MARS SUPER MARKET EXPANSION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN

SITE ANALYSIS

1.	LOT AREA (PARCEL B-1):	367,254 SF OR 8.431 AC.
	LOT AREA (PARCEL C-1):	23,130 SF OR 0.531 AC.
	TOTAL	390,384 SF OR 8.962 AC.
2.	DISTURBED AREA:	93,586 SF OR 2.148 AC.
3.	ZONING:	B-2 (COMMERCIAL)
4.	EXISTING LAND USE:	COMMERCIAL (SHOPPING CENTER)
5.	PROPOSED LAND USE:	COMMERCIAL (SHOPPING CENTER)
6.	EXISTING IMPERVIOUS AREA:	
	EXISTING BUILDING AREA:	83,000 SF
	EXISTING PAVEMENT AREA:	283,823 SF
	TOTAL IMPERVIOUS AREA:	366,823 SF
7.	EXISTING PERCENT IMPERVIOUS AREA:	93.99 %
8.	PROPOSED IMPERVIOUS AREA:	
	EXISTING BUILDING AREA:	83,000 SF
	PROPOSED BUILDING ADDITION:	14,654 SF
	PROPOSED PAVEMENT AREA:	266,949 SF
	TOTAL IMPERVIOUS AREA:	364,603 SF
9.	PROPOSED PERCENT IMPERVIOUS AREA:	93.40 %
10.	GREEN AREA PROVIDED ON SITE:	25,751 SF
	PERCENT OF TOTAL SITE AREA:	6.60 %
11.	LANDSCAPED AREA AT PARKING AREAS:	14,238 SF
	PERCENT OF TOTAL SITE AREA:	3.64 %
12.	EXISTING BUILDING SQUARE FOOTAGE:	
	EX. SUPERMARKET:	28,816 SF
	REMAINING SHOPPING CENTER (PARCEL B-1 & C-1)	54,184 SF
	TOTAL EXISTING BUILDING AREA:	83,000 SF
13.	PROPOSED BUILDING SQUARE FOOTAGE:	
	EXISTING SUPERMARKET	28,816 SF
	PROP. SUPERMARKET ADDITION:	14,654 SF
	REMAINING SHOPPING CENTER (PARCEL B-1 & C-1)	54,184 SF
	TOTAL PROPOSED BUILDING AREA:	97,654 SF

14. NUMBER OF PARKING SPACES REQUIRED BY ZONING:
SHOPPING CENTER DESIGNATION 5 SPACES / 1000 SF
97,654 S.F. @ (5/1000) = 488.27 SPACES

TOTAL SPACES REQUIRED:	489 SPACES

15. NUMBER OF PARKING SPACES PROVIDED:

Parcel B-1	475 SPACES
Parcel C-1	18 SPACES
TOTAL SPACES PROVIDED:	493 SPACES

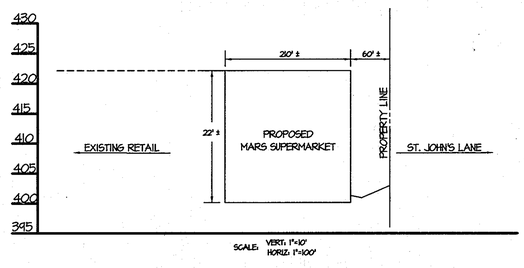
16. NUMBER OF HC PARKING SPACES PROVIDED: 12 SPACES

17. MINIMUM BUILDING SETBACKS:

REQUIRED	PROVIDED
FRONT: 30 FT	FRONT: 278 FT
SIDE: 30 FT	SIDE: 58 FT
REAR: 30 FT	REAR: 40 FT

GENERAL NOTES

1. ALL CONSTRUCTION AS SHOWN ON THESE PLANS IS TO BE TO CONDUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION VOLUME IV (OCT. 1990 AND ALL ADDENDA THERE TO) UNLESS OTHERWISE NOTED.
2. THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON FIELD LOCATIONS SUPPLEMENTED WITH EXISTING UTILITY DRAWINGS, AND SHOULD BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UTILITIES, AND ANY DAMAGE DONE TO THEM DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
3. CONTRACTOR TO NOTIFY HOWARD COUNTY, DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION (410-313-1880) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING CONSTRUCTION.
4. CONTRACTOR TO SCHEDULE PRECONSTRUCTION MEETING WITH HOWARD COUNTY, CONSTRUCTION INSPECTION DIVISION (410-313-1880) PRIOR TO STARTING CONSTRUCTION.
5. CONTRACTOR TO NOTIFY MISS UTILITY (1-800-257-7777) AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION WORK.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY MORRIS & RITCHIE ASSOCIATES, INC. DATED AUGUST 2001, AND SUPPLEMENTED WITH EXISTING AVAILABLE DESIGN PLANS.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24CA AND 17A WERE USED FOR THIS PROJECT.
8. CONTRACTOR IS TO REMOVE ANY ACCUMULATED DIRT OR SEDIMENT FROM ST. JOHNS LANE AND MD RTE 40.
9. ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATIONS, SECTION 134.
10. CONTRACTOR IS RESPONSIBLE FOR ALL SITE CONDITIONS, CONSTRUCTION REQUIREMENTS, AND SHALL CONFORM TO ALL STATE, FEDERAL, AND COUNTY CONSTRUCTION REGULATIONS. THE CONTRACTOR IS NOT RELIEVED OF RESPONSIBILITY SHOULD ANY REQUIRED ITEMS PERTAINING TO SITE CONSTRUCTION NOT BE INCLUDED ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ALL ITEMS NECESSARY TO COMPLETE THE SITE IMPROVEMENTS AS SHOWN ON THESE PLANS.
11. ANY DAMAGE TO EXISTING UTILITIES, PAVEMENT, OR CURB AND GUTTER DUE TO CONSTRUCTION ACTIVITY OUTSIDE THE LIMITS OF DISTURBANCE IS TO BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
12. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PROPERTY MONUMENTS, MARKERS, SIGNS, LIGHTS, OR ANY OTHER EXISTING SITE FEATURES DISTURBED DURING CONSTRUCTION.
13. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE "1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROLS" PUBLISHED JOINTLY BY THE WATER RESOURCES ADMINISTRATION, SOIL CONSERVATION SERVICE, AND STATE SOIL CONSERVATION COMMITTEE.
14. 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. MONUMENTS NOS. 24CA AND 17A WERE USED FOR THIS PROJECT.
15. CONTRACTOR TO TEST PIT ALL EXISTING UTILITIES PRIOR TO UTILITY CONSTRUCTION OR RELOCATION. AND REPORT FINDINGS TO SITE DESIGN ENGINEER OR OWNERS REPRESENTATIVE.
16. CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR THE PLACEMENT OF ALL SITE LIGHTING AND FIXTURES.
17. WATER IS PUBLIC, CONTRACT NO. 772-W. SEWER IS PUBLIC, CONTRACT NO. 32S.
18. NO 100-YEAR FLOOD PLAINS OR WETLANDS EXIST ON THE SITE.
19. SEE PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILES: F-77-01, F-71-05, VP-72-10, F-73-10, F-82-69, F-72-70, F-98-133, SDP 70-67, SDP 72-75, SDP 90-182.
20. A NOISE STUDY FOR THIS PROJECT IS NOT REQUIRED.
21. THE SITE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS IN ACCORDANCE WITH SECTION 16.1202 (1) (ii). THE PROJECT WAS CONSTRUCTED IN 1972 UNDER SDP-72-75. THE LIMITS OF DISTURBANCE SHOWN ON THIS SDP DOES NOT EXTEND TO THE LIMIT OF DISTURBANCE SHOWN ON SDP 72-75.
22. A GEOTECHNICAL STUDY WAS PREPARED BY GEOTECHNOLOGY ASSOCIATES, INC. DATED JULY 2001.
23. EXISTING PARKING LOT STRIPING TO BE REMOVED AND RESTRIPED PER ENCLOSED PLANS.
24. ALL PLAN DIMENSIONS ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

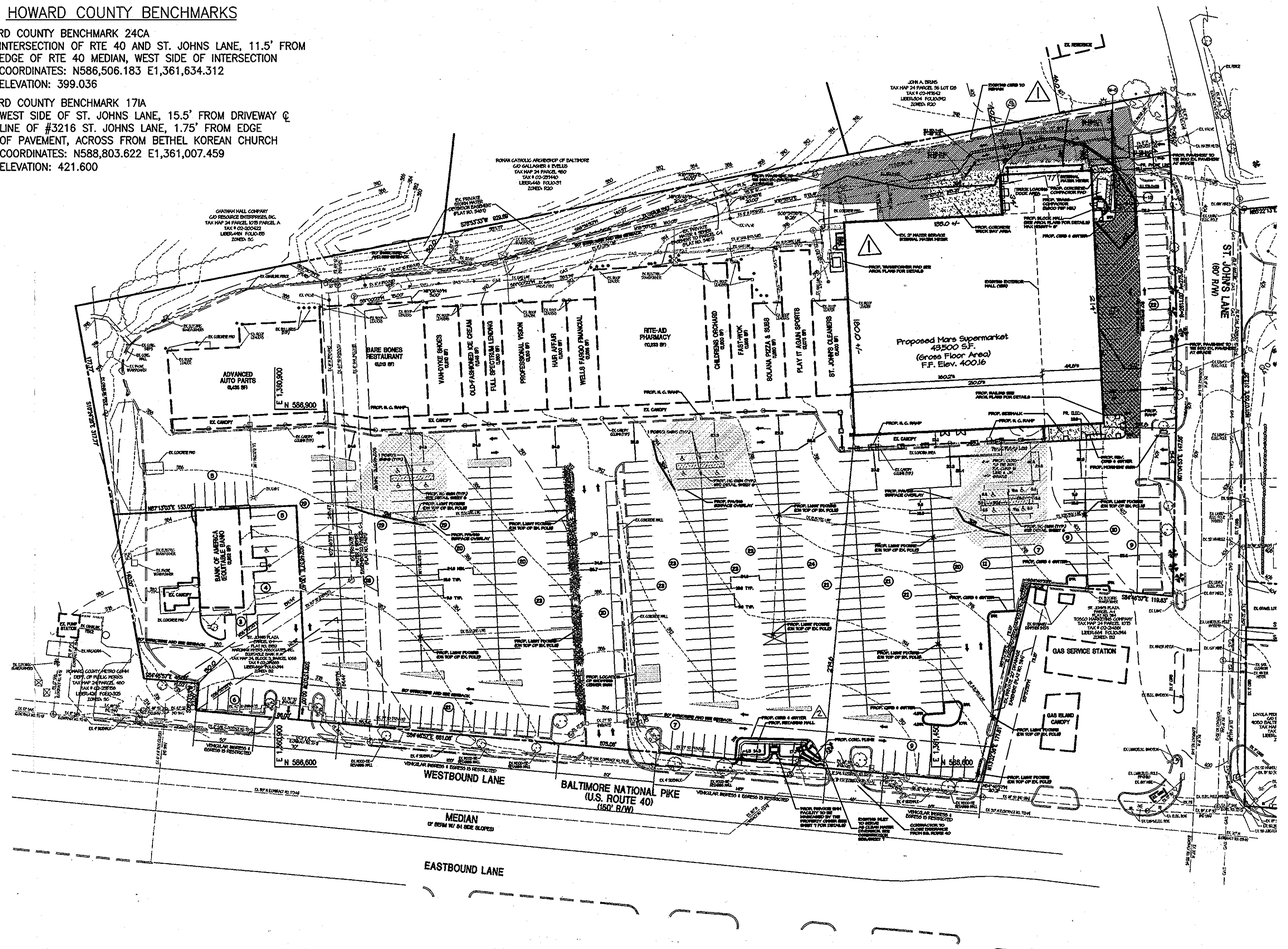


SCALE: VERT. 1"=10' HORIZ. 1"=100'

HOWARD COUNTY BENCHMARKS

HOWARD COUNTY BENCHMARK 24CA
INTERSECTION OF RTE 40 AND ST. JOHNS LANE, 11.5' FROM EDGE OF RTE 40 MEDIAN, WEST SIDE OF INTERSECTION
COORDINATES: N586,506.183 E1,361,634.312
ELEVATION: 399.036

HOWARD COUNTY BENCHMARK 17IA
WEST SIDE OF ST. JOHNS LANE, 15.5' FROM DRIVEWAY ℄ LINE OF #3216 ST. JOHNS LANE, 1.75' FROM EDGE OF PAVEMENT, ACROSS FROM BETHEL KOREAN CHURCH
COORDINATES: N588,803.622 E1,361,007.459
ELEVATION: 421.600



SHOPPING CENTER COMPOSITE PLAN
SCALE: 1"=60'

SWM MANAGEMENT NOTE

STORMWATER MANAGEMENT FOR THE PROPOSED SITE IMPROVEMENTS WILL BE PROVIDED BY A SURFACE SAND FILTER. THIS FACILITY WILL PROVIDE WATER QUALITY MANAGEMENT FOR 20% OF THE DEVELOPED SITES IMPERVIOUS AREA. THE SITE IS CONSIDERED AS "REDEVELOPMENT" PER THE HOWARD COUNTY SWM ORDINANCE. THEREFORE, ONLY WATER QUALITY MANAGEMENT IS REQUIRED FOR 20% OF THE DEVELOPED SITE IMPERVIOUS AREA, WHERE 'SITE' IS DEFINED AS THE PROPOSED EXPANSION AND ALL PARKING AND DRIVE AISLES REQUIRED FOR THE EXPANSION AREA. ALL OWNERSHIP AND MAINTENANCE RESPONSIBILITY REMAINS WITH THE DEVELOPER AND IT IS THEIR FINANCIAL OBLIGATIONS TO MAINTAIN SAID FACILITY TO CURRENT STANDARDS AS AVAILABLE FROM HOWARD COUNTY.

BOUNDARY SURVEY NOTE

BOUNDARY LINES SHOWN HEREON ARE BASED UPON BOUNDARY SHOWN ON PLAN ENTITLED "OVERALL PARKING SITE PLAN-PARCEL C-1 ST. JOHNS PLAZA" FROM SDP-90-182. NO BOUNDARY FIELD WORK HAS BEEN PERFORMED BY MORRIS & RITCHIE ASSOCIATES, INC.

SHEET INDEX

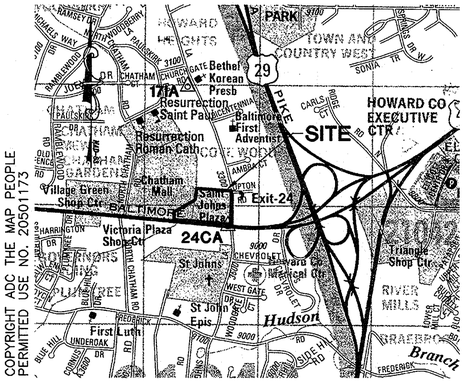
		Sht # of 16
TITLE SHEET	SDP-1	1
EXISTING CONDITIONS/DEMOLITION PLAN	SDP-2	2
SITE PLAN	SDP-3	3
GRADING & SEDIMENT CONTROL PLAN	SDP-4	4
GRADING & SEDIMENT CONTROL DETAILS	SDP-5	5
STORM DRAIN & UTILITY PROFILES, SITE DETAILS	SDP-6	6
SWM DETAIL PLAN	SDP-7	7
SWM DETAIL PLAN	SDP-7A	8
SWM FACILITY RETAINING WALL DETAILS	SDP-8	9
LANDSCAPE PLAN	SDP-9	10
LANDSCAPE DETAILS	SDP-10	11
ROAD IMPROVEMENT PLAN-ST. JOHN'S LANE	SDP-11	12
TRAFFIC CONTROL PLAN-ST. JOHN'S LANE	SDP-12	13
STORM DRAIN PROFILES & DETAILS-ST. JOHN'S LANE	SDP-13	14
TRAFFIC SIGNALIZATION PLAN-US 40 & ST. JOHNS LANE	15 OF 16	15
GENERAL INFORMATION-US 40 & ST. JOHNS LANE	16 OF 16	16

PIERO VAN MELLITS No.21875 REGISTERED PROFESSIONAL ENGINEER STATE OF MARYLAND 10-17-02

REVISION #1 ONLY
PIERO V. MELLITS, P.E. # 21875

PLAT REFERENCE: PLAT NO. 13152
DEED REFERENCE: 669/394
TAX ACCOUNT #: 02-214873

OWNER	FAX NO.: 410-531-3432
A. NAME: Charlotte H. Myers	B.TELEPHONE: 410-531-3432
C. COMPANY: Hardman-Myers, Inc.	
D. ADDRESS: P.O. Box 757	
E. CITY: Clarksville STATE: MD	ZIP: 21029-0757
DEVELOPER	FAX NO.: 410-342-4662
A. NAME: E. Philip Hanlon	B.TELEPHONE: 410-342-0197
C. COMPANY: Mars Super Markets, Inc.	
D. ADDRESS: 3401 E. Federal Street	
E. CITY: Baltimore STATE: MD	ZIP: 21213-4011



COPYRIGHT ADC THE MAP PEOPLE PERMITTED USE NO. 20501173

VICINITY MAP SCALE: 1"=1000'

PERMIT INFORMATION CHART					
Subdivision Name: ST. JOHN'S PLAZA			Section/Area: N/A		Lot/Parcel #: B-1
Plat #: 13152	Block #: 5	Zoning: B-2	Tax Map: 24	Elec. District: 2	Census Tract: 6027.00
Water Code: F-60			Sewer Code: 1403700		

ADDRESS CHART		
LOT/PARCEL	STORE NAME	STREET ADDRESS
B-1	ADVANCED AUTO PARTS	9150 BALTIMORE NATIONAL PIKE, SUITE 25
B-1	BARE BONES RESTAURANT	9150 BALTIMORE NATIONAL PIKE, SUITE H
B-1	VAN-DYKE SHOES	9150 BALTIMORE NATIONAL PIKE, SUITE 19
B-1	OLD-FASHIONED ICE CREAM	9150 BALTIMORE NATIONAL PIKE, SUITE 17
B-1	FULL SPECTRUM LENDING	9150 BALTIMORE NATIONAL PIKE, SUITE 16
B-1	PROFESSIONAL VISION	9150 BALTIMORE NATIONAL PIKE, SUITE 15
B-1	HAIR AFFAIR	9150 BALTIMORE NATIONAL PIKE, SUITE 13
B-1	WELLS FARGO FINANCIAL	9150 BALTIMORE NATIONAL PIKE, SUITE 12
B-1	RITE-AID PHARMACY	9150 BALTIMORE NATIONAL PIKE, SUITE 10
B-1	CHILDRENS ORCHARD	9150 BALTIMORE NATIONAL PIKE, SUITE 7
B-1	FAST-WOK	9150 BALTIMORE NATIONAL PIKE, SUITE 5
B-1	SOLANA PIZZA & SUBS	9150 BALTIMORE NATIONAL PIKE, SUITE 4
B-1	PLAY IT AGAIN SPORTS	9150 BALTIMORE NATIONAL PIKE, SUITE 3
B-1	ST. JOHNS CLEANERS	9150 BALTIMORE NATIONAL PIKE, SUITE 2
B-1	MARS SUPERMARKET	9150-1 BALTIMORE NATIONAL PIKE

2 PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 27742, EXPIRATION DATE JULY 18, 2012.

STATE OF MARYLAND JOHN C. POWLAS JR. No. 27742 PROFESSIONAL ENGINEER

REV #2 ONLY 2/24/2012
JOHN C. POWLAS, P.E. 27742

2 BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21031
PHONE: 410-229-9851

APPROVED DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	8/15/02 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	8/20/02 DATE
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING	8/26/02 DATE

SDP-1

MRA

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9080 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

PIERO VAN MELLITS No.21875 REGISTERED PROFESSIONAL ENGINEER STATE OF MARYLAND 10-17-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
TITLE SHEET
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS
09/02	1 REDUCE TRUCK DOCK WIDTH BY THREE (3).
	1 REVISE UTILITY SERVICES TO BUILDING.
1/25/12	2 RELOCATE CURB OPENING AND CONCRETE CHANNEL TO SURFACE SAND FILTER FACILITY. REBUILD INLET LID AND CONCRETE COND.

JOB NO.: 11643.01
SCALE: AS NOTED
DATE: 08/07/02
DRAWN BY: RLZ, TCN
DESIGN BY: TCN
REVIEW BY: PVM
SHEET: 1 OF 16

SDP-02-31

NOTE: THIS PLAN SHALL BE USED FOR SITE DEMOLITION ONLY. REFER TO SITE PLAN, SEDIMENT CONTROL PLAN, LANDSCAPE PLAN, AND SWM PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- EX. 2' CONTOUR
- EX. 10' CONTOUR
- EX. PROPERTY LINE
- EX. CURB
- EX. ROAD/PAVEMENT
- EX. CONCRETE PAD
- EX. BOLLARDS
- EX. BUILDING
- EX. FENCE
- EX. WATER LINE TO BE REMOVED (T.B.R.)
- EX. PAVING TO BE REMOVED
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. ELECTRIC LINE
- EX. GAS LINE
- EX. TELEPHONE LINE
- EX. TREE LINE
- EX. LIGHT/ELEC. POLE
- EX. FH/WATER VALVE
- EX. TREES/SHRUBS

OWNER		FAX NO.: 410-531-3432
A. NAME:	Charlotte H. Myers	B.TELEPHONE: 410-531-3432
C. COMPANY:	Hardman-Myers, Inc.	
B. ADDRESS:	P.O. Box 757	
E. CITY:	Clarksville STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.: 410-342-4662
A. NAME:	E. Philip Hanlon	B.TELEPHONE: 410-342-0197
C. COMPANY:	Mars Super Markets, Inc.	
B. ADDRESS:	3401 E. Federal Street	
E. CITY:	Baltimore STATE: MD	ZIP: 21213-4011

CHATHAM MALL COMPANY
C/O RESOURCE ENTERPRISES, INC.
TAX MAP 24 PARCEL 1075 PARCEL A
TAX # 02-200422
LIBER:4981 FOLIO:155
ZONED: SC

ROMAN CATHOLIC ARCHBISHOP OF BALTIMORE
C/O GALLAGHER & EVELIUS
TAX MAP 24 PARCEL 480
TAX # 02-257440
LIBER:448 FOLIO:31
ZONED: R20

JOHN A. BRUNS
TAX MAP 24 PARCEL 36 LOT 128
TAX # 02-197642
LIBER:304 FOLIO:342
ZONED: R20

ADVANCED AUTO PARTS (8,435 SF)
BARE BONES RESTAURANT (8,013 SF)
VAN-DYKE SHOES (2,610 SF)
OLD-FASHIONED ICE CREAM (1,046 SF)
FULL SPECTRUM LENDING (1,350 SF)
PROFESSIONAL VISION (3,150 SF)
HAIR AFFAIR (1,050 SF)
WELLS FARGO FINANCIAL (2,366 SF)
RITE-AID PHARMACY (10,223 SF)
CHILDRENS ORCHARD (2,300 SF)
FAST-WOK (1,068 SF)
SOLANA PIZZA & SUBS (1,680 SF)
PLAY IT AGAIN SPORTS (3,075 SF)
ST. JOHN'S CLEANERS (2,400 SF)
VALU FOOD SUPERMARKET (ABANDONED) (28,818 SF)
BANK OF AMERICA (EQUITABLE BANK) (2,988 SF)
GAS SERVICE STATION

ST. JOHN'S LANE (60' R/W)
BALTIMORE NATIONAL PIKE (U.S. ROUTE 40) (150' R/W)
WESTBOUND LANE
MEDIAN (2' BERM W/ 8:1 SIDE SLOPES)
EASTBOUND LANE

ST. JOHN'S PLAZA
PARCEL C-1
PLAT NO. 13152
HARDMAN MYERS ASSOCIATES, INC.
EQUITABLE BANK N.A.
TAX MAP 24, BLOCK 5, PARCEL 1068
TAX # 02-240865
LIBER:4665 FOLIO:344
ZONED: B2

HOWARD COUNTY METRO COMM
DEPT. OF PUBLIC WORKS
TAX MAP 24 PARCEL 460
TAX # 02-255158
LIBER:426 FOLIO:325
ZONED: SC

ST. JOHN'S PLAZA
PARCEL A-1
PLAT NO. 5114
TOSCO MARKETING COMPANY
TAX MAP 24 PARCEL 1075
TAX # 02-214001
LIBER:6691 FOLIO:344
ZONED: B2

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 8/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING	DATE 8/20/02

SDP-2

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

PIERO VAN MELLITS No.21875 REGISTERED PROFESSIONAL ENGINEER 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
EXISTING CONDITIONS/DEMOLITION PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS

JOB NO.: 11643.01
SCALE: 1" = 30'
DATE: 08/07/02
DRAWN BY: RLZ, TCN
DESIGN BY: TCN
REVIEW BY: PVM
SHEET: 2 OF 16

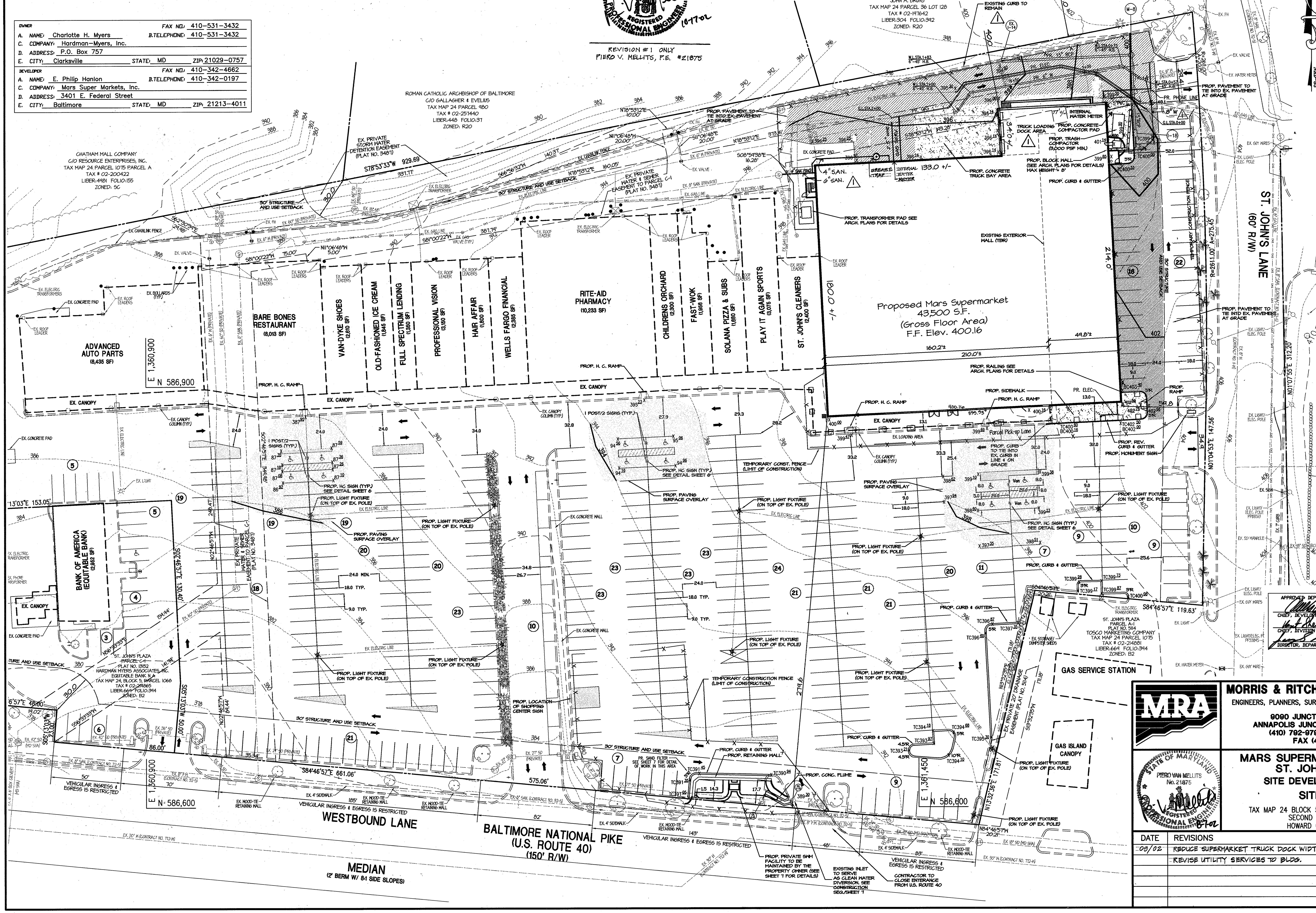
SDP-02-31

NOTE: THIS PLAN SHALL BE USED FOR SITE GRADING, STORM DRAIN, AND PAVING PLAN ONLY. REFER TO SEDIMENT CONTROL PLAN, DEMO PLAN, LANDSCAPE PLAN, AND SWM PLAN FOR ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR UTILITY CONNECTIONS INTO BUILDINGS.

OWNER		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B.TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B.TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

STATE OF MARYLAND PIERO VAN MELLITS No. 21875 REGISTERED PROFESSIONAL ENGINEER 10-7-02

REVISION #1 ONLY
PIERO V. MELLITS, P.E. #21875



LEGEND

- EX. 2' CONTOUR
- EX. 10' CONTOUR
- EX. CURB
- EX. ROAD/PAVEMENT
- EX. CONCRETE PAD
- EX. BOLLARDS
- EX. BUILDING
- EX. PROPERTY LINE
- EX. FENCE
- EX. WATER LINE
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. ELECTRIC LINE
- EX. GAS LINE
- EX. TELEPHONE LINE
- EX. TREE LINE
- EX. LIGHT/ELEC. POLE
- EX. FH/WATER VALVE
- EX. TREES/SHRUBS
- PR. STORM DRAIN
- PR. WATER LINE
- PR. ELEC. LINE
- PR. GAS LINE
- PR. PHONE LINE
- PR. 2' CONTOUR
- PR. 10' CONTOUR
- PR. SPOT ELEVATION
- 30' BUILDING SETBACK LINE
- HEAVY DUTY PAVEMENT
- LIGHT DUTY PAVEMENT
- CONCRETE PAVEMENT
- PAINTED NO PARKING STRIPING
- (22) PROPOSED PARKING SPACES
- PROPOSED LIGHTING – POLE AND WALL MOUNTED

NAD-83

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 8/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING	DATE 8/20/02

SDP-3

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

STATE OF MARYLAND PIERO VAN MELLITS No. 21875 REGISTERED PROFESSIONAL ENGINEER 8-7-02

MARS SUPERMARKET ADDITION ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
SITE PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	
09/02	REDUCE SUPERMARKET TRUCK DOCK WIDTH BY 3' ⚠1	JOB NO.: 11643.01
	REVISE UTILITY SERVICES TO BLDG. ⚠1	SCALE: 1" = 30'
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 3 OF 16

SDP-02-31

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

Jim Myers/CEI 8/13/02
U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE

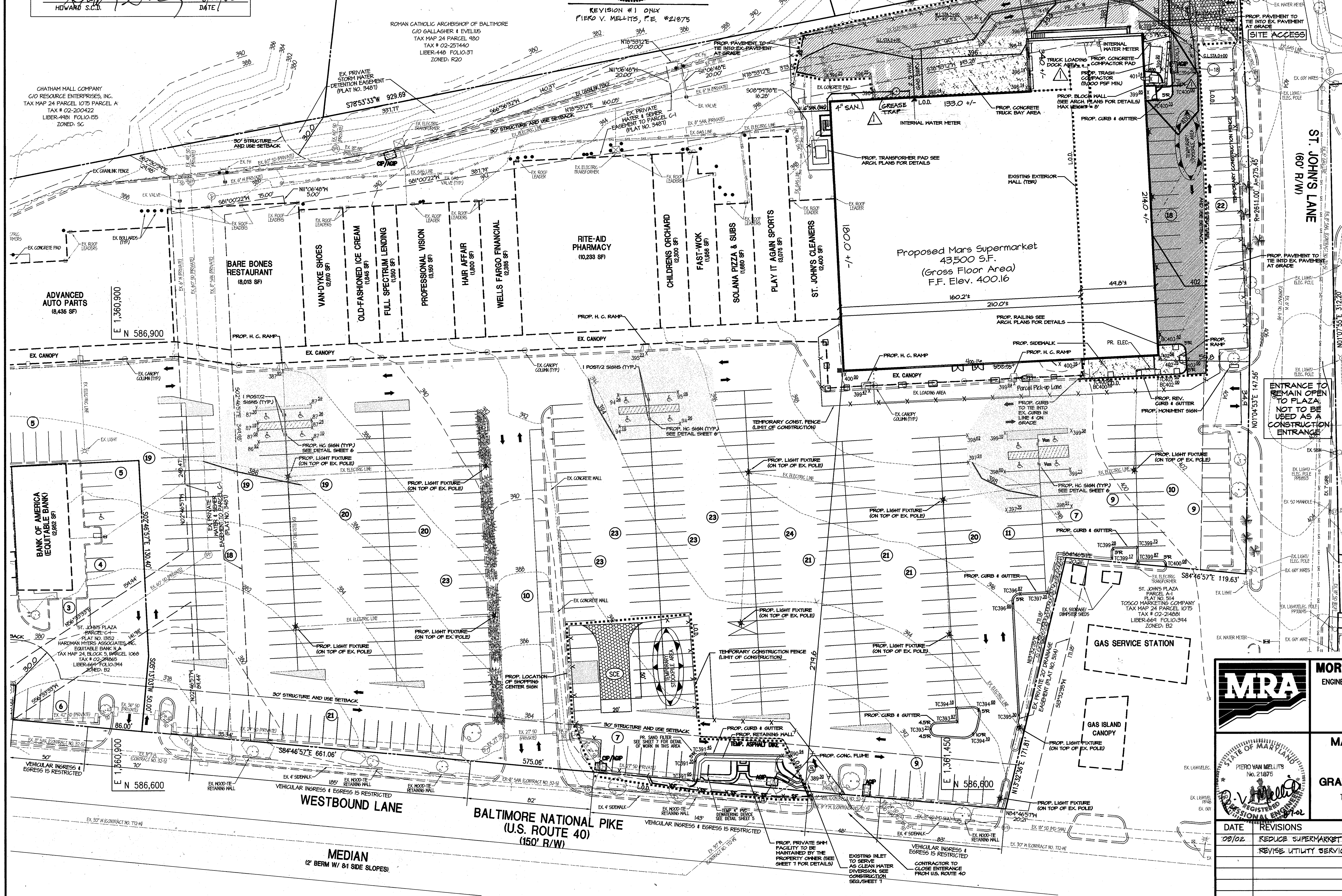
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

8/13/02
HOWARD S.C.D. — DATE

OWNER			
		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B. TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B. TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

NOTE: THIS PLAN SHALL BE USED FOR SITE GRADING AND SEDIMENT CONTROL ONLY. REFER TO SITE PLAN, LANDSCAPE PLAN, DEMO PLAN AND SWM PLAN FOR ADDITIONAL INFORMATION.

STATE OF MARYLAND — PIERO VAN MELLITS No. 21875 — REGISTERED PROFESSIONAL ENGINEER
10-17-02
REVISION #1 ONLY
PIERO V. MELLITS, P.E. #21875



LEGEND

404	EX. 2' CONTOUR
400	EX. 10' CONTOUR
	EX. CURB
	EX. ROAD/PAVEMENT
	EX. CONCRETE PAD
• • •	EX. BOLLARDS
	EX. BUILDING
	EX. PROPERTY LINE
	EX. FENCE
EX. 6" W	EX. WATER LINE
EX. 6" SAN.	EX. SANITARY SEWER
EX. 15" SD	EX. STORM DRAIN
EX. ELECTRIC	EX. ELECTRIC LINE
EX. GAS	EX. GAS LINE
EX. PHONE	EX. TELEPHONE LINE
	EX. TREE LINE
	EX. LIGHT/ELEC. POLE
	EX. FH/WATER VALVE
	EX. TREES/SHRUBS
PR. 15" SD	PR. STORM DRAIN
PR. 6" W	PR. WATER LINE
PR. ELEC.	PR. ELEC. LINE
PR. GAS	PR. GAS LINE
PR. PHONE	PR. PHONE LINE
402	PR. 2' CONTOUR
400	PR. 10' CONTOUR
x TC400.00	PR. SPOT ELEVATION
	30' BUILDING SETBACK LINE
	HEAVY DUTY PAVEMENT
	LIGHT DUTY PAVEMENT
	CONCRETE PAVEMENT
	PAINTED NO PARKING STRIPING
(22)	PROPOSED PARKING SPACES
	PROPOSED LIGHTING – POLE AND WALL MOUNTED
L.O.D.	PR. LIMIT OF DISTURBANCE
CIP	PR. CURB INLET PROTECTION
AGIP	PR. AT GRADE INLET PROTECTION
SF	PR. SILT FENCE
	TEMPORARY ASPHALT DIKE
SCE	PR. STONE CONSTRUCTION ENTRANCE
	TEMPORARY STOCK PILE AREA

NAD-83

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.

P-V-Mellits 8-7-02
SIGNATURE OF ENGINEER — DATE
PIERO VAN MELLITS, P.E. MD LICENSE #21875

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 SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

E. Philip Hanlon 8/6/02
SIGNATURE OF DEVELOPER — DATE
E. PHILIP HANLON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

8/15/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE
8/20/02
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE
8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE

SDP-4

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
GRADING & SEDIMENT CONTROL PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — PIERO VAN MELLITS No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

DATE	REVISIONS	
09/02	REDUCE SUPERMARKET TRUCK DOCK WIDTH BY 3' ⚠1	JOB NO.: 11643.01
	REVISE UTILITY SERVICES TO BLDG. ⚠1	SCALE: 1" = 30'
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 4 OF 16

SDP-02-31

STANDARDS AND SPECIFICATION FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIAL TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREA HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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

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

I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVELS, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUICKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

III. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SF) 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.

II. FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRE

I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION-SECTION I-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

III. TOPSOIL APPLICATION

I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION.

III. TOPSOIL SHALL BE UNIFORMLY DISTURBED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

IV. TOPSOIL SHALL NOT PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING-INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

I. COMPOSTED SLUDGE MATERIAL FOR USE A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRE SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.

B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A pH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.

C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SF.

II. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4LB/1,000 SF, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA. PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTE. REVISED 1973.

STANDARDS AND SPECIFICATIONS FOR LAND GRADING

DEFINITION

RESHAPING OF THE EXISTING LAND SURFACE IN ACCORDANCE WITH A PLAN AS DETERMINED BY ENGINEERING SURVEY AND LAYOUT.

PURPOSE

THE PURPOSE OF A LAND GRADING SPECIFICATION IS TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON THOSE AREAS WHERE THE EXISTING LAND SURFACE IS TO BE RESHAPED BY GRADING ACCORDING TO PLAN.

DESIGN CRITERIA

THE GRADING PLAN SHOULD BE BASED UPON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDINGS TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED ON THE GRADING OPERATION RELATED TO SLOPE STABILITY, EFFECT ON ADJACENT PROPERTIES AND DRAINAGE PATTERNS, MEASURES FOR DRAINAGE AND WATER REMOVAL AND VEGETATIVE TREATMENT, ETC.

MANY COUNTIES HAVE REGULATIONS AND DESIGN PROCEDURES ALREADY ESTABLISHED FOR LAND GRADING AND CUT AND FILL SLOPES. WHERE THESE REQUIREMENTS EXIST, THEY SHALL BE FOLLOWED. THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS OF THE AREA(S) TO BE GRADED. THE PLAN SHALL ALSO INCLUDE PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, SAFE DISPOSAL OF RUNOFF WATER AND DRAINAGE, SUCH AS WATERWAYS, LINED DITCHES, REVERSE SLOPE BENCHES (INCLUDE GRADE AND CROSS SECTION), GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSURFACE DRAINS. THE PLAN SHALL ALSO INCLUDE PHASING OF THESE PRACTICES. THE FOLLOWING SHALL BE INCORPORATED INTO THE PLAN:

I. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO INSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

II. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. (WHERE THE SLOPE IS TO BE MOWED THE SLOPE SHOULD BE NO STEEPER THAN 3:1, 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.) SLOPES EXCEEDING 2:1 SHALL REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS THAT SHALL BE ADEQUATELY SHOWN ON THE PLANS.

III. REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC., SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.

A. BENCHES SHALL BE A MINIMUM OF SIX FEET WIDE TO PROVIDE FOR EASE OF MAINTENANCE.

B. BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 6:1 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. BENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.

C. THE FLOW LENGTH WITHIN A BENCH SHALL NOT EXCEED 800' UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS. FOR FLOW CHANNEL STABILIZATION SEE TEMPORARY SWALE.

IV. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF EARTH DIKES, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNED STRUCTURE, EXCEPT WHERE:

A. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FORM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.

B. THE FACE OF SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATED FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGEWAYS, GRADED SWALES, DOWNSPOUTS, ETC.

C. THE FACE OF THE SLOPE WILL BE PROTECTED BY SPECIAL EROSION CONTROL MATERIALS, TO INCLUDE, BUT NOT LIMITED TO: APPROVED VEGETATIVE STABILIZATION PRACTICES (SEE SECTION G), RIP-RAP OR OTHER APPROVED STABILIZATION METHODS.

V. CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED AS SHOWN ON THE FOLLOWING DIAGRAM. THESE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND WILL HAVE STEPS CUT AT NOMINAL TWO-FOOT INTERVALS WITH NOMINAL THREE-FOOT HORIZONTAL SHELVES. THESE STEPS WILL VARY DEPENDING ON THE SLOPE RATIO OR THE CUT SLOPE. THE NOMINAL SLOPE LINE IS 1:1. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION. OVERLAND FLOW SHALL BE DIVERTED FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRIED TO A SUITABLE OUTLET.

VI. SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.

VII. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES.

VIII. FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIAL. IT SHOULD BE FREE OF STONES OVER TWO (2) INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER EIGHT (8) INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT. FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FROZEN FOUNDATION.

IX. STOCKPILES, BORROW AREAS AND SPOIL SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATIONS.

X. ALL DISTURBED AREAS SHALL BE STABILIZED STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH 20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.

VEGETATIVE STABILIZATION

PERMANENT AND TEMPORARY SEEDING, SODDING AND MULCHING

I. SITE PREPARATION

PERMANENT OR TEMPORARY VEGETATION SHALL BE ESTABLISHED WITHIN SEVEN (7) DAYS ON THE SURFACE OF ALL SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, SEDIMENT CONTROL BASINS, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND WITHIN 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. MULCHING MAY ONLY BE USED ON DISTURBED AREAS AS TEMPORARY COVER WHERE VEGETATION IS NOT FEASIBLE OR WHERE SEEDING CAN NOT BE COMPLETED BECAUSE OF WEATHER.

II. SEEDED PREPARATION AND SEEDING APPLICATION

LOOSEN THE TOP LAYER OF THE SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS DISC HARROWS, CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF THE SOIL BY DISCING OR BY OTHER SUITABLE MEANS. ROUGH AREAS SHOULD NOT BE ROLLED OR DRAGGED SMOOTH , BUT LEFT IN A ROUGHENED CONDITION. STEEP SLOPES GREATER THAN 3:1 SHOULD BE TRACKED BY A DOZER, LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL SHOULD BE LOOSE AND FRIABLE. PERMANENT COVER MAY REQUIRE AN APPLICATION OF TOPSOIL. IF SO, IT MUST MEET THE REQUIREMENTS SET FORTH IN SECTION 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL FROM THE 1994 STANDARDS AND SPECIFICATIONS.

III. SOIL AMENDMENTS

SOIL TESTS SHALL BE MADE ON SITES OVER FIVE ACRES TO DETERMINE THE EXACT REQUIREMENTS FOR BOTH LIME AND FERTILIZER. FOR SITES UNDER 5 ACRES, IN LIEU OF A SOIL TEST, APPLY THE FOLLOWING:

FERTILIZER NITROGEN 2 LBS/1000 SF (90 LBS/AC)
P205 4 LBS/1000 SF (175 LBS/AC)
K20 4 LBS/1000 SF (174 LBS/AC)

GROUND LIMESTONE 2 TONS/AC

IV. SEDIMENT CONTROL PRACTICE SEEDING

SELECT A SEEDING MIXTURE FROM TABLE 25 OR 26 IN SECTION 'G' OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BELOW.
NOTE: IF SEDIMENT CONTROL PRACTICES ARE IN FOR LONGER THAN 12 MONTHS, PERMANENT SEEDING IS REQUIRED.

V. TEMPORARY/PERMANENT SEEDING MIXTURES AND RATES

SELECT A SEEDING MIXTURE FROM APPROPRIATE TABLE 25 OR 26 IN SECTION 'G' OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BELOW.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE(HARDINESS ZONE 7a) FROM TABLE 26					FERTILIZER RATE (10-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE	SEEDING DEPTH		
1	BARLEY OR RYE PLUS FOXTAIL MILLET	8/15-11/30	8/15-11/30	1/4"-1/2"	600 LB/AC (15 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)

PERMANENET SEEDING SUMMARY

SEED MIXTURE(HARDINESS ZONE 7a) FROM TABLE 25					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE	SEEDING DEPTH	N	P_2O_5	K_2O	
3	TALL FESCUE (85%)	8/15-11/30	8/15-11/30	1/4"-1/2"	2 LB/ 1000 SF)	4 LB/ 1000 SF)	4 LB/ 1000 SF)	2 TONS/AC (100 LB/ 1000 SF)
	CHEWINGS FESCUE (10%)	8/15-11/30	8/15-11/30	1/4"-1/2"				
	KENTUCKY BLUE GRASS (5%)	8/15-11/30	8/15-11/30	1/4"-1/2"	=900 LBS/AC OF 10-20-20			

VI. TURFGRASS ESTABLISHMENT

THIS INCLUDES LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. AREA TO RECEIVE SEED SHALL BE TILLED BY DISCING OR BY OTHER APPROVED METHODS TO A DEPTH OF 3 TO 5 INCHES. LEVELED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OF CHOOSE A TURFGRASS MIXTURE FROM PATE G-20 OF THE 1994 STANDARDS AND SPECIFICATIONS OR SELECT FROM THE LIST IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".

VII. MULCHING

ALL SEEDING REQUIRE MULCHING. ALSO MULCH DURING NON-SEEDING DATES UNTIL SEEDING CAN BE DONE.
MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF A 2 TONS/ACRE OR 90 LBS/1000 SF (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS/ACRE. MULCH MATERIAL SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY MULCH NETTINGS, MULCH ANCHORING TOOL, WOOD CELLULOSE FIBER OR LIQUID MULCH BINDERS.

APPLY WOOD CELLULOSE FIBER AT A DRY WEIGHT OF 1,500 LBS/ACRE. IF MIXED WITH WATER, USE 50 LBS. OF WOOD CELLULOSE FIBER PER 1000 GALLONS OF WATER.

LIQUID BINDER SHOULD BE APPLIED HEAVIER AT THE EDGE, WHERE WIND CATCHES MULCH IN VALLEYS, AND ON CREST OF BANKS. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. APPLY RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR AND MULCH. STABLE LIGHT WEIGHT, PLASTIC NETTING OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

VIII. SODDING

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD IS TO BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR USING STAGGERED JOINTS WITH ALL ENDS TIGHTLY ABUTTED AND NOT OVER LAPPING. SOD SHALL BE ROLLED AND THOROUGHLY WATERED AFTER INSTALLATION. DAILY WATERING TO MAINTAIN 4 INCH DEPTH OF MOISTURE FOR THE FIRST WEEK IS REQUIRED IN THE ABSENCE OF RAINFALL. SOD IS NOT TO BE APPLIED ON FROZEN GROUND.

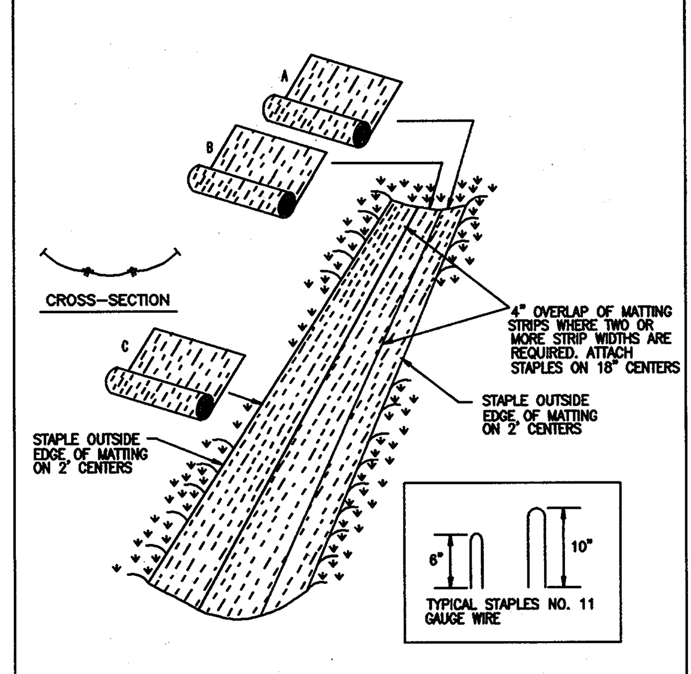
IX. MAINTENANCE

A. IRRIGATE-APPLY MINIMUM 1" OF WATER EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE, WHEN SOIL MOISTURE BECOMES DEFICIENT TO PREVENT LOSS OF STAND OF PROTECTIVE VEGETATION.

B. REPAIRS- IF STAND PROVIDES BETWEEN 40% TO 94% GROUND COVERAGE, OVERSEED AND FERTILIZER USING HALF OF THE RATES ORIGINALLY APPLIED. IF STAND PROVIDES LESS THAN 40% COVERAGE, REESTABLISH AND STAND FOLLOWING ORIGINAL RATES AND PROCEDURES.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G-22-2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

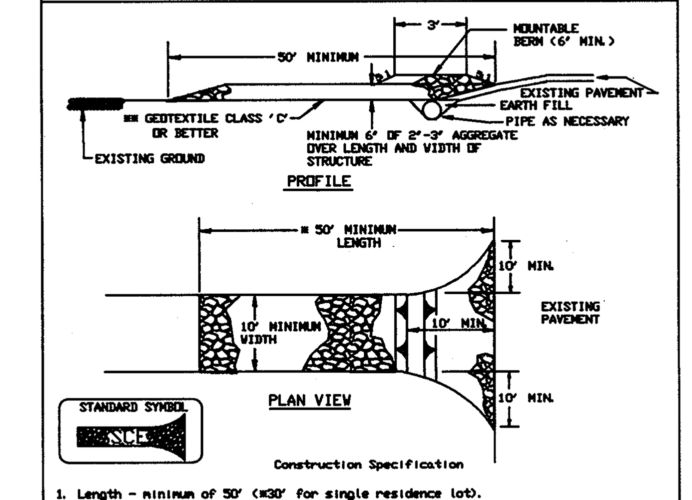
CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G-22-2A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

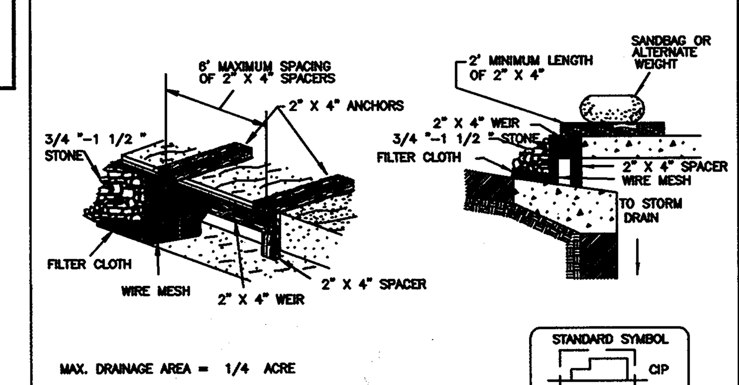


Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm 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 SCE is located at a high spot 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.
6. 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)



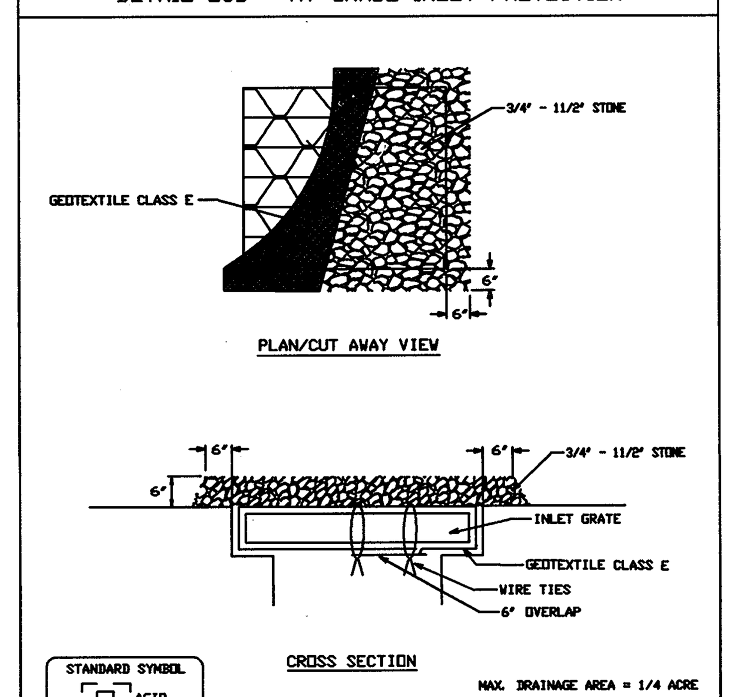
MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23B - AT GRADE INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
2. Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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] 8-7-02

SIGNATURE OF ENGINEER DATE
PIERO VAN MELLITS, P.E. MD LICENSE #21875

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 SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

E. Philip Hanlon 8/6/02

SIGNATURE OF DEVELOPER DATE
E. PHILIP HANLON

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

[signature] 8/13/02

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

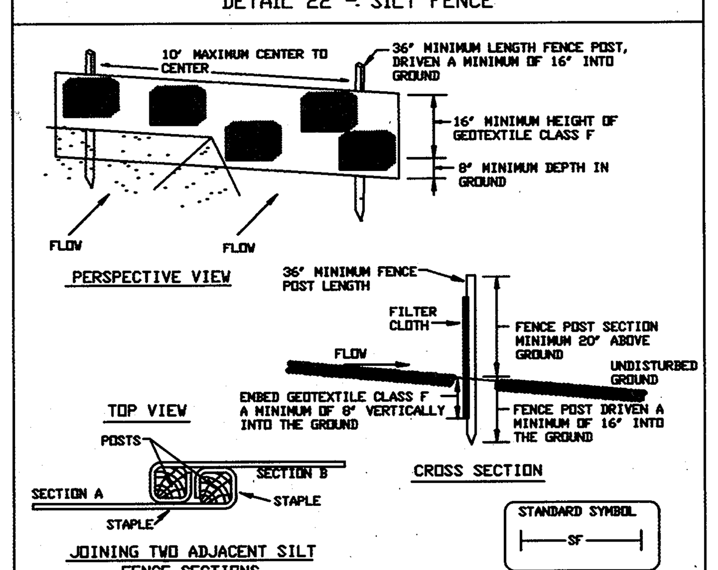
[signature] 8/3/02

HOWARD S.C.D. DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 8/15/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[signature] 8/20/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[signature] 8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter standard T or U section weighting not less than 1.00 pond per linear foot. (minimum) round and shall be of sound quality hardwood. Steel posts will be
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SILT FENCE

Silt Fence Design Criteria

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

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1.	OBTAIN ALL NECESSARY PERMITS. CONTACT THE HOWARD COUNTY OFFICE OF INSPECTIONS AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK.	1 DAY
2.	INSTALL TEMPORARY CONSTRUCTION FENCE. SAWCUT AND REMOVE PAVEMENT FOR INSTALLATION OF SEDIMENT CONTROLS ONLY.	2 DAYS
3.	INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES REQUIRED FOR DEMOLITION WORK AND BUILDING CONSTRUCTION.	2 DAYS
4.	SAWCUT REMAINING EXISTING PAVEMENT, UTILITIES, SERVICES, BUILDING SLABS AND WALLS PER DEMOLITION PLAN.	20 DAYS
5.	BEGIN BUILDING CONSTRUCTION. INSTALL ALL PROPOSED SERVICES, UTILITIES, & STORM DRAIN PER SITE PLAN AND ARCHITECTURAL PLANS.	3 MONTHS
6.	BEGIN INSTALLATION OF SWM FACILITY. SEE SEQUENCE OF CONSTRUCTION FOR SWM FACILITY ON SHEET 7.	20 DAYS
7.	INSTALL PAVING, CURB & GUTTER, SIDEWALK, FINAL LANDSCAPING, & RESTRIPE EXISTING PARKING LOT PER SITE PLAN.	20 DAYS
8.	STABILIZE ALL REMAINING DISTURBED AREAS.	2 DAYS
9.	WITH SEDIMENT CONTROL INSPECTOR'S APPROVAL, REMOVE ALL SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.	2 DAYS

HOWARD SOIL CONSERVATION DISTRICTS STANDARDS SEDIMENT CONTROL NOTES

1. A MIN. OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD CO. DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855)

2. ALL VEGETATION AND STRUCTURAL ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. 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 (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR

7. SITE ANALYSIS:

TOTAL AREA OF THE SITE	367,254 SF OR 8.43 AC
AREA TO BE DISTURBED	93,586 SF OR 2.148 AC
AREA TO BE STRUCTURALLY STABILIZED	92,186 SF OR 2.118 AC
AREA TO BE VEGETATIVELY STABILIZED	1,400 SF OR 0.03 AC
TOTAL CUT	40 CU. YDS.
TOTAL FILL	1,170 CU. YDS.
TOTAL IMPORT/EXPORT	1,130 CU. YDS.
TOP SOIL (SWMF ONLY)	32 CU. YDS.

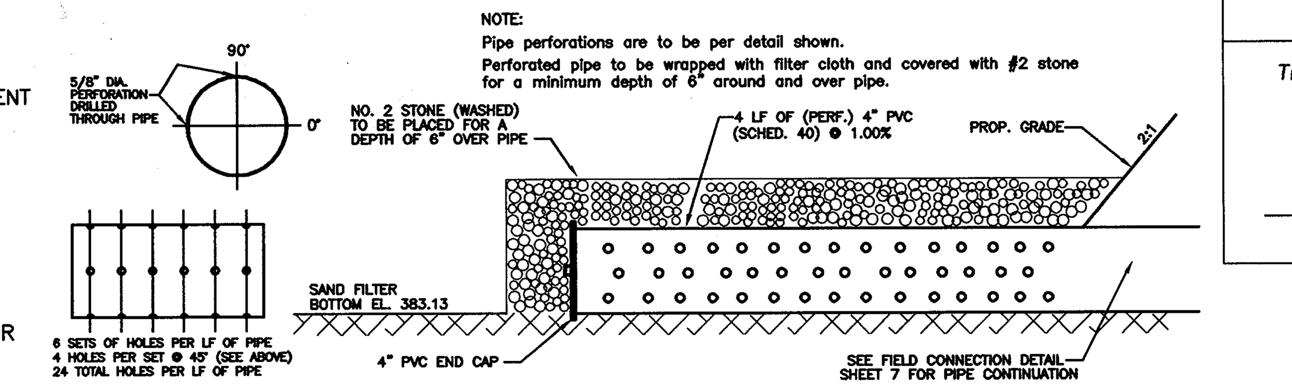
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTRIBUTED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST REPAIR ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN ACCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, 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.

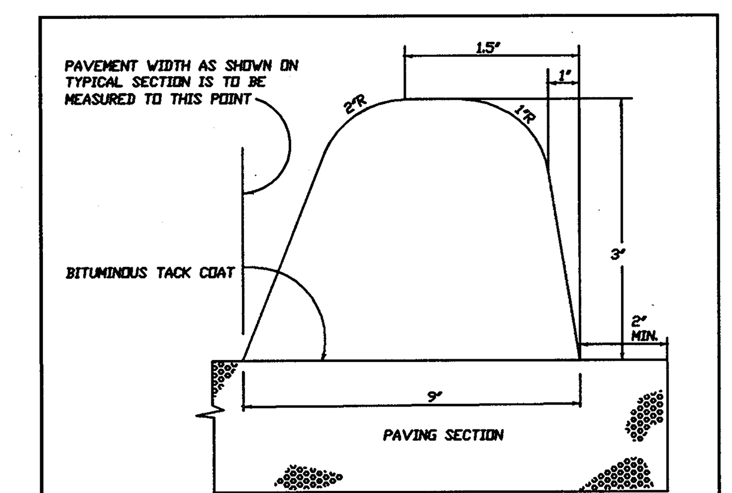
11. TRENCHES FOR THE UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.

NOTE:
Pipe perforations are to be per detail shown.
Perforated pipe to be wrapped with filter cloth and covered with #2 stone for a minimum depth of 6" around and over pipe.



4" PVC DEWATERING DEVICE DETAIL - SEDIMENT CONTROL

N.T.S.



	BITUMINOUS CURB DIVERSION DIKE	NOT TO SCALE

OWNER		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B.TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B.TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

SDP-5

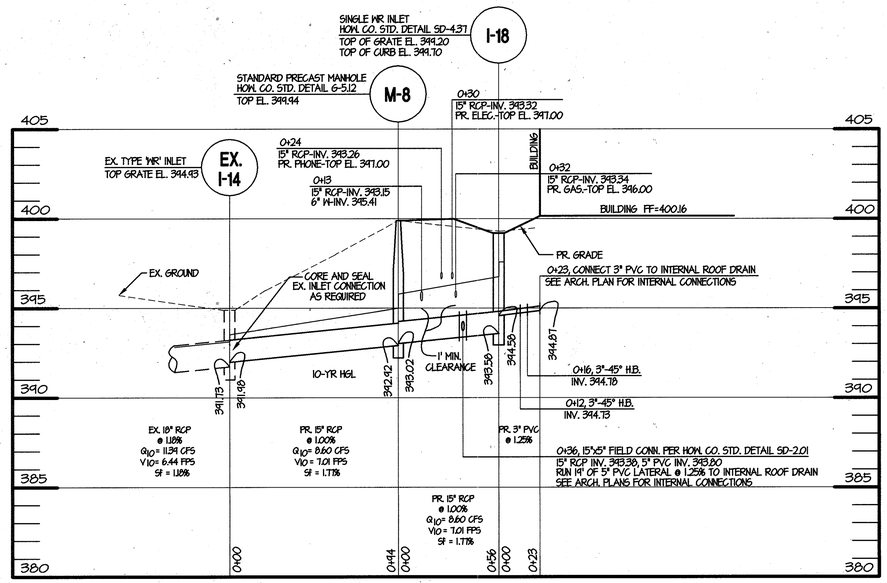
MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

STATE OF MARYLAND — PIERO VAN MELLITS No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
GRADING & SEDIMENT CONTROL DETAILS

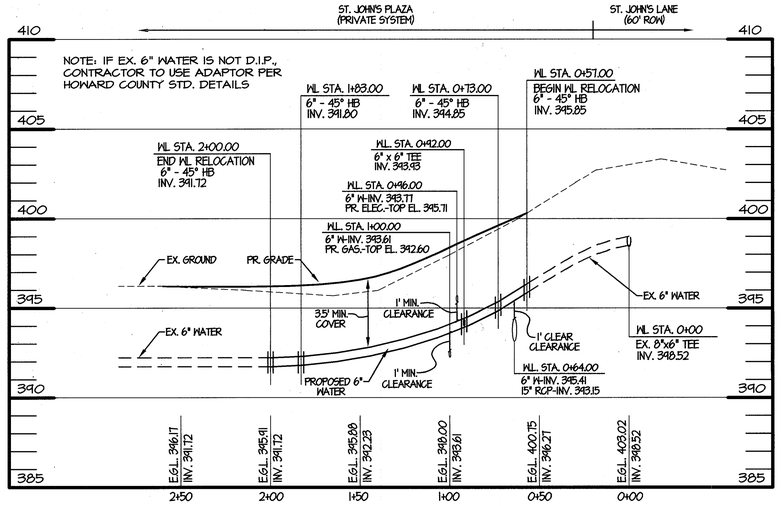
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	
		JOB NO.: 11643.01
		SCALE: N.T.S.
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 5 OF 16



STORM DRAIN PROFILE

HOR. 1" = 40'
VERT. 1" = 4'



WATER PROFILE

HOR. 1" = 40'
VERT. 1" = 4'

STORM DRAIN PIPE SCHEDULE		
SIZE	TYPE	LENGTH
3"	PVC (SCHED. 40)	23'
5"	PVC (SCHED. 40)	19'
15"	CLASS IV RCP	145'

STORM DRAIN FITTINGS SCHEDULE		
SIZE	TYPE	NUMBER
3"	45° H.B. (SCH. 40)	2
15"x5"	RCP FIELD CONN.	1

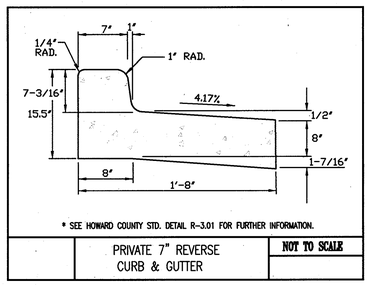
WATER LINE PIPE SCHEDULE		
SIZE	TYPE	LENGTH
6"	D.I.P. CLASS 52	143'

WATER LINE FITTINGS SCHEDULE		
SIZE	TYPE	NUMBER
6"	45° H.B. (CLASS 350)	4
6"	6"x6" TEE (CLASS 350)	1

HEAVY DUTY PAVING SECTION — NOT TO SCALE

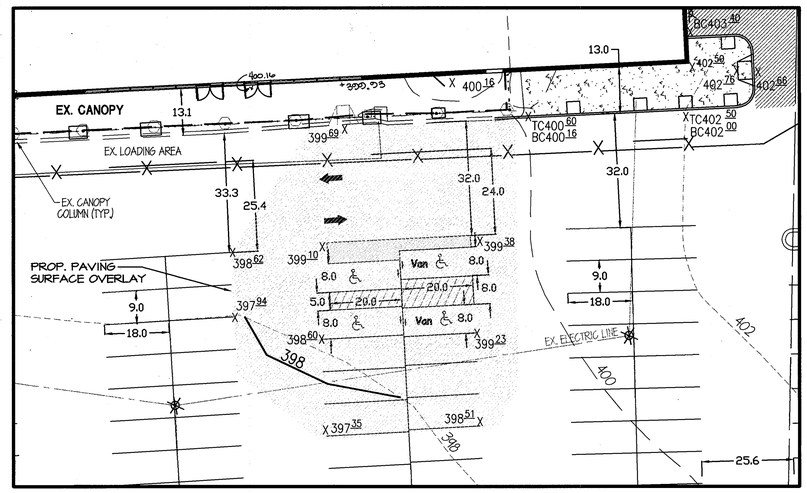
NOTES:
1. SIDEWALK JOINTS SHALL BE ARRANGED SUCH THAT SQUARE PANELS ARE FORMED AND NO PANEL IS LARGER OR SMALLER THAN 4' UNLESS OTHERWISE NOTED.
2. EXPANSION JOINTS TO BE PROVIDED EVERY 50' MIN.
3. SEE HOWARD COUNTY STD. DETAIL R-3.05 FOR FURTHER INFORMATION.

SIDEWALK SECTION — NOT TO SCALE

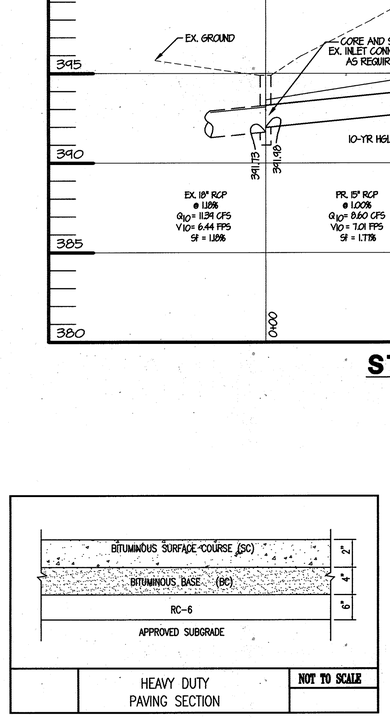


* SEE HOWARD COUNTY STD. DETAIL R-3.01 FOR FURTHER INFORMATION.

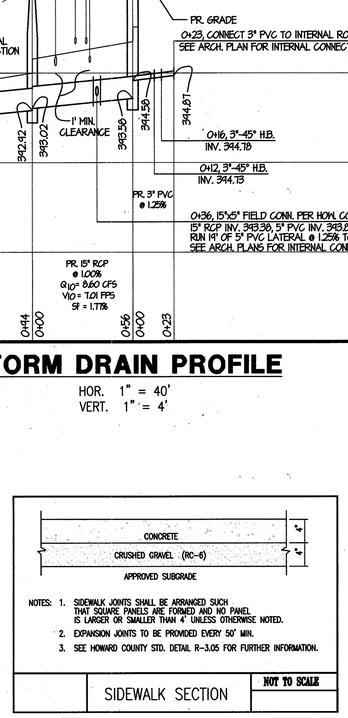
PRIVATE 7" REVERSE CURB & GUTTER — NOT TO SCALE



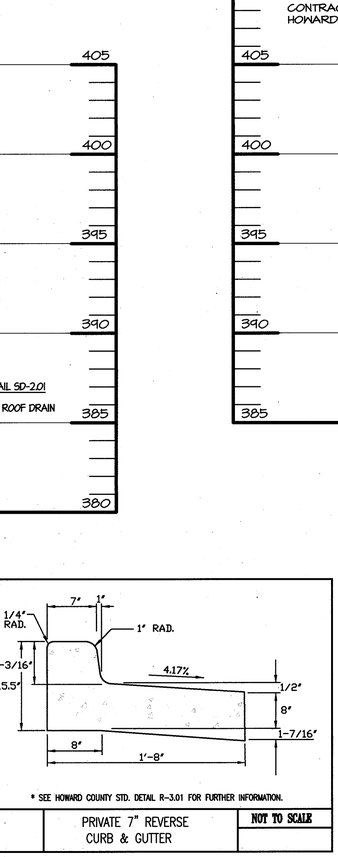
HC PARKING AREA PAVING DETAIL
SCALE: 1"=20'



LIGHT DUTY PAVING SECTION — NOT TO SCALE

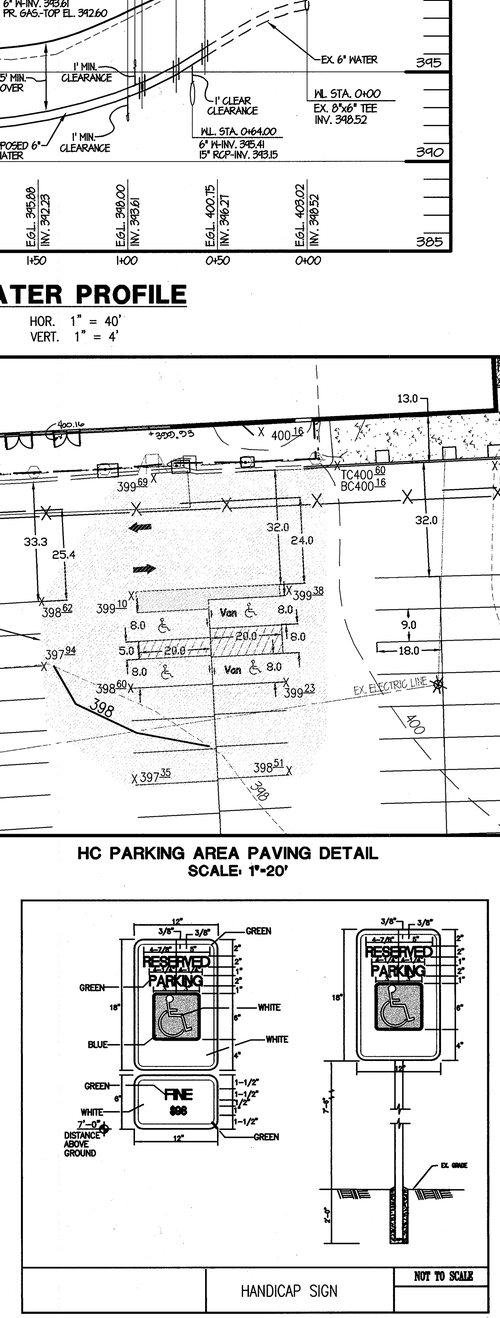


LOADING DOCK CONCRETE — NOT TO SCALE

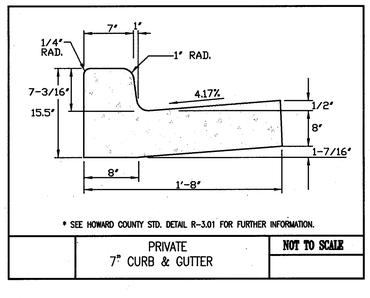


* SEE HOWARD COUNTY STD. DETAIL R-4.01 FOR FURTHER INFORMATION.

HANDICAPPED RAMP — NOT TO SCALE



HANDICAP SIGN — NOT TO SCALE



* SEE HOWARD COUNTY STD. DETAIL R-3.01 FOR FURTHER INFORMATION.

PRIVATE 7" CURB & GUTTER — NOT TO SCALE

● COORDINATES TO CENTER OF STRUCTURE AT FACE OF CURB FOR INLETS, CENTER OF STRUCTURE FOR MANHOLES
* TOP OF GRATE ELEVATION AT CENTER OF STRUCTURE AT FACE OF CURB. MANHOLE ELEVATIONS ARE AT CENTER OF RIM

STORM DRAIN STRUCTURE SCHEDULE							● LOCATION	
STR NO.	TOP ELEV	INV IN	INV IN	INV OUT	TYPE	REMARKS	NORTHING	EASTING
M-8	* 399.94	393.02	---	392.92	STD. PRECAST MANHOLE HOWARD CO. STD. DETAIL G-5.12		587,135.62	1,361,601.83
I-18	* 399.20	393.83	---	393.58	SINGLE WR INLET HOWARD CO. STD. DETAIL SD-4.37		587,079.68	1,361,603.31
EX. I-9	390.13	N/A	---	N/A	MODIFIED INLET/RISER STRUCTURE PER DETAIL SHEET 8		EXISTING-N/A	EXISTING-N/A
EX. I-10	388.05	N/A	---	N/A	MODIFIED INLET/JUNCTION CHAMBER PER DETAIL SHEET 8		EXISTING-N/A	EXISTING-N/A

NOTE: EXISTING INLETS I-9 AND I-10 ARE TYPE S COMBINATION INLETS PER HOWARD COUNTY STANDARD DETAIL SD-4.32. FOR SWM PURPOSES, THESE INLETS ARE TO BE MODIFIED PER DETAILS SHOWN ON SHEET 8. INLET I-10 IS TO BE CAPPED WITH A CONCRETE SLAB. INLET I-9 IS TO BE MODIFIED TO SERVE AS AN OVERFLOW STRUCTURE FOR THE PROPOSED SWM FACILITY.

OWNER			
		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B.TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER			
		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B.TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

APPROVED, DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/29/02

DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE

SDP-6

MRA

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

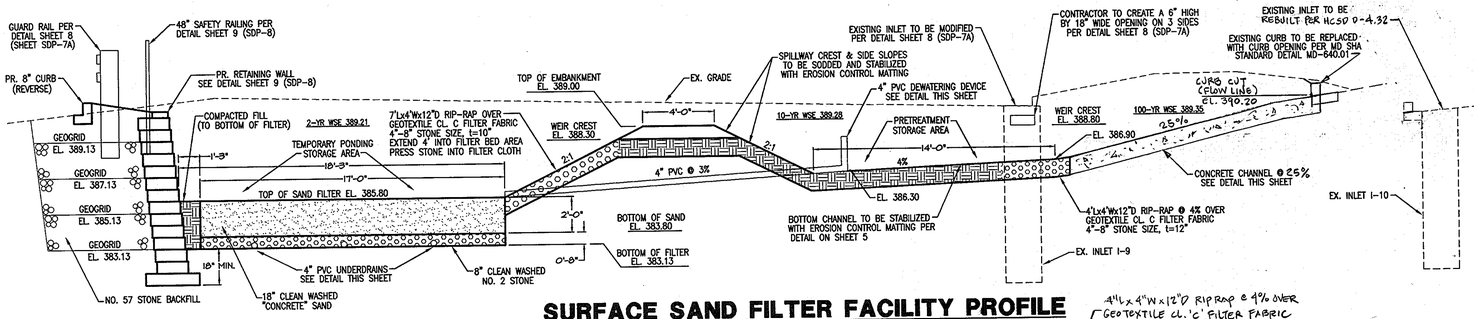
STATE OF MARYLAND — PIERRO VAN MELLE'S — No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
STORM DRAIN & UTILITY PROFILES, SITE DETAILS

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

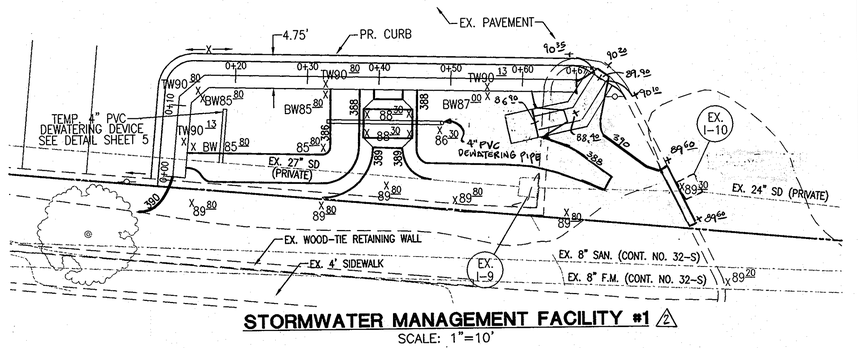
DATE	REVISIONS	JOB NO.: 11643.01
		SCALE: AS SHOWN
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 6 OF 16

SDP-02-31



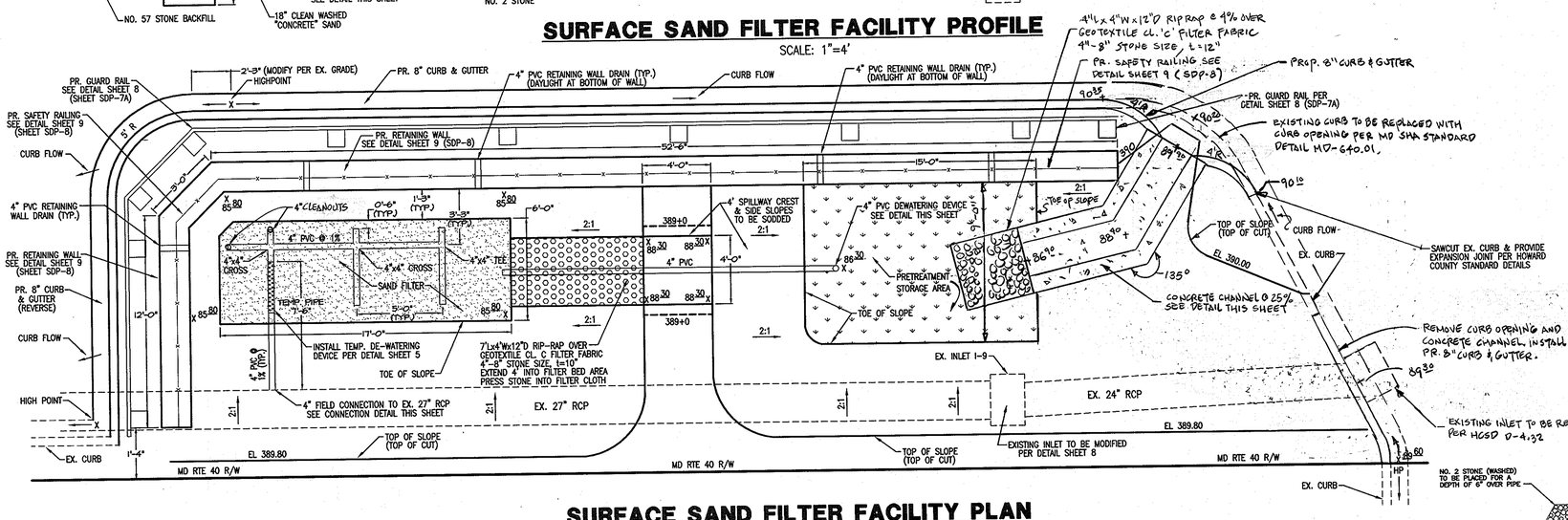
SURFACE SAND FILTER FACILITY PROFILE

SCALE: 1"=4'



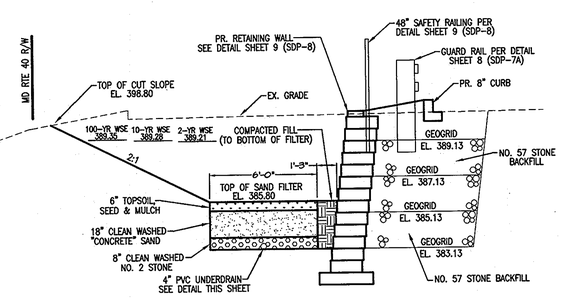
STORMWATER MANAGEMENT FACILITY #1 ⚠2

SCALE: 1"=10'



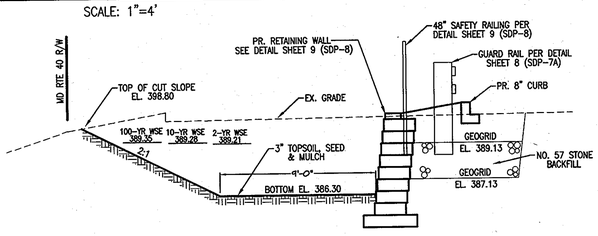
SURFACE SAND FILTER FACILITY PLAN

SCALE: 1"=4'



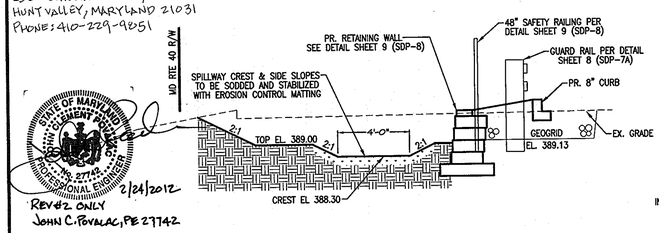
SAND FILTER PROFILE

SCALE: 1"=4'



PRETREATMENT AREA PROFILE

SCALE: 1"=4'



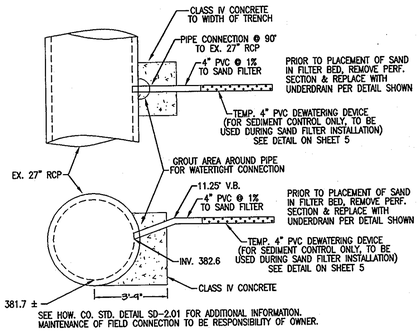
SPILLWAY PROFILE

SCALE: 1"=4'

⚠2

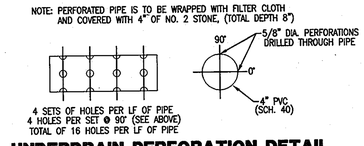
PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAW OF THE STATE OF MARYLAND LICENSE NO. 27742, EXPIRATION DATE JULY 1B, 2012.



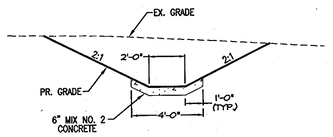
FIELD CONNECTION DETAIL

SCALE: 1"=4'



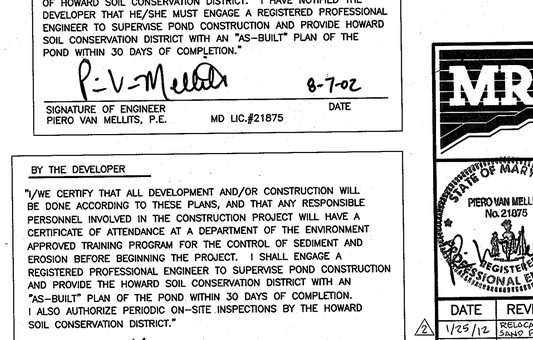
UNDERDRAIN PERFORATION DETAIL

SCALE: N.T.S.



CONCRETE SPILLWAY DETAIL

SCALE: 1"=4'



DEWATERING DEVICE DETAIL

N.T.S.

INSTALLATION NOTES

1. RETAINING WALL INSTALLATION SHALL BE DONE IN ACCORDANCE WITH DETAILS AND SPECIFICATIONS SHOWN ON SHEET 8.
2. CONCRETE SPILLWAY SHALL BE MIX NO. 2 CONCRETE, EXPANSION JOINTS EVERY 4 FEET.
3. ALL PIPE SHALL BE 4" PVC, SCHEDULE 40. PIPE PERFORATIONS ARE TO BE AS SHOWN.
4. UPON COMPLETION, EXISTING INLET I-9 TO BE MODIFIED AS SHOWN.
5. UPON COMPLETION, EXISTING INLET I-10 TO BE COVERED WITH CONCRETE TOP AND MANHOLE COVER PER HOWARD COUNTY STANDARD DETAILS G-5.05 AND G-5.51.
6. AFTER GRADING, CUT SLOPES ARE TO BE STABILIZED WITH EROSION CONTROL MATTING.
7. AFTER GRADING, ALL AREAS EXCEPT FILTER BED ARE TO BE STABILIZED WITH 3" TOPSOIL, SEED, & MULCH. FILTER BED AREA TO BE STABILIZED WITH 6" TOPSOIL, SEED, & MULCH.
8. FILTER MATERIAL AT FILTER BED TO BE CLEAN WASHED "CONCRETE" SAND. FILTER SAND TO BE COVERED WITH FILTER FABRIC PRIOR TO PLACEMENT OF 6" TOPSOIL.
9. FILTER STONE AROUND UNDERDRAINS TO BE CLEAN WASHED NO. 2 STONE OR EQUIVALENT. FILTER STONE TO BE COVERED WITH FILTER CLOTH PRIOR TO PLACEMENT OF SAND.
10. UNDERDRAINS TO TIE INTO EXISTING 27" RCP AS SHOWN. SEE FIELD CONNECTION DETAIL.
11. UPON COMPLETION, EXISTING CURB AT INLET I-10 TO BE REMOVED ONCE INLET IS MODIFIED.
12. REMOVAL OF EXISTING PAVEMENT AND CURB TO BE CARRIED ONLY TO EXTENT NECESSARY FOR INSTALLATION OF FACILITY.
13. CONTRACTOR TO USE EXTREME CARE WHEN EXCAVATING PRETREATMENT AREA AND SAND FILTER BED NEAR THE EXISTING 27" RCP STORM DRAIN.
14. DAMAGE TO ANY EXISTING PAVEMENT, CURB, OR UTILITIES NOT REQUIRED FOR INSTALLATION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

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

1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
8. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

SWM FACILITY CONSTRUCTION SEQUENCE

1. CONTACT HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1880) FOR SWM PRECONSTRUCTION MEETING.	1 DAY
2. INSTALL SILT FENCE, ASPHALT DIVERSION DIKE, AND TEMPORARY CONSTRUCTION FENCE AS SHOWN ON GRADING AND SEDIMENT CONTROL PLAN.	1 DAY
3. WITH GRADING INSPECTOR'S APPROVAL, REMOVE PAVEMENT TO LIMIT REQUIRED FOR INSTALLATION OF RETAINING WALL. BEGIN GRADING FOR SAND FILTER AND PRETREATMENT STORAGE AREA.	5 DAYS
4. BEGIN RETAINING WALL CONSTRUCTION. INSTALL SAND FILTER PER ALL DETAILS SHOWN ON THIS PLAN. FINAL GRADE SPILLWAY AND PRETREATMENT STORAGE AREA.	30 DAYS
5. INSTALL CONCRETE SPILLWAY AND MODIFY INLET I-9 PER DETAIL ON SHEET 8. PROVIDE FINAL STABILIZATION FOR ALL DISTURBED AREAS.	5 DAYS
6. INSTALL PROPOSED CURB, GUARD RAIL, AND ANY NECESSARY PAVING.	15 DAYS
7. ONCE ALL INTERIOR AREAS ARE STABILIZED, MODIFY INLET I-10 PER DETAIL ON SHEET 8. REMOVE EXISTING CURB BEHIND I-10 AND REPLACE WITH CURB OPENING PER DETAIL ON SHEET 8.	5 DAYS
8. WITH GRADING INSPECTOR'S APPROVAL, REMOVE ALL REMAINING SEDIMENT CONTROLS AND8 PROVIDE FINAL STABILIZATION AS NEEDED.	2 DAYS

OWNER — FAX NO.: 410-531-3432
A. NAME: Charlotte H. Myers — B. TELEPHONE: 410-531-3432
C. COMPANY: Hardman-Myers, Inc.
D. ADDRESS: P.O. Box 757
E. CITY: Clarksville — STATE: MD — ZIP: 21029-0757

DEVELOPER — FAX NO.: 410-342-4662
A. NAME: E. Philip Hanlon — B. TELEPHONE: 410-342-0197
C. COMPANY: Mars Super Markets, Inc.
D. ADDRESS: 3401 E. Federal Street
E. CITY: Baltimore — STATE: MD — ZIP: 21213-4011

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/9/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/9/02

BY THE ENGINEER

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

P. V. Mellits — 8-7-02

SIGNATURE OF ENGINEER — DATE
PIERO VAN MELLITS, P.E. — MD LIC.#21875

BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

E. Philip Hanlon — 8/6/02

SIGNATURE OF DEVELOPER — DATE
E. PHILIP HANLON, MARS SUPERMARKETS, INC.

SDP-7

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

STATE OF MARYLAND — PIERO VAN MELLITS — No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

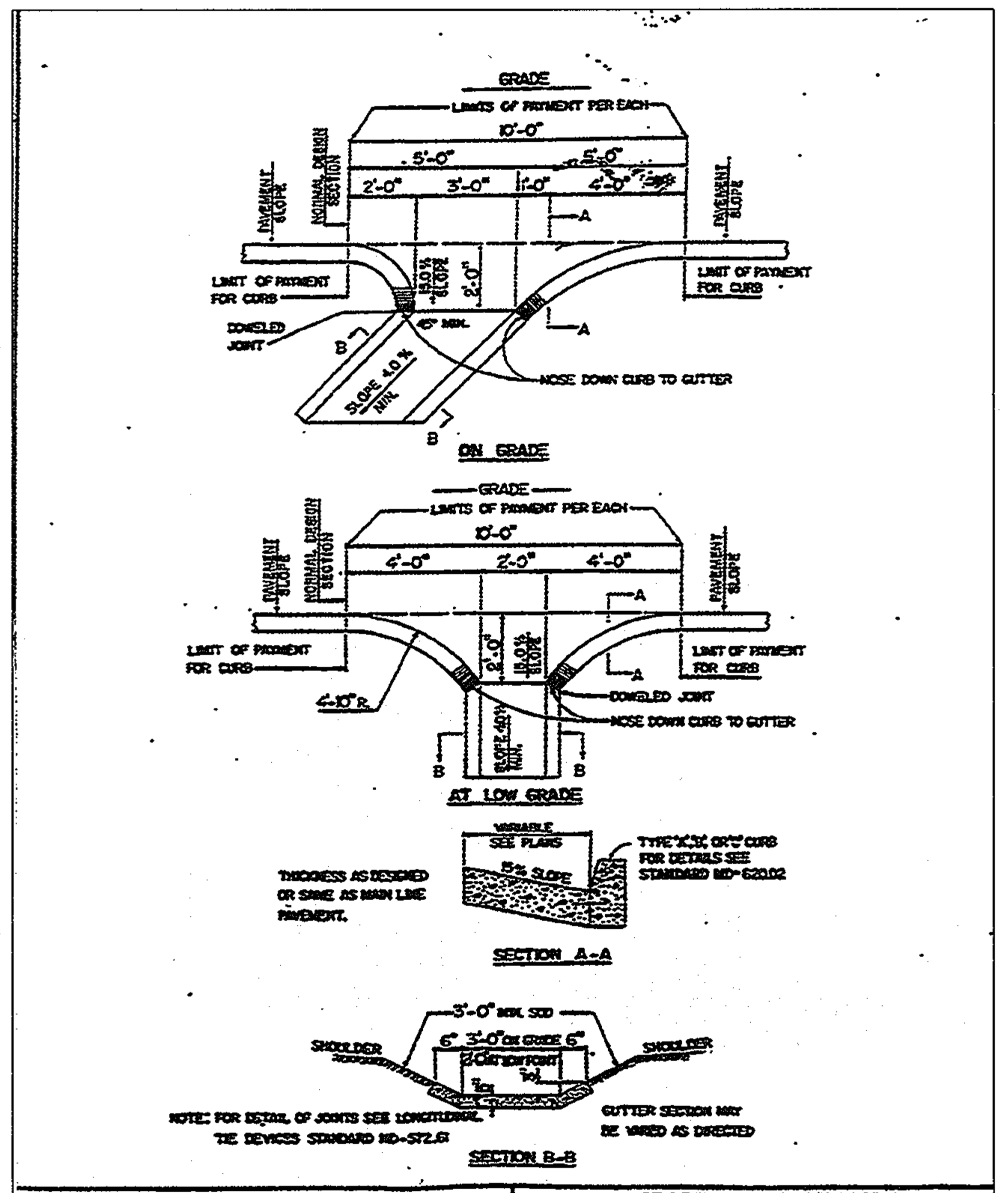
MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
SWM DETAIL PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS
⚠2 1/25/12	RELOCATE CURB OPENING AND CONCRETE CHANNEL TO SURFACE SAND FILTER FACILITY. REBUILD INLET I-10 AND CONCRETE CURB.

JOB NO.: 11643.01
SCALE: AS SHOWN
DATE: 08/07/02
DRAWN BY: RLZ, TCN
DESIGN BY: TCN
REVIEW BY: PVM
SHEET: 7 OF 16

SDP-02-31



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD CURB OPENING DETAIL
CURB SECTION
STANDARD NO. MD -640.01

APPROVAL — DEPUTY CHIEF ENGINEER/DEVELOPMENT — FEDERAL HIGHWAY ADMINISTRATION — ISSUED 10-17-63, 6-4-84, 8-1-84, 6-5-64

LOG OF BORING NO. SB-1

Sheet 1 of 1

PROJECT: St. John's Plaza
PROJECT NO: 01559
PROJECT LOCATION: Howard County, Maryland

DATE STARTED: August 24, 2001
DATE COMPLETED: August 24, 2001
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Geo-Technology Associates, Inc.
DRILLING METHOD: HSA
SAMPLING METHOD: Split Spoon

WATER LEVEL: 14.3 / Dry
DATE: 8/24/01 / 8/25/01
CAVED (ft): 14.4 / 13.5

GROUND SURFACE ELEVATION: 391.2
DATUM: MSL
EQUIPMENT: B-61
LOGGED BY: TC/DG
CHECKED BY: S. Rowe

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	DESCRIPTION	REMARKS
					391.2	0	SM	Olive-gray-brown, moist, medium dense, micaceous, coarse to fine SAND, some Silt, little Rock Fragments. (Fill) AASHTO: A-2-4	Asphalt: 3 in. Roadbed: 1 in.
1	0.5	12	5-6-21	27					
2	2.5	12	16-16-11	27					Wet spoon at 19.0 ft.
					386.2	5	SC SM	Brown to gray-brown, moist, stiff to medium stiff, SILT & CLAY and coarse to fine Sand, trace Organic. (Fill) AASHTO: A-4	
3	5.0	12	3-4-10	14					Bag Sample: 1.0 - 6.0 ft.
4	8.5	18	5-3-3	6		10			
					379.2		SM	Brown, moist to wet, loose, coarse to fine SAND and SILT. AASHTO: A-4	
5	13.5	18	3-4-4	8		15			
					374.2		SP SM	Brown, moist to dry, medium dense, coarse to fine SAND, little Silt. AASHTO: A-1-b	
6	18.5	18	15-16-17	23	371.2	20		Bottom of Hole at 20.0 ft.	
									Coordinates: N: 586623.0 E: 1361283.0

NOTES:

GTA GEO-TECHNOLOGY ASSOCIATES, INC. 9090 Junction Drive, Suite 9 Annapolis Junction, MD 20701

LOG OF BORING NO. SB-1 Sheet 1 of 1

LOG OF BORING NO. SB-2

Sheet 1 of 1

PROJECT: St. John's Plaza
PROJECT NO: 01559
PROJECT LOCATION: Howard County, Maryland

DATE STARTED: August 24, 2001
DATE COMPLETED: August 24, 2001
DRILLING CONTRACTOR: Geo-Technology Associates, Inc.
DRILLER: Geo-Technology Associates, Inc.
DRILLING METHOD: HSA
SAMPLING METHOD: Split Spoon

WATER LEVEL: 15.1 / 15.0
DATE: 8/24/01 / 8/25/01
CAVED (ft): 15.8 / 15.8

GROUND SURFACE ELEVATION: 390.7
DATUM: MSL
EQUIPMENT: B-61
LOGGED BY: TC/DG
CHECKED BY: S. Rowe

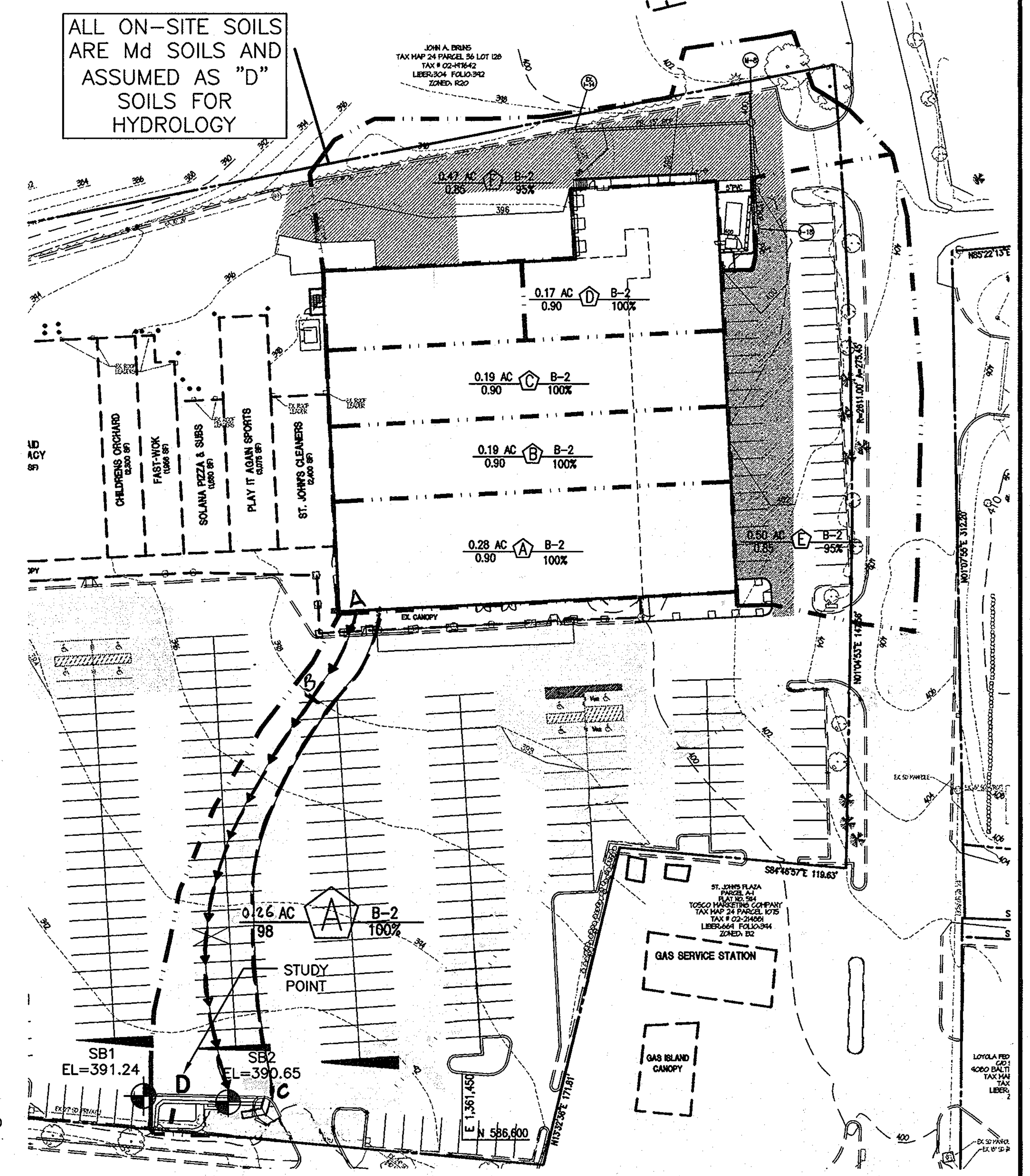
SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SAMPLE BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	DESCRIPTION	REMARKS
					390.7	0	SC SM	Olive-gray-brown, moist, loose to medium dense, coarse to fine SAND and Clayey SILT. (Fill) AASHTO: A-4	Asphalt: 3 in. Roadbed: 1 in.
1	0.5	8	3-4-5	9					
2	2.5	8	4-4-6	10					Wet spoon at 18.5 ft.
3	5.0	14	4-3-4	7		5			
4	8.5	2	4-5-4	9		10			
					378.7		SP SM	Brown, moist to wet, medium dense to very dense, coarse to fine SAND, little Silt and Rock Fragments. AASHTO: A-1-b	
5	13.5	13	10-9-10	19		15			
6	18.5	14	20-25-31	56	370.7	20		Bottom of Hole at 20.0 ft.	
									Coordinates: N: 586619.0 E: 1361327.0

NOTES:

GTA GEO-TECHNOLOGY ASSOCIATES, INC. 9090 Junction Drive, Suite 9 Annapolis Junction, MD 20701

LOG OF BORING NO. SB-2 Sheet 1 of 1

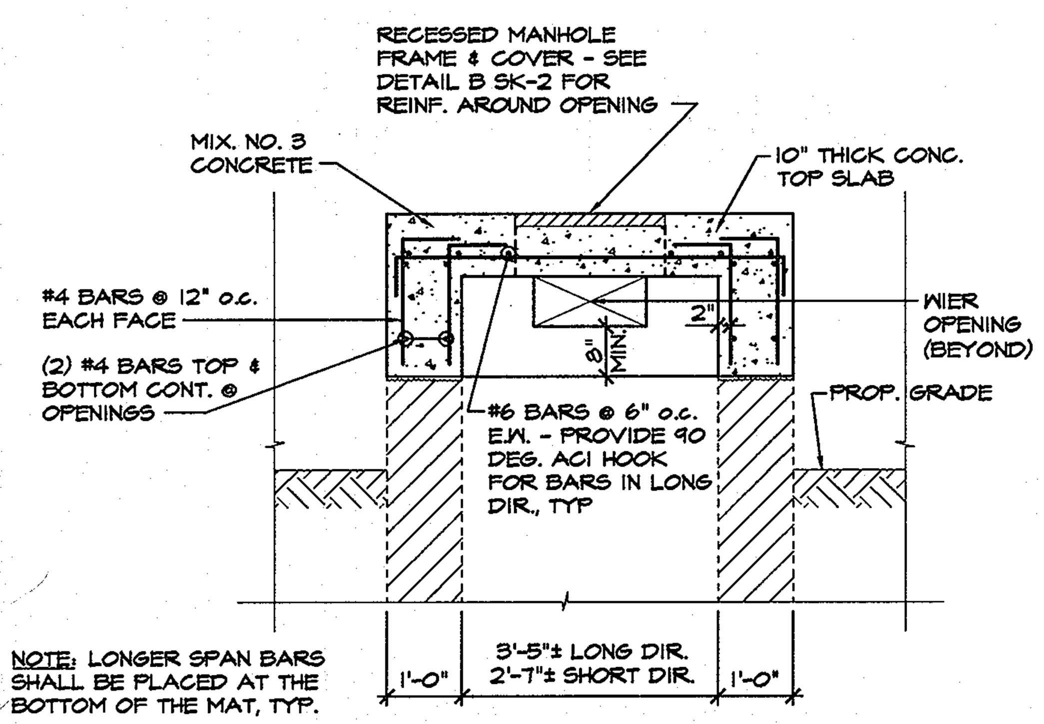
ALL ON-SITE SOILS ARE Md SOILS AND ASSUMED AS "D" SOILS FOR HYDROLOGY



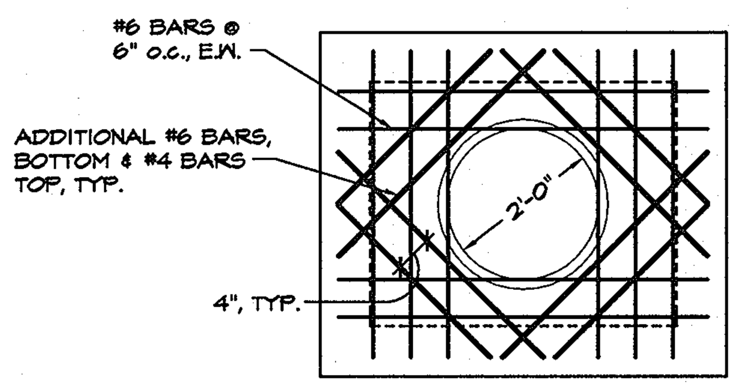
⚠2 STORM DRAIN AND STORMWATER MANAGEMENT DRAINAGE AREA MAP

SCALE: 1"=50'

FOR ALL SOIL INFORMATION REFER TO REPORT 'REPORT OF PRELIMINARY GEOTECHNICAL EXPLORATION - MARS SUPERMARKET EXPANSION' PERFORMED BY GEO-TECHNOLOGY ASSOCIATES, INC. AND DATED ON JULY 12, 2001 AND SEPTEMBER 27, 2001

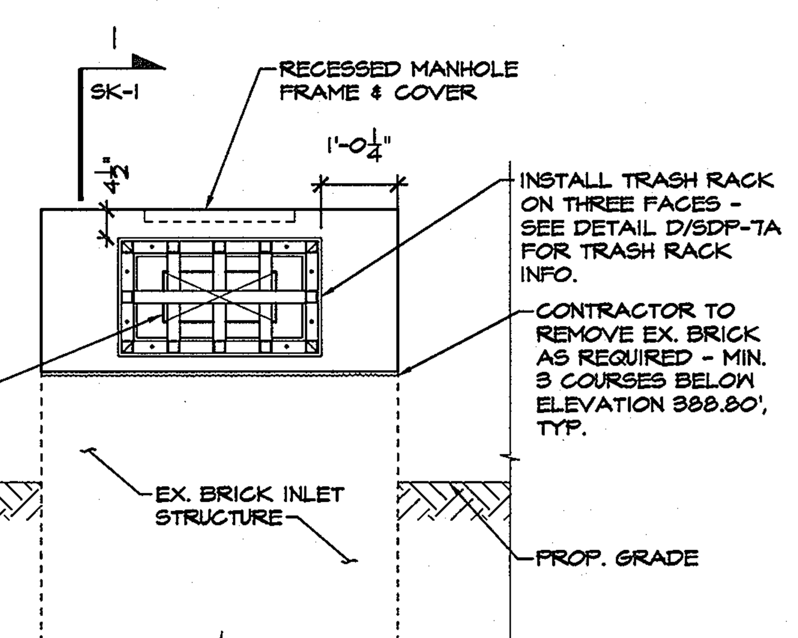


SECTION 1/SK-1
SCALE: ½" = 1'-0"



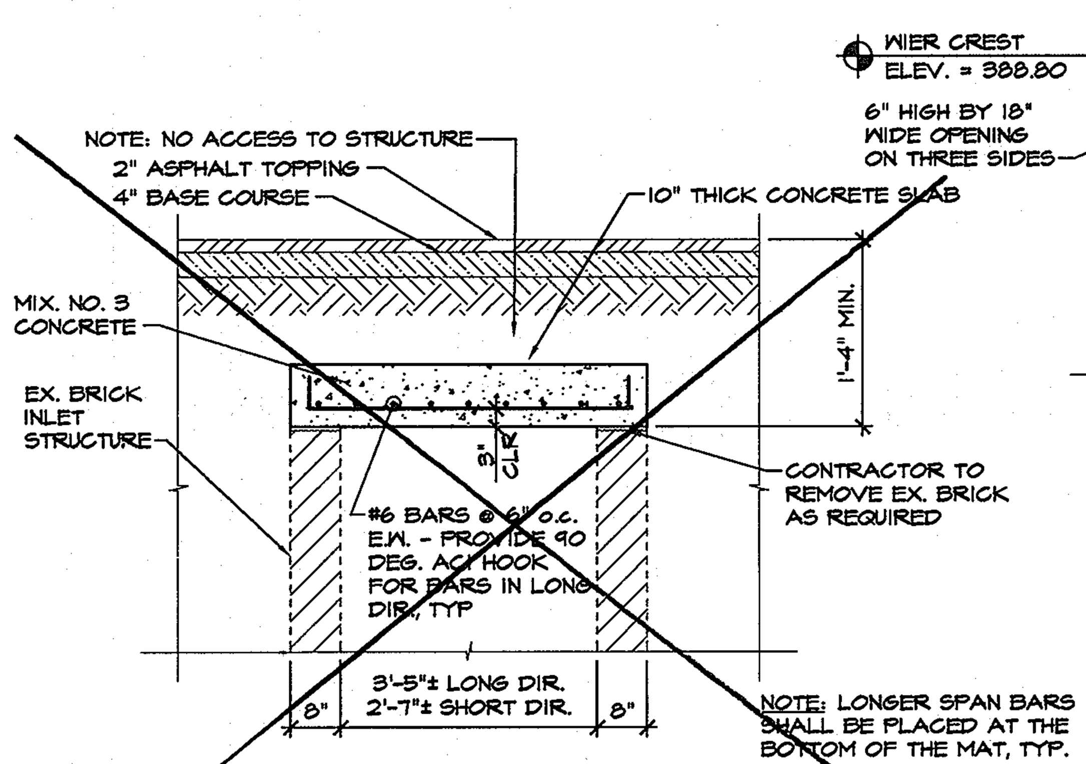
ADDT'L REINF. AROUND MANHOLE OPENING

DETAIL B
SCALE: ½" = 1'-0"



I-9 INLET MODIFICATIONS

DETAIL A
SCALE: ½" = 1'-0"



I-10 INLET MODIFICATIONS

DETAIL C ⚠2
SCALE: ½" = 1'-0"

OWNER			
		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B. TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B. TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

STRUCTURAL NOTES

CAST IN PLACE CONCRETE

A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301)", AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".

B. DESIGN LOADING:

DEAD LOAD		LIVE LOAD	
ASPHALT TOPPING:	81 PCF	HS-20 TRUCK LOADING:	16 KIPS
BASE COURSE:	100 PCF	SURCHARGE:	100 PSF
NORMAL WEIGHT CONC:	145 PCF		
SOIL:	130 PCF		

C. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
1. RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 305).
2. RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306).
3. RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI 347).

D. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 5% +/- 1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4", 3" FOR SLABS ON GRADE. ALL CONCRETE, EXCEPT FOOTINGS, SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 33.

E. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A 615 GRADE 60. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A 185. LAP ALL REINFORCING BARS A MINIMUM OF 36 BAR DIAMETERS AND ALL WWF. A MINIMUM OF TWO FULL GRIDS, UNLESS OTHERWISE INDICATED.

F. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE", ACI 315" DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI SP 66 "DETAILING MANUAL".

G. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.

H. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACEMENT OF ANY CONCRETE.

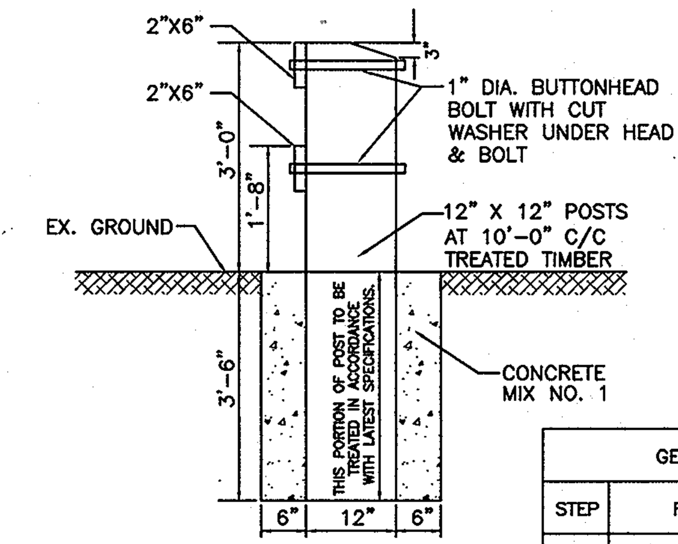
I. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND RESHORING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE, AND LOCATION OF ALL SHORING AND RESHORING AS WELL AS THE SEQUENCE OF CONSTRUCTION.

J. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50 PERCENT OF THE PORTLAND CEMENT IN A CONCRETE MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25 PERCENT OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C 989.

K. MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
WALLS BELOW GRADE 2 INCHES
SLABS BELOW GRADE 2 INCHES

L. THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED CONCRETE SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.

RAILS TO BE UNTREATED TIMBER
POSTS TO BE TREATED TIMBER.
WHERE PAINT IS TO BE CALLED FOR, TWO COATS ARE TO BE APPLIED.
ALL LUMBER TO BE SOUTHERN YELLOW PINE OF 1400 STRESS GRADE OR BETTER.
PAINT IS TO BE IN A COLOR SCHEME AND STRIPING DETAIL IN ACCORDANCE WITH THE LATEST 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES'



TIMBER GUARD RAIL DETAIL
NOT TO SCALE

NOTE: SEE GUARD RAIL INSTALLATION DETAIL ON SHEET 9 (SDP-8) FOR ADD'L INSTALLATION INFORMATION

GENERAL SWM FACILITY STORAGE REQUIREMENTS (DRAINAGE AREA 'A' ONLY)			
STEP	REQUIREMENT	VOLUME REQUIRED (ac-ft)	NOTES
1	Water Quality Volume (WQv)	0.0135	0.0208 ac.-ft. provided with sand filter design (min. requirement: 75% of total WqV)
2	Recharge Volume (Rev)	N/A	Not required for redevelopment.
3	Channel Protection Volume (Cpv)	N/A	Not required for redevelopment.
4	Overbank Flood Protection Volume (Qp)	N/A	Not required for redevelopment. Site not located within designated flood zone area.
5	Extreme Flood volume (Qf)	N/A	Not required for redevelopment. Site not located within designated flood zone area.

SITE MEETS REDEVELOPMENT DESIGNATION PER MDE SWM CRITERIA. THEREFORE SWM REQUIREMENTS ARE LIMITED TO A 20% REDUCTION IN "SITE" IMPERVIOUS AREA, OR PROVIDING STRUCTURAL WATER QUALITY TREATMENT OF 20% OF THE "SITE" IMPERVIOUS AREA. "SITE" AREA = 37,150 S.F.
20% OF "SITE" AREA = 7,430 S.F. WATER QUALITY VOLUME REQ'D = 588 C.F. (PROVIDED BY SAND FILTER)
⚠2 SAND FILTER LOCATION GOVERNED BY DRAINAGE AREA CONTAINING ADEQUATE IMPERVIOUS AREA TO MEET THE REDUCTION REQUIREMENTS. DA 'A' =0.26 AC. OR 11,442 S.F. (100% IMPERVIOUS)

⚠2 DRAINAGE AREA 'A' FOR SWM: RCN=98, Tc=0.10 HR, 100% IMPERVIOUS

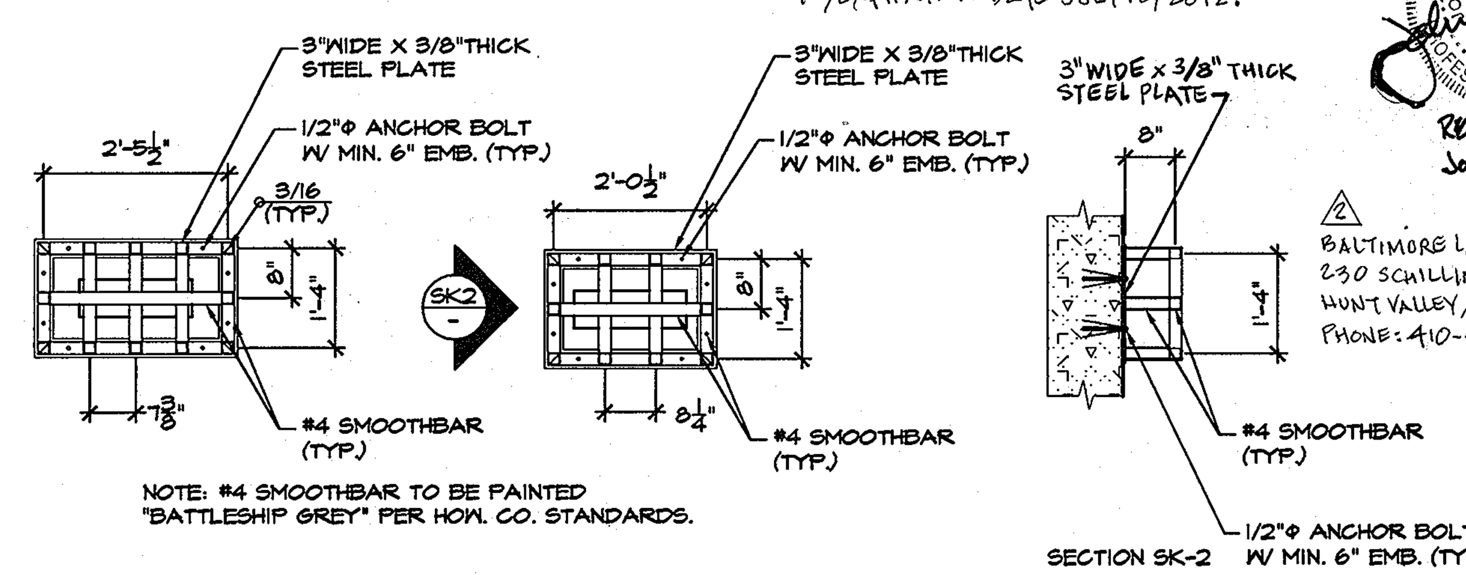
TIME OF CONCENTRATION PATH				
PR. DA "A"				
A-B	50'	3.0%	SHEET SMOOTH SURFACE	TC=0.010HR
B-C	250'	3.50%	SHALLOW PAVED SURFACE	TC=0.018HR
C-D	70'	V=4 FPS	OPEN CHANNEL FLOW	TC=0.005HR
			TOTAL	TC=0.033HR

USE MIN-TC=0.100HR

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/20/02

⚠2
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAW OF THE STATE OF MARYLAND LICENSE NO. 27742, EXPIRATION DATE JULY 18, 2012.

STATE OF MARYLAND — JOHN CLEMENT POVALAC — No. 27742 — PROFESSIONAL ENGINEER — 2/24/2012
REV#2 ONLY
JOHN C. POVALAC, PE 27742



NOTE: #4 SMOOTHBAR TO BE PAINTED "BATTLESHIP GREY" PER HOW. CO. STANDARDS.

DETAIL D - TRASH RACK
SCALE: ½" = 1'-0"

⚠2
BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21031
PHONE: 410-229-9851

SDP-7A

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

STATE OF MARYLAND — PIERO VAN MELLUTS — No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
SWM DETAIL PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	
		JOB NO.: 11643.01
⚠2 1/25/12	RELOCATE CURB OPENING AND CONCRETE CHANNEL TO SURFACE SAND FILTER FACILITY, REBUILD INLET I-10 AND CONCRETE CURB	SCALE: AS SHOWN
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 8 OF 16

SDP-02-31

SEGMENTAL RETAINING WALL SPECIFICATIONS

PART 1 – GENERAL

1.1 Work includes furnishing and installing segmental retaining wall units, geogrid reinforcement, wall fill, and backfill to the lines and grades shown on the construction drawings and as specified herein. The contract also includes the furnishing and installing all appurtenant materials, equipment, and labor required for construction of the geogrid reinforced, segmental retaining wall.

1.2 REFERENCE STANDARDS

A. ASTM C90–75 (1981 rev) – Hollow Load Bearing Masonry Units
B. ASTM C140–75 (1981 rev) – Sampling and Testing Concrete Masonry Units
C. ASTM C145–75 (1981 rev) – Solid Load Bearing Concrete Masonry Units
D. Geosynthetic Research Institute (GRI), GRI–GG4 – Determination of Long Term Design Strength of Geogrids.
E. ASTM D 638 – Test Method for Tensile Properties of Plastic
F. ASTM D 1248 – Specification of Polyethylene Plastics Molding and Extrusion Materials
G. ASTM D 4218 – Test Method for Carbon Black Content in Polyethylene Compounds by the Muffle Furnace Technique
H. ASTM D 3034 – Specification for Polyvinyl Chloride (PVC) Pipe

1.3 DELIVERY, STORAGE AND HANDLING

A. Contractor should check the materials upon delivery to assure that proper material has been received.
B. Contractor should prevent excessive mud, wet cement, epoxy, and like materials which may affix themselves, from coming in contact with the materials.
C. Geogrids should be stored above –20 degrees F.
D. Contractor should protect the materials from damage. Damaged material should not be incorporated into the reinforced retaining wall.

PART 2 – PRODUCTS

2.1 DEFINITIONS

A. Geogrid is a high density polyethylene grid, specifically fabricated for use as a soil reinforcement.
B. Concrete retaining wall units are as detailed on the drawings and as specified herein.
C. Geosynthetic Drainage Composites are polyethylene net structure with non–woven geotextiles bonded to both sides.
D. Erosion Control Blankets consist of a web of polyolefin fibers securely bounded by polyolefin threads between two high strength polyolefin nets.
E. Backfill is the soil which is used as fill for the reinforced soil mass.
F. Foundation soil is the in–situ soil or controlled compacted fill placed below the bottom of the retaining wall and geogrid zone.

2.2 MATERIALS

The contractor should submit manufacturer's catalog and samples of the proposed materials for approval by the project geotechnical engineer a minimum of seven days before the start of construction. Materials should be transported to the site only after approval of the proposed materials by the project geotechnical engineer.

A. Concrete Units

1. Masonry units should be Keystone Standard Retaining Wall Units. Substitution of other concrete units including Mesa Standard Units may be allowed with the prior approval of the Geotechnical Engineer.
2. Concrete wall units should have a minimum 28 day compressive strength of 3000 psi, in accordance with ASTM C–90. The concrete should have adequate freeze/thaw protection with a maximum moisture absorption of 6 to 8 percent.
3. Exterior dimensions may vary. Units are required to have a minimum of one square foot of face area each.
4. Units should have angled sides and be capable of attaining concave and convex alignment curves in accordance with manufacturer's recommendations.
5. Units should be interlocked with non–corrosive reinforced fiberglass pins.
6. Units should be interlocked as to provide a maximum of 1–1/4 inch of setback per block.

B. Leveling Pad

Material for leveling pad/footing should consist of compacted free–draining coarse aggregates meeting the requirements of ASTM #57 or Graded Aggregate Base (GAB) per Maryland State Highway Administration Standard Specifications for Construction and Materials. A minimum of 6 inches deep and 36 inches wide compacted leveling pad is required.

C. Fiberglass Connecting pins

1. Thermoset isophtalic polyester resin pultruded fiberglass reinforcements rods, minimum one–half inch in diameter.
2. Pins should have a minimum flexural strength of 128,000 psi and short beam shear of 6400 psi.
3. For substitute concrete units, use of other compatible connector system may be allowed with the prior approval of the Geotechnical Engineer.

D. Geogrid

Geogrid should be Tensar UX 1,400SB or equivalent as approved by the geotechnical engineer. The geogrid should have a long term design strength of 1,334 pounds/foot for UX 1,400SB geogrid.

E. Reinforced Backfill

Reinforced backfill soils should be non–plastic, controlled fill meeting the requirements of AASHTO A–2–4 or more granular. The geotechnical report for the project indicates that A–2–4 material is available on site. However, the material may not be readily available and also may be wet of optimum moisture. Contractor should be prepared to dry the on–site soils or import suitable AASHTO A–2–4 materials if these materials are not readily available from an on–site source at the time of construction.

F. Controlled Fill

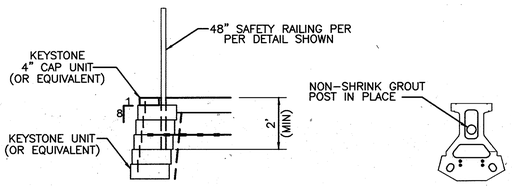
Controlled Fill soils to be placed outside the Reinforced Backfill area and where specified should be soils meeting the requirements of AASHTO A–2–4 or more granular.

G. Drainage Pipe

The drainage pipes should be perforated or slotted PVC pipe manufactured in accordance with ASTM D–3034.

H. Filter Fabric

Filter Fabric should be non–woven, polypropylene geotextile, 140 N manufactured by Nicolon Mirafi Group or approved equivalent.



SAFETY RAILING DETAIL

PART 3 – EXECUTION

A. Excavation

1. The contractor should excavate to the lines and grades shown on the construction drawings. Under no circumstances should the excavation lines and grades be exceeded, except with owner's approval. The contractor should protect the excavation from sloughing by placing a membrane over the face of the excavation.
2. Excavations should be sloped or otherwise supported in accordance with Occupation Safety and Health Administration (OSHA) and other local and state regulations.

B. Foundation Subgrade Preparation

1. Foundation soil should be excavated as required for installation of leveling pad, geogrid and other elements and as shown on the construction drawings.
2. Foundation soil should be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required strength should be removed and replaced with controlled, compacted material.
3. Over–excavated areas should be filled with select and approved material and compacted to 92 percent of maximum dry density in accordance with the Modified Proctor, ASTM D–1557.
4. Allowable bearing pressure for natural and controlled, compacted fill soils should be at least 2,000 psf for the retaining wall.
5. The exposed foundation subgrade should be proofrolled with a loaded dump truck. Any soft or unstable areas identified during proofrolling should be overexcavated and backfilled with Controlled Fill.
6. Fill required to establish the sloping surface in front of the wall should consist of Controlled Fill and should be placed, compacted and field tested in accordance with the requirements specified herein.

C. Leveling Pad

1. The leveling pad should be placed as shown on the construction drawings with a minimum thickness of 6 inches.
2. Leveling pad materials should be installed upon undisturbed in–situ soils or controlled, compacted backfill.
3. Leveling Pad should be prepared to insure complete contact of retaining wall unit with base. Gaps should not be allowed.

D. Unit Installation

1. First course of concrete wall units should be placed on the footing. The units should be checked for level and alignment. The first course is the most important to insure accurate and acceptable results.
2. Insure that units are in full contact with base.
3. Units are placed side by side for full length of wall alignment. Alignment may be done by means of a string line or offset from base line.
4. Install fiberglass connecting pin.
5. Lay up each course insuring that the connecting pins are inserted through front slot of the unit, and into the receiving slot in the course beneath. Repeat procedure to the extent of wall height.
6. At the end of each course where the wall changes elevation, units should be turned into the backfill. Units should be laid as to create the minimum radius possible. Unless otherwise shown on the drawings, a minimum of one unit should be installed into the grade. Only the front face of the units should be visible from the side of the wall.
7. Standard Units should be used to make convex and concave curves in accordance with manufacturer's recommendations.
8. Cap units should be installed and bonded with construction adhesive or epoxy cement as required by manufacturer.
9. Contractor should provide positive drainage for the back of the retaining wall during construction.

E. Geogrid Installation

1. All utilities in the vicinity of any retaining wall or geogrid reinforcement must be installed and properly backfilled prior to placing the geogrid soil reinforcement or constructing the wall.
2. The geogrid soil reinforcement should be laid horizontally on compacted backfill, connected to the concrete wall units. Hook grid over the fiberglass connecting pin, pull taut, and anchor before backfill is placed on the geogrid.
3. Slack in the geogrid at the wall unit connections should be removed in a manner, and to such a degree, as approved by the Engineer.
4. Geogrid should be laid at the proper elevation and orientation as shown on the construction drawings or as directed by the Engineer.
5. Correct orientation (roll direction) of the geogrid should be verified by the Contractor.
6. Geogrid should be secured in–place with staples, pins, sand bags, or backfill as required by fill properties, fill placement procedures, or weather conditions, or as directed by the Engineer.
7. Overlaps
   a. Uniaxial geogrid does not need to be overlapped in the across the roll direction, except to contain the fill at the slope face when wrap–around facing is used. Uniaxial grid should be overlapped 48" in the rolled direction.
   b. A layer of soil a minimum of 4 inches in thickness should be spread between uniaxial geogrid layers in the area to be overlapped, or as directed.

F. Fill Placement

1. Wall backfill material should be placed in no more than 8–inch lifts and compacted to 92 percent of the Modified Proctor (ASTM D–1557).
2. Backfill should be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.
3. Only hand–operated compaction equipment should be allowed within 4 feet of the wall face.
4. Backfill should be placed from the wall outward to insure that the geogrid remains taut.
5. Tracked construction equipment should not be operated behind or above the wall.
6. Rubber–tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning should be avoided.
7. Place filter fabric between the unit core fill and the reinforced backfill as shown on plans. The filter fabric should be embedded a minimum of two feet into the reinforced fill.
8. The finished sloping surface on the toe side of Retaining Walls A and B should be protected by installing the permanent erosion control blanket and loaming and seeding in accordance with project requirements.

G. DRAINAGE

1. Drainage fill should be placed behind the wall to the limits shown. The drainage fill should be a minimum of 12–inches thick. The drainage fill should be ASTM #57 stone. The drainage fill should be wrapped in filter fabric (Mirafi 140N or equal) as shown on the drawings.
2. Positive drainage should be maintained during and after construction. Soils within the reinforced zone that become wet during construction should be dried to optimum moisture or removed.
3. Install the perforated drainage pipes and lateral drainage pipes incrementally along with installation of concrete units and placement of fill.

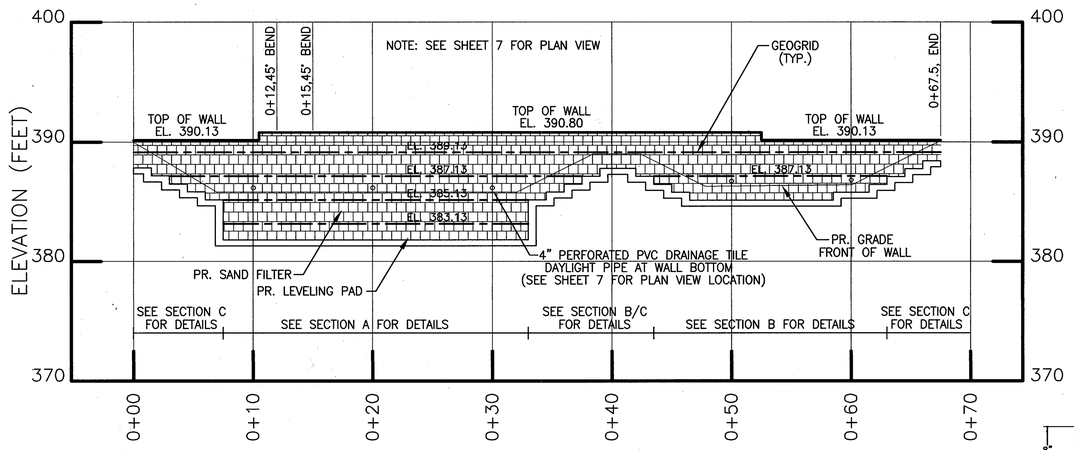
PART 4 – CONSTRUCTION OBSERVATION AND TESTING

A. The required leveling pad subgrade bearing capacity should be certified by a Maryland Registered Professional Geotechnical Engineer prior to footing placement.

B. Construction of retaining wall should be performed under the observations of a Maryland Professional Engineer. Conformance testing should be performed to verify material engineering properties. Upon completion of the work, the engineer should submit a signed and sealed report stating that the retaining wall was constructed in accordance with the plans, specifications, and accepted modifications (if applicable).

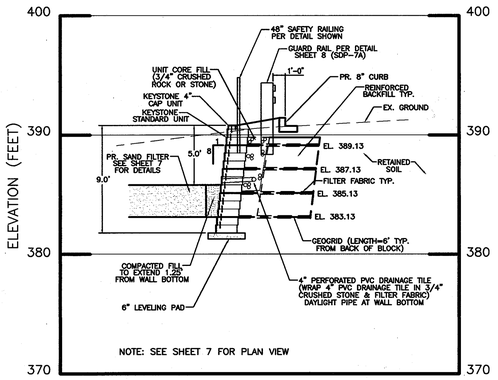
PART 5 – DESIGN CRITERIA

1. Required minimum allowable foundation bearing pressure is 2,000 psf.
2. Design internal friction angle = 30 degrees.
3. Design moist unit weight = 130 pcf.
4. Retaining walls are not designed to resist hydrostatic pressure.
5. Foundation soil internal friction angle = 30 degrees and cohesion = 0 psf.
6. This design includes a surcharge of 250 psf for traffic live load at the top of the wall.



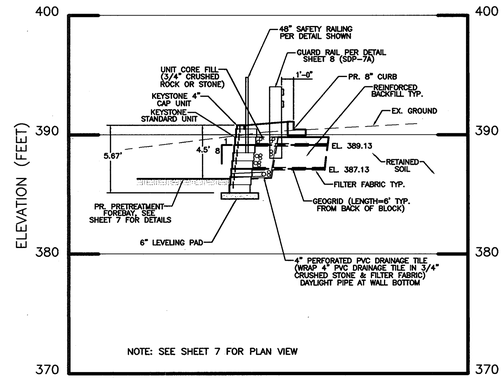
RETAINING WALL PROFILE

HORIZONTAL SCALE: 1" = 6'
VERTICAL SCALE: 1" = 6'



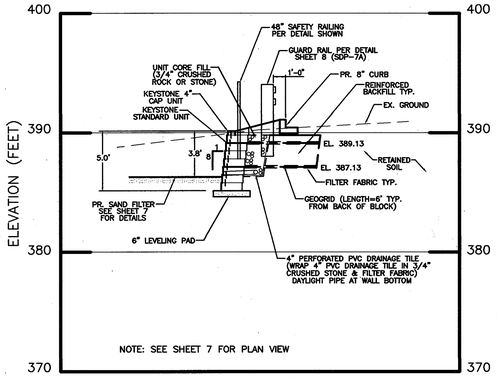
RETAINING WALL SECTION A, AT STA. 0+20

HORIZONTAL SCALE: 1" = 6'
VERTICAL SCALE: 1" = 6'



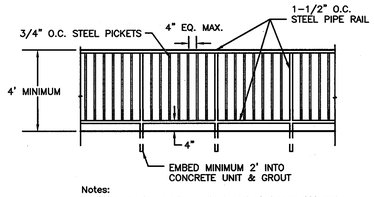
RETAINING WALL SECTION B, AT STA. 0+50

HORIZONTAL SCALE: 1" = 6'
VERTICAL SCALE: 1" = 6'



RETAINING WALL SECTION C, AT STA. 0+08.50

HORIZONTAL SCALE: 1" = 6'
VERTICAL SCALE: 1" = 6'

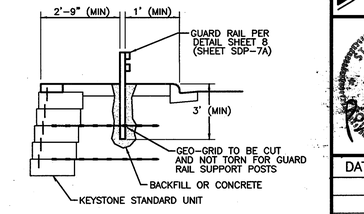


Notes:
1. Safety rail to be primed with 1 coat of Koppers 622 rust penetrating primer, or approved equal, then painted with 2 coats of Duron New Rethane Modified Block (or approved equal). Paint to be applied at min. 1.5 mil. per coat.

SAFETY RAIL

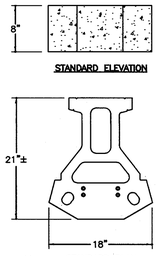
N.T.S.

NOTE:
1. AUGER THROUGH GEOGRID LAYERS.
2. BACKFILL OR CONCRETE GUARD RAIL POST IN PLACE

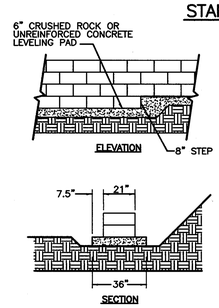


GUARD RAIL INSTALLATION DETAIL

N.T.S.



STANDARD UNIT



LEVELING PAD DETAIL

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/14/02

DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/20/02

SDP-8

OWNER			FAX NO.: 410–531–3432
A. NAME: Charlotte H. Myers		B.TELEPHONE: 410–531–3432	
C. COMPANY: Hardman–Myers, Inc.			
D. ADDRESS: P.O. Box 757			
E. CITY: Clarksville	STATE: MD	ZIP: 21029–0757	
DEVELOPER			FAX NO.: 410–342–4662
A. NAME: E. Philip Hanlon		B.TELEPHONE: 410–342–0197	
C. COMPANY: Mars Super Markets, Inc.			
D. ADDRESS: 3401 E. Federal Street			
E. CITY: Baltimore	STATE: MD	ZIP: 21213–4011	

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
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FAX (410) 792-7395

STATE OF MARYLAND — PIERO VAN MELLTS — No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
SWM FACILITY RETAINING WALL DETAILS

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B–1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11643.01
		SCALE: AS SHOWN
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 9 OF 16

SDP–02–31

LEGEND

- DECIDUOUS TREES
- FLOWERING TREES
- EVERGREEN TREES
- SHRUBS

Schedule D
Stormwater Management Area Landscaping

Linear Feet of Perimeter	185 L.F., Type B
Number of Trees Required Shade Trees 1/50 Evergreen Trees 1/40	4.0 5.0
Credit for existing Vegetation (No, yes and %)	No
Credit for Other Landscaping (No, yes and %)	No
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	0 0 0 21.0 shrubs

*Balance shown on Schedule B

2 Schedule B Parking Lot internal Landscaping

Number of Parking Spaces	73 Parking Spaces
Number of Trees Required 1/20	4.0
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	4 ~~CANOPY TREES~~ *Alternative location 20 1 Flowering ~~trees from Schedule D~~
Number of Landscaped Islands required:	73 p.s. / 20 = 3.65 or 4 Islands
Number of Landscaped Islands provided:	Dean to fill out.

Alternative compliance has been provided for the four landscaped islands shown. (Dean).

The Schedule D for the stormwater management facility generates a planting requirement of 6.5 shade tree equivalents. Per a meeting on December 6, 2001 with Planning and Zoning the shrub substitution has been shown in the immediate location of the facility with the balance of the plantings occuring in the vicinity of the facility. The alternative locations for the balance of the plantings occure in the two parking islands which have been created nearest the stormwater management facility. (Schedule B depicts the balance of these plantings)

~~PLANT LIST~~

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
CANOPY TREES					
I-1	4	Fraxinus pensylvanica	Green Ash	2 1/2"-3" cal.	B&B
I-2	3	Ginko biloba	Ginko	2 1/2"-3" cal.	B&B
I-3	9	Platanus occidentalis	American Sycamore	2 1/2"-3" cal.	B&B

REVISION #1 ONLY
TIMOTHY P. MADDEN
R.L.A. #406

2 PLANT LIST

KEY	QTY.	BOTANICAL NAME COMMON NAME	SIZE	ROOT
ZS	6	ZELKOVA SERRATA 'GREEN VASE' 'GREEN VASE' ZELKOVA	2½-3" CAL.	B&B
LT	11	LAGERSTROEMIA 'TUSCARORA' 'TUSCARORA' CRAPEMYRTLE	8-10' HT	B&B
AG	138	ABELIA GRANDIFLORA 'LITTLE RICHARD' 'LITTLE RICHARD' ABELIA	24-30" HT	#3 CONT.
EK	18	EUONYMUS KIAUT. 'MANHATTEN' 'MANHATTAN' EUONYMUS	24-30" HT	#3 CONT.
VP	50	VIBURNUM PRAGENSE PRAGUE VIBURNUM	30-36" HT	#7 CONT.

Schedule A
Perimeter Landscape Edge

2

Category	Adjacent to Roadway	Adjacent to Perimeter Properties
Linear Feet of Roadway Frontage / Perimeter	288 L.F. Type "E"	252 L.F. Type "D"
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	~~No~~ YES 2 EX. TREES	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	~~No~~ YES 83LF	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs	1/40 = ~~1.0~~ Shade 3 SHADE TREES 1/4 = 72 Shrubs	1/60 = 4.0 Shade 1/10 = 25.0 Evergreen
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	~~1.0~~ Shade 2 SHADE 2 ORNAMENTAL 51 SHRUBS 117.0 Shrubs ~~73 OF THESE SHRUBS ARE USED TO FULFILL THE REMAINING 6 SHRUB ACCOUNT FOR THE BALANCE OF 4 SHADE TREES REQUIRED~~	~~4.0~~ Shade ~~14.0~~ Evergreen 155 EX. SHRUBS 9 ORN. TREES 55 SHADE/16 EVERGREEN ~~1 SHADE TREE SHRUB TO BE APPLIED TOWARD THE 4 EVERGREEN DEFICIT, WHICH EQUATES TO A 2 SHADE TREE SHRUB~~

This plan has been prepared in accordance with the provisions Section 16.124 of the Ho. Co. code and the Ho. co. Landscape Manual.

Financial surety for the required landscaping has been posted as a part of the DPW Developer's Agreement in the amount of $12,360.00.

OWNER / DEVELOPER:	Hardman-Myers Associates, Inc.
SUBDIVISION NAME:	St. John's Plaza (Parcel B-1)
SUBDIVISION PLAT BOOK:	79 PAGE 15
LIBER & FOLIO:	L. 669 F. 394
FINAL PLAN NUMBER:	98-133
TAX ACCOUNT NUMBER:	02-214873
TAX MAP:	24
BLOCK:	5
PARCEL:	1068

OWNER
A. NAME: Charlotte H. Myers — FAX NO.: 410-531-3432
C. COMPANY: Hardman-Myers, Inc. — B. TELEPHONE: 410-531-3432
D. ADDRESS: P.O. Box 757
E. CITY: Clarksville — STATE: MD — ZIP: 21029-0757

DEVELOPER
A. NAME: E. Philip Hanlon — FAX NO.: 410-342-4662
C. COMPANY: Mars Super Markets, Inc. — B. TELEPHONE: 410-342-0197
D. ADDRESS: 3401 E. Federal Street
E. CITY: Baltimore — STATE: MD — ZIP: 21213-4011

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 01/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/29/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/29/02

2 REVISED BY HUMAN & ROHDE, INC. 4/29/13

SDP-9

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
LANDSCAPE PLAN

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS
09/02	REDUCE SUPERMARKET TRUCK DOCK WIDTH BY 3' 1
	REVISE UTILITY SERVICES TO BLDG.
04/29/13	REVISED THE LANDSCAPE PLAN 2

JOB NO.: 11643.01 -
SCALE: 1" = 30'
DATE: 08/07/02
DRAWN BY: RLZ, TCN
DESIGN BY: TCN
REVIEW BY: PVM
SHEET: 10 OF 16

SDP-02-31

SPECIFICATIONS FOR PLANTING

Plant Identification –– All plants shall be properly marked for identification and checking.

List of Plant Material –– The quantities given in the plant list are approximate only. The contractor will verify plant quantities prior to bidding and any discrepancies shall be brought to the attention of the landscape architect. The Contractor shall furnish, and plant, all plants required to complete the work as shown on the drawings. Substitutions shall not be made .

Plant Quality –– All plants shall be sound, free of plant disease, infestation, or insect eggs and shall have a healthy, normal root system. Plants shall be freshly dug and not heeled–in stock, nor stock from cold storage. All plants shall be nursery grown. Plants shall not be pruned prior to delivery. The shape of the plant shall, in general, conform to its natural growth proportions unless otherwise specified. All plants, including container grown, shall conform to the branching, caliper and height specifications of the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANSIZ60.1–1990 or latest edition, and shall have a well–shaped, heavy–branched structure for the species. Evergreen trees are to have an internode no greater than 24" and shall be uniformly well–shaped. Plants of a given–size shall not measure less than the minimum size as set forth in the American Standard for Nursery Stock, ANSIZ60.1–1990 or latest edition.

Plant Spacing –– Plant spacing is to scale on plan.

Soil Mix –– Soil mix will be 2/3 existing topsoil, 1/3 leafmold thoroughly mixed and homogenized.

Rootball Size –– The ball size shall conform to the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANSIZ60.1–1990 or latest edition, and shall be wrapped in untreated burlap.

Excavation –– Holes for all plants shall be 18" larger in diameter than size of ball or container and shall have vertical sides. Organic material (leafmold) will be incorporated into plant beds by tilling again to a depth of 8". Proportions of soil to organic material will be two parts existing soil to one part organic material.

Planting –– Backfilling shall be done with soil mix previously described, reasonably free of stones, subsoil, clay, lumps, stumps, roots, weeds, Bermuda grass, litter, toxic substances, or any other material which may be harmful to plant growth or hinder grading, planting, or maintenance operations. Plants shall be set plumb and straight and trees shall be guyed or staked at the time of planting. Backfill shall be well worked about the roots and seated by watering. Plants will be planted higher than surrounding grade. Trees will be 3" higher. Remove rope from round tree trunks and lay back burlap and wire baskets from top 1/3 of all B&B material. Nylon, plastic, or vinyl rope and/or burlap will be completely removed from all plant material prior to planting.
Maintenance –– The Contractor shall be responsible during the contract and up to the time of acceptance for keeping the planting and work incidental thereto in good condition by replanting, plant replacement, watering, weeding, cultivating, pruning, spraying, restaking and cleaning up, and by performing all other necessary operations of care for the promotion of good plant growth so that work is in satisfactory condition at the time of acceptance at no additional cost to the owner.

Fertilizer –– All fertilizer shall be granular, packet or pellet type with 35 to 90 percent of the total nitrogen in a slowly available form. For trees, fertilizer shall be a complete fertilizer with a minimum analysis of 10 percent nitrogen, 6 percent phosphorous and 4 percent potassium. Fertilizer shall be added depending on the size of the plant and the manufacturer's recommendation using the following application rate:

1. Trees: Use 1/2 lb. Of 10–6–4 fertilizer per inch of trunk diameter.

Guarantee and Replacement –– All plant material shall be unconditionally guaranteed for one year. The guarantee will begin on the date of that acceptance of the work. After a plant has been determined to be dead, dying or damaged from handling or installation, it will be replaced during the next growing season. For example, if a plant is found dead during the summer months, it will be replaced during the fall planting season. The guarantee will end for all plant material one year after acceptance. During the guarantee period, the Contractor will not be responsible for mechanical injury or vandalism caused by other parties.

Material Inspection –– Owner shall, at their discretion, inspect plant material before and during delivery and installation. Plant material will be properly delivered in covered trucks, and promptly uncovered when delivered to prevent damage. Material will be unloaded and properly handled in such a way as not to damage plants. Plants will be inspected and may be rejected upon delivery and/or installation by the owner for mechanical damage, and damage that will subsequently cause misshapen or deformed material. Owner will have authority to observe site preparation and planting installations, and have the right to reject any work if the specifications and construction documents are not followed. All plant material shall be of the quality specified and installed as described above, and unless these minimum standards are satisfied, the plants will be rejected.

GENERAL NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.

2. TREES AND SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS, FIBROUS ROOT SYSTEMS.

3. TREES AND SHRUBS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF THE LOCALITY OF THE PROJECT.

4. TREES AND SHRUBS SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE OF DISEASES AND INSECT INFESTATIONS.

5. THE LANDSCAPE CONTRACTOR SHALL WARRANTY ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) FULL YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS, UNSATISFACTORY GROWTH, DISEASE OR DEATH. UNSATISFACTORY, UNHEALTHY, DYING OR DEAD PLANT MATERIAL (IN THE OPINION OF THE LANDSCAPE ARCHITECT) SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES.

6. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPED AREAS, WHICH SHALL INCLUDE WATERING, CLEANING OF WEEDS AND DEBRIS, PRUNING AND TRIMMING, REPLACEMENT OF DEAD OR DISEASED PLANTINGS, AND FERTILIZING TO MAINTAIN HEALTHY GROWTH.

7. THE LANDSCAPE CONTRACTOR SHALL STAKEOUT PLANT LOCATIONS IN THE FIELD. THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE SHALL OBSERVE THESE LOCATIONS PRIOR TO COMMENCING PLANT PIT EXCAVATION. THE LANDSCAPE CONTRACTOR SHALL MAKE ANY ADJUSTMENTS AS REQUESTED BY THE LANDSCAPE ARCHITECT.

8. ALL PLANT SAUCERS AND PLANT BEDS SHALL BE MULCHED WITH DOUBLE SHREDDED HARDWOOD MULCH, A MINIMUM OF 3" IN DEPTH.

9. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE PERMITTED WITHOUT WRITTEN AUTHORIZATION OF THE LANDSCAPE ARCHITECT. THEIR REPRESENTATIVE, OR THE DEPARTMENT OF HOWARD COUNTY PLANNING & ZONING. THIS SHALL APPLY TO SUBSTITUTIONS OF SPECIES, SIZE AND QUANTITY.

10. THE LANDSCAPE CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD BARK MULCH TO A DEPTH OF 3" UNDER AND SURROUNDING ALL NEW LANDSCAPED MASS PLANTING AREAS TO PROVIDE A UNIFORM AND CONTINUOUS SURFACE AND APPEARANCE BETWEEN AND AROUND ALL PLANT MATERIAL, BUILDING LINES AND PAVED AREAS. IN GENERAL, THIS PERTAINS TO ALL PLANT MATERIAL THAT IS PLANTED CLOSER THAN SIX (6) FEET CENTER TO CENTER. IT IS THE INTENT OF THIS CONTRACT TO INSTALL LANDSCAPE MAT UNDER THE ENTIRE AREA OF SHREDDED BARK MULCH.

11. TREES SHALL BE LOCATED A MINIMUM OF 5' FROM SEWER/WATER CONNECTIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC AND PRIVATE UTILITIES, WATER AND SEWER LINES.

12. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

13. CONTRACTOR SHALL SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL BE GRADED SO AS NOT TO IMPEDE DRAINAGE AWAY FROM BUILDINGS.

14. TREE STAKING AND GUYING SHALL BE DONE PER DETAILS. CONTRACTOR SHALL ENSURE THAT TREES REMAIN PLUMB AND UPRIGHT FOR THE DURATION OF THE GUARANTEE PERIOD.

15. ALL TREE PITS, SHRUB BEDS, AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS.

16. CROWN OF ROOT BALL SHALL BE HIGHER (AFTER SETTING) THAN ADJACENT SOIL.

17. SHADE TREES: HEIGHT SHALL BE MEASURED FROM THE CROWN OF THE ROOT BALL TO THE TOP OF NATURE GROWTH. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE CROWN FROM THE CENTER OF THE TRUNK. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH. SINGLE TRUNK TREES SHALL BE FREE OF 'V' CROTCHES THAT COULD BE POINTS OF WEAK LIMB STRUCTURE OR DISEASE INFESTATION.

18. CONTRACTOR MUST CONTACT THE OWNER AT LEAST TEN WORKING DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTION(S). CONTRACTOR MUST REPLACE ALL DEAD OR UNACCEPTABLE PLANTS DURING THE FOLLOWING RECOMMENDED PLANTING SEASON.

19. TREES SHALL BE PLANTED DURING ACCEPTABLE PLANTING SEASONS; BETWEEN MARCH 15 AND MAY 15 AND BETWEEN AUGUST 15 AND NOVEMBER 15 OR AS APPROVED BY OWNERS REPRESENTATIVE.

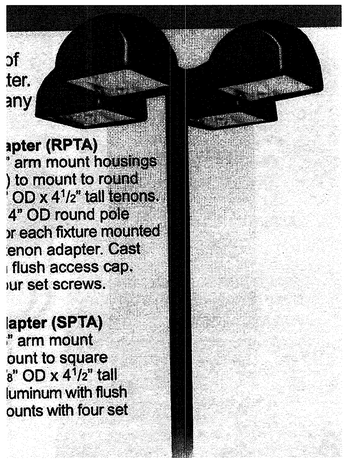
20. ALL TREE STAKING AND GUYING SHALL BE REMOVED BY THE CONTRACTOR AFTER THE TREES ARE ESTABLISHED.

21. SEEDED AREAS THAT WASH OUT MUST BE FILLED AND GRADED AS NECESSARY AND THE RESEEDED. SOME TYPE OF ANCHORING METHOD SHOULD THEN BE USED TO HOLD SEED AND MULCH IN PLACE. THIS IS ESPECIALLY IMPORTANT AROUND WATER COURSED, IN SWALES AND AREAS OF CONCENTRATED FLOWS, AND ON SLOPES.

22. BONDING OF LANDSCAPE WORK MUST BE COMPLETED PRIOR TO COMMENCEMENT OF INSTALLATION. 19 SHADE TREES @ A RATE OF $300.00 EA., 30 EVERGREEN TREES @ A RATE OF $150.00 EA., AND 72 SHRUBS @ A RATE OF $30.00 EA. THE REQUIRED AMOUNT OF BONDING FOR THIS LANDSCAPE PLAN IS $12,360.00.

23. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.

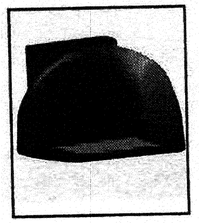
24. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS A PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $12,360.00



POLE MOUNTED FIXTURES

NOTES:

1) TYPE OF FIXTURE: WIDELITE EALM–400–4V, FULL CUT–OFF
2) HEIGHT OF FIXTURE: FIXTURES TO BE INSTALLED ON THE EXISTING POLES. TOTAL HEIGHT NOT TO EXCEED 35' AGL.
3) FULL CUT–OFF SHIELDING
4) FIXTURE WILL PROVIDE 36000 LUMENS LIGHT INTENSITY.
5) ALL FIXTURES TO BE LOCATED AS PER SITE PLANS.
6) FIXTURE WILL CONSIST OF 4 VERTICAL LAMPS, ARRANGED @ 90° CIRCULAR ARRAY FROM THE CENTER OF MOUNTING POLE (SEE ALL FIXTURES LABELED AS "A") QUANTITY= 9.
ALSO, TWO OF THE FIXTURES TO CONSIST OF SINGLE VERTICAL LAMPS TO BE INSTALLED IN POSITIONS MARKED AS "B" ON THE PLANS. QUANTITY=2
7) TYPE OF LIGHT–



WALL MOUNTED FIXTURES

NOTES:

1) TYPE OF FIXTURE: WIDELITE EWLM–175–4H, FULL CUT–OFF
2) HEIGHT OF FIXTURE: FIXTURES TO BE INSTALLED ON THE PROPOSED WALL. HEIGHT NOT TO EXCEED 18' AGL.
3) FULL CUT–OFF SHIELDING
4) FIXTURE WILL PROVIDE 14000 LUMENS LIGHT INTENSITY.
5) ALL FIXTURES TO BE LOCATED AS PER SITE PLANS.
6) EACH FIXTURE WILL CONSIST OF 1 HORIZONTAL LAMP, PROJECTING A TYPE 4 HORIZONTAL LIGHT DISTRIBUTION. POSITIONS MARKED AS "C" ON THE PLANS. QUANTITY=5.
7) TYPE OF LIGHT–

OWNER			FAX NO.: 410–531–3432
A. NAME: Charlotte H. Myers			B.TELEPHONE: 410–531–3432
C. COMPANY: Hardman–Myers, Inc.			
D. ADDRESS: P.O. Box 757			
E. CITY: Clarksville	STATE: MD	ZIP: 21029–0757	
DEVELOPER			FAX NO.: 410–342–4662
A. NAME: E. Philip Hanlon			B.TELEPHONE: 410–342–0197
C. COMPANY: Mars Super Markets, Inc.			
D. ADDRESS: 3401 E. Federal Street			
E. CITY: Baltimore	STATE: MD	ZIP: 21213–4011	

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

E. Philip Hanlon — 8/6/02

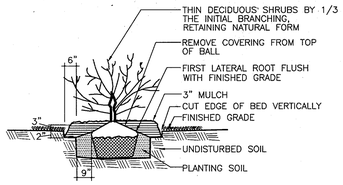
E. PHILIP HANLON, MARS SUPER MARKETS, INC. — DATE

APPROVED, DEPARTMENT OF PLANNING AND ZONING

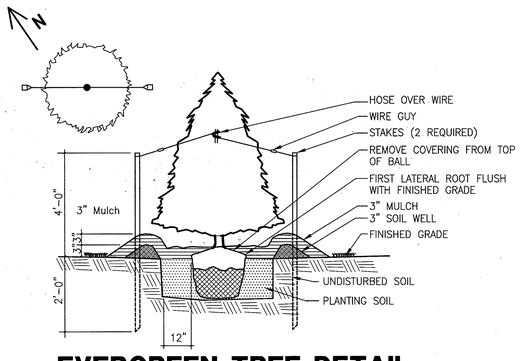
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/20/02

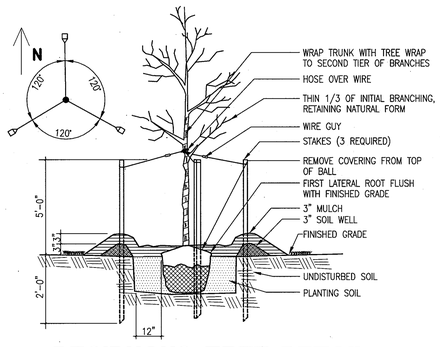
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/20/02



SHRUB DETAIL
SHRUB
NOT TO SCALE



EVERGREEN TREE DETAIL
EVR_TR
NOT TO SCALE



DECIDUOUS TREE DETAIL
Dec_Tr
NOT TO SCALE

SDP-10

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
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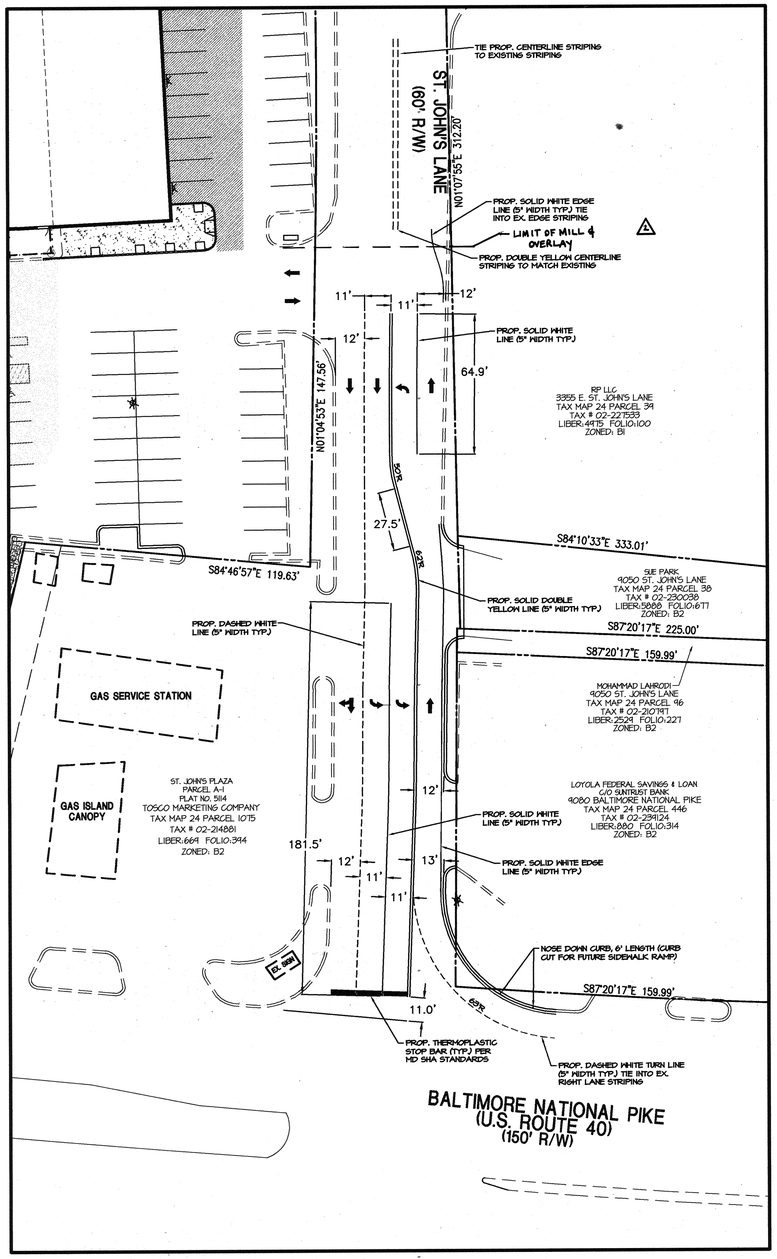
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
LANDSCAPE DETAILS

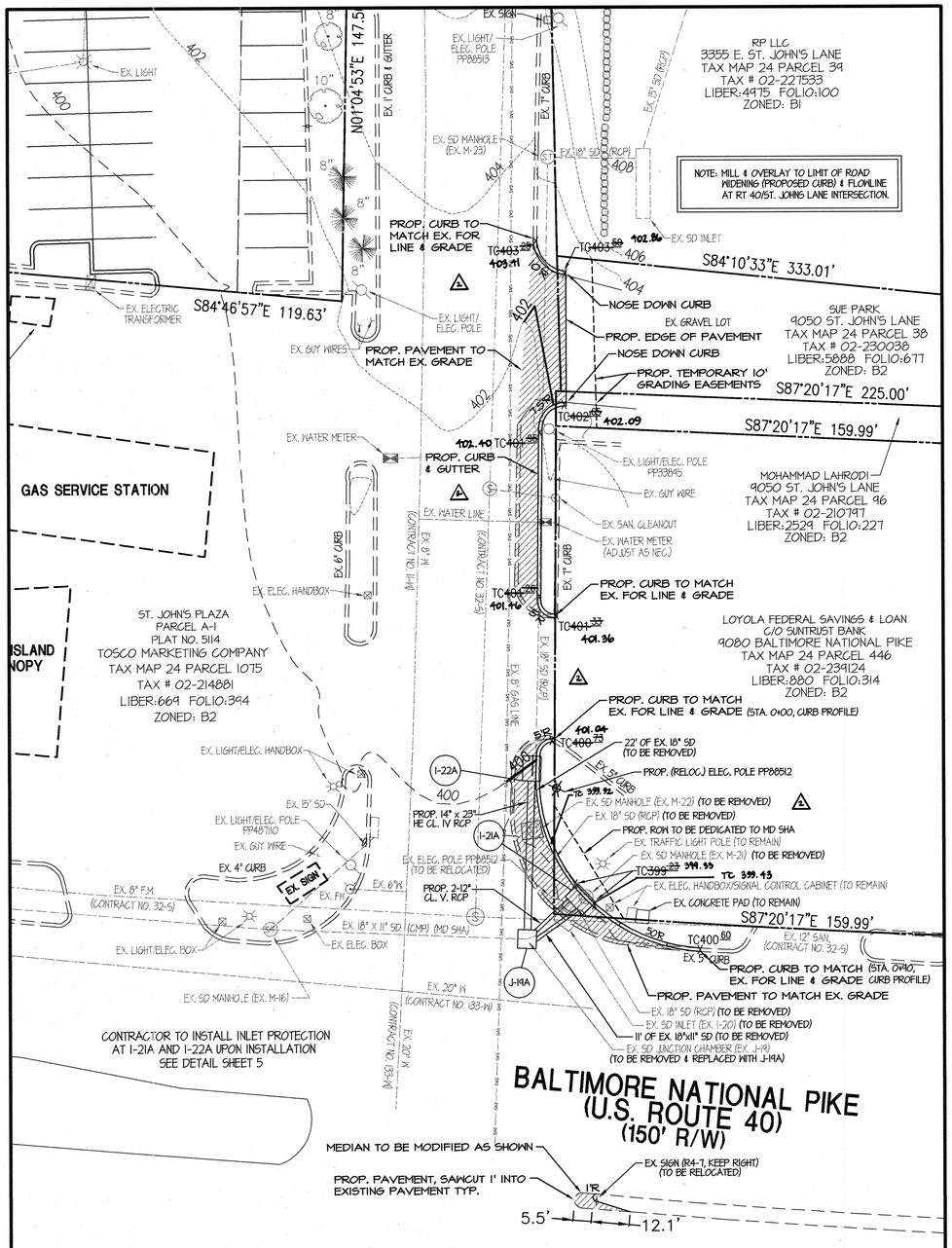
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B–1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11643.01
		SCALE: N.T.S.
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 11 OF 16

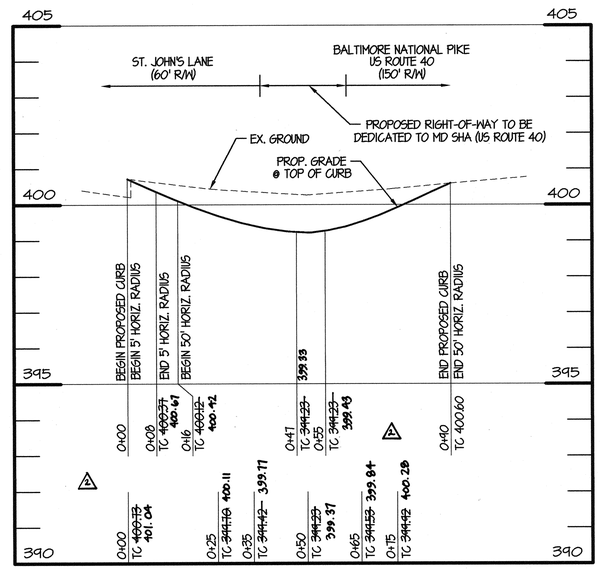
SDP–02–31



RESTRIPING PLAN - ST. JOHN'S LANE
SCALE: 1"=30'



ROAD WIDENING PLAN - ST. JOHN'S LANE
SCALE: 1"=20'



LINEAR PROFILE-PROP. CURB (ST. JOHNS LANE & US 40)
HOR. 1" = 20', VERT. 1"=2'

LEGEND

- 404 — EX. 2' CONTOUR
- 400 — EX. 10' CONTOUR
- EX. CURB
- EX. ROAD/PAVEMENT
- EX. BUILDING
- EX. PROPERTY LINE
- EX. FENCE
- EX. 6"W — EX. WATER LINE
- EX. 6"SAN — EX. SANITARY SEWER
- EX. 15"SD — EX. STORM DRAIN
- EX. ELEC/TRIC — EX. ELECTRIC LINE
- EX. TREE LINE
- EX. LIGHT/ELEC. POLE
- EX. FH/WATER VALVE
- EX. TREES/SHRUBS
- 402 — PR. 2' CONTOUR
- 400 — PR. 10' CONTOUR
- x TC400.00 — PR. SPOT ELEVATION
- 30' BUILDING SETBACK LINE
- HEAVY DUTY PAVEMENT
- LIGHT DUTY PAVEMENT
- CONCRETE PAVEMENT
- PAINTED NO PARKING STRIPING
- PROPOSED LIGHTING OR RELOCATED UTILITY POLE

△1 NOTE:
ALL OF THE WORK ON THIS DRAWING INCLUDING UTILITY WORK, NEW CONCRETE CURB AND GUTTER, WIDENING OF ST. JOHNS LANE, AND RESURFACING, WAS COMPLETED AS SHOWN AND SPECIFIED ON THIS DRAWING EXCEPT:

1. THE WIDENING PAVING WAS CHANGED BY OUR SHA INSPECTOR FROM HOWARD COUNTY P-3 TO 12" CR-6 SUBBASE, 6" ASPHALT BASE, 19MM PG64-22 (2-3" LIFTS) AND 2" ASPHALT SURFACE 12.5MM PG64-22.
2. WE WERE DIRECTED TO FURNISH AND PLACE 12" OF CR-6 SUBBASE UNDER CURB AND GUTTER.
3. THE MILLING AND RESURFACING OF ST. JOHN'S LANE EXTENDED BY 28 FEET TO THE "LIMIT LINE" SHOWN, FULL WIDTH AND INCREASED FROM 1.5" TO 2".
4. THE ASPHALT SURFACE MATERIAL FOR THE RESURFACING WAS CHANGED FROM "SF" TO 12.5MM PG64-22.

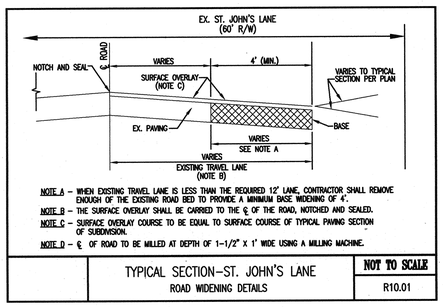
APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/14/02

DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE

SDP-11



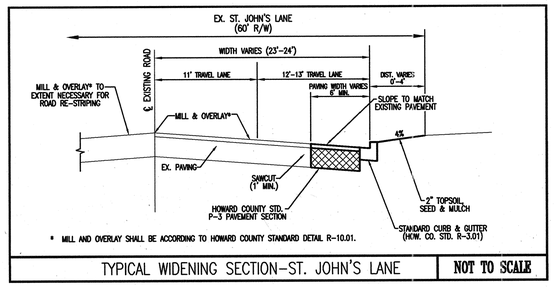
NOTE A – WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE, CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'.

NOTE B – THE SURFACE OVERLAY SHALL BE CARRIED TO THE ℄ OF THE ROAD, NOTCHED AND SEALED.

NOTE C – SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION.

NOTE D – ℄ OF ROAD TO BE MILLED AT DEPTH OF 1-1/2" X 1' WIDE USING A MILLING MACHINE.

TYPICAL SECTION–ST. JOHN'S LANE	NOT TO SCALE
ROAD WIDENING DETAILS	R10.01



* MILL AND OVERLAY SHALL BE ACCORDING TO HOWARD COUNTY STANDARD DETAIL R-10.01.

TYPICAL WIDENING SECTION–ST. JOHN'S LANE	NOT TO SCALE

OWNER		FAX NO.:	410-531-3432
A. NAME:	Charlotte H. Myers	B.TELEPHONE:	410-531-3432
C. COMPANY:	Hardman-Myers, Inc.		
D. ADDRESS:	P.O. Box 757		
E. CITY:	Clarksville	STATE: MD	ZIP: 21029-0757
DEVELOPER		FAX NO.:	410-342-4662
A. NAME:	E. Philip Hanlon	B.TELEPHONE:	410-342-0197
C. COMPANY:	Mars Super Markets, Inc.		
D. ADDRESS:	3401 E. Federal Street		
E. CITY:	Baltimore	STATE: MD	ZIP: 21213-4011

△2

MRA

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9080 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1890
FAX (410) 792-7395

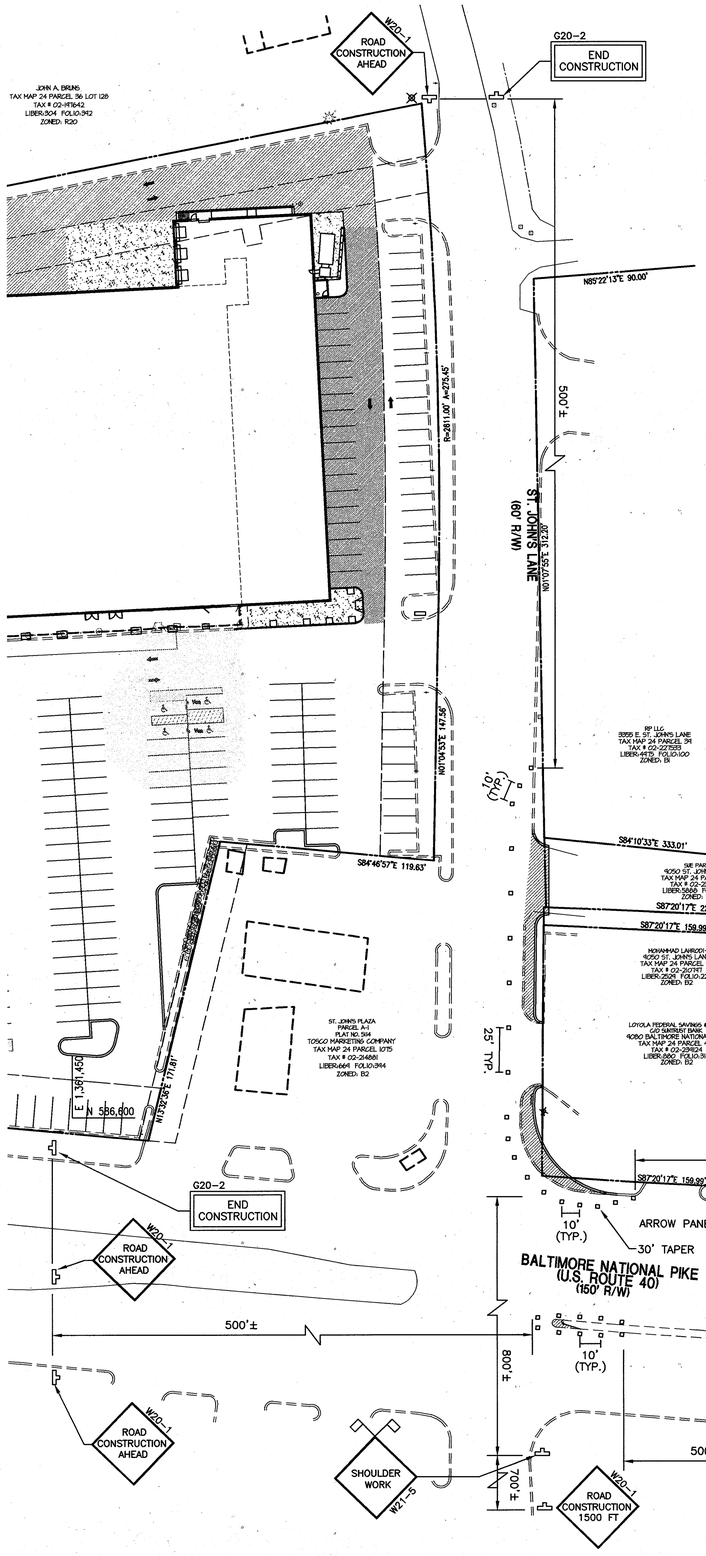
STATE OF MARYLAND — PIERO VAN MELLITS No. 21875 — REGISTERED PROFESSIONAL ENGINEER — 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
ROAD IMPROVEMENT PLAN-ST. JOHN'S LANE
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

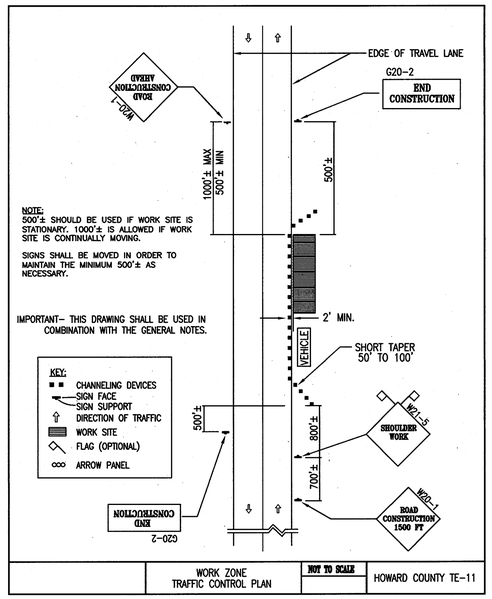
DATE	REVISIONS
05/2004	AS BUILT INFORMATION ADDED TO PLAN

JOB NO.: 11643.01
SCALE: AS SHOWN
DATE: 08/07/02
DRAWN BY: RLZ, TCN
DESIGN BY: TCN
REVIEW BY: PVM
SHEET: 12 OF 16

SDP-02-31



TRAFFIC CONTROL PLAN-ST. JOHN'S LANE
SCALE: 1"=40'



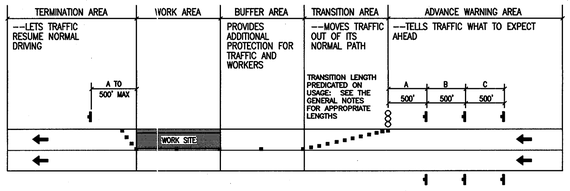
WORK ZONE TRAFFIC CONTROL PLAN	NOT TO SCALE	HOWARD COUNTY TE-11

OWNER			
A. NAME: Charlotte H. Myers		FAX NO.: 410-531-3432	
C. COMPANY: Hardman-Myers, Inc.		B.TELEPHONE: 410-531-3432	
D. ADDRESS: P.O. Box 757			
E. CITY: Clarksville	STATE: MD	ZIP: 21029-0757	
DEVELOPER			
A. NAME: E. Philip Hanlon		FAX NO.: 410-342-4662	
C. COMPANY: Mars Super Markets, Inc.		B.TELEPHONE: 410-342-0197	
D. ADDRESS: 3401 E. Federal Street			
E. CITY: Baltimore	STATE: MD	ZIP: 21213-4011	

*SPEED M.P.H.	MINIMUM DISTANCE FROM TAPER TO FIRST SIGN	ADDITIONAL SIGNS IN A SERIES TO BE SPACED AT A MINIMUM			MINIMUM COMBINED ADVANCED WARNING
	A	B	C	D	A
0 – 25	200'	200'	200'	–	600'
30 – 35	300'	300'	300'	–	900'
40	500'	500'	500'	–	1500'
41 – 55	800'	700'	1100'	2600' (1/2 MILE)	5200' (1 MILE)

*SPEED LIMIT OR PREVAILING TRAVEL SPEED, WHICH EVER IS HIGHER.

BELOW EXAMPLE: TWO LANES ONE-WAY ROADWAY / SPEED LIMIT IS 35 MPH / PREVAILING SPEED IS 38 MPH (USE 40 MPH)

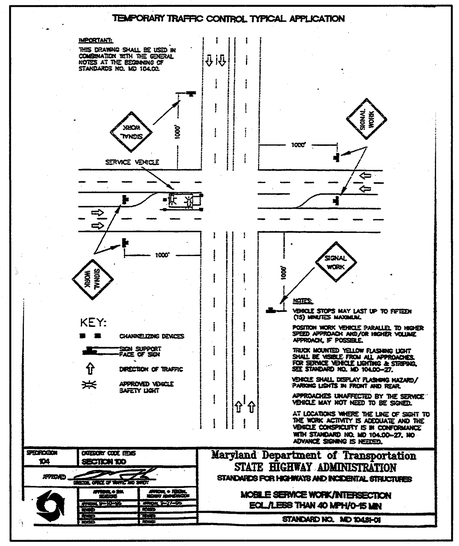


WORK ZONE TRAFFIC CONTROL PLAN	NOT TO SCALE	HOWARD COUNTY TE-10

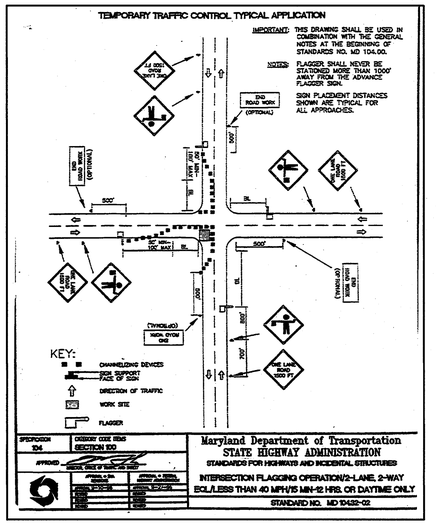
WORK ZONE TRAFFIC CONTROL NOTES

1. SEE HOWARD COUNTY STANDARD DETAILS TE-10 AND TE-11 FOR PLACEMENT OF ALL TRAFFIC CONTROL SIGNS AND BARRICADES. ALSO, SEE MARYLAND, DEPT. OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION, BOOK OF STANDARDS, STANDARD DETAILS 104.00-01 TO 104.00-30 FOR ADDITIONAL INFORMATION.
2. AN ARROW PANEL, IN THE FLASHING MODE, SHALL BE USED ANYTIME THERE IS A LANE CLOSURE ON A MULTILANE HIGHWAY. ARROW PANELS SHALL NOT BE USED ALONG TWO-WAY ROADWAYS UNLESS THEY DISPLAY MSHA'S "FOUR CORNER" LAMP ARRAY.
3. VEHICLES SHOULD NOT OCCUPY OR BE STOPPED IN A LANE BEYOND A HORIZONTAL CURVE OR A VERTICAL CURVE. INSTEAD, VEHICLES STOPPING ARE TO BE PULLED AS FAR OFF THE ROAD AS POSSIBLE, OR BE OTHERWISE PARKED IN A MANNER AS TO INHIBIT THE MOVEMENT OF TRAFFIC AS LITTLE AS POSSIBLE.
4. WARNING SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE HOWARD COUNTY DETAILS LISTED IN NOTE #1. THE BOTTOM OF EACH SIGN SHALL NOT BE LESS THAN ONE FOOT ABOVE THE PAVEMENT ELEVATION. ALL SIGNS SHALL BE PLACED IN SUCH A MANNER AS TO PROVIDE ADEQUATE VISIBILITY OF THESE SIGNS, AND ALL OTHER EXISTING SIGNS ON THE HIGHWAY TO THE DRIVER.
5. FOR URBAN AREAS WHERE THE PREVAILING SPEED IS 35 MPH OR LESS, THE MINIMUM WARNING SIGN SIZE MAY BE 36" X 36".
6. NO WORK OPERATIONS, WHICH INTERFERES WITH THE FLOW OF TRAFFIC, MAY TAKE PLACE DURING PEAK HOURS 6 AM-9AM, AND 3PM-7PM MONDAY-FRIDAY UNLESS WRITTEN APPROVAL IS RECEIVED FROM THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
7. ALL SIGNS, CHANNELIZING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 1988 EDITION.

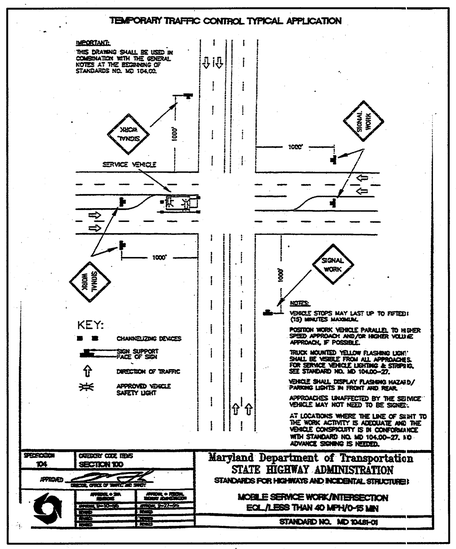
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



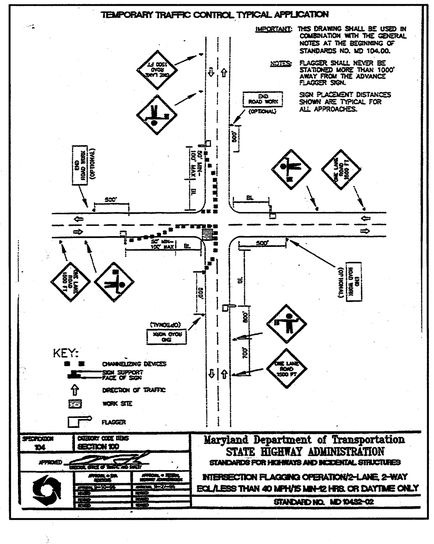
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/16/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/26/02

DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE

SDP-12

MRA

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9080 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

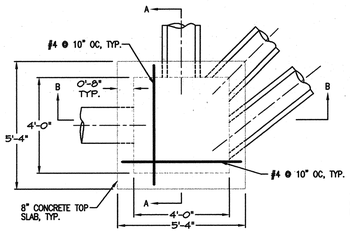
STATE OF MARYLAND — PIERO VAN MELLE'S — No. 21676 — REGISTERED PROFESSIONAL ENGINEER

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
TRAFFIC CONTROL PLAN-ST. JOHN'S LANE

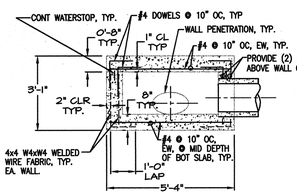
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	
		JOB NO.: 11643.01
		SCALE: AS SHOWN
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 13 OF 16

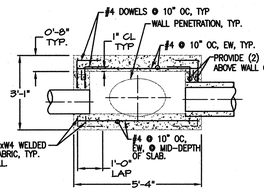
SDP-02-31



STRUCTURAL PLAN - STRUCTURE J-19A
SCALE: 1"=3'



STRUCTURE J-19A SECTION A-A
SCALE: 1"=3'



STRUCTURE J-19A SECTION B-B
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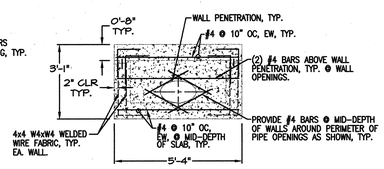
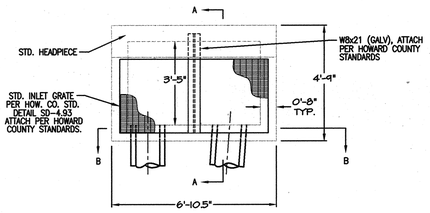
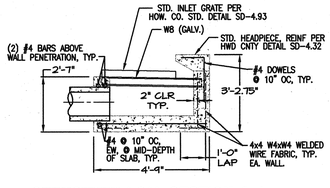


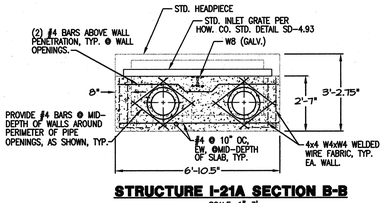
TYPICAL WALL REINFORCING AT PENETRATION
SCALE: 1"=3'



STRUCTURAL PLAN - STRUCTURE I-21A
SCALE: 1"=3'



STRUCTURE I-21A SECTION A-A
SCALE: 1"=3'



STRUCTURE I-21A SECTION B-B
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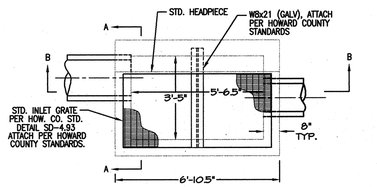
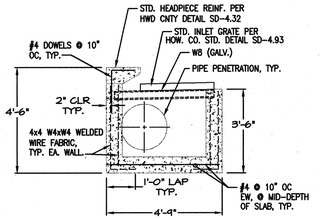
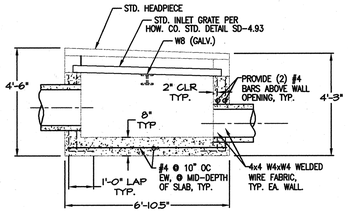


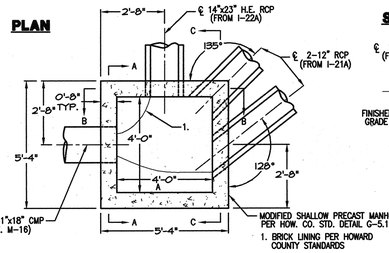
STRUCTURAL PLAN - STRUCTURE I-22A DETAIL
SCALE: 1"=3'



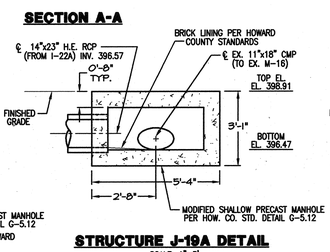
STRUCTURE I-22A SECTION A-A
SCALE: 1"=3'



STRUCTURE I-22A SECTION C-C
SCALE: 1"=3'



STRUCTURE J-19A DETAIL
SCALE: 1"=3'



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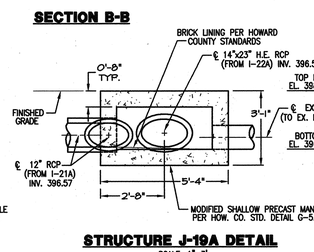

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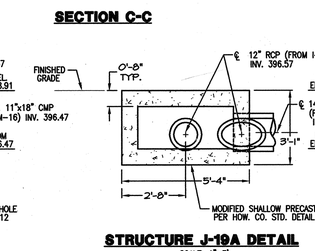

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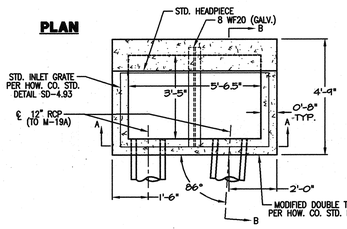
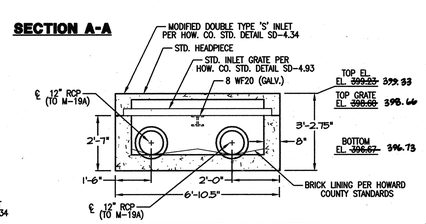


STRUCTURE I-21A DETAIL
SCALE: 1"=3'



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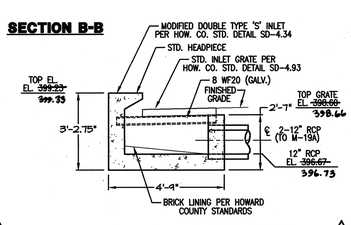
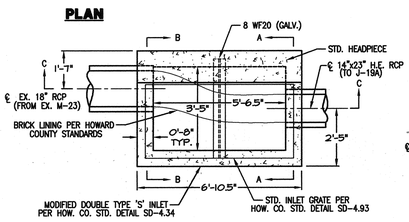


STRUCTURE I-21A DETAIL
SCALE: 1"=3'



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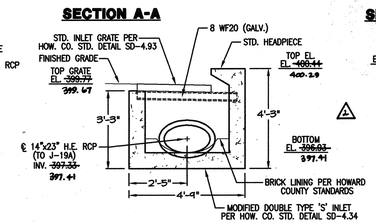
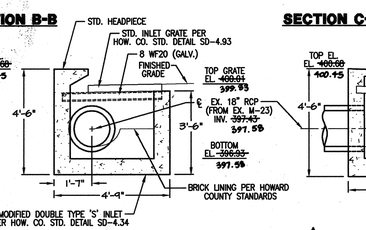
SCALE: 1"=3'



STRUCTURE I-22A DETAIL
SCALE: 1"=3'



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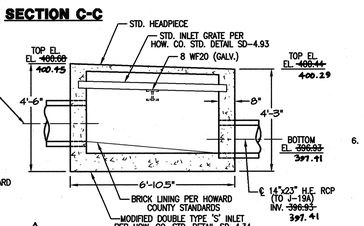

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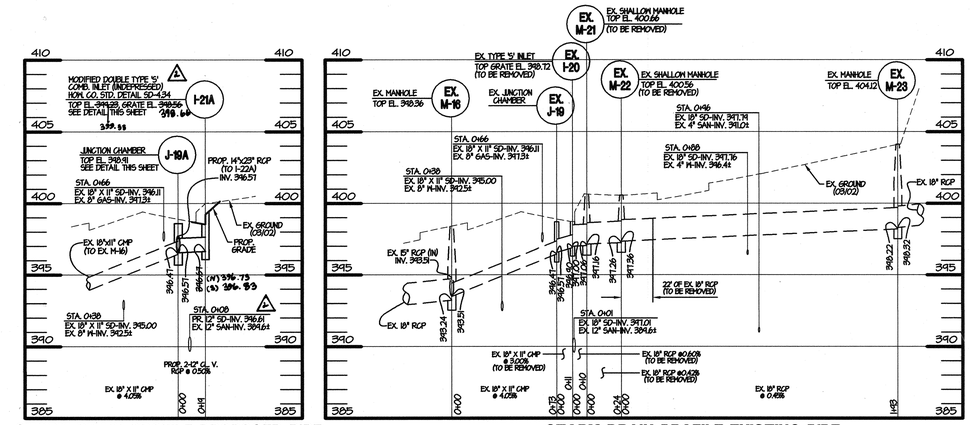
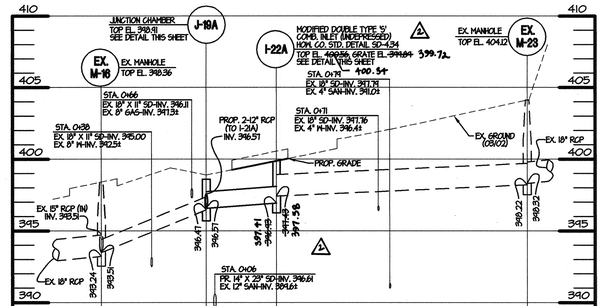
SCALE: 1"=3'



STORM DRAIN PROFILE-PROPOSED PIPE
HOR. 1" = 50'
VERT. 1" = 5'

STORM DRAIN PROFILE-EXISTING PIPE
HOR. 1" = 50'
VERT. 1" = 5'



STORM DRAIN PROFILE-PROPOSED PIPE
HOR. 1" = 50'
VERT. 1" = 5'

STRUCTURAL NOTES

1. BUILDING CODES
   A. ALL CONSTRUCTION SHALL CONFORM WITH THE 2000 INTERNATIONAL BUILDING CODE AND ALL SUBSEQUENT SUPPLEMENTS.
   B. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.
2. DESIGN LOADS
   A. THE MINIMUM DESIGN DEAD LOADING FOR ALL FRAMING IS BASED ON THE CONSTRUCTION MATERIALS SHOWN ON THE DRAWINGS AND INDICATED IN THE SPECIFICATIONS.
   B. THE DESIGN LIVE LOADING FOR ALL FRAMING IS BASED ON THE AASHTO HS20-44 TRUCK LOADING.
   C. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WHICH WILL EXCEED THE DESIGN LIVE LOADINGS NOTED.
3. MISCELLANEOUS
   A. THE CONTRACTOR SHALL COORDINATE THE LOCATION AND DIMENSIONS OF OPENINGS, SLEEVES, DEPRESSIONS, AND OTHER PROJECT REQUIREMENTS WITH THE CIVIL DRAWINGS PREPARED BY MORRIS & RITCHIE ASSOC., INC.
   B. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
   C. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.
   D. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
4. FOUNDATIONS
   A. ALL FOUNDATIONS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOUNDATIONS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 2500 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
   B. ALL FILL PLACED UNDER FOUNDATIONS SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698.
   C. ALL EXCAVATION AND BACKFILLING OPERATIONS WITHIN THE STRUCTURE FOOTPRINT, INCLUDING ALL COMPACTION TESTS AND INSPECTIONS, SHALL BE DONE UNDER THE DIRECTION AND SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER.
   D. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL FOUNDATION AND SOIL CONDITIONS WHICH DIFFER FROM THOSE ANTICIPATED OR INDICATED IN THE CONTRACT DOCUMENTS.
   E. ALL EXISTING SOIL CONTAINING GRAVEL, CONSTRUCTION OR DEMOLITION DEBRIS, ORGANIC SUBSTANCES, OR OTHER FOREIGN OBJECTS SHALL BE REMOVED FROM THE REGION WITHIN THE FOOTPRINT OF THE STRUCTURE.
5. CAST IN PLACE CONCRETE
   A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES 350)"; AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".
   B. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
      1. RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 305).
      2. RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306).
      3. RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI 347).
   C. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4", 3" FOR SLABS ON GRADE. ALL CONCRETE, EXCEPT FOOTINGS, SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 33.
   D. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A 615 GRADE 60. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM A 185. LAP ALL REINFORCING BARS A MINIMUM OF 45 BAR DIAMETERS AND ALL W.W.F. A MINIMUM OF TWO FULL GRIDS, UNLESS OTHERWISE INDICATED.
   E. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE", ACI 315" DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI SP 66 "DETAILING MANUAL".
   F. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.
   G. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE.
   H. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50 PERCENT OF THE PORTLAND CEMENT IN A CONCRETE MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25 PERCENT OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C 989.
   I. MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED: FOUNDATIONS 3 INCHES; WALLS 2 INCHES
   J. THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED CONCRETE SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.
   K. ALL RISER WALLS SHALL BE BRACED AND SHORED AS REQUIRED DURING BACKFILLING. BOTH SUPPORTING ELEMENTS SHALL BE IN PLACE AND DEVELOPING FULL REQUIRED STRENGTH PRIOR TO BACK FILLING OF WALLS SUPPORTED AT TOP AND BOTTOM.
6. STRUCTURAL AND MISCELLANEOUS STEEL
   A. ALL STEEL CONSTRUCTION SHALL CONFORM TO THE NINTH EDITION OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS; ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   B. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A 992 GRADE 50 OR ASTM A 36 AT THE CONTRACTORS OPTION.
   C. STEEL MEMBERS, FABRICATIONS AND ASSEMBLIES INDICATED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 123 AFTER FABRICATION.

* FLOWLINE ELEVATION AT CENTER OF STRUCTURE, FACE OF CURB.
● COORDINATES TO CENTER OF STRUCTURE AT FACE OF CURB FOR INLETS.
COORDINATES TO CENTER OF STRUCTURE FOR JUNCTION CHAMBER.

STORM DRAIN STRUCTURE SCHEDULE

STR NO.	TOP ELEV	INV IN	INV IN	INV OUT	TYPE
J-19A	398.91	396.57	395.57	396.47	JUNCTION CHAMBER, SEE DETAIL THIS SHEET
I-21A	~~* 398.56~~	~~---~~	~~---~~	~~396.67~~	MOD. DOUBLE TYPE S COMB. INLET, HOW. CO. SD-4.34
I-22A	~~* 399.89~~ 399.72	~~397.43~~ 397.58		~~396.93~~ 397.41 (N) 396.73 (S) 396.83	MOD. DOUBLE TYPE S COMB. INLET, HOW. CO. SD-4.34

LOCATION

STR NO.	NORTHING	EASTING
J-19A	586,560.07	1,361,704.23
I-21A	586,572.18	1,361,720.~~37~~ 41
I-22A	586,609.~~00~~ 47	1,361,706.~~99~~ 7.10

STORM DRAIN PIPE SCHEDULE

SIZE	TYPE	LENGTH
14"x23" H.E. (RISExSPAN)	CLASS IV RCP	49'
12"	CLASS V RCP	38'

APPROVED DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/20/02

SDP-13

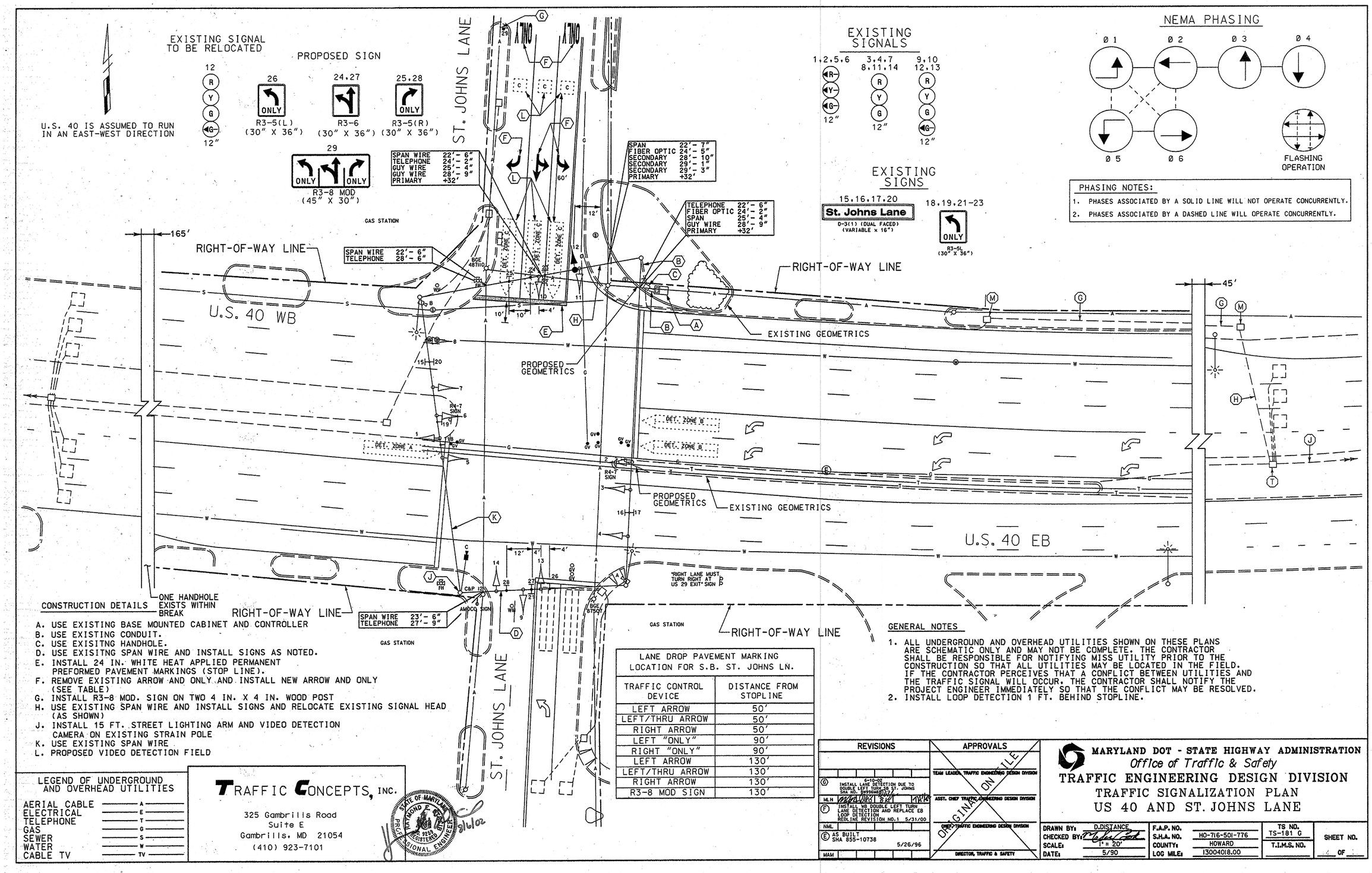
MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

PIERO VAN MELLE'S No. 21676 REGISTERED PROFESSIONAL ENGINEER 8-7-02

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
STORM DRAIN PROFILES & DETAILS
ST. JOHN'S LANE

TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11643.01
05/2004	AS-BUILT INFORMATION ADDED TO PLAN	SCALE: AS SHOWN
		DATE: 08/07/02
		DRAWN BY: RLZ, TCN
		DESIGN BY: TCN
		REVIEW BY: PVM
		SHEET: 14 OF 16



CONSTRUCTION DETAILS

A. USE EXISTING BASE MOUNTED CABINET AND CONTROLLER
B. USE EXISTING CONDUIT.
C. USE EXISITNG HANDHOLE.
D. USE EXISITNG SPAN WIRE AND INSTALL SIGNS AS NOTED.
E. INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED PAVEMENT MARKINGS (STOP LINE).
F. REMOVE EXISTING ARROW AND ONLY AND INSTALL NEW ARROW AND ONLY (SEE TABLE)
G. INSTALL R3-8 MOD. SIGN ON TWO 4 IN. X 4 IN. WOOD POST
H. USE EXISTING SPAN WIRE AND INSTALL SIGNS AND RELOCATE EXISTING SIGNAL HEAD (AS SHOWN)
J. INSTALL 15 FT. STREET LIGHTING ARM AND VIDEO DETECTION CAMERA ON EXISTING STRAIN POLE
K. USE EXISTING SPAN WIRE
L. PROPOSED VIDEO DETECTION FIELD

LANE DROP PAVEMENT MARKING LOCATION FOR S.B. ST. JOHNS LN.

TRAFFIC CONTROL DEVICE	DISTANCE FROM STOPLINE
LEFT ARROW	50'
LEFT/THRU ARROW	50'
RIGHT ARROW	50'
LEFT "ONLY"	90'
RIGHT "ONLY"	90'
LEFT ARROW	130'
LEFT/THRU ARROW	130'
RIGHT ARROW	130'
R3-8 MOD SIGN	130'

GENERAL NOTES

1. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO THE CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
2. INSTALL LOOP DETECTION 1 FT. BEHIND STOPLINE.

LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES

AERIAL CABLE	A
ELECTRICAL	E
TELEPHONE	T
GAS	G
SEWER	S
WATER	W
CABLE TV	TV

TRAFFIC CONCEPTS, INC.
325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101

STATE OF MARYLAND — RICHARD E. [illegible] — No. 9291 — REGISTERED PROFESSIONAL ENGINEER — 6/10/02

REVISIONS	APPROVALS
G 6-10-02 INSTALL LANE DETECTION DUE TO DOUBLE LEFT TURN ON SB ST. JOHNS SHA NO. SM9964481 MLH	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
F INSTALL WB DOUBLE LEFT TURN LANE DETECTION AND REPLACE EB LOOP DETECTION REDLINE REVISION NO.1 5/31/00 NML	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
E AS BUILT SHA 855-10738 5/26/96 M&M	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

ORIGINAL ON FILE

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNALIZATION PLAN
US 40 AND ST. JOHNS LANE

DRAWN BY: D.DISTANCE	F.A.P. NO.		TS NO.	SHEET NO.
CHECKED BY:	S.H.A. NO.	HO-716-501-776	TS-181 G	
SCALE: 1" = 20'	COUNTY:	HOWARD	T.I.M.S. NO.	OF
DATE: 5/90	LOG MILE:	13004018.00		

OWNER	FAX NO.: 410-531-3432
A. NAME: Charlotte H. Myers	B.TELEPHONE: 410-531-3432
C. COMPANY: Hardman-Myers, Inc.	
D. ADDRESS: P.O. Box 757	
E. CITY: Clarksville STATE: MD ZIP: 21029-0757	
DEVELOPER	FAX NO.: 410-342-4662
A. NAME: E. Philip Hanlon	B.TELEPHONE: 410-342-0197
C. COMPANY: Mars Super Markets, Inc.	
D. ADDRESS: 3401 E. Federal Street	
E. CITY: Baltimore STATE: MD ZIP: 21213-4011	

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 6/10/02
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 6/20/02
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING	DATE 6/20/02

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
TRAFFIC SIGNALIZATION PLAN-US 40 & ST. JOHN'S LANE
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS

JOB NO.:	11643.01
SCALE:	AS SHOWN
DATE:	08/07/02
DRAWN BY:	T.C., INC.
DESIGN BY:	T.C., INC.
REVIEW BY:	T.C., INC.
SHEET:	15 OF 16

SDP-02-31

PROJECT DESCRIPTION

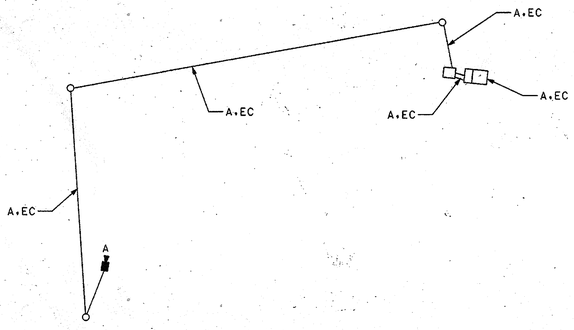
THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF US 40 AND ST JOHNS LANE IN HOWARD COUNTY.
US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

CONTROLLER OPERATION

THE EXISTING CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED.
CONTROLLER OPERATION WILL NOT CHANGE.

PHASING WILL NOT CHANGE

WIRING DIAGRAM



WIRING KEY

A	VIDEO DETECTION 500 FT. PREMANUFACTURED CABLE
EC	EXISTING CABLE

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS:

MR. JIM BUCKALEW
ASSISTANT DISTRICT ENGINEER - UTILITIES
(301) 624-8110

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(301) 624-8141

MR. DAVID COYNE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(301) 624-8106

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
(410) 787-7630

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
(410) 787-7676

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS
(410) 787-7631

MR. DAVID SCHWARTZ
SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE)
(410) 787-7668

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
(410) 787-7652

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
1001	LS	MAINTENANCE OF TRAFFIC
5001	4 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW (LEFT AND RIGHT)
5001	2 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW (THUR/LEFT)
5002	8 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING LETTER
5005	35 LF	FURNISH AND INSTALL 24 IN. HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING
8003	1 EA	FURNISH AND INSTALL 500 FT. VIDEO CABLE TO CONTROLLER
8013	1 EA	FURNISH AND INSTALL 15 FT. BRACKET ARM FOR SIGNAL STRUCTURE
8049	1 EA	VIDEO DETECTION CAMERA
8058	30 LF	FURNISH AND INSTALL 4 IN. X 4 IN. WOOD POST
---	2 EA	FURNISH AND INSTALL R3-5(R) SIGN (30" X 36") SPAN WIRE MOUNT
---	1 EA	FURNISH AND INSTALL R3-5(L) SIGN (30" X 36") SPAN WIRE MOUNT
---	2 EA	FURNISH AND INSTALL R3-6 SIGN (30" X 36") SPAN WIRE MOUNT
---	1 EA	FURNISH AND INSTALL R3-8 MOD. SIGN (45" X 30") GROUND MOUNT
---	1 EA	RELOCATE EXISTING SIGNAL HEAD

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

ALL OTHERS SHALL BECOME THE PROPERTY OF THE CONTRACTOR

STATE OF MARYLAND — JOHN P. CONCANNON — No. 9959 — REGISTERED PROFESSIONAL ENGINEER — 8/16/02

TRAFFIC CONCEPTS, INC.
325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
US 40 AND ST. JOHNS LANE

DRAWN BY: M.HOWELL	F.A.P. NO.	TS NO. 181G GI	SHEET NO.
CHECKED BY: T.ZAYDEL	S.H.A. NO.		
SCALE: 1" = 20'	COUNTY: HOWARD	T.I.M.S. NO.	OF
DATE: 3-13-02	LOG MILE:		

OWNER — FAX NO.: 410-531-3432
A. NAME: Charlotte H. Myers — B.TELEPHONE: 410-531-3432
C. COMPANY: Hardman-Myers, Inc.
D. ADDRESS: P.O. Box 757
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DEVELOPER — FAX NO.: 410-342-4662
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E. CITY: Baltimore — STATE: MD — ZIP: 21213-4011

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/15/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/20/02

DIRECTOR, DEPARTMENT OF PLANNING AND ZONING — DATE 8/29/02

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE, SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
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FAX (410) 792-7395

MARS SUPERMARKET ADDITION
ST. JOHN'S PLAZA
SITE DEVELOPMENT PLAN
GENERAL INFORMATION-US 40 & ST. JOHN'S LANE
TAX MAP 24 BLOCK 5 PARCEL 1068 (PARCEL B-1)
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE	REVISIONS

JOB NO.: 11643.01
SCALE: AS SHOWN
DATE: 08/07/02
DRAWN BY: T.C., INC.
DESIGN BY: T.C., INC.
REVIEW BY: T.C., INC.
SHEET: 16 OF 16

SDP-02-31