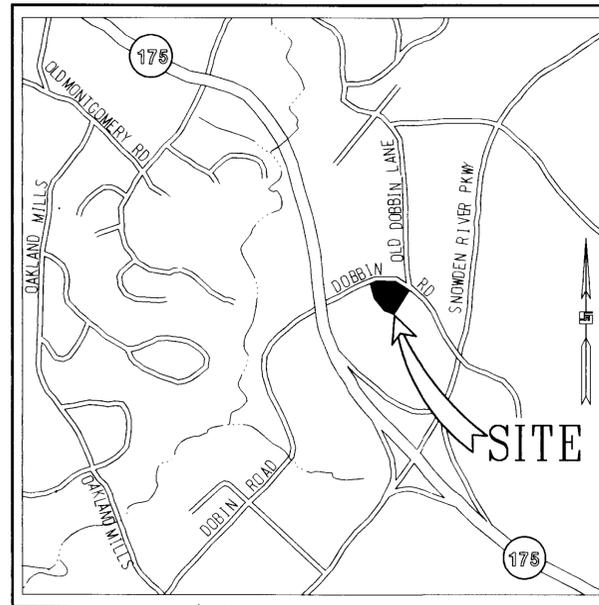


**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION LATEST EDITION" AND MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF EXISTING UTILITIES IN THE WORK AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING FREDERICK WARD ASSOC., INC. AT (410)-879-2090 IN THE EVENT OF ANY DISCREPANCIES ON THE PLAN OR IN THE RELATIONSHIP OF EXISTING GRADES WITH PROPOSED GRADES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN A SCALED DIMENSION AND A FIGURED DIMENSION SHOWN ON THE PLANS, THE FIGURED DIMENSION SHALL GOVERN.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE FAILURE TO MENTION SPECIFICALLY WORK THAT WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT, SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 5 WORKING DAYS PRIOR TO BEGINNING WORK:  
 MISS UTILITY: 1-800-257-7777  
 C&P TELEPHONE CO. 725-9976  
 HOWARD COUNTY BUREAU OF UTILITIES 313-2366  
 AT&T CABLE LOCATION DIVISION 393-3553  
 BGE 685-0123  
 NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION AT LEAST 48 HOURS PRIOR TO START (313-1855)  
 HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1880
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS, UNLESS STATED OTHERWISE.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE PURPOSE OF THIS SITE DEVELOPMENT PLAN IS TO CONSTRUCT A GASOLINE STATION, CONVENIENCE STORE, AND CAR WASH.
- THE WATER QUALITY STRUCTURE WILL BE PRIVATELY OWNED AND MAINTAINED.
- SECTION 404 OF THE MD DEPARTMENT OF NATURAL RESOURCES DOES NOT APPLY NOR ARE ANY WETLANDS PERMITS REQUIRED FOR THIS PROJECT.
- ALL WASTE MATERIAL WHICH HAS BEEN GENERATED AS A RESULT OF THE CONVENIENCE STORE SHALL BE EITHER STORED ON SITE AND LATER SHIPPED FOR RECYCLING OR PROPERLY DISPOSED OF AT A COUNTY APPROVED LANDFILL.
- ALL DETERGENT USED IN THE CAR WASH FACILITY SHALL BE "PHOSPHATE FREE" AS PER HOWARD COUNTY REGULATIONS.
- PUBLIC WATER AND SEWER WILL BE UTILIZED. A WATER METER SHALL BE LOCATED WITHIN THE CONVENIENCE STORE AND WILL MEET ALL HOWARD COUNTY STANDARDS. ON SITE WATER AND SEWER SHALL BE PRIVATE.
- PROJECT BACKGROUND:  
 SEE DEPT. OF PLANNING & ZONING FILE NUMBER SP95-08, FDP95-226, UIP95-94, GP96-45, F-96-41 & PB 302
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL SITE LIGHTING MUST BE DIRECTED AWAY FROM THE ADJACENT PUBLIC RIGHT OF WAY AND THE VICINAL RESIDENTIAL PROPERTIES.
- CONTRACTOR SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK @ (410) 313-1880
- ALL REFUSE SHALL BE STORED IN THE PROPOSED MASONRY TRASH ENCLOSURE IN ACCORDANCE WITH THE HOWARD COUNTY RULES & REGULATIONS FOR REFUSE COLLECTION.



**6251 COLUMBIA CROSSING DRIVE  
COLUMBIA, MARYLAND**



**VICINITY MAP**

SCALE: 1" = 2000'

HOWARD COUNTY ADC MAP  
PAGE NUMBER 15  
GRID NUMBER 9D

**BENCHMARK INFORMATION**

BENCHMARK INFORMATION IS REFERRED FROM GUTSCHICH LITTLE & WEBER, P.A. SITE DEVELOPMENT PLAN.  
 STATION 2542001 (CONCRETE MONUMENT)  
 ELEVATION: 426.971 (FOR VERTICAL CONTROL ONLY)  
 STATION IS LOCATED ON B.G. & E. TRANSMISSION LINES 1060' ± S.W. OF DOBBIN ROAD.  
 STATION 2542002 (CONCRETE MONUMENT)  
 ELEVATION: 363.638 (FOR VERTICAL CONTROL ONLY)  
 STATION IS LOCATED 1000' ± WEST OF RTE. 175 ON TRANSMISSION LINE OB.G.&E. TOWET 19-E.  
 STATION 37DR (1/2" REBAR)  
 N 69881.1794, E 416566.7155 (FOR HORIZONTAL CONTROL ONLY)  
 STATION IS LOCATED 0.45 ± MILES NORTH OF RTE. 175 AND 46' ± EAST OF THE CURB OF SNOWDEN RIVER PKWY.  
 STATION 361A (CONCRETE MONUMENT)  
 N 69205.9263, E 416313.5119 (FOR HORIZONTAL CONTROL ONLY)  
 STATION IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF SNOWDEN RIVER PKWY AND RTE. 175 3' ± FROM CURB AND 5.7' ± FROM GUARDRAIL.

**ZONING INFORMATION**

BOARD OF COUNTY COMMISSIONERS CASE B.C.C. 412 RESOLUTION APPROVED AUGUST 10, 1965  
 AMENDED B.C.C. CASE 507 RESOLUTION APPROVED NOVEMBER 4, 1968  
 AMENDED Z.B. CASE 606 RESOLUTION APPROVED NOVEMBER 22, 1972  
 AMENDED Z.B. CASE 644 RESOLUTION APPROVED JANUARY 7, 1974  
 AMENDED Z.B. CASE 693 RESOLUTION APPROVED DECEMBER 20, 1976  
 AMENDED Z.B. CASE 817 RESOLUTION APPROVED SEPTEMBER 9, 1986  
 AMENDED Z.B. CASE 918 RESOLUTION APPROVED MARCH 17, 1992  
 AMENDED Z.B. CASE 939 RESOLUTION APPROVED NOVEMBER 19, 1992  
 AMENDED Z.B. CASE 969 RESOLUTION APPROVED OCTOBER 23, 1995  
 AS PER HOWARD COUNTY PLANNING BOARD

**SHEET INDEX**

SHEET NUMBER	DRAWING TITLE
1	COVER SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	SITE LAYOUT PLAN
4	SITE GRADING PLAN
5	SITE UTILITY & PIPING PLAN
6	STORMCEPTOR NOTES AND DETAILS
7	STORM DRAIN PROFILES
8	UTILITY PROFILES
9	SEDIMENT AND EROSION CONTROL PLAN
10	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
11	LANDSCAPE PLAN
12	BUILDING PLAN
13	SIGNAGE & DETAIL PLAN

**SITE ANALYSIS**

- AREA OF PARCEL: 61,071 SQ. FT. = 1.402 AC. ±
- ZONING: NEW TOWN  
FINAL DEVELOPMENT PLAN 226-A  
LAND USE: COMMERCIAL
- EXISTING USE: UNDEVELOPED PARCEL  
PROPOSED USES: GASOLINE SERVICE STATION WITH CONVENIENCE STORE AND CAR WASH
- FLOOR SPACE:  
a. CONVENIENCE STORE:  
GROSS AREA: 2,000 SQ. FT.  
b. CAR WASH:  
GROSS AREA: 1,680 SQ. FT.
- MAXIMUM NUMBER OF EMPLOYEES: THREE (3)
- PARKING:  
a. REQUIRED: (PER FDP 226-A SPECIAL CRITERIA FOR GASOLINE STATIONS)  
ONE PER 200 SQ. FT. OF CONVENIENCE STORE AREA 2,000/200=10 SPACES  
ONE PER EMPLOYEE X 3 EMPLOYEES = 3 SPACES  
TOTAL REQUIRED: 13 SPACES  
b. PROVIDED: 15 SPACES
- OPEN SPACE (LANDSCAPING)  
a. REQUIRED: 20% OF SITE AREA (12,255 SQ. FT.)  
b. PROVIDED: 47% OF SITE AREA (28,750 SQ. FT.)
- BUILDING COVERAGE:  
a. CONVENIENCE STORE: 2.8895 SQ. FT.  
b. CAR WASH: 2.069 SQ. FT.  
c. CANOPY: 3,264 SQ. FT.  
TOTAL BUILDING COVERAGE: 8.2225 SQ. FT. (13.4 %)
- CAR WASH STACKING:  
a. REQUIRED: 15  
b. PROVIDED: 15

SDP \* 97-30

**ADDRESS CHART**

PARCEL	STREET ADDRESS				
E	6251 COLUMBIA CROSSING DRIVE				
SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.			
ROUTE 175 COMMERCIAL	1/1	PARCEL E			
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
12177	1B	NEW TOWN COMMERCIAL	3G	6	6067.03
WATER CODE	SEWER CODE				
E06	4900000				

PLANNING BOARD APPROVAL

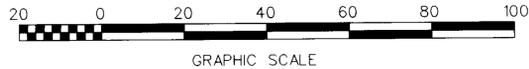
**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: 11/29/97

APRIL 22, 1997  
DATE

PROFESSIONAL ENGR. NO. 19155

5/28/97	△	REVISE SITE NOTES
DATE:	NUMBER	REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>Old Dominion</i>		5/16/97
CHIEF-DEVELOPMENT ENGINEERING DIVISION MK		
<i>Andy Hamilton</i>		5/16/97
DIVISION OF LAND DEVELOPMENT		
<i>James S. Hutto</i>		5/16/97
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.		
<i>Joseph M. Boyd and John R. Hutto</i>		5/13/97
COUNTY HEALTH DEPT. HR		
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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."		
<i>Timothy F. Whittle</i>		APRIL 22, 1997
SIGNATURE OF ENGINEER DATE		
BY THE DEVELOPER:		
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."		
<i>John P. Blanton</i>		4/22/97
SIGNATURE OF DEVELOPER DATE		
REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.		
<i>Charles J. Simmons</i>		04-29-97
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE		
THIS DEVELOPMENT PLAN IS AS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.		
OWNER: <b>AMOCO OIL COMPANY</b> 1 W. PENNSYLVANIA AVENUE SUITE 900 TOWSON, MARYLAND 21204 PHONE: 1 (410) 494-3729 ATTN: MR. CHARLES T. BOGDANOWICZ		
DEVELOPER: <b>AMOCO OIL COMPANY</b> 1 W. PENNSYLVANIA AVENUE SUITE 900 TOWSON, MARYLAND 21204 PHONE: 1 (410) 494-3729 ATTN: MR. CHARLES T. BOGDANOWICZ		
<b>FREDERICK WARD ASSOCIATES INC.</b> ENGINEERS ARCHITECTS SURVEYORS 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410) 879-2090		
FWA JOB NUMBER 98136 FWA DRAWING FILE NAME SDTILE		
CENSUS TRACT NO. 6067.03		
PLAT NO. 12177 PARCEL E		
TAX MAP 36		
6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: <b>COVER SHEET</b> FOR AN AMOCO STATION AT COLUMBIA CROSSING		
DESIGN BY: GHR	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: LCF	DATE: 02/10/97	DRAWING NUMBER
CHECKED BY: TFW	APPROVED:	SHT 1 OF 13

SDP-97-30



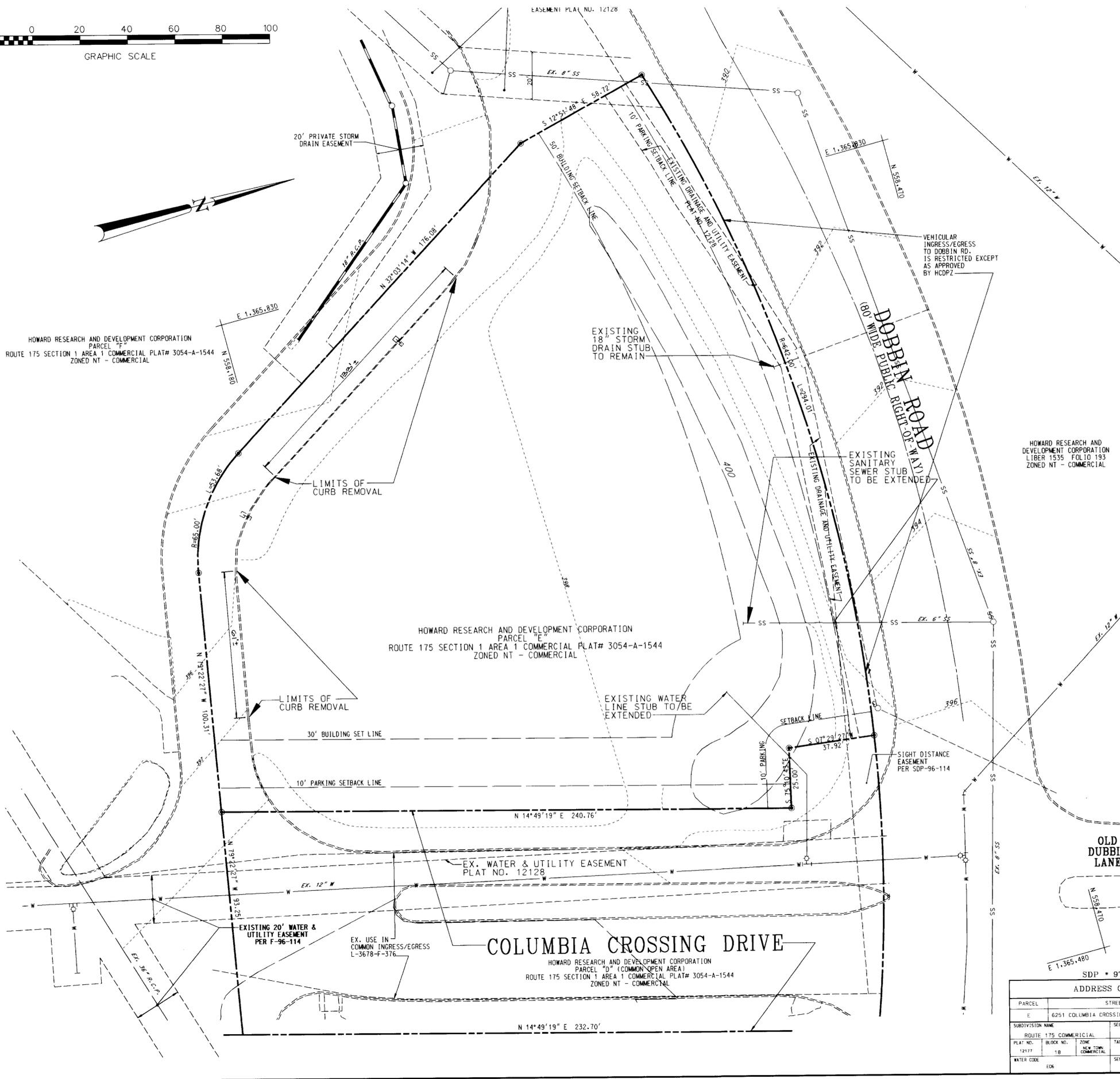
GRAPHIC SCALE



HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "F"  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "E"  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "D" (COMMON OPEN AREA)  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL



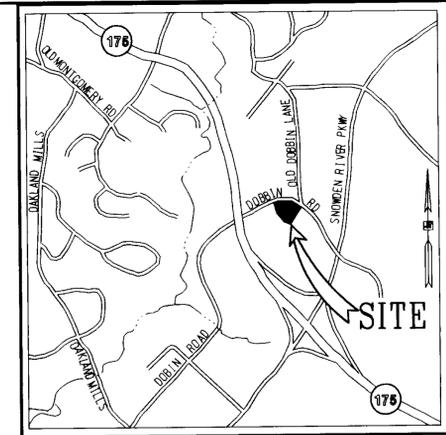
**LEGEND**

- 396- EX. CONTOUR
- SS- SANITARY SEWER
- W- STORM DRAIN
- W- EX. WATERLINE
- EX. MANHOLE
- EX. INLET
- ⊕ EX. WATER VALVE
- ⊙ PROPERTY CORNER
- ==== EX. CURB & GUTTER
- EX. PROPERTY LINE

NOTE: SITE SOIL TYPE IS  
 CHB2 = CHILLUM-FAIRFAX LOAMS  
 FOR THE ENTIRE SITE

NOTE: FOREST CONSERVATION EXEMPTION LETTER NOT  
 REQUIRED FOR THE NEW TOWN ZONING DISTRICT  
 AS PER OFFICE OF PLANNING AND ZONING

HOWARD RESEARCH AND  
 DEVELOPMENT CORPORATION  
 LIBER 1535 FOLIO 193  
 ZONED NT - COMMERCIAL



**VICINITY MAP**

SCALE: 1" = 2000'

DATE	NUMBER	REVISION DESCRIPTION
5/16/97		APPROVED: DEPARTMENT OF PLANNING AND ZONING
5/16/97		CHIEF DEVELOPMENT ENGINEERING DIVISION MKK DATE
5/16/97		DIVISION OF LAND DEVELOPMENT DATE
5/16/97		DIRECTOR DATE
5/13/97		APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
5/13/97		COUNTY HEALTH OFFICER DATE

BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL  
 REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PER-  
 SONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS  
 PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD  
 SOIL CONSERVATION DISTRICT."  
 SIGNATURE OF ENGINEER DATE: APRIL 22, 1997

BY THE DEVELOPER:  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL  
 BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF  
 SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.  
 ALSO AUTHORIZED PERIODIC ON-SITE INSPECTION BY THE HOWARD  
 SOIL CONSERVATION DISTRICT."  
 SIGNATURE OF DEVELOPER DATE: 4/22/97

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.  
 SIGNATURE DATE: 04/29/97  
 U.S. NATURAL RESOURCES  
 CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS AS APPROVED FOR SOIL EROSION AND  
 SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE DATE: 9/29/97  
 HOWARD S.C.D.

PLANNING BOARD APPROVAL  
**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: 1/29/97

OWNER: **AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: **AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS • ARCHITECTS • SURVEYORS  
 P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 96136 SDX1ST.DGN  
 CENSUS TRACT NO. 6067.03

PLAT NO. 12177 PARCEL E  
 TAX MAP 36  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
**TITLE EXISTING CONDITIONS & DEMOLITION PLAN  
 FOR AN AMOCO STATION AT  
 COLUMBIA CROSSING**  
 DESIGN BY: GHR SCALE: 1" = 20' PROJECT NO.: 96136  
 DRAWN BY: LCF DATE: 02/10/97 DRAWING NUMBER  
 CHECKED BY: TFW APPROVED: SHT 2 OF 13

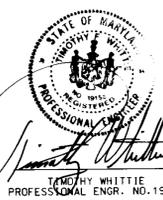
SDP # 97-30

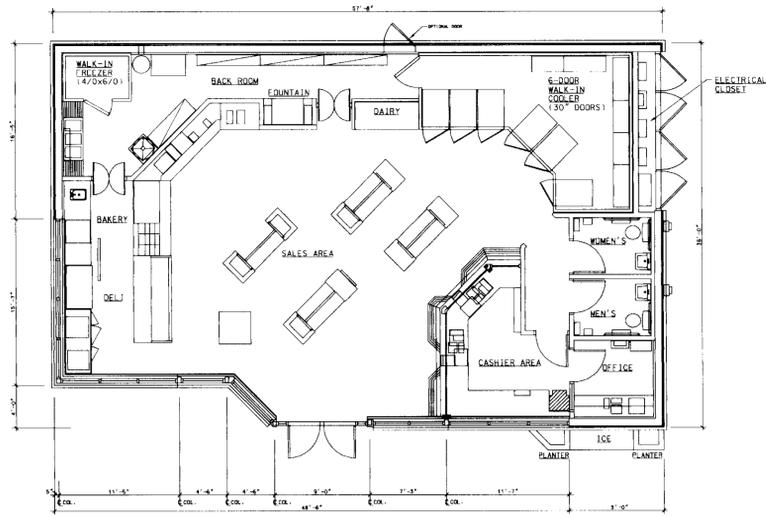
PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.
ROUTE 175 COMMERCIAL	1/1	PARCEL E

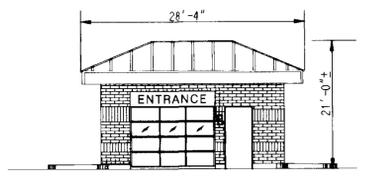
PLAT NO.	BLOCK NO.	ZONE	TAX-ZONE	ELECT. DIST.	CENSUS TR.
12177	18	COMMERCIAL	36	6	6067.03

WATER CODE	SEWER CODE
606	490000

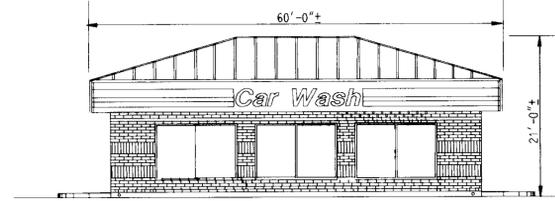




FLOOR PLAN  
NOT TO SCALE



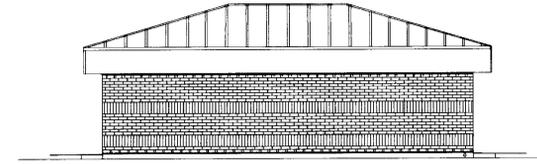
FRONT CARWASH ELEVATION  
NOT TO SCALE



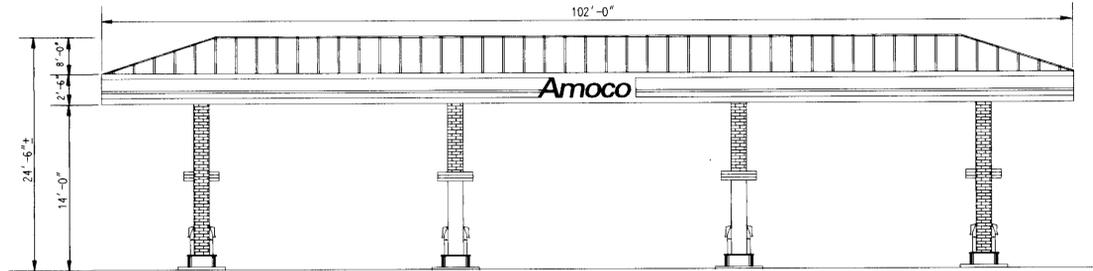
SIDE CARWASH ELEVATION  
NOT TO SCALE



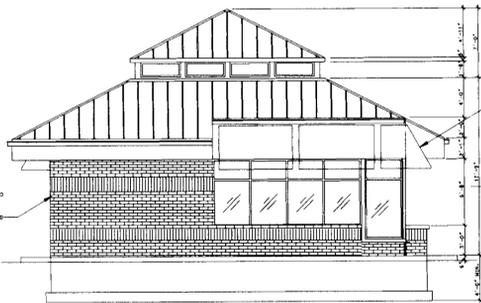
REAR CARWASH ELEVATION  
NOT TO SCALE



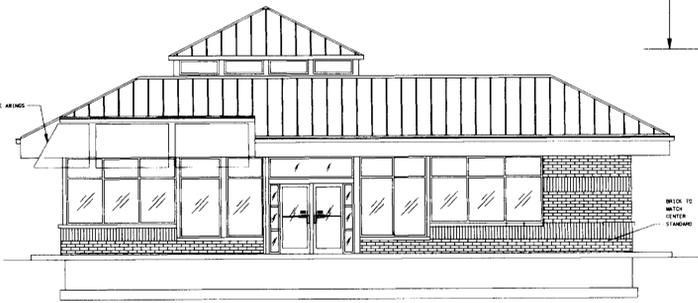
SIDE CARWASH ELEVATION  
NOT TO SCALE



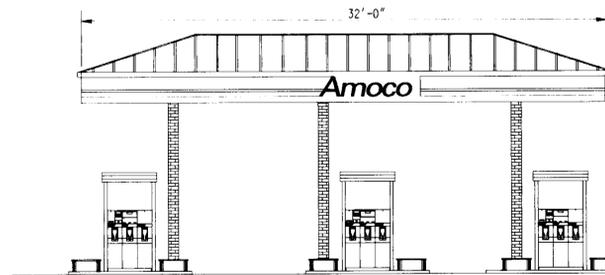
FRONT CANOPY ELEVATION  
NOT TO SCALE



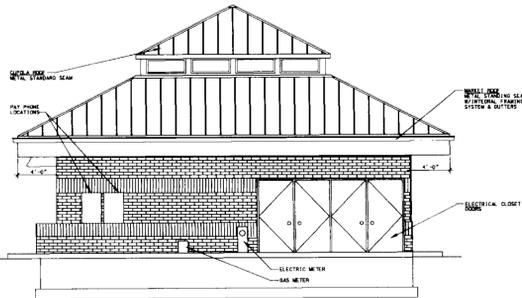
LEFT ELEVATION  
NOT TO SCALE



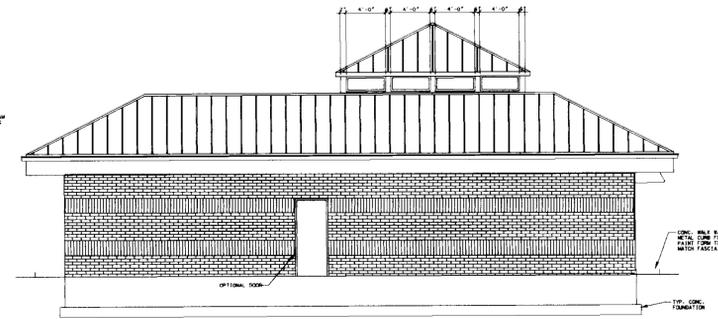
FRONT ELEVATION  
NOT TO SCALE



SIDE CANOPY ELEVATION  
NOT TO SCALE



RIGHT ELEVATION  
NOT TO SCALE



REAR ELEVATION  
NOT TO SCALE



DATE	NUMBER	REVISION DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION M.W. 5/6/97  
 DIVISION & LAND DEVELOPMENT 5/6/97  
 SUPERVISOR 5/14/97

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.  
 Joyce M. Boyd 5/13/97  
 COUNTY HEALTH OFFICER

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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature of Engineer: Timothy Whittie  
 DATE: APRIL 22, 1997

BY THE DEVELOPER:  
 I/we CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature of Developer: J. Blang  
 DATE: 4/22/97

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.  
 U.S. NATURAL RESOURCES CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

PLANNING BOARD APPROVAL  
**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE: 1/29/97

SDP \* 97-30

PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.
ROUTE 115 COMMERCIAL	1/1	

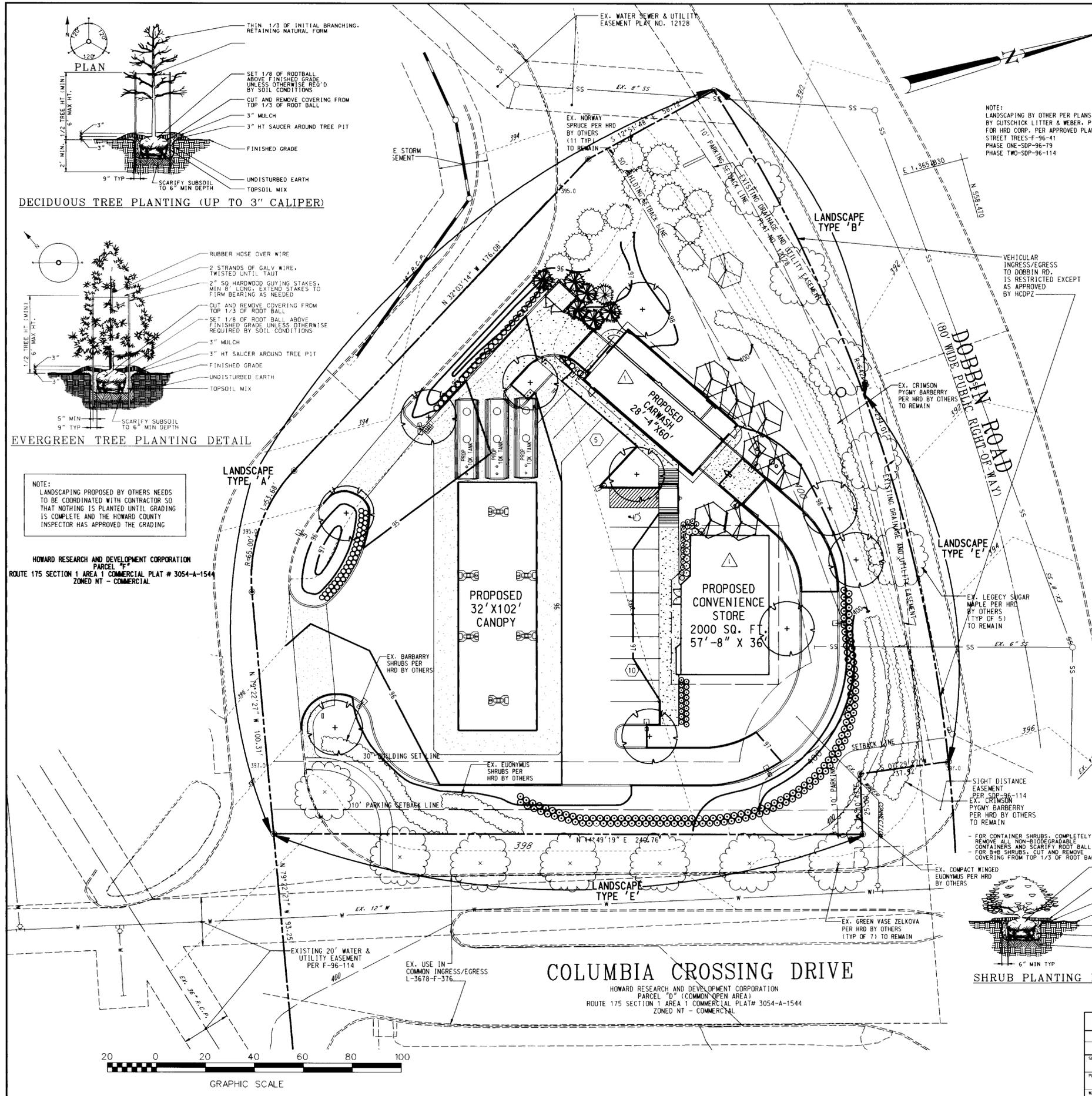
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
12177	1B	NEW COMMERCIAL	36	6	6167.03

WATER CODE	SEWER CODE
E06	4900000

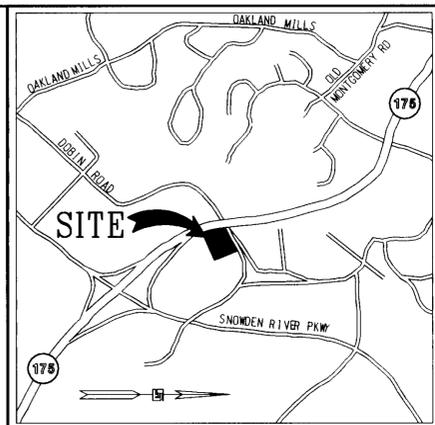
APRIL 22, 1997  
 DATE  
 Signature of Engineer: Timothy Whittie  
 PROFESSIONAL ENGR. NO. 19155

FREDERICK WARD ASSOCIATES, INC.  
 ENGINEERS • ARCHITECTS • SURVEYORS  
 P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 86136  
 508LDG.DGM

CENSUS TRACT NO. 6067-03  
 TAX MAP 36  
 PARCEL E  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 TITLE  
**BUILDING PLAN**  
 FOR AN AMOCO STATION AT  
**COLUMBIA CROSSING**  
 DESIGN BY: GHR  
 SCALE: 1" = 20'  
 PROJECT NO.: 96136  
 DRAWN BY: LCF  
 DATE: 11/29/96  
 DRAWING NUMBER  
 CHECKED BY: TFW  
 APPROVED: .  
 SHT 12 OF 13



- General Planting Notes
- All plant material shall conform to the sizes given in the plant list and shall be nursery grown in accordance with the USA Standards for Nursery Stock - latest edition.
  - All planting shall be in accordance with standard American Association of Nurserymen procedures and specifications.
  - Contractor and Owner's Representative shall verify the correct location of all underground utilities in the field prior to installation of any plant materials.
  - Plant material location to be staked in the field and approved by the Landscape Architect prior to planting.
  - All plant beds and planting areas to be mulched to a depth of 3" unless otherwise noted on drawings or specifications.
  - All areas disturbed by planting operations shall be fine graded and sodded.
  - Obtain approval from Architect's or Owner's Representative before making any substitutions or changes.
  - All plant beds shall be contained with a spaced edge unless otherwise noted on drawings.
  - Quantities shown on plant list are for the Contractor's convenience only and are not guaranteed to be accurate. In the event of a discrepancy between quantities shown on the plan and quantities shown on the plant list, the quantities on the plan shall apply.
  - This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual, following the New York Alternative Control Method.
  - Financial surety for the required landscaping must be posted as part of the grading permit in the amount of \$3,800.00.



SYMBOL	QUANTITY	BOTANICAL/Common NAME	SIZE	REMARKS
(Symbol)	10	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA GREEN VASE ZELKOVA	2-2 1/2" CAL 11-13' HT	B&B FULL AS SHOWN
(Symbol)	8	MALUS FLORIBUNDA JAPANESE FLOWERING CRABAPPLE	7-8' HT 1 1/4" - 2" CAL	B&B FULL AS SHOWN
(Symbol)	145	ILEX GLABRA 'COMPACT' COMPACT IMBERRY	2-2 1/2" HT 2-2 1/2" SPD	B&B FULL 3" O.C.
(Symbol)	31	EUONYMUS ALATA 'COMPACTUS' COMPACT WINGED EUONYMUS	2-2 1/2" HT 2-3 CANES	B&B FULL 30" O.C.
(Symbol)	41	BERBERIS THUNBERGII VAR. ATROPURPUREA 'CRIMSON PYGMY' CRIMSON PYGMY BARBERRY	15-18" HT 18-24" SPD	CONT FULL 2" DC
(Symbol)	9	TAXUS X MEDIA 'DENSIFORMIS' DENSIFORMIS YEW	2 1/2" - 3" HT 2 1/2" - 3" SPD	B&B FULL 3" DC
(Symbol)	46	COTONEASTER APICULATUS CRANBERRY COTONEASTER	18-24" HT 18-24" SPD	CONT FULL 2" DC
(Symbol)	7	PINUS STROBUS WHITE PINE	6-7' HT.	B & B FULL 8" O.C.

**SCHEDULE 'A' PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	E
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	130	467.69
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NONE	NONE
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NONE	NONE
NUMBER OF PLANTS REQUIRED		
SHADE TREES	3	12
EVERGREEN TREES	4	0
SHRUBS	0	117
NUMBER OF PLANTS PROVIDED		
SHADE TREES	1	6
EVERGREEN TREES	4	0
OTHER TREES (2:1 SUBSTITUTION)	8	0
SHRUBS (10:1 SUBSTITUTION)	0	232
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

COMMENTS:

**RELOCATED CONVENIENCE STORE & CAR WASH**

DATE: 05/28/97

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION: MK  
 DATE: 5/16/97

DIVISION OF LAND DEVELOPMENT  
 DATE: 5/16/97

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.  
 DATE: 5/13/97

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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APRIL 22, 1997

BY THE DEVELOPER:  
 I ME CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

4/22/97

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN HAS BEEN APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

6-1/97

PLANNING BOARD APPROVAL

**APPROVED**  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: 1/29/97

SDP # 97-30

ADDRESS CHART

PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.
ROUTE 175 COMMERCIAL	1/1	PARCEL E
PLAT NO. 12117	TAX/ZONE 36	ELECT. DIST. 6
ZONE 1B	NEW TOWN COMMERCIAL	CENSUS TR. 6067.03

WATER CODE: 606  
 SEWER CODE: 4900000

APRIL 22, 1997

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER

DATE: APRIL 22, 1997

OWNER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3723  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3723  
 ATTN: MR. CHARLES T. BOGDANOWICZ

FREDERICK WARD ASSOCIATES, INC.  
 ENGINEERS • ARCHITECTS • SURVEYORS

P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 96136

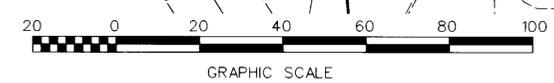
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 PLAT NO. 12117  
 TAX MAP 36  
 PARCEL E  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

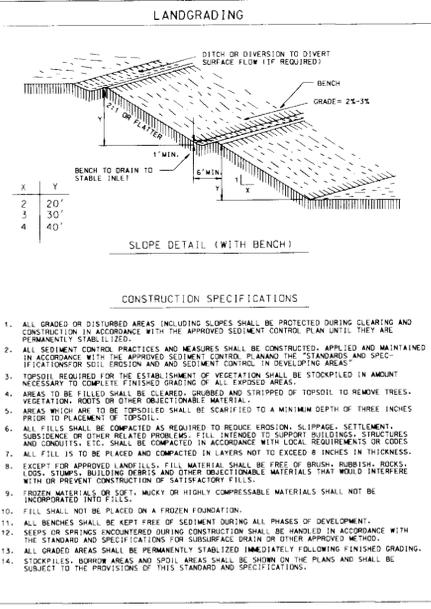
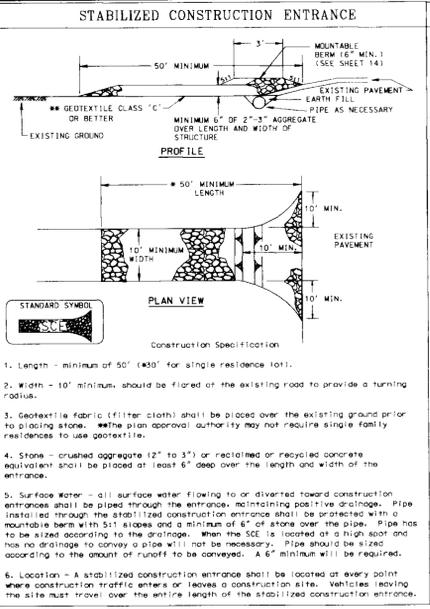
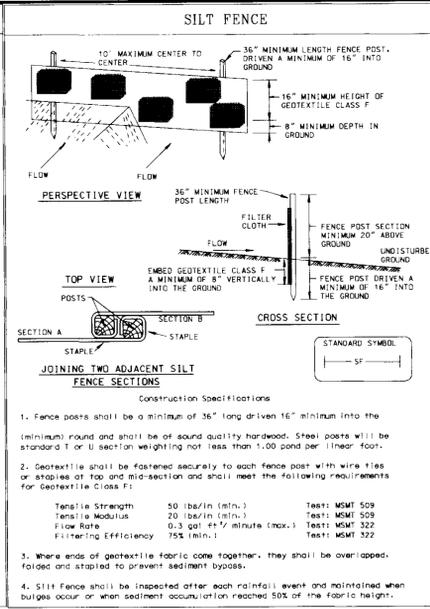
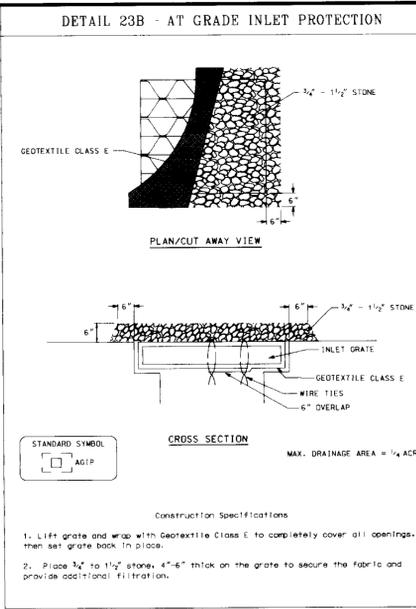
TITLE: LANDSCAPE PLAN FOR AN AMOCO STATION AT COLUMBIA CROSSING

DESIGN BY: GHR  
 SCALE: 1" = 20'  
 PROJECT NO.: 96136

DRAWN BY: LCF  
 DATE: 02/10/97  
 DRAWING NUMBER

CHECKED BY: TFW  
 APPROVED: [Signature]  
 SHT 11 OF 13





### TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- TOPSOIL SHALL BE A LOAM SANDY LOAM, LOAM 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 CONCRETE, STONE, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/2" IN DIAMETER.
- TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTCRACK, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIME/STONE SHALL BE SPREAD AT THE RATE OF 4.5 TONS/ACRE (200-400 POUNDS PER 1000 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.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN SOIL VEGETATIVE STABILIZATION - SECTION I VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. 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 BARRIERS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED ALBERT 4" - 8" HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR DIVISION 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 SEEDING PREPARATION.

V. THESE TOPSOIL SPECIFICATIONS HAVE BEEN EDITED FROM THE 1994 EROSION AND SEDIMENT CONTROL STANDARDS TO FIT THIS PROJECT. IT IS STILL THE INTENTION TO FOLLOW THE REFERENCED 1994 EROSION AND SEDIMENT CONTROL STANDARDS IN THEIR ENTIRETY.

### TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

SOILS AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2 1/2" BU PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

MULCHING: APPLY 1/2" TO 2 TONS PER ACRE (70-90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL, OR 2/8 GAL PER ACRE (5 GALS/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT OR HIGHER, USE 1/48 GALS PER ACRE (18 GALS/1000 SQ.FT.) FOR ANCHORING.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 1/48 LBS PER ACRE 30-0-0 UREA/NORM FERTILIZER (9 LBS/1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOILS.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 40 LBS PER ACRE (14 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1/2" TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL, OR 2/8 GAL PER ACRE (5 GALS/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREA, ON SLOPES 8 FEET OR HIGHER, USE 1/48 GALLONS PER ACRE (18 GALS/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENTS TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEE G.) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
  - TOTAL AREA OF SITE - 1.4 ACRES
  - AREA DISTURBED - 1.22 ACRES ±
  - AREA TO BE ROOFED OR PAVED - 0.74 ACRES ±
  - AREA TO BE VEGETATIVELY STABILIZED - 0.603 ACRES ±
  - TOTAL CUT - 1300 CUBIC YARDS
  - TOTAL FILL - CUBIC YARDS
  - OFFSITE WASTE/BORROW LOCATION - 500 TBD
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

### STANDARD SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

**SPECIFICATIONS**

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
- STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PAIDS AND TORN OR UNVEN ENDS WILL NOT BE ACCEPTABLE.
- SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

**SITE PREPARATION**

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TEST. UNDER UNUSUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B. BELOW.

- PRIOR TO SOODING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
- WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIME/STONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1000 SQUARE FEET. IN ALL SOILS, 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
- ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.

**SOD INSTALLATION**

- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
- THE FIRST ROW OF SOD SHALL BE Laid IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WELDED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT Voids WHICH WOULD CAUSE AIR DRYING OF THE SOILS.
- ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE Laid WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMING AND PEGGING OR OTHER APPROVED METHODS.
- AS SOODING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOIL CONTACT OF ROOTS WITH THE SOIL SURFACE. SOD SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMING UNTIL, THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.

**SOD MAINTENANCE**

- IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.
- AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.
- FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
- MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

### CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (40' for single residence lots).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The pipe approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate 1 1/2" to 3/4" or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance to existing drainage. Pipe installed through the stabilized construction entrance shall be protected with a rock apron with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the size is required of a pipe and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

### APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: 1/29/97

DATE: APRIL 22, 1997

### STANDARD SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

**SPECIFICATIONS**

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
- STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PAIDS AND TORN OR UNVEN ENDS WILL NOT BE ACCEPTABLE.
- SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

**SITE PREPARATION**

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TEST. UNDER UNUSUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B. BELOW.

- PRIOR TO SOODING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
- WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIME/STONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1000 SQUARE FEET. IN ALL SOILS, 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
- ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.

**SOD INSTALLATION**

- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
- THE FIRST ROW OF SOD SHALL BE Laid IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WELDED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT Voids WHICH WOULD CAUSE AIR DRYING OF THE SOILS.
- ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE Laid WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMING AND PEGGING OR OTHER APPROVED METHODS.
- AS SOODING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOIL CONTACT OF ROOTS WITH THE SOIL SURFACE. SOD SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMING UNTIL, THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.

**SOD MAINTENANCE**

- IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.
- AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.
- FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
- MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENTS TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEE G.) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
  - TOTAL AREA OF SITE - 1.4 ACRES
  - AREA DISTURBED - 1.22 ACRES ±
  - AREA TO BE ROOFED OR PAVED - 0.74 ACRES ±
  - AREA TO BE VEGETATIVELY STABILIZED - 0.603 ACRES ±
  - TOTAL CUT - 1300 CUBIC YARDS
  - TOTAL FILL - CUBIC YARDS
  - OFFSITE WASTE/BORROW LOCATION - 500 TBD
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

### STANDARD SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

**SPECIFICATIONS**

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
- STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PAIDS AND TORN OR UNVEN ENDS WILL NOT BE ACCEPTABLE.
- SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

**SITE PREPARATION**

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TEST. UNDER UNUSUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B. BELOW.

- PRIOR TO SOODING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
- WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIME/STONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1000 SQUARE FEET. IN ALL SOILS, 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
- ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.

**SOD INSTALLATION**

- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
- THE FIRST ROW OF SOD SHALL BE Laid IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WELDED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT Voids WHICH WOULD CAUSE AIR DRYING OF THE SOILS.
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**SOD MAINTENANCE**

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- FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
- MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

### CONSTRUCTION SPECIFICATIONS

- Length - minimum of 50' (40' for single residence lots).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The pipe approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate 1 1/2" to 3/4" or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance to existing drainage. Pipe installed through the stabilized construction entrance shall be protected with a rock apron with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the size is required of a pipe and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

### APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: 1/29/97

DATE: APRIL 22, 1997

SDP - 97-30

DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF - DEVELOPMENT ENGINEERING DIVISION MKC
5/6/97		DATE
		DIVISION OF LAND DEVELOPMENT
5/16/97		DATE
		APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
		HOWARD COUNTY HEALTH DEPARTMENT.
5/13/97		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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
		SIGNATURE OF ENGINEER
APRIL 22, 1997		DATE
		BY THE DEVELOPER:
		"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE WILL ACCEPT PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
		SIGNATURE OF DEVELOPER
APRIL 22, 1997		DATE
		REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.
		U.S. NATURAL RESOURCES SERVICE
04-29-97		DATE
		THIS DEVELOPMENT PLAN IS AS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
		HOWARD S.C.D.
		OWNER
		AMOCO OIL COMPANY
		1 W. PENNSYLVANIA AVENUE
		SUITE 900
		TOWSON, MARYLAND 21204

**ESTIMATE OF SEDIMENT CONTROL QUANTITIES**

SILT FENCE: 750 L.F.  
 STABILIZED CONSTR. ENTR.: 1EA  
 AGIP INLET PROTECTION: 3  
 STABILIZATION: 0.604 AC<sup>2</sup>

NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

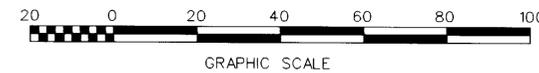
**SITE ANALYSIS DATA**

1. TOTAL SITE AREA: 1.4 AC<sup>2</sup>  
 2. TOTAL DISTURBED AREA: 1.23 AC<sup>2</sup>  
 3. TOTAL IMPERVIOUS AREA: 0.740 AC<sup>2</sup>  
 4. AREA TO BE VEGETATIVELY STABILIZED: 0.604 AC<sup>2</sup>  
 5. EARTHWORKS:  
 CUT - 1,300 CY  
 FILL - 500 CY  
 TOPSOIL - 225

NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "F"  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

EX. WATER SEWER & UTILITY EASEMENT PLAT NO. 12128



GRAPHIC SCALE

**COLUMBIA CROSSING DRIVE**

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "D" (COMMON-USE AREA)  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

**SEQUENCE OF CONSTRUCTION**

- OBTAIN HOWARD COUNTY GRADING PERMIT
- NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.
- CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE.
- INSTALL ALL SILT FENCE AS INDICATED ON PLANS.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM.
- STIR AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE WITH SEED AND MULCH.
- ROUGH GRADE SITE
- INSTALL STORM DRAIN UTILITIES. MAKE CONNECTION TO EXISTING 18" STUB FROM EXISTING 1-3 INLET ON DOBBIN ROAD. PERMANENTLY STABILIZE INLETS. FOR STORM DRAIN CONNECTIONS, WITH SOD IMMEDIATELY UPON COMPLETION OF STORM DRAIN INSTALLATION.
- COMPLETE INSTALLATION OF STORM DRAIN SYSTEM AND REMAINING ON-SITE UTILITIES, INCLUDING UNDERGROUND FUEL STORAGE TANKS. INSTALL AT-GRADE INLET PROTECTION DEVICES.
- INSTALL CURB AND GUTTER
- INSTALL SPLIT SECOND BUILDING, CAR WASH BUILDING, PUMP ISLANDS, AND CANOPY.
- INSTALL PAVING BASE COURSE. REMOVE INLET THE SEDIMENT CONTROL INSPECTOR, AS WORK PROGRESSES TO INLETS.
- INSTALL PAVING SURFACE COURSE.
- FINE GRADE AND STABILIZE SITE. INSTALL LANDSCAPING.
- CLEAN AND FLUSH OUT STORM DRAIN SYSTEM. DISPOSE OF SEDIMENT LADEN MATERIAL CLEANED OUT OF THE STORM DRAIN IN A MANNER APPROVED BY THE SEDIMENT CONTROL INSPECTOR.
- REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR.

**LEGEND**

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- AT GRADE INLET PROTECTION
- LIMIT OF DISTURBANCE

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 LIBER 1535 FOLIO 193  
 ZONED NT - COMMERCIAL

05/28/97	RELOCATED CONVENIENCE STORE & CAR WASH	
DATE:	NUMBER	REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>Mark Dammicus</i>		5/16/97
CHIEF-DEVELOPMENT ENGINEERING DIVISION		DATE
<i>Cindy Hamilton</i>		5/16/97
DIVISION OF LAND DEVELOPMENT		DATE
<i>James L. Keister</i>		5/16/97
DIRECTOR		DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.		
<i>Joseph M. Boyd</i>		5/13/97
COUNTY HEALTH OFFICER		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; AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*Timothy F. Whittle* APRIL 22, 1997  
 SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:  
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*Mark O. Blum* 4/22/97  
 SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.  
*Charles J. Dimario* 04-28-97  
 U.S. NATURAL RESOURCES CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS AS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

PLANNING BOARD APPROVAL  
**APPROVED**  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: 1/29/97

OWNER  
**AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER  
**AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS • ARCHITECTS • SURVEYORS  
 P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 96136  
 CENSUS TRACT NO. 6067.03

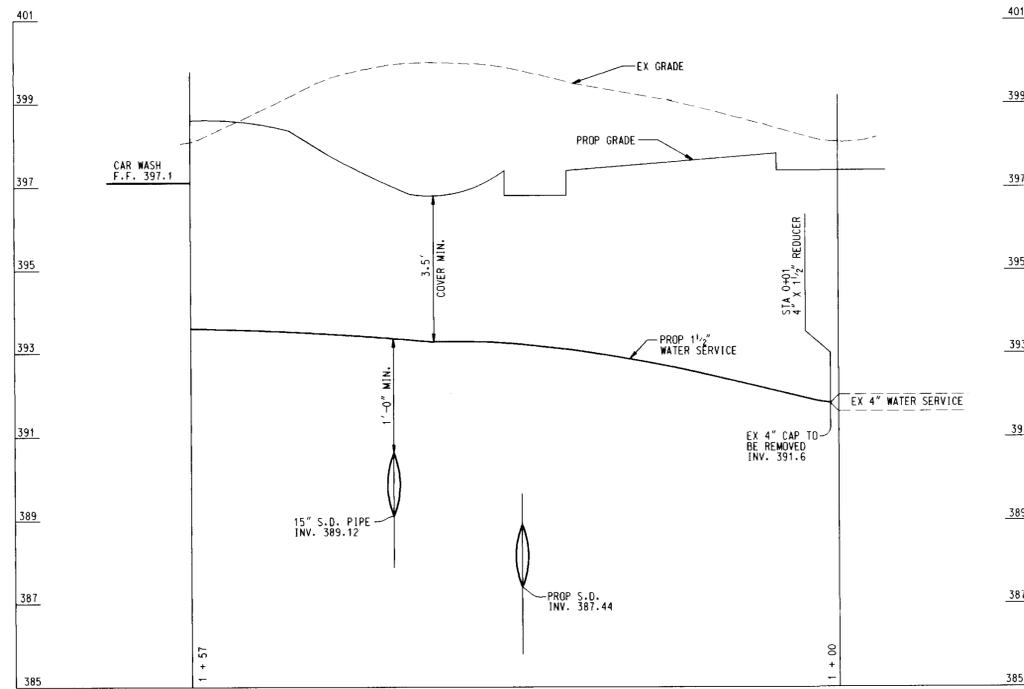
ADDRESS CHART

PARCEL	STREET ADDRESS	
E	6251 COLUMBIA CROSSING DRIVE	
SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.
ROUTE 175 COMMERCIAL	1/1	PARCEL 5
PLAT NO.	BLOCK NO.	TAX/ZONE
12117	18	36
WATER CODE	SEWER CODE	ELECT. DIST. CENSUS TR.
EDK	4900000	6

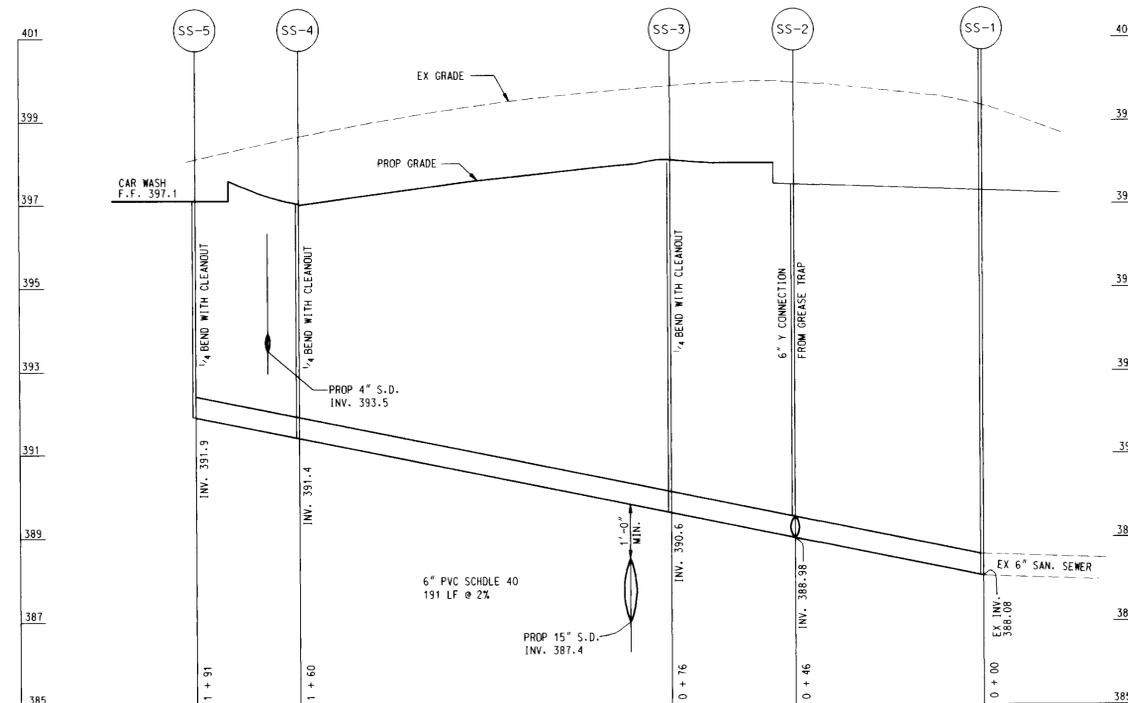
APRIL 22, 1997  
 DATE  
  
 TIMOTHY F. WHITTLE  
 PROFESSIONAL ENGR. NO. 19155

TITLE **SEDIMENT & EROSION CONTROL PLAN**  
 FOR AN AMOCO STATION AT  
**COLUMBIA CROSSING**

DESIGN BY: CHR SCALE: 1" = 20' PROJECT NO.: 96136  
 DRAWN BY: LFW DATE: 02/10/97 DRAWING NUMBER  
 CHECKED BY: TFW APPROVED: SHT 9 OF 13



**WATER CONNECTION PROFILES**  
 SCALE: HORIZ: 1" = 20'  
 VERT: 1" = 2'



**SANITARY SEWER PROFILES**  
 SCALE: HORIZ: 1" = 20'  
 VERT: 1" = 2'

SDP \* 97-30

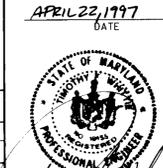
PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

SUBDIVISION NAME: ROUTE 175 COMMERCIAL  
 PLAT NO.: 12177, BLOCK NO.: 1B, ZONE: NEW TOWN COMMERCIAL, TAX ZONE: 36, ELECT. DIST.: 6, CENSUS TR.: 6067.03  
 WATER CODE: E06, SEWER CODE: 4100000

PLANNING BOARD APPROVAL

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY

DATE: 1/29/97



DATE	NUMBER	REVISION DESCRIPTION
5/6/97		
5/16/97		
5/16/97		

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF DEVELOPMENT ENGINEER DIVISION: MCK  
 DIVISION OF LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.

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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

BY THE DEVELOPER:  
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCES CONSERVATION SERVICE

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

OWNER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE, SUITE 900, TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729, ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE, SUITE 900, TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729, ATTN: MR. CHARLES T. BOGDANOWICZ

FREDERICK WARD ASSOCIATES, INC.  
 ENGINEERS \* ARCHITECTS \* SURVEYORS  
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 SDPROF2.DGN

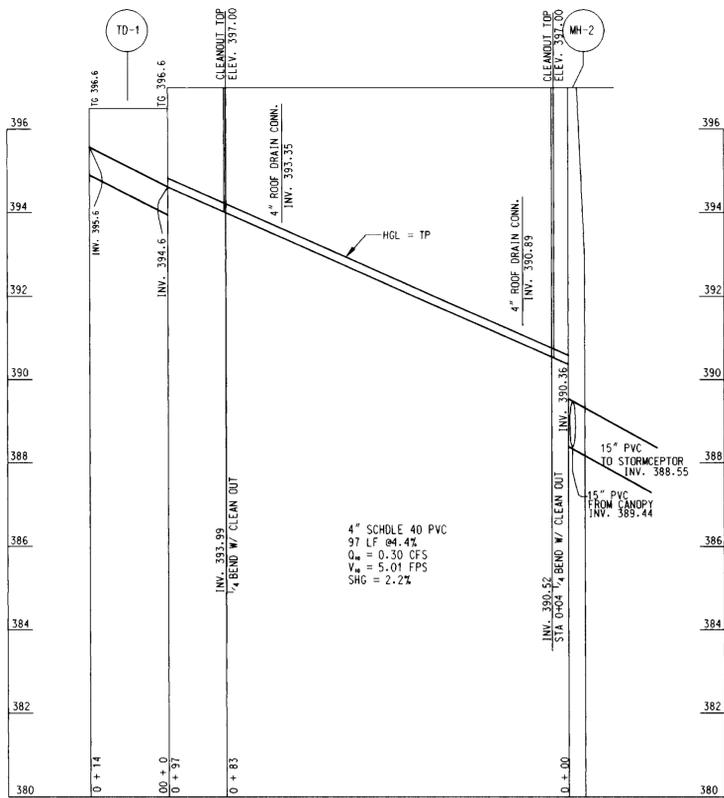
CENSUS TRACT NO. 6067.03

PLAT NO 12177  
 TAX MAP 36 PARCEL E  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

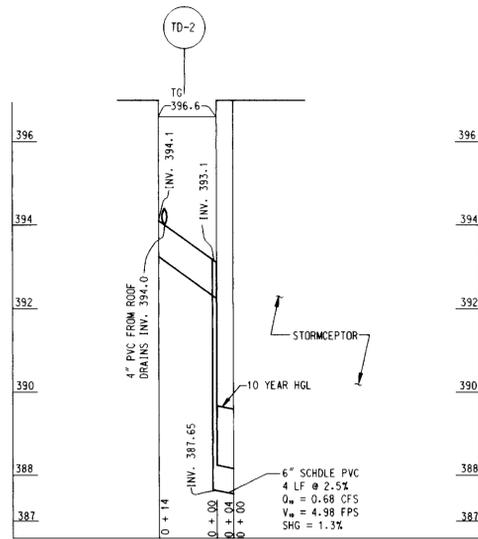
TITLE: UTILITY PROFILES FOR AN AMOCO STATION AT COLUMBIA CROSSING

DESIGN BY: GHR, SCALE: AS SHOWN, PROJECT NO.: 96136  
 DRAWN BY: KMLF, DATE: 02/10/97, DRAWING NUMBER  
 CHECKED BY: TFR, APPROVED: TIMOTHY WHITTLE, PROFESSIONAL ENGR. NO. 19155

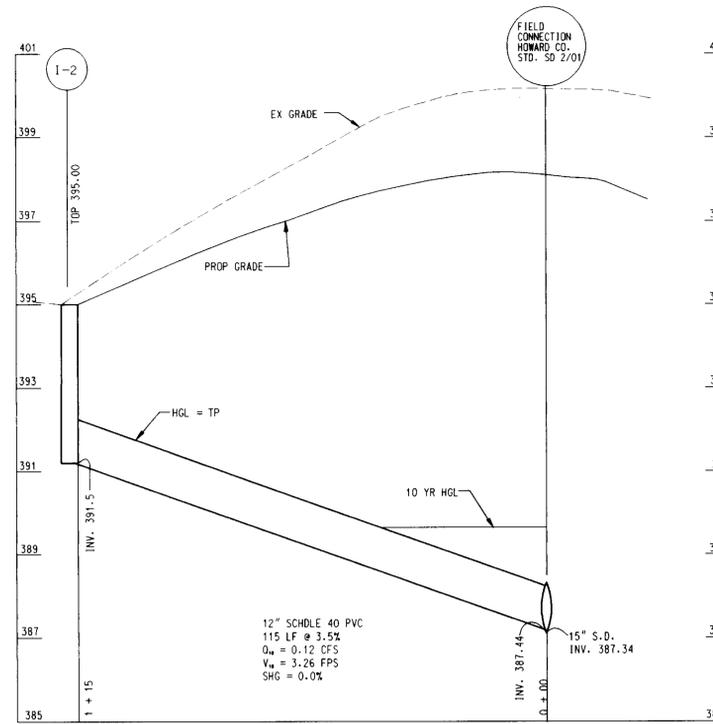
SHT 8 OF 13



**STORM DRAIN PROFILES**  
SCALE: HORIZ: 1" = 20'  
VERT: 1" = 2'

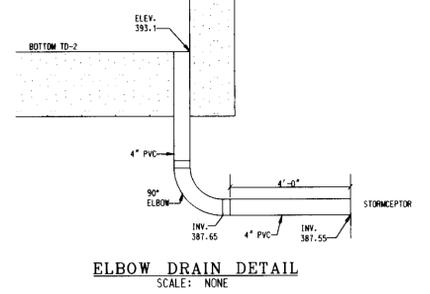


**STORM DRAIN PROFILES**  
SCALE: HORIZ: 1" = 20'  
VERT: 1" = 2'



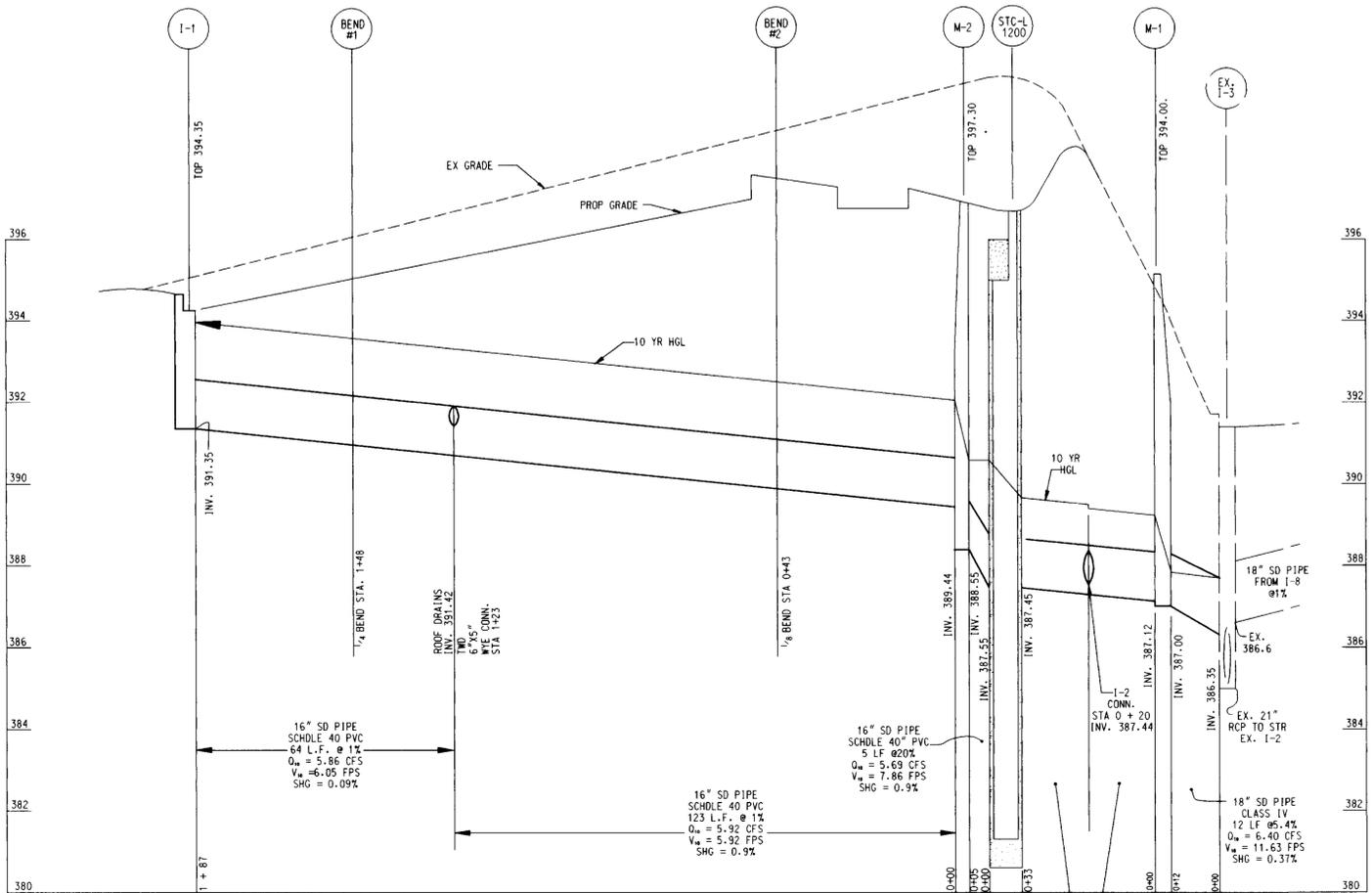
**STORM DRAIN PROFILES**  
SCALE: HORIZ: 1" = 20'  
VERT: 1" = 2'

PRIVATE PIPE SCHEDULE	
TYPE	AMOUNT
6" PVC SDR 40	400 LF
12" PVC SDR 40	115 LF
4" SDR OR SCH 40	268 LF
1 1/2" TYPE K COPPER	241 LF
16" SCHDLE 40 PVC	225 LF
18" CLASS IV RCP	12 LF



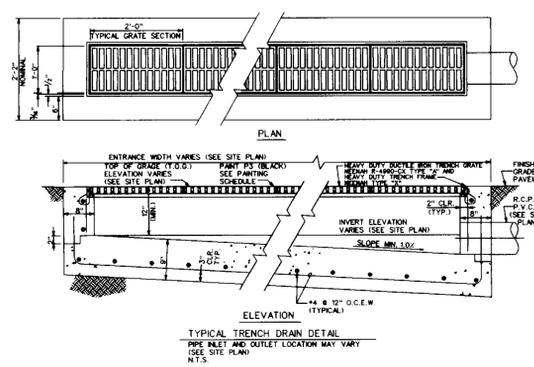
**ELBOW DRAIN DETAIL**  
SCALE: NONE

DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION MKK DATE 5/6/97
		CONY HAMILLAS DATE 5/16/97
		APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT. DATE 5/14/97
		JOYCE M. BOGDANOWICZ COUNTY HEALTH OFFICER DATE 5/13/97



**STORM DRAIN PROFILES**  
SCALE: HORIZ: 1" = 20'  
VERT: 1" = 2'

PRIVATE STRUCTURE SCHEDULE				
INSPECTED BY	NO.	DESCRIPTION	TOP ELEV.	REMARKS
PRIVATE	1	STANDARD PRECAST MANHOLE	394.0	H.C.D.P.W. DETAIL 65.12
PRIVATE	2	STC 1200 STORMCEPTOR	397.3	SEE DETAILS ON SHEET 6 OF 13
PRIVATE	3	PRECAST SINGLE WR INLET	394.35	H.C.D.P.W. DETAIL SD4.37
PRIVATE	4	PRECAST YARD INLET	395.0	H.C.D.P.W. DETAIL SD4.14
PRIVATE	5	TRENCH DRAIN	396.6	SEE DETAIL SHEET 7 OF 13
PRIVATE	7	TRENCH DRAIN	396.6	SEE DETAIL SHEET 7 OF 13
PRIVATE	8	STANDARD PRECAST MANHOLE	397.3	H.C.D.P.W. DETAIL 65.12



**TYPICAL TRENCH DRAIN DETAIL**  
PIPE INLET AND OUTLET LOCATION MAY VARY USE SITE PLAN NTS.

PLANNING BOARD APPROVAL  
**APPROVED**  
PLANNING BOARD OF HOWARD COUNTY  
DATE 1/29/97

ADDRESS CHART			
PARCEL	STREET ADDRESS	SECT./AREA	LOT/PARCEL NO.
E	6251 COLUMBIA CROSSING DRIVE	1/1	PARCEL E

DATE 4/22/1997  
TIMOTHY WHITTIE  
PROFESSIONAL ENGR. NO. 19155

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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
APR 22, 1997

BY THE DEVELOPER:  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
4/22/97

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCES CONSERVATION SERVICE

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

HOWARD S.C.D. DATE

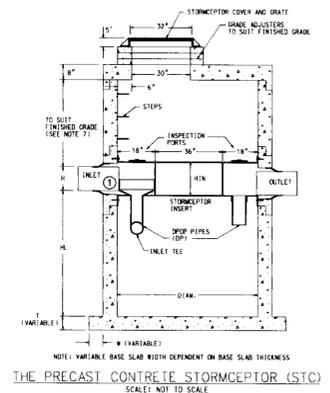
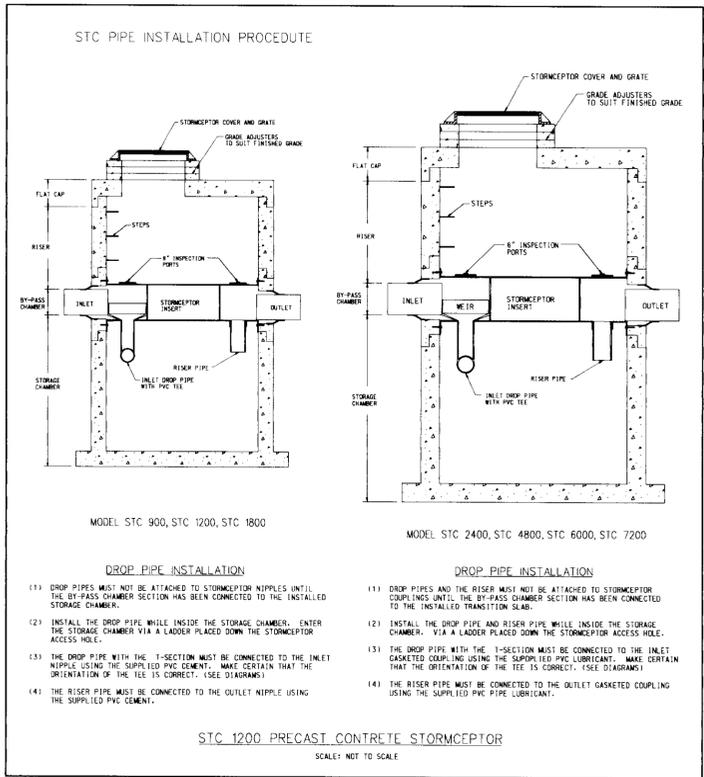
OWNER: AMOCO OIL COMPANY  
1 W. PENNSYLVANIA AVENUE SUITE 900  
TOWSON, MARYLAND 21204  
PHONE: 1 (410) 494-3729  
ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: AMOCO OIL COMPANY  
1 W. PENNSYLVANIA AVENUE SUITE 900  
TOWSON, MARYLAND 21204  
PHONE: 1 (410) 494-3729  
ATTN: MR. CHARLES T. BOGDANOWICZ

FREDERICK WARD ASSOCIATES, INC.  
ENGINEERS • ARCHITECTS • SURVEYORS  
P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243

CENSUS TRACT NO. 6067.03  
PLAT NO 12177  
TAX MAP 36 PARCEL E  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TITLE STORM DRAIN PROFILE NOTES & DETAILS FOR AN AMOCO STATION AT COLUMBIA CROSSING

DESIGN BY: GHR SCALE: AS SHOWN PROJECT NO.: 96136  
DRAWN BY: LF/KN DATE: 02/10/97 DRAWING NUMBER  
CHECKED BY: TFR APPROVED: DATE: SHT 7 OF 13

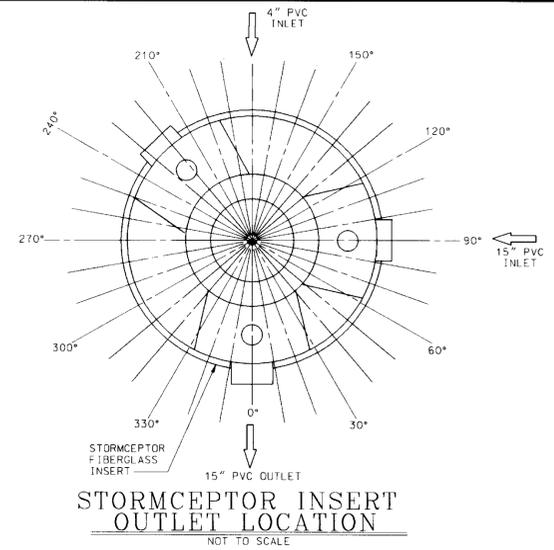


**FLOW AND CAPACITIES\***

MODEL	MAX. TREATED FLOW RATE (gpm/100)	SEDIMENT CAPACITY (LBS)	OIL CAPACITY (LBS GALL)	TOTAL CAPACITY (LBS GALL)
STC 900	285	10	280	910
STC 1200	285	110	280	1230
STC 1800	285	195	280	1860
STC 2400	475	210	560	2405
STC 3600	475	390	560	3720
STC 4800	800	415	675	5030
STC 6000	800	675	675	6205
STC 7200	1110	800	680	7510

**DIMENSIONS\***

MODEL	DIAM (FT)	DROP PIPE (FT)	HL (FT)	TL (FT)	WB (FT)
STC 900	6	6	42	8	8
STC 1200	6	6	60	8	8
STC 1800	6	6	96	8	8
STC 2400	8	8	76	8	0
STC 3600	8	8	118	8	0
STC 4800	10	10	106	12	0
STC 6000	10	10	130	12	0
STC 7200	12	12	114	14	0



**SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR SWM FACILITIES**

STAGE	DEVELOPER'S/ENGINEER APPROVAL		INSPECTOR'S APPROVAL	
	INITIALS	DATE	INITIALS	DATE
1. PRE-CONSTRUCTION MEETING. *				
2. INSTALLATION OF STRUCTURES AND ASSOCIATED STORM DRAINAGE. * A FOOTING SUBGRADE PRIOR TO POURING. *				
3. SITE IS PERMANENTLY STABILIZED. SEDIMENT CONTROL MEASURES REMOVED AND ALL SEDIMENT AND DEBRIS REMOVED FROM THE STRUCTURE. *				
4. FINAL INSPECTION. *				

NOTE: SEE CONSTRUCTION SPECIFICATIONS FOR DETAILED REQUIREMENTS.  
\* MANDATORY NOTIFICATION/APPROVAL OF INSPECTOR PRIOR TO PROCEEDING WITH NEXT STAGE.

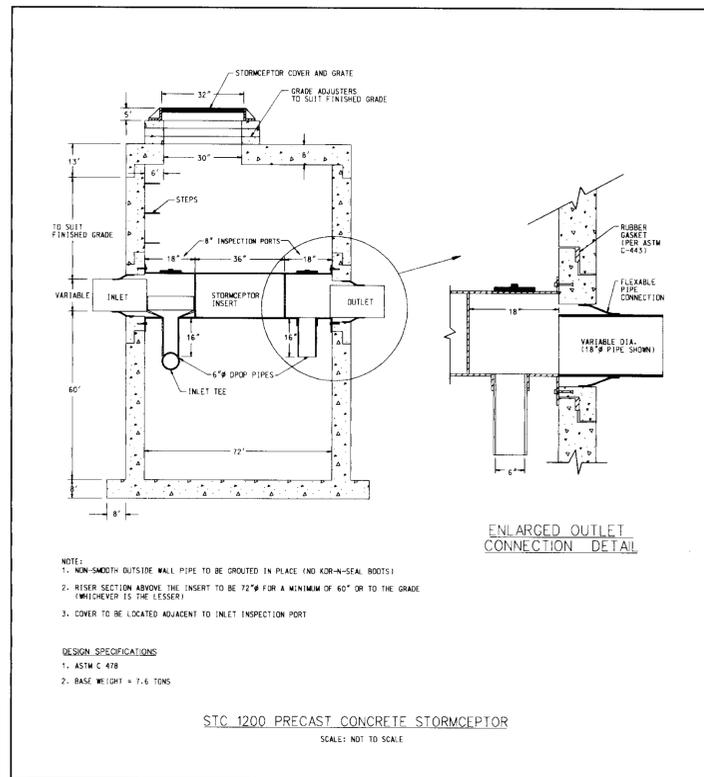
4025M-4 (REV 4-89)

**CONTRACTOR INSTALLATION INSTRUCTIONS: PRECAST CONCRETE STORMCEPTOR**

- STAKE-OUT THE LOCATION OF THE STORMCEPTOR AND EXCAVATE HOLE. EXCAVATE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO UNIT. INSTALL A 12" DEEP (OR AS REQUIRED) LAYER OF COMPACTED (95% STANDARD PROCTOR DENSITY OR LOCAL AND STATE REQUIREMENTS, AS DIRECTED BY THE INSPECTOR) AGGREGATE SUBBASE AT BOTTOM OF EXCAVATION. INSTALL MULE OR SHORING, AS NEEDED.
- CHECK ELEVATION OF UNIT BY MEASURING ITS SECTIONS FROM BASE OF THE STORAGE CHAMBER (BOTTOM OF UNIT'S SLAB) TO THE INVERT OF STORMCEPTOR BYPASS CHAMBER INLET ELEVATION (FIBERGLASS INSERT). SUBTRACT THIS DISTANCE FROM DESIGN INVERT ELEVATION TO DETERMINE TOP OF SUBBASE ELEVATION. CHECK ELEVATION OF INSTALLED SUBBASE AND ADJUST AS NEEDED.
- SECURE INSPECTOR APPROVAL OF SUBGRADE AND SUBBASE.
- INSTALL STORAGE CHAMBER. INSTALL SCREW INSERTS INTO BASE OF STORAGE CHAMBER. ATTACH RUBBER GASKET ON BASE UNIT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT). IF NOT PRELUBRICATED, INSTALL ADDITIONAL STORAGE CHAMBER SECTIONS, AS REQUIRED (PROCEDURE IS SAME AS STEP 6.).
- INSTALL REDUCING SLAB. (STORMCEPTOR MODELS STC-2400, STC-3600, STC-4800, STC-6000 AND STC-7200) CHECK THAT SECTION IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. INSTALL RUBBER GASKET ON THE TRANSITION SLAB SPIGOT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT).
- INSTALL BYPASS CHAMBER OF STORMCEPTOR WITH FACTORY INSTALLED STORMCEPTOR INSERT. LIFT BYPASS SECTION AND INSTALL, WHILE CHECKING ALIGNMENT AND GRADE OF INLET AND OUTLET DRAINAGE PIPES. CHECK TO MAKE SURE THE BYPASS CHAMBER IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. THE BYPASS CHAMBER MUST BE ORIENTED SUCH THAT INLET PIPE DISCHARGES INTO THE V-SHAPED FIBERGLASS WEIRS (INSIDE INSERT). INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.
- INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE.
- INSTALL RISER SECTION. LIFT RISER SECTION AND INSTALL, WHILE CHECKING THAT SECTION IS SET FLUSH AND IS AT PROPER ELEVATION AND THAT UNIT IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS REQUIRED IF STEPS 1-8 ARE INCLUDED. ALIGN STEPS ABOVE INLET INSPECTION PORT. NOTE: FOR SHALLOW INSTALLATIONS THIS SECTION MAY NOT BE REQUIRED.
- INSTALL TOP CAP WITH OPENING FOR STORMCEPTOR COVER. IF OPENING IS OFFSET (NOT CENTERED) THE TOP CAP OPENING SHOULD BE ORIENTED ABOVE THE STORMCEPTOR INLET INSPECTION PORT (PLUG).
- BACKFILL STORMCEPTOR WITH APPROVED BACKFILL MATERIAL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL SHOULD BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY, OR LOCAL AND STATE REQUIREMENTS, AS DIRECTED BY THE INSPECTOR.
- INSTALL AND SET GRADE ADJUSTING RINGS, AS NEEDED.
- INSTALL AND SET STORMCEPTOR FRAME AND COVER.
- INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SHRINK GROUT WHEN NO FLEXIBLE BOOTS ARE PROVIDED. THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH WITH THE INVERT OF THE STORMCEPTOR INSERT. FLEXIBLE BOOT INSTALLATION PROCEDURES: CENTER THE PIPE IN THE BOOT OPENING. LUBRICATE THE OUTSIDE OF THE PIPE AND/OR THE INSIDE OF THE BOOT IF THE PIPE OUTSIDE DIAMETER IS THE SAME AS THE INSIDE DIAMETER OF THE BOOT. POSITION THE PIPE CLAMP IN THE GROOVE OF THE BOOT WITH THE SCREW AT THE TOP. TIGHTEN THE PIPE CLAMP SCREW TO 60 INCH POUNDS. IF THE PIPE IS MUCH SMALLER THAN THE BOOT, LIFT THE BOOT SUCH THAT IT CONTACTS THE BOTTOM OF THE PIPE WHILE TIGHTENING THE CLAMP TO ENSURE EVEN CONTRACTION OF THE RUBBER. MOVE THE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING IT TO GRADE.
- THE STORMCEPTOR SHOULD BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED AND PERMANENTLY STABILIZED.
- FINAL INSPECTION.

**FLOW AND CAPACITIES\***

PIPE DIAMETER D (IN)	PIPE MATERIAL	MIN H (IN)	H (IN)	L (IN)
10	PVC	22	36	8
10	CONC / PE RIB	22	36	7
12	PVC / PE RIB	22	36	9
12	CONCRETE	22	42	11
15	PVC / PE RIB	22	42	9.5
15	CONCRETE	22	48	11.5
18	PVC / PE RIB	22	48	10
18	CONCRETE	32	48	11
21	PVC / PE RIB	32	48	9.5
21	CONCRETE	32	54	11.5
24	PVC	32	48	9
24	PE RIBBED	32	54	10
24	CONCRETE	32	54	11
27	PVC	32	54	8.5
27	CONCRETE	44	60	11.5
30	CONCRETE	44	60	12
33	CONCRETE	44	60	12.5
36	CONCRETE	44	60	12



1. SEE STORM DRAIN PROFILES ON SHEET 6 FOR INLET INVERT.  
2. SEE NOTES 8 AND 9 IN CONTRACTOR INSTALLATION INSTRUCTIONS, THIS SHEET.

**STORMCEPTOR SEPARATOR SPECIFICATIONS (CONCRETE)**

**GENERAL NOTES**

- SILT AND DEBRIS SHALL NOT BE ALLOWED TO ENTER THE STRUCTURES UNTIL CONTRIBUTING DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- ALL OPENINGS TO STRUCTURES SHALL BE PROTECTED WITH THE APPROPRIATE SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
- VARIOUS TYPES OF EQUIPMENT ARE AVAILABLE COMMERCIALY FOR THE CLEANOUT OF SYSTEMS. THE MOST COMMONLY USED EQUIPMENT AND TECHNIQUES USED FOR CLEANING SUBSURFACE SYSTEMS ARE VACUUM PUMP & WATERJET SPRAY. BOTH SYSTEMS ARE GENERALLY MOUNTED ON A SELF-CONTAINED VEHICLE AND CAN EFFECTIVELY REMOVE STONES, LEAVES, LITTER, AND SEDIMENT DEPOSITS FROM Sumps AND CHAMBERS.

**WATER QUALITY MAINTENANCE NOTES**

- INSPECT THE STORMCEPTOR ON A MONTHLY BASIS AND NOTE SEDIMENT AND OIL ACCUMULATIONS. MORE FREQUENT INSPECTIONS ARE APPROPRIATE WHERE OIL SPILLS OCCUR REGULARLY. STORMCEPTOR CANADA INC. CAN PROVIDE ADVICE ON SAMPLING EQUIPMENT.
- SEDIMENT SHOULD BE REMOVED ANNUALLY, OR WHENEVER THE ACCUMULATION REACHES 50% OF THE OPERATING DEPTH, FROM BASE TO DRAIN INVERT. MORE FREQUENT REMOVAL OF SEDIMENTS MAY BE NECESSARY IN AREAS OF NEW CONSTRUCTION, OR WHERE VEGETATION HAS NOT YET BEEN ESTABLISHED.
- VACUUM TRUCKS ARE USED TO REMOVE THE SEDIMENT AND OIL FROM THE STORMCEPTOR TREATMENT CHAMBER. OIL LEVELS GREATER THAN 2.5 CM SHOULD BE REMOVED IMMEDIATELY BY A LICENSED WASTE MANAGEMENT FIRM, AND SIGNIFICANT SPILLS MUST BE REPORTED TO THE APPROPRIATE REGULATORY AGENCY.
- THE PIPES AND STRUCTURAL PARTS SHALL BE CLEANED AND REPAIRED AS NEEDED. REPAIR AND/OR REPLACEMENT OF PARTS SHALL BE IN KIND.
- ALL MAINTENANCE SHALL BE PERFORMED BY THE OWNER OR BY THE OWNER'S REPRESENTATIVE AT THE OWNER'S EXPENSE.
- MINIMIZE SURFACE EROSION FROM PERVIOUS SURFACES AT ALL TIMES; MAINTAIN GRASS, SOD, AND/OR MULCH COVERAGE UPON LANDSCAPINGS.
- REMOVE DEBRIS ON TOP OF INLET GRATES AFTER EVERY RAINFALL.
- AT INTERVALS NOT EXCEEDING 1 YEAR, OR AS NEEDED, REMOVE ALL GREASE AND OILS, SILTS AND AGGREGATES, AND DEBRIS FROM ALL INLETS AND STRUCTURES.
- THE DISPOSAL OF THE LIQUID AND SOLID MATTER SHOULD BE AS FOLLOWS:
  - ALL LIQUID MATERIAL IN THE SEPARATOR INLET SHALL BE PUMPED INTO A SUITABLE TANK TRUCK AND DISPOSED OF AT AN APPROVED SANITARY DISTRICT DISCHARGE MANHOLE OR BE TAKEN TO AN APPROVED SEWAGE TREATMENT PLANT FOR DISCHARGE.
  - THE SOLID MATERIAL SHALL BE DELIVERED TO AN APPROVED SANITARY LANDFILL.

**REQUIRED PROCEDURES AND INSPECTIONS FOR INGROUND WATER QUALITY FACILITY**

- THE FOLLOWING INSPECTIONS ARE REQUIRED DURING CONSTRUCTION: (ADDITIONAL INSPECTIONS MAY BE REQUIRED AND NOTED BY THE INSPECTOR.)
- PRECONSTRUCTION MEETING: AN OPPORTUNITY TO REVIEW SITE PLANS, DISCUSS THE PURPOSE OF THE FACILITY AND TO ANSWER QUESTIONS REGARDING CONSTRUCTION AND/OR INSPECTION PROCEDURES.
  - CONSTRUCTION INSPECTIONS: WILL BE MADE DURING THE CONSTRUCTION OF THE FACILITY TO ENSURE ACCORDANCE WITH THE PLANS. SPECIFIC INSPECTION REQUIREMENTS WILL BE DETERMINED AT THE PRECONSTRUCTION MEETING. INSPECTIONS TO BE MADE AT, BUT NOT LIMITED TO, THE FOLLOWING INSTALLATION STEPS:
    - INSTALLATION OF SUBGRADE AND SUBBASE
    - FINAL INSPECTION

**Stormceptor® Order Request Form**

**Contractor Information**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

**Owner Information**

Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

**Stormceptor® Model**

900	1200	1800	2400
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Insert Size**

22"	32"	44"	Custom
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Method:**  
Top Elevation (ft): 392.3  
Inlet Pipe Invert (ft): 387.12  
Outlet Pipe Invert (ft): 381.00  
Pipe Type: SDP\_PVC  
Pipe Inside Diameter (in): [0] 10.16 in.  
Pipe Outside Diameter (in): [0] 11.75 in.

Project Name: COLUMBIA CROSSING  
Approximate time frame until required delivery (weeks): 180  
Delivery Address: Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Designer Company \_\_\_\_\_ Phone \_\_\_\_\_  
Designer Contact \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_

Please fax this sheet back to Hydro Conduit/Virginia Precast at (804) 798-3426  
Attn: Dave Brinser/Bryant Lowery (Phone: 1-800-999-2278)

For credit information/applications contact Carole Broadus at (804) 798-6068  
For technical assistance please call Stormceptor Corporation at (301) 762-8361 or toll free at 1-800-762-4703

09/12/99

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

DATE: 11/29/97

**ADDRESS CHART**

PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

**SDP - 97-30**

**APRIL 22, 1997**  
DATE

**FREDERICK WARD ASSOCIATES, INC.**  
ENGINEERS ARCHITECTS SURVEYORS  
P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
PHONE: (410) 819-2000 (410) 838-1900 FAX: (410) 893-1243  
96136  
CENSUS TRACT NO. 6067.03  
PLAT NO. 12177  
TAX MAP 36  
PARCEL E  
6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
TITLE: STORMCEPTOR NOTES & DETAILS FOR AN AMOCO STATION AT COLUMBIA CROSSING

DESIGN BY: GHR SCALE: 1" = 20'  
DRAWN BY: LCF DATE: 02/10/97 PROJECT NO.: 96136  
CHECKED BY: JFW APPROVED: SHT 6 OF 13

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

DATE: 5/10/97  
DATE: 5/16/97  
DATE: 5/16/97

**APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS**  
HOWARD COUNTY HEALTH DEPARTMENT.

DATE: 5/13/97

DATE: 4/22/97

**REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.**

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE: \_\_\_\_\_

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

HOWARD S.C.D. DATE: \_\_\_\_\_

**OWNER: AMOCO OIL COMPANY**  
1 W. PENNSYLVANIA AVENUE SUITE 900  
TOWSON, MARYLAND 21204  
PHONE: 1 (410) 494-3729  
ATTN: MR. CHARLES T. BOGDANOWICZ

**DEVELOPER: AMOCO OIL COMPANY**  
1 W. PENNSYLVANIA AVENUE SUITE 900  
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CHECKED BY: JFW APPROVED: SHT 6 OF 13

**SDP-97-30**

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "F"  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

**GENERAL NOTES FOR UTILITY CONSTRUCTION**

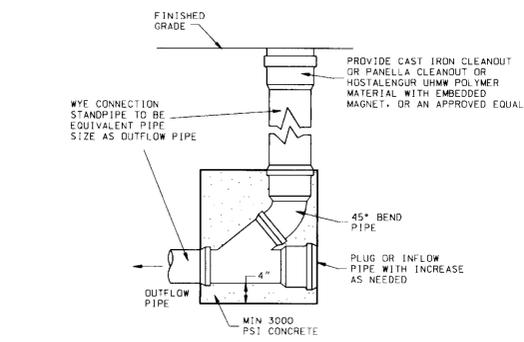
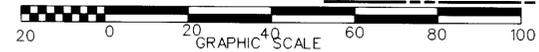
1. INFORMATION CONCERNING THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES WAS TAKEN FROM RECORDS PROVIDED BY UTILITY COMPANIES AND HOWARD COUNTY DPW. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. FREDERICK WARD ASSOCIATES, INC. MAKES NO GUARANTEE AS TO THE COMPLETENESS OR ACCURACY OF UTILITIES AND THEIR LOCATIONS, SHOWN OR NOT SHOWN, ON THESE DRAWINGS. SUCH INFORMATION PROVIDED ON THESE PLANS IS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL VERIFY THE PRESENCE, ABSENCE, AND LOCATIONS OF ALL UTILITIES TO HIS SATISFACTION, PRIOR TO ANY WORK UNDER THIS CONTRACT.
2. THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION AND EXCAVATION. PHONE 1-800-257-7777.
3. PRIOR TO ANY CONSTRUCTION UNDER THIS CONTRACT, CONTRACTOR SHALL TEST PIT TO VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WHERE UTILITY TIE-INS AND CROSSINGS WILL BE ENCOUNTERED. ANY DISCREPANCIES IN HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DRAWINGS, PARTICULARLY AT PROPOSED STORM DRAIN, SANITARY, AND WATER CONNECTIONS, SHALL BE IMMEDIATELY REPORTED TO FREDERICK WARD ASSOCIATES PRIOR TO ANY CONTINUATION OF WORK UNDER THIS CONTRACT. THIS IS FOR THE PURPOSE OF IDENTIFYING ANY CONFLICTS WHICH MAY IMPACT THE PROPOSED DESIGN, AND RESOLUTION OF SAID CONFLICTS PRIOR TO CONTINUATION OF WORK.
4. ANY EXISTING UTILITIES AND AMENITIES WHICH ARE DAMAGED DUE TO TEST PITTING AND UTILITY CONSTRUCTION SHALL BE REPAIRED IN KIND AT THE SOLE EXPENSE OF THE CONTRACTOR.
5. ANY SEDIMENT CONTROL MEASURES REMOVED FOR THE PURPOSE OF UTILITY CONSTRUCTION SHALL BE REPLACED AT THE END OF THE DAY BY THE UTILITY CONTRACTOR.
6. ALL STORM DRAIN, WATER, SEWER, AND PRODUCT PIPING UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION, AND AMCO SPECIFICATIONS.
7. ANY PROPOSED GAS AND ELECTRIC SERVICE TO BE COORDINATED IN THE FIELD BY THE AMCO FIELD ENGINEER WITH BGE FOR LOCATION AND SIZE OF SERVICE.
8. ALL DISCHARGE FROM THE CAR WASH SHALL BE APPROVED BY THE BUREAU OF UTILITIES BEFORE DRAINING TO THE STORMCEPTOR.

**GENERAL NOTES FOR WATER AND SEWER CONSTRUCTION**

1. WATER METER LID AND SANITARY CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF PROPOSED GRADES. CLEANOUT TOPS TO BE IDENTIFIED AS SANITARY CLEANOUTS, THREADED, AND CONTAIN COUNTERSUNK PLUGS.
2. UTILITIES SHALL MAINTAIN A MINIMUM 12-INCH CLEARANCE WHEN CROSSING EXISTING AND PROPOSED UTILITIES ON AND OFF SITE.
3. WATER SERVICES SHALL HAVE A MINIMUM 3.5 FOOT COVER OVER CROWN OF PIPE.
4. WATER SERVICE SHALL BE TYPE K COPPER TUBING. SANITARY SEWER PIPE SHALL BE PVC SCHEDULE 40.
5. WATER AND SEWER SERVICES TO BE INSTALLED TO 12" INSIDE FACE OF BUILDING. WHEREIN CONNECTION TO BUILDING UTILITIES SHALL BE COORDINATED WITH THE BUILDING CONTRACTOR.

**GENERAL NOTES FOR STORM DRAIN CONSTRUCTION**

1. INSTALL EXPANSION JOINTS BETWEEN CONCRETE APRONS AND TRENCH DRAINS.
2. REFER TO SITE GRADING PLAN FOR TRENCH DRAIN GRADE ELEVATIONS.
3. MANHOLE LIDS AND INLET GRATES SHALL BE TRAFFIC BEARING AND BICYCLE SAFE.
4. ALL MANHOLE LIDS- INLET GRATES AND CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF PROPOSED GRADES. CLEANOUT TOPS TO BE THREADED AND CONTAIN COUNTERSUNK PLUGS.
5. STORM DRAIN PIPE TO BE PVC SDR 40.



HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 LIBER 1535 FOLIO 193  
 ZONED NT - COMMERCIAL

**DETAIL STORM DRAIN AND SANITARY SEWER CLEANOUT (MODIFIED HO. CO. STD. S-2.22)**  
 NOT TO SCALE

NOTE:  
 ALL DEBRIS IS TO BE KEPT OUT OF WATER QUALITY AND STORMWATER MANAGEMENT FACILITY.

SANITARY SEWER		
SS NO.	INV.	TOP ELEV.
1	388.08	397.3
2	388.88	396.8
3	389.06	398.0
4	391.40	397.0
5	391.9	397.0

PLANNING BOARD APPROVAL

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: 1/29/97

APRIL 22, 1997  
 DATE

SDP - 97-30

ADDRESS CHART

PARCEL	STREET ADDRESS	
E	6251 COLUMBIA CROSSING DRIVE	
SUBDIVISION NAME	SECT./AREA	LOT/PARCEL NO.
ROUTE 175 COMMERCIAL	1/1	PARCEL E
PLAT NO. BLOCK NO. ZONE	TAX-ZONE	ELECT. DIST. CENSUS TR.
12177 18 COMMERCIAL	36	6 6061-03
WATER CODE	SEWER CODE	
E06	490000	

EMMETT WHITTE  
 PROFESSIONAL ENGR. NO. 19155

05/28/97 RELOCATED CONVENIENCE STORE & CAR WASH

DATE: NUMBER REVISION DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief-Development Engineering Division MK 5/16/97 DATE

Division of Land Development 5/16/97 DATE

Director 5/16/97 DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.

Joyce M. Boyd-Jefferson 5/13/97 DATE  
 COUNTY HEALTH OFFICER

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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Engineer: [Signature] APRIL 22, 1997 DATE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: [Signature] 4/22/97 DATE

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Signature: [Signature] DATE

OWNER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410)494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410)494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

FREDERICK WARD ASSOCIATES, INC.  
 ENGINEERS • ARCHITECTS • SURVEYORS

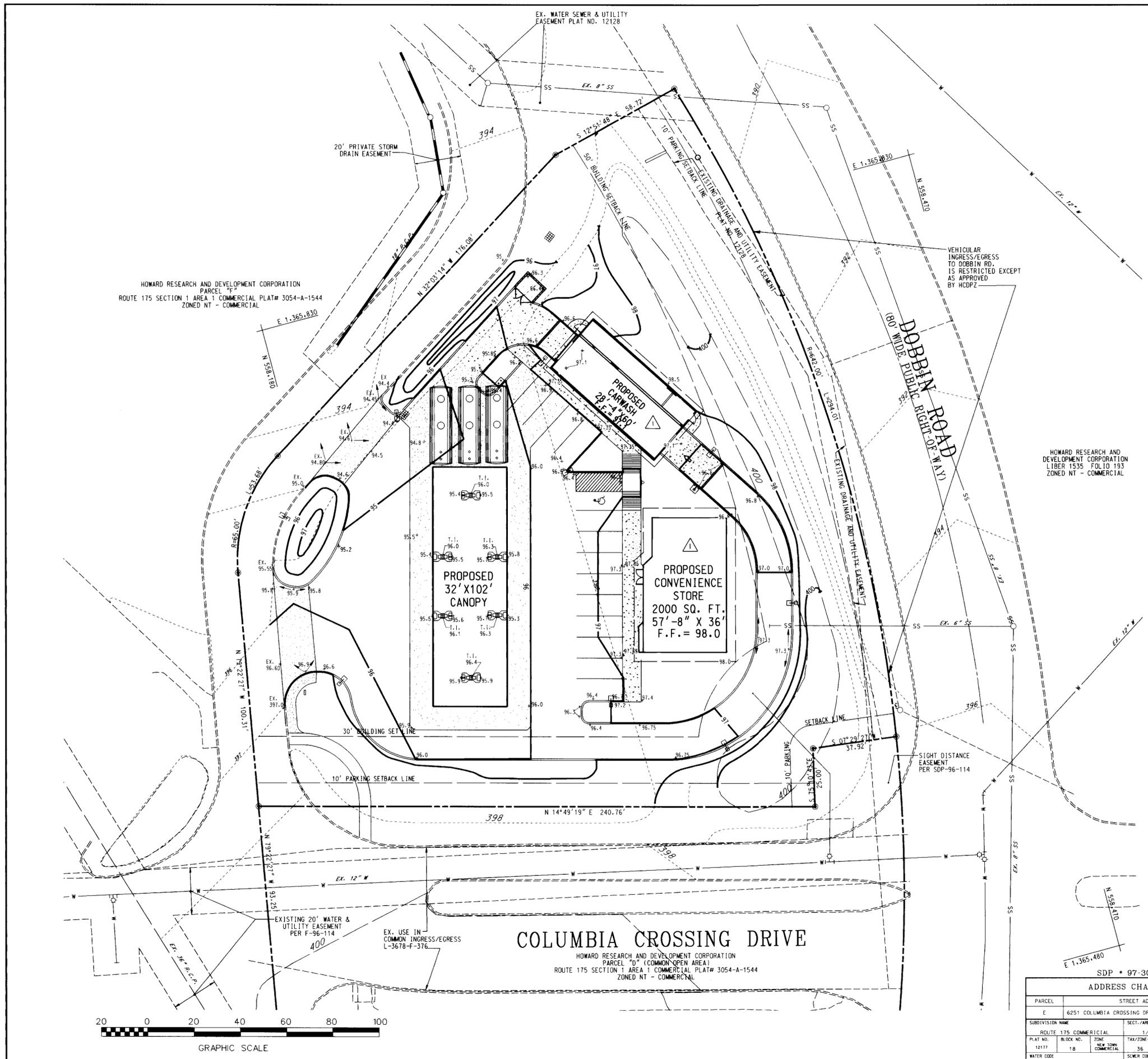
P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-1900 FAX: (410) 893-1243  
 96136 SHTILL.DWG

CENSUS TRACT NO. 6067-03

PLAT NO. 12177 PARCEL E  
 TAX MAP 36  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SITE UTILITY & PIPING PLAN FOR AN AMOCO STATION AT COLUMBIA CROSSING

DESIGN BY: PWR SCALES: 1" = 20' PROJECT NO.: 96136  
 DRAWN BY: LCF DATE: 02/10/97 DRAWING NUMBER  
 CHECKED BY: TFW APPROVED: SHT 5 OF 13

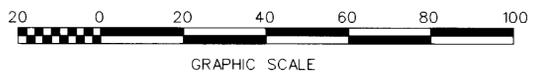


HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 LIBER 1535 FOLIO 193  
 ZONED NT - COMMERCIAL

**COLUMBIA CROSSING DRIVE**

HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 PARCEL "D" (COMMON OPEN AREA)  
 ROUTE 175 SECTION 1 AREA 1 COMMERCIAL PLAT# 3054-A-1544  
 ZONED NT - COMMERCIAL



SDP \* 97-30

ADDRESS CHART	
PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE
SUBDIVISION NAME: ROUTE 175 COMMERCIAL	
PLAT NO. 12177	BLOCK NO. 18
ZONE NEW TOWN COMMERCIAL	TAX ZONE 36
ELECT. DIST. 6	CENSUS TR. 6007-03
WATER CODE ED6	SEWER CODE 4900000

PLANNING BOARD APPROVAL

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY

DATE: 1/29/97

APRIL 22, 1997  
 DATE



05/28/97	RELOCATED CONVENIENCE STORE & CAR WASH
DATE:	NUMBER
REVISION DESCRIPTION	
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Mark Dammann</i>	5/16/97
CHIEF DEVELOPMENT ENGINEERING DIVISION PMK	DATE
<i>Andy Hamilton</i>	5/16/97
DIVISION OF LAND DEVELOPMENT	DATE
<i>James S. Bantle</i>	5/16/97
DIRECTOR	DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.

*Joyce M. Boyd* 5/13/97  
 COUNTY HEALTH DEPARTMENT 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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*James S. Bantle* APRIL 22, 1997  
 SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*Mr. Blum* APRIL 22, 1997  
 SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

*Charles J. Ammons* 04-29-97  
 U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*Sup. [Signature]* 4/29/97  
 HOWARD S.C.D. DATE

OWNER: **AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: **AMOCO OIL COMPANY**  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

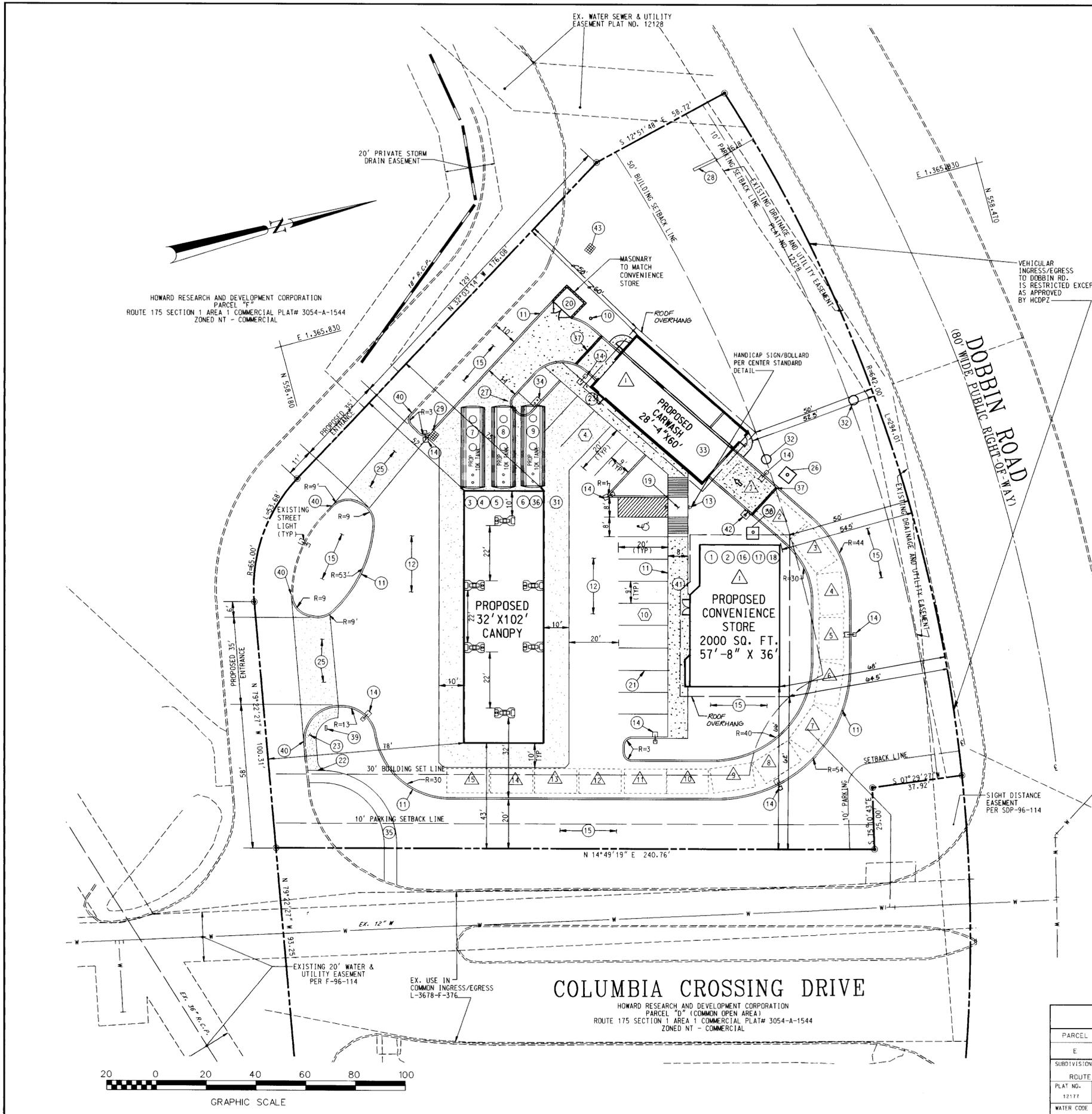
**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS • ARCHITECTS • SURVEYORS

P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 96136  
 CENSUS TRACT NO. 6067.03

PLAT NO. 12177  
 TAX MAP 36 PARCEL E  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: **GRADING PLAN FOR AN AMOCO STATION AT COLUMBIA CROSSING**

DESIGN BY: GHR SCALE: 1" = 20' PROJECT NO.: 96136  
 DRAWN BY: LCF DATE: 02/10/97 DRAWING NUMBER  
 CHECKED BY: TFW APPROVED: SHT 4 OF 13



SITE IMPROVEMENT OUTLINE		DRAWING NUMBER
ITEM NUMBER	FURNISHED BY	INSTALLER
1	BS	BUILDING TYPE (2,000 SQ. FT.) CARRY OUT FOOD SHOP
2	BS	BUILDING DOWNSPOUT DRAIN <input checked="" type="checkbox"/> UNDERGROUND <input type="checkbox"/> ABOVE GROUND
3	CS	CANOPY TYPE (32'-0" X 102'-0")
4	CS	DISPENSING EQUIPMENT - 6 MPO'S
5	CS	CANOPY DOWNSPOUT DRAIN <input checked="" type="checkbox"/> UNDERGROUND <input type="checkbox"/> ABOVE GROUND
6	A	PUMP ISLANDS
7	A	TANKS FOR MOTOR FUEL (1) ULTIMATE - PROPOSED (1) ULTIMATE - PROPOSED (1) REGULAR - PROPOSED
8	A	ENVIROFLEX PRODUCT PRING SYSTEM
9	A	VAPOR RECOVERY SYSTEM (STAGE 1 & STAGE II)
10	GC	TANK VENT RISER
11	GC	CONCRETE CURB
12	GC	ASPHALT PAVING PER AMOCO SPECIFICATIONS & PER AMOCO ENGINEER
13	GC	HANDICAPPED PRKG ONLY SIGN PER ADA & LOCAL CODE & CENTER STD.
14	GC	9 NEW YARD LIGHTS (16' HIGH) FIXTURES & POLE (PREFINISHED) LIGHTS MUST MATCH SPEC. IN CRITERIA (EMCO)
15	GC	LANDSCAPING
16	GC	BUILDING ELECTRICAL & TELEPHONE SERVICE ROUTED UNDERGROUND PER AMOCO FIELD ENGINEER & COUNTY CODES
17	GC	SANITARY SEWER SERVICE - TIE INTO EXISTING SANITARY SEWER PER AMOCO FIELD ENGINEER & PER COUNTY CODES
18	GC	7/8" WATER SERVICE - TIE INTO EXISTING WATER SERVICE PER AMOCO FIELD ENGINEER & PER COUNTY CODES
19	GC	HANDICAP RAMP PER LOCAL, FEDERAL & ADA CODES
20	GC	TRASH ENCLOSURE
21	GC	PAINT STRIPING (TYP)
22	GC	MEET EXISTING CURB & GUTTER, SIDEWALK AND PAVING
23	GC	5' CONCRETE SIDEWALK PER HOWARD COUNTY DPW STD# R3.05
24	GC	CONCRETE CURB
25	GC	HOWARD COUNTY STD. CONC. ENTRANCE
26	GC	STORMCEPTOR
27	GC	ROLLOVER CURB
28	A	MAJOR I.D. SIGN (PROPOSED) SPECIFIC LOCATION TO BE STAMPED OUT FOR FIELD REVIEW
29	GC	WR INLET HOWARD COUNTY DPW SD 4.35
30	GC	CONCRETE PAVING
31	GC	STANDARD PRECAST MANHOLE HOWARD COUNTY DPW STD GS.12
32	GC	CAR WASH
33	A	SEE AMOCO DWGS
34	A	SEE AMOCO DWGS
35	D	SEEWALK TO BE PER PHASE ISDP, INSTALLED BY DEVELOPER
36	A	CANOPY FASCIA SIGNS
37	GC	TRENCH DRAIN
38	GC	750 GALLON GREASE TRAP PER HOWARD COUNTY STANDARDS
39	A	AMOCO ENTRANCE SIGN SPECIFIC LOCATION AND DESIGN TO BE FIELD REVIEWED
40	GC	TRANSITION FROM EX. CURB TO PROP. ON SITE CURB & GUTTER
41	GC	8' CONCRETE SIDEWALK PER HOWARD COUNTY DPW STD# R3.01
42	A	CARWASH PAYPOINT
43	GC	YARD INLET HOWARD COUNTY STD 4.14

- CONSTRUCTION NOTES:**
1. ALL UTILITY CONNECTIONS ARE TO BE AS PER LOCAL CODE BY G. C.
  2. G. C. TO PROVIDE CONDUIT & WIRING TO ALL AMOCO I. D. SIGNS & CONDUIT ONLY TO PUBLIC TELEPHONE BOOTH.
  3. SITE PLAN SUPERSEDES ALL WORKING DRAWINGS.
  4. UNLESS OTHERWISE NOTED, ALL PAINT TO BE FURNISHED BY G. C.
  5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND CONSTRUCTION AS SHOWN ON PLANS UNLESS OTHERWISE NOTED.

DATE	NUMBER	REVISION DESCRIPTION
05/28/97	1	REVISED CONVENIENCE STORE & CAR WASH LOC.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION MKK 5/16/97  
 DIVISION OF LAND DEVELOPMENT 5/16/97  
 DIRECTOR 5/16/97

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT.

5/13/97  
 COUNTY HEALTH OFFICER MKK

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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APRIL 22, 1997  
 SIGNATURE OF ENGINEER

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

9/22/97  
 SIGNATURE OF DEVELOPER

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

4/28/97  
 U.S. NATIONAL RESOURCES CONSERVATION SERVICE

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

4/29/97  
 HOWARD S.C.D.

PLANNING BOARD APPROVAL

**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY

DATE 1/29/97

OWNER

AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER

AMOCO OIL COMPANY  
 1 W. PENNSYLVANIA AVENUE  
 SUITE 900  
 TOWSON, MARYLAND 21204  
 PHONE: 1 (410) 494-3729  
 ATTN: MR. CHARLES T. BOGDANOWICZ

FREDERICK WARD ASSOCIATES, INC.  
 ENGINEERS • ARCHITECTS • SURVEYORS

F.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
 PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
 96136  
 3051E.DGN

CENSUS TRACT NO. 6067.03

PLAT NO. 12177 PARCEL E  
 TAX MAP 36  
 6 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE  
**SITE LAYOUT PLAN**  
 FOR AN AMOCO STATION AT  
**COLUMBIA CROSSING**

DESIGN BY: GHR SCALE: 1" = 20'  
 DRAWN BY: LCF DATE: 02/10/97 PROJECT NO.: 96136  
 CHECKED BY: TFW APPROVED: DATE: SHT 3 OF 13

ADDRESS CHART

PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE

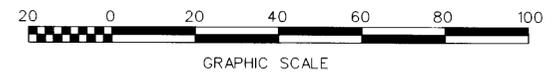
SUBDIVISION NAME	SECT./AREA	LDT/PARCEL NO.
ROUTE 175 COMMERCIAL	1/1	PARCEL E

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE-	ELECT. DIST.	CENSUS TR.
12177	18	NEW TOWN COMMERCIAL	36	6	6067.03

WATER CODE	SEWER CODE
E06	4900000

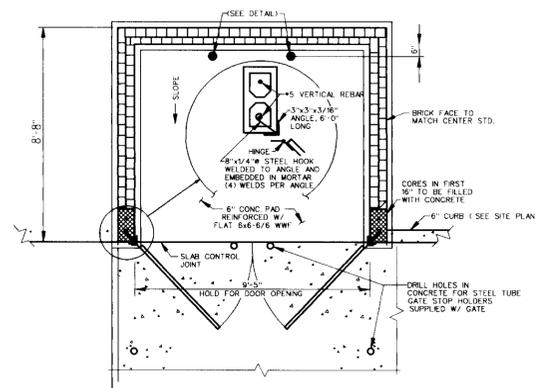
APRIL 22, 1997  
 DATE

PROFESSIONAL ENGINEER

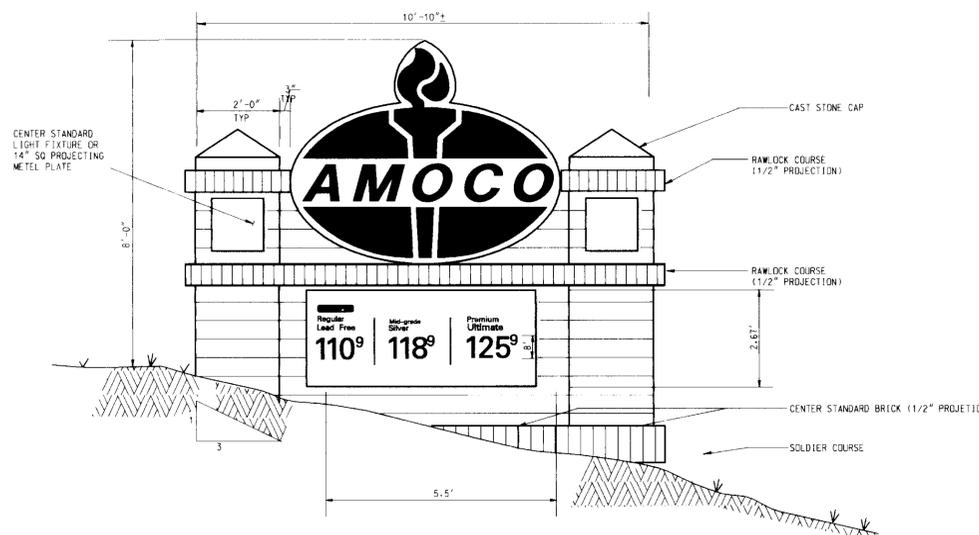
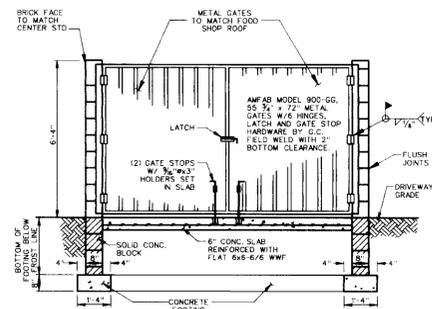


**SIGNAGE CALCULATIONS**

<b>A. ALLOWABLE SIGNAGE:</b>		= 115.33 SQ. FT.
1. SPLIT SECOND:	2 SQ. FT./L.F.T. X 57'-8"	= 120.00 SQ. FT.
2. CAR WASH:	2 SQ. FT./L.F.T. X 60.0"	= 235.33 SQ. FT.
<b>TOTAL ALLOWABLE SIGN AREA</b>		
<b>B. PROPOSED SIGNAGE:</b>		= 19.61 SQ. FT.
1. MONUMENT SIGN:	44" X 74" T & O	= 14.69 SQ. FT.
"AMOCO" I.D.	"PRICE SIGN"	= 34.30 SQ. FT.
		= 14.69 SQ. FT.
<b>SUB TOTAL (ALLOWED FOR PRICE SIGN)</b>		
2. DIRECTIONAL SIGN:		= 10.00 SQ. FT.
"AMOCO ENTRANCE"		= 29.61 SQ. FT.
<b>TOTAL MAJOR I.D. SIGN AREA</b>		
3. BUILDING SIGNAGE: (SINGLE SIDE ONLY)		= 14.20 SQ. FT.
<b>A. CANOPY SIGNS:</b>		
(2) "AMOCO" @ 7.10 SQ. FT. EACH		
<b>B. CAR WASH:</b>		
(1) "CAR WASH"		= 12.19 SQ. FT.
<b>TOTAL BUILDING SIGN AREA</b>		= 26.39 SQ. FT.
<b>TOTAL PROPOSED ON SITE SIGNAGE</b>		= 56.00 SQ. FT.



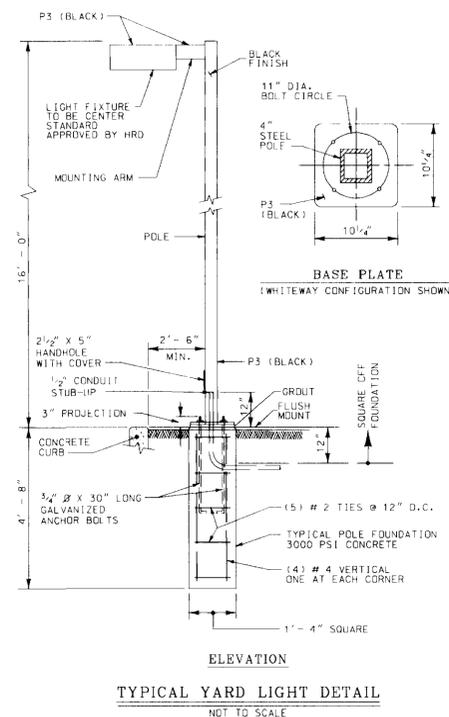
**TRASH ENCLOSURE ELEVATION**  
SCALE: NONE



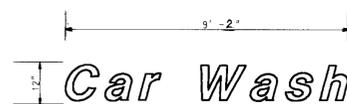
**PROPOSED MONUMENT SIGN - 34.30 SQ FT**  
SCALE: 1/2"=1'-0"



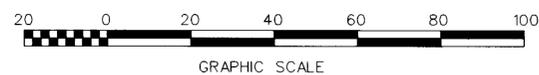
**PROPOSED CANOPY FASCIA SIGN - 7.10 SQ FT (LETTERS ONLY)**  
TWO INTERNALLY ILLUMINATED SINGLE FACED SIGNS  
SCALE: 1/2"=1'-0"



**TYPICAL YARD LIGHT DETAIL**  
NOT TO SCALE



**PROPOSED 'CAR WASH' SIGN = 9.2 SQ FT (LETTERS ONLY)**  
INTERNALLY ILLUMINATED SINGLE FACED SIGN  
SCALE: 1/2"=1'-0"



DATE:	NUMBER:	REVISION DESCRIPTION:
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF DEVELOPMENT ENGINEERING DIVISION MK
6/6/97		DATE
5/16/97		DATE
5/16/97		DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.		
5/13/97		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, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
Signature: *Timothy Whittle*  
DATE: APRIL 22, 1997

BY THE DEVELOPER:  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
Signature: *M.O. Blom*  
DATE: 4/22/97

PLANNING BOARD APPROVAL  
**APPROVED**  
PLANNING BOARD OF HOWARD COUNTY  
DATE: 1/29/97

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.  
U.S. NATURAL RESOURCES CONSERVATION SERVICE  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *6/22/97*  
DATE: 6/22/97

OWNER: **AMOCO OIL COMPANY**  
1 W. PENNSYLVANIA AVENUE  
SUITE 900  
TOWSON, MARYLAND 21204  
PHONE: 1 (410) 494-3729  
ATTN: MR. CHARLES T. BOGDANOWICZ

DEVELOPER: **AMOCO OIL COMPANY**  
1 W. PENNSYLVANIA AVENUE  
SUITE 900  
TOWSON, MARYLAND 21204  
PHONE: 1 (410) 494-3729  
ATTN: MR. CHARLES T. BOGDANOWICZ

**FREDERICK WARD ASSOCIATES, INC.**  
ENGINEERS • ARCHITECTS • SURVEYORS  
P.O. BOX 727, 5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014  
PHONE: (410) 879-2090 (410) 838-7900 FAX: (410) 893-1243  
96136  
CENSUS TRACT NO. 6067.03

SDP \* 97-30

ADDRESS CHART	
PARCEL	STREET ADDRESS
E	6251 COLUMBIA CROSSING DRIVE
SUBDIVISION NAME	SECT./AREA
ROUTE 175 COMMERCIAL	1/1
PLAT NO. BLOCK NO. ZONE	TAX/ZONING
12177 18 COMMERCIAL	36
WATER CODE	SEWER CODE
E06	490000

APRIL 22, 1997  
DATE  
Signature: *Timothy Whittle*  
PROFESSIONAL ENGR. NO. 19155

TITLE	DESIGN BY: GHR	SCALE: 1" = 20'	PROJECT NO.: 96136
SIGNAGE & DETAIL SHEET FOR AN AMOCO STATION AT COLUMBIA CROSSING	DRAWN BY: LCF	DATE: 11/29/96	DRAWING NUMBER
	CHECKED BY: TFV	APPROVED:	SHT 13 OF 13