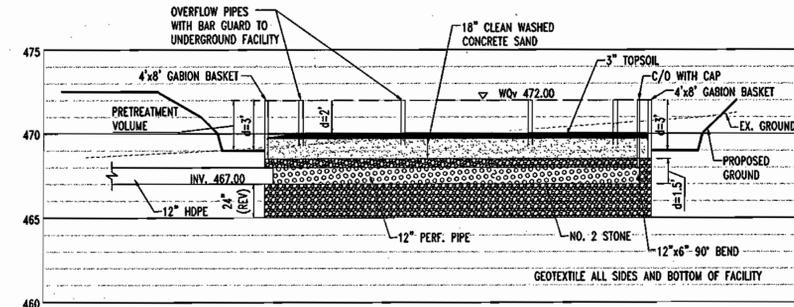
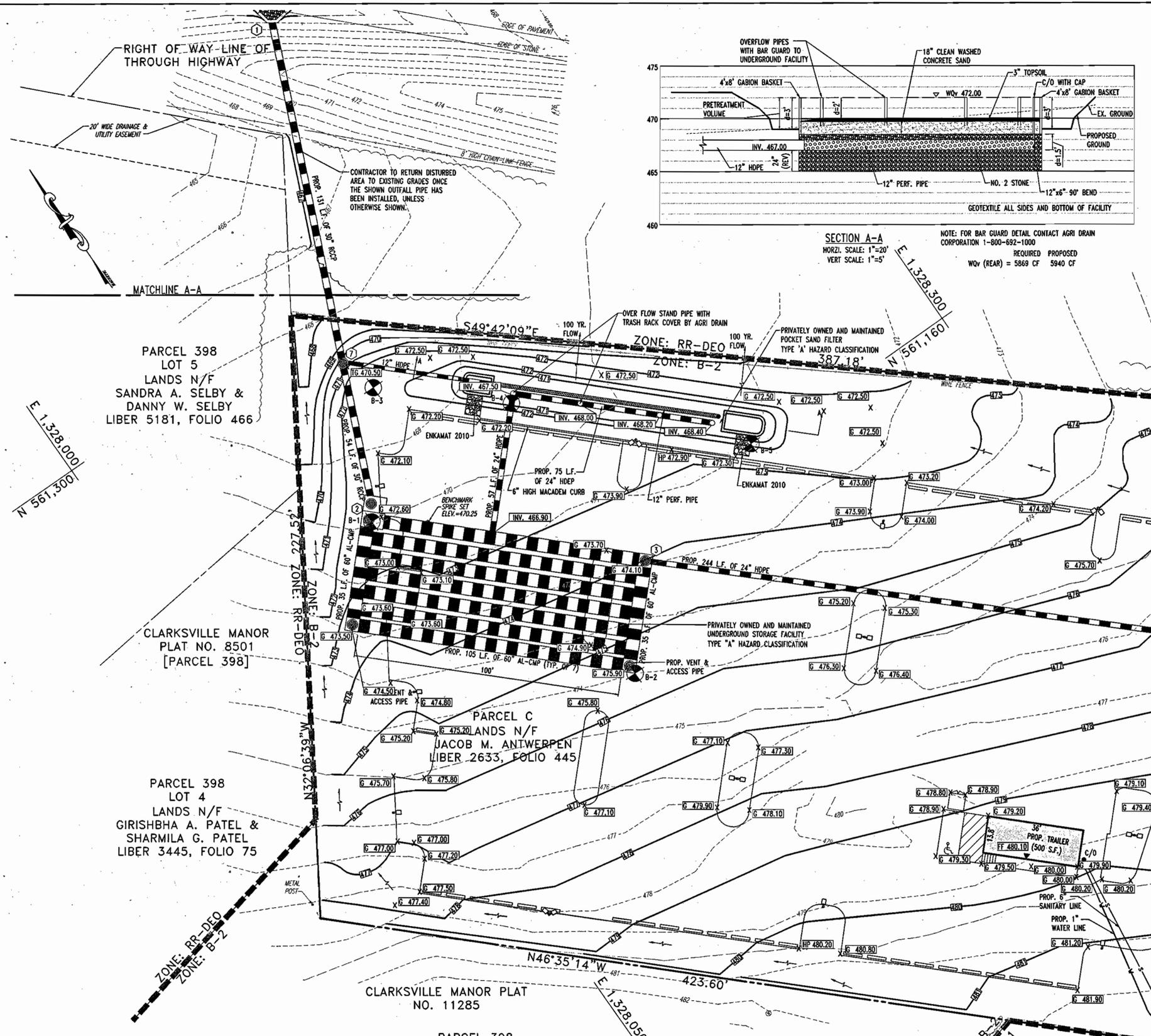
MISS UTILITY  
BEFORE YOU DIG CALL  
1-800-287-7777  
PROJECT VOUCHER ONE, THREE WORKING DAYS NOTICE

OWNER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

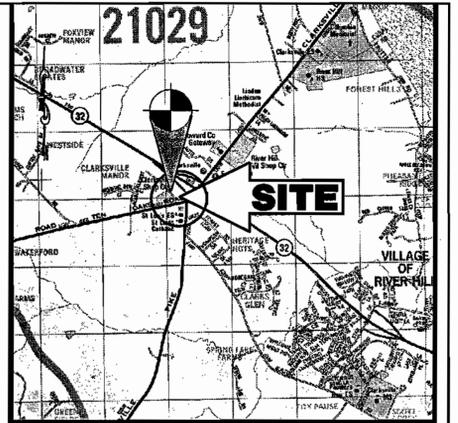
DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	6
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19
REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER RED & BLD COMMENTS
3	10/10/03	REVISED PER OLD COMMENTS

SDP-03-97

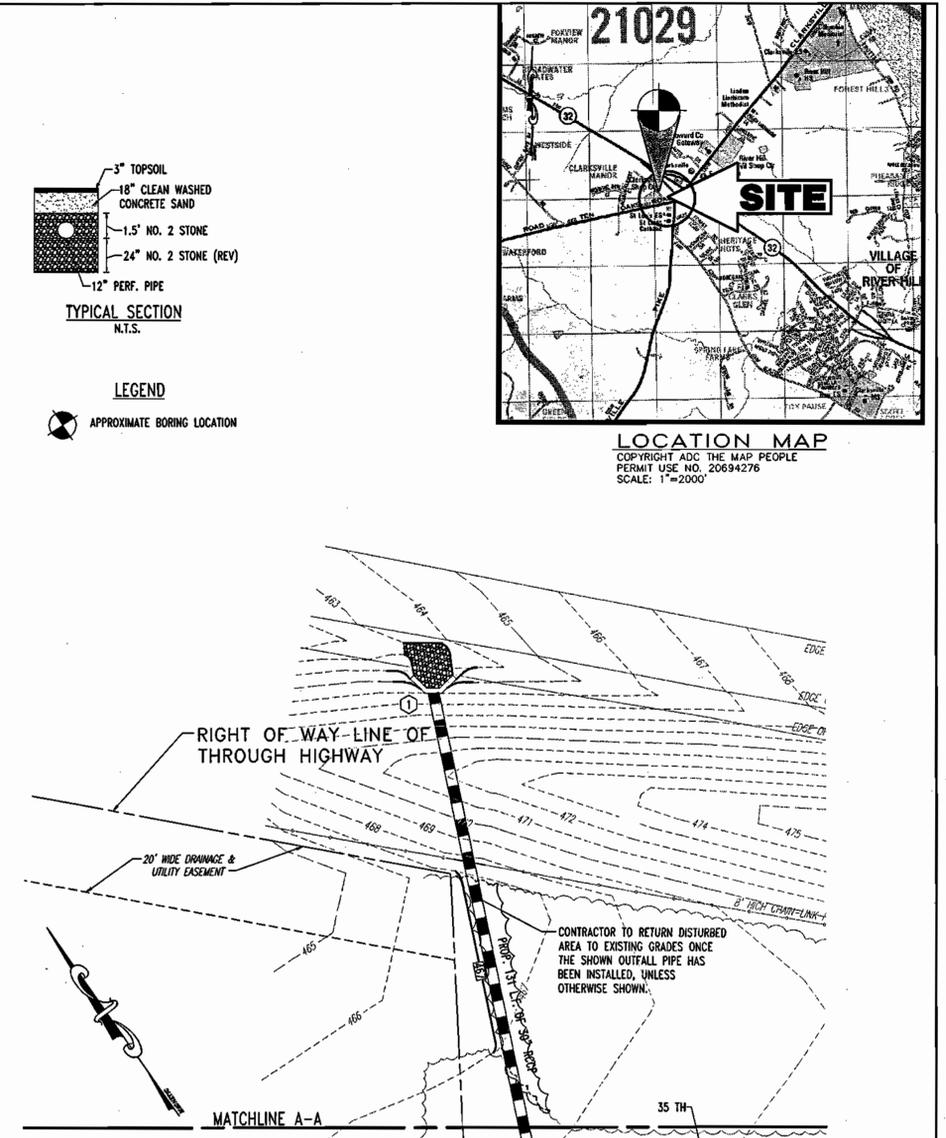


LEGEND  
 APPROXIMATE BORING LOCATION



LOCATION MAP  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'

MATCHLINE SEE SHEET 6

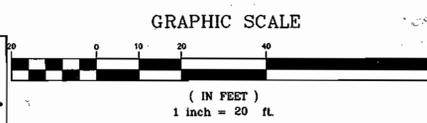


\*NOTE: SEE NOTES AND DETAILS SHEET 19 FOR POCKET SAND FILTER SPECIFICATIONS.

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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 Chief-Development Engineering Division  
 [Signature]  
 Chief-Division of Land Development  
 [Signature]  
 Director

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 4510 GLENDALES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 821-7900 FAX: (410) 821-7987 | MDBohler.com



11/18/03  
 DATE  
 [Professional Engineer Seal]  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342

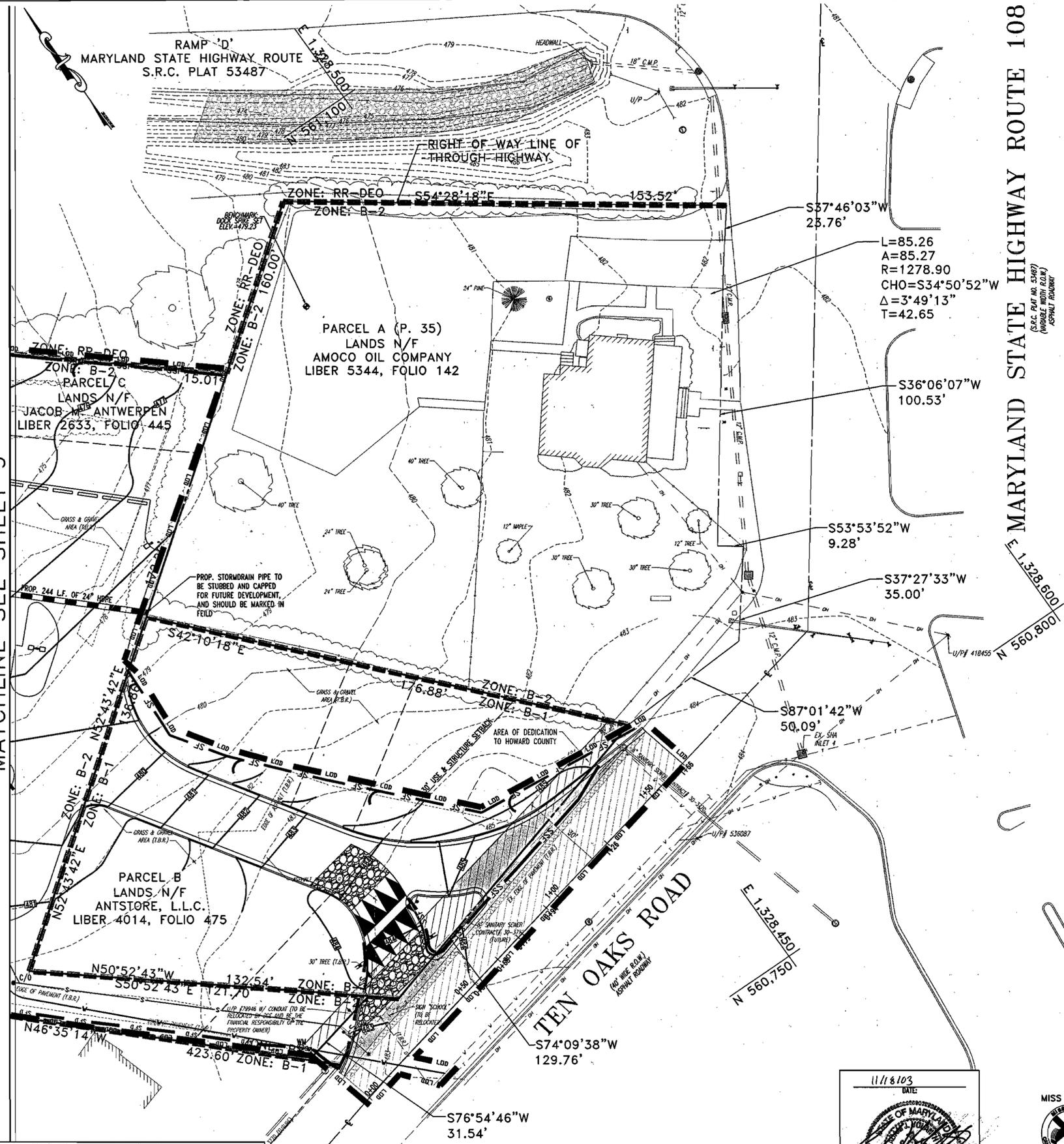
MISS UTILITY  
 [Miss Utility Logo]  
 BEFORE YOU DIG CALL 800-487-3877  
 PROJECT YOURSELF ONE INCH  
 MISSING DATE NOTICE  
 THIS DRAWING DOES NOT RELIEVE NECESSARY  
 PERMITS OR INSURANCE FROM THE  
 CONTRACTOR WHO IS TO BE IN COMPLIANCE  
 WITH THE REGULATIONS AND CODES OF THE  
 CITY AND ALL APPLICABLE REGULATIONS  
 AND ORDINANCES.  
 THE CONTRACTOR SHALL BE RESPONSIBLE  
 TO OBTAIN ALL NECESSARY PERMITS  
 PRIOR TO ANY CONSTRUCTION.

OWNER:  
 DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6389 N. 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		PROJECT NO.: MD032003	
DESIGN BY: B.A.M.	SCALE: 1"=20'	DRAWN BY: R.L.B.	DRAWING NUMBER
CHECKED BY: A.J.V.	DATE: 1/23/03	APPROVED: A.J.V.	7
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19	
REVISION NO.	DATE	REVISION DESCRIPTION	
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS	
2	6/19/03	REVISED PER DED & OLD COMMENTS	
3	10/10/03	REVISED PER OLD COMMENTS	

SDP-03-97

MATCHLINE SEE SHEET 9



**STANDARD SYMBOLS**

	ChB2	CHESTER SILT LOAM, 3-8% SLOPES MODERATELY ERODED
	EkA	ELJAK SILT LOAM, 0-3% SLOPES UNERODED OR SLIGHTLY ERODED
	SF	SILT FENCE
	SSF	SUPER SILT FENCE
	SFD	SILT FENCE DIVERSION
	LDD	LIMIT OF DISTURBANCE
	SCE	STABILIZED CONSTRUCTION ENTRANCE
		SOIL TYPE DIVIDE

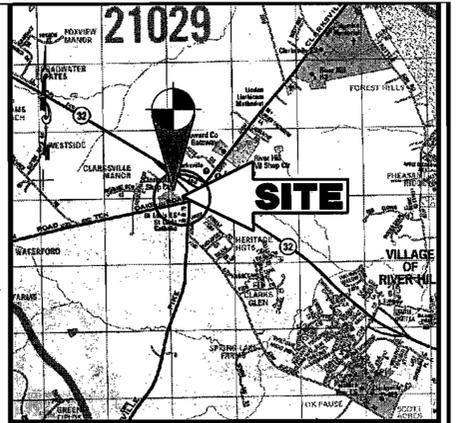
**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT, CONTACT HOWARD COUNTY SEDIMENT CONTROL DIVISION AT (410) 313-2231(1 DAY)
- PRIOR TO CLEARING OF TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRE CONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE. (1 DAY)
- THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBANCE. (2 DAYS)
- INSTALL PROPOSED STABILIZED CONSTRUCTION ENTRANCE CLEAR AND GRUB FOR INSTALLATION OF ALL OTHER SEDIMENT CONTROL DEVICES. (6 DAYS)
- INSTALL SILT FENCE, SUPER SILT FENCE, AND SILT FENCE DIVERSION AS SHOWN ON ERS PLAN. (2 DAYS)
- ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITEE MUST OBTAIN WRITTEN APPROVAL FROM THE INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING, OR GRADING. (3 DAYS)
- CLEAR AND GRUB THE REMAINDER OF THE SITE AND INSTALL STORM WATER MANAGEMENT FACILITY. (14 DAYS)
- GRADE SITE & INSTALL ALL UTILITIES MAINTAINING ALL ERS MEASURES. (5 DAYS)
- FINE GRADE ALL DISTURBED AREAS AND PERMANENTLY STABILIZE. (14 DAYS)
- INSTALL STONE SURFACE AND PAVEMENT BASE COURSE AND STABILIZE ALL DISTURBED AREA AS NECESSARY. (3 DAYS)
- STABILIZE ALL ADDITIONAL DISTURBED AREAS AS REQUIRED AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES. (2 DAYS)
- INSTALL SURFACE PAVING AND DELIVER TRAILER. (2 DAYS)

**EROSION AND SEDIMENT CONTROL QUANTITIES**

LIMIT OF DISTURBANCE = 103,918 S.F. OR 2.39 AC.  
 CUT = 349 CU. YARDS  
 FILL = 3,147 CU. YARDS  
 SILT FENCE = 315 L.F.  
 SUPER SILT FENCE = 1,512 L.F.  
 SILT FENCE DIVERSION = 433 L.F.

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**LOCATION MAP**  
COPYRIGHT ADC THE MAP PEOPLE  
PERMIT USE NO. 20694276  
SCALE: 1"=2000'

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John K. Robertson* 12/2/03  
 HOWARD SOIL CONSERVATION DISTRICT DATE

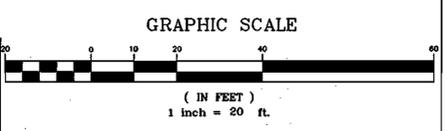
BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*Jim Marwan* 11/18/03  
 DEVELOPER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
*Jim Marwan* 12/2/03  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

BY THE ENGINEER:  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*J. J. White* 11/18/03  
 ENGINEER DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John J. White* 12/2/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
*David H. Harts* 12/2/03  
 CHIEF-DIVISION OF LAND DEVELOPMENT  
*Mark A. Wynn* 12/2/03  
 DIRECTOR

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENAGES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 621-7200 FAX: (410) 621-7667 MDBohler.com



11/18/03  
 DATE:  
  
 ADAM J. VOLANTI  
 PROFESSIONAL ENGINEER NO. 21342

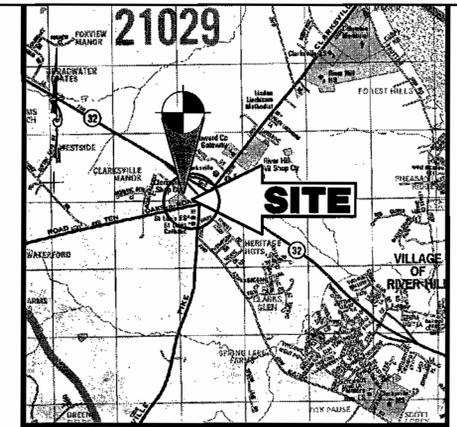


OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

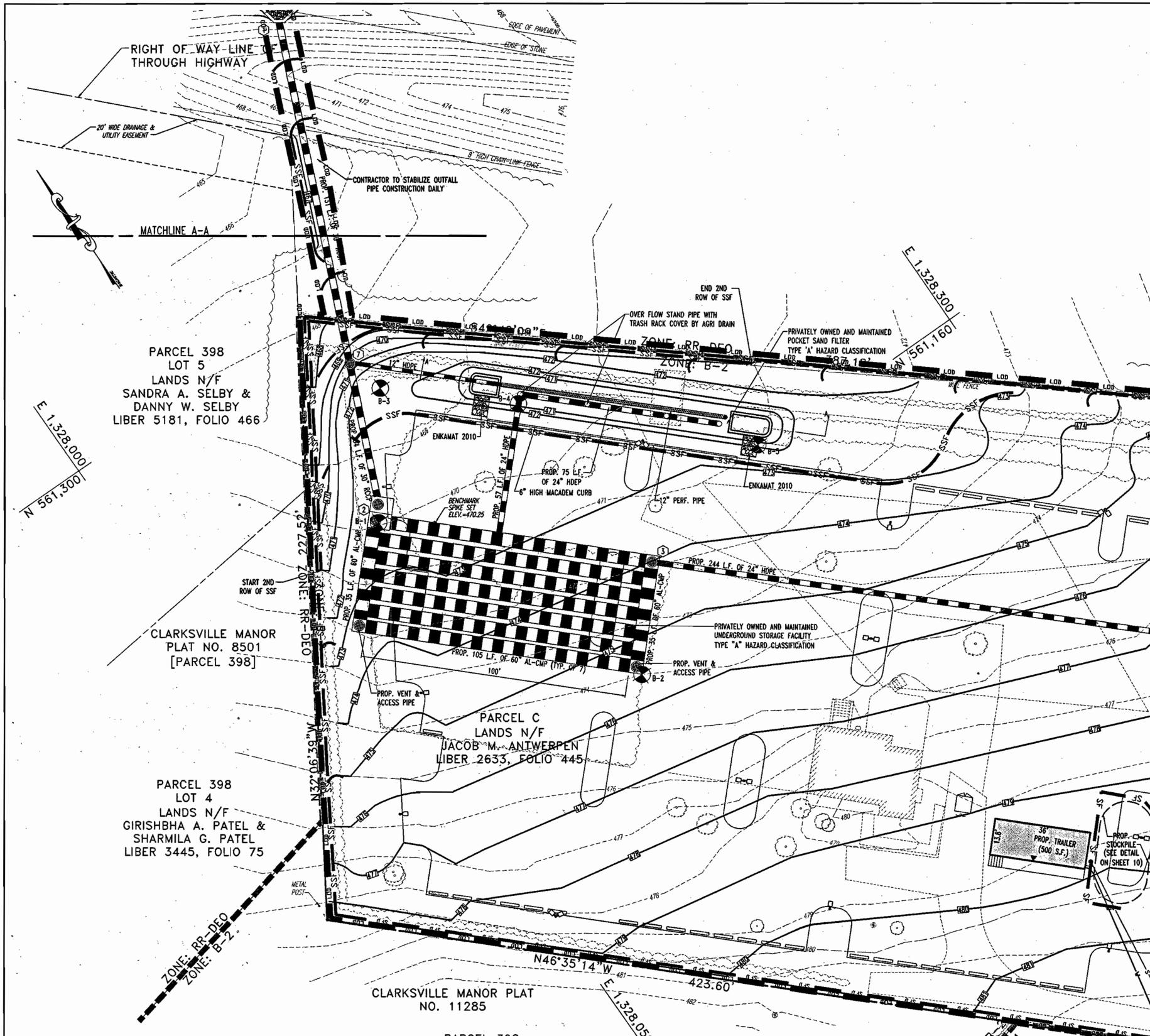
DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		
EROSION & SEDIMENT CONTROL PLAN		
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	8
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19
REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER BED & DID COMMENTS
3	10/10/03	REVISED PER DID COMMENTS

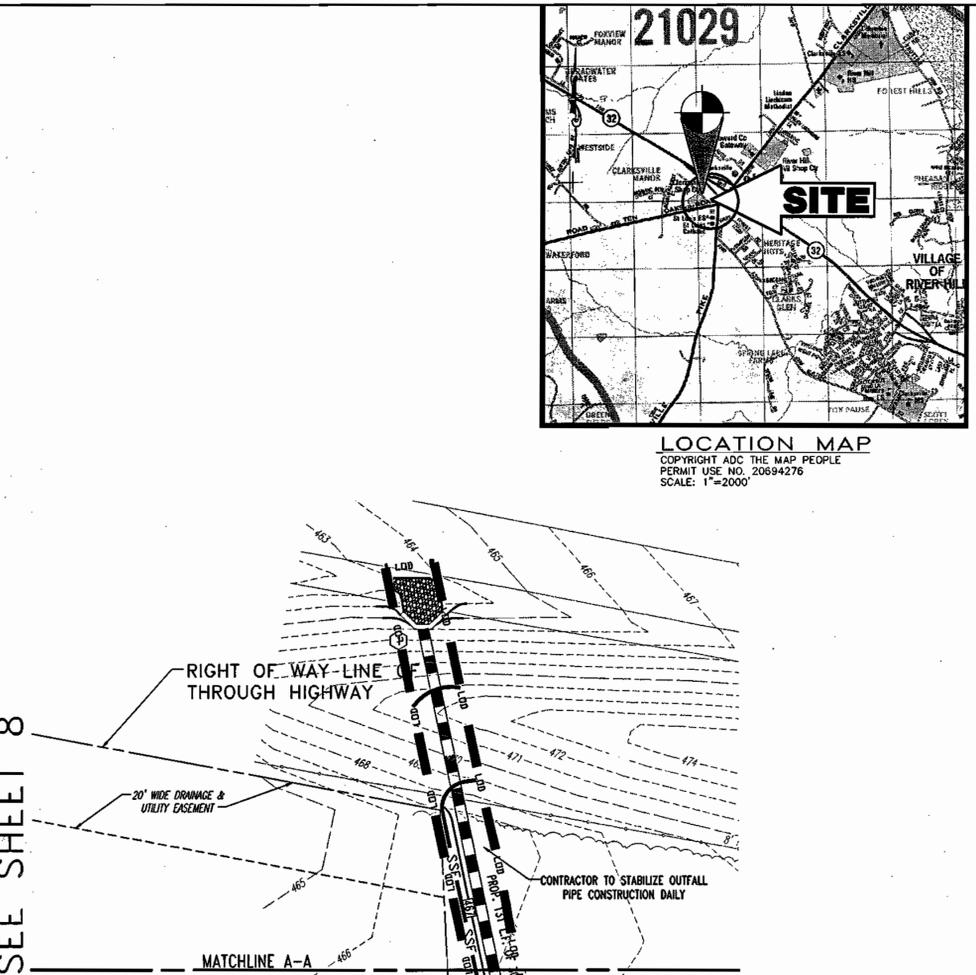
SDP-03-97



**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'



MATCHLINE SEE SHEET 8



THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

*John R. Robertson* 12/2/03  
 HOWARD SOIL CONSERVATION DISTRICT DATE

BY THE DEVELOPER:  
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*Jim M. ...* 12/2/03  
 DEVELOPER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*Jim M. ...* 12/2/03  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

BY THE ENGINEER:  
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*Adam J. Volanth* 11/18/03  
 ENGINEER DATE

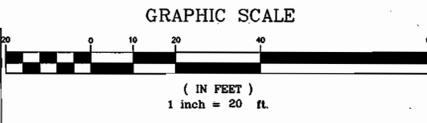
SDP-03-97

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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chris Hamant* 12/2/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE  
*Mark ...* 12/23/03  
 CHIEF-DIVISION OF LAND DEVELOPMENT DATE  
 DIRECTOR

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENDALES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 821-7800 FAX: (410) 821-7807 | M00332003



11/18/03 DATE  
  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342

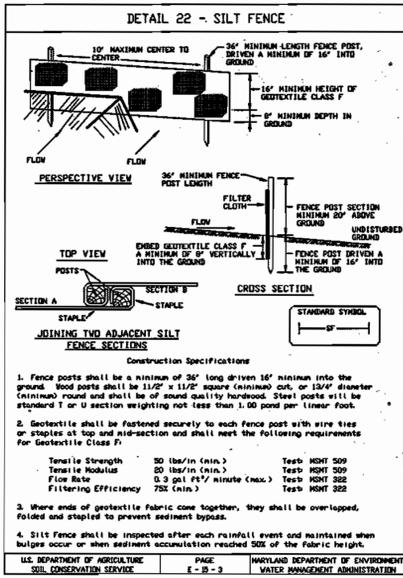
MISS UTILITY  
  
 BEFORE YOU DIG CALL 1-800-221-7777  
 PLEASE MARK YOUR DIG SITE. WE WILL BE AT YOUR SERVICE TO ASSIST YOU WITH ANY QUESTIONS, SAFETY OR HEALTH ASPECTS OF YOUR DIG SITE.

OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6383 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		PROJECT NO.: M00332003
EROSION & SEDIMENT CONTROL PLAN		DRAWING NUMBER
DESIGN BY: B.A.M.	SCALE: 1"=20'	9
DRAWN BY: R.L.B.	DATE: 1/23/03	OF 19
CHECKED BY: A.J.V.	APPROVED: A.J.V.	
REVISION NO.: 2	DRAWING NAME: M32003SS2	
REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DED & OLD COMMENTS
3	10/10/03	REVISED PER OLD COMMENTS

SDP-03-97



**SILT FENCE**

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	100 Feet	1,000 Feet
10:1 to 5:1	100 Feet	750 Feet
5:1 to 3:1	60 Feet	500 Feet
3:1 to 2:1	40 Feet	250 Feet
2:1 and steeper	20 Feet	125 Feet

Note: In areas of less than 2:1 slope and sandy soils (USDA general classification unclassified), still Class A), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

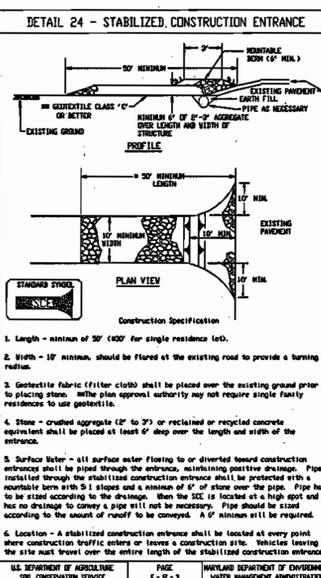
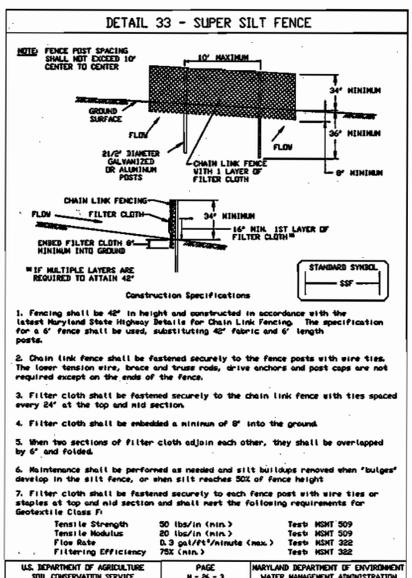
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE E-8-36, MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

**SUPER SILT FENCE**

Design Criteria

Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 Feet	1,500 Feet
20 - 30%	5:1 - 3:1	100 Feet	1,000 Feet
30 - 50%	3:1 - 2:1	100 Feet	500 Feet
50% +	2:1 +	50 Feet	250 Feet

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE E-8-36, MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION



**STANDARD AND SPECIFICATIONS FOR TOPSOIL**

- Definition**  
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation. Purpose: To provide a suitable soil medium for vegetation growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- Conditions Where Practice Applies**
- This practice is limited to areas having 2:1 or flatter slopes where:
    - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
    - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
    - The original soil to be vegetated contains material toxic to plant growth.
    - The soil is so acidic that treatment with limestone is not feasible.
  - For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization than 2:1 shall have the appropriate stabilization shown on the plans.
- Construction and Material Specifications**
- Topsoil salvaged from the existing site may be used provided that it meets the standards as specified. Typically, the depth of topsoil to be salvaged for a given set forth in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
  - Topsoil Specifications - Soil to be used as topsoil must meet the following:
    - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
    - Topsoil must be free of plants or plant parts such as bermuda grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
    - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
      - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section I - Vegetative Stabilization Methods and Materials.

- For sites having disturbed areas over 5 acres:
    - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      - Organic content of topsoil shall be not less than 1.5 percent by weight.
      - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
  - Topsoil Application
    - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
    - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
    - Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the resulting surface topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
    - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
  - Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments commercial below:
    - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
      - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
    - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4lb/1,000 square feet, and 1/3 the normal lime application rate.
- References: Guidelines Specifications, Soil Preparation and Sodding. MD-TA, Pub. #1. Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute. Revised 1973.

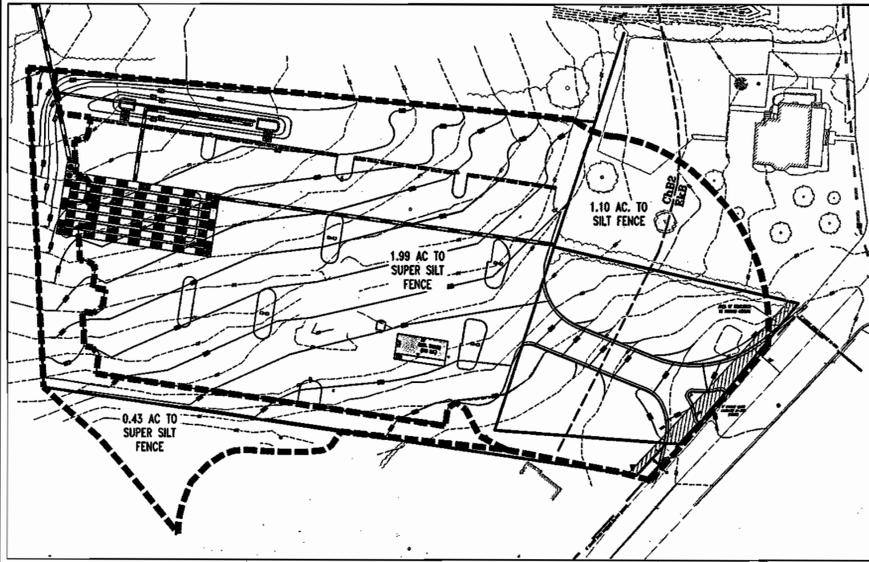
**PERMANENT SEEDING SUMMARY**

NO.	SPECIES	SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE 25		SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)			LIME RATE
		APPLICATION RATE (LB/AC)	* SEEDING DATES			N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
9	TALL FESCUE (80%)	120 LBS./AC. 3.4 LBS./1,000 S.F.	3/1 - 5/15	1"	90 LB/AC (2.0 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)	
	PGA TRIVIALIS (7%)	10 LBS./AC. 23 LBS./1,000 S.F.	8/15 - 10/15	1"					
	BROODFOOT TREFOIL (7%)	10 LBS./AC. 23 LBS./1,000 S.F.	8/15 - 10/15	1"					

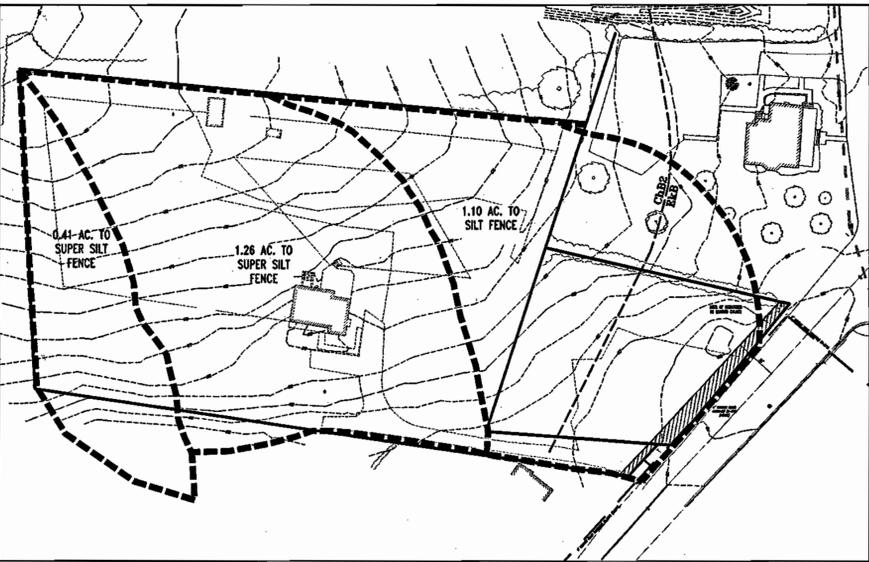
**TEMPORARY SEEDING SUMMARY**

NO.	SPECIES	SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE 26		SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
		APPLICATION RATE (LB/AC)	SEEDING DATES				
1	BARLEY	122 LBS./AC. 2.5 BU./1,000 S.F.	BY 10/15	1"-2"	600 LB/AC (15 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)	
2	ANNUAL RYEGRASS	50 LBS./AC. 1.15 BU./1,000 S.F.	11/1	1/4"-1/2"			
3	TALL FESCUE	120 LBS./AC.	3/1 - 5/15	1"			

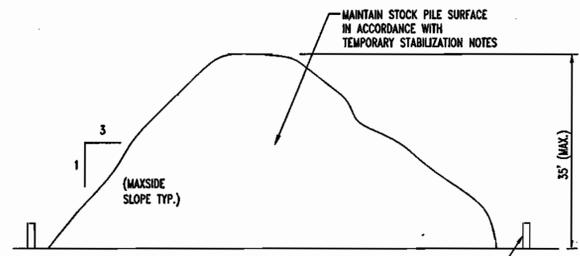
NOTE: FOR STANDARD AND SPECIFICATION FOR VEGETATIVE STABILIZATION, SEE SECTION G - "VEGETATIVE PRACTICES" IN THE "1994 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."



**PROPOSED E&S DRAINAGE AREAS**  
SCALE: 1"=60'



**EXISTING E&S DRAINAGE AREAS**  
SCALE: 1"=60'



**TEMPORARY STOCKPILE DETAIL**  
NOT TO SCALE

**SITE ANALYSIS**

TOTAL AREA OF SITE: 2.42 AC  
LIMIT OF DISTURBANCE: 2.39 AC  
PAVING AREA: 0.05 AC PARCEL 265, 1.66 AC PARCEL 361  
AREA TO BE VEGETATIVELY STABILIZED: 0.76 AC

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*Jim Murray* 12/2/03  
NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John K. Robertson* 12/2/03  
HOWARD SOIL CONSERVATION DISTRICT DATE

CONSULTANT'S CERTIFICATION  
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL." I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

ADAM J. VOLANTH P.E.  
PRINT NAME  
MD LICENSE NO. 21342  
BOHLER ENGINEERING, P.C.  
810 GLENAGLES COURT, SUITE 300  
TOWSON, MD 21286  
ADDRESS

*Adam J. Volanth* 11/18/03  
SIGNATURE DATE  
(410) 821-7900  
TELEPHONE #

EQUITABLE OWNER'S/DEVELOPER'S CERTIFICATION  
I/WE HEREBY CERTIFY THAT I/WE HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN AND THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE CERTIFICATION OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

PRINT NAME TITLE  
*Adam J. Volanth* DATE  
ADDRESS TELEPHONE #

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chris Hamilton* 12/4/03  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE  
*Chris Hamilton* 12/2/03  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE  
*David A. Light* 12/2/03  
DIRECTOR DATE

**BOHLER ENGINEERING, P.C.**  
\*PROFESSIONAL ENGINEERING SERVICES\*  
\*810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286\*  
\*(410) 821-7900 FAX: (410) 821-7987 MD9803@ereng.com\*

GENERAL NOTE:  
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

11/18/03  
DATE  
*Adam J. Volanth*  
PROFESSIONAL ENGINEER  
ADAM J. VOLANTH  
PROFESSIONAL ENGINEER NO. 21342



OWNER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

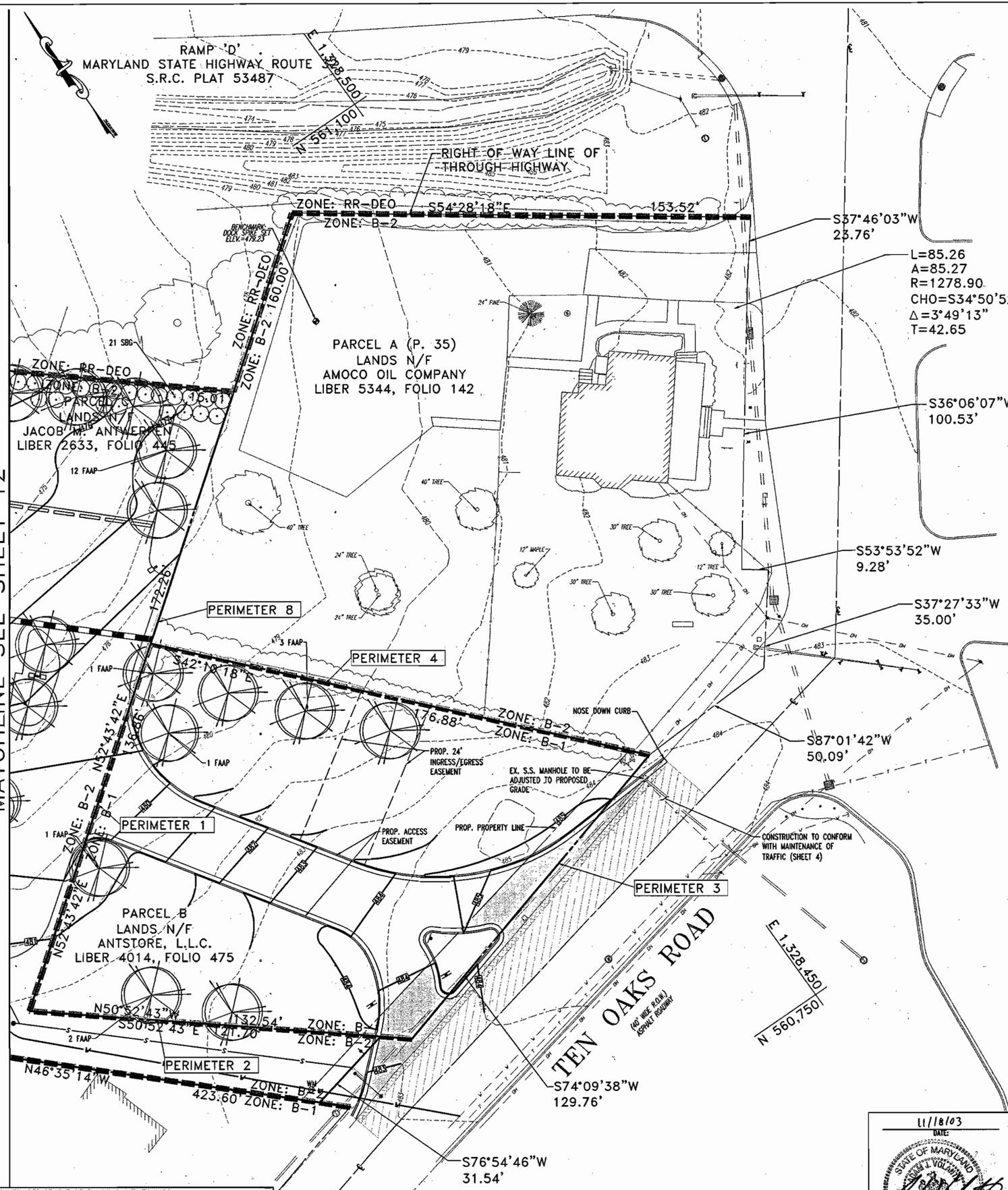
ANTWERPEN CAR FACILITY  
6589 & 6581 TEN OAKS ROAD  
CLARKSVILLE, MARYLAND 21029

**EROSION & SEDIMENT CONTROL NOTES**

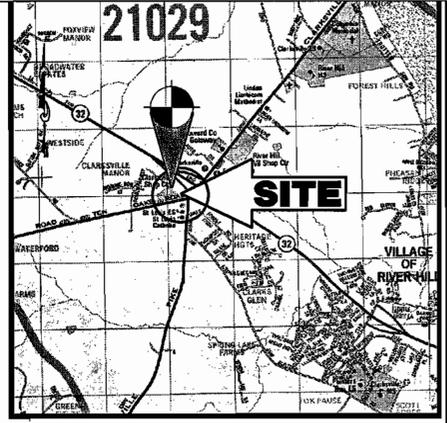
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/28/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	10
REVISION NO.: 2	DRAWING NAME: MS2003SE2	OF 19

REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DEED & DLD COMMENTS

MATCHLINE SEE SHEET 12



MARYLAND STATE HIGHWAY ROUTE 108  
E 1,328,500  
N 560,800



LOCATION MAP  
COPYRIGHT ADC THE MAP PEOPLE  
PERMIT USE NO. 20694276  
SCALE: 1"=2000'

**LANDSCAPE SCHEDULE**

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHADE TREE					
FAAP	44	FRAXINUS AMERICANA 'AUTUMN PURPLE'	AUTUMN PURPLE ASH	2 1/2-3" CAL.	B+B
EVERGREEN TREE					
PS	12	PINUS STROBUS	EASTERN WHITE PINE	6-7'	B+B
SHRUBS					
EAC	30	EUONYMUS ALATUS 'COMPACTUS'	DWARF WINGED EUONYMUS	30-36"	B+B
SRG	36	SPIREA X BIMALDA 'GOLDFLAME'	GOLD FLAME SPIREA	15-18"	#3 CAN
TH	35	TAXUS MEDIA 'HICKSII'	HICKS YEW	30-36"	B+B
TOT					

NOTE: 1.) IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.  
 2.) LANDSCAPE SCHEDULE DOES NOT INCLUDE THE REQUIRED BIO-RETENTION FACILITY PLANTINGS. REFER TO SHEET 13 FOR BIO-RETENTION PLANTING SCHEDULE.

**SEE SHEET 13 FOR LANDSCAPE INSTALLATION AND MAINTENANCE NOTES**

**THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY**

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

OWNER: \_\_\_\_\_ DATE: 10/24/03

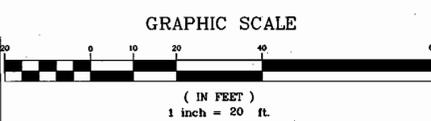
PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

GENERAL NOTE:  
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APPROVED: DEPARTMENT OF PLANNING AND ZONING

12/14/03  
 12/23/03  
 12/23/03

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 4110 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 261-7900 FAX: (410) 261-7907



11/18/03  
 DATE

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342



OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
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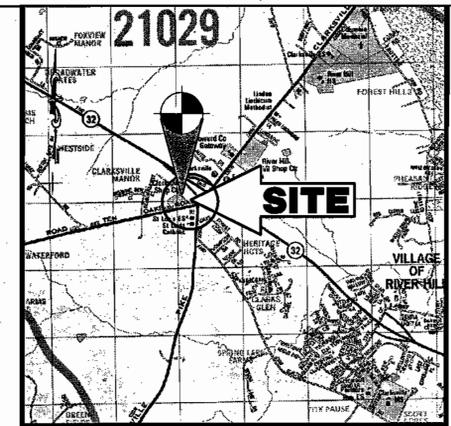
ANTWERPEN CAR FACILITY  
 6389 & 6381 TEN OAKS ROAD  
 CLARKSVILLE, MARYLAND 21029

FOREST CONSERVATION & LANDSCAPE PLAN

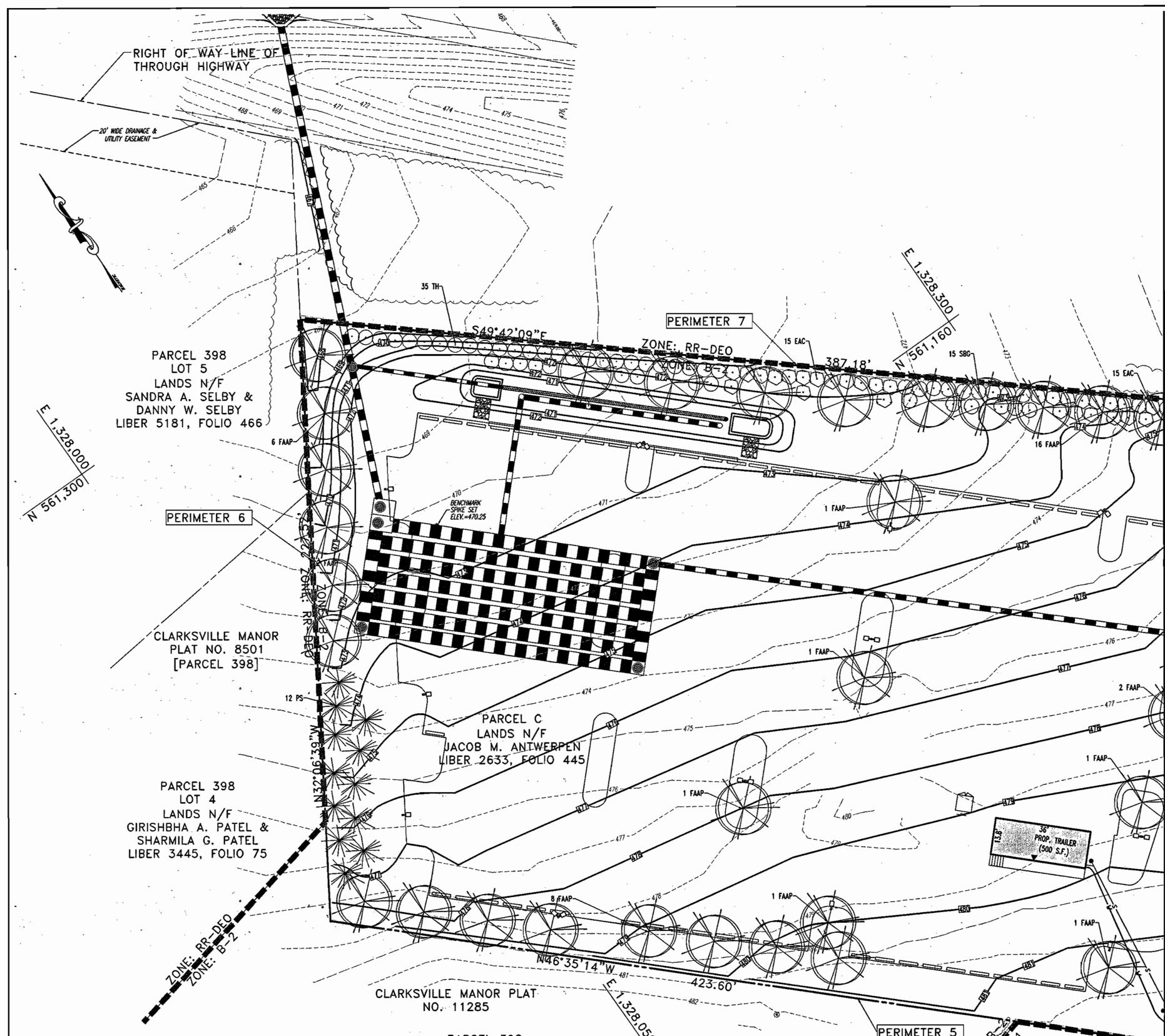
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: M0032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	11
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19

REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER B&D & DLD COMMENTS
3	10/10/03	REVISED PER DLD COMMENTS

SDP-03-97



**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'



MATCHLINE SEE SHEET 11

**SEE SHEET 13 FOR  
 LANDSCAPE INSTALLATION  
 AND MAINTENANCE NOTES**

**THIS PLAN TO BE UTILIZED FOR  
 LANDSCAPE PURPOSES ONLY**

**DEVELOPER'S/BUILDER'S CERTIFICATE**

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OWNER: [Signature] DATE: 12/24/03

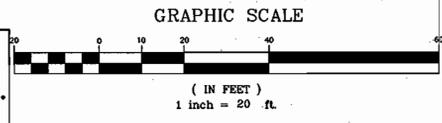
PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 12/4/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
[Signature] 12/23/03  
 CHIEF-DIVISION OF LAND DEVELOPMENT  
[Signature] 12/22/03  
 DIRECTOR

**BOHLER ENGINEERING, P.C.**  
 \*PROFESSIONAL ENGINEERING SERVICES\*  
 \*810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286\*  
 \* (410) 821-7900 FAX: (410) 821-7987 | MD@bohlereng.com \*



11/18/03  
 DATE

[Signature]  
 ADAM J. VOLANTH  
 PROFESSIONAL ENGINEER NO. 21342

**MISS UTILITY**

BEFORE YOU DIG CALL  
 1-800-387-7777  
 PROJECT YOURSELF ONE INCH  
 MARKING DAY'S NOTICE

NO GUARANTEE IS MADE  
 IN THE USE OF THIS MARKING  
 TO MARK UTILITIES UNLESS  
 IT IS USED IN ACCORDANCE  
 WITH THE MISS UTILITY  
 MARKING SYSTEM

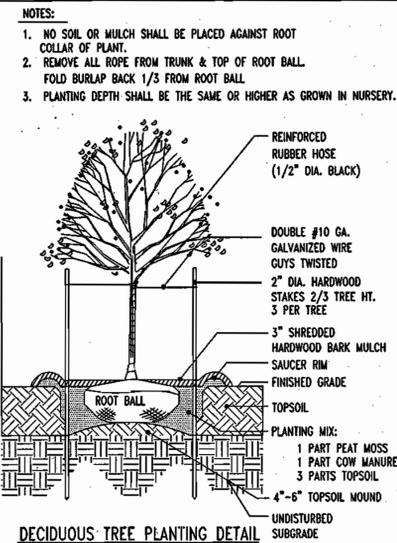
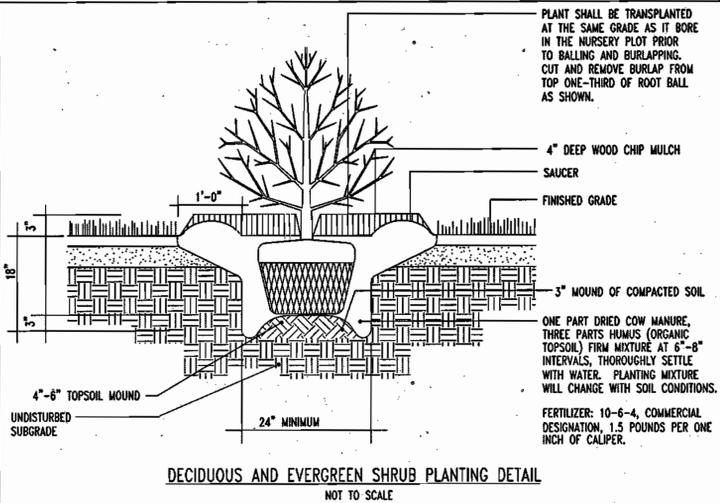
OWNER:

**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

DEVELOPER:

**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		PROJECT NO.: MD032003
<b>FOREST CONSERVATION &amp; LANDSCAPE PLAN</b>		
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	12
REVISION NO.: 2	DRAWING NAME: M32003SS2	OF 19
REVISION NO.:	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/15/03	REVISED PER DEED & OLD COMMENTS
3	10/10/03	REVISED PER DLD COMMENTS



**SCHEDULE A PERIMETER LANDSCAPE EDGE**

PERIMETER #	1	2	3	4	5	6	7	8
CATEGORY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROAD R.O.W.	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	A	A	E	A	A	C	E	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	137'	122'	50'	177'	424'	228'	402'	94'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED								
SHADE TREES	1:60' OR 3	1:60' OR 2	DEFERRED TO FUTURE SDP	1:60' OR 3	1:60' OR 8	1:40' OR 6	1:40' OR 11	1:60' OR 2
EVERGREEN TREES	0	0	0	0	0	1:20' OR 12	0	0
SHRUBS	0	0	0	0	0	0	1:4 OR 101	0
NUMBER OF PLANTS PROVIDED								
SHADE TREES	3	2	DEFERRED TO FUTURE SDP	3	8	6	11	2
EVERGREEN TREES	0	0	0	0	0	12	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	101	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS	NO SUBSTITUTIONS

NOTE: NO PERIMETER LANDSCAPING IS REQUIRED FOR THE SWM BIORETENTION FACILITY BECAUSE PLANTINGS HAVE BEEN PLACED WITHIN THE FACILITY.

**SCHEDULE B INTERIOR PARKING LOT LANDSCAPING**

PARCEL 361

NUMBER OF PARKING SPACES:	173
ISLANDS REQUIRED: (1/20 SPACES)	9
ISLANDS PROVIDED:	12
SHADE TREES REQUIRED:	9
SHADE TREES PROVIDED:	9

**LANDSCAPE MAINTENANCE MANAGEMENT PROGRAM:**

- GENERAL:**
  - ALL PLANTING AREAS (INCLUDING LAWNS, BUFFERS, PARKING LOTS) SHALL BE PERIODICALLY INSPECTED A MINIMUM OF ONCE PER MONTH, EVERY 2 WEEKS DURING THE GROWING SEASON OR AFTER EACH MOWING SESSION. A GENERAL FALL CLEAN-UP SHALL BE SCHEDULED EACH YEAR.
  - REMOVE ALL UNDESIRABLE LITTER, DEBRIS, AND WEEDS.
  - MAINTAIN A MINIMUM OF A 2 INCH DEPTH OF ORGANIC HARDWOOD MULCH OR EQUIVALENT ON ALL PLANTING BEDS. ADJACENT LAWN AREAS SHOULD BE EDGED TO MAINTAIN A NEAT, DISTINCT BORDER.
- IRRIGATION: (IF APPLICABLE)**
  - AUTOMATIC SPRINKLERS SHOULD BE CLEANED OUT AND TURNED OFF IN THE FALL PRIOR TO THE FIRST FROST, AND TESTED AND TURNED ON IN SPRING.
  - EVALUATE SUCCESS OF IRRIGATION SYSTEM AND MODIFY AS NECESSARY.
 

WATER REQUIREMENTS:

    - NEW TURF - KEEP MOIST UNTIL ALL SEED GERMINATES AND BECOMES AN ESTABLISHED STAND OF TURF.
    - EXISTING TURF - DURING DRY PERIODS, WATER TWICE A WEEK FOR 20 MINUTES AT A TIME; OR SET IRRIGATION SYSTEM FOR COVERAGE OF 1"-2" OF WATER PER WEEK.
- SEASONAL FLOWERS:**
  - ANNUAL FLOWER BEDS SHALL BE PERIODICALLY MULCHED AND THE SOIL AMENDED ANNUALLY. NEW PLANTINGS SHALL BE PROVIDED IN MAY OF EACH YEAR. DURING GROWING SEASON, ALL BEDS SHALL RECEIVE PERIODIC INSPECTION, (AS STATED IN NOTE #1) IRRIGATION, AND WEEDING TO MAINTAIN A NEAT APPEARANCE.
- TURF:**
  - LAWN AREAS SHALL NOT EXCEED A HEIGHT OF 4 INCHES. APPROXIMATELY 12 TO 15 MOWINGS PER YEAR WILL BE REQUIRED.
  - FERTILIZER AND SOIL AMENDMENTS SHOULD BE ADDED AS NECESSARY AND/OR ON A SEASONAL BASIS. FERTILIZER IS OPTIMALLY APPLIED TO LAWN AND TURF AREAS THREE TIMES PER SEASON. TIMING, FREQUENCY AND RATE OF APPLICATION SHOULD BE ADJUSTED ACCORDING TO WEATHER AND HORTICULTURAL AND SOIL TEST CONDITIONS FOR EACH SPECIFIC SITE. FERTILIZER SHOULD BE APPLIED BY ACCEPTED METHODS ONLY. SAFETY SHOULD ALWAYS BE OF PRIME CONSIDERATION. CARE SHOULD BE TAKEN NOT TO APPLY FERTILIZER WHEN GROUND IS WET, UNDER EXTREME STRESS, OR DURING WINDY CONDITIONS.
  - SOIL AMENDMENTS SUCH AS LIME, GYPSUM, OR PEAT MOSS MAY HAVE TO BE ADDED TO THE SOILS OF LAWNS, TURF OR PLANTING AREAS PERIODICALLY. THE NEED FOR SUCH SOIL AMENDMENTS SHOULD BE ANALYZED DURING THE PERIODIC INSPECTIONS AND IN CONJUNCTION WITH A SOIL TEST.
  - SOIL AMENDMENTS SHOULD BE APPLIED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS OR BASED UPON SOIL TEST RESULTS.
    - APPLY A 3-1-2 (21-7-14, 10-4-6, OR 24-4-8) 50% ORGANIC FERTILIZER TWICE A YEAR BETWEEN MARCH 15 TO APRIL 15 AND SEPTEMBER 1 TO OCTOBER 1. IF NECESSARY TWO ADDITIONAL APPLICATIONS MAY BE MADE IN MAY AND NOVEMBER.
    - APPLY LIME AND OTHER SOIL AMENDMENTS ONCE A YEAR IN MARCH.

DO NOT APPLY FERTILIZER OR SOIL AMENDMENTS WHILE TURF IS WET, UNDER EXTREME STRESS, WHEN CHILDREN ARE PRESENT, OR IN WINDY CONDITIONS.
- PRUNING:**
  - REMOVAL OF DEAD, DISEASED, INSECT INFESTED OR WEAK WOOD SHALL TAKE PLACE IN DORMANT SEASON, OR AFTER FLOWERING. EXCESSIVE SHOOTS AND SUCKERS SHALL BE REMOVED.
  - SHRUB MATERIAL USED AS A SCREEN SHOULD BE PRUNED AS A MASS TO ENHANCE THEIR NATURAL FORM. HEDGES SHOULD BE PRUNED TO MAINTAIN A TRAPEZOIDAL FORM.
  - ROOT PRUNING OF TREES ADJACENT TO CURBS OR SIDEWALKS SHOULD OCCUR DURING PERIODIC INSPECTION WITH KNOWLEDGE OF MOST RECENT PRUNING. NO MORE THAN 1/3 OF ROOT SYSTEM SHOULD BE PRUNED DURING A YEAR.
- INSECT AND DISEASE CONTROL:**
  - THE CONTROL OF INSECTS AND DISEASE ASSOCIATED WITH ALL PLANTING AREAS SHOULD ALWAYS BE A MAINTENANCE PRIORITY. ALL PLANTINGS, INCLUDING EXISTING MATURE TREES, SHOULD BE PERIODICALLY INSPECTED FOR INSECT OR DISEASE INFESTATION. METHODS UTILIZED TO CONTROL INSECT AND DISEASE MAY RANGE FROM SPRAYING AND PRUNING TO PLANT REMOVAL. WHATEVER METHOD IS UTILIZED, SAFETY AND CONTROL SHOULD ALWAYS BE OF PRIME CONCERN. CERTIFIED AND TRAINED PERSONNEL SHOULD ALWAYS PERFORM THIS TASK.
- RENOVATION:**

RENOVATION INCLUDES THE RESEEDING OR REPLANTING OF LANDSCAPE AREAS DAMAGED, DESTROYED OR FAILING DUE TO INSECTS, DISEASE, WEATHER OR PHYSICAL DAMAGE.

  - LAWN:**

ALL AREAS WHERE SOIL HAS BEEN EXPOSED SHOULD BE RENOVATED DURING THE NEXT PLANTING SEASON. PROPER HORTICULTURAL AND SOIL EROSION PREVENTION METHODS SHOULD BE UTILIZED. IF SOIL EROSION HAS OCCURRED, THE AREA SHOULD BE REPAIRED. A SEED MIXTURE COMPATIBLE TO EXISTING PLANTINGS AND CONDITIONS SHOULD ALWAYS BE UTILIZED.
  - PLANTINGS:**

ALL PLANTINGS WHICH ARE DAMAGED OR DESTROYED SHOULD BE REPLACED DURING THE NEXT PLANTING SEASON. A FAILING, DAMAGED OR DESTROYED LANDSCAPE SCREEN OR BUFFER MUST BE RENOVATED OR REPLACED WITHIN A REASONABLE AMOUNT OF TIME BUT NOT TO EXCEED THE SUBSEQUENT GROWING SEASON.
- SITE AMENITIES:**
  - BENCHES, PATHS, BICYCLE RACKS, TRASH RECEPTACLES AND SIGNS SHOULD BE INSPECTED AT LEAST TWICE A YEAR, MARCH AND AUGUST, TO DETERMINE THEIR CONDITION. ANY DAMAGED, WORN OR UNSAFE CONDITION SHOULD BE RECTIFIED IMMEDIATELY.
- PAVED SURFACES:**

ALL PAVED SURFACES, CONCRETE SIDEWALKS, ASPHALT PAVEMENT AND DECORATIVE PAVEMENT MUST BE INSPECTED ON A REGULAR BASIS, A MINIMUM OF ONCE PER MONTH.

ANY TRASH, STAINS, OR OBSTRUCTIONS MUST BE REMOVED IMMEDIATELY. PAVEMENTS SHOULD BE INSPECTED FOR DAMAGE, CRACKS, POT HOLES, AND RETURNED TO THEIR ORIGINAL CONDITION. SNOW SHOULD BE REMOVED DURING AND FOLLOWING EVERY STORM. SIDEWALKS AND PARKING AREAS MUST BE KEPT CLEAR OF ICE AND SNOW DURING BUSINESS HOURS.

- PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED; INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT. LAYOUT TO BE APPROVED BY OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.
- PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.
- CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR TREES AND SHRUBS. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
- INSO FAR AS IT IS PRACTICABLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD WILL BE REJECTED.
- QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60 (REV. 1980) "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- ALL PLANTS SHALL BE PLANTED IN AMENDED TOP SOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACK FILLING PROGRESSES. PLANTING MIX TO BE AS SHOWN ON PLANTING DETAILS. LARGE PLANTING AREAS TO INCORPORATE FERTILIZER AND SOIL CONDITIONERS AS STATED IN PLANTING SPECIFICATIONS.
- PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE BALL ONLY.
- PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION. ALL PLANT MATERIAL SHALL BE SPRAYED WITH "WILT-PROOF" OR EQUAL AS PER MANUFACTURER'S INSTRUCTIONS.
- NO PLANT, EXCEPT GROUND COVERS, SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS.
- SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT, A NORMAL OR NATURAL RELATIONSHIP TO THE GROUND OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANT IN THE CENTER OF THE PIT.
- ALL INJURED ROOTS SHALL BE PRUNED TO MAKE CLEAN ENDS BEFORE PLANTING UTILIZING CLEAN, SHARP TOOLS. IT IS ADVISABLE TO PRUNE APPROXIMATELY 1/3 OF THE GROWTH OF LARGE TREES (2" CALIPER AND OVER) BY THE REMOVAL OF SUPERFLUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER OF TREES WILL NOT BE CUT BACK. LONG SIDE BRANCHES, HOWEVER, MUST BE SHORTENED.
- EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE NATURAL CHARACTER OF PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.

**PLANTING NOTES:**

- TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. ALL TREES SIX (6) INCHES AND OVER IN CALIPER SHALL BE GUIDED. SMALLER TREES SHALL BE STAKED. GUYING WIRES AND STAKES SHALL BE INSTALLED AS INDICATED. THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING, GUYING & TREE WRAP AT THE END OF THE ONE YEAR MAINTENANCE & GUARANTEE PERIOD.
- THE TRUNKS OF ALL TREES SHALL BE WRAPPED AS SOON AS POSSIBLE AFTER PLANTING ACCORDING TO STANDARD PROCEDURES AND AS INDICATED.
- ALL PLANTING BEDS SHALL BE MULCHED WITH 3" LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH.
- NEW PLANTING AREAS AND SOD SHALL BE ADEQUATELY IRRIGATED OR WATERED TO ESTABLISH THE PROPOSED PLANTS AND LAWN.
- PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE AS SHOWN ON THE APPROVED LANDSCAPE PLAN MUST BE INSTALLED, INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT. THE TOWNSHIP ENGINEER AND LANDSCAPE ARCHITECT SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER AS REQUIRED BY OR ASSOCIATED WITH A SUBDIVISION OR SITE PLAN APPROVAL BY THE PLANNING BOARD OR ZONING BOARD OF ADJUSTMENT SHALL BE INSTALLED DURING THE FOLLOWING PLANTING SEASONS.
 

TYPE	DATES
PLANTS	3/15 TO 12/15
LAWN	3/15 TO 6/15 9/15 TO 12/1

FURTHERMORE, THE FOLLOWING TREE VARIETIES SHALL NOT BE PLANTED DURING THE FALL PLANTING SEASON DUE TO THE HAZARDS ASSOCIATED WITH PLANTING THESE TREES IN THIS SEASON.

ACER RUBRUM	POPULUS VARIETIES
BETULA VARIETIES	PRUNUS VARIETIES
CARPINUS VARIETIES	PYRUS VARIETIES
CRATAGUS VARIETIES	QUERCUS VARIETIES
KOELREUTERIA	SALIX WEEPING VARIETIES
LIQUID AMBER STYRACIFLUA	TILIA TOMENTOSA
LIRODENDRON TULIPIFERA	ZELKOVA VARIETIES
PLATANUS ACERIFOLIA	

ANY PLANTINGS INSTALLED IN CONFLICT WITH THIS REQUIREMENT MUST RECEIVE THE WRITTEN APPROVAL OF THE ENGINEER OR LANDSCAPE ARCHITECT, PRIOR TO PLANTING. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL REQUIRE THE REMOVAL OF THE PLANTING IN QUESTION. THIS REQUIREMENT DOES NOT APPLY TO SEEDING OR SODDING OR PLANTINGS SPECIFICALLY FOR SOIL STABILIZATION PURPOSES. THE PLANTING ASSOCIATED WITH ANY LOT GIVEN A CERTIFICATE OF OCCUPANCY OUTSIDE THESE PERIODS SHALL BE PROVIDED DURING THE PREVIOUS OR NEXT APPROPRIATE SEASON.
- ALL DISTURBED AREAS TO BE TREATED WITH 4" TOP SOIL & SEEDING IN ACCORDANCE WITH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION SEDIMENT CONTROL SHEET.

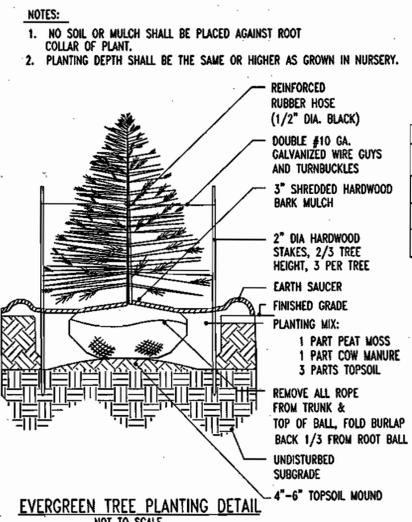
**BIORETENTION AREA PLANTING SOIL SPECIFICATIONS**

- PLANTING SOILS FOR BIORETENTION SHALL HAVE SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE.
- THE PLANTING SOIL SHALL BE TESTED PRIOR TO INSTALLATION TO MEET THE FOLLOWING CRITERIA:
 

CLAY CONTENT	10-25%
PH RANGE	5.5-6.5
INFILTRATION RATE	0.5 IN./HR. MIN.
ORGANIC MATTER	1.5-3.0%
MAGNESIUM (mg)	35 LBS./AC.
PHOSPHOROUS (p205)	100 LBS./AC.
POTASSIUM (k20)	85 LBS./AC.
SOLUBLE SALTS	500 PPM MAX.
- PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 18 INCHES OR LESS AND LIGHTLY COMPACTED. MINIMAL COMPACTATION EFFORT OR LESS CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR A BACKHOE.

**NOTE: SURETY IN THE AMOUNT OF \$18,030 FOR 44 SHADE TREES, 12 EVERGREEN TREES, AND 101 SHRUBS IS TO BE POSTED WITH THE DEVELOPER'S AGREEMENT.**

**THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16. 2000 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PAYING FEE IN LIEU.**



**WETLAND SEED MIX**

SPECIES	MIN %	MIN PURITY	MIN % BY GERMINATION	HEIGHT
SWITCHGRASS	42.7	92	60	
BLUE JOINT	18.6	97	20	
RED TOP	18.3	87	20	

**BIORETENTION PLANTINGS**

SYMBOL	QUANTITY	SPECIES	SIZE
○	16	CORNUS SERICA	4" O.C.
○	16	RED OLSER DOGWOOD	4" O.C.
○	16	LINDERA BENZOIN	4" O.C.
○	16	MYRTICA PENSYLVANICA	4" O.C.
○	16	NORTHERN BAYBERRY	4" O.C.
○	16	KOELREUTERIA STYRACIFLUA	12" O.C.
○	16	GOLDEN RAIN TREE	12" O.C.

4/18/03  
DATE:  
STATE OF MARYLAND  
ADAM J. VOLANTH  
PROFESSIONAL ENGINEER NO. 21342



OWNER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY  
6389 & 6381 TEN OAKS ROAD  
CLARKSVILLE, MARYLAND 21029

**FOREST CONSERVATION & LANDSCAPE DETAILS**

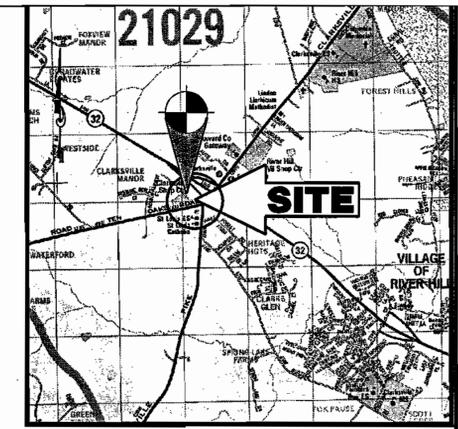
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DRAWN BY: R.L.B. DATE: 1/23/03 PROJECT NO.: M032003  
CHECKED BY: A.J.V. APPROVED: A.J.V. DRAWING NUMBER: 13  
REVISION NO.: 2 DRAWING NAME: M032003SL2 OF 19

REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DEB & OLD COMMENTS
3	10/10/03	REVISED PER OLD COMMENTS

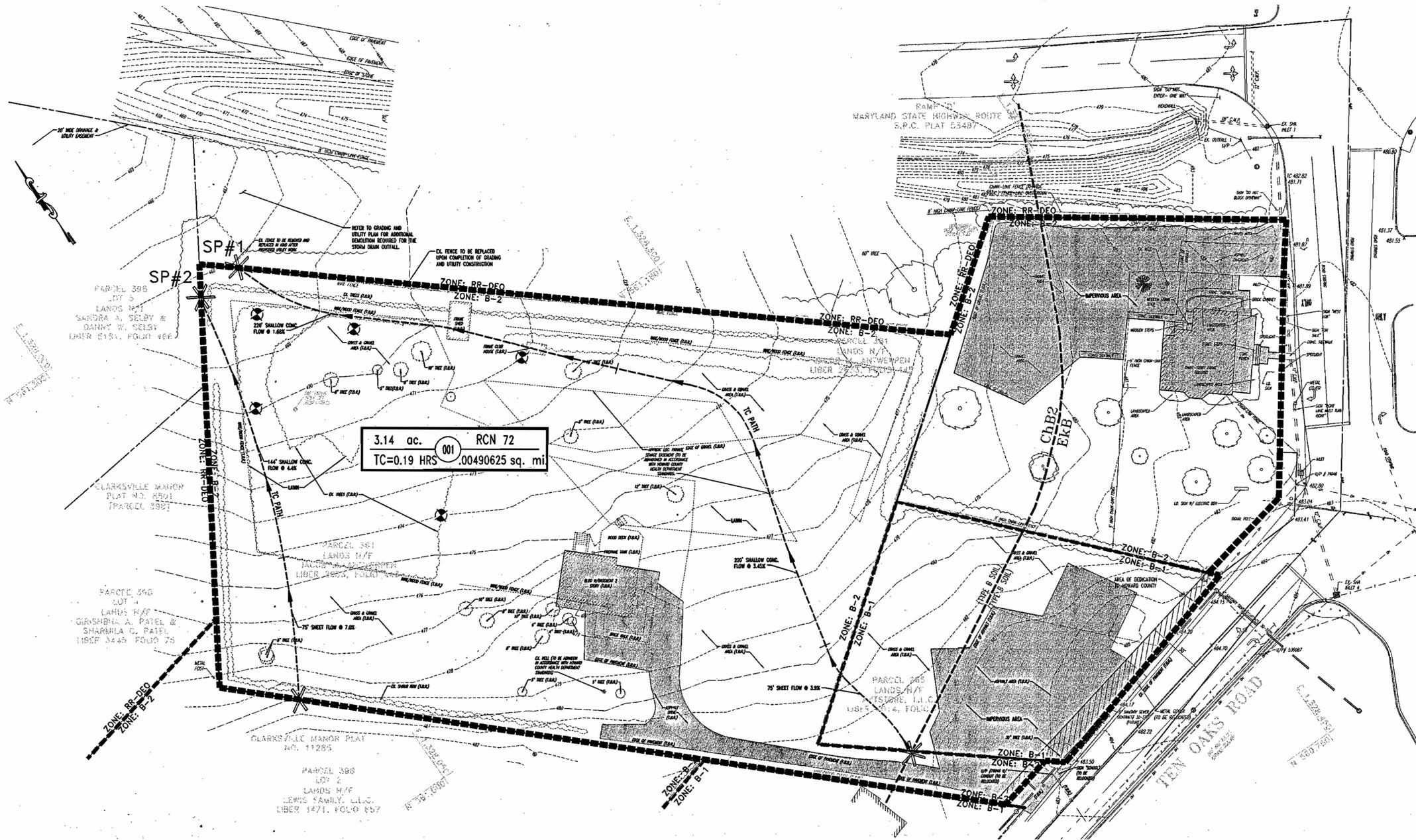
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF DEVELOPMENT ENGINEERING DIVISION  
12/4/02  
12/23/02  
12/23/02

**BOHLER ENGINEERING, P.C.**  
PROFESSIONAL ENGINEERING SERVICES  
810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286  
(410) 821-7900 FAX: (410) 821-7897 | MD@bohlereng.com

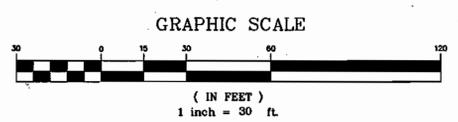




**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'



3.14 ac. 001 RCN 72  
 TC=0.19 HRS 0.00490625 sq. mi



**GENERAL NOTE:**  
 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 12/4/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 12/23/03  
 CHIEF-DIVISION OF LAND DEVELOPMENT  
*[Signature]* 12/23/03  
 DIRECTOR

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENEAGLES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 821-7900 FAX: (410) 821-7987 MD@bohlereng.com

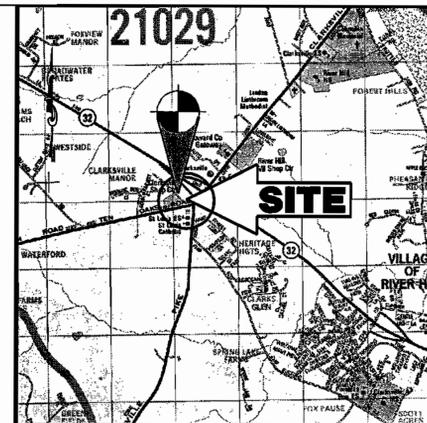
11/18/03  
 DATE  
  
 ADAM J. WOLANT  
 PROFESSIONAL ENGINEER NO. 21342

MISS UTILITY  
  
 BEFORE YOU DIG CALL  
 1-800-487-7877  
 PROJECT NUMBER: ONE THREE  
 WORKING DAYS NOTICE  
 THE DRAWING DOES NOT INCLUDE NECESSARY CONSTRUCTION DETAILS. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, PERMITS AND LOCAL ACTS OF THE STATE OF MARYLAND AND ALL APPLICABLE LOCAL ORDINANCES.  
 THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL AGENCIES.

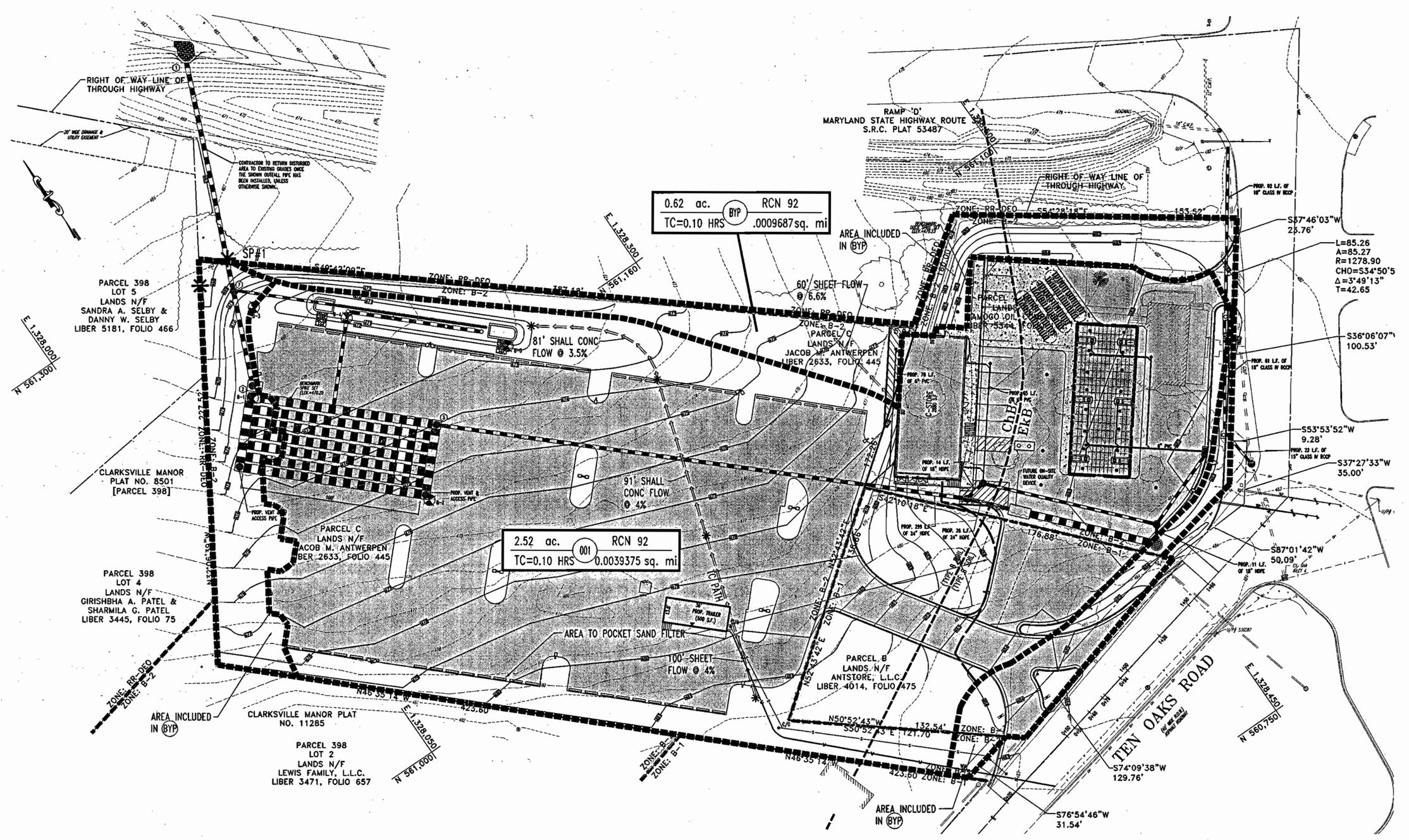
OWNER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN: JACOB ANTWERPEN

SDP-03-97		
ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		
SWM PRE-DEVELOPMENT DRAINAGE AREA MAP		
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032803
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER
CHECKED BY: A.J.V.	APPROVED: A.J.V.	15
REVISION NO.: 2	DRAWING NAME: M320030A2	OF 19
REVISION NO.	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DEB & DLD COMMENTS



**LOCATION MAP**  
 COPYRIGHT ADC THE MAP PEOPLE  
 PERMIT USE NO. 20694276  
 SCALE: 1"=2000'



L=85.26  
 A=85.27  
 R=1278.90  
 CHO=S34°50'5  
 Δ=3°49'13"  
 T=42.65

S36°06'07"W  
 100.53'

S53°53'52"W  
 9.28'

S37°27'33"W  
 35.00'

S87°01'42"W  
 50.09'

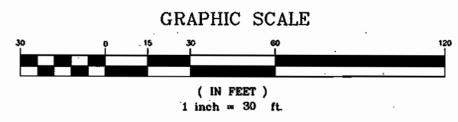
S74°09'38"W  
 129.76'

S76°54'46"W  
 31.54'

**LEGEND**  
 APPROXIMATE BORING LOCATION

**ULTIMATE PROPOSED CONDITIONS**  
 SCALE: 1"=60'

\* MINIMUM Tc OF 0.10 HRS WAS USED FOR PROPOSED USE.



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APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION  
 [Signature]  
 CHIEF-DIVISION OF LAND DEVELOPMENT  
 [Signature]

**BOHLER ENGINEERING, P.C.**  
 PROFESSIONAL ENGINEERING SERVICES  
 810 GLENEAGLES COURT, SUITE 300, TOWSON, MD 21286  
 (410) 821-7900 FAX: (410) 821-7987 MD@bollereng.com

11/18/05  
 DATE  
  
 ADAM J. WOLANT  
 PROFESSIONAL ENGINEER NO. 21342

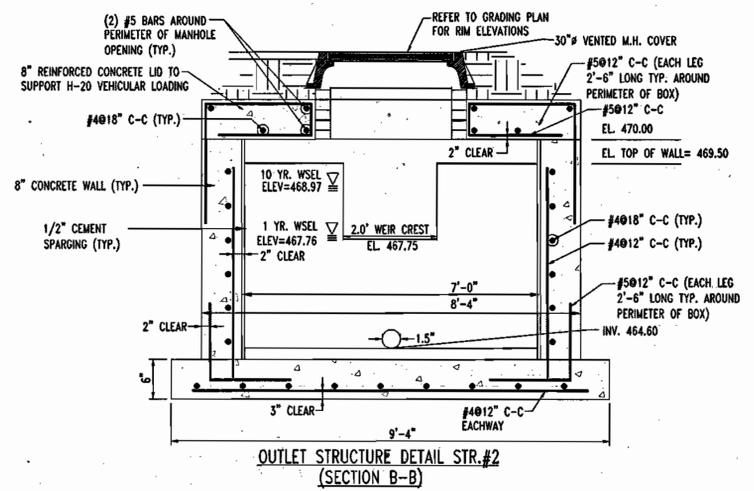
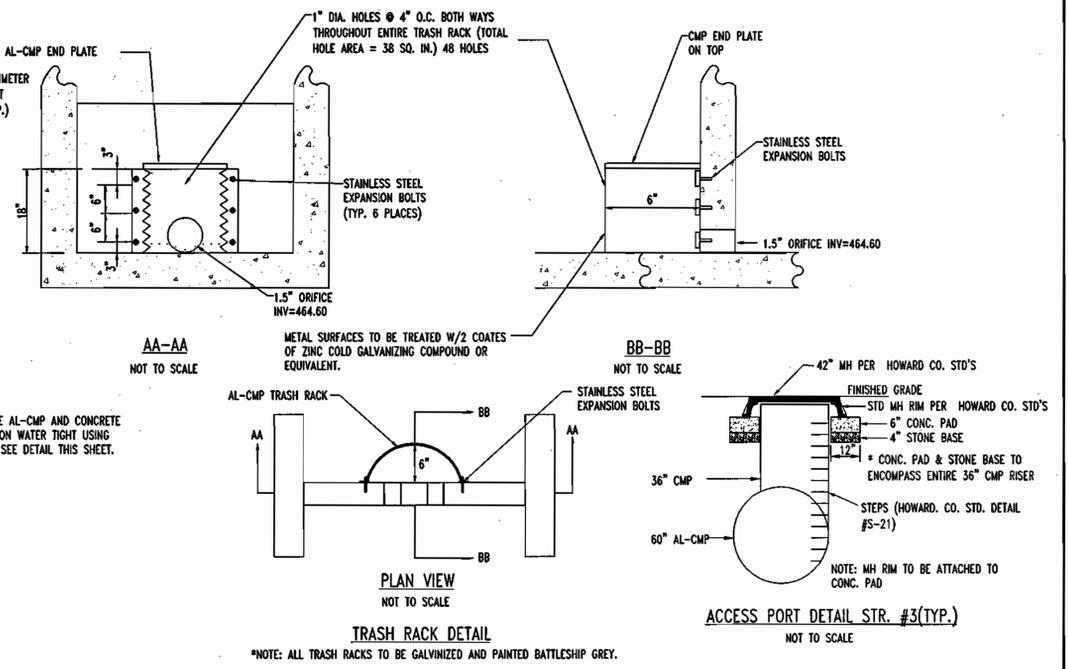
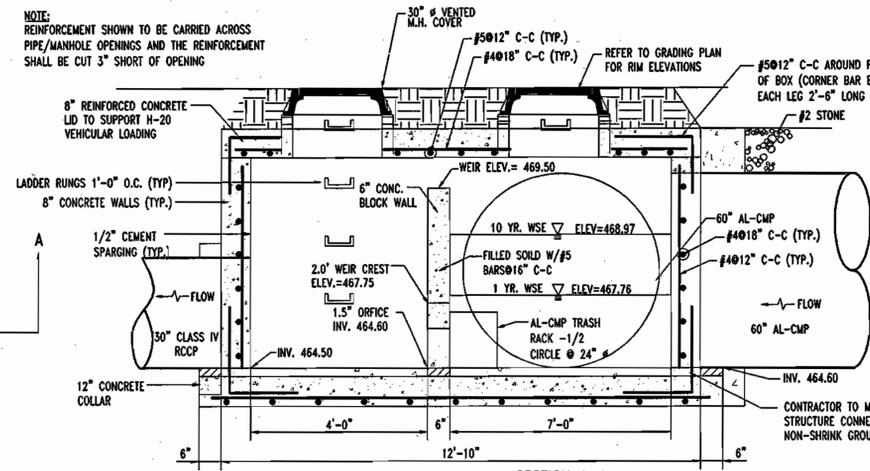
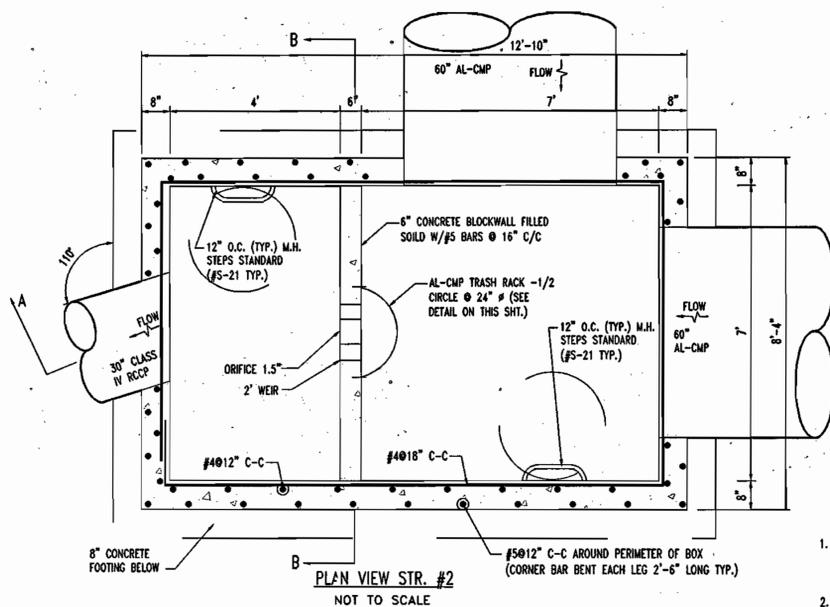
**MISS UTILITY**  
  
 BEFORE YOU DIG CALL 1-800-488-7777  
 PROTECT YOURSELF, ONE THREE ZERO WORKING DAYS NOTICE.  
 THE SHOWN DATA HAS BEEN VERIFIED BY MISS UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DEPTH AND SIZE OF ALL UTILITIES PRIOR TO ANY EXCAVATION.  
 THE CONTRACTOR TO CALL MISS UTILITY TO BE MADE PRIOR TO ANY CONSTRUCTION.

**OWNER:**  
 ANTWERPEN AUTOMOTIVE  
 6631 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

**DEVELOPER:**  
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 BALTIMORE, MARYLAND 21228  
 ATTN.: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6389 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029			
SWM POST-DEVELOPMENT DRAINAGE AREA MAP			
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032903	
DRAWN BY: R.L.B.	DATE: 1/23/03	DRAWING NUMBER	
CHECKED BY: A.J.V.	APPROVED: A.J.V.	19	
REVISION NO.: 2	DRAWING NAME: M32003002		
1	DATE	REVISION DESCRIPTION	
2	4/15/03	REVISED PER HOWARD COUNTY COMMENTS	
	6/19/03	REVISED PER DEED & OLD COMMENTS	

SDP-03-97



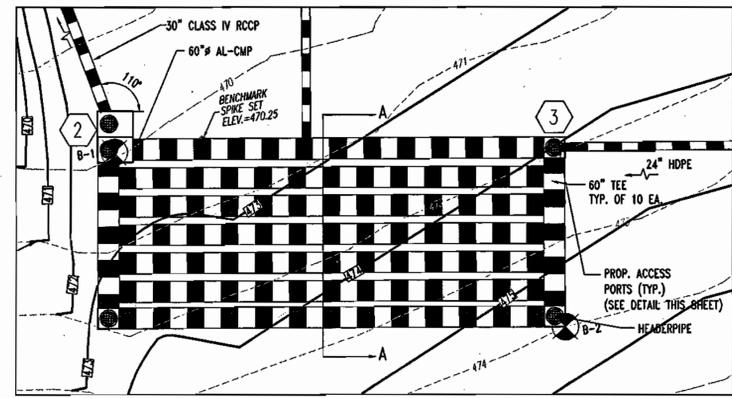
- CONCRETE NOTES**
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM CEMENT CONTENT OF 600 POUNDS PER CUBIC YARD FOR ALL FOOTINGS.
  2. ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4" TO WITHIN A TOLERANCE OF 1'-0".
  3. ALL EXPOSED CONCRETE SHALL BE AIR-ENTRAINED, 6% (WITHIN 1% TOLERANCE), CONFORMING TO ASTM C260.
  4. REINFORCING STEEL BARS SHALL BE A MINIMUM ASTM A615, GRADE 60, AND SHALL BE FIELD WIRED IN PLACE.
  5. ALL FRAMEWORK, AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES, AND REGULATIONS AS WELL AS THE ACI AND UNIFORM BUILDING CODE.

**Antwerpen Rte 108 & Yan Oaks**  
**General SWM Requirements**  
**Water Quality & SWM Summary**

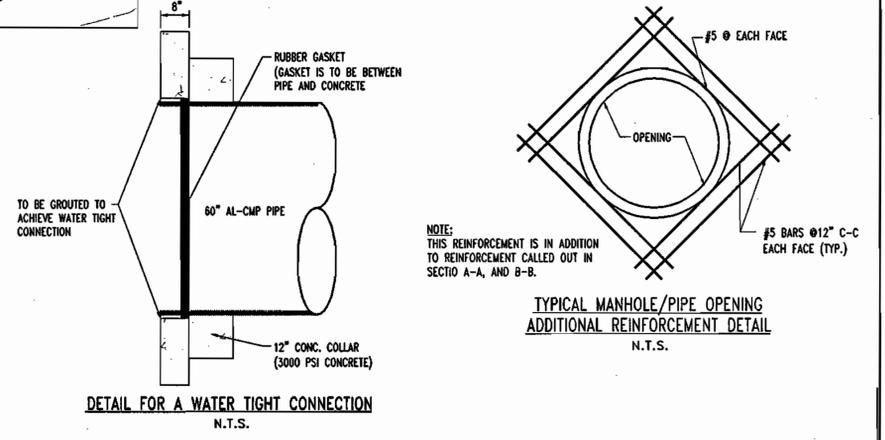
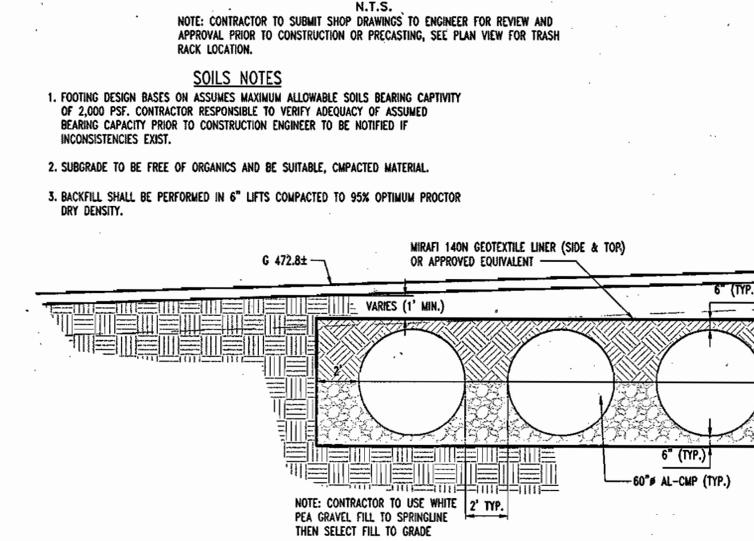
DESIGN STORM	EXISTING RELEASE RATE @ D.P. #1	BYPASS CFS	PROP. INFLOW TO SWM FACILITY	PROPOSED DISCHARGE FROM FACILITY	WATER SURFACE ELEVATION	PROPOSED DISCHARGE @ D.P. #1
1 Year	1.56	1.51	0.12	0.07	467.76	1.55
10 Year	10	3.31	13.49	8.54	468.97	10.44

Requirement	Volume Required	Notes
1. Water Quality Volume (WQV)	0.0	100% (Antw/Rear: 1.09 ac)
2. Retention Volume (RV)	0.0	100% (1525.94 cf)
3. Channel Protection (CP)	0.0	0.193 ac-ft
4. Overbank Flood Protection Vol. (OFP)	0.0	0.2 ac-ft
5. Extreme Flood Volume (EFV)	0.0	N/A



- OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND FACILITIES**
1. THE UNDERGROUND STORM WATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
  2. THE UNDERGROUND STORM WATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
  3. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUT FALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
  4. THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
  5. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORM WATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
  6. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.



**GENERAL NOTE:**  
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/4/03  
CHIEF-DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 12/21/03  
CHIEF-DIVISION OF LAND DEVELOPMENT

*[Signature]* 12/21/03  
DIRECTOR

**BOHLER ENGINEERING, P.C.**

\* PROFESSIONAL ENGINEERING SERVICES  
\* 810 GLENAGLES COURT, SUITE 300, TOWSON, MD 21286\*  
\* (410) 821-7000 FAX: (410) 821-7067 | MD@bohlereng.com \*

11/18/03  
DATE

*[Signature]*  
ADAM J. VOLANTH  
PROFESSIONAL ENGINEER NO. 21342

MISS UTILITY

*[Signature]*  
BEFORE YOU DIG CALL MISS UTILITY  
PROJECT NUMBER: 032003502  
DATE: 12/15/03  
THE DRAWING SET IS AN INSTRUMENTAL DOCUMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL INFORMATION AND TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

OWNER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN.: JACOB ANTWERPEN

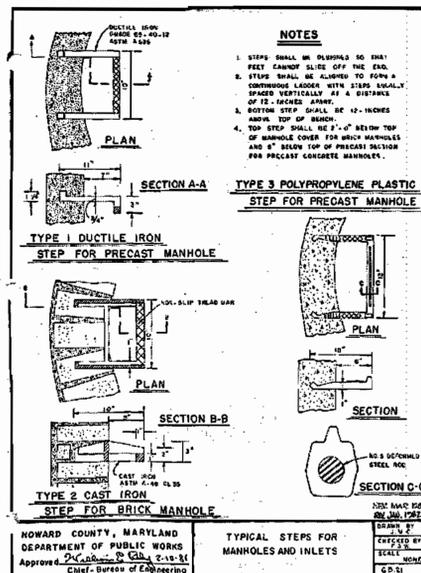
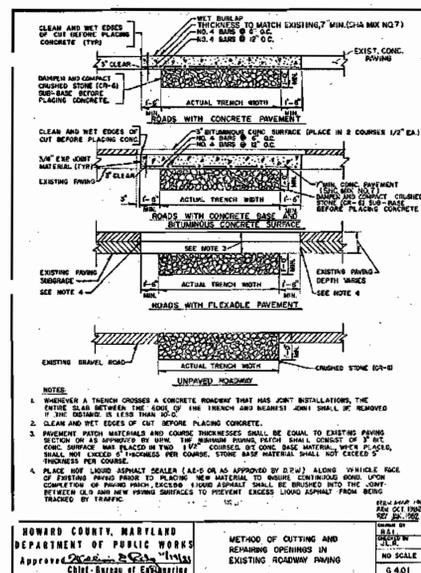
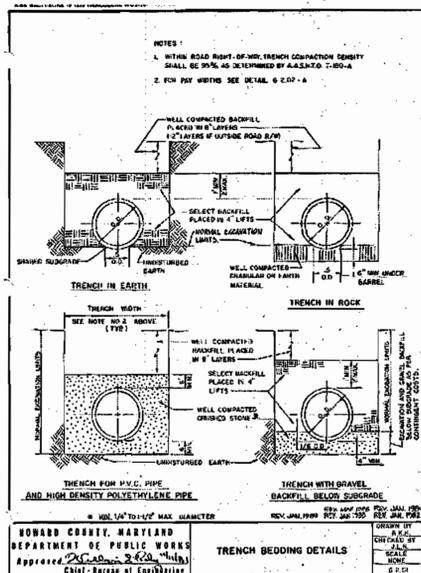
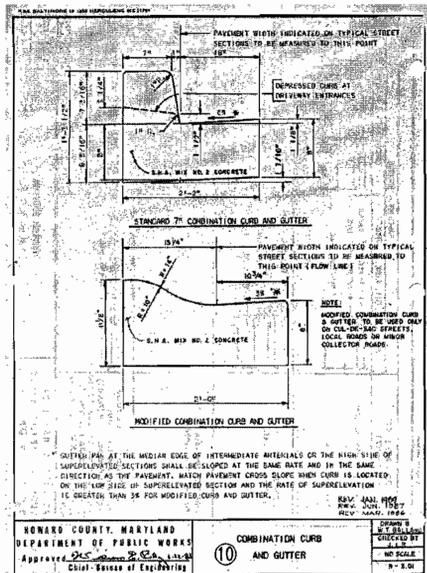
SDP-03-97

ANTWERPEN CAR FACILITY  
6388 & 6391 TON OAKS ROAD  
CLARKSVILLE, MARYLAND 21029  
**SWM NOTES & DETAILS**

REVISION NO.:	DATE	REVISION DESCRIPTION
1	4/15/03	REVISED PER HOWARD COUNTY COMMENTS
2	6/19/03	REVISED PER DEO & OLD COMMENTS

DESIGN BY:	SCALE:	PROJECT NO.:
B.A.M.	1"=20'	MD032003
DRAWN BY:	DATE:	DRAWING NUMBER
R.L.B.	1/23/03	17
CHECKED BY:	APPROVED:	OF 19
A.J.V.	A.J.V.	
REVISION NO.:	DRAWING NAME:	
2	M32003502	

SDP-03-97



**WHITESTONE ASSOCIATES, INC.**  
Record of Subsurface Exploration

Test No.: B-4 (TP = Test Pit, B = Boring, A = Auger Probe)  
Client: Bohler Engineering, P.C. (VA)  
Project: Prop. BP Service Station #20256  
Location: 12400 Clarksville Pike, Clarksville, MD  
Whitestone Project No.: WV01-4612  
Driller: Recon Drilling, Inc.  
Whitestone Rep.: S. Mills, P.E.

Date Started: 10-25-01  
Date Completed: 10-25-01  
Drilling Method: 2"X 1/2" HSA  
Rig Type: CME 55 (ATV)  
Test Method: SPT  
Surface Elevation: 471.0 feet msl  
Termination Depth: 15.0 feet bgs

DEPTH (FEET)	SAMPLE NO.	FACE BELOW (FT)	STRATA	DESCRIPTION	REMARKS	DEPTH (FEET)
0-1.0	01	0.0	1	Topsoil		0.0
1.0-1.5	02	0.5	2	1" Gravel		0.5
1.5-2.0	03	1.0	3	1" Gravel		1.0
2.0-2.5	04	1.5	4	1" Gravel		1.5
2.5-3.0	05	2.0	5	1" Gravel		2.0
3.0-3.5	06	2.5	6	1" Gravel		2.5
3.5-4.0	07	3.0	7	1" Gravel		3.0
4.0-4.5	08	3.5	8	1" Gravel		3.5
4.5-5.0	09	4.0	9	1" Gravel		4.0
5.0-5.5	10	4.5	10	1" Gravel		4.5
5.5-6.0	11	5.0	11	1" Gravel		5.0
6.0-6.5	12	5.5	12	1" Gravel		5.5
6.5-7.0	13	6.0	13	1" Gravel		6.0
7.0-7.5	14	6.5	14	1" Gravel		6.5
7.5-8.0	15	7.0	15	1" Gravel		7.0
8.0-8.5	16	7.5	16	1" Gravel		7.5
8.5-9.0	17	8.0	17	1" Gravel		8.0
9.0-9.5	18	8.5	18	1" Gravel		8.5
9.5-10.0	19	9.0	19	1" Gravel		9.0
10.0-10.5	20	9.5	20	1" Gravel		9.5
10.5-11.0	21	10.0	21	1" Gravel		10.0
11.0-11.5	22	10.5	22	1" Gravel		10.5
11.5-12.0	23	11.0	23	1" Gravel		11.0
12.0-12.5	24	11.5	24	1" Gravel		11.5
12.5-13.0	25	12.0	25	1" Gravel		12.0
13.0-13.5	26	12.5	26	1" Gravel		12.5
13.5-14.0	27	13.0	27	1" Gravel		13.0
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14.5-15.0	29	14.0	29	1" Gravel		14.0
15.0-15.5	30	14.5	30	1" Gravel		14.5
15.5-16.0	31	15.0	31	1" Gravel		15.0
16.0-16.5	32	15.5	32	1" Gravel		15.5
16.5-17.0	33	16.0	33	1" Gravel		16.0
17.0-17.5	34	16.5	34	1" Gravel		16.5
17.5-18.0	35	17.0	35	1" Gravel		17.0
18.0-18.5	36	17.5	36	1" Gravel		17.5
18.5-19.0	37	18.0	37	1" Gravel		18.0
19.0-19.5	38	18.5	38	1" Gravel		18.5
19.5-20.0	39	19.0	39	1" Gravel		19.0
20.0-20.5	40	19.5	40	1" Gravel		19.5
20.5-21.0	41	20.0	41	1" Gravel		20.0
21.0-21.5	42	20.5	42	1" Gravel		20.5
21.5-22.0	43	21.0	43	1" Gravel		21.0
22.0-22.5	44	21.5	44	1" Gravel		21.5
22.5-23.0	45	22.0	45	1" Gravel		22.0
23.0-23.5	46	22.5	46	1" Gravel		22.5
23.5-24.0	47	23.0	47	1" Gravel		23.0
24.0-24.5	48	23.5	48	1" Gravel		23.5
24.5-25.0	49	24.0	49	1" Gravel		24.0
25.0-25.5	50	24.5	50	1" Gravel		24.5

**WHITESTONE ASSOCIATES, INC.**  
Record of Subsurface Exploration

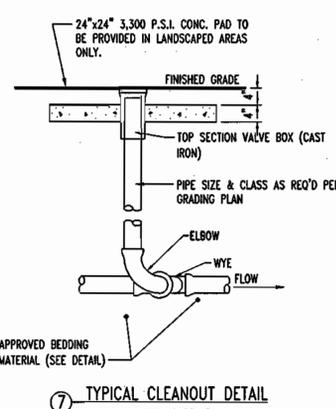
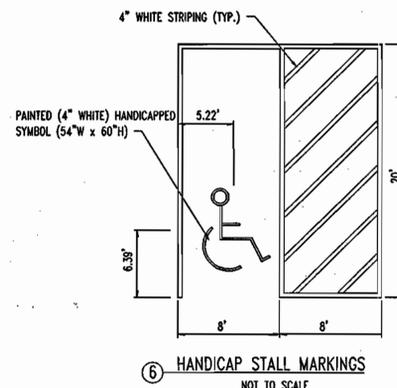
Test No.: B-5 (TP = Test Pit, B = Boring, A = Auger Probe)  
Client: Bohler Engineering, P.C. (VA)  
Project: Prop. BP Service Station #20256  
Location: 12400 Clarksville Pike, Clarksville, MD  
Whitestone Project No.: WV01-4612  
Driller: Recon Drilling, Inc.  
Whitestone Rep.: S. Mills, P.E.

Date Started: 10-25-01  
Date Completed: 10-25-01  
Drilling Method: 2"X 1/2" HSA  
Rig Type: CME 55 (ATV)  
Test Method: SPT  
Surface Elevation: 471.0 feet msl  
Termination Depth: 15.0 feet bgs

DEPTH (FEET)	SAMPLE NO.	FACE BELOW (FT)	STRATA	DESCRIPTION	REMARKS	DEPTH (FEET)
0-1.0	01	0.0	1	Topsoil		0.0
1.0-1.5	02	0.5	2	1" Gravel		0.5
1.5-2.0	03	1.0	3	1" Gravel		1.0
2.0-2.5	04	1.5	4	1" Gravel		1.5
2.5-3.0	05	2.0	5	1" Gravel		2.0
3.0-3.5	06	2.5	6	1" Gravel		2.5
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5.5-6.0	11	5.0	11	1" Gravel		5.0
6.0-6.5	12	5.5	12	1" Gravel		5.5
6.5-7.0	13	6.0	13	1" Gravel		6.0
7.0-7.5	14	6.5	14	1" Gravel		6.5
7.5-8.0	15	7.0	15	1" Gravel		7.0
8.0-8.5	16	7.5	16	1" Gravel		7.5
8.5-9.0	17	8.0	17	1" Gravel		8.0
9.0-9.5	18	8.5	18	1" Gravel		8.5
9.5-10.0	19	9.0	19	1" Gravel		9.0
10.0-10.5	20	9.5	20	1" Gravel		9.5
10.5-11.0	21	10.0	21	1" Gravel		10.0
11.0-11.5	22	10.5	22	1" Gravel		10.5
11.5-12.0	23	11.0	23	1" Gravel		11.0
12.0-12.5	24	11.5	24	1" Gravel		11.5
12.5-13.0	25	12.0	25	1" Gravel		12.0
13.0-13.5	26	12.5	26	1" Gravel		12.5
13.5-14.0	27	13.0	27	1" Gravel		13.0
14.0-14.5	28	13.5	28	1" Gravel		13.5
14.5-15.0	29	14.0	29	1" Gravel		14.0
15.0-15.5	30	14.5	30	1" Gravel		14.5
15.5-16.0	31	15.0	31	1" Gravel		15.0
16.0-16.5	32	15.5	32	1" Gravel		15.5
16.5-17.0	33	16.0	33	1" Gravel		16.0
17.0-17.5	34	16.5	34	1" Gravel		16.5
17.5-18.0	35	17.0	35	1" Gravel		17.0
18.0-18.5	36	17.5	36	1" Gravel		17.5
18.5-19.0	37	18.0	37	1" Gravel		18.0
19.0-19.5	38	18.5	38	1" Gravel		18.5
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21.5-22.0	43	21.0	43	1" Gravel		21.0
22.0-22.5	44	21.5	44	1" Gravel		21.5
22.5-23.0	45	22.0	45	1" Gravel		22.0
23.0-23.5	46	22.5	46	1" Gravel		22.5
23.5-24.0	47	23.0	47	1" Gravel		23.0
24.0-24.5	48	23.5	48	1" Gravel		23.5
24.5-25.0	49	24.0	49	1" Gravel		24.0
25.0-25.5	50	24.5	50	1" Gravel		24.5

**HOWARD COUNTY, MARYLAND**  
DEPARTMENT OF PUBLIC WORKS  
Approved: [Signature] Chief-Sur. of E. et.

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	PAVING SECTIONS P-5 THROUGH P-8
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE 3" BIT. CONC. BASE
P-6	ALL ZONES INTERMEDIATE ARTERIAL	1 1/2" BIT. CONC. SURFACE 2" BIT. CONC. BASE 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE 3" BIT. CONC. BASE
P-7	STABILIZED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS	DOUBLE BIT. SURFACE TREATMENT 4 1/2" GRADED AGGREGATE BASE (GAB)	DOUBLE BIT. SURFACE TREATMENT 4 1/2" GRADED AGGREGATE BASE (GAB)
P-8	PAVED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS SIDEWALKS & PARKING AREAS (PRIVATE) (NOTE: THIS SECTION MAY BE USED IN LIEU OF STABILIZED CONCRETE SIDEWALK IN OFF SITE, PRIVATELY MAINTAINED AREAS ONLY)	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE



**WHITESTONE ASSOCIATES, INC.**  
Record of Subsurface Exploration

Test No.: B-7 (TP = Test Pit, B = Boring, A = Auger Probe)  
Client: Bohler Engineering, P.C. (VA)  
Project: Prop. BP Service Station #20256  
Location: 12400 Clarksville Pike, Clarksville, MD  
Whitestone Project No.: WV01-4612  
Driller: Recon Drilling, Inc.  
Whitestone Rep.: S. Mills, P.E.

Date Started: 10-25-01  
Date Completed: 10-25-01  
Drilling Method: 2"X 1/2" HSA  
Rig Type: CME 55 (ATV)  
Test Method: SPT  
Surface Elevation: 470.0 feet msl  
Termination Depth: 15.0 feet bgs

DEPTH (FEET)	SAMPLE NO.	FACE BELOW (FT)	STRATA	DESCRIPTION	REMARKS	DEPTH (FEET)
0-1.0	01	0.0	1	Topsoil		0.0
1.0-1.5	02	0.5	2	1" Gravel		0.5
1.5-2.0	03	1.0	3	1" Gravel		1.0
2.0-2.5	04	1.5	4	1" Gravel		1.5
2.5-3.0	05	2.0	5	1" Gravel		2.0
3.0-3.5	06	2.5	6	1" Gravel		2.5
3.5-4.0	07	3.0	7	1" Gravel		3.0
4.0-4.5	08	3.5	8	1" Gravel		3.5
4.5-5.0	09	4.0	9	1" Gravel		4.0
5.0-5.5	10	4.5	10	1" Gravel		4.5
5.5-6.0	11	5.0	11	1" Gravel		5.0
6.0-6.5	12	5.5	12	1" Gravel		5.5
6.5-7.0	13	6.0	13	1" Gravel		6.0
7.0-7.5	14	6.5	14	1" Gravel		6.5
7.5-8.0	15	7.0	15	1" Gravel		7.0
8.0-8.5	16	7.5	16	1" Gravel		7.5
8.5-9.0	17	8.0	17	1" Gravel		8.0
9.0-9.5	18	8.5	18	1" Gravel		8.5
9.5-10.0	19	9.0	19	1" Gravel		9.0
10.0-10.5	20	9.5	20	1" Gravel		9.5
10.5-11.0	21	10.0	21	1" Gravel		10.0
11.0-11.5	22	10.5	22	1" Gravel		10.5
11.5-12.0	23	11.0	23	1" Gravel		11.0
12.0-12.5	24	11.5	24	1" Gravel		11.5
12.5-13.0	25	12.0	25	1" Gravel		12.0
13.0-13.5	26	12.5	26	1" Gravel		12.5
13.5-14.0	27	13.0	27	1" Gravel		13.0
14.0-14.5	28	13.5	28	1" Gravel		13.5
14.5-15.0	29	14.0	29	1" Gravel		14.0
15.0-15.5	30	14.5	30	1" Gravel		14.5
15.5-16.0	31	15.0	31	1" Gravel		15.0
16.0-16.5	32	15.5	32	1" Gravel		15.5
16.5-17.0	33	16.0	33	1" Gravel		16.0
17.0-17.5	34	16.5	34	1" Gravel		16.5
17.5-18.0	35	17.0	35	1" Gravel		17.0
18.0-18.5	36	17.5	36	1" Gravel		17.5
18.5-19.0	37	18.0	37	1" Gravel		18.0
19.0-19.5	38	18.5	38	1" Gravel		18.5
19.5-20.0	39	19.0	39	1" Gravel		19.0
20.0-20.5	40	19.5	40	1" Gravel		

**POND CONSTRUCTION SPECIFICATIONS, MD-378**

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

**Site Preparation**

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and steep slopes shall be cleared to a maximum of 10 feet from the riser.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

**Earth Fill**

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood rubbish, stones greater than 6" frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification CC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal roadway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment. Compaction shall be accomplished by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with a minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

**Structure Backfill**

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material nearest to the structure shall be placed in layers adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure pipe.

**Pipe Conduits**

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully biluminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any biluminous coating damaged or otherwise removed shall be replaced with cold applied biluminous coating compound. Steel pipes with polymer coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plast-Cote, Bloc-Nod, and Bath-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

2. Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-190 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pitch of the surrounding soils shall be between 4 and 5.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or boreal connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

4. All connections shall be a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rated an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter, flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide huggie type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long circular corrugated band using rods and nuts. A 12" wide by 3/8" thick circular neoprene gasket shall be installed on the end of each pipe for a total of 24".

5. Half-corrugated pipe shall have either continuously welded seams or huggie lock seams with internal caulking or a neoprene band.

6. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

7. Backfilling shall conform to "Structure Backfill."

8. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have ball and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe - Ball and spigot pipe shall be placed with the ball end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill."

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill."

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**Concrete**

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

**Rock Riprap**

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

**Care of Water during Construction**

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level of the location being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which the water shall be pumped.

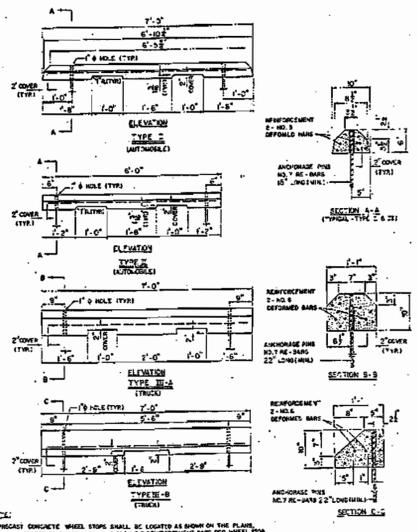
**Stabilization**

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

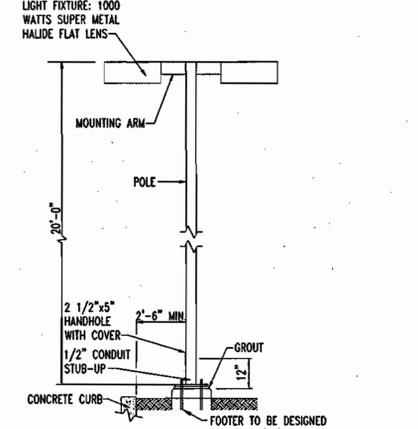
**Erosion and Sediment Control**

Construction operations will be carried out in such a manner that erosion will be controlled and water and/or pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

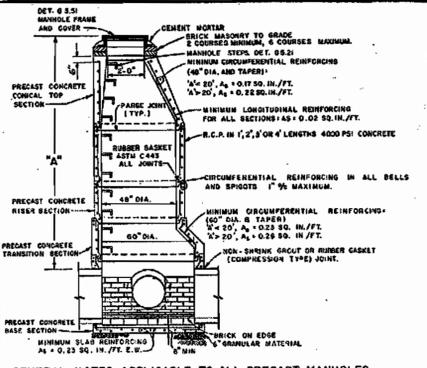
NOTE: NOT ALL SECTIONS ABOVE APPLY.



**16 PRECAST CONCRETE WHEEL STOPS**  
N.T.S.



**20 TYPICAL YARD LIGHT DETAIL**  
N.T.S.

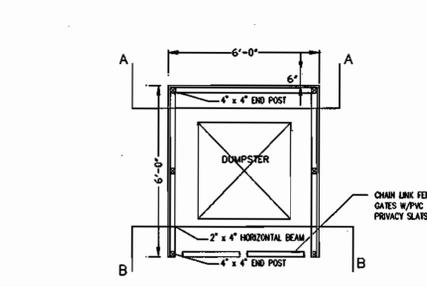


**GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES**

- MANHOLE BASE SHALL BE BEDED ON 6-INCH GRANULAR MATERIAL OF FINE SAND.
- EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/2 OF WAY TO TOP OF PIPE.
- CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHIFTING GROUT OR RUBBER CASSET (COMPRESSION TYPE) JOINT.
- MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL 0511. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL 0512.
- PROVIDE 2 LAYER COAT OF EPoxy COATING, 16 MIL DRY, SANSART SERIES ONLY, EXTERIOR SURFACE ONLY.
- PROVIDE FIVE (5) POINT WITHIN 2'-6" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
- MANHOLE CHAMBERS SHALL BE FORGED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE TO TOP OF PIPE OR AS SHOWN ON PLANS. MANHOLE CHAMBERS AND BENCHES SHALL BE FORMED FROM SEWER BRICK, GRADE 25, ASTM C-22.
- MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C-418 EXCEPT AS SHOWN.
- EXCEPT STONE DRAIN PIPE.

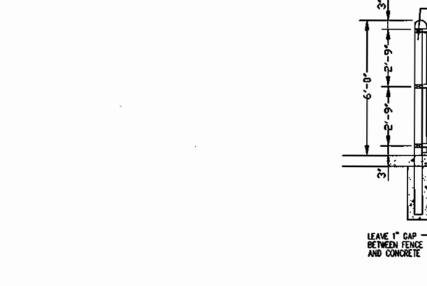
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: [Signature] Chief, Bureau of Engineering

**STANDARD PRECAST MANHOLES**  
SCALE: AS SHOWN BY SECTION  
65.11

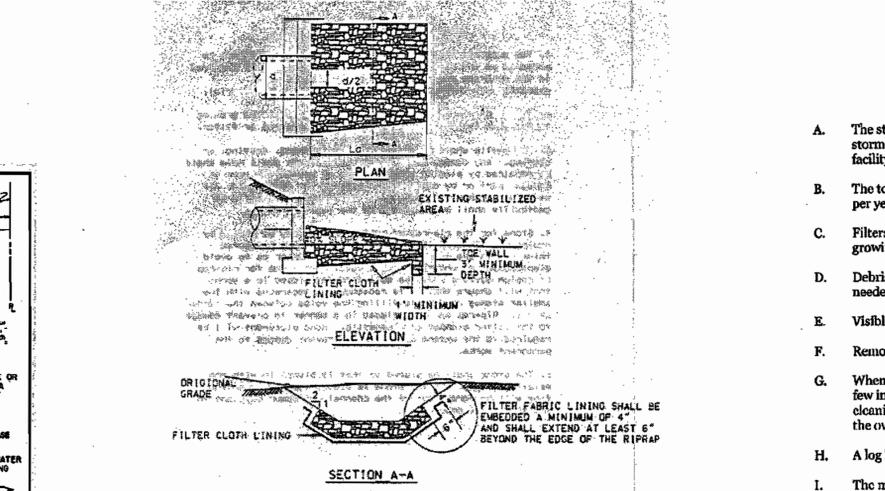


**ELEVATION B - CHAIN LINK GATE DETAIL**

- NOTES: 1. ALL LUMBER TO BE PRESSURE TREATED.  
2. WOOD FENCE TO BE PAINTED OR STAINED TO MATCH BUILDING FOUNDATION.



**DUMPSTER SCREEN**  
NOT TO SCALE

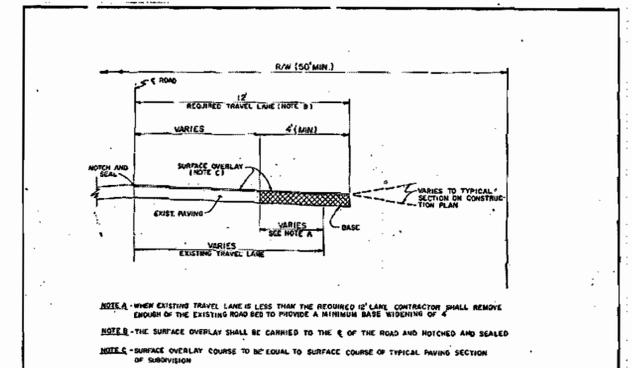


**EXISTING RIP RAP DETAIL @ STRUCTURE 1\***  
NOT TO SCALE  
\*CONTRACTOR TO ENSURE EXISTING OUTFALL MATCHES DETAIL.

**GENERAL NOTE:**  
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)**

- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when exceeds four (4) inches deep in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of dissolved material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A log book shall be maintained to determine the rate at which the facility drains.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



**WIDENING STRIPS ALONG EXISTING ROADWAYS**  
NO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
[Signatures and Dates]

**BOHLER ENGINEERING, P.C.**  
PROFESSIONAL ENGINEERING SERVICES  
810 GLENDALES COURT, SUITE 300, TOWSON, MD 21286  
(410) 621-7900 FAX: (410) 621-7977 MDBohlereng.com

11/18/03  
DATE  
[Professional Engineer Seal]  
ADAM J. VOLANTH  
PROFESSIONAL ENGINEER NO. 21342

MISS UTILITY  
[Logo]

OWNER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN: JACOB ANTWERPEN

DEVELOPER:  
**ANTWERPEN AUTOMOTIVE**  
6631 BALTIMORE NATIONAL PIKE  
BALTIMORE, MARYLAND 21228  
ATTN: JACOB ANTWERPEN

ANTWERPEN CAR FACILITY 6385 & 6381 TEN OAKS ROAD CLARKSVILLE, MARYLAND 21029		SDP-03-97	
DESIGN BY: B.A.M.	SCALE: 1"=20'	PROJECT NO.: MD032003	DRAWING NUMBER
DRAWN BY: R.L.B.	DATE: 1/23/03		19
CHECKED BY: A.J.V.	APPROVED: A.J.V.		OF 19
REVISION NO.: 2	DRAWING NAME: MS2003SD2		
REVISION NO.: 1	DATE: 4/15/03	REVISION DESCRIPTION	
2	6/15/03	REVISED PER HOWARD COUNTY COMMENTS	
		REVISED PER DEO & OLD COMMENTS	

SDP-03-97